

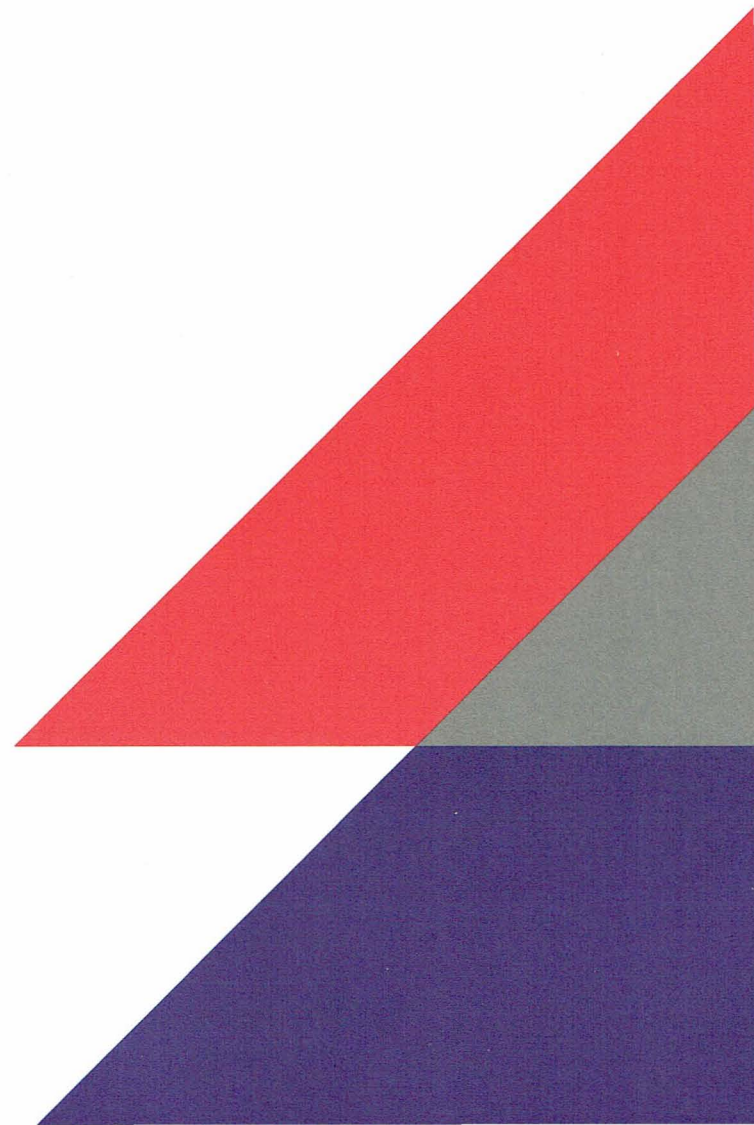
Service Manual



371

Programmable High Power Curve Tracer

070-6840-00



Service Manual



371

Programmable High Power Curve Tracer

070-6840-00

Warning

The servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to the Safety Summary prior to performing service.

Please check for change information at the rear of this manual.

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Instrument Serial Numbers

Each instrument manufactured by Tektronix has a serial number on a panel insert or tag, or stamped on the chassis. The first letter in the serial number designates the country of manufacture. The last five digits of the serial number are assigned sequentially and are unique to each instrument. Those manufactured in the United States have six unique digits. The country of manufacture is identified as follows:

B010000	Tektronix, Inc., Beaverton, Oregon, USA
E200000	Tektronix United Kingdom, Ltd., London
J300000	Sony/Tektronix, Japan
H700000	Tektronix Holland, NV, Heerenveen, The Netherlands

Instruments manufactured for Tektronix by external vendors outside the United States are assigned a two digit alpha code to identify the country of manufacture (e.g., JP for Japan, HK for Hong Kong, IL for Israel, etc.).

Tektronix, Inc., P.O. Box 500, Beaverton, OR 97077

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SAFETY SUMMARY

The Safety Summary is a listing of all safety precautions in the manual. These precautions are gathered here in a single place for convenient review of all precautions, and each also appears at a place in the manual where the reader receives the most benefit from the precaution.

WARNING

WARNING is used where, if ignored, injury or death could result, as well as instrument damage. Please read and observe the following **WARNINGS**:

Adjustment to the 371 should only be performed by a qualified service technician.

Dangerous voltages exist within the 371, both when operating and when not operating. Use extreme care to avoid serious injury.

Disconnect the 371 from the AC power source before changing operating voltages.

This instrument operates from a single-phase power source, and has a detachable three-wire power cord with a two-pole, three-terminal grounding-type plug. The voltage to ground (earth) from either pole of the power source must not exceed the maximum rated operating voltage (250 volts rms).

Before making connection to the power source, determine that the instrument is set for the power source voltage, and has a suitable plug (two-pole, three-terminal, grounding type).

This instrument is safety class 1 equipment (IEC designating receptacle with a grounding contact. Do not defeat the grounding connection. Any interruption of the grounding connection can create an electric shock hazard.

For electric shock protection, connect the instrument to ground before connecting to the instrument input or output terminals.

Following use of the 371 at high power settings, the device, fixture, or protective cover may be hot enough to cause injury. Avoid touching any of these items until cooled.

Over 3000 V may appear at the Collector Supply High Voltage collector terminal. To avoid injury or equipment damage, do not remove the Protective Cover or defeat the protective interlock switch.

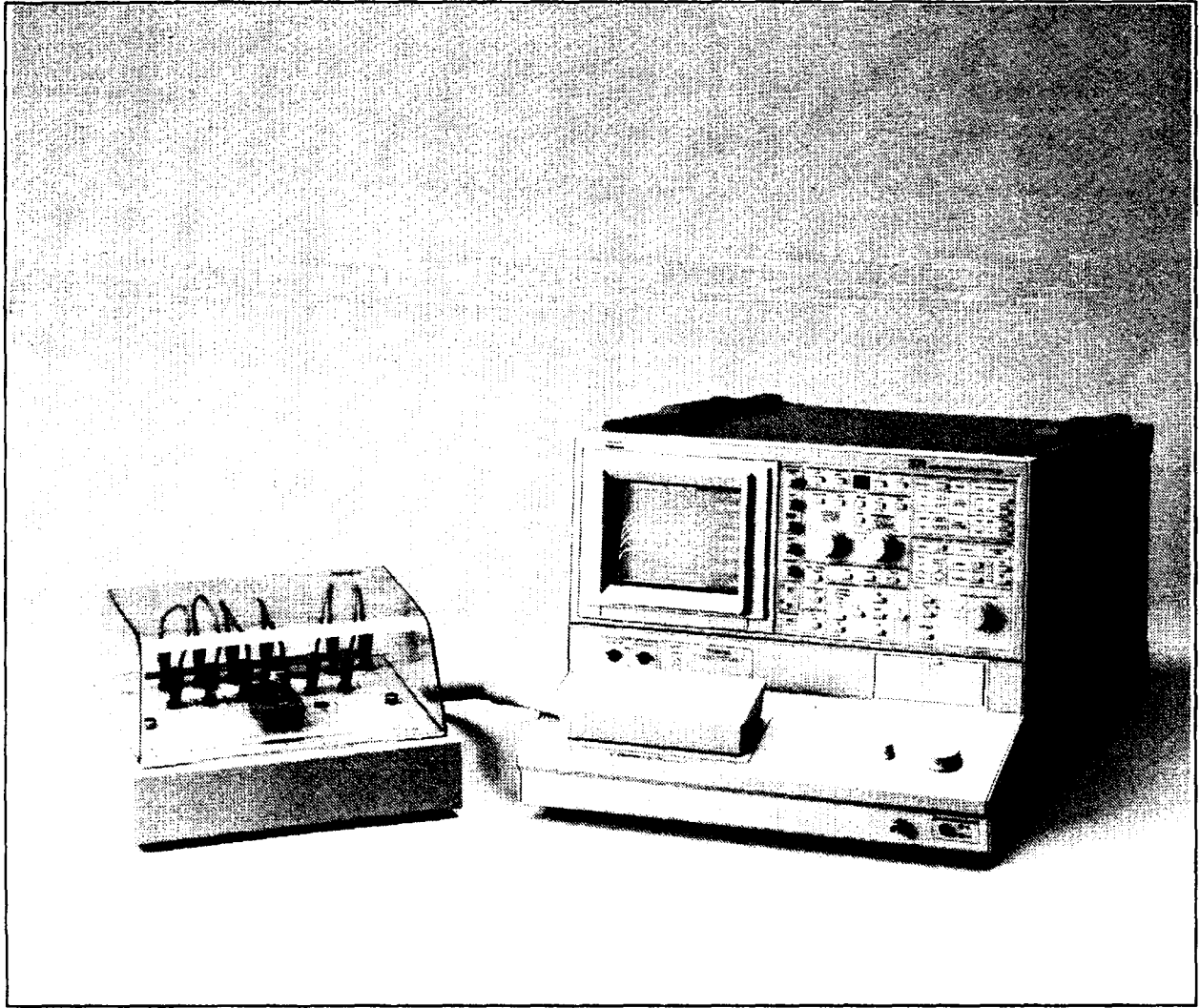
If an item to be tested does not fit under the plastic Protective Cover, external test fixtures may be required. Refer construction of external test fixtures to a qualified serviceman.

To avoid electric shock hazard, make sure that the 371 **POWER** switch is turned off before removing the high-voltage shield cover and connecting **DMM** to the 371, and make sure that the **DMM** ground lead is connected to the 371 **GROUND** terminal.

CAUTION

CAUTION is used where, if ignored, damage to the instrument or instrument software could result. Please read and observe the following **CAUTIONS**:

To prevent damage to the instrument, always check the settings of the Line Voltage **RANGE** indicator switches located on the rear panel of the 371 before connecting the instrument to the line-voltage source.



371 High Power Curve Tracer

SECTION ONE

GENERAL INFORMATION

The 371 is a high-power, GPIB-programmable digital-storage curve tracer that provides static and dynamic semiconductor device testing. This versatile instrument stimulates, measures, and displays the semiconductor characteristics of a variety of two-, three-, and four-terminal devices; including bipolar transistors, field effect transistors, silicon-controlled rectifiers, diodes, thyristors, etc. A variety of measurements can be performed using either grounded-emitter or grounded-base configurations.

The side, top, and bottom cabinet panels provide protection to personnel from operating potentials present within the instrument. In addition, they reduce radiation of electromagnetic interference from the instrument. The cabinet panels are held in place by screws and four plastic panel retainers. To remove the panels, remove the four plastic retainers and three additional securing screws at the rear of the instrument. Pull each panel back to release the front edge, then lift the panels away from the instrument. Operate the instrument with the panels in place to protect the interior from dust and to maintain cooling airflow.

The collector supply produces either high-current pulses (up to 400A) or a sine-square high-voltage waveform (up to 3 kV). The high current pulses enable dynamic testing of high power devices while keeping the internal heating of these devices to a minimum. The high-voltage low-current output enables measurement of static characteristics, such as breakdown voltage. A step generator produces voltage setups or current pulses or steps of either polarity for application to the base or emitter terminal.

In addition to conventional curve tracer performance, the 371 includes the following features:

1. Digital storage capability that allows bright and stable display and useful cursor measurements. The 371 can store up to 16 families of characteristic curves in a bubble cassette memory, display them on the CRT and send them for data processing via the GPIB. The bubble memory also provides non-volatile storage for up to 16 complete front-panel setups.
3. Almost all of the 371 front-panel settings can be controlled by GPIB commands. (Exceptions are those controls intended only for manual operation, such as INTENSITY, FOCUS, LOOPING COMPENSATION, etc.) Also, curve data can be sent to or received from an external controller through the GPIB.
4. The CENTRONICS-compatible plotter interface permits sending displayed curve data and digital on-screen readouts to a digital plotter without an external controller.
5. Other features include cursor measurement readout and diagnostic routines.

RELATED DOCUMENTATION

In addition to this service manual, the 371 Operators Manual and the 371 Pocket Reference Guide will also help you understand and operate the 371.

INSTALLATION AND INITIAL INSPECTION

This instrument was inspected both mechanically and electrically before shipment. It should be free of marks or scratches and meet or exceed all electrical specifications. To confirm this, inspect the instrument for physical damage incurred in transit and test the electrical performance by following the procedures in Section 4, Checks and Adjustment. If there is damage or discrepancy, contact your local Tektronix Field Office or representative.

POWER SOURCE INFORMATION

This instrument is designed for operation from a power source with its neutral at or near ground (earth) potential. It is not intended for operation from two phases of a multi-phase system, or across legs of a single-phase, three wire system. Table 1-1 shows the 371 Line Voltage, Line Frequency, and Power consumption information.

Operating Voltage Selection

WARNING

Disconnect the 371 from the AC power source before changing operating voltages.

The LINE VOLTAGE SELECTOR is located inside the 371, on the rear panel, and allows selection of the operating line voltage. To select the correct operating line voltage, first unplug the power cord, then remove the top cabinet panel. This is accomplished by removing the upper two plastic panel retainers from the upper rear corners and the securing screw

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from the rear of the top panel. Pull the top panel to the rear and lift to remove it. The line voltage selector is located next to the fan, directly behind the CRT.

The plastic cover over the LINE VOLTAGE SELECTOR is removed by pinching the tip of the cover retainer until it will fit through the hole in the cover. Pull the cover away from the rear panel and lift to disconnect from the lower support. Unplug the LINE VOLTAGE SELECTOR plug and reconnect it at the appropriate location:

J100	100 V
J120	120 V
J200	200 V
J240	240 V

Replace the cover by securing the bottom edge to the lower support and inserting the cover retainer in the cover hole.

Table 1-1
Line Voltage Ranges

RANGE switch	NOMINAL Switch Setting
240	216 to 250 VAC
200	180 to 220 VAC
120	108 to 132 VAC
100	90 to 110 VAC
Line frequency range:	48 to 63 Hz
Power consumption:	Maximum: 400 W, 4.5 A

Table 1-2
Power-Cord Color Conductor Identification

Conductor	Color	Alternate color
Ungrounded (Line)	Brown	Black
Grounded (Neutral)	Light Blue	White
Grounded (Protective Ground)	Green/Yellow	Green/Yellow

A power cord with the appropriate plug configuration is supplied with each instrument. The color-coding of the power cord conductors is given in Table 1-2. Also, should you require

a power-cord plug other than that supplied, refer to Section 5, Table 5-1, Option A1-A5.

WARNING

This instrument operates from a single-phase power source, and has a detachable three-wire power cord with a two-pole, three-terminal grounding-type power plug. The voltage to ground (earth) from either pole of the power source must not exceed the 250-volt maximum rated operating voltage.

Before making connection to the power source, determine that the instrument is set for the power source voltage, and has a suitable plug (two-pole, three-terminal, grounding type).

This instrument is safety class 1 equipment (IEC designating receptacle with a grounding contact. Do not defeat the grounding connection. Any interruption of the grounding connection can create an electric shock hazard.

OPERATING TEMPERATURE

The 371 can be operated where the ambient air temperature is between +10° C and +40° C and stored in ambient temperatures from -40° C to +65° C. After storage at temperatures outside the operating limits, allow the instrument temperature to reach the safe operating limits before applying power.

The 371 is cooled by air drawn through the fan from the rear and blown out through holes on the side panels. To ensure proper cooling of the instrument, maintain the proper clearance at the top, sides, and rear of the instrument.

OPERATION MODE SELECTION

Jumper connector J340 on the A3 A/D board is provided to select normal operation or to generate steps one at a time. See Adjustment Locations 1 in Section 7 for the location of the jumper. The selections are:

- J340 at pins 1-2 Step transition occurs at the zero crossing of the collector supply sweep (factory set)
- at pins 3-4 One step occurs each time SINGLE is pressed. STORE mode is disabled.

REPACKING FOR SHIPMENT

If the 371 is to be shipped long distances, we recommend that the instrument be repackaged the same as when it arrived. The cartons and packaging material in which your instrument was shipped should be saved and used for this purpose.

If your instrument is to be shipped to a Tektronix Service Center for service or repair, attach a tag to the instrument showing the following:

- Owner of the instrument (with address),
- Name of a person at your firm to contact,
- Instrument type,
- Instrument serial number,
- Description of the service required.

If the original packaging is unfit for use or not available, package the instrument as follows:

1. Obtain a corrugated cardboard shipping carton with a 375-pound test strength that has inside dimensions at least six inches greater than the instrument dimension.
2. Surround the instrument with polyethylene sheeting to protect the finish.
3. Cushion the instrument on all sides by tightly packing dunnage or urethane foam between the carton and the instrument, allowing three inches on all sides.
4. Seal the carton with shipping tape or with an industrial stapler.
5. Write the address of the Tektronix Service Center and your return address on the carton in one or more prominent locations.

ACCESSORIES

Standard Accessories

Operators Manual	070-6839-00
Pocket Reference Guide	070-6841-00
Fuses:	
250 V, 1A, Slow-blow	159-0260-00

250 V, 2A, Slow-blow	159-0259-00
250 V, 4A, Slow-blow	159-0291-00
Test Fixture	016-0908-00
Bubble Cassette	020-1310-00
Power Cord	161-0066-00
Test Fixture Adapters:	
In Line Adapter	A1002
TO-3/TO-66 Adapter	A1003

Optional Accessories

Blank Adapter	A1001
Offset Lead/Power Adapter	A1004
Axial Lead Adapter	A1105
Long Lead FET Adapter	A1008
4&6 Lead FET Adapter	A1009
IC Adapter	A1010
Service Manual	070-6840-00
Calibration Fixture	067-1345-00
Tray Extension Cables (both sets required)	174-1001-00
Field Wiring Cable	198-5628-00
Rackmounting Kit	016-0930-00
Centronics Cable	012-0555-00
GPIB Cable	012-0991-00
Camera Adapters:	
For C59A Camera	016-0249-06
For C5C Camera	016-0357-01
For C7 Camera	016-0357-01

OPTIONS

The following option is available:

Option A1-A5 International Power Cords.

Information about the international power-cord options is provided earlier in this section, in the Operators Manual, and in Section 5, Options.

SECTION TWO

THEORY OF OPERATION

This section describes the operation of the 371 circuits. The section is divided into two parts: block diagram description and detailed circuit operation. When reading this section, refer to the foldout schematic diagrams located in the rear of the manual. In each title that follows, the schematic diagram number appears inside a diamond, just preceding the topic, which is also the schematic diagram title.

BLOCK DIAGRAM DESCRIPTION

The following description is an overview of the 371 operation. Figure 2-1 is an overall block diagram of the 371. The numbers enclosed in diamonds within each block in Figure 2-1 indicate the schematic diagrams associated with the block.

The 371 is a static high-power semiconductor tester that displays and enables measurement of semiconductor characteristics obtained under simulated operating conditions.

The 371 consists of five major functional sections:

1. Collector Supply and Step Generator
2. Data Acquisition and Display
3. Control and Processing
4. Interface
5. Power Supply

Collector Supply and Step Generator

This section supplies stimulus to the device under test. It consists of the following circuits:

- PLL and Clock Circuit—Diagrams 4 and 5
- Step Generator Circuit—Diagram 4
- Step Amplifier Circuit—Diagrams 12, 13, and 27
- Collector Supply Generator—Diagram 5
- Collector Supply Amplifier—Diagram 11
- High-Voltage Output—Diagram 16
- High-Current Output—Diagrams 21 and 27

The PLL and clock circuit supplies clock signals synchronized to the line frequency to the collector supply generator, step generator, high current output, and acquisition circuits.

The collector supply generator generates two types of signals. One is a sine-square waveform generated from the clock signal received from the PLL and clock circuit. The other is a DC signal. These signals are output with the amplitude selected by the COLLECTOR SUPPLY VARIABLE control on the front panel.

The sine-square waveform is amplified by the collector supply amplifier and sent to the high voltage output circuit. There the signal is stepped up by a transformer, then output to the COLLECTOR SUPPLY HIGH VOLTAGE connector.

The DC signal is sent to the high current output circuit, where it is reshaped into a voltage pulse signal by means of control signals from the PLL and clock circuit. Then it is amplified and sent to the COLLECTOR SUPPLY HIGH CURRENT connector.

The step generator circuit generates a fixed-amplitude step voltage and an offset voltage from the clock signal received from the PLL and clock circuit. The signal is amplified as a current step signal or voltage signal by the step amplifier, then output to the STEP GENERATOR VOLTAGE or STEP GENERATOR CURRENT connector.

Data Acquisition and Display

The data acquisition and display section consists of the circuits listed below. These circuits sense, acquire, and display the effect of the collector supply and step generator on the device under test. These circuits include:

- Horizontal Sense Circuit—Diagram 15
- Vertical Sense Circuit—Diagram 14
- Sense Board Interface Circuit—Diagrams 14, 15, and 16
- Display Offset Circuit—Diagram 9
- Acquisition Circuit—Diagram 6
- Display Counter Circuit—Diagram 7
- Display D/A Converter Circuit—Diagram 8
- Display Select Circuit—Diagram 10
- CRT Output Circuit—Diagram 22
- High Voltage Power Supply Circuit—Diagram 23

The horizontal sense circuit senses and amplifies the voltage between the collector and emitter (or base and emitter) of the device under test. The vertical sense circuit senses and amplifies the collector current of the device under test. The display offset circuit determines the polarity of the output signals from these circuits according to whether PNP or NPN is selected for COLLECTOR SUPPLY, then sends them to the display select circuit and acquisition circuit.

The analog signal sent to the acquisition circuit is converted to a digital signal and stored in an acquisition memory in the acquisition circuit. The stored data are processed by the CPU, then sent to the display memory in the display counter circuit. Next, they are reconverted to an analog signal in the display D/A converter circuit.

In NON STORE mode, the display select circuit selects the signal from the display offset circuit and sends it to the CRT

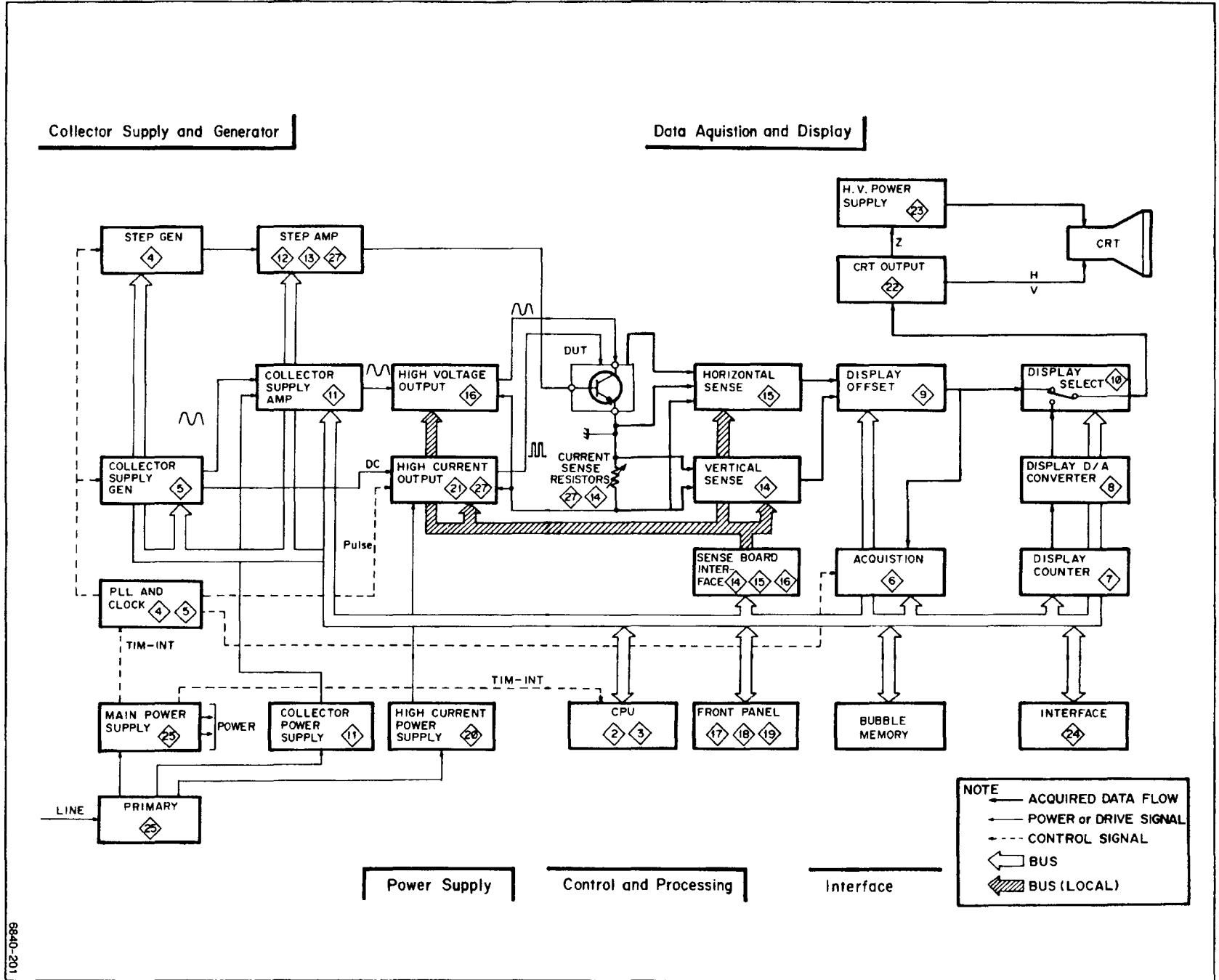


Figure 2-1. Block diagram of the 371.

6940-201

output circuit. In STORE mode, the signal from the display D/A converter circuit is selected and output to the CRT output circuit.

Control and Processing

The control and processing section consists of the following circuits:

- CPU Circuit—Diagram 2 and 3
- Front Panel Circuit—Diagrams 17, 18, and 19

These circuits control the 371 and process acquired data.

The CPU circuit controls all operations of the 371: perform Collector Supply and Step Generator control, sense circuit control, CRT display control, front panel control, bubble memory control etc. The circuit also processes the data acquired from the device under test. These operations are controlled by the microprocessor and its operating programs through the address, data and control bus lines.

The front panel circuit reads keys, switches, and rotary encoder information to set the 371 to the desired measurement conditions. This circuit also displays these settings to the operator by LED and numerical displays.

Interface

The interface section consists of the following circuits:

- Interface Circuit—Diagram 24
- Bubble Memory Circuit—(no diagram available)

The interface circuit includes a Centronics interface and a GPIB interface for transfer of data between the 371 and external devices.

The bubble memory circuit stores data acquired from the device under test and memorizes the 371 setting information. The data and information are stored in a non-volatile bubble memory cassette.

Power Supply

The power supply section consists of the following circuits:

- Primary Circuit—Diagram 25
- Main Power Circuit—Diagram 25
- Collector Power Supply Circuit—Diagram 11
- High Current Power Supply Circuit—Diagram 20

The primary circuit receives primary power at a transformer, converts it to the voltages required by the main power supply circuit, collector power supply circuit and high current power supply circuit, and supplies these circuits with the required voltages.

The main power supply circuit supplies low-voltage operating power to the circuits of the 371. It also outputs a TIM-INT signal synchronized to the frequency of the power line to the PLL and clock circuit and the CPU circuit, so the 371 operates synchronously with the line frequency.

The collector power supply circuit provides collector supply power in the HIGH VOLTAGE mode.

The high current power supply circuit provides collector supply power in the HIGH CURRENT mode.

DETAILED CIRCUIT OPERATION

This part of the Theory of Operation provides a detailed description of the electrical operation of the 371. Complete schematic diagrams are provided in Section 7, Diagrams and Circuit Board Illustrations. The number enclosed in a diamond preceding each title denotes the schematic diagram under discussion.

MOTHER BOARD

The A1 Mother Board connects inter-board signals of the 371. These signals include control signals, drive signals, data signals, reference signals, sense signals, ground lines, and power supply lines.

MPU

The MPU circuitry is located on the A2 CPU board. It consists of a 68000 microprocessor, reset circuit, clock generator, buffers, wait timing generator, and interrupt control logic circuit.

Microprocessor

The 68000 is a 16-data bit, 23-address bit microprocessor. The input and output signals can be grouped in eight categories. The following paragraphs describe each group and the signals in that group.

Address Bus (A1 through A20). The address bus is a uni-directional, three-state 20-bit bus, providing address information for all on and off-board functions requiring address control.

Data Bus (D0 through D15). The data bus is a 16-bit, bi-directional, three-state bus which is the general purpose data path. It can transfer data in either byte (8-bit) or word (16-bit) format.

Address Strobe (AS). This signal indicates that there is a valid address on the address bus.

Theory of Operation—371

Read/Write (R/W). This signal defines the data bus transfer as a read cycle (logic high) or a write cycle (logic low). The R/W signal also works in conjunction with the upper and lower data strobes as explained in the next paragraph.

Upper and Lower Data Strobes (UDS and LDS). These signals control the data on the data bus, as shown in Table 2-1. When the R/W line is high, the microprocessor will read from the data bus as indicated. When the R/W line is low, the microprocessor will write to the data bus as shown.

Data Transfer Acknowledge (DTACK). This input indicates that a data transfer is completed. When the microprocessor recognizes DTACK during a read cycle, data is latched and the bus cycle is terminated. When DTACK is recognized during a write cycle, the bus cycle is terminated.

Interrupt Control (IPL0, IPL1, IPL2). These input pins indicate the encoded priority level of the device requesting the interrupt. Seven levels are possible using these three pins, with level zero (no pins active) meaning no interrupt is requested.

System Control. The system control inputs, HALT and RESET, reset the microprocessor at power on. When the HALT and RESET inputs are driven simultaneously, the microprocessor enters the reset cycle starting at the address pointed by the reset vector.

Valid Peripheral Address (VPA). This input indicates that the microprocessor should use automatic vectoring for an interrupt.

Processor Status (FC0, FC1, FC2). These function outputs indicate the cycle type currently being executed. When the cycle type is the interrupt acknowledge cycle, all three outputs go high.

Clock (CLK). This is the clock input. The clock signal is derived from U100 and divided by four in U120, resulting in an 8-MHz clock signal applied to the microprocessor.

Reset Circuit. The reset circuit consists of U406, U408, U400A, U400B, U400D, R400 and C400. It generates the reset signal at power on. At power on, pin 2 of U406 and U408 remain low, causing the microprocessor to reset. 200 ms later C400 charges to 5 V and sets pin 2 of U406 and U408 high, enabling the microprocessor to run.

Clock Generator

The clock generator consists of the 32-MHz oscillator U100 and dividers U120A and U120B. This circuit generates the 8 MHz clock signal for the microprocessor and the 16 MHz clock signal for the DRAMs.

Address Bus Buffer

Buffers U450 and U452 isolate the address bus (A1-A16) for the A3 A/D board, A4 Digital Display board, A5 Display Control board, A11 Main Key board, A14 Lower Key board, A22 Interface board and A24 Bubble Controller board.

Data Bus Buffer

Buffers U454 and U456 isolate the data bus when the microprocessor is transceiving data to and from circuits off the CPU board. The CRD(L) line selects which direction data is transmitted through the buffer; the line is high when data is sent from the microprocessor off the CPU board. The N-10(L) line enables or disables the data output.

Table 2-1
Data Strobe Control of Data Bus

UDS	LDS	R/W	D8-D15	D0-D7
High	High	---	No Valid data	No valid data
Low	Low	High	Valid data bits 8-15	Valid data bits 0-7
High	Low	High	No valid data	Valid data bits 0-7
Low	High	High	Valid data bits 8-15	No valid data
Low	Low	Low	Valid data bits 8-15	Valid data bits 0-7
High	Low	Low	Valid data bits 0-7	Valid data bits 0-7
Low	High	Low	Valid data bits 8-15	Valid data bits 8-15

Control Bus Buffer

Buffer U458 isolates the control bus.

Silent Bus Buffer

Buffer U462 isolates the address bus (SA1-SA7) and data line SD0 for the A6 Collector Supply Output board, A7 Step Generator board, and A10 Sense board.

Wait Timing Generator

The wait timing generator consists of U300A, U300B, U300D, U310A, U310B, U320A, U340A and U340B. This circuit inserts wait cycles by controlling the DTACK(L) input to ensure that I/O devices have time to read or write the data on the bus.

In the following discussion, note that the WAIT(L) line is activated only when the microprocessor communicates with the A4 Digital Display board and the A22 Plotter Interface.

When the microprocessor communicates with the CPU board memories, no wait cycle is required. In this case, the microprocessor sets address line CA19 low, which sets pin 9 of U310B high. Pin 6 of U320A goes low at the next clock, enabling the DTACK(L) input.

When the microprocessor communicates with I/O devices (except the A4 Digital Display board and the A22 Plotter Interface) two wait cycles are required. In this case, the microprocessor sets address line CA19 high, disabling the preset inputs of latches U320A and U320B. When the microprocessor sets the CAS(L) (address strobe) line low, the clear inputs of the latches U320A and U320B are disabled, which enables the latches to be clocked by the 8 MHz clock. Three clock cycles following the activation of the CAS(L) line, pin 6 of U320A goes low and enables the DTACK(L) input.

When the microprocessor communicates with the A4 Digital Display board and the A22 Plotter Interface, the DTACK(L) input is controlled by the WAIT(L) signal. The A4 Digital Display board or the A22 Plotter Interface sets the WAIT(L) line low when the microprocessor accesses it. This sets pin 1 of U320A low, which sets pin 6 of U320A high, disabling the DTACK(L) signal. When the A4 Digital Display board or the A22 Plotter Interface sets the WAIT(L) line high, pin 6 of U320A goes low at the next clock, activating the DTACK(L) signal.

Counters U340A and U340B prevent the microprocessor from waiting for longer than 128 clock cycles (16 μ s). When the WAIT(L) line goes low, the counters begin to count. When the count reaches 128, pin 8 of U340 goes high and cancels the WAIT(L) signal on pin 5 of U300B. The output of U340B is also sent to pin 11 of U240B as the TIME OUT-INT interrupt signal.

Interrupt Control

The interrupt control circuit consists of buffer U460, interrupt signal latches U240A, U240B, U250A, and U250B, interrupt priority encoder U260, and interrupt acknowledge logic U200, U210, U220 and U230.

Interrupts inform the microprocessor that something needs attention. There are six interrupt signals; power fail (PF-INT) and timer (TIM-INT) from the A25 Main Power Supply board, time-out (TIME OUT-INT) from the wait control circuit, acquisition-done (DONE-INT) from the A3 A/D board, and interrupts from GPIB and plotter interface (GPIB-INT and PLOT-INT(L)). Each interrupt has its own priority level, as shown in Table 2-2.

When an interrupt occurs, the interrupt signal is latched into U240 or U250 and fed to priority encoder U260. U260 encodes the level of the interrupt to the 3-bit binary code onto the IPL0(L), IPL1(L) and IPL2(L) lines. For example, assume that an interrupt line is set low. If the interrupt level is higher than that of the current process, the microprocessor enters the interrupt acknowledge cycle after the completion of the current instruction. It outputs the interrupt level on address lines CA1, CA2 and CA3, asserts CAS(L), and sets the function code lines CFC0, CFC1 and CFC2 high. U210 decodes the address lines CA1, CA2 and CA3, and outputs a clear signal to the interrupt latch. The high on the function code lines set pin 7 of U200 low, causing the microprocessor to enter into auto vector mode.

Table 2-2
Interrupt Priority

Priority	Interrupt Inputs	Function
1 (level 7)	PF-INT	Power failure (Non maskable)
2 (level 6)	TIM-INT	Timer (line frequency)
3 (level 5)	TIME OUT-INT	Time out
4 (level 4)	GPIB-INT	GPIB request
5 (level 3)	DONE-INT	Acquisition completed
6 (level 2)	Future use	
7 (level 1)	PLOT-INT(L)	Plotter request

3 MEMORY

The memory circuit consists of the ROM, DRAM, memory controller, address selector, and buffers.

ROM

The 371 firmware is located in four 32K byte EPROMs (U600 through U630). The EPROMs are paired as U600–U610 and U620–U630 to form 16-bit words.

Dynamic RAM

DRAMs U800 through U830 provide general, temporary data storage space. U800 through U814 provide lower byte storage and U816 through U830 provide upper byte storage. Column address strobe signals LCAS(L) and UCAS(L) select addressing for either the lower byte or the upper byte.

Each chip is capable of storing 65,536 by one bit and has eight address bits. In order to address 65,536 memory locations, 16 address bits are required. To do that, the address is multiplexed into the chip 8-bits at a time by signals RAS(L) (row address strobe), LCAS(L) and UCAS(L) (column address strobe). In the case of both read and write, RAS(L) signal comes true first. A low on the WE(L) input enables the memory for a write.

Data Bus Buffer

Buffers U484 and U486 isolate the data bus. CRD(L) input selects which direction data is transmitted through the buffer. A high on CRD(L) transmits data from the microprocessor to the memories.

Address Bus Buffer

Buffers U480 and U482 isolate the Address Bus. U480 isolates the row address and U482 isolates the column address.

Address Multiplexer

Address multiplexer U760 through U780 multiplexes row addresses and column addresses, as determined by the select signal from pin 8 of U700B. A high on the SEL input selects row address (MA1 through MA8) and a low on the SEL input selects column address (MA9 through MA16).

Address Selector

Decoders U500A, U500B, U520 and U540 decode address lines A15 through A20 and select addressing for memory or devices on and off the CPU board. See Table 2-3 for the address assignments.

Dynamic RAM Controller

The dynamic RAM Controller consists of U300C, U400C, U700A, U700B, U720A, U720B, U720C, U720D, U740A and U740B. This circuit generates control signals RAS(L) (row address strobe), CAS(L) (column address strobe) and WE(L) (write enable) for DRAMs.

When the microprocessor communicates with other than DRAMs, pin 5 of U500A is high. Pin 10 of U300C is low, which holds latches U700A, U700B, U740A and U740B in the set state, disabling the RAS(L), LWE(L), UWE(L), LCAS(L) and UCAS(L) signal lines.

When the microprocessor communicates with DRAMs, pin 5 of U500A is low. When the microprocessor activates the CAS(L) (address strobe) line, indicating the address bus is valid, pin 10 of U300C goes high, enabling U700A and U700B to be clocked by the DRAMCK signal. Pin 5 of U700A goes low at the rising edge of the first DRAMCK after the low of the CAS(L) line, enabling the RAS(L) line to be activated. At this time, row address data (MA1 through MA8) is fed to the DRAMs from U760 and U780 because pin 8 of U700B stays low, and DRAMs latch the row address. Pin 8 of U700B goes high at the next DRAMCK, which enables U760 and U780 to output column address data. At the same time, pin 9 of U700B goes low, setting low on pin 2 (pin 12) of U740A (U740B). Then pin 5 (pin 9) of U740A (U740B) goes low at the next DRAMCK, activating the LCAS(L) (UCAS(L)) line to enable DRAMs to latch the column address.

4 CONTROL AND STEP GENERATOR

The control and step generator circuit, located on the A3 A/D (analog to digital) board, consists of an acquisition and step generator control circuit, pulse generator circuit, step generator circuit, and control latch and decoder circuit.

These circuits generate a variety of signals for the step generator, and generate pulse timing signals for the high current mode.

Control Latch and Decoder

Addressable latches U930 and U940 and decoders U920 and U950 supply the other circuits on this board with control signals from the CPU on the A2 CPU board. Table 2-4 indicates the functions of these control signals.

Table 2-3
Decoder Address Assignments

A20	A19	A1	A17	A16	A15	A14-A1	SELECTION
0	0	0	0	0	X	X	ROM 0 (U600&U610)
0	0	0	0	1	X	X	ROM 1 (U620&U630)
0	0	0	1	0	X	X	ROM 2 (U640&U650) (Future use)
0	0	0	1	1	X	X	Not used
0	0	1	X	X	X	X	RAM
0	1	0	0	0	0	X	Not used (A2 board)
0	1	0	0	0	1	X	AD(L) (A3 board)
0	1	0	0	1	0	X	DSP-RAM(L) (A4 board)
0	1	0	0	1	1	X	DSP-IO(L) (A5 board)
0	1	0	1	0	0	X	KEY(L) (A11 A12 board)
0	1	0	1	0	1	X	L-KEY(L) (A14 board)
0	1	0	1	1	0	X	IF-CS(L) (A22 board)
0	1	0	1	1	1	X	BUBBLE(L) (A24 board)
0	1	1	0	0	0	X	COLLECT(L) (A6 board)
0	1	1	0	0	1	X	SG(L) (A10 board)
0	1	1	0	1	0	X	SENSE(L) (A10 board)

Table 2-4
Microprocessor Control Signals

Signal	Function																																																																																							
S0 to S4	The values of these signals depend on the number of steps and measurement mode settings as indicated below:																																																																																							
	<table border="1"> <thead> <tr> <th rowspan="2">Number of STEPS</th> <th colspan="5">REPEAT & SINGLE</th> <th colspan="5">SWEEP</th> </tr> <tr> <th>S4</th> <th>S3</th> <th>S2</th> <th>S1</th> <th>S0</th> <th>S4</th> <th>S3</th> <th>S2</th> <th>S1</th> <th>S0</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>2</td> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>3</td> <td>1</td> <td>1</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>4</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>5</td> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td> </tr> </tbody> </table>	Number of STEPS	REPEAT & SINGLE					SWEEP					S4	S3	S2	S1	S0	S4	S3	S2	S1	S0	0	1	1	1	0	0	1	1	1	1	0	1	1	1	1	0	1	1	1	1	0	1	2	1	1	0	1	1	1	1	0	1	1	3	1	1	0	0	1	1	1	0	1	1	4	1	0	1	1	1	1	0	1	1	1	5	1	0	1	0	1	1	0	1	0	1
	Number of STEPS		REPEAT & SINGLE					SWEEP																																																																																
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MODE0 to MODE2	The values of these signals depend on the high voltage, high current, and measurement mode settings as indicated below:																																																																																							
	<table border="1"> <thead> <tr> <th>MODE2</th> <th>MODE1</th> <th>MODE0</th> <th>Operation Mode</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>HV, SINGLE & SWEEP</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>Not used</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>HC 300 W, SINGLE & SWEEP</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>HC 3 kW, SINGLE & SWEEP</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>HV, REPEAT</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>Not used</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>HC 300 W, REPEAT</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>HC 3 kW, REPEAT</td> </tr> </tbody> </table>	MODE2	MODE1	MODE0	Operation Mode	0	0	0	HV, SINGLE & SWEEP	0	0	1	Not used	0	1	0	HC 300 W, SINGLE & SWEEP	0	1	1	HC 3 kW, SINGLE & SWEEP	1	0	0	HV, REPEAT	1	0	1	Not used	1	1	0	HC 300 W, REPEAT	1	1	1	HC 3 kW, REPEAT																																																			
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SG-POL	0: Step Generator – Positive (POS +) 1: Step Generator – Negative (NEG-)																																																																																							
X.1	0: Step Generator .1X MULTI – OFF 1: Step Generator .1X MULTI – ON																																																																																							
CS-POL	0: Collector Supply High Current NPN and High Voltage 1: Collector Supply High Current PNP																																																																																							

Table 2-4 (cont)
Microprocessor Control Signals

Signal	Function
VIEW(L)	0: Stops output of all measurement signals from the 371
CSTOP(L)	In any of the states listed below, this signal goes to 0, stopping the output of measurement signals and display of data from the 371. Protective cover – Open Test Fixture – Not connected Collector supply fuse – Open Collector supply – Overheated PLL – Unlock
V/I	0: Step Generator – Current mode 1: Step Generator – Voltage mode
RSTM(L)	0: Sets the acquisition memory counter to 0 at every data acquisition
FIRE(L)	Starts data acquisition
ACQM(L)	0: The CPU is accessing acquisition memory
ABT	0: Erases the contents of acquisition memory and generates the DONE signal
VAR(L)	Latches the digital value of the COLLECTOR SUPPLY VARIABLE control in the D/A converter (U200)
OFFSET(L)	Latches the digital value of the step generator offset in the D/A converter (U550)
STATUS(L)	0: Used when PLL unlock information is read

Acquisition and Step Generator Control

This circuit supplies line frequency synchronized timing signals to the A/D converter circuit (diagram 5), step generator circuit and pulse generator circuit.

The PLL (phase-locked loop) circuit U310 uses the TIM-INT signal from the A25 Main Power Supply board to generate a signal with 4096 times the line frequency (f). Counters U320 and U300 divide this signal to create signals with frequencies of $2048f$, $128f$, $2f$, f , $f/2$ and $f/4$.

The $2048f$ signal (2048 times the line frequency) is divided by a $1/N$ divider including U330, U340A, U350 and U430C, and becomes the ACQ-TRG (acquisition trigger) signal for the high voltage mode.

The $128f$ signal (128 times the line frequency) is supplied to the pulse generator circuit.

The $2f$ signal (twice the line frequency) is supplied to the step generator circuit.

The f (line frequency) signal is used to generate a staircase signal in the high voltage mode.

The $f/2$ signal (1/2 the line frequency) is used to generate the ACQ-TRG signal and staircase signal in the 300 W mode.

The $f/4$ signal (1/4 the line frequency) is used to generate the ACQ-TRG signal and staircase signal in the 3 kW mode.

These clock signals, which are synchronized to the line frequency, are switched by the 4-to-1 line switch U350 and supplied as clock signals for the 3 W, 30 W, 300 W and 3 kW modes. Table 2-5 indicates which clock signals are selected in each mode.

Table 2-5
Clock Signals for ACQ-TRG and SG-TRG

Control Signal for U350		Operation Mode	Number of Steps	Output Signal from U350	
MODE1	MODE0			ACQ-TRG	SG-TRG
0	0	3 W, 30 W	0	0	f
0	0		1	1024f	f
0	0		2	512f	f
0	0		3	341.3f	f
0	0		4	256f	f
0	0		5	204.8f	f
0	1	Not used			
1	0	300 W	all	f/2	f/2
1	1	3 kW	all	f/4	f/4

The ACQ-TRG signal selected by U350 is supplied to the A/D timing circuit (Diagram 6). The A/D circuit detects the rising edge of this signal and begins A/D conversion.

The SG-TRG signal is supplied to the step generator and pulse generator circuits and triggers the operation of each circuit.

Step Generator

When triggered by the SG-TRG signal, the step generator circuit generates a staircase signal with the number of steps set by the NUMBER OF STEPS control on the front panel. Figure 2-2 shows a timing chart of this circuit.

The 2-to-1 line switch U370 selects whether to operate in SINGLE mode or REPEAT mode.

In SINGLE mode, the step generator circuit samples the FIRE(L) signal (U950-pin 14) from the A2 CPU board on the falling edge of the SG-TRG signal. When a high value is sampled, the counters U380 and U390 that generate the staircase signal begin counting. When all outputs from U390 go high, pin 15 (CARRY OUT) of U390 also goes high and pin 5 of U360B goes low. Next, the circuit waits for the FIRE(L) signal. A staircase signal with N steps can therefore be generated by U380, D/A converter U500, and operational amplifier U510 by presetting U390 to 16-N.

In REPEAT mode the staircase signal is output in freerun mode. The signal at pin 5 of U360B is sampled on the rising edge of pin 15 of U390. While pin 9 of U360A is high, the ACQ-TRG signal gate, enables operation of the A/D converter (diagram 6).

The staircase signal (200mV/step) from U510 is amplified by a factor of 1 or 1/10 (when .1X MULTI is ON) by U520A and U530. U550 and U560 generate the offset signal which is added to the staircase signal in U530.

The signal from U530 is input to 2-to-1 line switch U520B. U520B receives a switching signal from the pulse generator circuit and converts the staircase signal to a pulse signal.

The output signal from U520B passes through buffer U540 and output control switch U590C to the A7 Step Generator board. U590C is controlled by an output control logic circuit consisting of U440B, U570 and other components.

The output control logic circuit stops output from the step generator and collector supply according to the UNLOCK(L), CSTOP(L), ARC(L), RESET(L) and VIEW(L) signals as shown in Table 2-6.

When these signals go high and output resumes, the 2f signal is controlled by U710A and U440B to resume at a zero-crossing point of the power-line signal.

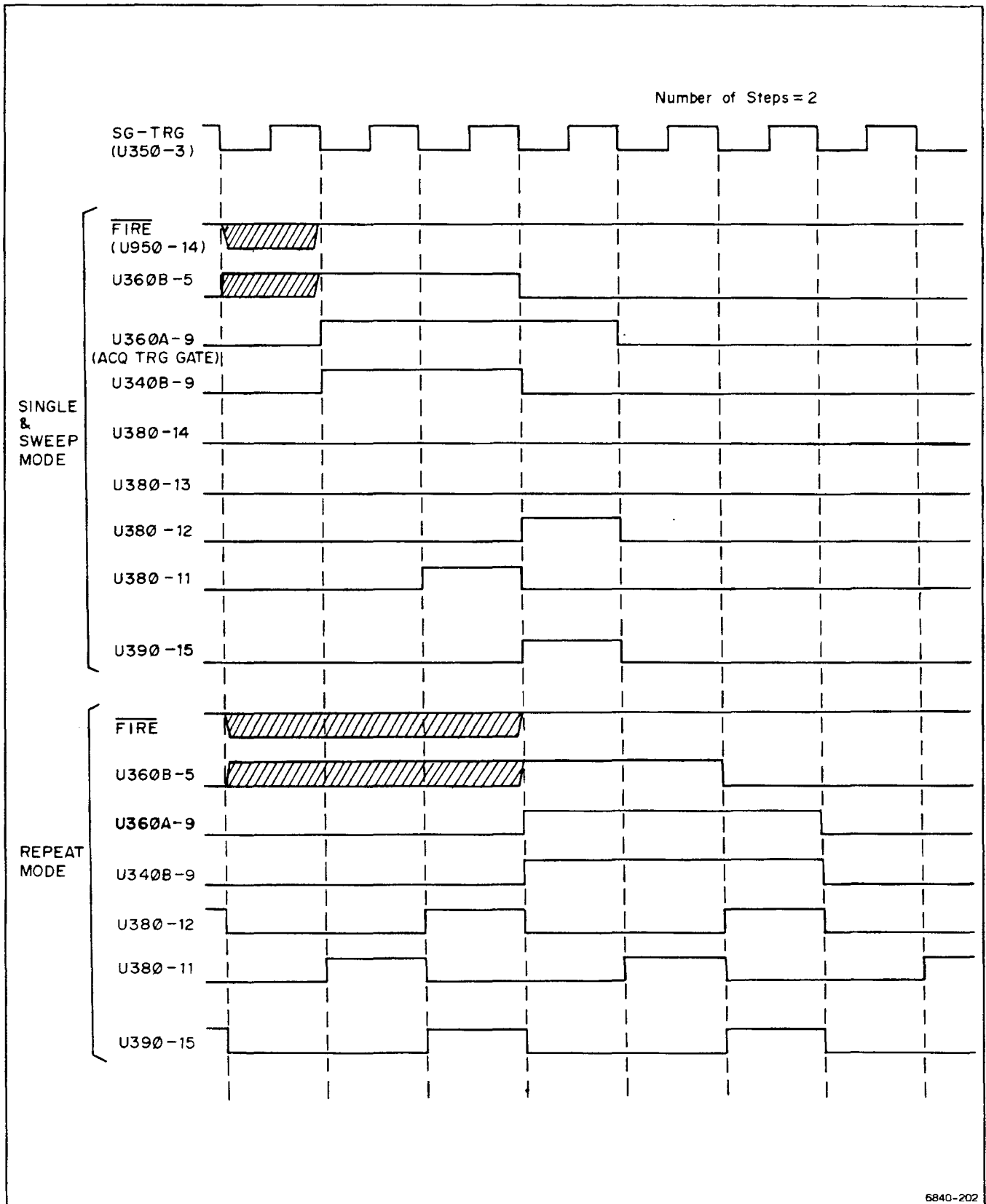


Figure 2-2. Step Generator Timing.

Table 2-6
Output Control Logic

Input					Output		
UNLOCK(L) U570-13	CSTOP(L) U570-10	ARC(L) U570-9	RESET(L) U570-2	VIEW(L) U570-12	Collector	Step Gen	Display
X	X	X	X	0	OFF	OFF	ON
X	X	X	0	1	OFF	OFF	OFF
X	X	0	X	1	OFF	OFF	OFF
X	0	X	X	1	OFF	OFF	OFF
0	X	X	X	1	OFF	OFF	OFF
1	1	1	1	1	ON	ON	ON

Pulse Generator

The pulse generator circuit uses the SG-TRG signal from the acquisition and step generator control circuit and the 128f signal to generate 250 μ s and 500 μ s pulses for high current mode.

U420A is a monostable multivibrator that generates a 500 μ s pulse in response to the SG-TRG signal. The 500 μ s pulse is supplied to the step generator circuit and high current amplifier circuit (diagram 21).

U440A is a delay circuit that delays the SG-TRG signal by 1/128f (approximately 130 μ s at 60 Hz). U420B receives this delayed SG-TRG signal and generates a 250 μ s pulse, which is supplied to the high current amplifier circuit (diagram 21) and unblanking and Z select circuit (diagram 10).



5 COLLECTOR SUPPLY GENERATOR

The collector supply generator circuit, located on the A3 A/D board, consists of a sine-square wave timing generator, sine-square wave generator, collector level control circuit and high voltage sine-square wave attenuator circuit. These circuits generate a sine-square wave synchronized to the line frequency, which is the source of the collector signal in the HIGH VOLTAGE mode, and a DC signal which is the source of the collector signal in HIGH CURRENT mode.

Sine-Square Wave Timing Generator

This circuit consists of PLL (phase-locked loop) U110, counter U120 and window comparator U130.

U110 is synchronized with line frequency. It supplies the clock signal for U120, which generates signals 32f, 16f, 8f, 4f, 2f, and f.

U130A and U130B check the input voltage of the VCO (voltage controlled oscillator) and determine whether the PLL is locked.

Sine-Square Wave Generator

The sine-square wave generator circuit consists of U140, U150, U160, U170 and U220B. From the 32f, 16f, 8f and 4f signals U140 generates the switching signal for the 1-to-8 line switch U150.

U150, U160, U170 and U220B are an integrating-type ramp signal generator. U150 and U220B control the slope of the ramp waveform. Feedback from U160B generates a sine-square wave with a fixed amplitude as shown in Figure 2-3.

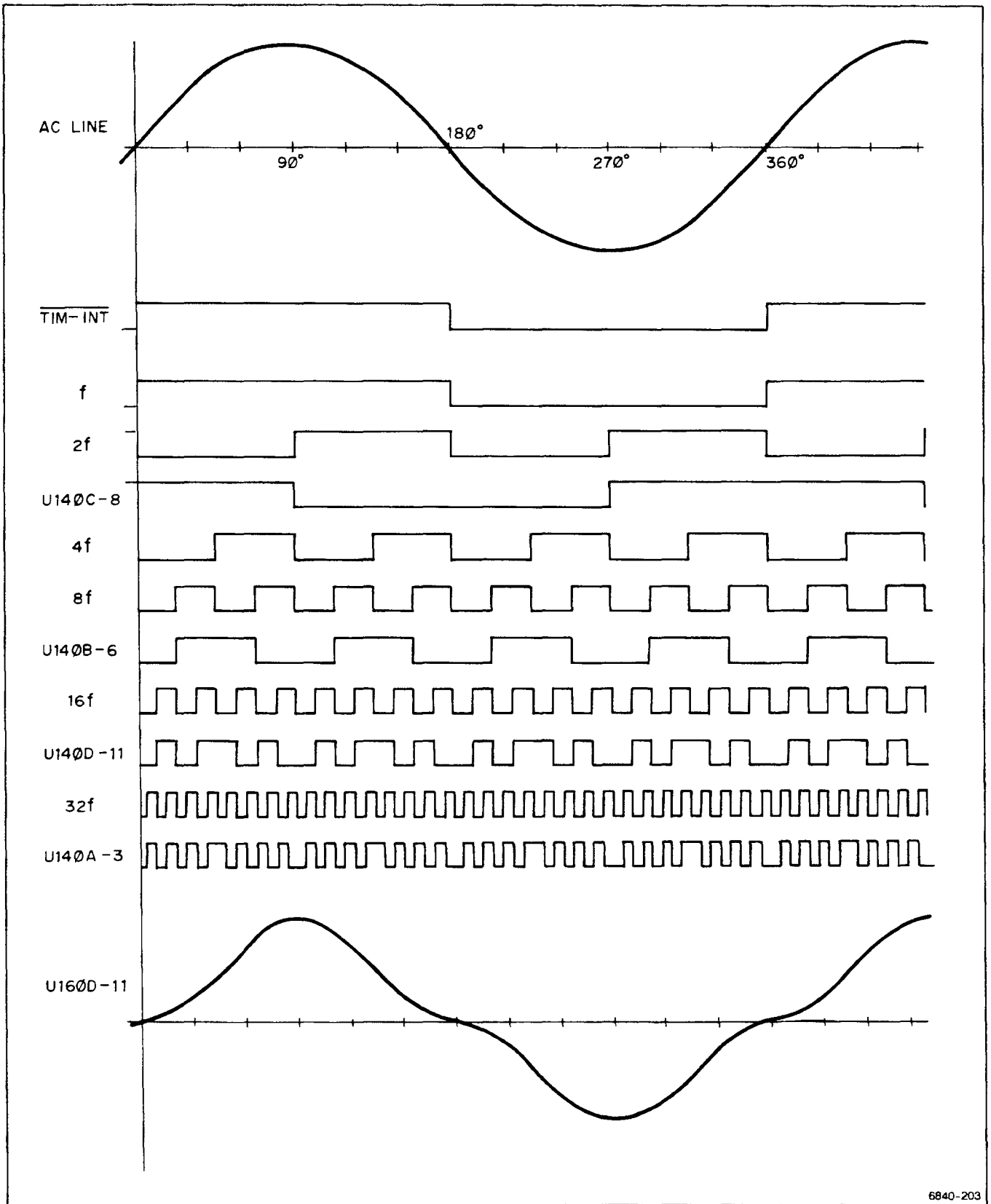
Collector Level Control

The collector level control circuit controls the amplitude of the collector supply.

U200 and U210A convert a digital value set by the COLLECTOR SUPPLY VARIABLE control on the front panel to a DC signal in the range from +2V to -2V.

This DC signal is supplied to the A16 High Current Control board as a source signal for determining the output level of the collector supply in high current mode.

This DC signal is also supplied to the high voltage sine-square wave generator circuit to control the amplitude of the sine-square signal, thereby controlling the output level of the collector supply in HIGH VOLTAGE mode.



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Figure 2-3. Sine-Square Wave Generator Timing.

High Voltage Sine-Square Wave Attenuator

The high voltage sine-square wave attenuator circuit consists of a VCA (voltage controlled amplifier) comprising U260A and U210B and an output control switch comprising U520C and U590B.

The VCA attenuates the amplitude of a 4 V p-p sine-square signal supplied from the sine-square wave generator circuit by means of a DC signal supplied from the collector level control circuit, and outputs the result to the A6 Collector Amplifier board. Figure 2-4 shows the characteristic of the VCA.

The output control switch is switched by the output control logic. (See the description for diagram 4, Control and Step Generator.)

6 ACQUISITION

The acquisition circuit, located on the A3 A/D board, consists of an S/H (sample and hold) and select circuit, A/D circuit, A/D timing circuit, acquisition memory control circuit, acquisition memory circuit and bus driver circuit.

These circuits perform A/D conversion of the HD and VD signals from the A4 Display Control board, write them into acquisition memory, and transfer data to the CPU.

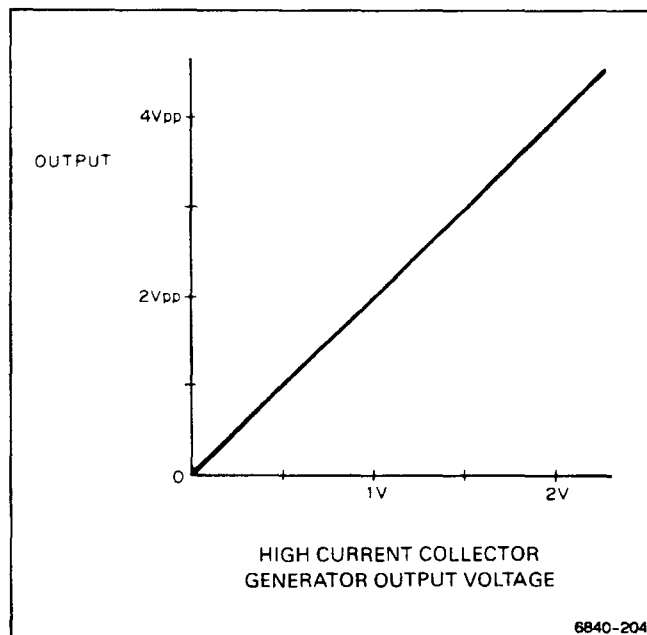


Figure 2-4. VCA Characteristic.

S/H and Select

The S/H (sample and hold) and select circuit consists of U600, U610 and U620. U600 and U610 sample and hold the HD and VD (horizontal and vertical gain) signals respectively, acting on control signals from the A/D timing circuit. The VD and HD signals, after being sampled, held, and converted to DC, are selected by 4-to-1 line switch U620 and supplied to the A/D circuit.

A/D

The A/D circuit consists of U630, U640 and U650. U630 is an operational amplifier that converts the -1V to +1V output signal from U620 to the 0 to 5V signal required by A/D converter U640.

A/D Timing

The A/D timing circuit controls the timing of operations from sample and hold of the analog signal through storage in memory. This circuit operates on a 2.5 MHz clock from pin 18 of A/D converter U640. The following description should be read with reference to the timing chart in Figure 2-5.

The A/D timing circuit begins operation on the rising edge of the ACQ-TRG signal from the acquisition and step generator control circuit. When the ACQ-TRG signal sets D flip flop, U660A, U600 and U610 go into the hold state. Two clock cycles later pin 12 of U690B goes low and A/D conversion starts.

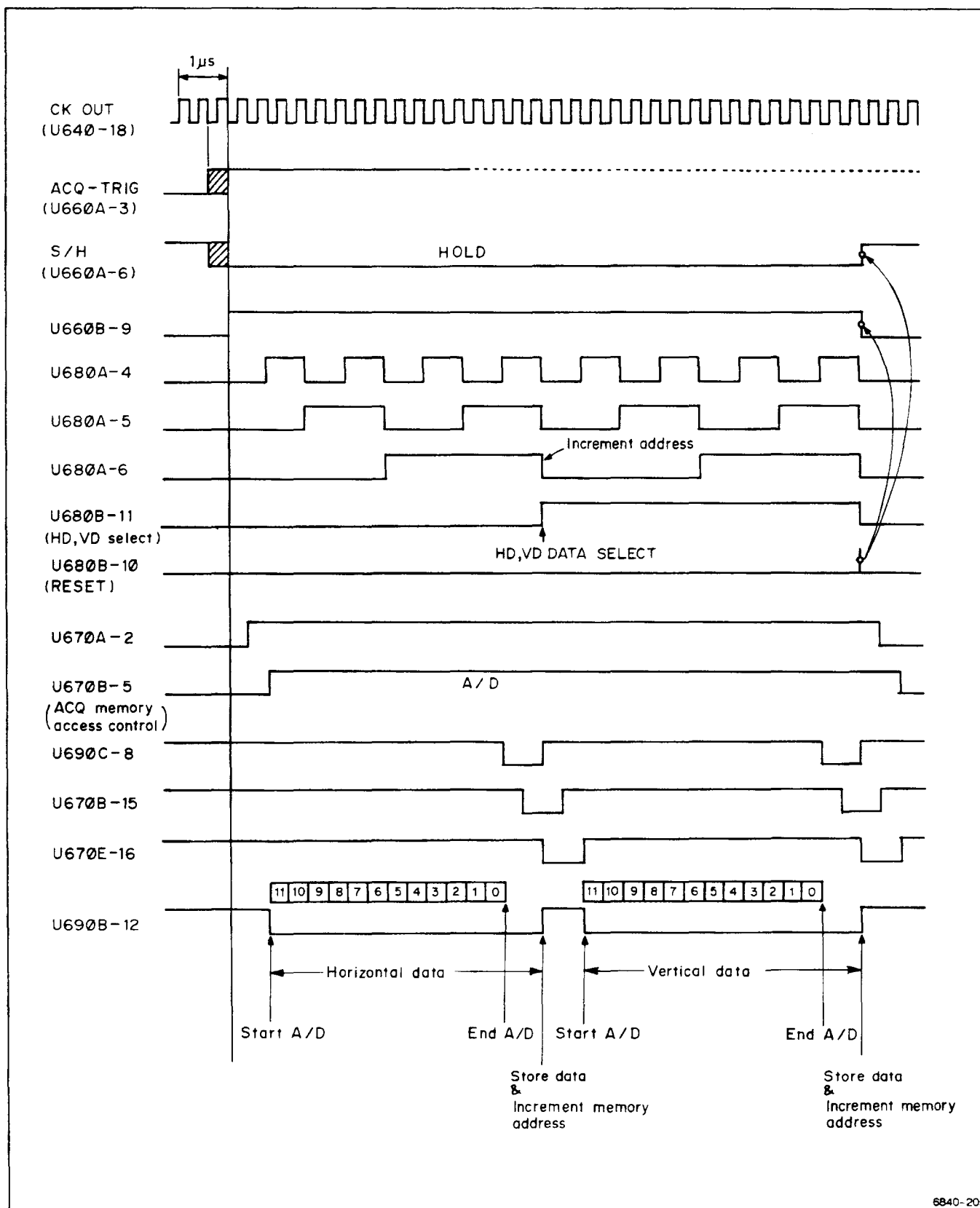
Fourteen clock cycles after the start of A/D conversion, pin 12 of U690B goes high and the data are latched in acquisition memory U750 and U760. At the same time pin 6 of U680A goes low, address counter U720 increments by 1, counter U680 increments by 1, and U620 switches over to the vertical signal (VD).

After the vertical signal has been stored in memory in the same way as the Horizontal signal, U680 increments by 1 and pin 10 of U680 goes high. This resets U660A and U660B, and U600 and U610 begin sampling data again while U660A waits for the next ACQ-TRG signal.

Acquisition Memory Control

This circuit consists of U710F, U700 and U720. U700 switches acquisition memory access between the microprocessor on the A2 CPU board and the A/D circuit. Switching is controlled by the output from pin 5 of U670B. (See Fig. 2-5.)

U720 is a 12-bit counter that generates the address signals supplied to acquisition memory.



6840-205

Figure 2-5. Acquisition Timing.

Acquisition Memory

The acquisition memory circuit consists of U750 and U760. It stores 10-bit data from the A/D circuit under control of the acquisition memory control circuit and is accessed by the CPU.

Bus Driver

The bus driver circuit consists of U770, U780 and U960. U770 and U780 are located between the acquisition memory data bus and CPU bus and perform control functions to prevent collisions between the two buses. U960 notifies the CPU of the lock state of the PLL circuit (U110 of the sine-square wave timing generator; see diagram 5) when requested by the STATUS(L) signal from the CPU control circuit.



7 DISPLAY COUNTER CIRCUIT

The display counter circuit is located on the A4 Digital Display board. The display counter circuit consists of the 4.5 MHz oscillator, display counter, address switch & cpu control, display RAM, bus transceiver, dot cursor generator and character & latch controller. These circuits determine whether the CPU accesses the display RAM or whether the display counter reads out the display RAM contents to display them on the CRT. This circuit also generates the necessary control signals for the digital display. For the display timing, see Figure 2-6.

4.5-MHz Oscillator

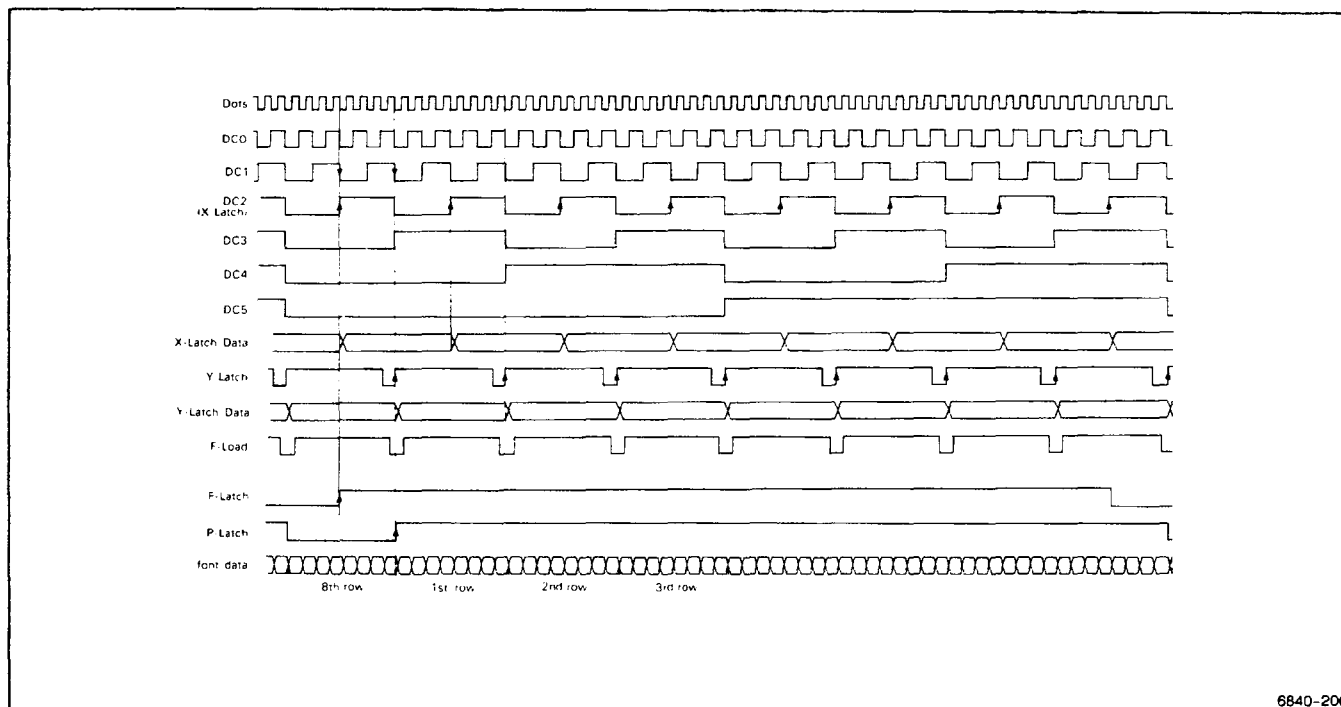
C-MOS oscillator U100 provides the 4.5-MHz clock for the display counter.

Display Counter

Dual 4-bit binary counters U110 and U120 make up the 16-bit display counter. This circuit counts the output of U100, producing the DC0 through DC14 signals. U110A is clocked by the dot cursor generator output. The DC2 through DC14 signals are supplied to the address switch & CPU control circuit and become display RAM address inputs.

Address Switch & CPU Control

This circuit consists of data selector/multiplexer U130, U140, U150, U160, D-flip flop U350B, gates U310A, U310D, U320B, U320C, U330B, and inverter U340F. The circuit provides address inputs and control signals for the display RAM. The address switch, composed of data selector U130 through U160, is controlled by D-flip flop U350B. When U350B pin 9 is high and the DSP-RAM(L) signal is low, the read/write access of the display RAM by the CPU is enabled. When U350B pin 9 is low, the address switch selects the display counter outputs DC2 through DC14 for display RAM address inputs to display the display RAM contents on the CRT. In this case, when the DSP-RAM(L) signal is low, U330B and U320B supplies CPU control signal WAIT(L) for the CPU until pin 9 of U350B returns high. Table 2-7 shows the relationship between the pin 9 output of U350B and DSP-RAM(L).



6840-206

Figure 2-6. Display Timing.

Table 2-7
Display RAM States

U350B pin 9	DSP-RAM(L)	WAIT(L) address	Display RAM status	Display RAM
1	0	1	CPU address	CPU accesses display RAM
1	1	1	CPU address	Display RAM not accessed
0	0	0	Display counter	Counter accesses display RAM
0	1	1	Display counter	Counter accesses display RAM

Display RAM

The display RAM consists of 8-Kbyte static RAM devices U230 and U240. It stores the display data. Figure 2-7 shows the display RAM memory map.

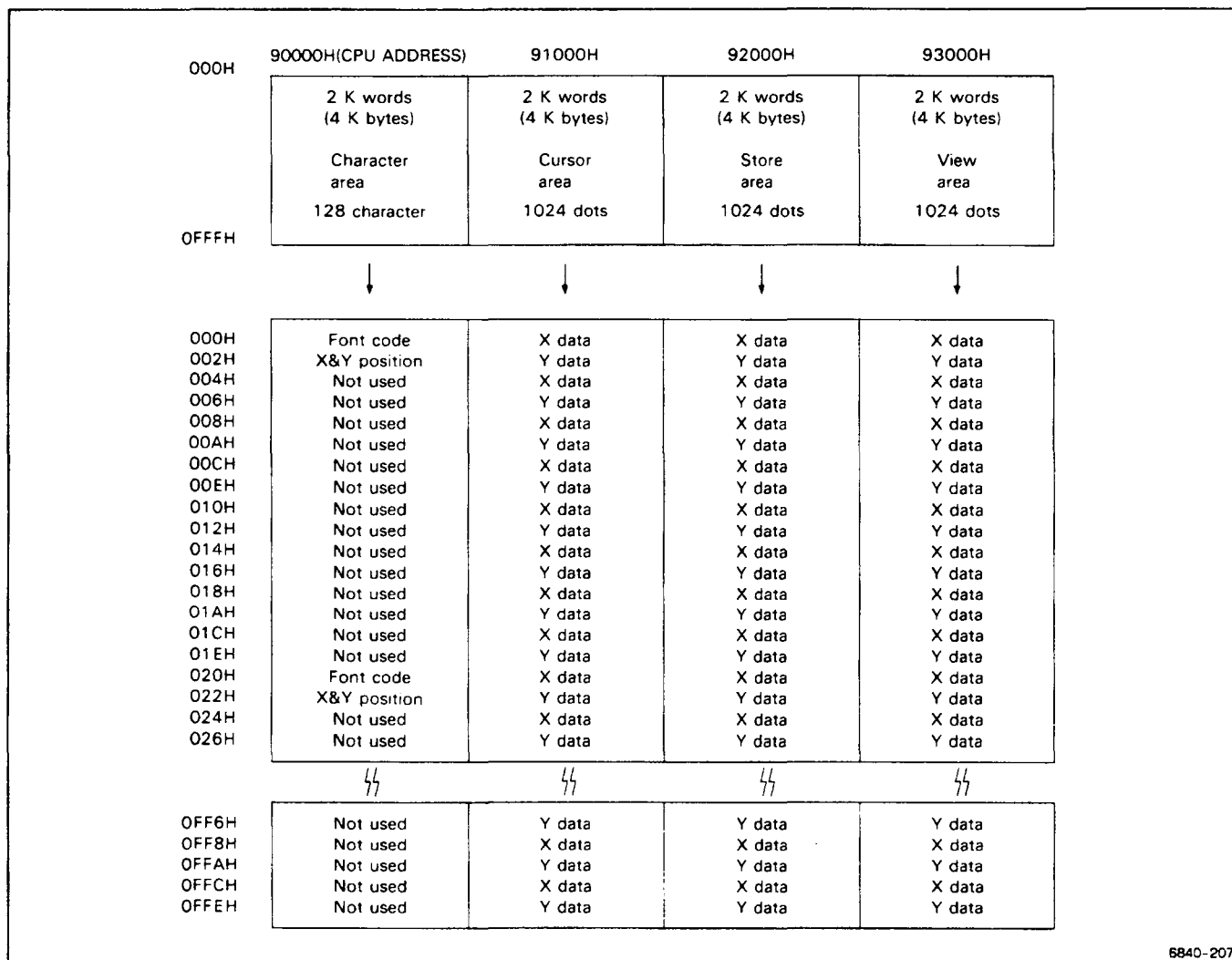
Bus Transceiver

The bus transceiver consists of octal bus transceivers U250 and U260 and gate U320A. When the pin 9 output of U350B is

high and the DSP-RAM(L) signal is low, the bus transceiver is enabled and the display RAM bus is connected to the CPU bus.

Dot Cursor Generator

The dot cursor generator consists of dual 4-bit counter U170, gate U310C, U330A, U330C, U330D and inverter U340C, U340D. The circuit generates the dot cursor signal by stopping the display counter clock. When both the STATUS-1 signal and pin 12 of U330D (DC2) are high, the clock input for U110A is inhibited for 128 cycles of the pin 8 output of U110B.



6840-207

Figure 2-7. Display RAM Memory Map.

Character & Latch Controller

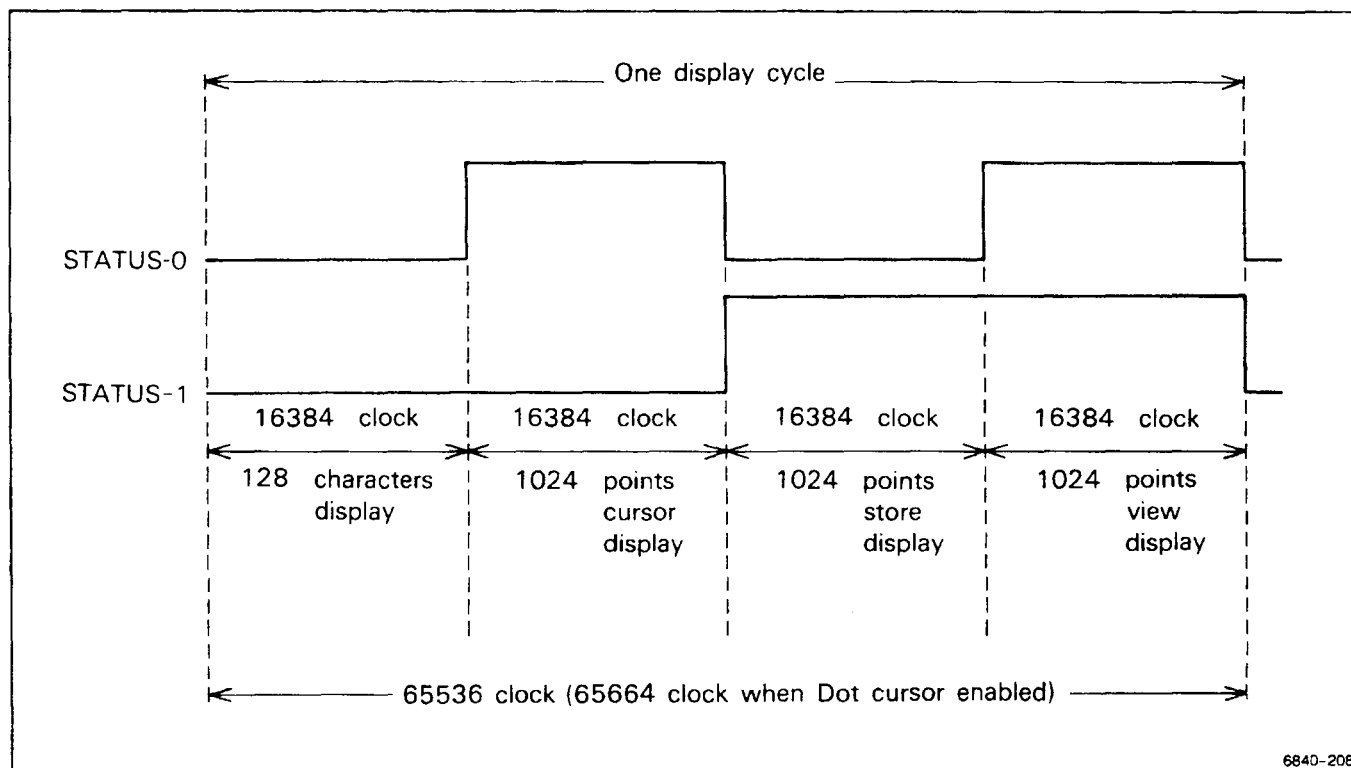
The character and latch controller circuit consists of D flip flops U350A, U360A & B, U370A & B, and U380, plus gates U300A & C, U320D, and U340A, B, & E. This circuit provides necessary control signals to the display D/A converter circuit (diagram 8). STATUS-0 and STATUS-1 signals that determine the display cycle are also produced by this circuit. The display cycle is shown in Figure 2-8.

The STATUS-1 signal provides a display refresh rate of 68.7 Hz (68.5 Hz if the Dot cursor is enabled). The F-LATCH signal latches the character font data. The P-LATCH signal latches the character position data. The F-LOAD signal latches the output of character ROM U620. DC2 latches the curve X data and attributes data (X-LATCH). Y-LATCH latches the curve X,Y data and attributes data. R-SEL selects Z-SEL and DZ(L) signals. DCL3-DCL5 generate Y readout position data.

8 DISPLAY D/A CONVERTER CIRCUIT

The display D/A converter circuit is located on the A4 Digital Display board. The display D/A converter circuit consists of:

1. X data & attribute prefetch latch
2. X-Y data & attribute load latch
3. X 10-bit DAC & Y 10-bit DAC
4. X & Y low-pass filter
5. Font latch
6. Character ROM & shift register
7. X & Y readout position latch
8. Readout attribute latch
9. 8-bit adder
10. X readout step generator
11. X readout DAC and Y readout DAC



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Figure 2-8. Display Cycle.

Display Select Circuit and Acquisition Circuit

These circuits convert the digitized waveform data, readout data and cursor data from the display RAM into an analog signal and generate the Z-axis signal.

X Data & Attribute Prefetch Latch

The X data & attribute prefetch latch consists of octal D flip flops U400 and U420. Because X coordinate data comes prior to Y coordinate data from the display RAM, and the X and Y curve data must simultaneously be latched into the X-Y data & attribute load latch (attribute data is included in X data), temporary storage of the X curve data is needed. X data is latched by the positive edge of DC2.

X-Y Data & Attribute Load Latch

This circuit consists of octal D flip flops U440, U460 and U480. The Y-LATCH signal latches X curve data and Y curve data and provides the data to the X and Y 10-bit DAC. Attribute data included in the X data are also latched. Figure 2-9 shows the X and Y data organization.

X 10-Bit DAC & Y 10-Bit DAC

The X 10-bit DAC consists of 12-bit DAC U500, operational amplifier U502A and associated components. This circuit converts 10-bit X digital signals (X curve data) from the X-Y data & attribute load latch circuit into a ± 1 V analog signal.

The Y 10-bit DAC consists of 12-bit DAC U520, operational amplifier U502B and associated components. Operation of this circuit is the same as the X 10-bit DAC and a ± 1 V Y analog signal is generated.

X Low-pass Filter & Y Low-pass Filter

The X low-pass filter consists of operational amplifier U522A, analog switch U540B, resistors R512, R514 and capacitors C508, C510, C512, C528. This circuit is enabled when the pin 17 output of U440 is high, reducing the high frequency elements of the X analog signal so that the dots displayed on the CRT seem to be a line.

The Y low-pass filter consists of operational amplifier U522B, analog switch U540C, resistors R532, R534 and capacitors C530, C532. This circuit acts just like the X low-pass filter.

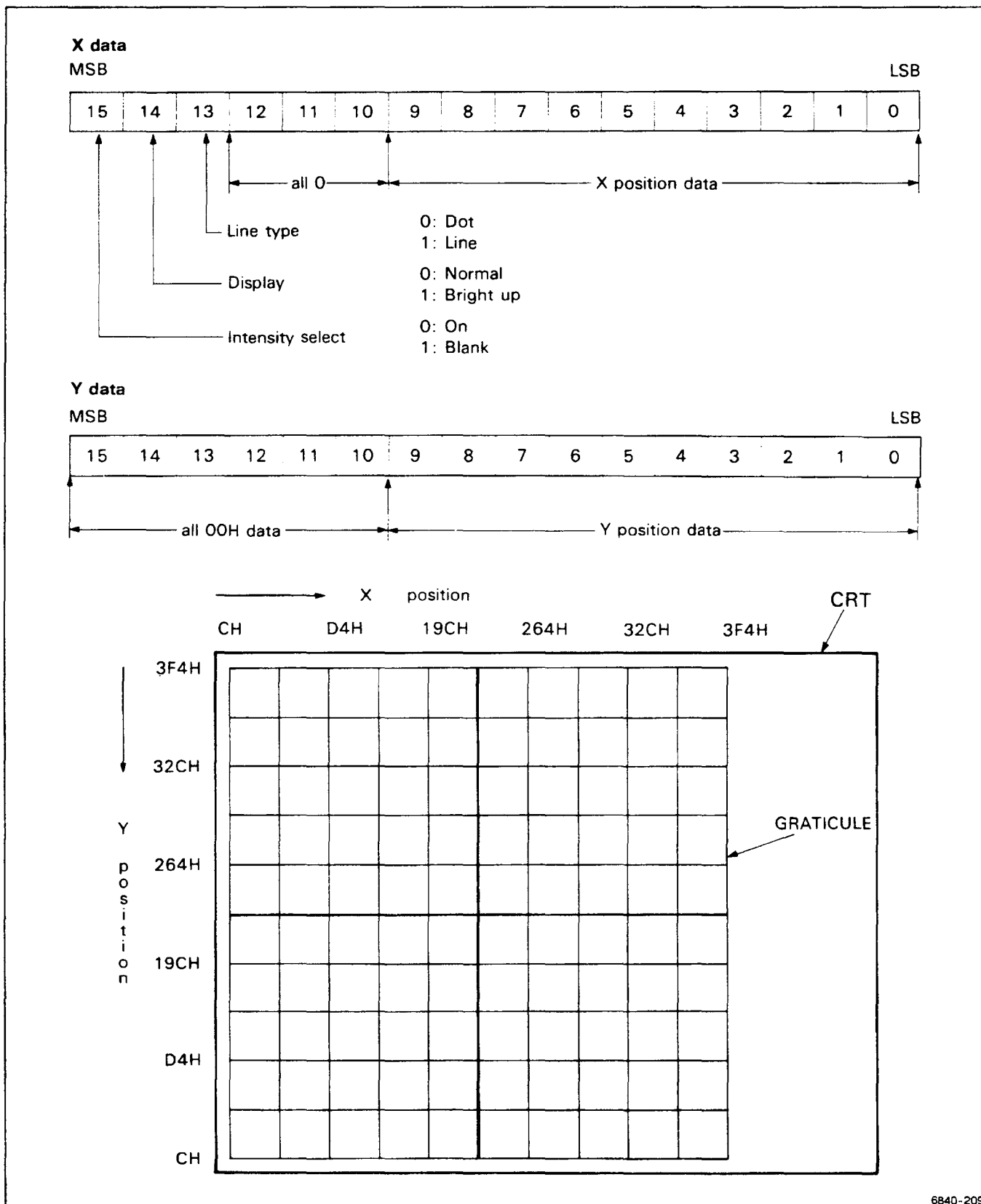


Figure 2-9. X and Y Data Organization.

Font Latch

The font latch consists of octal D flip flop U600. The font data of the readout character is stored by the F-LATCH signal. Figure 2-10 shows the data format of the font data word.

Character ROM & Shift Resistor

This circuit consists of character ROM U620, shift register U640 and NAND gate U310B. This circuit generates Z signals for the readout character. When the F-LOAD signal is low, the output of character ROM U620 is loaded into shift register U640 by the DOTS(L) signal. When the F-LOAD signal returns to high, loaded data are shifted by the DOTS(L) signal to become the serial readout Z signal. U310B shortens the readout Z signal active duration.

X & Y Readout Position Latch

The X & Y readout position latch consists of octal D flip flops U700 and U710. This circuit stores the X and Y position data for the readout character. The position data are latched by the P-LATCH signal. Figure 2-11 shows the readout position data format.

Readout Attribute Latch

Dual D-type flip flop U660 is the attribute latch; it stores readout attribute data prefetched in the X data & attribute prefetch latch. The readout attribute data are latched by the P-LATCH signal.

8-Bit Adder

The 8-bit adder consists of adder U760 and U770. It adds DCL3 through DCL5 to Y readout position data PY0 through PY7. The RY0 through RY7 outputs of this circuit are supplied to the Y readout DAC as the Y readout data.

X Readout Step Generator

The X readout step generator consists of U720B, C, D and resistors R700, R702, R704, R710, R712, R714, R716, R718, and R720. This circuit generates the X step signal from DC0 through DC2 signals and combines this step signal with the X readout DAC output as the X readout signal, RX.

X & Y Readout DAC

The X readout DAC consists of 8-bit DAC U800, operational amplifier U802A, B, analog switch U540A and their associated components. This circuit converts the X position data output

PX0 through PX7 from the X & Y readout position latch into an X analog signal and adds the output of the X readout step generator to the converted output. If pin 5 of the readout attribute latch U660A is high, U540A switches to offset the U802B by the U822B reference voltage so that the readout can be written in the SETUP readout area. The output of U802B provides the X readout signal, RX.

The Y readout DAC consists of 8-bit DAC U820, operational amplifier U822A and associated components. This circuit converts the RY0 through RY7 outputs of the 8-bit adder into the Y readout signal, RY.



DISPLAY OFFSET CIRCUIT

The display offset circuit is located on the A5 Display Control Board. The display offset circuit consists of the Control logic circuit, polarity select circuit, source select circuit, zero & invert select circuit, and X and Y gain select circuits. These circuits select the horizontal and vertical source inputs for the CRT display and provide them with calibrated offset voltages to execute display functions such as CRT CAL, DISPLAY INVERT and COLLECTOR SUPPLY POLARITY.

Control Logic

U100, U120 and U140 are 8-bit addressable latches and U160A and B form a dual, 2-line to 4-line decoder/multiplexer. These components form the control logic stage. This circuit decodes the address A1 through A5 from the CPU. D0 data from the CPU determines the display functions. Table 2-8 shows the display functions that are controlled by the address lines A1 through A5 and data line D0.

Polarity Select

The polarity select circuit consists of analog switches U660, U670, U680, U685, operational amplifiers U690, U695 and their associated components. This circuit provides display offset resulting from the setting of the front panel COLLECTOR SUPPLY POLARITY switch.

U685 pin 9 provides the display offset when the COLLECTOR SUPPLY POLARITY switch is set to + or -.

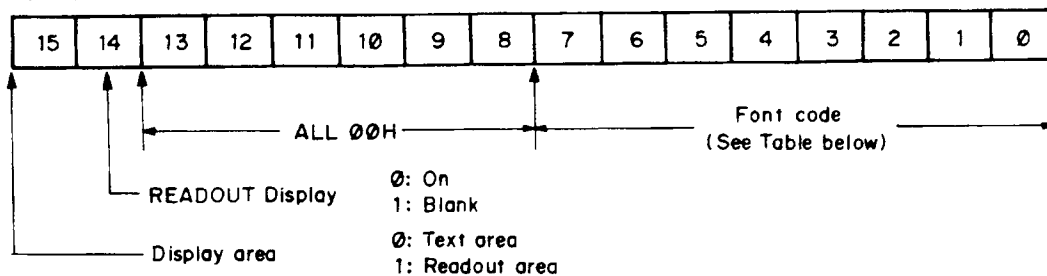
Source Select

The source select circuit consists of analog switches U600 and U610. U610 selects the horizontal source input from the (NPN or PNP) CAL voltages or H-OUT signal. U600 selects the vertical source input from the (NPN or PNP) CAL voltages or V-OUT signal.

Zero & Invert Select

The zero & invert select circuit consists of analog switches U605 and U615. This circuit determines if the ZERO offset

Font data format



FONT CODE

4MSB HEX representation

4LSB
HEX
representation

	00	10	20	30	40	50	60	70	80	90	A0	B0	C0	D0	E0	F0
00	NU	DE		0	@	P	,	p	▶			—	タ	ミ	=	
01	SH	D1	!	1	A	Q	a	q	↑		□	ア	チ	ム		円
02	SX	D2	"	2	B	R	b	r	↓		「	イ	ツ	メ		年
03	EX	D3	#	3	C	S	c	s	⇒		」	ウ	テ	モ		月
04	ET	D4	\$	4	D	T	d	t	⇐		:	エ	ト	ヤ		日
05	EN	NK	%	5	E	U	e	u			.	オ	ナ	ユ		時
06	AK	SY	&	6	F	V	f	v			ヲ	カ	ニ	ヨ		分
07	BL	EB	'	7	G	W	g	w			ァ	キ	ヌ	ラ		秒
08	BS	CN	(	8	H	X	h	x			ィ	ク	ネ	リ		千
09	HT	EM	)	9	I	Y	i	y			ゥ	ケ	ノ	ル		市
0A	LF	SB	*	:	J	Z	j	z			ェ	コ	ハ	レ		区
0B	VT	EC	+	;	K	(	k	{			ォ	サ	ヒ	ロ		町
0C	FF	FS	,	<	L	\	l	!			ャ	シ	フ	ワ		村
0D	CR	GS	-	=	M	}	m	}			ュ	ス	ヘ	ン		人
0E	SO	RS	.	>	N	^	n	~			ョ	セ	ホ	"		口
0F	SI	US	/	?	O	_	Ω	DL			ッ	ソ	マ	.		

6840-210

Figure 2-10. Data Format of The Font Data Word.

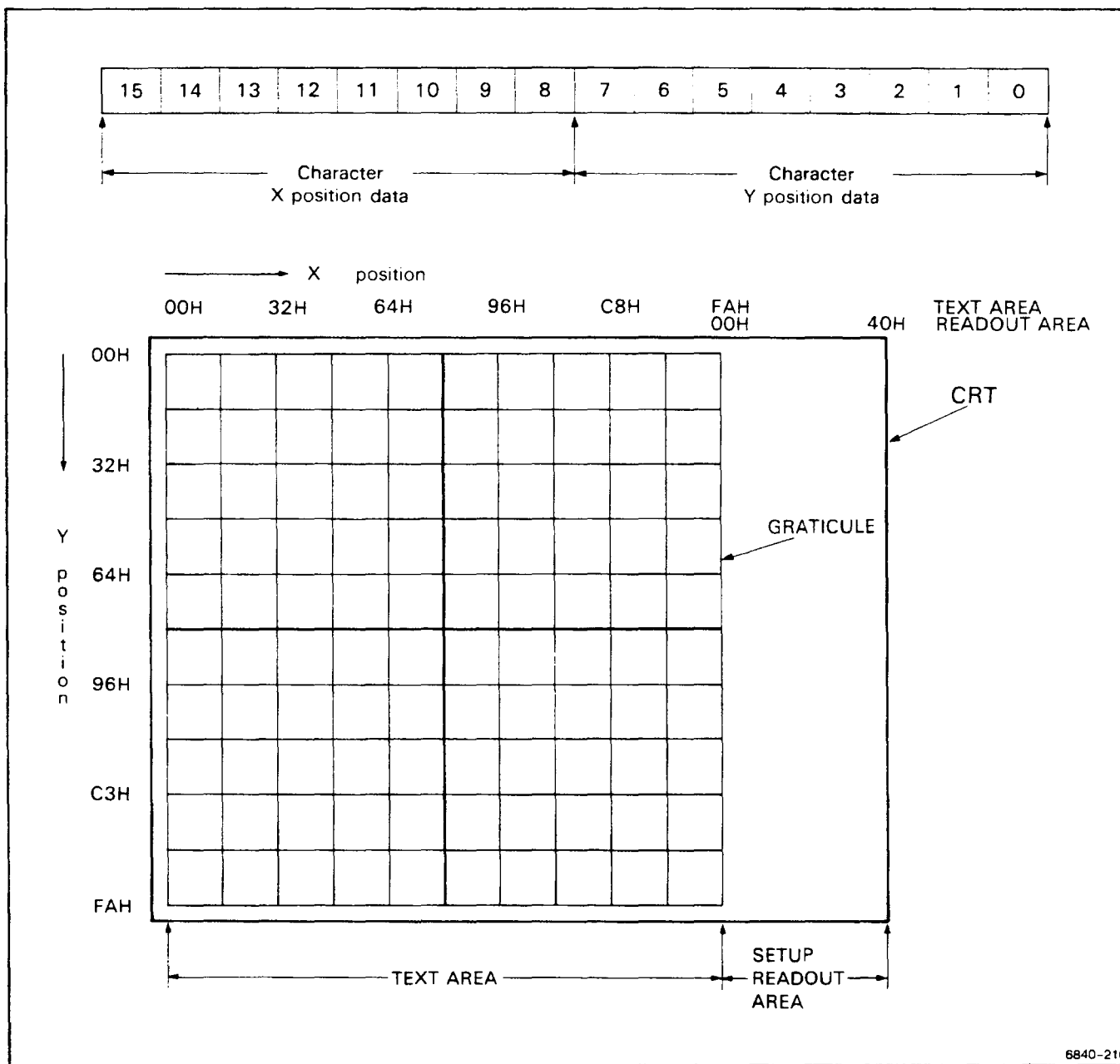


Figure 2-11. Data Format of Readout Character Position.

voltage (0 V) or the display offset signal is used for the source input and if the source input is inverted.

LOGIC. In the 371 the HMAG signal is always low, so the gain is always 1.

X Gain Select

The X gain select circuit consists of operational amplifier U630, U635, U655, analog switch U650 and associated components. This circuit determines the gain of the selected X source input as set by the HMAG signal from the CONTROL

Y Gain Select

The Y gain select circuit consists of operational amplifier U620, U625, U645, analog switch U640 and their associated components. This circuit operates the same as the X gain select circuit. The output of this circuit, VD, is supplied to the S/H and select circuit (part of the A3 A/D board).

Table 2-8
Display Function

A5	A4	A3	A2	Address		Signal	Display function determined by D0
				A1	HEX		
0	0	0	0	0	00	D00	
0	0	0	0	1	02	D01	
0	0	0	1	0	04	D02	offset
0	0	0	1	1	06	D03	
0	0	1	0	0	08	D04	
0	0	1	0	1	0A	D05	offset polarity
0	0	1	1	0	0C	not used	(1 for minus)
0	0	1	1	1	0E	not used	
0	1	0	0	0	10	V00	1 for NPN mode
0	1	0	0	1	12	V01	1 for AC mode
0	1	0	1	0	14	H00	1 for NPN mode
0	1	0	1	1	16	H01	1 for AC mode
0	1	1	0	0	18	VSRC	1 for SG sig
0	1	1	0	1	1A	HSRC	1 for SG sig
0	1	1	1	0	1C	MOV	1 for offset
0	1	1	1	1	1E	MOH	1 for offset
1	0	0	0	0	20	CAL	0 for cal
1	0	0	0	1	22	ZERO	1 for zero
1	0	0	1	0	24	INVERT	1 for invert
1	0	0	1	1	26	VMAG	1 for mag
1	0	1	0	0	28	HMAG	1 for mag
1	0	1	0	1	2A	NON-STORE	1 for non-store
1	0	1	1	0	2C	not used	
1	0	1	1	1	2E	not used	

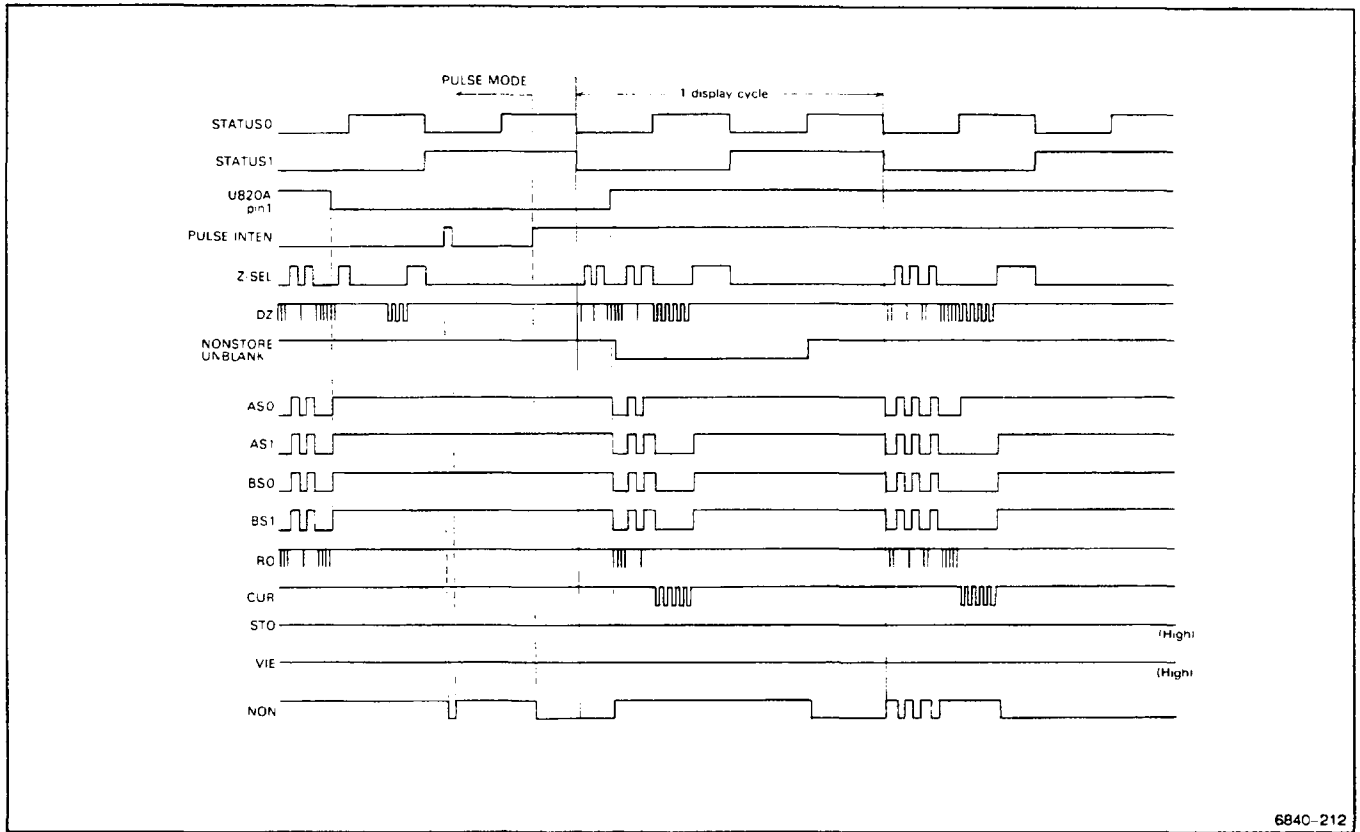
10 DISPLAY SELECT

The display select circuit is located on the A5 Display Control board. The circuit consists of the signal select logic circuit, unblank & Z select circuit, and the horizontal & vertical preamp. This circuit block selects and amplifies the source inputs that are displayed on the CRT. Selection of the source

inputs are performed by the signal select logic circuit. The Z signal for the source inputs is controlled by the unblank & Z select circuit. Figure 2-12 and Figure 2-13 show the display select timing.

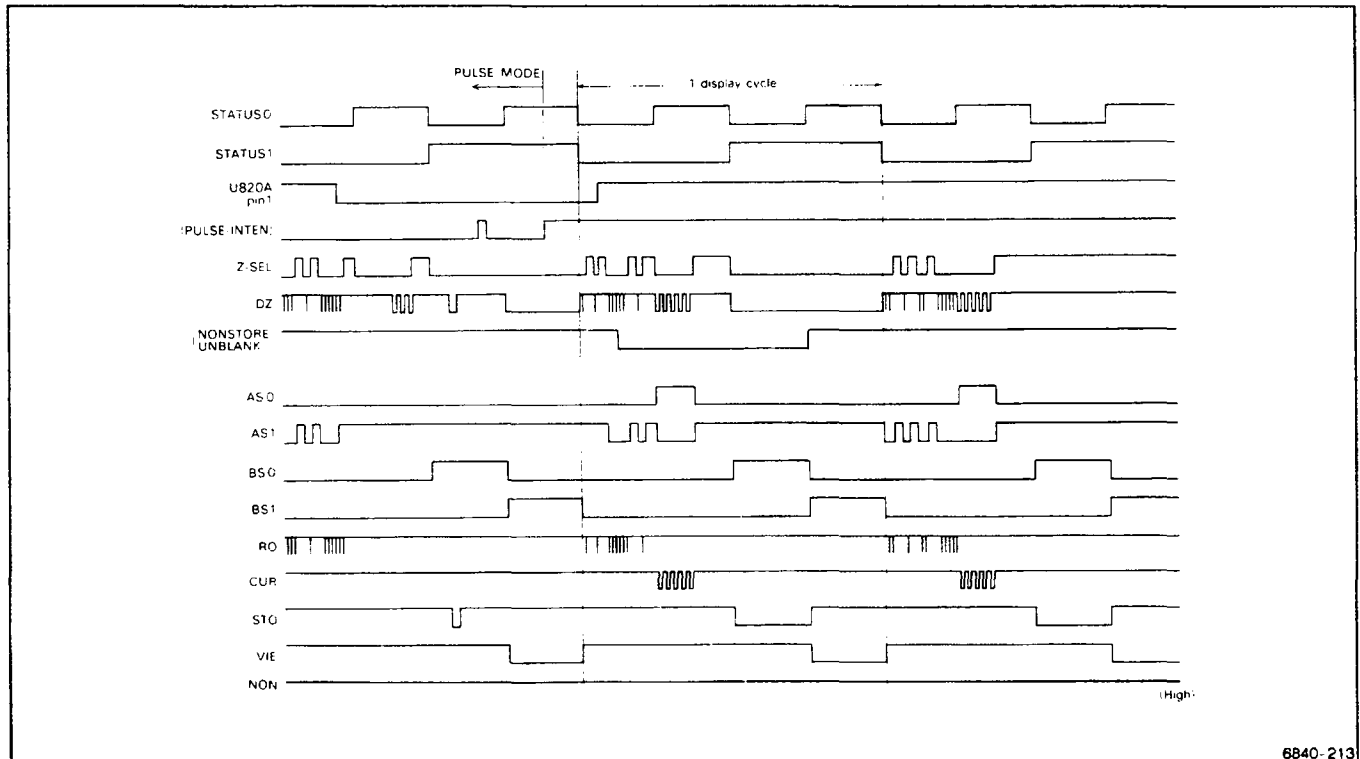
Signal Select Logic

The signal select logic circuit consists of decoder U800B, the lower half of data selector U810, operational amplifier



6840-212

Figure 2-12. Display Select Timing (with NON-ST high).



6840-213

Figure 2-13. Display Select Timing (with NON-ST low).

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U820A, NAND gate U850A, B, C, D, U860A, inverter U840A, C, F and associated components. This circuit generates two kinds of select signals: AS (AS0, AS1) and BS (BS0, BS1). Decoder U800B and NAND gate U850B, C, D generate the BS0 and BS1 select signals as follows:

Display cycle signals STATUS-0 and STATUS-1 are applied to decoder U800B, so when the pin 6 output of U850B is high, outputs of U800B are inverted by NAND gate U850C and U850D, becoming the BS0 and BS1 signals. When the pin 6 output of the NAND gate U850B is low, the BS0 and BS1 signals are both high.

The two input signals to NAND gate U850B (NON-ST and AS1) determine the non-store display cycle. When NON-ST is high, the active AS1 signal provides the non-store waveform display cycle. This AS1 signal goes active (high) in one of the following conditions:

1. STATUS-1 is high
2. Z-sel is high
3. Output of comparator U820A is low (this occurs if the front panel READOUT/CURSOR INTENSITY control is adjusted counterclockwise to lower the voltage level of the A-INTEN below 2.5 V).

The AS1 signal determines the AS0 signal. AS1 signal is applied to the select input (pin 2) of data selector U810 and provides either the NON-ST signal or STATUS-0 signal to its output as AS0.

Unblank & Z Select

The unblank and Z select circuit consists of transistors Q850, Q852, Q860, Q862, Q870, the upper half of data selector U810, demultiplexer U800A, U830B, gate U860C, U860D, U870A and associated components. The unblank logic consists of U810, U860C, U860D and U870A. This circuit is provided to cut off the Z signal when the front-panel switches are changed. When the display mode is NON STORE, U810 selects the pin 3 input. This input is controlled by the P-INTEN and NST-UNBLK signals. When either of these signals turns low, pin 3 input of U810 turns to high, and the pin 7 output of U810A turns all outputs of demultiplexer U800 and U830B high, so that the Z signal is disabled. The Z select circuit outputs the Z signal that corresponds with the display cycle. The Z signal is selected by the AS0, AS1, BS0 and BS1 signals.

Horizontal & Vertical Preamp

The horizontal and vertical preamp circuit consists of data selector U500, U520, decoder U830A, transistor Q540-Q543, Q556, Q576, NAND gate U860B, inverter U840B, D and their associated components. This circuit selects the horizontal and vertical signals and amplifies the selected signals. The horizontal signal is selected in data selector U500. AS0 and

AS1 signals are decoded by U830A, U840B, U840D and U860B into signals RON, SON and NON to provide the select input of U500. The selected horizontal signal is applied to the base of Q540 and the H-POS level is applied to the base of Q541. Transistors Q540 and Q541 are configured as an emitter-coupled, paraphase amplifier, with Q556 acting as a constant-current emitter source. The vertical preamp operates the same as the horizontal preamp but has a different amplification factor.



11 COLLECTOR SUPPLY AMPLIFIER

The collector supply amplifier consists of a collector power supply circuit, collector supply amplifier circuit, voltage limiter circuit, and limit detector circuit.

The collector supply amplifier amplifies signals from the sine-square wave generator (located on the A3 A/D board) to provide driving voltage for the collector supply transformer AOT200.

Collector Power Supply

The collector power supply circuit consists of a power supply for the high voltage collector supply and an alarm detect circuit. The power supply, consisting of CR710, CR720, CR730, C710 and C720, supplies power to the A6 Collector Supply Output board.

The collector power supply alarm detect circuit consists of U750, R750, and C750. This circuit outputs the CSPD(L) signal if an abnormal condition in the collector power supply should open the fuse (A0F100) or cut off the collector transformer (AOT200) etc.

Collector Supply Amplifier

The collector supply amplifier consists of operational amplifiers U400A and U400B, transistors Q424 and Q524, FETs Q438, Q440, Q538, and Q540, and diodes CR402 and CR404. This circuit amplifies the signal from the sine-square wave attenuator circuit (A3 A/D board) into the driving voltage for collector supply transformer T200. U400B and associated components form a low-pass filter, and U400A is an inverter. Q424, Q524, Q438, Q538, Q440, and Q540 form a differential output, capacitorless single-ended push-pull circuit. Resistor R412 adjusts the final stage offset.

Transistors Q444 and Q544, resistor pairs R444-R544, R466-R546 and R448-R548, relay drivers U102 and U103, relays K448, K548, K446 and K546, and associated components form a current limiter. This limiter is designed to limit the amplifier output current to 200 mA, 1.2 A or 2 A, depending on the states of the relays. In the 371 relays K448 and K548 are always ON and relays K446 and K546 are always OFF, so the current limit value is fixed at 2 A.

When the output current swing reaches the limit, the voltage drop of each resistor pair turns Q444 or Q544 on and the emitter currents of Q424 and Q524 decrease correspondingly. This in turn limits the gate-to-source voltages of Q438 and Q440 or Q538 and Q540. As a result, output current of this circuit is clamped within the current limit.

Voltage Limiter

This circuit consists of operational amplifiers U210 and U212, analog switch U200 and diodes CR210 and CR212. The circuit limits the board output voltage to 100%, 50%, 25% and 5%, under the control of the A2 CPU board. Analog switch U200 selects the output voltage limit. Operational amplifier U212A is a voltage follower and U212B is an inverter. U210 and diodes CR210 and CR212 make up two diode function generators. This circuit compares the output voltage of U400B with the positive and negative limits of the output voltage, which are set by U200. If the output voltage of U400B exceeds these limits, one of two diode generators U210A or U210B is turned on and the output voltage is clamped within upper or lower limits.

Limit Detector

This circuit consists of operational amplifiers U302A, U302B, U310A, and U310B. U330A senses output voltage. This circuit is not used in the 371.

12 STEP GENERATOR VOLTAGE AMPLIFIER

The step generator voltage amplifier consists of the 1–2–5 ranging circuit, the +55 and –55 V power supply circuit and the voltage amplifier circuit. This circuit transforms the output of the step generator on the A3 A/D board into voltage steps of various amplitudes to be applied to the device under test. The STEP/OFFSET AMPLITUDE control on the front panel determines the amplitude of the steps.

1–2–5 Ranging

The 1–2–5 ranging circuit consists of operational amplifiers U200 and U210, multiplexer U212, and R202, R204, R212, R214 and R216. This circuit converts the 0.2 V/step signal from the step generator on the A3 A/D Board to a 0.1 V/step, 0.2 V/step or 0.5 V/step signal according to the control signals SG1 and SG2. See Table 2–9. The output signal from this circuit is

supplied to the voltage amplifier circuit and current amplifier circuit (diagram 13).

Table 2–9
1–2–5 Ranging of Step Generator Voltage

Range	SG1	SG2	Output
1	0	0	0.1 V/step
2	1	0	0.2 V/step
5	0	1	0.5 V/step

+55 and –55 V Power Supply

This circuit consists of transistors Q700, Q704, Q720 and Q724, operational amplifiers U704A and U704B, and resistors R708, R710, R728 and R730. It supplies voltage to the voltage amplifier circuit.

Voltage Amplifier

When the STEP GENERATOR SOURCE is set to VOLTAGE, the V signal (VSG) goes high, output relay K600 closes, and a voltage step signal is output.

The signal from the 1–2–5 ranging circuit is applied to an inverting amplifier consisting of R400, R402, R404, R406 and U406. When the STEP/OFFSET AMPLITUDE control on the front panel is set to 1 V/step, 2 V/step or 5 V/step, the X10 signal goes high and R400, R403 and R404 are selected by U300A and U300B, making the voltage gain of the inverting amplifier U406 equal 1. At other settings of the V/step control the X10 signal is low, so R401, R402 and R406 are selected and the voltage gain is 0.1. The output signal from this inverting amplifier is applied to an inverting amplifier with voltage gain 10 consisting of U420, Q430, Q436, Q440 and Q446, then via relay K600S to the device under test. The circuit consisting of Q430, Q436, Q440 and Q446 is a power amplifier with a voltage gain of approximately 20.

U418 adds the voltage at the COMMON SENSE connector to the negative input of U420 to maintain the voltage between the STEP GENERATOR VOLTAGE connector and the COMMON connector at the correct value.

CR436, CR438, CR446, CR448, R438 and R448 form a current limiter circuit that limits the current flowing through R438 and R448 to 100mA.

13 STEP GENERATOR CURRENT AMPLIFIER

The step generator current amplifier consists of a control signal latch circuit, a relay driver circuit, and a current amplifier circuit. It transforms the output of the 1–2–5 ranging circuit (diagram 12) into current steps of various amplitudes to be applied to the device under test. The STEP/OFFSET AMPLITUDE control on the front panel determines the amplitude of the steps.

Control Signal Latches

This circuit consists of decoder U150 and 8-bit addressable latches U152, U154 and U156. U152, U154 and U156 control signals from the microprocessor on the A2 CPU board. U150 decodes address signals for the latches.

Relay Driver

Transistor arrays U158 and U160 drive relays K502 through K602. The STEP/OFFSET AMPLITUDE control, STEP GENERATOR POLARITY button, and STEP GENERATOR SOURCE buttons determine the state of the input signals to U158 and U160. When the input signal of a driver is high, the corresponding relay is energized. Table 2–10 shows the control signals for the relays.

Current Amplifier

When the STEP GENERATOR SOURCE control is set to the CURRENT position, the I signal goes high. This high I signal opens K602, causing output of a current step signal.

The signal from the 1–2–5 ranging circuit (diagram 12) passes through an inverting amplifier with voltage gain 1 consisting of U302, R300 and R302 and is applied to U310. U310 and Q332 to Q352 form a voltage follower circuit in which the output voltage is identical to the input voltage to U310. The circuit consisting of Q332, Q334, Q346 and Q350 amplifies positive current. The circuit consisting of Q333, Q336, Q348, and Q352 amplifies negative current.

When the STEP GENERATOR POLARITY setting on the front panel is POS +, the POS signal is high and K522 selects the circuit consisting of Q332, Q334, Q346 and Q350. The output from this circuit passes through one of the current setting resistors R500 to R512 to the device under test. The voltage applied to the device under test is fed back via U320 to the non-inverting input of U302. Figure 2–14 shows a block diagram of this circuit. The current flowing through the current setting resistor is given by the following formula:

$$I_{OUT} = V_{IN}/R_s$$

where I_{OUT} is the current to the device under test

V_{IN} is the input from the 0.5–1–2 ranging circuit

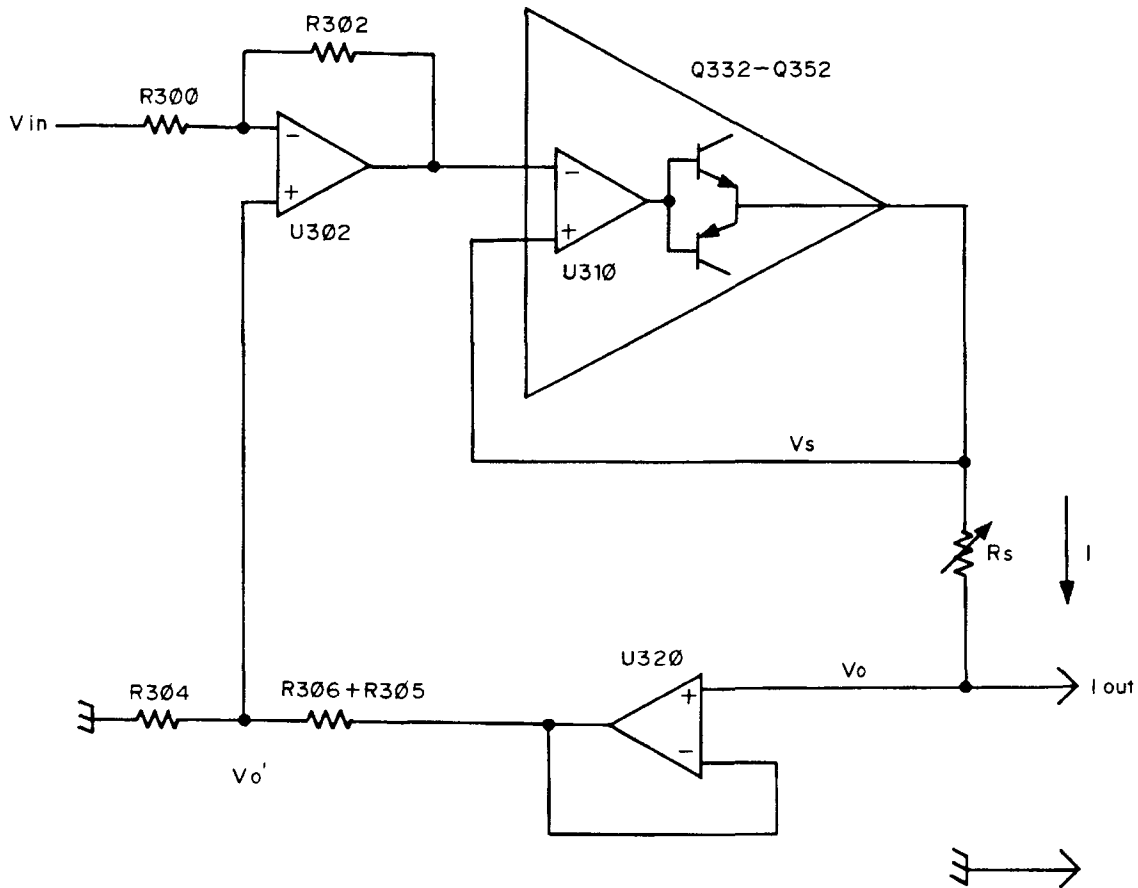
R_s is the value of the current-setting resistor.

The current flowing to the device under test is therefore determined by the output voltage of the 1–2–5 ranging circuit (diagram 12) and the value of the current setting resistor.

Q370, Q372, CR370, CR372, VR370, VR372 and U320 form a floating power supply for U302 and U310. This circuit shifts

Table 2–10
Range Control of Step Generator Current

STEP/OFFSET AMPLITUDE	Relay Control Signals					
	10 μ	100 μ	1 m	10 m	100 m	1
1–5 μ A	0	0	0	0	0	0
10–50 μ A	1	0	0	0	0	0
100–500 μ A	0	1	0	0	0	0
1–5 mA	0	0	1	0	0	0
10–50 mA	0	0	0	1	0	0
100–500 mA	0	0	0	0	1	0
1–2 A	0	0	0	0	0	1



Notes)

- 1) $R300 = R302 = R304 = R306 + R305$
- 2) R_s is the Resistors from R500 to R512 ($100k\Omega \sim 0.1\Omega$)

$$V_o' = \frac{1}{2} V_o$$

$$V_s = -V_{in} + 2 V_o'$$

$$I = (V_s - V_o) / R_s$$

$$I = \frac{-V_{in}}{R_s}$$

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Figure 2-14. Simplified Block Diagram of Step Generator Current Amplifier.

Theory of Operation—371

the power supplies of U302 and U310 according to the output voltage level of U320 to enlarge the operating range of U302 and U310.

14 VERTICAL SENSE

The vertical sense circuit consists of a current sense circuit, 1–2–5 ranging circuit, looping compensator circuit and control latch circuit. The vertical sense measures the collector current of the device under test, excluding stray capacitance effects.

Control Latch

The control latch circuit consists of U602 and U604. U602 latches signals from the A2 CPU board. U604 drives relays K102 to K112. Table 2–11 indicates the relations between control signals V1 to V7 and the VERTICAL CURRENT/DIV control range setting.

Current Sense

The current sense circuit consists of R102 to R106, U110, U112, U116 and AOR100 in diagram 27. Figure 2–15 shows a simplified block diagram of this circuit. AOR100 is the current sense resistor in HIGH CURRENT mode. R102 to R106 sense current in HIGH VOLTAGE mode. The voltages across these resistors are amplified by an instrumentation amplifier

Table 2–11
Control Range of Vertical Sensing

VERTICAL CURRENT/DIV	Control Signal							
		V1	V2	V3	V4	V5	V6	V7
High Current Mode	50 A	0	0	0	1	0	0	0
	20 A	1	0	0	1	0	0	0
	10 A	0	1	0	1	0	0	0
	5 A	1	1	0	1	0	0	0
	2 A	0	0	1	1	0	0	0
	1 A	1	0	1	1	0	0	0
	0.5 A	0	1	1	1	0	0	0
High Voltage Mode	5 mA	0	0	0	0	1	1	0
	2 mA	1	0	0	0	1	1	0
	1 mA	0	1	0	0	1	1	0
	0.5 mA	1	1	0	0	1	1	0
	0.2 mA	0	0	1	0	1	1	0
	0.1 mA	1	0	1	0	1	1	0
	50 μ A	0	0	0	0	1	0	1
	20 μ A	1	0	0	0	1	0	1
	10 μ A	0	1	0	0	1	0	1

consisting of U110, U112 and U116, then sent to the 1-2-5 ranging circuit. This instrumentation amplifier has a large input impedance, due to the presence of a voltage follower stage consisting of U110 and U112 preceding differential amplifier U116, which improves measurement accuracy.

1-2-5 Ranging

The 1-2-5 ranging circuit consists of 8-to-1 decoder U130, operational amplifier U146 and resistors R122 to R152. This circuit amplifies or attenuates the measurement signals from the current sense circuit according to the setting of the

VERTICAL control on the front panel and sends them to the A5 Display Control board. The gain of this circuit is selected as 0.4, 1, 2, 4, 10, 20 or 40 by control signals V1, V2 and V3.

Looping Compensator

The looping compensator circuit consists of C400 to C410, U412, U450 and R412. This circuit removes measurement error due to looping. It operates only in HIGH VOLTAGE mode when the collector voltage is high and the current measurement sensitivity is high.

Looping is a phenomenon that occurs because of current flow in the current sense resistors owing to stray capacitance

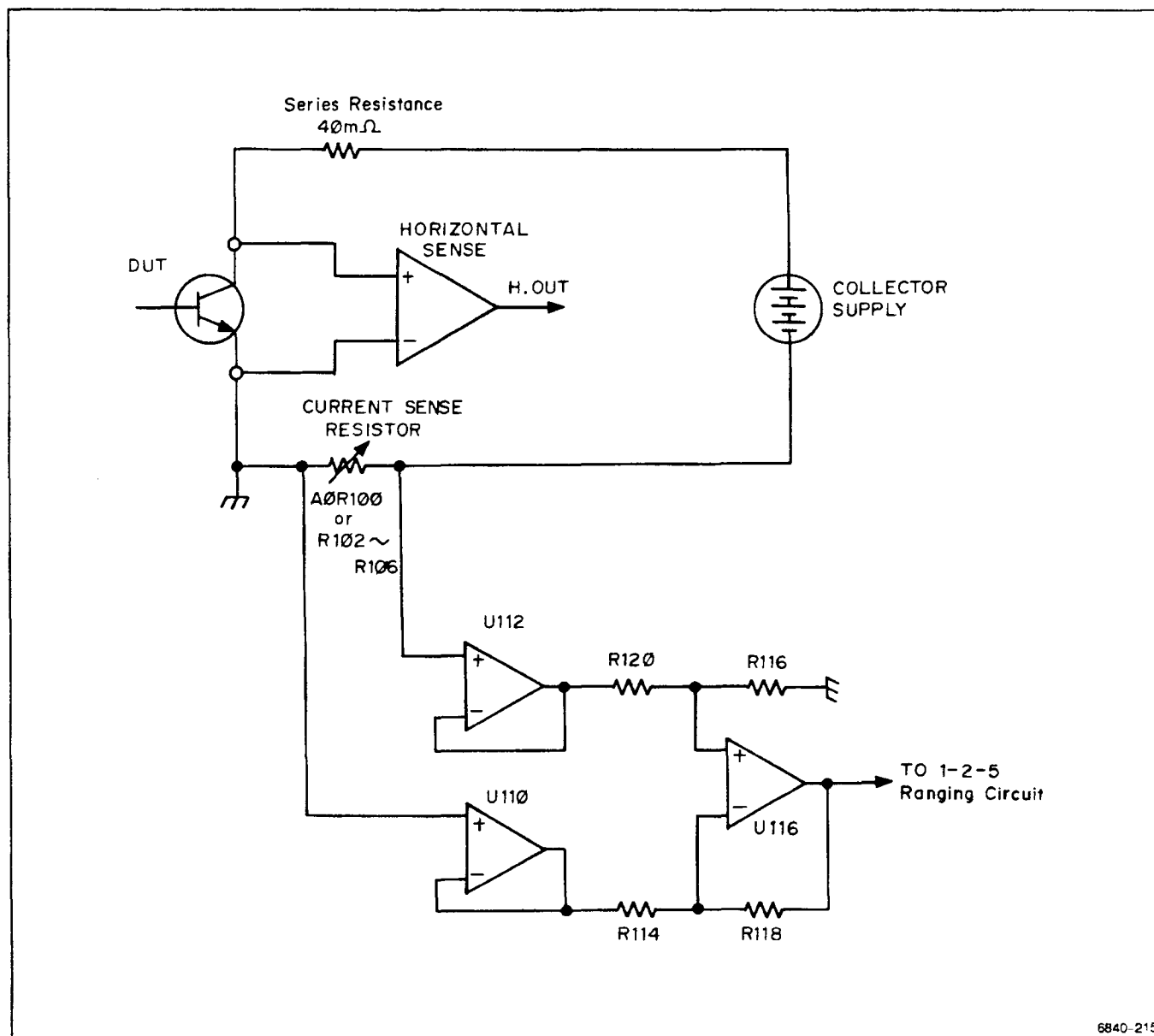


Figure 2-15. Simplified Block Diagram of Vertical Sense Circuit.

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between the collector supply and ground. This can occur at two points, A and B in Figure 2-16. There are accordingly two looping compensators: a cancel circuit to remove the effect of stray capacitance A, and a tangential circuit to remove the effect of stray capacitance B. The cancel circuit consists of C400 to C410, R412 and U412. The tangential circuit consists of U450A, U450B, R450 to R464 and C464. (See Fig. 2-17.) The output from these compensators is amplified by U442. The gain is selected by U420 according to signals V6 and V7. The output of U422 is added to the measurement signal in U116, thus subtracting the voltage caused by stray capacitance. The LOOPING COMPENSATION knob on the front panel controls the amplitude of the output signal from the looping compensator circuit.

15 HORIZONTAL SENSE

This circuit consists of the voltage sense circuit, 1-2-5 ranging circuit, and control latch circuit. It measures the collector voltage or base voltage of the device under test.

Control Latch

The control latch circuit consists of U600, U606, U608 and U610. U600 is an address decoder. U606 and U610 latch

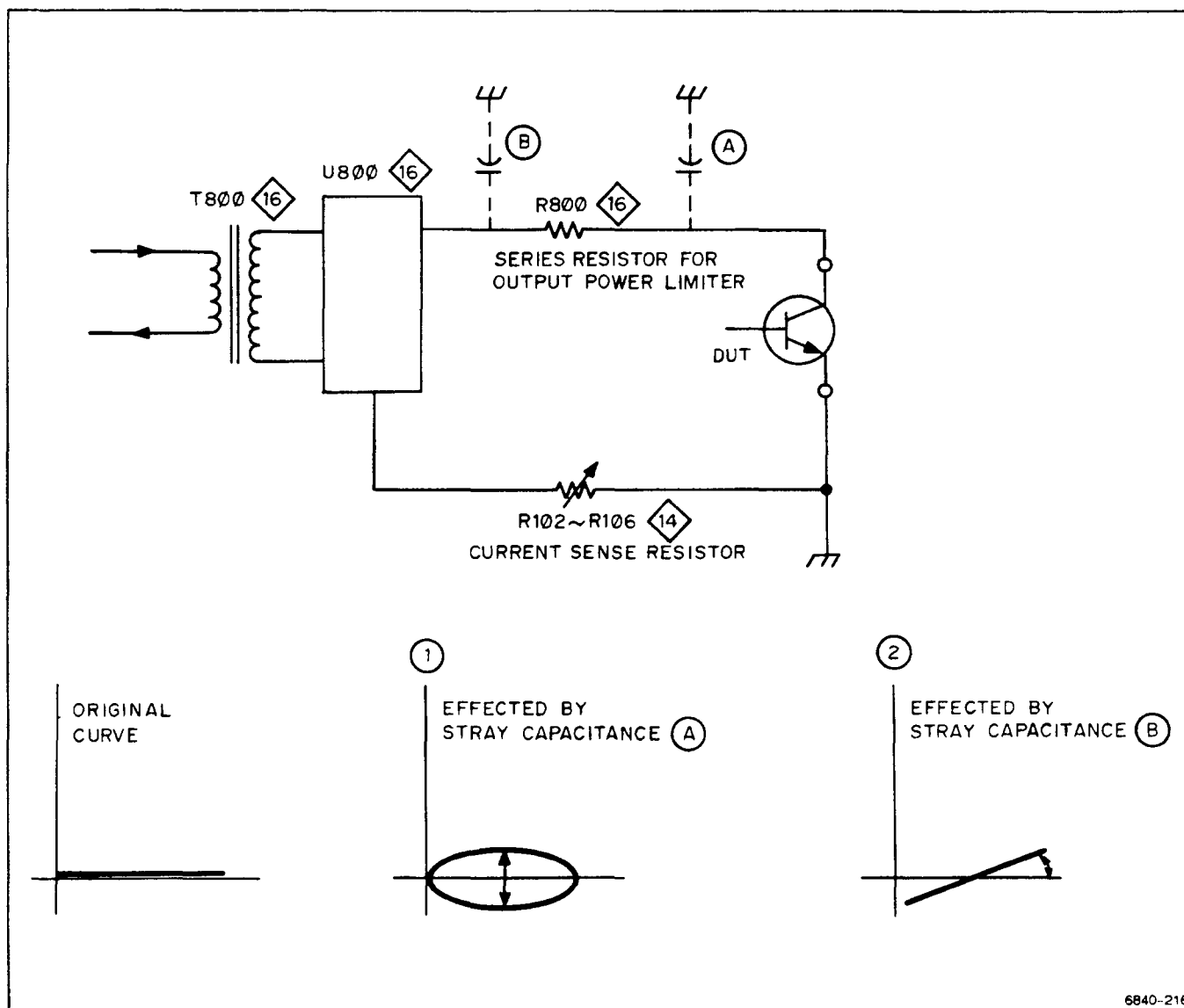


Figure 2-16. Effect of Stray Capacitance.

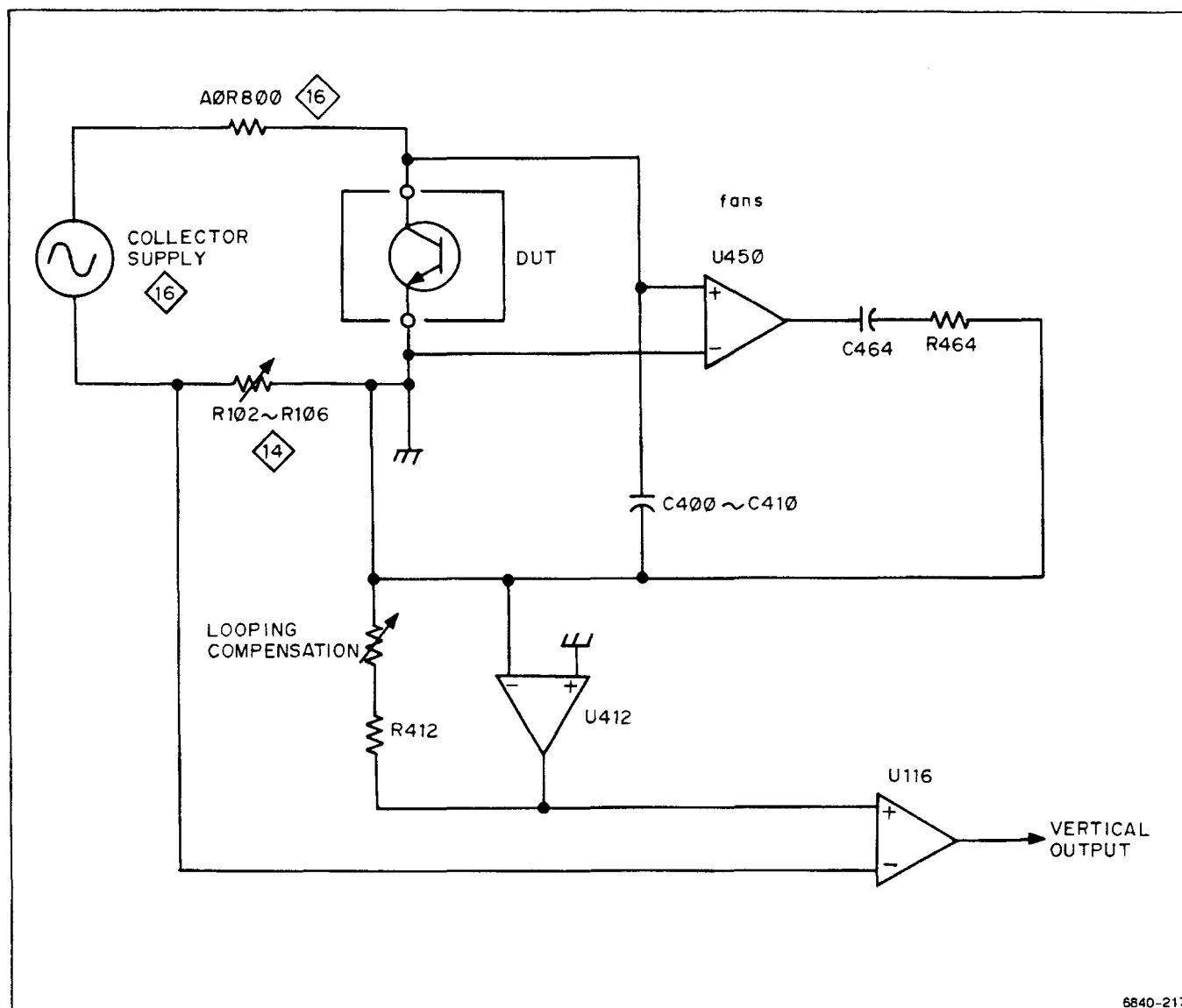


Figure 2-17. Simplified Block Diagram of Looping Compensator.

control signals from the microprocessor on the A2 CPU board. U608 drives relays K202 to K302. Tables 2-12 and 2-13 show the relationships between the control signals and the range setting of the HORIZONTAL VOLTS/DIV control.

Voltage Sense

The voltage sense circuit is divided into a circuit that measures collector voltage in HIGH VOLTAGE mode and a circuit that measures base voltage or collector voltage in HIGH CURRENT mode.

The circuit that measures collector voltage in HIGH VOLTAGE mode consists of U230, U232, U234, U240, U250,

U260, R200, R204, R208 and other components. Figure 2-18 shows a block diagram. The collector voltage is divided by R200, R204 and R208 and input to U230. The voltage division ratio is 1/100 for 50 V/DIV and 1/1000 in other cases. The voltage applied to U230 includes a voltage due to the current flowing through the current sensing resistors R102 to R106. This voltage is detected by U232 and U234 and subtracted in U260. The resistors, labeled RG, RE and RF in the diagram, are switched between 1/100 and 1/1000 according to the voltage division ratio.

The circuit that measures base voltage or collector voltage in HIGH CURRENT mode consists of U300, U234, U260 and other components. Figure 2-19 shows a simplified block diagram. The gain of this circuit can be switched between 1 and 10. The power supply of U300 is floated by Q316 to Q322,

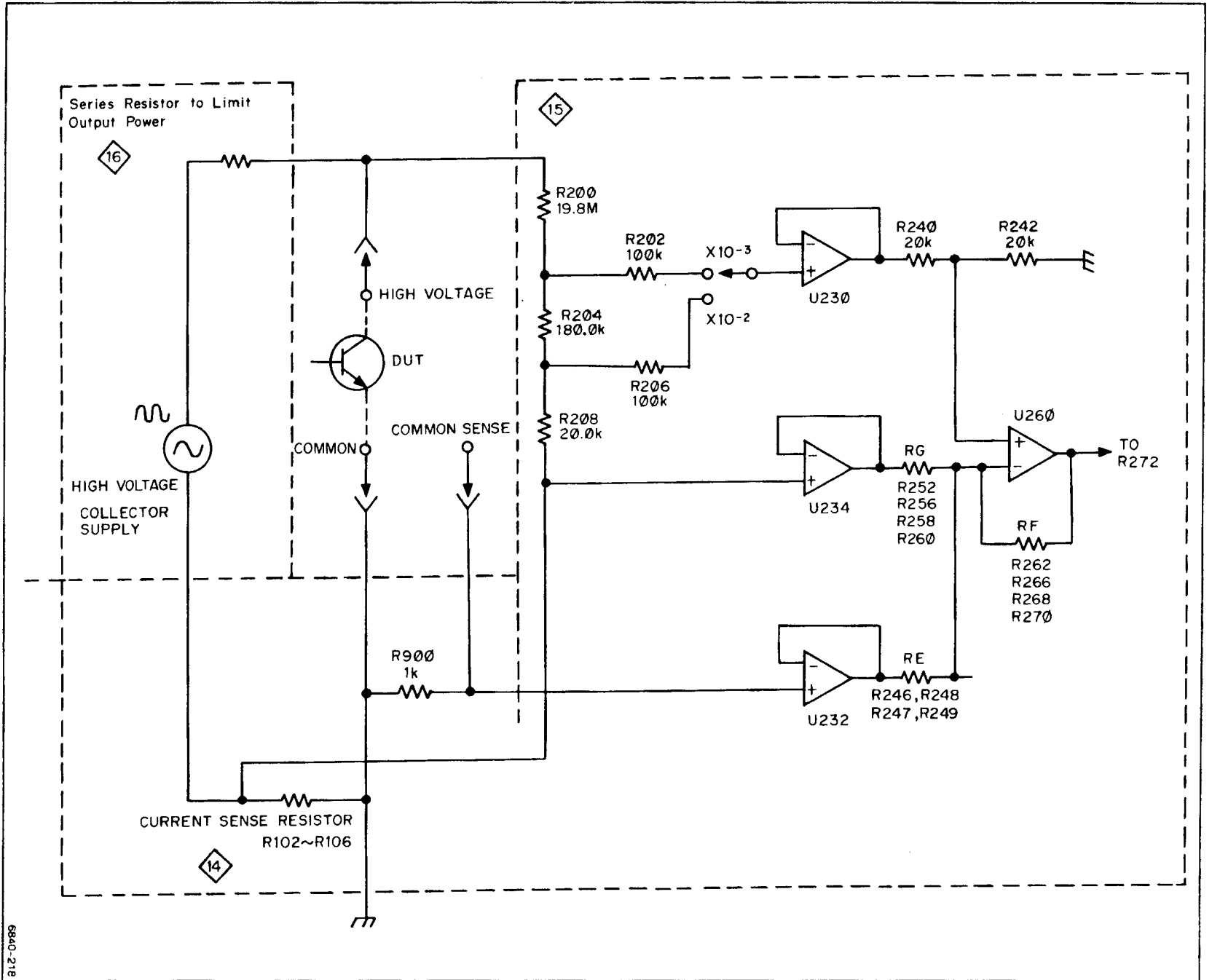
Table 2-12
Range Control of Horizontal Sensing at COLLECTOR Range

HORIZONTAL VOLTS/DIV (COLLECTOR Range)	Control Signal											
		X1	X10 ⁻²	X10 ⁻³	VBE	VGS	H1	H2	H3	H4	H5	H6
High Voltage Mode	500 V	0	0	1	0	0	1	1	0	0	1	1
	200 V	0	0	1	0	0	1	1	0	0	0	1
	100 V	0	0	1	0	0	1	1	0	0	1	0
	50 V	0	1	0	0	0	0	1	0	0	1	1
High Current Mode	5 V	1	0	0	0	0	0	0	0	1	1	1
	2 V	1	0	0	0	0	0	0	0	1	0	1
	1 V	1	0	0	0	0	0	0	0	1	1	0
	0.5V	1	0	0	0	0	0	0	1	0	1	1
	0.2V	1	0	0	0	0	0	0	1	0	0	1
	0.1V	1	0	0	0	0	0	0	1	0	1	0

Table 2-13
Range Control of Horizontal Sensing at STEP GEN Range

HORIZONTAL VOLTS/DIV (STEP GEN Range)	Control Signal											
		X1	X10 ⁻²	X10 ⁻³	VBE	VGS	H1	H2	H3	H4	H	H6
Current Source	5 V	0	0	0	1	0	0	0	0	1	1	1
	2 V	0	0	0	1	0	0	0	0	1	0	1
	1 V	0	0	0	1	0	0	0	0	1	1	0
	0.5 V	0	0	0	1	0	0	0	1	0	1	1
	0.2 V	0	0	0	1	0	0	0	1	0	0	1
	0.1 V	0	0	0	1	0	0	0	1	0	1	0
Voltage Source	5 V	0	0	0	0	1	0	0	0	1	1	1
	2 V	0	0	0	0	1	0	0	0	1	0	1
	1 V	0	0	0	0	1	0	0	0	1	1	0
	0.5 V	0	0	0	0	1	0	0	1	0	1	1
	0.2 V	0	0	0	0	1	0	0	1	0	0	1
	0.1 V	0	0	0	0	1	0	0	1	0	1	0

Figure 2-18. Simplified Block Diagram of Horizontal Sensing in HIGH VOLTAGE Mode.



6840-218

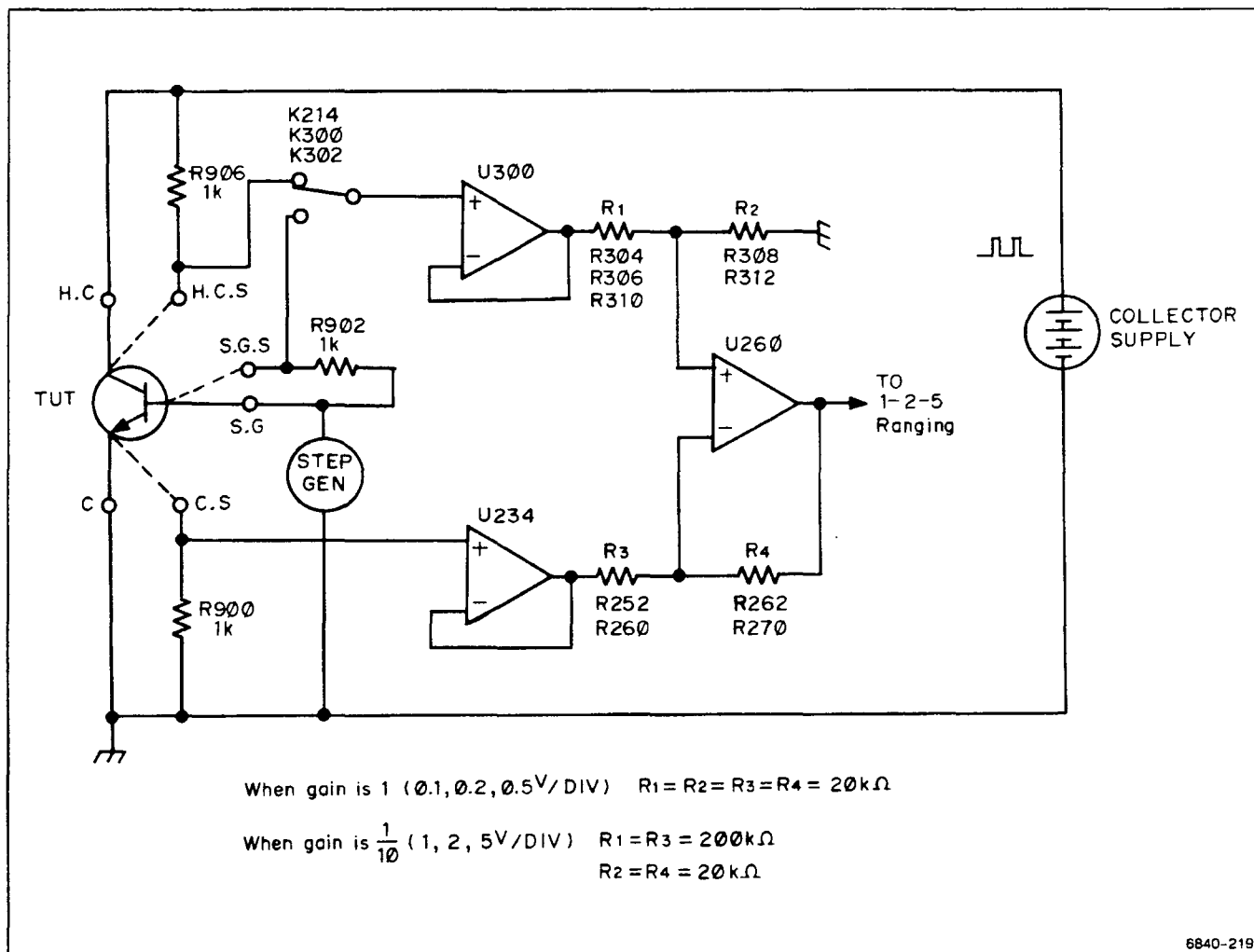


Figure 2-19. Simplified Block Diagram of Collector Voltage Measurement in HIGH CURRENT Mode and Base Voltage Measurement.

VR316, VR322 etc. to extend the input voltage range of U300 to +50 V to -50 V.

voltage output controls the collector supply output, step generator output and collector supply output relays by means of an interlock.

1-2-5 Ranging

The 1-2-5 ranging circuit consists of U270, U280, R272, R274, R278 and R280. The gain of this circuit can be set to 0.4, 1 or 2 by control signals H5 and H6.

Interlock and Overheat Circuit

The interlock and overheat circuit consists of relays K700 and K704, temperature switches A0S92 (diagram 11), A0S904 and A0S906, microswitches A0S600, A0S602, A0S1000, A0S1002 and A0S1004 (diagram 27), monostable multi-vibrators U724A and U724B, and transistor Q740. Figure 2-20 is a simplified drawing of this circuit.

16 COLLECTOR SUPPLY INTERFACE AND HIGH VOLTAGE OUTPUT

This circuit consists of an interlock and overheat circuit, high voltage control circuit, high current control circuit and high voltage output circuit. The collector supply interface and high

When the Test Fixture is not connected to the test fixture connector or the protective cover of the Test Fixture is open, this circuit shuts off the collector supply and step generator outputs to prevent the output of dangerous voltages. A0S600 and A0S602 detect whether the test fixture is connected to the

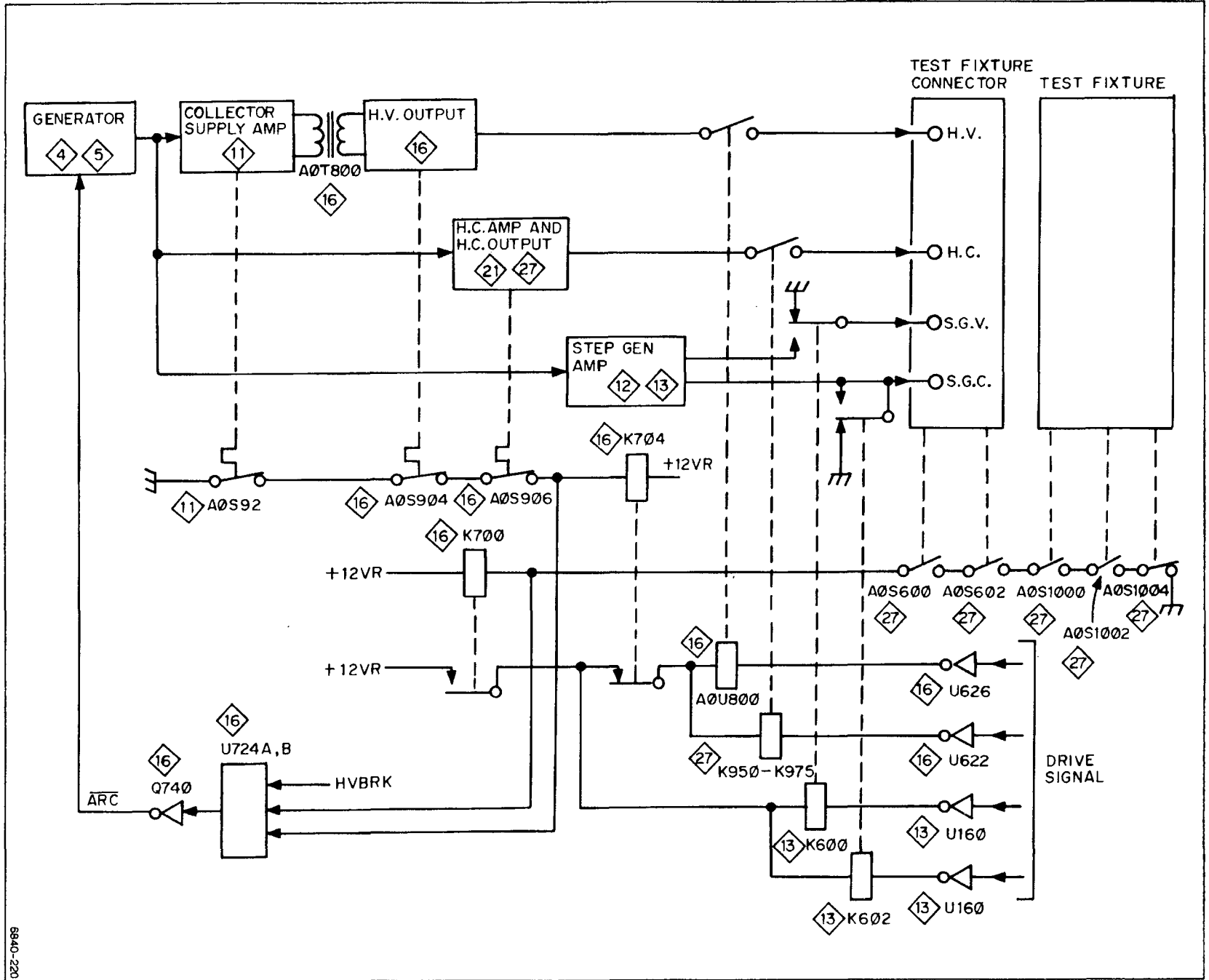


Figure 2-20. Interlock and Overheat Circuit.

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test fixture connector. A0S1000, A0S1002 and A0S1004 detect whether the protective cover of the Test Fixture is open.

A0S92, A0S904 and A0S906 are temperature switches that operate at 70° C. A0S92 detects overheating of MOS FETs Q438, Q440, Q538 and Q540 on the A6 Collector Supply Output board. A0S904 detects overheating of series resistor A0R800 in the high voltage output circuit. A0S906 detects overheating of series resistor A0R960 in the high current output circuit. If overheating is detected, the collector supply and step generator outputs are shut off.

When the Test Fixture is removed from the 371, the protective cover of the Test Fixture is opened, or the 371 overheats, U724A outputs a positive pulse at pin 13. When the COLLECTOR SUPPLY HIGH VOLTAGE breaker on the front panel is set to the DISABLED position, U724B outputs a positive pulse at pin 5. These pulse signal cause an ARC(L) signal at the collector of Q740. The ARC(L) signal stops collector signal output from the A3 A/D Board immediately before the contact of the collector supply output relay breaks, preventing arcing at the collector supply output relay contact.

High Voltage Control

The high voltage control circuit consists of 8-bit addressable latch U624 and transistor array U626. This circuit latches control signals from the microprocessor on the A2 CPU Board and drives the relays in the high voltage relay module A0U800 in the high voltage output circuit. Table 2-14 lists the relay control signals.

High Current Control

The high current control circuit consists of 8-bit addressable latch U620 and transistor array U622. This circuit latches control signals from the microprocessor on the A2 CPU board and drives relays on the A31 Relay board. Table 2-15 lists the relay control signals.

High Voltage Output

The high voltage output circuit consists of transformer A0T800, high voltage relay module A0U800 and resistor A0R800. This circuit steps up the signal from the collector supply amplifier on the A6 Collector Supply Output board to a

Table 2-14
Relay Control Signals for HV Collector Supply

COLLECTOR SUPPLY MODE	Setting POLARITY	Relay Control Signal PEAK POWER WATTS	30 W	+3 kW	-3 kW
HIGH VOLTAGE	NPN+	30 W	1	1	0
		3 W	0	1	0
	PNP-	30 W	1	0	1
		3 W	0	0	1

Table 2-15
Relay Control Signals for HC Collector Supply

COLLECTOR SUPPLY MODE	Setting POLARITY	Relay Control Signal PEAK POWER WATTS	3 kW	+30 V	-30 V
HIGH CURRENT	NPN+	3 kW	1	1	0
		300 W	0	1	0
	PNP-	3 kW	1	0	1
		300 W	0	0	1

maximum 3000 V. A0R800 limits the maximum output power to 3 watts or 30 watts.

17 MAIN KEY

The main key circuit is located on the A11 Main Key board, and consists of the bus buffer circuit, the address decoder circuit, the variable control circuit, and the switch matrix circuit. These circuits interface signals between the A2 CPU board and the A12 Sub Key board, set up VERTICAL, HORIZONTAL and STEP/OFFSET AMPLITUDE settings, and control focus and intensity, etc.

Bus Buffer

Bus buffer U120 isolates the data bus (D0 through D7) from the A2 CPU board. Once through U120, the signal titles are changed to KD0 through KD7 and are sent to the A12 Sub Key board. The direction of buffering is controlled by the RD(L) select signal from the A2 CPU board. This buffering function is activated while the KEY(L) signal from the A2 CPU board is activated low.

Address Decoder

The address decoder consists of 3-to-8 demultiplexers U140 and U160 and dual 2-to-4 demultiplexer U180. The circuit decodes address signals A2 through A7 from the A2 CPU board and generates corresponding chip select signals L0(L) through L7(L) and K0(L) through K7(L). The decoding function of U140 and U160 is activated when control signal KEY(L) and RD(L) (for U160) or WR(L) (for U140) are activated low. The KEY(L) signal is activated low when the microprocessor on the A2 CPU board accesses address A0000hex through A7FFFhex. U180A is activated only when the decoded signal from U160 is the key read signal for S210, S220 and S230, and U160 transfers the chip select signal from pin 7. This selection occurs when the microprocessor accesses address A007xhex and A7(L), RD(L) and KEY(L) signals are all activated low. All these decoded signals read data from the key or switch matrix and write data to the LED display.

Variable Control

This circuit consists of variable resistors R302, R312, R322, R330, R340, R350, R360 and R370 and resistors R300, R304, R310, R314, R320, and R324. This circuit adjusts the NON STORE/STORE INTENSITY, the VIEW INTENSITY, the READOUT/CURSOR INTENSITY, the FOCUS, the SCALE ILLUM, the VERT POSITION, the HORIZ POSITION and the TRACE ROTATION.

Switch Matrix

The switch matrix circuit consists of rotary switches S210, S220 and S230 and diodes CR210 through CR236. S210 and its associated diodes CR210, CR212, CR214 and CR216 set the VERTICAL CURRENT/DIV. S220 and diodes CR220, CR222, CR224 and CR226 set the HORIZONTAL VOLTS/DIV. S230 and diodes CR230, CR232, CR234 and CR236 set the STEP/OFFSET AMPLITUDE. Address signals A2 and A3 from the A2 CPU board are decoded by U180A and applied as A0070, A0074 and A0078 to the switch matrix circuit. Depending on the switch setting, these signals are transferred to data bus KD0 through KD3 through switches and diodes (see Table 2-16).

18 FRONT PANEL LED & KEY

The front panel LED and key circuit is located on the A12 Sub Key board and consists of the front panel display circuit and the front panel key matrix circuit. The circuit is controlled by the A11 Main Key board: it displays the main key setting information and transfers key input data from the key matrix.

Front Panel Display

This circuit consists of 8-bit addressable latches U100, U110, U120, U130, U140, U150, and U160, BCD to seven segment decoder/latch/driver U200, transistor Q170, LEDs DS100 through DS157 and seven segment numerical displays DS200 and DS210. This circuit controls and drives the front-panel LEDs and the numerical display under the control of control signals L0(L) through L7(L) and KD0 and address signals A1 through A3. This display information is sent from the A2 CPU board and processed through the A11 Main Key board. Among these signals, L0(L) through L7(L) are chip select signals, A1 through A3 are display codes and KD0 is the enable signal. The chip select signals select one latch among U100 through U160 to fetch and store display information. The enable signal enables information fetching and storing. The stored information is transferred directly to the corresponding LED, with the exception of U160. The signals ID0 through ID3 are the 371 bubble memory index display information from U160. These signals are decoded to BCD by seven segment decoder/latch/driver U200 and transferred to numerical display DS210 (digits 0-9). Signal ID4 is also the bubble memory index display signal and, through transistor Q170, drives numerical display DS200 (1 and blank).

Front Panel Key Matrix

This circuit consists of keys S500 through S567 and diodes CR500 through CR567, connected as a matrix. The key matrix sweep signals are applied to the matrix as row signal K0(L) through K6(L). The resultant output signals are obtained from the column of the matrix KD0 through KD7.

Table 2-16
Switch Matrix Data Input/Output

Input	Output	Switch	Data	
A0070	KD0	S210	VERTICAL	LSB
	KD1		VERTICAL	
	KD2		VERTICAL	
	KD3		VERTICAL	MSB
A0074	KD0	S220	HORIZONTAL	LSB
	KD1		HORIZONTAL	
	KD2		HORIZONTAL	
	KD3		HORIZONTAL	MSB
A0078	KD0	S230	STEP/OFFSET	LSB
	KD1		STEP/OFFSET	
	KD2		STEP/OFFSET	
	KD3		STEP/OFFSET	MSB

19 LOWER KEY

This circuit is located on the A14 Lower Key board, and consists of the bus buffer circuit, the address decoder circuit, the rotary encoder circuit, and the status port circuit. These circuits interface signals with the A2 CPU board, set up collector supply VARIABLE settings, and transfer the status data to the A2 CPU board.

Bus Buffer

The bus buffer circuit consists of bus buffer U100. This circuit isolates the data bus (D0 through D7) from the A2 CPU board. After isolation, names of these signals are changed to LD0 through LD7. The direction of buffering is controlled by the RD(L) signal from the A2 CPU board. This buffering function is activated when the LKEY(L) signal from the A2 CPU board is activated low.

Address Decoder

This circuit consists of dual 2-to-4 demultiplexer U140, and decodes address signals A4 through A5 from the A2 CPU board, generating corresponding chip select signals STATUS, CCW(L) and CW(L). The LKEY(L) signal is activated low when the microprocessor accesses address A8000hex through AFFFhex. All these decoded signals read data from the status port or the rotary encoder.

Rotary Encoder

The rotary encoder circuit consists of hex inverter U200, dual D flip flop U220, dual 4-bit binary counters U240 and U260, octal 3-state D flip flops U300 and U320 and associated components. U240 and U260 operate as up and down counters. Rotary encoder S140 encodes its rotation into the number of pulses that is proportional to the angle of rotation; this circuit counts these pulses with the up or down counter according to the direction of rotation. The pulse shape of the generated pulse train is improved by U200, then sent to U240 and U260. The rotary encoder generates two pulse trains; each is 90 degrees away from the other. Making use of this phase difference, the direction of rotation can be detected.

If S140 rotates clockwise, the pulse train only appears at U220 pin 8, and up counter U240 counts, because the D flip flop is cleared by the leading pulse. Conversely, if S140 rotates counter-clockwise, the pulse train appears only at U220 pin 6, and down counter U260 counts down. This counted data is periodically cleared by the microprocessor of the A2 CPU board and as a result, the counted data expresses the velocity of rotation during a given interval. The rotation velocity data is applied to U300 and U320. The microprocessor on the A2 CPU

board reads the rotating velocity at address A8000hex and A8010hex.

Status Port

This circuit consists of hex 3-state bus buffer U500, and reads the 371 status information such as HVBRK (high voltage breaker information), CSPD(L) (collector supply power down), OH1, OH2 (overheat 1, 2), and 12VE (interlock). To obtain the data, the microprocessor reads address A8020hex.

20 HIGH CURRENT POWER SUPPLY

This circuit operates as the collector supply power supply circuit in high current mode. It consists of capacitors C400 to C418, comparator U310, opto-isolators U312 and U330, transistor A0Q902 and diode CR100. U310 and U312 form a control circuit that switches A0Q902 so that the charging voltage of C400 to C418 is approximately 60 V. As C400 to C418 are charged and the voltage rises, the voltage at pin 6 of U310 also rises: when it exceeds the voltage at pin 5 of U310, the output from U310 goes low. The low output from U310 turns opto-isolator U312 on, removing base drive from A0Q902. A0Q902 turns off and charging ceases. In the HIGH VOLTAGE mode, the CHARGE(L) signal goes high, turning on opto-isolator U330, which also stops the charging of C400 to C418. This prevents noise caused by charge current.

21 27 HIGH CURRENT AMPLIFIER

This circuit consists of a high current pulse generator circuit, high current pulse filter circuit, high current pulse driver circuit, power MOS FETs circuit and high current output circuit. Figure 2-21 shows a block diagram and Figure 2-22 shows waveform processing.

High Current Pulse Generator

The high current pulse generator circuit consists of operational amplifier U100, analog switches U120A, U120B and U120C, and NAND gates U150A, U150B, U150C and U150D. It converts the DC-COL signal to two pulse signals for the high current pulse driver circuit, one for NPN and the other for PNP.

High Current Pulse Filter

The high current pulse filter circuit, consisting of operational amplifiers U200A and U200B, is a low-pass filter with a cutoff frequency of 10kHz.

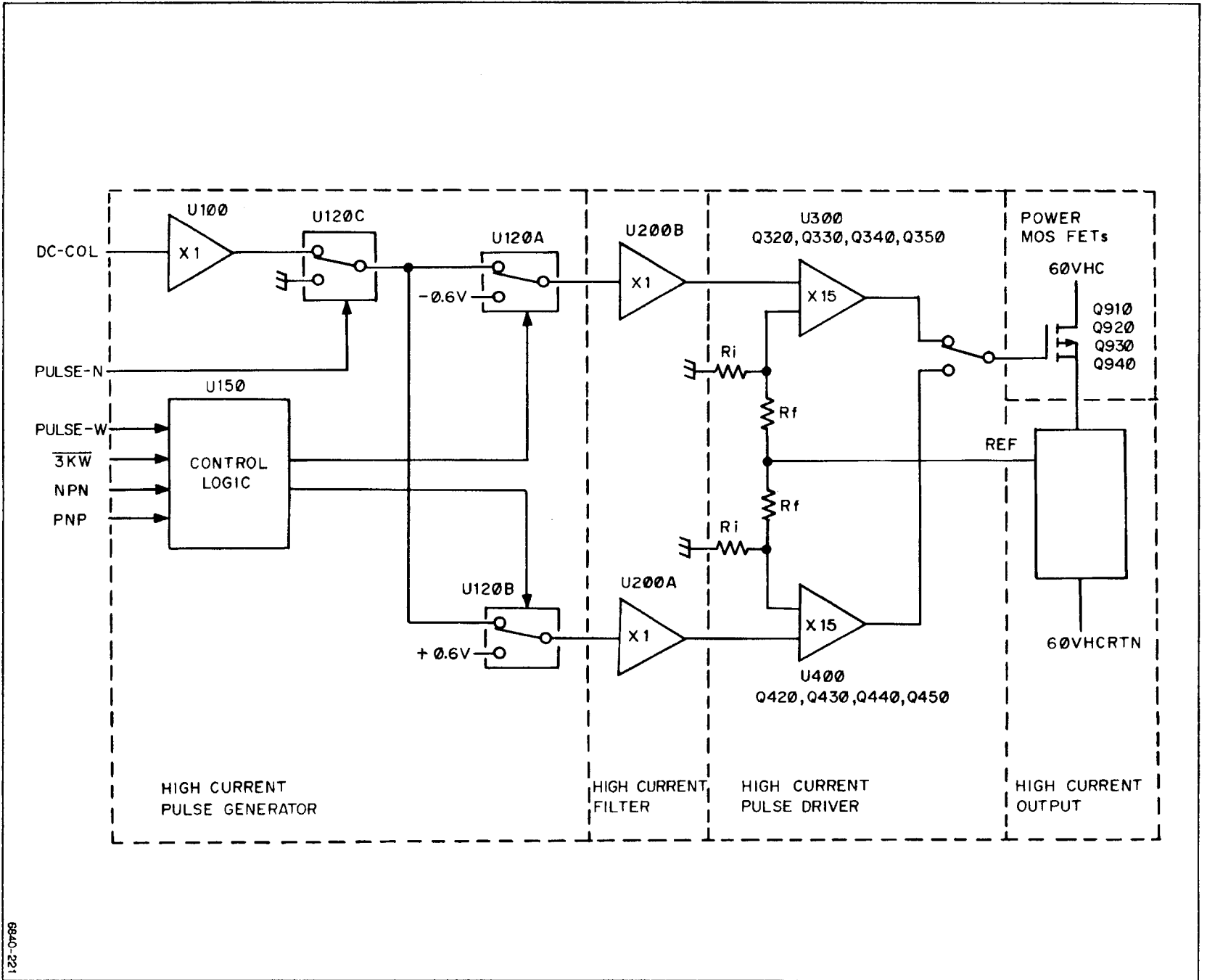
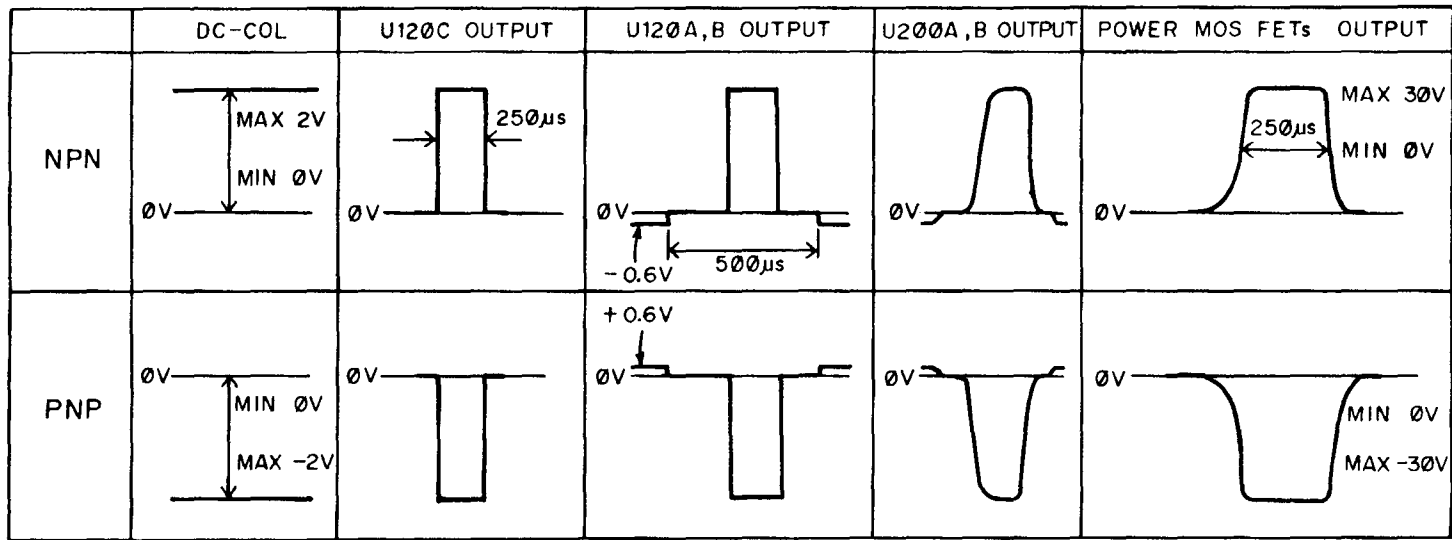


Figure 2-21. Simplified Block Diagram of High Current Amplifier.

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Figure 2-22. Waveform Processing of High Current Amplifier.



8940-222

High Current Pulse Driver

The high current pulse driver circuit comprises an NPN driver consisting of operational amplifier U300 and transistors Q320, Q330, Q340 and Q350 and a PNP driver consisting of operational amplifier U400 and transistors Q420, Q430, Q440 and Q450. This circuit forms an amplifier with a gain of 15, which drives the power MOS FETs circuit.

Power MOS FETs

The power MOS FETs circuit, shown in diagram 27, consists of eight power MOS FETs connected in parallel: Q910-1, Q910-2, Q920-1, Q920-2, Q930-1, Q930-2, Q940-1 and Q940-2.

High Current Output

The high current output circuit consists of the A30 Connector board and A31 Relay board. This circuit connects the power MOS FETs circuit as a grounded drain circuit when the COLLECTOR SUPPLY POLARITY is NPN +, and as a grounded source circuit when the COLLECTOR SUPPLY POLARITY is PNP-, thereby supplying high current to the device under test. See Figure 2-23.



CRT OUTPUT AMPLIFIER

The CRT output amplifier is located on the A18 CRT OUTPUT board and consists of the horizontal output amplifier, the vertical output amplifier, and the Z-axis amplifier. The horizontal and vertical output amplifiers convert current signals from the preamplifier of the A5 Display Control board into deflection plate driving voltages for the CRT. The Z-axis amplifier converts the current signal from the unblanking logic of the A5 Display Control board into the driving voltage for the grid bias and DC restorer circuit of the A20 CRT HV Power Supply board. The Horizontal and Vertical Output Amplifiers are similar, so only the horizontal output amplifier is discussed here.

Horizontal Output Amplifier

The horizontal output amplifier consists of transistors Q100, Q102, Q110, Q112, Q120, Q122, Q130 and Q132, Schottky diodes CR102 and CR104, Zener diode VR100, diodes CR100, CR110 and CR112 and associated components. This circuit symmetrically amplifies both +H and -H signals. Thus, only the -H amplifier circuit is discussed here.

The bias network, which is composed of CR100 and R100, sets up base bias voltage of Q100. This constant voltage is obtained from the subtraction of the voltage drop at diode

CR100 from +6.5 V. As a result, the emitter voltage of Q100 is a nearly constant +6.5 V, which forces the preamplifiers of the A5 Display Control board to operate as a current amplifier, making the output signal (-H) into constant voltage and variable current. The output stages of this amplifier consist of Q110, Q120 and Q130 and uses a self-biasing configuration, where the bias current for Q110 is supplied through R130. The voltage at the collector of Q120 balances at a level where the current through R130 and CR110 raises the voltage at the collector of Q100 to about zero volts. At this point any change in current through Q100 results in an equal but opposite change in current through R130. The output voltage (-HDEF) change is equal to the change in voltage across R130. Transistor Q130, Zener diode VR100 and resistor R128 form a constant current supply circuit for the output stage. Schottky diodes CR102 and CR104 prevent excessive signal difference.

Vertical Output Amplifier

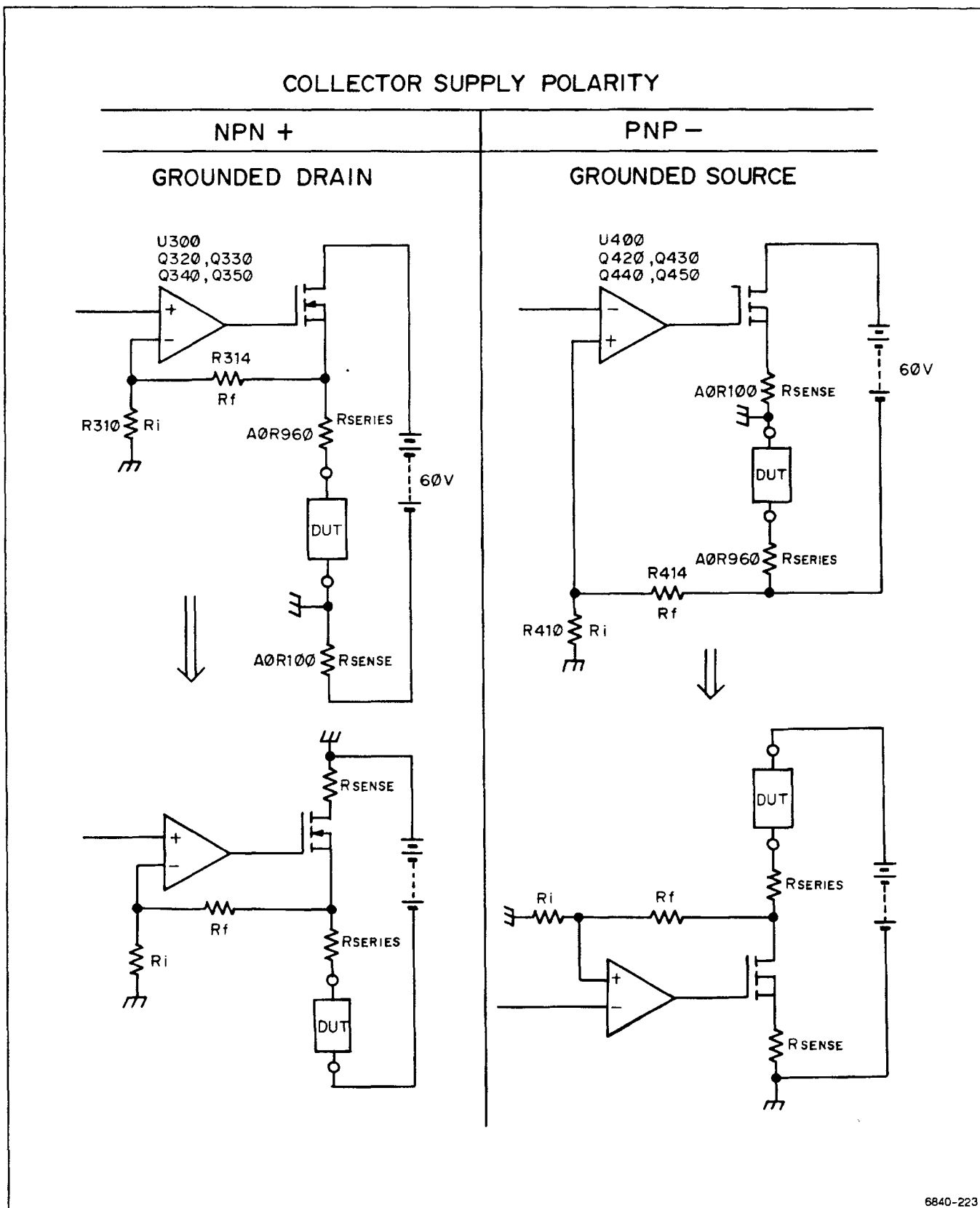
This circuit consists of transistors Q200, Q202, Q210, Q212, Q220, Q222, Q230 and Q232, Schottky diodes CR202 and CR204, Zener diode VR200, diodes CR200, CR210 and CR212 and associated components. This circuit operates in the same way as the horizontal output amplifier. Please refer to the horizontal output amplifier description.

Z-Axis Amplifier

The Z-axis amplifier consists of transistors Q300, Q310, Q312, Q320 and Q330, Schottky diode CR306, diodes CR300, CR302 and CR304 and associated components. The circuit converts the current signal from the unblanking logic of the A5 Display Control board into the driving voltage for the grid bias and DC restorer circuit of the A20 CRT HV POWER SUPPLY board. The bias network, which is composed of CR300 and R300, sets the base bias voltage of Q300 to a constant voltage. This constant voltage is obtained through the subtraction of voltage drop at diode CR300 from +6.5 V. As a result, the emitter voltage of Q300 is an almost constant voltage of +6.5 V and this, in turn, forces the unblanking logic of the A5 Display Control board to operate as a current amplifier and the output signal Z to be a constant voltage and varying current.

The signal current Z from the A5 Display Control board via Q300 develops a voltage across R306. When the Z signal is blanked, the developed voltage turns off diodes CR302 and CR304. Schottky diode CR306 prevents this voltage from exceeding approximately +0.4 V. Q310, Q312, Q320 and Q330 and associated components form a current-to-voltage inverting amplifier. For a blanked signal, the output voltage from the collectors of Q320 and Q330 is approximately +3.8 V, and this voltage provides current flow through feedback resistor R308 to bias resistor R310. This provides bias voltage for Q310 and Q312. Because diodes CR302 and CR304 are reverse biased and cut off, they don't affect the output of Q310 and Q312.

To unblank the CRT, the unblanking logic of the A5 Display Control board reduces the current signal Z. This in turn



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Figure 2-23. Power MOS FET Connection.

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reduces the voltage across R306 and turns on diodes CR302 and CR304 by forward biasing. The forward-biased diodes sink bias currents of Q310 and Q312 away from each base terminal. These reduced bias currents lower the Q310 base bias and increase Q312 base bias. As a result, the collectors of Q320 and Q330 are forced high, so that the current through R308 can maintain the forward bias current of diodes CR302 and CR304. This output voltage supplies current through R308 to diodes CR302 and CR304. If this current is equal to the current that can maintain diodes CR302 and CR304 at the cut off level, the circuit balances. The maximum output voltage of the amplifier is approximately +25 V and CRT intensity may be set anywhere between these limits, depending on the value of the Z current signal.

**23 CRT HV POWER SUPPLY**

The CRT HV power supply is located on the A20 CRT HV Power Supply board. This circuit consists of the high-voltage generator circuit, the high-voltage regulator circuit, the grid bias and DC restorer circuit, the focus amplifier and DC restorer circuit, the anode multiplier circuit, the rectifier filter circuit and the CRT circuit. The CRT HV power supply provides the various high voltage operating potentials required by the CRT, and displays the 371 data.

High-Voltage Generator

This circuit consists of transistor Q100 and transformer T100 and associated components. Q100 and the primary windings of T100 are connected to form an oscillator. The frequency of oscillation is approximately 20 kHz. The 20 kHz AC voltage induces high voltage in the secondary windings of T100.

High-Voltage Regulator

The high-voltage regulator circuit consists of U200A and associated components. This circuit monitors the cathode voltage of the CRT and controls base bias current of Q100. Because Q100 produces the 20 kHz AC supply voltage for T100, base current control of Q100 results in a controlled high voltage output from the T100 secondary windings.

Grid Bias and DC Restorer

The grid bias and DC restorer circuit provides the CRT control-grid bias voltage and couples both the DC and low frequency components of the Z-OUT drive signal to the CRT control grid. The circuit operates by impressing the grid bias setting and the Z-OUT drive signal on an AC waveform. This shaped waveform is then AC-coupled to the high potential CRT environment where the DC components of the original

signal are restored. An AC drive voltage of approximately 400 V peak-to-peak is applied to this circuit from pin 7 of transformer T100. This signal is coupled to the junction of a positive clamp (made up of R208, R210, CR202, VR200 and VR202) and a negative clamp (made up of CR204) through resistor R204 and R206 and capacitor C202. Grid bias potentiometer R210 determines the overall CRT intensity. The positive and negative clamped AC waveform and Z-OUT signal is applied to pin 9 and pin 10 of U100 high voltage module, respectively. The capacitor connected to pin 9 and the two diodes attached to its other terminal in U100 form a rectifier circuit. This circuit charges the capacitor connected to pin 10 to a potential below the -2400 volt level of the CRT cathode. A positive transition of the Z-OUT signal voltage moves the control-grid bias positive by approximately the same voltage, thereby increasing CRT beam current.

Focus Amplifier and DC Restorer

The focus amplifier and DC restorer circuit provides the level shifting of the operator-controlled FOCUS signal to the high potential environment of the CRT. This level shifting is done in a manner similar to that just described for the last stage, the grid bias and DC restorer. The active positive clamp, made up of U200B, Q200 and their associated components, provides a variable voltage clamp that limits the positive swing of the AC waveform. Diode CR200 limits the negative swing. The 800 V of AC signal is applied to the clamping node through resistors R200 and R202 and capacitor C200. Operational amplifier U200B changes its output so that feedback through R222 maintains the voltage on pin 6 equal to that on pin 5, which is zero volts.

The FOCUS signal from the A11 Main Key board is divided by R226 and R224. FOCUS can be adjusted from zero to +6.5 volts. This provides a range of clamping levels from +650 volts (FOCUS equals zero volts) to +344 volts (FOCUS equals +6.5 volts). Q200 provides voltage isolation for the output of U200B. When CR210 is forward biased by a voltage swing that exceeds the clamping level, U200B absorbs the excess current through R220, Q200 and R228 so that feedback current through R222 can remain unchanged.

The positive and negative clamped AC signal from T100 is fed to pin 7 of U100. The capacitor connected to pin 7 and the two diodes attached to the capacitor's other terminal within U100 form a rectifier circuit. This circuit charges the capacitor connected to pin 8 to a potential above the -2400 volt level of the CRT cathode. This voltage is applied to the focus-grid of the CRT to control spot size.

Anode Multiplier

Anode multiplier U300 is a conventional voltage multiplier of 12 stages; it produces 12 kV accelerating potential for the CRT.

Rectifier Filter

The rectifier filter circuit consists of diodes CR300, CR310 and CR320 and capacitors C300, C310 and C320. This circuit

provides approximately +100 V and +200 V to the CRT output amplifier from 200 V peak-to-peak AC supplied by T100.

CRT

This circuit consists of the CRT (Cathode Ray Tube), orthogonality coil L120, trace rotation coil L100 and associated components. This circuit displays the 371 curves and data. L100 and L120 control trace rotation and orthogonality of the CRT. Pin assignment of CRT is described in Table 2-17.

Table 2-17
CRT Pin Assignment

Pin no.	Pin name	Connected signal
1, 14	Heater power supply	6.3 V heater line.
2	Cathode	Cathode (~2400 V).
3	No. 1 grid	Intensity control line.
4	No. 1 plate	Focus control line.
5	No. 2 grid	Geometry
6	Collector	GND
7	Vertical deflection plates	+VDEF
9	Vertical deflection plates	-VDEF
11	Horizontal deflection plates	-HDEF
12	Horizontal deflection plates	+HDEF

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GPIB AND PLOTTER INTERFACE

The GPIB and plotter interface is located on the A22 Interface board. The circuit consists of the bus buffer circuit, the address decoder circuit, the GPIB address switch, the GPIB controller circuit, the GPIB bus driver circuit, the plotter controller circuit and the plotter bus driver circuit. The function of this circuit is to transfer data to the plotter and to communicate with other instruments via the bidirectional general purpose interface bus (GPIB). These functions are under control of the microprocessor and the communication handling software, which are located on the A2 CPU board.

Bus Buffer

The bus buffer circuit consists of U120 and U140; it isolates data bus D0 through D7, address bus A1 through A4 and control signals from the A2 CPU board (RD(L), WR(L), RESET(L) and IF-CS(L)). After isolation, the names of these signals are changed to IFD0 through IFD7 (data bus), IFA1 through IFA4 (address bus) and IFRD(L), IFRW(L), IFRESET(L) and IFCE(L) (control signals) respectively. Because the data bus (IFD0 through IFD7) is a bidirectional bus, data bus driver U140 switches the direction of buffering under the control of the IFRD(L) signal. The address bus and control signals are unidirectional signals only from the A2 CPU board and are isolated by U120 and changed in name as mentioned before.

Address Decoder

The address decoder circuit consists of dual 2-to-4 demultiplexers U220. This circuit generates chip select signals for GPIB controller U300, plotter controller U400, and GPIB address switch U360 by decoding address signals of IFA2, IFA3 and IFA4, which are derived from the A2 CPU board. The decoded signals are transferred to the corresponding circuit of the board when the IFCE(L) control signal occurs. (Address signals IFA0(L) through IFA4(L) are also used to select internal registers of GPIB controller U300 for reference by the microprocessor.)

GPIB Address Switch

The GPIB address switch circuit consists of S360 DIP switch and U360, which determine the GPIB address and data delimiter. The right five digits of the switch (No.2 through No.6) set GPIB address from 0 to 31 in binary notation. The leftmost digit of the switch (No.1) sets the data delimiter.

GPIB Controller

The GPIB controller circuit consists of GPIB controller U300. This circuit manages all interfacing procedures needed to complete GPIB data communication.

GPIB Bus Driver

GPIB bus driver U320 and U340 transfers signals to and from the GPIB bus and the GPIB controller circuit. U320 drives the GPIB control signals from U300 to the GPIB. U340 drives the GPIB data signals between U300 and the GPIB.

Plotter Controller

The plotter controller circuit consists of serial/parallel communication controller U400. U400 has both serial and

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parallel communication capabilities. The 371 makes use of the parallel communication capability of U400 to control the plotter. U400 operates under the control of the A2 CPU board.

Plotter Driver

The plotter driver consists of U440 and U460; this circuit transfers the signals between the plotter controller and the plotter bus. U440 drives the plotter control signals and U460 drives data.

**25 POWER SUPPLY**

This circuit is located on the A25 Main Power Supply board and the A27 Primary board. This board consists of the primary circuit, the main power supply circuit and the interrupt generator circuit. This circuit supplies low voltage power for the 371 and generates interrupt signals.

Primary

The primary circuit consists of line filter FL100, line voltage selector P100, transformers T100 and T200, spark gaps E100 and E200 and air cooling fan B100. This circuit provides AC line power supply voltages for the 371. The 371 can be operated from either a 100 V, 120 V, 200 V, or 240 V nominal line voltage source by setting the line voltage selector P100. Spark gaps E100 and E200 protect the rectifier and filter circuit from line surges over 230 V peak-to-peak. This board also supplies AC power voltages to air cooling fan B100.

Main Power Supplies

The main power supply circuit provides five regulated voltages (+5 V, +6.5 V, +12 V, -6.5 V, -12 V) and two unregulated voltages (+50V UNREG and -50V UNREG). The two reference voltages (+2V-REF and -2V-REF) and the scale illumination voltage are also provided by this circuit.

+ 5 V Supply

The +5 V supply circuit provides regulated +5 V for the digital circuits and consists of diode CR100, capacitors C100, C102 and C104 and voltage regulator U100. Fixed resistor R102 sets the output of U100 to +5.2 V.

+6.5 and -6.5 V Supply

The +6.5 and -6.5 V supply circuit provides regulated voltage for analog circuits. The circuits consist of transistors

Q130 and Q230, capacitors C134 and C234 and operational amplifier U130. The reference voltage for U130 is supplied by U120, elsewhere on the board. The output voltages of +6.5 V and -6.5 V are sensed and divided by resistor pair R134-R136 (+6.5 V) or R234-R236 (+6.5 V). These divided voltages are compared with the reference voltage of +2.5 V and the differential voltages are obtained by U130. U130 amplifies each differential voltage, and this output controls Q130 and Q230, respectively, to make the +6.5 V and -6.5 V constant.

+ 12 V Supply

The +12 V supply circuit consists of diode pair CR300, capacitors C300 and C302 and voltage regulator U300.

-12 V Supply

The -12 V supply circuit consists of diode pair CR400, capacitors C400, C402 and C404 and voltage regulator U400.

+ 50 V and -50 V Unregulated Supplies

These supply circuits provide operating power for the step generator, etc. The unregulated +50 and -50 V supplies consist of diode bridge CR500, capacitors C500 and C502 and resistor R501.

ILLUM Voltage Supply

This circuit consists of transistors Q600 and Q602. The circuit supplies current to the A28 LAMP A and A29 LAMP B boards under the control of the ILLUM signal, the level of which is set by the GRAT ILLUM control of the A11 Main Key board.

+ 2 V REF and -2 V REF

These reference supply circuits consist of operational amplifier U500 and reference regulator U120. Resistors R500 and R516 adjust the +2.0 V and -2.0 V, respectively.

Interrupt Generators 1 and 2

This circuit consists of comparators U560A and U560B and associated components. The circuit provides interrupt signals for the A2 CPU board and the A3 A/D Board, namely, TIM-INT (line frequency timer interrupt) and PF-INT (power fail interrupt).

The TIM-INT generator circuit synchronizes the line frequency. Comparator U560A produces the clock signal of the AC line frequency for the PLL and the microprocessor. It consists of diodes CR570 and CR572 and U560A. This

TIM-INT clock signal is used by the PLL circuit on the A3 A/D board to synchronize waveform generation timing and by the A2 CPU board to initiate periodical input procedures such as keyboard data reading of the microprocessor.

The PF-INT generator circuit includes diodes CR560 and CR562, resistor R562, capacitor C562 and comparator U560B. When the AC line shuts down, this circuit produces the active high PF-INT signal for the microprocessor before the +5 V supply shuts down, so that the microprocessor has time to initiate and complete the power failure support procedure.

Warning

The following servicing instructions are for use only by qualified personnel. To avoid personal injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer to General Safety Summary and Service Safety Summary prior to performing any service.

SECTION THREE MAINTENANCE

This section of the manual contains information for performing preventive maintenance, troubleshooting, and corrective maintenance for the 371 High Power Curve Tracer.

PREVENTIVE MAINTENANCE

Preventive maintenance performed on a regular basis can prevent instrument breakdown and may improve the reliability of the instrument. The severity of the environment to which the instrument is subjected will determine the frequency of maintenance. A convenient time to perform preventive maintenance is preceding electrical adjustment of the instrument.

CABINET PANEL REMOVAL

WARNING

Dangerous potentials exist at several points throughout this instrument. When the instrument is operated with the covers removed, do not touch exposed connections or components. Some transistors have voltages present on the case. Disconnect power before cleaning the instrument or replacing parts.

The side, top, and bottom cabinet panels provide protection to personnel from operating potentials present within the instrument. In addition, they reduce radiation of electromagnetic interference from the instrument. To remove the panels, remove the four plastic retainers and three additional securing screws at the rear of the instrument. Pull each panel back to release the front edge, then lift the panels away from the instrument. Operate the instrument with the panels in place to protect the interior from dust, and to maintain cooling airflow.

CLEANING

The 371 should be cleaned as often as operating conditions require. Accumulation of dirt in the instrument can cause overheating and component breakdown. Dirt on components acts as an insulating blanket and prevents efficient heat dissipation. It also provides an electrical conduction path that may result in instrument failure.

CAUTION

Avoid the use of chemical cleaning agents that might damage the plastics used in this instrument. Use a non-residue type of cleaner, preferably isopropyl alcohol, totally denatured ethyl alcohol, or a Freon TF cleaner such as Spray-On #2002. Before using any other type of cleaner, consult your Tektronix Service Center or representative.

Exterior

Loose dust accumulated on the outside of the instrument can be removed with a soft cloth or small brush. The brush is particularly useful for dislodging dirt on and around the front-panel controls. Dirt that remains can be removed with a soft cloth dampened in a mild detergent and water solution. Abrasive cleaners should not be used.

Air Filter

Inspect and clean the air filter periodically to maintain cooling air flow. Remove the filter retainer from the rear of the 371. Wash the filter in soapy water; rinse, dry, and replace on the 371.

CRT

Clean the plastic light filter, implosion shield, and the CRT faceplate with a soft, lint-free cloth dampened with denatured alcohol.

Interior

Cleaning the interior of the instrument should only be necessary occasionally. The best way to clean the interior is to

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blow off the accumulated dust with dry, low-velocity air (approximately 5 lbs/sq in). Remove any dirt that remains with a soft brush or a cloth dampened with a mild detergent and water solution. A cotton swab is useful for cleaning in narrow spaces or for cleaning more delicate circuit components.



Circuit boards and components must be dry before applying power to prevent damage from electrical arcing.

The high-voltage circuits should receive special attention. Excessive dirt in this area may cause high-voltage arcing and result in improper instrument operation.

VISUAL INSPECTION

The 371 should be inspected occasionally for such defects as broken connections, improperly seated semiconductors, damaged or improperly installed circuit boards, and heat-damaged parts. The corrective procedure for most

visible defects is obvious; however, particular care must be taken if heat-damaged parts are found. Overheating usually indicates other trouble in the instrument; therefore, correcting the cause of overheating is important to prevent recurrence of the damage.

SEMICONDUCTOR CHECKS

Periodic checks of the semiconductors are not recommended. The best check of semiconductor performance is actual operation in the instrument. More details on semiconductors are given under "Troubleshooting" later in this section.

PERIODIC ELECTRICAL ADJUSTMENT

To ensure accurate measurements, check the electrical adjustment of this instrument after each 2000 hours of operation or every twelve months if used infrequently. In addition, replacement of components may necessitate adjustment of the affected circuits. Complete adjustment instructions are given in Section Four, "Performance Check and Adjustment." This procedure can be helpful in localizing certain troubles in the instrument and in some cases may correct them.

TROUBLESHOOTING

The following information is provided to facilitate troubleshooting of the 371 High Power Curve Tracer. Information contained in other sections of this manual should be used in conjunction with the following data to aid in locating a defective component. An understanding of the circuit operation is helpful in locating troubles. See Section Two, "Theory of Operation," for this information.

TROUBLESHOOTING AIDS

Diagrams

Complete schematic diagrams are given on the pullout pages in Section 7, "Diagrams and Circuit Board Illustrations." The component number and electrical value of each component in this instrument is shown on these diagrams. (See the first page of the "Diagrams and Circuit Board Illustrations" section for definitions of the reference designators and symbols used to identify components in this instrument.) Important voltages and numbered waveform test points are also shown on the diagrams. Important waveforms and the numbered test points where each was obtained are located adjacent to each diagram. The portions of circuits mounted on circuit boards are enclosed with heavy solid-black lines.

Circuit Board Illustrations

To aid in locating circuit boards, a circuit board location illustration appears on the back of the pullout page that faces the appropriate schematic diagram. In addition, circuit board illustrations are included that show the physical location of the components and waveform test points that appear on the schematic diagram. Each circuit board illustration includes a grid locator with an index to aid rapid location of components contained in the schematic diagrams.

Troubleshooting Charts

Troubleshooting charts are given in Section 7, "Diagrams and Circuit Board Illustrations," to aid in locating a defective circuit. The shaded blocks on the Troubleshooting charts indicate circuits that may cause the indicated malfunction. The circuits listed are discussed in detail in Section 2, "Theory of Operation."

Adjustment and Test Point Locations

To aid in locating test points and adjustable components called out in the various portions of the Adjustment procedure, the Adjustment and Test Point Locations pullout pages appear in Section 7, "Diagrams and Circuit Board Illustrations."

Component Color Coding

The instrument contains brown composition resistors, some metal-film resistors, and some wire-wound resistors. The resistance value of a wire-wound resistor is usually printed on the component body. The resistance value of a composition resistor or metal-film resistor is color-coded on the component using the EIA color code. (Some metal-film resistors may have the value printed on the body.) The color code is read starting with the stripe nearest the end of the resistor. Composition resistors have four stripes which consist of two significant figures, a multiplier, and a tolerance value (see Figure 3-1). Metal-film resistors have five stripes that consist of three significant figures, a multiplier, and a tolerance value.

The values of common disc capacitors and small electrolytic capacitors are marked on the side of the component body. The white ceramic and epoxy-coated tantalum capacitors used in the instrument are color coded using a modified EIA code (see Figure 3-1).

The cathode end of glass-encased diodes is indicated by a stripe, a series of stripes, or a dot. The cathode and anode ends of metal-encased diodes can be identified by the diode symbol marked on the body.

Semiconductor Lead Configurations

Lead configurations for semiconductor devices used in the 371 are shown in Figure 3-2.

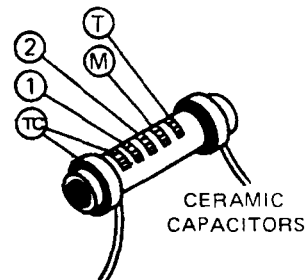
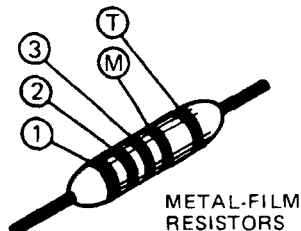
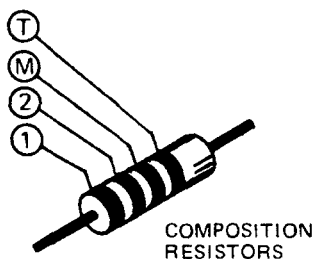
Static-sensitive Device Classification



Static discharge can damage any semiconductor component in this instrument.

This instrument contains electrical components that are susceptible to damage from static discharge. See Table 3-1 to determine the relative susceptibility of various classes of semiconductors. Static voltages of 1 kV to 30 kV are common in unprotected environments.

COLOR CODE

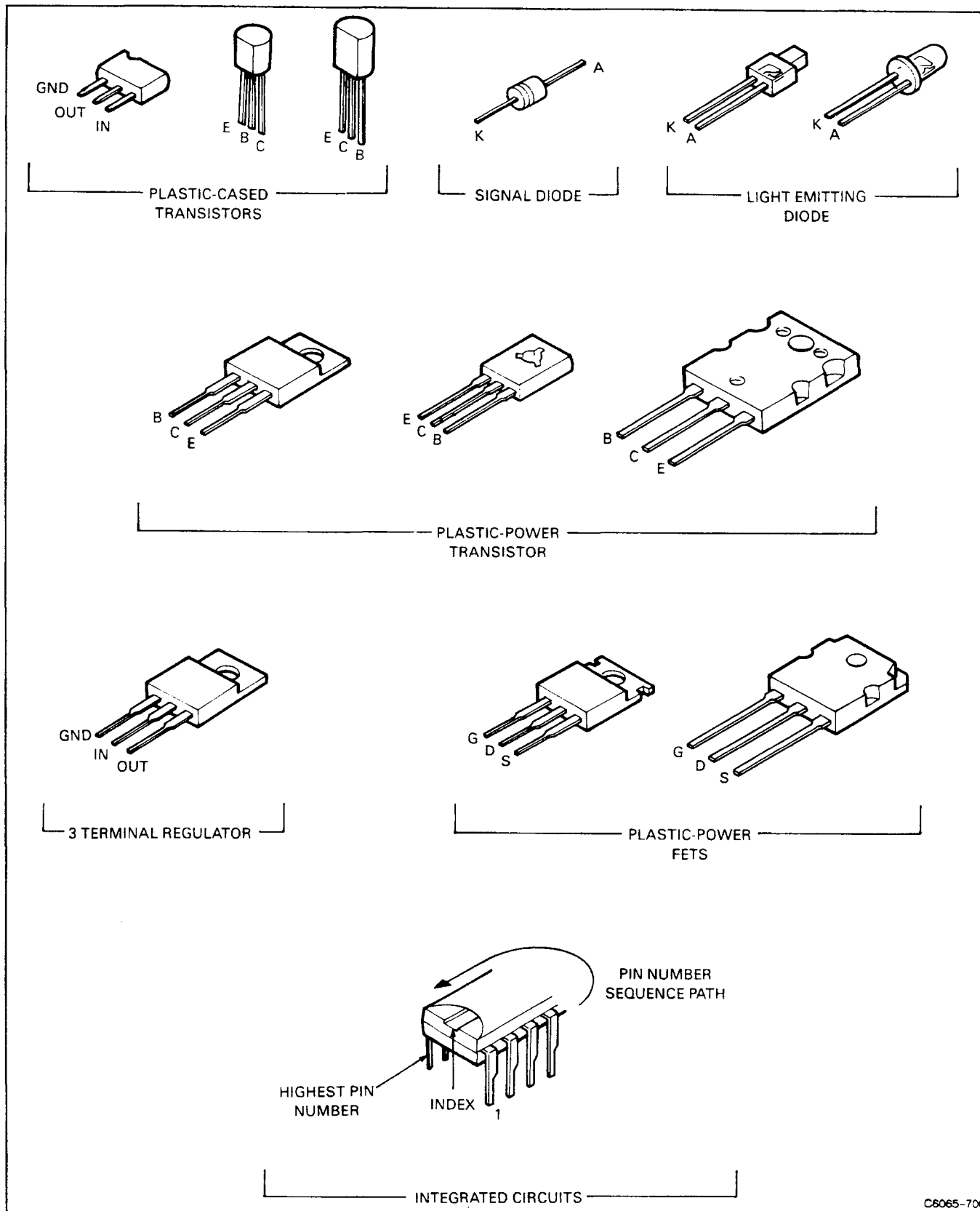


① ② and ③ - 1ST, 2ND, AND 3RD SIGNIFICANT FIGS. T AND/OR TC COLOR CODE MAY NOT BE PRESENT ON SOME CAPACITORS;
 M - MULTIPLIER T - TOLERANCE;
 TC - TEMPERATURE COEFFICIENT.

COLOR	SIGNIFICANT FIGURES	RESISTORS		CAPACITORS		
		MULTIPLIER (OHMS)	TOLERANCE	MULTIPLIER (pF)	TOLERANCE	
					OVER 10pF	UNDER 10pF
BLACK	0	1	---	1	±20%	±2pF
BROWN	1	10	±1%	10	±1%	±0.1pF
RED	2	10 ² or 100	±2%	10 ² or 100	±2%	---
ORANGE	3	10 ³ or 1 K	±3%	10 ³ or 1000	±3%	---
YELLOW	4	10 ⁴ or 10K	±4%	10 ⁴ or 10,000	+100% -0%	---
GREEN	5	10 ⁵ or 100 K	±1/2%	10 ⁵ or 100,000	±5%	±0.5pF
BLUE	6	10 ⁶ or 1 M	±1/4%	10 ⁶ or 1,000,000	---	---
VIOLET	7	---	±1/10%	10 ⁷ or 10,000,000	---	---
GRAY	8	---	---	10 ⁻² or 0.01	+80% -20%	±0.25pF
WHITE	9	---	---	10 ⁻¹ or 0.1	±10%	±1pF
GOLD	---	10 ⁻¹ or 0.1	±5%	---	---	---
SILVER	---	10 ⁻² or 0.01	±10%	---	---	---
NONE	---	---	±20%	---	±10%	±1pF

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Figure 3-1. Resistor and capacitor color coding.



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Figure 3-2. Semiconductor lead configurations.

Table 3-1
Relative Susceptibility to Damage
from Static Discharge

Semiconductor Class	Relative Susceptibility Level
MOS or CMOS microcircuits and discrete or linear microcircuits with MOS inputs (most sensitive)	1 (100 to 500 volts)
ECL	2 (200 to 500 volts)
Schottky Signal Diodes	3 (250 volts)
Schottky TTL	4 (500 volts)
High-frequency bipolar transistors	5 (400 to 600 volts)
JFETs	6 (600 to 800 volts)
Linear Microcircuits	7 (700 to 1000 volts)
Low-power Schottky TTL	8 (900 volts)
TTL (least sensitive)	9 (1200 volts)

(Voltage is discharged from a 100 pF capacitor through a resistance of 100 Ω .)

Observe the following precautions to avoid damage:

1. Minimize handling of static-sensitive components.
2. Transport and store static-sensitive components or assemblies in the original container on a metal rail or on conductive foam.
3. Discharge the static voltage from your body by wearing a wrist strap while handling static-sensitive components. Servicing static-sensitive components should be performed only at a static-free work station by qualified service personnel. We recommend use of the Static Control Mat, Tektronix Part 006-3414-00, and Wrist Strap, Tektronix Part 006-3415-00.
4. Allow nothing capable of generating or holding a static charge on the work station surface.
5. Keep the component leads shorted together whenever possible.
6. Pick up components by the body, never by the leads.
7. Do not slide the component over any surface.

8. Avoid handling components in areas that have a floor or work-surface covering capable of generating a static charge.
9. Use a soldering iron that is connected to earth ground.
10. Use only special antistatic suction-type desoldering tools.

Multi-pin Connector Identification

Multi-pin (harmonica, ribbon cable) connector pins are marked with a triangle, dot, or square symbol on the connector to denote pin 1 of the connector. When making a connection to a circuit board, match the symbol position on the connector to the index symbol that is printed on the board near the connector (see Figure 3-3).

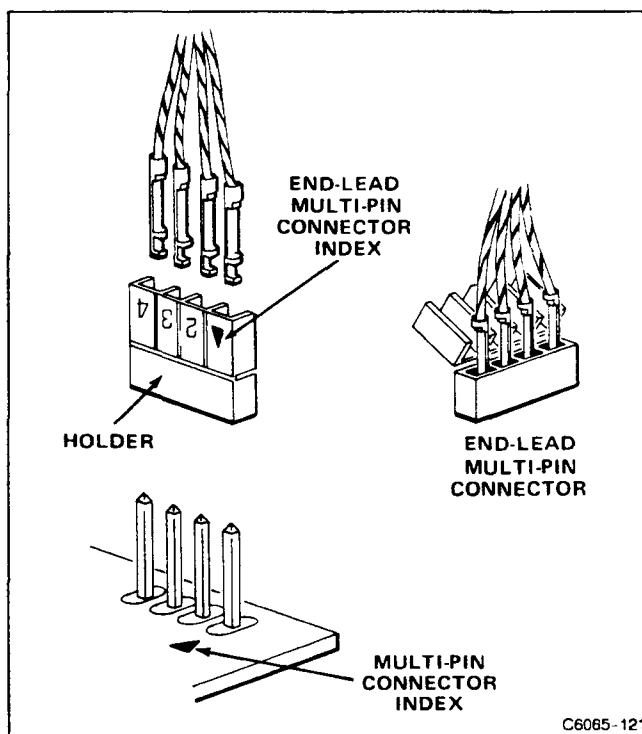


Figure 3-3. Connector pin indexing.

CAUTION

Exceptions to the FUJITSU's holders are as follows. The F mark identifies pin 1. From the F mark each slot in the connector is sequentially numbered (2, 3, 4, 5 etc.). Notice that the "." mark does not identify pin 1 but fifth slot from the "F" mark.

TROUBLESHOOTING EQUIPMENT

The following equipment is useful for troubleshooting the 371 High Power Curve Tracer.

1. Transistor Tester

Description: Dynamic type tester.

Purpose: Tests semiconductors.

Recommended type: SONY/TEKTRONIX 370 Programmable Curve Tracer.

2. Digital Multimeter

Description: 10 M Ω input impedance and 0 to 1 kV range, AC and DC; ohmmeter, accuracy, within 0.1%. Test probes must be insulated to prevent accidental shorting.

Purpose: Checks voltages and resistances.

Recommended type: TEKTRONIX DM 501A Digital Multimeter.

3. Test Oscilloscope

Description: Frequency response, DC to 150 MHz minimum; deflection factor, 2 mV to 5 V/division. A 10X, 10 M Ω voltage probe should be used to reduce circuit loading for voltage measurements.

Purpose: Checks operating waveforms.

Recommended type: TEKTRONIX 2445A Oscilloscope.

4. Variable Autotransformer

Description: Output variable from 0 to 140 volts, 10 amperes minimum rating. Must have three-wire power cord, plug, and receptacle.

Purpose: Varies line voltage when troubleshooting the power-supply.

Recommended type: General Radio W10MT3W Variac Autotransformer.

5. Calibration Fixtures

a. Extender Board

Purpose: Troubleshooting the circuit boards.

Recommended type: TEKTRONIX 670-9303-00 Extender.

b. Extension Cables

Purpose: Troubleshooting with the drawer unit extended.

Recommended type: TEKTRONIX 174-0351-00, 174-0352-00, 174-1001-00.

TROUBLESHOOTING TECHNIQUES

This troubleshooting procedure is arranged to check the simple trouble possibilities before proceeding with extensive troubleshooting. The first few checks ensure proper connection and operation of associated equipment. If the trouble is not located by these checks, the remaining steps aid in locating the defective component. When the defective component is located, replace it using the replacement procedures given in the "Corrective Maintenance."

1. Check Control Settings

Incorrect control settings can indicate a trouble that does not exist. If there is any question about the correct function or operation of any control on the instrument, refer to the Operators Manual.

2. Check Associated Equipment

Before proceeding with troubleshooting, check that the equipment used with this instrument is operating correctly. Make sure that the input signals are properly connected and that the interconnecting cables are not defective. Also check the line-voltage source.

3. Visual Check

Visually check the portion of the instrument where the trouble is located. Many troubles can be found by visible indications such as unsoldered connections, loose cable connections, broken wires, damaged circuit boards, and damaged components.

4. Check Instrument Adjustment

Check the electrical adjustment of this instrument or of the affected circuit if the trouble appears in one circuit. The apparent trouble may only be a result of misadjustment. Complete adjustment instructions are given in Section 4, "Performance Check and Adjustment."

5. Isolate Trouble to a Circuit

To isolate trouble to a particular circuit, note the trouble symptom. The symptom often identifies the circuit in which the trouble is located. When trouble symptoms appear in more than one circuit, check the affected circuits by taking voltage and waveform measurements.

Incorrect operation of all circuits often indicates trouble in the power supply. Check first for correct voltage of the individual supplies. However, a defective component elsewhere in the instrument can appear as a power-supply trouble and may also affect the operation of other circuits.

The 371 Troubleshooting charts in the "Diagrams and Circuit Board Illustrations," Section 7, provide a guide for

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locating defective circuits. Start at the top of the chart and perform the checks until one of the checks fails.

6. Check Voltages

Often the defective component can be located by checking for the correct voltages in the circuit. Typical voltages are given in Section 7, "Diagrams and Circuit Board Illustrations."

NOTE

Voltages appearing in Section 7, "Diagrams and Circuit Board Illustrations," are not absolute and may vary slightly between 371 High Power Curve Tracers. To obtain operating conditions used to take these readings, see the Voltage Conditions adjacent to the schematic diagram.

7. Check Individual Components

The following procedures describe methods of checking individual components in the 371. Components that are soldered in place (excluding integrated circuits) are best checked by first disconnecting one end. This isolates the measurement from the effects of surrounding circuitry.

CAUTION

To avoid electric shock hazard, always turn off the mainframe power switch before removing or replacing components.

Fuses. Check for open fuses by checking continuity with an ohmmeter.

WARNING

Before replacing an open fuse determine the cause of failure. Refer to the Power Supply Board and Interconnect diagrams and the adjacent board illustrations in the foldout section at the rear of this manual for component locations.

Transistors. A good check of transistor operation is actual performance under operating conditions. A transistor can most effectively be checked by substituting a new component for it (or one that has been previously checked). However, be sure that circuit conditions are not such that a replacement transistor might also be damaged. If substitute transistors are not available, use a dynamic tester. Static testers are not recommended because they do not check operation under simulated operating conditions.

Integrated Circuits. These can be checked with a test oscilloscope, digital tester, or by direct substitution.

CAUTION

Direct substitution must not be attempted with soldered-in integrated circuits. The I.C., circuit board, or both, may be damaged due to the heat required to melt the solder from the connections. Use care when checking voltages and waveforms around the integrated circuits so that adjacent leads are not shorted together. An integrated circuit test clip provides a convenient means of clipping a test probe to the in-line, multi-pin, integrated circuit.

A good understanding of the circuit operation is essential to troubleshooting circuits using integrated circuits. Operating conditions and other information for the integrated circuits are given in Section 2, "Theory of Operation," and Section 7, "Diagrams and Circuit Board Illustrations."

Diodes. A diode can be checked for an open or shorted condition by measuring the resistance between terminals with an ohmmeter on a scale having a low internal source current, such as the R x 1k scale. The resistance should be very high in one direction and very low when the meter leads are reversed.

CAUTION

When checking diodes do not use an ohmmeter scale setting that has a high internal current because high currents may damage the diodes under test.

Resistors. Check the resistors with an ohmmeter. Resistor tolerances are given in Section 6, "Replaceable Electrical Parts." Normally, resistors need not be replaced unless the measured value varies widely from the specified value.

Capacitors. A leaky or shorted capacitor can best be detected by checking resistance with an ohmmeter on the highest scale. Do not exceed the voltage rating of the capacitor. The resistance reading should be high after initial charge of the capacitor. An open capacitor can best be detected with a capacitance meter or by checking if the capacitor passes AC signals.

8. Repair and Adjust the Circuit

If any defective parts are located, follow the replacement procedures given under Component Replacement in this section. Check the performance of any circuit that has been repaired or that has had any electrical components replaced. Adjustment of the circuit may be necessary.

CORRECTIVE MAINTENANCE

Corrective maintenance consists of component replacement and instrument repair. Special techniques required to replace components in the 371 Programmable Curve Tracer are given here.

COMPONENT REMOVAL AND REPLACEMENT

WARNING

To avoid electric-shock hazard, always disconnect the instrument from the power source before removing or replacing sub-assemblies or components.

The exploded-view drawings associated with the Replaceable Mechanical Parts list (located at the rear of this manual) may be helpful in the removal or disassembly of individual components or sub-assemblies.

Preparations for Component Removal and Replacement

Before removing or replacing a component, it may be necessary to open or remove panels, keyboards, etc. The following is the procedure for these preparations.

Cabinet Removal

1. The 371 has three cabinet panels, top, right, and left.
2. Remove the four cabinet panel retainers from each corner of the 370 rear panel.
3. Remove the top cabinet panel by first removing its securing screw at the rear. Slide the panel back to remove it.
4. Remove the right and left cabinet panels by first removing each securing screw at the rear. Pull each panel back slightly to release it from the front casting. Then, move the top of the panel outward. Remove each panel by either sliding it to the rear or by lifting it from the bottom groove in the main body.
5. Replace panels in the reverse order of removal.

Connector Replacement

1. The 371 uses many types of connectors; some of them are very similar in appearance. Tag each connector before removing to avoid confusing one connector with another. (See Figure 3-3.)
2. Some connectors have latches to prevent erroneous removal during operation. Release these latches when disconnecting.
3. Be sure to properly orient each connector when reconnecting it.

CAUTION

Some connectors are symmetrical. These are indexed by a mark that denotes pin 1.

Drawer Unit Removal

1. Remove the right and the left cabinet panel from the main body.
2. Remove the eight screws (four flat-head and four round-head) from each of the mounting brackets that secure the test fixture module to the main body. Remove both the right and the left mounting brackets.
3. Pull the drawer unit forward away from the 371.
4. Replace the drawer unit in the reverse order of removal.

NOTE

Before replacing the left or right mounting bracket, make certain that the label on one access hole is properly aligned with the internal potentiometers. (The brackets are interchangeable and could be installed on the wrong side.)

Cathode-Ray Tube Removal

NOTE

Before removing the CRT, be certain that removal is necessary by checking associated circuits.

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Remove the Cathode-Ray Tube (CRT) as follows:

WARNING

The CRT may retain a dangerous electrical charge. Before removing the CRT, the anode must be fully discharged by shorting the CRT anode to the chassis. Wait approximately ten minutes and again firmly short the anode to the chassis, then remove the CRT.

Use extreme care when handling a CRT. Breakage of the CRT causes a high-velocity scattering of glass fragments (implosion). Wear protective clothing and safety glasses. Avoid striking the CRT on any object that might cause it to crack or implode. When storing a CRT, place it in a protective carton or face down in a protected location on a smooth surface with a soft mat under the faceplate.

1. Remove the rear and top panels.
2. Loosen the two screws located on both sides of the CRT base-pin until the tension of the springs on these screws is released.
3. Remove the CRT base-pin socket from the rear of the CRT.
4. Disconnect the CRT anode cap from the jack located on the left side of the CRT. Ground the CRT anode to the chassis to dissipate any stored charge remaining in the CRT.
5. Remove the CRT bezel cover from the lower side of the CRT bezel by pulling it off with your fingernail. Remove the CRT bezel from the front panel by removing the two screws located on the lower side of the bezel.
6. Remove the CRT filter, CRT spacer, and CRT implosion shield from the CRT frame.
7. Remove the four screws located on the inner sides of the frame.
8. Remove the CRT frame by removing the four remaining screws located on the outer sides of the CRT frame. Remove the cushion from the CRT faceplate.
9. Remove the graticule illumination lamp assembly from both sides of the CRT.
10. Hold one hand on the CRT faceplate and gently pull out the CRT while pushing on the CRT base pins.

Cathode-Ray Tube Replacement

Replace the Cathode Ray Tube (CRT) as follows:

1. Place four CRT retainers into the guide slots located at each corner of the front panel CRT opening.
2. Insert the CRT into the front panel opening and set it firmly against the CRT clamp ring located at the rear of the CRT shield.
3. Clean the CRT faceplate and place the A28 and A29 lamp boards on the right and left side of the CRT, respectively.
4. Replace the CRT cushion. Fasten the CRT frame by fixing four screws located on the outer sides of the CRT frame.
5. Tighten the four screws located on the inner sides of the CRT frame by applying 5 Kg/cm (4.3 inch-lb) of torque.
6. Tighten the two screws beside the CRT base until the springs on the screws are fully compressed.
7. Replace the CRT base-pin socket on the CRT base pins.
8. Replace the CRT implosion shield, CRT spacer, and CRT filter.
9. Replace the CRT bezel and bezel cover.
10. Reconnect the CRT anode cap.
11. Replace the rear and top panels.

NOTE

Replacing the CRT requires readjustment of the 371.

BOARDS

To determine the location of a circuit board, see Figure 7-2 in Section 7.

Chassis-mounted Boards

Remove and replace all chassis-mounted circuit boards as follows:

1. Disconnect all pin connectors attached to the board or that connect the board to other parts of the instrument.
2. Remove the securing screws.
3. Remove the chassis-mounted board.
4. Replace chassis-mounted boards in the reverse order of removal. Be sure to match the index arrow or index mark

on the multi-pin connector to the corresponding arrow on the board.

NOTE

To replace a specific circuit board, other circuit boards, chassis parts, or panels may require removal. If such is the case, refer to the removal instructions for that assembly as required.

A2, A3, A4, A5 Plug-in Boards

Remove and replace the plug-in boards as follows:

1. Remove the two circuit board retainers
2. Remove the plug-in board by pulling up on the ejector tab at each end of the board.
3. Replace the plug-in board by aligning the board with the guide slots (components on the side away from the CRT) and inserting it, holding the tabs parallel to the top of the board.
4. Slide the board down through the slots until the edge connectors rest on the bus slot connectors on the A1 Mother board.
5. Push the module down into the bus slot connectors of the A1 Mother board. Press firmly on the board, but do not press on components.
6. Replace the two circuit board retainers.

A1 Mother Circuit Board

Remove and replace the A1 Mother circuit board as follows:

1. Remove A2, A3, A4, and A5 circuit boards from the main body. (See the Plug-In Boards removal instructions.)
2. Remove the connectors for J10, J12, J110, J180, J190, J220, J400, J410, J412, and J420 from the board.
3. Remove the connector for J60 from the A6 Collector Supply Output circuit board. Remove the connector for J70 from the A7 Step Generator circuit board. Remove the connector for J192 from the A25 Main Power Supply circuit board.
4. Remove the A1 Mother circuit board by removing the eight screws from the board.
5. Replace the A1 Mother circuit board in the reverse order of removal.

A6 Collector Supply Output Circuit Board

Remove and replace the A6 Collector Supply Output circuit board as follows.

1. Remove the electrical shield.
2. Remove the connectors for J60, J62 and J66 from the board and remove the connector for J64 from the A26 Collector Power Supply circuit board.
3. Remove the four screws that secure the heat sink of the A6 Collector Supply Output circuit board to the chassis.
4. Remove the A6 Collector Supply Output board by removing the two screws from the board.
5. Replace the A6 Collector Supply Output board in the reverse order of removal.



Make sure that all four insulation washers on Q438, Q440, Q538, Q540 are placed in position. Without these insulators, destructive electric short circuits will occur.

NOTE

At the time of replacement, no silicone grease application is required because of the high heat conductivity of the insulation washer.

A7 Step Generator Circuit Board

Remove and replace the A7 Step Generator circuit board as follows:

1. Remove the connectors for J70, J72, J74, J76, and J78 from the board.
2. Remove the three screws located on the lower side of the board.
3. Remove the three screws fastening the heat sink of the board to the main body. Support the board as these screws are removed so it does not fall and become damaged.
4. Remove the A7 Step Generator circuit board.
5. Replace the A7 Step Generator circuit board in the reverse order of removal.

A10 Sense Circuit Board

Remove and replace the A10 Sense circuit board as follows:

1. Pull out the drawer unit from the main body.
2. Remove the connector at J02 from the A24 Bubble Controller assembly, and remove the connectors for J140, J142, and J146 from the A14 Lower Key circuit board.
3. Remove the six screws securing the support bracket for the Bubble Controller assembly and A14 Lower Key circuit board to the chassis.
4. Remove the bracket with the Bubble Controller assembly and A14 Lower Key circuit board attached.
5. Remove the connectors for J146, J610, J612, J614, J616, J617, J618, J620, J622, J626, J630, J632, J634, J636, J670, J690, and J695 from the board.

NOTE

When removing connectors from the board tag each wire to identify its destination. Unless the wires are tagged, confusion might result when reconnecting the wires.

6. Remove the A10 Sense circuit board by removing the six securing screws from the board.
7. Replace the A10 Sense circuit board in the reverse order of removal.

A11 Main Key Circuit Board

Remove and replace the A11 Main Key circuit board as follows:

1. Remove the CRT bezel from the front panel. (See Cathode-Ray Tube removal.)
2. Remove the right side panel from the main body.
3. Remove the two securing screws from the right side of the front panel, and pull out the front panel.
4. Remove the connector at J110 from the A1 Mother circuit board and remove the screw holding the ground wire lug. Then remove the front panel.
5. Pull out the eight knobs (three large and five small) from the front panel.
6. Remove the A11 Main Key circuit board by removing the six screws securing the board.

NOTE

A11 Main Key circuit board and A12 Sub Key circuit board are connected to one another by circuit board mounted connectors J100, J120, P100 and P120. Be careful not to damage the connectors when removing and replacing the board.

7. Replace the A11 Main Key circuit board in the reverse order of removal.

A12 Sub Key Circuit Board

Remove and replace the A12 Sub Key circuit board as follows:

1. Remove the A11 Main Key circuit board. (See the last section of A11 Main Key circuit board removal instructions.)
2. Remove the A12 Sub Key circuit board by removing the six spacers from the board.
3. Replace the A12 Sub Key circuit board in the reverse order of removal.

A14 Lower Key Circuit Board

Remove and replace the A14 Lower Key circuit board as follows:

1. Pull out the drawer unit from the main body of the 371.
2. Remove the connector at J02 from the A24 Bubble Controller circuit board and remove the connectors for J140, J142, and J146 from the A14 Lower Key circuit board.
3. Remove the A14 Lower Key circuit board by removing the four securing screws securing the board.
4. Replace the A14 Lower Key circuit board in the reverse order of removal.

A15 High Current Power Supply Circuit Board

Remove and replace the A15 High Current Power Supply circuit board as follows:

1. Pull out the drawer unit from the main body of the 371.
2. Remove the shield from the drawer unit by removing the four screws.
3. Remove the connectors for J800, J802, J900, J902, J904, and J906 from the board.
4. Remove the A15 High Current Power Supply circuit board by removing the seven securing screws securing the board.

5. Replace the A15 High Current Power Supply circuit board in the reverse order of removal.



The CRT anode circuit retains up to 2400 Volt of charge. Be sure that the circuit is completely grounded to the chassis before handling the circuit.

A16 High Current Control Circuit Board

Remove and replace the A16 High Current Control circuit board as follows:

1. Pull out the drawer unit from the main body of the 371.
2. Remove the shield from the drawer unit by removing the four screws.
3. Remove the connectors for J690, J906, J908, J912, and J914 from the board.
4. Remove the A16 High Current Control circuit board by removing the four securing screws securing the board.
5. Replace the A16 High Current Control circuit board in the reverse order of removal.

A18 CRT Output Circuit Board

Remove and replace the A18 CRT Output Circuit board as follows:

1. Remove the top cabinet panel from the main body of the 371.
2. Remove the insulator from the A18 CRT Output Circuit board by removing the four screws.
3. Remove the connectors for J180, J182, J184 and J186 from the board.
4. Remove the A18 CRT Output circuit board by removing the four spacers from the board.
5. Replace the A18 CRT Output circuit board in the reverse order of removal.

A20 HV Reg Circuit Board

Remove and replace the A20 H.V. Regulator circuit board as follows:

1. Remove the left cabinet panel from the main body.
2. Remove the shield of the A20 H.V. Regulator circuit board from the main body by removing the four securing screws.
3. Remove the retainer that holds the transistor on the board to the chassis by removing the securing screw.

4. Remove CRT anode cap from the jack located on the left side of the CRT. Ground CRT anode cap to the chassis to dissipate any stored charge.
5. Remove the connectors for J182, J194, and J200 from the board.
6. Remove the A20 H.V. Regulator circuit board by removing the four screws from the board.
7. Replace the A20 H.V. Regulator circuit board in the reverse order of removal.

A22 Interface Circuit Board

Remove and replace the A22 Interface circuit board as follows:

1. Remove the connector at J220 from the A1 Mother circuit board. (See A2/A3/A4/A5 Plug-In Circuit board removal.)
2. Remove the rear panel.
3. Remove the two screws that secure the IEEE STD 488 PORT connector to the rear panel. Also remove the two screws that secure the PLOTTER INTERFACE PORT connector to the rear panel.
4. Remove the A22 Interface circuit board together with its insulation cover by removing the four screws from the board.
5. Replace the A22 Interface circuit board in the reverse order of removal.

A25 Main Power Supply Circuit Board

Remove and replace the A25 Main Power Supply circuit board as follows:

1. Remove the top cabinet.
2. Remove the rear panel.
3. Remove the connectors for J72, J190, J192, J194, J250, J252, J280, and J290 from the board.
4. Remove the three screws that secure the heat sink of the A25 Main Power Supply circuit board to the chassis.
5. Remove the A25 Main Power Supply circuit board by removing the two screws from the board.

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6. Replace the A25 Main Power Supply circuit board in the reverse order of removal.

A27 Primary Circuit Board

Remove and replace the A27 Primary Circuit board as follows:

1. Remove the rear panel.
2. Remove the protective cover and remove the connectors for J270 and J272 from the board.
3. Remove the connectors for J274 and J276 from the board.
3. Remove the A27 Primary circuit board by removing the three screws and two spacers from the board.
4. Replace the A27 Primary circuit board in the reverse order of removal.

A28, A29 Graticule Illumination Lamp Circuit Board

Remove and replace the A28 and A29 Graticule Illumination Lamp circuit boards as follows:

1. Remove the CRT bezel cover from the lower side of the CRT bezel by pulling it off with your fingernail. Remove the CRT bezel from the front panel by removing the two screws located on the lower side of the bezel.
2. Remove the (blue) CRT filter, the CRT spacer, and the CRT implosion shield from the CRT frame.
3. Remove the CRT frame by first removing the four round head screws from the inner sides of the frame. Then remove the four flat-head screws from the outer sides of the CRT frame.
4. Remove the cabinet top.
5. Remove connector(s) J280 and/or J290 from the A19 L.V. Supply circuit board.
6. Remove the (internal scale illumination) light reflector, the light reflector retainer, and the retainer spring by pulling them out from alongside the CRT faceplate.
7. Remove the A28 or A29 Graticule Illumination Lamp circuit board by removing the two screws that secure the board in place.
8. Replace the A28 or A29 Graticule Illumination Lamp circuit board in the reverse order of removal.

A30 Connector Circuit Board

Remove and replace the A30 Connector circuit board as follows:

1. Pull out the drawer unit from the main body of the 371.
2. Remove the shield from the drawer unit by removing the four screws.
3. Remove the front porch by removing the screws and nut securing it to the drawer unit. There are three screws on the right side and three screws on the left side of the chassis and a nut in the center.
4. Remove the connectors for J30, J40 and J530 from the board.
5. Remove the A30 Connector circuit board by removing the nuts securing the test fixture connector J700, J702, J704, J706, J708, J710, J712, J714, J716, and J720.
6. Replace the A30 Connector circuit board in the reverse order of removal.

A31 Relay Circuit Board

Remove and replace the A31 Relay circuit board as follows:

1. Pull out the drawer unit from the main body of the 371.
2. Remove the shield from the drawer unit by removing the four screws.
3. Remove the screws and nut securing the front porch to the drawer unit. There are three screws on the right side and three screws on the left side of the chassis and a nut in the center. Pull the front porch toward the front slightly.
4. Remove the connectors for J695 and J914 from the board.
5. Remove the six screws securing the wires to P920, P922, P924, P926, P928, and P932.
6. Remove the A31 Relay circuit board by removing the ten screws securing the five relays on the board to the chassis.
7. Replace the A31 Relay circuit board in the reverse order of removal.

A24 Bubble Controller Assembly

Remove and replace the A24 Bubble Controller assembly as follows:

1. Pull out the drawer unit from the main body of the 371.
2. Remove the connector at J02 from the A24 Bubble Controller assembly.

3. Remove the A24 Bubble Controller assembly by removing the four screws from the assembly.
4. Replace the A24 Bubble Controller assembly in the reverse order of removal.

WARNING

Handle silicone grease with care. Avoid getting the silicone grease in your eyes. Wash hands thoroughly after use.

Cooling Fan

Remove and replace the Cooling Fan as follows:

1. Remove the rear panel.
2. Remove the protective cover and remove the connector for J272 from the A27 Primary circuit board.
3. Remove the Cooling Fan together with the fan cover, filter, and fan guard by removing the four screws and nuts.

NOTE

Before reinstalling the cooling fan, be certain that the J272 connector wires are at the bottom right corner (as facing the rear). Also check that the air flow arrow marked on the fan housing is pointing toward the inside of the 371.

4. Replace the Cooling Fan in the reverse order of removal.

Semiconductors

Do not replace semiconductors unless actually defective. If removed from their sockets during routine maintenance, return them to their original sockets. Unnecessary replacement of semiconductors may affect the adjustment of the instrument. When semiconductors are replaced, check the operation of circuits that may be affected.

WARNING

To avoid electric shock hazard, always disconnect the 371 from the power source before removing or replacing components.

Replacement semiconductors should be of the original type or a direct replacement. When removing soldered-on transistors, use a solder-removing wick to remove the solder from the circuit board pads. If the transistor has a heat sink or is mounted on the chassis and uses silicone grease to increase heat conductivity, replace the silicone grease on both sides of the insulating washer when replacing these transistors.

An extracting tool should be used to remove the in-line integrated circuits to prevent damaging the pins. This tool is available from Tektronix, Inc.; order Tektronix part 003-0619-00. If an extracting tool is not available, use care to avoid damaging the pins. Pull slowly and evenly on both ends of the integrated circuit. Try to avoid disengaging one end from the socket before the other.

Line Fuses

The two line fuses (main and collector) used in this instrument are located on the rear panel. Replace the line fuse only with one of proper type and rating.

Remove and replace the line fuses as follows:

1. Disconnect the power cord from the AC INPUT connector on the rear panel.
2. Press the fuse-holder cap and release it with a slight counterclockwise rotation. Pull the cap (with the attached fuse inside) out of the fuse holder.
3. Replace the line fuse in the reverse order of removal.

ADJUSTMENT AFTER REPAIR

After any electrical component has been replaced, the adjustment of that particular circuit should be checked as well as the adjustment of any closely related circuits.

DIAGNOSTIC ROUTINES

The 371 has four diagnostic routines: two Power On Diagnostic routines, a User Initiated Diagnostic routine, and a GPIB diagnostic routine.

Power On Diagnostic Routines

At power on, the 371 runs the Power On Diagnostic routine to execute the following tests in sequence:

- System ROM check
- System RAM check
- Display RAM check
- Acquisition RAM check
- Up/down switch and Push button test

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After the completion of Power On Diagnostic routines, the 371 displays a "SELFTTEST PASS" message on the error message area of the CRT and sets the initial settings.

If the 371 is turned on with the SHIFT key pressed, a more detailed Power On Diagnostic routine is performed, in the following order:

- System ROM check
- System RAM check
- Display RAM check
- Acquisition RAM check
- LED check Display quality check
- Up/down switch and Push button test

To exit this diagnostic routine, press the SHIFT key.

System ROM Check

After confirming that the system ROMs are in the correct sockets, the 371 diagnoses the system ROMs by checksum.

If a system ROM fatal error is found (such as misinsertion) the Bubble memory index display blinks with 0 and 1.

When the checksum errors are found, the error message is displayed on the error message area of the CRT. The format of this message is as follows:

ROM 000X

Where X is the hexadecimal number whose bit 1 through bit 4 respectively indicates the error status of system ROM U600, U610, U620, and U630. (For example, error message "ROM 0002" indicates that the checksum error is detected in ROM U610.)

In the above cases, the 371 does not advance the diagnostics routines.

System RAM Check

The 371 checks the system RAM by read/write operation. If a system RAM fatal error is found (such as bus shorted) the Bubble memory index display blinks with 0 and 2.

When a read/write error is found, the error message is displayed on the error message area of the CRT. The format of this message is as follows:

RAM XXXXX YYYYY

Where XXXXX is a hexadecimal representation of the address of the RAM in error, and YYYYY is a hexadecimal representation of error bits in that address (for example, error message "RAM 00000 0018" indicates that a read/write error is detected in bit 4 and bit 5 of the system RAM at address 00000).

In the above cases, the 371 does not advance the diagnostics routines.

Display RAM Check

The 371 checks the Display RAM by read/write operation.

If a read/write error is found (such as bus shorted) the Bubble memory index display blinks with 0 and 3 and the 371 does not advance the diagnostics routines.

Acquisition RAM Check

The 371 checks the Acquisition RAM by read/write operation.

If a read/write error is found (such as bus shorted) the Bubble memory index display blinks with 0 and 4 and the 371 does not advance the diagnostics routines. Table 3-2 shows the Power-on System Error Messages displayed on the Bubble memory index display.

Table 3-2
Power-on System Error Messages

Display	Meaning
0/1(blink)	System ROM error (such as misinsertion)
0/2(blink)	System RAM error (such as bus shorted)
0/3(blink)	Display RAM Read/Write error (such as bus shorted)
0/4(blink)	Acquisition RAM Read/Write error (such as bus shorted)

LED Check

The 371 turns on all front-panel LEDs sequentially for visual check.

Display Quality Check

The 371 displays the logo mark (SONY/TEKTRONIX) and a CRT adjustment pattern for CRT control adjustment. For the implementation of this adjustment pattern, refer to Section 4, "Performance Checks and Adjustment."

Pressing the SHIFT key exits this routine.

Up/Down Switch and Push Button Test

The 371 executes the up/down switch and push button test. (The SHIFT button is not tested in this case.) If an error is

found, the error message is displayed on the error message area of the CRT. The error message is indicated by the following format:

KEY ERROR < NUM >

Where < NUM > indicates the number of corresponding up/down switches or push buttons on the front panel, listed in Table 3-3.

The following message appears on the test area of the CRT simultaneously with the above error message:

PUSH SHIFT KEY TO GO ON

You can ignore the displayed error and push the SHIFT key to continue the test, but the displayed key function will not necessarily occur correctly.

User Initiated Diagnostic Routine

Pressing both the SHIFT key and NON STORE key enters the User Initiated Diagnostic routine. This routine displays a number or message that corresponds to the front panel push button or rotary switch that you press or rotate. Thus, you can diagnose whether the front panel controls are operating normally. Table 3-3 lists the buttons, switches and associated numbers or messages. To exit this routine, press both the SHIFT key and the NON STORE key again.

GPB Diagnostic Routine

The GPB TEST? command initiates the 371 system ROM and RAM diagnostic routines. The 371 responds to this command by returning system ROM and RAM information to the controller in the following format:

TEST ROM:000X (ROM error code), RAM:YYYY (RAM error code)

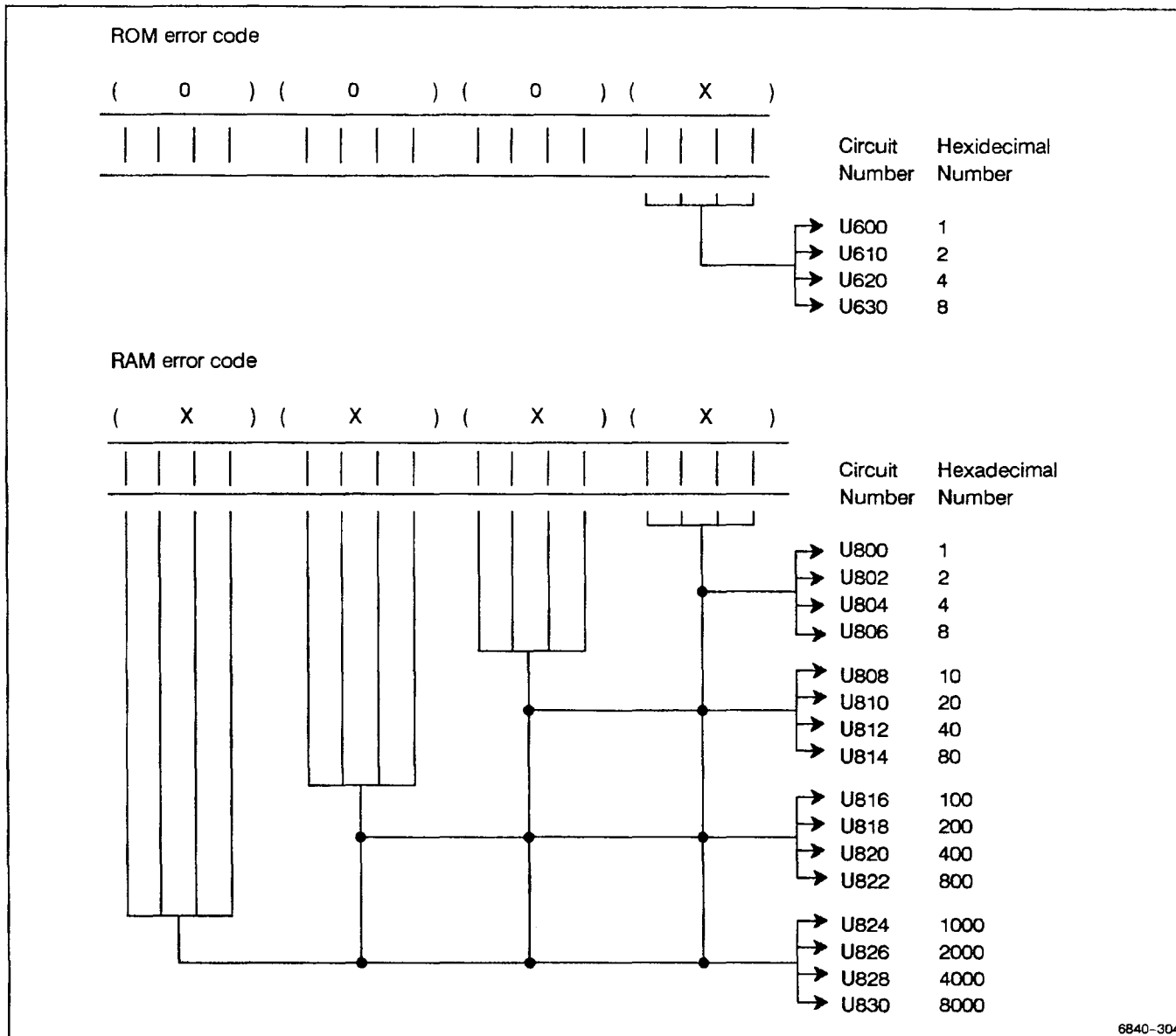
The TEST query response consists of two hexadecimal numbers that indicate if a ROM or RAM IC was found to be defective. These numbers must be translated to the binary equivalent to determine the ROM and RAM locations as shown in Figure 3-4. (If all ROMs and RAMs are good, the TEST query response is ROM:0000, RAM:0000.)

Table 3-3
Front Panel Control Index Numbers

Key function	Key Number
Save Key	1
Recall Key	2
Index Decr Key	3
Index Incr Key	4
Non Store Key	5
Store Key	6
Compare Key	7
View Key	8
Enter Key	9
Display Invert Key	10
Repeat Key	11
Single Key	12
Sweep Key	13
Reset To Local Key	14
User Request Key	15
Plot Key	16
Cursor Mode Incr Key	17
Cursor Mode Decr Key	18
Left Arrow Key	19
Up Arrow Key	20
Right Arrow Key	21
Down Arrow Key	22
Shift Key	23
Collector Supply Polarity Key	24
Peak Power Watts 3 kW Key	25
Peak Power Watts 300 W Key	26
Peak Power Watts 30 W Key	27
Peak Power Watts 3 W Key	28

**Table 3-3 (cont.)
Front Panel Control Index Numbers**

Key function	Key Number
Step Gen Polarity Invert Key	29
Step Gen Current Source Key	30
Step Gen Voltage Source Key	31
Number Of Steps Incr Key	32
Number Of Steps Decr Key	33
Step Gen Offset Incr Key	34
Step Gen Offset Decr Key	35
Step Gen Mult .1x Key	36
Vertical Current/Div	VERT SENSE 0-16
Horizontal Volts/Div	HORIZ SENSE 0-16
Step/Offset Amplitude	STEP AMP 0-16
Collector Supply High Voltage Collector Supply High Current	COLLECTOR OFF COLLECTOR H.V. COLLECTOR H.C. COLLECTOR BOTH
Collector Supply Variable	VCS(%) = 0.0 - 100.0
Interlock	INTERLOCK OFF INTERLOCK ON



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Figure 3-4. ROM and RAM error messages.

SECTION FOUR PERFORMANCE CHECK AND ADJUSTMENT

The Performance Check and Adjustment Section:

- Checks key electrical specifications
- Provides instructions for determining whether adjustment is necessary
- Provides instructions for making all internal adjustments
- Provides optional functional check instructions

Adjustment Interval

To maintain instrument accuracy, check performance every 2000 hours of operation or annually if used infrequently.

IMPORTANT:

The Performance Check and Adjustment Section serves several purposes. Time can be saved by performing only those tasks necessary for your application. Carefully read Table 4-1 to select the appropriate procedure option for the task to be performed.

Table 4-1
Performance Check and Adjustment Options

Task	Procedure Options
Performance Check (Checking key electrical specifications)	<ul style="list-style-type: none"> • Perform the Power-Up Sequence at the beginning of the Performance Check and Adjustment Section. • Perform those procedures with titles beginning with "Checking" and identified with a ✓ in the bar above the heading (see the Procedure Index at the beginning of the section). <p>IMPORTANT:</p> <p>If a "Checking" procedure also contains the word "Adjusting" in the title and a ⊖ in the bar above the title, ignore those parts of the procedure with adjustment instructions.</p>
Adjustment	<ul style="list-style-type: none"> • Perform the Power-Up Sequence at the beginning of the Performance Check and Adjustment Section. • Perform only those procedures with "Adjusting" in the title and a ⊖ in the bar above the title (see the Procedure Index at the beginning of the section). <p>IMPORTANT:</p> <p>Perform all steps of these adjustment procedures; most adjustments are preceded by instructions for determining whether adjustment is necessary and followed by instructions for verifying that the adjustment was correctly performed.</p>

TABLE 4-1 (Cont.)
Performance Check and Adjustment Options

Task	Procedure Options
<p>Performance Check and Adjustment</p>	<ul style="list-style-type: none"> • Perform the Power-Up Sequence at the beginning of the Performance Check and Adjustment Section. • Perform all procedures in the section with a ✓ or a ⊖ (or both) in the bar above the procedure title (see the Procedure Index at the beginning of the section). <p>IMPORTANT:</p> <p>Steps for “Examining” characteristics only (i.e., those with no “Checking” or “Adjusting” instructions included) are not necessary for checking specifications or making adjustments.</p>
<p>Partial Performance Check or Adjustment</p>	<ul style="list-style-type: none"> • Perform the Power-Up Sequence at the beginning of the Performance Check and Adjustment Section. • Perform the desired procedures (e.g., A1, B3, etc.) using the SETUP CONDITIONS at the beginning of each procedure. <p>IMPORTANT:</p> <p>Although a partial adjustment can be performed, we recommend that the entire subsection (e.g., A. Power Supply, D. Step Generator, etc.) be performed if any adjustments are made.</p>
<p>Functional Check of Front Panel Controls and Connectors</p>	<ul style="list-style-type: none"> • Perform the <i>First-Time Operation</i> procedure in Section 3 of the 371 Operators Manual.
<p>Complete Functional Check</p>	<ul style="list-style-type: none"> • Perform the Power-up Sequence at the beginning of the Performance Check and Adjustment Section. • Perform only those procedures with titles beginning with “Checking” or “Examining.” <p>IMPORTANT:</p> <p>If a “Checking” or an “Examining” procedure also contains the word “Adjusting” in the title and a ⊖ in the bar above the title, ignore those parts of the procedure with adjustment instructions.</p>

Before making adjustments, thoroughly clean and inspect the 371 instrument as instructed in the Maintenance section of this manual.

USING THIS SECTION

The following aids are used in this section:

Performance Check Summary

The Performance Check Summary lists key characteristics checked in this section and the procedure in which they are checked. It also indicates which procedures contain adjustments which may affect the specified performance of characteristics.

Procedure Index

The Index lists all procedures included in each subsection. The beginning page number is given for each procedure for easy location if a portion of the subsection is performed.

The procedures in the Index are marked with ✓ and ⊖ symbols, which are also used in the procedure to designate specification checks and internal adjustments.

Power-Up Sequence

The Power-Up Sequence ensures that operating conditions are stable and repeatable, and must be performed before any complete or partial procedure is performed.

Initializing the 371

The 371 is initialized at the beginning of most procedures to prevent the carry-over of inappropriate setup conditions from previous procedures. Initialization also allows each procedure to be performed independently if only portions of the subsection are performed.

Subsection Headings

The section is divided into subsections by major circuit function. For example: A. Power Supply, B. Display, etc. Each subsection contains procedures to check or adjust characteristics of that major circuit.

Procedure Titles and Title Bars

The title of each procedure begins with Checking, Adjusting, Examining, or a combination of these words.

- **Checking** indicates that an electrical characteristic is checked.
- **Adjusting** indicates that instructions are given to make one or more internal adjustments.
- **Examining** indicates that a functional check of the circuit is performed and that no electrical specifications are checked.

Each procedure with instructions for checking and/or adjusting instrument characteristics has a title bar positioned over the procedure title. The title bar contains a ✓ and/or a ⊖ to quickly identify the purpose of the procedure.

Setup Conditions

Each procedure has setup conditions enclosed in a box, which include all equipment, connections, and control settings necessary to begin the procedure.

Parts of Procedure

Each procedure is composed of sequential steps with alphabetic indexing. The steps are arranged into functional groups so that, for instance, if a performance check is being performed, adjustment instructions may be skipped.

PERFORMANCE CHECK SUMMARY

Table 4-2 lists key characteristics checked in this procedure and the steps in which they are checked. Also listed are procedures containing adjustment instructions which may affect a characteristic's specified performance. The specifications for characteristics listed in Table 4-2 are given at the beginning of the procedure in which they are checked.

**Table 4-2
Performance Check Summary**

Characteristic	Examined	Checked	Adjusted
POWER SUPPLIES			
Reference Voltage		A2,A3	A2,A3
Deviation and Ripple	A1		
Cathode Supply	A4		
DISPLAY			
Offset	B1		
Bias	B2		B2
Astigmatism	B3		B3
Intensity	B4,B5,B6		
Accuracy			B7
Orthogonality and Geometry		B8	B8
Position and Size		B8	B8
Looping			B9
MEASUREMENT ACCURACY			
Horizontal Balance			C1
Vertical Balance			C2
Step Generator Voltage Measurement		C3	
Collector Low Voltage Measurement		C4	
Collector High Voltage Measurement		C5	
Collector Current Voltage Measurement in High Voltage Mode		C6	
Collector Current Voltage Measurement in High Current Mode		C7	

**Table 4-2 (Cont.)
Performance Check Summary**

Characteristic	Examined	Checked	Adjusted
STEP GENERATOR			
Multi .1X Balance and Offset			D1
Gain (Voltage)			D2
Rate and Pulse Form		D3	
Gain (Current)			D4
Current Zero and Balance			D5
Voltage Balance			D6
Ripple and Noise (Voltage)		D7	
Incremental Accuracy		D8	
Amplitude Accuracy (Voltage)		D9	
Maximum Voltage		D10	
Offset Accuracy		D11	
Short Current Limit		D12	
Amplitude Accuracy (Current)		D13,D15	
Maximum Current		D14	
Maximum Voltage in Current Mode		D17	
Ripple and Noise (Current)		D18	
COLLECTOR SUPPLY			
Offset			E1
Gain			E2
Pulse Form		E3	
Minimum Current		E4	
Maximum Voltage		E5	
TEST FIXTURE			
Sense Lead Resistance		F1	
Continuity		F2	

PERFORMANCE CHECK AND ADJUSTMENT PROCEDURES

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Tektronix Field Service

Tektronix Field Service Centers and the Factory Service Center provide instrument repair and adjustment services. Contact your Tektronix Field Office or representative for further information.

Test Equipment

The test equipment listed in Table 4-3 is required for a complete Performance Check and Adjustment of the instrument. However, complete checking or adjusting may not always be necessary or desirable. You may be satisfied with checking only selected characteristics, thereby reducing the amount of test equipment actually required.

The specifications for test equipment listed in Table 4-3 are the minimum required to check performance requirements of the 371. Detailed operating instructions for test equipment are not given in these procedures; refer to the test equipment instruction manual if more information is needed.

Special Fixtures

Special fixtures are used where they facilitate instrument adjustment. These fixtures are available from Tektronix, Inc. Order by part number from Tektronix Field Offices or representatives.

Test Equipment Alternatives

The checks and adjustment procedures are based on the first item of equipment given as an example. When other equipment is substituted, control settings or setups may have to be altered. If the exact item of equipment given as an example in Table 4-3 is not available, first check the Minimum Specifications column carefully to see if any other equipment might suffice. Then check the Purpose column to see where this item is used. If used for a performance check or adjustment that is of little or no importance for your measurement requirements, the item and corresponding procedure(s) can be deleted.

Table 4-3
Test Equipment

Item	Minimum Specification	Purpose	Example of Applicable Test Equipment
1. Test Oscilloscope	Bandwidth, DC to 150 MHz; deflection factor, 2 mV to 5 V/DIV (with 1X probe)	Used to check ripple, noise, and pulse shape	a. Tektronix 2445A 150 MHz Oscilloscope with P6063B Probe b. Refer to Tektronix Products catalog for compatible equipment
2. DC Voltage Source	Voltage range: 0 mV to 1000 V; Accuracy: 0.1 mV; Resolution: 0.1 mV	Supplies a reference voltage to the 371	Fluke 5101B
3. DC Current Source	Current range: 0 μ A to 1.9999 A; Accuracy: 0.1% Resolution: 0.1 μ A	Supplies a reference current to the 371	Fluke 5101B
4. Digital Multimeter	DCV: 1000 V, 4.5 digit; Accuracy: 0.05%; Resolution: 0.1 mV; Input imp: > 10 M Ω DCA: 2 A; Accuracy: 0.1%; Resolution 0.1 nA; OHM: 2 k Ω ; Accuracy: 0.05%; Resolution: 0.1 Ω	Used throughout the checks and adjustments to measure voltage, current, and resistance	a. Fluke 8505A and Tektronix DM 501A (for 2A measurement only) b. Keithley 195A W/OP 1950
5. Tool, Alignment	Screwdriver tips for electronics use.	Used to perform internal adjustments	Tektronix Part No. 003-0489-00
6. Calibration Fixture		Used in many procedures	Tektronix Part No. 067-1345-00
7. Screwdrivers	POZIDRIV; Length: 8-1/2 inch; Point Size #1, #2	Used to remove Panels and High Voltage Shield Cover	Tektronix Part No. 003-0293-00
8. Patch Cord	Banana Plug-Jack to Banana Plug-Jack	Used in many procedures	Tektronix Part No. 198-5621-00 (qty.5) 198-5622-00(qty.5)
9. High Voltage Probe	Voltage range: 0 - 3 kV (DC,AC); Accuracy: \pm 1%	Used to examine -2400 V.	Fluke 80K-6
10. Test lead		Used in many procedures	Tektronix Part No. 198-5625-00 Included with Item 6 Calibration fixture.
12. Transistor	2SC2527G (TO220) or 2N3055H (TO3)	Used as DUT for acquisition of curve data	Tektronix Part No. 151-0701-00 or 151-0336-00

Table 4-3 (Cont.)
Test Equipment

Item	Minimum Specification	Purpose	Example of Applicable Test Equipment
13. Plotter (optional)	8-bit parallel interface; HPGL support	Used to check the plotter interface port. (There is no performance check for the plotter interface port.)	Tektronix HC100 Centronics cable: Option 1
14. Controller (optional)	GPIB Support	Used to check the GPIB port. (There is no performance check for the GPIB port.)	Hewlett-Packard 9836A
15. Bubble Memory Cassette		Used to store displayed curve data and instrument settings	Tektronix Part No. 020-1310-00
16. Test Adapter		Used to hold the DUT	Tektronix A1002 or A1003

Power-up Sequence

The performance of this instrument can be checked at any ambient temperature from +10° C to +40° C unless otherwise stated. Adjustments must be made at an ambient temperature from +15° C to +25° C for the specified tolerances to apply.

WARNING

Adjustment of the 371 should only be performed by a qualified service technician.

1. Check that the 371 is set for the proper power source and that a suitable power cord has been attached.
2. Remove the 371 cabinet panels to gain access to internal adjustments and test points.

For instructions on cabinet panel removal, refer to the description under the heading COMPONENT REMOVAL AND REPLACEMENT in Section 3 of this manual.

WARNING

Use extreme care when operating the 371 with the covers removed, due to the line voltage, high voltage, and high current levels present.

3. Connect the 371 to a suitable power source.
4. Press the POWER button and allow at least 20 minutes warmup before proceeding.

Initializing the 371

The following procedure saves the power-up default 371 settings for use when the procedure calls for you to "Initialize the 371."

1. Insert a Bubble Cassette (write-protect key in write-enable position) into the 371 Bubble Cassette receptacle until a click is heard.
2. Press the Setup SAVE button to store the default settings in memory location 1.

2. Press the Setup SAVE button to store the default settings in memory location 1.
3. Check that the "SAVE COMPLETE" message is displayed.

These default settings plus the manual initialization settings are used as starting settings throughout this procedure, except as noted otherwise.

Now, to Initialize the 371:

- a. Press the Setup RECALL button (with the MEMORY Index set to location 1).
- b. Check that the "SET01" message is displayed.

The power-up default settings are as follows:

```

DISPLAY
MODE ..... STORE
VERTICAL ..... 1 A/DIV
HORIZONTAL ..... 1 V/DIV
INVERT ..... OFF
STEP GENERATOR
SOURCE ..... CURRENT
STEP/OFFSET AMPLITUDE ..... 1 mA
NUMBER OF STEPS ..... 2
OFFSET ..... 0.00 MA
STEP MULTI .1X ..... OFF
INVERT ..... OFF
COLLECTOR SUPPLY
VARIABLE ..... 0.0%
PEAK POWER WATTS ..... 300 W
POLARITY ..... NPN +
MEASUREMENT ..... REPEAT
CURSOR ..... OFF
MEMORY
INDEX NUMBER ..... 1

```

A. POWER SUPPLIES

Equipment Required (see Table 4-3):

- Test Oscilloscope
- Digital Multimeter
- High Voltage Probe

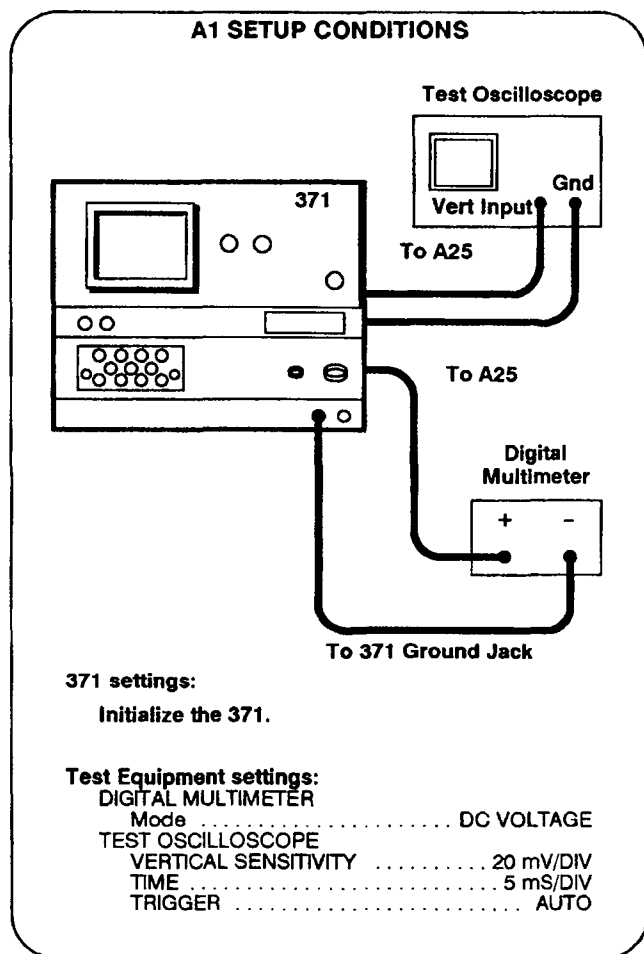
NOTE

See Test Point and Adjustment Locations 3 in Section 7 for the location of test points for this step.

A1. Examining Voltage Deviation and Ripple

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; they are not specifications.



Examining Voltage Deviation

- a. Connect the digital multimeter to the +5 test point on the A25 Main Power Supply board.
- b. **EXAMINE** the digital multimeter reading at the +5 test point and each of the other power supply test points listed in Table 4-4 for voltage levels within the given deviation.

Examining Ripple

- c. Disconnect the digital multimeter and connect the test oscilloscope to the +5 test point.
- d. **EXAMINE** the test oscilloscope display at each of the test points listed in Table 4-4 for ripple displays within the given deviation.

Removing the Setup

- e. Disconnect the test oscilloscope.

Table 4-4
Voltage Regulation and Ripple

Voltage	Test Point	Deviation Limits (V)	Ripple (mV)
+5.2 V	+5	+4.992 to +5.408	≤ 200
-12 V	-12	-11.4 to -12.6	≤ 100
+12 V	+12	+11.4 to +12.6	≤ 100
-6.5 V	-6.5	-6.37 to -6.67	≤ 50
+6.5 V	+6.5	+6.37 to +6.67	≤ 50

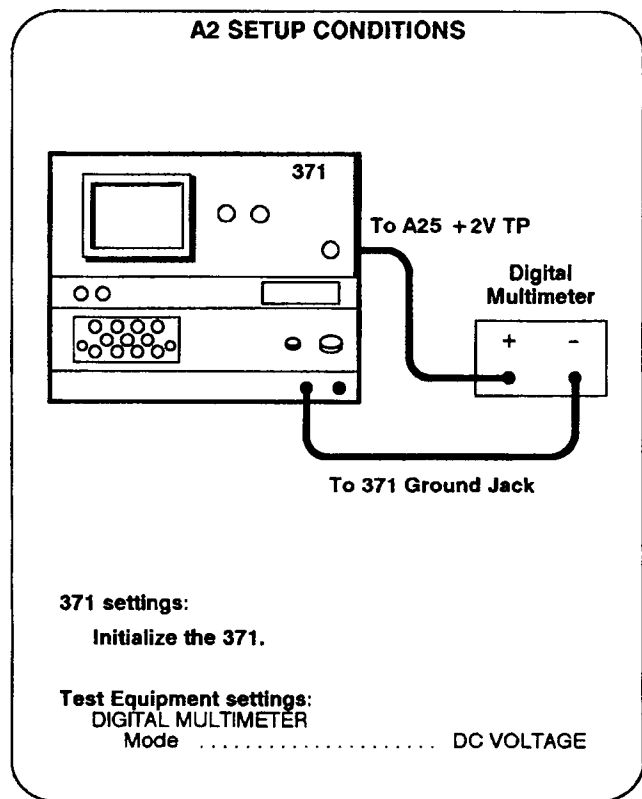


A2. Checking the +2 V Reference

Adjusting the +2 V Reference (A25R500)

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*



NOTE

See **Test Point and Adjustment Locations 3** in *Section 7* for the location of the test point and adjustment for this procedure.

Checking the +2 V Reference

- a. **CHECK** for a digital multimeter reading of +1.999 V to +2.001 V.

If not within these limits, the following adjustment is necessary.

Adjusting the +2 V Reference

- b. **ADJUST** +2 V ADJ on the A25 LV Supply Board for a digital multimeter reading of +2.000 V.

Removing the Setup

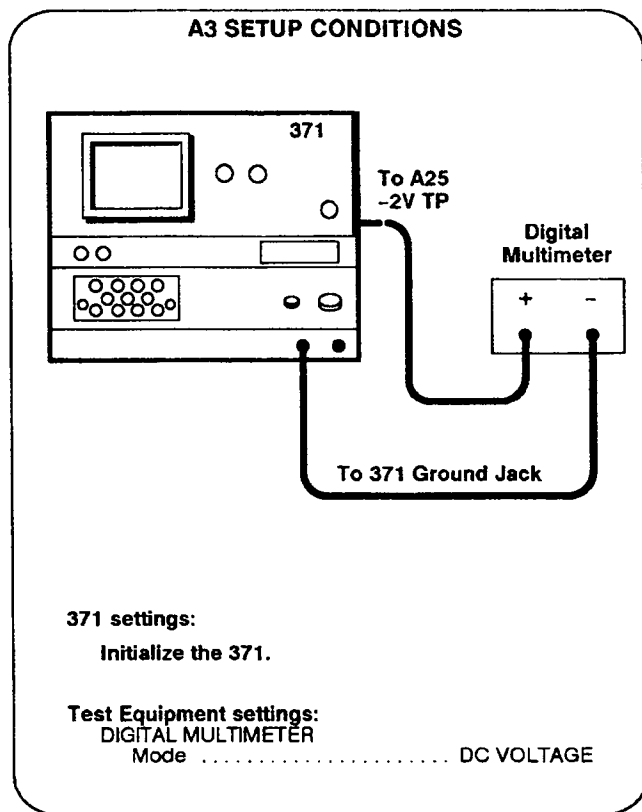
- c. Disconnect the positive lead of the digital multimeter from the test point.



A3. Checking the -2 V Reference Adjusting the -2 V Reference (A25R516)

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*



NOTE

See **Test Point and Adjustment Locations 3** in *Section 7* for the location of the test point and adjustment for this procedure.

Checking the -2 V Reference

- a. **CHECK** for a digital multimeter reading of -1.999 V to -2.001 V.

If not within these limits, perform step b.

Adjusting the -2 V Reference

- b. **ADJUST** -2 V ADJ on the A25 LV Supply Board for a digital multimeter reading of -2.000 V.

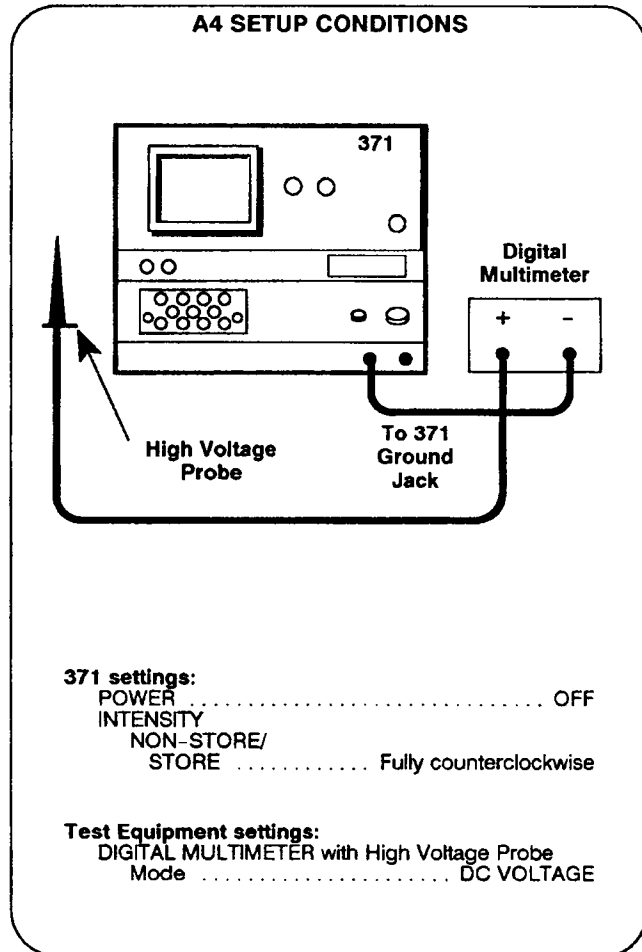
Removing the Setup

- c. Disconnect the digital multimeter leads from the 371.

A4. Examining the -2400 V Cathode Supply

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; they are not specifications.



Removing the High Voltage Shield

WARNING

To avoid electric shock hazard, be certain the 371 POWER switch is set to OFF before removing or replacing the high voltage shield and connecting the digital multimeter to the 371. Be certain that the digital multimeter ground lead is connected to the 371 ground terminal.

- a. Use a #1 Pozidrive screwdriver to remove the high voltage shield from the left side of the 371. (There are three shields on the left side; remove the center shield.)

Measuring the Cathode Voltage

NOTE

See Test Point and Adjustment Locations 3 in Section 7 for the location of the test point used in this step.

- b. Connect the high voltage probe to TP400 on the A20 HV Regulator Board.
- c. Change the following 371 setting:
 POWER ON
- d. **EXAMINE** the digital multimeter for a reading of -2352 V to -2448 V.

Disconnecting the Meter

- e. Change the following 371 setting:

POWER OFF

WARNING

To avoid electric shock hazard, be certain the 371 POWER switch is set to OFF before disconnecting the digital multimeter leads.

- f. Disconnect the high voltage digital multimeter probe and negative lead from the 371.

Replacing the High Voltage Shield

WARNING

To avoid electric shock hazard, be certain the 371 POWER switch is set to OFF before replacing the high voltage shield.

- g. Replace the high voltage shield.
- h. Change the following 371 setting:

POWER ON

B. DISPLAY

Equipment Required (see Table 4-3):

- Digital Multimeter

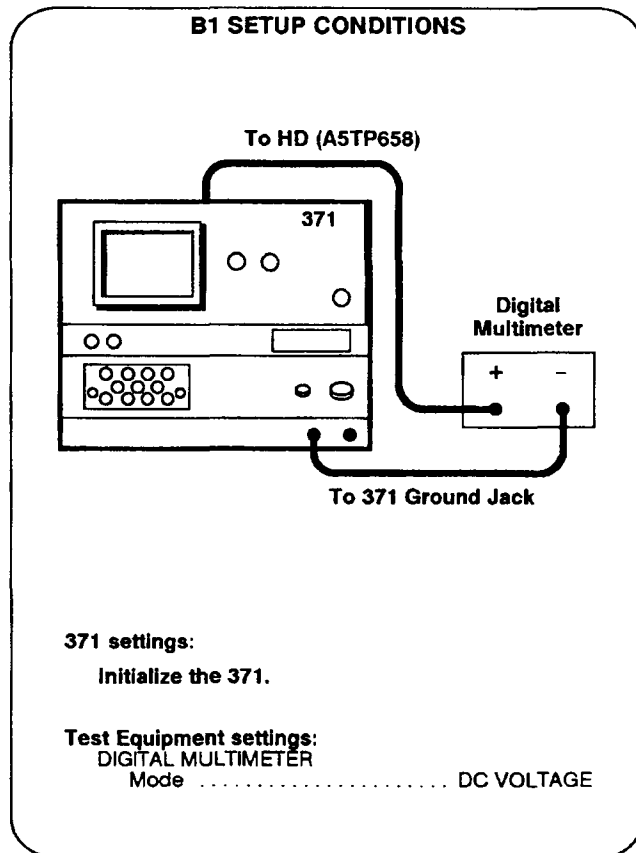
NOTE

See Test Point and Adjustment Locations 1 in Section 7 for the location of test points used in this step.

B1. Examining Display Offset

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; they are not specifications.



Examining Negative Horizontal Offset

- a. Change the following 371 setting:

DISPLAY
CRT CAL CAL ZERO

Hold down *SHIFT* and press *VIEW* to enter the *CAL ZERO* mode.

- b. **EXAMINE** the digital multimeter for a reading between -0.995 V and -1.005 V .

Examining Positive Horizontal Offset

- c. Change the following 371 setting:

DISPLAY
CRT CAL CAL FULL

Hold down *SHIFT* and press *STORE* to enter the *CAL FULL* mode.

- d. **EXAMINE** the digital multimeter for a reading between $+0.995\text{ V}$ and $+1.005\text{ V}$.

- e. Disconnect the digital multimeter from HD.

Examining Negative Vertical Offset

f. Connect the digital multimeter to VD (TP648) on the A5 Display Control board.

g. Change the following 371 setting:

DISPLAY
CRT CAL CAL ZERO

Hold down SHIFT and press VIEW to enter the CAL ZERO mode.

h. **EXAMINE** the digital multimeter for a reading between -0.995 V and -1.005 V.

Removing the Setup

k. Change the following 371 setting:

DISPLAY
CRT CAL OFF

Hold down SHIFT and press COMPARE to turn off the calibration mode.

l. Disconnect the digital multimeter from VD.

Examining Positive Vertical Offset

i. Change the following 371 setting:

DISPLAY
CRT CAL CAL FULL

Hold down SHIFT and press STORE to enter the CAL FULL mode.

j. **EXAMINE** the digital multimeter for a reading between +0.995 V and +1.005 V.



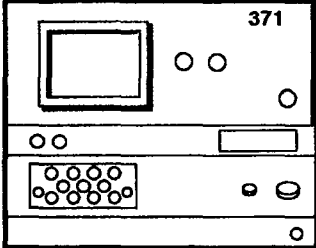
B2. Examining CRT Bias

Adjusting CRT Bias (A18R210)

IMPORTANT:

The characteristics examined in this procedure are provided as examples of typical instrument operation to aid in the adjustment of R210; they are not specifications.

B2 SETUP CONDITIONS



371 settings:

POWER	OFF
INTENSITY	
NON-STORE/STORE ..	Fully counterclockwise
VIEW	Fully counterclockwise
READOUT/CURSOR ...	Fully counterclockwise
GRAT ILLUM	Fully counterclockwise

- a. While pressing the CURSOR SHIFT button, set the 371 POWER switch to ON. This displays the Frame Test Pattern on the CRT.

Examining CRT Bias

- b. **EXAMINE** the CRT for the center spot to be barely visible.

If the spot is bright or not visible at all, the following adjustment may be necessary.

Adjusting CRT Bias

NOTE

R210 can be adjusted through the access hole in the high voltage shield.

- c. **ADJUST** Grid Bias adjustment R210 on the A20 HV Regulator Board until the CRT spot is barely visible.

Removing the Setup

- d. Change the following 371 settings:

INTENSITY
 NON STORE/STORE Optimum Intensity
 READOUT/CURSOR Optimum intensity

NOTE

The Frame Test Pattern is also used in procedure B3. Proceed to step e. only if B3 will not be performed.

- e. Press the CURSOR SHIFT button to remove the test pattern.

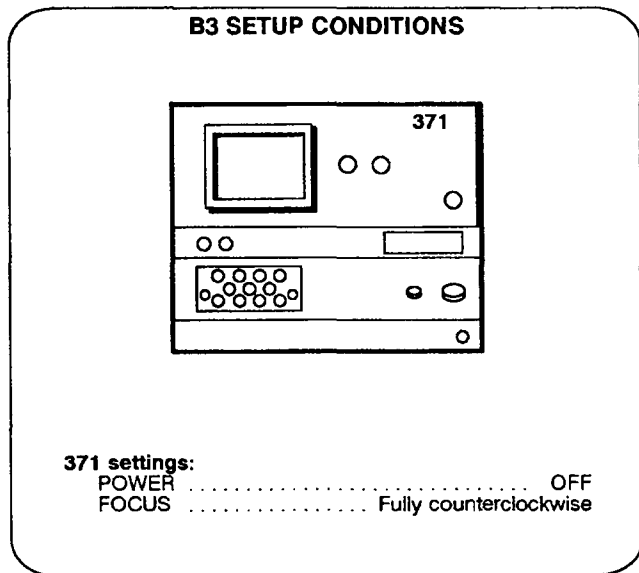


B3. Examining Astigmatism

Adjusting Astig (A18R420)

IMPORTANT:

The characteristics examined in this procedure are provided as examples of typical instrument operation to aid in the adjustment of R420; they are not specifications.



- a. While pressing the CURSOR SHIFT button, set the 371 POWER switch to ON. This displays the Frame Test Pattern on the CRT.

Examining Astigmatism

- b. Change the following 371 setting:
 NON-STORE/STORE Largest possible displayed spot
- c. **EXAMINE** the center spot for a circular shape.
If the spot is not circular, the following adjustment may be necessary.

Adjusting Astigmatism

NOTE

See Test Point and Adjustment Locations 2 in Section 7 for the location of the adjustment associated with this step.

- d. **ADJUST ASTIG** adjustment R420 on the A18 CRT Output board for a circular spot shape.

Removing the Setup

- e. Change the following 371 settings:
 FOCUS Set for smallest possible spot
- INTENSITY
 NON-STORE/STORE Normal viewing
 CURSOR Press the CURSOR SHIFT button to remove the test pattern



B4. Examining NON STORE/STORE INTENSITY Operation

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*

B4 SETUP CONDITIONS

371

371 settings:
Initialize the 371.

Examining STORE

- a. **CHECK** that the STORE LED is lit.
- b. **EXAMINE** the CRT for a continuous increase in spot brightness when the NON STORE/STORE INTENSITY control is turned from fully counterclockwise to fully clockwise.

Examining NON STORE

- c. Change the following 370 setting:
 DISPLAY
 Mode NON STORE
- d. **CHECK** that the NON STORE LED is lit.
- e. **EXAMINE** the CRT for a continuous increase in spot brightness as the NON STORE/STORE INTENSITY control is turned from fully counterclockwise to fully clockwise.
- f. Change the following 370 settings:
 INTENSITY
 NON STORE/STORE Normal viewing level

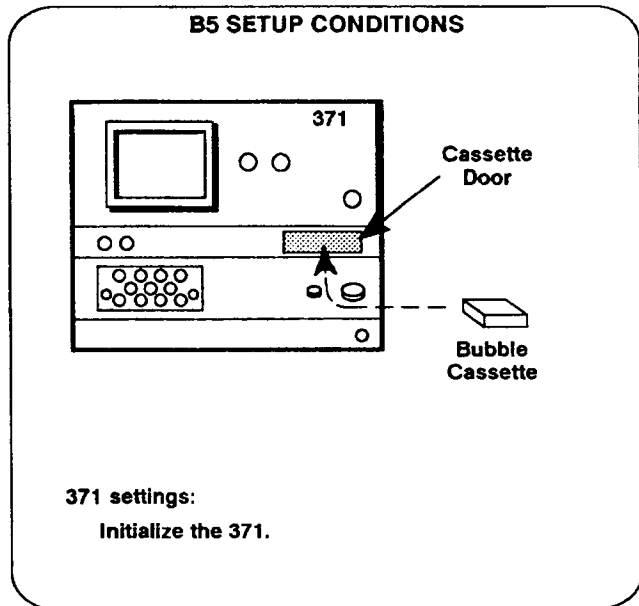
 DISPLAY
 Mode STORE



B5. Examining VIEW INTENSITY Operation

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*



a. Install in the 371 a bubble memory cassette containing a stored waveform.

b. Change the following 371 settings:

MEMORY
 Index Memory location containing
 the stored waveform

DISPLAY
 Mode VIEW

c. **CHECK** that the VIEW LED is lit.

d. **EXAMINE** the CRT for a continuous increase in brightness of the viewed trace as the VIEW INTENSITY control is turned from fully counterclockwise to fully clockwise.

e. Change the following 371 setting:

DISPLAY
 Mode COMPARE

f. **CHECK** that the COMPARE LED is lit.

g. **EXAMINE** the CRT for a continuous increase in brightness of the viewed trace as the VIEW INTENSITY control is turned from fully counterclockwise to fully clockwise.

h. Change the following 371 settings:

DISPLAY
 Mode STORE

INTENSITY
 NON STORE/STORE Normal viewing level

**B6. Examining READOUT/CURSORS
INTENSITY Operation**

IMPORTANT:

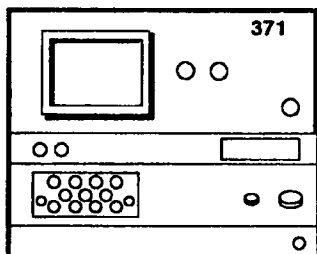
The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*

a. **EXAMINE** the display for a continuous increase in readout and cursor brightness as the READOUT/CURSORS INTENSITY control is turned from fully counterclockwise to fully clockwise.

b. Change the following 371 settings:

INTENSITY
READOUT/CURSORS Normal viewing level
CURSORS
Mode OFF

B6 SETUP CONDITIONS



371 settings:

Initialize the 371; then set the following control as indicated.

CURSORS
Mode WINDOW

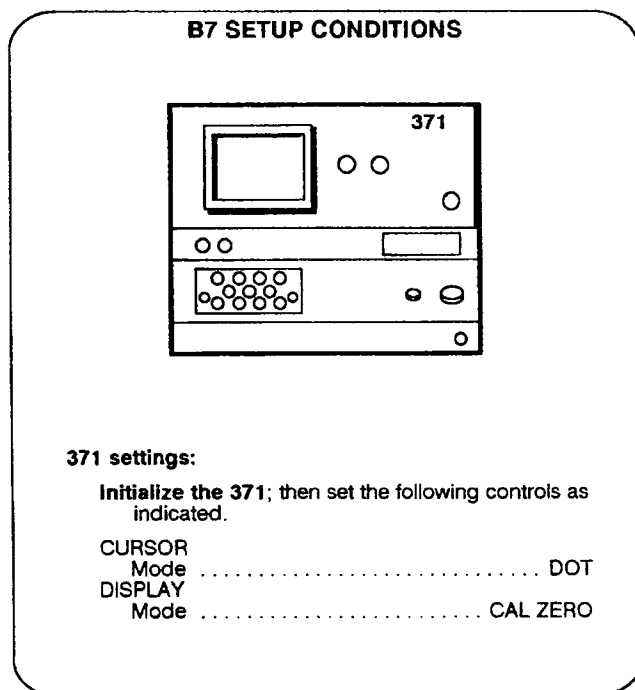


B7. Adjusting V Zero and H Zero (A3R614 and A3R604)

Adjusting Store Gain (A3R622)

IMPORTANT:

The characteristics examined in this procedure are provided as examples of typical instrument operation to aid in the adjustment of R604 and R614; they are not specifications.



CAL ZERO is initiated by holding down the CURSOR SHIFT button while pressing the VIEW button.

Determining if Adjustment is Necessary

- a. **EXAMINE** the vertical CURSOR readout for a reading that does not exceed ± 0.02 A and the horizontal CURSOR readout for a reading that does not exceed ± 0.02 V.

If the CURSOR readouts are not within these limits, the following adjustment is necessary.

Adjusting H Zero and V Zero

NOTE

See Test Point and Adjustment Locations 1 in Section 7 for the location of adjustments in this step.

- b. **ADJUST** H Zero adjustment R604 and V Zero adjustment R614 on the A3 A/D Board for a CURSOR readout of 0.00 for Vertical and 0.00 for Horizontal.

- c. Change the following 371 setting:

DISPLAY	.....	ON
INVERT	.....	ON

- d. **CHECK** that the INVERT LED is lit, and that the displayed spot moved from the lower left to the upper right corner of the CRT.

- e. Repeat steps a. and b.

- f. Change the following 371 settings:

DISPLAY	.....	OFF
INVERT	.....	OFF
Mode	.....	CAL FULL

CAL FULL is initiated by holding down the CURSOR SHIFT button while pressing the STORE button.

Examining Cal Full

- g. **EXAMINE** the 371 for the following:

- The vertical cursor readout is between 9.98 A and 10.02 A
- The horizontal cursor readout is between 9.98 V and 10.02 V

Performance Check and Adjustment—371

B. Display

h. Change the following 371 setting:

DISPLAY
INVERT ON

The indicator above the INVERT button will be lit.

i. Repeat step g.

j. Change the following 371 setting:

DISPLAY
INVERT OFF

Returning to Cal Off Mode

k. If the Cal Zero and Cal Full readouts are within the given limits, proceed to step m. If they are not within the limits, the following adjustments are necessary.

Adjusting Store Gain

NOTE

See Test Point and Adjustment Locations 1 in Section 7 for the location of adjustments made in this procedure.

l. **ADJUST** Store Gain adjustment R622 on the A3 A/D board so that the difference in vertical cursor readouts is 10.00 A between the Cal Zero and Cal Full modes.

Example: Cal Zero -0.05 A, Cal Full 9.95 A, difference equals 10.00 A.

m. Press the VIEW button while pressing the CURSOR SHIFT button.

This initiates Cal Zero mode.



B8. Checking Orthogonality and Geometry

Examining Store Position, Non Store Gain, and D/A Gain

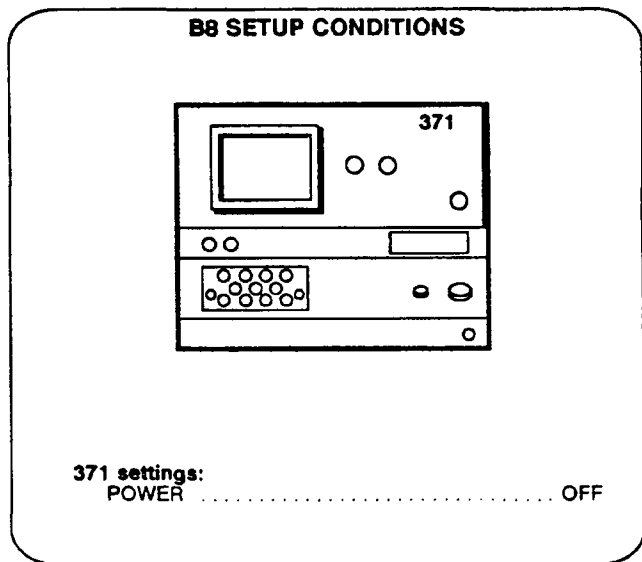
Adjusting SX Position (A5R508), SY Position (A5R528), D/A Gain (A4R842), X-Gain (A5R554), Y-Gain (A5R574), Orthogonality (A5R80), Geom (A18R410)

Specifications:

- Orthogonality is $90^\circ \pm 0.5$ minor division.
- Geometry includes two categories: (1) Tilt or bowing is no more than 0.5 minor division. (2) Keystone effect is no more than 0.75 minor division.

IMPORTANT:

Characteristics in EXAMINE steps are provided as examples of typical instrument operation to aid in adjustment; *they are not specifications.*



NOTE

See Test Point and Adjustment Locations 1 and 2 in Section 7 for the location of adjustments associated with this procedure.

Initiating the Test Pattern

- While pressing the CURSOR SHIFT button, set the 371 POWER to ON.

This initiates the diagnostic routine. The Sony/Tektronix logo first appears, followed by the display test pattern shown in Figure 4-1.

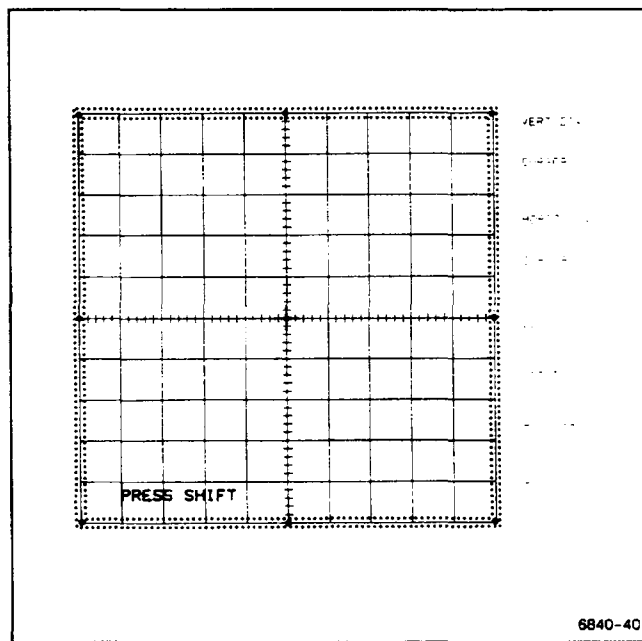


Figure 4-1. Diagnostic test pattern display.

The test pattern consists of the Frame Test Pattern overlaid over the Dot Test Pattern.

- Turn the GRAT ILLUM control fully clockwise for maximum brightness.
- Set the Frame Test Pattern to the same intensity as the graticule using the Intensity READOUT/CURSOR control

B. Display

and set the Dot Test Pattern slightly brighter using the Intensity NON STORE/STORE control.

Examining Store Position

- d. **EXAMINE** the display to determine whether the center cross mark of the Frame Test Pattern aligns with the center dot of the Dot Pattern.

If the pattern centers do not align, the following adjustments are necessary.

Adjusting SY POSITION and SX POSITION

The SX and SY POSITION controls change the Frame Test Pattern position without affecting the Dot Test Pattern position.

- e. **ADJUST SY POSITION** adjustment R528 and **SX POSITION** adjustment R508 on the A5 Display Control Board so that the center cross mark of the Frame Test Pattern conforms to the center dot of the Dot Pattern (not the center of the graticule).

Examining and Adjusting D/A Gain

- f. **EXAMINE** the display to determine whether the outer eight dots of the Dot Pattern are located between the inner frame and outer frame of the Frame Test Pattern.

If the location is not correct, the following adjustment is necessary.

- g. **ADJUST D/A Gain** adjustment R842 on the A4 Digital Display Board to position the outer eight dots between the inner frame and outer frame of the Frame Test Pattern.

D/A Gain adjusts the size of the Frame Test Pattern without changing the Dot Test Pattern size.

Checking and Adjusting the Display

The Dot and Frame Test Patterns are visual aids for display alignment. Positioning, straightening and sizing of the display involves several adjustments. Three of these adjustments, GEOMETRY, TRACE ROTATION, and ORTHOGONALITY, are interactive.

- **GEOMETRY** adjusts the curvature of the sides, top and bottom of the test pattern.
- **TRACE ROTATION** tilts the test pattern about a pivot point approximately 2 1/2 divisions from the right side of the graticule on the horizontal center line.
- **ORTHOGONALITY** changes the test pattern shape from rhombic to rectangular.
- **X-GAIN** and **Y-GAIN** change the test pattern from rectangular to square.
- Front-panel **POSITION** controls change the position of the whole display.

Checking Orthogonality

- h. Change the following 370 settings:

POSITION		
Vertical and Horizontal	.....	Position the center dot to graticule center
TRACE ROTATION	.....	Position the three intermediate horizontal dots on the center horizontal graticule line

- i. **CHECK** that the three intermediate vertical dots conform to the center vertical graticule line within 0.5 minor division.

If the dots do not conform, the following adjustment is necessary.

Adjusting Orthogonality

- j. **ADJUST** Orthogonality adjustment R80 on the A5 Display Control Board so that the three intermediate vertical dots conform to the center vertical graticule line.

Examining Non-Store Gain

- k. **EXAMINE** the display to determine if the Dot Pattern's outer eight dots are positioned within the inner and outer frame patterns.

If the positioning is not correct, the following adjustment is necessary.

Adjusting X-GAIN and Y-GAIN

- i. **ADJUST** X-GAIN adjustment R554 and Y-GAIN adjustment R574 on the A5 Display Control Board to position the Dot Pattern's outer eight dots within the inner and outer Frame Patterns.

Checking and Adjusting Geometry

- m. Change the following 370 settings:

POSITION

Horizontal and Vertical Position the center dot of the Dot Pattern at graticule center

- n. **CHECK** the Frame Pattern for ≤ 0.5 minor division of bowing and ≤ 0.75 minor division of keystone effect.

If the bowing and keystone effect are not within these limits, the following adjustment may be necessary.

- o. **ADJUST** Geometry adjustment R410 on the A18 CRT Output Board (if necessary) for minimum display bowing.

Examining the Display for Adjustment Interaction

- p. **EXAMINE** the display for all dots to be between the outer frame and inner frame of the Frame Test Pattern, within 0.5 minor division.

If not, repeat steps i. through m.

- q. **EXAMINE** the display for the graticule periphery to be between the outer frame and inner frame of the frame test pattern, within 0.5 minor division.

If not, repeat steps i. through m.

- r. **EXAMINE** the display for the center dot to be at graticule center, within 0.5 minor division.

Removing the Test Pattern

- s. Press the CURSOR SHIFT key to exit the diagnostic routine.



B9. Adjusting Tangent Zero (A10R462), Looping Balance (A10R422), Looping Zero (A10R413)

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*

B9 SETUP CONDITIONS

371 settings:
 Initialize the 371, then change the following settings:

COLLECTOR SUPPLY	
PEAK POWER WATTS	3 W
HIGH VOLTAGE	ENABLED
VARIABLE	100%
DISPLAY	
Mode	NON STORE
VERTICAL	10 μ A/DIV
HORIZONTAL	500 V/DIV COLLECTOR
Protective Cover	CLOSED

- a. Turn the LOOPING COMPENSATION control throughout its range.
- b. **CHECK** that the looping passes through minimum curve separation.

NOTE

See Test Point and Adjustment Locations 2 in Section 7 for the location of adjustments R462, R422, and R413.

- c. **ADJUST TAN ZERO** adjustment R462 on the A10 Sense board to align the trace with the horizontal graticule line.
- d. Change the following 371 setting:
 COLLECTOR SUPPLY
 VARIABLE 0.0%.
- e. **ADJUST LOOP BAL** adjustment R422 and **LOOP ZERO** adjustment R413 on the A10 Sense board for minimum spot shift while turning the front-panel LOOPING COMPENSATION control from one extreme to the other.
- f. Change the following 371 setting:
 COLLECTOR SUPPLY
 HIGH VOLTAGE DISABLED

C. MEASUREMENT ACCURACY

Equipment Required (see Table 4-3):

- DC Current Source
- DC Voltage Source
- Calibration Fixture (067-1345-00)



C1. Adjusting Horizontal Balance (A10R276)

Specifications:

- Cursor accuracy is less than 1.5% of READOUT plus 10% of HORIZONTAL VOLTS/DIV setting. (100 mV/DIV setting accuracy is 5.0% of READOUT plus 20 mV).

C1 SETUP CONDITIONS

371 settings:
Initialize the 371, then change the following settings:
 DISPLAY
 HORIZONTAL 100 mV/DIV COLLECTOR
 CURSOR
 Mode DOT

Determining Whether Adjustment Is Necessary

- a. **EXAMINE** the horizontal CURSOR readout for a reading within the limits given in Table 4-5 while setting the HORIZONTAL VOLTS/DIV switch and PEAK POWER WATTS selectors as indicated.

If within the given limits, no adjustment is necessary. Go on to the next procedure.

TABLE 4-5
Horizontal Balance Limits

PEAK POWER WATTS Setting	HORIZONTAL (COLLECTOR) Setting	HORIZ CURSOR READOUT
3 kW	100 mV/DIV	±10 mV
	200 mV/DIV	±20 mV
	500 mV/DIV	±50 mV
300 W	1 V/DIV	±0.10 V
	2 V/DIV	±0.20 V
	5 V/DIV	±0.50 V
30 W	50 V/DIV	±5 V
	100 V/DIV	±10 V
	200 V/DIV	±20 V
3 W	500 V/DIV	±50 V

C. Measurement Accuracy

Adjusting Horizontal Balance

b. Change the following 371 settings:

DISPLAY
 Mode NON STORE
 COLLECTOR SUPPLY
 PEAK POWER WATTS 30 W

NOTE

See **Test Point and Adjustment Locations 2** in Section 7 for the location of adjustment R276.

c. **ADJUST H BAL** adjustment R276 on the A10 Sense board for minimum spot shift while setting HORIZONTAL VOLTS/DIV from 50 V/DIV COLLECTOR to 500 V/DIV COLLECTOR.

Rechecking After Adjustment

d. Change the following 371 setting:

DISPLAY
 Mode STORE

e. Repeat step a.



C2. Adjusting Vertical Balance (A10R146)

Specifications:

- Cursor accuracy is less than 1.5% of READOUT plus 10% of VERTICAL CURRENT/DIV setting.

C2 SETUP CONDITIONS

371 settings:
 Initialize the 371, then change the following settings:

COLLECTOR SUPPLY	
PEAK POWER WATTS	3 W
DISPLAY	
VERTICAL	10 μ A/DIV
CURSOR	
Mode	DOT

If the CURSOR readout is within the given limits, go on to the next procedure.

TABLE 4-6
Vertical Zero Limits

PEAK POWER WATTS Setting	VERTICAL Setting	VERTICAL CURSOR Readout (\pm)
3 W	10 μ A/DIV	1.0 μ A
3 W	20 μ A/DIV	2.0 μ A
3 W	50 μ A/DIV	5.0 μ A
3 W, 30 W	100 μ A/DIV	10 μ A
3 W, 30 W	200 μ A/DIV	20 μ A
3 W, 30 W	500 μ A/DIV	50 μ A
30 W	1 mA/DIV	0.10 mA
30 W	2 mA/DIV	0.20 mA
30 W	5 mA/DIV	0.50 mA
300 W	500 mA/DIV	50 mA
300 W, 3 kW	1 A/DIV	0.10 A
300 W, 3 kW	2 A/DIV	0.20 A
300 W, 3 kW	5 A/DIV	0.50 A
3 kW	10 A/DIV	1.0 A
3 kW	20 A/DIV	2.0 A
3 kW	50 A/DIV	5.0 A

Adjusting Vertical Balance

NOTE

See **Test Point and Adjustment Locations 2** in Section 7 for the location of adjustment R146.

Determining Whether Adjustment is Necessary

- EXAMINE** the vertical CURSOR readout for a reading within the limits in Table 4-6, while setting the VERTICAL CURRENT/DIV switch and PEAK POWER WATTS selector as indicated.

Performance Check and Adjustment – 371

C. Measurement Accuracy

b. Change the following 371 settings:

DISPLAY
 Mode NON STORE
 COLLECTOR SUPPLY
 PEAK POWER WATTS 30 W

c. **ADJUST** V BAL adjustment R146 on the A10 Sense board for minimum spot shift while VERTICAL CURRENT/DIV is set from from 100 μ A/DIV to 5 mA/DIV.

Rechecking After Adjustment

d. Change the following 371 settings:

DISPLAY
 Mode STORE
 COLLECTOR SUPPLY
 PEAK POWER WATTS 3 W

e. Repeat step a.

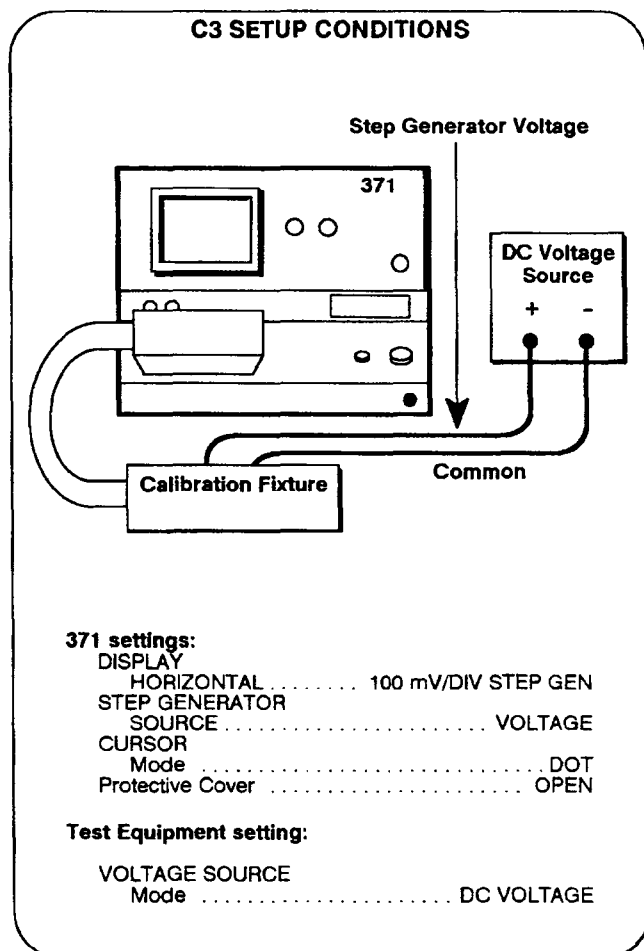


C3. Checking Step Generator (Vbe) Voltage Measurement Accuracy

Specifications:

- Cursor accuracy is less than 1.5% of READOUT plus 10% of HORIZONTAL VOLTS/DIV setting. (100 mV/DIV setting accuracy is 5.0% of READOUT plus 20 mV).

- Turn off the 371.
- Remove the connector at J76 on the A7 STEP GENERATOR board.
- Turn on the 371 and configure as shown in the Setup Conditions below:



NOTE

Leave the Protective Cover open until the end of this procedure.

- Connect the voltage source between the COMMON and STEP GENERATOR VOLTAGE terminals using two long patch cords as shown in Figure 4-2.

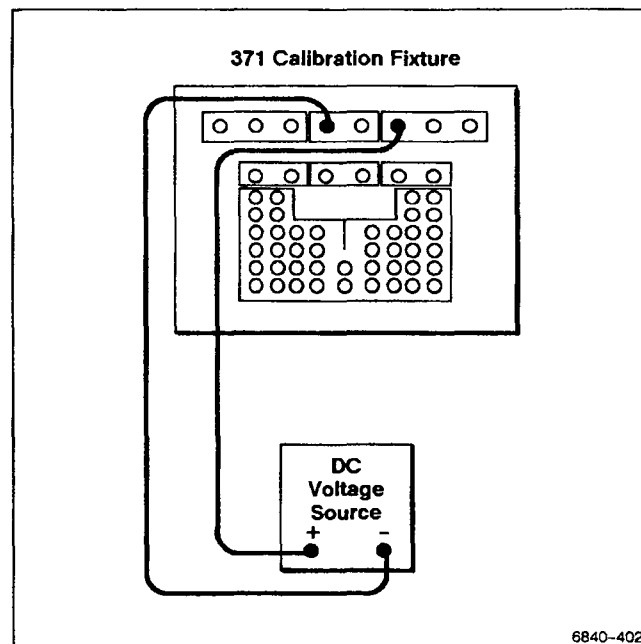


Figure 4-2. Setup for determining voltage measurement accuracy.

- Set the voltage source to 0V.
- CHECK** that the Horizontal CURSOR readout is within the limits shown in Table 4-7 for a voltage source of 0.000 V at each setting of Horizontal VOLTS/DIV STEP GEN.
- Set HORIZONTAL to 100 mV/DIV STEP GEN.
- Repeat step f., this time setting the voltage source to the non-zero value shown in Table 4-7 for each setting of Horizontal VOLTS/DIV STEP GEN.
- CHECK** that the Horizontal CURSOR readout is within the limits shown in Table 4-7.
- Set the voltage source to 0 V output.
- Disconnect the patch cords from the CALIBRATION FIXTURE.

- i. Set the 371 POWER switch to off.
- m. Connect the connector at J76 on the A7 STEP GENERATOR board.

Table 4-7
Step Generator Voltage Measurement Accuracy

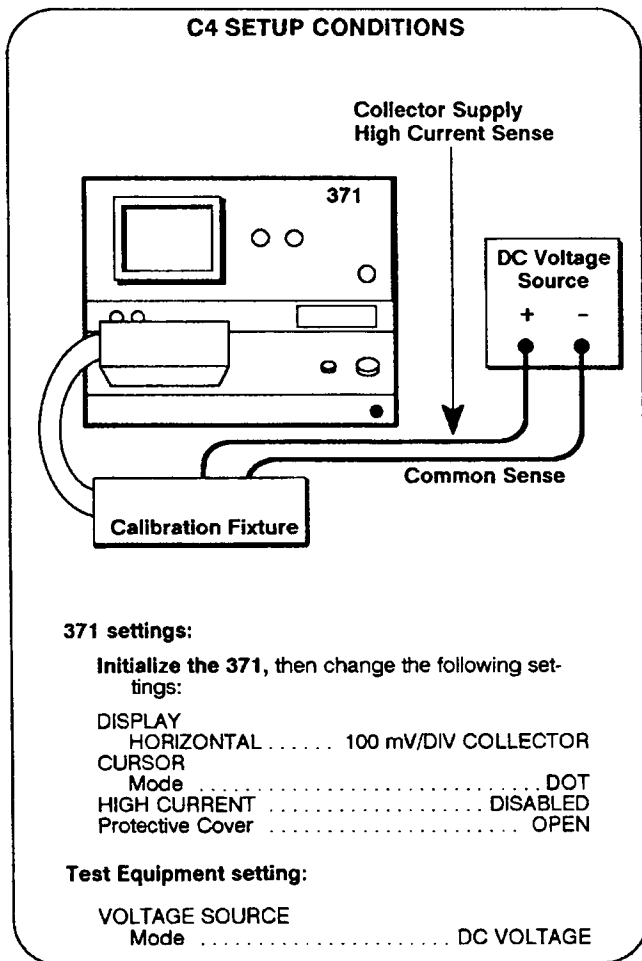
Horizontal V/DIV STEP GEN Setting	VOLTAGE SOURCE Setting	HORIZ CURSOR Readout
100 mV	0.000 V	±20 mV
	900 mV	876-924 mV
200 mV	0.000 V	±20 mV
	1800 mV	1752-1848 mV
500 mV	0.000 V	±50 mV
	4500 mV	4380-4620 mV
1 V	0.000 V	±0.10 V
	9.00 V	8.76-9.24 V
2 V	0.000 V	±0.20 V
	18.00 V	17.52-18.48 V
5 V	0.000 V	±0.50 V
	45.00 V	43.80-46.20 V



C4. Checking Collector (Vce) Low Voltage Measurement Accuracy

Specifications:

- Cursor accuracy is less than 1.5% of READOUT plus 10% of HORIZONTAL VOLTS/DIV setting. (100 mV/DIV setting accuracy is 5.0% of READOUT plus 20 mV).



NOTE

Leave the Protective Cover open until the end of this procedure.

- Connect the voltage source between the HIGH CURRENT SENSE terminal and the COMMON SENSE terminal by using two long patch cords as shown in Figure 4-3.

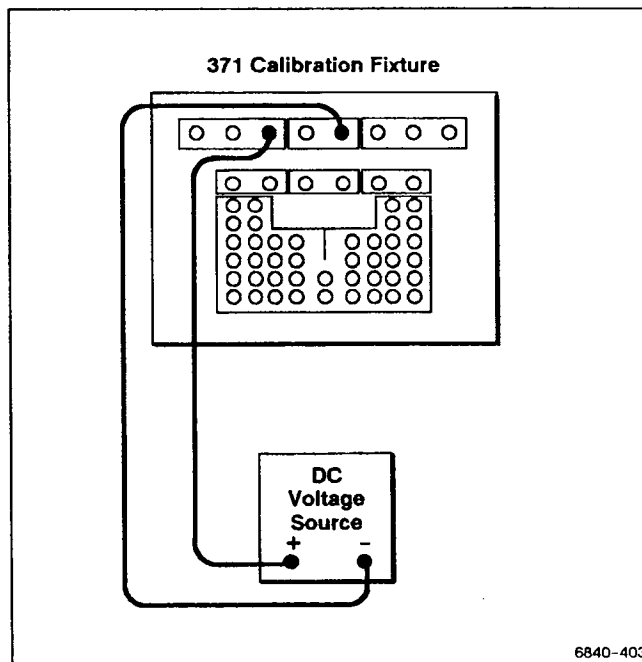


Figure 4-3. Setup for determining low voltage measurement accuracy.

- Set the voltage source to 0V.
- CHECK** that the CURSOR readout is within the limits shown in Table 4-8 for a voltage source of 0.000 V at each setting of Horizontal VOLTS/DIV COLLECTOR.
- Set HORIZONTAL to 100 mV/DIV COLLECTOR.
- Repeat step c., this time setting the voltage source to the non-zero value shown in Table 4-8 for each setting of Horizontal VOLTS/DIV COLLECTOR.

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C. Measurement Accuracy

- f. **CHECK** that the Horizontal CURSOR readout is within the limits shown in Table 4-8.

Table 4-8
Collector Low Voltage Measurement Accuracy

HORIZONTAL V/DIV STEP COLLECTOR Setting	VOLTAGE SOURCE Setting	HORIZ CURSOR Readout
100 mV	0.000 V	± 20 mV
	900 mV	876-924 mV
200 mV	0.000 V	± 20 mV
	1800 mV	1752-1848 mV
500 mV	0.000 V	± 50 mV
	4500 mV	4380-4620 mV
1 V	0.000 V	± 0.10 V
	9.00 V	8.76-9.24 V
2 V	0.000 V	± 0.20 V
	18.00 V	17.52-18.48 V
5 V	0.000 V	± 0.50 V
	45.00 V	43.80-46.20 V

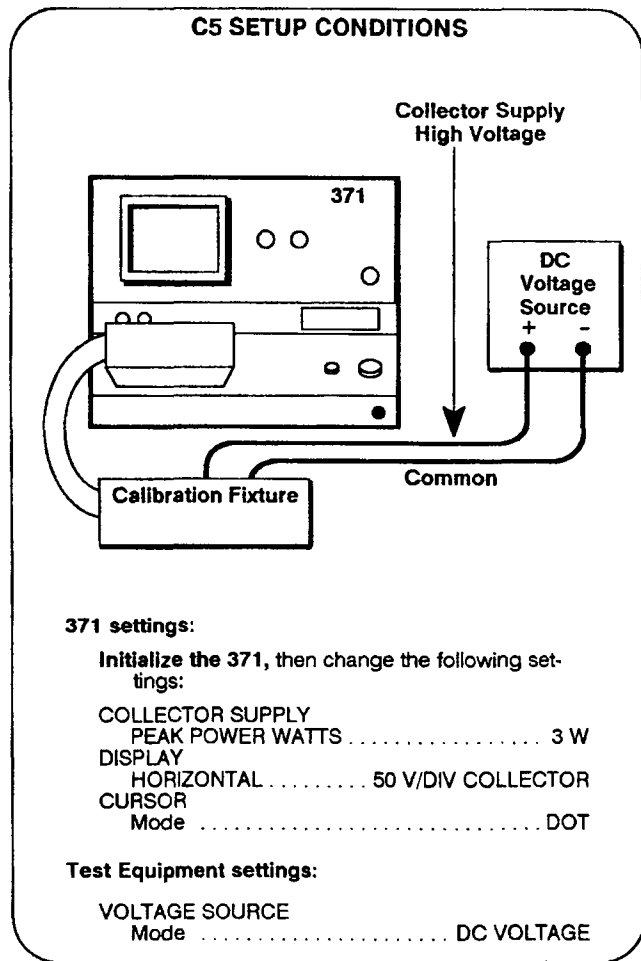
- g. Set the voltage source to 0 V output.
- h. Disconnect the patch cords from the CALIBRATION FIXTURE.
- i. Initialize the 371.



C5. Checking Collector (Vce) High Voltage Measurement Accuracy

Specifications:

- Cursor accuracy is less than 1.5% of READOUT plus 10% of HORIZONTAL VOLTS/DIV setting.



- a. Connect the voltage source between the Collector Supply HIGH VOLTAGE terminal and the COMMON terminal by using two long patch cords as shown in Figure 4-4.

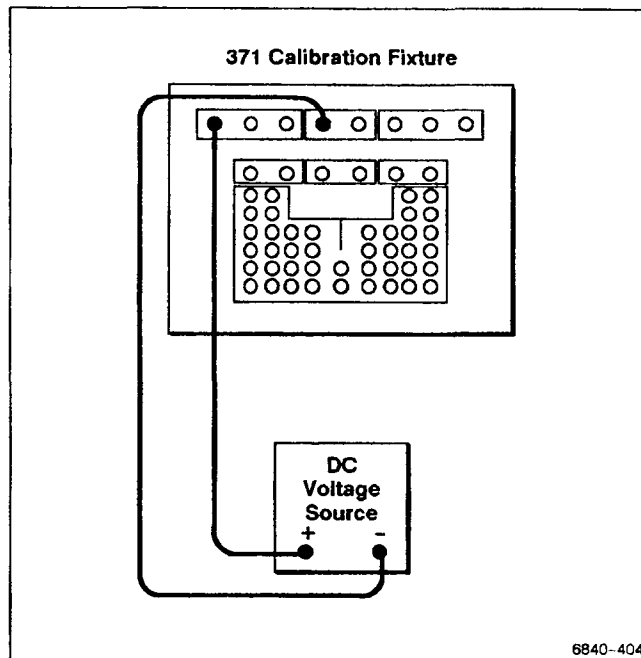


Figure 4-4. Setup for determining high voltage measurement accuracy.

- b. Set the voltage source to 0 V.
- c. Set the Collector Supply HIGH VOLTAGE breaker to ENABLED.
- d. Close the Protective Cover.
- e. **CHECK** that the Horizontal CURSOR readout is within the limits shown in Table 4-9 for a voltage source of 0.000 V at each setting of the Horizontal VOLTS/DIV COLLECTOR.
- f. Set the HORIZONTAL to 50 V/DIV COLLECTOR.
- g. Repeat step c., this time setting the voltage source to the non-zero value shown in Table 4-9 for each setting of Horizontal VOLTS/DIV COLLECTOR.

- h. **CHECK** that the HORIZ CURSOR readout is within the limits shown in Table 4–9.
- i. Set the Voltage Source to 0 V.



Before disconnecting the voltage source, make sure that the voltage source has been set to 0 V or disabled.

Table 4–9
Collector High Voltage Measurement Accuracy

HORIZONTAL COLLECTOR Setting	VOLTAGE SOURCE Setting	HORIZONTAL CURSOR Readout
50 V/DIV	0.000 V	± 5.0 V
	450.0 V	438.0 – 462.0 V
100 V/DIV	0.000 V	± 10 V
	900 V	876 – 924 V
200 V/DIV	0.000 V	± 20 V
	900 V	866 – 934 V
500 V/DIV	0.000 V	± 50 V
	900 V	836 – 964 V

- j. Disconnect the voltage source from the CALIBRATION FIXTURE.
- k. Initialize the 371.



C6. Checking Collector Current Measurement Accuracy in High Voltage Mode

Specifications:

- Cursor accuracy is less than 1.5% of READOUT plus 10% of VERTICAL CURRENT/DIV setting.

C6 SETUP CONDITIONS

371 settings:
Initialize the 371, then change the following settings:
 COLLECTOR SUPPLY
 PEAK POWER WATTS 3 W
 DISPLAY
 VERTICAL 10 μ A/DIV
 CURSOR
 Mode DOT

Test Equipment setting:
 CURRENT SOURCE
 Mode DC CURRENT

- Press the PEAK POWER WATTS 3 W button while pressing the SHIFT button to enter VERTICAL AMP CHECK MODE.
- CHECK** that the "VERTICAL AMP CHECK MODE" message is displayed.
- CHECK** that the Vertical CURSOR readout is within the range shown in Table 4-10 for VERTICAL settings from 10 μ A/DIV to 500 μ A/DIV.
- Set the PEAK POWER WATTS to 30W.
- CHECK** that the Vertical CURSOR readout is within the range shown in Table 4-10 for VERTICAL settings from 5 mA/DIV to 1 mA/DIV.

Table 4-10
Cursor Readout with No Current

PEAK POWER WATTS Setting	VERTICAL CURRENT/DIV Setting	VERTICAL CURSOR Readout
3 W	10 μ A	$\pm 1 \mu$ A
	20 μ A	$\pm 2 \mu$ A
	50 μ A	$\pm 5 \mu$ A
	100 μ A	$\pm 10 \mu$ A
	200 μ A	$\pm 20 \mu$ A
	500 μ A	$\pm 50 \mu$ A
30 W	1 mA	± 0.10 mA
	2 mA	± 0.2 mA
	5 mA	± 0.50 mA

- Set the PEAK POWER WATTS to 3 W and the VERTICAL to 10 μ A/DIV.
- Connect the current source between the COLLECTOR SUPPLY HIGH VOLTAGE and the COMMON terminals on

Performance Check and Adjustment—371
 C. Measurement Accuracy

the CALIBRATION FIXTURE by using two long patch cords as shown in Figure 4-5.

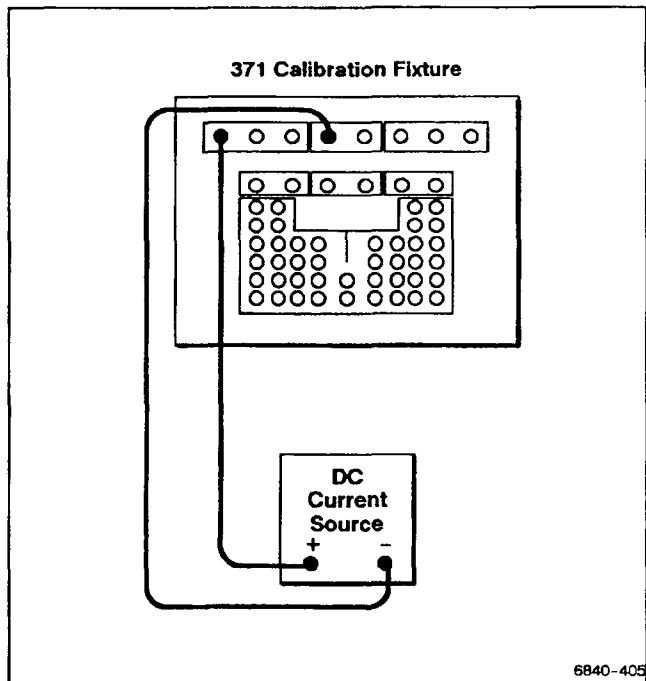


Figure 4-5. Calibration Fixture setup for C6.

- h. Verify that the VERTICAL CURSOR readout is within the limit shown in Table 4-11 at each setting of the current source, PEAK POWER WATTS, and VERTICAL CURRENT/DIV.
- i. Disable the current source, then disconnect the patch cords.
- j. Initialize the 371.

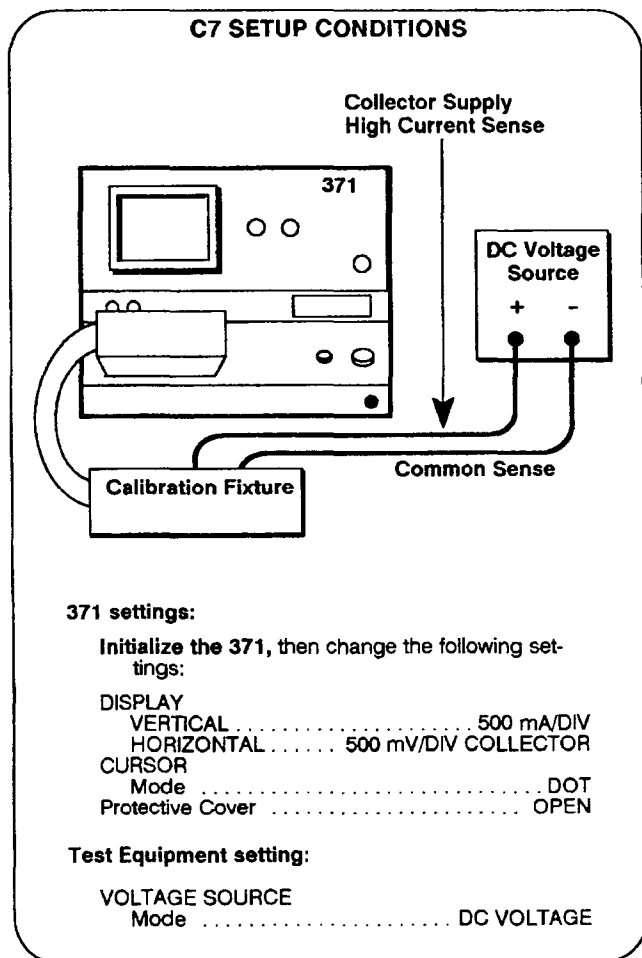
Table 4-11
 Cursor Readout with Current

CURRENT SOURCE Setting	PEAK POWER WATTS Setting	VERTICAL CURRENT/DIV Setting	VERTICAL CURSOR Readout
-90 μ A	3 W	10 μ A	87.6 to 92.4 μ A
-180 μ A		20 μ A	175.2 to 184.8 μ A
-450 μ A		50 μ A	438.0 to 462.0 μ A
-0.9 mA		100 μ A	876 to 924 μ A
-1.8 mA		200 μ A	1752 to 1848 μ A
-4.5 mA		500 μ A	4380 to 4620 μ A
-9.0 mA	30 W	1 mA	8.76 to 9.24 mA
-18.0 mA		2 mA	17.52 to 18.48 mA
-45.0 mA		5 mA	43.80 to 46.20 mA

C7. Checking Accuracy of Collector Current Measurement in High Current Mode

Specifications:

- Cursor accuracy is less than 1.5% of READOUT plus 10% of VERTICAL CURRENT/DIV setting.



The accuracy of the Vertical Cursor readout is verified by forcing a known voltage across load resistors in the Calibration Fixture using the Collector Supply and reading the resulting calibrated current with the Vertical Cursor.

- Connect long patch cords between the CALIBRATION FIXTURE and the voltage source as shown in Figure 4-6.
- Set the voltage source to 4.000 V and note the reading of the HORIZ CURSOR readout.
- Set the voltage source to 4.500 V and note the reading of the HORIZ CURSOR readout.
- Set the HORIZONTAL to 1 V/DIV COLLECTOR, the voltage source to 9.000 V and note the reading of the HORIZ CURSOR readout.
- Set the HORIZONTAL to 500 mV/DIV COLLECTOR.

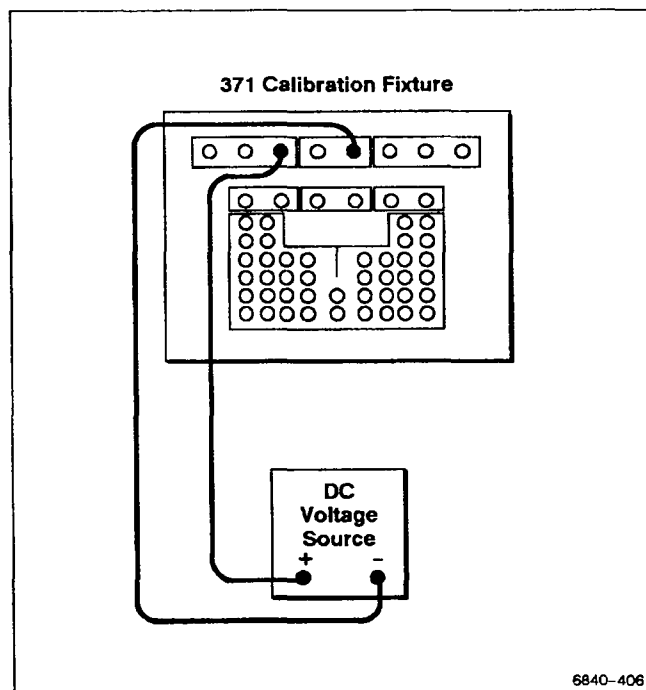
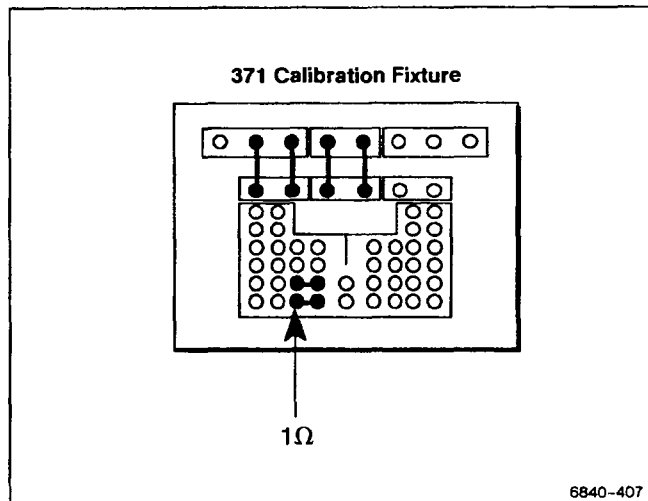


Figure 4-6. Calibrating CURSOR readout for C7.

- Set the voltage source output to 0 V and disconnect the long patch cords.

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 C. Measurement Accuracy

g. Connect the short patch cords and plug the two shorting bars over the 1 Ω load resistor label as shown in Figure 4-7.



- h. Close the Protective Cover.
- i. Set the HIGH CURRENT breaker to ENABLED.
- j. Turn the Collector Supply VARIABLE control clockwise until the Horizontal CURSOR readout reaches the exact value noted in steps b., c., or d. for the voltage listed in the Table 4-12 VOLTAGE SOURCE column.
- k. **CHECK** that the VERTICAL CURSOR readout is within a reading specified in Table 4-12.
- l. Repeat steps g. through k. for each setting of PEAK POWER WATTS, VERTICAL, HORIZONTAL, VOLTAGE SOURCE, and LOAD RESISTOR shown in Table 4-12.
- m. Set the HIGH CURRENT breaker to DISABLED.
- n. Remove the patch cords from the CALIBRATION FIXTURE.
- o. Initialize the 371.

Figure 4-7. Calibration Fixture setup for C7.

Table 4-12
 High Collector Current Measurement Accuracy

PEAK POWER WATTS Setting	VERTICAL Setting	HORIZONTAL (COLLECTOR) Setting	VOLTAGE SOURCE Setting	Calibration Fixture Load Resistor Setting	VERTICAL CURSOR Readout
300 W	500 mA/DIV	500 mV/DIV	4.5 V	1 Ω	4380 - 4620 mA
	1 A/DIV	1 V/DIV	9 V	1 Ω	8.76 - 9.24 A
	2 A/DIV	500 mV/DIV	4.5 V	250 mΩ	17.52 - 18.48 A
3 kW	5 A/DIV	500 mV/DIV	4.5 V	100 mΩ	43.80 - 46.20 A
	10 A/DIV	1 V/DIV	9 V	100 mΩ	87.6 - 92.4 A
	20 A/DIV	500 mV/DIV	4.5 V	25 mΩ	175.2 - 184.8 A
	50 A/DIV	500 mV/DIV	4.0 V	10 mΩ	389.0 - 411.0 A

D. STEP GENERATOR

Equipment Required (see Table 4-3):

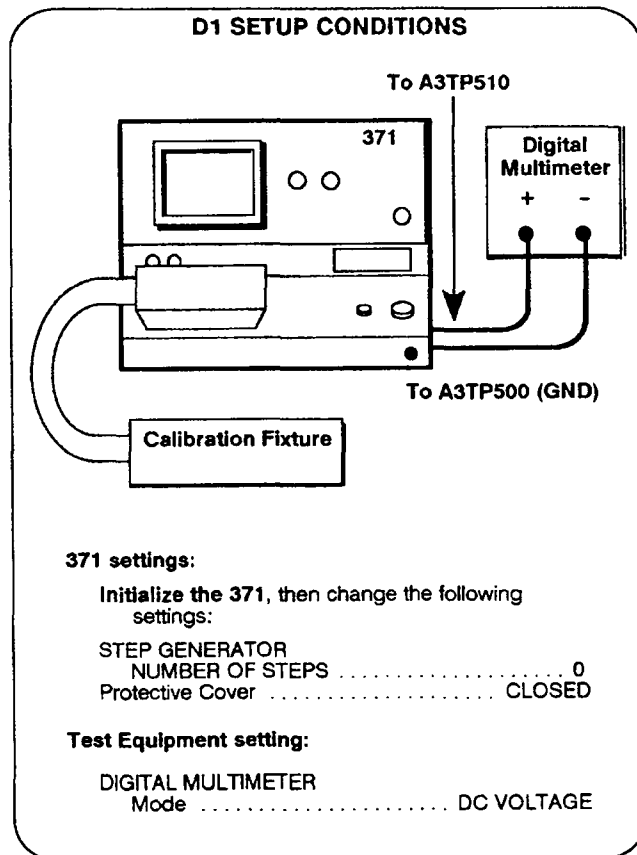
- Digital Multimeter
- Voltage Source
- Calibration Fixture (067-1345-00)
- Patch Cords



D1. Adjusting Step Multi .1X Balance (A3R510), Step Generator Offset (A3R560), Step Generator Balance (A7R210)

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*

**NOTE**

See **Test Point and Adjustment Locations 1** in Section 7 for the location of test points..

D. Step Generator

Determining Whether Adjustment is Necessary

a. **EXAMINE** the digital multimeter for a reading of 0 mV \pm 1 mV when the STEP/OFFSET AMPLITUDE is set to 500 mA, 200 mA, and 100 mA.

b. Change the following 371 setting:

STEP GENERATOR
STEP MULTI .1X On

The indicator above the STEP MULTI .1X button will be lit.

c. **EXAMINE** the digital multimeter for a reading of 0 mV \pm 1 mV when STEP/OFFSET AMPLITUDE is set to 50 mA, 20 mA, and 10 mA.

If the Digital Multimeter reading is within the given limits in steps a. and c., no adjustment is necessary and the remainder of this procedure may be skipped.

Adjusting .1X Balance

NOTE

See **Test Point and Adjustment Locations 1** in Section 7 for the location of adjustments R510.

d. Change the following 371 settings:

COLLECTOR SUPPLY
PEAK POWER WATTS 30 W
HORIZONTAL 100 mV/DIV STEP GEN
STEP GENERATOR
SOURCE VOLTAGE
STEP MULTI .1X OFF
STEP/OFFSET AMPLITUDE 5 V

CURSOR
Mode DOT

e. If the spot position is out of the display area (HORIZONTAL READOUT is flashing), use the OFFSET button to move the spot into the display area.

f. **ADJUST** .1X Balance adjustment R510 on the A3 A/D board for minimum horizontal display shift, then minimum horizontal cursor readout shift when STEP MULTI .1X is set between On and Off.

Changing the Setup

g. Change the following 371 settings:

STEP GENERATOR
OFFSET 0.00 V

Simultaneously press the OFFSET UP and DOWN button to set OFFSET to 0.00 V.

COLLECTOR SUPPLY
PEAK POWER WATTS 300 W
DISPLAY
Mode NON STORE
HORIZONTAL 100 mV/DIV STEP GEN
STEP GENERATOR
SOURCE CURRENT
STEP/OFFSET AMPLITUDE 2 A
STEP MULTI .1X OFF

h. Connect a patch cord between the COMMON and one of the 1 k Ω terminals.

i. Connect a patch cord between the STEP GENERATOR CURRENT connector and the other 1 k Ω terminal as shown in Figure 4-8.

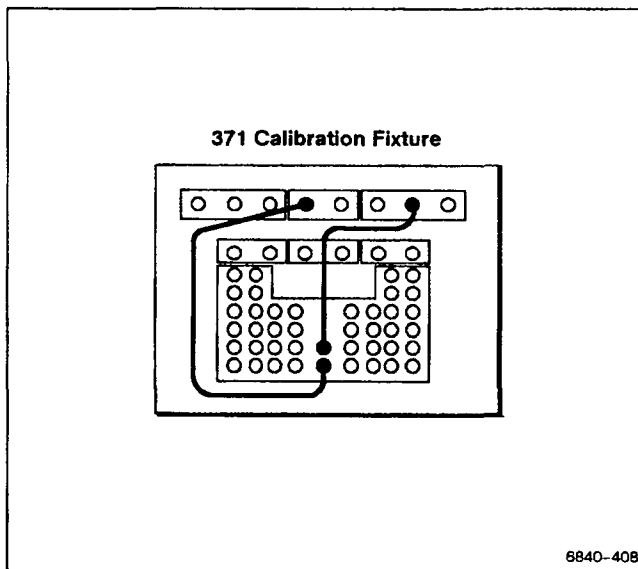


Figure 4-8. Calibration Fixture connections for procedure D1.

j. Close the Protective Cover.

Locating the Displayed Spot*NOTE*

If the spot is positioned out of the display area, adjust SG Balance adjustment R210 on the A7 Step Generator board to move the spot within the display area. If the spot cannot be located by adjusting R210, set the HORIZONTAL VOLTS/DIV to 5 V/DIV STEP GEN, then preset SGI Loop Gain adjustment R305 to clockwise and SGI Zero adjustment R322 to center.

Adjusting SG Offset and Balance*NOTE*

*See **Test Point and Adjustment Locations 1 and 2** in Section 7 for the location of adjustments R560 and R210.*

- k. **ADJUST** SG Offset adjustment R560 on the A3 A/D board for minimum spot length.
- l. Change the following 371 setting:

STEP GENERATOR
STEP/OFFSET AMPLITUDE 500 mA

- m. **ADJUST** SG Balance adjustment R210 on the A7 Step Generator board for a digital multimeter reading of 0 V \pm 1 mV.

Rechecking the Adjustments

- n. Repeat steps a. through c.

Removing the Setup

- o. Disconnect the digital multimeter leads and patch cords.



D2. Adjusting Step Generator Gain (A3R518)

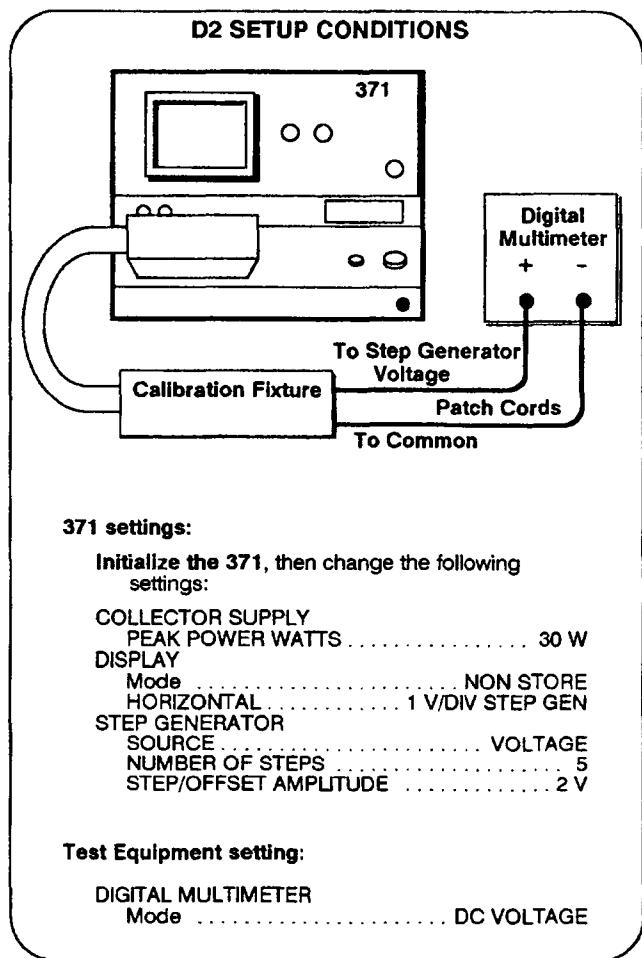
IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*

Moving the Cal Jumper

- a. Change the following 371 setting:

POWER OFF



NOTE

See Test Point and Adjustment Location 1 in Section 7 for the location of adjustment J340.

- b. Change the position of jumper J340 on the A3 A/D board to the CAL position
- c. Change the following 371 setting:
- POWER ON

Connecting the Patch Cords

- d. Connect the digital multimeter between the STEP GEN VOLTAGE terminal and the COMMON terminal with long patch cords as shown in Figure 4-9.

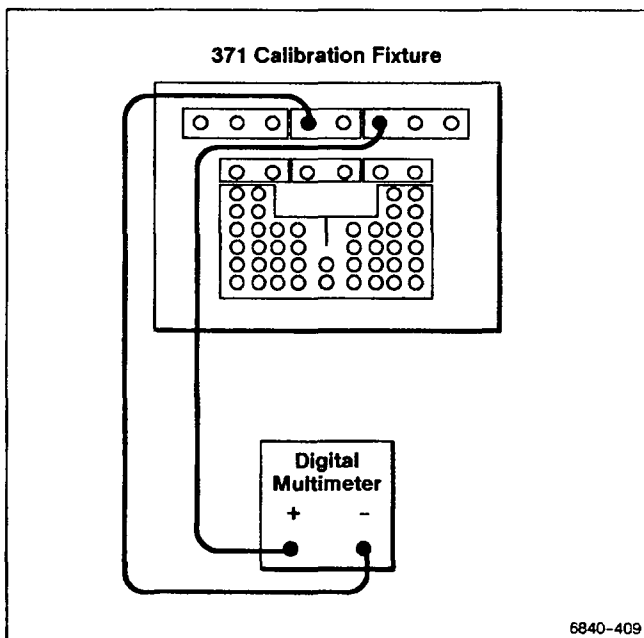


Figure 4-9. Calibration Fixture connections for procedure D2.

- e. Close the Protective Cover.

Adjusting Step Generator Gain

- f. Press the REPEAT button several times to move the spot 10 divisions to the right.

NOTE

See **Test Point and Adjustment Locations 1** in Section 7 for the location of adjustment R518.

- g. **ADJUST** SG Gain adjustment R518 on the A3 A/D board for a digital multimeter reading of 10.00 V \pm 0.01 V.

Returning the Jumper to the Zero Position

- h. Change the following 371 setting:
POWER OFF
- i. Change the position of jumper J340 on the A3 A/D board to the ZERO position.
- j. Change the following 371 setting:
POWER ON

Removing the Setup

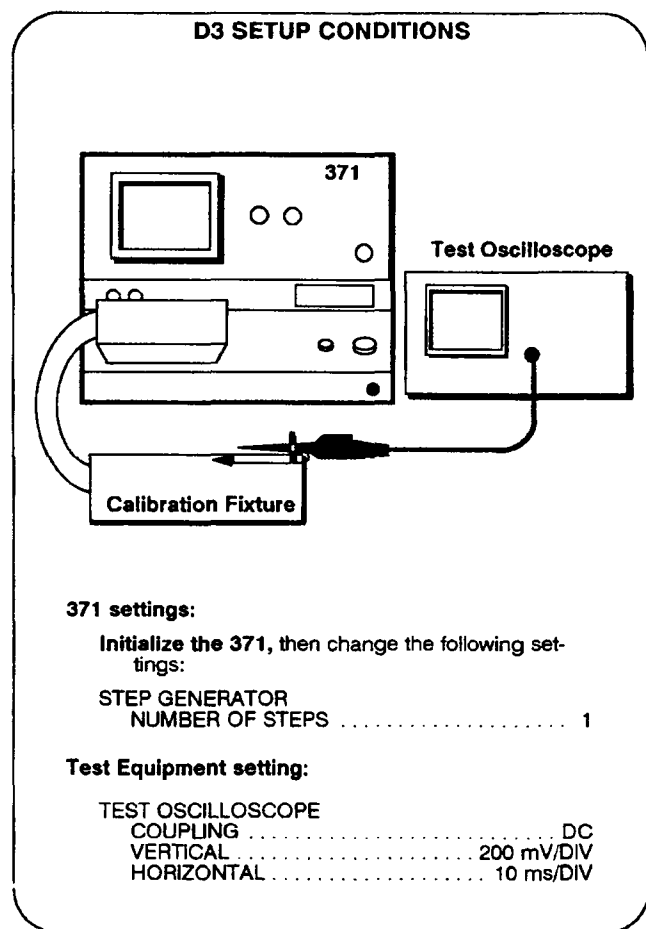
- k. Disconnect the digital multimeter.



D3. Checking Step Rates, Pulse Form

Specifications:

- Step rate is 2X line frequency at 30 W and 3 W, 0.25X line frequency at 3 kW and 0.5X line frequency at 300W.
- Pulse width is $500 \mu\text{s} \pm 10\%$ with $1 \text{ k}\Omega$ load at 1 mA/step.
- Rise and fall time are less than $40 \mu\text{s}$.
- Undershoot and overshoot are less than 10% of output.



- a. Connect a patch cord between the COMMON and one of the $1 \text{ k}\Omega$ terminals.

- b. Connect a patch cord between the STEP GEN CURRENT and the remaining $1 \text{ k}\Omega$ terminals.
- c. Connect the X1 probe from the test oscilloscope by using terminal plugs as shown in Figure 4-10.

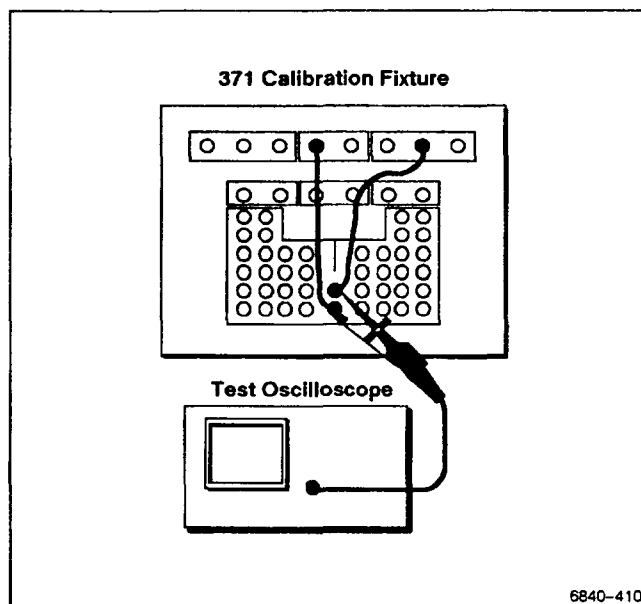


Figure 4-10. Calibration Fixture connections for procedure D3.

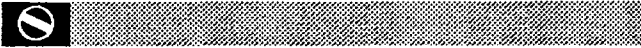
- d. Close the Protective Cover.
- e. Set the test oscilloscope to DC coupling.
- f. **CHECK** that the pulse rate is approximately 80 ms at 50 Hz line frequency or 66.7 ms at 60 Hz line frequency.
- g. Set PEAK POWER WATTS to 3 kW.
- h. **CHECK** that the pulse rate is approximately 160 ms at 50 Hz line frequency or 133.3 ms at 60 Hz line frequency.
- i. Set the test oscilloscope time/division to $50 \mu\text{s}/\text{division}$.
- j. **CHECK** that the pulse width is $490 \mu\text{s}$ to $510 \mu\text{s}$ at half amplitude and overshoot or undershoot is within 10% of full amplitude.
- k. Set the test oscilloscope time/division to $10 \mu\text{s}/\text{division}$.
- l. **CHECK** that the rise and fall time are less than $40 \mu\text{s}$ between 10% and 90% of full amplitude.
- m. Set the test oscilloscope to 1 V/division, and 10 ms/division.

n. Change the following 371 settings:

COLLECTOR SUPPLY
PEAK POWER WATTS 30 W
STEP GENERATOR
STEP/OFFSET AMPLITUDE 1 mA
NUMBER OF STEPS 5

p. Remove the X1 probe and the patch cords.

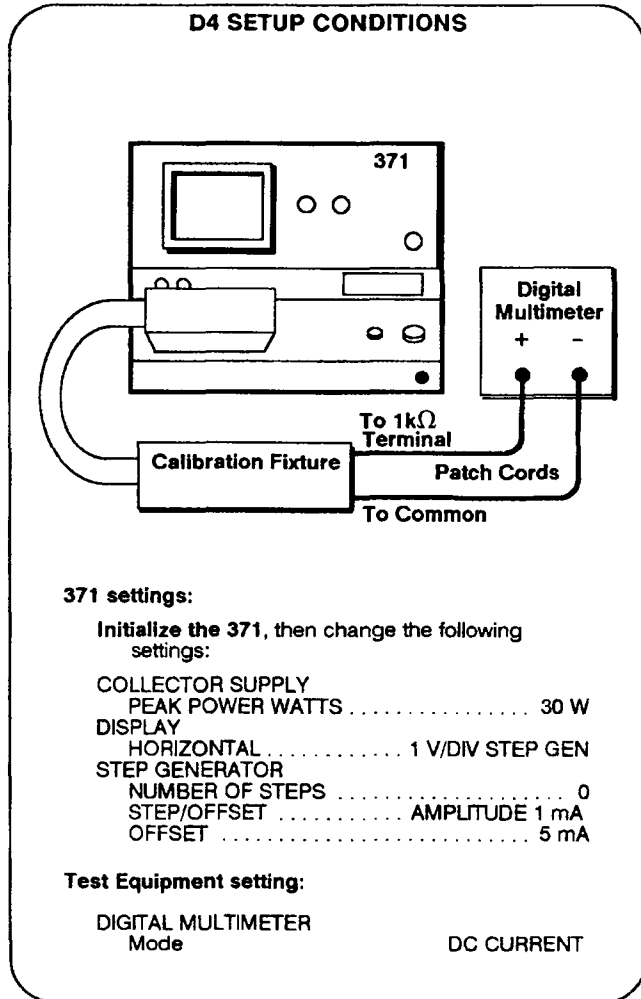
o. **CHECK** that the staircase repetition rate is approximately 60 ms at 50 Hz line frequency or 50 ms at 60 Hz line frequency.



D4. Adjusting Loop Gain in Current Source Mode (A7R305)

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; they are not specifications.



Connecting the Patch Cords

- Connect a patch cord between the STEP GENERATOR CURRENT and a 1 k Ω terminal.
- Connect a long patch cord between the other 1 k Ω terminal and the digital multimeter positive input.
- Connect a long patch cord between the COMMON terminal and the digital multimeter negative input.
- Connect a shorting bar over the 1 k Ω terminals as shown in Figure 4-11.

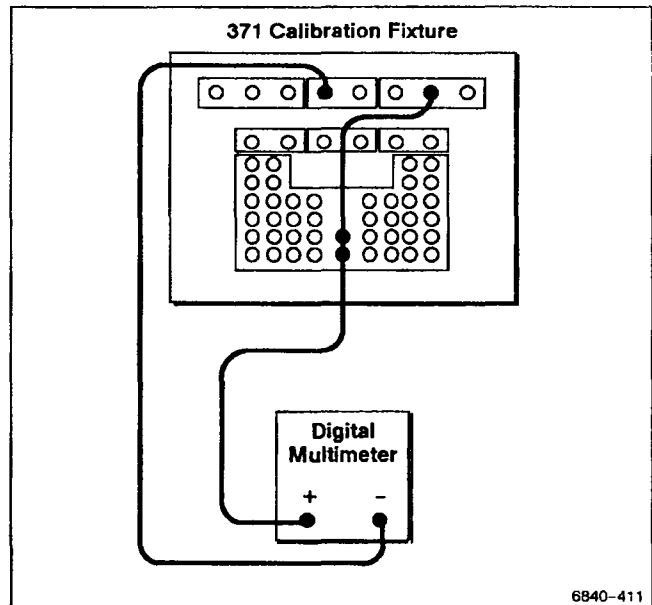


Figure 4-11. Calibration Fixture connections for procedure D4.

- Close the Protective Cover.

Noting the Reference Value

- Note the digital multimeter reading, to be used in step i.
- Disconnect the shorting bar.
- Close the Protective Cover.

Adjusting Loop Gain*NOTE*

See *Test Point and Adjustment Locations 2* in Section 7 for the location of adjustment R305.

- i. **ADJUST** SGI Loop Gain adjustment R305 on the A7 Step Generator board for the digital multimeter reading noted in step f., ± 0.13 mA.

Readjusting for Interaction

- j. Repeat steps d. to i. to determine if further adjustment is necessary.

Removing the Setup

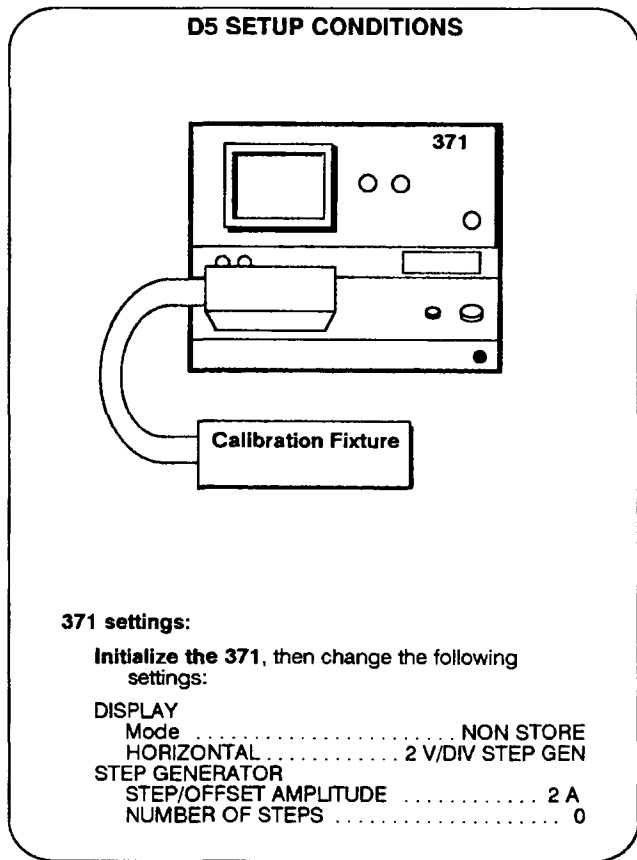
- k. Disconnect the patch cords.



D5. Adjusting Step Generator Current Zero (A7R322) and Negative Current Balance (A7R380)

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; they are not specifications.



Connecting the Patch Cords

- Connect a patch cord between the STEP GENERATOR CURRENT and a 1 k Ω terminal.
- Connect a patch cord between the COMMON and the other 1 k Ω terminal as shown in Figure 4-12.
- Close the Protective Cover.

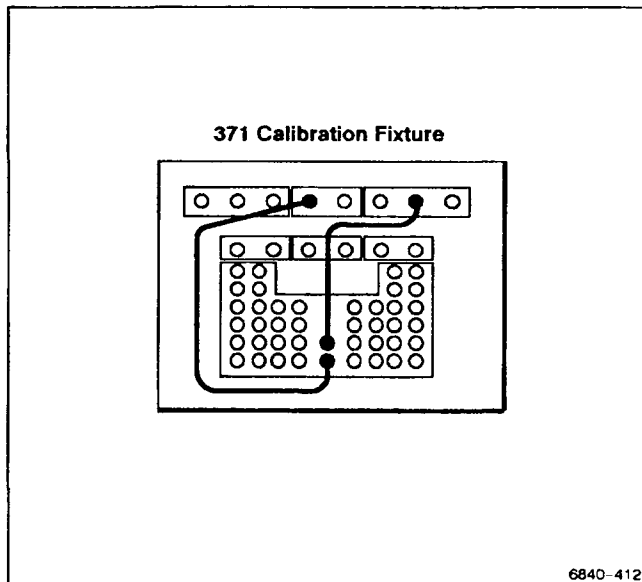


Figure 4-12. Calibration Fixture connections for procedure D5.

Adjusting Step Generator Current Zero

NOTE

See Test Point and Adjustment Locations 2 in Section 7 for the location of adjustment R322.

- ADJUST** SGI ZERO adjustment R322 on the A7 Step Generator board for minimum shift through the following settings:

HORIZONTAL (STEP GEN)	STEP/OFFSET AMPLITUDE
2 V/DIV	2 A/STEP
1 V/DIV	1 A/STEP
500 mV/DIV	500 mA/STEP
200 mV/DIV	200 mA/STEP
100 mV/DIV	100 mA/STEP

Correcting for Unsatisfactory Adjustment

- f. **ADJUST NEG CURRENT BALANCE** adjustment R380 on the A7 Step Generator board for minimum spot shift through the same settings used for step d.

NOTE

Repeat procedures D1 through D3 if R322 cannot be satisfactorily adjusted.

Removing the Setup

- g. Remove the Patch Cords.

Adjusting Negative Current Balance

- e. Change the following 371 setting:

STEP GENERATOR
INVERT ON

The indicator beside the INVERT button will be lit.

NOTE

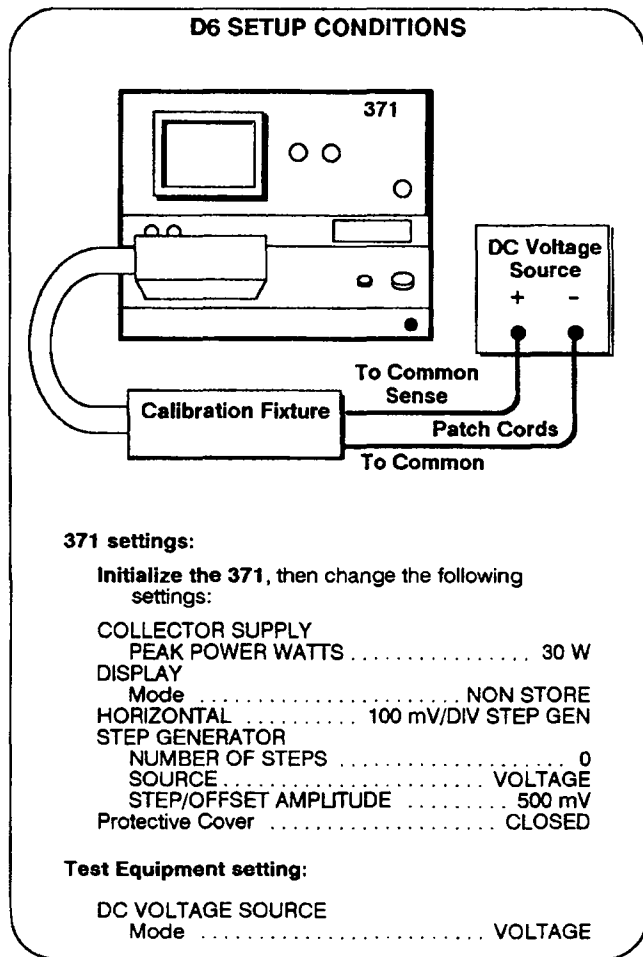
*See **Test Point and Adjustment Locations 2** in Section 7 for the location of adjustment R380.*



D6. Adjusting Step Generator Voltage Source Balance (A7R405), Voltage Source CMR (A7R417)

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; they are not specifications.



Adjusting SGV Balance

NOTE

See *Test Point and Adjustment Locations 2* in Section 7 for the location of adjustment R405.

- a. **ADJUST SGV BALANCE** adjustment R405 on the A7 Step Generator board for no horizontal display shift when STEP/OFFSET AMPLITUDE is set back and forth between 500 mV and 1 V.

Changing the Setup

- b. Change the following 371 settings:

DISPLAY	
Mode	STORE
STEP GENERATOR	
STEP/OFFSET AMPLITUDE	200 mV
CURSOR	
Mode	DOT

- c. Connect the DC voltage source to the COMMON and the COMMON SENSE terminals as shown in Figure 4-13.

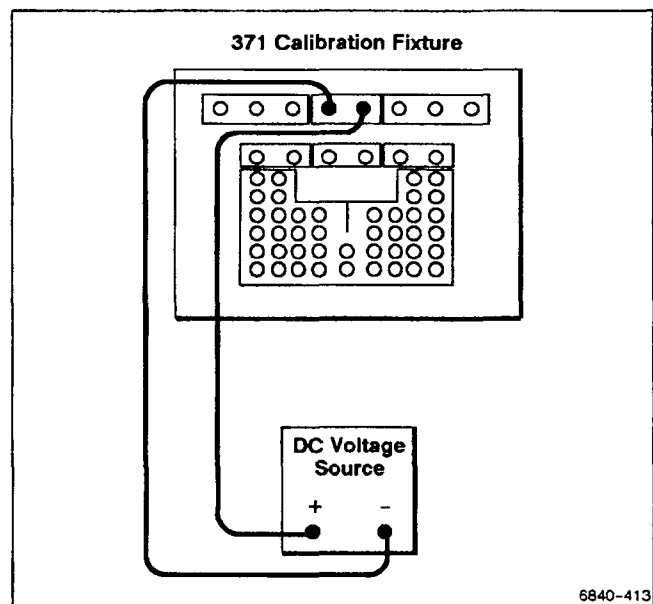


Figure 4-13. Calibration Fixture connections for procedure D6.

- d. Close the Protective Cover.

Adjusting V CMR

- e. Change the following test equipment setting:

DC VOLTAGE SOURCE
VOLTAGE 0 V

- f. Note the Horizontal CURSOR readout for use in step h.

- g. Change the following test equipment setting:

DC VOLTAGE SOURCE
VOLTAGE 2 V

- h. **ADJUST** V CMR adjustment R417 on the A7 Step Generator board for the Horizontal CURSOR value noted in step f., ± 8 mV.

Adjusting for Interaction

- i. Change the following test equipment setting:

DC VOLTAGE SOURCE
VOLTAGE 0 V

- j. Repeat steps e. through h. to determine if further adjustment is necessary.

Removing the Setup

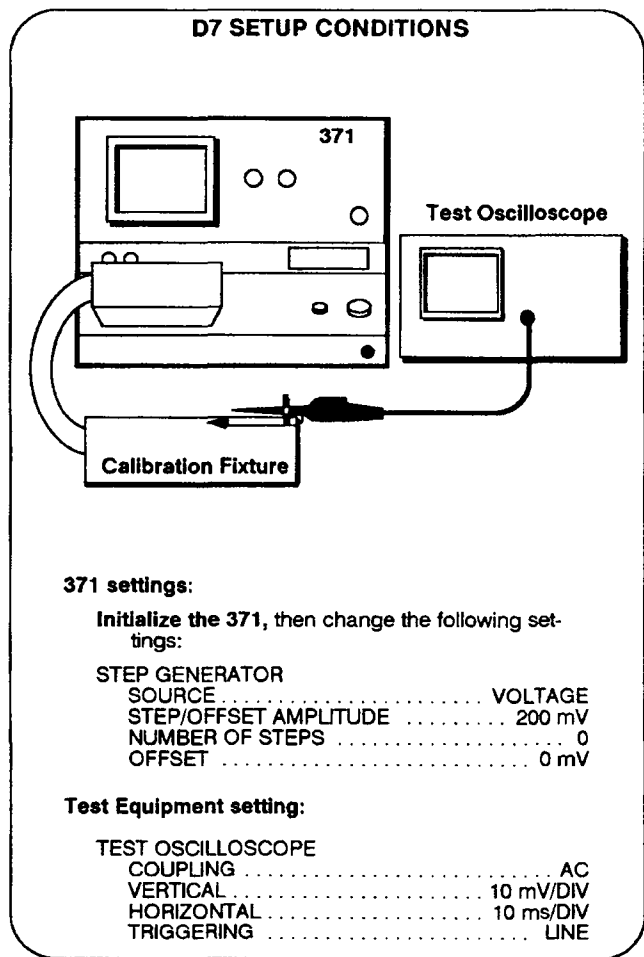
- k. Disconnect the DC voltage source from the 371.



D7. Checking Ripple Pulse Noise of Voltage Source Mode

Specifications:

- Less than 1% of AMPLITUDE setting + 10 mV.



- a. Connect the X1 probe tip from the test oscilloscope to the STEP GENERATOR VOLTAGE terminal and the ground lead to the COMMON terminal by using terminal plugs as shown in Figure 4-14.

- b. Close the Protective Cover.

- c. **CHECK** for the ripple pulse noise within the value specified in Table 4-13.

Table 4-13
Ripple and Noise Amplitude

AMPLITUDE Setting	Oscilloscope Reading
200 mV	12 mV p-p
500 mV	15 mV p-p
1 V	20 mV p-p
2 V	30 mV p-p
5 V	60 mV p-p

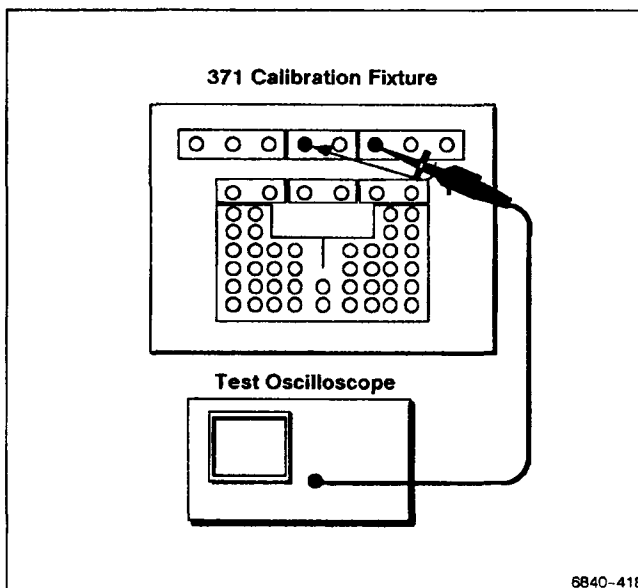


Figure 4-14. Calibration Fixture connections for procedure D7.

- d. Set the STEP/OFFSET AMPLITUDE to next step.

- e. Repeat parts c. and d. for each STEP/OFFSET AMPLITUDE setting in Table 4-13.

- f. Remove the X1 probe.



D8. Checking Incremental Accuracy

Specifications:

- Each step is within 2% of total output +3% of Step AMPLITUDE + 2 mV.
- Less than 2% variation between step amplitudes.
- With STEP MULTI .1X on, each step is within 4% of total output +5% of Step AMPLITUDE + 2 mV.
- With STEP MULTI .1X on, variation between step amplitudes is less than 5%.

a. Change the following 371 settings:

POWER OFF

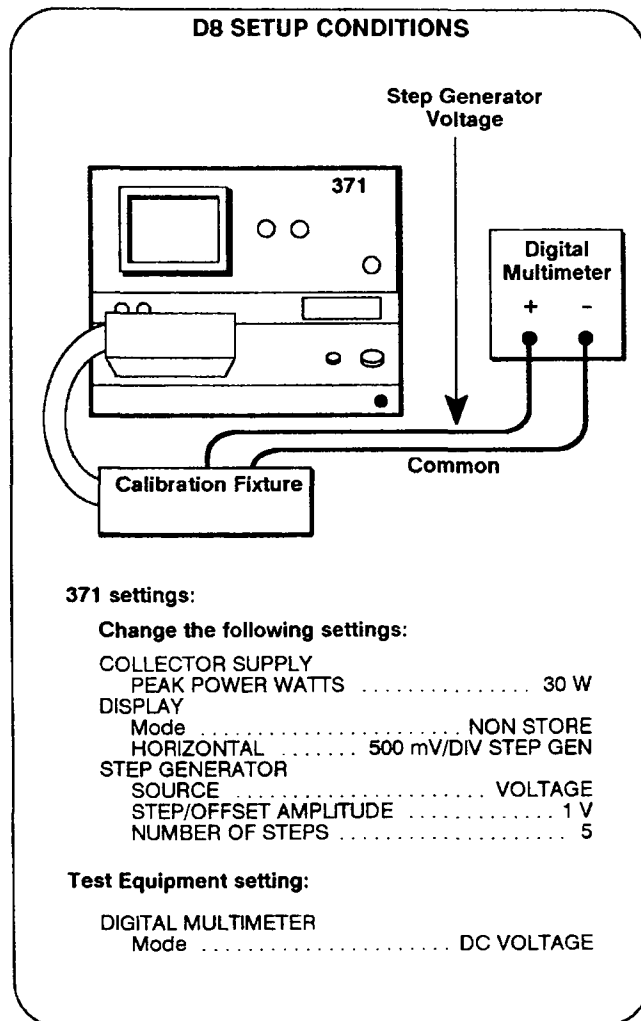
b. Change the position of jumper J340 on A3 A/D board from ZERO to CAL.

NOTE

When the jumper position is changed from ZERO to CAL, STORE MODE is disabled.

c. Change the following 371 setting:

POWER ON



- d. Connect the Digital Multimeter between the STEP GENERATOR VOLTAGE terminal and the COMMON terminal as shown in Figure 4-15.

Performance Check and Adjustment—371
D. Step Generator

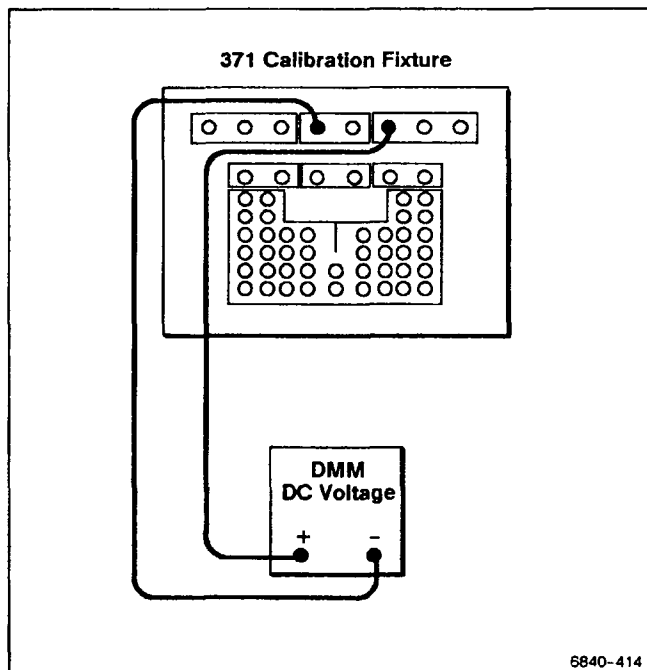


Figure 4-15. Calibration Fixture Connections for Incremental Accuracy.

- e. Close the Protective Cover.
- f. **CHECK** that the spot is on the left-most vertical graticule line by pressing the SINGLE button.
- g. **CHECK** the Digital Multimeter reading for the value specified for STEP 0 of Table 4-14. Note the reading for use in step j.
- h. Press the REPEAT button once so that the spot moves right 2 divisions.
- i. **CHECK** the Digital Multimeter reading for the value specified in the next STEP of Table 4-14. Note the reading for use in step j.
- j. **CHECK** that the voltage difference between adjacent steps is within 1000mV.
- k. Repeat steps h. to j. for each STEP in Table 4-14.
- l. Press the STEP GENERATOR INVERT button to turn INVERT on.
- m. Press the REPEAT button so that the spot moves to the right-most vertical graticule line.
- n. **CHECK** the Digital Multimeter reading for the value specified for STEP 0 of Table 4-14. Note the reading for use in step q.

- o. Press the REPEAT button once so that the spot moves left 2 divisions.
- p. **CHECK** the Digital Multimeter reading for the value specified in the next STEP of Table 4-14. Note the reading for use in step q.
- q. **CHECK** that the voltage difference between adjacent steps is within $1000\text{ mV} \pm 20\text{ mV}$.
- r. Repeat steps o. to q. for each STEP in Table 4-14.
- s. Press the STEP GENERATOR INVERT button to turn INVERT off.

Table 4-14
Incremental Accuracy

STEP	DMM Reading	VOLTAGE difference between adjacent STEP
0	$\pm(0.000\text{ V} \pm 32\text{ mV})$	$1000\text{ mV} \pm 20\text{ mV}$
1	$(1.000\text{ V} \pm 52\text{ mV})$	
2	$\pm(2.000\text{ V} \pm 72\text{ mV})$	$1000\text{ mV} \pm 20\text{ mV}$
3	$\pm(3.000\text{ V} \pm 92\text{ mV})$	$1000\text{ mV} \pm 20\text{ mV}$
4	$\pm(4.000\text{ V} \pm 112\text{ mV})$	$1000\text{ mV} \pm 20\text{ mV}$
5	$\pm(5.000\text{ V} \pm 132\text{ mV})$	$1000\text{ mV} \pm 20\text{ mV}$

Table 4-15
Incremental Accuracy using MULTI .1X

STEP	Reading of DMM	VOLTAGE difference between adjacent STEP
0	$\pm(0\text{ mV} \pm 7\text{ mV})$	$100\text{ mV} \pm 5\text{ mV}$
1	$\pm(100\text{ mV} \pm 11\text{ mV})$	
2	$\pm(200\text{ mV} \pm 15\text{ mV})$	$100\text{ mV} \pm 5\text{ mV}$
3	$\pm(300\text{ mV} \pm 19\text{ mV})$	$100\text{ mV} \pm 5\text{ mV}$
4	$\pm(400\text{ mV} \pm 23\text{ mV})$	$100\text{ mV} \pm 5\text{ mV}$
5	$\pm(500\text{ mV} \pm 27\text{ mV})$	$100\text{ mV} \pm 5\text{ mV}$

- t. Set the STEP MULTI .1X to on, and the HORIZONTAL to 100 mV/DIV STEP GEN.
- u. Repeat steps f. through s., using Table 4-15 instead of Table 4-14 .
- v. Proceed to the SETUP CONDITIONS of D9 to check Step Generator amplitude accuracy in Voltage mode. Otherwise, perform the following steps.
- w. Set the POWER switch to off.
- x. Change the position of the jumper J340 from CAL to ZERO on the A3 A/D board.



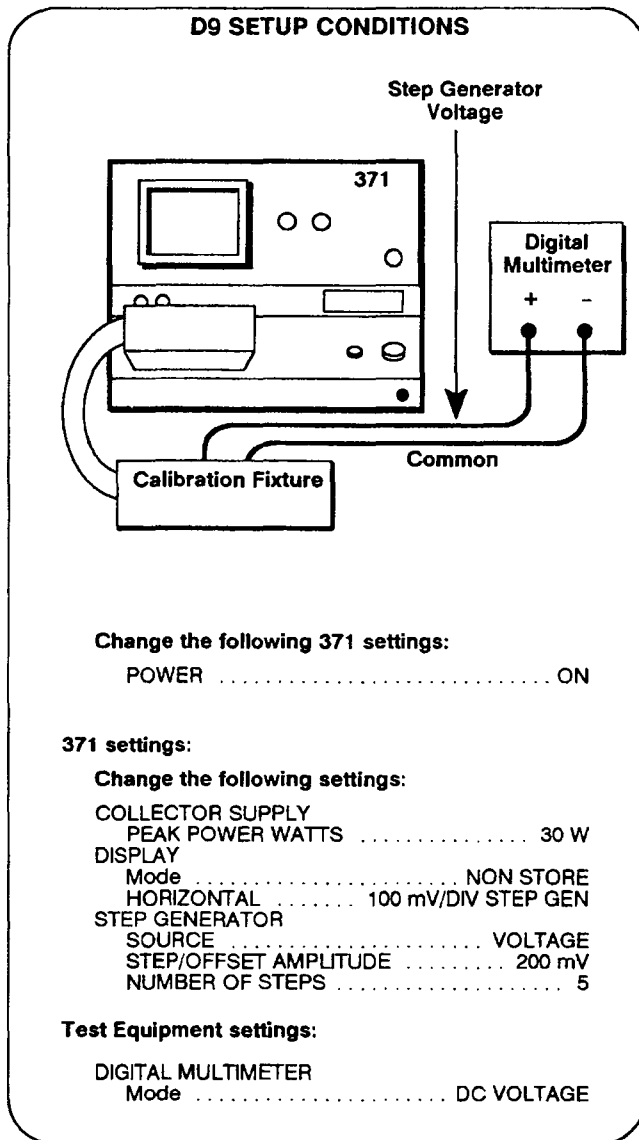
D9. Checking Amplitude Accuracy of Voltage Source Mode

Specifications:

- Each step is within 2% of total output +3% of Step AMPLITUDE + 2 mV.
 - With STEP MULTI .1X on, each step is within 4% of total output +5% of Step AMPLITUDE + 2 mV.
- a. Change the following 371 settings:
- POWER OFF
- b. Change the position of jumper J340 from ZERO to CAL on A3 A/D board.

NOTE

When the jumper position is changed from ZERO to CAL, STORE MODE is disabled.



- c. Connect the Digital Multimeter between the STEP GENERATOR VOLTAGE terminal and the COMMON terminal as shown in Figure 4-16.

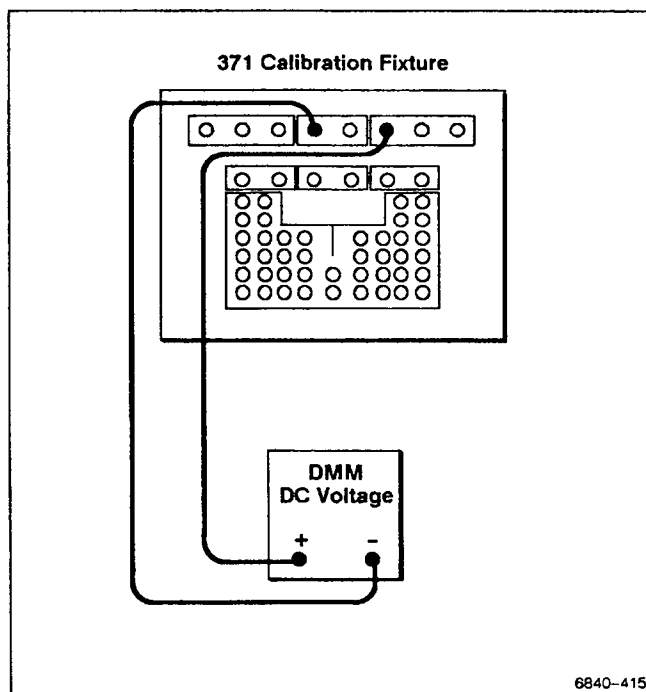


Figure 4-16. Setup for measuring voltage amplitude accuracy.

- d. Close the Protective Cover.
- e. Press the REPEAT button several times until the spot moves to the right-most vertical graticule line.
- f. **CHECK** that the Digital Multimeter reading is within the range specified in Table 4-16 for each STEP/AMPLITUDE setting from 200 mV to 5 V.
- g. Press the STEP GENERATOR INVERT button to turn INVERT on.
- h. **CHECK** that the Digital Multimeter reading is within the range specified in Table 4-16 for each STEP/AMPLITUDE setting from 200 mV to 5 V.
- i. Press the STEP GENERATOR INVERT button to turn INVERT off.

Table 4-16
Voltage Amplitude Accuracy

AMPLITUDE Setting	DMM Reading
200 mV	$\pm(0.972 - 1.028)$ V
500 mV	$\pm(2.433 - 2.567)$ V
1 V	$\pm(4.868 - 5.132)$ V
2 V	$\pm(9.738 - 10.262)$ V
5 V	$\pm(24.35 - 25.65)$ V

- j. Set the STEP MULTI .1X to on.
- k. **CHECK** that the Digital Multimeter reading is within the range specified in Table 4-17 for each STEP/AMPLITUDE setting from 20 mV to 500 mV.
- l. Press the STEP GENERATOR INVERT button to turn INVERT on.
- m. **CHECK** that the Digital Multimeter reading is within the range specified in Table 4-17 for each STEP/AMPLITUDE setting from 20 mV to 500 mV.

Table 4-17
Voltage Amplitude Accuracy Using MULTI .1X

AMPLITUDE Setting	DMM Reading
20 mV	$\pm(93.4 - 106.6)$ mV
50 mV	$\pm(235.5 - 264.5)$ mV
100 mV	$\pm(0.473 - 0.527)$ V
200 mV	$\pm(0.948 - 1.052)$ V
500 mV	$\pm(2.373 - 2.627)$ V

- n. Disconnect the Digital Multimeter.
- o. Press the SETUP RECALL button to initialize the 371.
- p. Proceed to the SETUP CONDITIONS of D10 to check maximum voltage accuracy. Otherwise perform the following steps.
- q. Set the 371 POWER switch to off.
- r. Change the position of the jumper J340 from CAL to ZERO on A3 A/D board.



D10. Checking Maximum Voltage Accuracy of Voltage Source Mode

Specifications:

- Each step is within 2% of total output +3% of Step AMPLITUDE +2 mV.

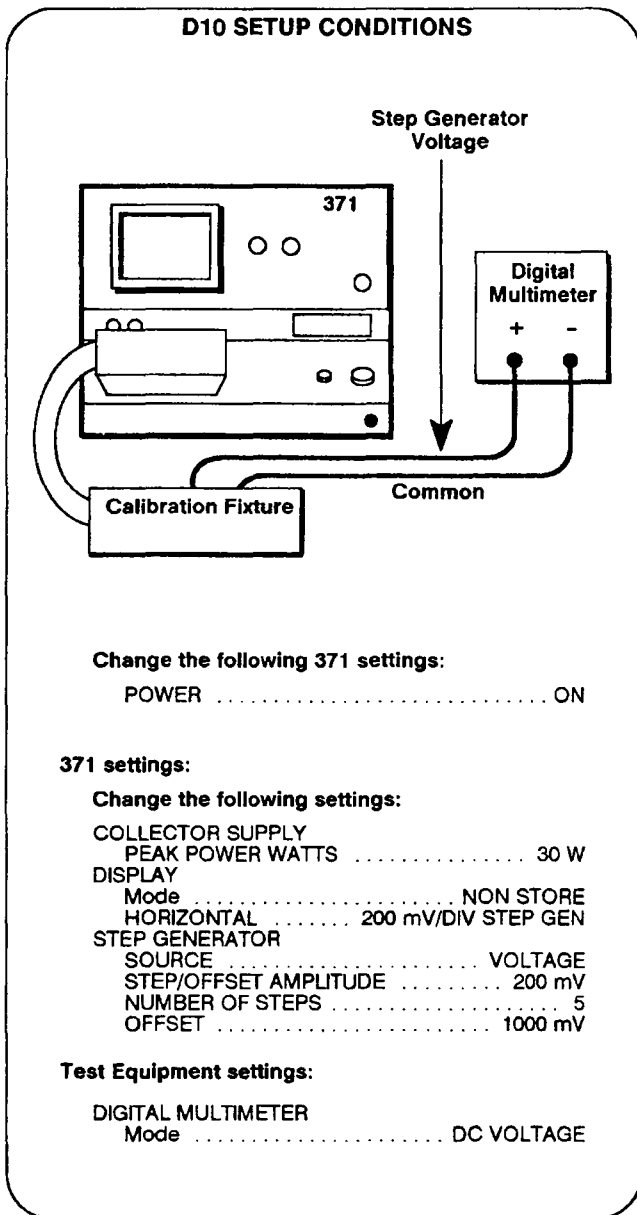
a. Change the following 371 settings:

POWER OFF

b. Change the position of jumper J340 from ZERO to CAL on A3 A/D board.

NOTE

When the jumper position is changed from ZERO to CAL, STORE MODE is disabled.



c. Connect the Digital Multimeter between the STEP GENERATOR VOLTAGE terminal and the COMMON terminal as shown in Figure 4-17.

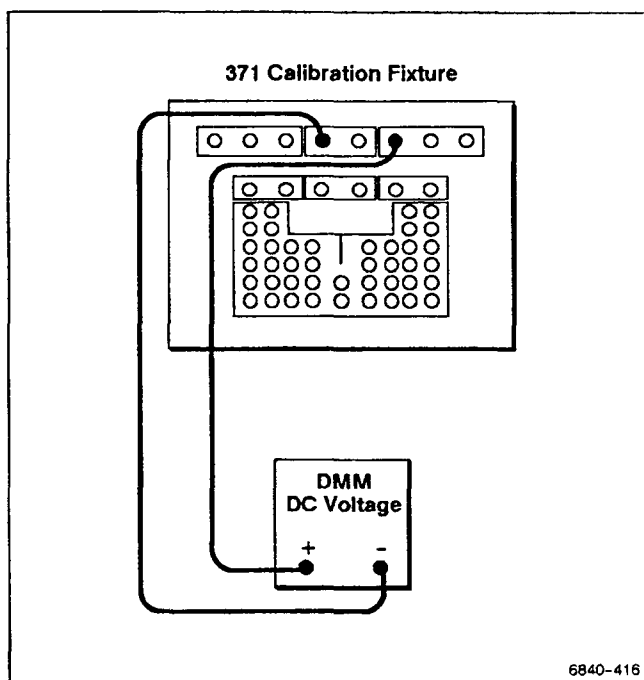


Figure 4-17. Setup for measuring maximum voltage accuracy.

- d. Close the Protective Cover.
- e. Press the REPEAT button several times until the spot moves to the right-most vertical graticule line.
- f. **CHECK** that the Digital Multimeter reading is within the range specified in Table 4-18 for each STEP/AMPLITUDE setting from 200 mV to 5 V.
- g. Press the STEP GENERATOR INVERT button to turn INVERT on.
- h. **CHECK** that the Digital Multimeter reading is within the range specified in Table 4-18 for each STEP/AMPLITUDE setting from 200 mV to 5 V.
- i. Disconnect the Digital Multimeter.
- j. Set the 371 POWER switch to off.
- k. Change the position of the jumper J340 from CAL to ZERO on A3 A/D board.

Table 4-18
Maximum Voltage Accuracy

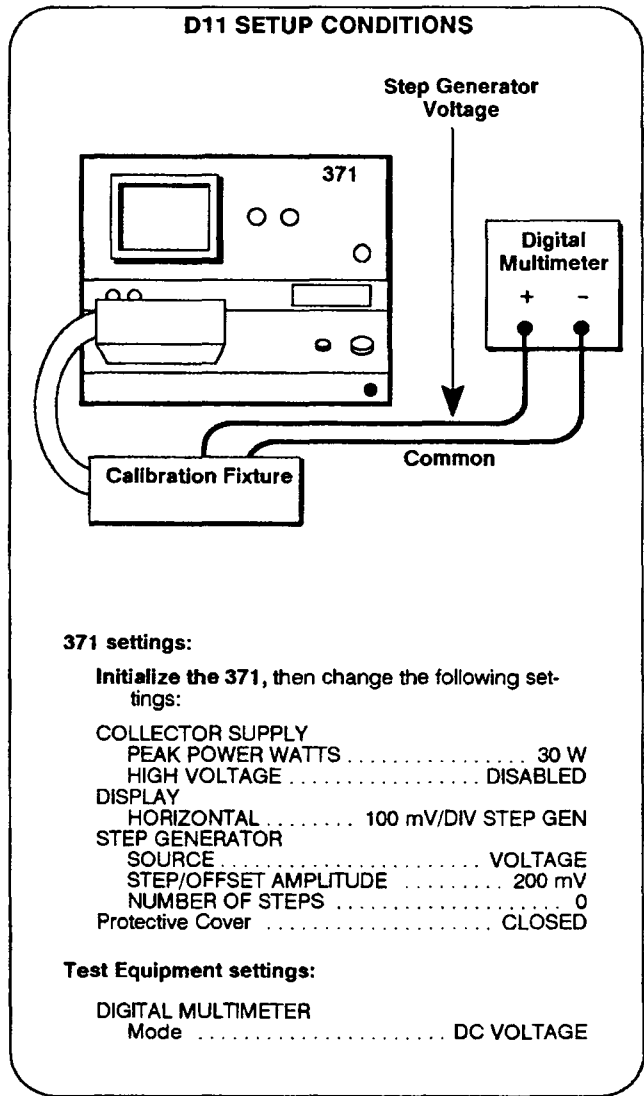
AMPLITUDE Setting	DMM Reading
200 mV	$\pm(1.952 - 2.048) V$
500 mV	$\pm(4.883 - 5.117) V$
1 V	$\pm(9.768 - 10.232) V$
2 V	$\pm(19.54 - 20.46) V$
5 V	$\pm(48.85 - 51.15) V$



D11. Checking Offset Accuracy

Specifications:

- Each step is within 2% of total output +3% of Step AMPLITUDE +2 mV.



- Press the up-arrow OFFSET button.
- CHECK** that the spot moves to the right.
- Press the Step Generator OFFSET down-arrow button.

- CHECK** that the spot moves to the left.
- Press the OFFSET up-arrow button while pressing the Cursor SHIFT button.
- CHECK** that the spot moves rapidly to the right.
- Press both OFFSET buttons simultaneously.
- CHECK** that the spot moves to the graticule origin and the OFFSET readout displays 0 mV.
- Connect the Digital Multimeter between the STEP GENERATOR VOLTAGE terminal and the COMMON terminal as shown in Figure 4-18.

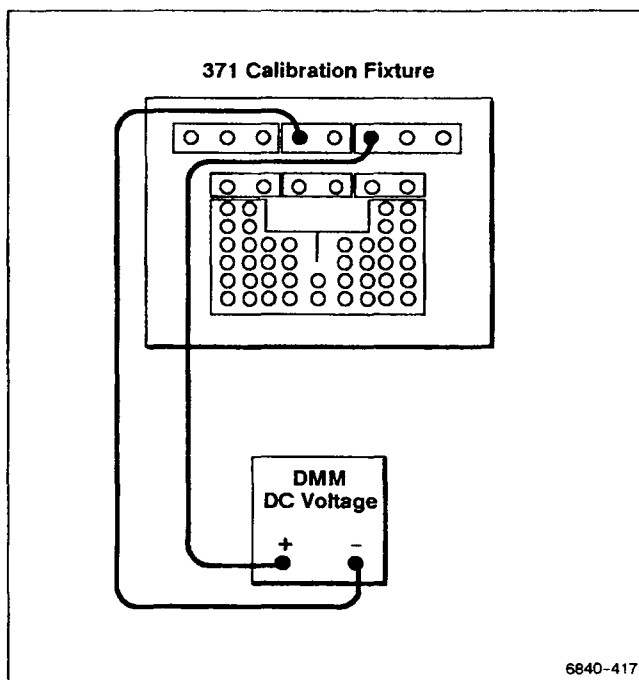


Figure 4-18. Setup for checking offset accuracy.

- Close the Protective Cover.
- CHECK** that the Digital Multimeter reading is within the limit shown in the 0% of OFFSET column in Table 4-19 for each setting of STEP/OFFSET AMPLITUDE from 200 mV to 5 V.
- Press the COLLECTOR SUPPLY POLARITY button.
- CHECK** that the PNP- and NEG- LEDs are lit.
- Repeat step k.
- Press the COLLECTOR SUPPLY POLARITY button.
- CHECK** that the NPN+ and POS+ LEDs are lit.

- q. Set the STEP/OFFSET AMPLITUDE switch to 200 mV.
- r. Press the OFFSET up-arrow button while pressing the Cursor SHIFT button until the OFFSET readout reaches 1000mV.
- s. **CHECK** that the Digital Multimeter reading is within the limit shown in the 100% of OFFSET column in Table 4-19 for each setting of STEP/OFFSET AMPLITUDE from 200 mV to 5 V.
- t. Press the STEP GENERATOR INVERT button to turn INVERT on.
- u. Repeat step s.

Table 4-19
Offset Accuracy

STEP/OFFSET AMPLITUDE Setting	DMM (0% of OFFSET) Reading	DMM (100% of OFFSET) Reading
200mV	$\pm 8\text{mV}$	$\pm(972-1028)\text{mV}$
500mV	$\pm 17\text{mV}$	$\pm(2433-2567)\text{mV}$
1V	$\pm 32\text{mV}$	$\pm(4.868-5.132)\text{V}$
2V	$\pm 62\text{mV}$	$\pm(9.738-10.262)\text{V}$
5V	$\pm 152\text{mV}$	$\pm(24.35-25.65)\text{V}$

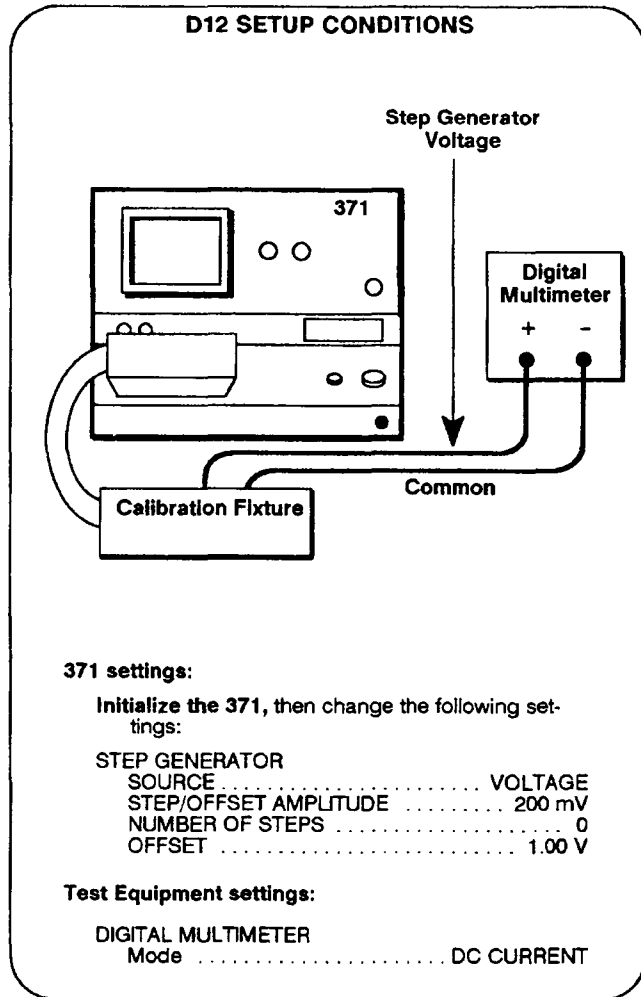
- v. Remove the patch cords from the STEP GENERATOR VOLTAGE OUTPUT and the COMMON terminals.
- w. Initialize the 371.



D12. Checking Short Circuit Current Limit of Voltage Source Mode

Specifications:

- Short circuit current limit is 80 to 150 mA.



- Connect the Digital Multimeter between the STEP GENERATOR VOLTAGE and the COMMON terminals as shown in Figure 4-19.

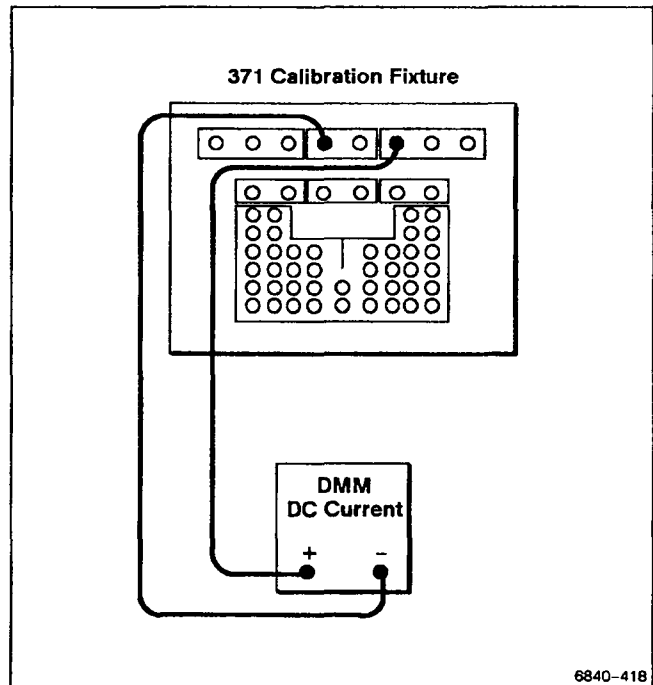


Figure 4-19. Setup for checking short circuit.

- Close the Protective Cover.
- CHECK** that the Digital Multimeter reading is between 80 mA and 150 mA.
- Press the Step Generator INVERT button to change Step Generator polarity.
- CHECK** that the Digital Multimeter reading is between -80 mA and -150 mA, then disconnect the Digital Multimeter.
- Initialize the 371.



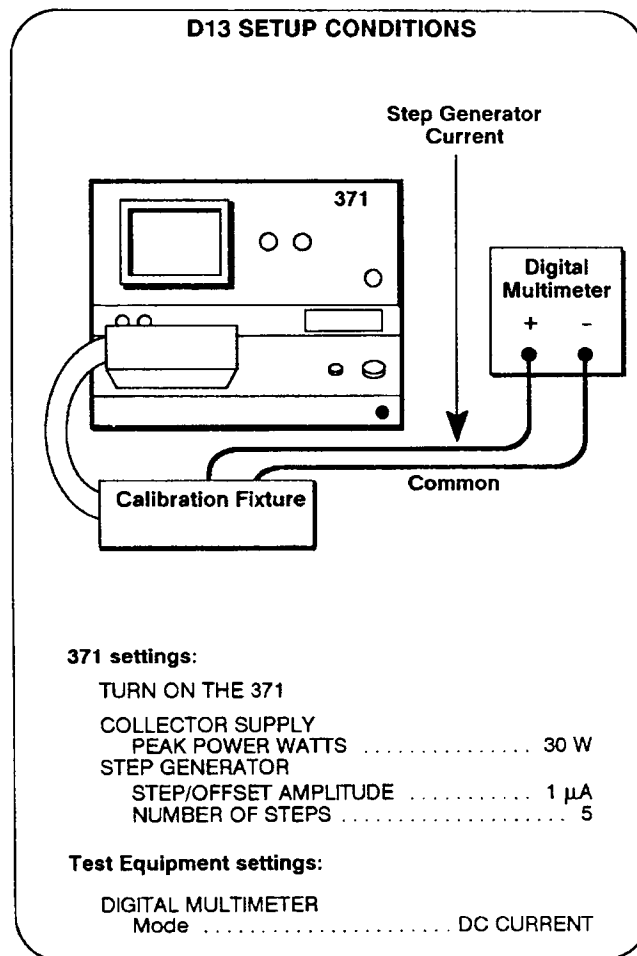
D13. Checking Amplitude Accuracy of Normal Step Current Source Mode

Specifications:

- Each step is within 2% of total output +3% of Step AMPLITUDE + 10 nA.
 - Variation between step amplitudes is less than 2%.
 - With STEP MULTI .1X on, each step is within 4% of total output + 5% of Step AMPLITUDE + 10 nA.
 - With STEP MULTI .1X on, variation between step amplitudes is less than 5%.
- a. Turn off the 371.
 - b. Change the position of jumper J340 from ZERO to CAL on A3 A/D board.

NOTE

When the jumper position is changed from ZERO to CAL, STORE MODE is disabled.



- c. Connect the Digital Multimeter between the STEP GENERATOR CURRENT terminal and the COMMON terminal as shown in Figure 4-20.

Performance Check and Adjustment—371
D. Step Generator

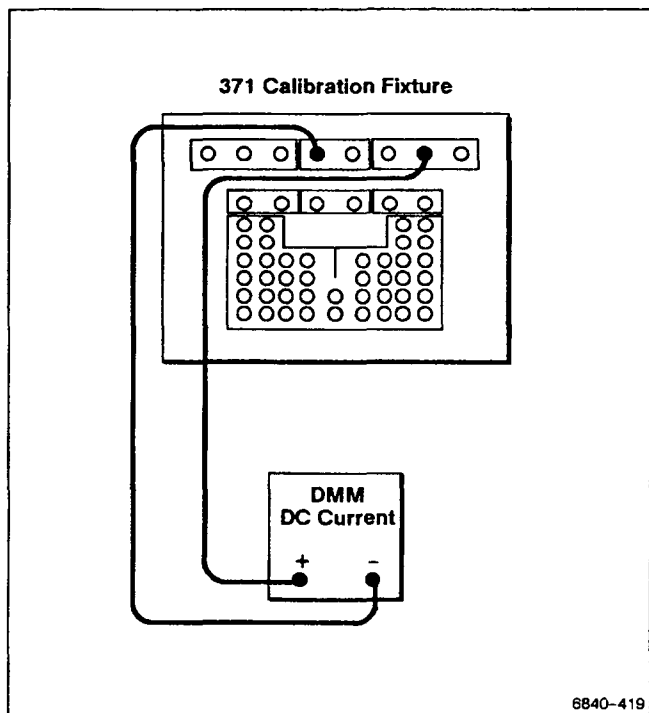


Figure 4-20. Setup for step current amplitude accuracy.

- d. Close the Protective Cover.
- e. Press the REPEAT button several times to maximize the Digital Multimeter reading.
- f. **CHECK** that the Digital Multimeter reading is within the limit specified in Table 4-20 for each STEP/AMPLITUDE setting from 1 μA to 2 mA.
- g. Press the STEP GENERATOR INVERT button to turn INVERT on.
- h. **CHECK** that the Digital Multimeter reading is within the limit specified in Table 4-20 for each STEP/AMPLITUDE setting from 1 μA to 2 mA.
- i. Press the STEP GENERATOR INVERT button to turn INVERT off.

Table 4-20
Current Amplitude Accuracy

AMPLITUDE Setting	DMM Reading
1 μA	$\pm(4.86 - 5.14) \mu\text{A}$
2 μA	$\pm(9.73 - 10.27) \mu\text{A}$
5 μA	$\pm(24.34 - 25.66) \mu\text{A}$
10 μA	$\pm(48.69 - 51.31) \mu\text{A}$
20 μA	$\pm(97.39 - 102.61) \mu\text{A}$
50 μA	$\pm(243.5 - 256.5) \mu\text{A}$
100 μA	$\pm(487.0 - 513.0) \mu\text{A}$
200 μA	$\pm(974.0 - 1026.0) \mu\text{A}$
500 μA	$\pm(2.435 - 2.565) \text{mA}$
1 mA	$\pm(4.870 - 5.130) \text{mA}$
2 mA	$\pm(9.740 - 10.260) \text{mA}$

- j. Set the STEP MULTI .1X to on.
- k. **CHECK** that the Digital Multimeter reading is within the limit specified in Table 4-21 for each STEP/OFFSET AMPLITUDE setting from 100 nA to 200 μA .
- l. Press the STEP GENERATOR INVERT button to turn INVERT on.
- m. **CHECK** that the Digital Multimeter reading is within the limit specified in Table 4-21 for each STEP/OFFSET AMPLITUDE setting from 100 nA to 200 μA .

Table 4-21
Current Amplitude Accuracy Using MULTI .1X

AMPLITUDE Setting	DMM Reading
100 nA	$\pm(465 - 535)$ nA
200 nA	$\pm(940 - 1060)$ nA
500 nA	$\pm(2.365 - 2.635)$ μ A
1 μ A	$\pm(4.740 - 5.260)$ μ A
2 μ A	$\pm(9.490 - 10.510)$ μ A
5 μ A	$\pm(23.74 - 26.26)$ μ A
10 μ A	$\pm(47.49 - 52.51)$ μ A
20 μ A	$\pm(95.00 - 105.00)$ μ A
50 μ A	$\pm(237.5 - 262.5)$ μ A
100 μ A	$\pm(475.0 - 525.0)$ μ A
20 μ A	$\pm(950.0 - 1050.0)$ μ A

- n. Disconnect the Digital Multimeter.
- o. To check maximum current accuracy, proceed to the SETUP CONDITIONS of D14. Otherwise perform the following steps.
- p. Set the 371 POWER switch to off.
- q. Change the position of jumper J340 from CAL to ZERO on A3 A/D board.



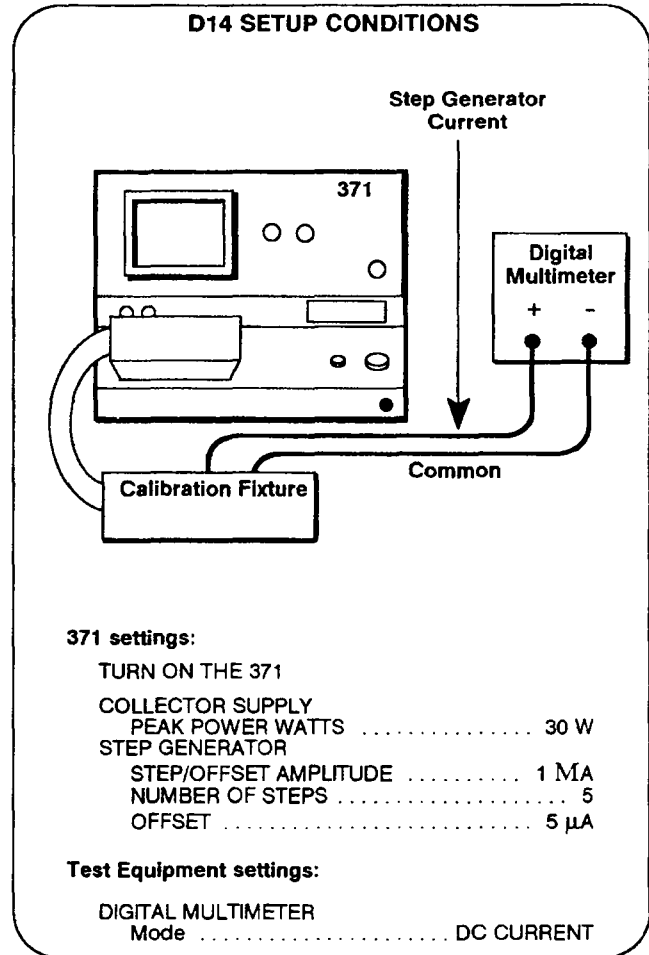
D14. Checking Maximum Current Accuracy of Normal Step Current Mode

Specifications:

- Each step is within 2% of total output +3% of Step AMPLITUDE + 10 nA.
- a. Change the following 371 settings:
POWER OFF
- b. Change the position of jumper J340 from ZERO to CAL on A3 A/D board.

NOTE

When the jumper position is changed from ZERO to CAL, STORE MODE is disabled.



- c. Connect the Digital Multimeter between the STEP GENERATOR CURRENT terminal and the COMMON terminal as shown in Figure 4-21.

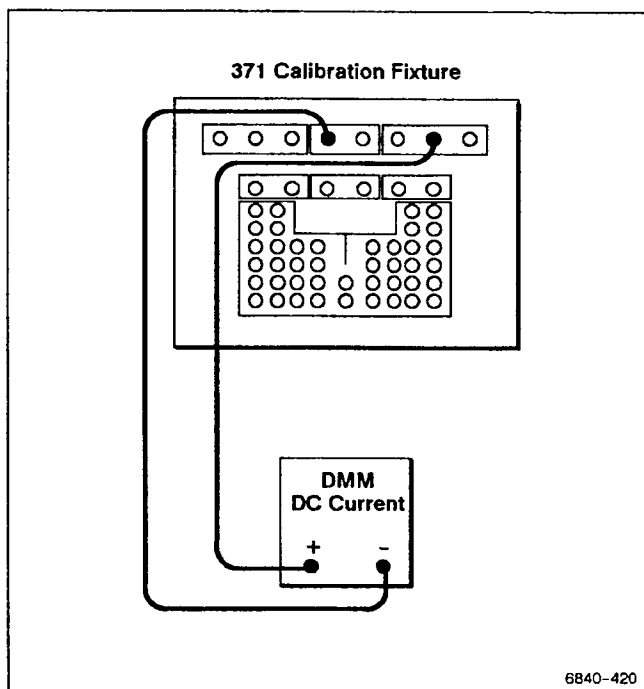


Figure 4-21. Setup for maximum current measurement.

- d. Close the Protective Cover.
- e. Press the REPEAT button several times to maximize the Digital Multimeter reading.
- f. **CHECK** that the Digital Multimeter reading is within the limits specified in Table 4-22 for each STEP/OFFSET AMPLITUDE setting from 1 μA to 2 mA.
- g. Press the STEP GENERATOR INVERT button to turn INVERT on.

- h. **CHECK** that the Digital Multimeter reading is within the limits specified in Table 4-22 for each STEP/OFFSET AMPLITUDE setting from 1 μA to 2 mA.
- i. Press the STEP GENERATOR INVERT button to turn INVERT off and disconnect the Digital Multimeter.

Table 4-22
Maximum Current Accuracy

AMPLITUDE Setting	DMM Reading
1 μA	$\pm(9.760 - 10.240) \mu\text{A}$
2 μA	$\pm(19.53 - 20.47) \mu\text{A}$
5 μA	$\pm(48.84 - 51.16) \mu\text{A}$
10 μA	$\pm(97.69 - 102.31) \mu\text{A}$
20 μA	$\pm(195.4 - 204.6) \mu\text{A}$
50 μA	$\pm(488.5 - 511.5) \mu\text{A}$
100 μA	$\pm(977.0 - 1023.0) \mu\text{A}$
200 μA	$\pm(1.954 - 2.046) \text{mA}$
500 μA	$\pm(4.885 - 5.115) \text{mA}$
1 mA	$\pm(9.770 - 10.230) \text{mA}$
2 mA	$\pm(19.54 - 20.46) \text{mA}$

- j. Set the the POWER switch to off.
- k. Change the position of the jumper J340 from CAL to ZERO.

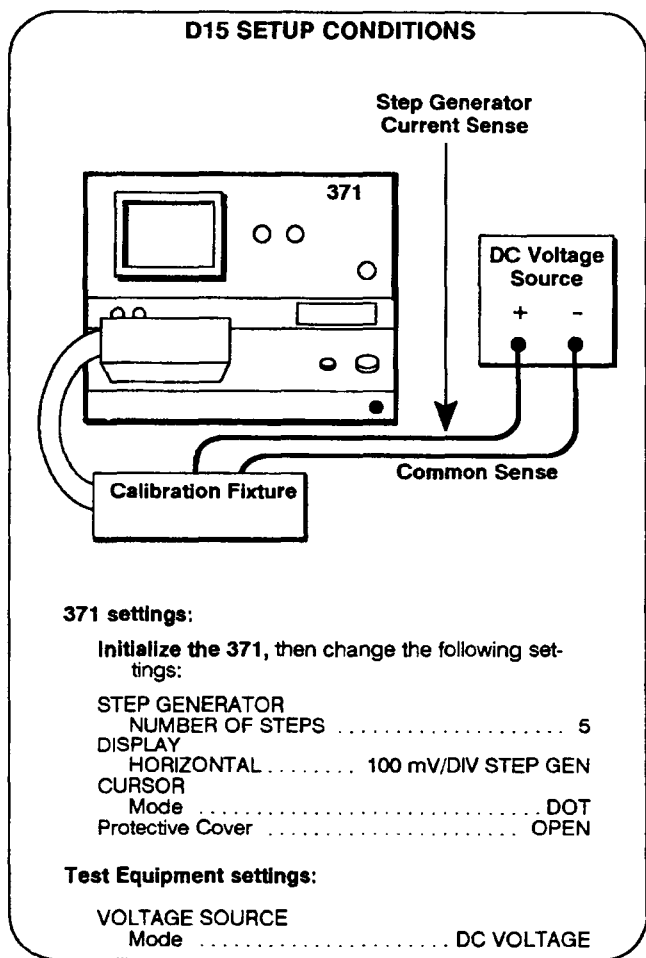


D15. Checking Amplitude Accuracy of Pulsed Step Current Source Mode

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; they are not specifications.

The following procedure checks the amplitude of Step Generator current pulses by forcing these pulses through load resistors and measuring the pulse voltage across the resistors with the Horizontal Cursor. The measurement variation of the Horizontal Cursor, determined by measuring a calibrated voltage source, is added to each pulse voltage measurement and compared to a table of limit values.



a. Connect long patch cords between the Calibration Fixture and the voltage source as shown in Figure 4-22.

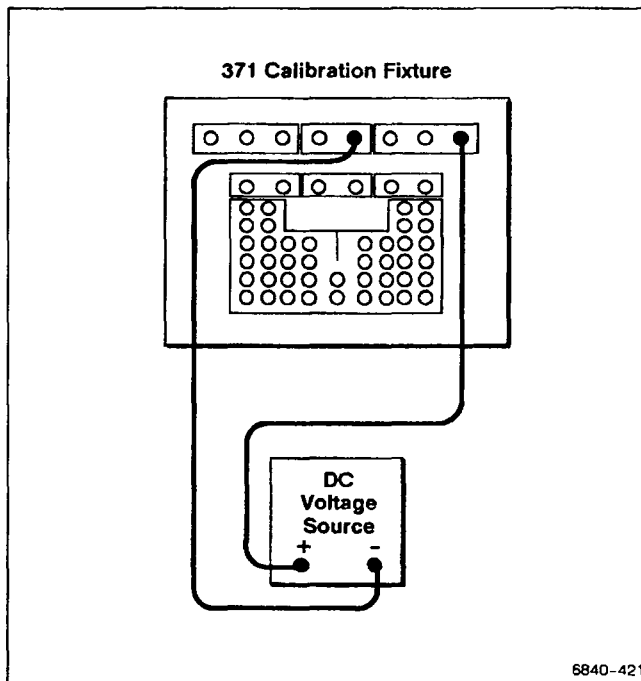


Figure 4-22. Setup for determining cursor measurement variation.

- b. Apply 0.750 V from the voltage source.
- c. Note the reading of the Horizontal CURSOR readout.
- d. Calculate:

$$\text{Horizontal Cursor} - \text{Applied Voltage} = \text{Variation}$$

Example:

Applied Voltage	750 mV
Cursor Readout	-760 mV
Variation:	-10 mV

- e. Record the Variation in the VARIATION column of Table 4-23, in each row where the HORIZONTAL VOLTS/DIV STEP GEN Setting is 100 mV.
- f. Set the HORIZONTAL to 200 mV/DIV STEP GEN and apply 1.875 V from the voltage source.
- g. Repeat steps c. and d.
- h. Record the Variation in the VARIATION column of Table 4-23, in each row where the HORIZONTAL VOLTS/DIV STEP GEN Setting is 200 mV.
- i. Set the HORIZONTAL to 500 mV/DIV STEP GEN and apply 3.750 V from the voltage source.
- j. Repeat steps c. and d.

- k. Record the Variation in the VARIATION column of Table 4-23, in each row where the HORIZONTAL VOLTS/DIV STEP GEN Setting is 500 mV.
- l. Set the voltage source output to 0 V and disconnect the voltage source.
- m. Connect the patch cords as shown in Figure 4-23.

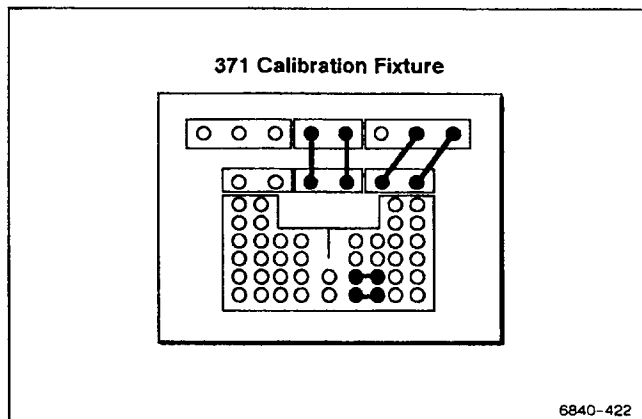


Figure 4-23. Measuring pulse amplitude accuracy.

- n. Set the STEP/OFFSET AMPLITUDE, HORIZONTAL VOLTS/DIV STEP GEN, and LOAD RESISTOR as indicated in the first row of Table 4-23. (The LOAD RESISTOR shorting bars are correctly placed for a 750 Ω load in Figure 4-23.)

- o. Close the Protective Cover.
- p. Move the Dot Cursor to the right-most dot, representing the fifth Step Generator pulse, by using the Cursor arrow keys.
- q. Record the Horizontal CURSOR readout in the CURSOR Reading column of Table 4-23 in the first row.
- r. Repeat steps n. and q. for each row of Table 4-23.
- s. Calculate:

$$\text{Cursor Reading} \pm \text{VARIATION} = \text{PULSE AMPLITUDE}$$

Example:

Applied Voltage	3760 mV
Cursor Readout	-30 mV
Variation:	3730 mV

- t. Compare the calculated value of PULSE AMPLITUDE with the LIMIT VALUE for each row of Table 4-23.
- u. Press the Step Generator INVERT button to reverse step polarity.
- v. Repeat steps n. through t.
- w. Disconnect the patch cords.
- x. Proceed to SETUP CONDITIONS of D16 to check the accuracy of the Step Generator with offset in the Current mode. Otherwise, perform the following steps.
- y. Initialize the 371.

Table 4-23
Pulsed Step Current Amplitude Accuracy

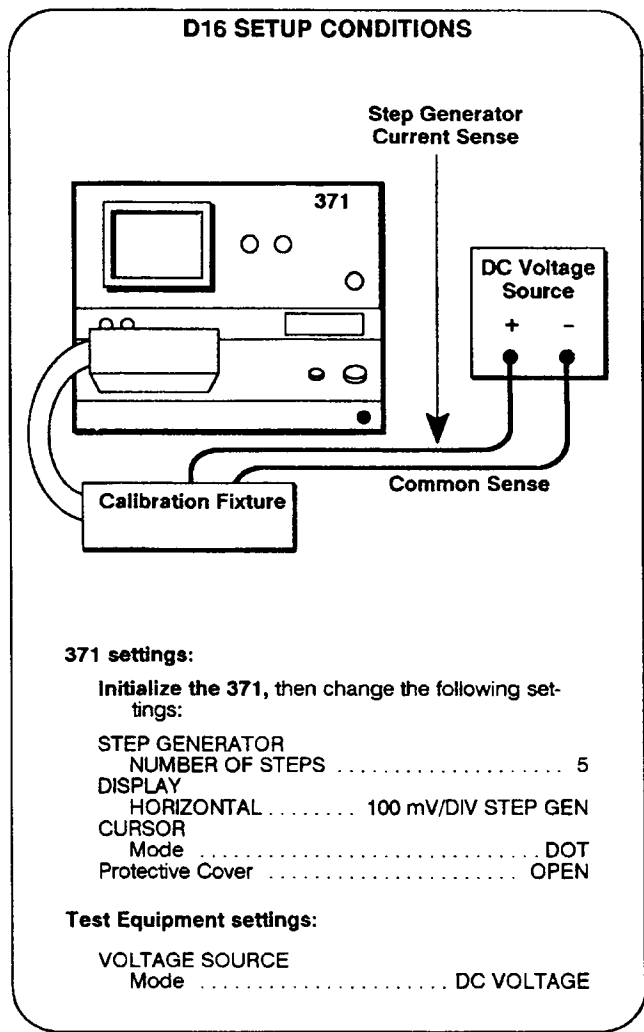
STEP/OFFSET AMPLITUDE Setting	HORIZONTAL VOLTS/DIV STEP GEN Setting	LOAD RESISTOR Setting	VARIATION \pm	CURSOR Reading	PULSE AMPLITUDE (CURSOR Reading \pm Variation)	LIMIT VALUE \pm
1 mA	500 mV	750 Ω				3655 to 3845 mV
2 mA	100 mV	75 Ω				730 to 770 mV
5 mA	200 mV	75 Ω				1828 to 1922 mV
10 mA	500 mV	75 Ω				3655 to 3845 mV
20 mA	100 mV	7.5 Ω				730 to 770 mV
50 mA	200 mV	7.5 Ω				1828 to 1922 mV
100 mA	500 mV	7.5 Ω				3655 to 3845 mV
200 mA	100 mV	750 m Ω				730 to 770 mV
500 mA	200 mV	750 m Ω				1828 to 1922 mV
1 A	500 mV	750 m Ω				3655 to 3845 mV
2 A	100 mV	75 m Ω				730 to 770 mV



D16. Checking Maximum Current Accuracy of Pulsed Step Current Source Mode

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*



a. Connect the long patch cords between the Calibration Fixture and the voltage source as shown in Figure 4-24.

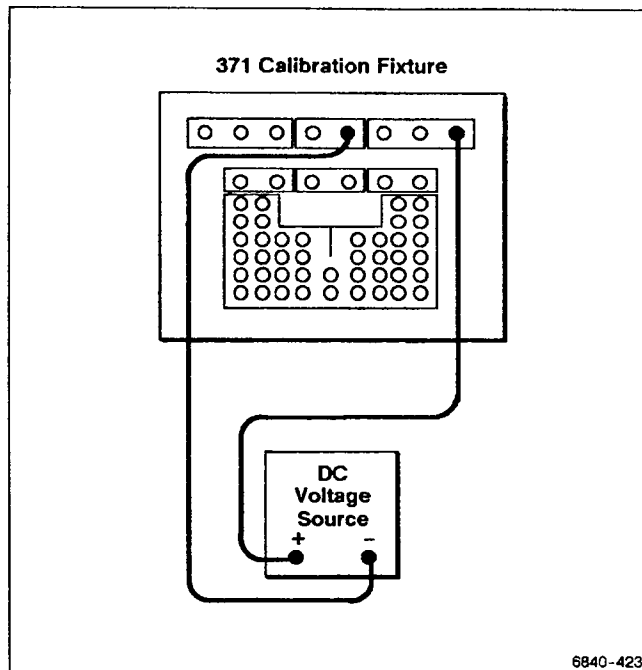


Figure 4-24. Setup for determining cursor measurement variation.

- b. Apply 0.750 V from the Voltage Source.
- c. Note the reading of the HORIZ CURSOR readout.
- d. Calculate:

Horizontal Cursor – Applied Voltage = Variation	
Example:	
Applied Voltage	750 mV
Cursor Readout	-760 mV
Variation:	-10 mV
- e. Record the Variation in the VARIATION column of Table 4-20, in each row where the HORIZONTAL VOLTS/DIV STEP GEN Setting is 100 mV.
- f. Set the HORIZONTAL to 200 mV/DIV STEP GEN and apply 1.500 V from the voltage source.
- g. Repeat steps c. and d.
- h. Record the Variation in the VARIATION column of Table 4-24, in each row where the Horizontal VOLTS/DIV STEP GEN Setting is 200 mV.
- i. Set the HORIZONTAL to 500 mV/DIV STEP GEN and apply 3.750 V from the voltage source.

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- j. Repeat steps c. and d.
- k. Record the Variation in the VARIATION column of Table 4-24, in each row where the Horizontal VOLTS/DIV STEP GEN Setting is 500 mV.
- l. Set the voltage source output to 0 V and disconnect the voltage source.
- m. Connect the patch cords as shown in Figure 4-25.

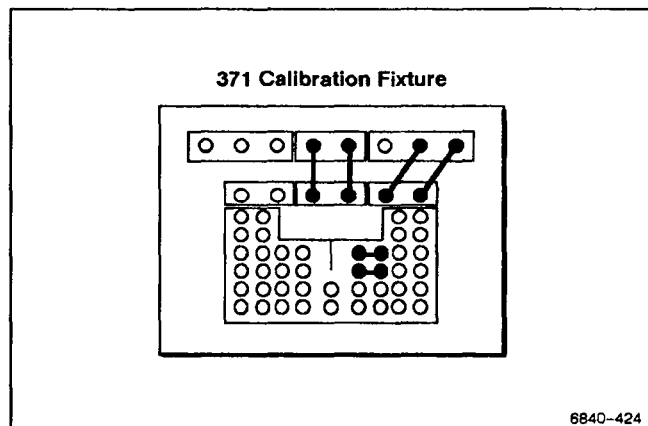


Figure 4-25. Measuring maximum pulse amplitude accuracy.

- n. Set the STEP/OFFSET AMPLITUDE, Step Generator OFFSET, HORIZONTAL VOLTS/DIV STEP GEN, and LOAD RESISTOR as indicated in the first row of Table

4-24. (The LOAD RESISTOR shorting bars are correctly placed for a 75 Ω load in Figure 4-25.)

- o. Close the Protective Cover.
- p. Move the Dot Cursor to the right-most dot, which represents the fifth Step Generator pulse, by using the Cursor arrow keys.
- q. Record the Horizontal CURSOR readout in the CURSOR Reading column of Table 4-24 in the first row.
- r. Repeat steps n. and q. for each row of Table 4-24.
- s. Calculate:

$$\text{Cursor Reading} \pm \text{VARIATION} = \text{PULSE AMPLITUDE}$$

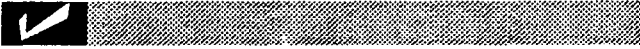
Example:

Cursor Reading	3760 mV
Variation	-30 mV
Pulse Amplitude	3730 mV

- t. Compare the calculated value of PULSE AMPLITUDE with the LIMIT VALUE for each row of Table 4-24.
- u. Press the Step Generator INVERT button to reverse step polarity.
- v. Repeat steps n. through u.
- w. Disconnect the patch cords.
- x. Initialize the 371.

Table 4-24
Pulsed Step Current Maximum Amplitude Accuracy

STEP/OFFSET AMPLITUDE Setting (OFFSET)	HORIZONTAL VOLTS/DIV STEP GEN Setting	LOAD RESISTOR Setting	VARIATION \pm	CURSOR Reading	PULSE AMPLITUDE (CURSOR Reading \pm Variation)	LIMIT VALUE \pm
1 mA (5 mA)	100 mV	75 Ω				730 to 770 mV
2 mA (10 mA)	200 mV	75 Ω				1462 to 1538 mV
5 mA (25 mA)	500 mV	75 Ω				3655 to 3845 mV
10 mA (50 mA)	100 mV	7.5 Ω				730 to 770 mV
20 mA (100 mA)	200 mV	7.5 Ω				1462 to 1538 mV
50 mA (250 mA)	500 mV	7.5 Ω				3655 to 3845 mV
100 mA (500 mA)	100 mV	750 m Ω				730 to 770 mV
200 mA (1000 mA)	200 mV	750 m Ω				1462 to 1538 mV
500 mA (2500 mA)	500 mV	750 m Ω				3655 to 3845 mV
1 A (5 A)	100 mV	75 m Ω				730 to 770 mV
2 A (10 A)	200 mV	75 m Ω				1462 to 1538 mV

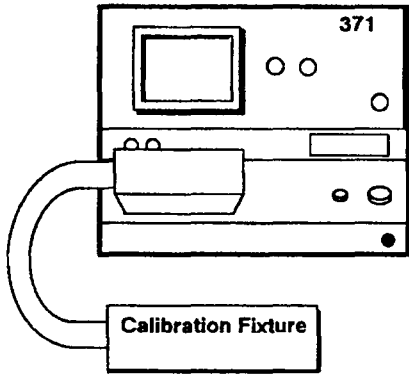


D17. Checking Maximum Voltage of Current Source Mode

Specifications:

- Maximum output voltage in current mode is 12 V \pm 20%.

D17 SETUP CONDITIONS



371 settings:
Initialize the 371, then change the following settings:

COLLECTOR SUPPLY	
PEAK POWER WATTS	30 W
DISPLAY	
HORIZONTAL	2 V/DIV STEP GEN
STEP GENERATOR	
OFFSET	5 μ A
CURSOR	
Mode	DOT
Protective Cover	CLOSED

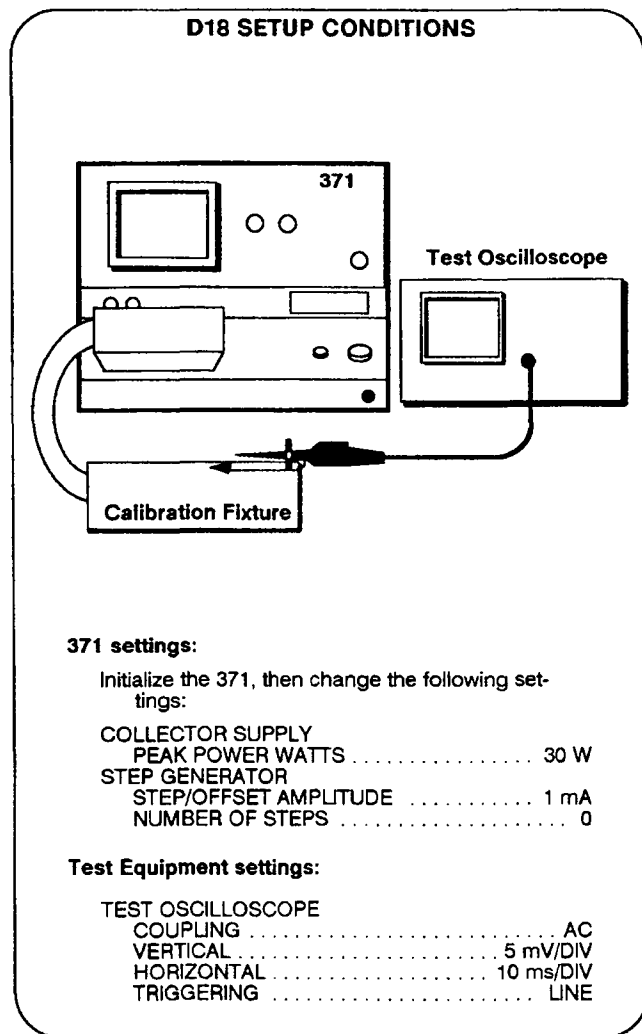
- CHECK** that the Horizontal CURSOR readout is between 9.6 V and 14.4 V when the STEP/OFFSET AMPLITUDE is turned throughout its range.
- Press the Step Generator INVERT button to reverse step polarity.
- CHECK** that the Horizontal CURSOR readout is between -9.6 V and -14.4 V when the STEP/OFFSET AMPLITUDE is turned throughout its range.
- Press the Step Generator INVERT button to resume normal operation.
- Set the Collector Supply PEAK POWER WATTS to 300 W.
- Repeat steps a. through d.
- Initialize the 371.



D18. Checking Ripple and Pulse Noise of Current Source Mode

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*



- Connect a patch cord between the COMMON and one of the 1 K Ω terminals.
- Connect a patch cord between the STEP GENERATOR CURRENT and the other 1 K Ω terminal.
- Connect the X1 probe tip from the test oscilloscope by using terminal plugs as shown in Figure 4-26.

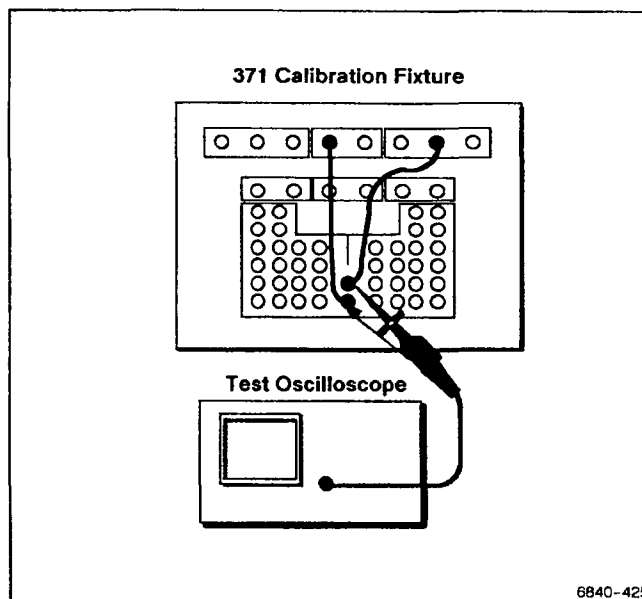


Figure 4-26. Setup for checking Ripple and Pulse Noise.

- Close the Protective Cover.
- CHECK** that the ripple plus noise is less than 20 mV p-p.
- Disconnect the X1 probe and the patch cords.
- Initialize the 371.

E. COLLECTOR SUPPLY

Equipment Required: (see Table 4-3)

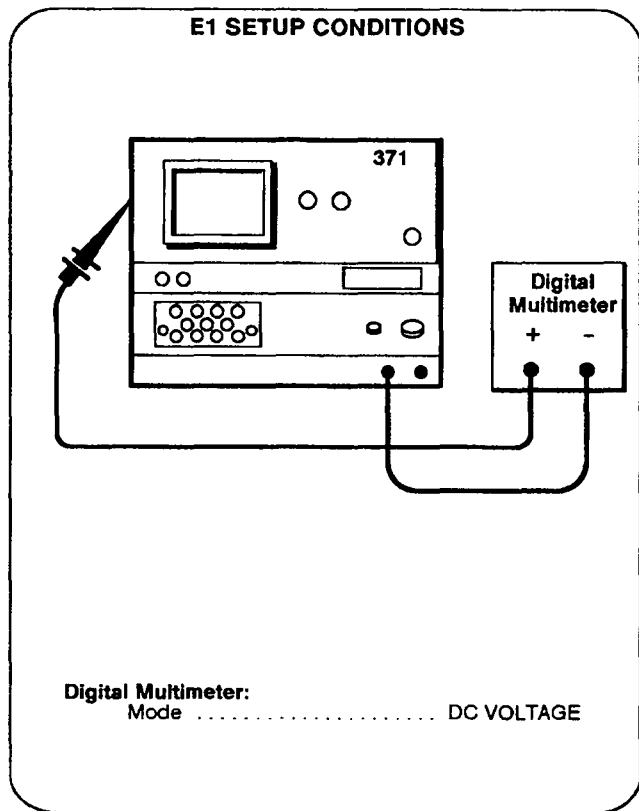
- Digital Multimeter
- Test Oscilloscope



E1. Adjusting Collector Supply Offset (A6R412)

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*



Removing the Shield Panel and Connecting the Meter

- a. Change the following 371 setting:
 POWER OFF
- b. Remove the shield panel on the A6 Collector Supply board.
- c. Connect the positive lead of the digital multimeter to J62 pin 1 on the A6 Collector Supply Output board and the negative lead to ground.

Adjusting Collector Supply Offset

- d. Change the following 371 settings:
 POWER ON
 COLLECTOR SUPPLY
 PEAK POWER WATTS 30 W
- e. Close the Protective Cover.

NOTE

See **Test Point and Adjustment Locations 2** in Section 7 for the location of adjustment R412.

- f. **ADJUST** HV CS Offset adjustment R412 on the A6 Collector Supply Output board for a digital multimeter reading of 0 V \pm 1.00 mV.

Disconnecting the Meter and Replacing the Shield Panel

g. Change the following 371 setting:

POWER OFF

h. Disconnect the digital multimeter from the 371.

i. Replace the shield panel.

j. Change the following 371 setting:

POWER ON

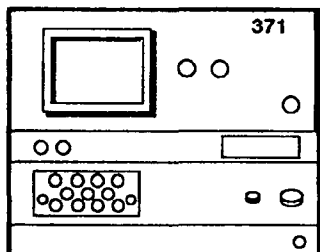


E2. Adjusting Collector Supply Gain for High Voltage (A6R401)

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; they are not specifications.

E2 SETUP CONDITIONS



371 settings:

Initialize the 371, then change the following settings:

COLLECTOR SUPPLY
 PEAK POWER WATTS 30 W
 HIGH VOLTAGE ENABLED
 VARIABLE 100%
 DISPLAY
 HORIZONTAL 500 V/DIV COLLECTOR
 CURSOR
 Mode DOT

Determining Whether Adjustment is Necessary

- a. Close the Protective Cover.
- b. Press the CURSOR movement buttons to position the DOT CURSOR at the end of the trace.

- c. **EXAMINE** the display for a vertical cursor readout between 3000 V and 3300 V.

- d. Change the following 371 setting:

COLLECTOR SUPPLY
 PEAK POWER WATTS 3 W

- e. **EXAMINE** the display for a vertical cursor readout between 3000 V and 3300 V.

If the readouts are both within these limits, proceed to step i. If either readout is not within these limits, the following adjustment is necessary.

Adjusting Collector Supply Gain

- f. Change the following 371 setting:

COLLECTOR SUPPLY
 PEAK POWER WATTS 30 W

NOTE

See Test Point and Adjustment Locations 2 in Section 7 for the location of adjustment R401.

- g. **ADJUST** HV CS Gain adjustment R401 on the A6 Collector Supply Output board for a horizontal cursor readout of approximately 3150 volts (midway between 3000V and 3300V).

R401 can be adjusted through the access hole in the electrical shield.

Determining Whether Further Adjustment is Necessary

- h. Repeat steps c. to e. to determine whether further adjustment is necessary.

Removing the Setup

- i. Change the following 371 setting:

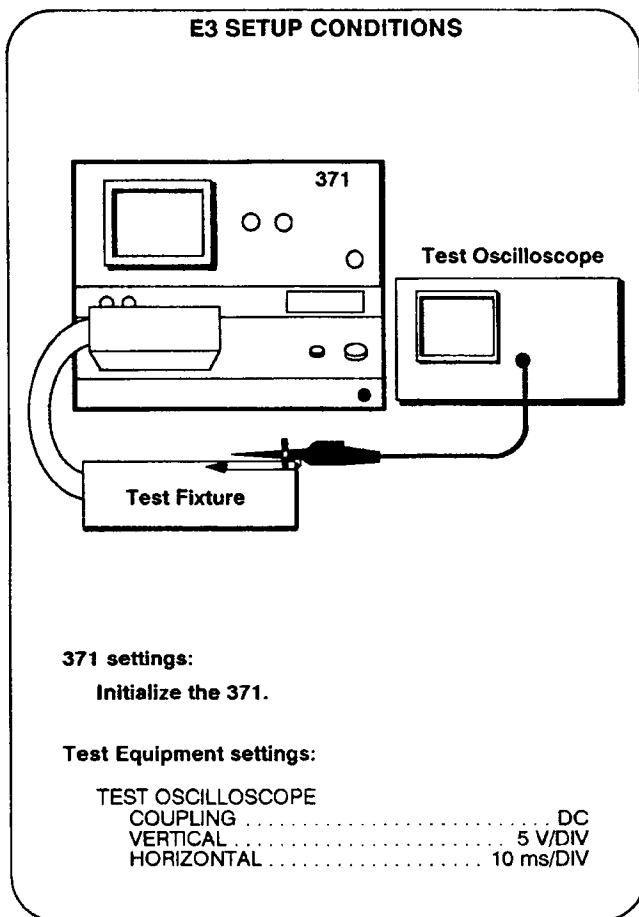
COLLECTOR SUPPLY
 HIGH VOLTAGE DISABLED



E3. Checking Pulse Form

Specifications:

- Repetition rate is 0.25X line frequency at 3 kW and 0.5X line frequency at 300 W.
- Pulse width is $250 \mu\text{s} \pm 10\%$ above 30% of Collector Supply VARIABLE and from 150 to 250 μs from 5% to 30%.
- Rise and Fall time are between 40 and 120 μs with Collector Supply VARIABLE set at 50%.
- Undershoot and overshoot are less than 5% of pulse amplitude.



- a. Connect the X1 probe tip from the test oscilloscope to the HIGH CURRENT and the ground lead to the COMMON terminals with terminal plugs as shown in Figure 4-27.

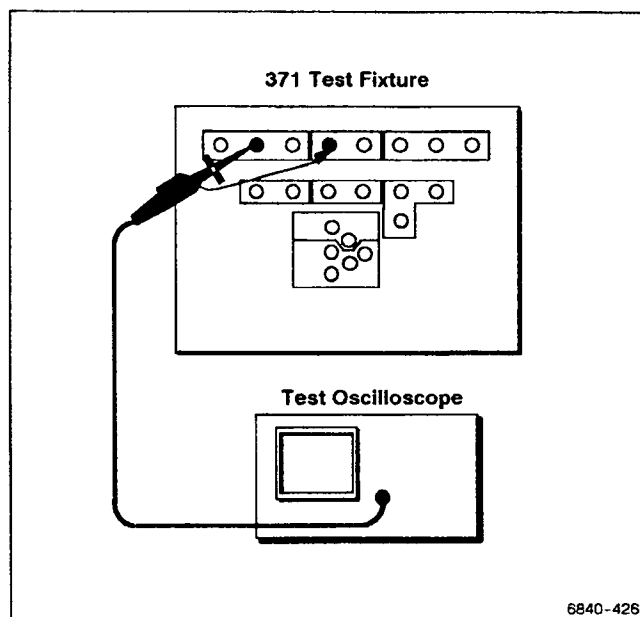


Figure 4-27. Setup for checking pulse form.

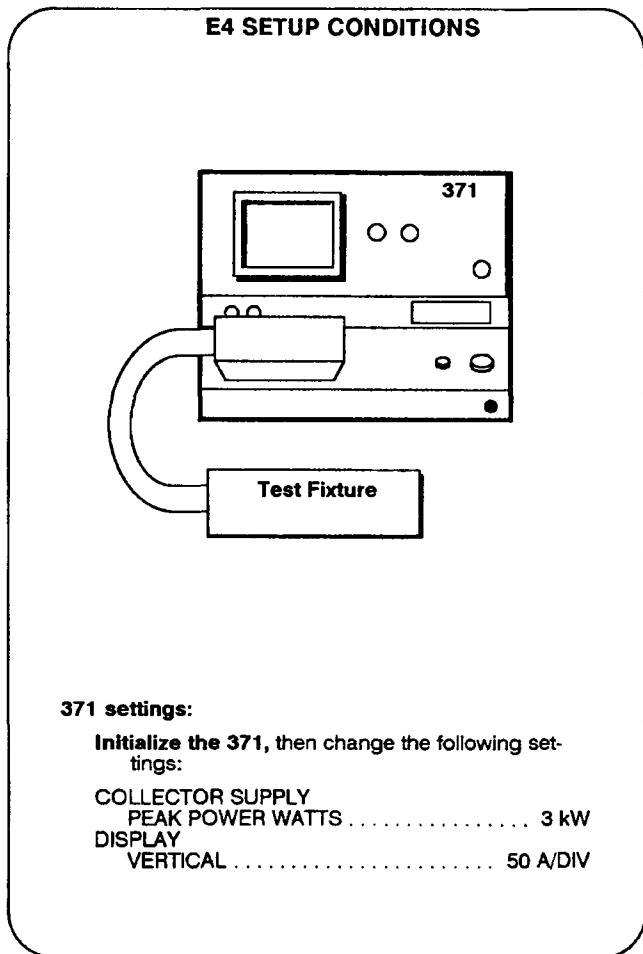
- b. Close the Protective Cover and set the HIGH CURRENT breaker to the ENABLED position.
- c. Set the Collector Supply VARIABLE control to 50%.
- d. **CHECK** that the repetition rate is 40 ms at 50 Hz line frequency or 33.3 ms at 60 Hz line frequency.
- e. Set PEAK POWER WATTS to 3 kW.
- f. **CHECK** that the repetition rate is 80 ms at 50 Hz line frequency or 66.7 ms at 60 Hz line frequency.
- g. Set the test oscilloscope time/DIV to 50 μs /DIV.
- h. **CHECK** that the half-amplitude pulse width is between 225 μs and 275 μs .
- i. **CHECK** that the rise and fall time is between 40 μs and 120 μs from 10% to 90% of full amplitude.
- j. Set the Collector Supply VARIABLE control to 5% and test oscilloscope to 500 mV/DIV.
- k. **CHECK** that the half-amplitude pulse width is between 150 μs and 250 μs .
- l. **CHECK** that the overshoot and undershoot is within 5% of full amplitude.
- m. Set the HIGH CURRENT breaker to DISABLED.
- n. Disconnect the X1 probe.



E4. Checking Minimum Current Available

Specifications:

- S Collector Supply output exceeds 400A at 3 kW, 40A at 300 W. Output is 40 mA \pm 20% at 30 W and 4 mA \pm 20% at 3 W.



- a. Connect a patch cord between the HIGH CURRENT terminal and the COMMON terminal as shown in Figure 4-28.

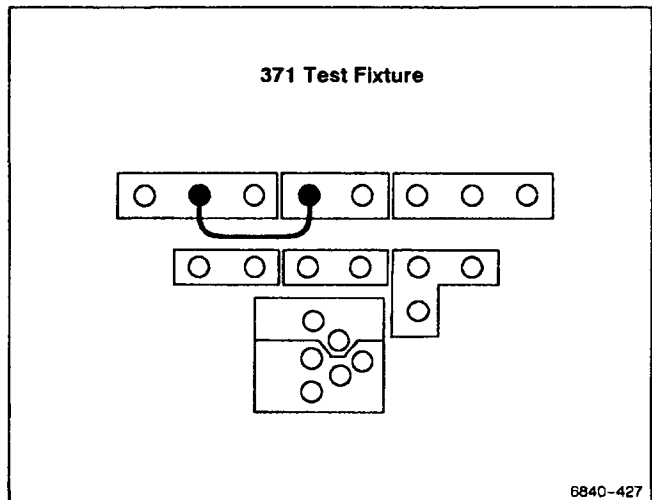


Figure 4-28. Setup for checking minimum Collector current in current mode.

- b. Close the Protective Cover.
- c. Set the HIGH CURRENT breaker to the ENABLED position.
- d. **CHECK** that the spot can reach the value specified in Table 4-25 when Collector Supply VARIABLE control is turned clockwise.
- e. Set the Collector Supply VARIABLE control to 0%.
- f. Set the PEAK POWER WATTS to 300 W.
- g. Repeat step d.
- h. Set the HIGH CURRENT breaker to the DISABLED position.
- i. Move the patch cord from the HIGH CURRENT terminal to the HIGH VOLTAGE terminal as shown in Figure 4-29 and close the Protective Cover.

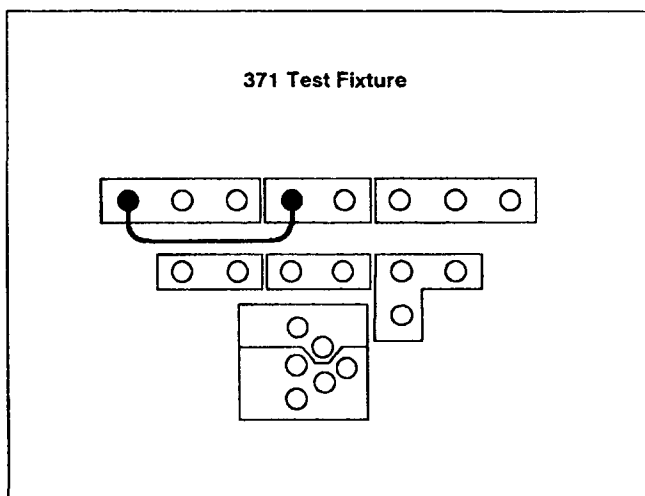


Figure 4-29. Setup for checking minimum Collector current in voltage mode.

j. Set the HIGH VOLTAGE breaker to the ENABLED position and the PEAK POWER WATTS to 30 W.

k. **CHECK** that the trace reaches the value specified in Table 4-25 when the VARIABLE control is turned to 100%.

l. Set the PEAK POWER WATTS to 3 W.

m. Repeat step k.

n. Initialize the 371.

o. Disconnect the patch cord.

Table 4-25
Minimum Output Current

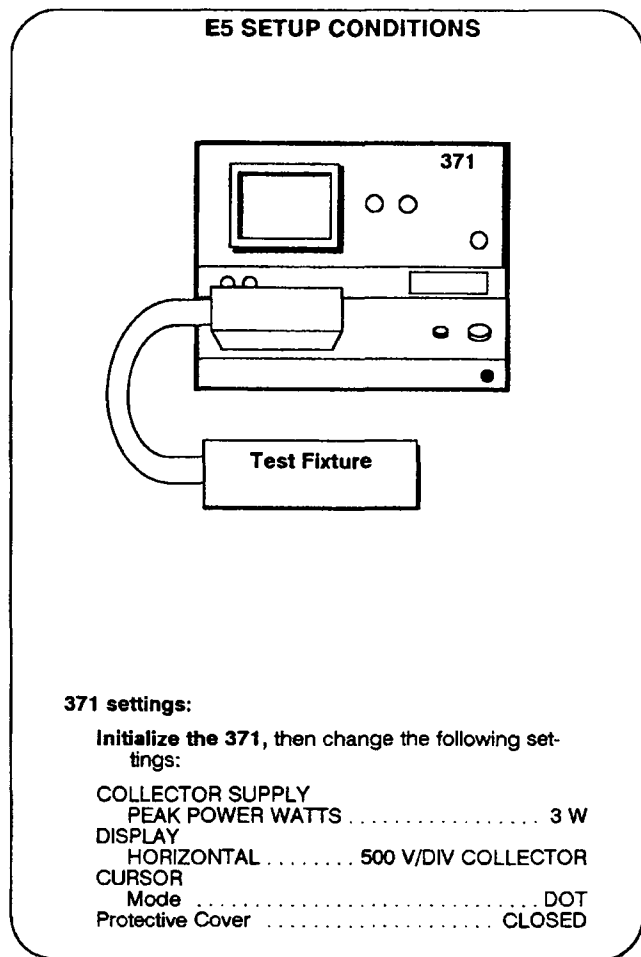
PEAK POWER WATTS Setting	CURRENT OUTPUT Reading
3 kW	400 A
300 W	40 A
30 W	32 mA to 48 mA
3 W	3.2 mA to 4.8 mA



E5. Checking Maximum Peak Voltage

Specifications:

- Maximum peak voltage is 30 V + 10%, -5% at 3 kW and 300 W; it is 3 kV + 10%, -0% at 30 W and 3 W.



- Set the HIGH VOLTAGE breaker to the ENABLED position.
- Turn the VARIABLE control clockwise to 100%.
- CHECK** that the trace length is changed smoothly.

- Set the LOOPING COMPENSATION control to minimum looping.
- CHECK** that the end of the trace is between 6.0 and 6.6 divisions from the lower left corner of the graticule.
- CHECK** that the start of the trace is less than 0.6 divisions from the lower left corner.
- Set the PEAK POWER WATTS to 30W.
- Repeat steps e. and f.
- Set the HIGH VOLTAGE breaker to the DISABLED position.
- Set the PEAK POWER WATTS to 300W.
- Set the HIGH CURRENT breaker to the ENABLED position.
- Set the VARIABLE control to 100%.
- CHECK** that the value of the Horizontal Cursor readout is between 28.5V and 33.0V.
- Set the PEAK POWER WATTS to 3 kW.
- Repeat step m.
- Press the Collector Supply POLARITY button to set PNP-, then set the PEAK POWER WATTS to 3W.
- Repeat steps a. to p. The Horizontal CURSOR readout in step m will be a negative value.
- Set the HIGH CURRENT breaker to the DISABLED position.
- Initialize the 371.

F. TEST FIXTURE

Equipment Required (see Table 4-3):

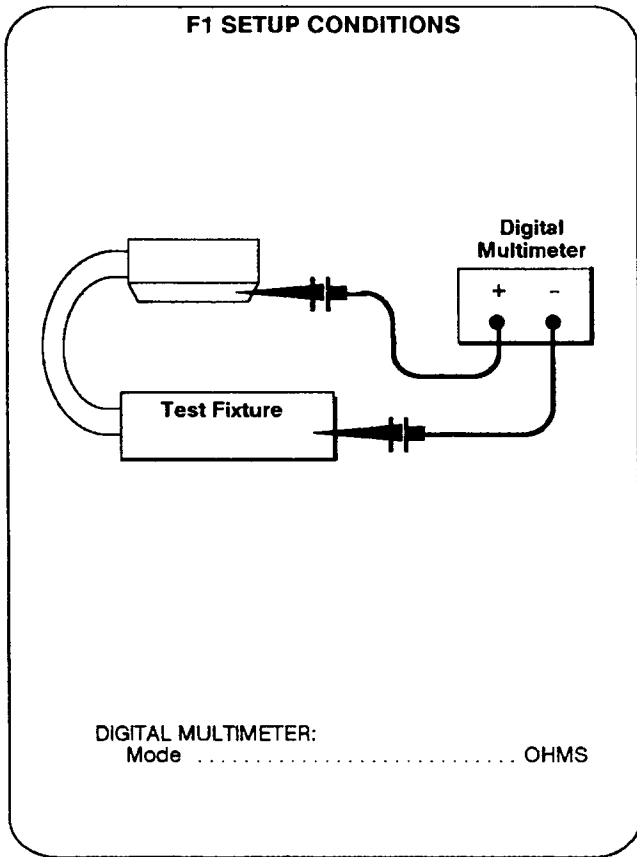
- Digital Multimeter



F1 Checking Sense Lead Resistance

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*



- a. Connect the patch cords as shown in Figure 4-30 on the TEST FIXTURE.

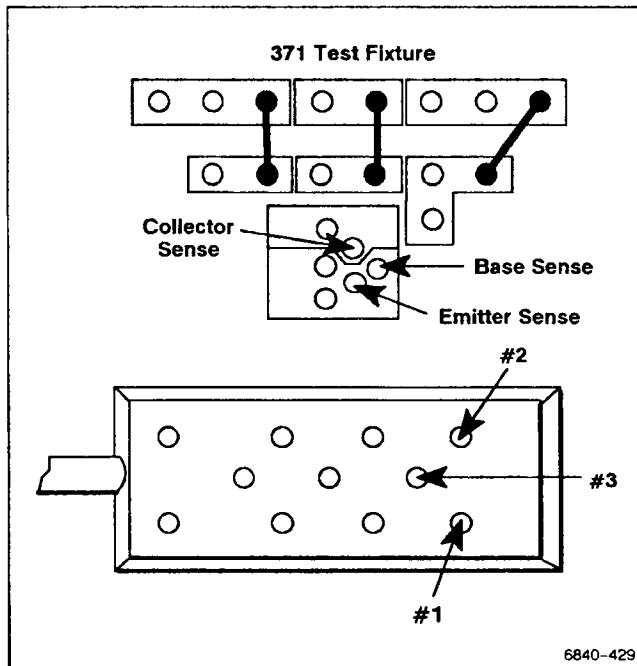


Figure 4-30. Test Fixture connections for procedure F1.

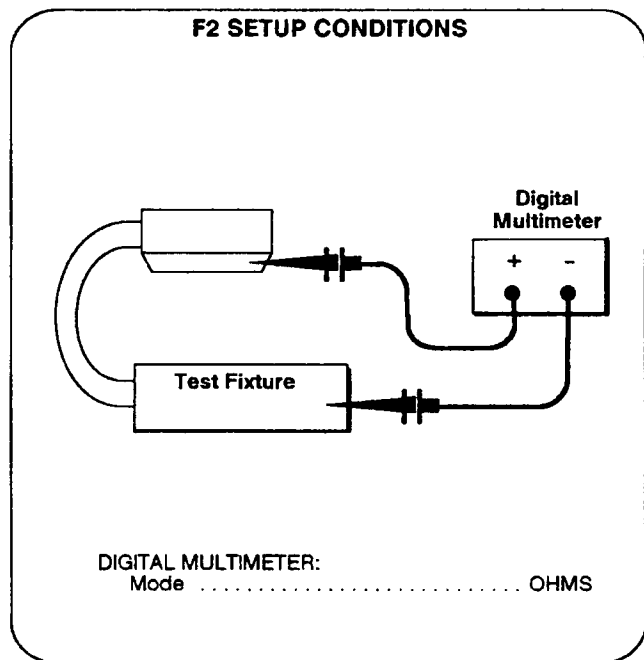
- b. **CHECK** that the resistance between the COLLECTOR SENSE and #1 is less than 1 Ω.
- c. **CHECK** that the resistance between the BASE SENSE and #2 is less than 1 Ω.
- d. **CHECK** that the resistance between the EMITTER SENSE and #3 is less than 1 Ω.



F2 Checking Test Fixture Continuity

IMPORTANT:

The characteristics examined in this procedure are examples of typical instrument operation; *they are not specifications.*



- a. Connect the patch cords on the Test Fixture as shown in Figure 4-31.
- b. **CHECK** that the resistance between the COLLECTOR and #4 is less than 1 Ω.
- c. **CHECK** that the resistance between the BASE and #5 is less than 1 Ω.

- d. **CHECK** that the resistance between the EMITTER and #6 is less than 1 Ω.

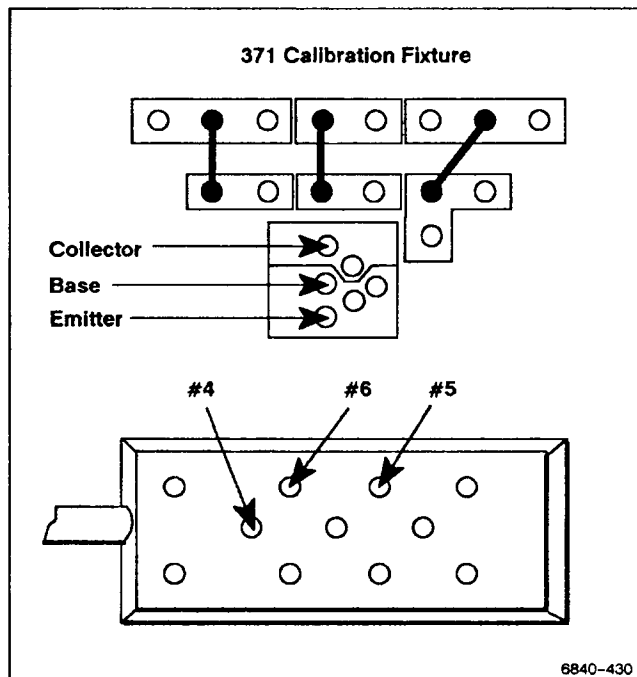


Figure 4-31. Test Fixture connections for procedure F2.

- e. Connect the patch cords on the Test Fixture as shown in Figure 4-32.
- f. **CHECK** that the resistance between COLLECTOR and #7 is less than 1 Ω.
- g. **CHECK** that the resistance between BASE and #8 is less than 1 Ω.
- h. **CHECK** that the resistance between the 1 kΩ terminal and #8 is about 1 kΩ.
- i. **CHECK** that the resistance between #9 and #10 is less than 1 Ω.

- j. **CHECK** that the resistance between #10 and #11 is less than $1\ \Omega$ with the Protective Cover closed and open circuit when the Protective Cover is open.

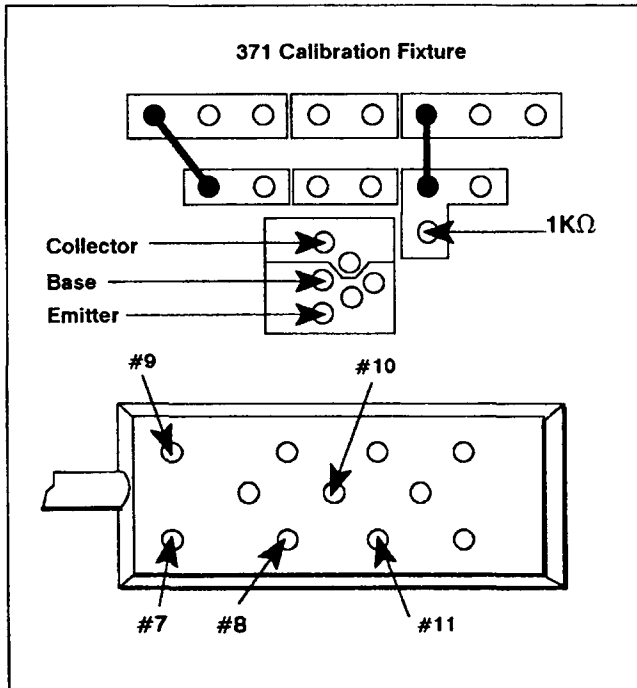


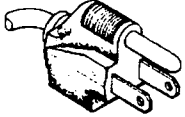
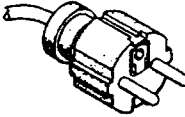

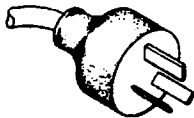
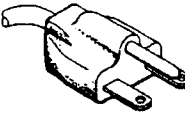
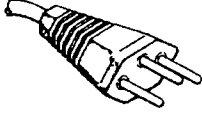
Figure 4-31. Test Fixture connections for second half of procedure F2.

SECTION FIVE INSTRUMENT OPTIONS

Your instrument may be equipped with one or more instrument options. A brief description of each available option is given in the following discussion. Option information is incorporated into the appropriate sections of the manual. For further information on instrument options, see your Tektronix Products catalog or contact your Tektronix Field Office.

Option A1–A5: See Table 5–1.

**Table 5-1
Option A1-A5**

Plug Configuration	Usage (Max Rating)	Reference Standards & Certification	Option #
	North American 125 V/6 A	¹ ANSI C73.11 ² NEMA 5-15-P ³ IEC 83 ¹⁰ UL ¹¹ CSA	Standard
	European 220 V/6 A	⁴ CEE (7), II, IV, VII ³ IEC 83 ⁸ VDE ⁹ SEMKO	A1
	United Kingdom 240 V/6 A	⁵ BSI 1363 ³ IEC 83	A2
	Australian 240 V/6 A	⁶ AS C112 ¹² ETSA	A3
	North American 250 V/10 A	¹ ANSI C73.20 ² NEMA 6-15-P ³ IEC 83 ¹⁰ UL ¹¹ CSA	A4
	Switzerland 240 V/6 A	⁷ SEV	A5

¹ANSI – American National Standards Institute

²NEMA – National Electrical Manufacturer's Association

³IEC – International Electrotechnical Commission

⁴CEE – International Commission on Rules for the Approval of Electrical Equipment

⁵BSI – British Standards Institute

⁶AS – Standards Association of Australia

⁷SEV – Schweizerischer Elektrotechnischer Verein

⁸VDE – Verband Deutscher Elektrotechniker

⁹SEMKO – Swedish Institute for Testing and Approval of Electrical Equipment

¹⁰UL – Underwriters Laboratories

¹¹CSA – Canadian Standards Association

¹²ETSA – Electricity Trust of South Australia

REPLACEABLE ELECTRICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

Only the circuit number will appear on the diagrams and circuit board illustrations. Each diagram and circuit board illustration is clearly marked with the assembly number. Assembly numbers are also marked on the mechanical exploded views located in the Mechanical Parts List. The component number is obtained by adding the assembly number prefix to the circuit number.

The Electrical Parts List is divided and arranged by assemblies in numerical sequence (e.g., assembly A1 with its subassemblies and parts, precedes assembly A2 with its subassemblies and parts).

Chassis-mounted parts have no assembly number prefix and are located at the end of the Electrical Parts List.

LIST OF ASSEMBLIES

A list of assemblies can be found at the beginning of the Electrical Parts List. The assemblies are listed in numerical order. When the complete component number of a part is known, this list will identify the assembly in which the part is located.

CROSS INDEX-MFR. CODE NUMBER TO MANUFACTURER

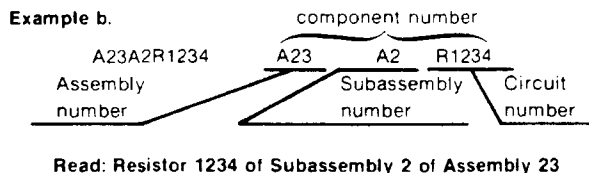
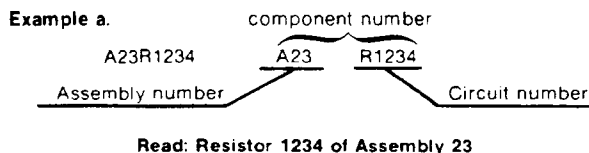
The Mfr. Code Number to Manufacturer index for the Electrical Parts List is located immediately after this page. The Cross Index provides codes, names and addresses of manufacturers of components listed in the Electrical Parts List.

ABBREVIATIONS

Abbreviations conform to American National Standard Y1.1.

COMPONENT NUMBER (column one of the Electrical Parts List)

A numbering method has been used to identify assemblies, subassemblies and parts. Examples of this numbering method and typical expansions are illustrated by the following:



TEKTRONIX PART NO. (column two of the Electrical Parts List)

Indicates part number to be used when ordering replacement part from Tektronix.

SERIAL/MODEL NO. (columns three and four of the Electrical Parts List)

Column three (3) indicates the serial number at which the part was first used. Column four (4) indicates the serial number at which the part was removed. No serial number entered indicates part is good for all serial numbers.

NAME & DESCRIPTION (column five of the Electrical Parts List)

In the Parts List, an Item Name is separated from the description by a colon (:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

MFR. CODE (column six of the Electrical Parts List)

Indicates the code number of the actual manufacturer of the part (Code to name and address cross reference can be found immediately after this page.)

MFR. PART NUMBER (column seven of the Electrical Parts List)

Indicates actual manufacturers part number.

CROSS INDEX - MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip Code
01121	ALLEN-BRADLEY CO	1201 S 2ND ST	MILWAUKEE WI 53204-2410
01295	TEXAS INSTRUMENTS INC	13500 N CENTRAL EXPY	DALLAS TX 75265
	SEMICONDUCTOR GROUP	PO BOX 655012	
04222	AVX CERAMICS	19TH AVE SOUTH	MYRTLE BEACH SC 29577
	DIV OF AVX CORP	P O BOX 867	
04713	MOTOROLA INC	5005 E MCDOWELL RD	PHOENIX AZ 85008-4229
	SEMICONDUCTOR PRODUCTS SECTOR		
07263	FAIRCHILD SEMICONDUCTOR CORP		
07716	TRW INC	2850 MT PLEASANT AVE	BURLINGTON IA 52601
	TRW IRC FIXED RESISTORS/BURLINGTON		
14552	MICROSEMI CORP	2830 S FAIRVIEW ST	SANTA ANA CA 92704-5948
19701	PHILIPS COMPONENTS DISCRETE PRODUCTS	PO BOX 760	MINERAL WELLS TX 76067-0760
	DIV RESISTIVE PRODUCTS FACILITY		
	AIRPORT ROAD		
22526	DU PONT E I DE NEMOURS AND CO INC	515 FISHING CREEK RD	NEW CUMBERLAND PA 17070-3007
	DU PONT ELECTRONICS DEPT		
24546	CORNING GLASS WORKS	550 HIGH ST	BRADFORD PA 16701-3737
25088	SIEMENS CORP	186 WOOD AVE S	ISELIN NJ 08830-2704
27014	NATIONAL SEMICONDUCTOR CORP	2900 SEMICONDUCTOR DR	SANTA CLARA CA 95051-0606
2M627	ROHM CORPORATION	PO BOX 19515	IRVINE CA 92713
51642	CENTRE ENGINEERING INC	2820 E COLLEGE AVE	STATE COLLEGE PA 16801-7515
54473	MATSUSHITA ELECTRIC CORP OF AMERICA	ONE PANASONIC WAY	SECAUCUS NJ 07094-2917
		PO BOX 1501	
		92 HAYDEN AVE	
56289	SPRAGUE ELECTRIC CO		LEXINGTON MA 02173-7929
	WORLD HEADQUARTERS		
59660	TUSONIX INC	7741 N BUSINESS PARK DR	TUCSON AZ 85740-7144
		PO BOX 37144	
75042	IRC ELECTRONIC COMPONENTS	401 N BROAD ST	PHILADELPHIA PA 19108-1001
	PHILADELPHIA DIV		
	TRW FIXED RESISTORS		
80009	TEKTRONIX INC	14150 SW KARL BRAUN DR	BEAVERTON OR 97077-0001
		PO BOX 500	
91637	DALE ELECTRONICS INC	2064 12TH AVE	COLUMBUS NE 68601-3632
		PO BOX 609	
92966	GTE PRODUCTS CORP	WEST MAIN ST	HILLSBORO NH 03244
	LIGHTING PRODUCTS GROUP HILLSBORO		
	MINIATURE LAMP PLANT		
S0293	MATSUSHITA ELECTRIC IND CO LTD	1048 KADOMA	OSAKA JAPAN
		KADOMA-CITY	
S0319	mitsubishi electric corp	2-2-3 MARUNOUCHI	TOKYO JAPAN
		CHIYODA-KU	
S0552	TDK CORP	1-31-1 NIHONBASHI	TOKYO JAPAN
		CHUO-KU	
S4217	NIPPON CHEMI-CON CORP	1-167-1 HIGASHI-OME	TOKYO JAPAN
		OME-CITY	
S4431	MURATA MFG CO LTD	16 KAIJEN NISHIJM CHO	KYOTO JAPAN
		NAGAOKAKY-CITY	
S4549	JAPAN AVIATION ELECTRONICS IND LTD	21 6 DOGUZAKA	TOKYO JAPAN
		SHILHUYA QU 1 CHOME	
S5011	ISHIZUKA ELECTRONICS CORP	3-16-7 HIGASHI-KOIWA	TOKYO JAPAN
		EDOGAWA-KU	
S5218	SANKYO INTERNATIONAL CO LTD	3-3-12 MISAKI-CHO	TOKYO JAPAN
		CHIYODA-KU	
S5302	KOA CO LTD	3672 INA	NAGANO JAPAN
		INA-CITY	
S5372	HITACHI LTD	1-5-1 MARUNOUCHI	TOKYO JAPAN
		CHIYODA-KU	
S5518	ROHM CO LTD	21 SAIINN MIZOSAKI CHO UKYO KU	KYOTO JAPAN
TK0020	UNITED CHEMI-CON INC	1128 LEXINGTON AVE	ROCHESTER NY 14606
TK001	MATSUSHITA ELECTRIC IND CO LTD	1-1-2 SHIBAKDEN	TOKYO JAPAN
		MINATO-KU	
TK00M	NIPPON CHEMI-CON COPR.	2-7-8 TOYOMACHI	TOKYO JAPAN
		SHINAGAWA-KU	
TK0191	SONY TEKTRONIX	PO BOX 14	TOKYO JAPAN
		HANEDA AIRPORT	
TK0858	STAUFFER SUPPLY CO (DIST)		

CROSS INDEX - MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip Code
TK0961	NEC ELECTRONICS USA INC	4-403 IKEBUKURO	TOKYO JAPAN
TK0AB	NATIONAL SEMICONDUCTOR CORP	TOSHIMA-KU	TOKYO JAPAN
TK0AC	ANALOG DEVICES INC	4-7-8 KOUJIMACHI	TOKYO JAPAN
TK0AE	P C N CO LTD	CHIYODA-KU	NIIGATA JAPAN
TK0BW	MULTI CONTACT	721-8 YOSHIOKA	NIIGATA JAPAN
TK0BX	NIHON FINE CHEMICAL CO LTD	MANO-MACHI SADO-GUN	KANAGAWA JAPAN
TK0BY	SANKEN ELECTRIC CO LTD	2-7-2 SHINYOKOHAMA	KANAGAWA JAPAN
TK0BZ	SANSHIN DENKI CO LTD	KITA-KU YOKOHAMA-CITY	KANAGAWA JAPAN
TK0CC	TOSHIBA CORP	5-3-7 HIGASHI-YAHATA	KANAGAWA JAPAN
TK0CG	ELCO INTERNATIONAL CORP	HIRATSUKA-CITY	KANAGAWA JAPAN
TK0CH	IWAKI MUSEN KENKYUSHO CO LTD	3-6-3 KITANO	SAITAMA JAPAN
TK0CI	MAXIM CORPORATION	NIIZA-CITY	TOKYO JAPAN
TK0CJ	NIKO DENSHI CO LTD	4-12 SHIBA, 4-CHOME	TOKYO JAPAN
TK0CM	SUMISHO NON-FERROUS METALS TRADING C	MINATO-KU	TOKYO JAPAN
TK0FY	SANSHIN ELECTRIC CO LTD	1-1-1 SHIBAURA	TOKYO JAPAN
TK0HD	TOKIN CORP	MINATO-KU	TOKYO JAPAN
TK1424	MARCON AMERICA CORP	1794 NIPPA-CHO KOHOKU-KU	KANAGAWA JAPAN
		YOKOHAMA-CITY	KANAGAWA JAPAN
		485 FUTAKO	KANAGAWA JAPAN
		TAKATSU KU KAWASAKI-CITY	TOKYO JAPAN
		1-29-6 TAKADANOBABA	TOKYO JAPAN
		SHINJUKU-KU	TOKYO JAPAN
		23-15 OHARA 2-CHOME	TOKYO JAPAN
		SETAGAYA-KU	TOKYO JAPAN
		2-6-1 NISHI-SHINJUKU	TOKYO JAPAN
		SHINJUKU-KU	TOKYO JAPAN
		10 NOZUTAMACHI	TOKYO JAPAN
		MACHINDA-CITY	TOKYO JAPAN
		2-5-8 KITA-AOYAMA	TOKYO JAPAN
		MINATO-KU	TOKYO JAPAN

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Dscont	Name & Description	Mfr. Code	Mfr. Part No.
A1	671-0236-20			CIRCUIT BD ASSY:MOTHER	80009	671-0236-20
A1	671-0235-03	.300280		CIRCUIT BD ASSY:A/D	80009	671-0235-03
A2	670-9304-20	.300000	.300158	CIRCUIT BD ASSY:CPU	80009	670-9304-20
A2	670-9304-21	.300159	.300223	CIRCUIT BD ASSY:CPU	80009	670-9304-21
A2	670-9304-23	.300224	.300262	CIRCUIT BD ASSY:CPU	80009	670-9304-23
A2	670-9304-24	.300263		CIRCUIT BD ASSY:CPU	80009	670-9304-24
A3	671-0235-00	.300000	.300158	CIRCUIT BD ASSY:A/D	TK0191	ORDER BY DESCR
A3	671-0235-01	.300159	.300213	CIRCUIT BD ASSY:A/D	80009	671-0235-01
A3	671-0235-02	.300214	.300279	CIRCUIT BD ASSY:A/D	80009	671-0235-02
A3	671-0235-03	.300280		CIRCUIT BD ASSY:A/D	80009	671-0235-03
A4	670-9306-02			CIRCUIT BD ASSY:DIGITAL DISPLAY	TK0191	ORDER BY DESCR
A5	670-9307-20	.300000	.300158	CIRCUIT BD ASSY:DISPLAY CONTROL	80009	670-9307-20
A5	670-9307-21	.300159		CIRCUIT BD ASSY:DISPLAY CONTROL	TK0191	ORDER BY DESCR
A6	670-9308-01	.300000	.300158	CIRCUIT BD ASSY:COLLECTOR SUPPLY OUTPUT	TK0191	ORDER BY DESCR
A6	670-9308-20	.300159		CIRCUIT BD ASSY:COLLECTOR SUPPLY	TK0191	ORDER BY DESCR
A7	671-0234-00			CIRCUIT BD ASSY:STEP GENERATOR	TK0191	ORDER BY DESCR
A10	671-0233-00	.300000	.300253	CIRCUIT BD ASSY:SENSE	TK0191	ORDER BY DESCR
A10	671-0233-01	.300254	.300350	CIRCUIT BD ASSY:SENSE	80009	671-0233-01
A10	671-0233-04	.300351		CIRCUIT BD ASSY:SENSE	80009	671-0233-04
A11	671-0232-00			CIRCUIT BD ASSY:MAIN KEY	TK0191	ORDER BY DESCR
A12	671-0231-00			CIRCUIT BD ASSY:SUB KEY	TK0191	ORDER BY DESCR
A14	671-0230-00			CIRCUIT BD ASSY:LOWER KEY	TK0191	ORDER BY DESCR
A15	671-0226-00			CIRCUIT BD ASSY:HIGH CURRENT PWR	TK0191	ORDER BY DESCR
A16	671-0225-00			CIRCUIT BD ASSY:HIGH CURRENT CONTROL	TK0191	ORDER BY DESCR
A18	670-9319-01			CIRCUIT BD ASSY:CRT OUTPUT	80009	670-9319-01
A20	670-9321-00	.300000	.300188	CIRCUIT BD ASSY:H V REGULATOR	TK0191	670-9321-00
A20	670-9321-01	.300189		CIRCUIT BD ASSY:H.V. REGULATOR	TK0191	ORDER BY DESCR
A22	670-9322-00			CIRCUIT BD ASSY:INTERFACE	TK0191	670-9322-00
A25	671-0229-00			CIRCUIT BD ASSY:MAIN PWR SPLY	TK0191	ORDER BY DESCR
A26	671-0228-00			CIRCUIT BD ASSY:COLLECTOR PWR SPLY	TK0191	ORDER BY DESCR
A27	671-0227-00	.300000	.300133	CIRCUIT BD ASSY:PRIMARY	TK0191	ORDER BY DESCR
A27	671-0227-01	.300134		CIRCUIT BD ASSY:PRIMARY	80009	671-0227-01
A28	670-9324-00			CIRCUIT BD ASSY:LAMP	TK0191	670-9324-00
A29	670-9324-00			CIRCUIT BD ASSY:LAMP	TK0191	670-9324-00
A30	671-0305-00			CIRCUIT BD ASSY:CONNECTOR	80009	671-0305-00
A31	671-0306-00			CIRCUIT BD ASSY:RELAY	80009	671-0306-00
A1	671-0236-20			CIRCUIT BD ASSY:MOTHER	80009	671-0236-20

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discnt	Name & Description	Mfr. Code	Mfr. Part No.
A1	671-0235-03	.300280		CIRCUIT BD ASSY:A/D	80009	671-0235-03
A1J10	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A1J12	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A1J20	131-3651-00			CONN,RCPT,ELEC:HEADER,2 X 32,0.1 SPACING	TK0191	131-3651-00
A1J22	131-3649-00			CONN,RCPT,ELEC:CKT BD,RTANG,2 X 22,0.1 SPACING	TK0191	131-3649-00
A1J30	131-3651-00			CONN,RCPT,ELEC:HEADER,2 X 32,0.1 SPACING	TK0191	131-3651-00
A1J32	131-3649-00			CONN,RCPT,ELEC:CKT BD,RTANG,2 X 22,0.1 SPACING	TK0191	131-3649-00
A1J40	131-3651-00			CONN,RCPT,ELEC:HEADER,2 X 32,0.1 SPACING	TK0191	131-3651-00
A1J42	131-3649-00			CONN,RCPT,ELEC:CKT BD,RTANG,2 X 22,0.1 SPACING	TK0191	131-3649-00
A1J50	131-3651-00			CONN,RCPT,ELEC:HEADER,2 X 32,0.1 SPACING	TK0191	131-3651-00
A1J52	131-3649-00			CONN,RCPT,ELEC:CKT BD,RTANG,2 X 22,0.1 SPACING	TK0191	131-3649-00
A1J110	131-3660-00			CONN,RCPT,ELEC:HEADER,2 X 20	TK0191	131-3660-00
A1J180	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 9)	80009	131-0608-00
A1J190	131-3668-00			CONN,RCPT,ELEC:CKT BD,4 PIN	TK0191	131-3668-00
A1J220	131-3661-00			CONN,RCPT,ELEC:HEADER,2 X 13	TK0191	131-3661-00
A1J400	131-3662-00			CONN,RCPT,ELEC:HEADER,2 X 17	TK0191	131-3662-00
A1J410	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 10)	80009	131-0608-00
A1J412	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 6)	80009	131-0608-00
A1J420	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 5)	80009	131-0608-00
A1W60	174-0291-00			CA ASSY,SP,ELEC:16,28 AWG,18.5 L,RIBBON	TK0191	174-0291-00
A1W70	174-0292-00			CA ASSY,SP,ELEC:16,28 AWG,4.3 L,RIBBON	TK0191	174-0292-00
A1W100	131-0566-00	.300000	.300253	BUS,CONDUCTOR:DUMMY RES,0.094 OD X 0.225 L	24546	OMA 07
A1W100	131-0566-04	.300254		BUS,CONDUCTOR:DUMMY RES,18MM OD X 3.2MM L,W/WIRE LEADS	80009	131-0566-04
A1W192	174-0294-00			CA ASSY,SP,ELEC:16,28 AWG,12.6 L,RIBBON	TK0191	174-0294-00
A2	670-9304-20	.300000	.300158	CIRCUIT BD ASSY:CPU	80009	670-9304-20
A2	670-9304-21	.300159	.300223	CIRCUIT BD ASSY:CPU	80009	670-9304-21
A2	670-9304-23	.300224	.300262	CIRCUIT BD ASSY:CPU	80009	670-9304-23
A2	670-9304-24	.300263		CIRCUIT BD ASSY:CPU	80009	670-9304-24
A2C120	290-0778-00			CAP,FXD,ELCTLT:1UF,20%,50V,NPLZD	54473	ECE-A50N1
A2C400	290-0804-00			CAP,FXD,ELCTLT:10UF,+50-20%,25V	80009	290-0804-00
A2C410	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A2C412	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C460	281-0814-00			CAP,FXD,CER DI:100 PF,10%,100V	04222	SA101A101KAA
A2C900	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A2C902	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C904	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C906	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C908	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C910	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C920	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A2C922	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C924	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C926	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C928	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C930	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A2C932	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA

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Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A2C934	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C936	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C937	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C938	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C940	290-0745-00			CAP, FXD, ELCTLT: 22UF, +50-20%, 25WVDC	54473	ECE-A25V22L
A2C942	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C944	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C946	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C948	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C950	281-0775-00	.300000	.300158	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C952	281-0775-00	.300000	.300158	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C954	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C956	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C958	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C960	290-1197-00			CAP, FXD, ELCTLT: 22UF, 10%, 16V	80009	290-1197-00
A2C962	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C964	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C966	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C968	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C970	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C972	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C974	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C976	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C978	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C980	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C982	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C984	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C986	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C988	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C990	281-0775-00	.300000	.300223	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C992	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C994	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2C996	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A2CR120	152-0327-00			SEMICON DVC, DI: SIG, SI, 100MA, 75V, D2X5, BAX13	80009	152-0327-00
A2CR400	152-0327-00			SEMICON DVC, DI: SIG, SI, 100MA, 75V, D2X5, BAX13	80009	152-0327-00
A2FL400	119-1762-00			FILTER, RFI: 0.022UF, +50/-20%, 50V	80009	119-1762-00
A2J400	131-0608-00	.300000	.300158	TERMINAL, PIN: 0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A2L900	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A2L920	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A2L940	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A2L960	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A2P20	131-3650-00			CONN, PLUG, ELEC: CKT BD, RTANG, 2 X 32, 0.1 SPAC	TK0191	131-3650-00
A2P22	131-3648-00			CONN, PLUG, ELEC: CKT BD, RTANG, 2 X 22, 0.1 SPAC	TK0191	131-3648-00
A2R120	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A2R121	315-0203-00			RES, FXD, FILM: 20K OHM, 5%, 0.25W	80009	315-0203-00
A2R270	315-0472-00			RES, FXD, FILM: 4.7K OHM, 5%, 0.25W	80009	315-0472-00
A2R272	315-0472-00			RES, FXD, FILM: 4.7K OHM, 5%, 0.25W	80009	315-0472-00
A2R274	315-0472-00			RES, FXD, FILM: 4.7K OHM, 5%, 0.25W	80009	315-0472-00
A2R300	315-0472-00			RES, FXD, FILM: 4.7K OHM, 5%, 0.25W	80009	315-0472-00
A2R400	315-0153-00			RES, FXD, FILM: 15K OHM, 5%, 0.25W	80009	315-0153-00
A2R402	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A2R404	315-0104-00			RES, FXD, FILM: 100K OHM, 5%, 0.25W	80009	315-0104-00
A2R406	315-0472-00			RES, FXD, FILM: 4.7K OHM, 5%, 0.25W	80009	315-0472-00
A2R408	315-0472-00			RES, FXD, FILM: 4.7K OHM, 5%, 0.25W	80009	315-0472-00
A2R409	315-0472-00			RES, FXD, FILM: 4.7K OHM, 5%, 0.25W	80009	315-0472-00

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A2R410	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R412	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R414	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R416	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R418	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R420	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R422	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R450	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R452	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R454	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R456	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R458	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R460	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2R462	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A2U100	119-2314-00			OSCILLATOR,DI:32MHZ,CRYSTAL	TK0191	119-2314-00
A2U120	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A2U200	156-2316-00			MICROCKT,DGTL:3/8 LINE DECODER	80009	156-2316-00
A2U210	156-2316-00			MICROCKT,DGTL:3/8 LINE DECODER	80009	156-2316-00
A2U220	156-2820-00	.300000	.300223	MICROCKT,DGTL:CMOS,QUAD 2-INPUT AND	80009	156-2820-00
A2U230	156-2820-00	.300000	.300223	MICROCKT,DGTL:CMOS,QUAD 2-INPUT AND	80009	156-2820-00
A2U240	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A2U250	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A2U260	156-2833-00			MICROCKT,DGTL:CMOS,8-3 ENCODER	TK0191	156-2833-00
A2U300	156-2026-00			IC,DIGITAL:HCCMOS,GATES;QUAD 2-INPUT NOR;74 HC02,DIP14.3,TUBE	80009	156-2026-00
A2U310	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A2U320	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A2U340	156-2813-00			MICROCKT,DGTL:CMOS,DUAL BIN COUNTER	TK0191	156-2813-00
A2U400	156-2253-00			MICROCKT,DGTL:MOS,QUAD NAND GATE	TK0191	156-2253-00
A2U404	156-2820-00	.300224		MICROCKT,DGTL:CMOS,QUAD 2-INPUT AND	80009	156-2820-00
A2U406	156-2277-00			MICROCKT,DGTL:TRANSISTOR	TK0191	156-2277-00
A2U408	156-2277-00			MICROCKT,DGTL:TRANSISTOR	TK0191	156-2277-00
A2U410	156-1445-00	.300000	.300183	MICROCKT,DGTL:NMOS,16-BIT MICROPROCESSOR	80009	156-1445-00
A2U410	156-1445-05	.300184	.300188	MICROCKT,DGTL:NMOS,16 BIT MICROPRCR,8MHZ	S5372	HD68000P8
A2U410	156-1445-04	.300189		MICROCKT,DGTL:NMOS,16 BIT MICROPROCESSOR	04713	MC68000P8
A2U430	156-2253-00			MICROCKT,DGTL:MOS,QUAD NAND GATE	TK0191	156-2253-00
A2U450	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U452	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U454	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U456	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U458	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U460	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U462	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U480	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U482	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U484	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U486	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A2U500	156-2825-00			MICROCKT,DGTL:CMOS,DUAL 2-4 DCDR	80009	156-2825-00
A2U520	156-2316-00			MICROCKT,DGTL:3/8 LINE DECODER	80009	156-2316-00
A2U540	156-2316-00			MICROCKT,DGTL:3/8 LINE DECODER	80009	156-2316-00
A2U600	160-4959-00	.300000	.300158	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4959-00
A2U600	160-4959-01	.300159	.300262	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4959-01
A2U600	160-4959-02	.300263	.300351	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4959-02

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Component No.	Tektronix Part No.	Serial/Assembly No.		Name & Description	Mfr. Code	Mfr. Part No.
		Effective	Discont			
A2U610	160-4960-00	.300000	.300158	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4960-00
A2U610	160-4960-01	.300159	.300262	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4960-01
A2U610	160-4960-02	.300263	.300351	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4960-02
A2U620	160-4961-00	.300000	.300158	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4961-00
A2U620	160-4961-01	.300159	.300262	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4961-01
A2U620	160-4961-02	.300263	.300351	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4961-02
A2U630	160-4962-00	.300000	.300158	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4962-00
A2U630	160-4962-01	.300159	.300262	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4962-01
A2U630	160-4962-02	.300263	.300351	MICROCKT,DGTL:32768 X 8 EPROM,PRGM	80009	160-4962-02
A2U700	156-2009-00	.300000	.300193	IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A2U700	156-0388-00	.300194		IC,DIGITAL:LSTTL,FLIP FLOP;DUAL D-TYPE;74LS 74,DIP14.3,TUBE	80009	156-0388-00
A2U710	156-2009-00	.300224		IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A2U720	156-2808-00			MICROCKT,DGTL:CMOS,QUAD 2-INPUT OR	TK0191	156-2808-00
A2U740	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A2U760	156-2088-00			MICROCKT,DGTL:CMOS,QUAD 2 TO 1 LINE MULTIPL EXER	80009	156-2088-00
A2U780	156-2088-00			MICROCKT,DGTL:CMOS,QUAD 2 TO 1 LINE MULTIPL EXER	80009	156-2088-00
A2U800	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U800	156-2882-00	.300224		MICROCKT,DGTL:NMOS,65536 X 4 DRAM	TK0961	UPD41464C-15
A2U802	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U804	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U806	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U808	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U810	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U810	156-2882-00	.300224		MICROCKT,DGTL:NMOS,65536 X 4 DRAM	TK0961	UPD41464C-15
A2U812	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U814	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U816	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U818	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U820	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U820	156-2882-00	.300224		MICROCKT,DGTL:NMOS,65536 X 4 DRAM	TK0961	UPD41464C-15
A2U822	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U824	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U826	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U828	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U830	156-2807-00	.300000	.300223	MICROCKT,DGTL:64K BITS D-RAM	TK0191	156-2807-00
A2U830	156-2882-00	.300224		MICROCKT,DGTL:NMOS,65536 X 4 DRAM	TK0961	UPD41464C-15
A2XU410	136-0716-02	.300000	.300158	SKT,PL-IN ELEK:MICROCKT,64 DIP,LOW PF,MACH	TK0191	136-0716-02
A2XU600	136-0694-01			SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	TK0191	136-0694-01
A2XU610	136-0694-01			SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	TK0191	136-0694-01
A2XU620	136-0694-01			SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	TK0191	136-0694-01
A2XU630	136-0694-01			SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	TK0191	136-0694-01
A3	671-0235-00	.300000	.300158	CIRCUIT BD ASSY:A/D	TK0191	ORDER BY DESC
A3	671-0235-01	.300159	.300213	CIRCUIT BD ASSY:A/D	80009	671-0235-01
A3	671-0235-02	.300214	.300279	CIRCUIT BD ASSY:A/D	80009	671-0235-02
A3	671-0235-03	.300280		CIRCUIT BD ASSY:A/D	80009	671-0235-03
A3C10	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A3C20	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A3C30	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A3C40	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A3C50	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A3C60	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00

Component No.	Tektronix Part No.	Serial/Assembly No. Effective Dscnt	Name & Description	Mfr. Code	Mfr. Part No.
A3C70	290-1007-00		CAP, FXD, ELCTLT:22UF, 20%, 16V	80009	290-1007-00
A3C100	290-1007-00		CAP, FXD, ELCTLT:22UF, 20%, 16V	80009	290-1007-00
A3C101	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C102	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C110	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C112	290-0746-00		CAP, FXD, ELCTLT:47UF, +50-20%, 16V	80009	290-0746-00
A3C114	283-0603-00		CAP, FXD, MICA DI:113PF, 2%, 300V	80009	283-0603-00
A3C120	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C136	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C140	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C150	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C152	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C156	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C158	290-1007-00		CAP, FXD, ELCTLT:22UF, 20%, 16V	80009	290-1007-00
A3C160	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C162	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C167	281-0812-00		CAP, FXD, CER DI:1000PF, 10%, 100V	04222	SA101C102KAA
A3C168	290-1007-00		CAP, FXD, ELCTLT:22UF, 20%, 16V	80009	290-1007-00
A3C169	290-0804-00		CAP, FXD, ELCTLT:10UF, +50-20%, 25V	80009	290-0804-00
A3C170	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C172	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C200	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C210	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C212	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C214	281-0823-00		CAP, FXD, CER DI:470PF, 10%, 50V	04222	SA101A471KAA
A3C216	281-0812-00		CAP, FXD, CER DI:1000PF, 10%, 100V	04222	SA101C102KAA
A3C220	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C222	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C260	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C262	281-0812-00		CAP, FXD, CER DI:1000PF, 10%, 100V	04222	SA101C102KAA
A3C264	290-1007-00		CAP, FXD, ELCTLT:22UF, 20%, 16V	80009	290-1007-00
A3C266	281-0812-00		CAP, FXD, CER DI:1000PF, 10%, 100V	04222	SA101C102KAA
A3C268	290-0778-00		CAP, FXD, ELCTLT:1UF, 20%, 50V, NPLZD	54473	ECE-A50N1
A3C300	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C310	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C312	290-0746-00		CAP, FXD, ELCTLT:47UF, +50-20%, 16V	80009	290-0746-00
A3C314	283-0603-00		CAP, FXD, MICA DI:113PF, 2%, 300V	80009	283-0603-00
A3C320	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C330	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C340	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C350	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C360	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C370	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C380	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C390	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C400	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C414	285-1117-00		CAP, FXD, PLASTIC:0.018UF, 2%, 100V	80009	285-1117-00
A3C418	285-1117-00		CAP, FXD, PLASTIC:0.018UF, 2%, 100V	80009	285-1117-00
A3C420	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C430	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C440	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C450	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C500	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C505	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C507	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C510	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C512	281-0775-00		CAP, FXD, CER DI:0.1UF, 20%, 50V	04222	SA105E104MAA
A3C514	281-0823-00		CAP, FXD, CER DI:470PF, 10%, 50V	04222	SA101A471KAA

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discnt	Name & Description	Mfr. Code	Mfr. Part No.
A3C516	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A3C520	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C522	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C530	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C532	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C538	281-0811-00			CAP,FXD,CER DI:10PF,10%,100V	04222	SA101A100KAA
A3C540	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C542	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C550	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C552	281-0775-00	.300189		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C560	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C562	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C564	281-0823-00			CAP,FXD,CER DI:470PF,10%,50V	04222	SA101A471KAA
A3C566	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A3C570	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C590	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C592	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C600	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C602	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C604	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A3C608	281-0770-00			CAP,FXD,CER DI:1000PF,20%,100V	04222	SA101C102MAA
A3C610	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C612	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C614	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A3C618	281-0770-00			CAP,FXD,CER DI:1000PF,20%,100V	04222	SA101C102MAA
A3C620	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C622	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C630	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C632	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C634	290-1033-00			CAP,FXD,ELCTLT:1000UF,20%,30V	56289	601D1912
A3C636	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C640	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C642	290-1033-00			CAP,FXD,ELCTLT:1000UF,20%,30V	56289	601D1912
A3C644	281-0762-00			CAP,FXD,CER DI:27PF,20%,100V	04222	SA101A270MAA
A3C646	281-0762-00			CAP,FXD,CER DI:27PF,20%,100V	04222	SA101A270MAA
A3C650	290-1033-00			CAP,FXD,ELCTLT:1000UF,20%,30V	56289	601D1912
A3C652	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C654	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C656	290-1033-00			CAP,FXD,ELCTLT:1000UF,20%,30V	56289	601D1912
A3C660	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C670	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C680	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C690	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C700	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C710	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C720	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C750	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C760	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C770	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C780	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C910	281-0776-00			CAP,FXD,CER DI:120PF,5%,100V	04222	SA102A121JAA
A3C920	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C930	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C940	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C950	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3C960	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A3CR164	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A3CR168	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00

Component No.	Tektronix		Serial/Assembly No.		Name & Description	Mfr. Code	Mfr. Part No.
	Part No.	Effective	Discont				
A3CR169	152-0327-00				SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A3CR170	152-0327-00				SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A3CR604	152-0327-00				SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A3J340	131-0590-03				TERMINAL,PIN:0.38 L X 0.025 SQ,NO FERRULE (QUANTITY OF 4)	80009	131-0590-03
A3L10	108-0948-00				COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A3L20	108-0948-00				COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A3L30	108-0948-00				COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A3L40	108-0948-00				COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A3L50	108-0948-00				COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A3L60	108-0948-00				COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A3L70	108-0948-00				COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A3L650	108-0948-00				COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A3L654	108-0948-00				COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A3P30	131-3650-00				CONN,PLUG,ELEC:CKT BD,RTANG,2 X 32,0.1 SPAC ING	TK0191	131-3650-00
A3P32	131-3648-00				CONN,PLUG,ELEC:CKT BD,RTANG,2 X 22,0.1 SPAC ING	TK0191	131-3648-00
A3P340	131-0993-00	.300000	.300100		BUS,CONDUCTOR:SHUNT/SHORTING,;FEMALE,STR,1 X 2,0.1 CTR,0.385 H,30 GOLD,BLACK;;	22526	65474-006
A3P340	131-4311-00	.300101			BUS,CONDUCTOR:WHITE,SHUNT ASSY	80009	131-4311-00
A3R100	315-0101-00				RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A3R102	315-0103-00				RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R110	315-0473-00				RES,FXD,FILM:47K OHM,5%,0.25W	80009	315-0473-00
A3R112	315-0472-00				RES,FXD,FILM:4.7K OHM,5%,0.25W	80009	315-0472-00
A3R116	321-0339-00				RES,FXD,FILM:33.2K OHM,1%,0.125W,TC=TO	07716	CEAD33201F
A3R118	321-0358-00				RES,FXD,FILM:52.3K OHM,1%,0.125W,TC=TO	07716	CEAD52301F
A3R130	315-0103-00				RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R132	315-0303-00				RES,FXD,FILM:30K OHM,5%,0.25W	80009	315-0303-00
A3R134	315-0103-00				RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R136	315-0103-00				RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R145	307-0729-00				RES NTWK,FXD,FI:4,10K OHM,10%,0.125W	80009	307-0729-00
A3R150	321-0403-00				RES,FXD,FILM:154K OHM,1%,0.125W,TC=TO	07716	CEAD15402F
A3R151	321-0357-00				RES,FXD,FILM:51.1K OHM,1%,0.125W,TC=TO	07716	CEAD51101F
A3R152	321-0337-00				RES,FXD,FILM:31.6K OHM,1%,0.125W,TC=TO	07716	CEAD31601F
A3R153	321-0325-00				RES,FXD,FILM:23.7K OHM,1%,0.125W,TC=TO	07716	CEAD23701F
A3R154	321-0316-00				RES,FXD,FILM:19.1K OHM,1%,0.125W,TC=TO	07716	CEAD19101F
A3R155	321-0311-00				RES,FXD,FILM:16.9K OHM,1%,0.125W,TC=TO	07716	CEAC16901F
A3R156	321-0307-00				RES,FXD,FILM:15.4K OHM,1%,0.125W,TC=TO	80009	321-0307-00
A3R157	321-0306-00				RES,FXD,FILM:15.0K OHM,1%,0.125W,TC=TO	80009	321-0306-00
A3R158	321-0289-00				RES,FXD,FILM:10.0K OHM,1%,0.125W,TC=TO	80009	321-0289-00
A3R159	321-0289-00				RES,FXD,FILM:10.0K OHM,1%,0.125W,TC=TO	80009	321-0289-00
A3R160	315-0203-00				RES,FXD,FILM:20K OHM,5%,0.25W	80009	315-0203-00
A3R162	315-0203-00				RES,FXD,FILM:20K OHM,5%,0.25W	80009	315-0203-00
A3R164	315-0304-00				RES,FXD,FILM:300K OHM,5%,0.25W	80009	315-0304-00
A3R165	315-0472-00				RES,FXD,FILM:4.7K OHM,5%,0.25W	80009	315-0472-00
A3R166	315-0302-00				RES,FXD,FILM:3K OHM,5%,0.25W	80009	315-0302-00
A3R167	315-0104-00				RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A3R168	315-0472-00				RES,FXD,FILM:4.7K OHM,5%,0.25W	80009	315-0472-00
A3R170	315-0304-00				RES,FXD,FILM:300K OHM,5%,0.25W	80009	315-0304-00
A3R172	315-0103-00				RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R176	321-0289-00				RES,FXD,FILM:10.0K OHM,1%,0.125W,TC=TO	80009	321-0289-00
A3R178	321-0289-00				RES,FXD,FILM:10.0K OHM,1%,0.125W,TC=TO	80009	321-0289-00
A3R180	315-0622-00				RES,FXD,FILM:6.2K OHM,5%,0.25W	80009	315-0622-00
A3R182	315-0112-00				RES,FXD,FILM:1.1K OHM,5%,0.25W	80009	315-0112-00
A3R212	315-0101-00				RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A3R220	315-0102-00				RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R230	315-0101-00				RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix	Serial/Assembly No.		Name & Description	Mfr.	Mfr. Part No.
	Part No.	Effective	Dscnt		Code	
A3R260	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R262	315-0203-00			RES,FXD,FILM:20K OHM,5%,0.25W	80009	315-0203-00
A3R266	315-0473-00			RES,FXD,FILM:47K OHM,5%,0.25W	80009	315-0473-00
A3R268	315-0473-00			RES,FXD,FILM:47K OHM,5%,0.25W	80009	315-0473-00
A3R290	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A3R310	315-0473-00			RES,FXD,FILM:47K OHM,5%,0.25W	80009	315-0473-00
A3R312	315-0472-00			RES,FXD,FILM:4.7K OHM,5%,0.25W	80009	315-0472-00
A3R316	321-0339-00			RES,FXD,FILM:33.2K OHM,1%,0.125W,TC=T0	07716	CEAD33201F
A3R318	321-0358-00			RES,FXD,FILM:52.3K OHM,1%,0.125W,TC=T0	07716	CEAD52301F
A3R410	321-0358-00			RES,FXD,FILM:52.3K OHM,1%,0.125W,TC=T0	07716	CEAD52301F
A3R414	321-0329-00			RES,FXD,FILM:26.1K OHM,1%,0.125W,TC=T0	80009	321-0329-00
A3R420	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R430	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R504	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R506	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R510	311-1743-02			RES,VAR,NONW:10K OHM,20%,0.5W	80009	311-1743-02
A3R512	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R516	321-0260-00			RES,FXD,FILM:4.99K OHM,1%,0.125W,TC=T0	19701	5033ED4K990F
A3R518	311-1979-01			RES,VAR,NONW:2K OHM,20%,0.5W	80009	311-1979-01
A3R520	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R522	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R530	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R532	321-0414-04			RES,FXD,FILM:200K OHM,0.1%,0.125W,TC=T2	80009	321-0414-04
A3R534	321-0318-07			RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA188Z20KOHM
A3R535	321-0226-00			RES,FXD,FILM:2.21K OHM,1%,0.125W,TC=T0	07716	CEAD22100F
A3R536	321-1317-07			RES,FXD,FILM:19.8K OHM,0.1%,0.125W,TC=T9	S5518	CRB25BZ19.8K
A3R538	321-0615-01			RES,FXD,FILM:20.4K OHM,0.5%,0.125W,TC=T0	91637	MFF1816G20401D
A3R540	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A3R560	311-1743-02			RES,VAR,NONW:10K OHM,20%,0.5W	80009	311-1743-02
A3R562	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R570	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R571	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A3R602	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R604	311-1740-02			RES,VAR,NONW:1K OHM,20%,0.5W	80009	311-1740-02
A3R606	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R612	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R614	311-1740-02			RES,VAR,NONW:1K OHM,20%,0.5W	80009	311-1740-02
A3R616	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A3R620	321-0202-00			RES,FXD,FILM:1.24K OHM,1%,0.125W,TC=T0	19701	5043ED1K240F
A3R622	311-1740-02			RES,VAR,NONW:1K OHM,20%,0.5W	80009	311-1740-02
A3R624	321-0280-00			RES,FXD,FILM:8.06K OHM,1%,0.125W,TC=T0	80009	321-0280-00
A3R630	315-0822-00			RES,FXD,FILM:8.2K OHM,5%,0.25W	80009	315-0822-00
A3R632	321-0291-00			RES,FXD,FILM:10.5K OHM,1%,0.125W,TC=T0	80009	321-0291-00
A3R634	321-0340-00			RES,FXD,FILM:34.0K OHM,1%,0.125W,TC=T0	80009	321-0340-00
A3R638	321-0309-00			RES,FXD,FILM:16.2K OHM,1%,0.125W,TC=T0	80009	321-0309-00
A3R640	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A3R770	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A3R780	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A3R900	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A3R910	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A3R960	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A3TP230	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A3TP290	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A3TP500	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A3TP510	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A3TP540	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A3TP560	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A3U110	156-0704-00			IC,MISC:CMOS,PLL;LOW SPEED;MC14046BCP,DIP16.3	04713	MC14046CP
A3U120	156-2835-00			MICROCKT,DGTL:CMOS,12 STAGE,CNTR	TK0191	156-2835-00
A3U130	156-1778-00			MICROCKT,LINEAR:DUAL COMPARATOR	TK0191	156-1778-00
A3U140	156-2836-00			MICROCKT,DGTL:CMOS,EXCLUSIVE/OR	TK0191	156-2836-00
A3U150	156-0513-00			IC,MISC:CMOS,ANALOG MUX;8 CHANNEL;CD4051,DIP16.3	80009	156-0513-00
A3U160	156-0495-00			IC,LINEAR:BIPOLAR,OP-AMP;QUAD,SINGLE SUPPLY;LM324N,DIP14.3	80009	156-0495-00
A3U170	156-0158-00			IC,LINEAR:BIPOLAR,OP-AMP;DUAL;MC1458P1,DIP08.3	80009	156-0158-00
A3U200	156-2810-00			MICROCKT,LINEAR:12 BIT,D/A CONV	TK0191	156-2810-00
A3U210	156-0158-00			IC,LINEAR:BIPOLAR,OP-AMP;DUAL;MC1458P1,DIP08.3	80009	156-0158-00
A3U220	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053,DIP16.3	80009	156-0515-00
A3U260	156-3358-00			MICROCKT,LINEAR:VOLTAGE CONTROL AMPL	80009	156-3358-00
A3U300	156-2813-00			MICROCKT,DGTL:CMOS,DUAL BIN COUNTER	TK0191	156-2813-00
A3U310	156-0704-00			IC,MISC:CMOS,PLL;LOW SPEED;MC14046BCP,DIP16.3	04713	MC14046CP
A3U320	156-2835-00			MICROCKT,DGTL:CMOS,12 STAGE,CNTR	TK0191	156-2835-00
A3U330	156-1762-00			IC,DIGITAL:HCMOS,COUNTER;SYNCH 4-BIT BINARY;74HC161,DIP16.3	27014	MM74HC161N
A3U340	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74HC74,DIP14.3,TUBE	80009	156-2009-00
A3U350	156-0514-03	.300000	.300116	MICROCKT,DGTL:DIFF 4-CHANNEL MUX	80009	156-0514-03
A3U350	156-0514-00	.300117		IC,MISC:CMOS,ANALOG MUX;DUAL 4 CHANNEL;CD4052,DIP16.3	80009	156-0514-00
A3U360	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74HC74,DIP14.3,TUBE	80009	156-2009-00
A3U370	156-2088-00			MICROCKT,DGTL:CMOS,QUAD 2 TO 1 LINE MULTIPLEXER	80009	156-2088-00
A3U380	156-1762-00			IC,DIGITAL:HCMOS,COUNTER;SYNCH 4-BIT BINARY;74HC161,DIP16.3	27014	MM74HC161N
A3U390	156-1762-00			IC,DIGITAL:HCMOS,COUNTER;SYNCH 4-BIT BINARY;74HC161,DIP16.3	27014	MM74HC161N
A3U400	156-2253-00			MICROCKT,DGTL:MOS,QUAD NAND GATE	TK0191	156-2253-00
A3U420	156-3202-00			MICROCKT,DGTL:DUAL RETRIG MONOSTABLE MULTIVIBRATOR	TK00C	74HC123P
A3U430	156-2820-00			MICROCKT,DGTL:CMOS,QUAD 2-INPUT AND	80009	156-2820-00
A3U440	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74HC74,DIP14.3,TUBE	80009	156-2009-00
A3U450	156-2820-00			MICROCKT,DGTL:CMOS,QUAD 2-INPUT AND	80009	156-2820-00
A3U500	156-0719-01			IC,CONVERTER:CMOS,D/A;DUPLICATE OF 156-0719-00,DO NOT USE;AD7533LN,DIP16.3	80009	156-0719-01
A3U505	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053,DIP16.3	80009	156-0515-00
A3U510	156-2795-00			MICROCKT,LINEAR:OPERATIONAL PRECISION	TK0191	156-2795-00
A3U520	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053,DIP16.3	80009	156-0515-00
A3U530	156-2795-00			MICROCKT,LINEAR:OPERATIONAL PRECISION	TK0191	156-2795-00
A3U540	156-2795-00			MICROCKT,LINEAR:OPERATIONAL PRECISION	TK0191	156-2795-00
A3U550	156-2810-00			MICROCKT,LINEAR:12 BIT,D/A CONV	TK0191	156-2810-00
A3U560	156-2795-00			MICROCKT,LINEAR:OPERATIONAL PRECISION	TK0191	156-2795-00
A3U570	156-2820-00			MICROCKT,DGTL:CMOS,QUAD 2-INPUT AND	80009	156-2820-00
A3U590	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053,DIP16.3	80009	156-0515-00
A3U600	156-2812-00			MICROCKT,LINEAR:SAMPLE/HOLD	TK0191	156-2812-00
A3U610	156-2812-00			MICROCKT,LINEAR:SAMPLE/HOLD	TK0191	156-2812-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discnt	Name & Description	Mfr. Code	Mfr. Part No.
A3U620	156-0514-03	.300000	.300116	MICROCKT,DGTL:DIFF 4-CHANNEL MUX	80009	156-0514-03
A3U620	156-0514-00	.300117		IC,MISC:CMOS,ANALOG MUX;DUAL 4 CHANNEL;CD4052,DIP16.3	80009	156-0514-00
A3U630	156-2832-01			MICROCKT,DGTL:OP AMP,BIFET	TKOAB	LF411CN
A3U640	156-3195-00			MICROCKT,DGTL:12 BIT A/D CONVERTER	TKOAC	AD7572JN05
A3U650	156-3196-00			MICROCKT,DGTL:DC-DC CONVERTER,5V,T0-15V	S0552	RZC15N20
A3U660	156-2009-00			IC,DIGITAL:HCCMOS,FLIP FLOP;DUAL D-TYP E;74HC74,DIP14.3,TUBE	80009	156-2009-00
A3U670	156-2315-00			MICROCKT,DGTL:3 STATE OCTAL D TYPE FF	80009	156-2315-00
A3U680	156-2813-00			MICROCKT,DGTL:CMOS,DUAL BIN COUNTER	TK0191	156-2813-00
A3U690	156-2814-00			MICROCKT,DGTL:CMOS,TRI 3-INPUT NAND	TK0191	156-2814-00
A3U700	156-2088-00			MICROCKT,DGTL:CMOS,QUAD 2 TO 1 LINE MULTIPL EXER	80009	156-2088-00
A3U710	156-2027-00			IC,DIGITAL:HCCMOS,GATES;HEX INV;74HC04,DIP14.3,TUBE	27014	MM74HC04N
A3U720	156-2835-00			MICROCKT,DGTL:CMOS,12 STAGE,CNTR	TK0191	156-2835-00
A3U750	156-2004-00	.300000	.300258	IC,MEMORY:CMOS,SRAM;2K X 8,150NS;,DIP24.3	80009	156-2004-00
A3U750	156-3253-01	.300259		IC,MEMORY:CMOS,SRAM;2K X 8,55NS;,DIP24.3	80009	156-3253-01
A3U760	156-2004-00	.300000	.300258	IC,MEMORY:CMOS,SRAM;2K X 8,150NS;,DIP24.3	80009	156-2004-00
A3U760	156-3253-01	.300259		IC,MEMORY:CMOS,SRAM;2K X 8,55NS;,DIP24.3	80009	156-3253-01
A3U770	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A3U780	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A3U920	156-2316-00			MICROCKT,DGTL:3/8 LINE DECODER	80009	156-2316-00
A3U930	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A3U940	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A3U950	156-2316-00			MICROCKT,DGTL:3/8 LINE DECODER	80009	156-2316-00
A3U960	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A3VR100	152-0195-00			DIODE,ZENER:;,5.1V,5%,0.4W;1N751A FMLY,DO-35 OR 7	80009	152-0195-00
A3VR604	152-1039-00			SEMICON DVC,DI:ZENER,SI,3V,500MW,DO035	S5372	HZ3ALL
A3VR640	152-0195-00			DIODE,ZENER:;,5.1V,5%,0.4W;1N751A FMLY,DO-35 OR 7	80009	152-0195-00
A3Y642	158-0336-00			XTAL UNIT,QTZ:2.5MHZ,30PPM,SER	TKOCJ	ORDER BY DESCR
A4	670-9306-02			CIRCUIT BD ASSY:DIGITAL DISPLAY	TK0191	ORDER BY DESCR
A4C10	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A4C20	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A4C30	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A4C40	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A4C110	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C120	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C130	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C140	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C150	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C160	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C170	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C200	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C210	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C220	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C230	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C240	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C250	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C260	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C300	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C310	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C320	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C330	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA

Component No.	Tektronix		Serial/Assembly No.	Name & Description	Mfr. Code	Mfr. Part No.
	Part No.	Effective Discnt				
A4C340	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C350	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C360	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C370	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C380	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C400	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C420	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C440	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C460	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C480	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C500	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C502	281-0811-00			CAP,FXD,CER DI:10PF,10%,100V	04222	SA101A100KAA
A4C504	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C506	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C508	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C510	281-0814-00			CAP,FXD,CER DI:100 PF,10%,100V	04222	SA101A101KAA
A4C512	281-0814-00			CAP,FXD,CER DI:100 PF,10%,100V	04222	SA101A101KAA
A4C520	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C522	281-0811-00			CAP,FXD,CER DI:10PF,10%,100V	04222	SA101A100KAA
A4C524	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C526	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C528	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C530	281-0814-00			CAP,FXD,CER DI:100 PF,10%,100V	04222	SA101A101KAA
A4C532	281-0814-00			CAP,FXD,CER DI:100 PF,10%,100V	04222	SA101A101KAA
A4C540	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C542	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C600	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C620	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C640	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C660	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C670	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C680	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C700	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C710	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C720	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C760	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C770	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C800	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C802	281-0759-00			CAP,FXD,CER DI:22PF,10%,100V	04222	SA101A220KAA
A4C804	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C806	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C808	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C820	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C822	281-0759-00			CAP,FXD,CER DI:22PF,10%,100V	04222	SA101A220KAA
A4C824	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C826	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C840	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C842	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C900	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25MVDC	54473	ECE-A25V22L
A4C1000	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4C1002	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A4CR220	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A4L10	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A4L20	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A4L30	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A4L40	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A4L900	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective Dscont	Name & Description	Mfr. Code	Mfr. Part No.
A4P40	131-3650-00		CONN,PLUG,ELEC:CKT BD,RTANG,2 X 32,0.1 SPAC ING	TK0191	131-3650-00
A4P42	131-3648-00		CONN,PLUG,ELEC:CKT BD,RTANG,2 X 22,0.1 SPAC ING	TK0191	131-3648-00
A4R200	307-0923-00		RES NTKW,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A4R210	307-0923-00		RES NTKW,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A4R220	307-0923-00		RES NTKW,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A4R250	307-0923-00		RES NTKW,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A4R260	307-0923-00		RES NTKW,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A4R500	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4R502	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4R504	321-0928-07		RES,FXD,FILM:250 OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ2500HM
A4R506	321-0927-07		RES,FXD,FILM:125 OHM,0.1%,0.125W,TC=T9	2M627	CRB14-BZ-R125
A4R508	321-0928-07		RES,FXD,FILM:125 OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ2500HM
A4R510	315-0100-00		RES,FXD,FILM:250 OHM,5%,0.25W	19701	5043CX10RR00J
A4R512	315-0432-00		RES,FXD,FILM:4.3K OHM,5%,0.25W	80009	315-0432-00
A4R514	315-0432-00		RES,FXD,FILM:4.3K OHM,5%,0.25W	80009	315-0432-00
A4R520	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4R522	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4R524	321-0928-07		RES,FXD,FILM:250 OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ2500HM
A4R526	321-0927-07		RES,FXD,FILM:125 OHM,0.1%,0.125W,TC=T9	2M627	CRB14-BZ-R125
A4R528	321-0928-07		RES,FXD,FILM:250 OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ2500HM
A4R530	315-0100-00		RES,FXD,FILM:10 OHM,5%,0.25W	19701	5043CX10RR00J
A4R532	315-0432-00		RES,FXD,FILM:4.3K OHM,5%,0.25W	80009	315-0432-00
A4R534	315-0432-00		RES,FXD,FILM:4.3K OHM,5%,0.25W	80009	315-0432-00
A4R700	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A4R702	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A4R704	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A4R710	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4R712	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4R714	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4R716	321-0193-00		RES,FXD,FILM:1K OHM,1%,0.125W,TC=T0	80009	321-0193-00
A4R718	321-0193-00		RES,FXD,FILM:1K OHM,1%,0.125W,TC=T0	80009	321-0193-00
A4R720	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4R722	321-0409-00		RES,FXD,FILM:178K OHM,1%,0.125W,TC=T0	80009	321-0409-00
A4R724	321-0409-00		RES,FXD,FILM:178K OHM,1%,0.125W,TC=T0	80009	321-0409-00
A4R726	321-0193-00		RES,FXD,FILM:1K OHM,1%,0.125W,TC=T0	80009	321-0193-00
A4R800	321-0193-00		RES,FXD,FILM:1K OHM,1%,0.125W,TC=T0	80009	321-0193-00
A4R802	321-0193-00		RES,FXD,FILM:1K OHM,1%,0.125W,TC=T0	80009	321-0193-00
A4R804	321-0612-00		RES,FXD,FILM:500 OHM,1%,0.125W,TC=T0 MI	07716	CEAD500ROF
A4R806	321-0928-07		RES,FXD,FILM:250 OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ2500HM
A4R808	321-0612-00		RES,FXD,FILM:500 OHM,1%,0.125W,TC=T0 MI	07716	CEAD500ROF
A4R810	321-0612-00		RES,FXD,FILM:500 OHM,1%,0.125W,TC=T0 MI	07716	CEAD500ROF
A4R812	321-0612-00		RES,FXD,FILM:500 OHM,1%,0.125W,TC=T0 MI	07716	CEAD500ROF
A4R814	315-0100-00		RES,FXD,FILM:10 OHM,5%,0.25W	19701	5043CX10RR00J
A4R820	321-0193-00		RES,FXD,FILM:1K OHM,1%,0.125W,TC=T0	80009	321-0193-00
A4R822	321-0193-00		RES,FXD,FILM:1K OHM,1%,0.125W,TC=T0	80009	321-0193-00
A4R824	321-0612-00		RES,FXD,FILM:500 OHM,1%,0.125W,TC=T0 MI	07716	CEAD500ROF
A4R826	321-0928-07		RES,FXD,FILM:250 OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ2500HM
A4R828	321-0612-00		RES,FXD,FILM:500 OHM,1%,0.125W,TC=T0 MI	07716	CEAD500ROF
A4R830	315-0100-00		RES,FXD,FILM:10 OHM,5%,0.25W	19701	5043CX10RR00J
A4R840	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A4R842	311-1621-01		RES,VAR,NONMW:200 OHM,20%,0.5W	TK0191	311-1621-01
A4R844	321-0239-00		RES,FXD,FILM:3.01K OHM,1%,0.125W,TC=T0	80009	321-0239-00
A4R846	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4R848	321-0222-00		RES,FXD,FILM:2.00K OHM,1%,0.125W,TC=T0	80009	321-0222-00
A4TP10	214-0579-00		TERM,TEST POINT:BR3 CD PL	TK0858	ORDER BY DESCR
A4U100	119-2312-00		OSCILLATOR:4.5MHZ,CRYSTAL	TK0191	119-2312-00

Component No.	Tektronix Part No.	Serial/Assembly No. Effective Dscnt	Name & Description	Mfr. Code	Mfr. Part No.
A4U110	156-2813-00		MICROCKT,DGTL:CMOS,DUAL BIN COUNTER	TK0191	156-2813-00
A4U120	156-2813-00		MICROCKT,DGTL:CMOS,DUAL BIN COUNTER	TK0191	156-2813-00
A4U130	156-2088-00		MICROCKT,DGTL:CMOS,QUAD 2 TO 1 LINE MULTIPL EXER	80009	156-2088-00
A4U140	156-2088-00		MICROCKT,DGTL:CMOS,QUAD 2 TO 1 LINE MULTIPL EXER	80009	156-2088-00
A4U150	156-2088-00		MICROCKT,DGTL:CMOS,QUAD 2 TO 1 LINE MULTIPL EXER	80009	156-2088-00
A4U160	156-2088-00		MICROCKT,DGTL:CMOS,QUAD 2 TO 1 LINE MULTIPL EXER	80009	156-2088-00
A4U170	156-2813-00		MICROCKT,DGTL:CMOS,DUAL BIN COUNTER	TK0191	156-2813-00
A4U200	156-2300-00		MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A4U210	156-2300-00		MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A4U220	156-2300-00		MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A4U230	156-1817-00		IC,MEMORY:CMOS,SRAM;8K X 8,;,DIP28.6	80009	156-1817-00
A4U240	156-1817-00		IC,MEMORY:CMOS,SRAM;8K X 8,;,DIP28.6	80009	156-1817-00
A4U250	156-2300-00		MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A4U260	156-2300-00		MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A4U300	156-2814-00		MICROCKT,DGTL:CMOS,TRI 3-INPUT NAND	TK0191	156-2814-00
A4U310	156-2253-00		MICROCKT,DGTL:MOS,QUAD NAND GATE	TK0191	156-2253-00
A4U320	156-2808-00		MICROCKT,DGTL:CMOS,QUAD 2-INPUT OR	TK0191	156-2808-00
A4U330	156-2820-00		MICROCKT,DGTL:CMOS,QUAD 2-INPUT AND	80009	156-2820-00
A4U340	156-2309-00		MICROCKT,DGTL:HEX INVERTER	80009	156-2309-00
A4U350	156-2009-00		IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A4U360	156-2009-00		IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A4U370	156-2009-00		IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A4U380	156-2310-00		MICROCKT,DGTL:HEX D TYPE FF	80009	156-2310-00
A4U400	156-2821-00		MICROCKT,DGTL:CMOS,OCTAL LATCH	80009	156-2821-00
A4U420	156-2821-00		MICROCKT,DGTL:CMOS,OCTAL LATCH	80009	156-2821-00
A4U440	156-2821-00		MICROCKT,DGTL:CMOS,OCTAL LATCH	80009	156-2821-00
A4U460	156-2821-00		MICROCKT,DGTL:CMOS,OCTAL LATCH	80009	156-2821-00
A4U480	156-2821-00		MICROCKT,DGTL:CMOS,OCTAL LATCH	80009	156-2821-00
A4U500	156-1589-00		IC,CONVERTER:BIPOLAR,D/A;12 BIT,CURRENT OUT ,MULTIPLYING;AM6012/DAC312,DIP20.3	80009	156-1589-00
A4U502	156-2822-00		MICROCKT,LINER:OP-AMP	80009	156-2822-00
A4U520	156-1589-00		IC,CONVERTER:BIPOLAR,D/A;12 BIT,CURRENT OUT ,MULTIPLYING;AM6012/DAC312,DIP20.3	80009	156-1589-00
A4U522	156-1699-00		MICROCKT,LINER:DUAL BI-FET,OPNL AMPL	01295	TL288CP
A4U540	156-0515-00		IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053,DIP16.3	80009	156-0515-00
A4U600	156-2821-00		MICROCKT,DGTL:CMOS,OCTAL LATCH	80009	156-2821-00
A4U620	160-3916-01		MICROCKT,DGTL:16384 X 8 EPROM,PRGM	80009	160-3916-01
A4U640	156-2834-00		IC,DIGITAL:HCCMOS,SHIFT REGISTER;8-BIT PISO ;74HC166,DIP16.3,TUBE	80009	156-2834-00
A4U660	156-2009-00		IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A4U670	156-2827-00		MICROCKT,DGTL:CMOS,DUAL,4-1,SEL/MUX	80009	156-2827-00
A4U680	156-2088-00		MICROCKT,DGTL:CMOS,QUAD 2 TO 1 LINE MULTIPL EXER	80009	156-2088-00
A4U700	156-2821-00		MICROCKT,DGTL:CMOS,OCTAL LATCH	80009	156-2821-00
A4U710	156-2821-00		MICROCKT,DGTL:CMOS,OCTAL LATCH	80009	156-2821-00
A4U720	156-2820-00		MICROCKT,DGTL:CMOS,QUAD 2-INPUT AND	80009	156-2820-00
A4U760	156-2823-00		MICROCKT,DGTL:CMOS,4 BIT ADDER	80009	156-2823-00
A4U770	156-2823-00		MICROCKT,DGTL:CMOS,4 BIT ADDER	80009	156-2823-00
A4U800	156-1255-02		MICROCKT,LINER:8 BIT HS MULTI D/A CONV	80009	156-1255-02

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Dscont	Name & Description	Mfr. Code	Mfr. Part No.
A4U802	156-2822-00			MICROCKT,L,LINEAR:OP-AMP	80009	156-2822-00
A4U820	156-1255-02			MICROCKT,L,LINEAR:8 BIT HS MULTI D/A CONV	80009	156-1255-02
A4U822	156-2822-00			MICROCKT,L,LINEAR:OP-AMP	80009	156-2822-00
A4XU620	136-0694-01	.300000	.300158	SKT,PL-IN ELEK:MICROCIRCUIT,28 DIP	TK0191	136-0694-01
A5	670-9307-20	.300000	.300158	CIRCUIT BD ASSY:DISPLAY CONTROL	80009	670-9307-20
A5	670-9307-21	.300159		CIRCUIT BD ASSY:DISPLAY CONTROL	TK0191	ORDER BY DESCR
A5C10	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A5C20	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A5C30	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A5C40	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A5C50	290-0746-00			CAP,FXD,ELCTLT:47UF,+50-20%,16V	80009	290-0746-00
A5C60	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A5C100	281-0775-00	.300000	.300158	CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C120	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C140	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C160	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C500	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C502	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C520	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C522	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C555	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A5C562	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C565	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C575	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A5C582	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C585	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C600	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C602	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C605	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C607	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C610	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C612	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C615	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C617	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C620	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C622	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C625	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C627	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C630	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C632	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C635	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C637	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C640	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C641	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A5C642	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C643	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A5C645	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C647	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C650	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C651	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A5C652	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C653	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A5C655	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C657	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C660	281-0775-00	.300000	.300158	CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A5C662	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C670	281-0775-00	.300000	.300158	CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C672	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C680	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C682	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C685	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C687	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C690	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C691	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A5C692	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C695	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C696	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A5C697	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C800	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C810	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C820	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C830	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C840	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C850	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C860	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C865	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A5C870	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5C1002	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A5CR590	152-0327-00			SEMICONDC DVC,DI:SIG.SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A5L10	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A5L20	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A5L30	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A5L40	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A5L50	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A5L60	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A5P50	131-3650-00			CONN,PLUG,ELEC:CKT BD,RTANG,2 X 32,0.1 SPACING	TK0191	131-3650-00
A5P52	131-3648-00			CONN,PLUG,ELEC:CKT BD,RTANG,2 X 22,0.1 SPACING	TK0191	131-3648-00
A5Q540	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q541	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q542	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q543	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q556	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q576	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q850	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q852	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q860	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q862	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5Q870	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A5R10	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A5R12	315-0105-00			RES,FXD,FILM:1M OHM,5%,0.25W	80009	315-0105-00
A5R15	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A5R20	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A5R22	315-0105-00			RES,FXD,FILM:1M OHM,5%,0.25W	80009	315-0105-00
A5R25	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A5R30	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A5R32	315-0105-00			RES,FXD,FILM:1M OHM,5%,0.25W	80009	315-0105-00
A5R35	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A5R80	311-1743-02			RES,VAR,NONWV:10K OHM,20%,0.5W	80009	311-1743-02
A5R82	315-0470-00			RES,FXD,FILM:47 OHM,5%,0.25W	80009	315-0470-00
A5R90	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A5R91	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix	Serial/Assembly No.		Name & Description	Mfr. Code	Mfr. Part No.
	Part No.	Effective	Discnt			
A5R92	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R93	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R94	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R95	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R96	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R97	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R98	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R102	315-0102-00	.300000	.300158	RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R103	315-0102-00	.300000	.300158	RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R104	315-0102-00	.300000	.300158	RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R105	315-0102-00	.300000	.300158	RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R106	315-0102-00	.300000	.300158	RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R107	315-0102-00	.300000	.300158	RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R120	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R121	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R122	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R123	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R124	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R125	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R126	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R127	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R140	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R141	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R142	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R143	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R144	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R145	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R500	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R502	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R504	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R506	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A5R508	311-1613-00			RES, VAR, NONW: 20K OHM, 20%, 0.5W	80009	311-1613-00
A5R520	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R522	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R524	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R526	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A5R528	311-1613-00			RES, VAR, NONW: 20K OHM, 20%, 0.5W	80009	311-1613-00
A5R550	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R552	321-0254-00			RES, FXD, FILM: 4.32K OHM, 1%, 0.125W, TC=TO	07716	CEAD43200F
A5R554	311-1238-01			RES, VAR, NONW: TRMR, 5K OHM, 20%, 0.5W	TK0191	311-1238-01
A5R558	321-0201-00			RES, FXD, FILM: 1.21K OHM, 1%, 0.125W, TC=TO	80009	321-0201-00
A5R559	321-0201-00			RES, FXD, FILM: 1.21K OHM, 1%, 0.125W, TC=TO	80009	321-0201-00
A5R562	315-0302-00			RES, FXD, FILM: 3K OHM, 5%, 0.25W	80009	315-0302-00
A5R563	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R564	315-0202-00			RES, FXD, FILM: 2K OHM, 5%, 0.25W	80009	315-0202-00
A5R566	321-0213-00			RES, FXD, FILM: 1.62K OHM, 1%, 0.125W, TC=TO	07716	CEAD16200F
A5R568	321-0213-00			RES, FXD, FILM: 1.62K OHM, 1%, 0.125W, TC=TO	07716	CEAD16200F
A5R569	315-0562-00			RES, FXD, FILM: 5.6K OHM, 5%, 0.25W	80009	315-0562-00
A5R570	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R572	321-0258-00			RES, FXD, FILM: 4.75K OHM, 1%, 0.125W, TC=TO	80009	321-0258-00
A5R574	311-1238-01			RES, VAR, NONW: TRMR, 5K OHM, 20%, 0.5W	TK0191	311-1238-01
A5R578	321-0202-00			RES, FXD, FILM: 1.24K OHM, 1%, 0.125W, TC=TO	19701	5043ED1K240F
A5R579	321-0202-00			RES, FXD, FILM: 1.24K OHM, 1%, 0.125W, TC=TO	19701	5043ED1K240F
A5R582	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A5R583	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R584	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A5R586	321-0230-00			RES, FXD, FILM: 2.43K OHM, 1%, 0.125W, TC=TO	80009	321-0230-00
A5R588	321-0230-00			RES, FXD, FILM: 2.43K OHM, 1%, 0.125W, TC=TO	80009	321-0230-00

Component No.	Tektronix	Serial/Assembly No.		Name & Description	Mfr.	Mfr. Part No.
	Part No.	Effective	Discnt		Code	
A5R590	321-0258-00			RES, FXD, FILM: 4.75K OHM, 1%, 0.125W, TC=T0	80009	321-0258-00
A5R592	321-0204-00			RES, FXD, FILM: 1.30K OHM, 1%, 0.125W, TC=T0	80009	321-0204-00
A5R594	315-0561-00			RES, FXD, FILM: 560 OHM, 5%, 0.25W	80009	315-0561-00
A5R596	315-0471-00			RES, FXD, FILM: 470 OHM, 5%, 0.25W	80009	315-0471-00
A5R620	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R621	315-0332-00			RES, FXD, FILM: 3.3K OHM, 5%, 0.25W	80009	315-0332-00
A5R622	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R623	315-0332-00			RES, FXD, FILM: 3.3K OHM, 5%, 0.25W	80009	315-0332-00
A5R624	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R625	315-0332-00			RES, FXD, FILM: 3.3K OHM, 5%, 0.25W	80009	315-0332-00
A5R626	321-0385-07			RES, FXD, FILM: 100K OHM, 0.1%, 0.125W, TC=T9	2M627	
A5R627	315-0332-00			RES, FXD, FILM: 3.3K OHM, 5%, 0.25W	80009	315-0332-00
A5R630	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R631	315-0332-00			RES, FXD, FILM: 3.3K OHM, 5%, 0.25W	80009	315-0332-00
A5R632	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R633	315-0332-00			RES, FXD, FILM: 3.3K OHM, 5%, 0.25W	80009	315-0332-00
A5R634	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R635	315-0332-00			RES, FXD, FILM: 3.3K OHM, 5%, 0.25W	80009	315-0332-00
A5R636	321-0385-07			RES, FXD, FILM: 100K OHM, 0.1%, 0.125W, TC=T9	2M627	
A5R637	315-0332-00			RES, FXD, FILM: 3.3K OHM, 5%, 0.25W	80009	315-0332-00
A5R640	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R642	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R644	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R646	321-0385-07			RES, FXD, FILM: 100K OHM, 0.1%, 0.125W, TC=T9	2M627	
A5R647	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R648	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R650	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R652	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R654	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A5R656	321-0385-07			RES, FXD, FILM: 100K OHM, 0.1%, 0.125W, TC=T9	2M627	
A5R657	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R658	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R661	321-0414-07	.300000	.300158	RES, FXD, FILM: 200K OHM, 0.1%, 0.125W, TC=T9	24546	NE55E2003B
A5R662	321-0414-07	.300000	.300158	RES, FXD, FILM: 200K OHM, 0.1%, 0.125W, TC=T9	24546	NE55E2003B
A5R663	321-0414-07	.300000	.300158	RES, FXD, FILM: 200K OHM, 0.1%, 0.125W, TC=T9	24546	NE55E2003B
A5R664	321-0414-07	.300000	.300158	RES, FXD, FILM: 200K OHM, 0.1%, 0.125W, TC=T9	24546	NE55E2003B
A5R665	321-0414-07	.300000	.300158	RES, FXD, FILM: 200K OHM, 0.1%, 0.125W, TC=T9	24546	NE55E2003B
A5R666	321-0414-07	.300000	.300158	RES, FXD, FILM: 200K OHM, 0.1%, 0.125W, TC=T9	24546	NE55E2003B
A5R671	321-0385-07	.300000	.300158	RES, FXD, FILM: 100K OHM, 0.1%, 0.125W, TC=T9	2M627	
A5R672	321-0385-07	.300000	.300158	RES, FXD, FILM: 100K OHM, 0.1%, 0.125W, TC=T9	2M627	
A5R673	321-0385-07	.300000	.300158	RES, FXD, FILM: 100K OHM, 0.1%, 0.125W, TC=T9	2M627	
A5R674	321-0385-07	.300000	.300158	RES, FXD, FILM: 100K OHM, 0.1%, 0.125W, TC=T9	2M627	
A5R680	315-0304-00			RES, FXD, FILM: 300K OHM, 5%, 0.25W	80009	315-0304-00
A5R682	321-1747-07			RES, FXD, FILM: 320K OHM, 0.1%, 0.125W, TC=T9	80009	321-1747-07
A5R684	321-1748-07			RES, FXD, FILM: 160K OHM, 0.1%, 0.125W, TC=T9	80009	321-1748-07
A5R686	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R688	315-0753-00			RES, FXD, FILM: 75K OHM, 5%, 0.25W	80009	315-0753-00
A5R690	315-0304-00			RES, FXD, FILM: 300K OHM, 5%, 0.25W	80009	315-0304-00
A5R692	321-1747-07			RES, FXD, FILM: 320K OHM, 0.1%, 0.125W, TC=T9	80009	321-1747-07
A5R694	321-1748-07			RES, FXD, FILM: 160K OHM, 0.1%, 0.125W, TC=T9	80009	321-1748-07
A5R696	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A5R698	315-0753-00			RES, FXD, FILM: 75K OHM, 5%, 0.25W	80009	315-0753-00
A5R800	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R801	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R802	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R803	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R804	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00
A5R805	315-0334-00			RES, FXD, FILM: 330K OHM, 5%, 0.25W	80009	315-0334-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix	Serial/Assembly No.		Name & Description	Mfr.	Mfr. Part No.
	Part No.	Effective	Discount		Code	
A5R820	315-0512-00			RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A5R822	315-0512-00			RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A5R824	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A5R826	315-0512-00			RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A5R850	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A5R852	315-0681-00			RES,FXD,FILM:680 OHM,5%,0.25W	80009	315-0681-00
A5R854	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A5R860	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A5R862	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A5R864	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A5R865	315-0203-00			RES,FXD,FILM:20K OHM,5%,0.25W	80009	315-0203-00
A5R870	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A5R872	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A5R880	315-0911-00			RES,FXD,FILM:910 OHM,5%,0.25W	80009	315-0911-00
A5TP10	214-0579-00	.300000	.300158	TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP20	214-0579-00	.300000	.300158	TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP30	214-0579-00	.300000	.300158	TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP60	214-0579-00	.300000	.300158	TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP70	214-0579-00	.300000	.300158	TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP80	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP90	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP100	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP500	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP502	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP648	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5TP658	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A5U100	156-2824-00	.300000	.300158	MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A5U120	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A5U140	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A5U160	156-2825-00			MICROCKT,DGTL:CMOS,DUAL 2-4 DCDR	80009	156-2825-00
A5U500	156-1834-00			MICROCKT,LINEAR:ANALOG MULTIPLEXER HYBRID	80009	156-1834-00
A5U520	156-1834-00			MICROCKT,LINEAR:ANALOG MULTIPLEXER HYBRID	80009	156-1834-00
A5U600	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A5U605	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A5U610	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A5U615	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A5U620	156-2826-00			MICROCKT,LINEAR:OP-AMP,BIFET	80009	156-2826-00
A5U625	156-2826-00			MICROCKT,LINEAR:OP-AMP,BIFET	80009	156-2826-00
A5U630	156-2826-00			MICROCKT,LINEAR:OP-AMP,BIFET	80009	156-2826-00
A5U635	156-2826-00			MICROCKT,LINEAR:OP-AMP,BIFET	80009	156-2826-00
A5U640	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A5U645	156-2826-00			MICROCKT,LINEAR:OP-AMP,BIFET	80009	156-2826-00
A5U650	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A5U655	156-2826-00			MICROCKT,LINEAR:OP-AMP,BIFET	80009	156-2826-00
A5U660	156-0515-00	.300000	.300158	IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A5U670	156-0515-00	.300000	.300158	IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A5U680	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A5U685	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discount	Name & Description	Mfr. Code	Mfr. Part No.
A5U690	156-2795-00			MICROCKT, LINEAR: OPERATIONAL PRECISION	TK0191	156-2795-00
A5U695	156-2795-00			MICROCKT, LINEAR: OPERATIONAL PRECISION	TK0191	156-2795-00
A5U800	156-2825-00			MICROCKT, DGTL: CMOS, DUAL 2-4 DCDR	80009	156-2825-00
A5U810	156-2827-00			MICROCKT, DGTL: CMOS, DUAL, 4-1, SEL/MUX	80009	156-2827-00
A5U820	156-1778-00			MICROCKT, LINEAR: DUAL COMPARATOR	TK0191	156-1778-00
A5U830	156-2825-00			MICROCKT, DGTL: CMOS, DUAL 2-4 DCDR	80009	156-2825-00
A5U840	156-2309-00			MICROCKT, DGTL: HEX INVERTER	80009	156-2309-00
A5U850	156-2253-00			MICROCKT, DGTL: MOS, QUAD NAND GATE	TK0191	156-2253-00
A5U860	156-2253-00			MICROCKT, DGTL: MOS, QUAD NAND GATE	TK0191	156-2253-00
A5U870	156-2253-00			MICROCKT, DGTL: MOS, QUAD NAND GATE	TK0191	156-2253-00
A6	670-9308-01	.300000	.300158	CIRCUIT BD ASSY: COLLECTOR SUPPLY OUTPUT	TK0191	ORDER BY DESC
A6	670-9308-20	.300159		CIRCUIT BD ASSY: COLLECTOR SUPPLY	TK0191	ORDER BY DESC
A6C212	281-0775-00	.300000	.300158	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A6C302	281-0707-00			CAP, FXD, CER DI: 15000PF, 10%, 200V	80009	281-0707-00
A6C304	281-0773-00			CAP, FXD, CER DI: 0.01UF, 10%, 100V	04222	SA201C103KAA
A6C305	281-0814-00			CAP, FXD, CER DI: 100 PF, 10%, 100V	04222	SA101A101KAA
A6C306	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A6C336	290-0745-00	.300000	.300158	CAP, FXD, ELCTLT: 22UF, +50-20%, 25WVDC	54473	ECE-A25V22L
A6C400	281-0775-00	.300000	.300158	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A6C406	290-0745-00			CAP, FXD, ELCTLT: 22UF, +50-20%, 25WVDC	54473	ECE-A25V22L
A6C407	290-0745-00			CAP, FXD, ELCTLT: 22UF, +50-20%, 25WVDC	54473	ECE-A25V22L
A6C424	283-0923-00			CAP, FXD, CER DI: 47PF, 10%, 500V	80009	283-0923-00
A6C452	283-0000-00			CAP, FXD, CER DI: 0.001UF, +100-0%, 500V	80009	283-0000-00
A6C480	290-1168-00			CAP, FXD, ELCTLT: 47UF, 20%, 16V	TK00M	ORDER BY DESC
A6C524	283-0923-00			CAP, FXD, CER DI: 47PF, 10%, 500V	80009	283-0923-00
A6C552	283-0000-00			CAP, FXD, CER DI: 0.001UF, +100-0%, 500V	80009	283-0000-00
A6CR210	152-0832-00	.300000	.300158	SEMICON DVC, DI: SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A6CR212	152-0832-00	.300000	.300158	SEMICON DVC, DI: SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A6CR316	152-0832-00	.300000	.300158	SEMICON DVC, DI: SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A6CR402	152-0832-00			SEMICON DVC, DI: SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A6CR404	152-0832-00			SEMICON DVC, DI: SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A6CR446	152-0832-00	.300000	.300158	SEMICON DVC, DI: SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A6CR448	152-0832-00	.300000	.300158	SEMICON DVC, DI: SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A6J60	131-3672-00			CONN, RCPT, ELEC: HEADER, 16 PIN	TK0191	131-3672-00
A6J62	131-0589-00			TERMINAL, PIN: 0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 4)	80009	131-0589-00
A6J66	131-0608-00			TERMINAL, PIN: 0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A6K446	148-0186-00	.300000	.300158	RELAY, ARM: SPDT, 3A, 200V, COIL, 12VDC	TK0191	148-0186-00
A6K448	148-0186-00	.300000	.300158	RELAY, ARM: SPDT, 3A, 200V, COIL, 12VDC	TK0191	148-0186-00
A6K546	148-0186-00	.300000	.300158	RELAY, ARM: SPDT, 3A, 200V, COIL, 12VDC	TK0191	148-0186-00
A6K548	148-0186-00	.300000	.300158	RELAY, ARM: SPDT, 3A, 200V, COIL, 12VDC	TK0191	148-0186-00
A6L306	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A6L406	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A6L407	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A6Q424	151-0559-00			TRANSISTOR: NPN, SI, PWR	TK0191	151-0559-00
A6Q438	151-1201-00			TRANSISTOR: PMOS, FET, PWR, 200V	TK0191	151-1201-00
A6Q440	151-1201-00			TRANSISTOR: PMOS, FET, PWR, 200V	TK0191	151-1201-00
A6Q444	151-0558-00			TRANSISTOR: PNP, SI	TK0191	151-0558-00
A6Q524	151-0558-00			TRANSISTOR: PNP, SI	TK0191	151-0558-00
A6Q538	151-1202-00			TRANSISTOR: NMOS, FET, PWR, 200V	TK0191	151-1202-00
A6Q540	151-1202-00			TRANSISTOR: NMOS, FET, PWR, 200V	TK0191	151-1202-00
A6Q544	151-0559-00			TRANSISTOR: NPN, SI, PWR	TK0191	151-0559-00
A6R102	315-0103-00	.300000	.300158	RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A6R104	315-0103-00	.300000	.300158	RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discnt	Name & Description	Mfr. Code	Mfr. Part No.
A6R110	307-0885-00	.300000	.300158	RES NTKW,FXD,FI:5,100K OHM,5%,0.125W	80009	307-0885-00
A6R200	321-0347-00	.300000	.300158	RES,FXD,FILM:40.2K OHM,1%,0.125W,TC=T0	80009	321-0347-00
A6R202	321-0318-03	.300000	.300158	RES,FXD,FILM:20.0K OHM,0.125%,0.125W,TC=T2	2M627	CRA18CY20KOHM
A6R204	321-0231-00	.300000	.300158	RES,FXD,FILM:2.49K OHM,1%,0.125W,TC=T0	19701	5033ED2K49F
A6R206	321-0222-07	.300000	.300158	RES,FXD,FILM:2.0K OHM,0.1%,0.125W,TC=T9	80009	321-0222-07
A6R208	321-0164-00	.300000	.300158	RES,FXD,FILM:499 OHM,1%,0.125W,TC=T0	19701	5043ED499ROF
A6R212	315-0512-00	.300000	.300158	RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A6R214	321-0289-06	.300000	.300158	RES,FXD,FILM:10.0K OHM,0.25%,0.125W,TC=T9	80009	321-0289-06
A6R216	321-0289-06	.300000	.300158	RES,FXD,FILM:10.0K OHM,0.25%,0.125W,TC=T9	80009	321-0289-06
A6R300	316-0104-00			RES,FXD,CMPNS:100K OHM,10%,0.25W	80009	316-0104-00
A6R302	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A6R304	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A6R305	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A6R310	321-0289-06	.300000	.300158	RES,FXD,FILM:10.0K OHM,0.25%,0.125W,TC=T9	80009	321-0289-06
A6R312	321-0289-06	.300000	.300158	RES,FXD,FILM:10.0K OHM,0.25%,0.125W,TC=T9	80009	321-0289-06
A6R314	315-0511-00	.300000	.300158	RES,FXD,FILM:510 OHM,5%,0.25W	80009	315-0511-00
A6R318	321-0211-00	.300000	.300158	RES,FXD,FILM:1.54K OHM,1%,0.125W,TC=T0	07716	CEAD15400F
A6R320	321-0401-00	.300000	.300158	RES,FXD,FILM:147K OHM,1%,0.125W,TC=T0	80009	321-0401-00
A6R322	321-0401-00	.300000	.300158	RES,FXD,FILM:147K OHM,1%,0.125W,TC=T0	80009	321-0401-00
A6R330	315-0123-00	.300000	.300158	RES,FXD,FILM:12K OHM,5%,0.25W	80009	315-0123-00
A6R332	315-0102-00	.300000	.300158	RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A6R334	315-0204-00	.300000	.300158	RES,FXD,FILM:200K OHM,5%,0.25W	80009	315-0204-00
A6R336	315-0103-00	.300000	.300158	RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A6R340	315-0333-00	.300000	.300158	RES,FXD,FILM:33K OHM,5%,0.25W	80009	315-0333-00
A6R342	315-0511-00	.300000	.300158	RES,FXD,FILM:510 OHM,5%,0.25W	80009	315-0511-00
A6R344	315-0333-00	.300000	.300158	RES,FXD,FILM:33K OHM,5%,0.25W	80009	315-0333-00
A6R346	315-0511-00	.300000	.300158	RES,FXD,FILM:510 OHM,5%,0.25W	80009	315-0511-00
A6R400	321-0929-07			RES,FXD,FILM:2.5K OHM,0.1%,0.125W,TC=T9	80009	321-0929-07
A6R401	311-0634-04			RES,VAR,NONW:TRMR,500 OHM,20%,0.5W	80009	311-0634-04
A6R402	321-0641-07			RES,FXD,FILM:1.8K OHM,0.1,0.125W,TC=T9	07716	CEAE 18000B
A6R403	315-0100-00	.300000	.300158	RES,FXD,FILM:10 OHM,5%,0.25W	19701	5043CX10RR00J
A6R404	321-0414-04			RES,FXD,FILM:200K OHM,0.1%,0.125W,TC=T2	80009	321-0414-04
A6R406	315-0392-00			RES,FXD,FILM:3.9K OHM,5%,0.25W	80009	315-0392-00
A6R408	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A6R410	315-0221-00			RES,FXD,FILM:220 OHM,5%,0.25W	80009	315-0221-00
A6R412	311-2388-00			RES,VAR,NONW:TRMR,10K OHM,10%,0.5W	S4431	POT1102P-1-103
A6R414	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A6R420	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A6R422	315-0392-00			RES,FXD,FILM:3.9K OHM,5%,0.25W	80009	315-0392-00
A6R424	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A6R428	315-0512-00	.300000	.300253	RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A6R428	325-0456-00	.300254		RES,FXD,FILM:5.1K,5%,0.25 W	80009	325-0456-00
A6R434	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A6R436	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A6R438	307-1286-00			RES,FXD,FILM:1 OHM,5%,2W	80009	307-1286-00
A6R440	307-1286-00			RES,FXD,FILM:1 OHM,5%,2W	80009	307-1286-00
A6R442	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A6R444	315-0033-00	.300000	.300158	RES,FXD,CMPNS:3.3 OHM,5%,0.25	80009	315-0033-00
A6R446	307-1294-00	.300000	.300158	RES,FXD,FILM:0.51 OHM,5%,2W	TK0191	307-1294-00
A6R448	308-0885-00	.300000	.300158	RES,FXD,W:0.3 OHM,1%,2W	80009	308-0885-00
A6R450	308-0885-00	.300159		RES,FXD,W:0.3 OHM,1%,2W	80009	308-0885-00
A6R452	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A6R480	315-0153-00			RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A6R481	307-1289-00			RES,FXD,FILM:15K OHM,5%,1W	TK0191	307-1289-00
A6R520	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A6R522	315-0392-00			RES,FXD,FILM:3.9K OHM,5%,0.25W	80009	315-0392-00
A6R524	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A6R528	315-0512-00	.300000	.300253	RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A6R528	325-0456-00	.300254		RES, FXD, FILM: 5.1K, 5%, 0.25 W	80009	325-0456-00
A6R534	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A6R536	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A6R538	307-1286-00			RES, FXD, FILM: 1 OHM, 5%, 2W	80009	307-1286-00
A6R540	307-1286-00			RES, FXD, FILM: 1 OHM, 5%, 2W	80009	307-1286-00
A6R542	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A6R544	315-0033-00	.300000	.300158	RES, FXD, CMPSN: 3.3 OHM, 5%, 0.25	80009	315-0033-00
A6R546	307-1294-00	.300000	.300158	RES, FXD, FILM: 0.51 OHM, 5%, 2W	TK0191	307-1294-00
A6R548	308-0885-00	.300000	.300158	RES, FXD, WW: 0.3 OHM, 1%, 2W	80009	308-0885-00
A6R550	308-0885-00	.300159		RES, FXD, WW: 0.3 OHM, 1%, 2W	80009	308-0885-00
A6R552	315-0104-00			RES, FXD, FILM: 100K OHM, 5%, 0.25W	80009	315-0104-00
A6S92	260-2332-00			SWITCH, THRMSTC: NC, 60 OPEN, 3A, 250V	TK0191	260-2332-00
A6U100	156-1822-00	.300000	.300158	MICROCKT, DGTL: CMOS, 8 BIT ADDRESSABLE LATCH	80009	156-1822-00
A6U102	156-0447-00	.300000	.300158	MICROCKT, DGTL: DIGITAL TRANSISTOR	TK0191	156-0447-00
A6U103	156-0447-00	.300000	.300158	MICROCKT, DGTL: DIGITAL TRANSISTOR	TK0191	156-0447-00
A6U200	156-0514-00	.300000	.300158	IC, MISC: CMOS, ANALOG MUX; DUAL 4 CHANNEL; CD4052, DIP16, 3	80009	156-0514-00
A6U210	156-1771-00	.300000	.300158	MICROCKT, LINEAR: DUAL OP-AMP	80009	156-1771-00
A6U212	156-1771-00	.300000	.300158	MICROCKT, LINEAR: DUAL OP-AMP	80009	156-1771-00
A6U302	156-1771-00	.300000	.300158	MICROCKT, LINEAR: DUAL OP-AMP	80009	156-1771-00
A6U310	156-1778-00	.300000	.300158	MICROCKT, LINEAR: DUAL COMPARATOR	TK0191	156-1778-00
A6U330	156-2839-00	.300000	.300158	MICROCKT, LINEAR: DUAL OP-AMP	TK0191	156-2839-00
A6U400	156-1699-00			MICROCKT, LINEAR: DUAL BI-FET, OPNL AMPL	01295	TL288CP
A6W64	174-0301-00			CA ASSY, SP, ELEC: 4, 22 AWG, 16.0 L	TK0191	174-0301-00
A6W66	174-0304-00			CA ASSY, SP, ELEC: 2, 26 AWG, 6.0 L, RIBBON	TK0191	174-0304-00
A7	671-0234-00			CIRCUIT BD ASSY: STEP GENERATOR	TK0191	ORDER BY DESCR
A7C100	290-1142-00			CAP, FXD, ELCTLT: 100UF, 20%, 25V	TK0191	290-1142-00
A7C102	290-1142-00			CAP, FXD, ELCTLT: 100UF, 20%, 25V	TK0191	290-1142-00
A7C104	290-1142-00			CAP, FXD, ELCTLT: 100UF, 20%, 25V	TK0191	290-1142-00
A7C106	290-1142-00			CAP, FXD, ELCTLT: 100UF, 20%, 25V	TK0191	290-1142-00
A7C108	290-1142-00			CAP, FXD, ELCTLT: 100UF, 20%, 25V	TK0191	290-1142-00
A7C110	290-1142-00			CAP, FXD, ELCTLT: 100UF, 20%, 25V	TK0191	290-1142-00
A7C150	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A7C204	281-0812-00			CAP, FXD, CER DI: 1000PF, 10%, 100V	04222	SA101C102KAA
A7C210	281-0814-00			CAP, FXD, CER DI: 100 PF, 10%, 100V	04222	SA101A101KAA
A7C220	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A7C222	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A7C224	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A7C302	281-0814-00			CAP, FXD, CER DI: 100 PF, 10%, 100V	04222	SA101A101KAA
A7C310	281-0814-00			CAP, FXD, CER DI: 100 PF, 10%, 100V	04222	SA101A101KAA
A7C322	281-0812-00			CAP, FXD, CER DI: 1000PF, 10%, 100V	04222	SA101C102KAA
A7C370	281-0814-00			CAP, FXD, CER DI: 100 PF, 10%, 100V	04222	SA101A101KAA
A7C372	281-0814-00			CAP, FXD, CER DI: 100 PF, 10%, 100V	04222	SA101A101KAA
A7C374	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A7C376	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A7C406	281-0814-00			CAP, FXD, CER DI: 100 PF, 10%, 100V	04222	SA101A101KAA
A7C420	281-0814-00			CAP, FXD, CER DI: 100 PF, 10%, 100V	04222	SA101A101KAA
A7C430	281-0809-00			CAP, FXD, CER DI: 200 PF, 5%, 100V	04222	SA101A201JAA
A7C432	281-0812-00			CAP, FXD, CER DI: 1000PF, 10%, 100V	04222	SA101C102KAA
A7C438	290-1077-00			CAP, FXD, ELCTLT: 22UF, 160V	80009	290-1077-00
A7C440	281-0809-00			CAP, FXD, CER DI: 200 PF, 5%, 100V	04222	SA101A201JAA
A7C442	281-0812-00			CAP, FXD, CER DI: 1000PF, 10%, 100V	04222	SA101C102KAA
A7C448	290-1077-00			CAP, FXD, ELCTLT: 22UF, 160V	80009	290-1077-00
A7C470	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
A7C472	281-0775-00			CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No.		Name & Description	Mfr. Code	Mfr. Part No.
		Effective	Discont			
A7C474	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A7C704	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A7C708	290-1077-00			CAP,FXD,ELCTLT:22UF,160V	80009	290-1077-00
A7C724	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A7C728	290-1077-00			CAP,FXD,ELCTLT:22UF,160V	80009	290-1077-00
A7C900	290-1196-00			CAP,FXD,ELCTLT:2200UF,20%,50V	80009	290-1196-00
A7C902	290-1196-00			CAP,FXD,ELCTLT:2200UF,20%,50V	80009	290-1196-00
A7CR310	152-0246-00			SEMICON DVC,DI:SW,SI,40V,200MA,DO-7	80009	152-0246-00
A7CR312	152-0246-00			SEMICON DVC,DI:SW,SI,40V,200MA,DO-7	80009	152-0246-00
A7CR314	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR316	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR320	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR322	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR324	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR326	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR350	152-1033-00			SEMICON DVC,DI:CRD,5.6MA,10%,100V,0.3W	80009	152-1033-00
A7CR351	152-1033-00			SEMICON DVC,DI:CRD,5.6MA,10%,100V,0.3W	80009	152-1033-00
A7CR352	152-1033-00			SEMICON DVC,DI:CRD,5.6MA,10%,100V,0.3W	80009	152-1033-00
A7CR353	152-1033-00			SEMICON DVC,DI:CRD,5.6MA,10%,100V,0.3W	80009	152-1033-00
A7CR370	152-0460-00			DIODE,SIG:,REGLTR;100V,1.20MA IP,1.45V VL;1 N5299,DO-35	04713	1N5299
A7CR372	152-0460-00			DIODE,SIG:,REGLTR;100V,1.20MA IP,1.45V VL;1 N5299,DO-35	04713	1N5299
A7CR430	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR436	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR437	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR438	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR440	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR446	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR447	156-0327-00			IC,DIGITAL:TTL,LATCH;QUAD;93L14,DIP16.3	07263	93L14 DC
A7CR448	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A7CR600	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A7CR602	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A7CR900	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A7CR902	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A7J70	131-3672-00			CONN,RCPT,ELEC:HEADER,16 PIN	TK0191	131-3672-00
A7J72	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 10)	80009	131-0589-00
A7J74	131-3666-00			CONN,RCPT,ELEC:CKT BD,2 PIN	TK0191	131-3666-00
A7J76	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 5)	80009	131-0589-00
A7J78	131-3667-00			CONN,RCPT,ELEC:CKT BD,3 PIN	TK0191	131-3667-00
A7K502	148-0186-00			RELAY,ARM:SPDT,3A,200V,COIL,12VDC	TK0191	148-0186-00
A7K504	148-0186-00			RELAY,ARM:SPDT,3A,200V,COIL,12VDC	TK0191	148-0186-00
A7K506	148-0186-00			RELAY,ARM:SPDT,3A,200V,COIL,12VDC	TK0191	148-0186-00
A7K508	148-0186-00			RELAY,ARM:SPDT,3A,200V,COIL,12VDC	TK0191	148-0186-00
A7K510	148-0189-00			RELAY,ARM:DPST,8A,380V,COIL,12VDC	TK0191	148-0189-00
A7K512	148-0189-00			RELAY,ARM:DPST,8A,380V,COIL,12VDC	TK0191	148-0189-00
A7K522	148-0209-00			RELAY,ARM:DPST,250V,8A,COIL,12VDC,600 OHM,1 8.8MA	S0293	AR20139
A7K600	148-0186-00			RELAY,ARM:SPDT,3A,200V,COIL,12VDC	TK0191	148-0186-00
A7K602	148-0209-00			RELAY,ARM:DPST,250V,8A,COIL,12VDC,600 OHM,1 8.8MA	S0293	AR20139
A7L100	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A7L102	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A7L104	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00

Component No.	Tektronix	Serial/Assembly No.		Name & Description	Mfr.	Mfr. Part No.
	Part No.	Effective	Dscont		Code	
A7L106	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A7L108	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A7L110	108-1013-00			COIL, RF: FIXED, 8.2UH	80009	108-1013-00
A7Q332	151-1237-00			TRANSISTOR: FET, NMOS, 0.5A, 30W, TO-220AB	S5372	TO-220AB 2SK214
A7Q333	151-1239-00			TRANSISTOR: FET, PMOS, 0.5A, 30W, 160V, TO-220AB	S5372	TO-220AB 2SJ77
A7Q334	151-0561-00			TRANSISTOR: NPN, SI, PWR	TK0191	151-0561-00
A7Q336	151-0562-00			TRANSISTOR: PNP, SI, PWR	TK0191	151-0562-00
A7Q346	151-1238-00			TRANSISTOR: FET, PMOS, 10A, 120V, 50W, TO-220AB	S5372	TO-220AB 2SJ127
A7Q348	151-1236-00			TRANSISTOR: FET, NMOS, 10A, 120V, 50W, TO-220AB	S5372	TO-220AB 2SK551
A7Q350	151-1238-00			TRANSISTOR: FET, PMOS, 10A, 120V, 50W, TO-220AB	S5372	TO-220AB 2SJ127
A7Q352	151-1236-00			TRANSISTOR: FET, NMOS, 10A, 120V, 50W, TO-220AB	S5372	TO-220AB 2SK551
A7Q370	151-0770-01			TRANSISTOR: NPN, SI, TO-126	80009	151-0770-01
A7Q372	151-0739-01			TRANSISTOR: PNP, SI, TO-126	80009	151-0739-01
A7Q430	151-0559-00			TRANSISTOR: NPN, SI, PWR	TK0191	151-0559-00
A7Q436	151-0897-00			TRANSISTOR: PNP, SI, 15A, 200V, 150W, TO-3P	TKOCC	25A1302-0
A7Q440	151-0558-00			TRANSISTOR: PNP, SI	TK0191	151-0558-00
A7Q446	151-0895-00			TRANSISTOR: NPN, SI, 15A, 120V, 150W, TO-3P	TKOCC	25C3281-0
A7Q700	151-0897-00			TRANSISTOR: PNP, SI, 15A, 200V, 150W, TO-3P	TKOCC	25A1302-0
A7Q704	151-0770-01			TRANSISTOR: NPN, SI, TO-126	80009	151-0770-01
A7Q720	151-0895-00			TRANSISTOR: NPN, SI, 15A, 120V, 150W, TO-3P	TKOCC	25C3281-0
A7Q724	151-0739-01			TRANSISTOR: PNP, SI, TO-126	80009	151-0739-01
A7R120	307-0923-00			RES NTKW, FXD, FI: (8)330K OHM, 5%, 0.125W	80009	307-0923-00
A7R122	307-0923-00			RES NTKW, FXD, FI: (8)330K OHM, 5%, 0.125W	80009	307-0923-00
A7R152	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A7R154	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A7R160	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A7R200	315-0105-00			RES, FXD, FILM: 1M OHM, 5%, 0.25W	80009	315-0105-00
A7R202	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A7R204	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A7R206	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A7R210	311-2041-00			RES, VAR, NONW: CKT BD, 10K OHM, 10%, 0.5W	80009	311-2041-00
A7R211	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A7R212	321-0929-07			RES, FXD, FILM: 2.5K OHM, 0.1%, 0.125W, TC=T9	80009	321-0929-07
A7R214	321-0210-07			RES, FXD, FILM: 1.5K OHM, 0.1%, 0.125W, TC=T9	19701	5033RE1K50B
A7R216	321-0193-07			RES, FXD, FILM: 1K OHM, 0.1%, 0.125W, TC=T9	80009	321-0193-07
A7R300	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A7R302	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A7R304	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A7R305	311-0605-03			RES, VAR, NONW: TRMR, 200 OHM, 20%, 0.5W	80009	311-0605-03
A7R306	321-0289-00			RES, FXD, FILM: 10.0K OHM, 1%, 0.125W, TC=T0	80009	321-0289-00
A7R310	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A7R312	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A7R320	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A7R322	311-2041-00			RES, VAR, NONW: CKT BD, 10K OHM, 10%, 0.5W	80009	311-2041-00
A7R323	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A7R330	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A7R331	315-0202-00			RES, FXD, FILM: 2K OHM, 5%, 0.25W	80009	315-0202-00
A7R332	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A7R333	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A7R334	315-0470-00			RES, FXD, FILM: 47 OHM, 5%, 0.25W	80009	315-0470-00
A7R335	315-0470-00			RES, FXD, FILM: 47 OHM, 5%, 0.25W	80009	315-0470-00
A7R336	315-0470-00			RES, FXD, FILM: 47 OHM, 5%, 0.25W	80009	315-0470-00
A7R337	315-0470-00			RES, FXD, FILM: 47 OHM, 5%, 0.25W	80009	315-0470-00
A7R338	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A7R340	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A7R342	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A7R344	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A7R346	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00

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Component No.	Tektronix Part No.	Serial/Assembly No. Effective Dscont	Name & Description	Mfr. Code	Mfr. Part No.
A7R348	315-0101-00		RES, FXD, FILM:100 OHM, 5%, 0.25W	80009	315-0101-00
A7R350	315-0101-00		RES, FXD, FILM:100 OHM, 5%, 0.25W	80009	315-0101-00
A7R352	315-0101-00		RES, FXD, FILM:100 OHM, 5%, 0.25W	80009	315-0101-00
A7R370	307-1373-00		RES, FXD, FILM:3K OHM, 5%, 1W	S5302	SPR1-3KJ
A7R372	307-1373-00		RES, FXD, FILM:3K OHM, 5%, 1W	S5302	SPR1-3KJ
A7R380	311-2041-00		RES, VAR, NONNW:CKT BD, 10K OHM, 10%, 0.5W	80009	311-2041-00
A7R382	315-0103-00		RES, FXD, FILM:10K OHM, 5%, 0.25W	80009	315-0103-00
A7R384	315-0104-00		RES, FXD, FILM:100K OHM, 5%, 0.25W	80009	315-0104-00
A7R386	315-0103-00		RES, FXD, FILM:10K OHM, 5%, 0.25W	80009	315-0103-00
A7R388	315-0105-00		RES, FXD, FILM:1M OHM, 5%, 0.25W	80009	315-0105-00
A7R400	321-0193-07		RES, FXD, FILM:1K OHM, 0.1%, 0.125W, TC=T9	80009	321-0193-07
A7R401	315-0911-00		RES, FXD, FILM:910 OHM, 5%, 0.25W	80009	315-0911-00
A7R402	321-0289-07		RES, FXD, FILM:10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A7R403	315-0511-00		RES, FXD, FILM:510 OHM, 5%, 0.25W	80009	315-0511-00
A7R404	321-0193-07		RES, FXD, FILM:1K OHM, 0.1%, 0.125W, TC=T9	80009	321-0193-07
A7R405	311-2041-00		RES, VAR, NONNW:CKT BD, 10K OHM, 10%, 0.5W	80009	311-2041-00
A7R406	321-0193-07		RES, FXD, FILM:1K OHM, 0.1%, 0.125W, TC=T9	80009	321-0193-07
A7R410	321-0222-07		RES, FXD, FILM:2.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0222-07
A7R412	321-0222-07		RES, FXD, FILM:2.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0222-07
A7R414	321-0318-07		RES, FXD, FILM:20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A7R416	321-0318-07		RES, FXD, FILM:20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A7R416	321-1317-07		RES, FXD, FILM:19.8K OHM, 0.1%, 0.125W, TC=T9	S5518	CRB25BZ19.8K
A7R417	311-2328-00		RES, VAR, NONNW:500 OHM, 20%, 0.5W	80009	311-2328-00
A7R418	315-0104-00		RES, FXD, FILM:100K OHM, 5%, 0.25W	80009	315-0104-00
A7R430	315-0202-00		RES, FXD, FILM:2K OHM, 5%, 0.25W	80009	315-0202-00
A7R431	315-0103-00		RES, FXD, FILM:10K OHM, 5%, 0.25W	80009	315-0103-00
A7R432	315-0511-00		RES, FXD, FILM:510 OHM, 5%, 0.25W	80009	315-0511-00
A7R433	301-0103-00		RES, FXD, FILM:10K OHM, 5%, 0.50W	80009	301-0103-00
A7R434	315-0102-00		RES, FXD, FILM:1K OHM, 5%, 0.25W	80009	315-0102-00
A7R436	315-0101-00		RES, FXD, FILM:100 OHM, 5%, 0.25W	80009	315-0101-00
A7R438	307-0108-00		RES, FXD, CMPSN:6.8 OHM, 5%, 0.25W	80009	307-0108-00
A7R440	315-0202-00		RES, FXD, FILM:2K OHM, 5%, 0.25W	80009	315-0202-00
A7R441	315-0103-00		RES, FXD, FILM:10K OHM, 5%, 0.25W	80009	315-0103-00
A7R442	315-0511-00		RES, FXD, FILM:510 OHM, 5%, 0.25W	80009	315-0511-00
A7R443	301-0103-00		RES, FXD, FILM:10K OHM, 5%, 0.50W	80009	301-0103-00
A7R444	315-0102-00		RES, FXD, FILM:1K OHM, 5%, 0.25W	80009	315-0102-00
A7R446	315-0101-00		RES, FXD, FILM:100 OHM, 5%, 0.25W	80009	315-0101-00
A7R448	307-0108-00		RES, FXD, CMPSN:6.8 OHM, 5%, 0.25W	80009	307-0108-00
A7R500	321-0385-07		RES, FXD, FILM:100K OHM, 0.1%, 0.125W, TC=T9	2M627	
A7R502	321-1293-07		RES, FXD, FILM:11.1K OHM, 0.1%, 0.125W, TC=T9	S5518	CRB25BZ11.1K
A7R504	321-1930-07		RES, FXD, FILM:1.01K OHM, 0.1%, 0.125W, TC=T9	80009	321-1930-07
A7R506	321-0097-07		RES, FXD, FILM:100 OHM, 0.1%, 0.125W, TC=T9	80009	321-0097-07
A7R508	308-0923-00		RES, FXD, WW:10.0 OHM, 0.1%, 0.125W	TKDAE	T56E-10-B-Z
A7R510	308-0928-00		RES, FXD, WW:1.0 OHM, 0.1%, 0.25W	TKDAE	C1310E4-1-B-Z
A7R512	308-0927-00		RES, FXD, WW:0.1 OHM, 0.1%, 0.33W	TKDAE	C1910E4-0.1-B-Z
A7R520	315-0102-00		RES, FXD, FILM:1K OHM, 5%, 0.25W	80009	315-0102-00
A7R700	315-0201-00		RES, FXD, FILM:200 OHM, 5%, 0.25W	80009	315-0201-00
A7R702	315-0103-00		RES, FXD, FILM:10K OHM, 5%, 0.25W	80009	315-0103-00
A7R704	315-0101-00		RES, FXD, FILM:100 OHM, 5%, 0.25W	80009	315-0101-00
A7R706	315-0102-00		RES, FXD, FILM:1K OHM, 5%, 0.25W	80009	315-0102-00
A7R708	321-0344-00		RES, FXD, FILM:37.4K OHM, 1%, 0.125W, TC=T0	19701	5033ED 37K40F
A7R710	321-0816-00		RES, FXD, FILM:5K OHM, 1%, 0.125W, TC=T0	07716	
A7R720	315-0201-00		RES, FXD, FILM:200 OHM, 5%, 0.25W	80009	315-0201-00
A7R722	315-0103-00		RES, FXD, FILM:10K OHM, 5%, 0.25W	80009	315-0103-00
A7R724	315-0101-00		RES, FXD, FILM:100 OHM, 5%, 0.25W	80009	315-0101-00
A7R726	315-0102-00		RES, FXD, FILM:1K OHM, 5%, 0.25W	80009	315-0102-00
A7R728	321-0344-00		RES, FXD, FILM:37.4K OHM, 1%, 0.125W, TC=T0	19701	5033ED 37K40F
A7R730	321-0816-00		RES, FXD, FILM:5K OHM, 1%, 0.125W, TC=T0	07716	

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discount	Name & Description	Mfr. Code	Mfr. Part No.
A7R904	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A7RT900	307-1375-00			RES,THERMAL:10 OHM,20%,1A	S4431	PTH623H01AR100M1
A7TP100	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A7TP110	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A7TP120	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A7TP212	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A7U150	156-1827-00			MICROCKT,DGTL:G2MOS,3 LINE TO 8 LINE DECODE R	80009	156-1827-00
A7U152	156-1822-00			MICROCKT,DGTL:C2MOS,8 BIT ADDRESSABLE LATCH	80009	156-1822-00
A7U154	156-1822-00			MICROCKT,DGTL:C2MOS,8 BIT ADDRESSABLE LATCH	80009	156-1822-00
A7U156	156-1822-00			MICROCKT,DGTL:C2MOS,8 BIT ADDRESSABLE LATCH	80009	156-1822-00
A7U158	156-1837-00			MICROCKT,LINEAR:DRIVER W/STROBE	80009	156-1837-00
A7U160	156-1837-00			MICROCKT,LINEAR:DRIVER W/STROBE	80009	156-1837-00
A7U200	156-2832-01			MICROCKT,DGTL:OP AMP,BIFET	TK0AB	LF411CN
A7U210	156-2832-01			MICROCKT,DGTL:OP AMP,BIFET	TK0AB	LF411CN
A7U212	156-0514-03	.300000	.300116	MICROCKT,DGTL:DIFF 4-CHANNEL MUX	80009	156-0514-03
A7U212	156-0514-00	.300117		IC,MISC:CMOS,ANALOG MUX;DUAL 4 CHANNEL;CD4052,DIP16.3	80009	156-0514-00
A7U300	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053,DIP16.3	80009	156-0515-00
A7U302	156-2829-00			MICROCKT,LINEAR:OP-AMP	TK0191	156-2829-00
A7U310	156-2793-00			MICROCKT,LINEAR:OPERATIONAL,BIFET	TK0191	156-2793-00
A7U320	156-2793-00			MICROCKT,LINEAR:OPERATIONAL,BIFET	TK0191	156-2793-00
A7U406	156-2829-00			MICROCKT,LINEAR:OP-AMP	TK0191	156-2829-00
A7U418	156-2829-00			MICROCKT,LINEAR:OP-AMP	TK0191	156-2829-00
A7U420	156-2829-00			MICROCKT,LINEAR:OP-AMP	TK0191	156-2829-00
A7U704	156-0158-00			IC,LINEAR:BIPOLAR,OP-AMP;DUAL;MC1458P1,DIP08.3	80009	156-0158-00
A7VR370	152-0168-00			DIODE,ZENER:.,12V,5%,0.4W;1N963B,DO-35 OR 7,TR	80009	152-0168-00
A7VR372	152-0168-00			DIODE,ZENER:.,12V,5%,0.4W;1N963B,DO-35 OR 7,TR	80009	152-0168-00
A7VR420	152-0166-00			SEMICONV DVC,DI:ZEN,SI,6.2V,5%,400MW,DO-7	80009	152-0166-00
A7VR422	152-0166-00			SEMICONV DVC,DI:ZEN,SI,6.2V,5%,400MW,DO-7	80009	152-0166-00
A10	671-0233-00	.300000	.300253	CIRCUIT BD ASSY:SENSE	TK0191	ORDER BY DESCR
A10	671-0233-01	.300254	.300350	CIRCUIT BD ASSY:SENSE	80009	671-0233-01
A10	671-0233-04	.300351		CIRCUIT BD ASSY:SENSE	80009	671-0233-04
A10C102	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C104	281-0772-00			CAP,FXD,CER DI:4700PF,10%,100V	04222	SA101C472KAA
A10C110	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C112	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C114	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C116	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A10C118	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A10C130	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C132	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C146	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A10C204	283-0639-00			CAP,FXD,MICA DI:56PF,1%,500V	80009	283-0639-00
A10C208	283-0620-00			CAP,FXD,MICA DI:470PF,1%,500V	80009	283-0620-00
A10C220	283-0185-00			CAP,FXD,CER DI:2.5PF,0.5%,50V	51642	100-050-NP0-259B
A10C234	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C240	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C250	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C260	283-0181-00			CAP,FXD,CER DI:1.8PF,+/-0.1%,100V	80009	283-0181-00
A10C262	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A10C270	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Dscnt	Name & Description	Mfr. Code	Mfr. Part No.
A10C272	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C274	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C300	283-0260-00			CAP,FXD,CER DI:5.6PF,+/-0.25PF,200V	04222	SR152A5R6CAA
A10C314	281-0788-00			CAP,FXD,CER DI:470PF,10%,100V	04222	SA102C471KAA
A10C318	283-0178-02			CAP,FXD,CER DI:0.1UF,+80-20%,100V	TK0191	283-0178-02
A10C322	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C324	283-0178-02			CAP,FXD,CER DI:0.1UF,+80-20%,100V	TK0191	283-0178-02
A10C400	281-0951-00			CAP,FXD,CER DI:120PF,5%,3.15KV	S4431	DE1107SL121J
A10C402	281-0951-00			CAP,FXD,CER DI:120PF,5%,3.15KV	S4431	DE1107SL121J
A10C404	281-0951-00			CAP,FXD,CER DI:120PF,5%,3.15KV	S4431	DE1107SL121J
A10C406	281-0951-00			CAP,FXD,CER DI:120PF,5%,3.15KV	S4431	DE1107SL121J
A10C408	281-0951-00			CAP,FXD,CER DI:120PF,5%,3.15KV	S4431	DE1107SL121J
A10C410	281-0951-00			CAP,FXD,CER DI:120PF,5%,3.15KV	S4431	DE1107SL121J
A10C411	281-0813-00			CAP,FXD,CER DI:0.047UF,20%,50V	04222	SA105E473MAA
A10C422	281-0814-00			CAP,FXD,CER DI:100 PF,10%,100V	04222	SA101A101KAA
A10C454	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A10C460	281-0763-00			CAP,FXD,CER DI:47PF,10%,100V	04222	SA101A470KAA
A10C464	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C500	290-1142-00			CAP,FXD,ELCTLT:100UF,20%,25V	TK0191	290-1142-00
A10C502	290-1142-00			CAP,FXD,ELCTLT:100UF,20%,25V	TK0191	290-1142-00
A10C504	290-1142-00			CAP,FXD,ELCTLT:100UF,20%,25V	TK0191	290-1142-00
A10C506	290-1142-00			CAP,FXD,ELCTLT:100UF,20%,25V	TK0191	290-1142-00
A10C508	290-1142-00			CAP,FXD,ELCTLT:100UF,20%,25V	TK0191	290-1142-00
A10C510	290-1142-00			CAP,FXD,ELCTLT:100UF,20%,25V	TK0191	290-1142-00
A10C520	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C600	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C606	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C612	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C622	281-0775-00	.300000	.300133	CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C650	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A10C700	290-1142-00	.300000	.300350	CAP,FXD,ELCTLT:100UF,20%,25V	TK0191	290-1142-00
A10C701	290-1142-00			CAP,FXD,ELCTLT:100UF,20%,25V	TK0191	290-1142-00
A10C705	290-1142-00			CAP,FXD,ELCTLT:100UF,20%,25V	TK0191	290-1142-00
A10C724	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A10C730	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10C734	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A10C746	281-0775-00		.300351	CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A10CR110	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR112	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR114	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR120	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR230	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR232	152-0936-00			SEMICON DVC,DI:DUAL,1A,100V	80009	152-0936-00
A10CR233	152-0937-00			SEMICON DVC,DI:DUAL,1A,100V	80009	152-0937-00
A10CR234	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR235	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR302	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR310	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR330	152-0460-00			DIODE,SIG:,REGLTR;100V,1.20MA IP,1.45V VL;1 N5299,DO-35	04713	1N5299
A10CR332	152-0460-00			DIODE,SIG:,REGLTR;100V,1.20MA IP,1.45V VL;1 N5299,DO-35	04713	1N5299
A10CR334	152-0460-00			DIODE,SIG:,REGLTR;100V,1.20MA IP,1.45V VL;1 N5299,DO-35	04713	1N5299
A10CR336	152-0460-00			DIODE,SIG:,REGLTR;100V,1.20MA IP,1.45V VL;1 N5299,DO-35	04713	1N5299
A10CR410	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR450	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00

Component No.	Tektronix	Serial/Assembly No.		Name & Description	Mfr.	Mfr. Part No.
	Part No.	Effective	Discnt		Code	
A10CR452	152-0939-00			SEMICON DVC,DI:DUAL,100MA,20V	80009	152-0939-00
A10CR700	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A10CR702	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A10CR703	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A10CR704	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A10CR706	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A10CR707	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A10CR724	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A10CR734	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A10CR754	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A10J146	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 5)	80009	131-0608-00
A10J610	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 10)	80009	131-0608-00
A10J612	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 6)	80009	131-0608-00
A10J614	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 10)	80009	131-0589-00
A10J616	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 3)	80009	131-0608-00
A10J617	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A10J618	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A10J620	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 8)	80009	131-0608-00
A10J622	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 2)	80009	131-0589-00
A10J626	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 3)	80009	131-0608-00
A10J630	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A10J632	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 6)	80009	131-0589-00
A10J634	131-3659-00			TERM,QIK DISC.:CKT,0.187 X 25,TAB	TK0191	131-3659-00
A10J636	131-3659-00			TERM,QIK DISC.:CKT,0.187 X 25,TAB	TK0191	131-3659-00
A10J670	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 3)	80009	131-0608-00
A10J690	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 6)	80009	131-0608-00
A10J695	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 7)	80009	131-0608-00
A10K102	148-0190-00			RELAY, REED:0.25A,100V,COIL,12VDC	TK0191	148-0190-00
A10K108	148-0190-00			RELAY, REED:0.25A,100V,COIL,12VDC	TK0191	148-0190-00
A10K112	148-0190-00			RELAY, REED:0.25A,100V,COIL,12VDC	TK0191	148-0190-00
A10K202	148-0190-00			RELAY, REED:0.25A,100V,COIL,12VDC	TK0191	148-0190-00
A10K206	148-0190-00			RELAY, REED:0.25A,100V,COIL,12VDC	TK0191	148-0190-00
A10K214	148-0190-00			RELAY, REED:0.25A,100V,COIL,12VDC	TK0191	148-0190-00
A10K300	148-0190-00			RELAY, REED:0.25A,100V,COIL,12VDC	TK0191	148-0190-00
A10K302	148-0190-00			RELAY, REED:0.25A,100V,COIL,12VDC	TK0191	148-0190-00
A10K700	148-0186-00			RELAY, ARM: SPDT, 3A, 200V, COIL, 12VDC	TK0191	148-0186-00
A10K704	148-0186-00			RELAY, ARM: SPDT, 3A, 200V, COIL, 12VDC	TK0191	148-0186-00
A10L500	108-1013-00			COIL, RF: FIXED, 8.2UH	80009	108-1013-00
A10L502	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A10L504	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A10L506	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A10L508	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A10L510	108-0948-00			COIL, RF: FIXED, 100UH, 10%	80009	108-0948-00
A10Q316	151-0559-00			TRANSISTOR: NPN, SI, PWR	TK0191	151-0559-00
A10Q320	151-0559-00			TRANSISTOR: NPN, SI, PWR	TK0191	151-0559-00
A10Q322	151-0558-00			TRANSISTOR: PNP, SI	TK0191	151-0558-00
A10Q740	151-0190-00			TRANSISTOR: NPN, SI, TO-92	80009	151-0190-00
A10R102	321-0097-07			RES, FXD, FILM: 100 OHM, 0.1%, 0.125W, TC=T9	80009	321-0097-07
A10R104	321-1317-07			RES, FXD, FILM: 19.8K OHM, 0.1%, 0.125W, TC=T9	S5518	CRB25BZ19.8K
A10R106	321-1317-07			RES, FXD, FILM: 19.8K OHM, 0.1%, 0.125W, TC=T9	S5518	CRB25BZ19.8K
A10R109	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A10R110	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A10R111	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A10R112	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A10R113	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A10R114	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A10R116	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A10R118	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A10R120	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A10R122	321-0986-07			RES, FXD, FILM: 25K OHM, 0.1%, 0.125W, TC=T9	80009	321-0986-07
A10R124	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A10R126	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A10R128	321-0816-07			RES, FXD, FILM: 5K OHM, 0.1%, 0.125W, TC=T9	80009	321-0816-07
A10R130	321-0193-07			RES, FXD, FILM: 1K OHM, 0.1%, 0.125W, TC=T9	80009	321-0193-07
A10R132	321-0193-07			RES, FXD, FILM: 1K OHM, 0.1%, 0.125W, TC=T9	80009	321-0193-07
A10R134	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A10R136	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A10R138	321-0318-07			RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R140	321-0318-07			RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R142	321-0289-07			RES, FXD, FILM: 10.0K OHM, 0.1%, 0.125W, TC=T9	80009	321-0289-07
A10R144	321-0318-07			RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R146	311-1743-02			RES, VAR, NONW: 10K OHM, 20%, 0.5W	80009	311-1743-02
A10R148	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A10R150	321-0612-07			RES, FXD, FILM: 500 OHM, 0.1%, 0.125W, TC=T9	80009	321-0612-07
A10R152	321-0318-07			RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R200	325-0425-00			RES, FXD, FILM: 19.8M OHM, 0.1%, 2W	TK0BX	RH2HVC19.8MB
A10R202	315-0104-00			RES, FXD, FILM: 100K OHM, 5%, 0.25W	80009	315-0104-00
A10R204	321-1409-07			RES, FXD, FILM: 180.0K OHM, 0.1%, 0.125W, TC=T9	S5518	CRB25BZ180K
A10R206	315-0104-00			RES, FXD, FILM: 100K OHM, 5%, 0.25W	80009	315-0104-00
A10R208	321-0318-07			RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R218	307-1374-00			RES, FXD, FILM: 100 OHM, 5%, 1W	S5302	SPR1-101J
A10R220	315-0104-00			RES, FXD, FILM: 100K OHM, 5%, 0.25W	80009	315-0104-00
A10R230	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A10R231	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A10R232	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A10R233	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A10R234	315-0103-00			RES, FXD, FILM: 10K OHM, 5%, 0.25W	80009	315-0103-00
A10R240	321-0318-07			RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R242	321-0318-07			RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R246	321-0318-07			RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R247	321-0130-00			RES, FXD, FILM: 221 OHM, 1%, 0.125W, TC=T0	80009	321-0130-00
A10R248	321-0318-07			RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R249	315-0220-00			RES, FXD, FILM: 22 OHM, 5%, 0.25W	80009	315-0220-00
A10R250	315-0101-00			RES, FXD, FILM: 100 OHM, 5%, 0.25W	80009	315-0101-00
A10R252	321-0318-07	.300000	.300253	RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM
A10R252	321-0924-07	.300254		RES, FXD, FILM: 40K OHM, 0.1%, 0.125W, TC=T9	80009	321-0924-07
A10R256	315-0205-00			RES, FXD, FILM: 2M OHM, 5%, 0.25W	80009	315-0205-00
A10R258	315-0206-01			RES, FXD, CMPSN: 20M OHM, 5%, 0.25W	80009	315-0206-01
A10R260	321-0414-00			RES, FXD, FILM: 200K OHM, 1%, 0.125W, TC=T0	07716	CEAD20002F
A10R262	321-0318-07	.300000	.300253	RES, FXD, FILM: 20.0K OHM, 0.1%, 0.125W, TC=T9	2M627	CRA18BZ20KOHM

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A10R262	321-0924-07	.300254		RES,FXD,FILM:40K OHM,0.1%,0.125W,TC=T9	80009	321-0924-07
A10R266	321-0318-07			RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ20KOHM
A10R268	321-0318-07			RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ20KOHM
A10R270	321-0318-07			RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ20KOHM
A10R272	321-0603-07			RES,FXD,FILM:15K OHM,0.1%,0.125W,TC=T9	80009	321-0603-07
A10R274	321-0289-07			RES,FXD,FILM:10.0K OHM,0.1%,0.125W,TC=T9	80009	321-0289-07
A10R275	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R276	311-1743-02			RES,VAR,NONNW:10K OHM,20%,0.5W	80009	311-1743-02
A10R278	321-0289-07			RES,FXD,FILM:10.0K OHM,0.1%,0.125W,TC=T9	80009	321-0289-07
A10R280	321-0289-07			RES,FXD,FILM:10.0K OHM,0.1%,0.125W,TC=T9	80009	321-0289-07
A10R284	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A10R300	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10R302	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R304	322-0289-07	.300000	.300253	RES,FXD,FILM:10K 0.1%,0.25W,TC=T9	2M627	CRB60BZ 10KOHM
A10R304	322-0711-00	.300254		RES,FXD,FILM:30K OHM,0.1%,0.25W,TC=TO	80009	322-0711-00
A10R306	321-0289-07			RES,FXD,FILM:10.0K OHM,0.1%,0.125W,TC=T9	80009	321-0289-07
A10R308	321-0318-07	.300000	.300253	RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ20KOHM
A10R308	321-0924-07	.300254		RES,FXD,FILM:40K OHM,0.1%,0.125W,TC=T9	80009	321-0924-07
A10R310	321-0414-07			RES,FXD,FILM:200K OHM,0.1%,0.125W,TC=T9	24546	NE55E2003B
A10R312	321-0318-07			RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ20KOHM
A10R314	315-0471-00			RES,FXD,FILM:470 OHM,5%,0.25W	80009	315-0471-00
A10R316	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A10R318	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A10R320	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A10R322	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A10R324	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A10R330	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10R332	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10R334	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10R336	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10R410	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10R411	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10R412	321-0385-00			RES,FXD,FILM:100K OHM,1%,0.125W,TC=TO	80009	321-0385-00
A10R413	311-1743-02			RES,VAR,NONNW:10K OHM,20%,0.5W	80009	311-1743-02
A10R414	321-0414-00			RES,FXD,FILM:200K OHM,1%,0.125W,TC=TO	07716	CEAD20002F
A10R415	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A10R416	321-0816-00			RES,FXD,FILM:5K OHM,1%,0.125W,TC=TO	07716	
A10R418	321-0816-00			RES,FXD,FILM:5K OHM,1%,0.125W,TC=TO	07716	
A10R420	321-0318-00			RES,FXD,FILM:20.0K OHM,1%,0.125W,TC=TO	80009	321-0318-00
A10R422	311-1743-02			RES,VAR,NONNW:10K OHM,20%,0.5W	80009	311-1743-02
A10R424	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R426	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R430	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10R450	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R452	321-0318-07			RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ20KOHM
A10R454	321-0318-07			RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ20KOHM
A10R456	321-0318-07			RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ20KOHM
A10R458	315-0206-01			RES,FXD,CMPSN:20M OHM,5%,0.25W	80009	315-0206-01
A10R460	321-0318-07			RES,FXD,FILM:20.0K OHM,0.1%,0.125W,TC=T9	2M627	CRA18BZ20KOHM
A10R462	311-1743-02			RES,VAR,NONNW:10K OHM,20%,0.5W	80009	311-1743-02
A10R464	315-0105-00			RES,FXD,FILM:1M OHM,5%,0.25W	80009	315-0105-00
A10R600	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A10R602	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A10R604	307-0909-00			RES NTWK,FXD,FI:(4)10K OHM,5%,0.25W EACH	80009	307-0909-00
A10R610	307-0909-00			RES NTWK,FXD,FI:(4)10K OHM,5%,0.25W EACH	80009	307-0909-00
A10R612	307-0909-00			RES NTWK,FXD,FI:(4)10K OHM,5%,0.25W EACH	80009	307-0909-00
A10R620	315-0392-00			RES,FXD,FILM:3.9K OHM,5%,0.25W	80009	315-0392-00
A10R622	315-0392-00			RES,FXD,FILM:3.9K OHM,5%,0.25W	80009	315-0392-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Dscont	Name & Description	Mfr. Code	Mfr. Part No.
A10R624	315-0392-00			RES,FXD,FILM:3.9K OHM,5%,0.25W	80009	315-0392-00
A10R650	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R690	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R692	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R694	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R702	315-0152-00			RES,FXD,FILM:1.5K OHM,5%,0.25W	80009	315-0152-00
A10R703	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A10R704	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R706	315-0153-00			RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A10R707	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A10R708	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R710	315-0153-00			RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A10R720	315-0153-00			RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A10R722	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R724	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R730	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A10R734	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R740	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R742	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R744	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R746	315-0103-00	.300351		RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R748	315-0103-00	.300351		RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A10R900	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A10R902	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10R906	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A10TP148	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A10TP284	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A10TP500	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A10U110	156-2793-00			MICROCKT,LINER:OPERATIONAL,BIFET	TK0191	156-2793-00
A10U112	156-2793-00			MICROCKT,LINER:OPERATIONAL,BIFET	TK0191	156-2793-00
A10U116	156-2832-01			MICROCKT,DGTL:OP AMP,BIFET	TK0AB	LF411CN
A10U130	156-0513-00			IC,MISC:CMOS,ANALOG MUX;8 CHANNEL;CD4051,DI P16.3	80009	156-0513-00
A10U146	156-2832-01			MICROCKT,DGTL:OP AMP,BIFET	TK0AB	LF411CN
A10U230	156-2793-00			MICROCKT,LINER:OPERATIONAL,BIFET	TK0191	156-2793-00
A10U232	156-2793-00			MICROCKT,LINER:OPERATIONAL,BIFET	TK0191	156-2793-00
A10U234	156-2793-00			MICROCKT,LINER:OPERATIONAL,BIFET	TK0191	156-2793-00
A10U240	156-0514-03	.300000	.300116	MICROCKT,DGTL:DIFF 4-CHANNEL MUX	80009	156-0514-03
A10U240	156-0514-00	.300117		IC,MISC:CMOS,ANALOG MUX;DUAL 4 CHANNEL;CD4052,DI P16.3	80009	156-0514-00
A10U250	156-0514-03	.300000	.300116	MICROCKT,DGTL:DIFF 4-CHANNEL MUX	80009	156-0514-03
A10U250	156-0514-00	.300117		IC,MISC:CMOS,ANALOG MUX;DUAL 4 CHANNEL;CD4052,DI P16.3	80009	156-0514-00
A10U260	156-2832-01			MICROCKT,DGTL:OP AMP,BIFET	TK0AB	LF411CN
A10U270	156-2832-01			MICROCKT,DGTL:OP AMP,BIFET	TK0AB	LF411CN
A10U280	156-0514-03	.300000	.300116	MICROCKT,DGTL:DIFF 4-CHANNEL MUX	80009	156-0514-03
A10U280	156-0514-00	.300117		IC,MISC:CMOS,ANALOG MUX;DUAL 4 CHANNEL;CD4052,DI P16.3	80009	156-0514-00
A10U300	156-2793-00			MICROCKT,LINER:OPERATIONAL,BIFET	TK0191	156-2793-00
A10U412	156-2793-00			MICROCKT,LINER:OPERATIONAL,BIFET	TK0191	156-2793-00
A10U420	156-0514-03	.300000	.300116	MICROCKT,DGTL:DIFF 4-CHANNEL MUX	80009	156-0514-03
A10U420	156-0514-00	.300117		IC,MISC:CMOS,ANALOG MUX;DUAL 4 CHANNEL;CD4052,DI P16.3	80009	156-0514-00
A10U422	156-2793-00			MICROCKT,LINER:OPERATIONAL,BIFET	TK0191	156-2793-00
A10U450	156-1422-00			MICROCKT,LINER:DUAL OPNL AMPL	80009	156-1422-00
A10U600	156-1827-00			MICROCKT,DGTL:C2MOS,3 LINE TO 8 LINE DECODE R	80009	156-1827-00

Component No.	Tektronix	Serial/Assembly No.		Name & Description	Mfr.	Mfr. Part No.
	Part No.	Effective	Discort		Code	
A10U602	156-1822-00			MICROCKT,DGTL:C2MOS,8 BIT ADDRESSABLE LATCH	80009	156-1822-00
A10U604	156-1837-00			MICROCKT,LINER:DRIVER W/STROBE	80009	156-1837-00
A10U606	156-1822-00			MICROCKT,DGTL:C2MOS,8 BIT ADDRESSABLE LATCH	80009	156-1822-00
A10U608	156-1837-00			MICROCKT,LINER:DRIVER W/STROBE	80009	156-1837-00
A10U610	156-1822-00			MICROCKT,DGTL:C2MOS,8 BIT ADDRESSABLE LATCH	80009	156-1822-00
A10U620	156-1822-00			MICROCKT,DGTL:C2MOS,8 BIT ADDRESSABLE LATCH	80009	156-1822-00
A10U622	156-3204-00			MICROCKT,DGTL:RELAY DRIVER	S0319	M54532P
A10U624	156-1822-00			MICROCKT,DGTL:C2MOS,8 BIT ADDRESSABLE LATCH	80009	156-1822-00
A10U626	156-1837-00			MICROCKT,LINER:DRIVER W/STROBE	80009	156-1837-00
A10U724	156-3202-00			MICROCKT,DGTL:DUAL RETRIG MONOSTABLE MULTI VIBRATOR	TKOCC	74HC123P
A10VR146	152-0166-00			SEMICON DVC,DI:ZEN,SI,6.2V,5%,400MW,DO-7	80009	152-0166-00
A10VR148	152-0166-00			SEMICON DVC,DI:ZEN,SI,6.2V,5%,400MW,DO-7	80009	152-0166-00
A10VR230	152-0166-00			SEMICON DVC,DI:ZEN,SI,6.2V,5%,400MW,DO-7	80009	152-0166-00
A10VR232	152-0166-00			SEMICON DVC,DI:ZEN,SI,6.2V,5%,400MW,DO-7	80009	152-0166-00
A10VR280	152-1039-00			SEMICON DVC,DI:ZENER,SI,3V,500MW,DO035	S5372	HZ3ALL
A10VR282	152-1039-00			SEMICON DVC,DI:ZENER,SI,3V,500MW,DO035	S5372	HZ3ALL
A10VR316	152-0166-00			SEMICON DVC,DI:ZEN,SI,6.2V,5%,400MW,DO-7	80009	152-0166-00
A10VR322	152-0168-00			DIODE,ZENER,;12V,5%,0.4W;1N963B,DO-35 OR 7,TR	80009	152-0168-00
A11	671-0232-00			CIRCUIT BD ASSY:MAIN KEY	TK0191	ORDER BY DESCR
A11C10	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A11C20	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A11C30	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A11C120	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A11C140	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A11C160	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A11C180	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A11C300	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A11C302	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A11CR210	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR212	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR214	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR216	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR220	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR222	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR224	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR226	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR230	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR232	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR234	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11CR236	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A11L10	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A11L20	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A11L30	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A11P100	131-3656-01			CONN,RCPT,ELEC:HEADER,STR,15 PIN,0.1 SPACIN	S4549	PS15PAS4T1PKL3
A11P120	131-3656-01			CONN,RCPT,ELEC:HEADER,STR,15 PIN,0.1 SPACIN	S4549	PS15PAS4T1PKL3
A11R110	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R111	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R112	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R113	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R114	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R115	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R116	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective Dscnt	Name & Description	Mfr. Code	Mfr. Part No.
A11R117	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R118	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R119	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R120	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R121	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R122	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R123	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R124	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R125	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R126	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R127	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R128	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R130	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A11R131	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A11R132	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A11R133	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A11R134	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A11R135	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A11R136	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A11R137	315-0102-00		RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A11R140	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R141	315-0334-00		RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A11R300	315-0153-00		RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A11R302	311-1623-00		RES,VAR,NONWW:10K OHM,10%,0.25W	80009	311-1623-00
A11R304	315-0153-00		RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A11R310	315-0153-00		RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A11R312	311-1623-00		RES,VAR,NONWW:10K OHM,10%,0.25W	80009	311-1623-00
A11R314	315-0153-00		RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A11R320	315-0153-00		RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A11R322	311-1623-00		RES,VAR,NONWW:10K OHM,10%,0.25W	80009	311-1623-00
A11R324	315-0153-00		RES,FXD,FILM:15K OHM,5%,0.25W	80009	315-0153-00
A11R330	311-1623-00		RES,VAR,NONWW:10K OHM,10%,0.25W	80009	311-1623-00
A11R340	311-1623-00		RES,VAR,NONWW:10K OHM,10%,0.25W	80009	311-1623-00
A11R350	311-1624-00		RES,VAR,NONWW:10K OHM,10%,0.25W	80009	311-1624-00
A11R360	311-1624-00		RES,VAR,NONWW:10K OHM,10%,0.25W	80009	311-1624-00
A11R370	311-1624-00		RES,VAR,NONWW:10K OHM,10%,0.25W	80009	311-1624-00
A11S210	260-2325-00		SWITCH,ROTARY:4 BITS,GRAY	TK0191	260-2325-00
A11S220	260-2325-00		SWITCH,ROTARY:4 BITS,GRAY	TK0191	260-2325-00
A11S230	260-2325-00		SWITCH,ROTARY:4 BITS,GRAY	TK0191	260-2325-00
A11U120	156-2300-00		MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A11U140	156-2316-00		MICROCKT,DGTL:3/8 LINE DECODER	80009	156-2316-00
A11U160	156-2316-00		MICROCKT,DGTL:3/8 LINE DECODER	80009	156-2316-00
A11U180	156-2825-00		MICROCKT,DGTL:CMOS,DUAL 2-4 DCDR	80009	156-2825-00
A11W110	174-0293-00		CA ASSY,SP,ELEC:40,28 AWG,4.3 L,RIBBON	TK0191	174-0293-00
A11W112	196-3097-00		LEAD,ELECTRICAL:18 AWG,5.5 L,5-4	TK0191	196-3097-00
A12	671-0231-00		CIRCUIT BD ASSY:SUB KEY	TK0191	ORDER BY DESCR
A12C100	281-0775-00		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A12C120	281-0775-00		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A12C140	281-0775-00		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A12C160	281-0775-00		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A12CR500	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR501	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR504	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR505	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR507	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR510	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00

Component No.	Tektronix Part No.	Serial/Assembly No. Effective Dscont	Name & Description	Mfr. Code	Mfr. Part No.
A12CR511	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR514	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR516	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR517	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR521	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR522	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR524	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR526	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR530	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR531	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR532	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR534	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR535	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR536	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR537	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR540	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR541	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR542	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR543	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR546	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR547	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR552	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR553	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR555	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR557	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR560	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR562	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR563	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR565	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12CR567	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A12DS100	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS101	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS102	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS103	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS104	150-1173-00		LT EMITTING DIO:RED	TK0191	150-1173-00
A12DS105	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS106	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS107	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS110	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS111	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS112	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS113	150-1173-00		LT EMITTING DIO:RED	TK0191	150-1173-00
A12DS114	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS116	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS120	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS121	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS122	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS123	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS124	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS125	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS126	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS127	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS130	150-1173-00		LT EMITTING DIO:RED	TK0191	150-1173-00
A12DS134	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS135	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS136	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS137	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS140	150-1179-00		LT EMITTING DIO:GREEN	TK0191	150-1179-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A12DS141	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS142	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS143	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS144	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS145	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS147	150-1173-00			LT EMITTING DIO:RED	TK0191	150-1173-00
A12DS151	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS152	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS153	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS154	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS155	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS156	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS157	150-1179-00			LT EMITTING DIO:GREEN	TK0191	150-1179-00
A12DS200	150-1174-00			LT EMITTING DIO:YELLOW,7 SEGMENT	TK0191	150-1174-00
A12DS210	150-1174-00			LT EMITTING DIO:YELLOW,7 SEGMENT	TK0191	150-1174-00
A12J100	131-3657-01			CONN,PLUG,ELEC:STR,15 PIN,0.1 SPACING	S4549	PS-15SD-S4TS1-2
A12J120	131-3657-01			CONN,PLUG,ELEC:STR,15 PIN,0.1 SPACING	S4549	PS-15SD-S4TS1-2
A12Q170	151-0190-00			TRANSISTOR:NPN,SI,TO-92	80009	151-0190-00
A12R100	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R104	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R105	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R107	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R110	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R113	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R114	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R116	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R120	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R124	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R130	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R134	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R140	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R147	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R150	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R153	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R163	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A12R170	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R171	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R200	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R201	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R202	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R203	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R204	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R205	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R206	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A12R300	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A12R302	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A12R310	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A12R312	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A12R314	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A12S500	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S501	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S504	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S505	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S507	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S510	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S511	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S514	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S516	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A12S517	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S521	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S522	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S524	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S526	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S530	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S531	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S532	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S534	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S535	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S536	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S537	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S540	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S541	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S542	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S543	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S546	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S547	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S552	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S553	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S555	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S557	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S560	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S562	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S563	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S565	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12S567	260-2156-00			SWITCH,KEY:SPST	80009	260-2156-00
A12U100	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A12U110	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A12U120	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A12U130	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A12U140	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A12U150	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A12U160	156-2824-00			MICROCKT,DGTL:CMOS,DI,LATCH,OCT	80009	156-2824-00
A12U200	156-0795-00			IC,DIGITAL:	80009	156-0795-00
A12XU200	131-3677-00			CONN,RCPT,ELEC:1 X 5 FEMALE (XU200A)	TK0191	131-3677-00
A12XU200	131-3677-00			CONN,RCPT,ELEC:1 X 5 FEMALE (XU200B)	TK0191	131-3677-00
A12XU210	131-3677-00			CONN,RCPT,ELEC:1 X 5 FEMALE (XU210A)	TK0191	131-3677-00
A12XU210	131-3677-00			CONN,RCPT,ELEC:1 X 5 FEMALE (XU210B)	TK0191	131-3677-00
A14	671-0230-00			CIRCUIT BD ASSY:LOWER KEY	TK0191	ORDER BY DESCR
A14C10	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A14C20	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A14C30	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A14C40	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A14C200	281-0775-00	.300000	.300298	CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A14C200	281-0773-00	.300299		CAP,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A14C210	281-0775-00	.300000	.300298	CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A14C210	281-0773-00	.300299		CAP,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A14J140	131-3662-00			CONN,RCPT,ELEC:HEADER,2 X 17	TK0191	131-3662-00
A14J142	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 10)	80009	131-0608-00
A14J146	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 5)	80009	131-0608-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discount	Name & Description	Mfr. Code	Mfr. Part No.
A14L10	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A14R100	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A14R140	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A14R200	315-0512-00	.300000	.300298	RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A14R200	315-0513-00	.300299		RES,FXD,FILM:51K OHM,5%,0.25W	80009	315-0513-00
A14R202	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A14R204	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A14R210	315-0512-00	.300000	.300298	RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A14R210	315-0513-00	.300299		RES,FXD,FILM:51K OHM,5%,0.25W	80009	315-0513-00
A14R212	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A14R214	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A14R500	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A14R600	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A14R602	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A14R940	308-0933-00			RES,FXD,WM:4.7 OHM,2%,8W	80009	308-0933-00
A14U100	156-2300-00	.300000	.300143	MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A14U100	156-1767-00	.300144		MICROCKT,DGTL:CMOS,OCTAL BUS TRANSCEIVER	80009	156-1767-00
A14U140	156-2316-00			MICROCKT,DGTL:3/8 LINE DECODER	80009	156-2316-00
A14U200	156-2309-00			MICROCKT,DGTL:HEX INVERTER	80009	156-2309-00
A14U220	156-2009-00			IC,DIGITAL:HCMOS,FLIP FLOP;DUAL D-TYP E;74H C74,DIP14.3,TUBE	80009	156-2009-00
A14U240	156-2813-00			MICROCKT,DGTL:CMOS,DUAL BIN COUNTER	TK0191	156-2813-00
A14U260	156-2813-00			MICROCKT,DGTL:CMOS,DUAL BIN COUNTER	TK0191	156-2813-00
A14U300	156-2315-00			MICROCKT,DGTL:3 STATE OCTAL D TYPE FF	80009	156-2315-00
A14U320	156-2315-00			MICROCKT,DGTL:3 STATE OCTAL D TYPE FF	80009	156-2315-00
A14U500	156-2809-00			MICROCKT,DGTL:6 BIT 3 STATE BUFFER	TK0191	156-2809-00
A15	671-0226-00			CIRCUIT BD ASSY:HIGH CURRENT PWR	TK0191	ORDER BY DESCR
A15C200	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A15C300	290-1007-00			CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A15C302	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A15C400	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15C402	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15C404	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15C406	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15C408	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15C410	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15C412	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15C414	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15C416	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15C418	290-1188-00			CAP,FXD,ELCTLT:2200UF,20%,100V	S4217	KME100VNSN-30F
A15CR100	152-0934-00			SEMICON DVC,DI:10A,600V	80009	152-0934-00
A15CR200	152-0460-00			DIODE,SIG:,REGLTR;100V,1.20MA IP,1.45V VL;1 N5299,DO-35	04713	1N5299
A15J800	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
				(QUANTITY OF 2)		
A15J802	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
				(QUANTITY OF 2)		
A15J804	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
				(QUANTITY OF 2)		
A15J900	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
				(QUANTITY OF 2)		
A15J902	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
				(QUANTITY OF 2)		

Component No.	Tektronix Part No.	Serial/Assembly No. Effective Dscont	Name & Description	Mfr. Code	Mfr. Part No.
A15J904	131-3666-00		(QUANTITY OF 3) CONN,RCPT,ELEC:CKT BD,2 PIN	TK0191	131-3666-00
A15J906	131-0589-00		TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A15R200	315-0103-00		(QUANTITY OF 4) RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A15R300	307-1371-00		RES,FXD,FILM:3K OHM,5%,3W	S5302	SPR3-3KJ
A15R302	315-0512-00		RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A15R304	315-0103-00		RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A15R306	321-0385-00		RES,FXD,FILM:100K OHM,1%,0.125W,TC=TO	80009	321-0385-00
A15R308	321-0289-00		RES,FXD,FILM:10.0K OHM,1%,0.125W,TC=TO	80009	321-0289-00
A15R310	315-0204-00		RES,FXD,FILM:200K OHM,5%,0.25W	80009	315-0204-00
A15R312	315-0512-00		RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A15R800	301-0220-02		RES,FXD,CMPSN:22 OHM,5%,0.50W	80009	301-0220-02
A15U310	156-1897-00		MICROCKT,DGTL:PHOTO COUPLER	80009	156-1897-00
A15U312	156-1897-00		MICROCKT,DGTL:PHOTO COUPLER	80009	156-1897-00
A15U330	156-1778-00		MICROCKT,LINER:DUAL COMPARATOR	TK0191	156-1778-00
A15VR200	152-0590-00		DIODE,ZENER:;18V,5%,0.4W;1N967B,DO-35 OR 7,TR	80009	152-0590-00
A15VR300	152-0816-00		SEMICON DVC,DI:ZEN,SI,12V,5%,0.5W	80009	152-0816-00
A15VR302	152-0823-00		SEMICON DVC,DI:ZEN,SI,6.2V,5%,0.5W	80009	152-0823-00
A16	671-0225-00		CIRCUIT BD ASSY:HIGH CURRENT CONTROL	TK0191	ORDER BY DESCR
A16C100	281-0775-00		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A16C102	281-0775-00		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A16C200	281-0812-00		CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A16C202	281-0823-00		CAP,FXD,CER DI:470PF,10%,50V	04222	SA101A471KAA
A16C210	281-0812-00		CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A16C212	281-0823-00		CAP,FXD,CER DI:470PF,10%,50V	04222	SA101A471KAA
A16C312	281-0767-00		CAP,FXD,CER DI:330PF,20%,100V	04222	SA102C331MAA
A16C314	281-0809-00		CAP,FXD,CER DI:200 PF,5%,100V	04222	SA101A201JAA
A16C320	281-0823-00		CAP,FXD,CER DI:470PF,10%,50V	04222	SA101A471KAA
A16C324	281-0798-00		CAP,FXD,CER DI:51PF,1%,100V	04222	SA101A510GAA
A16C326	281-0812-00		CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A16C330	281-0785-00		CAP,FXD,CER DI:68PF,10%,100V	04222	SA101A680KAA
A16C412	281-0809-00		CAP,FXD,CER DI:200 PF,5%,100V	04222	SA101A201JAA
A16C414	281-0809-00		CAP,FXD,CER DI:200 PF,5%,100V	04222	SA101A201JAA
A16C420	281-0823-00		CAP,FXD,CER DI:470PF,10%,50V	04222	SA101A471KAA
A16C422	281-0812-00		CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A16C424	281-0823-00		CAP,FXD,CER DI:470PF,10%,50V	04222	SA101A471KAA
A16C426	281-0812-00		CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A16C430	281-0785-00		CAP,FXD,CER DI:68PF,10%,100V	04222	SA101A680KAA
A16C446	281-0775-00		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A16C900	290-1007-00		CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A16C902	281-0775-00		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A16C905	290-1007-00		CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A16C910	290-1007-00		CAP,FXD,ELCTLT:22UF,20%,16V	80009	290-1007-00
A16C912	281-0775-00		CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A16C920	290-0769-00		CAP,FXD,ELCTLT:10UF,+50-10%,100VDC	TK0020	100T10
A16CR300	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A16CR310	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A16CR312	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A16CR324	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A16CR400	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A16CR410	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A16CR412	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A16CR424	152-0327-00		SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discount	Name & Description	Mfr. Code	Mfr. Part No.
A16CR446	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A16CR905	152-0327-00			SEMICON DVC,DI:SIG,SI,100MA,75V,D2X5,BAX13	80009	152-0327-00
A16J690	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 6)	80009	131-0608-00
A16J906	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 4)	80009	131-0589-00
A16J908	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 5)	80009	131-0608-00
A16J912	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 9)	80009	131-0608-00
A16J914	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 3)	80009	131-0608-00
A16K390	148-0186-00			RELAY,ARM:SPDT,3A,200V,COIL,12VDC	TK0191	148-0186-00
A16L100	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A16L900	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A16L910	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A16Q320	151-0770-01			TRANSISTOR:NPN,SI,TO-126	80009	151-0770-01
A16Q330	151-0739-01			TRANSISTOR:PMP,SI,TO-126	80009	151-0739-01
A16Q340	151-0423-00			TRANSISTOR:NPN,SI,TO-220AB	80009	151-0423-00
A16Q350	151-0423-00			TRANSISTOR:NPN,SI,TO-220AB	80009	151-0423-00
A16Q420	151-0770-01			TRANSISTOR:NPN,SI,TO-126	80009	151-0770-01
A16Q430	151-0739-01			TRANSISTOR:PMP,SI,TO-126	80009	151-0739-01
A16Q440	151-0423-00			TRANSISTOR:NPN,SI,TO-220AB	80009	151-0423-00
A16Q450	151-0423-00			TRANSISTOR:NPN,SI,TO-220AB	80009	151-0423-00
A16R100	315-0105-00			RES,FXD,FILM:1M OHM,5%,0.25W	80009	315-0105-00
A16R120	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R121	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A16R122	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A16R123	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R140	315-0472-00			RES,FXD,FILM:4.7K OHM,5%,0.25W	80009	315-0472-00
A16R150	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R151	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R152	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R153	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R154	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R200	315-0203-00			RES,FXD,FILM:20K OHM,5%,0.25W	80009	315-0203-00
A16R202	315-0203-00			RES,FXD,FILM:20K OHM,5%,0.25W	80009	315-0203-00
A16R210	315-0203-00			RES,FXD,FILM:20K OHM,5%,0.25W	80009	315-0203-00
A16R212	315-0203-00			RES,FXD,FILM:20K OHM,5%,0.25W	80009	315-0203-00
A16R300	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A16R310	321-0289-00			RES,FXD,FILM:10.0K OHM,1%,0.125W,TC=TO	80009	321-0289-00
A16R312	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A16R314	321-0402-00			RES,FXD,FILM:150K OHM,1%,0.125W,TC=TO	19701	5033ED150K0F
A16R320	315-0222-00			RES,FXD,FILM:2.2K OHM,5%,0.25W	80009	315-0222-00
A16R321	315-0393-00			RES,FXD,FILM:39K OHM,5%,0.25W	80009	315-0393-00
A16R322	315-0302-00			RES,FXD,FILM:3K OHM,5%,0.25W	80009	315-0302-00
A16R324	315-0473-00			RES,FXD,FILM:47K OHM,5%,0.25W	80009	315-0473-00
A16R326	315-0753-00			RES,FXD,FILM:75K OHM,5%,0.25W	80009	315-0753-00
A16R330	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R332	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A16R338	315-0303-00			RES,FXD,FILM:30K OHM,5%,0.25W	80009	315-0303-00
A16R340	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A16R342	315-0563-00			RES,FXD,FILM:56K OHM,5%,0.25W	80009	315-0563-00
A16R350	315-0151-00			RES,FXD,FILM:150 OHM,5%,0.25W	80009	315-0151-00
A16R360	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A16R365	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A16R370	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A16R375	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00

Component No.	Tektronix	Serial/Assembly No.		Name & Description	Mfr.	Mfr. Part No.
	Part No.	Effective	Dscnt		Code	
A16R390	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A16R400	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A16R410	321-0286-00			RES,FXD,FILM:9.31K OHM,1%,0.125W,TC=T0	80009	321-0286-00
A16R412	315-0334-00			RES,FXD,FILM:330K OHM,5%,0.25W	80009	315-0334-00
A16R414	321-0402-00			RES,FXD,FILM:150K OHM,1%,0.125W,TC=T0	19701	5033ED150K0F
A16R420	315-0222-00			RES,FXD,FILM:2.2K OHM,5%,0.25W	80009	315-0222-00
A16R421	315-0393-00			RES,FXD,FILM:39K OHM,5%,0.25W	80009	315-0393-00
A16R422	315-0512-00			RES,FXD,FILM:5.1K OHM,5%,0.25W	80009	315-0512-00
A16R424	315-0473-00			RES,FXD,FILM:47K OHM,5%,0.25W	80009	315-0473-00
A16R426	315-0753-00			RES,FXD,FILM:75K OHM,5%,0.25W	80009	315-0753-00
A16R430	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R432	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A16R438	315-0303-00			RES,FXD,FILM:30K OHM,5%,0.25W	80009	315-0303-00
A16R440	315-0301-00			RES,FXD,FILM:300 OHM,5%,0.25W	80009	315-0301-00
A16R442	315-0563-00			RES,FXD,FILM:56K OHM,5%,0.25W	80009	315-0563-00
A16R444	315-0473-00			RES,FXD,FILM:47K OHM,5%,0.25W	80009	315-0473-00
A16R446	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A16R450	315-0151-00			RES,FXD,FILM:150 OHM,5%,0.25W	80009	315-0151-00
A16R460	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A16R465	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A16R470	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A16R475	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A16R905	315-0472-00			RES,FXD,FILM:4.7K OHM,5%,0.25W	80009	315-0472-00
A16U100	156-2832-01			MICROCKT,DGTL:OP AMP,BIFET	TK0AB	LF411CN
A16U120	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053, DIP16.3	80009	156-0515-00
A16U140	156-2277-00			MICROCKT,DGTL:TRANSISTOR	TK0191	156-2277-00
A16U150	156-1766-00			MICROCKT,DGTL:CMOS,QUAD 2 INPUT NAND GATE	80009	156-1766-00
A16U200	156-1699-00			MICROCKT,LINEAR:DUAL BI-FET,OPNL AMPL	01295	TL288CP
A16U300	156-2795-00			MICROCKT,LINEAR:OPERATIONAL PRECISION	TK0191	156-2795-00
A16U400	156-2795-00			MICROCKT,LINEAR:OPERATIONAL PRECISION	TK0191	156-2795-00
A16VR360	152-0304-00			DIODE,ZENER:.,20V,5%,0.4W;1N968B,DO-35 OR 7 ,TR	80009	152-0304-00
A16VR370	152-0304-00			DIODE,ZENER:.,20V,5%,0.4W;1N968B,DO-35 OR 7 ,TR	80009	152-0304-00
A18	670-9319-01			CIRCUIT BD ASSY:CRT OUTPUT	80009	670-9319-01
A18C50	290-0747-00			CAP,FXD,ELCTLT:100UF,+50-20%,25WVDC	54473	ECE-B25V100L
A18C52	290-0747-00			CAP,FXD,ELCTLT:100UF,+50-20%,25WVDC	54473	ECE-B25V100L
A18C60	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A18C62	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A18C70	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A18C82	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A18C100	283-0002-00			CAP,FXD,CER DI:0.01UF,+80-20%,500V	80009	283-0002-00
A18C102	283-0240-00			CAP,FXD,CER DI:1PF,20%,500V	56289	53C141
A18C104	283-0240-00			CAP,FXD,CER DI:1PF,20%,500V	56289	53C141
A18C106	283-0002-00			CAP,FXD,CER DI:0.01UF,+80-20%,500V	80009	283-0002-00
A18C120	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A18C122	283-0002-00			CAP,FXD,CER DI:0.01UF,+80-20%,500V	80009	283-0002-00
A18C200	283-0002-00			CAP,FXD,CER DI:0.01UF,+80-20%,500V	80009	283-0002-00
A18C202	283-0240-00			CAP,FXD,CER DI:1PF,20%,500V	56289	53C141
A18C204	283-0240-00			CAP,FXD,CER DI:1PF,20%,500V	56289	53C141
A18C206	283-0002-00			CAP,FXD,CER DI:0.01UF,+80-20%,500V	80009	283-0002-00
A18C220	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A18C222	283-0002-00			CAP,FXD,CER DI:0.01UF,+80-20%,500V	80009	283-0002-00
A18C300	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A18C302	283-0240-00			CAP,FXD,CER DI:1PF,20%,500V	56289	53C141

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A18C304	283-0002-00			CAP, FXD, CER DI:0.01UF, +80-20%, 500V	80009	283-0002-00
A18C306	283-0002-00			CAP, FXD, CER DI:0.01UF, +80-20%, 500V	80009	283-0002-00
A18C400	283-0002-00			CAP, FXD, CER DI:0.01UF, +80-20%, 500V	80009	283-0002-00
A18C420	283-0002-00			CAP, FXD, CER DI:0.01UF, +80-20%, 500V	80009	283-0002-00
A18CR100	152-0832-00			SEMICON DVC, DI:SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A18CR102	152-0322-00			SEMICON DVC, DI:SCHOTTKY, SI, 15V, 1.2PF, DO-35	TK0961	1SS97(2)T
A18CR104	152-0322-00			SEMICON DVC, DI:SCHOTTKY, SI, 15V, 1.2PF, DO-35	TK0961	1SS97(2)T
A18CR110	152-0832-00			SEMICON DVC, DI:SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A18CR112	152-0832-00			SEMICON DVC, DI:SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A18CR200	152-0832-00			SEMICON DVC, DI:SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A18CR202	152-0322-00			SEMICON DVC, DI:SCHOTTKY, SI, 15V, 1.2PF, DO-35	TK0961	1SS97(2)T
A18CR204	152-0322-00			SEMICON DVC, DI:SCHOTTKY, SI, 15V, 1.2PF, DO-35	TK0961	1SS97(2)T
A18CR210	152-0832-00			SEMICON DVC, DI:SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A18CR212	152-0832-00			SEMICON DVC, DI:SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A18CR300	152-0832-00			SEMICON DVC, DI:SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A18CR302	152-0832-00			SEMICON DVC, DI:SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A18CR304	152-0832-00			SEMICON DVC, DI:SW, SI, 50V, 0.12A, DO-34	80009	152-0832-00
A18CR306	152-0322-00			SEMICON DVC, DI:SCHOTTKY, SI, 15V, 1.2PF, DO-35	TK0961	1SS97(2)T
A18J180	131-0589-00			TERMINAL, PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 9)	80009	131-0589-00
A18J182	131-0589-00			TERMINAL, PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 8)	80009	131-0589-00
A18J184	131-0589-00			TERMINAL, PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 4)	80009	131-0589-00
A18J186	131-0589-00			TERMINAL, PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 3)	80009	131-0589-00
A18Q100	151-0188-00			TRANSISTOR:PNP, SI, TO-92	80009	151-0188-00
A18Q102	151-0188-00			TRANSISTOR:PNP, SI, TO-92	80009	151-0188-00
A18Q110	151-0190-00			TRANSISTOR:NPN, SI, TO-92	80009	151-0190-00
A18Q112	151-0190-00			TRANSISTOR:NPN, SI, TO-92	80009	151-0190-00
A18Q120	151-0423-00			TRANSISTOR:NPN, SI, TO-220AB	80009	151-0423-00
A18Q122	151-0423-00			TRANSISTOR:NPN, SI, TO-220AB	80009	151-0423-00
A18Q130	151-0721-00			TRANSISTOR:PNP, SI, TO-220AB	80009	151-0721-00
A18Q132	151-0721-00			TRANSISTOR:PNP, SI, TO-220AB	80009	151-0721-00
A18Q200	151-0188-00			TRANSISTOR:PNP, SI, TO-92	80009	151-0188-00
A18Q202	151-0188-00			TRANSISTOR:PNP, SI, TO-92	80009	151-0188-00
A18Q210	151-0190-00			TRANSISTOR:NPN, SI, TO-92	80009	151-0190-00
A18Q212	151-0190-00			TRANSISTOR:NPN, SI, TO-92	80009	151-0190-00
A18Q220	151-0423-00			TRANSISTOR:NPN, SI, TO-220AB	80009	151-0423-00
A18Q222	151-0423-00			TRANSISTOR:NPN, SI, TO-220AB	80009	151-0423-00
A18Q230	151-0721-00			TRANSISTOR:PNP, SI, TO-220AB	80009	151-0721-00
A18Q232	151-0721-00			TRANSISTOR:PNP, SI, TO-220AB	80009	151-0721-00
A18Q300	151-0188-00			TRANSISTOR:PNP, SI, TO-92	80009	151-0188-00
A18Q310	151-0190-00			TRANSISTOR:NPN, SI, TO-92	80009	151-0190-00
A18Q312	151-0188-00			TRANSISTOR:PNP, SI, TO-92	80009	151-0188-00
A18Q320	151-0721-00			TRANSISTOR:PNP, SI, TO-220AB	80009	151-0721-00
A18Q330	151-0423-00			TRANSISTOR:NPN, SI, TO-220AB	80009	151-0423-00
A18R100	315-0123-00			RES, FXD, FILM:12K OHM, 5%, 0.25W	80009	315-0123-00
A18R102	315-0513-00			RES, FXD, FILM:51K OHM, 5%, 0.25W	80009	315-0513-00
A18R104	321-0213-00			RES, FXD, FILM:1.62K OHM, 1%, 0.125W, TC=TO	07716	CEAD16200F
A18R106	321-0213-00			RES, FXD, FILM:1.62K OHM, 1%, 0.125W, TC=TO	07716	CEAD16200F
A18R108	315-0513-00			RES, FXD, FILM:51K OHM, 5%, 0.25W	80009	315-0513-00
A18R110	315-0151-00			RES, FXD, FILM:150 OHM, 5%, 0.25W	80009	315-0151-00
A18R112	315-0511-00			RES, FXD, FILM:510 OHM, 5%, 0.25W	80009	315-0511-00

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A18R114	315-0471-00			RES,FXD,FILM:470 OHM,5%,0.25W	80009	315-0471-00
A18R116	315-0151-00			RES,FXD,FILM:150 OHM,5%,0.25W	80009	315-0151-00
A18R118	315-0511-00			RES,FXD,FILM:510 OHM,5%,0.25W	80009	315-0511-00
A18R120	315-0471-00			RES,FXD,FILM:470 OHM,5%,0.25W	80009	315-0471-00
A18R128	315-0244-00			RES,FXD,FILM:240K OHM,5%,0.25W	80009	315-0244-00
A18R130	322-0356-00			RES,FXD,FILM:49.9K OHM,1%,0.25W,TC=T0	75042	CEBT0-4992F
A18R132	322-0356-00			RES,FXD,FILM:49.9K OHM,1%,0.25W,TC=T0	75042	CEBT0-4992F
A18R140	315-0681-00			RES,FXD,FILM:680 OHM,5%,0.25W	80009	315-0681-00
A18R142	315-0431-00			RES,FXD,FILM:430 OHM,5%,0.25W	80009	315-0431-00
A18R200	315-0123-00			RES,FXD,FILM:12K OHM,5%,0.25W	80009	315-0123-00
A18R202	315-0513-00			RES,FXD,FILM:51K OHM,5%,0.25W	80009	315-0513-00
A18R204	321-0241-00			RES,FXD,FILM:3.16K OHM,1%,0.125W,TC=T0	07716	CEAD31600F
A18R206	321-0241-00			RES,FXD,FILM:3.16K OHM,1%,0.125W,TC=T0	07716	CEAD31600F
A18R208	315-0513-00			RES,FXD,FILM:51K OHM,5%,0.25W	80009	315-0513-00
A18R210	315-0151-00			RES,FXD,FILM:150 OHM,5%,0.25W	80009	315-0151-00
A18R212	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A18R214	315-0471-00			RES,FXD,FILM:470 OHM,5%,0.25W	80009	315-0471-00
A18R216	315-0151-00			RES,FXD,FILM:150 OHM,5%,0.25W	80009	315-0151-00
A18R218	315-0751-00			RES,FXD,FILM:750 OHM,5%,0.25W	80009	315-0751-00
A18R220	315-0471-00			RES,FXD,FILM:470 OHM,5%,0.25W	80009	315-0471-00
A18R228	315-0124-00			RES,FXD,FILM:120K OHM,5%,0.25W	80009	315-0124-00
A18R230	322-0327-00			RES,FXD,FILM:24.9K OHM,1%,0.25W,TC=T0	19701	5043RD24K90F
A18R232	322-0327-00			RES,FXD,FILM:24.9K OHM,1%,0.25W,TC=T0	19701	5043RD24K90F
A18R240	315-0681-00			RES,FXD,FILM:680 OHM,5%,0.25W	80009	315-0681-00
A18R242	315-0431-00			RES,FXD,FILM:430 OHM,5%,0.25W	80009	315-0431-00
A18R300	315-0123-00			RES,FXD,FILM:12K OHM,5%,0.25W	80009	315-0123-00
A18R306	315-0242-00			RES,FXD,FILM:2.4K OHM,5%,0.25W	80009	315-0242-00
A18R308	322-0327-00			RES,FXD,FILM:24.9K OHM,1%,0.25W,TC=T0	19701	5043RD24K90F
A18R310	315-0513-00			RES,FXD,FILM:51K OHM,5%,0.25W	80009	315-0513-00
A18R312	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A18R314	315-0682-00			RES,FXD,FILM:6.8K OHM,5%,0.25W	80009	315-0682-00
A18R316	315-0204-00			RES,FXD,FILM:200K OHM,5%,0.25W	80009	315-0204-00
A18R318	315-0271-00			RES,FXD,FILM:270 OHM,5%,0.25W	80009	315-0271-00
A18R320	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A18R322	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A18R410	311-2377-00			RES,VAR,NONW:TRMR,500K OHM,0.5W	80009	311-2377-00
A18R412	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A18R420	311-2377-00			RES,VAR,NONW:TRMR,500K OHM,0.5W	80009	311-2377-00
A18R422	315-0164-00			RES,FXD,FILM:160K OHM,5%,0.25W	80009	315-0164-00
A18TP100	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A18VR100	152-0195-00			DIODE,ZENER:.,:5.1V,5%,0.4W;1N751A FMLY,DO-35 OR 7	80009	152-0195-00
A18VR200	152-0195-00			DIODE,ZENER:.,:5.1V,5%,0.4W;1N751A FMLY,DO-35 OR 7	80009	152-0195-00
A18W410	131-0566-00			BUS,CONDUCTOR:DUMMY RES,0.094 OD X 0.225 L	24546	OMA 07
A18W420	131-0566-00			BUS,CONDUCTOR:DUMMY RES,0.094 OD X 0.225 L	24546	OMA 07
A20	670-9321-00	.300000	.300188	CIRCUIT BD ASSY:H V REGULATOR	TK0191	670-9321-00
A20	670-9321-01	.300189		CIRCUIT BD ASSY:H.V. REGULATOR	TK0191	ORDER BY DESCR
A20C54	281-0773-00			CAP,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A20C56	281-0773-00			CAP,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A20C100	290-0927-00			CAP,FXD,ELCTLT:330UF,20%,35V	80009	290-0927-00
A20C102	285-0560-00			CAP,FXD,PLASTIC:0.022UF,10%,630V	80009	285-0560-00
A20C104	281-0773-00			CAP,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A20C200	283-0000-00			CAP,FXD,CER DI:0.001UF,+100-0%,500V	80009	283-0000-00
A20C202	283-0000-00			CAP,FXD,CER DI:0.001UF,+100-0%,500V	80009	283-0000-00
A20C210	283-0002-00			CAP,FXD,CER DI:0.01UF,+80-20%,500V	80009	283-0002-00

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Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Dscart	Name & Description	Mfr. Code	Mfr. Part No.
A20C220	283-0013-00			CAP,FXD,CER DI:0.01UF,-0+100%,1000V	59660	818-602ZSU0103P
A20C228	281-0773-00			CAP,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A20C230	281-0773-00			CAP,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A20C232	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A20C300	290-0821-00			CAP,FXD,ELCTLT:10UF,+50-10%,160V	80009	290-0821-00
A20C310	290-0821-00			CAP,FXD,ELCTLT:10UF,+50-10%,160V	80009	290-0821-00
A20C320	290-0821-00			CAP,FXD,ELCTLT:10UF,+50-10%,160V	80009	290-0821-00
A20C340	285-1376-00			CAP,FXD,PLASTIC:0.01UF,20%,2.5KV	TK0191	285-1376-00
A20CR200	152-0608-00			SEMICON DVC,DI:POWER,SI,1000V,0.2A	80009	152-0608-00
A20CR202	152-0242-00			SEMICON DVC,DI:SIG,SI,225V,0.2A,DO-7	07263	FDH5004
A20CR204	152-0242-00			SEMICON DVC,DI:SIG,SI,225V,0.2A,DO-7	07263	FDH5004
A20CR210	152-0608-00			SEMICON DVC,DI:POWER,SI,1000V,0.2A	80009	152-0608-00
A20CR300	152-0242-00			SEMICON DVC,DI:SIG,SI,225V,0.2A,DO-7	07263	FDH5004
A20CR310	152-0242-00			SEMICON DVC,DI:SIG,SI,225V,0.2A,DO-7	07263	FDH5004
A20CR320	152-0242-00			SEMICON DVC,DI:SIG,SI,225V,0.2A,DO-7	07263	FDH5004
A20J182	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A20J194	131-0589-00			(QUANTITY OF 7) TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A20J200	131-0589-00			(QUANTITY OF 7) TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A20L100	108-1346-00	.300000	.300188	COIL,RF:FXD,470UH,1A	80009	108-1346-00
A20L100	108-1431-00	.300189		COIL,RF:FXD,300UH	TKOHD	ORDER BY DESCR
A20Q100	151-0563-00			TRANSISTOR:NPN,SI	TK0191	151-0563-00
A20Q200	151-0667-00	.300000	.300188	TRANSISTOR:NPN,SI,TO-5	80009	151-0667-00
A20Q200	151-0769-00	.300189		TRANSISTOR:NPN,SI,TO-220AB	80009	151-0769-00
A20R50	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A20R52	321-0388-00			RES,FXD,FILM:107K OHM,1%,0.125W,TC=TO	80009	321-0388-00
A20R54	321-0205-00			RES,FXD,FILM:1.33K OHM,1%,0.125W,TC=TO	80009	321-0205-00
A20R56	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A20R100	315-0152-00			RES,FXD,FILM:1.5K OHM,5%,0.25W	80009	315-0152-00
A20R200	315-0513-00			RES,FXD,FILM:51K OHM,5%,0.25W	80009	315-0513-00
A20R202	315-0513-00			RES,FXD,FILM:51K OHM,5%,0.25W	80009	315-0513-00
A20R204	315-0184-00			RES,FXD,FILM:180K OHM,5%,0.25W	80009	315-0184-00
A20R206	315-0184-00			RES,FXD,FILM:180K OHM,5%,0.25W	80009	315-0184-00
A20R208	315-0472-00			RES,FXD,FILM:4.7K OHM,5%,0.25W	80009	315-0472-00
A20R210	311-1272-00			RES,VAR,NONWM:TRMR,100K OHM,0.5W	80009	311-1272-00
A20R214	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A20R216	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A20R218	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A20R220	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A20R222	315-0475-00			RES,FXD,FILM:4.7M OHM,5%,0.25W	01121	CB4755
A20R224	315-0473-00			RES,FXD,FILM:47K OHM,5%,0.25W	80009	315-0473-00
A20R226	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A20R228	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A20R230	315-0101-00			RES,FXD,FILM:100 OHM,5%,0.25W	80009	315-0101-00
A20RT100	307-0863-00	.300000	.300188	RES,THERMAL:10 OHM,10%,NTC	80009	307-0863-00
A20RT100	307-1496-00	.300189		RES,THERMAL:8 OHM,15%	S5011	ORDER BY DESCR
A20T100	120-1679-00			TRANSFORMER,RF:HIGH VOLTAGE	TK0191	120-1679-00
A20TP100	214-0579-00	.300000	.300188	TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A20TP200	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A20TP300	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A20TP400	214-0579-00			TERM,TEST POINT:BRS CD PL	TK0858	ORDER BY DESCR
A20U100	119-1684-01			MULTIPLIER,HV:2X,W/DC RESTORER	TK0191	119-1684-01
A20U200	156-1422-00			MICROCKT,LINEAR:DUAL OPNL AMPL	80009	156-1422-00
A20U300	119-2162-01			HV MODULER:2KV INPUT,12KV OUTPUT	80009	119-2162-01

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A20VR200	152-0286-00			SEMICONDC,DI:ZEN,SI,75V,5%,0.4W,DO-7	14552	1N982B
A20VR202	152-0265-00			SEMICONDC,DI:ZEN,SI,24V,5%,0.4W	80009	152-0265-00
A22	670-9322-00			CIRCUIT BD ASSY:INTERFACE	TK0191	670-9322-00
A22C100	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C120	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C140	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C200	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C300	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C320	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C340	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C400	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C420	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C440	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C460	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A22C500	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A22C520	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A22C540	290-0745-00			CAP,FXD,ELCTLT:22UF,+50-20%,25WVDC	54473	ECE-A25V22L
A22J350	131-3652-00			CONN,RCPT,ELEC:CKT,BD,24 PIN,FEMALE	TK0191	131-3652-00
A22J450	131-3653-01			CONN,RCPT,ELEC:CKT BD,36PIN,FEMALE	80009	131-3653-01
A22L500	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A22L520	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A22L540	108-0948-00			COIL,RF:FIXED,100UH,10%	80009	108-0948-00
A22R100	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A22R102	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A22R104	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A22R110	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A22R112	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A22R114	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A22R120	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A22R140	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A22R320	307-0881-00			RES NTWK,FXD,FI:8,10K OHM,10%,0.125W	80009	307-0881-00
A22R340	307-0881-00			RES NTWK,FXD,FI:8,10K OHM,10%,0.125W	80009	307-0881-00
A22R360	307-0923-00			RES NTWK,FXD,FI:(8)330K OHM,5%,0.125W	80009	307-0923-00
A22R440	307-0881-00			RES NTWK,FXD,FI:8,10K OHM,10%,0.125W	80009	307-0881-00
A22R460	307-0881-00			RES NTWK,FXD,FI:8,10K OHM,10%,0.125W	80009	307-0881-00
A22S360	260-2326-00			SWITCH,TOGGLE:DTS-6H	TK0191	260-2326-00
A22U100	156-2828-00			MICROCKT,DGTL:CMOS,OCTAL BUS DRIVER	TK0191	156-2828-00
A22U120	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A22U140	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A22U200	119-2313-00			OSCILLATOR:4MHZ,CRYSTAL	TK0191	119-2313-00
A22U220	156-2825-00			MICROCKT,DGTL:CMOS,DUAL 2-4 DCDR	80009	156-2825-00
A22U240	156-2026-00			IC,DIGITAL:HCCMOS,GATES:QUAD 2-INPUT NOR;74 HC02,DIP14.3,TUBE	80009	156-2026-00
A22U300	156-1444-01			IC,PROCESSOR:NMOS,CONTROLLER;GPIB ADAPTER;T MS9914A,DIP40.6	80009	156-1444-01
A22U320	156-1414-02	.300000	.300116	MICROCKT,DGTL:OCTAL GPIB BUS XCVR,SCRN	27014	DS75160A N
A22U320	156-1414-00	.300117		IC,DIGITAL:LSSTTL,TRANSCEIVER;OCTAL IEEE-488 GPIB BUS XCVR;75160,DIP20.3	80009	156-1414-00
A22U340	156-1415-01	.300000	.300116	MICROCKT,DGTL:OCTAL GPIB XCVR-MANAGEMENT	27014	DS75161A NA+
A22U340	156-1415-00	.300117		IC,DIGITAL:LSSTTL,TRANSCEIVER;OCTAL IEEE-488 GPIB BUS MGT;75161,DIP20.3	80009	156-1415-00
A22U360	156-2300-00			MICROCKT,DGTL:OCTAL BUFFER W/3 STATE OUT	80009	156-2300-00
A22U400	156-2797-00			MICROCKT,DGTL:PLOTTER INTERFACE	TK0191	156-2797-00
A22U420	156-0515-00			IC,MISC:CMOS,ANALOG MUX;TRIPLE SPDT;CD4053,DIP16.3	80009	156-0515-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Dscont	Name & Description	Mfr. Code	Mfr. Part No.
A22U440	156-1111-02	.300000	.300116	IC,DIGITAL:LSTTL,TRANSCEIVER;OCTAL, NONINV, 3-STATE;74LS245,DIP20.3,TUBE,SCRN	80009	156-1111-02
A22U440	156-1111-00	.300117		IC,DIGITAL:LSTTL,BUS TRANSCEIVER;OCTAL, NON INV, 3-STATE;74LS245,DIP20.3,TUBE	80009	156-1111-00
A22U460	156-1111-02	.300000	.300116	IC,DIGITAL:LSTTL,TRANSCEIVER;OCTAL, NONINV, 3-STATE;74LS245,DIP20.3,TUBE,SCRN	80009	156-1111-02
A22U460	156-1111-00	.300117		IC,DIGITAL:LSTTL,BUS TRANSCEIVER;OCTAL, NON INV, 3-STATE;74LS245,DIP20.3,TUBE	80009	156-1111-00
A22W220	174-0295-00			CA ASSY,SP,ELEC:26,28 AWG,11.0 L,RIBBON	TK0191	174-0295-00
A25	671-0229-00			CIRCUIT BD ASSY:MAIN PWR SPLY	TK0191	ORDER BY DESCR
A25C100	290-1136-00			CAP,FXD,ELCLTL:6800UF,20%,16V	TK0191	290-1136-00
A25C102	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A25C104	290-1142-00			CAP,FXD,ELCLTL:100UF,20%,25V	TK0191	290-1142-00
A25C120	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A25C132	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A25C134	290-1142-00			CAP,FXD,ELCLTL:100UF,20%,25V	TK0191	290-1142-00
A25C150	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A25C200	290-1136-00			CAP,FXD,ELCLTL:6800UF,20%,16V	TK0191	290-1136-00
A25C232	281-0812-00			CAP,FXD,CER DI:1000PF,10%,100V	04222	SA101C102KAA
A25C234	290-1142-00			CAP,FXD,ELCLTL:100UF,20%,25V	TK0191	290-1142-00
A25C300	290-1189-00			CAP,FXD,ELCLTL:4700UF,20%,25V	S0293	ECEA1EU472
A25C302	290-1142-00			CAP,FXD,ELCLTL:100UF,20%,25V	TK0191	290-1142-00
A25C400	290-1189-00			CAP,FXD,ELCLTL:4700UF,20%,25V	S0293	ECEA1EU472
A25C402	290-0779-00			CAP,FXD,ELCLTL:10 UF +50% -10%,50VDC	TK1424	CEUSM2A100-Q
A25C404	290-1142-00			CAP,FXD,ELCLTL:100UF,20%,25V	TK0191	290-1142-00
A25C500	290-1141-00			CAP,FXD,ELCLTL:220UF,20%,100V	TK0191	290-1141-00
A25C502	290-1141-00			CAP,FXD,ELCLTL:220UF,20%,100V	TK0191	290-1141-00
A25C562	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A25C571	281-0775-00			CAP,FXD,CER DI:0.1UF,20%,50V	04222	SA105E104MAA
A25CR100	152-0933-00	.300000	.300298	SEMICON DVC,DI:8A,100V,CENTER TAP	80009	152-0933-00
A25CR100	152-1119-00	.300299		SEMICON DVC,DI:RECT,SI,100V,10A	80009	152-1119-00
A25CR102	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A25CR130	152-0832-00			SEMICON DVC,DI:SW,SI,50V,0.12A,DO-34	80009	152-0832-00
A25CR200	152-0606-00	.300000	.300298	SEMICON DVC,DI:POWER,SI,100V,8A	80009	152-0606-00
A25CR200	152-1120-00	.300299		SEMICON DVC,DI:RECT,SI,100V,10A	80009	152-1120-00
A25CR230	152-0832-00			SEMICON DVC,DI:SW,SI,50V,0.12A,DO-34	80009	152-0832-00
A25CR300	152-0933-00	.300000	.300298	SEMICON DVC,DI:8A,100V,CENTER TAP	80009	152-0933-00
A25CR300	152-1119-00	.300299		SEMICON DVC,DI:RECT,SI,100V,10A	80009	152-1119-00
A25CR302	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A25CR400	152-0606-00	.300000	.300298	SEMICON DVC,DI:POWER,SI,100V,8A	80009	152-0606-00
A25CR400	152-1120-00	.300299		SEMICON DVC,DI:RECT,SI,100V,10A	80009	152-1120-00
A25CR402	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A25CR500	152-0931-00			SEMICON DVC,DI:BRIDGE,1.5A,200V	80009	152-0931-00
A25CR560	152-0832-00			SEMICON DVC,DI:SW,SI,50V,0.12A,DO-34	80009	152-0832-00
A25CR562	152-0832-00			SEMICON DVC,DI:SW,SI,50V,0.12A,DO-34	80009	152-0832-00
A25CR570	152-0832-00			SEMICON DVC,DI:SW,SI,50V,0.12A,DO-34	80009	152-0832-00
A25CR572	152-0832-00			SEMICON DVC,DI:SW,SI,50V,0.12A,DO-34	80009	152-0832-00
A25CR600	152-0832-00			SEMICON DVC,DI:SW,SI,50V,0.12A,DO-34	80009	152-0832-00
A25J72	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 10)	80009	131-0589-00
A25J190	131-3668-00			CONN,RCPT,ELEC:CKT BD,4 PIN	TK0191	131-3668-00
A25J192	131-3658-00			CONN,PLUG,ELEC:HEADER,16 PIN	TK0191	131-3658-00
A25J194	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 6)	80009	131-0589-00

Component No.	Tektronix		Serial/Assembly No. Effective Dscnt	Name & Description	Mfr. Code	Mfr. Part No.
	Part No.					
A25J250	131-3670-00			CONN,RCPT,ELEC:CKT BD,9 PIN	TK0191	131-3670-00
A25J252	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 10)	80009	131-0589-00
A25J280	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A25J290	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A25Q130	151-0562-00			TRANSISTOR:PMP,SI,PWR	TK0191	151-0562-00
A25Q230	151-0561-00			TRANSISTOR:NPN,SI,PWR	TK0191	151-0561-00
A25Q600	151-0561-00			TRANSISTOR:NPN,SI,PWR	TK0191	151-0561-00
A25Q602	151-0188-00			TRANSISTOR:PMP,SI,TO-92	80009	151-0188-00
A25R100	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A25R102	315-0124-00			RES,FXD,FILM:120K OHM,5%,0.25W	80009	315-0124-00
A25R130	315-0151-00			RES,FXD,FILM:150 OHM,5%,0.25W	80009	315-0151-00
A25R132	315-0201-00			RES,FXD,FILM:200 OHM,5%,0.25W	80009	315-0201-00
A25R134	321-0260-00			RES,FXD,FILM:4.99K OHM,1%,0.125W,TC=T0	19701	5033ED4K990F
A25R136	321-0280-00			RES,FXD,FILM:8.06K OHM,1%,0.125W,TC=T0	80009	321-0280-00
A25R150	315-0100-00			RES,FXD,FILM:10 OHM,5%,0.25W	19701	5043CX10RR00J
A25R200	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A25R230	315-0151-00			RES,FXD,FILM:150 OHM,5%,0.25W	80009	315-0151-00
A25R232	315-0201-00			RES,FXD,FILM:200 OHM,5%,0.25W	80009	315-0201-00
A25R234	321-0300-00			RES,FXD,FILM:13.0K OHM,1%,0.125W,TC=T0	07716	CEAD13001F
A25R236	321-0260-00			RES,FXD,FILM:4.99K OHM,1%,0.125W,TC=T0	19701	5033ED4K990F
A25R300	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A25R400	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A25R500	311-2328-00			RES,VAR,NONW:500 OHM,20%,0.5W	80009	311-2328-00
A25R501	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A25R502	321-1216-03			RES,FXD,FILM:1.76K OHM,0.25%,0.125W,TC=T2	2M627	CRA18CY1.76KOHM
A25R504	321-0962-03			RES,FXD,FILM:8K OHM,0.25%,0.125W,TC=T2	80009	321-0962-03
A25R506	315-0471-00			RES,FXD,FILM:470 OHM,5%,0.25W	80009	315-0471-00
A25R508	315-0471-00			RES,FXD,FILM:470 OHM,5%,0.25W	80009	315-0471-00
A25R510	315-0472-00			RES,FXD,FILM:4.7K OHM,5%,0.25W	80009	315-0472-00
A25R512	321-0281-00			RES,FXD,FILM:8.25K OHM,1%,0.125W,TC=T0	80009	321-0281-00
A25R514	321-0289-00			RES,FXD,FILM:10.0K OHM,1%,0.125W,TC=T0	80009	321-0289-00
A25R516	311-2328-00			RES,VAR,NONW:500 OHM,20%,0.5W	80009	311-2328-00
A25R560	315-0154-00			RES,FXD,FILM:150K OHM,5%,0.25W	80009	315-0154-00
A25R562	315-0154-00			RES,FXD,FILM:150K OHM,5%,0.25W	80009	315-0154-00
A25R564	315-0103-00			RES,FXD,FILM:10K OHM,5%,0.25W	80009	315-0103-00
A25R570	315-0752-00			RES,FXD,FILM:7.5K OHM,5%,0.25W	80009	315-0752-00
A25R571	315-0202-00			RES,FXD,FILM:2K OHM,5%,0.25W	80009	315-0202-00
A25R574	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A25R576	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A25R600	315-0511-00			RES,FXD,FILM:510 OHM,5%,0.25W	80009	315-0511-00
A25R604	315-0102-00			RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
A25R606	315-0104-00			RES,FXD,FILM:100K OHM,5%,0.25W	80009	315-0104-00
A25TP100	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A25TP130	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A25TP150	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A25TP230	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A25TP300	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A25TP400	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00

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Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A25TP500	131-0589-00			TERMINAL, PIN: 0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A25TP510	131-0589-00			TERMINAL, PIN: 0.46 L X 0.025 SQ PH BRZ GLD P L	80009	131-0589-00
A25U100	156-2831-00			MICROCKT, LINEAR: VOLTAGE REG, +5V STR9005	TK0191	156-2831-00
A25U120	156-1173-00			MICROCKT, LINEAR: VOLTAGE REFERENCE	80009	156-1173-00
A25U130	156-1771-00			MICROCKT, LINEAR: DUAL OP-AMP	80009	156-1771-00
A25U300	156-2830-00			MICROCKT, LINEAR: VOLTAGE REG, +12V	TK0191	156-2830-00
A25U400	156-0872-00	.300000	.300298	IC, LINEAR: BIPOLAR, VOLTAGE REGULATOR; NEGATIVE, -12V, 1.0A, 4%; MC7912CT, TO-220	04713	MC7912CT
A25U400	156-0872-03	.300299		MICROCKT, LINEAR: VOLTAGE REGULATOR, 12V	80009	156-0872-03
A25U500	156-1771-00			MICROCKT, LINEAR: DUAL OP-AMP	80009	156-1771-00
A25U560	156-1778-00			MICROCKT, LINEAR: DUAL COMPARATOR	TK0191	156-1778-00
A26	671-0228-00			CIRCUIT BD ASSY: COLLECTOR PWR SPLY	TK0191	ORDER BY DESCR
A26C710	290-1143-00			CAP, FXD, ELCTLT: 1000UF, 20%, 50V	TK0191	290-1143-00
A26C712	290-1077-00			CAP, FXD, ELCTLT: 22UF, 160V	80009	290-1077-00
A26C720	290-1143-00			CAP, FXD, ELCTLT: 1000UF, 20%, 50V	TK0191	290-1143-00
A26C722	290-1077-00			CAP, FXD, ELCTLT: 22UF, 160V	80009	290-1077-00
A26C750	290-1007-00			CAP, FXD, ELCTLT: 22UF, 20%, 16V	80009	290-1007-00
A26CR710	152-1020-00			SEMICON DVC, DI: RECT, SI, 4A, 400V	TK0BY	RB-404
A26CR720	152-1020-00			SEMICON DVC, DI: RECT, SI, 4A, 400V	TK0BY	RB-404
A26CR730	152-1020-00			SEMICON DVC, DI: RECT, SI, 4A, 400V	TK0BY	RB-404
A26J64	131-3668-00			CONN, RCPT, ELEC: CKT BD, 4 PIN	TK0191	131-3668-00
A26J260	131-3670-00			CONN, RCPT, ELEC: CKT BD, 9 PIN	TK0191	131-3670-00
A26J262	131-0589-00			TERMINAL, PIN: 0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 3)	80009	131-0589-00
A26R710	315-0513-00			RES, FXD, FILM: 51K OHM, 5%, 0.25W	80009	315-0513-00
A26R712	315-0104-00			RES, FXD, FILM: 100K OHM, 5%, 0.25W	80009	315-0104-00
A26R720	315-0513-00			RES, FXD, FILM: 51K OHM, 5%, 0.25W	80009	315-0513-00
A26R722	315-0104-00			RES, FXD, FILM: 100K OHM, 5%, 0.25W	80009	315-0104-00
A26R730	315-0100-00			RES, FXD, FILM: 10 OHM, 5%, 0.25W	19701	5043CX10RR00J
A26R750	315-0203-00			RES, FXD, FILM: 20K OHM, 5%, 0.25W	80009	315-0203-00
A26R752	315-0512-00			RES, FXD, FILM: 5.1K OHM, 5%, 0.25W	80009	315-0512-00
A26U750	156-3203-00			MICROCKT, LINEAR: VOLTAGE REGULATOR, 5V	TK0CI	MAX611CP
A27	671-0227-00	.300000	.300133	CIRCUIT BD ASSY: PRIMARY	TK0191	ORDER BY DESCR
A27	671-0227-01	.300134		CIRCUIT BD ASSY: PRIMARY	80009	671-0227-01
A27C100	285-1377-00			CAP, FXD, PLASTIC: 0.22UF, 20%, 250V	TK0191	285-1377-00
A27C110	285-1377-00			CAP, FXD, PLASTIC: 0.22UF, 20%, 250V	TK0191	285-1377-00
A27C200	285-1424-00	.300000	.300188	CAP, FXD, PLASTIC: 1UF, 20%, 250V	80009	285-1424-00
A27C200	285-1438-00	.300189		CAP, FXD, PLASTIC: 1UF, 20%, 250V	TK00I	ECQ-U2A-105MT
A27C220	285-1377-00			CAP, FXD, PLASTIC: 0.22UF, 20%, 250V	TK0191	285-1377-00
A27E100	307-1324-00			RES, V SENSITIVE: 240VDC, 0.8W	80009	307-1324-00
A27E200	307-1324-00			RES, V SENSITIVE: 240VDC, 0.8W	80009	307-1324-00
A27J100	131-0589-00			TERMINAL, PIN: 0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 4)	80009	131-0589-00
A27J120	131-0589-00			TERMINAL, PIN: 0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 4)	80009	131-0589-00
A27J200	131-0589-00			TERMINAL, PIN: 0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 4)	80009	131-0589-00
A27J240	131-0589-00			TERMINAL, PIN: 0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 4)	80009	131-0589-00

Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discont	Name & Description	Mfr. Code	Mfr. Part No.
A27J270	131-3667-00			CONN,RCPT,ELEC:CKT BD,3 PIN	TK0191	131-3667-00
A27J272	131-3666-00			CONN,RCPT,ELEC:CKT BD,2 PIN	TK0191	131-3666-00
A27J274	131-4111-00			CONN,RCPT,ELEC:HEADER,1 X 5	TK0CG	009090050116805
A27J276	131-4111-00			CONN,RCPT,ELEC:HEADER,1 X 5	TK0CG	009090050116805
A28	670-9324-00			CIRCUIT BD ASSY:LAMP	TK0191	670-9324-00
A28DS100	150-0097-00			LAMP,INCAND:6.3V,0.2A,#7381,WIRE LEADS	92966	7381
A28DS102	150-0097-00			LAMP,INCAND:6.3V,0.2A,#7381,WIRE LEADS	92966	7381
A28DS104	150-0097-00			LAMP,INCAND:6.3V,0.2A,#7381,WIRE LEADS	92966	7381
A29	670-9324-00			CIRCUIT BD ASSY:LAMP	TK0191	670-9324-00
A29DS100	150-0097-00			LAMP,INCAND:6.3V,0.2A,#7381,WIRE LEADS	92966	7381
A29DS102	150-0097-00			LAMP,INCAND:6.3V,0.2A,#7381,WIRE LEADS	92966	7381
A29DS104	150-0097-00			LAMP,INCAND:6.3V,0.2A,#7381,WIRE LEADS	92966	7381
A30	671-0305-00			CIRCUIT BD ASSY:CONNECTOR	80009	671-0305-00
A30C710	281-0773-00			CAP,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A30E200	119-0181-00			ARSR,ELEC SURGE:230,GAS FILLED	25088	B1-A230T
A30E300	119-0181-00			ARSR,ELEC SURGE:230,GAS FILLED	25088	B1-A230T
A30J30	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A30J40	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 2)	80009	131-0608-00
A30J530	131-0589-00			TERMINAL,PIN:0.46 L X 0.025 SQ PH BRZ GLD P L (QUANTITY OF 6)	80009	131-0589-00
A30W622	174-0991-00			CA ASSY,SP,ELEC:6,26 AWG,23.6 L,RIBBON	80009	174-0991-00
A30W632	174-0993-00			CA ASSY,SP,ELEC:6,26 AWG,23.6 L,RIBBON	80009	174-0993-00
A31	671-0306-00			CIRCUIT BD ASSY:RELAY	80009	671-0306-00
A31C710	281-0773-00			CAP,FXD,CER DI:0.01UF,10%,100V	04222	SA201C103KAA
A31CR950	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A31CR955	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A31CR960	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A31CR970	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A31CR975	152-0935-00			SEMICON DVC,DI:SI,1.0A,280V	80009	152-0935-00
A31J695	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 7)	80009	131-0608-00
A31J914	131-0608-00			TERMINAL,PIN:0.365 L X 0.025 BRZ GLD PL (QUANTITY OF 3)	80009	131-0608-00
A31J920	131-4216-00			CONN,RCPT,ELEC:PWR,FEMALE,15A	80009	131-4216-00
A31J922	131-4216-00			CONN,RCPT,ELEC:PWR,FEMALE,15A	80009	131-4216-00
A31J924	131-4216-00			CONN,RCPT,ELEC:PWR,FEMALE,15A	80009	131-4216-00
A31J926	131-4216-00			CONN,RCPT,ELEC:PWR,FEMALE,15A	80009	131-4216-00
A31J928	131-4216-00			CONN,RCPT,ELEC:PWR,FEMALE,15A	80009	131-4216-00
A31J932	131-4216-00			CONN,RCPT,ELEC:PWR,FEMALE,15A	80009	131-4216-00
A31K950	148-0210-00			RELAY,ARM:SPST,250V,30A,C10L,12VDC,75 OHM,1 60MA	S0293	AR52119
A31K955	148-0210-00			RELAY,ARM:SPST,250V,30A,C10L,12VDC,75 OHM,1 60MA	S0293	AR52119
A31K960	148-0210-00			RELAY,ARM:SPST,250V,30A,C10L,12VDC,75 OHM,1 60MA	S0293	AR52119
A31K970	148-0210-00			RELAY,ARM:SPST,250V,30A,C10L,12VDC,75 OHM,1 60MA	S0293	AR52119

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Component No.	Tektronix Part No.	Serial/Assembly No. Effective	Discort	Name & Description	Mfr. Code	Mfr. Part No.
A31K975	148-0210-00			RELAY, ARM: SPST, 250V, 30A, CIOL, 12VDC, 75 OHM, 1 60MA	S0293	AR52119
A31R970	315-0102-00			RES, FXD, FILM: 1K OHM, 5%, 0.25W	80009	315-0102-00
A24	119-2109-00			MEMORY CONTROL: BUBBLE	TK0191	119-2109-00
B100	119-2310-00			FAN, TUBE AXIAL: 2650RPM, 14W, 100V	TK0191	119-2310-00
C600	281-0775-00	.300000	.300116	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
C602	281-0775-00	.300000	.300116	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
C900	283-0013-00	.300000	.300133	CAP, FXD, CER DI: 0.01UF, -0+100%, 1000V	59660	818-602ZSU0103P
C900	285-1423-00	.300134		CAP, FXD, PLASTIC: 0.01UF, 20%, 250V	80009	285-1423-00
C1000	281-0775-00	.300000	.300133	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
C1000	281-0954-00	.300134		CAP, FXD, CER DI: 0.01UF, 20%, 125V	80009	281-0954-00
C1002	281-0775-00	.300000	.300133	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
C1002	281-0954-00	.300134		CAP, FXD, CER DI: 0.01UF, 20%, 125V	80009	281-0954-00
C1004	281-0775-00	.300000	.300133	CAP, FXD, CER DI: 0.1UF, 20%, 50V	04222	SA105E104MAA
C1004	281-0954-00	.300134		CAP, FXD, CER DI: 0.01UF, 20%, 125V	80009	281-0954-00
DS140	150-1180-00			LIGHT EMITTING DIO: RED	TK0191	150-1180-00
F100	159-0291-00			FUSE, CARTRIDGE: 4A, 250V, SLOW BLOW (USE WHEN LINE VOLT IS NOM 100V OR 220V)	80009	159-0291-00
F100	159-0238-00			FUSE, CARTRIDGE: 3AG, 2A, 250V, SLOW (USE WHEN LINE VOLT IS NOM 200V OR 240V)	80009	159-0238-00
F200	159-0238-00			FUSE, CARTRIDGE: 3AG, 2A, 250V, SLOW	80009	159-0238-00
FL100	119-2683-00			FILTER, RFI: 50/60HZ, 250VAC, 6A	S0552	ZUB2206H-F
J700	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J702	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J704	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J706	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J708	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J710	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J712	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J714	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J716	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J718	136-0934-00			SOCKET, PIN TERM: 0.16 DIA, RED	TK0BW	SLB4-F6.3-1
J720	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1002	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1004	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1008	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1010	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1012	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1014	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1016	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1018	136-0934-00			SOCKET, PIN TERM: 0.16 DIA, RED	TK0BW	SLB4-F6.3-1
J1100	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1102	136-0934-00			SOCKET, PIN TERM: 0.16 DIA, RED	TK0BW	SLB4-F6.3-1
J1104	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1106	136-0934-00			SOCKET, PIN TERM: 0.16 DIA, RED	TK0BW	SLB4-F6.3-1
J1108	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1110	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1112	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1114	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1116	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1118	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1120	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
J1122	136-0933-00			SOCKET, PIN TERM: 0.16 DIA, GRAY	TK0BW	SLB4-F6.3-8
L100	108-1345-01			COIL, TUBE DEFL: TRACE ROTATION	TK0191	108-1345-01
L120	108-1347-01			COIL, TUBE DEFL: Y-AXIS ALIGNMENT	TK0191	108-1347-01
P500	131-3701-00			CONN, RCPT, ELEC: FEMALE, 37	80009	131-3701-00
P520	131-4112-00			CONN, RCPT, ELEC: 15 MALE, D SUB	S4549	DA-15P-N

Component No.	Tektronix		Serial/Assembly No.		Name & Description	Mfr.	
	Part No.	Effective	Discnt	Code		Part No.	
P1002	134-0199-00				PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L	TKOBW	SA405
P1004	134-0199-00				PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L	TKOBW	SA405
P1006	134-0198-00				PLUG,TIP:MULTI CONTACT,4MM DIA,38.5MM L	TKOBW	SA479
P1008	134-0199-00				PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L	TKOBW	SA405
P1010	134-0199-00				PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L	TKOBW	SA405
P1012	134-0199-00				PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L	TKOBW	SA405
P1014	134-0199-00				PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L	TKOBW	SA405
P1016	134-0199-00				PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L	TKOBW	SA405
P1018	134-0199-00				PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L	TKOBW	SA405
P1020	134-0199-00				PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L	TKOBW	SA405
Q902	151-0896-00				TRANSISTOR:N-CHANNEL,100A,300W	TKOCC	MG100H1BS1
Q910	151-1240-00				TRANSISTOR:MOSFET,PWR,50A,310W	S0319	FM50DZ-9
Q920	151-1240-00				TRANSISTOR:MOSFET,PWR,50A,310W	S0319	FM50DZ-9
Q930	151-1240-00				TRANSISTOR:MOSFET,PWR,50A,310W	S0319	FM50DZ-9
Q940	151-1240-00				TRANSISTOR:MOSFET,PWR,50A,310W	S0319	FM50DZ-9
R100	308-0922-00				RES,FXD,WW:0.01 OHM,0.1%,8W	TKOAE	RHF-75ML0.01B
R626	311-1624-00				RES,VAR,NONWM:10K OHM,10%,0.25W	80009	311-1624-00
R800	307-1372-00				RES,FXD,FILM:75K OHM,60W	TKOCH	STC-010-00
R950	308-0926-00				RES,FXD,WW:0.675 OHM,2%,8W	TKOAE	RHF-25ML0.675G
R960	308-0925-00	.300000	.300236		RES,FXD,WW:0.04 OHM,2%,8W	TKOAE	RHF-75ML0.05G
R960	308-0925-01	.300237			RES,FXD,WW:0.04 OHM,2%,12W	80009	308-0925-01
R1100	315-0102-00				RES,FXD,FILM:1K OHM,5%,0.25W	80009	315-0102-00
S92	260-2332-00				SWITCH,THRMSTC:NC,60 OPEN,3A,250V	TK0191	260-2332-00
S100	260-2323-00				SWITCH,PUSH:DPST,15A,250V,ON/OFF	TK0191	260-2323-00
S140	260-2396-00				SWITCH,ROTARY:ENCODER,5VDC,50UA	80009	260-2396-00
S600	260-2324-00				SW,SENSITIVE:SPDT,3A,250VAC,INTERLOCK	TK0191	260-2324-00
S602	260-2324-00				SW,SENSITIVE:SPDT,3A,250VAC,INTERLOCK	TK0191	260-2324-00
S800	260-2379-00				CIRCUIT BREAKER:1A,250V	TKOBY	T111RE441.00A11L
S900	260-2404-00	.300000	.300133		CIRCUIT BREAKER:5A,250V	80009	260-2404-00
S900	260-2391-00	.300134			CIRCUIT BREAKER:3A,250V	TKOBY	T111RE443.00A11L
S904	260-2332-00				SWITCH,THRMSTC:NC,60 OPEN,3A,250V	TK0191	260-2332-00
S906	260-2332-01	.300000	.300133		SWITCH,THRMSTC:NC,OPEN 70 DEG C,3A,250V	80009	260-2332-01
S906	260-2332-00	.300134			SWITCH,THRMSTC:NC,60 OPEN,3A,250V	TK0191	260-2332-00
S1000	260-2324-00				SW,SENSITIVE:SPDT,3A,250VAC,INTERLOCK	TK0191	260-2324-00
S1002	260-2324-00				SW,SENSITIVE:SPDT,3A,250VAC,INTERLOCK	TK0191	260-2324-00
S1004	260-2324-00				SW,SENSITIVE:SPDT,3A,250VAC,INTERLOCK	TK0191	260-2324-00
T100	120-1756-00				XFMR,PWR,STPON:MAIN POWER	TKOBZ	STT-047-00
T200	120-1755-00	.300000	.300183		XFMR,PWR,STU:COLLECTOR POWER	TKOBZ	STT-048-00
T200	120-1755-01	.300184			XFMR,PWR,STU:CMOS,CLK GEN & READY INTFC 8MH Z,82C284,DIP18	TKOBY	ORDER BY DESCR
T800	120-1757-00				XFMR,PWR,STU:HIGH VOLTAGE	TKOBZ	STT0045-00
U800	119-2682-00	.300000	.300143		HIGH V MODULE:W/3 RELAY	S5218	STC-009-00
U800	119-2682-01	.300144			MODULE:HIGH VOL,W/3 RELAY	S5218	ORDER BY DESCR
V100	154-0928-00				ELECTRON TUBE:CRT,P31,INT SCALE	80009	154-0928-00
W14	196-3099-00				LEAD,ELECTRICAL:24 AWG,10.0 L	TK0191	196-3099-00
W16	196-3191-00	.300000	.300233		LEAD,ELECTRICAL:18 AWG,7.0 L,8-0	80009	196-3191-00
W16	198-5667-00	.300234	.300351		WIRE SET,ELEC:LINE FILTER,371	80009	198-5667-00
W16	198-5667-01	.300352			WIRE SET,ELEC:LINE FILTER,371/371A	80009	198-5667-01
W17	196-3192-00				LEAD,ELECTRICAL:18 AWG,6.0 L,5-4	80009	196-3192-00
W18	196-3193-00	.300000	.300233		LEAD,ELECTRICAL:18 AWG,7.0 L,8-9	80009	196-3193-00
W19	196-3188-00				LEAD,ELECTRICAL:18 AWG,5.0 L,8-01	80009	196-3188-00
W20	196-3189-00				LEAD,ELECTRICAL:18 AWG,5.0 L,8-02	80009	196-3189-00
W30	174-0981-00				CA ASSY,SP,ELEC:2,26 AWG,2.0 L,RIBBON	80009	174-0981-00
W40	174-0981-00				CA ASSY,SP,ELEC:2,26 AWG,2.0 L,RIBBON	80009	174-0981-00
W66	174-0304-00				CA ASSY,SP,ELEC:2,26 AWG,6.0 L,RIBBON	TK0191	174-0304-00
W72	174-0982-00				CA ASSY,SP,ELEC:10,22 AWG,21.7 L	80009	174-0982-00
W110	196-3096-00				LEAD,ELECTRICAL:18 AWG,3.5 L,5-4	TK0191	196-3096-00
W140	174-0983-00				CA ASSY,SP,ELEC:34,28 AWG,7.0 L	80009	174-0983-00

Replaceable Electrical Parts-371 Curve Tracer

Component No.	Tektronix Part No.	Serial/Assembly No.		Name & Description	Mfr. Code	Mfr. Part No.
		Effective	Discont			
W142	174-0984-00			CA ASSY,SP,ELEC:3,26 AWG,23.6 L,RIBBON	80009	174-0984-00
W146	174-0985-00			CA ASSY,SP,ELEC:5,26 AWG,7.8 L,RIBBON	80009	174-0985-00
W180	174-0314-00			CA ASSY,SP,ELEC:9,26 AWG,7.5 L,RIBBON	TK0191	174-0314-00
W182	174-0309-00			CA ASSY,SP,ELEC:10,22 AWG,5.0 L,RIBBON	TK0191	174-0309-00
W190	174-0328-00			CA ASSY,SP,ELEC:4,18 AWG,15.5 L	TK0191	174-0328-00
W194	174-0308-00			CA ASSY,SP,ELEC:6,22 AWG,20.0 L,RIBBON	TK0191	174-0308-00
W270	174-0986-00			CA ASSY,SP,ELEC:3,18 AWG,10.0 L	80009	174-0986-00
W280	174-0313-00			CA ASSY,SP,ELEC:2,26 AWG,30.0 L,RIBBON	TK0191	174-0313-00
W290	174-0312-00			CA ASSY,SP,ELEC:2,26 AWG,22.0 L,RIBBON	TK0191	174-0312-00
W400	174-0296-00			CA ASSY,SP,ELEC:34,28 AWG,5.5 L,RIBBON	TK0191	174-0296-00
W410	174-1007-00			CA ASSY,SP,ELEC:34,22 AWG,15.0 L	80009	174-1007-00
W412	174-1008-00			CA ASSY,SP,ELEC:12,22 AWG,15.0 L	80009	174-1008-00
W610	174-0987-00			CA ASSY,SP,ELEC:23,22 AWG,27.5 L	80009	174-0987-00
W616	174-0988-00			CA ASSY,SP,ELEC:12,22 AWG,20.4 L	80009	174-0988-00
W617	174-0989-00			CA ASSY,SP,ELEC:2,26 AWG,15.7 L,RIBBON	80009	174-0989-00
W618	174-0990-00			CA ASSY,SP,ELEC:2,26 AWG,15.7 L,RIBBON	80009	174-0990-00
W622	174-0991-00			CA ASSY,SP,ELEC:6,26 AWG,23.6 L,RIBBON	80009	174-0991-00
W626	174-0992-00			CA ASSY,SP,ELEC:3,26 AWG,8.6 L,RIBBON	80009	174-0992-00
W632	174-0993-00			CA ASSY,SP,ELEC:6,26 AWG,23.6 L,RIBBON	80009	174-0993-00
W690	174-0994-00			CA ASSY,SP,ELEC:6,26 AWG,15.7 L,RIBBON	80009	174-0994-00
W695	174-0995-00			CA ASSY,SP,ELEC:7,26 AWG,20.0 L,RIBBON	80009	174-0995-00
W706	198-5616-00			WIRE SET,ELEC:	80009	198-5616-00
W802	174-1146-00			CA ASSY,SP,ELEC:2,18 AWG,20 L,8-01 & 8-02	80009	174-1146-00
W902	174-0996-00			CA ASSY,SP,ELEC:3,22 AWG,7.0 L	80009	174-0996-00
W904	174-0997-00			CA ASSY,SP,ELEC:2,12 AWG,4.7 L	80009	174-0997-00
W906	174-0998-00			CA ASSY,SP,ELEC:4,26 AWG,13.3 L,RIBBON	80009	174-0998-00
W912	174-0999-00			CA ASSY,SP,ELEC:9,26 AWG,6.7 L,RIBBON	80009	174-0999-00
W914	174-1000-00			CA ASSY,SP,ELEC:3,26 AWG,7.0 L,RIBBON	80009	174-1000-00
W920	198-5616-00			WIRE SET,ELEC:	80009	198-5616-00
W1000	016-0908-00			BOX,TEST FXTR:	TKOCM	30-0231

Schematic Diagrams and Circuit Board Illustrations

Symbols

Graphic symbols and class designation letters are based on ANSI Standard Y32.2-1975.

Logic symbology is based on ANSI/IEEE Std 91-1984 in terms of positive logic. Logic symbols depict the logic function performed and may differ from the manufacturer's data.

The overline on a signal name indicates that the signal performs its intended function when it is in the low state.

Abbreviations are based on ANSI Y1.1-1972.

Other ANSI standards that are used in the preparation of diagrams by Tektronix, Inc. are:

Y14.15, 1966
Y14.2, 1973
Y10.5, 1968

Drafting Practices.
Line Conventions and Lettering.
Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering.

American National Standard Institute
1430 Broadway
New York, New York 10018

Component Values

Electrical components shown on the diagrams are in the following units unless noted otherwise:

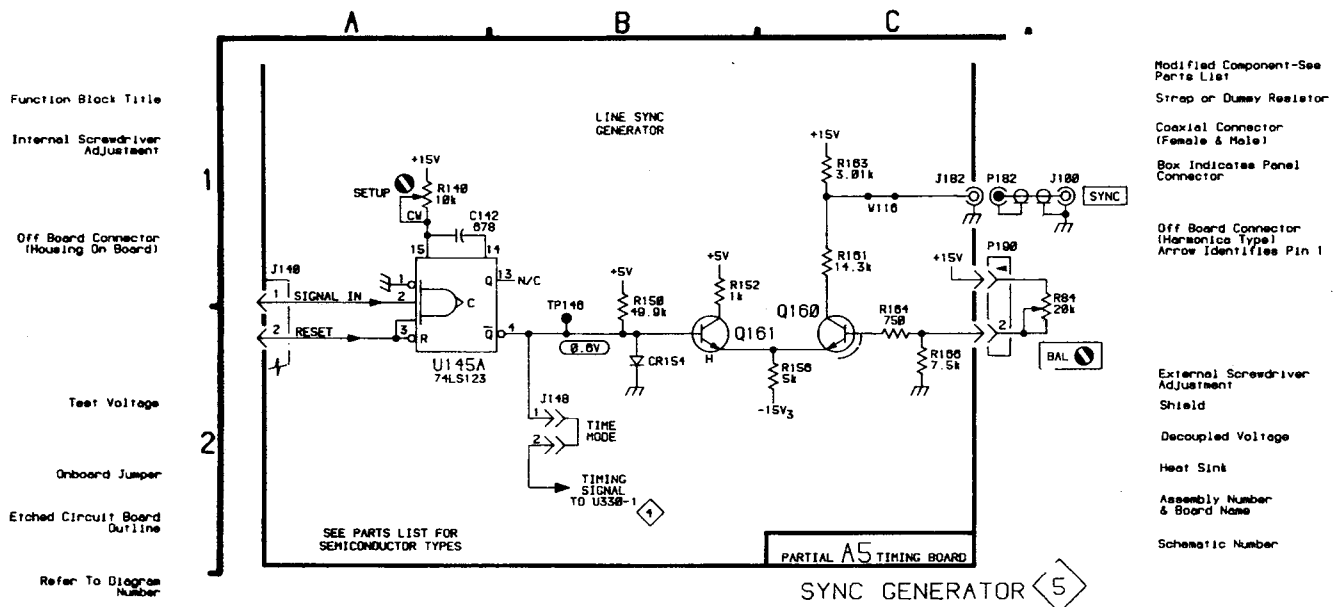
Capacitors = Values one or greater are in picofarads (pF). Values less than one are in microfarads (μ F).
Resistors = Ohms (Ω).

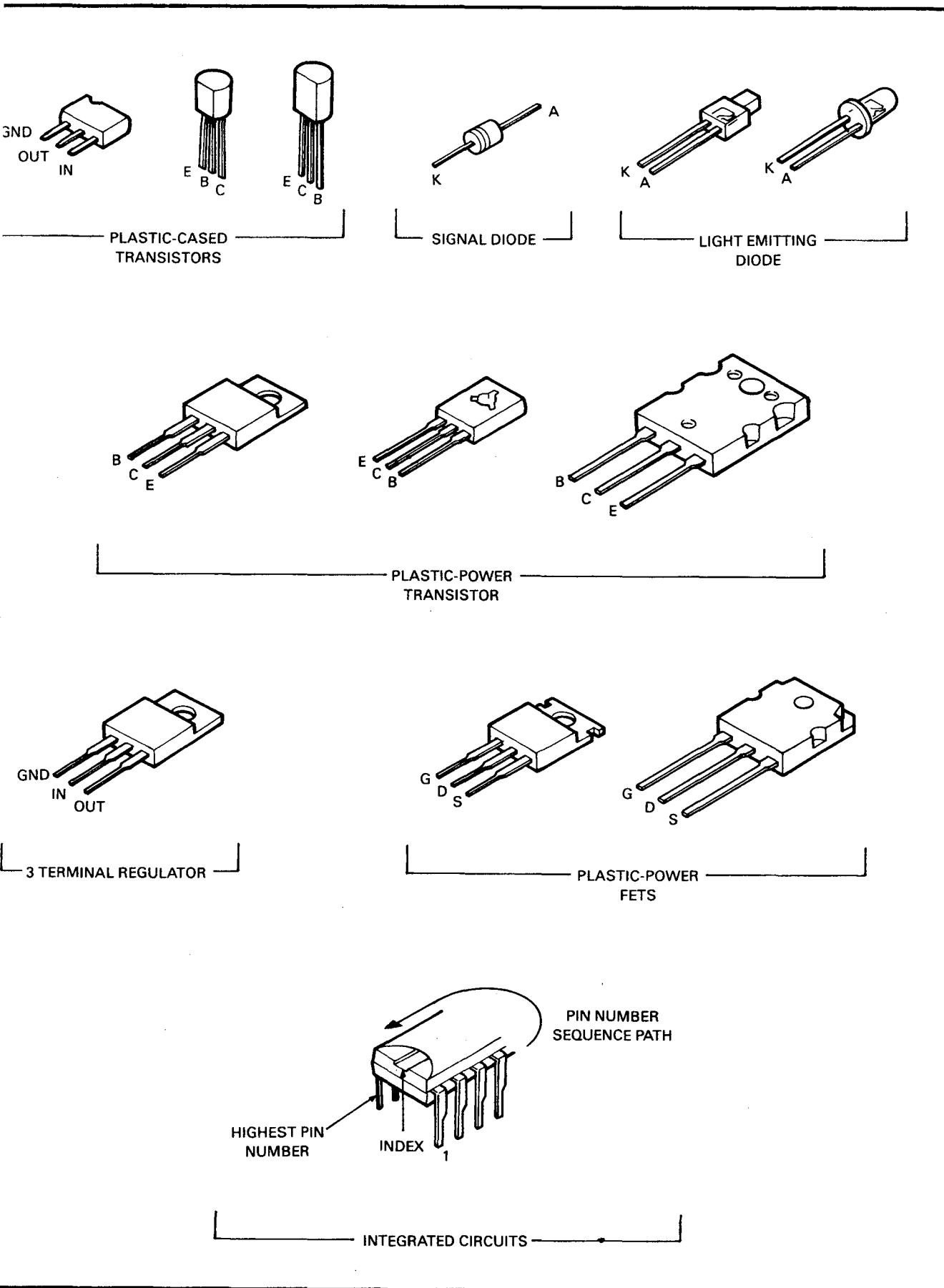
The information and special symbols below may appear in this manual.

Assembly Numbers and Grid Coordinates

Each assembly in the instrument is assigned an assembly number (e.g., A20). The assembly number appears on the circuit board outline on the diagram, in the title for the circuit board component location illustration, and in the lookup table for the schematic diagram and corresponding component locator illustration. The Replaceable Electrical Parts list is arranged by assemblies in numerical sequence; the components are listed by component number.

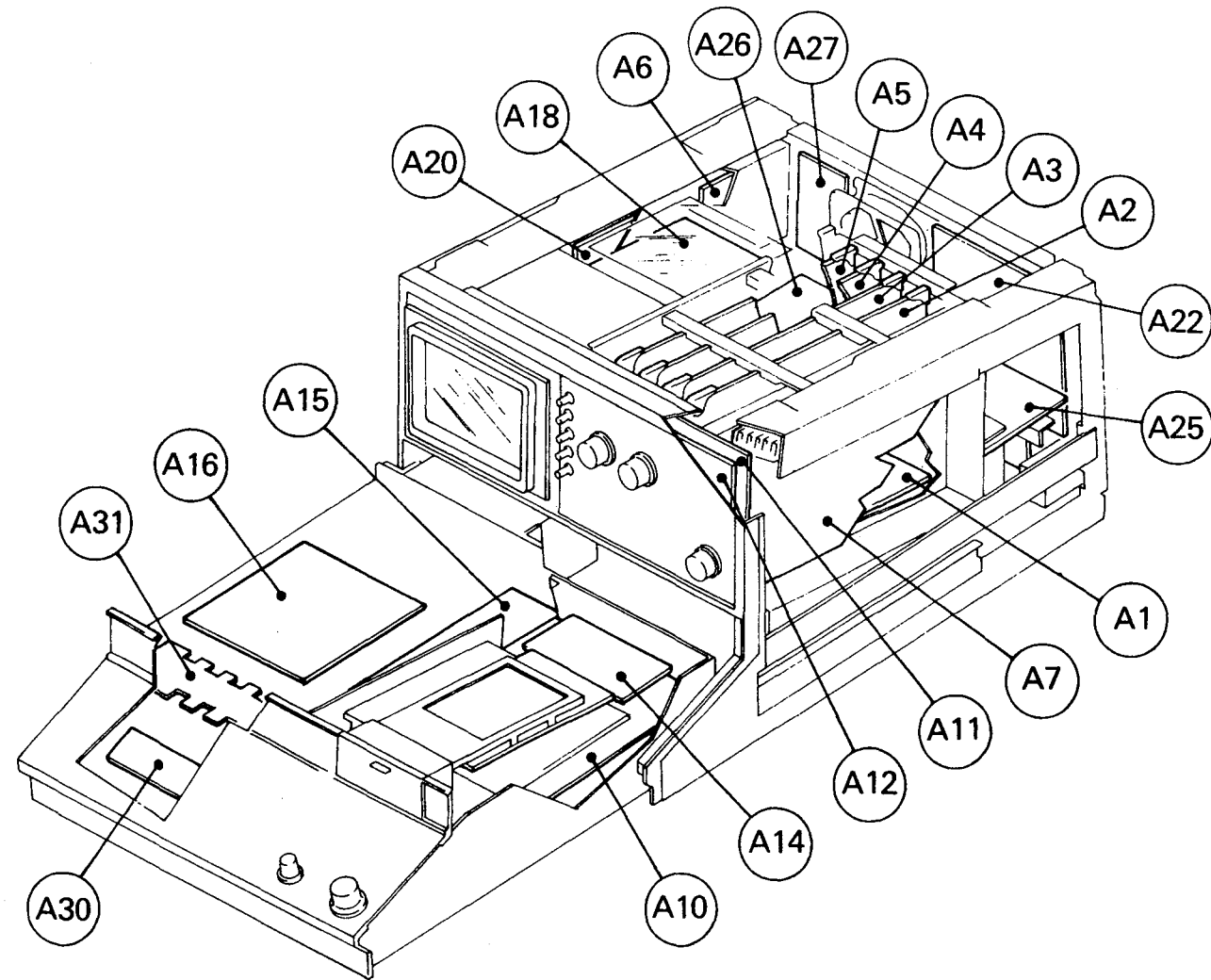
The schematic diagram and circuit board component location illustration have grids. A lookup table with the grid coordinates is provided for ease of locating the component. Only the components illustrated on the facing diagram are listed in the lookup table. When more than one schematic diagram is used to illustrate the circuitry on a circuit board, the circuit board illustration may only appear opposite the first diagram on which it was illustrated; the lookup table will list the diagram number of other diagrams that the circuitry of the circuit board appears on.





6804-700

Figure 7-1. Semiconductor Lead Configurations.

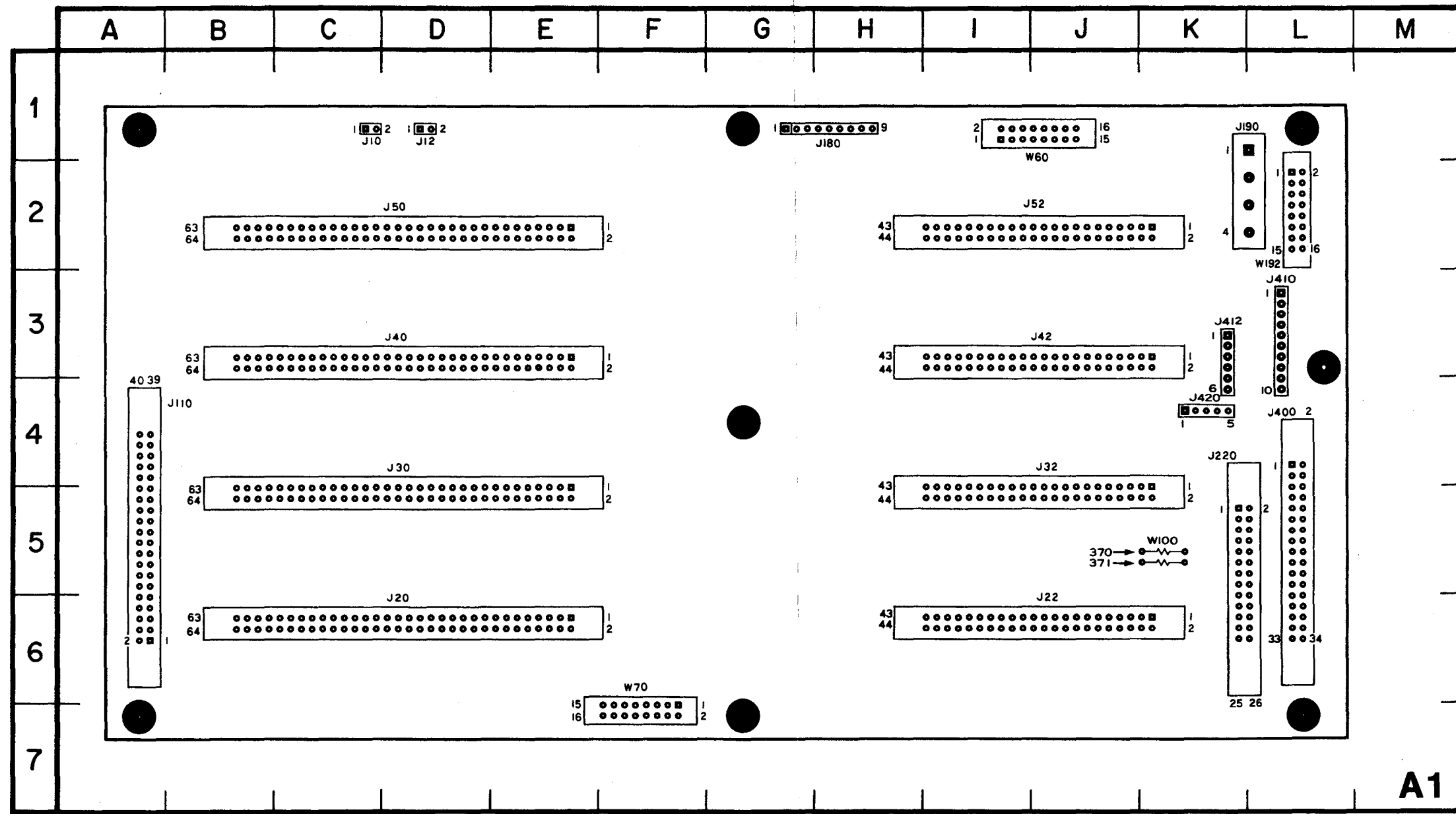


Name	Diagram Number	Name	Diagram Number
A1 Mother board	1, 10	A27 Primary	25
A2 CPU board	2, 3	A28 Lamp	25
A3 A/D board	4, 5, 6	A29 Lamp	25
A4 Digital Display	7, 8	A30 Connector	27
A5 Display Control	9, 10	A31 Relay	27
A6 Collector Supply Output	11	CRT	23
A7 Step Generator	12, 13	Fan	25, 28
A10 Sense	14, 15, 16	FET High Current Drivers	27
A11 Main Key	17	HV Output Module	16, 29
A12 Sub Key	18, 17	HV Resistors	16, 29
A14 Lower Key	19	HV Transformer T800	16, 29
A15 High Current Power Supply	20	Mains Power	25, 28
A16 High Current Control	21	Patch Panel	27
A18 CRT Output	22	Primary Transformer T100	25
A20 CRT HV Power Supply	23	Primary Transformer T200	25, 11
A22 Interface	24	Sense Resistor	27
A24 Bubble Control	29	Test Fixture	27
A25 Main Power Supply	25	Thermal switches	27
A26 Collector Power Supply	11		

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Figure 7-2. Circuit Board Locator.

Assembly A1



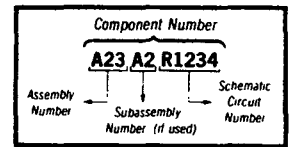
A1

6804-702

Figure 7-3. A1-Mother circuit board assembly.

⚡ Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List

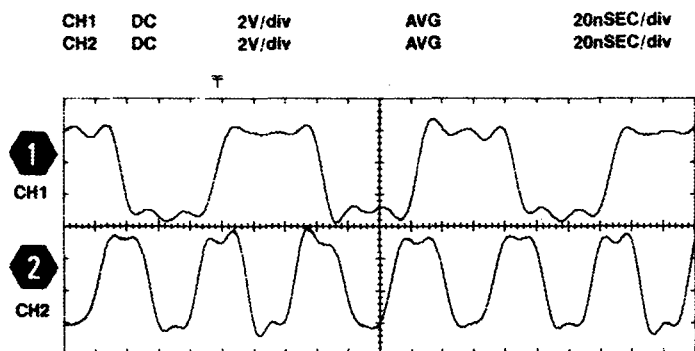
MOTHER BOARD 1

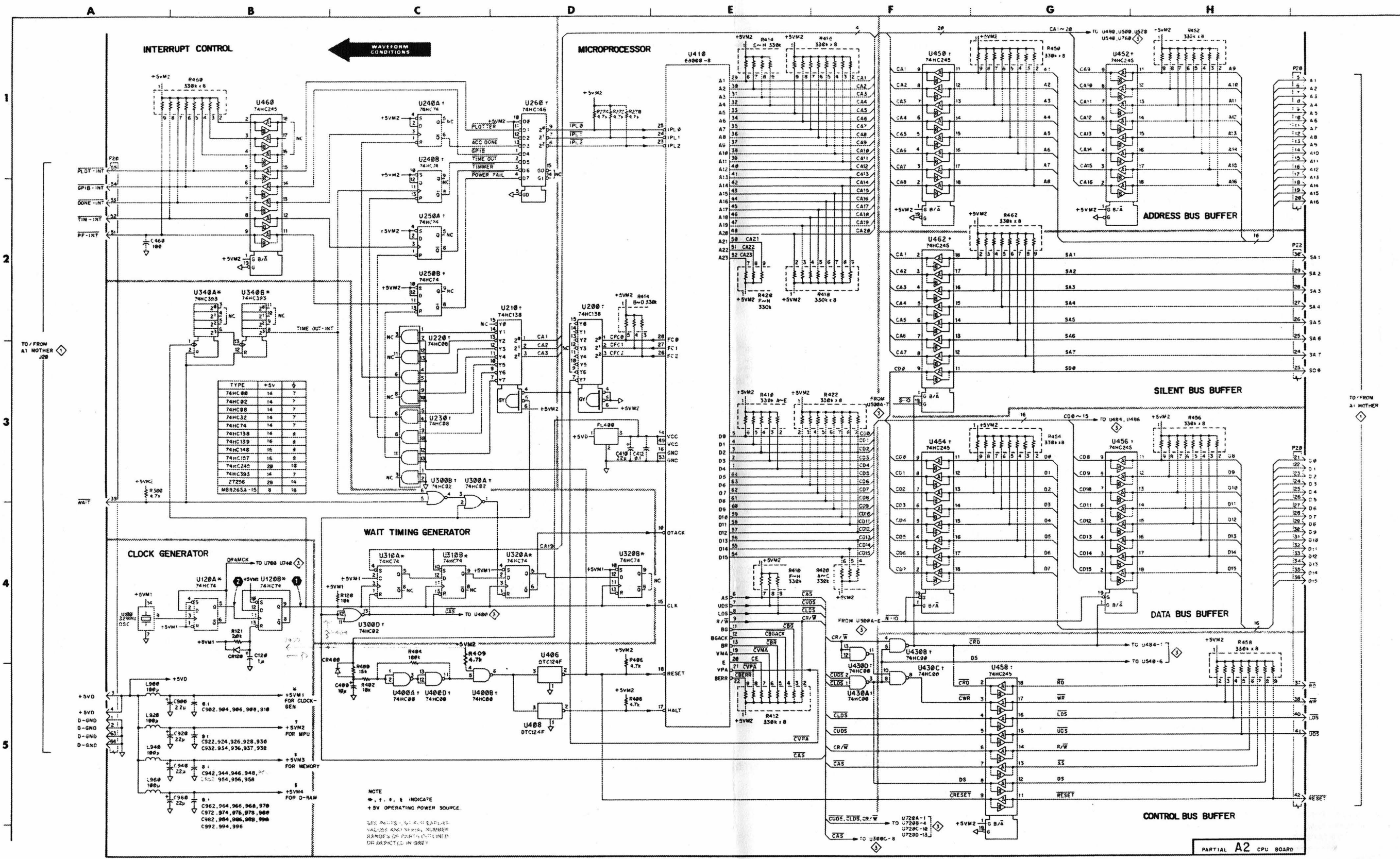
ASSEMBLY A1								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
J10	A1	D2	J50	B4	D2	J412	E1	L4
J12	A2	D2	J52	B2	J2	J420	EB	K4
J20	D4	D6	J110	E2	B4			
J22	D2	J6	J180	A3	H2	W60	A4	J2
J30	C4	D5	J190	A7	L2	W70	A5	F7
J32	C2	J5	J220	E6	L5	W100	B6	K5
J40	C4	D4	J400	E4	L4	W192	A2	L3
J42	C2	J4	J410	A6	L3			
CHASSIS MOUNTED PARTS								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION			
J500	E4	CHASSIS	L100	A1	CHASSIS			
J510	A6, E1	CHASSIS	L120	A2	CHASSIS			

WAVEFORM CONDITIONS

Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 M Ω input impedance (Tektronix 2430 with plotter) with the 371 set to the power-up default (initial) settings.





TYPE	+5V	Q
74HC00	14	7
74HC02	14	7
74HC03	14	7
74HC04	14	7
74HC08	14	8
74HC10	14	8
74HC13	14	8
74HC14	14	8
74HC15	14	8
74HC20	14	8
74HC24	14	8
74HC30	14	8
74HC32	14	8
74HC33	14	8
74HC36	14	8
74HC39	14	8
74HC45	14	8
74HC47	14	8
74HC50	14	8
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74HC149	14	8
74HC150	14	8
74HC151	14	8
74HC152	14	8
74HC153	14	8
74HC154	14	8
74HC155	14	8
74HC156	14	8
74HC157	14	8
74HC158	14	8
74HC159	14	8
74HC160	14	8
74HC161	14	8
74HC162	14	8
74HC163	14	8
74HC164	14	8
74HC165	14	8
74HC166	14	8
74HC167	14	8
74HC168	14	8
74HC169	14	8
74HC170	14	8
74HC171	14	8
74HC172	14	8
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74HC174	14	8
74HC175	14	8
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74HC178	14	8
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74HC180	14	8
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74HC183	14	8
74HC184	14	8
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74HC186	14	8
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74HC193	14	8
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74HC198	14	8
74HC199	14	8
74HC200	14	8

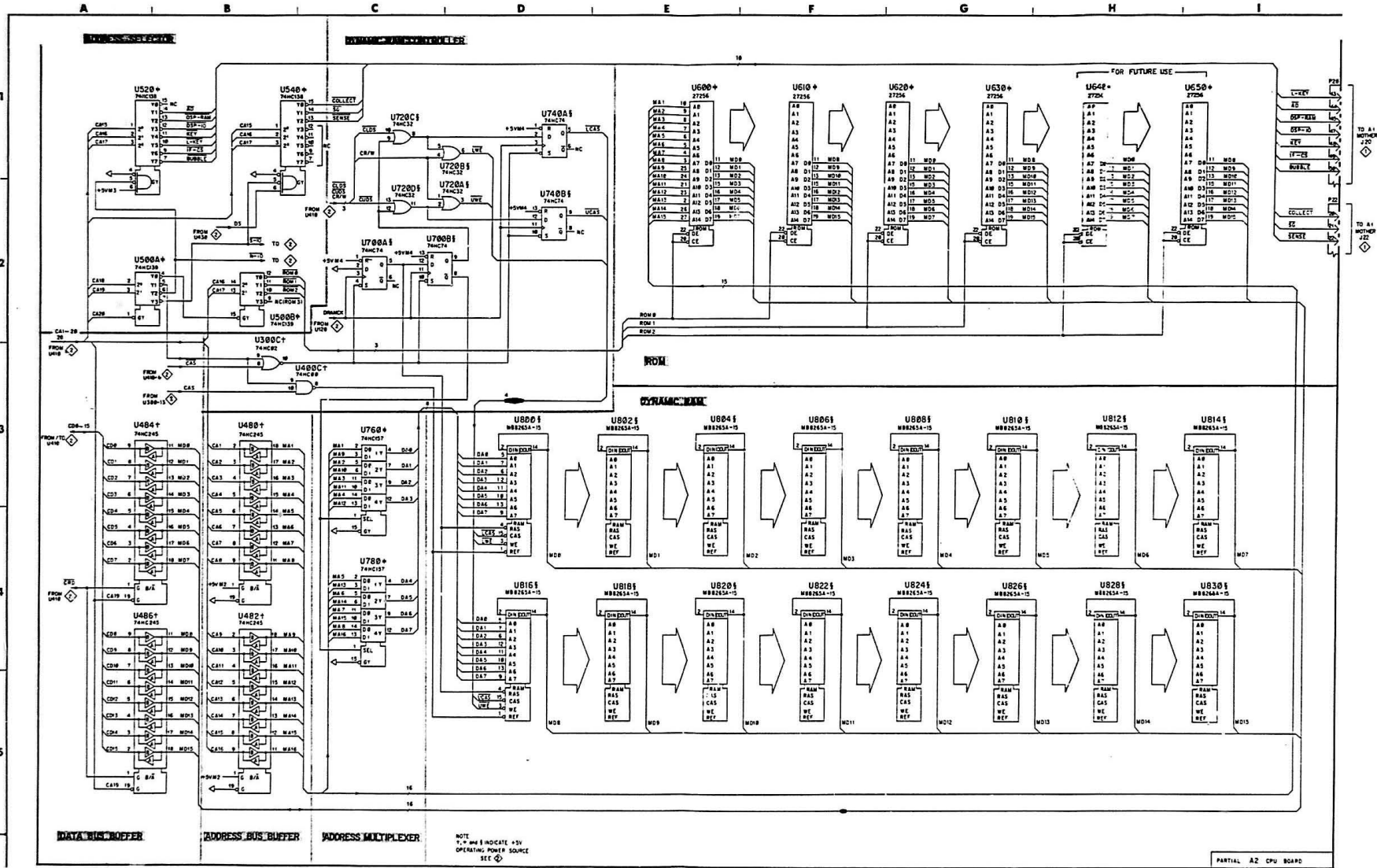
NOTE
 * , + , # , & INDICATE
 +5V OPERATING POWER SOURCE.
 SEE PARTS LIST FOR VALUES AND PART NUMBER RANGES OF PARTS OUTLINED OR INDICATED IN GREY.

MPU 2

ASSEMBLY A2								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C120	B4		CR120	B4		R452	H1	F6
C400	C5	L4	CR400	C5	L4	R454	G3	E6
C410	D3	L3				R456	H3	D6
C412	E3	L2	FL400	D3M3		R458	H5	G5
C460	A2	G6				R460	B1	G6
C900	B5	L5				R462	G2	J6
C902	B5	L4	L900	A5	L5			
C904	B5	J4	L920	A5	L5	U100	A4	H2
C906	B5	H3	L940	A5	A3	U120A	B4	H2
C908	B5	H2	L960	A5	B2	U120B	B4	H2
C910	B5	H2				U200	D3	K6
C920	B5	K5	P20	A1,H1,H3	D7	U210	D3	G7
C922	B5	J6	P22	H2	J7	U220	C3	G7
C924	B5	G6				U230	C3	H7
C926	B5	D6	R120	C4	I3	U240A	C1	H8
C928	B5	D6	R121	B4		U240B	C1	H8
C930	B5	C6	R270	D1	J5	U250A	C2	H7
C932	B5	G7	R272	D1	J5	U250B	C2	H7
C934	B5	H7	R274	D1	K5	U260	D1	I6
C936	B5	H6	R300	A3	I5	U300A	C3	K4
C937	B5	G4	R400	C5	L4	U300B	C3	K4
C938	B5	K4	R402	C5	L4	U300D	C4	K4
C940	B5	B3	R404	C5	M4	U310A	C4	I4
C942	B5	C4	R406	D5	L3	U310B	C4	I4
C944	B5	B4	R408	D5	L3	U320A	D4	H3
C946	B5	C4	R409	C4	L3	U320B	D4	H3
C948	B5	B4	R410A	E3	I3	U340A	B2	L4
C954	B5	G2	R410B	E3	I3	U340B	B2	L4
C956	B5	H3	R410C	E3	I3	U400A	C5	M4
C958	B5	I4	R410D	E3	I3	U400B	C5	M4
C960	B5	B2	R410E	E3	I3	U400D	C5	M4
C962	B5	E2	R410F	E4	I3	U406	D5	L4
C964	B5	E2	R410G	E4	I3	U408	D5	L4
C966	B5	D2	R410H	E4	I3	U410	E1	J2
C968	B5	D2	R412	E5	K3	U430A	F5	J4
C970	B5	E3	R414B	D2	L3	U430B	F4	J4
C972	B5	E3	R414C	D2	L3	U430C	F5	J4
C974	B5	D3	R414D	D2	L3	U430D	F4	J4
C976	B5	D3	R414E	E1	L3	U450	F1	F6
C978	B5	C2	R414F	E1	L3	U452	G1	E6
C980	B5	C2	R414G	E1	L3	U454	F4	E6
C982	B5	B2	R414H	E1	L3	U456	G3	C6
C984	B5	B2	R416	F1	L3	U458	G5	G6
C986	B5	C3	R418	F2	K3	U460	B2	G6
C988	B5	C3	R420A	F4	J2	U462	F2	J6
C990	B5	B3	R420B	F4	J2			
C992	B5	B3	R420C	F4	J2			
C994	B5	G3	R420F	E2	J2			
C996	B5	G2	R420G	E2	J2			
			R420H	E2	J2			
			R422	F3	I3			

MEMORY 3

ASSEMBLY A2								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P20	I1	D7	U830	G1	B5	U806	F3	D2
P22	I2	J7	U840	H1	D5	U808	G3	F3
			U850	I1	B5	U810	G3	E3
U300C	B2	K4	U700A	C2	G3	U812	H3	E3
U400C	C3	M4	U700B	C2	G3	U814	I3	D3
U480	B3	F4	U720A	D2	H3	U816	D4	D2
U482	B4	F4	U720B	D1	H3	U818	E4	C2
U484	A3	D6	U720C	C1	H3	U820	E4	C2
U488	A4	C8	U720D	C2	H3	U822	F4	B2
U500A	A2	G4	U740A	D1	G2	U824	G4	D3
U500B	B2	G4	U740B	D2	G2	U826	G4	C3
U520	A1	H4	U760	C3	F3	U828	H4	C3
U540	B1	I4	U780	C4	F2	U830	I4	B3
U600	E1	D4	U800	D3	F2			
U610	F1	B4	U802	E3	E2			
U820	G1	D5	U804	E3	E2			



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MEMORY 3

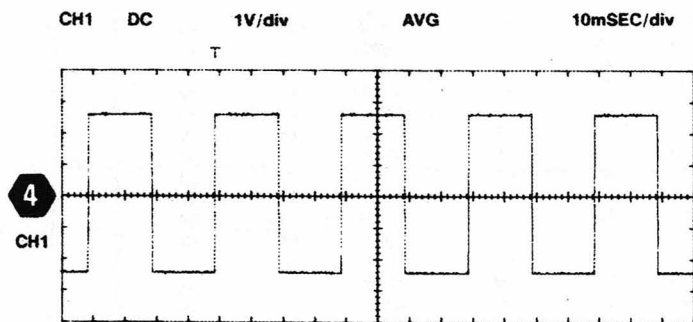
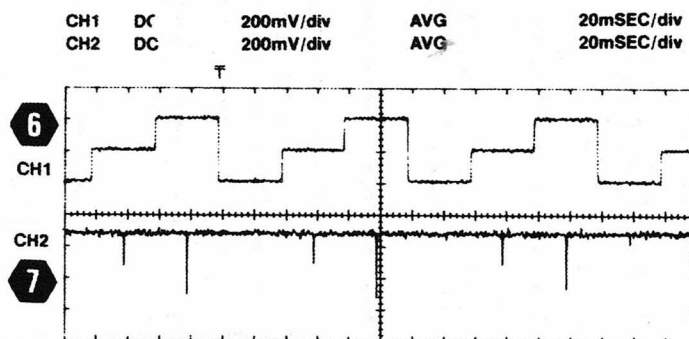
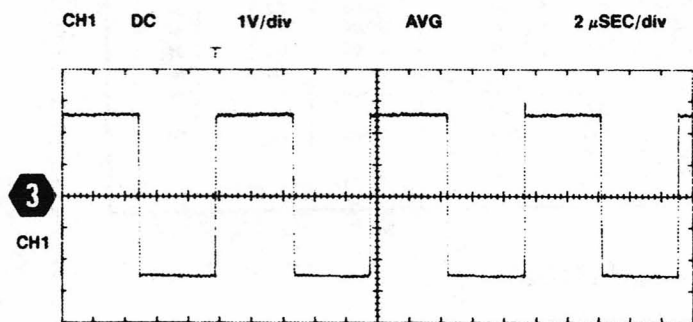
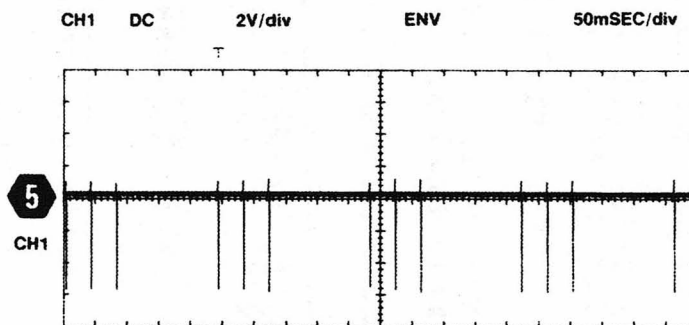
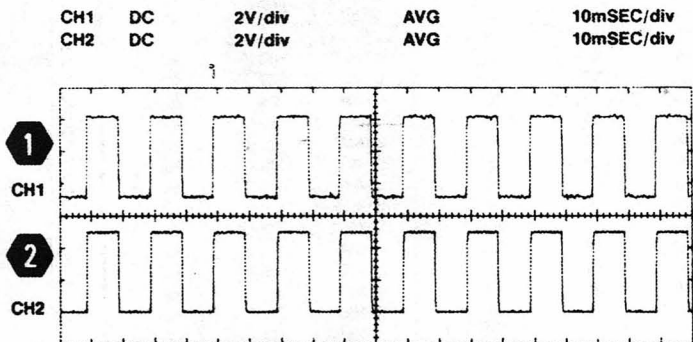
3 Memory

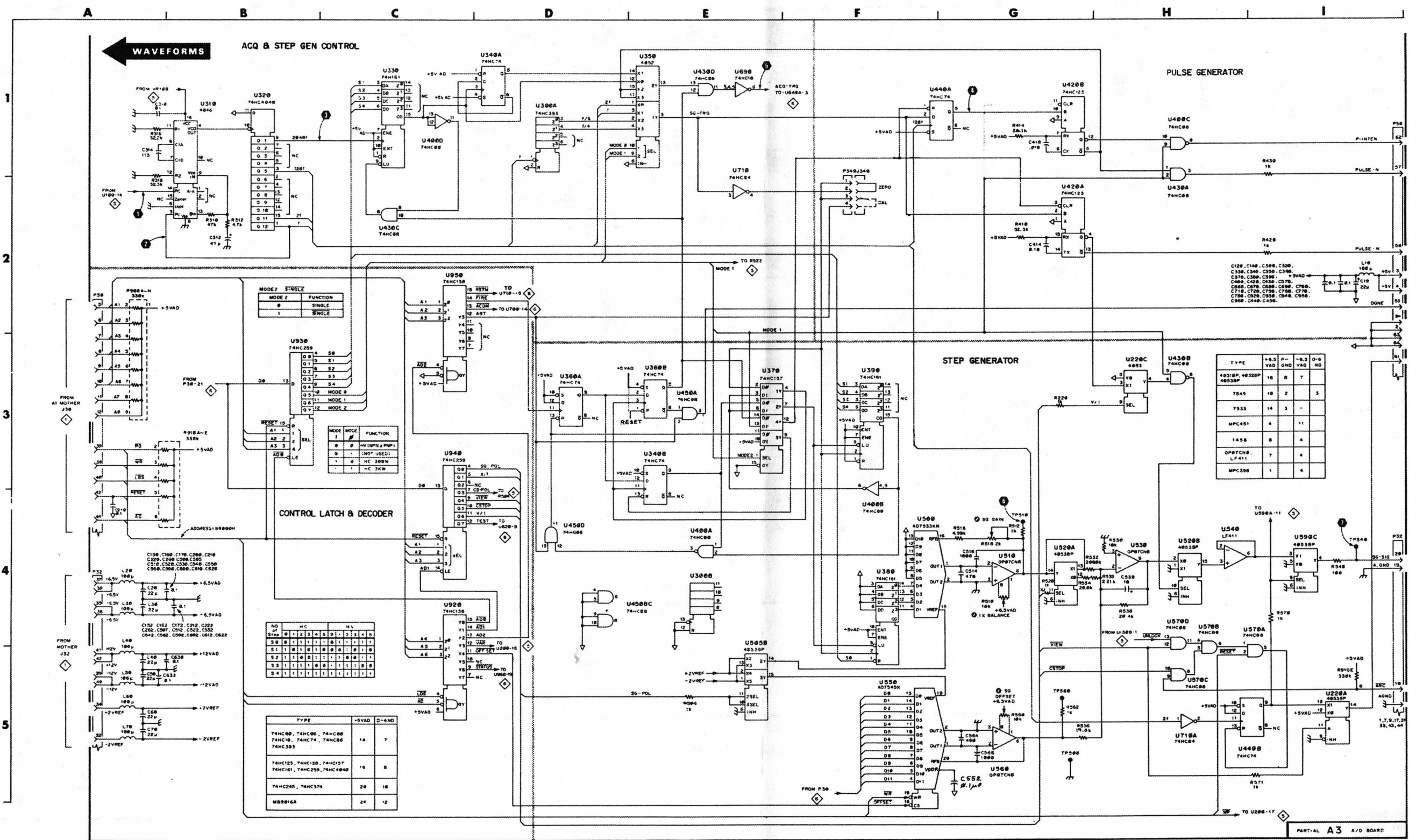
Reverse Side A3

WAVEFORM CONDITIONS

Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 MΩ input impedance (Tektronix 2430 with plotter) with the 371 set to the power-up default (initial) settings.





A/D CONTROL & STEP GENERATOR 4

ASSEMBLY A3								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C10	I2	F8	C810	B4	K4	R910	A3	C6
C20	A4	H8	C812	B4	K5	TP500	G5	K1
C30	A4	H8	C820	B4	L3	TP510	G4	G1
C40	A5	H8	C822	B4	L4	TP540	I4	J1
C50	A5	H6	C830	A5	H6	TP560	G5	J1
C60	A5	H6	C832	A5	H6	U220A	I5	H3
C70	A5	J6	C860	I2	F5	U220C	H3	H3
C120	I2	G1	C870	I2	E4	U300A	D1	C2
C140	I2	H1	C880	I2	F4	U300B	E4	C2
C150	B4	I1	C890	I2	E2	U310	B1	B2
C152	B4	I2	C700	I2	D3	U320	B1	C2
C160	B4	K1	C710	I2	E2	U330	C1	B3
C162	B4	K2	C720	I2	D4	U340A	D1	B3
C170	B4	L2	C750	I2	E4	U340B	E3	B3
C172	B4	L2	C780	I2	D4	U350	E1	C3
C200	B4	J4	C770	I2	E5	U360A	D3	B4
C210	B4	J4	C780	I2	D5	U360B	E3	B4
C212	B4	J4	C910	A4	C6	U370	E3	C4
C220	B4	H2	C920	I2	C5	U380	F4	C3
C222	B4	H4	C930	I2	C6	U390	F3	B4
C260	B4	J5	C940I2	C5	C5	U400A	E4	F3
C262	B4	J5	C950	I2	E5	U400B	F4	F3
C300	I2	C1	C960	I2	E5	U400C	C1	F3
C310	A1	B1	J340	F2	C2	U420A	G2G3	
C312	B2	B2	L10	I2	F7	U420B	G1	G3
C314	A1	B2	L20	A4	I8	U430A	H2	F2
C320	I2	C1	L30	A4	I6	U430B	H3	F2
C330	I2	B3	L40	A5	H6	U430C	C2	F2
C340	I2	B3	L50	A5	H6	U430D	E1	F2
C350	I2	C3	L60	A5	I6	U440A	G1	G2
C360	I2	B4	L70	A5	J6	U440	B15	G2
C370	I2	C4	P30	A2, I1	D7	U450A	E3	D5
C380	I2	D3	P32	I4	J7	U450B	D4	D5
C390	I2	B4	R220	G3	G4	U450C	D4	D5
C400	I2	F2	R310	B2	B2	U450D	D4	D5
C414	G2	G3	R312	B2	B2	U500	F4	H3
C418	G1	F4	R316	A1	B2	U505B	E5	H4
C420	I2	G2	R318	A1	B2	U510	G4	I3
C430	I2	F1	R410	G2	G3	U520A	G4	J3
C500	B4	H2	R414	G1	G3	U520B	H4	J3
C505	B4	H3	R420	I2	G3	U530	H4	K3
C507	B4	H3	R430	I2	F3	U540	H4	K3
C510	B4	I3	R430	I2	F3	U550	F5	I5
C512	B4	H3	R430	I2	F3	U560	G5	I4
C514	G4	H3	R508	E5	H4	U570A	I5	B5
C516	G4	I3	R510	G4	J1	U570B	H5	B5
C520	B4	J2	R512	G4	H2	U570C	H5	B5
C522	B4	J3	R516	G4	H2	U570D	H5	B5
C530	B4	K2	R518	G4	G2	U590	I4	K6
C532	B4	K3	R530	H4	J3	U690	E1	E3
C538	H4	J8	R532	G4	J3	U710A	H5	E3
C540	B4	K4	R534	G4	J3	U710B	E1	E3
C542	B4	K4	R535	H4	J3	U920	C4	C5
C550	B4	I4	R536	G5	J3	U930	B3	B6
C560	B4	I3	R538	H4	J3	U940	C3	C6
C562	B4	I4	R540	I4	J6	U950	C2	B5
C564	G5	I4	R560	G5	H1			
C566	G5	I4	R562	G5	J3			
C570	I2	B5	R570	I4	K6			
C590	B4	K5	R571	I5	H3			
C592	B4	K6	R800	A2	D6			
C600	B4	L5						
C602	B4	L5						

COLLECTOR SUPPLY GEN 5

ASSEMBLY A3								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C100	B2	D1	R134	C1	D2	R522	G3	J3
C101	A2	D1	R136	C1	D2	TP230	H3	J1
C102	B2	D1	R145	C2	I2	TP290	H2	J1
C110	A2	E2	R150	E2	J2	U110	B2	E2
C112	B3	F2	R151	E2	J2	U120	C2	G2
C114	B2	E2	R152	E2	J2	U130A	C1	D2
C136	C1	E2	R153	E3	J2	U130B	B1	D2
C156	E3	J2	R154	E3	I2	U140A	C2	H2
C158	E2	J2	R155	E3	I2	U140B	C3	H2
C167	B4	I2	R156	E3	I2	U140C	C3	H2
C168	E3	K1	R157	E3	I2	U140D	C2	H2
C169	ED3	J2	R158	E2	J2	U150	D2	I2
C214	G3	J4	R159	E2	J2	U160A	E3	K2
C216	G3	I4	R160	E3	K2	U160B	D3	K2
C264	G2	J4	R162	R2	K2	U160C	B4	K2
C268	G2	J4	R164	E3	K2	U160D	F3	K2
C268	G2	K4	R165	B4	K2	U170A	D3	L2
CR164	E3	K2	R166	E3	K2	U170B	D3	L2
CR168	B4	I2	R167	B4	K2	U200	F3	J5
CR169	D3	J3	R168	B4	I2	U210A	G3	J4
CR170	E3	J2	R169	D3	J2	U210B	G2	J4
P30	A3	D7	R170	E3	J2	U220B	D3	H3
P32	H2	J7	R172	D3	L2	U260A	G2	J4
R100	A2	D1	R176	D3	K2	U260B	G2	J4
R102	A2	D1	R178	D3	K2	U505A	F4	H4
R110	B3	F2	R180	B3	I2	U520C	G2	J3
R112	B3	F2	R182	B4	J2	U590A	H3	K6
R116	B2	F2	R212	G3	I4	U590B	H2	K6
R118	B3	F2	R230	H3	J6	VR100	A2	D2
R130	B1	D2	R260	G2	J4			
R132	B1	D2	R262	G2	J4			
			R266	G2	K4			
			R268	G2	K4			
			R290	H2	J6			
			R504	F4	H4			

ACQUISITION 6

ASSEMBLY A3								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C804	B3	L5	R612	A3	K5	U670E	D4	E4
C808	B3	L5	R614	B3	L1	U680A	C4	F4
C814	B3	K5	R616	B3	L2	U680E	B5	F4
C818	B3	L5	R620	C3	L3	U690B	E4	E3
C834	E3	H5	R622	C3	L3	U690C	C4	E3
C836	E3	H5	R624	C3	L3	U700	E5	D3
C840	E3	H5	R630	D3	H5	U710C	F5	E3
C842	E3	H5	R632	D3	H5	U710D	D4	E3
C844	E4	G6	R634	D3	H5	U710E	B4	E3
C846	E4	G6	R638	E3	H5	U710F	E5	E3
C848	E3	H5	R640	F3	H4	U720	F4	C4
C650	D3	G5	R770	A1	F6	U750	E2	E4
C652	E3	G6	R780	A2	D8	U760	F2	D4
C654	D3	F5	R960	B1	F6	U770	C1	E6
C656	D3	F6	U570B	D4	B5	U780	D1	D6
CR604	B3	L4	U600	B3	L5	U960	B1	E8
L650	D3	G6	U810	B3	K5	VR604	B3	L5
L654	D3	F5	U820	C3	L4	VR640	E3	H5
P30	A1	D7	U630	E3	H5	Y642	E4	G6
P32	A3	J7	U640	E3	H6			
R602	A3	L5	U650	D3	G5			
R604	B3	L1	U680A	A4	F6			
R606	B3	L2	U680B	B4	F6			
			U670A	C4	E4			
			U670B	D4	E4			
			U670D	C4	E4			

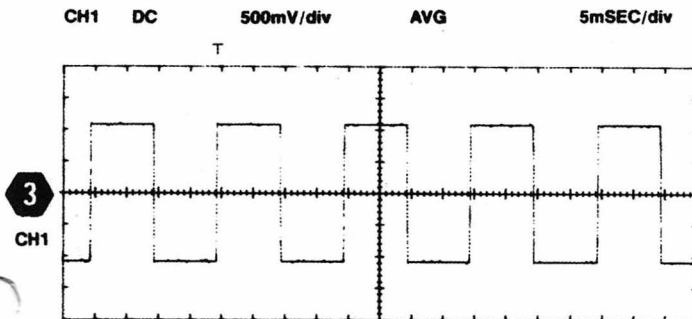
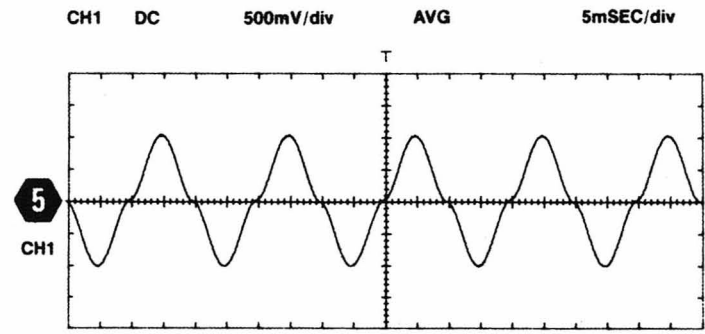
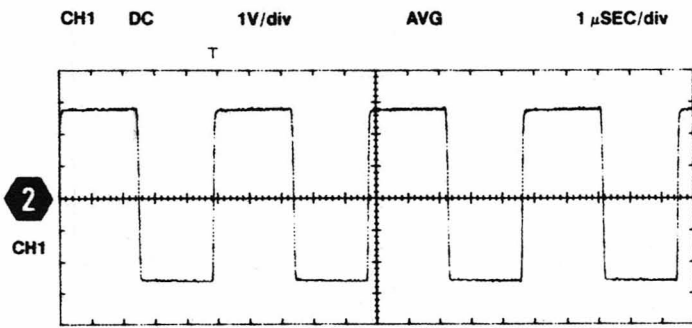
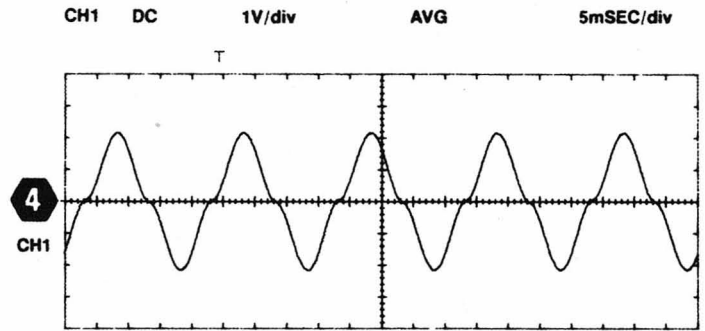
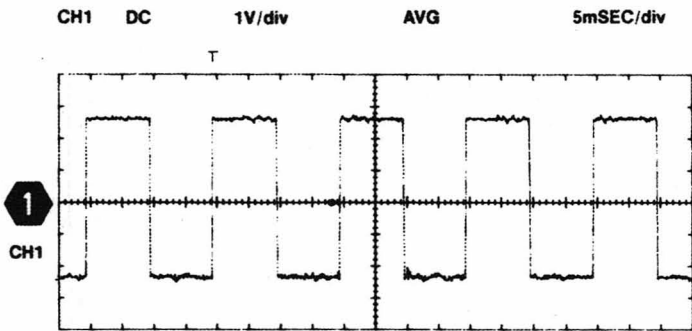
WAVEFORM CONDITIONS

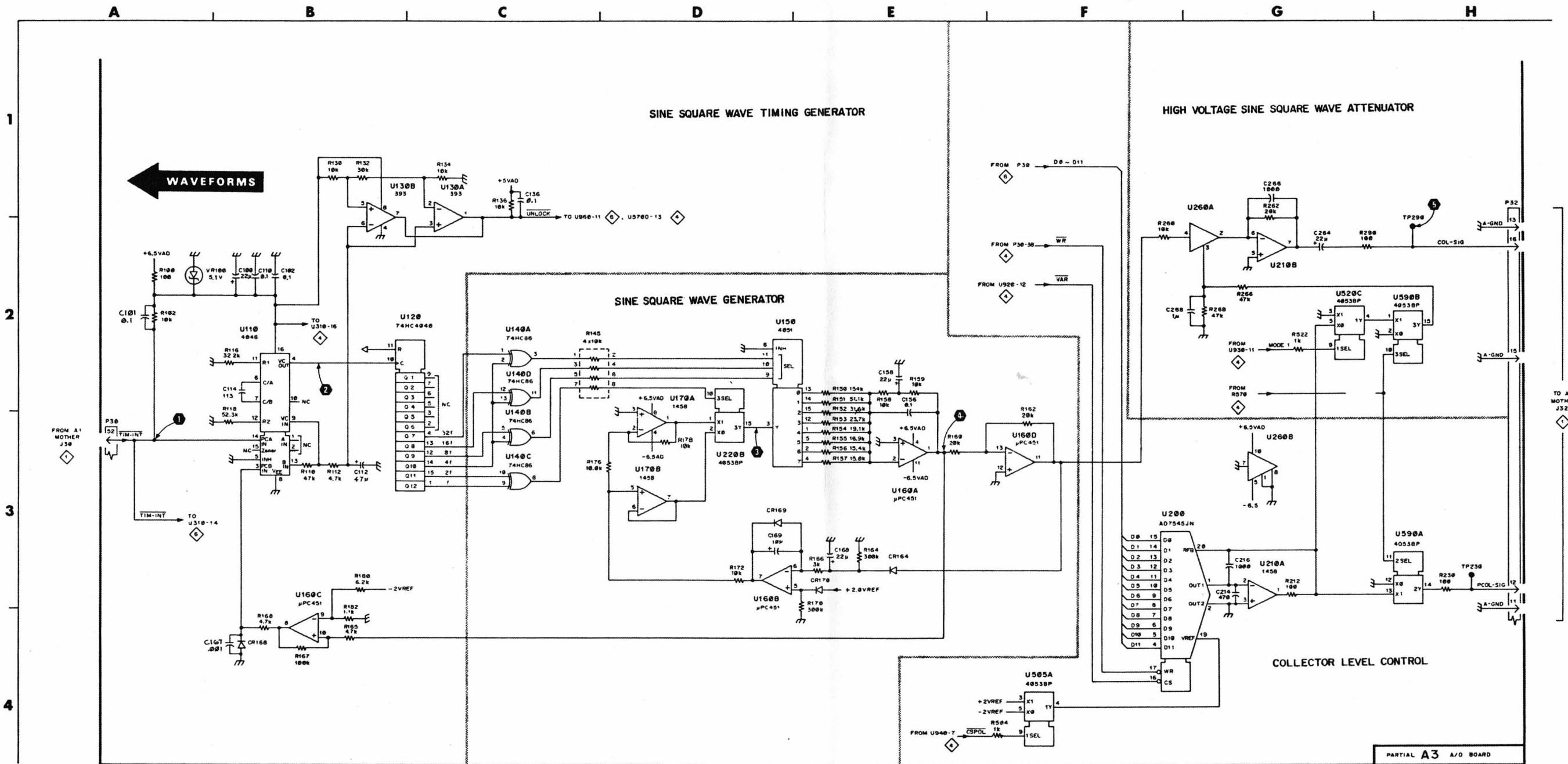
Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 M Ω input impedance (Tektronix 2430 with plotter) with the 371 under the following conditions:

Waveforms 1, 2, 3, and 4: These waveforms were obtained from the 371 set to the power-up default initial settings.

Waveform 5: This waveform was obtained from the 371 set to the initial settings, except that the COLLECTOR SUPPLY PEAK POWER WATTS is set to 30 W and COLLECTOR SUPPLY VARIABLE is set to 50%.





Collector Supply Generator

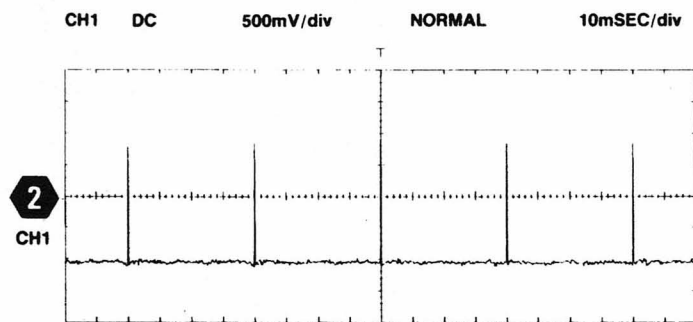
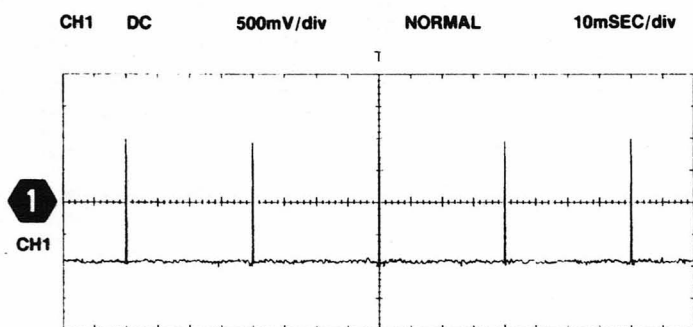
PARTIAL A3 A/D BOARD

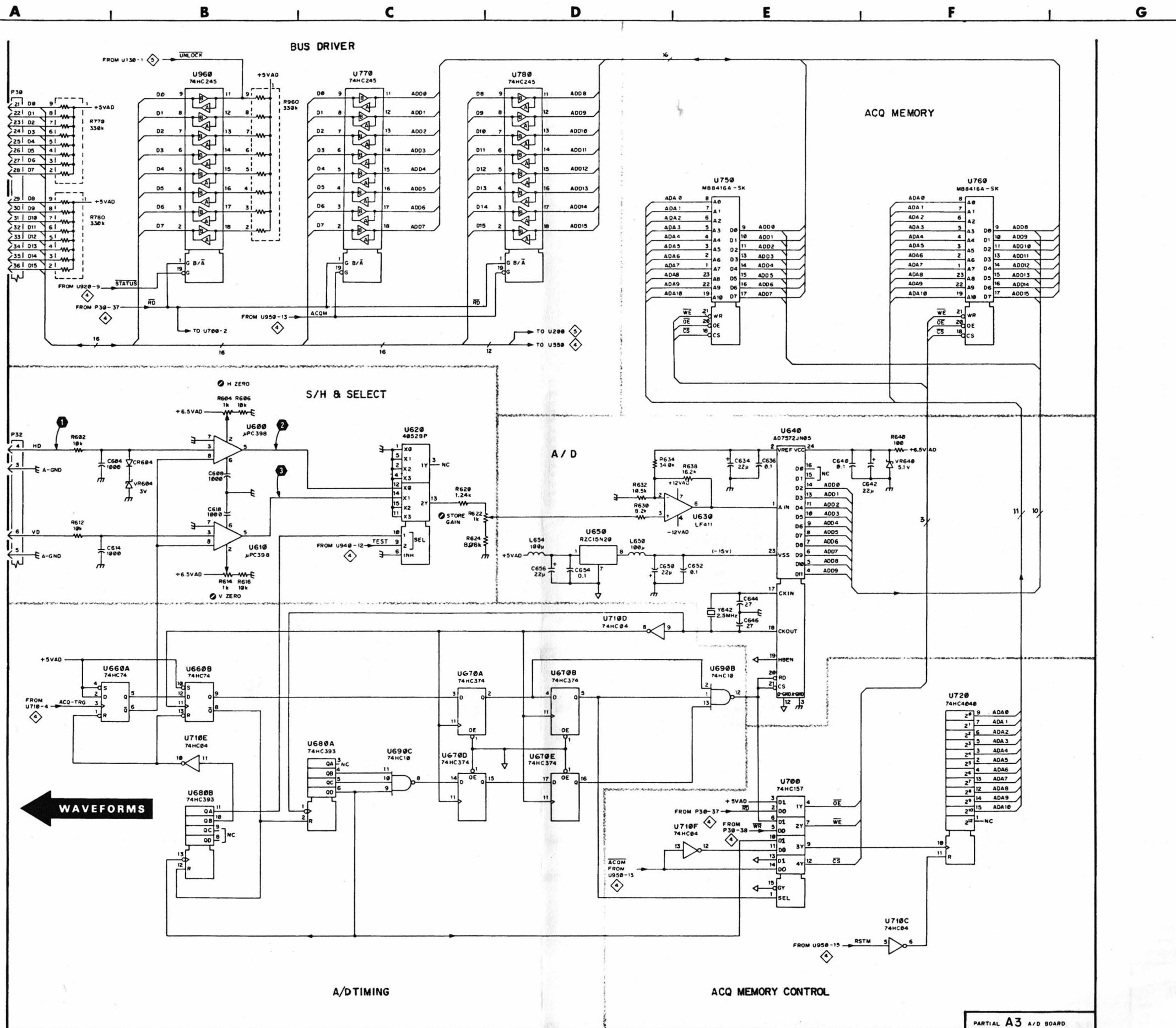
COLLECTOR SUPPLY GENERATOR 5

WAVEFORM CONDITIONS

Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 M Ω input impedance (Tektronix 2430 with plotter) with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY VARIABLE is set to 30%.

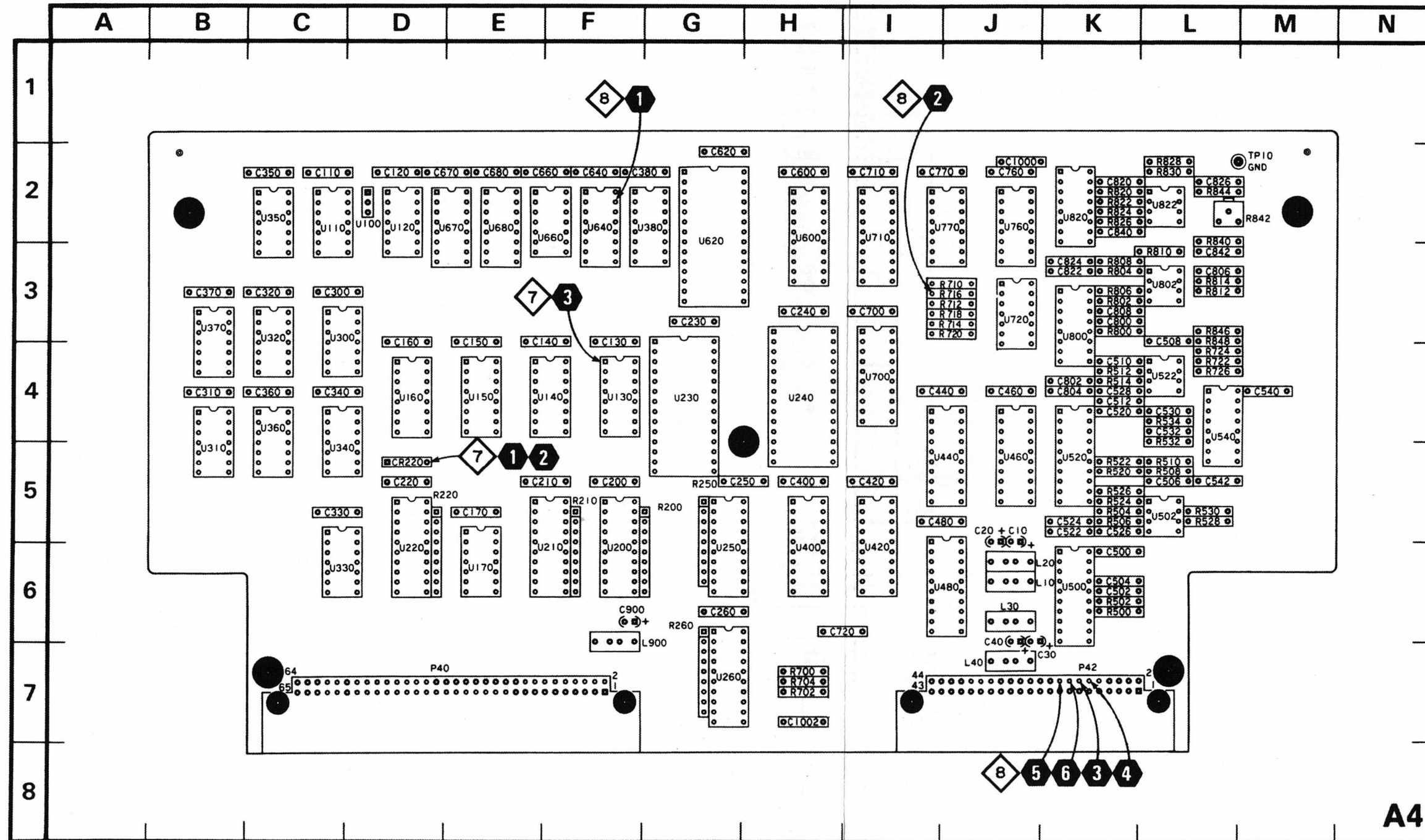




← WAVEFORMS

Acquisition Reverse Side A4

PARTIAL A3 A/D BOARD

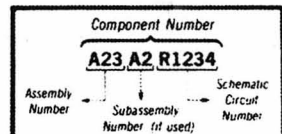


A4

6804-711

Figure 7-6. A4-Digital Display circuit board assembly.

⊗ Static Sensitive Devices
See Maintenance Section
COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

A4-Digital Display circuit board illustration to be used with diagram and

Assembly A4

DISPLAY D/A CONVERTER

7

ASSEMBLY A4								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C10	G1	J5	R510	F1	L5	R848	F4	L4
C20	G1	J5	R512	F1	K4	TP10	F1	M2
C500	E1	K6	R514	F1	K4			
C502	E1	K6	R520	E2	K5			
C504	E2	K6	R522	E3	K5	U310B	D5	B4
C506	F1	L5	R524	F2	K5	U400	B1	H6
C508	F1	L4	R526	E2	K5	U420	B2	I6
C510	F1	K4	R528	F2	L5	U440	C1	J5
C512	F2	K4	R530	F2	L5	U460	C2	J5
C520	E2	K4	R532	F2	L5	U480	C2	J6
C522	E2	K5	R534	F2	L4	U500	E1	K6
C524	E3	K5	R700	E4	H7	U502A	F1	L5
C526	F1	K5	R702	E4	H7	U502B	F2	L5
C528	F2	K4	R704	E5	H7	U520	E2	K5
C530	F2	L4	R710	F4	J3	U522A	F1	L4
C532	F2	L4	R712	F5	J3	U522B	F2	L4
C800	E3	K3	R714	F5	J3	U540A	G3	L4
C802	E3	K4	R716	F4	J3	U540B	G1	L4
C804	E3	K4	R718	F5	J3	U540C	G2	L4
C806	F3	L3	R720	F5	J4	U600	C4	H2
C808	F3	K3	R722	F3	L4	U620	D4	G2
C820	E4	K2	R724	F3	L4	U640	D4	F2
C822	E4	K3	R726	F4	L4	U660A	B5	F2
C824	E4	K3	R800	E3	K3	U660B	C5	F2
C826	F4	L2	R802	E3	K3	U670A	D1	E2
C840	F4	K2	R804	F3	K3	U670B	D1	E2
C842	G4	L3	R806	E3	K3	U680	E5	E2
C1000	G3	J2	R808	F3	K3	U700	B3	I4
C1002	G3	H7	R810	F3	L3	U710	B4	I2
			R812	G3	L3	U720A	F5	J3
L10	G1	K6	R814	G3	L3	U720B	F5	J3
L20	G1	K6	R820	E4	K2	U720C	F4	J3
			R822	E4	K2	U720D	F4	J3
P40	G5	D7	R824	F4	K2	U760	C3	J2
P42	G1	K7	R826	E4	K2	U770	C4	J2
			R828	F4	L2	U800	E3	K3
R500	E1	K6	R830	F4	L2	U802A	F3	L3
R502	E2	K6	R840	G4	L3	U802B	G3	L3
R504	F1	K5	R842	G4	M2	U820	E4	K2
R506	E1	K5	R844	G4	L2	U822A	F4	L2
R508	F1	L5	R846	F4	L3	U822B	G4	L2

DISPLAY OFFSET

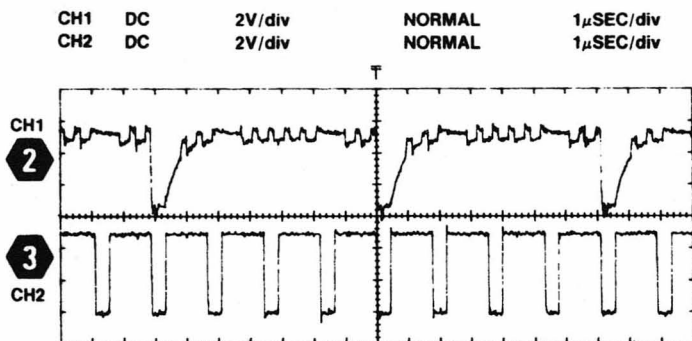
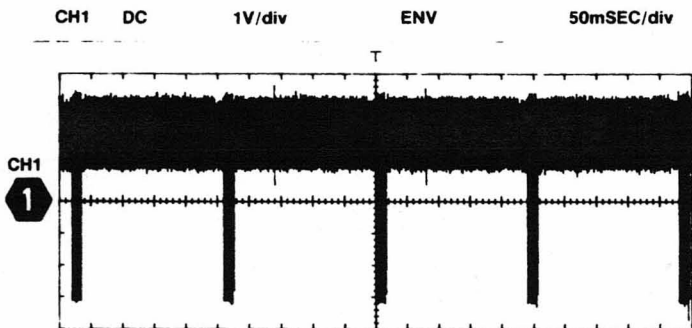
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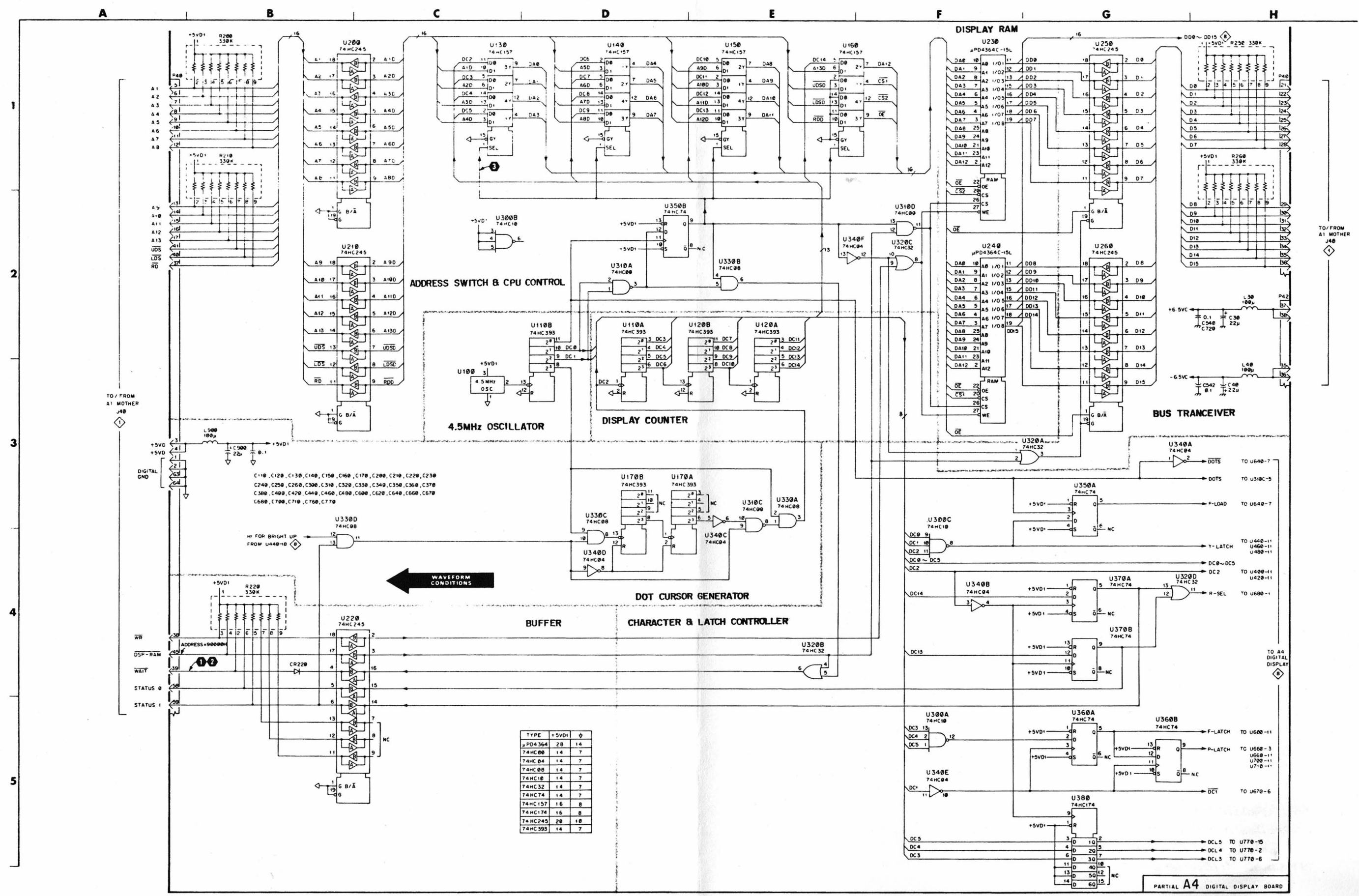
ASSEMBLY A5								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C40	G2	H6	R142	C3	G3	R688	E1	J2
C50	G2	G6	R143	C3	G3	R690	E2	L2
C641	F3	J6	R144	C3	G3	R692	E2	L1
C643	F3	J5	R145	C3	F3	R694	E2	L2
C651	F4	K5	R620	F3	J3	R696	E2	L2
C653	F4	K5	R621	E3	J4	R698	E2	L2
C691	E1	J2	R622	F3	J4			
C696	E2	L1	R623	E3	J4	TP60	F2	L1
			R624	F3	J3	TP70	F1	L1
L40	G2	H6	R625	E3	J3	TP648	G3	K1
L50	G2	H6	R626	F3	J3	TP658	G3	L1
			R627	E3	J2			
P50	A1	D6	R630	F4	L3	U100	C1	F4
P52	A4, G2	J6	R631	E4	L3	U120	C2	F2
			R632	F4	L3	U140	C3	F3
R10	B4	G3	R633	E4	L3	U160A	B1	E3
R12	B4	G3	R634	F4	L3	U160B	B2	E3
R20	B4	G2	R635	E4	L2	U600	D3	I3
R22	B4	G2	R636	F4	L3	U605	E3	J3
R30	B4	G3	R637	E4	L2	U610	D4	I2
R32	B4	G3	R640	F3	J4	U615	E4	K3
R90	B1	E4	R642	F3	J5	U620	E3	K4
R91	B1	E4	R644	F3	J5	U625	E3	K3
R92	B1	E4	R646	F3	J5	U630	E4	L3
R93	B1	F3	R647	G3	J5	U635	E4	L2
R94	B1	F3	R648	G3	J6	U640	F3	J4
R95	B2	D4	R650	F4	L4	U645	F3	J5
R96	B2	D6	R652	F4	L4	U650	F4	K4
R97	B2	D5	R654	F4	L4	U655	F4	K5
R98	B2	D5	R656	F4	L4	U660	D1	I4
R102	C1	G4	R657	G4	L4	U670	D2	I5
R103	C1	G4	R658	G4	L5	U680	E1	J2
R104	C1	G4	R661	D1	I4	U685	E2	K2
R105	C1	G4	R662	D1	I4	U690	E1	K2
R106	C1	G4	R663	D2	I5	U695	E2	L2
R107	C1	G4	R664	D4	I5	U820B	G1	E2
R120	C2	G2	R665	D2	I5	U840E	B3	E4
R121	C2	G2	R666	D2	I6	U870B	B3	C5
R122	C2	G2	R671	D1	I4	U870C	B3	C5
R123	C2	G2	R672	D2	I5	U870D	B3	C5
R124	C2	G3	R673	D2	I5			
R125	C2	G2	R674	D2	I6	W640	G3	J5
R126	C2	G2	R680	E1	J2	W650	G4	L5
R127	C2	G2	R682	E1	J2			
R140	C3	G3	R684	E1	J2			
R141	C3	G3	R686	E1	J2			

WAVEFORM CONDITIONS

Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 MΩ input impedance (Tektronix 2430 with plotter) with the 371 set to the power-up default (initial) settings.

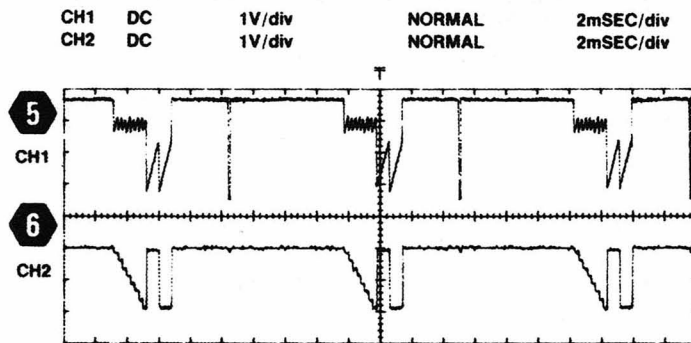
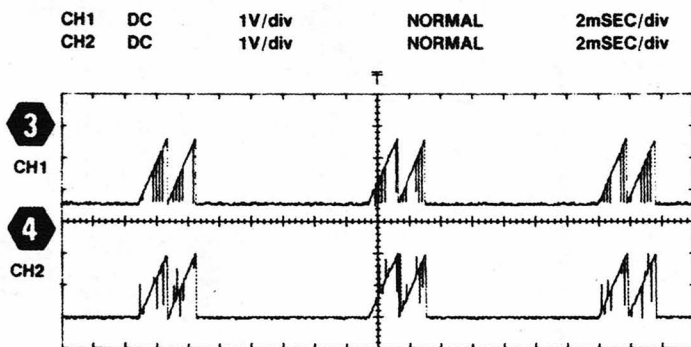
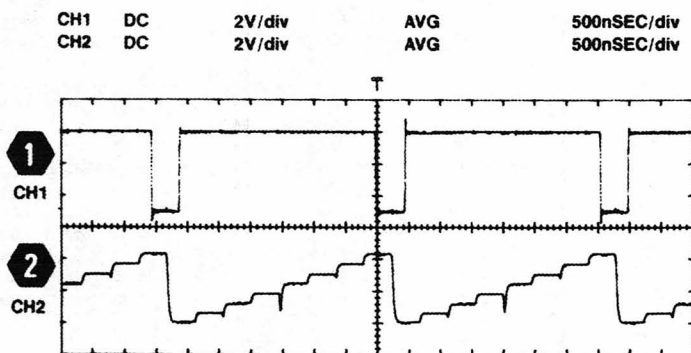


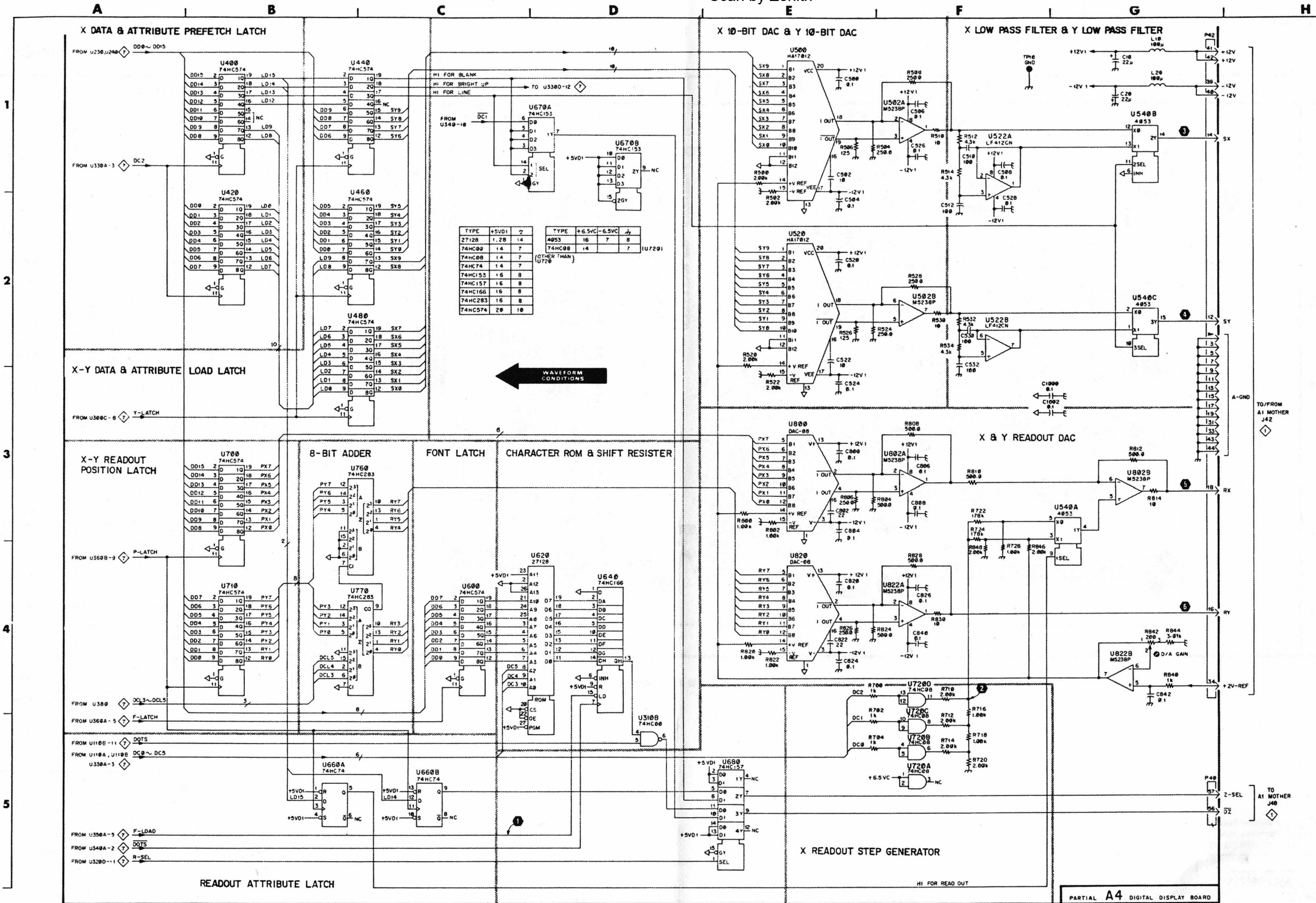


WAVEFORM CONDITIONS

Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 MΩ input impedance (Tektronix 2430 with plotter) with the 371 set to the power-up default (initial) settings.





Assembly A5

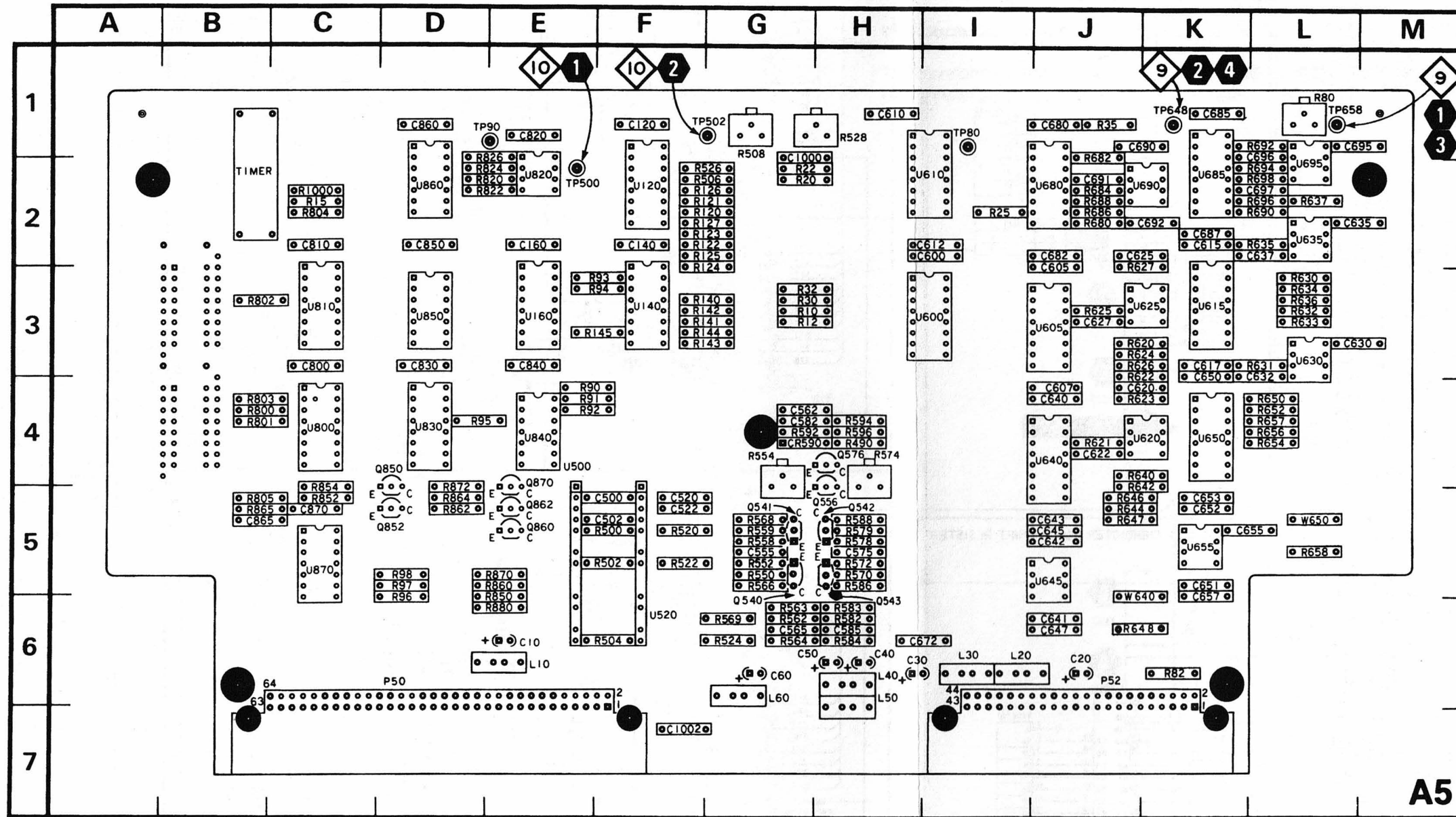
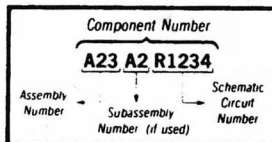


Figure 7-7. A5-Display Control circuit board assembly.

6804-714

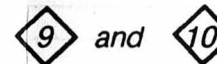
⊗ Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List

A5-CPU Display Control circuit board illustration to be used with diagrams



DISPLAY OFFSET

9

ASSEMBLY A5								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C10	B5	E6	C850	B5	D2	R582	G2	H6
C20	G5	J6	C860	B5	D1	R583	G2	H6
C30	G4	H6	C865	B3	B5	R584	G2	H6
C60	G3	G6	C870	B5	C5	R586	F2	H5
C120	B5	F1	C1002	C2	F7	R588	F2	H5
C140	B5	F2				R590	F2	H4
C160	B5	E2	CR590	F2	G4	R592	F2	G4
C500	G4	F5				R594	F1	H4
C502	G5	F5	L10	B5	E6	R596	F2	H4
C520	G4	F5	L20	G5	H6	R800	B4	B4
C522	G5	F5	L30	G4	H6	R801	B4	B4
C555	F1	G5	L60	G3	G6	R802	B3	B3
C562	F2	G4				R803	B3	B4
C565	G1	G6	P50	A3	D6	R804	B3	C2
C575	F3	H5	P52	A1, A2, A4, G1	J6	R805	B3	B5
C582	F2	G4				R820	B2	E2
C585	G2	H6	Q540	F1	G6	R822	B3	E2
C600	G4	I2	Q541	G1	G5	R824	B4	E2
Q602	G5	I3	Q542	F2	H5	R826	B3	E2
C605	G4	J3	Q543	G2	H6	R850	B4	E6
C607	G5	J4	Q556	F2	H5	R852	E4	C5
Q610	G4	H1	Q576	F2	H4	R854	E4	C5
C612	G5	I2	Q850	E4	D4	R860	B4	E5
C615	G4	K2	Q852	E4	D5	R862	E4	D5
C617	G5	K3	Q860	D4	E5	R864	E4	D5
C620	G4	K4	Q862	E4	E5	R865	B3	B4
C622	G5	J4	Q870	E4	E4	R870	B4	E5
C625	G4	J2				R872	E4	D5
C627	G5	J3	R15	B5	C2	R880	E4	E6
C630	G4	L3	R25	F5	I2			
C632	G5	L3	R35	F4	J1	TP80	G3	I1
C635	G4	L2	R80	G3	L1	TP90	B5	E1
C637	G5	L2	R82	G3	K6	TP500	E1	E2
C640	G4	J4	R500	D1	F5	TP502	E2	G1
C642	G5	J5	R502	D1	F5			
C645	G4	J5	R504	D1	F6	U500	E1	E4
C647	G5	J6	R506	D1	G2	U520	E2	F6
C650	G4	K3	R508	D1	G1	U800A	E5	C4
C652	G5	K5	R520	D2	F5	U800B	C4	C4
C655	G4	K5	R522	D2	F5	U810	D3	C3
C657	G5	K5	R524	D2	G6	U820A	B4	E2
C662	G5	I5	R526	D2	G2	U830A	D3	D4
C672	G5	I6	R528	D2	H1	U830B	D4	D4
Q680	G4	J1	R550	F1	G5	U840A	C4	E4
C682	G5	J2	R552	F1	G5	U840B	D3	E4
C685	G4	K1	R554	F1	G4	U840C	C3	E4
C687	G5	K2	R558	F1	G5	U840D	D3	E4
C690	G4	J1	R559	F1	G5	U840F	B3	E4
C692	G5	K2	R562	G1	G6	U850A	C4	D3
C695	G4	L1	R563	G1	G6	U850B	C3	D3
C697	G5	L2	R564	G1	G6	U850C	D4	D3
C800	B5	C3	R566	F1	G5	U850D	D4	D3
C810	B5	C2	R568	F1	G5	U860A	B3	D2
C820	B5	E1	R569	G1	G6	U860B	E3	D2
C830	B5	D3	R570	F2	H5	U860C	C3	D2
C840	B5	E3	R572	F2	H5	U860D	C3	D2
			R574	F2	H4	U870A	B3	C5
			R578	F3	H5			
			R579	F3	H5			

CHASSIS MOUNTED PARTS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
L120	H3	CHASSIS

DISPLAY SELECT

10

ASSEMBLY A5								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C40	G2	H6	R622	F3	J4	U120	C2	F2
C50	G2	G6	R623	E3	J4	U140	C3	F3
C641	F3	J6	R624	F3	J3	U160A	B1	E3
C643	F3	J5	R625	E3	J3	U160B	B2	E3
C651	F4	K5	R626	F3	J3	U600	D3	I3
C653	F4	K5	R627	E3	J2	U605	E3	J3
C691	E1	J2	R630	F4	L3	U610	D4	I2
C696	E2	L1	R631	E4	L3	U615	E4	K3
			R632	F4	L3	U620	E3	K4
			R633	E4	L3	U625	E3	K3
L40	G2	H6	R634	F4	L3	U630	E4	L3
L50	G2	H6	R635	E4	L2	U635	E4	L2
			R636	F4	L3	U640	F3	J4
P50	A1	D6	R637	E4	L2	U645	F3	J5
P52	A4	G2	R640	F3	J4	U650	F4	K4
			R642	F3	J5	U655	F4	K5
R10	B4	G3	R644	F3	J5	U680	E1	J2
R12	B4	G3	R646	F3	J5	U685	E2	K2
R20	B4	G2	R647	G3	J5	U690	E1	K2
R22	B4	G2	R648	G3	J6	U695	E2	L2
R30	B4	G3	R650	F4	L4	U820B	G1	E2
R32	B4	G3	R652	F4	L4	U840E	B3	E4
R90	B1	E4	R654	F4	L4	U870B	B3	C5
R91	B1	E4	R656	F4	L4	U870C	B3	C5
R92	B1	E4	R657	G4	L4	U870D	B3	C5
R93	B1	F3	R658	G4	L5			
R94	B1	F3	R680	E1	J2	W640	G3	J5
R95	B2	D4	R682	E1	J2	W650	G4	L5
R96	B2	D6	R684	E1	J2			
R97	B2	D5	R686	E1	J2			
R98	B2	D5	R688	E1	J2			
R120	C2	G2	R690	E2	L2			
R121	C2	G2	R692	E2	L1			
R122	C2	G2	R694	E2	L2			
R123	C2	G2	R696	E2	L2			
R124	C2	G3	R698	E2	L2			
R125	C2	G2						
R126	C2	G2						
R127	C2	G2	TP648	G3	K1			
R140	C3	G3	TP658	G3	L1			
R141	C3	G3						
R142	C3	G3						
R143	C3	G3						
R144	C3	G3						
R145	C3	F3						
R620	F3	J3						
R621	E3	J4						

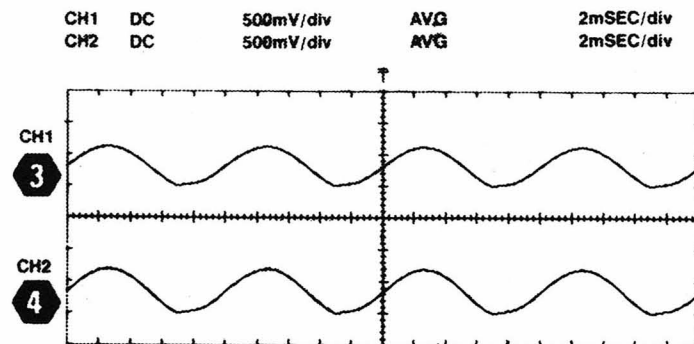
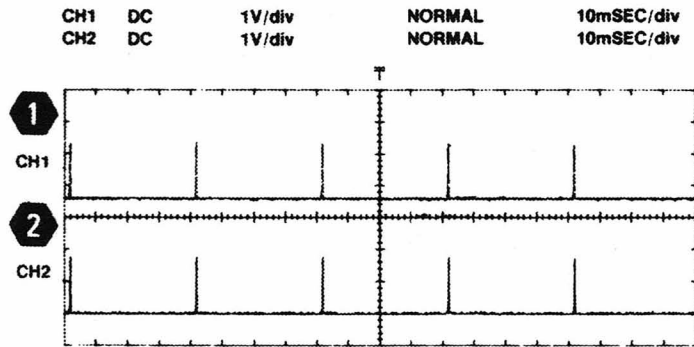
WAVEFORM CONDITIONS

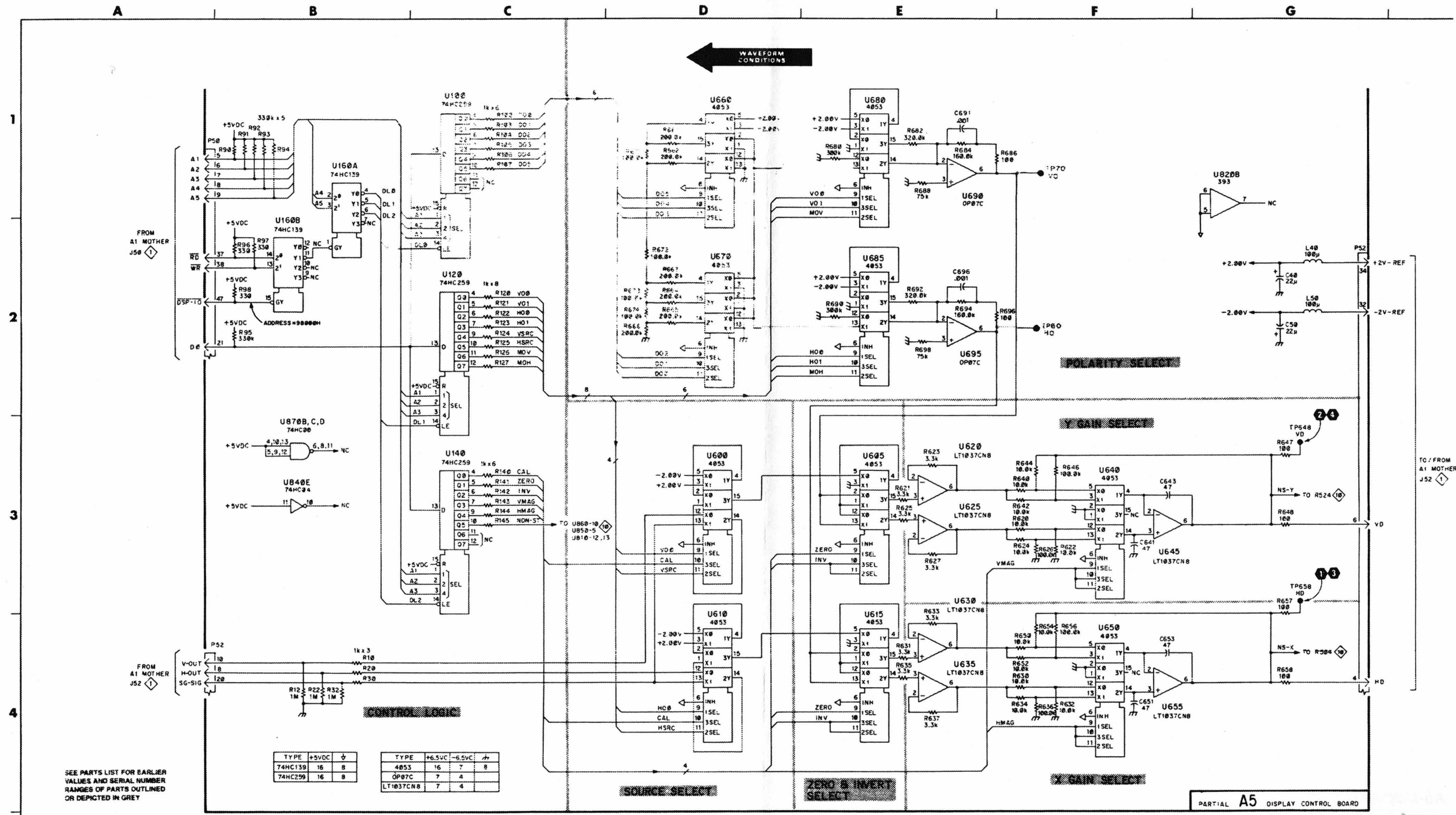
Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 M Ω input impedance (Tektronix 2430 with plotter) from the 371 under the following conditions:

Waveform 1 and 2: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY VARIABLE is set to 50%, and a 1 Ω resistor is connected between the Collector Supply HIGH CURRENT terminal and the COMMON terminal.

Waveform 3 and 4: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY PEAK POWER WATTS is set to 30W and COLLECTOR SUPPLY VARIABLE is set to 50%, and a 10 k Ω resistor is connected between the Collector Supply HIGH VOLTAGE terminal and the COMMON terminal.





9 Display Offset

371

PARTIAL A5 DISPLAY CONTROL BOARD

DISPLAY OFFSET 9

SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES OF PARTS OUTLINED OR DEPICTED IN GREY

TYPE	+5VDC	φ
74HC139	16	8
74HC259	16	8

TYPE	+6.5VDC	-6.5VDC	φ
4053	16	7	8
OP07C	7	4	
LT1037CN8	7	4	

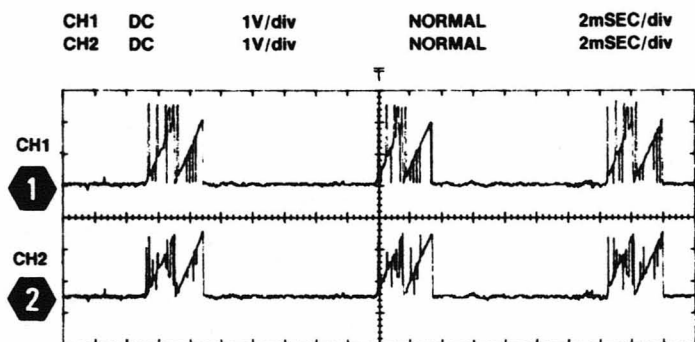
VOLTAGE AND WAVEFORM CONDITIONS

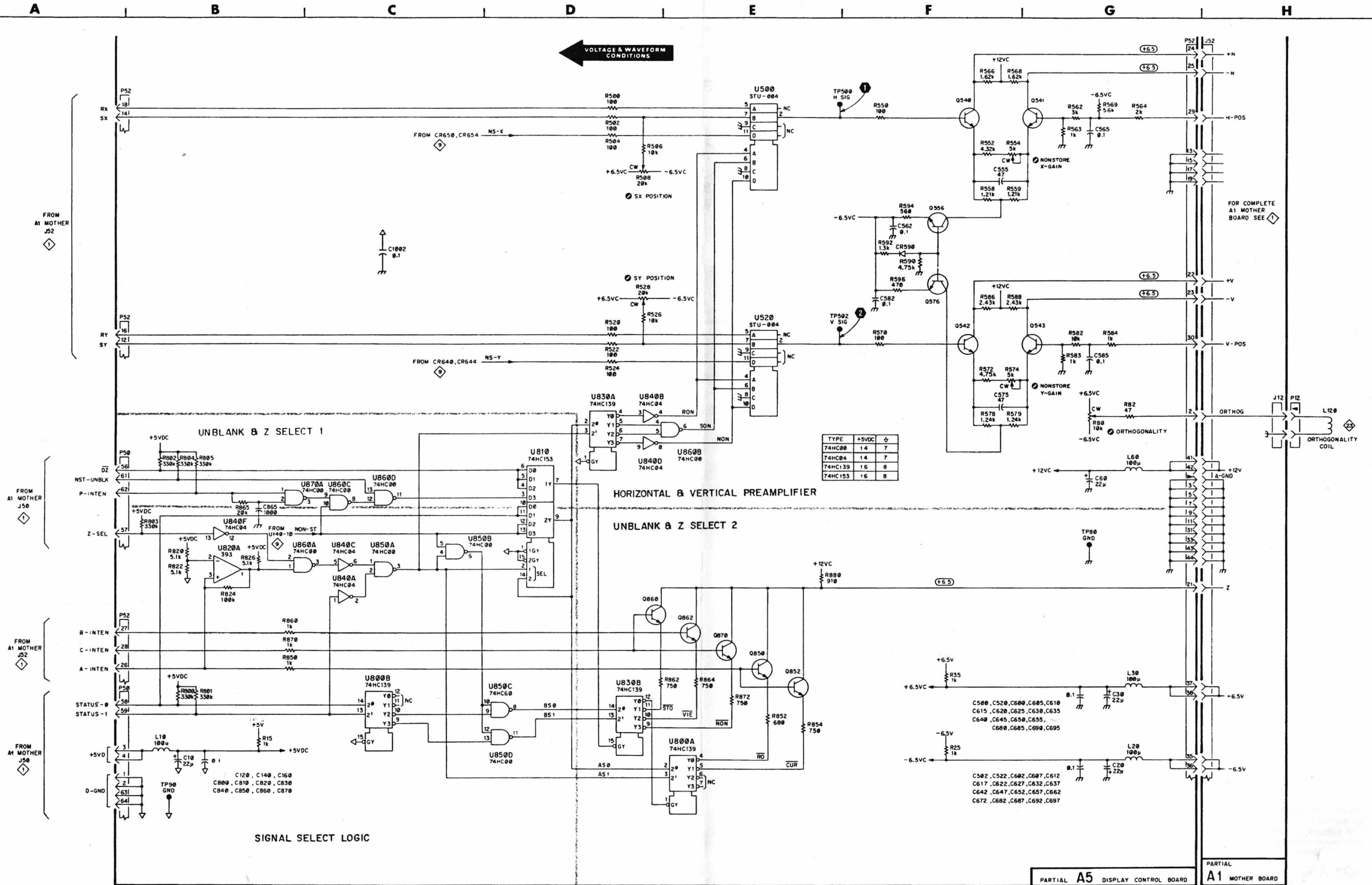
Voltage Conditions

The voltages shown on the diagram were obtained using a digital multimeter with a 10 M Ω input impedance. These voltages are not affected by the 371 settings.

Waveform Conditions

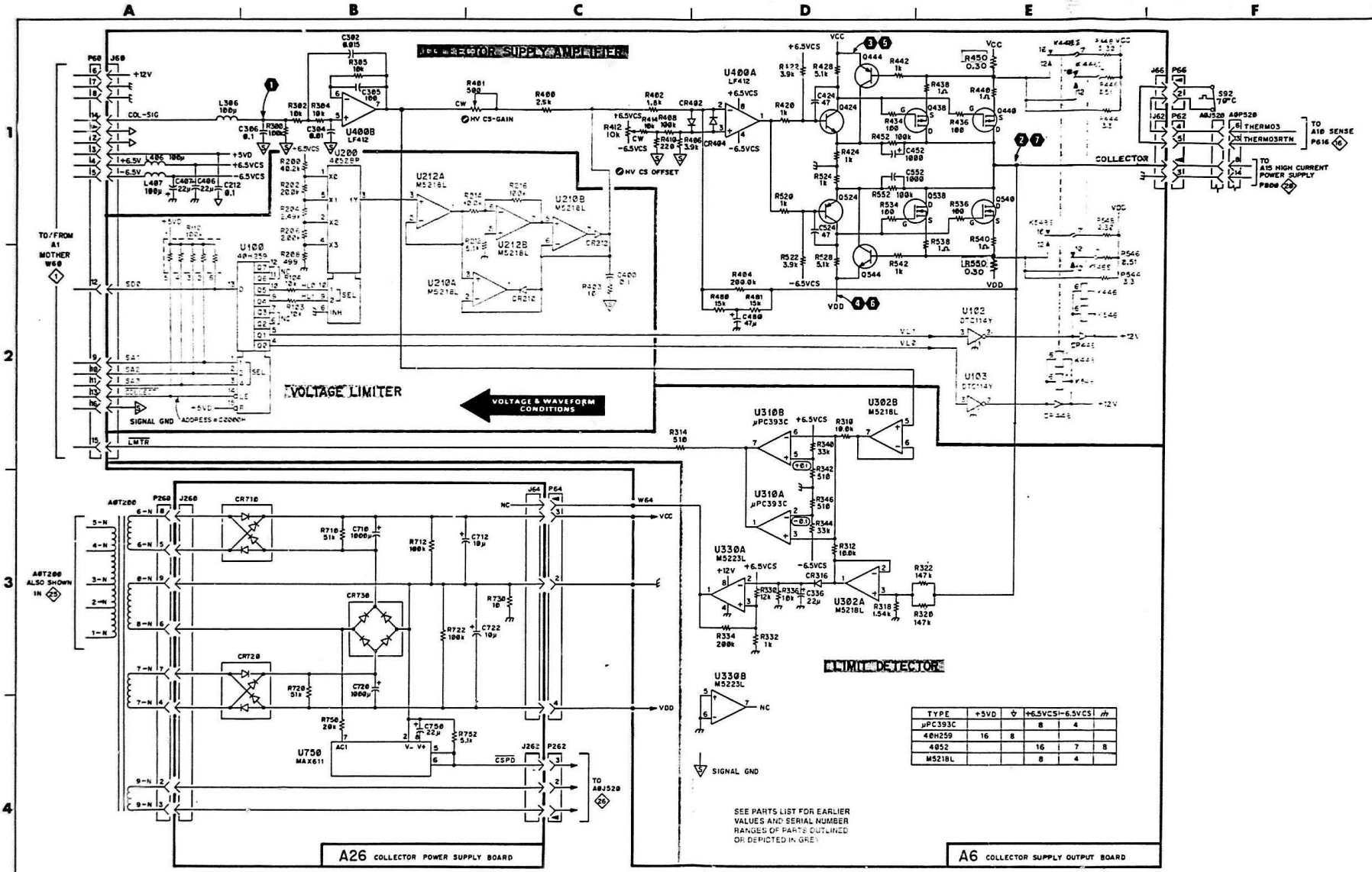
The waveforms shown below were obtained using a test oscilloscope with 1 M Ω input impedance (Tektronix 2430 with plotter) while the 371 is set to the power-up default (initial) settings.





COLLECTOR SUPPLY AMPLIFIER 11

ASSEMBLY A6								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C302	B1	B4	R410	C1	B4			
C304	B1	B4	R412	C1	D4			
C305	B1	B4	R414	C1	C4			
C306	B1	B4	R420	D1	C4			
C406	A1	B3	R422	D1	C4			
C407	A1	B3	R424	D1	D4			
C424	D1	D4	R428	D1	D3			
C452	D1	D4	R434	D1	E4			
C480	D2	C5	R436	E1	E4			
C524	D1	E4	R438	E1	B5			
C552	D1	D4	R440	E1	C5			
			R442	D1	E3			
CR402	D1	B4	R450	E1	D2			
CR404	D1	B4	R452	D1	D4			
CR448	E2	C2	R480	D2	C4			
			R481	D2	C5			
J60	A1	A2	R520	D1	C4			
J62	F1	A4	R522	D2	C4			
J66	F1	A4	R524	D1	D4			
			R528	D2	D3			
			R534	D1	E4			
L306	A1	B3	R536	E1	F4			
L406	A1	B3	R538	E1	D5			
L407	A1	B3	R540	E1	E5			
			R542	D2	E3			
Q424	D1	D4	R550	E2	E3			
Q438	E1	A6	R552	D1	D4			
Q440	E1	C8						
Q444	D1	E3						
Q524	D1	E4	U400A	D1	B4			
Q538	E1	D6	U400B	B1	B4			
Q540	E1	F6						
Q544	D2	E3	W64	C3	D3			
R300	B1	B4						
R302	B1	B4						
R304	B1	B4						
R305	B1	B4						
R400	C1	C4						
R401	C1	C4						
R402	C1	C4						
R404	E2	C4						
R406	C1	B4						
R408	C1	C4						
ASSEMBLY A26								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C710	B3	C2	J64	C3	B3	R730	C3	D1
C712	B3	B2	J260	A3	D3	R750	B4	C2
C720	B3	C2	J262	C4	D2	R752	B4	C1
C722	C3	A2						
C750	B4	D2	R710	B3	C1	U750	B4	D2
			R712	B3	B3			
CR710	A3	C3	R720	B3	B4			
CR720	A3	B3	R722	B3	B2			
CR730	B3	C2						
CHASSIS MOUNTED PARTS								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
AQJ520	F1		S92	F1		AOT200	A3	
AOP520	F1							

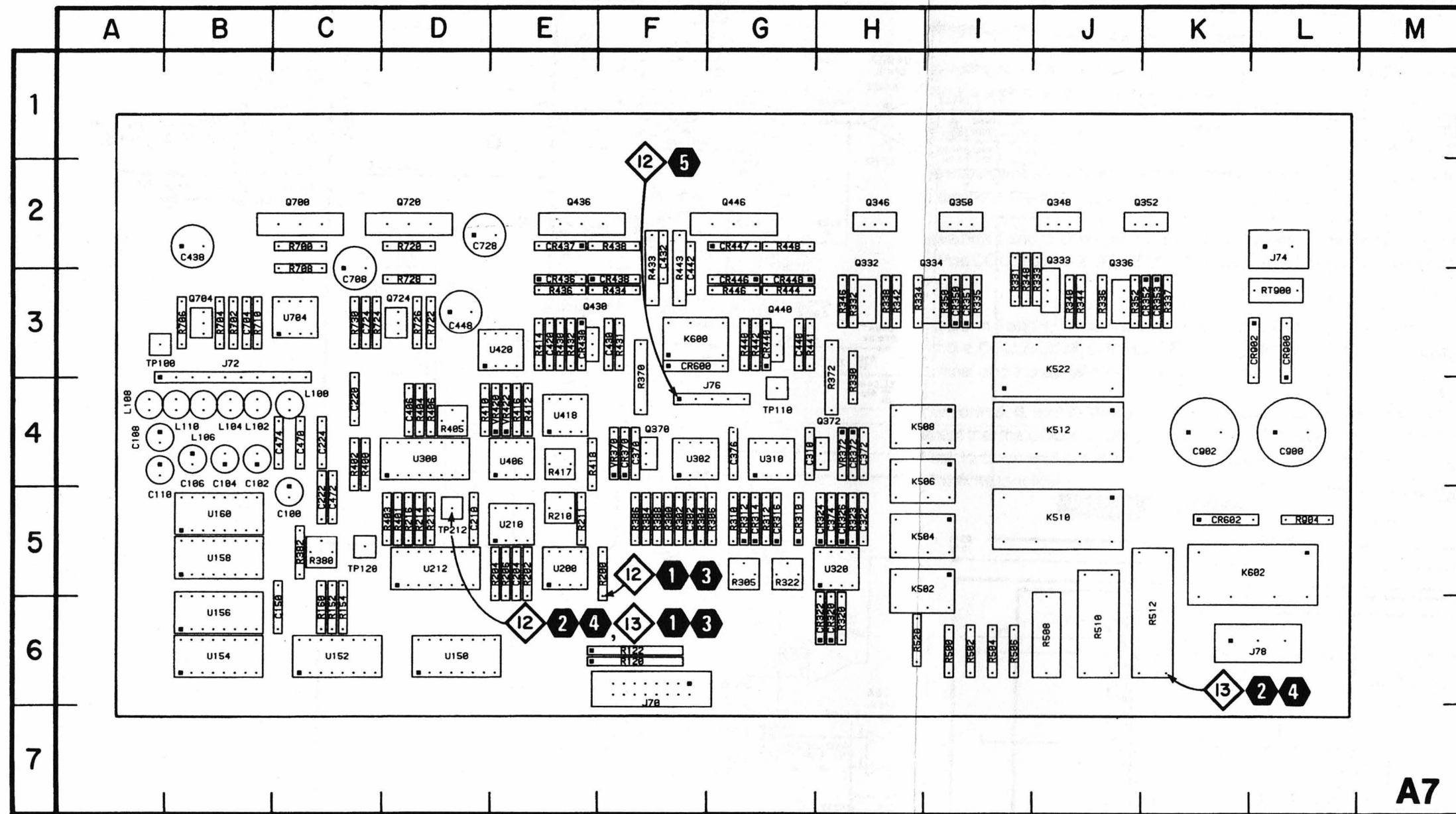


A26 COLLECTOR POWER SUPPLY BOARD

A6 COLLECTOR SUPPLY OUTPUT BOARD

TYPE	+5VD	+6.5VCS	-6.5VCS	-5VCS	μ
μPC393C			8	4	
40N259	16	8			
40S2			16	7	8
M521BL				8	4

SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES OF PARTS OUTLINED OR DEPICTED IN GREY

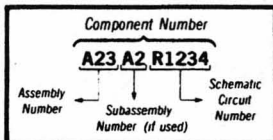


A7

6804-720

Figure 7-10. A7-Step Generator circuit board assembly.

⚡ Static Sensitive Devices
See Maintenance Section
COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

A7-Step Generator circuit board illustration to be used with diagrams and

STEP VOLTAGE AMPLIFIER 12

STEP GEN CURRENT AMPLIFIER 13

ASSEMBLY A7								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C204	B2	E5	R202	B2	E5	R448	F4	G2
C210	B2	D5	R204	B2	E5	R700	C4	C2
C408	D2	D4	R208	B2	E5	R702	C4	B3
C420	E2	E3	R210	B2	E5	R704	C4	B3
C430	E1	F3	R211	B2	E5	R708	C4	B3
C432	F1	F2	R212	C2	D5	R708	D3	C2
C440	E3	G3	R214	C3	D5	R710	D4	B3
C442	F3	F2	R218	C3	D5	R720	C4	D2
C704	C4	B3	R400	C2	C4	R722	C4	D3
C708	D3	C3	R401	C3	D5	R724	C4	C3
C724	C4	C3	R402	C2	C4	R728	C4	D3
C728	D4	D2	R403	C3	D5	R728	D4	D3
CR430	E2	E3	R404	D2	D4	TP110	F3	G4
CR436	E1	E3	R405	D3	D4	TP120	C2	C5
CR437	F1	E2	R408	D2	D4	TP212	B2	D5
CR438	E1	F3	R410	D2	D4			
CR440	E3	G3	R412	D3	E4	U200	A2	E5
CR446	E4	G3	R414	E2	E3	U210	B2	E5
CR447	F4	G2	R416	D3	E4	U212	B3	D5
CR448	E4	G3	R417	D3	E4	U300A	D2	D4
J76	F2	G4	R418	E4	E4	U300	B	D3
Q430	E2	E3	R430	E2	F3	U408	D2	E4
Q436	F1	E2	R431	E1	E3	U418	E4	E4
Q440	E3	G3	R432	E2	F3	U420	E2	E3
Q446	F3	G2	R433	F2	F3	U704A	C4	C3
Q700	C3	C2	R434	E1	F3	U704	B	C4
Q704	C4	B3	R436	E1	E3	VR420	E2	E4
Q720	C4	D2	R438	F1	F2	VR422	E2	E4
Q724	C4	D3	R440	E3	G3			
R200	A2	F5	R441	E3	G3			
			R442	E3	G3			
			R443	F3	F3			
			R444	E4	G3			
			R446	E3	G3			

ASSEMBLY A7								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C100	B2	C5	K502	E2	H5	R337	F2	K3
C102	B2	B4	K504	F2	H5	R338	F1	H3
C104	B2	B4	K508	F2	H4	R340	F2	J3
C106	B2	B4	K508	F2	H4	R342	F1	H3
C108	B2	B4	K510	F2	J5	R344	F2	J3
C110	B1	B4	K512	F2	J4	R346	F1	H3
C150	B2	C6	K522	E5	J3	R348	F2	I3
C220	B2	C4	K600	F5	F3	R350	F1	I3
C222	B2	C5	K602	F5	K5	R352	F2	J3
C224	B2	C4				R370	D2	F4
C302	D1	F5	L100	B2	C4	R372	D3	H4
C310	E1	G4	L102	B2	B4	R380	C2	C5
C322	D2	H5	L104	B2	B4	E382	C5	C5
C370	D2	F4	L106	B2	B4	R384	C2	F5
C372	D3	H4	L108	B2	A4	R386	D2	F5
C374	B2	H5	L110	B1	B4	R388	D1	F5
C376	D2	G4	Q332	F1	H3	R500	E3	I6
C438	B1	B2	Q333	F2	J3	R502	E3	I6
C448	B1	D3	Q334	F1	I3	R504	F3	I6
C470	B2	C4	Q336	F2	J3	R506	F3	I6
C472	B2	C5	Q346	F1	H2	R508	F3	J6
C474	B2	C4	Q348	F2	J2	R510	F3	J6
C900	B5	L4	Q350	F1	I2	R512	F3	K6
C902	B5	K4	Q352	F2	J2	R520	E2	H6
			Q370	D2	F4	R904	B5	L5
			Q372	D3	H4			
CR310	E1	G5	R120	B3	F6	RT900	A4	L3
CR312	E1	G5	R122	B4	F6	TP100	A1	B3
CR314	E1	G5	R152	D3	C6			
CR318	E1	G5	R154	D3	C6			
CR320	E2	H6	R160	E3	C6	U150	C3	D6
CR322	E2	H6	R300	C1	F5	U152	D3	C6
CR324	D2	H5	R302	D1	F5	U154	E3	B6
CR326	D2	H5	R304	D1	F5	U156	D4	B6
CR350	F2	I3	R305	D2	G5	U158	E4	B5B
CR351	F2	I3	R308	D2	G5	U160	E5	B5
CR352	F2	J3	R310	E1	G5	U300	B	C2
CR353	F2	K3	R312	E2	G5	U302	D1	F4
CR370	D2	F4	R320	E3	H6	U310	E1	G4
CR372	D3	H4	R322	E2	G5	U320	E3	H5
CR600	F5	F3	R323	D2	H5			
CR602	F5	K5	R330	E1	H4	VR370	D2	F4
CR900	B4	L3	R331	E2	I3	VR372	D2	H4
CR902	B5	L3	R332	E1	H3			
J70	A3	F6	R333	E2	J3			
J72	A1	B3	R334	F1	H3			
J74	A4	L2	R335	F1	I3			
J78	G1	L6	R336	F2	J3			

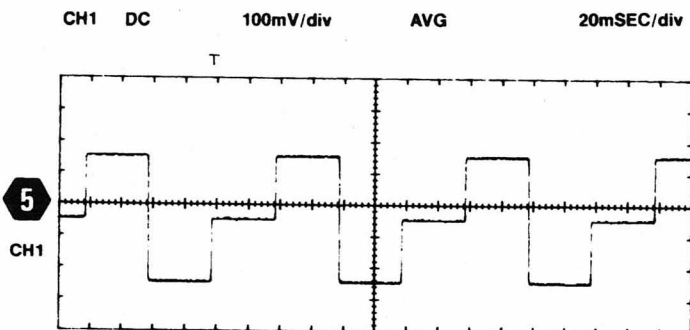
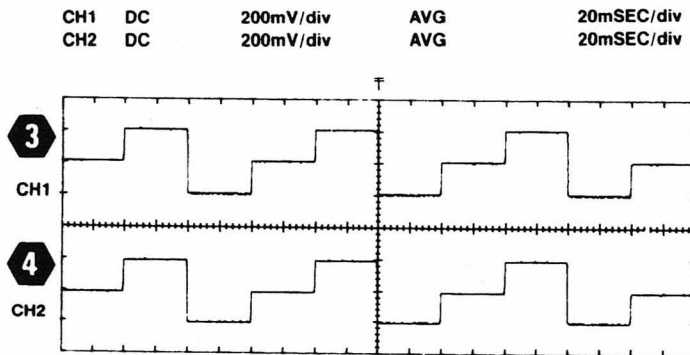
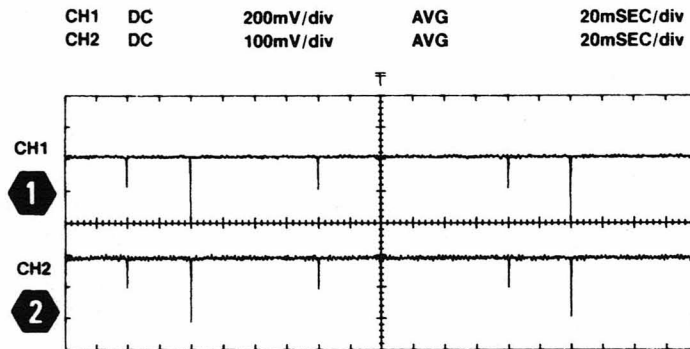
WAVEFORM CONDITIONS

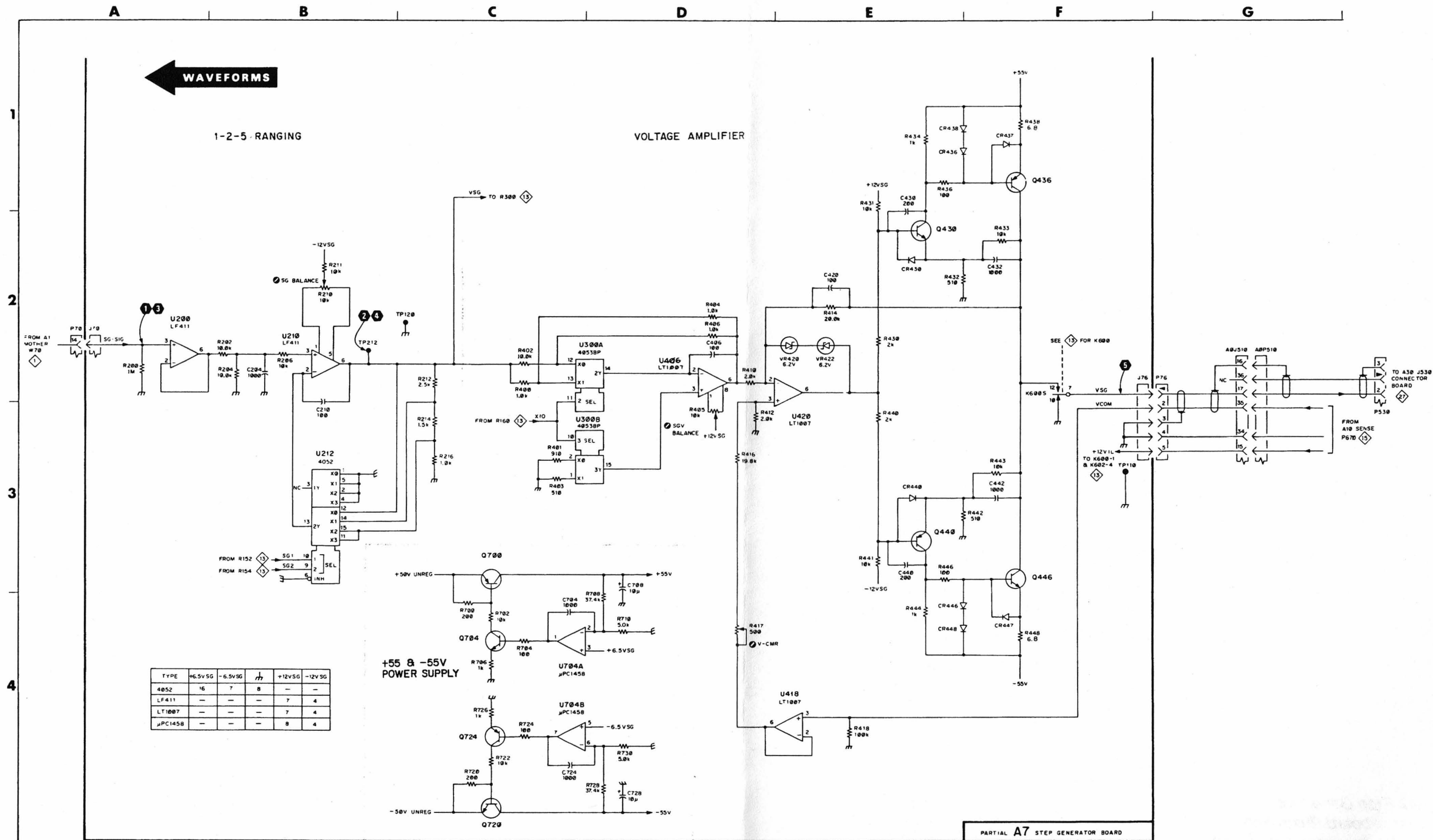
Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 M Ω input impedance (Tektronix 2430 with plotter) with the 371 under the following conditions:

Waveform 1 and 2: These waveforms were obtained with the 371 set to the power-up default (initial) settings.

Waveform 3, 4, and 5: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the STEP GENERATOR SOURCE is set to VOLTAGE and the STEP/OFFSET AMPLITUDE is set to 200 mV.





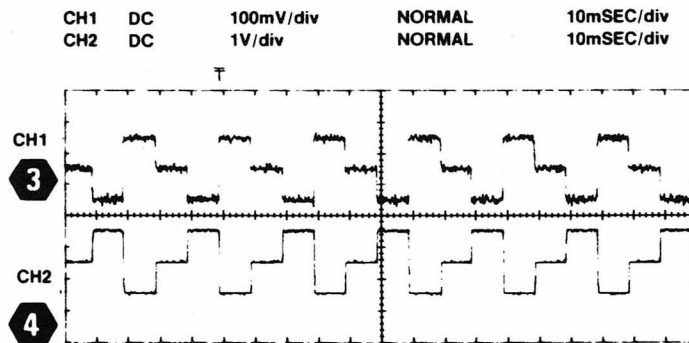
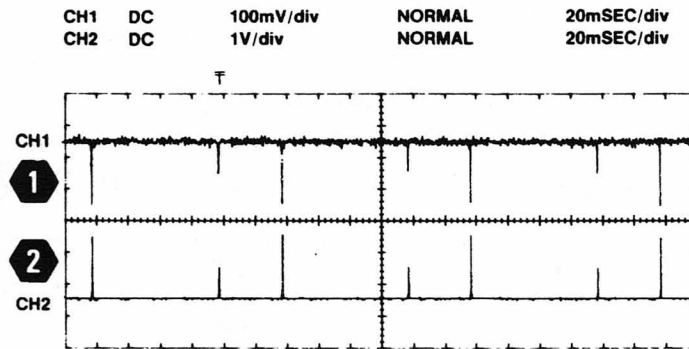
WAVEFORM CONDITIONS

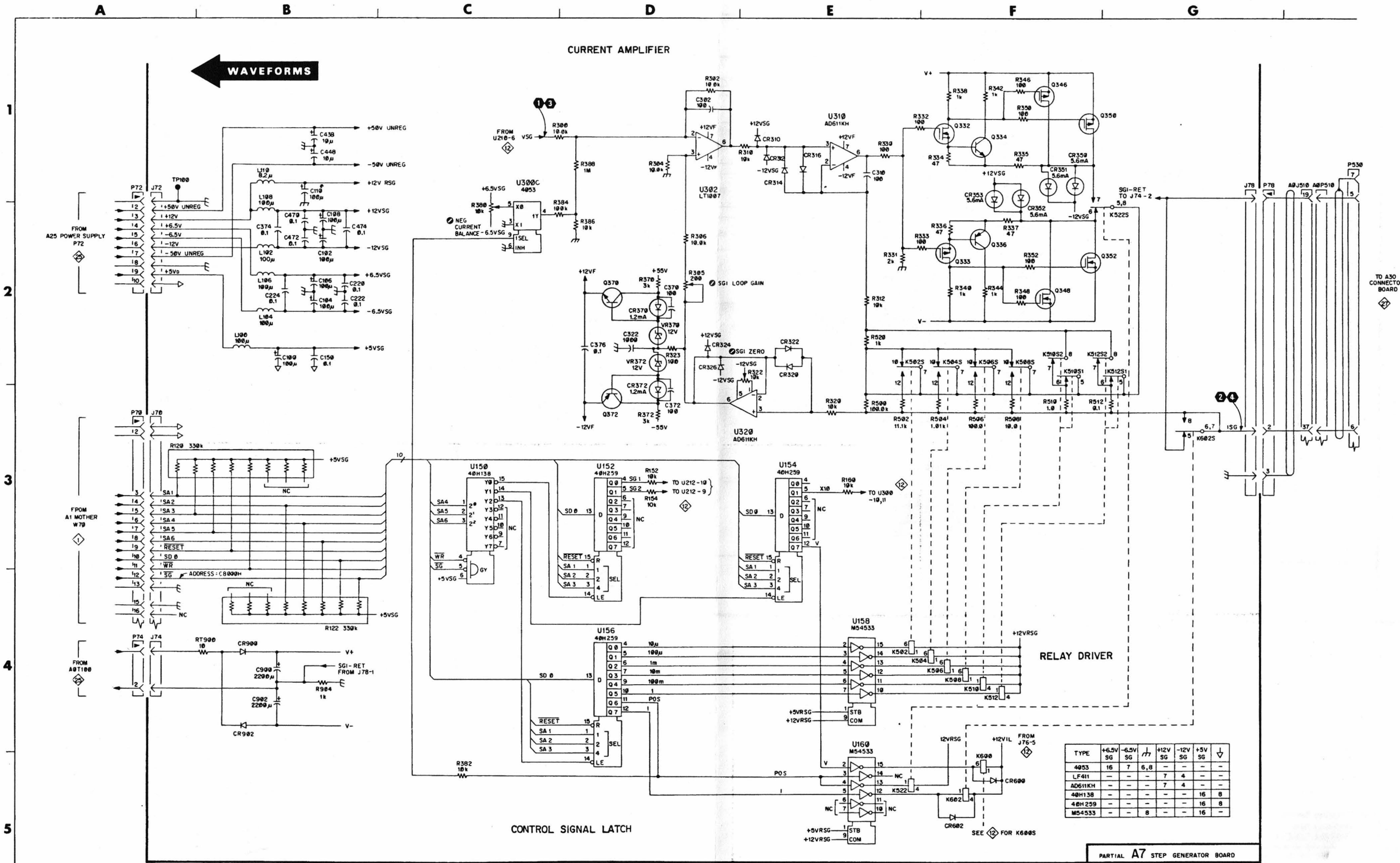
Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 M Ω input impedance (Tektronix 2430 with plotter) with the 371 under the following conditions:

Waveform 1 and 2: These waveforms were obtained with the 371 set to the power-up default (initial) settings, and a 1 k Ω resistor is connected between the Step Generator CURRENT terminal and the COMMON terminal.

Waveform 3 and 4: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY PEAK POWER WATTS is set to 30 W and the STEP/OFFSET AMPLITUDE is set to 1 mA, and a 1 k Ω resistor is connected between the Step Generator CURRENT terminal and the COMMON terminal.





13 Step Generator Current Amplifier Reverse Side A10

TYPE	+6.5V SG	-6.5V SG	12V SG	-12V SG	+5V SG	↓
4033	16	7	6,8	-	-	-
LF411	-	-	7	4	-	-
AD611KH	-	-	7	4	-	-
40H138	-	-	-	-	16	8
40H259	-	-	-	-	16	8
M54533	-	-	8	-	16	-

PARTIAL A7 STEP GENERATOR BOARD

VERTICAL SENSE 14

ASSEMBLY A10								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C102	D2	B8	J614	A4	K2	R412	D5	H5
C104	D2	B8	J628	D5	A5	R413	D5	J6
C110	B4	E8	J630	A1	A4	R414	E4	I5
C112	D5	E8	J636	A2	D1	R415	D5	H5
C114	D5	F8				R416	E5	I5
C116	F2	F8	K102	D2	B8	R418	E4	I5
C118	G8	F8	K108	E3	C8	R420	E5	I5
C130	E5	G8	K112	E3	C5	R422	F3	J6
C132	D5	B3				R424	E4	I5
C148	H3	G5	L500	B4	K2	R426	E4	I5
C234	B5	E3	L502	B4	K2	R430	E5	I5
C240	B4	J5	L504	B4	K2	R450	E5	F4
C250	B5	I5	L508	B5	K3	R452	F5	F4
C272	B4	C3	L508	B5	K3	R454	F5	F5
C274	B5	I5	L510	B5	K3	R458	F5	F4
C400	C5	B1				R458	F5	F4
C402	C5	B1	R102	E2	B6	R460	F5	F4
C404	C5	C1	R104	E2	B8	R462	F5	I6
C406	C5	C1	R106	E2	B85	R464	G5	H5
C408	D5	C1	R109	F1	EW6	R800	B2	I2
C410	D5	C1	R110	E1	E8	R802	B2	I3
C411	D5	H5	R111	C1	E8	R804	C3	F5
C422	F4	J5	R112	E2	D6	R900	B1	A5
C454	F5	F4	R113	F2	E8			
C480	F5	F4	R114	F1	F8	TP148	H1	I6
C484	F5	H5	R116	F2	F8	TP500	B4	G4
C500	B4	K2	R118	G1	F8			
C502	C5	K2	R120	F2	F8	U110	F1	E8
C504	B4	K2	R122	G2	G5	U112	F2	D6
C506	B5	K3	R124	G2	G5	U116	G1	F8
C508	B5	K3	R128	G2	G5	U130	H3	G6
C510	B5	K3	R128	G1	G8	U146	H3	H6
C520	B4	J3	R130	G1	G8	U412	D5	I5
C600	B5	F4	R132	G1	G8	U420	F4	I6
C612	B5	H2	R134	G2	G5	U422	F4	J6
			R136	G2	G5	U450A	E5	E4
			R138	G2	G5	U450B	F5	E4
CR110	E1	E8	R140	G1	G5	U602	C3	F3
CR112	E2	E8	R142	G1	G8	U604	D3	B3
CR114	F1	E8	R144	G1	G8			
CR120	F2	E8	R146	H3	H8	UR148	H2	H5
CR410	D4	D2	R148	H1	G6	UR148	H2	H5
CR450	E5	E4	R150	G12	G8			
CR452	E5	E5	R152	G1	G8			
			R410	D5	D2			
J610	A3	J1	R411	D5	D2			
J612	H1	K4						

HORIZONTAL SENSE 15

ASSEMBLY A10								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C204	C3	D2	CR334	G2	E2	Q322	G2	E2
C206	C3	D3	CR336	G2	D2			
C220	E5	E3				R200	C3	C2
C260	G3	I5	J612	H3	K4	R202	D3	B3
C262	G3	I5	J632	A1,A3	A4	R204	D3	D2
C270	H3	K5	J634	A3	B2	R206	D3	B3
C300	E1	D4	J670	H4	K5	R208	D3	D3
C314	F1	D3				R218	D4	D6
C318	F1	F2	K202	D2	C4	R220	E5	E3
C322	F1	E3	K202S	D3	C4	R230	E3	E5
C324	G2	D2	K206	D2	B5	R231	E3	E5
			K206S	D3	B5	R232	E4	E5
CR230	E3	D5	K214	D2	B4	R233	E4	F5
CR232	E4	F5	K214S	D4	B4	R234	E5	E3
CR233	E4	F5	K300	D3	B5	R240	E3	E5
CR234	E5	E3	K300S	B1	B5	R242	F3	E5
CR235	D5	F5	K302	D2	C5	R246	E4	G4
CR302	E1	D4				R247	F4	G4
CR310	E2	E4	Q316	F1	E2	R248	E4	G4
CR330	F1	F2	Q320	F1	F2	R249	F4	G4
CR332	F1	E2						

HORIZONTAL SENSE 15

ASSEMBLY A10								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
R250	F5	E3	R310	E2	D3	U250	G3	H5
R252	F4	G5	R312	E2	D3	U260	G3	I5
R256	F5	G5	R314	F1	D3	U270	H3	K6
R258	F5	G5	R316	F1	E2	U290	H3	J6
R260	F5	F5	R318	F1	F2	U300	F1	E4
R262	F4	G4	R320	F1	E2	U600	B2	I2
R266	F5	G4	R322	G2	E2	U606	C2	F4
R268	F5	G4	R324	G2	E2	U608	C2	C3
R270	F5	F4	R330	G1	F2	U610	E2	H2
R272	G3	I5	R332	G1	E2			
R274	G4	I5	R334	F2	E2	VR230	E3	E5
R275	G3	I5	R336	F2	D2	VR232	E4	E5
R276	H4	I6	R810	E2	H4	VR280	G4	J5
R278	H3	K6	R812	E3	H2	VR282	G4	J5
R280	H3	K6	R902	A2	A5	VR316	F2	E2
R284	H3	K5	R906	A4	A4	VR322	G1	E2
R300	E1	D4						
R302	E1	D4	U230	E3	D5			
R304	E2	D5	U232	E4	E5			
R306	E2	E5	U234	E5	E3			
R308	E2	E5	U240	F3	H4			

PARTIAL A10 also shown on DIAGRAM 14 16

COLLECTOR SUPPLY INTERFACE & HIGH VOLTAGE OUTPUT 16

ASSEMBLY A10								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C650	C2	H3	J618	B4	A6	R707	B4	J5
			J620	E2	H1	R708	B4	I4
			J622	B2	A6	R710	B4	J5
C701	B3	K5	J690	F3	K1	R720	B4	I4
C705	B3	J5	J695	F3	G1	R722	B4	I4
C724	D4	J3				R724	C4	I3
C730	D4	I3	K700	B2	K4	R730	D4	I3
C734	D4	J3	K704	B4	K4	R734	D4	I3
						R740	E4	I3
CR700	B3	J5	Q740	E4	J3	R742	E4	I3
CR702	B3	J5				R744	E4	I3
CR703	B3	I4	R624	D3	G3			
CR704	B4	J5	R620	D3	G3	U620	C3	H3
CR706	B4	J5	R622	D3	G4	U622	D3	G3
CR707	B4	I4	R650	C1	H4	U624	C2	H3
CR724	C4	I3	R690	E2	H4	U626	D4	I3
CR734	D4	I3	R692	E3	H4	U724A	D4	I3
CR754	C1	J5	R694	E3	B3	U724B	E4	I3
			R702	C3	K5			
J146	F5	K4	R703	B3	J5			
J616	B5	I1	R704	B5	I4			
J617	B4	I1	R706	B5	I4			

PARTIAL A10 also shown on DIAGRAM 14 15

CHASSIS MOUNTED PARTS					
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
AOR800	H1		J802	E1	
AOS800	E1				
AOS904	A4		P620	E2	
AOS906	A4		P820	E1	
AOT800	E1				
AOUB00	F1				

WAVEFORM CONDITIONS

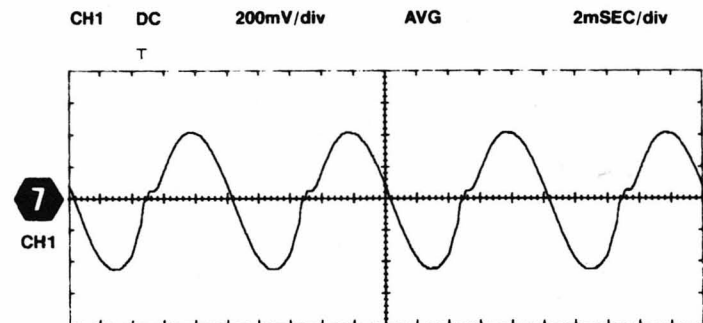
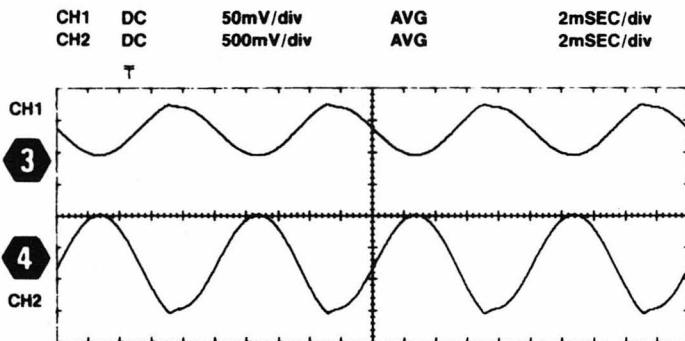
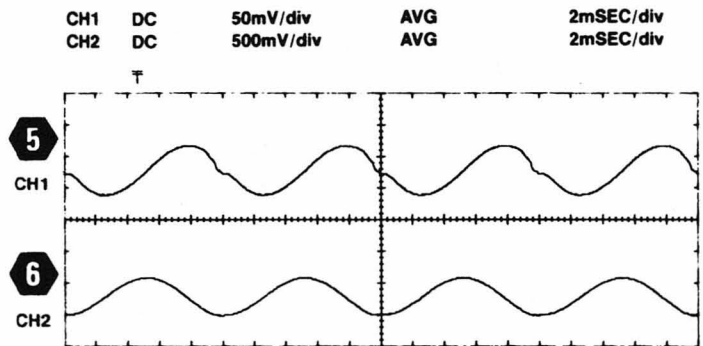
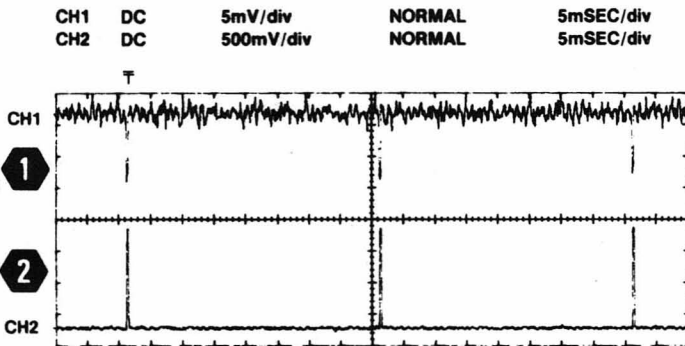
Waveform Conditions

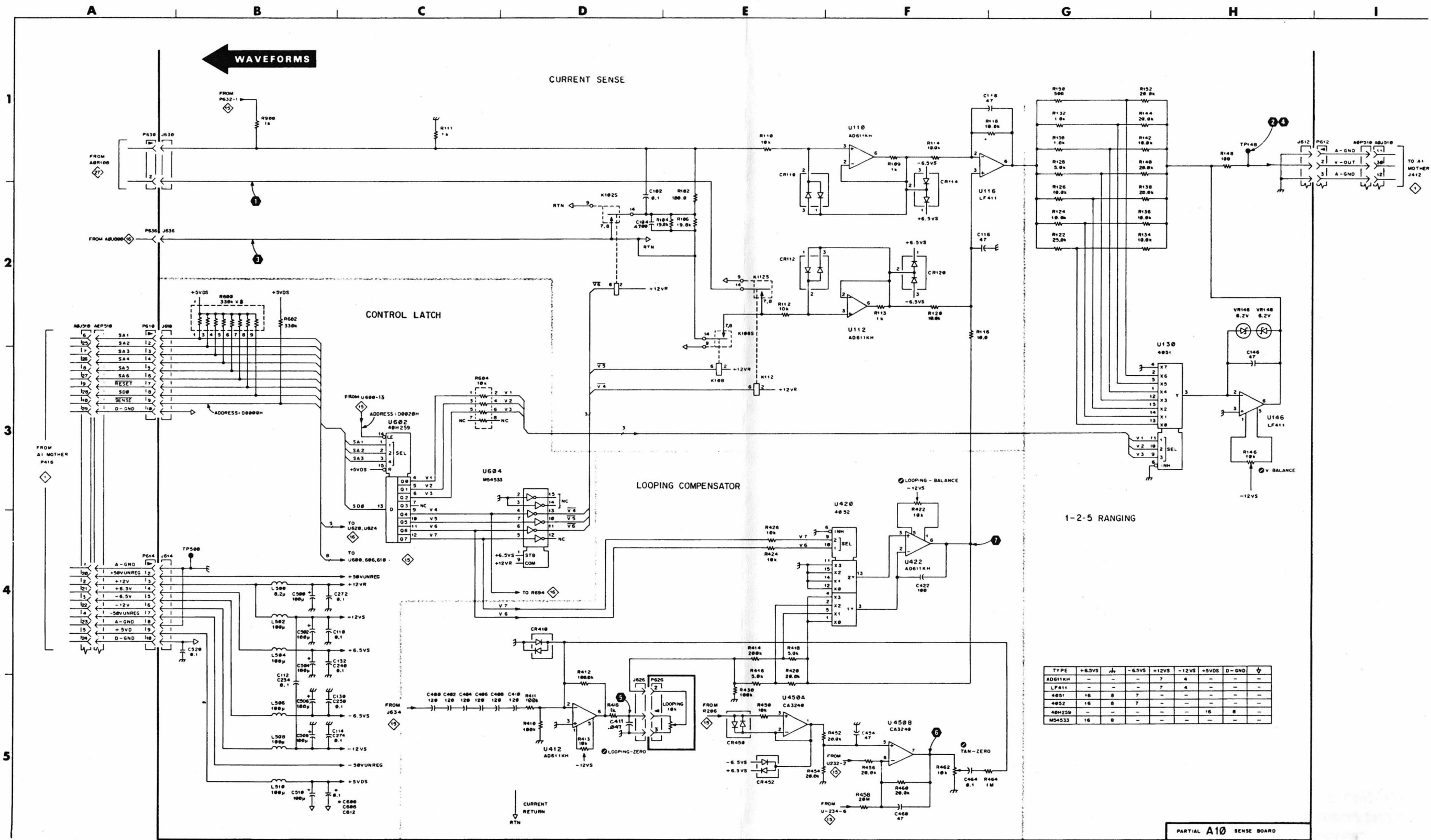
The waveforms shown below were obtained using a test oscilloscope with 1 MΩ input impedance (Tektronix 2430 with plotter) with the 371 under the following conditions:

Waveform 1 and 2: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY VARIABLE is set to 50%, and a patch cord is connected between the Collector Supply HIGH CURRENT terminal and the COMMON terminal.

Waveform 3 and 4: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY PEAK POWER WATTS is set to 30 W and the Collector Supply VARIABLE is set to 20%, and a patch cord is connected between the Collector Supply HIGH VOLTAGE terminal and the COMMON terminal.

Waveform 5 and 6: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY PEAK POWER WATTS is set to 3 W and the COLLECTOR SUPPLY VARIABLE is set to 20%.





TYPE	+6.5V	-6.5V	+12V	-12V	+5VDS	D-GND
AD611KH	-	-	7	4	-	-
LF411	-	-	7	4	-	-
4051	16	8	7	-	-	-
4052	16	8	7	-	-	-
404259	-	-	-	-	16	8
M54533	16	8	-	-	-	-

Vertical Sense

PARTIAL A10 SENSE BOARD

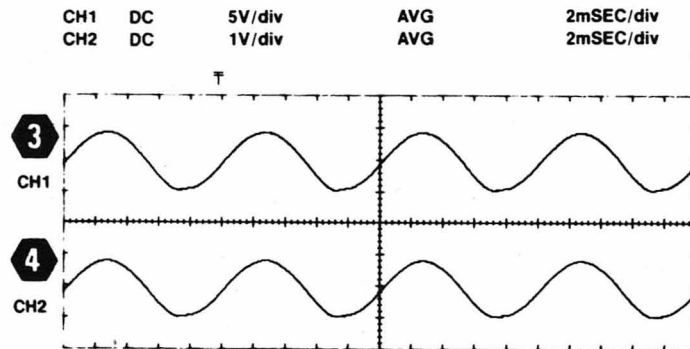
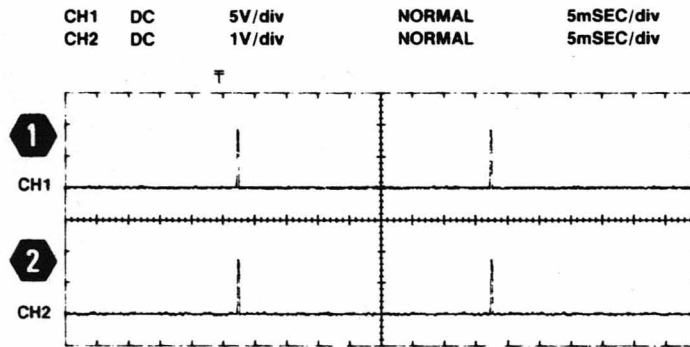
WAVEFORM CONDITIONS

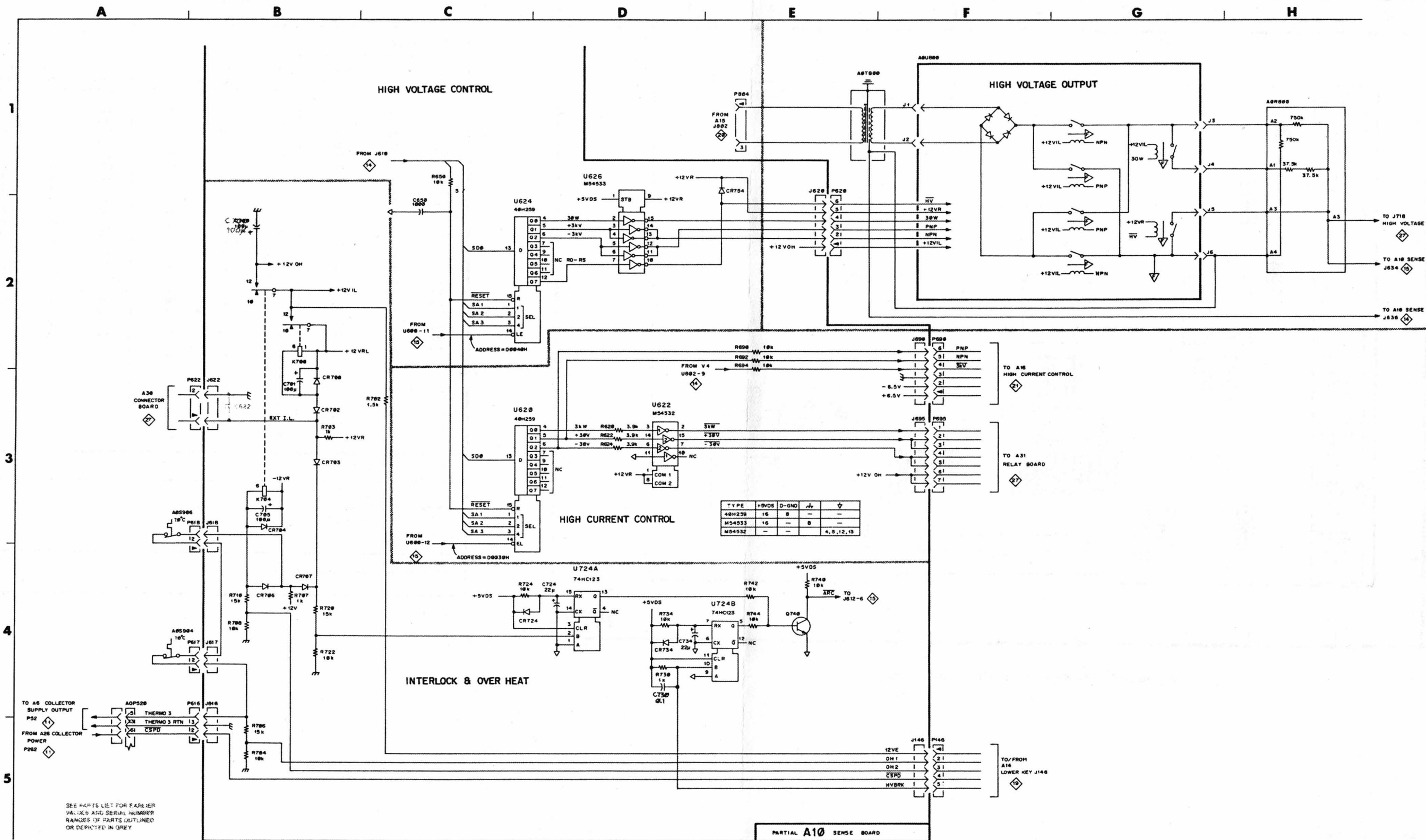
Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 MΩ input impedance (Tektronix 2430 with plotter) with the 371 under the following conditions:

Waveform 1 and 2: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY VARIABLE is set to 30%.

Waveform 3 and 4: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY PEAK POWER WATTS is set to 30 W and the COLLECTOR SUPPLY VARIABLE is set to 30%.



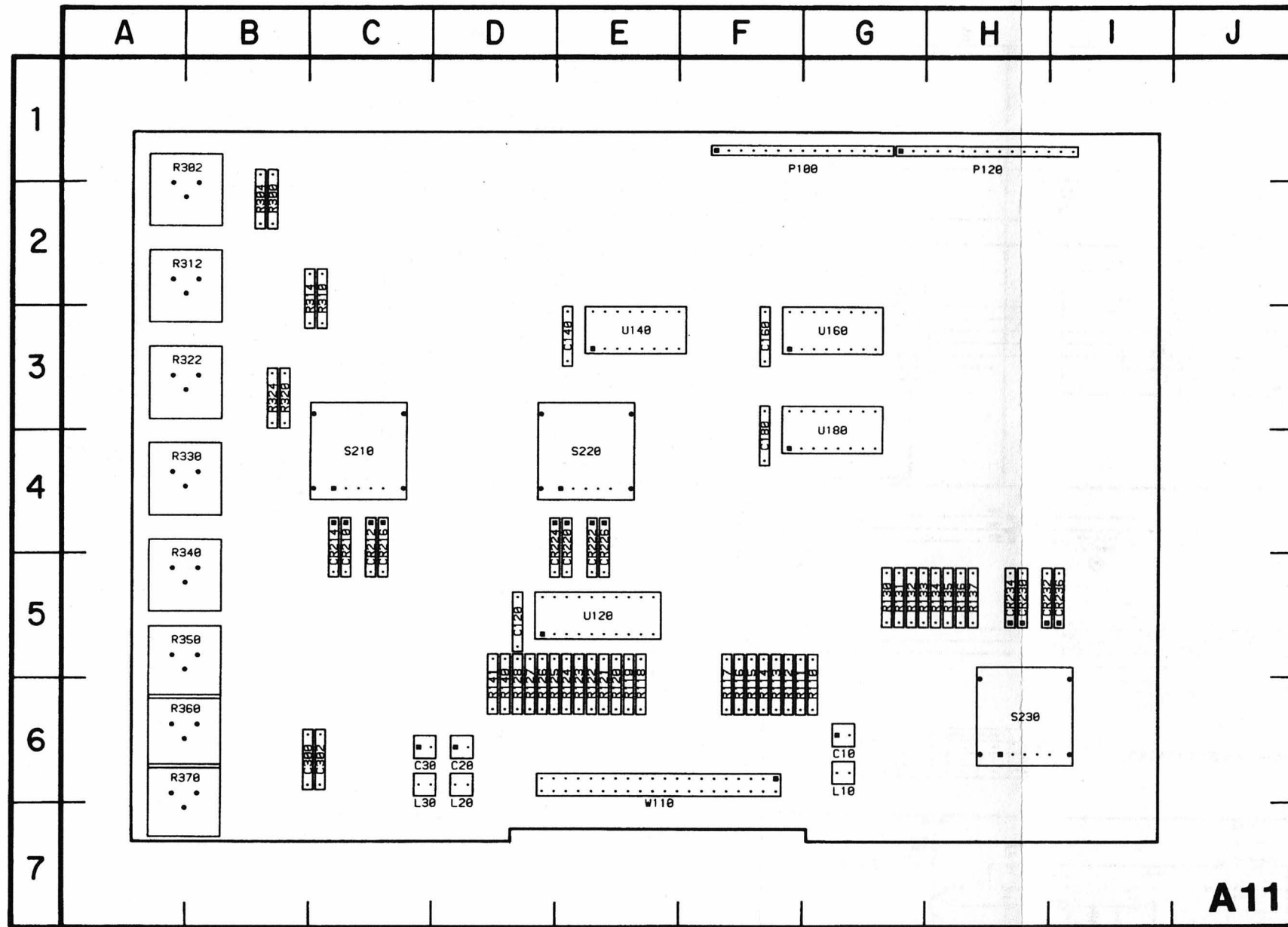


SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES OF PARTS OUTLINED OR DEPICTED IN GREY

371

REV JAN 91

COLLECTOR SUPPLY INTERFACE and HIGH VOLTAGE OUTPUT 16



A11

6804-727

Figure 7-12. All—Main Key circuit board assembly.

MAIN KEY

ASSEMBLY A11								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C10	B2	G6	R110	A1	G6	R302	B4	B2
C20	B2	D6	R111	A1	F6	R304	B4	B2
C30	B2	C6	R112	B1	F6	R310	B4	C2
C120	B2	D5	R113	B1	F6	R312	B4	B2
C140	B2	E3	R114	B1	F6	R314	B4	C2
C160	B2	F3	R115	B1	F6	R320	B4	B3
C180	B2	F4	R116	B1	F6	R322	B4	B3
C300	B2	C6	R117	B1	F6	R324	B4	B3
C302	B2	C6	R118	A3	E6	R330	C4	B4
			R119	A3	E6	R340	C4	B5
CR210	E3	C4	R120	B3	E6	R350	C5	B5
CR212	E3	C4	R121	B3	E6	R360	C5	B6
CR214	E3	C4	R122	B3	E6	R370	B5	B6
CR216	E3	C4	R123	B3	E6	S210	D3	C4
CR220	E4	E4	R124	B3	E6	S220	D4	E4
CR222	E4	E4	R125	B3	D6	A230	D4	H6
CR224	E4	E4	R126	B3	D6			
CR226	E4	E4	R127	B3	D6	U120	D2	E5
CR230	E4	H5	R128	B3	D6	U140	D1	E3
CR232	E4	H5	R130	E1	G5	U160	D2	G3
CR234	E4	H5	R131	E1	G5	U180A	D4	G3
CR236	E4	I5	R132	E1	G5	U180	B	C1
			R133	E1	G5			
L10	A2	G6	R134	E1	H5	W110	A1	E6
L20	A2	D6	R135	E1	H5			
L30	A2	C6	R136	E1	H5			
			R137	E1	H5			
P100	F1	G1	R140	B3	D6			
P120	F3	H1	R141	B3	D6			
			R300	B4	B2			

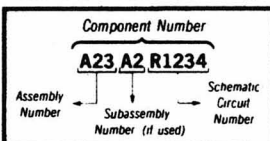
ASSEMBLY A12		
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
J100	F1	F1
J120	F3	G1

PARTIAL A12 also shown on DIAGRAM

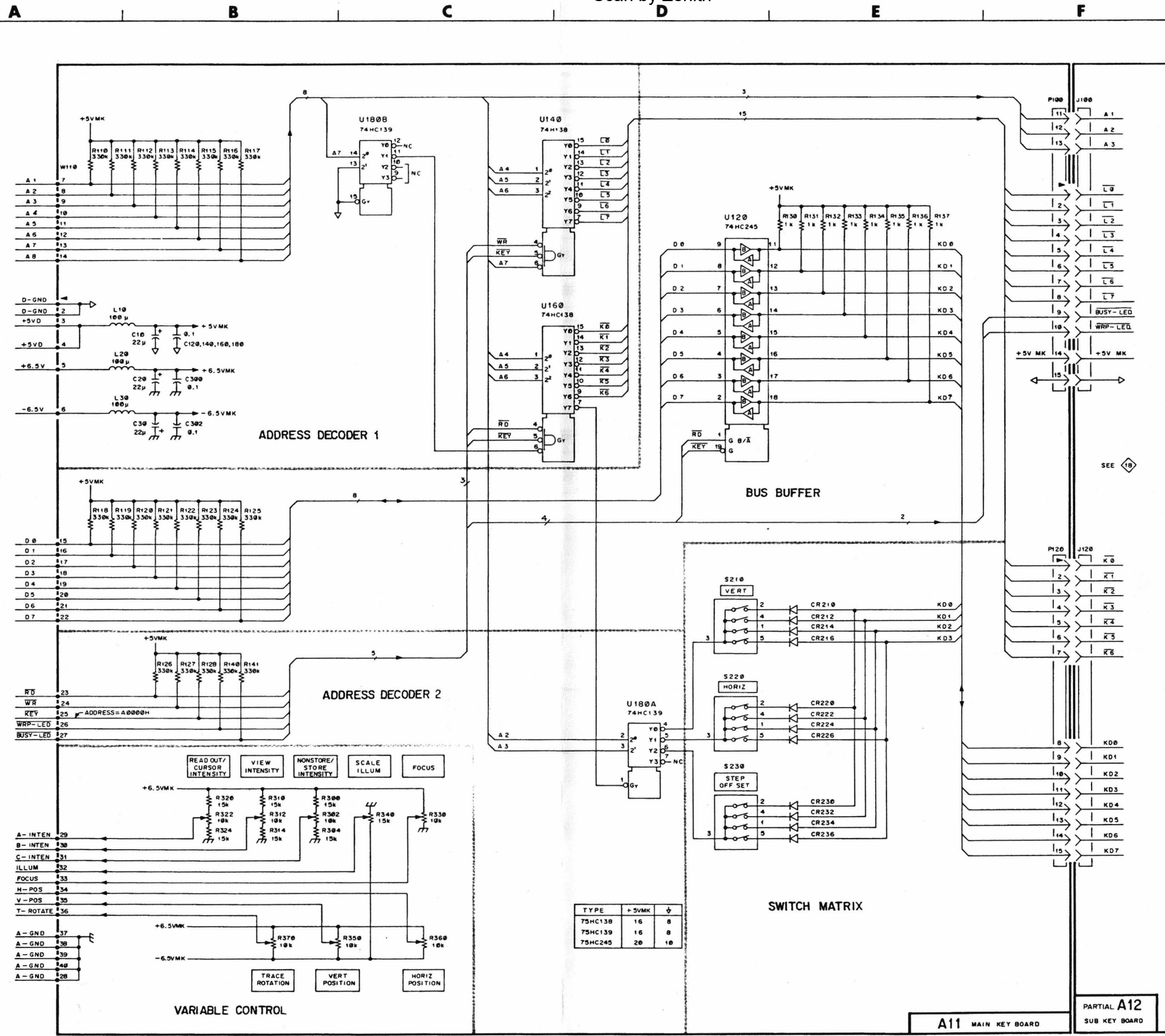
Static Sensitive Devices

See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.



17 Main Key
Reverse Side A12

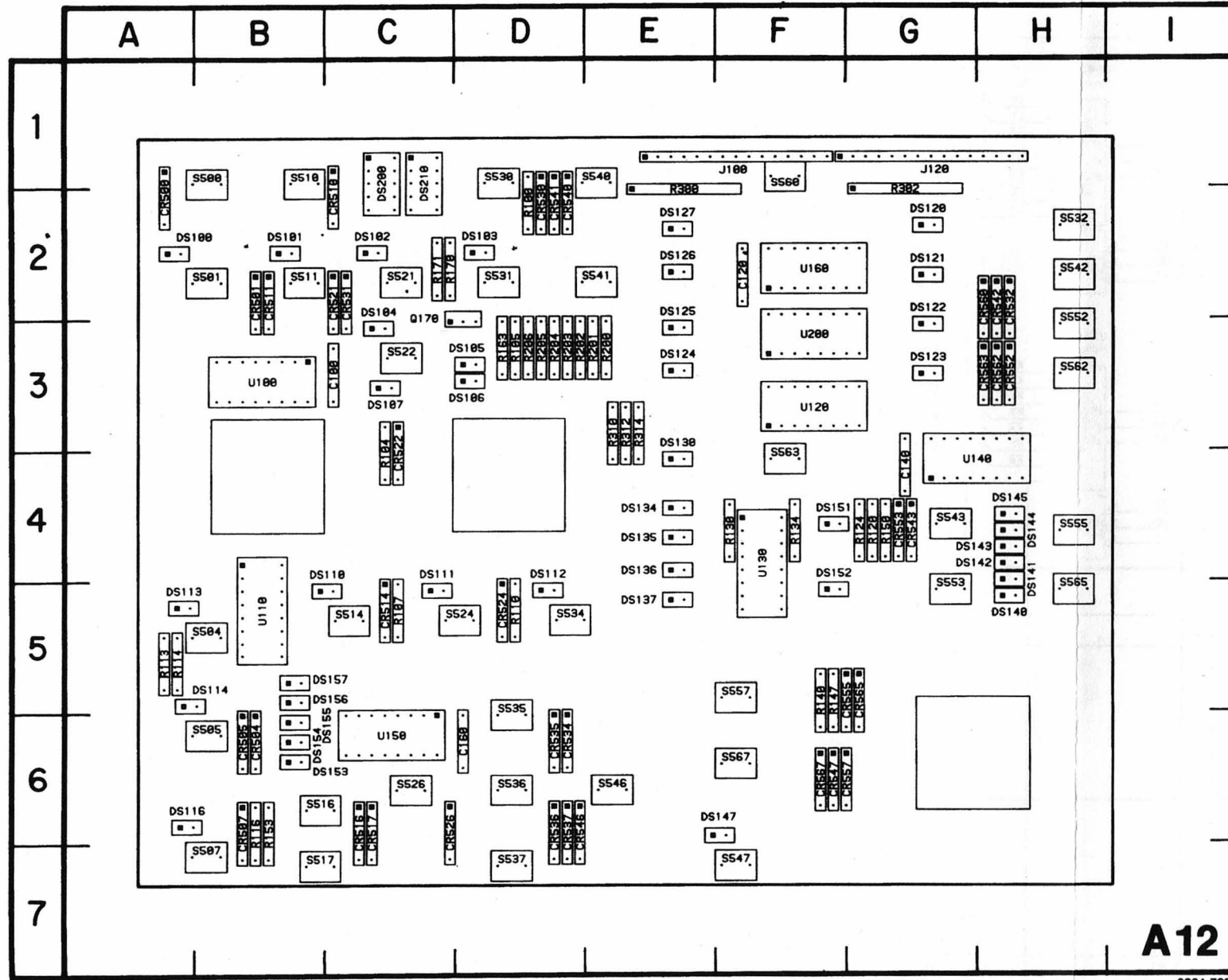
TYPE	+5VMK	φ
75HC139	16	8
75HC139	16	8
75HC245	20	18

A11 MAIN KEY BOARD
PARTIAL A12 SUB KEY BOARD

371 Service

SUB KEY 18

Assembly A12



6804-729

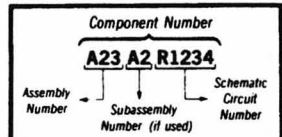
Figure 7-13. A12-Sub Key circuit board assembly.

ASSEMBLY A12								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C100	B3	C3	DS121	C4	G2	R204	F4	D3
C120	B3	F2	DS122	C4	G3	R205	F4	D3
C140	B3	G4	DS123	C4	G3	R206	F4	D3
C160	B3	D6	DS124	C5	E3	R300	B2	E1
			DS125	C5	E2	R302	B3	G1
CR500	G1	A2	DS126	C5	E2	R310	B2	E3
CR501	G1	B2	DS127	C5	E2	R312	B2	E3
CR504	G3	B6	DS130	D2	E4	R314	B3	E3
CR505	G3	B6	DS134	D2	E4			
CR507	G4	B6	DS135	D2	E4	S500	G1	B1
CR510	G1	C2	DS136	D2	E4	S501	G1	B2
CR511	G1	B2	DS137	D2	E5	S504	G3	B5
CR514	G3	C5	DS140	D4	H5	S505	G3	B6
CR516	G3	C6	DS141	D4	H4	S507	G4	B7
CR517	G4	C6	DS142	D4	H4	S510	G1	B1
CR521	H1	C2	DS143	D4	H4	S511	G1	B2
CR522	H2	C3	DS144	D5	H4	S514	G3	C5
CR524	H3	D5	DS145	D5	H4	S516	G3	B6
CR526	H3	C6	DS147	D5	F6	S517	G4	B7
CR530	H1	D2	DS151	F2	F4	S521	H1	C2
CR531	H1	C2	DS152	F2	F5	S522	H2	C3
CR532	H2	H2	DS153	F2	B6	S524	H3	D5
CR534	H3	D6	DS154	F2	B6	S526	H3	C6
CR535	H3	D6	DS155	F2	B6	S530	H1	D1
CR538	H3	D6	DS156	F2	B5	S531	H1	D2
CR537	H4	D6	DS157	F2	B5	S532	H2	H2
CR540	H1	D2	DS200	F3	F4	S534	H3	D5
CR541	H1	D2	DS210	F5	F5	S535	H3	D5
CR542	H2	H2				S538	H3	D6
CR543	H2	G4	J100	A2	F1	S537	H4	D7
CR546	H3	D6	J120	A3	G1	S540	H1	E1
CR547	H4	F6				S541	H1	E2
CR552	I2	H3	Q170	F3	D2	S542	H2	H2
CR553	I2	G4				S543	H2	G4
CR555	I3	F5	R100	C1	D2	S546	H3	E6
CR557	I4	F6	R104	C1	C4	S547	H4	F7
CR580	I1	H2	R105	C2	D3	S552	I2	H3
CR582	I2	H3	R107	C2	C5	S553	I2	G5
CR583	I2	H3	R110	C3	D5	S555	I3	H4
CR585	I3	G5	R113	C3	A5	S557	I4	F5
CR587	I4	F6	R114	C3	A5	S560	I1	F1
			R116	C4	B6	S562	I2	H3
DS100	C2	A2	R120	C4	G4	S563	I2	F4
DS101	C2	B2	R124	C5	G4	S565	I3	H5
DS102	C2	C2	R130	D1	F4	S567	I4	F6
DS103	C2	D2	R134	D2	F4			
DS104	C2	C3	R140	D4	F5	U100	B1	B3
DS105	C2	D3	R147	D5	F5	U110	B3	B5
DS106	C2	D3	R150	F1	G4	U120	B4	F3
DS107	C2	C3	R153	F2	B6	U130	D1	F4
DS110	C3	C5	R163	F3	D3	U140	D4	G4
DS111	C3	C5	R170	F3	C2	U150	E1	C6
DS112	C3	D5	R171	G3	C2	U160	E3	F2
DS113	C3	A5	R200	F4	E3	U200	F4	F3
DS114	C3	A5	R201	F4	E3			
DS116	C3	A6	R202	F4	D3			
DS120	C4	G2	R203	F4	D3			

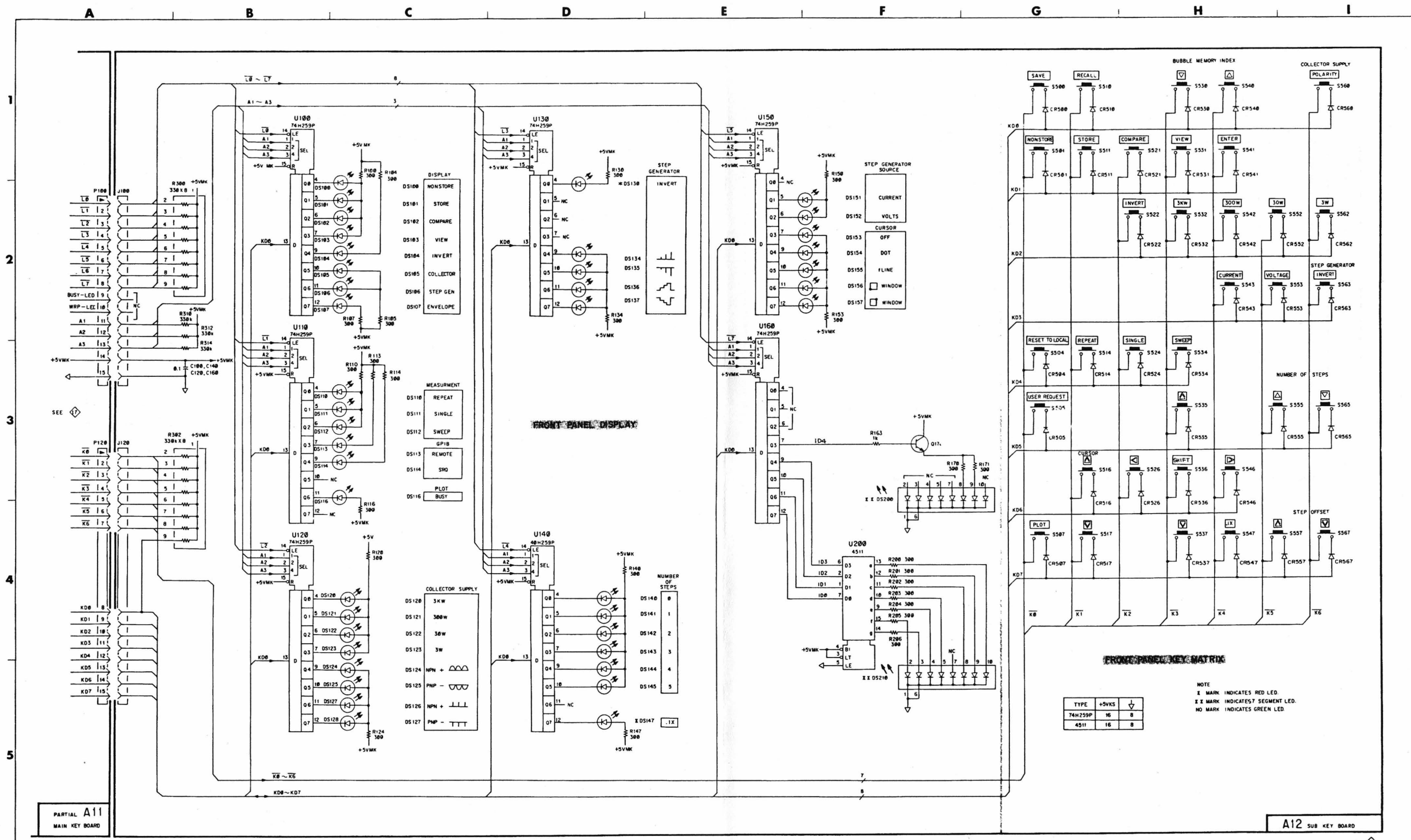
ASSEMBLY A11

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P100	A2	
P120	A3	

Static Sensitive Devices
See Maintenance Section
COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List



18 Sub Key

Reverse Side A14

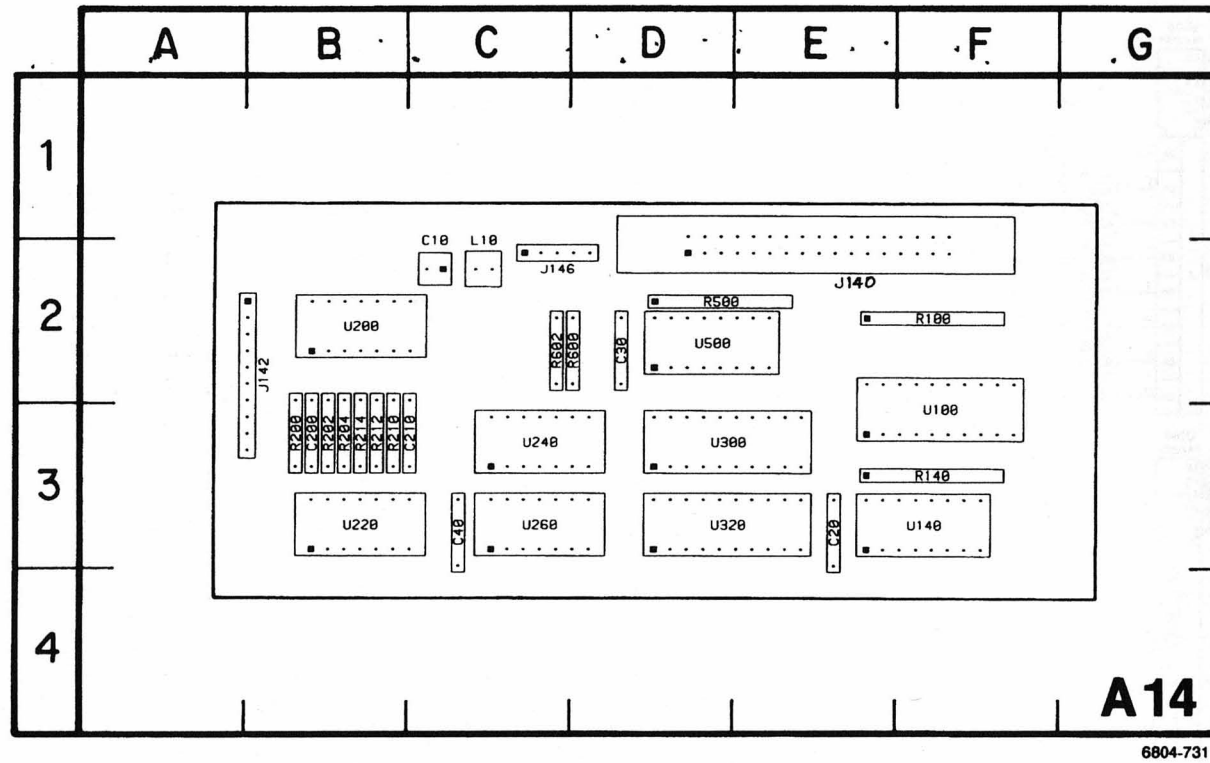
TYPE	+5VKS	↓
74H259P	16	8
4511	16	8

NOTE
 I MARK INDICATES RED LED.
 I I MARK INDICATES 7 SEGMENT LED.
 NO MARK INDICATES GREEN LED

PARTIAL A11
 MAIN KEY BOARD

A12 SUB KEY BOARD

SUB KEY 18



6804-731

Figure 7-14. A14—Lower Key circuit board assembly.

LOWER KEY

ASSEMBLY A14								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C10	B4	C2	R210	B1	B3	U200C	B2	B2
C20	B4	E3	R212	B1	B3	U200D	B1	B2
C30	B4	D2	R214	B1	B3	U200E	B1	B2
C40	B4	C3	R500A	B4	D2	U200F	E3	B2
C200	B2	B3	R500B	B4	D2	U220A	C2	B3
C210	B1	C3	R500C	B4	D2	U220B	C1	B3
			R500D	B4	D2	U240A	D2	C3
J140	A2	E2	R500E	B4	D2	U240B	D1	C3
J142	A1	B2	R500H	B4	D2	U260A	D3	C3
J146	A4	C2	R500F	B2	D2	U260B	D2	C3
			R500G	B2	D2	U300	E1	D3
L10	B3	C2	R600	B4	D2	U320	E3	D3
			R602	D4	C2	U500	D4	D2
R100	B2	F2						
R140	B3	F3	U100	C3	F3			
R200	B2	B3	U140	C2	F3			
R202	B2	B3	U200A	D2	B2			
R204	B1	B3	U200B	B2	B2			
CHASSIS MOUNTED PARTS								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION			
DS140	F4		P500	A2				
J500	A2		S140	A1				

Assembly A14

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE

Component Number		
A23 A2 R1234		
Assembly Number	Subassembly Number (if used)	Schematic Circuit Number

Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List

A

B

C

D

E

F

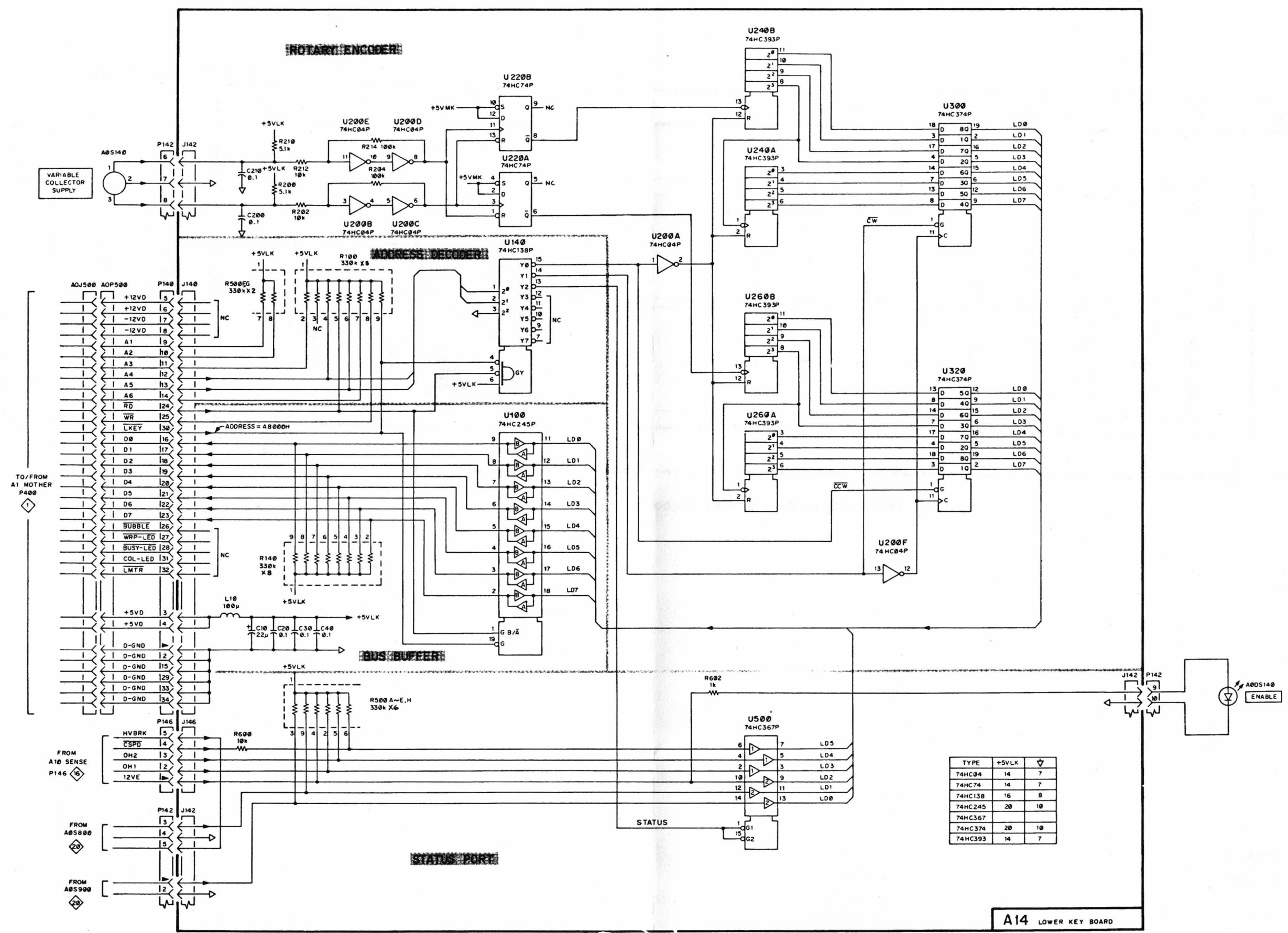
1

2

3

4

5



TYPE	+5VLK	▽
74HC04	14	7
74HC74	14	7
74HC138	16	8
74HC245	20	10
74HC367	20	10
74HC374	20	10
74HC393	14	7

A14 LOWER KEY BOARD

Lower Key

Reverse Side A15

HIGH CURRENT POWER SUPPLY

20

ASSEMBLY A15								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C200	B1	J3	J800	B3	L3	R312	D2	K4
C300	C2	J4	J802	F3	L3	R800	F3	L3
C302	C2	K4	J804	F3	B2			
C400	D1	H2	J900	B2	I4	U310	D2	K3
C402	E1	H3	J902	B1	I2	U312	D2	K3
C404	E1	G2	J904	F1	L3	U330	D3	K2
C406	E1	G3	J908	F3	J2			
C408	E1	E2				VR200	B1	J3
C410	E1	E3	R200	B1	K3	VR300	C2	K4
C412	E1	D2	R300	C2	J2	VR302	C2	K4
C414	F1	D3	R302	C2	K3			
C418	F1	C2	R304	C2	K3			
C418	F1	C3	R306	C2	J3			
			R308	C2	K3			
CR100	B2	I3	R310	D2	K3			
CR200	B1	K2						
CHASSIS MOUNTED PARTS								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION			
C900	A3		Q802	A1				
J520	A2		S800	F3				
J520	A3		S900	A2				

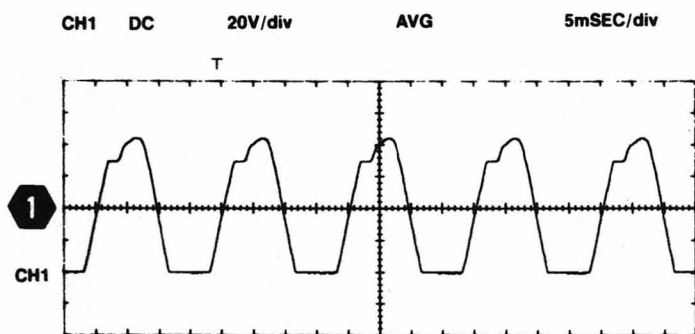
VOLTAGE AND WAVEFORM CONDITIONS

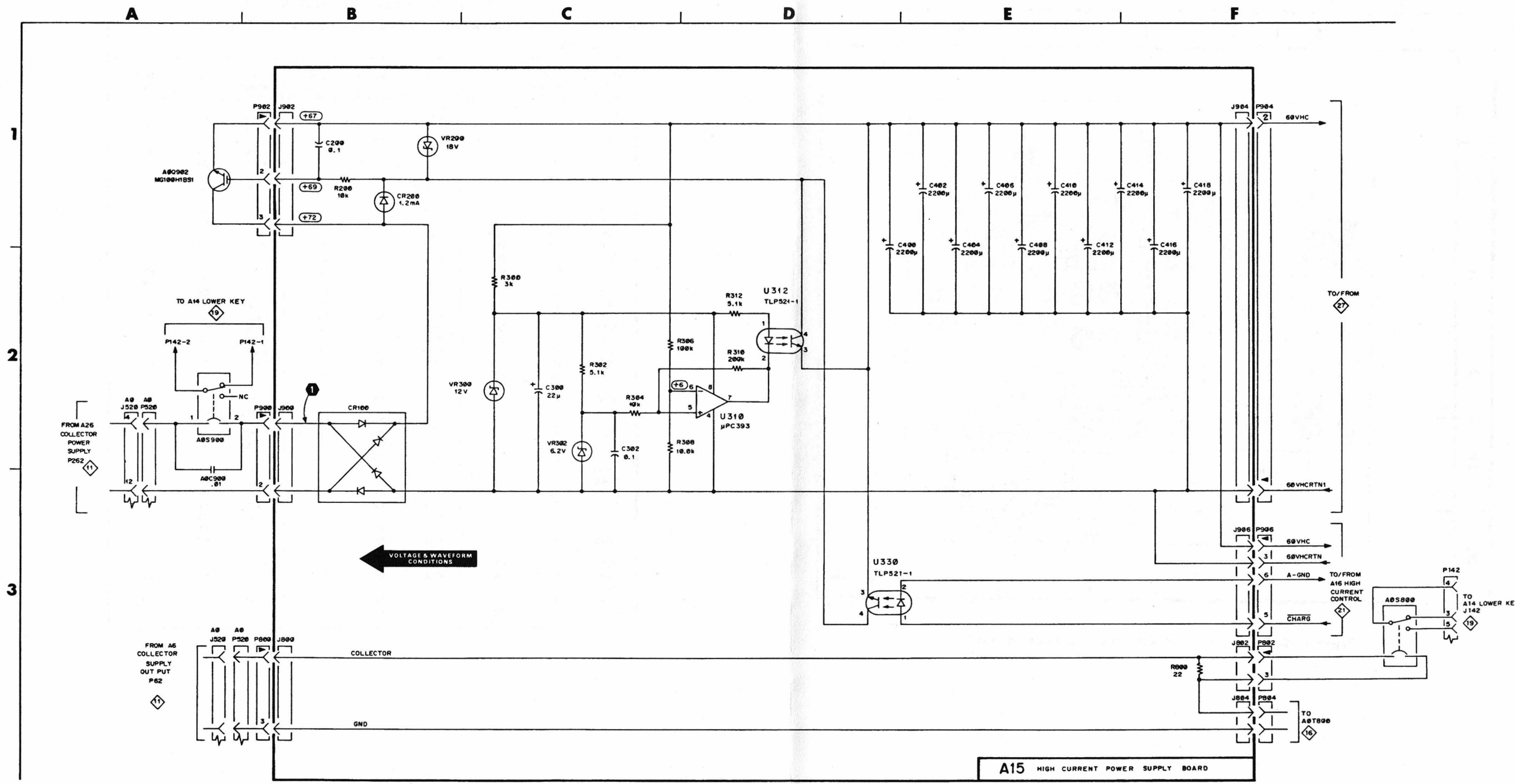
Voltage Conditions

The voltages shown on the diagram were obtained using a digital multimeter with a $10\text{ M}\Omega$ input impedance with the 371 COLLECTOR SUPPLY mode set to HIGH CURRENT.

Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with $1\text{ M}\Omega$ input impedance (Tektronix 2430 with plotter) with the 371 set to the power-up default (initial) settings.





371

HIGH CURRENT POWER SUPPLY 20

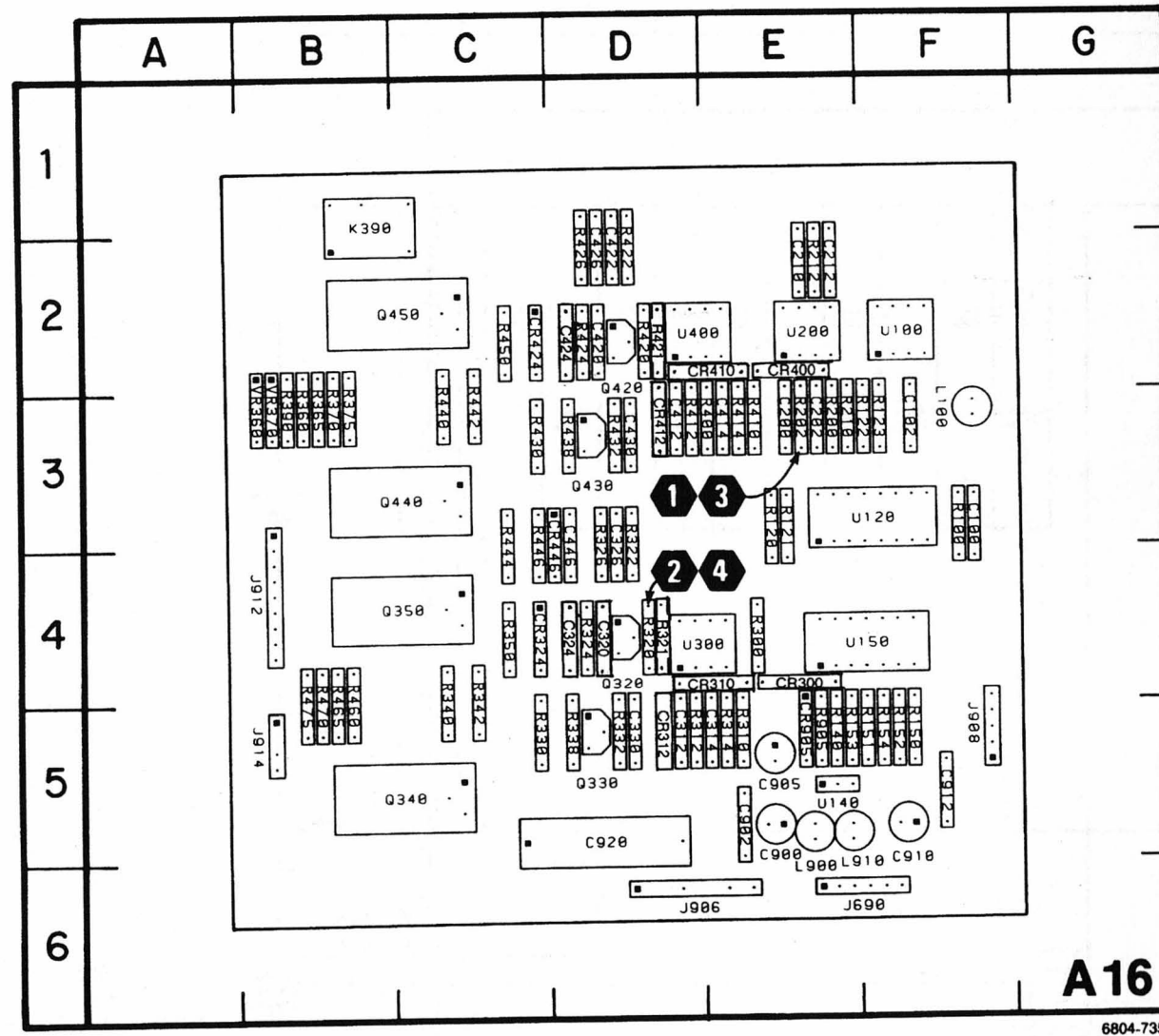
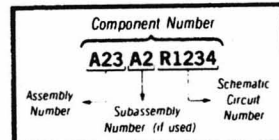


Figure 7-16. A16—High Current Control circuit board assembly.

HIGH CURRENT CONTROL 21

ASSEMBLY A16								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C100	B1	F3	K390	F2	B1	R342	F1	C5
C102	B1	F3				R350	F2	C4
C200	D2	E3	L100	B1	F3	R360	G1	B3
C202	D1	E3	L900	B3	E5	R365	G1	B3
C210	D3	E2	L910	B4	E5	R370	G1	B3
C212	D3	E2				R375	G2	B3
C312	E2	D5	Q320	E2	D4	R390	G1	B3
C314	D2	E5	Q330	E1	D5	R400	D3	E3
C320	E1	D4	Q340	F1	C5	R410	D3	E3
C324	E1	D4	Q350	F2	B4	R412	E3	D3
C326	E2	D3	Q420	E3	D2	R414	D3	E3
C330	E2	D5	Q430	E3	D3	R420	E3	D2
C412	E3	D3	Q440	F3	B3	R421	E3	D2
C414	D3	E3	Q450	F4	B2	R422	E4	D2
C420	E3	D2				R424	E3	D2
C422	E4	D2	R100	B1	F3	R426	E4	D2
C424	E3	D2	R120	C2	E3	R430	E3	C3
C426	E4	D3	R121	C2	E3	R432	E3	D3
C430	E3	D3	R122	C3	F3	R438	E3	D3
C446	F2	D3	R123	C3	F3	R440	F3	C3
C900	B3	E5	R140	B2	E5	R442	F3	C3
C902	B3	E5	R150	B2	F5	R444	F3	C3
C905	B3	E5	R151	B3	F5	R446	F2	C3
C910	B3	F5	R152	B3	F5	R450	F4	C2
C912	B3	F5	R153	B3	E5	R460	G2	B5
C920	B2	D5	R154	B2	F5	R4465	G2	B5
			R200	C1	E3	R470	G2	B5
CR300	B1	E4	R202	D1	E3	R475	G2	B5
CR310	D1	E4	R210	C3	E3	R905	B3	E5
CR321	E2	D5	R212	D3	E2			
CR324	E1	C4	R300	D1	E4	U100	B1	F2
CR400	D3	E2	R3310	D2	E5	U120	C1	F3
CR410	D3	E2	R312	E2	D5	U120	C3	F3
CR412	E3	D3	R314	D2	E5	U140	B2	E5
CR424	E3	C2	R320	E1	D4	U150	B2	F4
CR446	F2	D3	R321	E2	D4	U150	C2	F4
CR905	B3	E5	R322	E2	D3	U150	C3	FR
			R324	E1	D4	U200	D3	E2
J690	A3	F6	R326	E2	D3	U300	E1	E4
J906	A2	D6	R330	E1	C5	U400	E3	D2
J908	A1	F5	R332	E1	D5			
J912	G1	B4	R338	E2	D5	VR360	G1	B3
J914	G2	B5	R340	F2	C5	VR370	G1	B3

Static Sensitive Devices
See Maintenance Section
COMPONENT NUMBER EXAMPLE

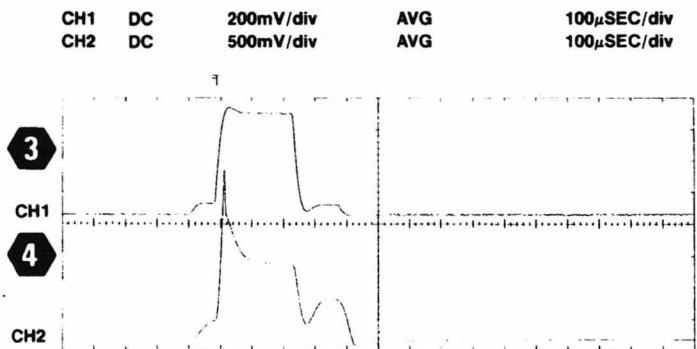
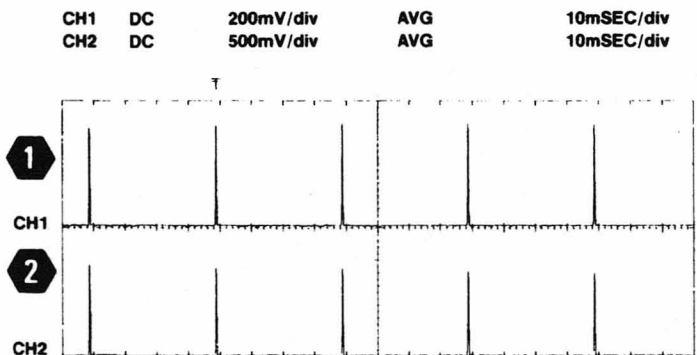


Chassis mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List

WAVEFORM CONDITIONS

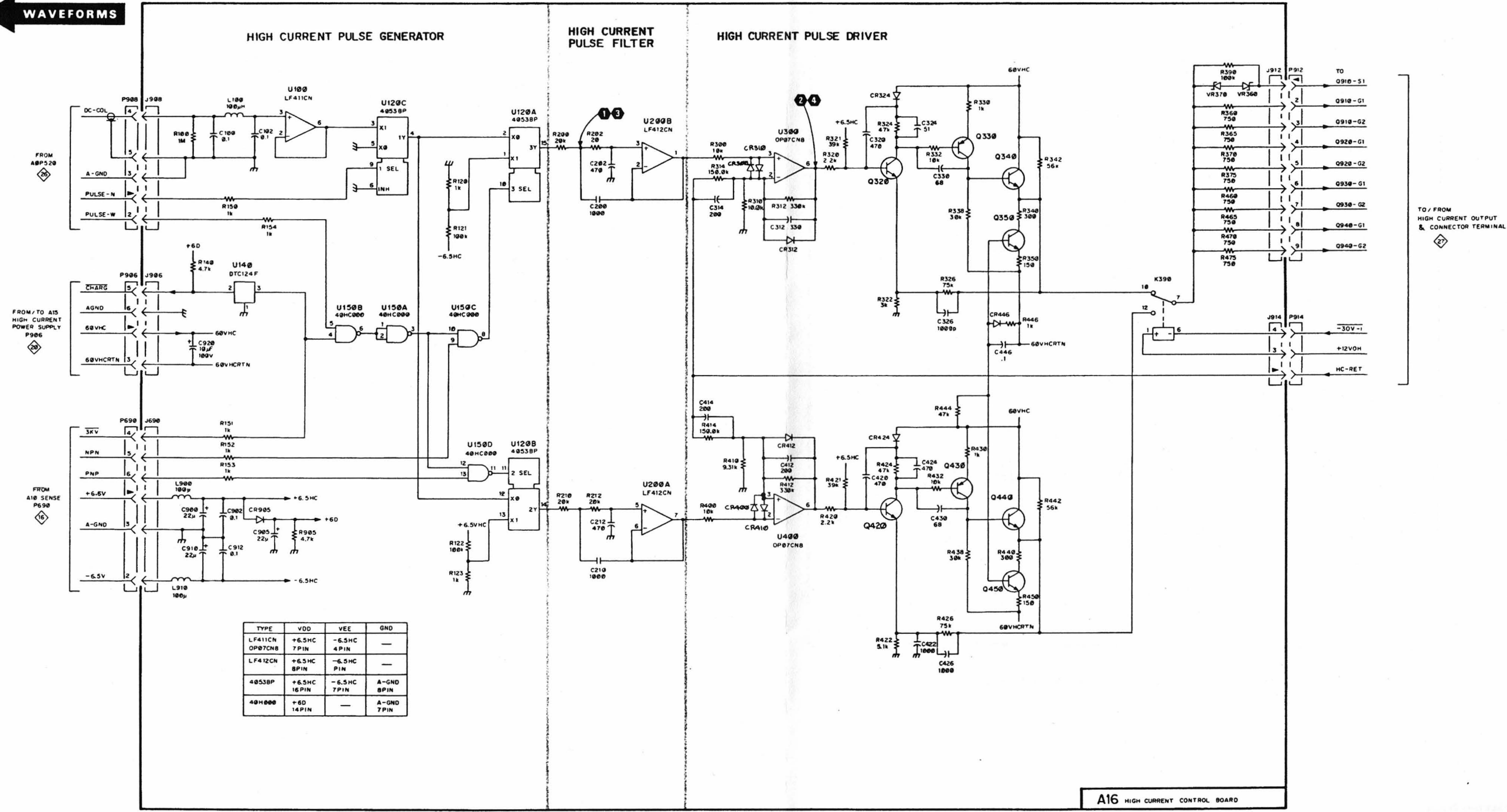
Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with 1 M Ω input impedance (Tektronix 2430 with plotter) with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY VARIABLE is set to 30%.



A B C D E F G H

← WAVEFORMS



A16 HIGH CURRENT CONTROL BOARD

High Current Amplifier
Reverse Side A16

TO / FROM HIGH CURRENT OUTPUT & CONNECTOR TERMINAL

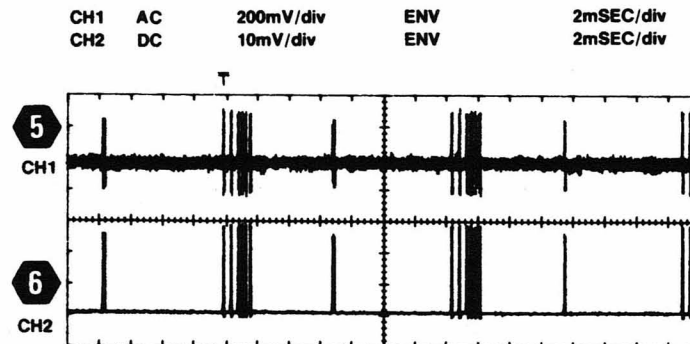
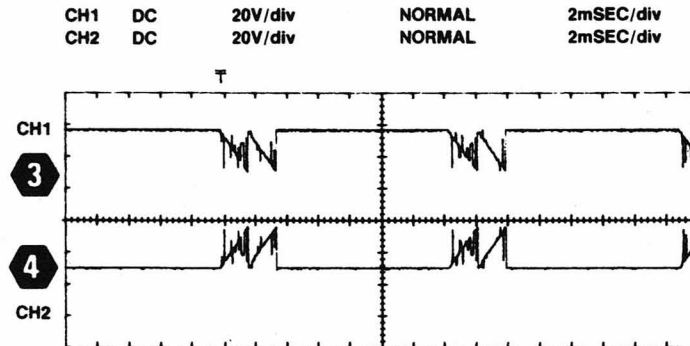
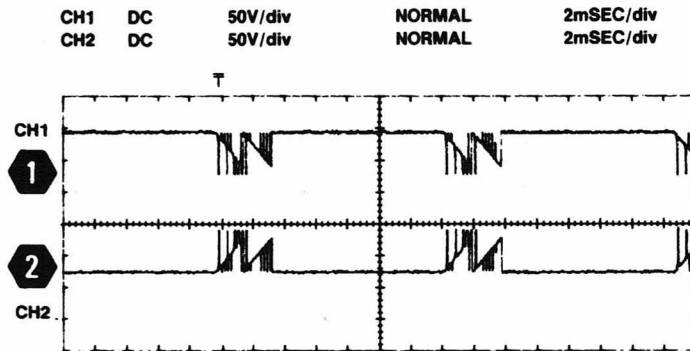
VOLTAGE AND WAVEFORM CONDITIONS

Voltage Conditions

The voltages shown on the diagram were obtained using a digital multimeter with a 10 MΩ input impedance. These voltages are not affected by the 371 settings.

Waveform Conditions

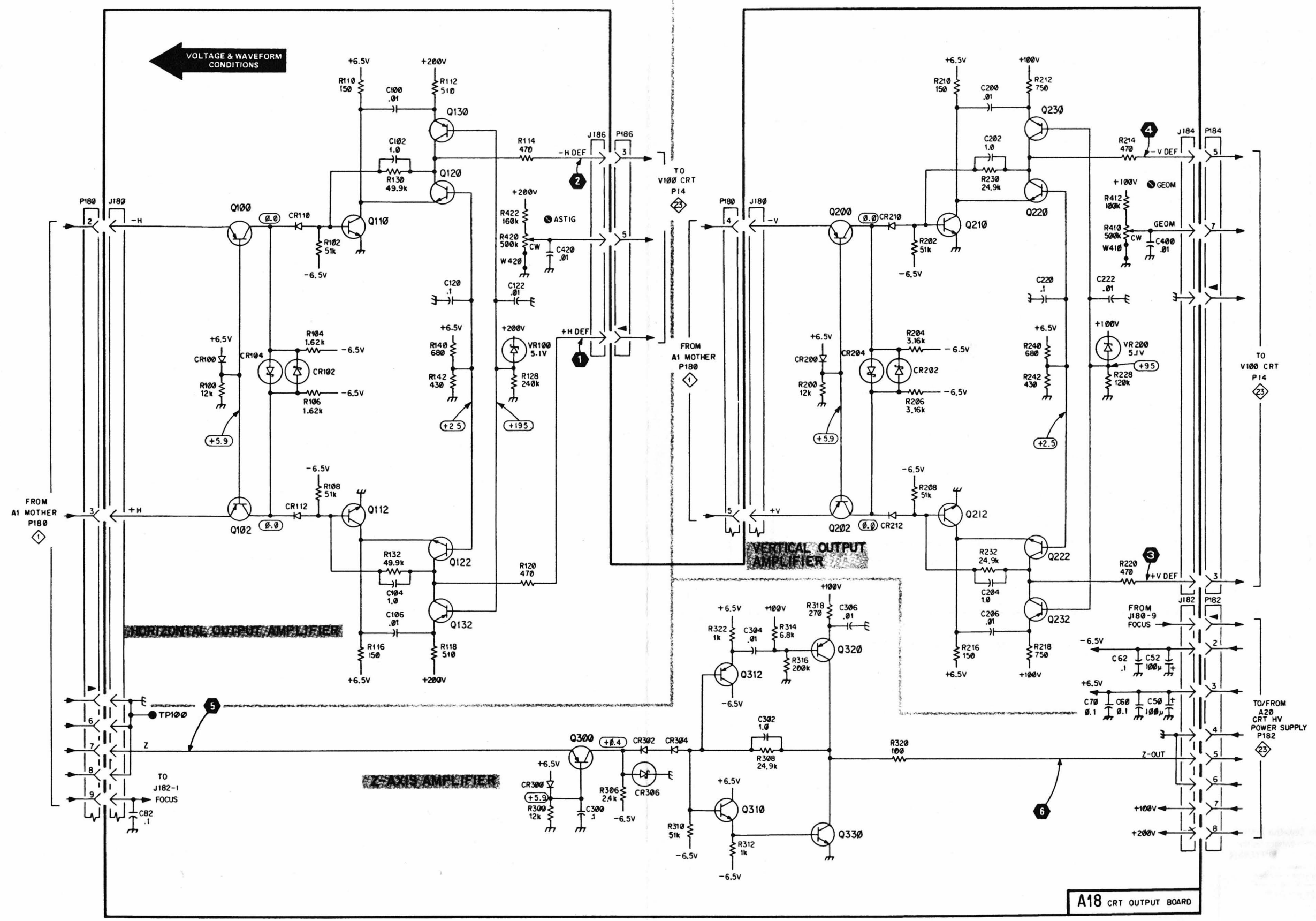
The waveforms shown below were obtained using a test oscilloscope with 1 MΩ input impedance (Tektronix 2430 with plotter) with the 371 set to the power-up default (initial) settings.

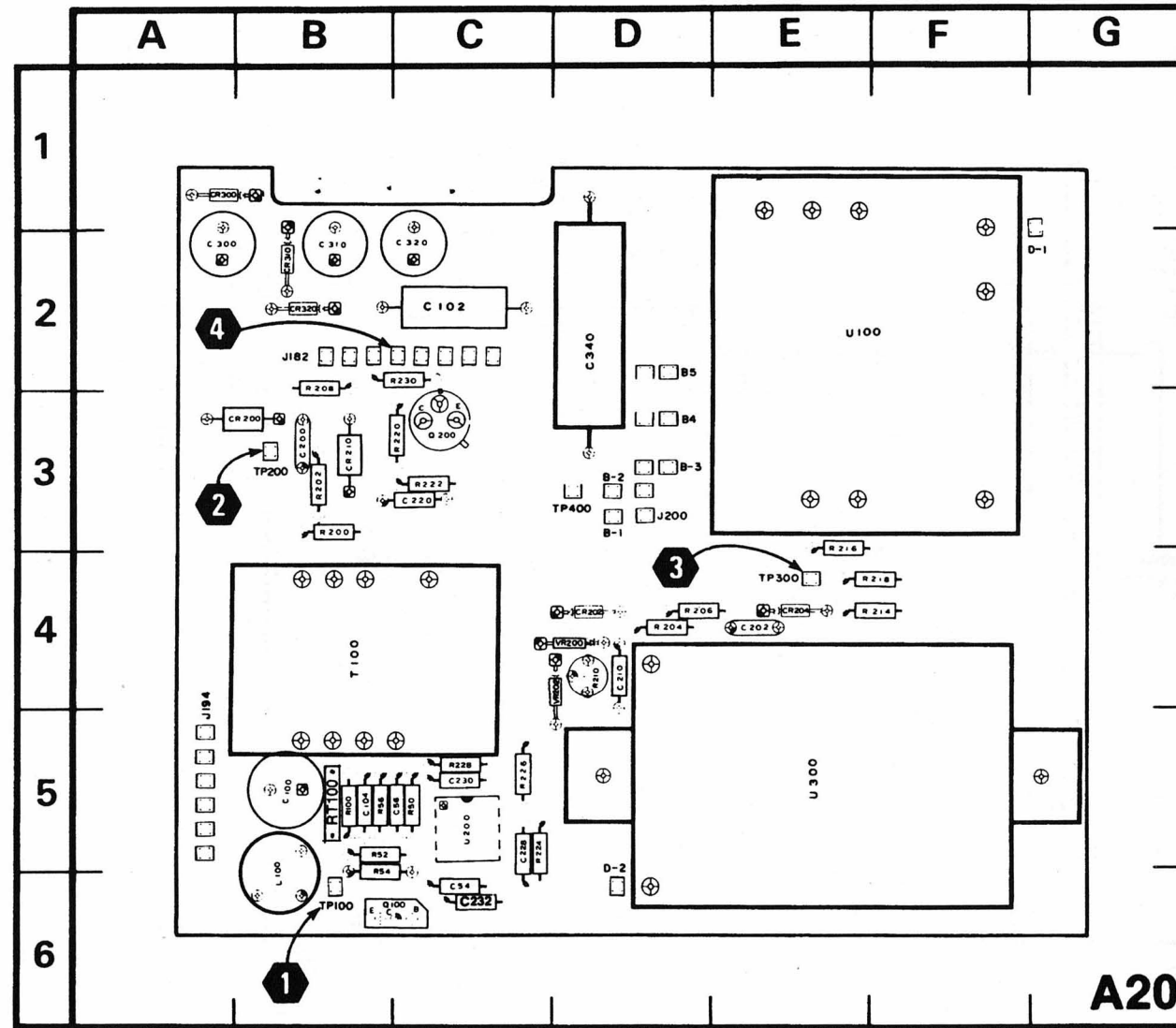


A B C D E F

1
2
3
4

VOLTAGE & WAVEFORM CONDITIONS





Assembly A20

6804-739

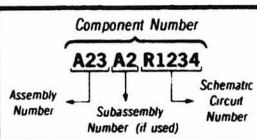
Figure 7-18. A20-CRT HV Power Supply circuit board assembly.

CRT VH POWER SUPPLY 23

ASSEMBLY A20								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C54	C3	C6	J182	E2	B2	R220	C1	C3
C56	C4	C5	J194	A3	A4	R222	B1	C3
C100	A1	B5	J200	E1	D3	R224	B2	C5
C102	B3	C2				R226	B2	C5
C104	B4	B5	L100	B1	B6	R228	C2	C5
C200	C2	B3				R230	C2	C2
C202	C2	E4	Q100	A2	C6			
C210	C3	D4	Q200	C2	C3	RT100	A1	B5
C220	C1	C3				T100	B1	B4
C228	B1	C5	R50	C4	C5			
C230	B3	C5	R52	C3	B5	TP100	A1	B6
C232	B2	C6	R54	C3	B6	TP200	C2	B3
C300	D3	A2	R546	B3	B5	TP300	C2	E4
C310	D3	B2	R100	A2	B5	TP400	D2	D3
C320	D3	C2	R200	B2	B3			
C340	D2	D2	R202	B2	B3	U100	D1	E2
CR200	C2	B3	R204	B2	D4	U200A	B4	C5
CR202	C2	D4	R206	B2	D4	U200B	B2	C5
CR204	C2	E4	R208	B2	D4	U300	D4	E5
CR210	C2	B3	R208	C2	B2			
CR300	D3	A1	R210	C3	D4	VR200	B3	D4
CR310	D3	B2	R214	C2	F4	VR202	C2	D4
CR320	D3	B2	R216	C2	E4			
			R218	C2	F4			

CHASSIS MOUNTED PARTS								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
L100	E4	CHASSIS	P14	F1	CHASSIS	W10	E4	CHASSIS
L120	E2	CHASSIS	V100	E4	CHASSIS	W12	E3	CHASSIS

Static Sensitive Devices
See Maintenance Section



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

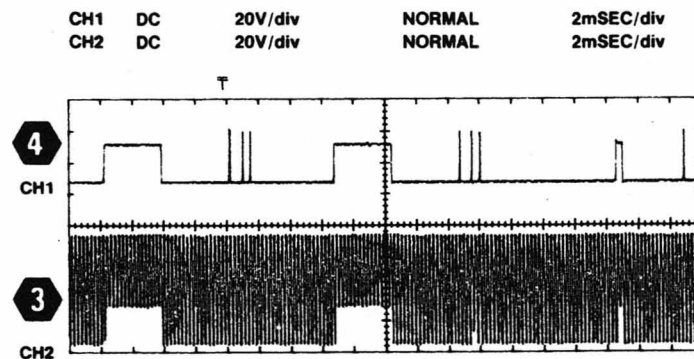
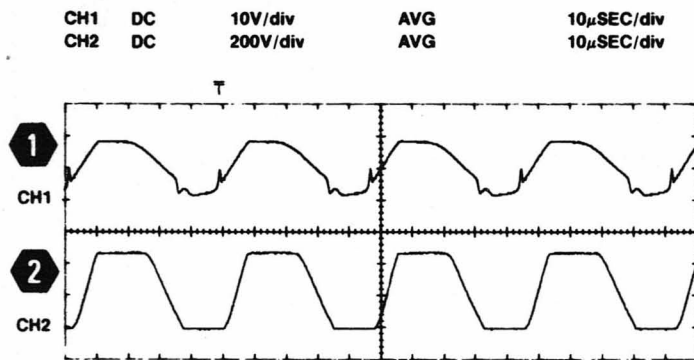
WAVEFORM CONDITIONS

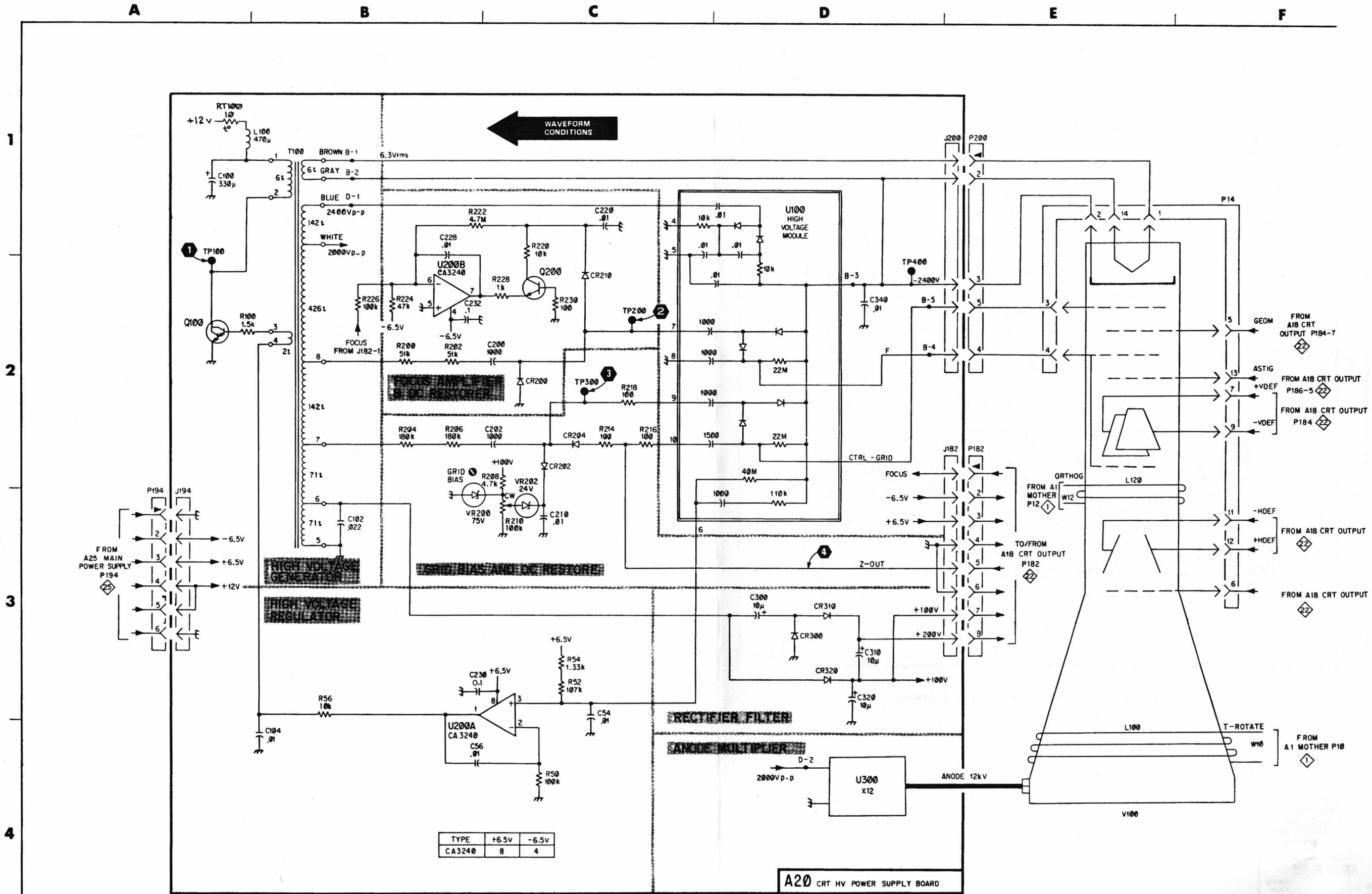
Waveform Conditions

The waveforms shown below were obtained using a test oscilloscope with $1\text{ M}\Omega$ input impedance (Tektronix 2430 with plotter) with the 371 under the following conditions:

Waveforms 1 and 2: These waveforms were obtained with the 371 set to the power-up default (initial) settings.

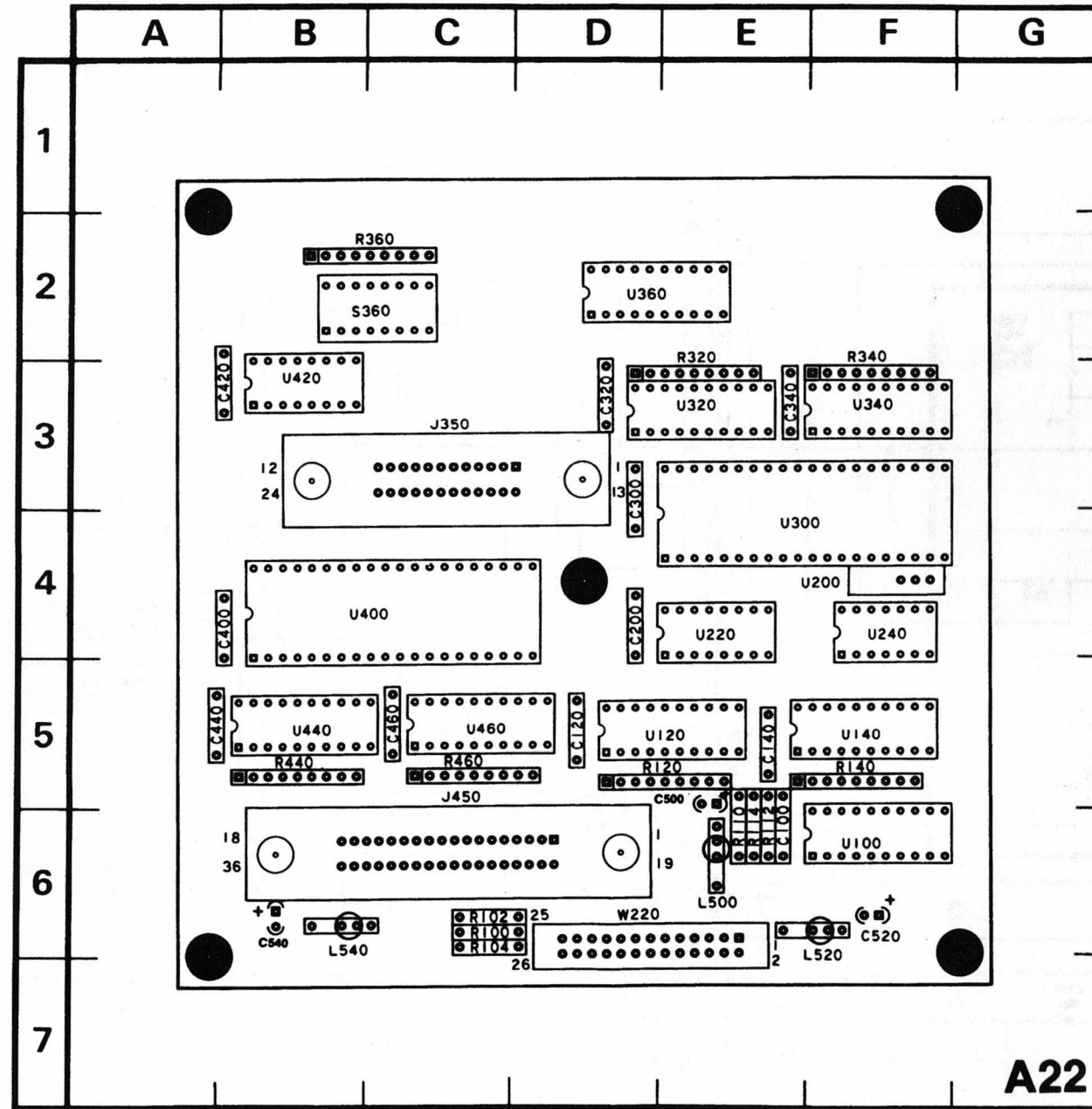
Waveforms 3 and 4: These waveforms were obtained with the 371 set to the power-up default (initial) settings, except that the COLLECTOR SUPPLY PEAK POWER WATTS is set to 30 W, and NONSTORE/STORE Intensity knob and READOUT/CURSOR Intensity knob are turned fully clockwise.





TYPE	+6.5V	-6.5V
CA3240	8	4

1
2
3
4



A22

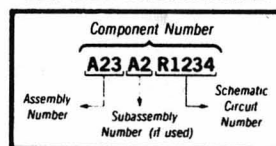
6804-741

Figure 7-19. A22-Interface circuit board assembly.

GPIB PLOTTER INTERFACE 24

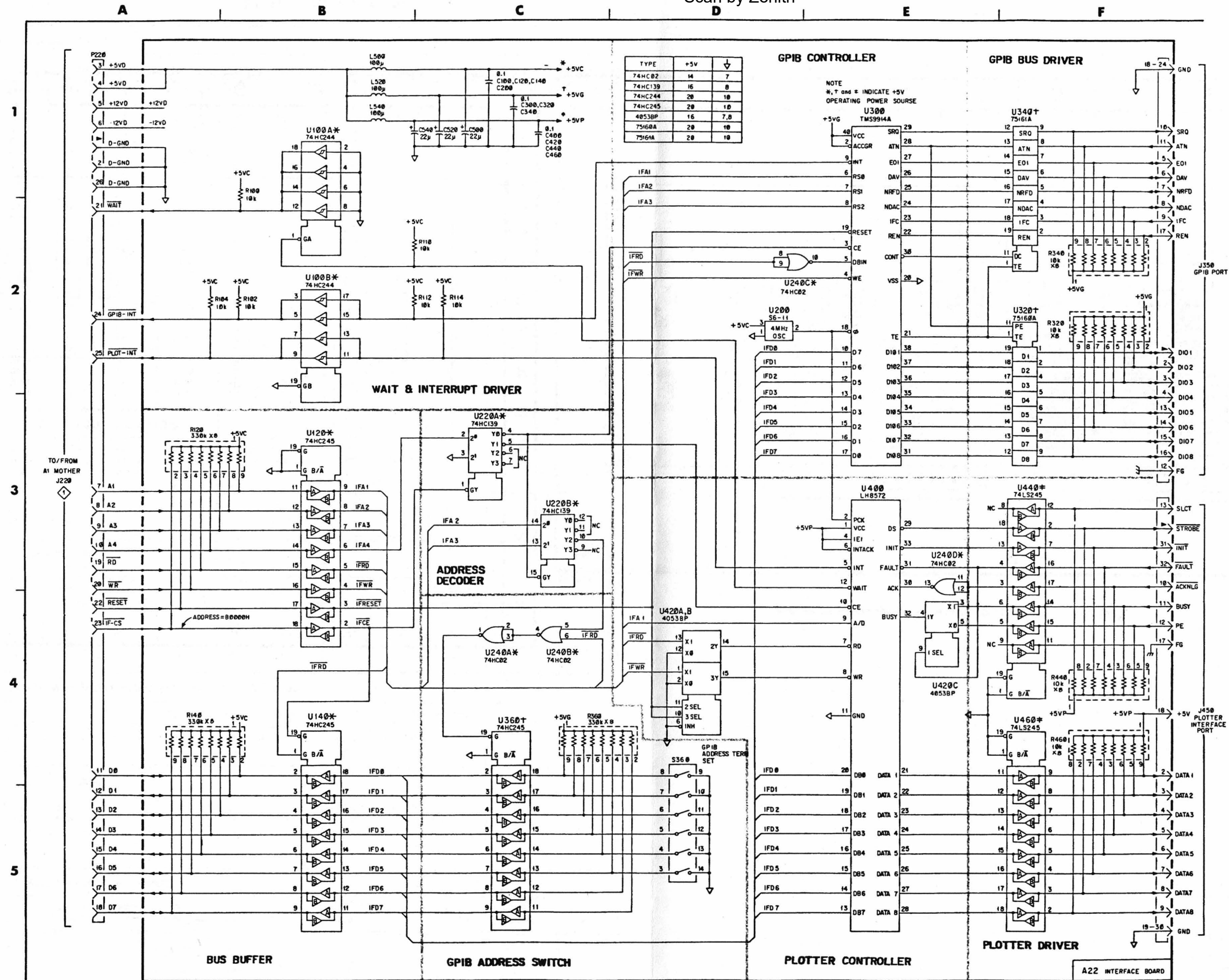
ASSEMBLY A22								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C100	C1	E6	R100	B1	C6	U220B	C3	E4
C120	C1	D5	R102	B2	C6	U240A	C4	F4
C140	C1	E5	R104	A2	C6	U240B	C4	F4
C200	C1	D4	R110	C2	E6	U240C	D2	F4
C300	C1	D3	R112	C2	E6	U240D	E3	F4
C320	C1	D3	R114	C2	E6	U300	E1	E4
C340	C1	E3	R120	A3	D5	U320	F2	E3
C400	C1	B4	R140	A4	F5	U340	F1	F3
C420	C1	B3	R320	F2	E2	U360	C4	D2
C440	C1	A5	R340	F2	F2	U400	E3	C4
C460	C1	C5	R360	C4	C2	U420A	D4	B3
C500	C1	E5	R440	F4	B5	U420B	D4	B3
C520	C1	F6	R460	F4	C5	U420C	E4	B3
C540	C1	B6				U440	F3	B5
						U460	F4	C5
J350	F2	C3	S360	D4	C2			
J450	F4	C5	U100A	B1	F6	W220	A1	D6
			U100B	B2	F6			
L500	B1	E6	U120	B3	E5			
L520	B1	F7	U140	B4	F5			
L540	B1	B6	U200	D2	F4			
			U220A	C3	E4			

Static Sensitive Devices
See Maintenance Section



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

Assembly A22



ASSEMBLY A25

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C100	E3	G4	CR400	E3	H3	R134	F4	C4	R600	F5	I4
C102	E3	C3	CR402	F2	E3	R138	F4	C4	R604	F5	I4
C104	F3	C3	CR500	D1	G5	R150	G4	C4	R606	F5	I4
C120	E2	D4	CR580	D2	D5	R200	E5	H4			
C132	E4	C4	CR562	D2	D5	R230	E5	B3	TP100	F3	B4
C134	F4	C3	CR570	D3	D4	R232	E5	B4	TP130	F4	B5
C150	G4	C4	CR572	D3	D4	R234	F5	B4	TP150	G4	B5
C200	E5	G4	CR600	F5	I4	R238	F5	C4	TP230	F5	B4
C232	E5	B4				R300	E2	G3	TP300	F2	B4
C234	F5	B3	J72	G3	F5	R400	E3	G3	TP400	F3	B4
C300	E2	F4	J190	G1	D5	R500	B4	C4	TP500	C4	B5
C302	F2	F3	J192	G1	B5	R501	D1	G5	TP510	C4	B5
C400	E3	E4	J194	G2	E4	R502	B4	B4			
C402	E3	E3	J250	D2	H4	R504	B4	B4	U100	F3	D2
C404	F3	E3	J252	G3	F5	R508	C4	B4	U120	E2	D4
C500	E1	F5	J280	G5	I5	R508	C5	C4	U130A	E5	C4
C502	E1	E5	J290	G5	I5	R510	C5	C4	U130B	E4	
C562	E2	D5				R512	C5	C4	U300	F2	
C571	D4	D4	Q130	E4	C3	R514	B5	C4	U400	F3	E2
			Q230	E5	B3	R516	B4	C5	U500A	C4	C5
CR100	D3	H3	Q600	F5	I3	R560	E2	D5	U500B	C5	
CR102	F3	C3	Q602	F5	I3	R562	E2	D5	U560A	D4	D4
CR130	E4	C4				R564	F2	D5	U560B	F2	
CR200	D5	I3	R100	E3	H4	R570	D4	D4			
CR230	E5	B4	R102	F3	C3	R571	D4	D4			
CR300	E2	G3	R130	E4	B3	R574	E4	D5			
CR302	F1	E3	R132	E4	C4	R576	D4	D4			

CHASSIS MOUNTED PARTS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
B100	B3		FL100	A5		P510	G3		T200	C1	
F100	A3		J510	G3		S100	A4				
F200	A3										

ASSEMBLY A27

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C100	A3	F2	E100	B3	D4	J120	B2	G3	J272	B3	E3
C110	A2	E2	E200	B3	B3	J200	A2	G2	J274	B2	C6
C200	A2	F2				J240	A2	G2	J276	B2	B6
C220	A2	B4	J100	B2	G3	J270	A3	H3			

ASSEMBLY A28

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
DS100	G5		DS102	G5		DS104	G5	

ASSEMBLY A29

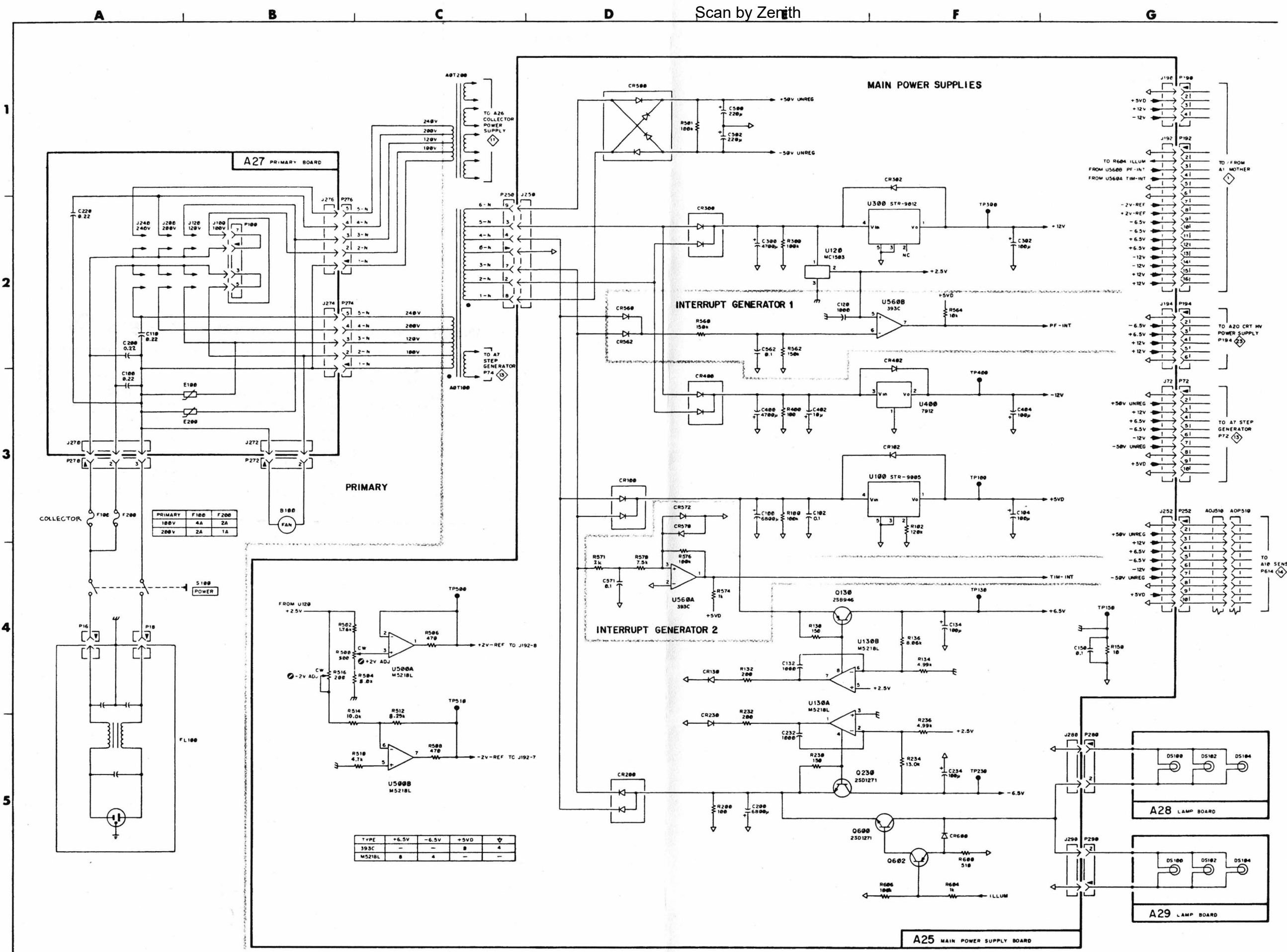
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DS100	G5		DS102	G5		DS104	G5	

CHASSIS MOUNTED PARTS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
B100	B3		FL100	A5		P270	A3		S100	A4	
F100	A3		P16	A4		P272	B3		T200	C1	
F200	A3		P18	A4		P274	B2				
						P276	B2				

A27

6804-744



PRIMARY	F100	F200
100V	4A	2A
200V	2A	1A

TYPE	+6.5V	-6.5V	+5V	↓
393C	-	-	B	4
M5218L	B	4	-	-

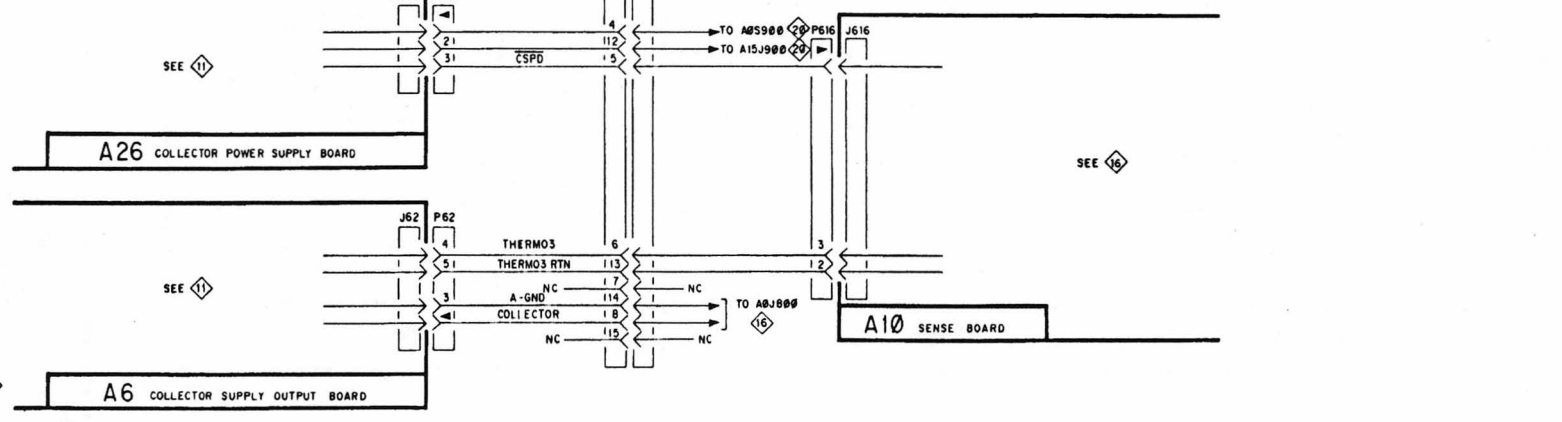
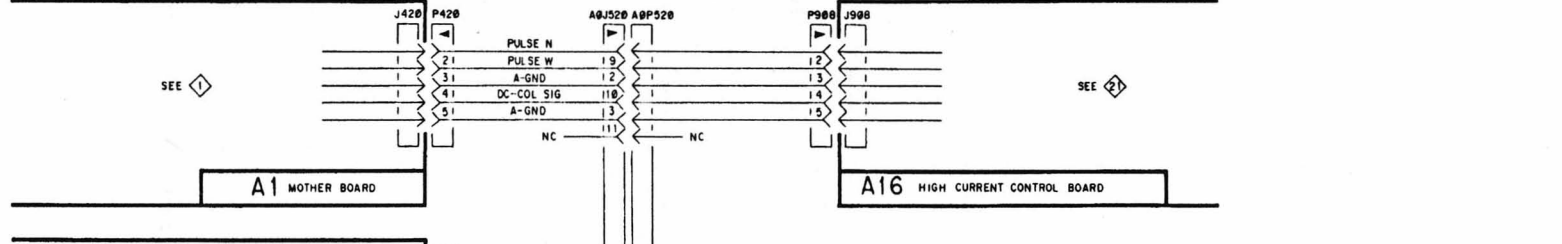
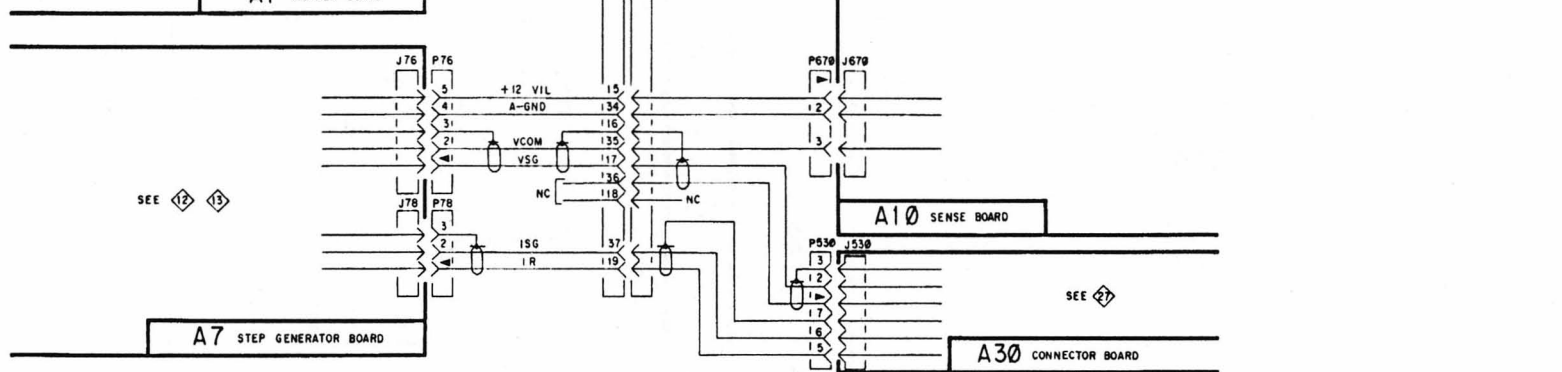
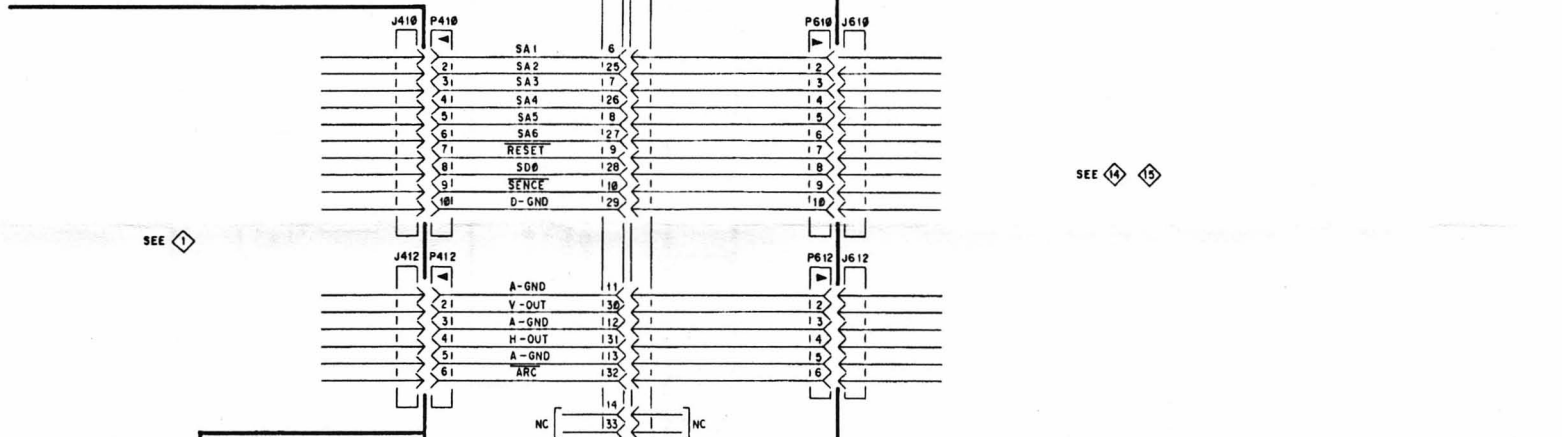
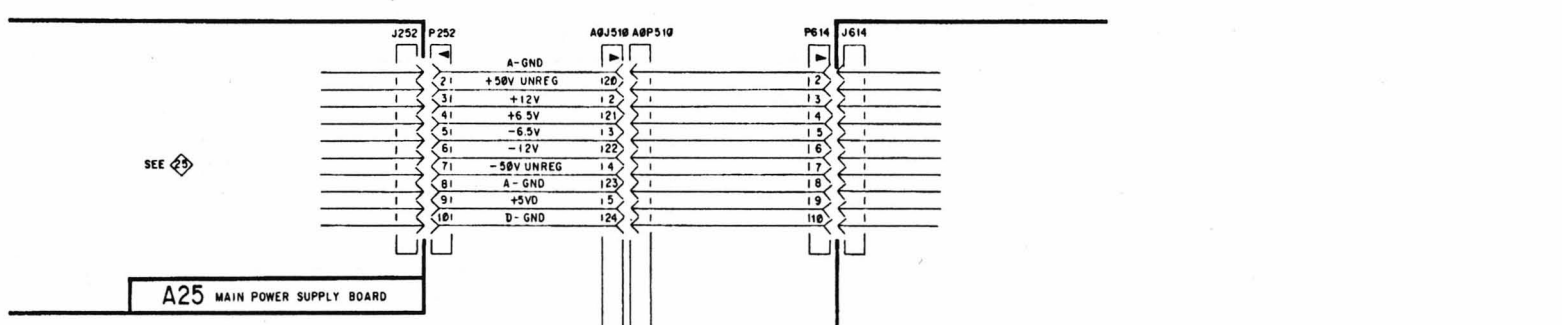
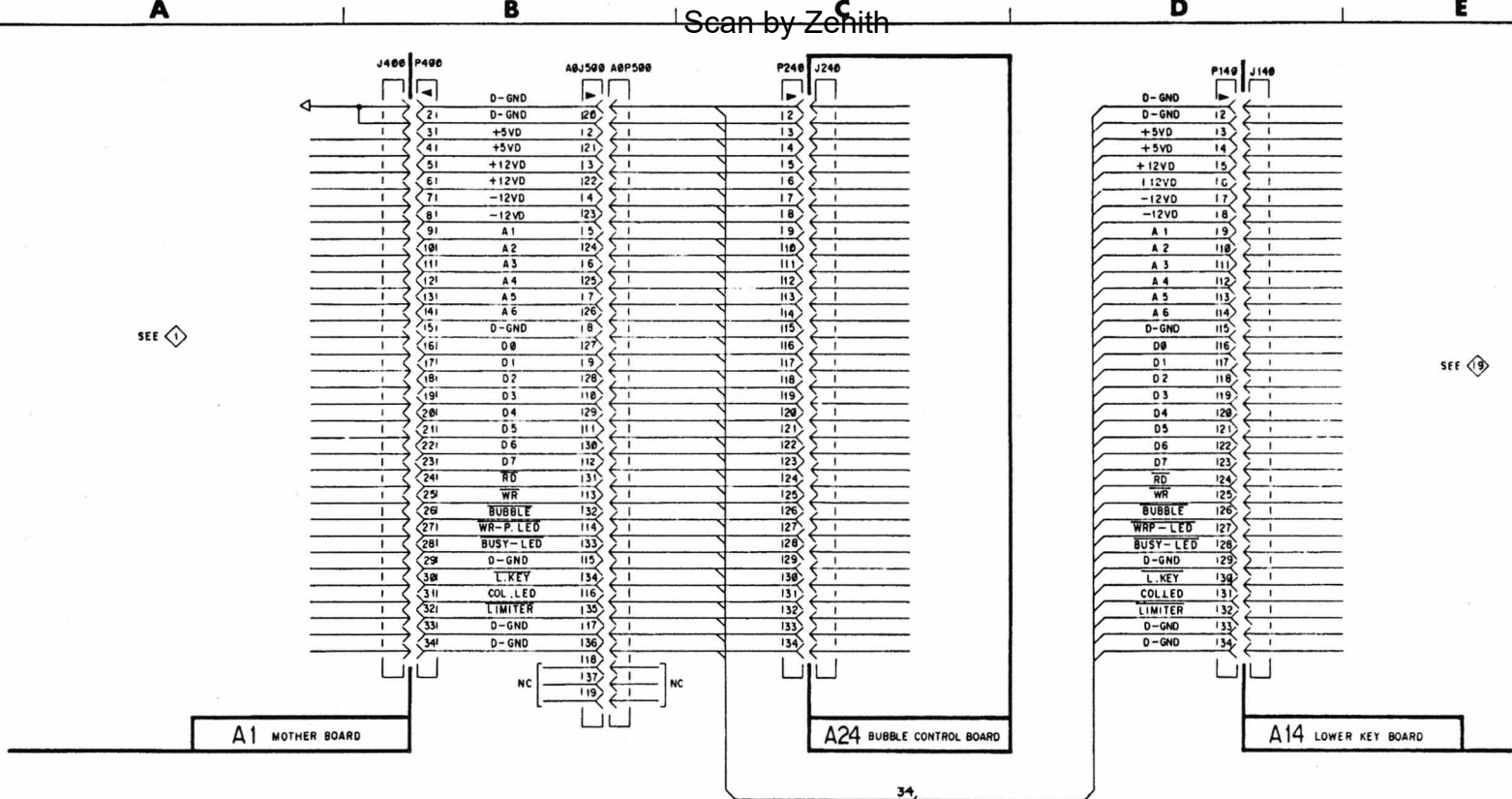
Power Supply

INTERCONNECTIONS – MAINFRAME & DRAWER



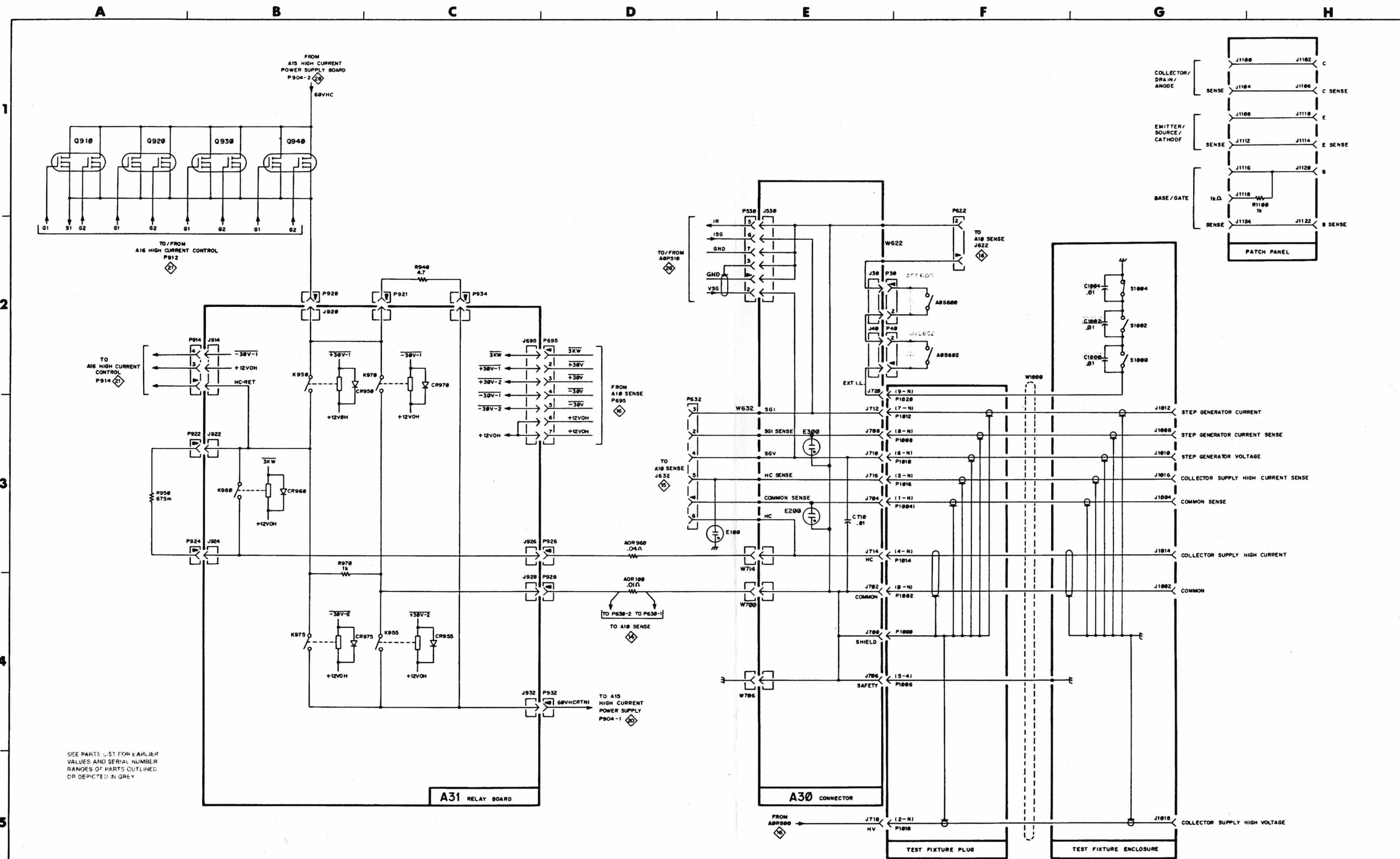
INTER-BOARD CONNECTORS								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
J62	B8		J410	B4		J670	C5	
J76	B5		J412	B5		J908	C6	
J78	B6		J420	B6				
J140	D1		J530	C6		AQJ500	B1	
J240	C1		J610	C4		AQJ510	B3	
J252	B3		J612	C5		AQJ520	B6	
J262	B7		J614	C3		AQJ800	C8	
J400	B1		J616	C7				

371



6804-746

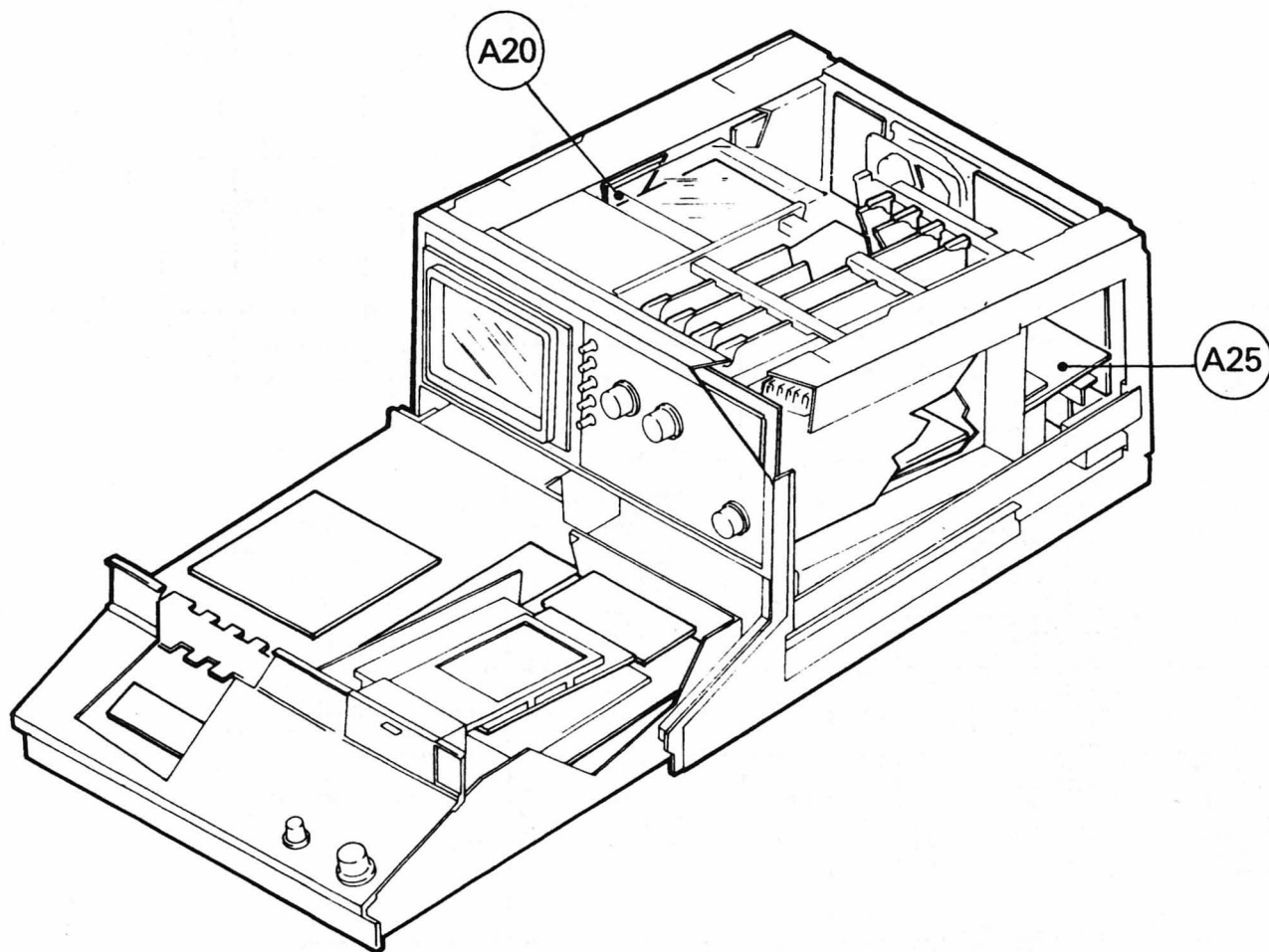
INTERCONNECTIONS - MAINFRAME & DRAWER

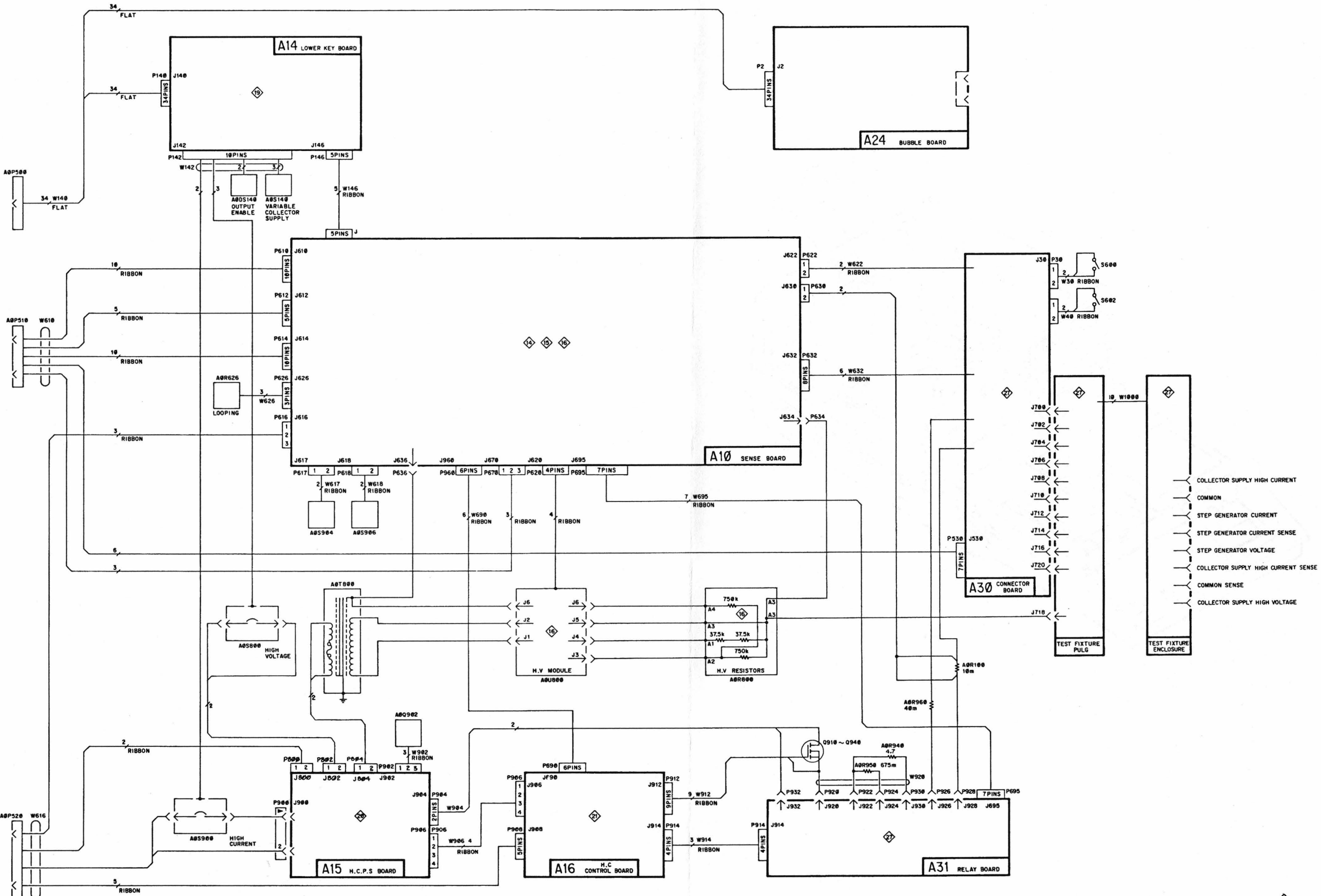


SEE PARTS LIST FOR EARLIER VALUES AND SERIAL NUMBER RANGES OF PARTS OUTLINED OR DEPICTED IN GREY

High Current Output & Connector Terminal

371 Service

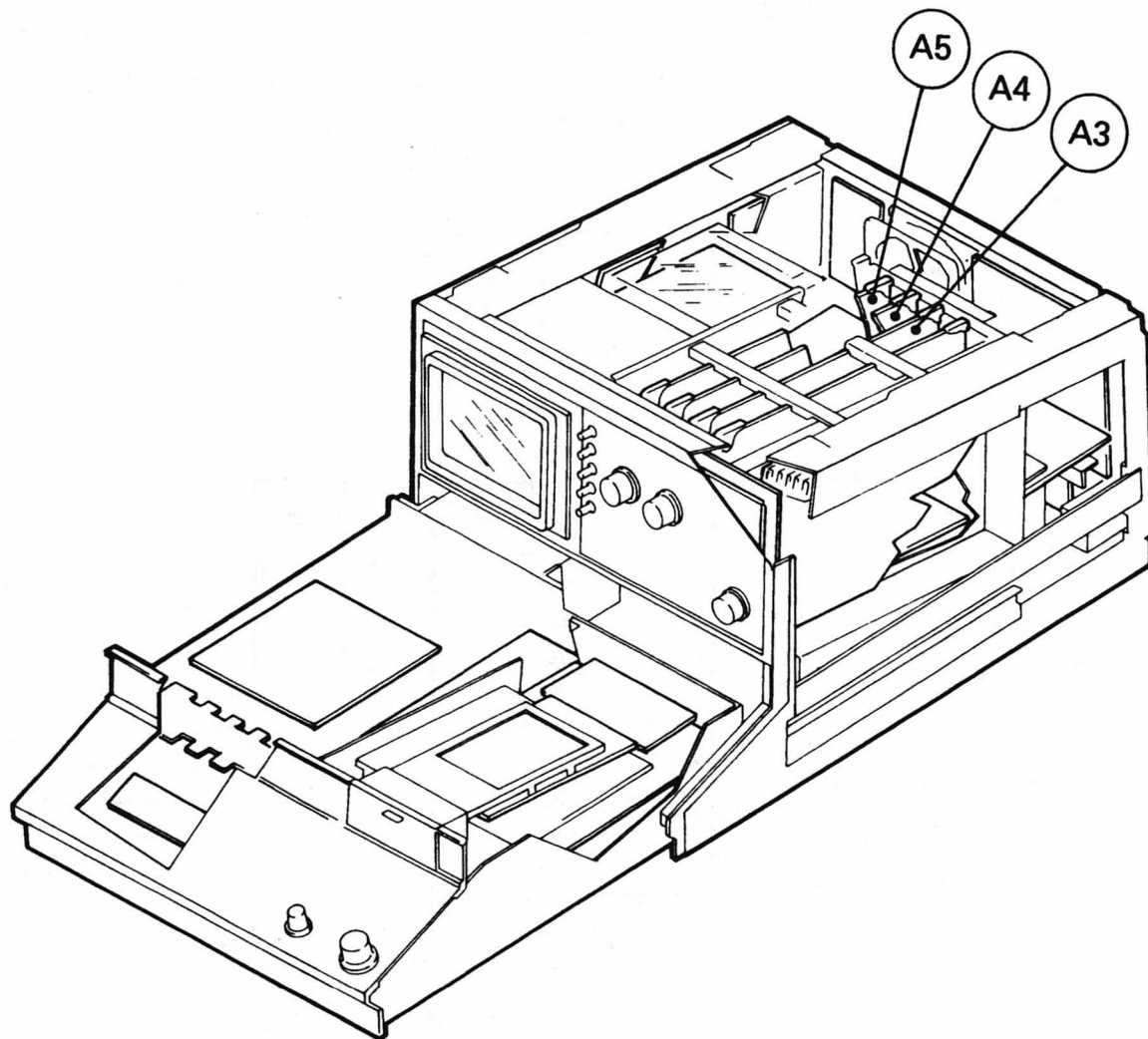


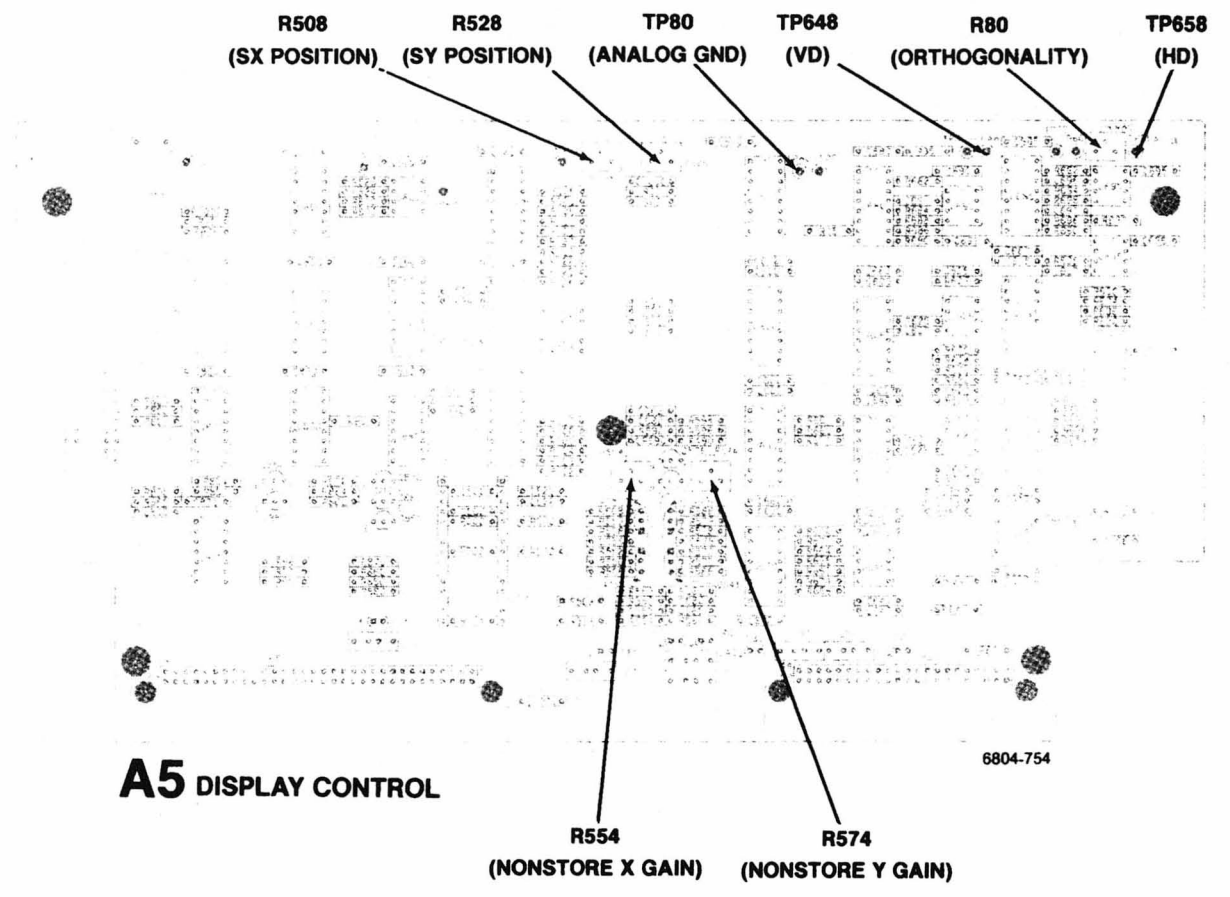
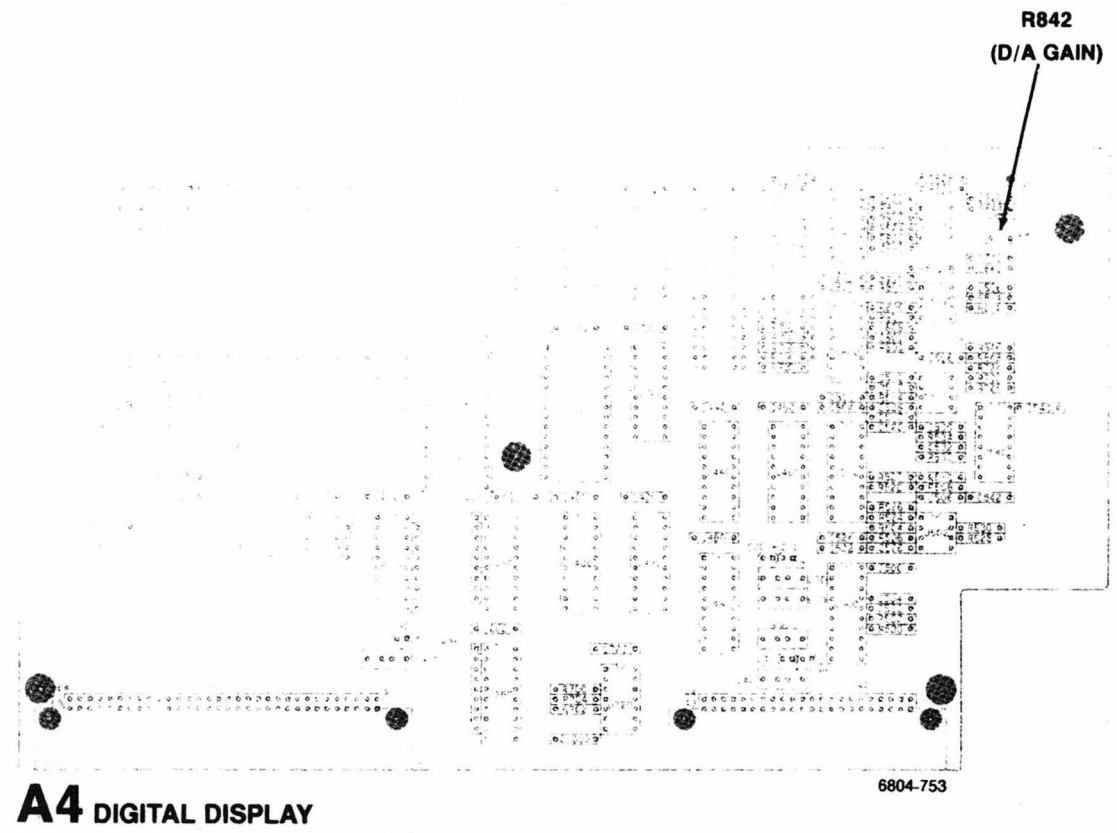
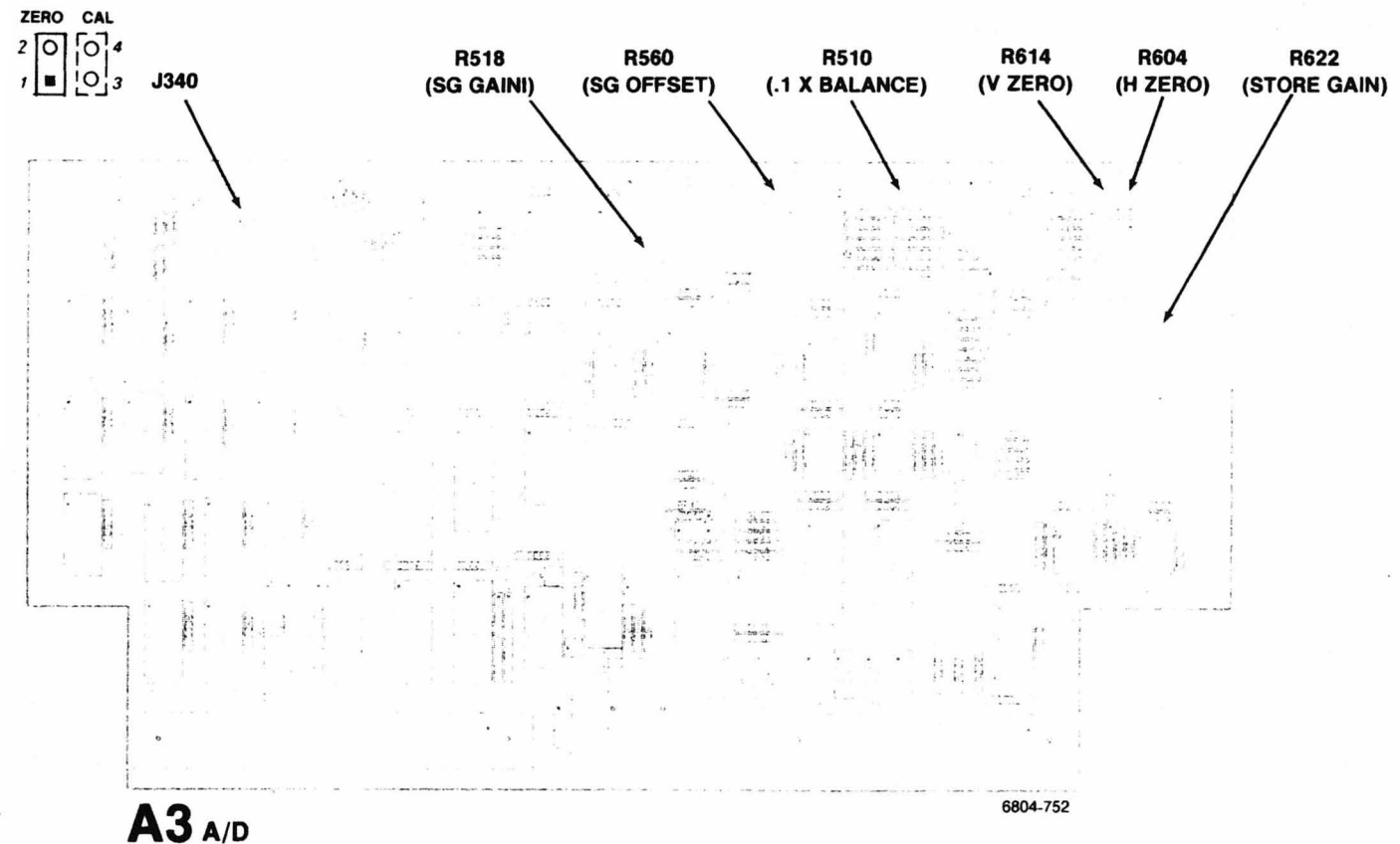


29 Circuit Board Interconnections - Drawer

- COLLECTOR SUPPLY HIGH CURRENT
- COMMON
- STEP GENERATOR CURRENT
- STEP GENERATOR CURRENT SENSE
- STEP GENERATOR VOLTAGE
- COLLECTOR SUPPLY HIGH CURRENT SENSE
- COMMON SENSE
- COLLECTOR SUPPLY HIGH VOLTAGE

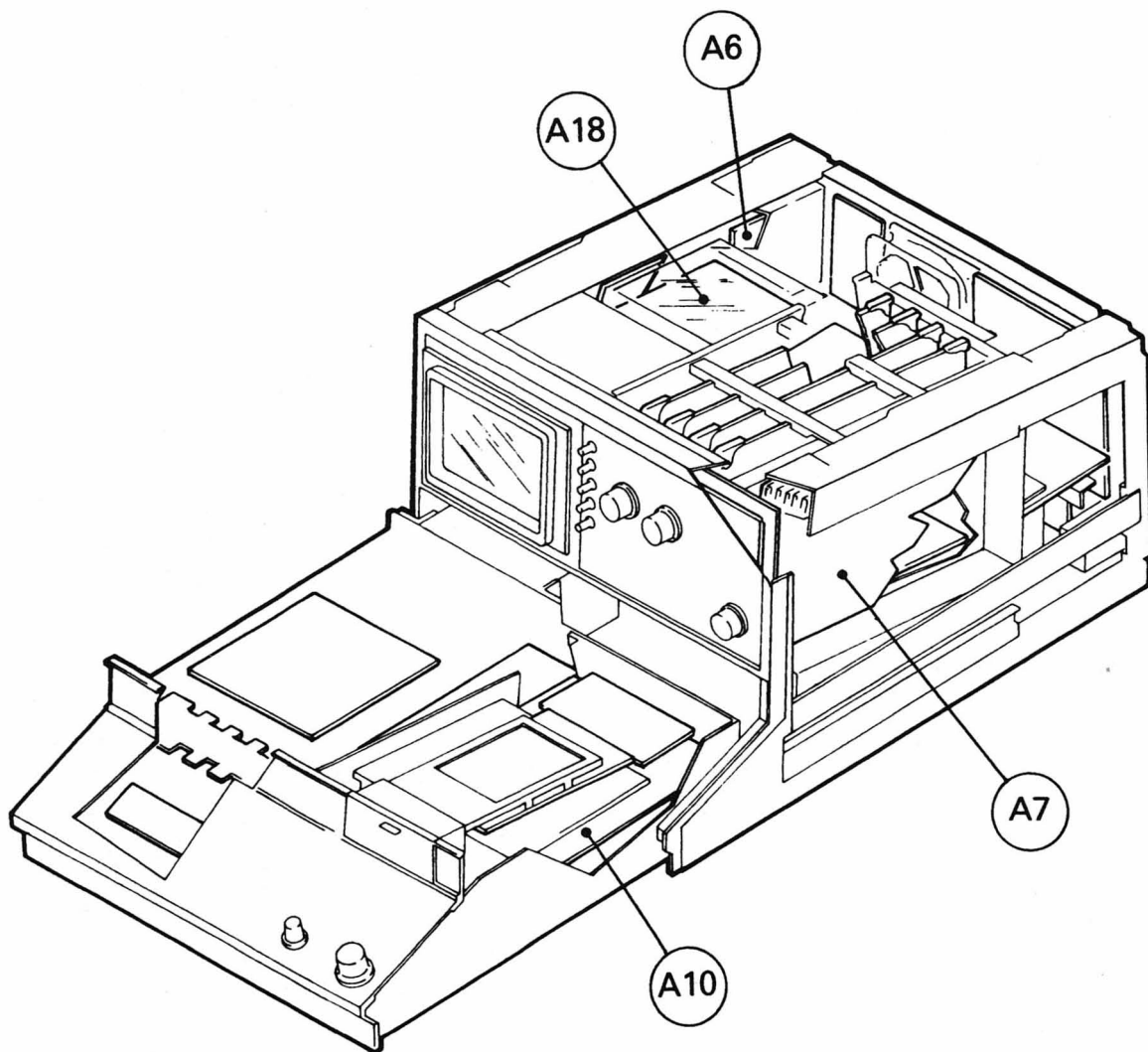
371 Service

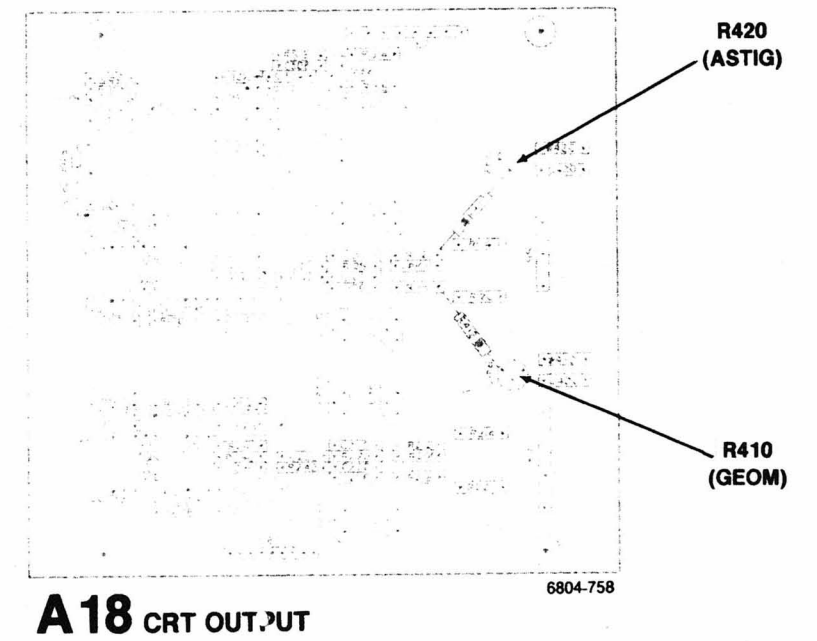
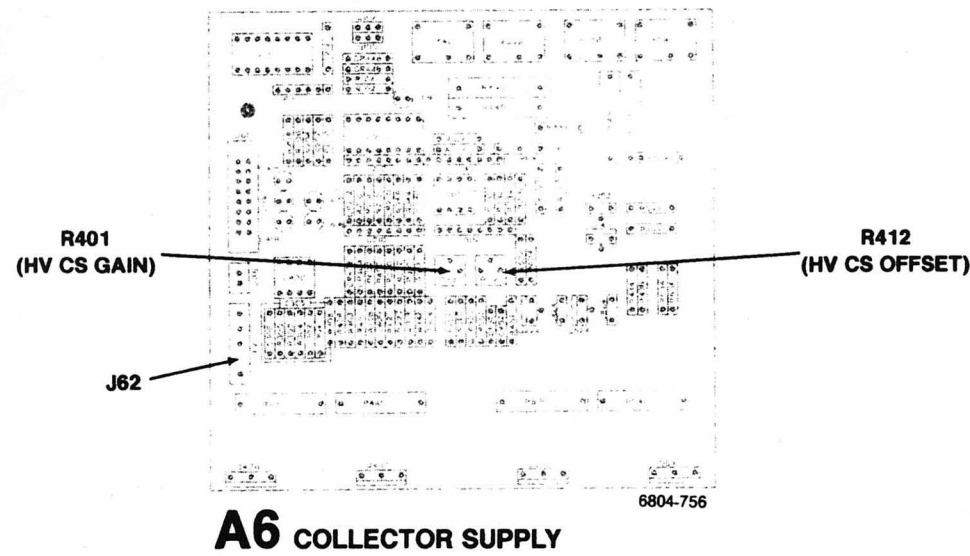
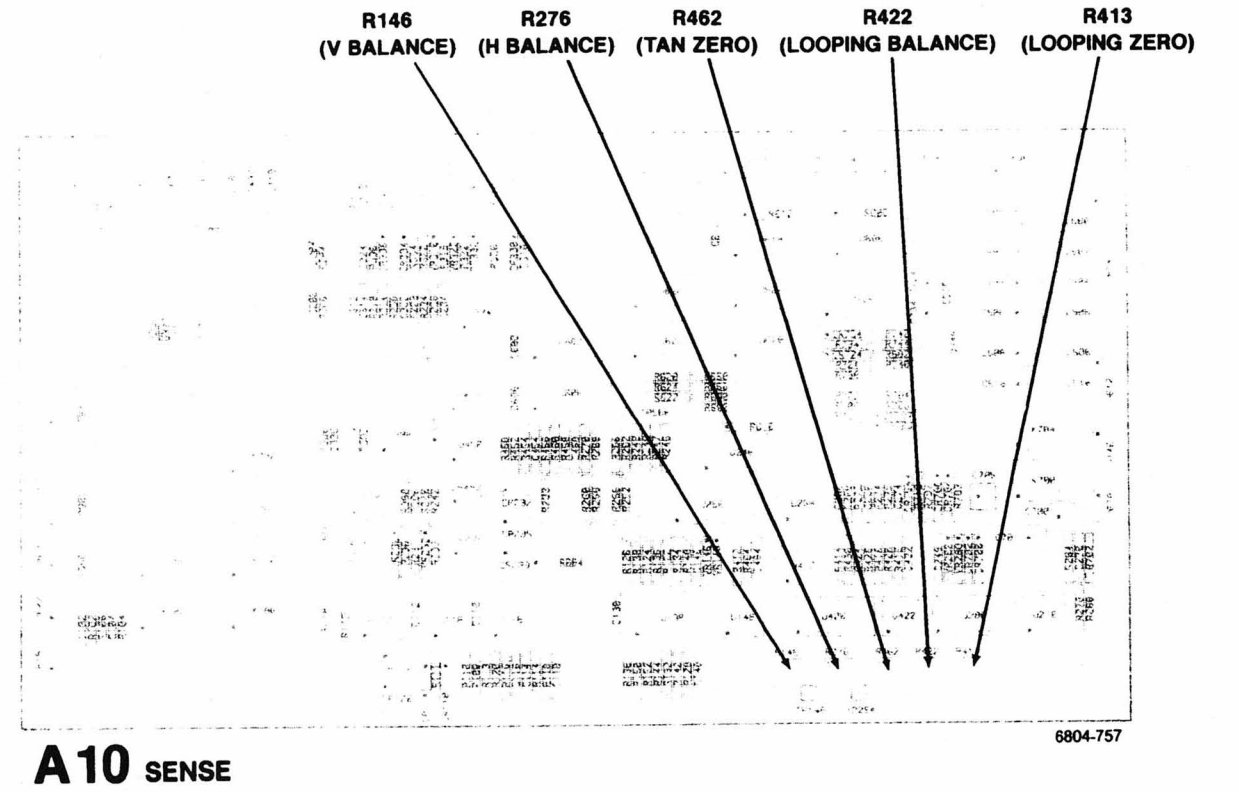
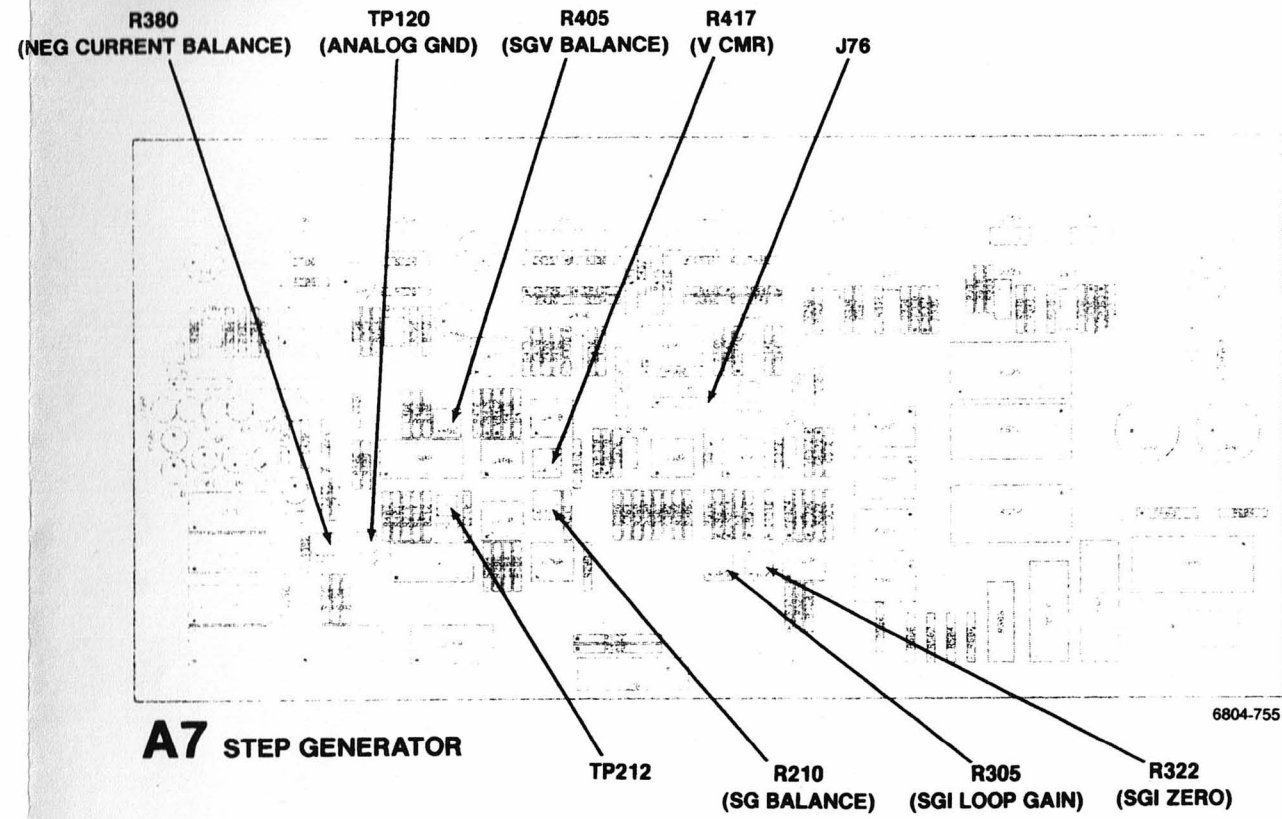


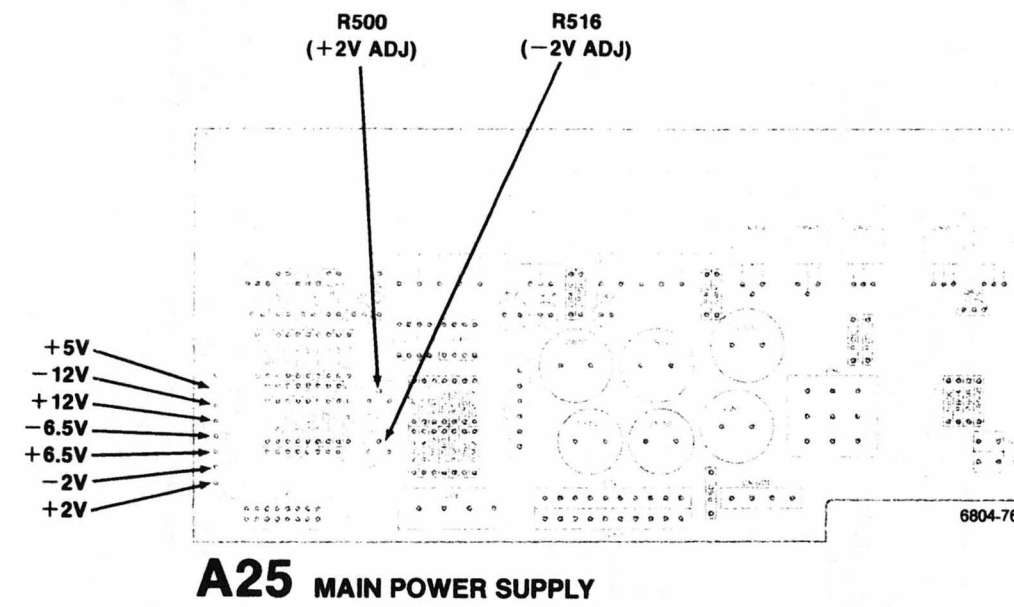
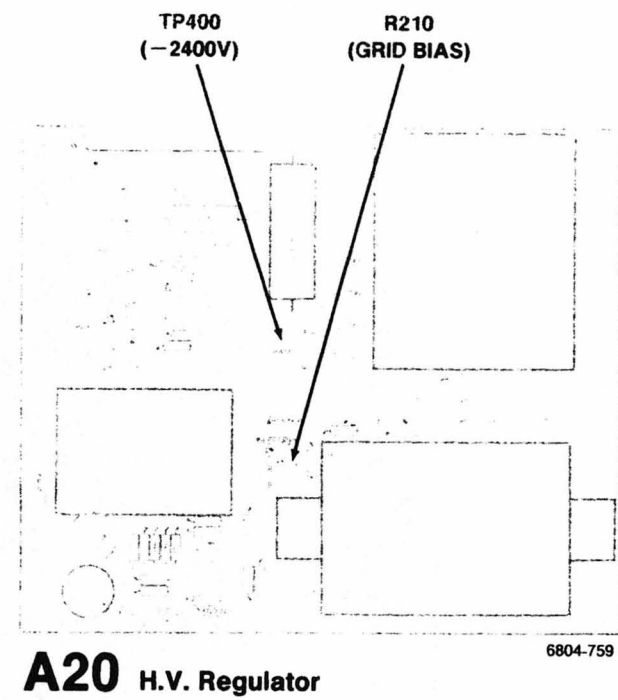


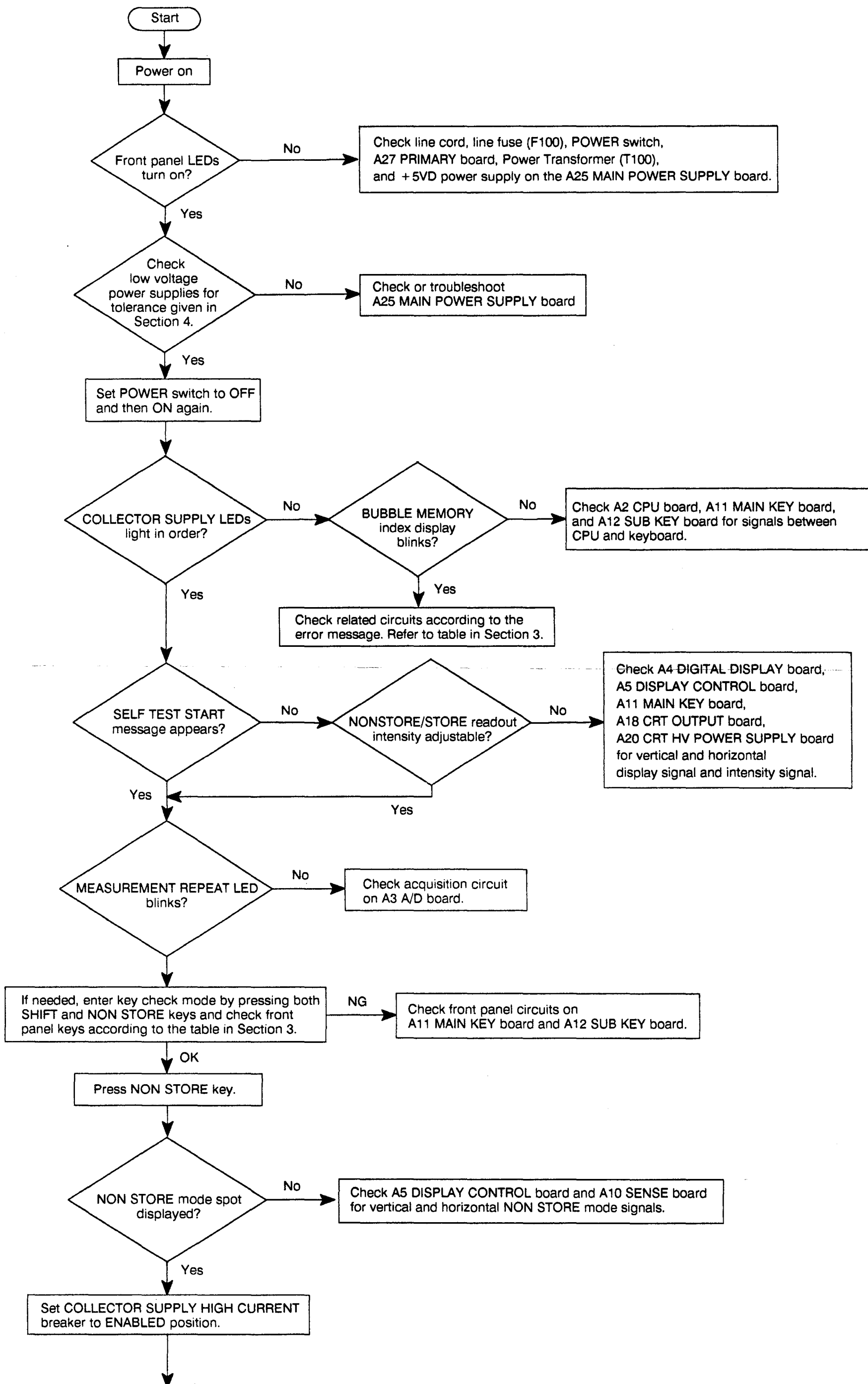
Test Point & Adjustment Locations 1

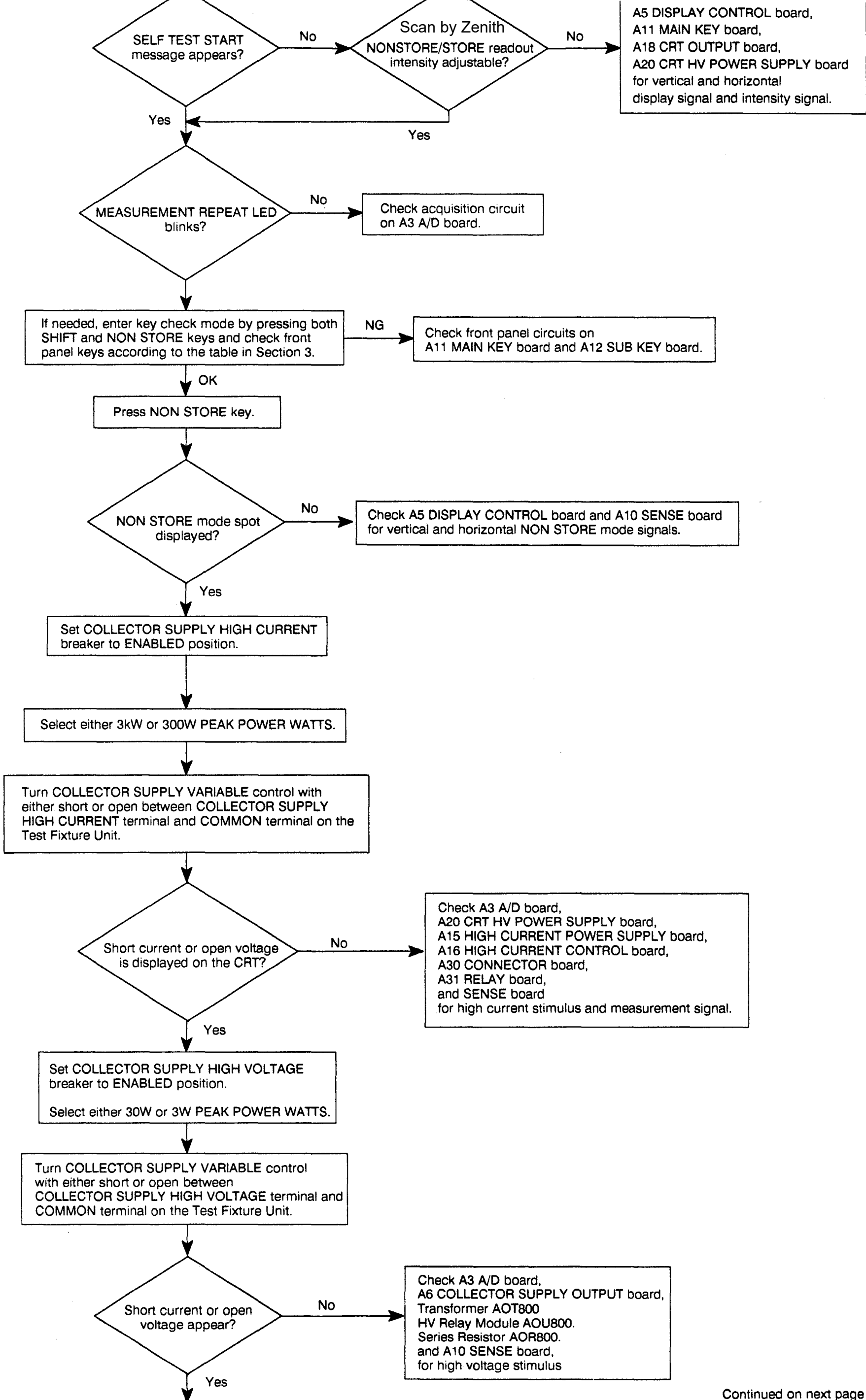
371 Service



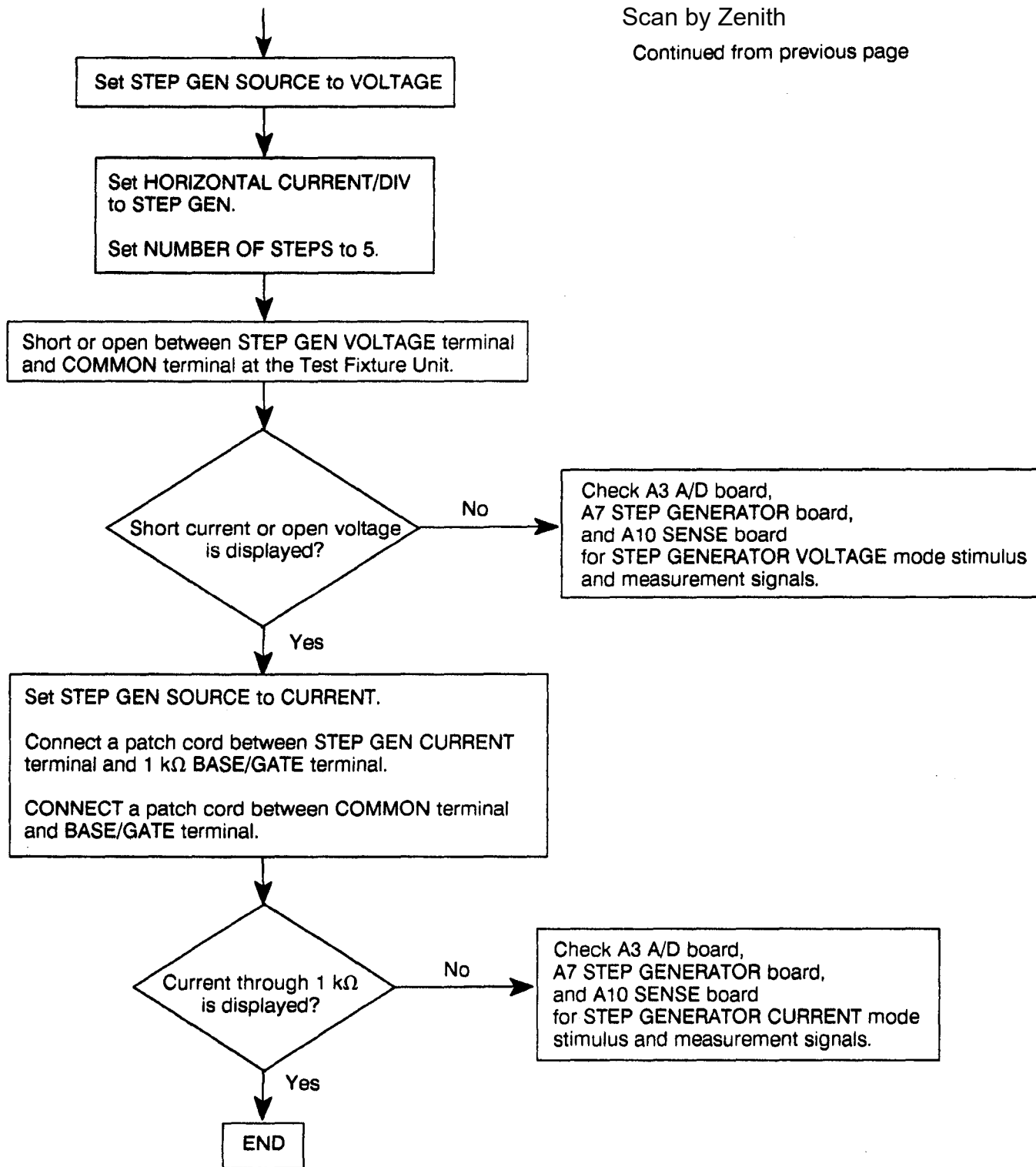








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REPLACEABLE MECHANICAL PARTS

PARTS ORDERING INFORMATION

Replacement parts are available from or through your local Tektronix, Inc. Field Office or representative.

Changes to Tektronix instruments are sometimes made to accommodate improved components as they become available, and to give you the benefit of the latest circuit improvements developed in our engineering department. It is therefore important, when ordering parts, to include the following information in your order: Part number, instrument type or number, serial number, and modification number if applicable.

If a part you have ordered has been replaced with a new or improved part, your local Tektronix, Inc. Field Office or representative will contact you concerning any change in part number.

Change information, if any, is located at the rear of this manual.

ITEM NAME

In the Parts List, an item Name is separated from the description by a colon(:). Because of space limitations, an Item Name may sometimes appear as incomplete. For further Item Name identification, the U.S. Federal Cataloging Handbook H6-1 can be utilized where possible.

FIGURE AND INDEX NUMBERS

Items in this section are referenced by figure and index numbers to the illustrations.

INDENTATION SYSTEM

This mechanical parts list is indented to indicate item relationships. Following is an example of the indentation system used in the description column.

1 2 3 4 5 *Name & Description*

Assembly and/or Component

Attaching parts for Assembly and/or Component

END ATTACHING PARTS

Detail Part of Assembly and/or Component

Attaching parts for Detail Part

END ATTACHING PARTS

Parts of Detail Part

Attaching parts for Parts of Detail Part

END ATTACHING PARTS

Attaching Parts always appear in the same indentation as the item it mounts, while the detail parts are indented to the right. Indented items are part of, and included with, the next higher indentation.

Attaching parts must be purchased separately, unless otherwise specified.

ABBREVIATIONS

Abbreviations conform to American National Standards Institute Y1.1

CROSS INDEX - MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip Code
00779	AMP INC	2800 FULLING MILL PO BOX 3608	HARRISBURG PA 17105
01536	TEXTRON INC CAMCAR DIV SEMS PRODUCTS UNIT	1818 CHRISTINA ST	ROCKFORD IL 61108
06383	PANDUIT CORP	17301 RIDGELAND	TINLEY PARK IL 07094-2917
06950	SCREWCORP VSI AEROSPACE PRODUCTS DIV SUB OF FAIRCHILD INDUSTRIES INC	13001 E TEMPLE AVE PO BOX 730	CITY OF INDUSTRY CA 91746-1417
07416	NELSON NAME PLATE CO	3191 CASITAS	LOS ANGELES CA 90039-2410
0J260	COMTEK MANUFACTURING OF OREGON (METALS)	PO BOX 4200	BEAVERTON OR 97076-4200
12136	P H C INDUSTRIES INC	1643 HADDON AVE PO BOX 1448	CAMDEN NJ 08103-3109
12327	FREEWAY CORP	9301 ALLEN DR	CLEVELAND OH 44125-4632
24931	SPECIALTY CONNECTOR CO INC	2100 EARLYWOOD DR PO BOX 547	FRANKLIN IN 46131
70903	COOPER BELDEN ELECTRONICS WIRE AND C SUB OF COOPER INDUSTRIES INC	2000 S BATAVIA AVE	GENEVA IL 60134-3325
73743	FISCHER SPECIAL MFG CO	111 INDUSTRIAL RD	COLD SPRING KY 41076-9749
77250	ALLIED PRODUCTS CORP PHEOLL MFG CO DIV	5700 W ROOSEVELT RD	CHICAGO IL 60650-1156
77900	ILLINOIS TOOL WORKS SHAKEPROOF DIV	ST CHARLES RD	ELGIN IL 60120
78189	ILLINOIS TOOL WORKS INC SHAKEPROOF DIV	ST CHARLES ROAD	ELGIN IL 60120
80009	TEKTRONIX INC	14150 SW KARL BRAUN DR PO BOX 500	BEAVERTON OR 97077-0001
83385	MICRODOT MFG INC GREER-CENTRAL DIV	3221 W BIG BEAVER RD	TROY MI 48098
83486	ELCO INDUSTRIES INC	1101 SAMUELSON RD	ROCKFORD IL 61101
86928	SEASTROM MFG CO INC	701 SONORA AVE	GLENDALE CA 91201-2431
93907	TEXTRON INC CAMCAR DIV	600 18TH AVE	ROCKFORD IL 61108-5181
97464	INDUSTRIAL RETAINING RING CO	57 CORDIER ST	IRVINGTON NJ 07111-4035
98159	RUBBER TECK INC	19115 HAMILTON AVE PO BOX 389	GARDENA CA 90247
99742	PERMACEL TAPE DIV AN AVERY CO	U S HIGHWAY 1 P O BOX 671	NEW BRUNSWICK NJ 08903
S3199	SATO PARTS CO LTD	3-3-3 EBISU SHIBUYA-KU	TOKYO JAPAN
S3629	SCHURTER AG H C/O PANEL COMPONENTS CORP	2015 SECOND STREET	BERKELEY CA 94170
S4238	STANLEY ELECTRIC CO LTD	2-9-13 NAKA-MEGURO MEGURA-KU	TOKYO 153 JAPAN
TK0191	SONY TEKTRONIX	PO BOX 14 HANEDA AIRPORT	TOKYO JAPAN
TK0392	NORTHWEST FASTENER SALES INC	7923 SW CIRRRUS DRIVE	BEAVERTON OR 97005-6448
TK0435	LEWIS SCREW CO	4300 S RACINE AVE	CHICAGO IL 60609-3320
TK0858	STAUFFER SUPPLY CO (DIST)		
TK0861	H SCHURTER AG DIST PANEL COMPONENTS	2015 SECOND STREET	BERKELEY CA 94170
TKOAL	ONODERA MFG CO LTD	3-1-2 KAMIYOHGA SETAGAYA-KU	TOKYO JAPAN
TKOAP	SUGANUMA MFG CO LTD	5-8-22 KITA-SHINAGAWA SHINAGAWA-KU	TOKYO JAPAN
TKOAR	KITAGAWA IND CO LTD	2-4-26 MUROMACHI NIHONBASHI CHUO-KU	TOKYO JAPAN
TKOAU	CHIYODA DENSHI CO LTD	2-5-12 MITA MEGURO-KU	TOKYO JAPAN
TKOBD	TAISHO ELECTRIC IND CO LTD	5-28-16 OKUSAWA SETAGAYA-KU	TOKYO JAPAN
TKOBJ	SONE SHOTEN CO LTD	2-1-10 TSUKIZE CHUO-KU	TOKYO JAPAN
TKOBK	SHOWA KOSAN CO LTD	2-947 IKEBUKURO TOSHIMA-KU	TOKYO JAPAN
TKOBV	KYODO LIGHT METAL CO LTD	2-5-3 NIHONBASHI CHUO-KU	TOKYO JAPAN

CROSS INDEX - MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip Code
TKOBW	MULTI CONTACT	2-7-2 SHINYOKOHAMA KITA-KU YOKOHAMA-CITY	KANAGAWA JAPAN
TKOCA	SUZUKI ELEC MFG CO LTD	105 OHKUMA-CHO MIDORI-KU YOKOHAMA-CITY	KANAGAWA JAPAN
TKOCB	T K Y MFG CO LTD	2-18-8 MASUGATA TAMA-KU KAWASAKI-CITY	KANAGAWA JAPAN
TKOCF	YASUDA MFG CO LTD	81-1 OKESHITA NISHIMAKADO NUMAZU-CITY	SHIZUOKA JAPAN
TKOCM	SUMISHO NON-FERROUS METALS TRADING C	2-6-1 NISHI-SHINJUKU SHINJUKU-KU	TOKYO JAPAN
TKOCP	NISSHO DENZAI CO LTD	15-26 ICHIBAN-CHO MISHIMA-CITY	SHIZUOKA JAPAN
TKOCX	SANRIN PRINTING CO LTD	5-7-3 KITA-SHINAGAWA SHINAGAWA-KU	TOKYO JAPAN
TKODJ	KOKKO ELEC CO LTD	5-8-20 KITA-SHINAGAWA SHINAGAWA-KU	TOKYO JAPAN
TKODK	KYORITSU PLASTIC IND CO LTD	2739 FURUIKE OHHIRA NUMAZU-CITY	SHIZUOKA JAPAN
TKOEV	MORI HATSUJO CO LTD	1-1-17 BUNDA SUMIDA-KU	TOKYO JAPAN
TK1373	PATELEC-CEM (ITALY)	10156 TORINO	VAICENTALLO 62/45S ITALY
TK1543	CAMCAR/TEXTRON	600 18TH AVE	ROCKFORD IL 61108-5181
TK2278	COMTEK MANUFACTURING OF OREGON (METALS)		

Replaceable Mechanical Parts-371 Curve Tracer

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr.	
		Effective	Dscont			Code	Mfr. Part No.
1-1	390-0984-00			1	CABINET SIDE:LEFT (ATTACHING PARTS)	TK0191	390-0984-00
-2	211-0507-00			1	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESCR
-3	367-0116-00			2	HANDLE,CARRYING:16.54 L,BLUE VINYL (ATTACHING PARTS)	12136	ORDER BY DESCR
-4	212-0628-00			8	SCREW,SHOULDER:10-32 X 0.4 L,RDH,STL	TK1543	ORDER BY DESCR
-5	386-1624-00			4	PLATE,HDL RTNG:STAINLESS STEEL (END ATTACHING PARTS)	OJ260	ORDER BY DESCR
-6	386-1283-01			4	PLATE,HDL MTG:FRONT	80009	386-1283-01
-7	200-0728-00			4	COVER,HDL END:1.91 X 0.91 X 0.36 BLUE	80009	200-0728-00
-8	426-2139-00			1	FRAME SECT,CAB.:TOP LEFT (ATTACHING PARTS)	TK0191	426-2139-00
-9	211-0538-00			2	SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL	93907	ORDER BY DESCR
-10	211-0559-00			2	SCREW,MACHINE:6-32 X 0.375,FLH,100 DEG,STL	TK0435	1593-300
-11	211-0538-00			4	SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-12	124-0446-00			1	STRIP,TRIM:TOP RIGHT	TK0191	124-0446-00
-13	426-2140-00			1	FRAME SECT,CAB.:TOP RIGHT (ATTACHING PARTS)	TK0191	426-2140-00
-14	211-0538-00			2	SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL	93907	ORDER BY DESCR
-15	211-0559-00			2	SCREW,MACHINE:6-32 X 0.375,FLH,100 DEG,STL	TK0435	1593-300
-16	211-0504-00			5	SCREW,MACHINE:6-32 X 0.250,PNH,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR
-17	124-0447-00			1	STRIP,TRIM:TOP RIGHT	TK0191	124-0447-00
-18	426-2141-00			1	FRAME SECT,CAB.:LEFT (ATTACHING PARTS)	TK0191	426-2141-00
-19	211-0559-00			1	SCREW,MACHINE:6-32 X 0.375,FLH,100 DEG,STL	TK0435	1593-300
-20	211-0504-00			4	SCREW,MACHINE:6-32 X 0.250,PNH,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR
-21	426-2142-00			1	FRAME SECT,CAB.:RIGHT (ATTACHING PARTS)	TK0191	426-2142-00
-22	211-0559-00			1	SCREW,MACHINE:6-32 X 0.375,FLH,100 DEG,STL	TK0435	1593-300
-23	211-0504-00			3	SCREW,MACHINE:6-32 X 0.250,PNH,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR
-24	407-3476-01			1	BRACKET,SUPPORT:TEST FIXTURE,ALUMINUM (ATTACHING PARTS)	S3199	ORDER BY DESCR
-25	212-0002-00			4	SCREW,MACHINE:8-32 X 0.25,FLH,100 DEG,STL	83385	ORDER BY DESCR
-26	212-0004-00			4	SCREW,MACHINE:8-32 X 0.312,PNH,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR
-27	407-3476-01			1	BRACKET,SUPPORT:TEST FIXTURE,ALUMINUM (ATTACHING PARTS)	S3199	ORDER BY DESCR
-28	212-0002-00			4	SCREW,MACHINE:8-32 X 0.25,FLH,100 DEG,STL	83385	ORDER BY DESCR
-29	212-0004-00			4	SCREW,MACHINE:8-32 X 0.312,PNH,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR
-30	334-7068-00			1	MARKER,IDENT:MKD R146	TK0CX	30-0102
-31	426-2211-00			1	FRAME SECTION:BOTTOM,LEFT (ATTACHING PARTS)	TK0BV	ORDER BY DESCR
-32	211-0559-00			2	SCREW,MACHINE:6-32 X 0.375,FLH,100 DEG,STL (END ATTACHING PARTS)	TK0435	1593-300
-33	124-0448-00			2	STRIP,TRIM:BOTTOM	TK0191	124-0448-00
-34	348-0128-00			4	FOOT,CABINET:BLACK POLYURETHANE (ATTACHING PARTS)	80009	348-0128-00
-35	211-0513-00			8	SCREW,MACHINE:6-32 X 0.625,PNH,STL (END ATTACHING PARTS)	93907	880-00032-003
-36	426-2134-00			1	FRAME SECT,CAB.:LEFT (ATTACHING PARTS)	TK0191	426-2134-00
-37	211-0538-00			2	SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-38	426-2138-00			1	FRAME SECT,CAB.:BOTTOM RIGHT (ATTACHING PARTS)	TK0191	426-2138-00
-39	211-0559-00			2	SCREW,MACHINE:6-32 X 0.375,FLH,100 DEG,STL (END ATTACHING PARTS)	TK0435	1593-300
-40	334-3379-01	.300000	.300293	1	MARKER,IDENT:MARKED GROUND SYMBOL	80009	334-3379-01
	334-3379-00	.300294		1	MARKER,IDENT:MARKED GROUND SYMBOL	07416	ORDER BY DESCR
-41	426-2135-00			1	FRAME SECT,CAB.:RIGHT (ATTACHING PARTS)	TK0191	426-2135-00

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr. Code	Mfr. Part No.
		Effective	Discont				
1-42	211-0538-00			2	SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESC
-43	351-0770-00			2	GUIDE,TEST FXTR:BOTTOM (ATTACHING PARTS)	TK0191	351-0770-00
-44	211-0038-00			6	SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESC
-45	441-1739-00			1	CHAS,CRV TRACER:BOTTOM (ATTACHING PARTS)	TK0191	441-1739-00
-46	211-0541-00			2	SCREW,MACHINE:6-32 X 0.25,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESC
-47	390-0987-00			1	CABINET BOTTOM: (ATTACHING PARTS)	TK0191	390-0987-00
-48	211-0007-00			6	SCREW,MACHINE:4-40 X 0.188,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESC
-49	390-0986-00			1	CABINET TOP: (ATTACHING PARTS)	TK0191	390-0986-00
-50	211-0507-00			1	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESC
-51	426-2136-00	.300000	.300258	1	FRAME SECT,CAB.:REAR	TK0191	426-2136-00
	426-2136-01	.300259		1	FRAME SECT,CAB.:REAR,AL	80009	426-2136-01
-52	390-0985-00			1	CABINET SIDE:RIGHT (ATTACHING PARTS)	TK0191	390-0985-00
-53	211-0507-00			1	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESC
-54	333-3515-00	.300000	.300253	1	PANEL,REAR:	80009	333-3515-00
	333-3515-01	.300254		1	PANEL,REAR: (ATTACHING PARTS)	80009	333-3515-01
-55	211-0507-00			6	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESC
-56	343-1272-00			2	RTNR,CAB COVER:BLUE,PLASTIC (ATTACHING PARTS)	TK0191	343-1272-00
-57	213-0782-00			2	SCREW,TPG,TF:8-32 X 0.625,FILH,STL (END ATTACHING PARTS)	83486	ORDER BY DESC
-58	200-3300-00			1	GUARD,FAN: (ATTACHING PARTS)	TK0191	200-3300-00
-59	129-1126-00			4	SPACER,POST:21.5MM L,4-40,6-32 THD,BRS,HEX (END ATTACHING PARTS)	TK0191	129-1126-00
-60	378-0278-00			1	FILTER,AIR:125MM X 5MM THK	TK0191	378-0278-00
-61	200-3277-00			1	COVER,FAN:AL (ATTACHING PARTS)	TK0191	200-3277-00
-62	211-0008-00			4	SCREW,MACHINE:4-40 X 0.25,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESC
-63	343-1271-00			2	RTNR,CAB COVER:BLUE,PLASTIC (ATTACHING PARTS)	TK0191	343-1271-00
-64	213-0782-00			2	SCREW,TPG,TF:8-32 X 0.625,FILH,STL (END ATTACHING PARTS)	83486	ORDER BY DESC
-65	-----			1	FAN,TUBEAXIAL:(SEE B100 REPL) (ATTACHING PARTS)		
-66	210-0457-00			4	NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL (END ATTACHING PARTS)	78189	511-061800-00
-67	129-0992-00			4	SPACER,POST:0.41 L,4-40 INT,BRS,0.19 HEX	80009	129-0992-00
-68	342-0784-00			1	INSULATOR,PLATE:INTERFACE BOARD	TK0191	342-0784-00
-69	-----			1	CKT BOARD ASSY:INTERFACE (SEE A22 REPL) (ATTACHING PARTS)		
-70	211-0661-00			4	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-71	-----			1	CKT BOARD ASSY INCLUDES: .CONN,RCPT,ELEC:(SEE A22J350 REPL)		
-72	-----			1	.CONN,RCPT,ELEC:(SEE A22J450 REPL)		
-73	-----			1	.CA ASSY,SP,ELEC:(SEE A22W220 REPL)		
-74	-----			1	CKT BOARD ASSY:PRIMARY (SEE A27 REPL)		
-75	342-0827-00			1	INSULATOR,PLATE:CKT BD,POLYCARBONATE (ATTACHING PARTS)	80009	342-0827-00
-76	211-0661-00			3	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-77	342-0828-00			1	INSULATOR,PLATE:CKT BD,POLYCARBONATE	80009	342-0828-00
-78	129-1187-00			1	SPACER,POST:43MM L,W/4-40 EXT THD ONE END,B RS	80009	129-1187-00

Replaceable Mechanical Parts-371 Curve Tracer

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr.	
		Effective	Dscont			Code	Mfr. Part No.
1-79	343-1346-00			1	RETAINER, INSUL:15.9MM L, NYLON	80009	343-1346-00
-80	129-1188-00			1	SPACER, POST:23.7MM L, 4-40 EXT THD, 6-32 EXT THD, BRS, 0.188 HEX	80009	129-1188-00
-81	210-0202-00			1	TERMINAL, LUG:0.146 ID, LOCKING, BRZ TIN PL (ATTACHING PARTS)	86928	A-373-158-2
-82	210-0407-00			1	NUT, PLAIN, HEX:6-32 X 0.25, BRS CD PL (END ATTACHING PARTS)	73743	3038-402
-83	129-0992-00			5	SPACER, POST:0.41 L, 4-40 INT, BRS, 0.19 HEX	80009	129-0992-00
-84	200-2264-00			2	CAP, FUSEHOLDER:3AG FUSES	S3629	FEK 031 1666
-85	-----			2	FUSE, CARTRIDGE:(SEE F100, F200 REPL)		
-86	204-0833-00			2	BODY, FUSEHOLDER:3AG & 5 X 20MM FUSES	TK0861	031 1653 (FEU)
-87	210-1039-00			2	WASHER, LOCK:0.521 ID, INT, 0.025 THK, SST	24931	ORDER BY DESCR
-88	200-1388-03			2	COVER, FUSE LEAD:POLYURETHANE	80009	200-1388-03
-89	-----			1	FILTER:115/230V, 4A (SEE FL100 REPL) (ATTACHING PARTS)		
-90	211-0038-00			2	SCREW, MACHINE:4-40 X 0.312, FLH, 100 DEG, STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-91	-----			1	LEAD, ELECTRICAL:18AWG, 6.0L (SEE W17 REPL)		
-92	210-0202-00			1	TERMINAL, LUG:0.146 ID, LOCKING, BRZ TIN PL (ATTACHING PARTS)	86928	A-373-158-2
-93	210-0407-00			1	NUT, PLAIN, HEX:6-32 X 0.25, BRS CD PL (END ATTACHING PARTS)	73743	3038-402
-94	210-0202-00			1	TERMINAL, LUG:0.146 ID, LOCKING, BRZ TIN PL (ATTACHING PARTS)	86928	A-373-158-2
-95	211-0504-00			1	SCREW, MACHINE:6-32 X 0.250, PNH, STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR

FIG. 1 CABINET, REAR

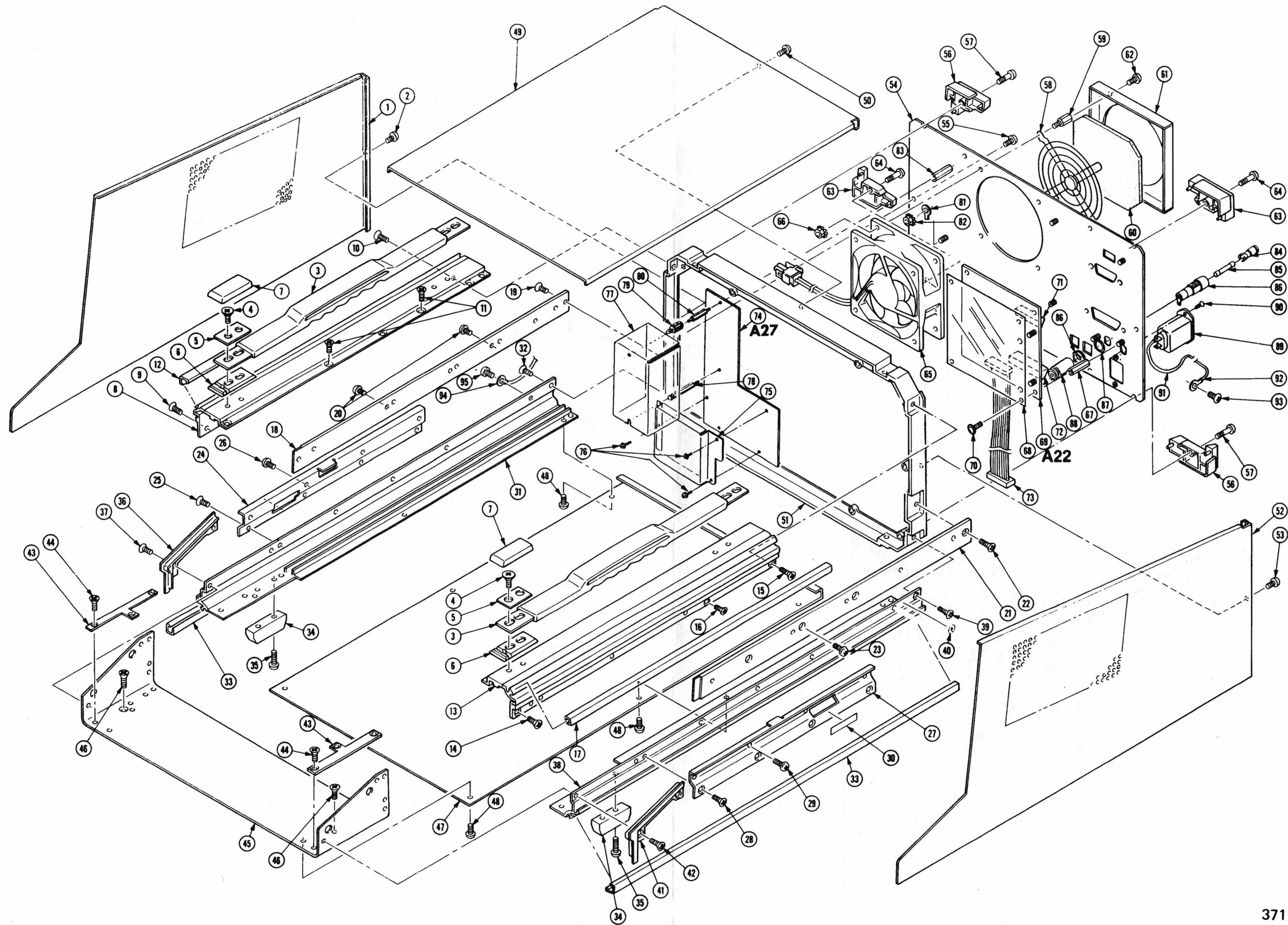


FIG. 2 DISPLAY, FRONT

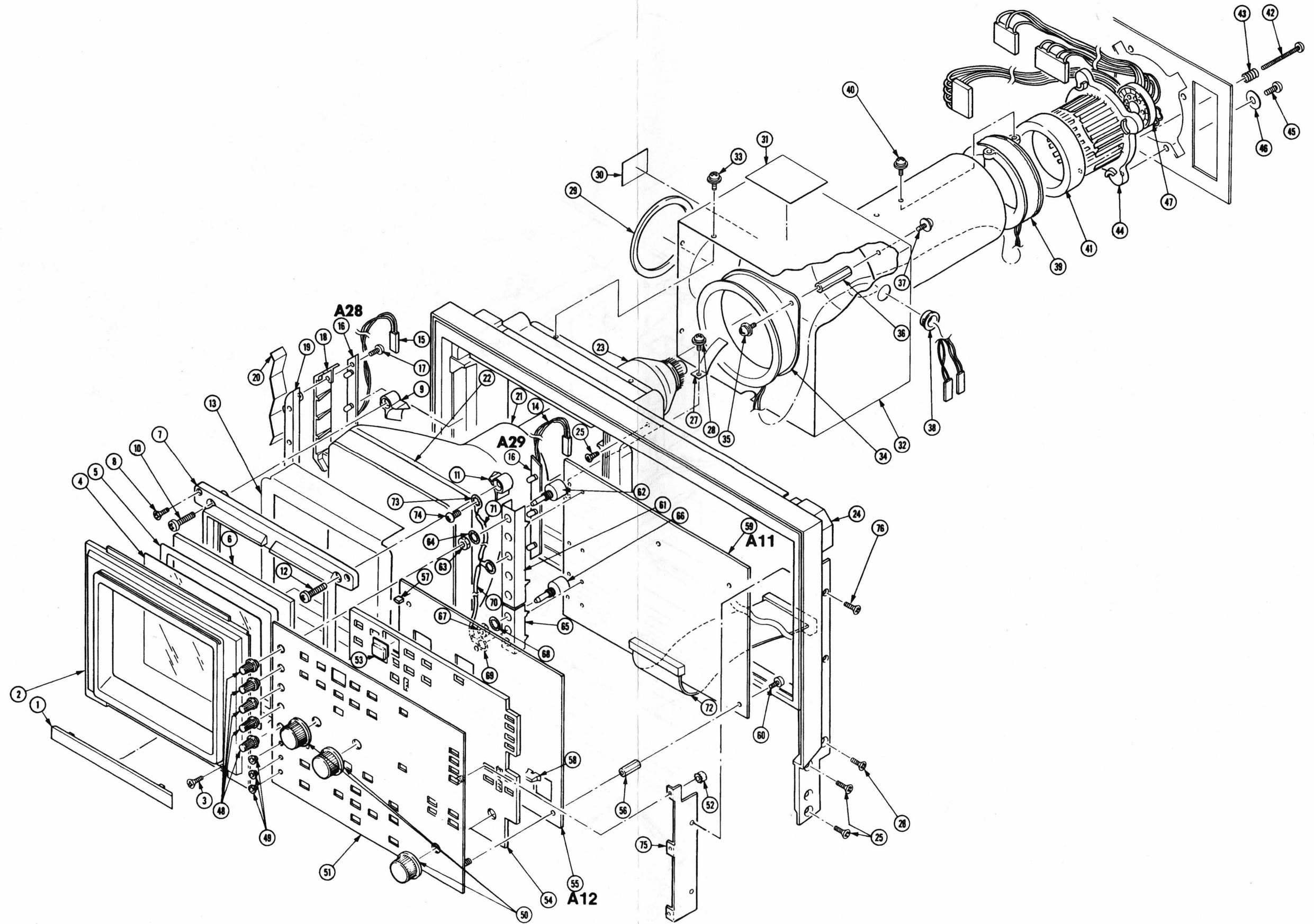


Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr.	
		Effective	Dscont			Code	Mfr. Part No.
2-1	200-3281-01			1	COVER,BEZEL:POLYCARBONATE,TEK TAN	80009	200-3281-01
-2	200-3276-01			1	BEZEL,CRT:PC,TEK TAN (ATTACHING PARTS)	80009	200-3276-01
-3	211-0538-00			2	SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-4	378-0276-00			1	FILTER,LT,CRT:BLUE,108.4MM X 134.4MM X 1MM	TK0191	378-0276-00
-5	361-1381-00			1	SPACER,RING:CRT,0.4MM	TK0191	361-1381-00
-6	337-3328-00			1	SHIELD,CRT:CLEAR	TK0191	337-3328-00
-7	426-2133-00			1	FRAME,CRT: (ATTACHING PARTS)	TK0191	426-2133-00
-8	211-0512-00			4	SCREW,MACHINE:6-32 X 0.5,FLH,100 DEG,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR
-9	343-1269-00			2	RETAINER,CRT:FRONT,(A) (ATTACHING PARTS)	TK0191	343-1269-00
-10	212-0022-00			2	SCREW,MACHINE:8-32 X 1.5,PNH,STL (END ATTACHING PARTS)	TK0435	2011-300
-11	343-1270-00			2	RETAINER,CRT:FRONT,(B) (ATTACHING PARTS)	TK0191	343-1270-00
-12	212-0022-00			2	SCREW,MACHINE:8-32 X 1.5,PNH,STL (END ATTACHING PARTS)	TK0435	2011-300
-13	331-0491-00			1	MASK,CRT:	80009	331-0491-00
-14	-----			1	CA ASSY,SP,ELEC:2.26AWG,30L (SEE W280 REPL)		
-15	-----			1	CA ASSY,SP,ELEC:2.26AWG,22L (SEE W290 REPL)		
-16	-----			2	CKT BOARD ASSY:GRAT LAMPS(SEE A28,A29 REPL) (ATTACHING PARTS)		
-17	211-0062-00			4	SCREW,MACHINE:2-56 X 0.312,PNH,STL (END ATTACHING PARTS)	06950	ORDER BY DESCR
-18	343-1268-00			2	RETAINER,LIGHT:REFLECTOR	TK0191	343-1268-00
-19	378-0614-01			2	REFLECTOR,LIGHT:INT SCALE ILLUMINATION	80009	378-0614-01
-20	214-3886-00			2	SPRING,RTNR:SCALE LAMP	TK0191	214-3886-00
-21	-----			1	ELECTRON TUBE:CRT (SEE V100 REPL)		
-22	253-0267-00			1	TAPE,PRESS SENS:0.08 X 20 X 2000MM,AL FOIL	80009	253-0267-00
-23	253-0137-00			1	TAPE,SILICONE:RED RBR,1.25 X 0.02	99742	2650
-24	426-2132-01			1	FRAME,PNL,CAB.:FRONT (ATTACHING PARTS)	TK0BV	ORDER BY DESCR
-25	211-0538-00			8	SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL	93907	ORDER BY DESCR
-26	211-0541-00			2	SCREW,MACHINE:6-32 X 0.25,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-27	214-3880-00			1	CONTACT,SPRING:GROUNDING CRT (ATTACHING PARTS)	TK0191	214-3880-00
-28	211-0661-00			1	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-29	348-0955-00			1	GROMMET,PLASTIC:188MM L,CHANNEL	TK0191	348-0955-00
-30	334-6691-00			1	MARKER,IDENT:MKD DANGER	TK0191	334-6691-00
-31	334-6805-00			1	MARKER,IDENT:MKD WARNING	80009	334-6805-00
-32	337-3325-00			1	SHIELD,CRT: (ATTACHING PARTS)	TK0191	337-3325-00
-33	211-0661-00			4	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-34	-----			1	COIL,TUBE DEFL:TRACE ROT (SEE L100 REPL) (ATTACHING PARTS)		
-35	211-0661-00			2	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-36	129-1123-00			2	SPACER,POST:33MM L,4-40 THD,BRASS,0.188 (ATTACHING PARTS)	TK0191	129-1123-00
-37	211-0661-00			2	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-38	348-0948-00			1	GROMMET,PLASTIC:BLACK,RING,9.5MM ID	TK0191	348-0948-00
-39	-----			1	COIL,TUBE DEFL:Y-AXIS (SEE L120 REPL) (ATTACHING PARTS)		
-40	211-0661-00			2	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-41	354-0347-00			1	RING,CRT CLAMP:2.127 ID X 2.595 OD X 0.563 (ATTACHING PARTS)	80009	354-0347-00
-42	211-0170-00			2	SCREW,MACHINE:4-40 X 2.25,PNH,SST	93907	ORDER BY DESCR
-43	214-1333-00			2	SPRING,HLCP:0.213 OD X 0.375,CLE,CU-BE (END ATTACHING PARTS)	80009	214-1333-00
-44	343-0205-01			1	RTNR,ELCTR N TU:3.0 DIA X 1.5 L,DEL RIN	80009	343-0205-01

Replaceable Mechanical Parts-371 Curve Tracer

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No. Effective Dscont	Qty	12345 Name & Description	Mfr. Code	Mfr. Part No.
2-				(ATTACHING PARTS)		
-45	211-0578-00		4	SCREW,MACHINE:6-32 X 0.438,PNH,STL	93907	ORDER BY DESC
-46	210-0949-00		4	WASHER,FLAT:0.141 ID X 0.5 OD X 0.062,BRS	12327	ORDER BY DESC
				(END ATTACHING PARTS)		
-47	-----		1	LEAD,ELEC:24 AWG,10.0 L,CRT (SEE W14 REPL)		
-48	366-0625-01		5	KNOB:SILVER GRAY,9.5MM OD	80009	366-0625-01
-49	358-0378-00		3	BUSHING,SLEEVE:0.131 ID X 0.18 OD X 0.125 L	80009	358-0378-00
-50	366-0620-01		3	KNOB:SILVER GRAY,25MM OD	80009	366-0620-01
-51	333-3511-00		1	PANEL,FRONT:	80009	333-3511-00
				(ATTACHING PARTS)		
-52	210-0586-00		3	NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL	78189	211-041800-00
				(END ATTACHING PARTS)		
-53	378-0277-00		1	FILTER,LT,CRT:SMOKE GRAY	TK0191	378-0277-00
-54	351-0814-00		1	GUIDE,PUSH BTN:MAIN KEY BD,POLYCARBONATE	80009	351-0814-00
-55	-----		1	CKT BOARD ASSY:SUB KEY (SEE A12 REPL)		
				(ATTACHING PARTS)		
-56	129-1131-00		6	SPACER,POST:12.7MM L,4-40 THD ONE END,BRASS	TK0191	129-1131-00
	210-1002-00		6	WASHER,FLAT:0.125 ID X 0.25 OD X 0.022,BRS	86928	5714-147-20N
				(END ATTACHING PARTS)		
				CKT BOARD ASSY INCLUDES:		
-57	129-1128-00		41	.SPACER,POST:5.1MM,L,POLYCARBONATE	TK0191	129-1128-00
-58	366-0617-01		36	PUSH BUTTON:SILVER GRAY,9.6MM X 4.2MM X 8.5 MM,ABS	80009	366-0617-01
-59	-----		1	CKT BOARD ASSY:MAIN KEY (SEE A11 REPL)		
				(ATTACHING PARTS)		
-60	211-0661-00		6	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ	01536	821-01655-024
				(END ATTACHING PARTS)		
				CKT BOARD ASSY INCLUDES:		
-61	407-3474-00		1	.BRACKET,ANGLE:VAR RES MTG	TK0191	407-3474-00
-62	-----		5	.RES,VAR,NONWV:(SEE A11R302,R312,R322,R330, .R340 REPL)		
				(ATTACHING PARTS)		
-63	210-0583-00		5	.NUT,PLAIN,HEX:0.25-32 X 0.312,BRS CD PL	73743	2X-20319-402
-64	210-0046-00		4	.WASHER,LOCK:0.261 ID,INTL,0.018 THK,STL	77900	1214-05-00-0541C
				(END ATTACHING PARTS)		
-65	407-3475-00		1	.BRACKET,ANGLE:VAR RES MTG	TK0191	407-3475-00
-66	-----		3	.RES,VAR,NONWV:(SEE A11R350,R360,R370 REPL)		
				(ATTACHING PARTS)		
-67	210-0583-00		3	.NUT,PLAIN,HEX:0.25-32 X 0.312,BRS CD PL	73743	2X-20319-402
-68	210-0046-00		2	.WASHER,LOCK:0.261 ID,INTL,0.018 THK,STL	77900	1214-05-00-0541C
				(END ATTACHING PARTS)		
-69	210-0223-00		2	.TERMINAL,LUG:0.26 ID,LOCKING,BRZ TIN PL	86928	5441-37
-70	-----		1	.LEAD ELECTRICAL:(SEE A11W111 REPL)		
-71	-----		1	.LEAD,ELECTRICAL:(SEE A11W112 REPL)		
-72	174-0293-00		1	.CA ASSY,SP,ELEC:40,28 AWG,4.3 L,RIBBON	TK0191	174-0293-00
-73	210-0201-00		1	.TERMINAL,LUG:0.12 ID,LOCKING,BRZ TIN PL	86928	A373-157-2
-74	211-0008-00		1	SCREW,MACHINE:4-40 X 0.25,PNH,STL	93907	ORDER BY DESC
-75	407-3665-00		1	BRACKET,ANGLE:FRONT PNL MTG,ALUMINUM	TK0CA	30-0071
				(ATTACHING PARTS)		
-76	211-0106-00		2	SCREW,MACHINE:4-40 X 0.625,FLH,100 DEG,STL	TK0435	ORDER BY DESC
				(END ATTACHING PARTS)		

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr.	
		Effective	Discont			Code	Mfr. Part No.
3-1	441-1740-01			1	CHASSIS,CKT BD:	80009	441-1740-01
-2	348-0953-00			1	GROMMET,PLASTIC:177MM L,CHANNEL	TK0191	348-0953-00
-3	343-0778-00			2	CLAMP,CABLE:5MM ID,NYLON	80009	343-0778-00
-4	348-0948-00			1	GROMMET,PLASTIC:BLACK,RING,9.5MM ID	TK0191	348-0948-00
-5	351-0769-00			2	GUIDE,CKT BD:	TK0191	351-0769-00
-6	343-1289-00			1	CLAMP,CABLE:STEEL	TK0191	343-1289-00
-7	343-1084-00			4	CLAMP,CABLE:NYLON	80009	343-1084-00
-8	348-0958-00			1	GROMMET,PLASTIC:63MM L,CHANNEL	80009	348-0958-00
-9	348-0954-00			1	GROMMET,PLASTIC:305MML,CHANNEL	TK0191	348-0954-00
-10	-----			1	CKT BOARD ASSY:STEP GENERATOR (SEE A7 REPL) (ATTACHING PARTS)		
-11	211-0661-00			3	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-12	-----			4	CKT BOARD ASSY INCLUDES: .TRANSISTOR:(SEE A7Q346,Q350,Q348,Q352 REPL) (ATTACHING PARTS)		
-13	211-0315-00			4	.SCR,ASSEM WSHR:4-40 X 0.437,PHN,STL CD PL (END ATTACHING PARTS)	78189	ORDER BY DESCR
-14	342-0787-00			4	.INSULATOR,PLATE:TRANSISTOR,TO-3P,SI RUBBER	TK0191	342-0787-00
-15	-----			4	.TRANSISTOR:(SEE A7Q700,Q436,Q720,Q446 REPL) (ATTACHING PARTS)		
-16	211-0244-00			4	.SCR,ASSEM WSHR:4-40 X 0.312,PNH STL	TK0858	211-0244-00
-17	211-0315-00			4	.SCR,ASSEM WSHR:4-40 X 0.437,PHN,STL CD PL (END ATTACHING PARTS)	78189	ORDER BY DESCR
-18	342-0163-01			4	.INSULATOR,PLATE:TRANSISTOR,SILICON RUBBER	80009	342-0163-01
-19	214-3875-01			1	.HT SK,CKT BD:CKT BD,AL	80009	214-3875-01
-20	-----			1	CKT BOARD ASSY:MOTHER (SEE A1 REPL) (ATTACHING PARTS)		
-21	211-0661-00			7	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-22	407-3633-00			1	BRACKET,CKT BD:ALUMINUM (ATTACHING PARTS)	TK0CA	30-0006
-23	211-0507-00			2	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESCR
-24	-----			1	CKT BOARD ASSY:MAIN POWER SUPPLY (SEE A25 REPL) (ATTACHING PARTS)		
-25	211-0246-00			2	SCR,ASSEM WSHR:4-40 X 0.625,PNH,STL,POZ	01536	ORDER BY DESCR
-26	211-0507-00			3	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESCR
-27	-----			5	CKT BOARD ASSY INCLUDES: .TRANSISTOR:(SEE A25U400,CR100,CR200,CR300, .CR400 REPL) (ATTACHING PARTS)		
-28	211-0244-00			5	.SCR,ASSEM WSHR:4-40 X 0.312,PNH STL	TK0858	211-0244-00
-29	210-1178-00	.300000	.300298	5	.WASHER,SHLDR: (END ATTACHING PARTS)	80009	210-1178-00
-30	342-0163-01	.300000	.300298	5	.INSULATOR,PLATE:TRANSISTOR,SILICON RUBBER	80009	342-0163-01
-31	-----			2	.TRANSISTOR:(SEE A25U100,U300 REPL) (ATTACHING PARTS)		
-32	211-0315-00			4	.SCR,ASSEM WSHR:4-40 X 0.437,PHN,STL CD PL (END ATTACHING PARTS)	78189	ORDER BY DESCR
-33	342-0790-00			2	.INSULATOR,FILM:MICA,0.07MA	TK0191	342-0790-00
-34	-----			3	.TRANSISTOR:(SEE A25Q130,Q230,Q600 REPL) (ATTACHING PARTS)		
-35	211-0244-00			3	.SCR,ASSEM WSHR:4-40 X 0.312,PNH STL (END ATTACHING PARTS)	TK0858	211-0244-00
-36	214-4032-00			1	.HEAT SINK,ELEC:ALUMINUM,MAIN PWR SPLY (ATTACHING PARTS)	80009	214-4032-00
-37	211-0661-00			2	.SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-38	-----			2	.CAPACITOR:(SEE A25C300,C400 REPL)		
-39	342-0842-00			2	.INSULATOR,FILM:CAPACITOR,POLYIMIDE	TK0CP	30-0072
-40	343-1273-00			2	RETAINER,CKT BD:BRASS (ATTACHING PARTS)	TK0191	343-1273-00
-41	211-0504-00			2	SCREW,MACHINE:6-32 X 0.250,PNH,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR
-42	348-1048-00			2	PAD,CUSHIONING:150MM X 12MM X 13MM	80009	348-1048-00

Replaceable Mechanical Parts-371 Curve Tracer

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No. Effective Dscont	Qty	12345 Name & Description	Mfr. Code	Mfr. Part No.
3-43	-----		1	CKT BOARD ASSY:CPU (SEE A2 REPL) (ATTACHING PARTS)		
-44	211-0661-00		5	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS) CKT BOARD ASSY INCLUDES:	01536	821-01655-024
-45	105-0899-00		2	.EJECTOR,CKT BD:	80009	105-0899-00
-46	337-3326-00		1	.SHIELD,ELEC:CPU BD	TK0191	337-3326-00
-47	-----		1	CKT BOARD ASSY:A/D (SEE A3 REPL) (ATTACHING PARTS)		
-48	211-0661-00		5	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS) CKT BOARD ASSY INCLUDES:	01536	821-01655-024
-49	105-0899-00		2	.EJECTOR,CKT BD:	80009	105-0899-00
-50	337-3326-00		1	.SHIELD,ELEC:CPU BD	TK0191	337-3326-00
-51	-----		1	CKT BOARD ASSY:DIGITAL DISPLAY(SEE A4 REPL) (ATTACHING PARTS)		
-52	211-0661-00		5	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS) CKT BOARD ASSY INCLUDES:	01536	821-01655-024
-53	105-0899-00		2	.EJECTOR,CKT BD:	80009	105-0899-00
-54	337-3326-00		1	.SHIELD,ELEC:CPU BD	TK0191	337-3326-00
-55	-----		1	CKT BOARD ASSY:DISPLAY CONTROL(SEE A5 REPL) (ATTACHING PARTS)		
-56	211-0661-00		5	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS) CKT BOARD ASSY INCLUDES:	01536	821-01655-024
-57	200-0945-00		1	.COVER HALF,XSTR:DUAL TO-18 ALUMINUM	80009	200-0945-00
-58	200-0945-01		1	.COVER HALF,XSTR:DUAL TO-18 W/2-56 THD AL (ATTACHING PARTS)	80009	200-0945-01
-59	211-0001-00		2	.SCREW,MACHINE:2-56 X 0.25,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-60	105-0899-00		2	.EJECTOR,CKT BD:	80009	105-0899-00
-61	337-3326-00		1	.SHIELD,ELEC:CPU BD	TK0191	337-3326-00

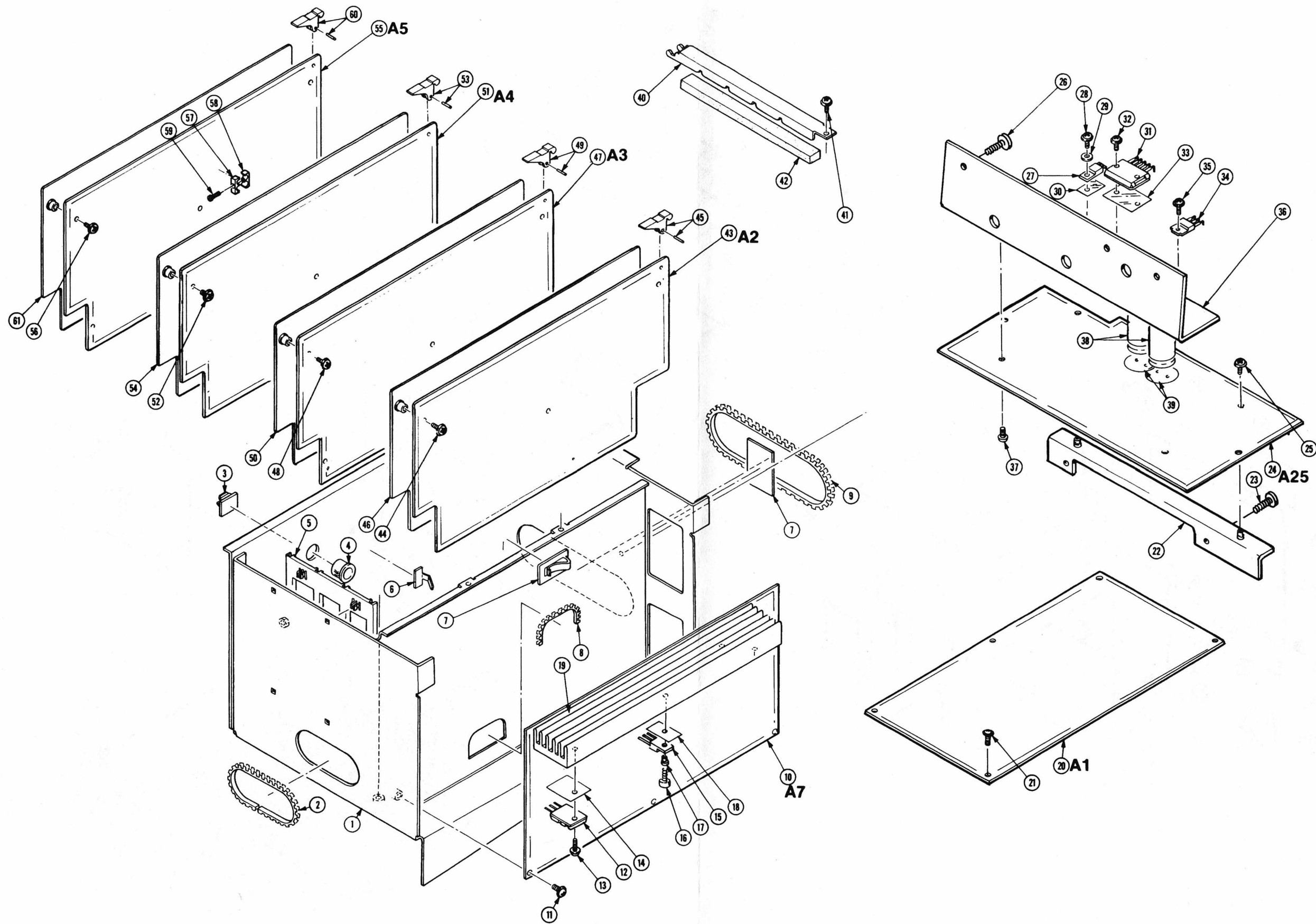


FIG. 3 CHASSIS, CIRCUIT BOARDS

FIG. 4 POWER SUPPLY

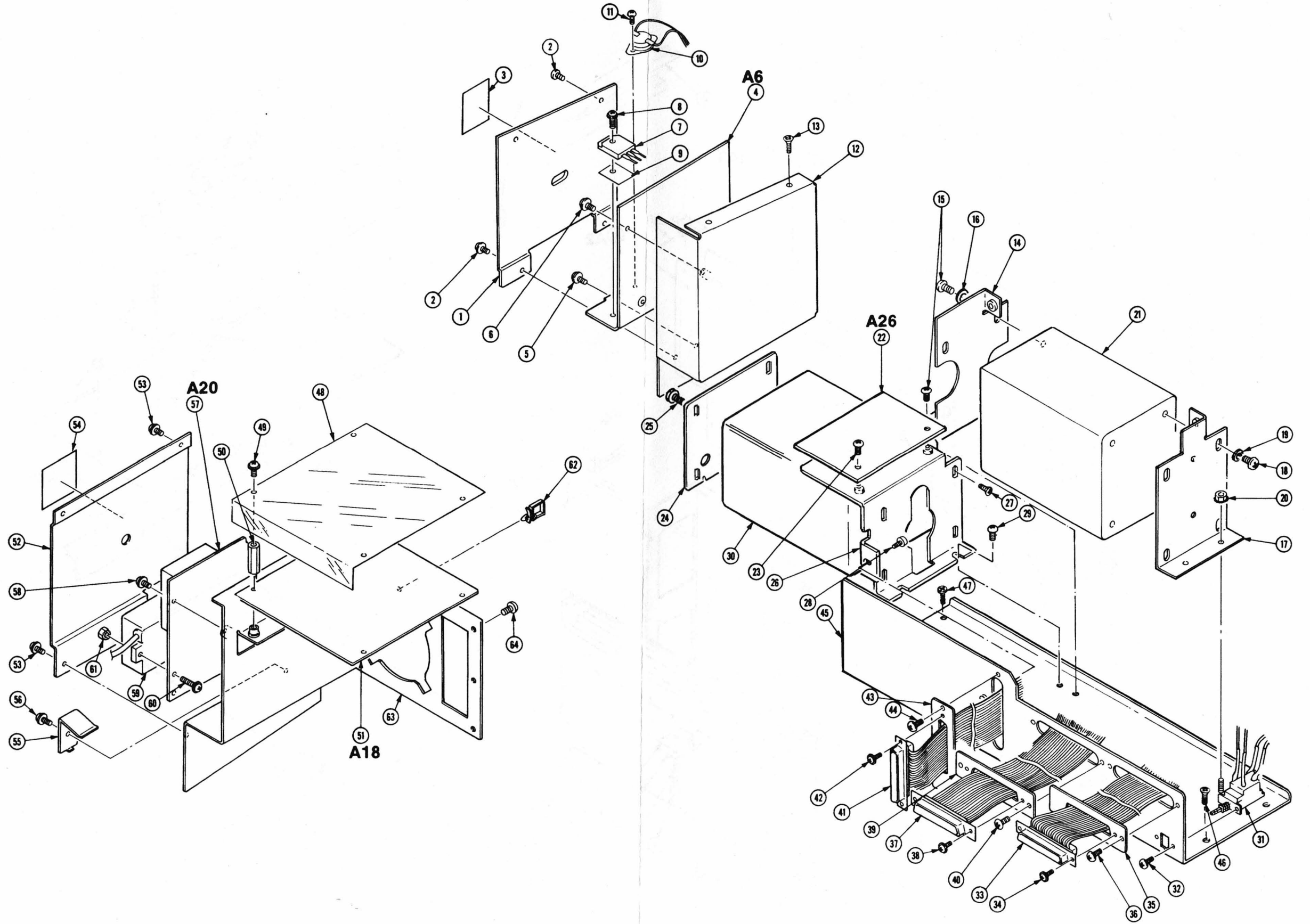


Fig. & Index No.	Tektronix Part No.	Serial/Assembly No. Effective Dscnt	Qty	12345 Name & Description	Mfr. Code	Mfr. Part No.
4-1	337-3330-00		1	SHIELD,ELEC.COLLECTOR SUPPLY (ATTACHING PARTS)	TK0191	337-3330-00
-2	211-0008-00		4	SCREW,MACHINE:4-40 X 0.25,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESC
-3	334-6695-00		1	MARKER,IDENT:MKD DANGER & POT	TK0191	334-6695-00
-4	-----		1	CKT BOARD ASSY:COLLECTOR SUPPLY OUTPUT (SEE A6 REPL) (ATTACHING PARTS)		
-5	211-0507-00		4	SCREW,MACHINE:6-32 X 0.312,PNH,STL	83385	ORDER BY DESC
-6	211-0661-00		2	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-7	-----		4	CKT BOARD ASSY INCLUDES: .TRANSISTOR:(SEE A6Q43B,Q440,Q538,Q540 REPL) (ATTACHING PARTS)		
-8	211-0315-00		4	.SCR,ASSEM WSHR:4-40 X 0.437,PHN,STL CD PL (END ATTACHING PARTS)	78189	ORDER BY DESC
-9	342-0787-00		4	.INSULATOR,PLATE:TRANSISTOR,TO-3P,SI RUBBER	TK0191	342-0787-00
-10	-----		1	.SWITCH,THERMAL:(SEE A6S92 REPL) (ATTACHING PARTS)		
-11	211-0661-00	.300000	2	.SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ	01536	821-01655-024
	211-0007-00	.300169	2	.SCREW,MACHINE:4-40 X 0.188,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESC
-12	407-3470-00		1	BRACKET,CKT BD:COLLECTOR SUPPLY OUTPUT (ATTACHING PARTS)	TK0191	407-3470-00
-13	211-0538-00		2	SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESC
-14	407-3478-01		1	BRACKET,XFMR:LEFT,ALUMINUM (ATTACHING PARTS)	80009	407-3478-01
-15	212-0507-00		6	SCREW,MACHINE:10-32 X 0.375,PNH,STL	TK0435	ORDER BY DESC
-16	210-1003-00		4	WASHER,FLAT:0.2 ID X 0.438 OD X 0.036 BRS (END ATTACHING PARTS)	86928	5714-50-32N
-17	407-3477-01		1	BRACKET,XFMR:RIGHT,ALUMINUM (ATTACHING PARTS)	80009	407-3477-01
-18	212-0507-00		4	SCREW,MACHINE:10-32 X 0.375,PNH,STL	TK0435	ORDER BY DESC
-19	210-1003-00		4	WASHER,FLAT:0.2 ID X 0.438 OD X 0.036 BRS	86928	5714-50-32N
-20	220-0410-00		2	NUT,PL,ASSEM WA:10-32 X 0.375 HEX,STL CD PL (END ATTACHING PARTS)	78189	511-101800-50
-21	-----		1	XFMR,PWR,STDN:MAIN PWR (SEE T100 REPL)		
-22	-----		1	CKT BOARD ASSY:COLLECTOR POWER SUPPLY (SEE A26 REPL) (ATTACHING PARTS)		
-23	211-0661-00		3	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-24	407-3632-00		1	BRACKET,XFMR:ALUMINUM (ATTACHING PARTS)	TKOCF	30-0003
-25	212-0507-00		4	SCREW,MACHINE:10-32 X 0.375,PNH,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESC
-26	407-3631-00		1	BRACKET,XFMR:ALUMINUM (ATTACHING PARTS)	TKOCF	30-0002
-27	212-0507-00		4	SCREW,MACHINE:10-32 X 0.375,PNH,STL	TK0435	ORDER BY DESC
-28	211-0507-00		1	SCREW,MACHINE:6-32 X 0.312,PNH,STL	83385	ORDER BY DESC
-29	212-0507-00		2	SCREW,MACHINE:10-32 X 0.375,PNH,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESC
-30	-----		1	XFMR,PWR,STU:COLLECTOR PWR (SEE T200 REPL)		
-31	-----		1	SWITCH,POWER:(SEE S100 REPL) (ATTACHING PARTS)		
-32	211-0751-00		2	SCR,ASSEM WSHR:M3 X 8 (END ATTACHING PARTS)	TK0191	211-0751-00
-33	-----		1	WIRE ASSY:(SEE W400 REPL) (ATTACHING PARTS)		
-34	211-0661-00		2	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-35	386-5485-00		1	PLATE,CONN MTG:FEMALE,STEEL (ATTACHING PARTS)	80009	386-5485-00
-36	211-0507-00		2	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESC
-37	-----		1	WIRE ASSY:(SEE W410 REPL) (ATTACHING PARTS)		

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Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr. Code	Mfr. Part No.
		Effective	Discont				
4-38	211-0661-00			2	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-39	386-5485-00			1	PLATE,CONN MTG:FEMALE,STEEL (ATTACHING PARTS)	80009	386-5485-00
-40	211-0507-00			2	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESCR
-41	-----			1	WIRE ASSY: (SEE W412 REPL) (ATTACHING PARTS)		
-42	211-0661-00			2	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-43	386-5674-00			1	PLATE,CONN MTG:STEEL (ATTACHING PARTS)	TK0AP	30-0091
-44	211-0507-00			2	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESCR
-45	441-1803-00			1	CHASSIS,REAR:XFMR (ATTACHING PARTS)	TK0CF	30-0001
-46	211-0507-00			2	SCREW,MACHINE:6-32 X 0.312,PNH,STL	83385	ORDER BY DESCR
-47	211-0538-00			2	SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-48	342-0785-00			1	INSULATOR,PLATE:CRT OUTPUT (ATTACHING PARTS)	TK0191	342-0785-00
-49	211-0661-00			4	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-50	129-1139-00			4	SPACER,POST:25MM L,W4-40 THD,BRASS	TK0191	129-1139-00
-51	-----			1	CKT BOARD ASSY:CRT OUTPUT (SEE A18 REPL)		
-52	337-3329-00			1	SHIELD,ELEC:HV REG (ATTACHING PARTS)	TK0191	337-3329-00
-53	211-0008-00			4	SCREW,MACHINE:4-40 X 0.25,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-54	334-6694-00			1	MARKER,IDENT:MKD DANGER & POT	TK0191	334-6694-00
-55	343-1275-00			1	RETAINER,XSTR:HV,SST (ATTACHING PARTS)	TK0191	343-1275-00
-56	211-0661-00			1	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-57	-----			1	CKT BOARD ASSY:HV REGULATOR (SEE A20 REPL) (ATTACHING PARTS)		
-58	211-0661-00			4	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-59	-----			1	CKT BOARD ASSY INCLUDES: .HV MODULE: (SEE A20U300 REPL) (ATTACHING PARTS)		
-60	211-0012-00			2	.SCREW,MACHINE:4-40 X 0.375,PNH,STL	93907	ORDER BY DESCR
-61	210-0586-00			2	.NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL (END ATTACHING PARTS)	78189	211-041800-00
-62	343-1288-00			1	CLAMP,CABLE:PLASTIC	TK0191	343-1288-00
-63	441-1743-00			1	CHASSIS,CRT:LEFT (ATTACHING PARTS)	TK0191	441-1743-00
-64	211-0504-00			3	SCREW,MACHINE:6-32 X 0.250,PNH,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345	Name & Description	Mfr.	
		Effective	Discont				Code	Mfr. Part No.
5-1	337-3473-00			1		SHIELD,ELEC:TEST LID,POLYCARBONATE	TKOBV	30-0220
-2	213-1013-00			2		THUMBSCREW:6-32 X 15.6MM,12MM OD HD (ATTACHING PARTS)	TKOCM	30-0223
-3	354-0165-00			2		RING,RETAINING:TYPE E EXT,U/O 0.156 OD SFT	97464	1000-15-ZD
-4	210-1318-00			2		WASHER,FLAT:0.169 ID X 0.315 OD X 0.02,STL (END ATTACHING PARTS)	80009	210-1318-00
-5	200-3560-00			1		COVER,ELEC CONN:ALUMINUM,TEST FIXTURE (ATTACHING PARTS)	TKOCM	30-0212
-6	211-0101-00			4		SCREW,MACHINE:4-40 X 0.25,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-7	129-1242-00			4		SPACER,POST:56.8MM L,4-40 INT THD BOTH ENDS	80009	129-1242-00
-8	131-4322-00			1		BUS,CONDUCTOR:83MM L X 8MM W X 0.8MMH BRS	80009	131-4322-00
-9	136-0933-00			9		SOCKET,PIN TERM:0.16 DIA,GRAY	TKOBW	SLB4-F6.3-8
	136-0934-00			4		SOCKET,PIN TERM:0.16 DIA,RED	TKOBW	SLB4-F6.3-1
-10	342-0852-00			13		INSULATOR,BSHG:15MM OD X 11.3MM L,PC	80009	342-0852-00
-11	342-0851-00			1		INSULATOR,CONN:TEST FIXTURE,PC	80009	342-0851-00
-12	334-7137-00			1		MARKER,IDENT:MARKED TEST ADAPTER INFO	TKOAU	30-0219
-13	386-5698-00			1		PLATE,CONN MTG:ALUMINUM	TKOCM	30-0211
-14	214-4097-00			1		LATCH,DOOR:POLYACETAL	TKOBK	2Y24
-15	200-3561-00			1		DOOR,ACCESS:STRAGE,TEST FIXTURE,AL	TKOCM	30-0214
-16	214-4096-00			1		HINGE HALF:ALUMINUM (ATTACHING PARTS)	TKOCM	30-0229
-17	213-0153-00			4		SETScrew:5-40 X 0.125,STL	TK0392	ORDER BY DESCR
-18	214-4095-00			2		PIN,HINGE:4MM DIA,45MM L,6MM DIA HD (END ATTACHING PARTS)	TKOCM	30-0230
-19	105-1005-00			1		CATCH,LATCH:PLASTIC	TKOBK	2A16
-20	348-1039-00			2		BUMPER,PLASTIC:7.5MM OD X 1.5MM L,NYLON	TKOBK	74-01
-21	426-2261-00	.300000	.300143	1		FRAME,SHIELD:GROUNDING	TKOCM	ORDER BY DESCR
	426-2270-00	.300144		2		FRAME,SHIELD:181.6MM,BRASS (ATTACHING PARTS)	TKOCM	ORDER BY DESCR
-22	211-0008-00			10		SCREW,MACHINE:4-40 X 0.25,PNH,STL	93907	ORDER BY DESCR
-23	210-0004-00			10		WASHER,LOCK:#4 INTL,0.015 THK,STL (END ATTACHING PARTS)	77900	1204-00-00-0541C
-23.1	426-2269-00	.300144		2		FRAME,SHIELD:267.0MM,BRASS (ATTACHING PARTS)	TKOCM	ORDER BY DESCR
-23.2	211-0105-00	.300144		2		SCREW,MACHINE:4-40 X 0.188,FLH,100 DEG (END ATTACHING PARTS)	TK0435	ORDER BY DESCR
-24	136-0933-00			7		SOCKET,PIN TERM:0.16 DIA,GRAY	TKOBW	SLB4-F6.3-8
	136-0934-00			1		SOCKET,PIN TERM:0.16 DIA,RED	TKOBW	SLB4-F6.3-1
-25	342-0852-00			8		INSULATOR,BSHG:15MM OD X 11.3MM L,PC	80009	342-0852-00
-26	334-7136-00			1		MARKER,IDENT:MARKED I/O SIGNALS	TKOAU	30-0218
-27	407-3693-00			1		BRACKET,ANGLE:I.L SW ACTR SPRING,ALUMINUM (ATTACHING PARTS)	TKOCM	30-0217
-28	210-0586-00			2		NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL (END ATTACHING PARTS)	78189	211-041800-00
-29	214-4098-00			1		ROLLER,ACTR:5MM DIA X 3.5MM L,BRASS	TKOCM	30-0216
-30	214-4099-00			1		SPRING,FLAT:0.3MM THK (ATTACHING PARTS)	TKOEV	30-0215
-31	211-0008-00			2		SCREW,MACHINE:4-40 X 0.25,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-32	-----			2		SW,SENSITIVE:(SEE S1000,S1002 REPL) (ATTACHING PARTS)		
-33	213-0986-00			4		SCREW,MACHINE:2-26 X 12MM,HEX,BRS NI PL	TK0191	213-0986-00
-34	210-0405-00			4		NUT,PLAIN,HEX:2-56 X 0.188,BRS CD PL	73743	12157-50
-35	210-0054-00			4		WASHER,LOCK:#4 SPLIT,0.025 THK STL	78189	ORDER BY DESCR
-36	210-0938-00			4		WASHER,FLAT:0.109 ID X 0.25 OD X 0.032,STL (END ATTACHING PARTS)	86928	ORDER BY DESCR
-37	351-0823-00			2		GUIDE,SW ACT AD:INTERLOCK (ATTACHING PARTS)	80009	351-0823-00
-38	210-0586-00			4		NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL (END ATTACHING PARTS)	78189	211-041800-00
-39	346-0032-00	.300000	.300133	2		STRAP,RETAINING:0.075 DIA X 4.0 L,MLD RBR	98159	2829-75-4
	346-0032-00	.300134		3		STRAP,RETAINING:0.075 DIA X 4.0 L,MLD RBR	98159	2829-75-4
-40	333-3576-00	.300000	.300143	1		PANEL,FRONT:	TKOCM	30-0210
	333-3576-01	.300144		1		PANEL,FRONT:371,AL (ATTACHING PARTS)	TKOCM	ORDER BY DESCR
-41	211-0101-00			6		SCREW,MACHINE:4-40 X 0.25,FLH,100 DEG,STL	93907	ORDER BY DESCR
-42	211-0101-00			2		SCREW,MACHINE:4-40 X 0.25,FLH,100 DEG,STL	93907	ORDER BY DESCR

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Replaceable Mechanical Parts-371 Curve Tracer

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr.	
		Effective	Discont			Code	Mfr. Part No.
5-					(END ATTACHING PARTS)		
-43	220-0096-00			2	NUT BLOCK:12MM SQ X 22.5MM L,6-32 THRU (ATTACHING PARTS)	TKOCM	30-0224
-44	211-0559-00			2	SCREW,MACHINE:6-32 X 0.375,FLH,100 DEG,STL (END ATTACHING PARTS)	TK0435	1593-300
-45	343-0549-00			5	STRAP,TIEDOWN,E:0.098 W X 4.0 L,ZYTEL	06383	PLT1M
-46	334-3379-05	.300000	.300293	1	MARKER,IDENT:MKD GROUND SYMBOL	80009	334-3379-05
	334-3379-00	.300294		1	MARKER,IDENT:MARKED GROUND SYMBOL	07416	ORDER BY DESCR
-47	441-1833-00			1	CHASSIS ASSY:TEST FIXTURE,ALUMINUM (ATTACHING PARTS)	TKOCM	30-0209
-48	211-0244-00			3	SCR,ASSEM WSHR:4-40 X 0.312,PNH STL	TK0858	211-0244-00
-49	210-0586-00			6	NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL	78189	211-041800-00
-50	390-1034-00			1	CABINET,TEST FI:BOTTOM,ALUMINUM (ATTACHING PARTS)	TKOCM	30-0213
-51	211-0008-00			2	SCREW,MACHINE:4-40 X 0.25,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-52	348-1041-00			1	GROMMET:CHANNEL,3.2MM X 70MM L,NYLON	TKOAR	CSG-032
-53	343-1381-00			1	CLAMP,LOOP:25MM ID,ALUMINUM (ATTACHING PARTS)	TKOCB	30-0227
-54	210-0458-00			2	NUT,PL,ASSEM WA:8-32 X 0.344,STL CD PL (END ATTACHING PARTS)	78189	511-081800-00
-55	343-1380-00			1	CLAMP,CABLE:TOP	TKODK	30-0226
-56	343-1379-00			1	CLAMP,CABLE:BOTTOM	TKODK	30-0225
-57	211-0507-00			2	SCREW,MACHINE:6-32 X 0.312,PNH,STL	83385	ORDER BY DESCR
-58	210-0006-00			2	WASHER,LOCK:#6 INTL,0.018 THK,STL	77900	1206-00-00-0541C
-59	342-0854-00	.300134		2	INSULATOR,FILM:CAP,POLYIMIDE (ATTACHING PARTS)	80009	342-0854-00
-59.1	407-3694-00			1	BRACKET,ANGLE:INTERLOCK SW MTG,ALUMINUM	TKOCM	30-0222
-60	211-0244-00			2	SCR,ASSEM WSHR:4-40 X 0.312,PNH STL (END ATTACHING PARTS)	TK0858	211-0244-00
-61	-----			1	SW,SENSITIVE:(SEE S1004 REPL) (ATTACHING PARTS)		
-62	213-0986-00			2	SCREW,MACHINE:2-26 X 12MM,HEX,BRS NI PL	TK0191	213-0986-00
-63	210-0054-00			2	WASHER,LOCK:#4 SPLIT,0.025 THK STL	78189	ORDER BY DESCR
-64	210-0938-00			2	WASHER,FLAT:0.109 ID X 0.25 OD X 0.032,STL (END ATTACHING PARTS)	86928	ORDER BY DESCR
-65	348-1040-00			4	FOOT,CABINET:BLACK,PLASTIC	TKOBK	5475
-66	198-5627-00			1	WIRE SET,ELEC:	TKOBD	ORDER BY DESCR
-67	211-0459-00			4	.SCREW,MACHINE:M3 X 25MM,PNH,STL ZN PL	TK0191	ORDER BY DESCR
-68	343-1401-00			1	.CLAMP,LOOP:18MM ID,STEEL (ATTACHING PARTS)	TKOBD	ORDER BY DESCR
-69	211-0458-00			2	.SCREW,MACHINE:M4 X 10MM PNH,STL ZN PL	TK0191	ORDER BY DESCR
-70	210-0092-00			2	.WASHER,LOCK:M4 SPLIT,1MM THK,STL ZN PL (END ATTACHING PARTS)	TK0191	ORDER BY DESCR
-71	134-0198-00			1	.PLUG,TIP:MULTI CONTACT,4MM DIA,38.5MM L (ATTACHING PARTS)	TKOBW	SA479
-72	220-0083-00			2	.NUT,PLAIN,HEX:M5 X 8MM,STL,ZN PL	TKOBJ	30-0616
-73	210-1460-00			1	.WASHER,PLAIN:5.3MM ID X 1MM THK,STL (END ATTACHING PARTS)	TK0191	ORDER BY DESCR
-74	134-0199-00			10	.PLUG,TIP:MULTI CONTACT,4MM DIA,30.5MM L (ATTACHING PARTS)	TKOBW	SA405
-75	220-0085-00			20	.NUT,PLAIN,HEX:M3 X 5.5MM,STL,ZN PL	TKOBJ	30-0614
-76	210-1459-00			10	.WASHER,PLAIN:3.2MM ID X 0.5MM THK,STL (END ATTACHING PARTS)	TK0191	ORDER BY DESCR
-77	198-5622-00	.300000	.300344	1	WIRE SET,ELEC:	80009	198-5622-00
	012-1371-00	.300345		1	LEAD SET,ELEC:6 EA,CORE & ALLIGATOR CLIP	80009	012-1371-00
-78	198-5621-00	.300000	.300344	1	WIRE SET,ELEC:	80009	198-5621-00

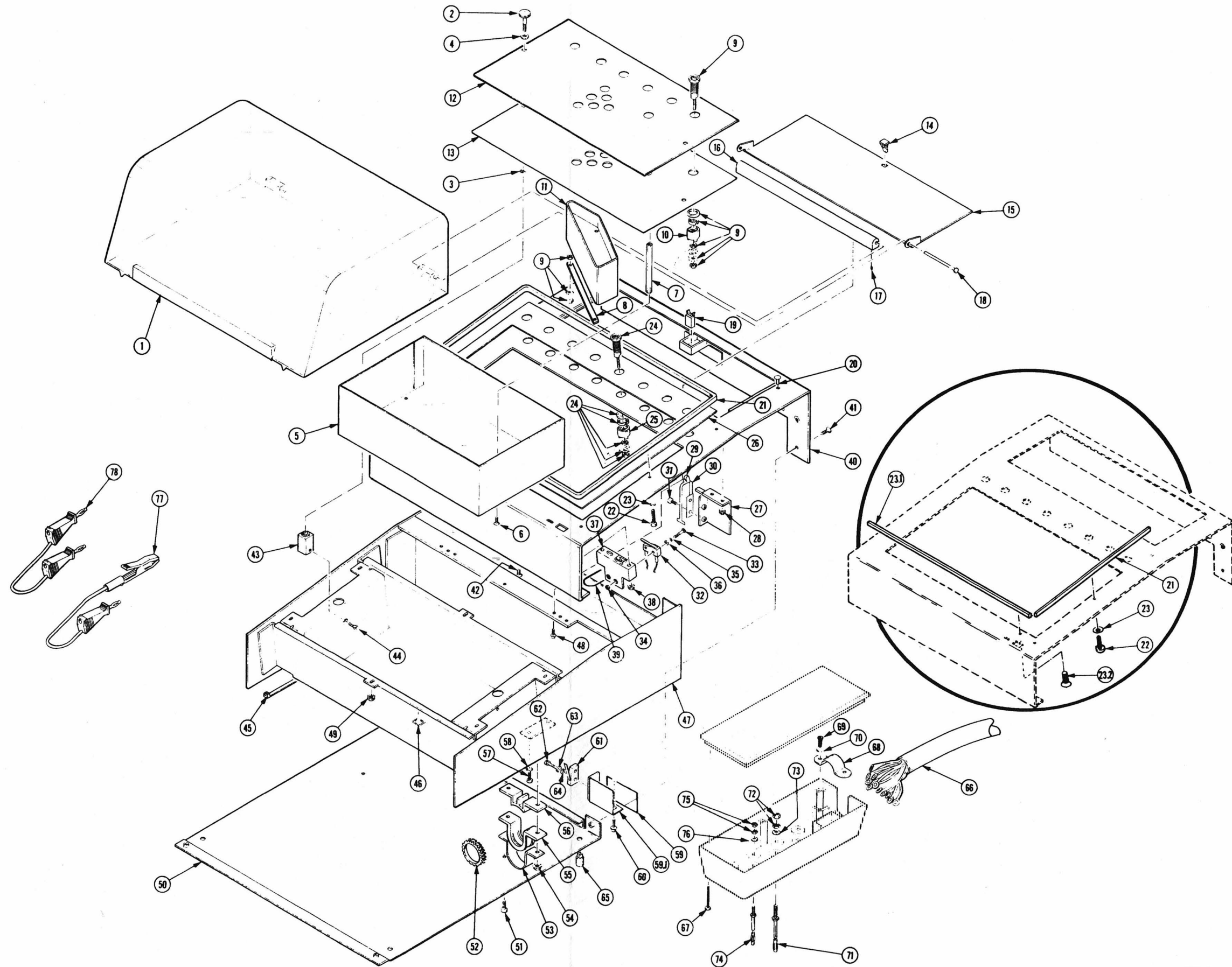


FIG. 6 TEST FIXTURE

FIG. 6 FRONT PORCH

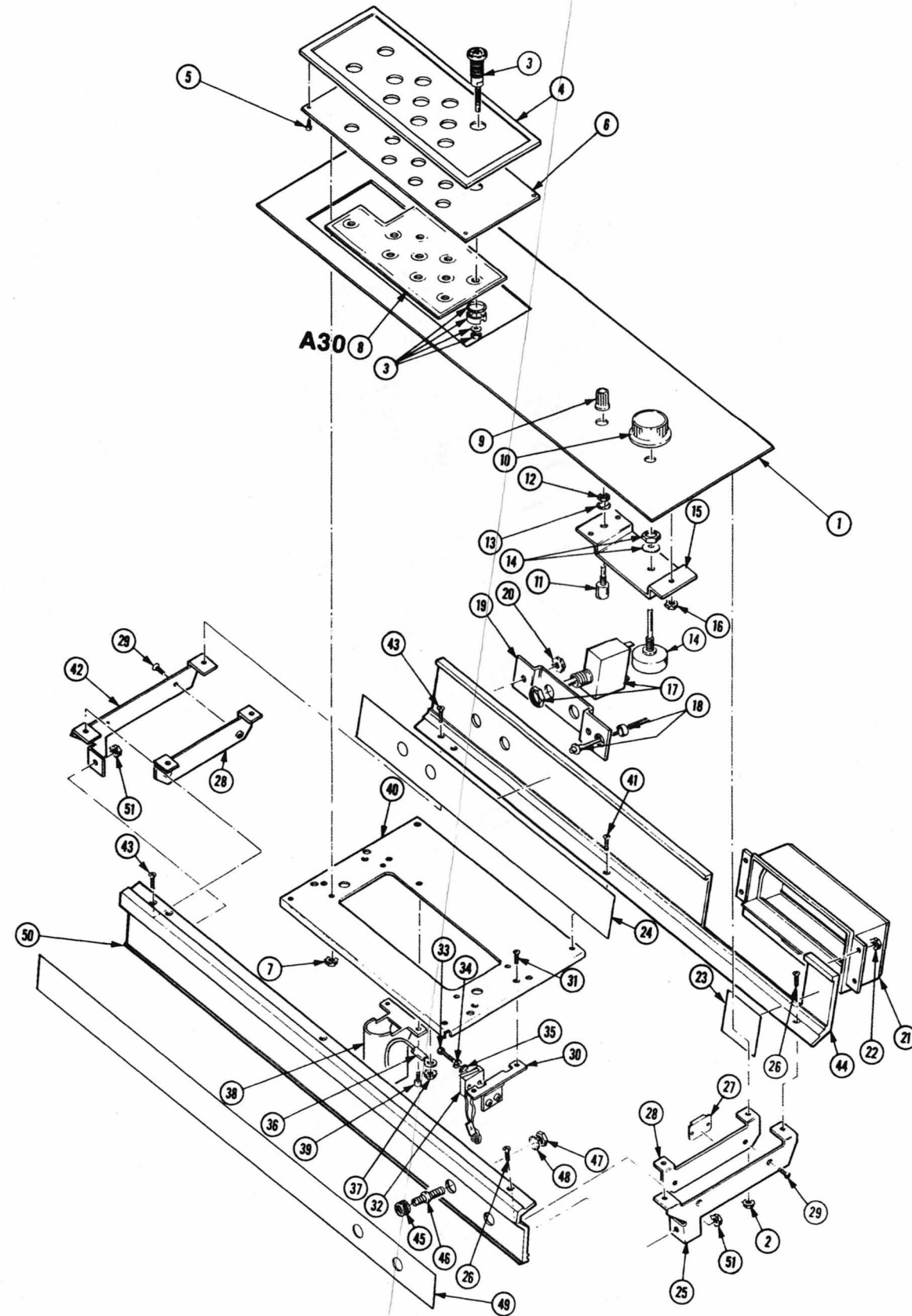


Fig. & Index No.	Tektronix Part No.	Serial/Assembly No. Effective Dscort	Qty	12345 Name & Description	Mfr. Code	Mfr. Part No.
6-1	333-3512-00		1	PANEL,FRONT: (ATTACHING PARTS)	80009	333-3512-00
-2	210-0586-00		4	NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL (END ATTACHING PARTS)	78189	211-041800-00
-3	-----		11	SOCKETS:(SEE J700,J702,J704,J706,J708,J710, J712,J714,J716,J718,J720 REPL)		
-4	386-5607-00		1	PLATE,CONN MTG:W/SPRING,PC (ATTACHING PARTS)	80009	386-5607-00
-5	213-0816-00		4	SCREW,TPG,TC:2-56 X 0.188L,TYPE T,PNH,STL (END ATTACHING PARTS)	TK0858	ORDER BY DESCR
-6	386-5609-00		1	PLATE,CONN SHLD:ALUMINUM (ATTACHING PARTS)	80009	386-5609-00
-7	210-0586-00		6	NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL (END ATTACHING PARTS)	78189	211-041800-00
-8	-----		1	CKT BOARD ASSY:CONNECTOR (SEE A30 REPL)		
-9	366-0626-01		1	KNOB:SILVER GRAY,12MM OD	80009	366-0626-01
-10	366-0622-01		1	KNOB:SILVER GRAY,30MM OD	80009	366-0622-01
-11	-----		1	RES,VAR,LOOPING:(SEE R626 REPL) (ATTACHING PARTS)		
-12	210-0583-00		1	NUT,PLAIN,HEX:0.25-32 X 0.312,BRS CD PL	73743	2X-20319-402
-13	210-0046-00		1	WASHER,LOCK:0.261 ID,INTL,0.018 THK,STL (END ATTACHING PARTS)	77900	1214-05-00-0541C
-14	-----		1	ROTARY ENCODER: (SEE S140 REPL)		
-15	407-3636-00		1	BRACKET,ELEC SW:ALUMINUM (ATTACHING PARTS)	TK0AP	30-0021
-16	210-0586-00		3	NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL (END ATTACHING PARTS)	78189	211-041800-00
-17	-----		2	SWITCH,CKT BREAKER: (SEE S800 REPL)		
-18	352-0858-00		1	HOLDER,LED:PLASTIC	S4238	30-0603
-19	407-3637-00		1	BRACKET,ELEC SW:ALUMINUM (ATTACHING PARTS)	TK0AP	30-0022
-20	210-0457-00		2	NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL (END ATTACHING PARTS)	78189	511-061800-00
-21	351-0779-00		1	GUIDE,BUBBLE ME: (ATTACHING PARTS)	TK0191	351-0779-00
-22	210-0586-00		4	NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL (END ATTACHING PARTS)	78189	211-041800-00
-23	333-3349-01		1	PANEL,FRONT:	80009	333-3349-01
-24	333-3513-00		1	PANEL,FRONT:	80009	333-3513-00
-25	122-0184-00		1	ANGLE,RAIL:SUBPANEL MTG,RIGHT (ATTACHING PARTS)	TK0191	122-0184-00
-26	211-0038-00		2	SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-27	344-0396-00		3	CLIP,CABLE:PVC	TK0191	344-0396-00
-28	407-3472-00		2	BRACKET,ANGLE:LOWER,PANEL (ATTACHING PARTS)	TK0191	407-3472-00
-29	211-0038-00		4	SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-30	407-3484-00		2	BRACKET,SW MTG:ALUMINUM (ATTACHING PARTS)	TK0191	407-3484-00
-31	211-0038-00		4	SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-32	-----		2	MICRO SWITCH: (SEE S600,602 REPL) (ATTACHING PARTS)		
-33	213-0986-00		4	SCREW,MACHINE:2-26 X 12MM,HEX,BRS NI PL	TK0191	213-0986-00
-34	210-0938-00		4	WASHER,FLAT:0.109 ID X 0.25 OD X 0.032,STL	86928	ORDER BY DESCR
-35	210-0054-00		4	WASHER,LOCK:#4 SPLIT,0.025 THK STL (END ATTACHING PARTS)	78189	ORDER BY DESCR
-36	210-0202-00		1	TERMINAL,LUG:0.146 ID,LOCKING,BRZ TIN PL (ATTACHING PARTS)	86928	A-373-158-2
-37	210-0457-00		1	NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL (END ATTACHING PARTS)	78189	511-061800-00
-38	342-0841-00		1	INSULATOR,CONN:H.V.,NYLON (ATTACHING PARTS)	TKDDK	30-0073
-39	211-0007-00		2	SCREW,MACHINE:4-40 X 0.188,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-40	407-3635-00		1	BRACKET,CMPNT:ALUMINUM (ATTACHING PARTS)	TKOCA	30-0018

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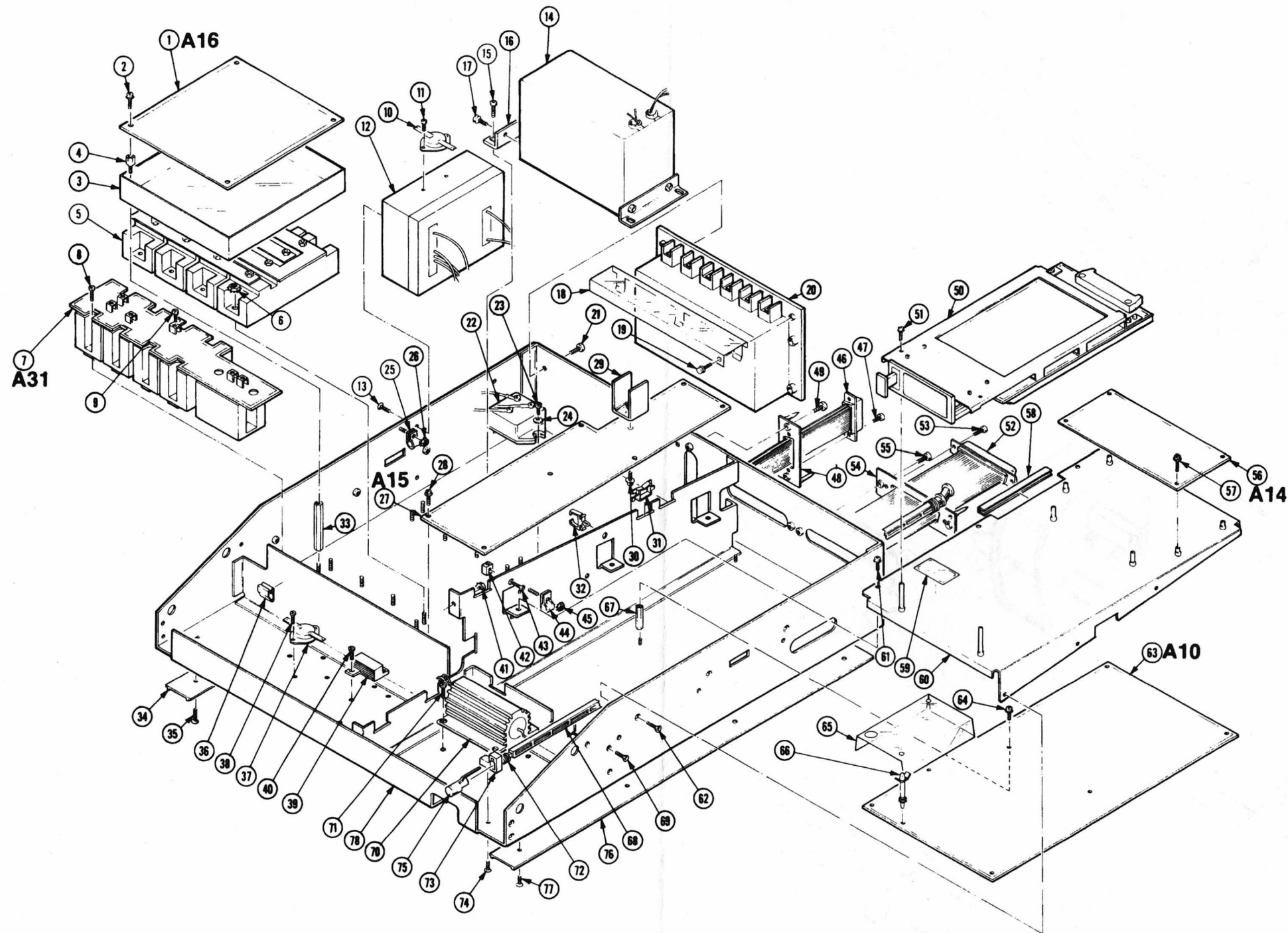
Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr. Code	Mfr. Part No.
		Effective	Dscont				
6-41	211-0038-00			2	SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-42	122-0183-00			1	ANGLE,RAIL:SUBPANEL MTG,LEFT (ATTACHING PARTS)	TK0191	122-0183-00
-43	211-0038-00			2	SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-44	426-2212-00			1	SUBPANEL,FRONT:BUBBLE MEMORY	TK0BV	ORDER BY DESCR
-45	200-0103-00			1	NUT,PLAIN,KNURL:0.25-28 X 0.375"OD BRASS	80009	200-0103-00
-46	355-0507-00			1	STUD,SHOULDERED:BINDING POST,BRS NP (ATTACHING PARTS)	TK2278	ORDER BY DESCR
-47	210-0455-00			1	NUT,PLAIN,HEX:0.25-28 X 0.375,BRS NP	73743	3089-402
-48	210-0046-00			1	WASHER,LOCK:0.261 ID,INTL,0.018 THK,STL (END ATTACHING PARTS)	77900	1214-05-00-0541C
-49	333-3514-00			1	PANEL,FRONT:	80009	333-3514-00
-50	426-2213-00			1	SUBPANEL,FRONT:PWR SW (ATTACHING PARTS)	TK0BV	ORDER BY DESCR
-51	210-0586-00			2	NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL (END ATTACHING PARTS)	78189	211-041800-00

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr.	
		Effective	Discont.			Code	Mfr. Part No.
7-1	-----			1	CKT BOARD ASSY: HIGH CURRENT CONTROL (SEE A16 REPL) (ATTACHING PARTS)		
-2	211-0661-00			4	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-3	337-3427-00			1	SHIELD,ELEC:H.C.C. BD (ATTACHING PARTS)	80009	337-3427-00
-4	129-1216-00			4	SPACER,POST:8MM L,6-32 EXT THD,4-40 INT THD (END ATTACHING PARTS)	TKOAL	30-0074
-5	-----			4	FET: (SEE Q910,Q920,Q930,Q940 REPL) (ATTACHING PARTS)		
-6	210-0457-00			8	NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL (END ATTACHING PARTS)	78189	511-061800-00
-7	-----			1	CKT BOARD ASSY:RELAY (SEE A31 REPL) (ATTACHING PARTS)		
-8	211-0507-00			10	SCREW,MACHINE:6-32 X 0.312,PNH,STL	83385	ORDER BY DESCR
-9	211-0751-00			7	SCR,ASSEM WSHR:M3 X 8	TK0191	211-0751-00
-10	-----			1	SWITCH,THERMO: (SEE S92 REPL) (ATTACHING PARTS)		
-11	211-0007-00			2	SCREW,MACHINE:4-40 X 0.188,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-12	-----			1	RESISTOR,SERIES: (SEE R800 REPL) (ATTACHING PARTS)		
-13	211-0541-00			4	SCREW,MACHINE:6-32 X 0.25,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-14	-----			1	XFMR:COLLECTOR SUPPLY (SEE T100 REPL) (ATTACHING PARTS)		
-15	212-0001-00			4	SCREW,MACHINE:8-32 X 0.25,PNH,STL (END ATTACHING PARTS)	77250	ORDER BY DESCR
-16	407-3638-00			2	BRACKET,XFMR:ALUMINUM (ATTACHING PARTS)	TKOAP	30-0024
-17	212-0023-00			4	SCREW,MACHINE:8-32 X 0.375,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-18	342-0843-00			1	INSULATOR,PLATE:H.V. MODULE,POLYCARBONATE (ATTACHING PARTS)	TKODJ	30-0034
-19	211-0007-00			2	SCREW,MACHINE:4-40 X 0.188,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-20	-----			1	HV MODULE: (SEE U800 REPL) (ATTACHING PARTS)		
-21	211-0507-00			4	SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESCR
-22	-----			1	IGBT: (SEE Q902 REPL) (ATTACHING PARTS)		
-23	211-0507-00			2	SCREW,MACHINE:6-32 X 0.312,PNH,STL	83385	ORDER BY DESCR
-24	210-0803-00			2	WASHER,FLAT:0.15 ID X 0.375 OD X 0.032,STL (END ATTACHING PARTS)	12327	ORDER BY DESCR
-25	343-1367-00			3	CLAMP,LOOP:3.3MM ID,NYLON (ATTACHING PARTS)	TKOAR	30-0608
-26	210-0407-00			3	NUT,PLAIN,HEX:6-32 X 0.25,BRS CD PL (END ATTACHING PARTS)	73743	3038-402
-27	-----			1	CKT BOARD ASSY:HIGH CURRENT PWR SUPPLY (SEE A15 REPL) (ATTACHING PARTS)		
-28	211-0661-00			11	SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-29	214-4031-00			1	CKT BOARD ASSY INCLUDES: .HEAT SINK,DIODE:ALUMINUM (ATTACHING PARTS)	80009	214-4031-00
-30	211-0246-00			1	.SCR,ASSEM WSHR:4-40 X 0.625,PNH,STL,POZ (END ATTACHING PARTS)	01536	ORDER BY DESCR
-31	344-0395-00			13	CLIP,CABLE:NYLON	TK0191	344-0395-00
-32	344-0409-00			5	CLIP,RETAINING:WIRE MOUNTING,NYLON	80009	344-0409-00
-33	129-1185-00			4	SPACER,POST:45MM L,W/4-40 INT THD BOTH END, BRS	80009	129-1185-00
-34	122-0181-00			1	ANGLE,RAIL:LEFT (ATTACHING PARTS)	TK0191	122-0181-00
-35	211-0502-00			4	SCREW,MACHINE:6-32 X 0.188,FLH,100 DEG,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESCR

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Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345	Name & Description	Mfr.	
		Effective	Dscont				Code	Mfr. Part No.
7-36	344-0396-00			2		CLIP,CABLE:PVC	TK0191	344-0396-00
-37	-----			1		SWITCH,THERMO:(SEE S906 REPL) (ATTACHING PARTS)		
-38	211-0007-00			2		SCREW,MACHINE:4-40 X 0.188,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-39	-----			2		RESISTOR,SERIES:(SEE R950,A14R940 REPL) (ATTACHING PARTS)		
-40	211-0008-00			4		SCREW,MACHINE:4-40 X 0.25,PNH,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-41	210-0457-00			1		NUT,PL,ASSEM WA:6-32 X 0.312,STL CD PL (ATTACHING PART TO FRONT SUBPANEL)	78189	511-061800-00
-42	220-0547-01			2		NUT BLOCK:4-40 X 0.282,NI SIL NP (ATTACHING PARTS)	80009	220-0547-01
-43	211-0105-00			2		SCREW,MACHINE:4-40 X 0.188,FLH,100 DEG (END ATTACHING PARTS)	TK0435	ORDER BY DESCR
-44	343-1287-00			1		CLAMP,CABLE:8.4MM ID,NYLON (ATTACHING PARTS)	TK0191	343-1287-00
-45	210-0407-00			1		NUT,PLAIN,HEX:6-32 X 0.25,BRS CD PL (END ATTACHING PARTS)	73743	3038-402
-46	-----			1		CONNECTOR:(SEE P520 REPL) (ATTACHING PARTS)		
-47	211-0661-00			2		SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-48	386-5610-00			1		PLATE,CONN MTG:STEEL,MALE (ATTACHING PARTS)	80009	386-5610-00
-49	211-0507-00	.300000	.300258	2		SCREW,MACHINE:6-32 X 0.312,PNH,STL	83385	ORDER BY DESCR
	211-0510-00	.300259		2		SCREW,MACHINE:6-32 X 0.375,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESCR
-50	-----			1		BUBBLE MEMORY UNIT:(SEE A24 REPL) (ATTACHING PARTS)		
-51	211-0661-00			4		SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-52	-----			2		CONNECTOR:(SEE P500 REPL) (ATTACHING PARTS)		
-53	211-0661-00			4		SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-54	386-5484-00			2		PLATE,CONN MTG:MALE,STEEL (ATTACHING PARTS)	80009	386-5484-00
-55	211-0507-00	.300000	.300258	4		SCREW,MACHINE:6-32 X 0.312,PNH,STL	83385	ORDER BY DESCR
	211-0510-00	.300259		4		SCREW,MACHINE:6-32 X 0.375,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESCR
-56	-----			1		CKT BOARD ASSY:LOWER KEY (SEE A14 REPL) (ATTACHING PARTS)		
-57	211-0661-00			4		SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
-58	348-1046-00			1		GROMMET:CHANNEL,2.4MM X 98MM L,NYLON	80009	348-1046-00
-59	334-7069-00			1		MARKER,IDENT:MARKED DANGER	TKOCX	30-0101
-60	407-3634-00			1		BRACKET,CMPNT:ALUMINUM (ATTACHING PARTS)	TKOCA	30-0015
-61	211-0507-00			3		SCREW,MACHINE:6-32 X 0.312,PNH,STL	83385	ORDER BY DESCR
-62	211-0538-00			3		SCREW,MACHINE:6-32 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESCR
-63	-----			1		CKT BOARD ASSY:SENSE (SEE A10 REPL) (ATTACHING PARTS)		
-64	211-0661-00			6		SCR,ASSEM WSHR:4-40 X 0.25,PNH,STL,POZ (END ATTACHING PARTS)	01536	821-01655-024
						CKT BOARD ASSY INCLUDES:		
-65	342-0826-00			1		.INSULATOR,PLATE:CKT BD,POLYCARBONATE	80009	342-0826-00
-66	343-1345-00			2		.RETAINER,CKT BD:19.1MM L,NYLON	80009	343-1345-00
-67	129-1234-00			6		SPACER,POST:4-40 INT THD BOTH END,21MM L	80009	129-1234-00
-68	384-1703-00			1		EXTENSION SHAFT:PWR SW	TK0191	384-1703-00
-69	211-0038-00			6		SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG,STL (ATTACHING PARTS FOR FRONT PORCH ASSY)	93907	ORDER BY DESCR
-70	-----			2		RESISTOR:(SEE R100,R960 REPL) (ATTACHING PARTS)		
-71	211-0507-00			8		SCREW,MACHINE:6-32 X 0.312,PNH,STL (END ATTACHING PARTS)	83385	ORDER BY DESCR
-72	214-3420-00			1		SPRING,HLCPS:10.0MM OD X 9.5MM L,CLE,SST	80009	214-3420-00

Fig. & Index No.	Tektronix Part No.	Serial/Assembly No.		Qty	12345 Name & Description	Mfr.	
		Effective	Dscont			Code	Mfr. Part No.
7-73	351-0774-00	.300000	.300308	3	GUIDE,SLIDE:PWR SW	TK0191	351-0774-00
	351-0774-01	.300309		3	GUIDE,SLIDE:PWR SW,POLYCARBONATE (ATTACHING PARTS)	80009	351-0774-01
-74	211-0038-00			3	SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG,STL (END ATTACHING PARTS)	93907	ORDER BY DESC
-75	366-1767-01			1	PUSH BUTTON:BLACK, GREEN INDICATOR	80009	366-1767-01
-76	122-0182-00			1	ANGLE,RAIL:RIGHT (ATTACHING PARTS)	TK0191	122-0182-00
-77	211-0502-00			4	SCREW,MACHINE:6-32 X 0.188,FLH,100 DEG,STL (END ATTACHING PARTS)	TK0435	ORDER BY DESC
-78	441-1804-00			1	CHASSIS ASSY:DRAWER MODULE	TK0CF	ORDER BY DESC



19067T

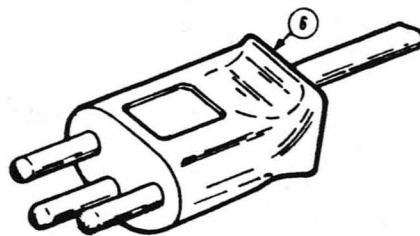
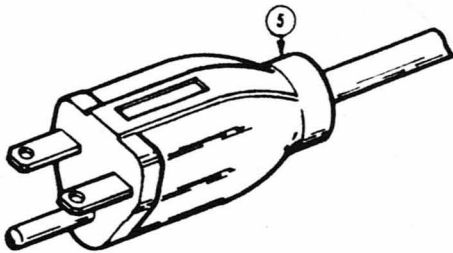
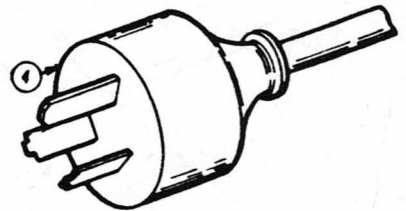
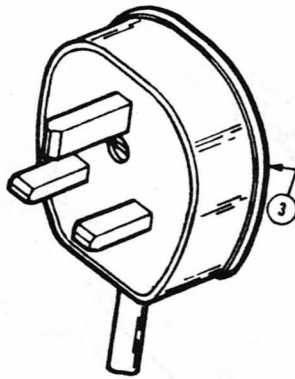
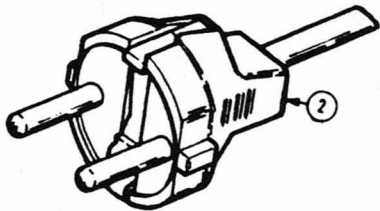
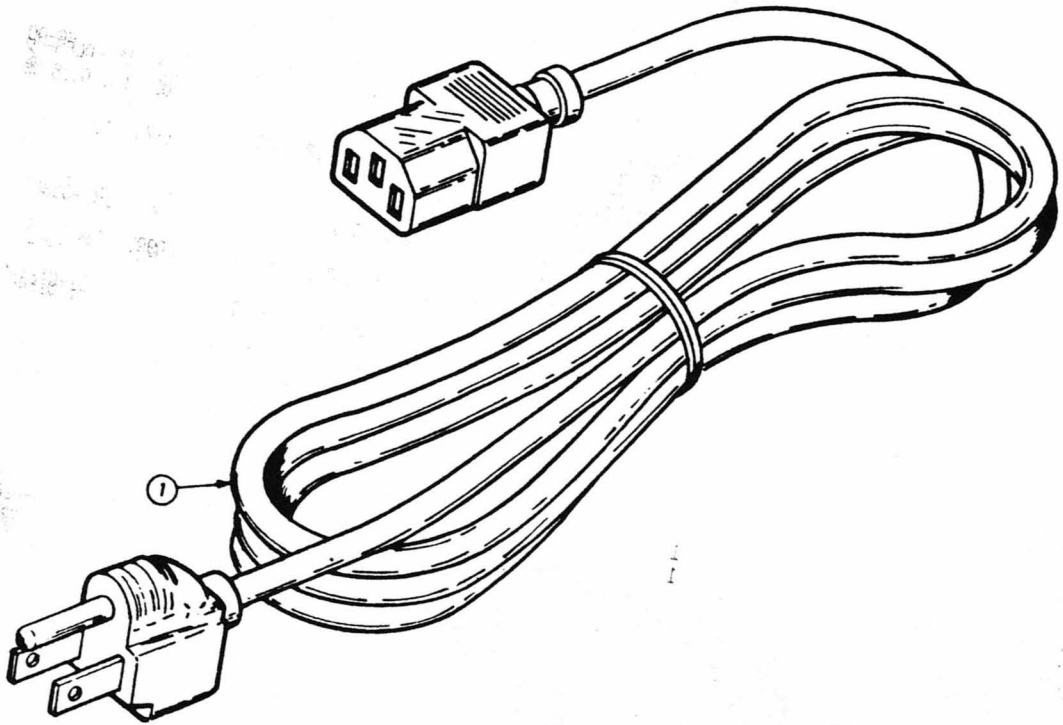


Fig. & Index No.	Tektronix Part No.	Serial/Assembly No. Effective Dscont	Qty	12345	Name & Description	Mfr. Code	Mfr. Part No.
8-					STANDARD ACCESSORIES		
-1	161-0066-00		1		CABLE ASSY,PWR,:3,18AWG,115V,98.0 L	80009	161-0066-00
-2	161-0066-09		1		CABLE ASSY,PWR,:3,0.75MM SQ,220V,99.0 L (OPTION A1 ONLY)	80009	161-0066-09
-3	161-0066-10		1		CABLE ASSY,PWR,:THREE 0.75MM SQ,250V,2.5 METERS LONG,UNITED KINGDOM (OPTION A2 ONLY)	TK1373	24230
-4	161-0066-11		1		CABLE ASSY,PWR,:3,0.75MM,240V,96.0 L (OPTION A3 ONLY)	80009	161-0066-11
-5	161-0066-12		1		CABLE ASSY,PWR,:3,18 AWG,250V,99.0 L (OPTION A4 ONLY)	70903	CH-77893
-6	161-0154-00		1		CABLE ASSY,PWR,:3,1.00MM SQ,250V,10A,2.5MET ER SAFTEY CONTROLLED SWISS (OPTION A5 ONLY)	80009	161-0154-00
	016-0908-00		1		BOX,TEST FXTR:	TK00M	30-0231
	020-1310-00		1		TAPE CARTRIDGE:BUBBLE MEMORY CASSETTE,1M BIT, 45 X 60 X 20MM W/THERMISTOR	TK0191	020-1310-00
	070-6839-00		1		MANUAL,TECH:OPERATORS,371	80009	070-6839-00
	070-6841-00		1		MANUAL,TECH:REFERENCE,371	80009	070-6841-00
	159-0259-00		1		FUSE,CARTRIDGE:4A,125V,MEDIUM	TK0191	159-0259-00
	159-0260-00		1		FUSE,CARTRIDGE:2A,250V,MEDIUM	TK0191	159-0260-00
	159-0291-00		1		FUSE,CARTRIDGE:4A,250V,SLOW BLOW	80009	159-0291-00
					OPTIONAL ACCESSORIES		
	012-0555-00		1		CABLE,INTCON:CENTRONIX,3 METERS LONG,36 POS RIBBON X 36 POS RIBBON,4695 TO TERMINAL	80009	012-0555-00
	012-0991-00		1		CABLE,GPIB:LOW EMI,2 METER	00779	553577-3
	016-0249-06		1		ADAPTER,CAMERA:	80009	016-0249-06
	016-0357-01		1		ADAPTER,HOOD:	80009	016-0357-01
	016-0930-00		1		RACK MOUNT KIT:CONVERSION	80009	016-0930-00
	067-1345-00		1		FIXTURE,CAL:	80009	067-1345-00
	070-6840-00		1		MANUAL,TECH:SERVICE,371	80009	070-6840-00
	174-1001-00		1		CA ASSY,SP,ELEC:15,24 AWG,28.0 L	80009	174-1001-00
	198-5628-00		1		WIRE SET,ELEC:	TK0BD	ORDER BY DESC