

Tektronix[®]
COMMITTED TO EXCELLENCE

Harry
067-0886-01 AND UP

TEST MODULATOR

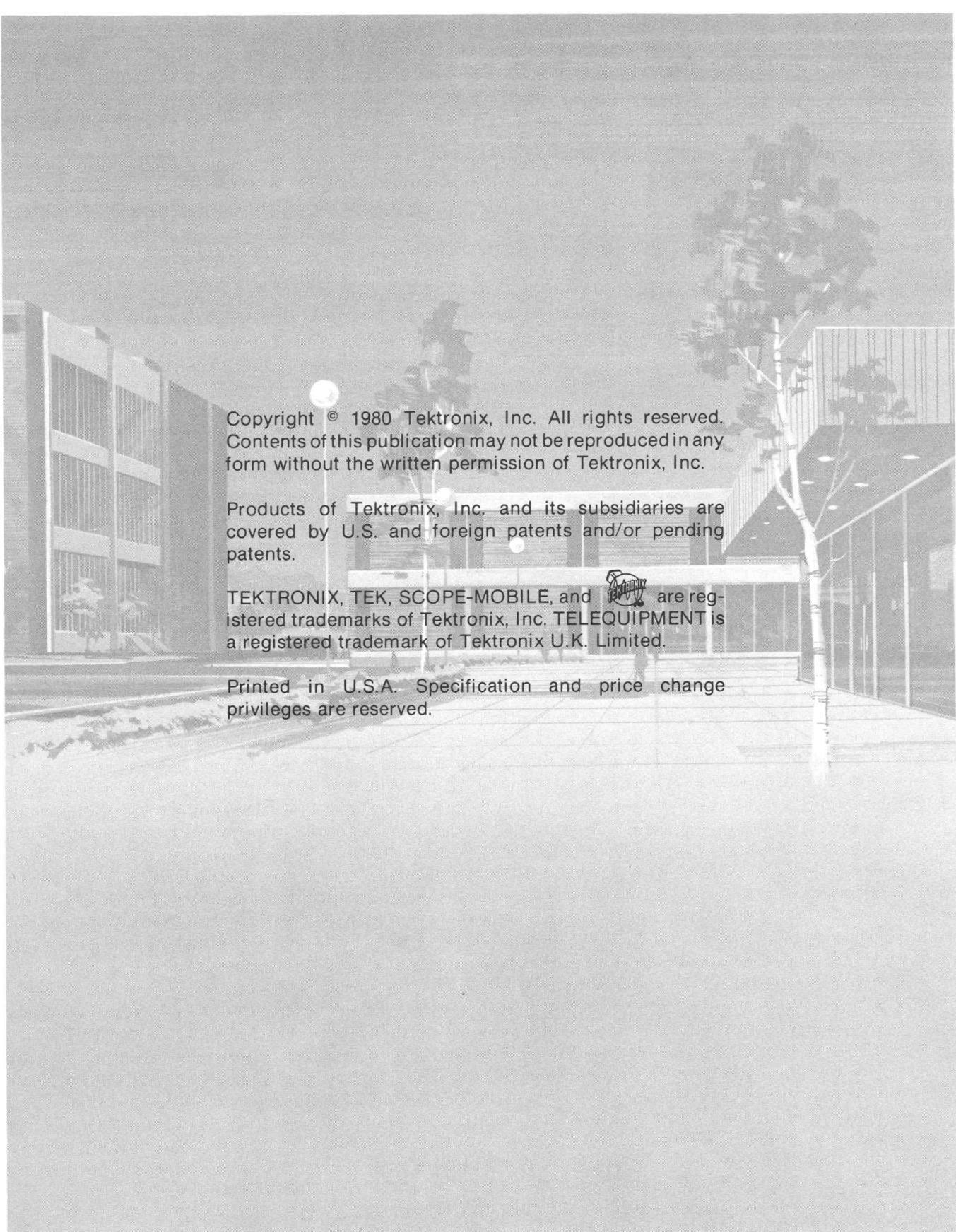
1450 SERIES TEST FIXTURE

New Parts list.

INSTRUCTION MANUAL


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

Serial Number _____



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WARNING

THE FOLLOWING SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO AVOID PERSONAL INJURY, DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.

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OPERATORS SAFETY SUMMARY

The general safety information in this part of the summary is for both operating and servicing personnel. Specific warnings and cautions will be found throughout the manual where they apply, but may not appear in this summary.

Terms In This Manual

CAUTION statements identify conditions or practices that could result in damage to the equipment or other property.

WARNING statements identify conditions or practices that could result in personal injury or loss of life.

Danger Arising From Loss of Ground

Upon loss of the protective-ground connection, all accessible conductive parts (including knobs and con-

trols that may appear to be insulating) can render an electric shock.

Do Not Operate in Explosive Atmospheres

To avoid explosion, do not operate this product in an explosive atmosphere unless it has been specifically certified for such operation.

Do Not Remove Covers or Panels

To avoid personal injury, do not remove the product covers or panels. Do not operate the product without the covers and panels properly installed.

SERVICE SAFETY SUMMARY

FOR QUALIFIED SERVICE PERSONNEL ONLY

Refer also to the preceding Operators Safety Summary.

Do Not Service Alone

Do not perform internal service or adjustment of this product unless another person capable of rendering first aid and resuscitation is present.

Use Care When Servicing With Power On

Dangerous voltages exist at several points in this product. To avoid personal injury, do not touch exposed connections and components while power is on.

Disconnect power before removing protective panels, soldering, or replacing components.

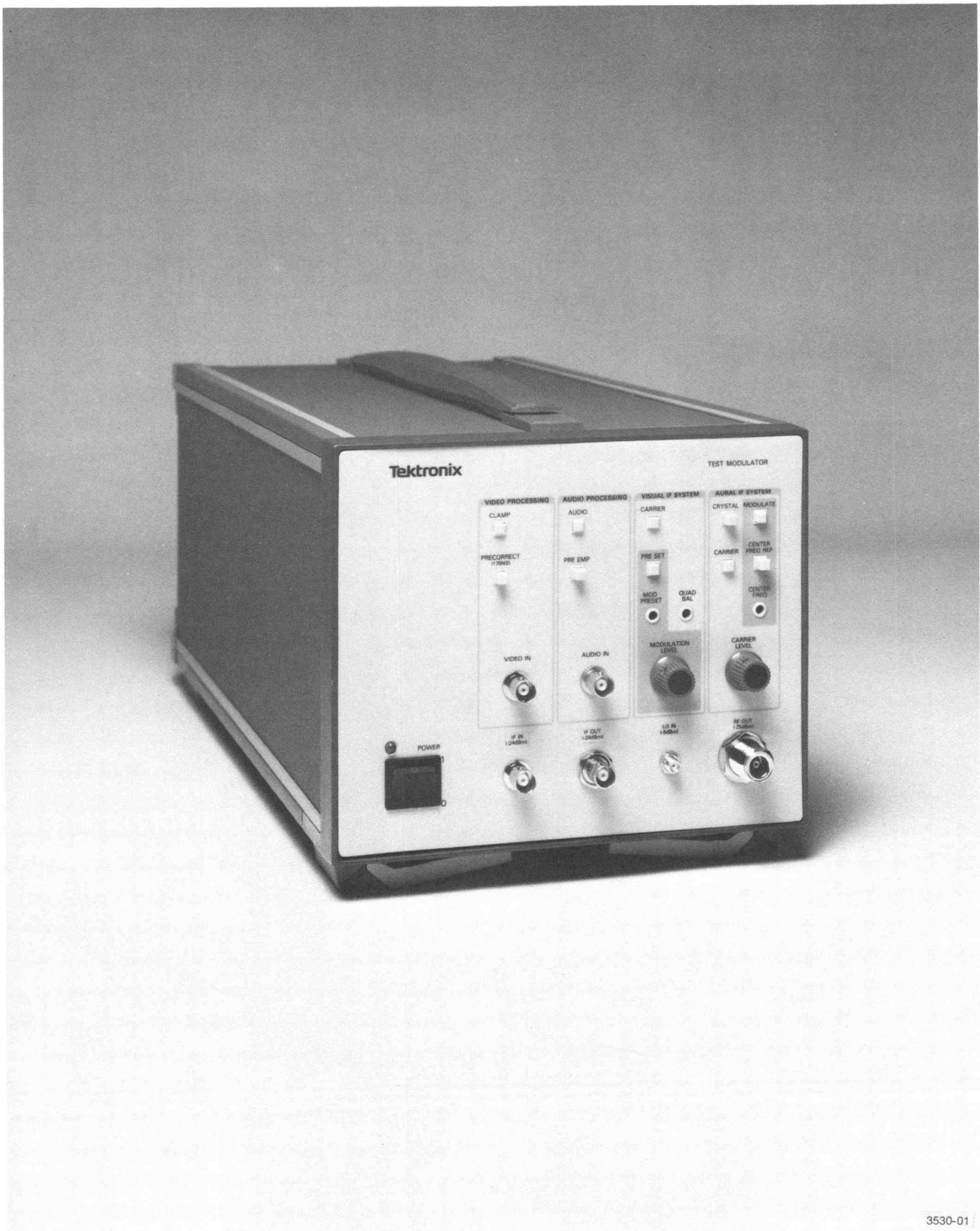


Fig. 1-1. 067-0886-01 and Up Test Modulator.

INTRODUCTION AND SPECIFICATION

INTRODUCTION

The Test Modulator is designed to drive a SYSTEM (Down Converter + Television Demodulator) or the Television Demodulator alone. There are five versions available. These modulator versions are described by CCIR Systems and visual **if** carrier frequencies. See Table 1-1.

Table 1-1
TEST MODULATOR VERSIONS

CCIR System	Visual IF	Aural IF	Part Number
M	37 MHz	32.5 MHz	067-0886-01
M	38.9 MHz	34.4 MHz	067-0886-02
M	45.75 MHz	41.25 MHz	067-0886-03
B & G	38.9 MHz	33.4 MHz	067-0886-04
I	38.9 MHz	32.9 MHz	067-0886-05

The Test Modulator converts baseband video to a specified **if** or **rf**. The aural carrier is n^1 MHz below the visual carrier frequency at the **if** output, and n^1 MHz above the visual carrier frequency at the **rf** output (where n MHz = Aural Intercarrier Frequency). See Table 1-2.

The Test Modulator uses state-of-the-art circuitry to achieve high stability. This stability means that very little maintenance or recalibration is required.

Table 1-2
AURAL INTERCARRIER FREQUENCY

System M	4.5 MHz
System B	5.5 MHz
System G	5.5 MHz
System I	6.0 MHz

¹ See Table 1-2.

SPECIFICATIONS (ELECTRICAL, ENVIRONMENTAL, AND PHYSICAL)

DEFINITIONS OF COLUMN HEADINGS

Characteristics

Distinguishing electrical, environmental, or physical features and properties of the product.

Performance Requirement

Statements that describe the primary characteristics of the product in terms of verifiable limits. Procedures should be provided in the manual to verify performance within these limits. However, it is possible that some items, that are performance requirements, cannot be checked by a simple Performance Check procedure. Reason for this might be:

- a. Parameters that are fixed by the nature of their function.
- b. Characteristics that are digitally derived from a timing reference signal that is checked or controlled by a master clock in the system.
- c. Characteristics of a very stable nature that would require an extensive performance check procedure, and test equipment that is not commonly available in order to perform the check.

Statements in this column are considered a commitment to the customer.

Supplemental Information

This column may be used for two kinds of information:

- a. Statements that are described as secondary characteristics in terms of verifiable limits. Procedures may be provided in the instruction manual to verify performance within these limits, but these procedures may be omitted if they require expensive or unique equipment, are complex or time-consuming, or are not necessary to assure that the product performs within limits.
- b. Statements that describe characteristics in more general terms. No verifiable limits are given and procedures may not be provided in the instruction manual to verify these statements.

Statements in this column are not considered a commitment to the customer but are intended for use in advertising, in the catalog, and as supplementary specifications in the product manual.

**Table 1-3
ELECTRICAL CHARACTERISTICS**

Characteristics	Performance Requirement	Supplemental Information
Inputs		
VIDEO INput		
Z _{in} and Connector		75 Ω bnc
Return Loss	20 dB or greater	
Level	1 V p-p	Blanking at 0 V ±200 mV
AUDIO INput		
Z _{in} and Connector		600 Ω bnc
Level Range	50 mV p-p/kHz peak ±5% or 20 kHz/V	25 kHz peak deviation is equivalent to 1.25 V p-p (0.442 V _{rms}), and 50 kHz peak deviation is equivalent to 2.5 V p-p (0.884 V _{rms}).

Table 1-3 (cont)

Characteristics	Performance Requirements	Supplemental Information
IF INput		From Test Modulator or Down Converter IF OUTput
Z_{in} and Connector		50 Ω bnc
Return Loss	18 dB or greater	Across the if bandpass See Table 4-11
Frequency		
Visual IF		See Table 1-4
Aural IF	Visual if minus intercarrier frequency	Dependent on CCIR System See Table 1-4
LO INput		
Z_{in} and Connector		50 Ω sma
Level	-5 dBm nominal	0 dBm to -6 dBm
Frequency	Visual rf carrier + Visual if carrier	
Outputs		
RF OUTput		
Z_{out} and Connector		50 Ω n-type connector
Frequency Response VIDEO IN to RF OUT	± 0.1 dB	Across any single channel bandpass
Return Loss	16 dB or greater	
Level	-25 dBm ± 3 dB	Double sideband
Frequency		LO INput—Visual if
IF OUTput		To Test Modulator IF IN or Demodulator IF IN
Z_{out} and Connector		50 Ω bnc
Frequency Response VIDEO IN to IF OUT	± 0.1 dB	Across the if bandpass See Table 4-11
Return Loss	20 dB or greater	
Level	-24 dBm ± 3 dB	Double sideband
Frequency		See Table 1-4 (crystal-controlled)
Visual	+0.01%	
Aural	Visual if — Intercarrier frequency	Dependent on CCIR System See Table 1-1
VIDEO PROCESSING PRECORRECTOR ON	170 ns ± 10 ns See Table 1-5	At subcarrier frequency with PRECORRECTOR 'ON'
PRECORRECTOR OFF	± 6 ns	0 to 6 MHz
CLAMP (Back Porch)	0 V ± 50 mV	With CLAMP 'ON'

Table 1-3 (cont)

Characteristics	Performance Requirements	Supplemental Information
VISUAL IF SYSTEM		
MODULATION PRESET	100% \pm 20% of carrier	Selected with a switch
MODULATION LEVEL	Variable from 50% nominal to 100% of carrier	
QUADrature BALance	Adjusts for $\pm 3^\circ$ of quadrature modulation	
AUDIO PROCESSING		
PRE-EMPhasis	System B, G, & I = 50 μ s System M = 75 μ s	See Table 1-6
Total Harmonic Distortion	Less than 0.1% or -60 dB	
POWER SUPPLY CHARACTERISTICS		
Mains		
Power	15 W maximum	10 W nominal at 60 Hz high line
Voltage Range		
100 V Low	90 V to 110 V	
115 V/120 V High	108 V to 132 V	
220 V Low	198 V to 242 V	
230 V/240 V High	216 V to 250 V	
Fuse Data		
115 V		0.5 A Slow-Blow
230 V		0.25 A Slow-Blow
Frequency	48 to 62 Hz	
Crest Factor		At least 1.3 (p-p rms)
Internal Supply		
Accuracy		
+15 V	$\pm 1\%$	0.390 A nominal (current limit = 0.8 A)
-15 V	$\pm 0.5\%$	0.030 A nominal (current limit = 0.09 A)
Ripple	1 mV or less	All supplies
Line Regulation	5 mV or less	All supplies
Safety		
Insulation Stress		
Primary Circuit	Withstands 1500 V rms	50 to 60 Hz for 10 seconds
Grounding Circuit		0.1 Ω maximum

**Table 1-4
TEST MODULATOR VERSIONS**

CCIR System	Visual IF	Aural IF	Part Number
M	37 MHz	32.5 MHz	067-0886-01
M	38.9 MHz	34.4 MHz	067-0886-02
M	45.75 MHz	41.25 MHz	067-0886-03
B & G	38.9 MHz	33.4 MHz	067-0886-04
I	38.9 MHz	32.9 MHz	067-0886-05

**Table 1-5
ENVELOPE DELAY vs. BASEBAND FREQUENCY RESPONSE**

System B and System G

Frequency in MHz	Delay in ns	Tolerance in ns
0.25	+5	±6
1.00	+53	±6
2.00	+90	±6
3.00	+75	±6
3.75	0.0	±6
4.43	-170	±10
4.80	-400	±45

System M

Frequency in MHz	Delay in ns	Tolerance in ns
0.50	0.0	±10
1.00	0.0	±10
2.50	0.0	±10
3.00	-25	±10
3.58	-170	±10
4.00	-293	±20
4.18	-340	±40

Table 1-6
PRE-EMPHASIS AUDIO FREQUENCY RESPONSE

50 μ s Time Constant Systems B, G, and I		75 μ s Time Constant System M	
Frequency	Attenuation	Frequency	Attenuation
10.00 Hz	0.00 dB	10.00 Hz	0.00 dB
1.000 kHz	+0.41 dB	1.000 kHz	+0.87 dB
2.000 kHz	+1.44 dB	2.000 kHz	+2.76 dB
3.000 kHz	+2.76 dB	2.122 kHz	+3.01 dB
3.183 kHz	+3.01 dB	3.000 kHz	+4.77 dB
4.000 kHz	+4.11 dB	4.000 kHz	+6.58 dB
5.000 kHz	+5.40 dB	5.000 kHz	+8.16 dB
6.000 kHz	+6.58 dB	6.000 kHz	+9.54 dB
7.000 kHz	+7.66 dB	7.000 kHz	+10.75 dB
8.000 kHz	+8.64 dB	8.000 kHz	+11.82 dB
9.000 kHz	+9.54 dB	9.000 kHz	+12.78 dB
10.000 kHz	+10.36 dB	10.000 kHz	+13.66 dB
11.000 kHz	+11.12 dB	11.000 kHz	+14.45 dB
12.000 kHz	+11.82 dB	12.000 kHz	+15.18 dB
13.000 kHz	+12.47 dB	13.000 kHz	+15.86 dB
14.000 kHz	+13.08 dB	14.000 kHz	+16.49 dB
15.000 kHz	+13.66 dB	15.000 kHz	+17.07 dB
16.000 kHz	+14.19 dB	16.000 kHz	+17.62 dB
17.000 kHz	+14.70 dB	17.000 kHz	+18.14 dB
18.000 kHz	+15.22 dB	18.000 kHz	+18.63 dB
19.000 kHz	+15.64 dB	19.000 kHz	+19.09 dB
20.000 kHz	+16.07 dB	20.000 kHz	+19.53 dB

Table 1-7
ENVIRONMENTAL CHARACTERISTICS

Temperature	
Operating	+10°C to +40°C
Storage	-50°C to +65°C
Altitude	
Operating	To 4,572 m (15,000 feet)
Storage	To 15,240 m (50,000 feet)

Table 1-8
PHYSICAL CHARACTERISTICS

Dimensions (see Fig. 1-2)	
Height	19.49 cm (7.675 inches)
Width	21.40 cm (8.424 inches)
Length	49.72 cm (19.575 inches)
Weight	9.53 kg (21 lbs.)

ACCESSORIES

Table 1-9
STANDARD ACCESSORIES

Qty.	Item	Tektronix Part No.
1	Instruction Manual	070-3530-00
1	Power Cable; 8 feet (2.44 m)	161-0066-00
1	Extender Circuit Board	670-6973-00
1	50 Ω Coaxial Cable with N-type Connectors; 42 in. long (106.7 cm)	012-0114-01
1	50 Ω Coaxial Cable with bnc Connectors; 6-13/16 in. long (17.3 cm)	012-0751-00
1	50 Ω Coaxial Cable with sma Connectors; 28-1/2 in. long (72.4 cm)	012-0649-00
1	Bnc-to-Square Pin Adapter Cable; 30 in. long (76.2 cm)	175-2140-00
1	Bnc-to-Conhex Adapter Cable; 30 in. long (76.2 cm)	067-0709-00
1	Right-Angle Conhex Female-to-Conhex Male Adapter Cable; 6 in. long (15.2 cm)	175-0396-01
2	Conhex Male-to-Conhex Male Adapter	103-0146-00
1	Torx Screwdriver Tip, Magnetic	003-0816-00
1	0.5 A Slow-Blow Fuse for 230 V Range	159-0032-00
1	0.25 A Slow-Blow Fuse for 115 V Range	159-0044-00

Table 1-10
OPTIONAL ACCESSORIES

Qty.	Item	Tektronix Part No.
1	Half-Rack Adapter Kit (Two instruments side-by-side)	020-0633-00
1	Half-Rack Adapter Kit (One instrument and a 'dummy' box side-by-side)	020-0634-00
1	Pair Rackmount Slide Guides	351-0104-03
1	Pair Rackmount Slides	351-0301-03

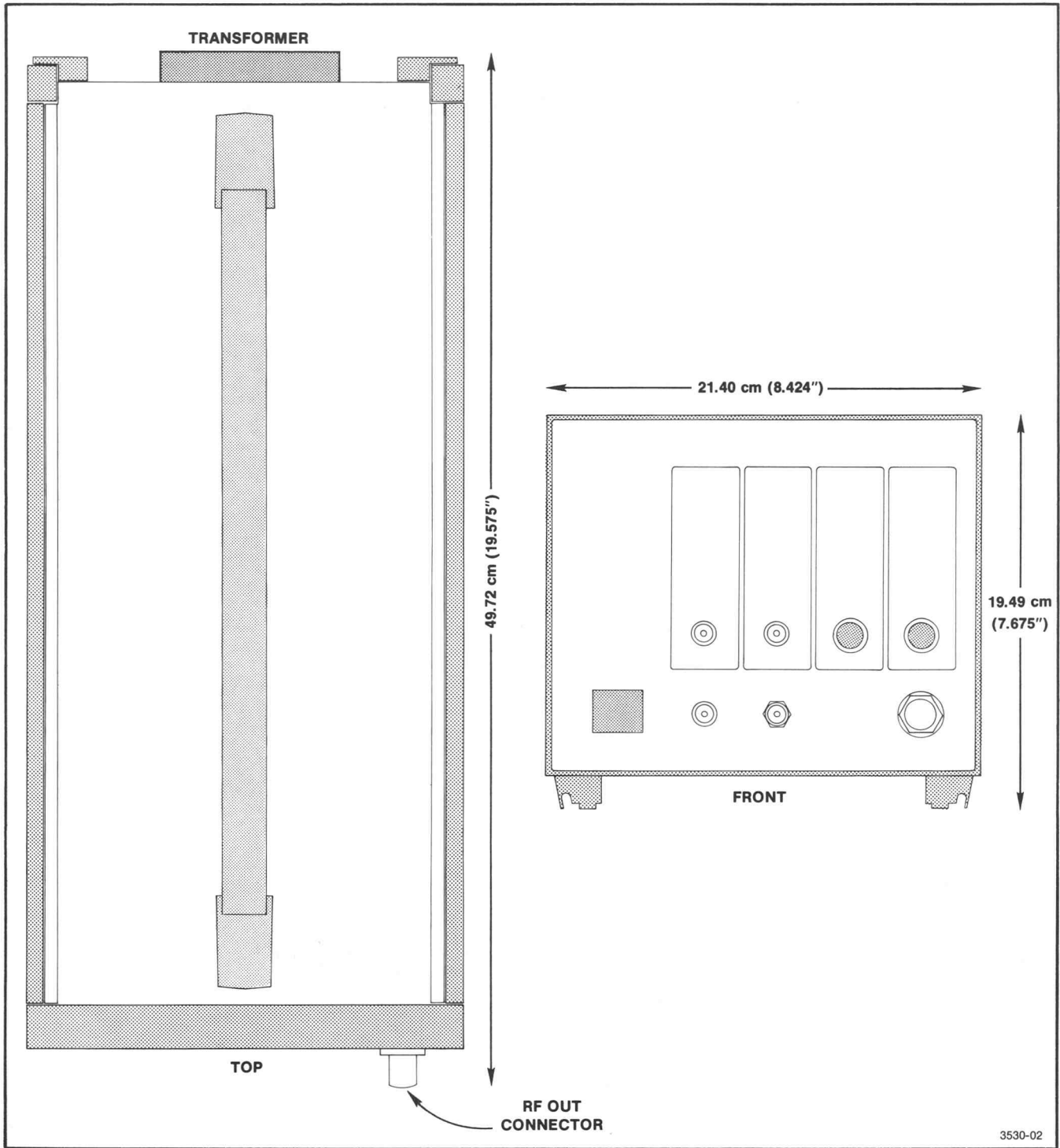


Fig. 1-2. Dimensional Drawing.

OPERATING INSTRUCTIONS

This section includes information on the functions of the front-panel controls, connectors, and indicators; how to use the Test Modulator; and installation procedures.

CONTROLS AND CONNECTORS

Front Panel (See Fig. 2-1)

① **CLAMP**—The video input-signal blanking level is held to 0 V \pm 50 mV when the clamp is 'ON'.

② **PRECORRECTOR**—Applies delay (+90/−170 ns for System B and System G, +0/−0 ns for System I, and +0/−170 ns for System M) to the video input signal.

ON—Video clamp is 'ON'.

OFF—Video clamp is 'OFF'. Video is dc-coupled to the if modulator.

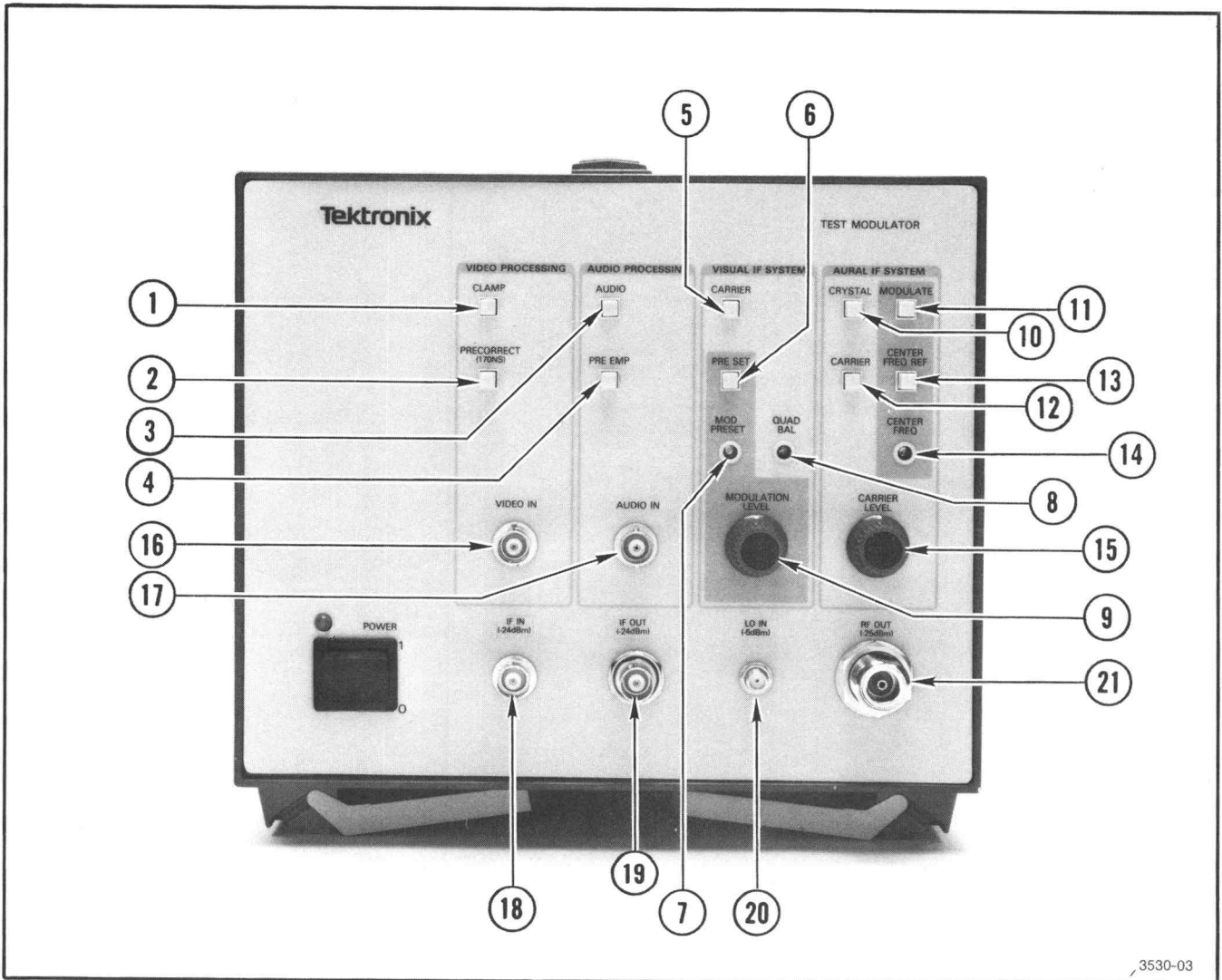


Fig. 2-1. Front Panel Controls and Connectors.

ON—'Group' delay is applied.

OFF—'Group' delay is not applied. That is, the precorrector is bypassed.

③ **AUDIO**—Turns audio 'ON' and 'OFF'.

ON—Allows the audio signal to pass through to the aural if modulator.

OFF—Inhibits the audio signal.

④ **PRE-EMP IN**—Selects pre-emphasis to the audio input to match the de-emphasis in the Television Demodulator.

ON—Turns 'ON' PRE-EMphasis.

OFF—Turns 'OFF' PRE-EMphasis.

⑤ **VISUAL IF CARRIER**—Selects visual if carrier conditions; ON/OFF.

⑥ **PRESET**—Selects either a preset or a variable modulation level.

ON—In this position, the carrier switch selects a carrier level that can be set with a front-panel adjustment (MOD PRESET).

OFF—In this position, the carrier switch selects a variable level that can be controlled with a front-panel knob that varies modulation depth by varying the carrier level.

⑦ **MOD PRESET**—A front-panel screwdriver adjustment that is used to set modulation level.

⑧ **QUAD BAL**—Incidental phase modulation (ICPM) adjustment accessible from the front panel. It minimizes ICPM by nulling the quadrature-carrier component.

⑨ **MODULATION LEVEL**—Varies the if carrier when (PRESET) OFF is selected.

⑩ **CRYSTAL**—Selects a crystal-oscillator output for aural carrier with no modulation capability. The AURAL IF CARRIER must be 'ON'.

⑪ **MODULATE**—Selects the aural-modulator output, providing aural carrier modulation by the incoming audio signal. The AURAL IF CARRIER must be 'ON'.

⑫ **AURAL IF CARRIER**—Selects aural if carrier conditions; ON/OFF.

⑬ **CENTER FREQ REF**—A momentary 'ON' button switch that turns on the crystal oscillator. The AURAL IF CARRIER may be 'ON' or 'OFF'. It is used to calibrate the aural-carrier center frequency relative to the visual-carrier frequency.

⑭ **CENTER FREQ**—Used to set the aural-carrier center frequency.

⑮ **CARRIER LEVEL**—Varies aural-carrier level with respect to visual-carrier level.

⑯ **VIDEO IN**—A bnc baseband-video input connector.

⑰ **AUDIO IN**—A bnc connector audio input.

⑱ **IF IN**—A bnc if input connector accepts an if signal from the front-panel IF OUTput or from an external if source, such as a down converter.

⑲ **IF OUT**—A bnc IF OUTput connector used to drive the Test Modulator IF INput or a Television Demodulator.

⑳ **LO IN**—An sma input connector accepts an external LO signal (as from a crystal oscillator). The mixer product of this input and the if signal results in the rf output.

㉑ **RF OUT**—An n-type output connector for the rf output.

USING THE TEST MODULATOR

The Test Modulator may be used for an accurate television **if** or **rf** carrier source. When used as an **rf** source, the IF OUTput must be connected to the IF INput; and the LO INput must be driven with a **lo** signal from a single-channel down converter or from a low phase-noise **rf** signal generator.

The Test Modulator provides both a visual carrier and an aural carrier.

Applying Signals

The VIDEO INput is terminated in 75 Ω and the AUDIO INput is terminated in 600 Ω . Thus, no external terminations are necessary since most television test-signal generators are terminated in 75 Ω and audio signal generators terminated in 600 Ω .

The VIDEO INput test-signal amplitude should be 2 V p-p unterminated (75 Ω), and the input audio signal should be no more than 2.5 V p-p.

The VISUAL IF CARRIER button must be 'ON' to obtain a visual **if** carrier signal, and the AURAL IF CARRIER button 'ON' for an aural **if** carrier signal at the IF OUT connector.

Both MODULATE and AUDIO buttons must be 'ON' to obtain a modulated aural **if** carrier at the IF OUTput.

The carrier signals (visual and aural) are controlled independently of each other. Refer to the description of controls at the beginning of this section.

The PRECORRECTOR compensates for delays in the transmitted video signal when the demodulator is in a narrow-band mode (Sound Trap In). The PRECORRECTOR can be turned 'ON' and 'OFF' from the front panel. Refer to the control definition at the beginning of this section.

Output Signals

The IF OUTput is at about -24 dBm nominal. The visual **if** carrier frequency is crystal-controlled while the aural **if** carrier frequency is switchable between a crystal oscillator and a tuned LC oscillator. The aural carrier is unmodulated when the carrier source is the crystal oscillator (CRYSTAL 'ON').

To obtain a **rf**-carrier signal at the RF OUT connector, the IF OUT connector must be connected to the IF IN connector. A short **bnc** cable is provided in the accessories package for this purpose. Also the LO IN connector must be driven with a **rf** signal of about -5 dBm. This **lo** signal is available on all Tektronix down converters, or a low phase-noise **rf** signal generator may be used for the **lo** signal source. The **lo** frequency for any one channel can be determined from the following equation:

$$\text{LO FREQUENCY} = \text{VISUAL RF CARRIER} + \text{VISUAL IF CARRIER}$$

where VISUAL RF CARRIER is the channel vision-carrier frequency, and VISUAL IF CARRIER is the down-converter vision **if**-carrier frequency. Refer to the down converter serial number tag for carrier frequencies.

NOTE

*The IF OUTput signal has a frequency-bandpass orientation that is inverted from the RF OUTput frequency bandpass. That is, the visual **if**-carrier frequency is above the aural **if**-carrier frequency while the visual **rf**-carrier frequency is below the aural **rf**-carrier frequency.*

The RF OUTput level is about -25 dBm. It is a double-sideband signal (sum and difference of LO INput and IF INput) with the difference signal being at the **rf** carrier frequency. This makes it virtually impossible to use a frequency counter to check the RF OUTput frequency.

Verifying the Test Modulator

In the Test Modulator, effects of the modulation process are minimized and allowed for in the instrument specification. However, it is useful to know how the Test Modulator affects a test signal. This information can be included in the evaluation of a modulated signal to determine more precisely how the circuit under test is performing.

The Test Modulator may be verified by feeding a set of test signals to a demodulator with known characteristics. To determine the Test Modulator characteristics, combine (normalize) the characteristics of the demodulator with the output obtained from the demodulator, and compare the results with the input signal.

Also performing a series of tests provided in the performance check procedure in Section 4 will verify the performance of the Test Modulator.

INSTALLATION

Shipping Carton

At installation time, save the shipping carton and packing materials for repackaging in case reshipment becomes necessary.

ELECTRICAL INSTALLATION

Test Modulator

The Test Modulator provides an **if** output simply by setting some front-panel controls 'ON'. However, to obtain a **rf** output, the following connections have to be made:

Using the 50 Ω **bnc** cable from the accessories kit, connect the IF OUT connector to the IF IN connector; and connect a low phase-noise signal-generator output to the LO IN connector. The generator output level should be approximately -5 dBm, and its frequency determined by the equation:

$$\text{LO FREQUENCY} = \text{VISUAL RF CARRIER} + \text{VISUAL IF CARRIER}$$

where the VISUAL RF CARRIER is the channel vision-carrier frequency, and the VISUAL IF CARRIER is the down converter **if**-carrier frequency. The **sma** connectors should be screwed down at least finger tight.

Power Source

This instrument is intended to operate from a single-phase power source having one of its current-carrying conductors at or near earth ground (the neutral conductor). Only the Line conductor is fused for over-current protection. Systems that have both current-carrying conductors live with respect to ground (such as phase-to-phase on multi-phase systems) are not recommended power sources.

Mains Frequency and Voltage Ranges

The Test Modulator operates over a frequency range of 48 to 62 Hz, and at nominal mains voltages of 100 V ac, 120 V ac, 220 V ac, or 240 V ac.

A rear-panel voltage selector eases selection of any of these nominal voltages.

WARNING

It is recommended that only qualified service personnel change the mains-voltage selector.

Mains Conversion

Mains-voltage selection is accomplished by means of a small circuit board in the power connector-fuse holder assembly on the rear panel. See Fig. 2-2.

To change mains-voltage ranges, remove the power cord, open the cover, and pull the fuse lever down.

Insert a pointed tool in the hole at the edge of the voltage-change board and gently pull out of the holder.

Power Connection

Check that the POWER switch is 'off' before connecting the power cord to the instrument. The power cord must match one of those shown in Fig. 2-3. Plug the power cord into the power outlet.

MECHANICAL INSTALLATION OPTIONAL RACKMOUNTING

NOTE

The Test Modulator is intended to be a benchtop piece of test gear. However, rackmounting parts and hardware are available at extra cost to the customer as optional accessories.

Description

The 020-0633-00 and the 020-0634-00 Rackmount Frame Assemblies consist of the mechanical parts needed to install two Test Modulators, or a Test Modulator and dummy box (hereafter referred to as main assemblies) side-by-side in a standard 19-inch wide rack. See Fig. 2-4 and Fig. 2-5.

The principal parts of the 020-0633-00 option (two Test Modulators side-by-side) are:

1. 4 each, Frame Interlock Sections.
2. 2 each, Interlock Trim Strips.
3. 2 each, Corner Trim Strips.
4. 2 each, Side Panels with Handles.
5. 2 each, Drawer Slide Sections.
6. 2 each, Slide Drawer Extensions.
7. 2 each, Latch Releases.
8. 2 each, Retaining Latches.

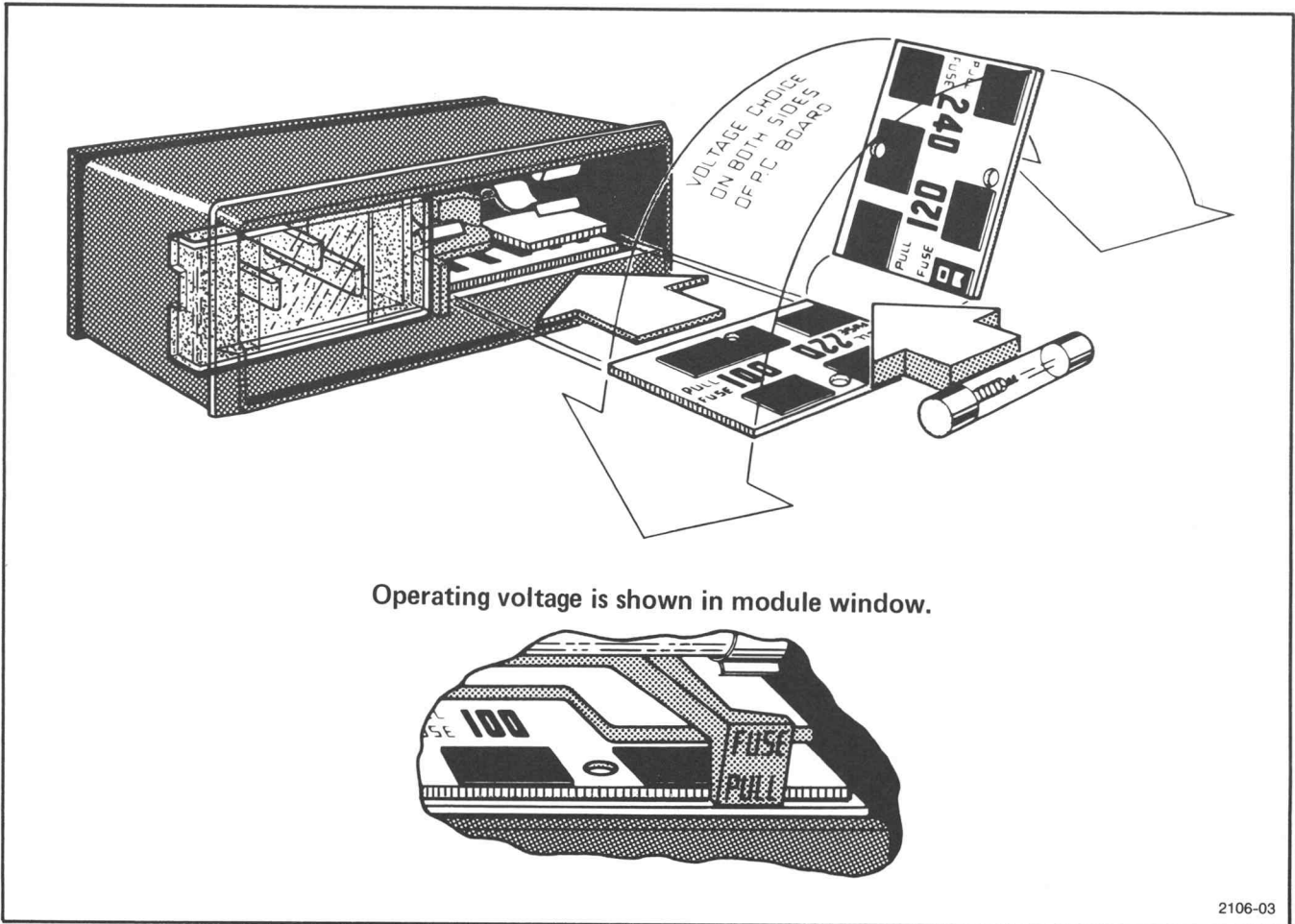


Fig. 2-2. Changing Mains Voltage.

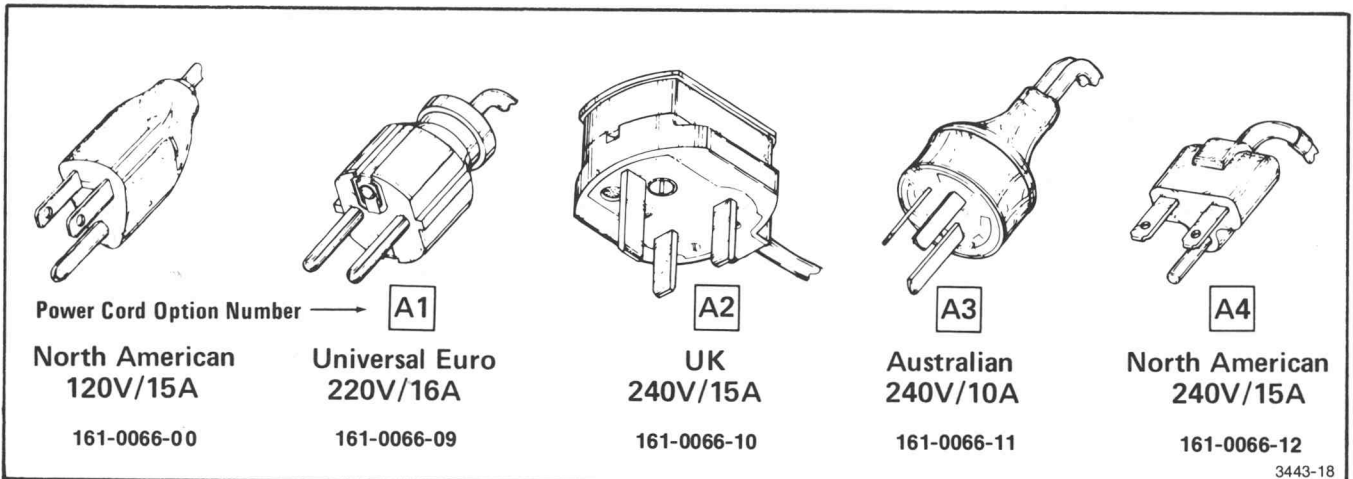


Fig. 2-3. International Power Plugs.

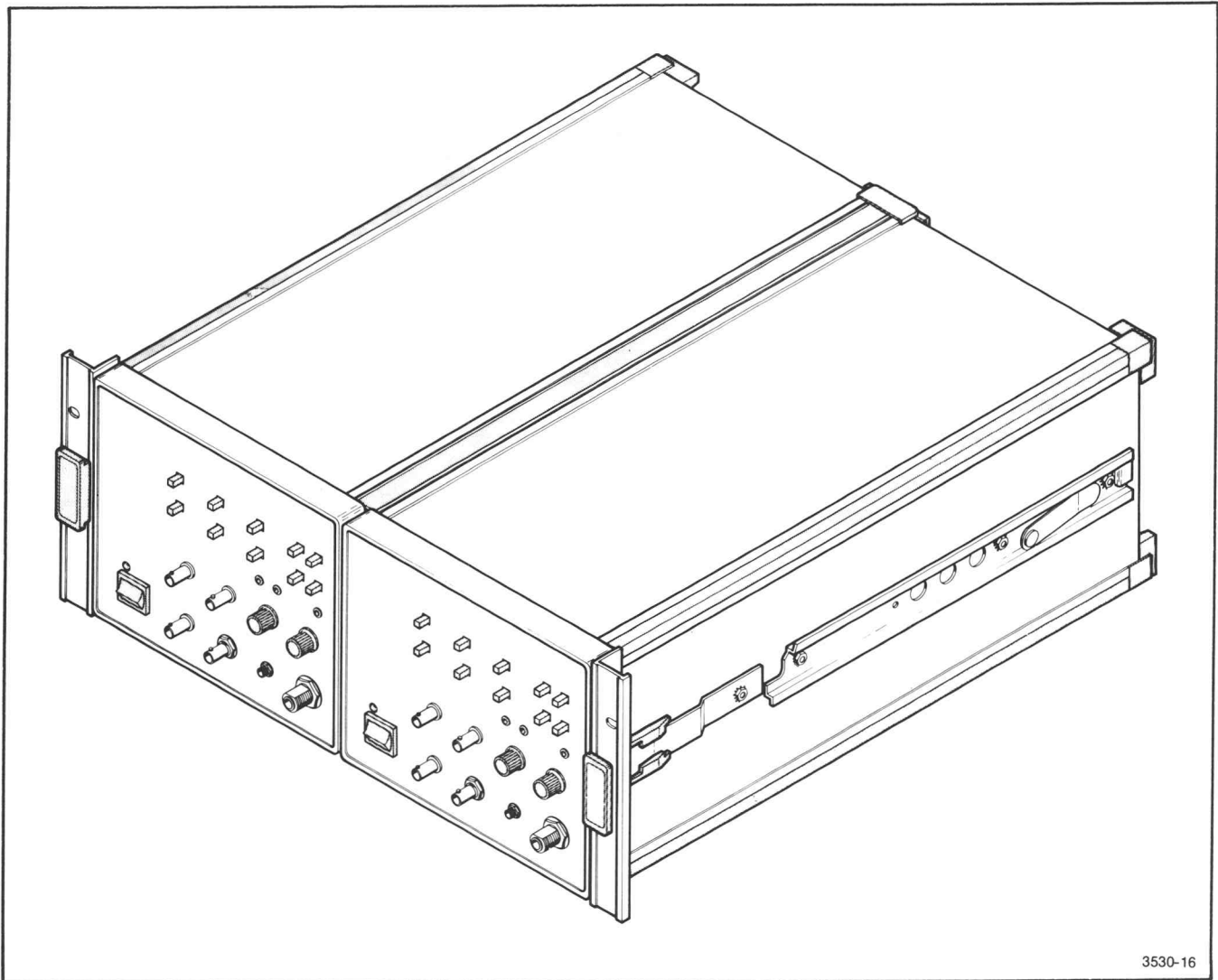
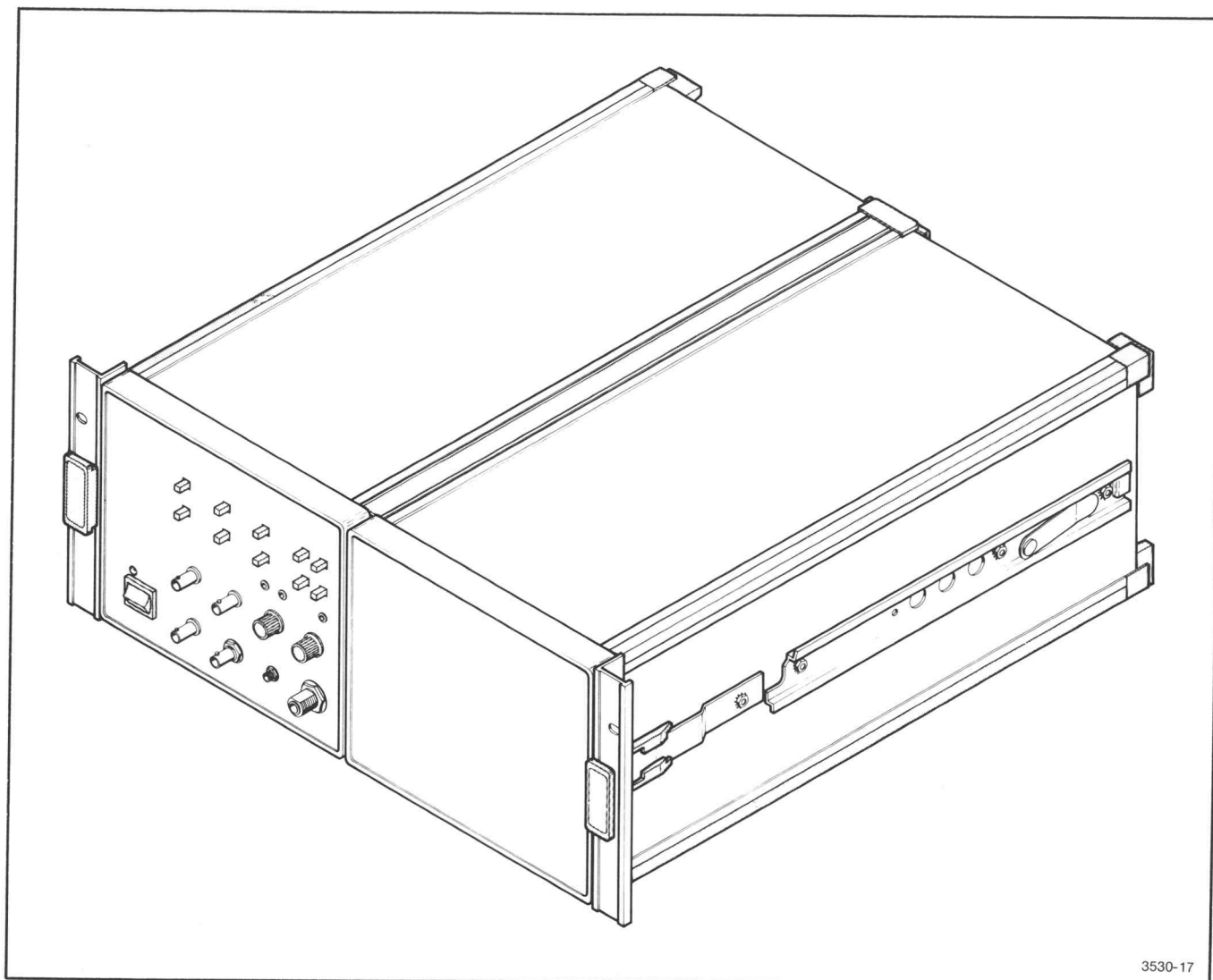


Fig. 2-4. Two Test Modulators Assembled For Rackmounting.

- 9. 2 each, Cabinet Corner Retainers.
- 10. Assortment of nuts, screws, and washers.

The principal parts of the 020-0634-00 option (Test Modulator and Dummy Box) are:

- 1. 4 each, Frame Interlock Sections.
- 2. 2 each, Interlock Trim Strips.
- 3. 2 each, Corner Trim Strips.
- 4. 2 each, Side Panels with Handles.
- 5. 2 each, Drawer Slide Sections.
- 6. 2 each, Slide Drawer Extensions.
- 7. 2 each, Latch Releases.
- 8. 2 each, Retaining Latches,
- 9. 2 each, Cabinet Corner Retainers.
- 10. Dummy box consisting of (See Fig. 2-6):
 - a. 1 each, Open Rear Cabinet Frame.
 - b. 1 each, Blank Rear Panel.
 - c. 1 each, Open Front Cabinet Frame.
 - d. 1 each, Front Sub-Panel.
 - e. 1 each, Blank Front Panel.
 - f. 4 each, Cabinet Corner Frame Sections.



3530-17

Fig. 2-5. Test Modulator and 'Dummy' Box Assembled For Rackmounting.

- g. 1 each, Cabinet Top.
- h. 1 each, Cabinet Bottom.

11. Assortment of nuts, screws, and washers.

Assembly and Installation (See Fig. 2-6)

NOTE

Numbers in parentheses correspond to number-coded parts in Fig. 2-6.

Mounting a Test Modulator and Dummy Box (020-0634-00):

1. Assemble the Dummy Box [Open Front (21) and rear (30) frames, cabinet corner frame sections (33), front sub-panel (18), front (17) and rear (28) panels, and cabinet top (1) and bottom (2). The cabinet top and bottom slide into the assembly from the rear. The front sub-panel and front panel may be omitted, and the resulting open-ended compartment used as storage space for small tools].

2. On the Test Modulator, remove the cabinet rear-corner retainers; the rear cabinet feet; the bottom-corner trim strips; the front cabinet feet; and one of the top-corner trim strips on the side that will be attached to the dummy box; and the side panel that will be next to the rack side.

3. Position the main assemblies (Test Modulator and dummy box) side-by-side.

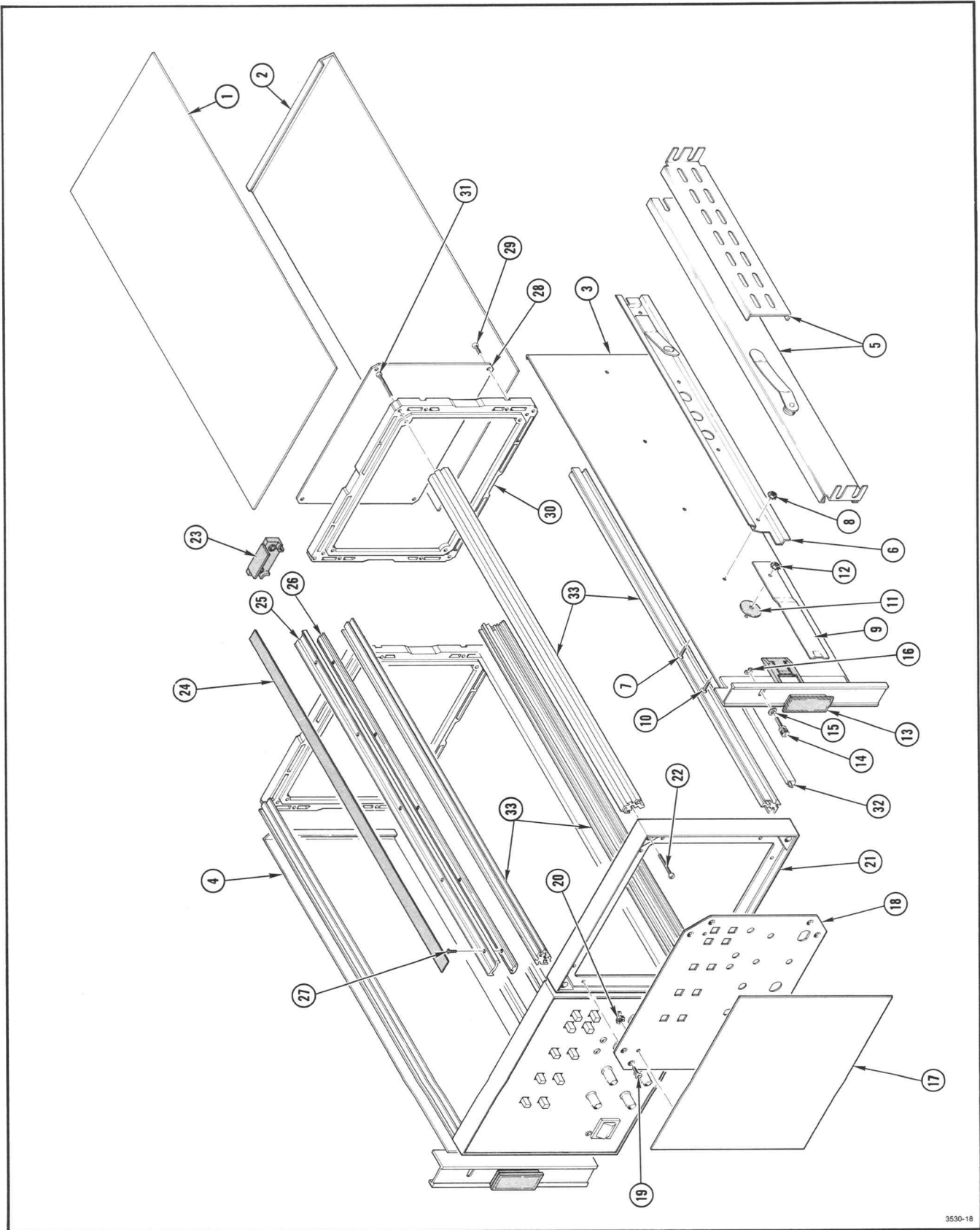


Fig. 2-6. Exploded View of The 'Dummy' Box Beside a Test Modulator.

4. Install the top (25) and bottom (26) interlock strips using 10 each 6-32 flat head screws, and the interlock trim strips (24). (Note: The interlock trim strips slide into the top and bottom interlock strips from the rear.)

5. Assemble the chassis track section (6), retaining latch (9), and latch release (13) to the (outer) side panels using the 8-32 flat head screws (10). See Fig. 2-6.

6. Install the side panels (3) and (4) to the 2-wide assembly.

7. Install two corner trim strips (32) to the dummy box and one to the Test Modulator bottom corner. (Note: Two corner trim strips are furnished with the modification kit, and one was removed from the Test Modulator in assembly step 2. All three of these trim strips are 17.410 inch long. Two shorter strips that were removed from the bottom corners of the Test Modulator, are not used.)

8. Install four rear-corner retainers that were removed from the Test Modulator in assembly step 2. Also install two 'double' rear-corner retainers (23) between the two main assemblies. See Fig. 2-6.

9. Remove the carrying handle from the Test Modulator cabinet top. This can be accomplished by pulling upwards on the carrying handle and exposing a small hole on each handle-retaining cap; inserting a small screwdriver or a scribe in the small hole; and applying a downward pressure in the hole to release the spring catch.

10. Install the stationary track sections in the rack (a sliding track section is provided already installed in the stationary track section).

11. Insert the chassis track section into the sliding track section.

12. Press the latch stops in the chassis section, and push the assembly into the track until the latches snap into their holes.

13. Again press the latch stops and push the assembly into the rack.

To adjust the tracks for smooth operation, loosen the screws that hold the front flanges of the stationary track section to the rack sides. Center the assembly, allowing the tracks to seek their proper position, then tighten the screws.

Mounting Two Test Modulators Side-by-Side (020-0633-00):

1. Remove the cabinet rear-corner retainers from both Test Modulators, the bottom-corner trim strips and feet, the top-corner trim strips on the sides that will be adjacent to each other, and the outer side panels. The side panels with handles will be installed on the outer sides, and the interlock frame sections will be installed on the inner side between the main assemblies.

2. Position the Test Modulators side-by-side.

3. Install the top and bottom interlock strips using 10 each 6-32 flat head screws, and the interlock trim strips. (Note: The interlock trim strips slide into the top and bottom interlock strips from the rear.)

4. Assemble the chassis track sections, retaining latch, and latch release to the (outer) side panels using the 8-32 flat head screws and nuts with lock washers. See Fig. 2-6.

5. Install the (outer) side panels to the 2-wide assembly.

6. Install the bottom-corner trim strips and the four rear-corner retainers.

7. Install the top and bottom inner retainers, (3), (6), (8), (9), (11), (12), and (13). See Fig. 2-6.

8. Remove the carrying handles from the individual Test Modulator cabinet tops. This can be accomplished by pulling upwards on the carrying-handle and exposing a small hole on each handle-retaining cap; inserting a small screwdriver or scribe in the small hole; and applying a downward pressure in the hole to release the spring catch.

9. Install the stationary track sections in the rack (a sliding track section is provided already installed in the stationary track section).

10. Insert the chassis track section into the sliding track section.

11. Press the latch stops in the chassis section, and push the assembly into the track until the latches snap into their holes.

12. Again press the latch stops and push the assembly into the rack.

To adjust the tracks for smooth operation, loosen the screws that hold the front flanges of the stationary track section to the rack sides. Center the assembly, allowing the tracks to seek their proper position, then tighten the screws.

Latching

The optional rackmounting hardware incorporates a spring-latch design built into the rack handle. To release, grasp the spring-latch handle and pull the Test Modulator forward. To re-latch, push the Test Modulator in until the spring latches again.

Thumbscrews

If additional latch strength is needed, the front castings have mounting holes for thumbscrew hold-downs (not supplied with the Test Modulator). See Fig. 2-7 for mounting-hole details.

NOTE

Because of the spring-latch feature, the Test Modulator cannot be racked in already-installed stationary slide sections unless thumbscrew hold-downs are used. The slide tracks supplied with the optional accessories are required to accommodate the spring latches. The new slides provide a cut-out in the stationary section to catch the shoulder of the spring-latch. See Fig. 2-8.

Rackmounting

With optional rackmounting accessories, the Test Modulator will fit most commercial consoles and 19-inch wide racks whose rail holes conform to universal spacing. See Fig. 2-7 for hole-spacing details.

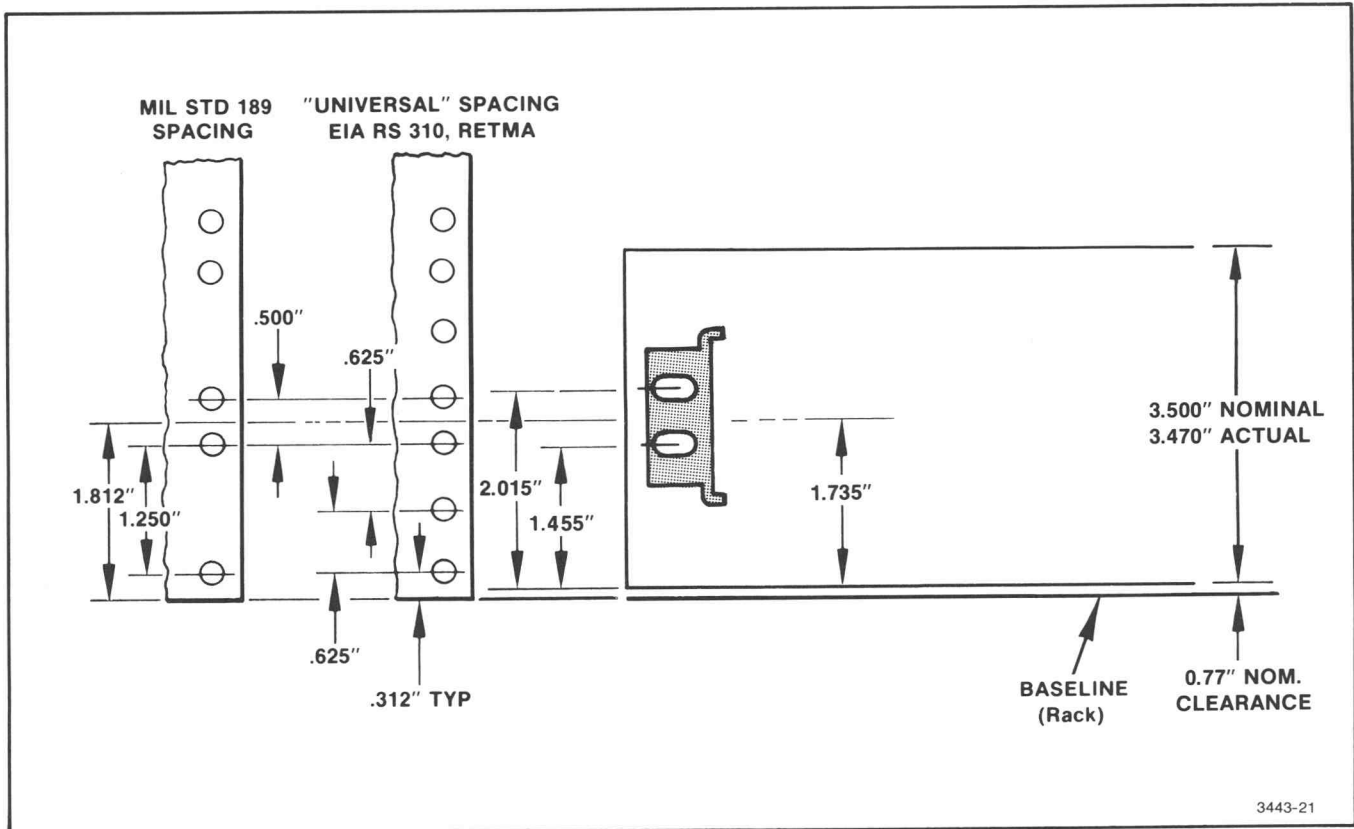


Fig. 2-7. Rackmounting Hole Spacing.

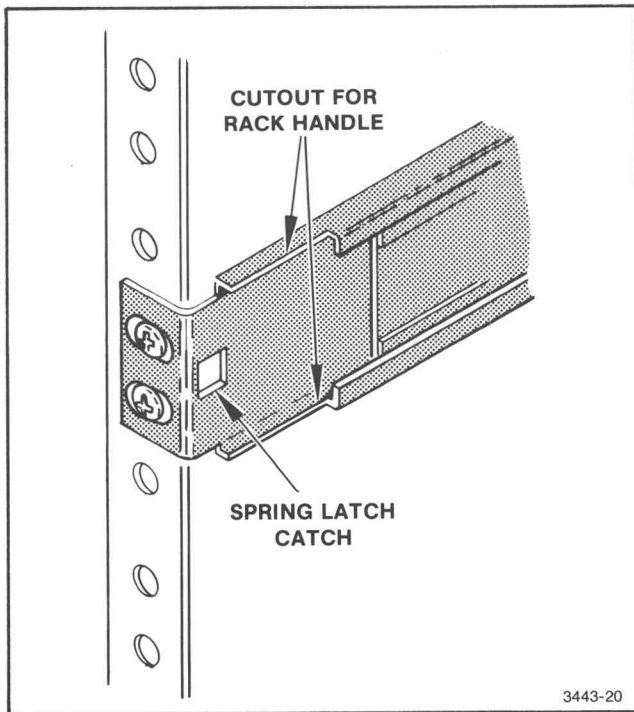


Fig. 2-8. Spring Latch Catch.

Allow at least two inches of clearance between the Test Modulator rear panel and the rack enclosure to ensure an adequate supply of cooling air.

The slide-out tracks mount easily to the rack front and rear vertical mounting rails if the inside distance between the rails is within 10 1/2 to 24 1/2 inches.

If the tracks are going to be installed in a rack whose inside dimension is not within 10 1/2 and 24 1/2 inches, some means of support (for example, extensions to the rear mounting brackets) is needed for the rear ends of the slide-out tracks.

The Test Modulator is 7 inches high, a multiple of 1.75 inches (the standard rack spacing). As long as the Test Modulator is positioned in the rack some multiple of 1.75 inches from the bottom or top, all the holes should line up and no drilling will be necessary.

The dimensions of the opening between front rack rails must be at least 17 5/8 inches. The front lip of the stationary track section mounts in front of the rail. Use bar nuts behind untapped front rails. The front lip of the stationary track section must mount in front of the front rail to allow the Test Modulator spring-latch to function properly.

The slide-out tracks consist of two assemblies, one for each side of the instrument. Each assembly consists of three sections. See Fig. 2-9. The stationary section of each track attaches to rack rails as illustrated in Fig. 2-10. The chassis section mounts on the instrument and is installed by the customer. The intermediate section fits between the other two sections, allowing the instrument to be fully extended out of the rack.

The stationary and intermediate sections for both sides are shipped as a matched set and should not be separated. The package includes matched sets for both sides, and mounting hardware. To identify the assemblies, note that the automatic latch and intermediate section stop are located near the top of the matched sets when properly mated to the chassis sections.

To mount the instrument in a rack, select the appropriate holes in the rack rail, using Fig. 2-7 as a guide.

Mount the stationary track sections to the front rack rails with pan-head screws (and bar nuts) if the rails are not countersunk. Use flat-head screws (and bar nuts) if the rails are countersunk.

Mount the stationary track sections to the rear rails, using one of the methods in Fig. 2-10. Note that the rear mounting bracket can be installed to fit either a deep or shallow cabinet rack.

After mounting the instrument in the slide-out tracks, adjust for proper width by loosening the front screws and allowing the slides to seek the proper width. Be sure that the instrument is centered, and re-tighten the screws.

When the instrument is pushed into the rack, an automatic spring-latch engages the back of the front rack rail to hold the instrument in place. To extend the instrument out of the rack, just pull on the spring-latch handles on each side and pull the instrument out.

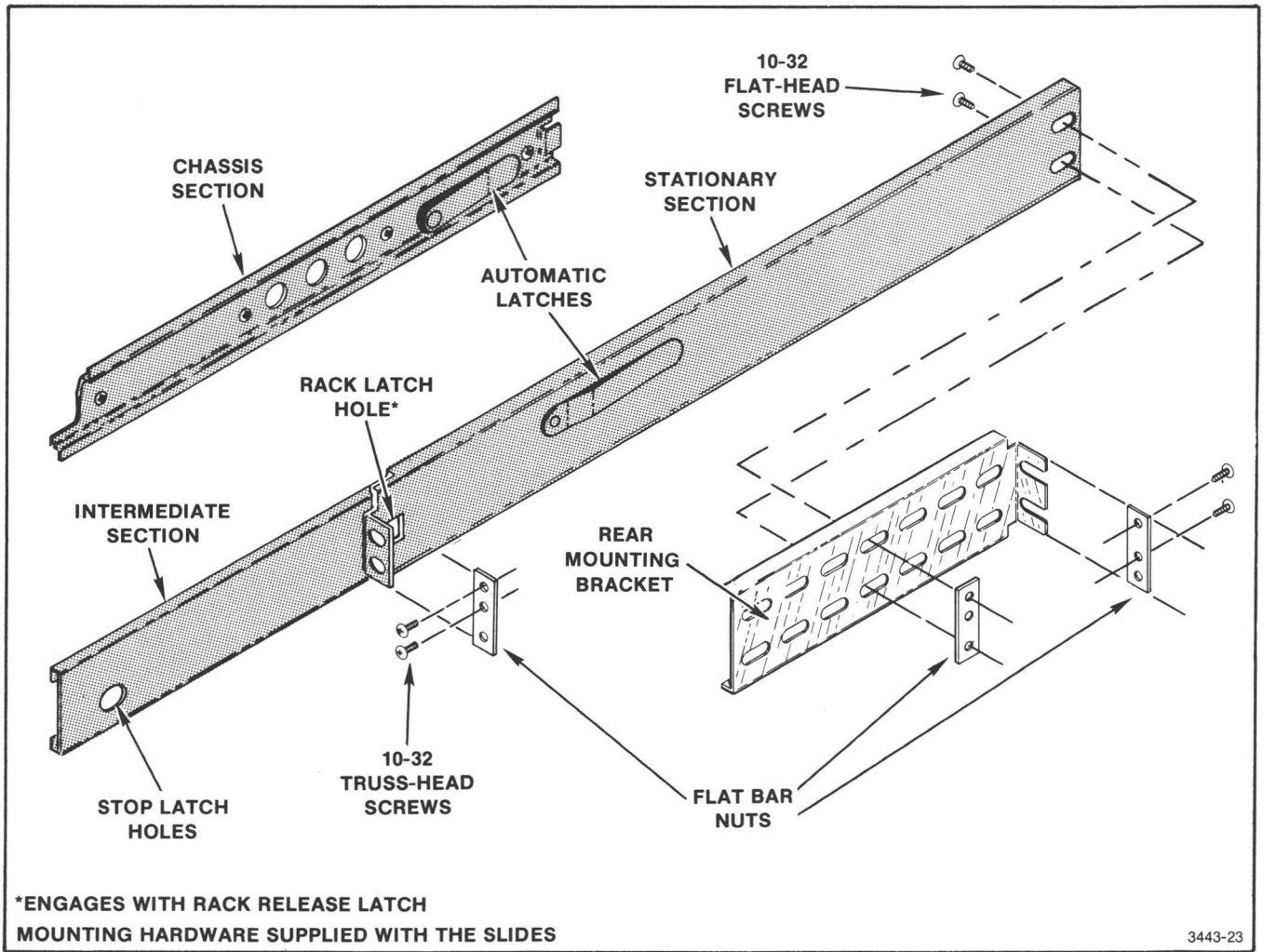


Fig. 2-9. Rackmounting Hardware.

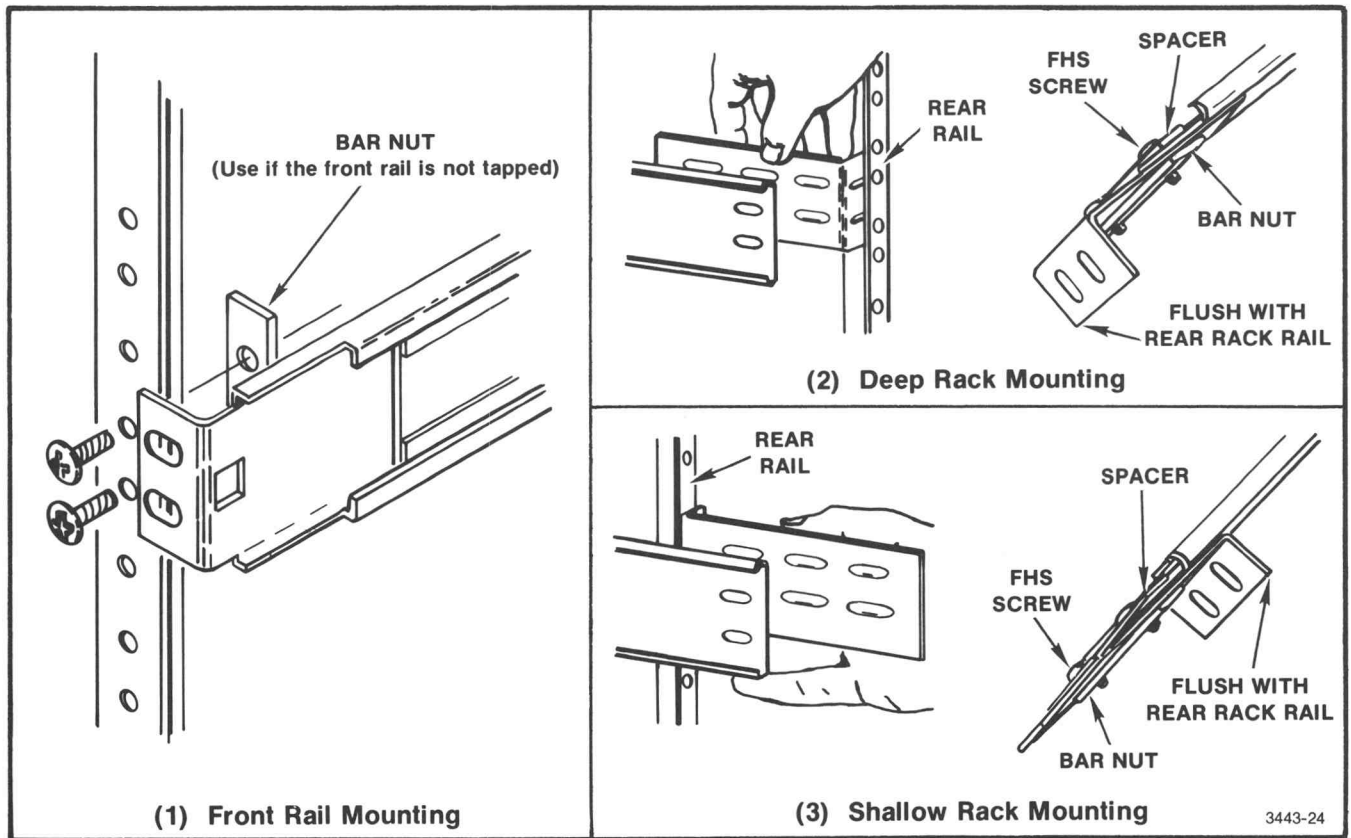
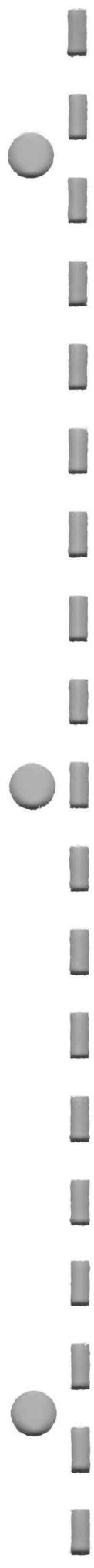
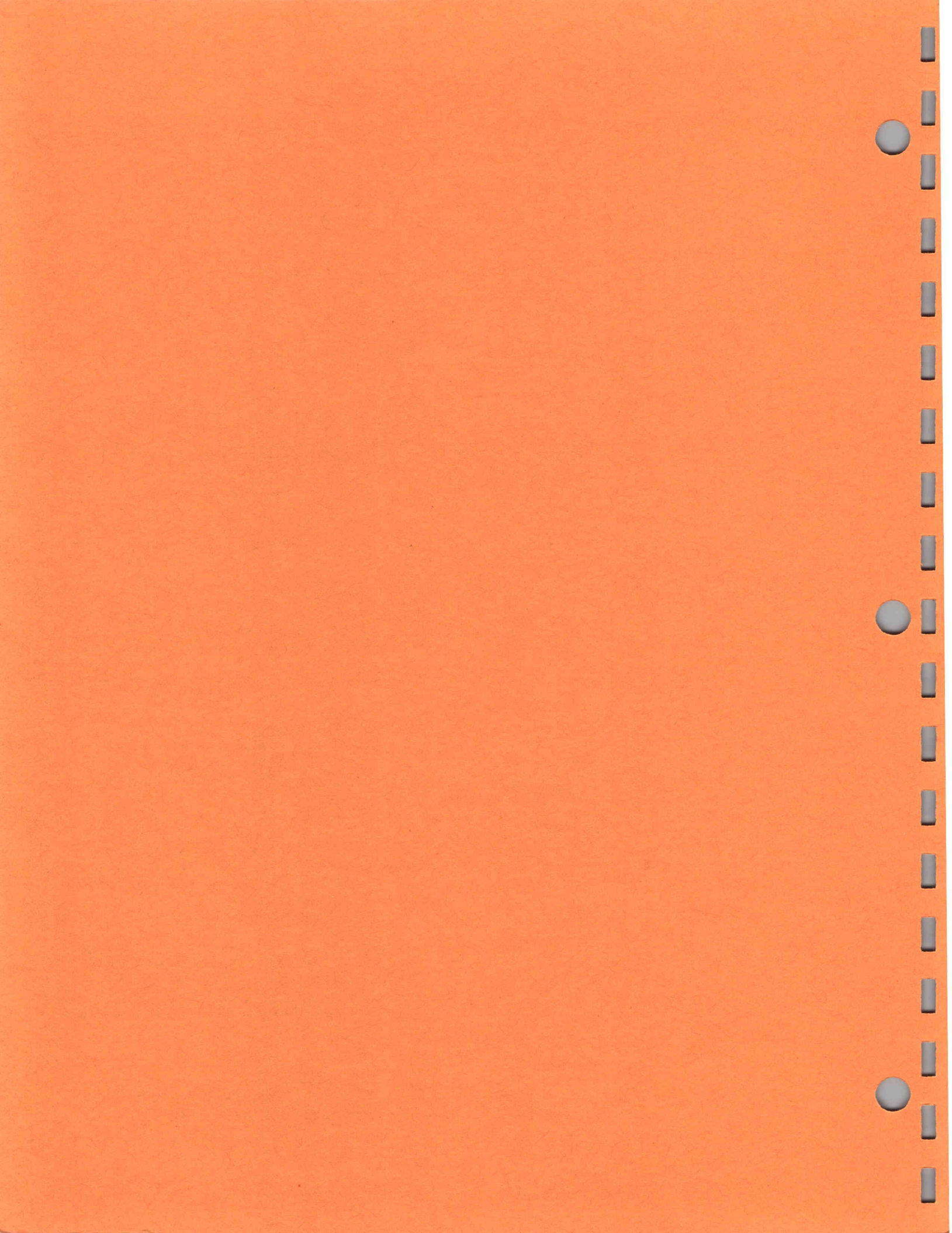


Fig. 2-10. Mounting Stationary Rackmount Sections.



WARNING

THE FOLLOWING SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO AVOID PERSONAL INJURY, DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO.



PART II

SERVICE INFORMATION

THEORY OF OPERATION

GENERAL CIRCUIT DESCRIPTION

Abbreviations

LO (lo)	Local Oscillator
IF (if)	Intermediate Frequency
RF (rf)	Radio Frequency

This section includes a block diagram description and a detailed circuit description. The descriptions apply to all versions of the Test Modulator. Check the information on the serial number tag to determine the IF, and CCIR system of any particular Test Modulator.

BLOCK DESCRIPTION

The Test Modulator provides baseband-to-**if** and baseband-to-**rf** conversion of all video test signals used to verify performance requirements of TEKTRONIX Television Demodulators. It also provides **if-to-rf** conversion of any Tektronix down converter providing the LO IN is driven with the appropriate **lo** signal.

Rf, if, lo, and audio signal lines are accessible through front-panel coaxial connectors. A detailed block diagram in the Diagrams section illustrates signal paths and function of the major circuits. Refer to this diagram while reading the description.

The baseband signal is fed to the front panel of the Test Modulator and an **if** signal is available at the front panel. The IF OUT must be connected to the IF IN, and an external **lo** signal from a Tektronix down converter (or comparable source) connected to the LO IN in order to obtain an RF OUT signal.

NOTE

*The down converter used for a **lo** signal source must be of the same CCIR system, and have the same **if**.*

Inside the Test Modulator, circuits are isolated from each other by extensive shielding and decoupling. The baseband signal is fed through a Video Processor A1A6 to clamp the blanking level at 0 V. It is then fed to a Video Precorrector (A1A7) that has predetermined group delay. From the Video Precorrector, the baseband signal is fed to the Visual Modulator (A1A5). Note that in System I Test Modulators, the baseband signal is fed to the Visual Modulator directly from the Video Processor since there is no Precorrection in System I Test Modulators.

In the Visual Modulator, the baseband signal amplitude-modulates an **if** carrier signal from the Visual LO (A1A4). The resultant is the **if** carrier signal available at the front-panel connector labeled IF OUT. The aural carrier is added to the **if** signal through a Directional Coupler A5 just before it reaches the front panel.

The Aural Modulator accepts an audio signal from the AUDIO IN connector on the front panel. This board consists of a switchable PRE-EMPHASIS network, an LC Oscillator, and a Crystal Oscillator.

The IF OUTput signal is used to drive a TEKTRONIX Television Demodulator, or converted to **rf**, and the resultant **rf** signal is then used to drive a Tektronix down converter.

The IF OUTput signal is brought back to the IF INput connector via a coaxial cable, to be up-converted to **rf**. The signal line from the IF Input drives the IF Amplifier A1A3 at pin 2. The signal is amplified, passed through a bandpass filter, and amplified again before being fed to the RF Mixer A1A2.

In the RF Mixer, the **if** signal amplitude-modulates a **lo** signal from the RF LO Amplifier A1A1 resulting in a double-sideband **rf** signal at the RF OUTput.

The **lo** signal originates from a Tektronix down converter or a comparable source. It is amplified in the RF LO Amplifier (≈ 16 dB) and in the RF LO Mixer just before it reaches the mixer proper.

The RF LO Amplifier is a broadband type with 16 dB of gain. The amplifier feeds the RF Mixer for **if-to-rf** conversion.

The RF Mixer circuit converts the **if** signal to the **rf** signal determined by the **if** and **lo** signals. The **lo** signal and the **if** signal are mixed in a diode-ring type mixer, and give the difference signal at the **rf**. The **rf** output from the mixer is available at the front panel.

The **lo** signal must be generated by a Tektronix down converter or a comparable **rf** signal generator.

GLOSSARY

There are several components and circuits used in the Test Modulator that may be considered new or unusual by many technicians. To aid in understanding these circuits, this brief glossary is included.

Chip Components—Resistors, capacitors, and transistors designed for use in high-frequency circuits. They usually consist of very small ceramic bodies with short leads or terminals mounted on the body. They are used where stray reactances are to be kept to a minimum.

Microstrip—A section of etched-circuit board designed to act as a transmission line between circuits on the board. Impedance of the microstrip is determined by the size and separation of the signal-carrying conductor and the ground-plane conductor.

DETAILED CIRCUIT DESCRIPTION

VIDEO PROCESSING

1

Video Processor (A1A7)

The Video Processor, A1A7, contains a video amplifier, a lowpass filter, a sync stripper, and a back-porch level detector.

The video amplifier, U130, has a gain of 6 dB at the board-edge (pin 11) output when pin 11 is terminated in infinite impedance. Therefore, the output has to be terminated in 75 Ω .

The lowpass filter is comprised of C325, L339, and L345. It is driven by the amplifier through R325. The filter passes luminance and rejects chrominance on the video test signal. The filter drives the inputs of the sync stripper and the back-porch level detector.

The sync stripper, U510, is isolated from the lowpass filter by the emitter follower, Q322. Back-porch timing pulses regenerated by the sync stripper are used to gate the back-porch level sample-and-hold (U339 and C341) when the CLAMP is ON. U339 has a high input-impedance and is a sampling amplifier, while C341 is the 'hold capacitor'. Thus, U339 together with C341 comprise a sample-and-hold network.

When the CLAMP is OFF, Q543 grounds the emitter of Q541 and turns it off. Thus, back-porch timing pulses do not reach U339. R341 discharges C341, and the output of the follower U346 goes to 0 V.

U346 is a follower that senses the **dc** voltage in the memory capacitor, C341, and injects current from R345 when the blanking level of the incoming video test signal is positive, and vice versa.

Video Precorrector (A1A7)

With the PRECORRECTOR switch in the OFF position, the baseband signal is routed through a 75 Ω pi-pad; and with the PRECORRECTOR switch in the ON position, the signal is routed through a delay network.

NOTE

The Video Precorrector board may be returned to a Tektronix, Inc. Service Center for repair and recalibration.

VISUAL AND AURAL IF MODULATORS

2

Visual LO (A1A4)

The oscillator circuitry provides the locally-generated **if** carrier signal that is subsequently amplitude-modulated to derive the visual **if** carrier.

The crystal oscillator is composed of transistor Q225 and Y238 with the associated components. As the crystal operates in an overtone mode, L225 and C231 assure operation at the correct overtone. The output from the collector of Q225 drives the common-emitter amplifier Q216 through the filter L221. L221 is tuned to the **if**.

The crystal oscillator can be turned 'off' and 'on' with a switch on the front panel, CARRIER ON/OFF, which removes or applies +15 V to the oscillator.

The output of the amplifier drives a pi-type bandpass filter comprised of L214, C215, and C211.

The output at pin 2 feeds the Visual Modulator (A1A5) at pin 6.

Visual Modulator (A1A5)

The Visual Modulator board (A1A5) contains a diode-ring type mixer circuit and a bandpass filter. (See Fig. 3-1). The if carrier signal is amplitude-modulated by the input video to this board, then the resulting visual if carrier is brought out to the IF OUT connector through a bandpass filter and double-shielded coaxial cable.

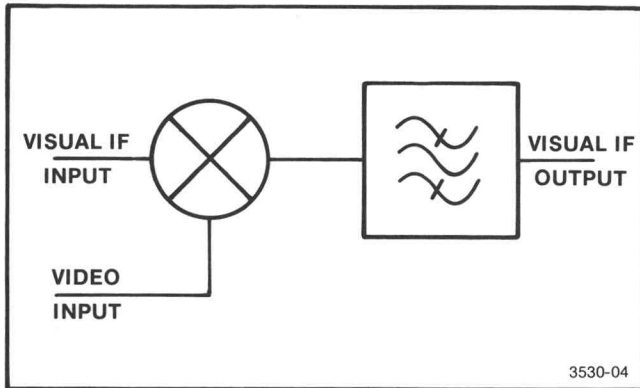


Fig. 3-1. Visual Modulator Block Diagram.

The if carrier signal is fed to the modulator at P131 on A1A5, and the input video at pin 6. The network at the video input line tunes the impedance of the video signal port to make the mixer look like a 75 Ω load to the input video.

The mixer is a diode-ring type, using a small-signal transistor connected as diodes in each of the four legs. The 'diode' in each leg of the ring allows a higher rf signal to be applied because of the higher current-handling capability of each transistor. This helps maintain a high dynamic range since high I_o (if carrier) power yields a high mixer-output intercept point.

The mixer is driven by T121 with the if carrier signal at a high power level. This switches the diodes on and off at the carrier rate. The video signal is fed via T214. The diode ring switches the secondary leads of T214 so that the difference between the carrier and video is present at the secondary of T214. This is the visual if carrier (IF OUT). The carrier and video components at the mixer output are minimized by the balanced mixer. (See Fig. 3-2.)

The mixer action can be turned 'on' and 'off' at the front panel with a push-push switch by biasing and removing bias from the diode-ring mixer. Another front-panel switch selects either a preset modulation level (MOD PRESET) or a front-panel variable level (MODULATION LEVEL). The MOD PRESET control selects a front-panel-set bias on the diode ring, while MODULATION LEVEL selects a variable bias.

The mixer output is attenuated by a 50 Ω pad (R215, R210, and R216). This allows the mixer to be properly terminated into 50 Ω and accurately sets the IF OUTput level.

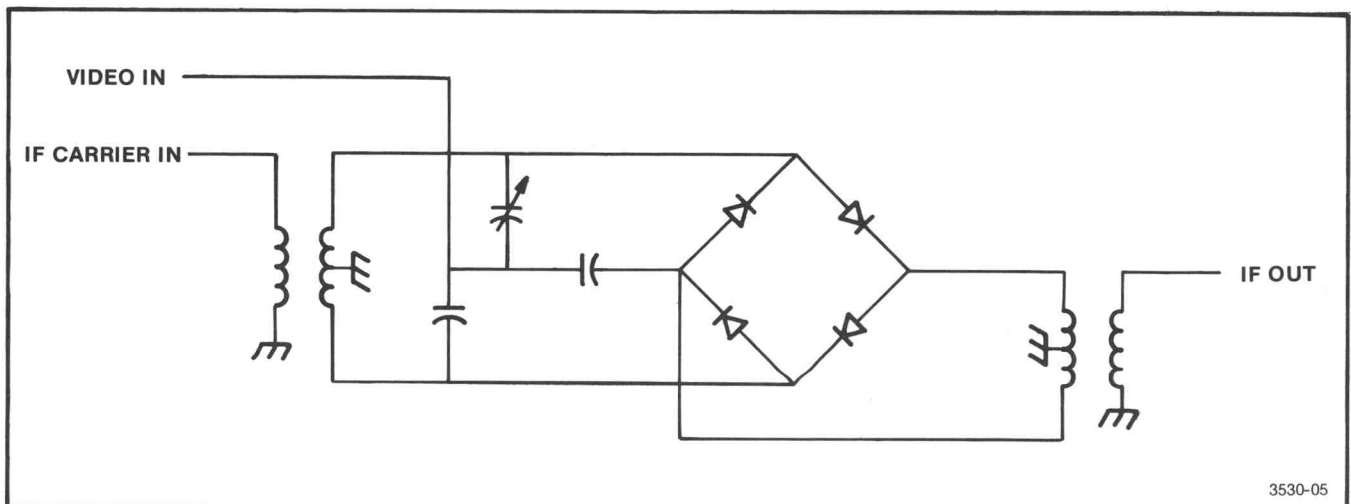


Fig. 3-2. Balanced Mixer.

Theory of Operation—067-0886-01 & up

A bandpass filter is inserted between the 50 Ω pad and the IF OUTPUT. The bandpass is centered about the *if*, and its limits depend on the CCIR system and the *if*. See Table 2-1. Thus, products of *if-lo* harmonics and the baseband signal are not present at the IF OUTPUT.

Moving jumpers on P311 and P711 from pins a and b to pins c and d bypasses the filter.

Aural Modulator (A1A8)

The Aural Modulator board (A1A8) consists of a Follower, Pre-Emphasis network, an Amplifier (-7 dB), a 2.5 dB Amplifier with a coupling emitter-follower, an LC Oscillator, and a Crystal Oscillator.

The Follower is composed of U400 and the associated circuitry, including R312. R312 is set for maximum audio input (without clipping) during calibration. The stage has a gain of approximately 0 dB.

The Pre-Emphasis network consists of Q307, R300, and C301 and the associated components. With PRE-EMPHASIS OUT, Q302 is turned off and the Follower is coupled to the Amplifier through R300. Thus, the input resistance to the Amplifier becomes Ω^1 , making the amplifier a dB² gain stage.

However, when PRE-EMPHASIS is switched IN, Q302 turns 'on' and now the Follower is coupled to the Amplifier through the parallel combination of R300 and C301. The gain of the Amplifier becomes frequency-dependent. That is, the Amplifier gain increases with frequency.

The Amplifier consists of Q202 and Q204, with associated components including R301. R301, together with the Pre-Emphasis network, determines the gain of the Amplifier. The Amplifier drives a Pre-distortion Amplifier.

The Pre-distortion Amplifier consists of Q207 and the associated components, including R102, and emitter follower Q206. This amplifier introduces a predetermined amount of distortion, set with R102. This distortion compensates for the distortion that will be generated in the volts-to-frequency conversion of the LC Oscillator. The gain of this amplifier is approximately 2.5 dB.

The emitter follower, Q206, isolates the Pre-distortion Amplifier from the LC Oscillator.

¹ 15 k Ω for Systems B, G, and I; and 22.6 k for System M.

² -3.5 dB for Systems B, G, and I; and -7 dB for System M.

The LC Oscillator is comprised of TR126, L126, R103, R94, Q214, Q213, R125, C318 and the associated components. During adjustment, R94 is midranged, and R103 is set such that the carrier frequency can be moved the same amount above and below center frequency, using R94.

L126 is adjusted for proper center frequency. When audio is applied, the frequency of the LC Oscillator varies about the center frequency. The amount of swing depends on the peak-to-peak amplitude of the audio signal.

Q214 and Q213 form a power-gain stage, with Q214 being the voltage-gain stage (common emitter) and Q213 the current-gain stage (common base). Q213 also isolates the LC Oscillator from the Crystal Oscillator. When the CRYSTAL switch is pushed in, Q213 turns 'off' completely, effectively isolating the LC Oscillator from the Crystal Oscillator. When the MODULATOR switch is pushed in, the CRYSTAL switch cancels, and Q213 turns 'on'.

At the output of the power-gain stage is a narrow-bandpass filter comprised of C316, C317, C319, L318, and C318. Bandpass center is dependent on the *if*. C318 is adjusted for maximum carrier amplitude. The output of the filter is fed to the Directional Coupler (A5) through pin 11.

The Crystal Oscillator consists of Q325, Y129, R128, C326 and associated components. It is used to check audio signal-to-noise ratio and to center the LC Oscillator. C222 and L224 assure operation at the correct overtone, while R128 sets the gain.

The bandpass filter composed of C324, C325, C326, C425, L326, C327 is identical to the filter in the LC Oscillator.

UP CONVERTER

RF LO Amplifier (A1A1)

The RF LO Amplifier, A1A1, provides 16 dB of power gain to the input signal. In addition, the amplifier provides reverse isolation to reduce possible reradiation of the *lo* and *rf* back out of the LO INPUT.

The amplifier has two stages. The first stage, Q36 and Q33, has 10 dB of power gain. Q33 sets the bias for Q36. A voltage divider, R21 and R22, sets the base, and thus the emitter voltage of Q33. The constant voltage on the emitter of Q33 sets the current through R32. Almost all of this current flows through the collector of Q36, and the remainder flows through Q33 to the base of Q36. The individual transistor betas determine the actual division of current. Thus, Q33 regulates the collector current of Q36 by measuring the voltage drop across R32.

The **rf** gain for the first stage is determined by the values of the emitter resistors R37 and R47, collector load resistor R56, feedback resistor R46, and the associated microstrip transmission lines.

The second stage consists of Q56 and Q52, and has 6 dB of power gain. It is biased much the same as the first stage, except that Q56 has twice the collector current of Q36. The **rf** gain of the second stage is determined by the emitter resistors R55 and R58, the collector load resistor R65, and the associated microstrip transmission lines.

Microstrip transmission line circuit board runs and chip components are used where appropriate to maintain constant impedance for the **rf** signal.

IF Amplifier (A1A3)

This board provides rejection of unwanted signals, and about 10 dB of power gain for the IF INput signal from the Test Modulator or the Down Converter. The circuits on this board include an input amplifier, a bandpass filter, and an output amplifier. The amplifiers provide good source and load terminations, as well as amplification.

The signal from the IF INput connector drives the board at pin 2. High-frequency mixer products from the down converter are terminated by R28B through C28B. The **if** signal drives one winding of T18, which is part of a feedback circuit around Q16. Transistor Q16 operates as a low-noise, grounded-base, high-linearity amplifier. The input impedance of Q16 is determined by R07, which is factory selected to provide 50 Ω at the IF INput connector. The resistance of R07 reflected through T18 determines the input impedance. The output from Q16 drives the emitter of Q04. Voltage gain is provided by grounded-base stages Q16 and Q04 due to the higher collector-load impedance versus input impedance. A voltage gain of about 1.6 is provided from the input of L26 to the collector of Q04, and about 1.6 from this point to the junction of L02 and C20. Parasitic oscillations are prevented by LR13.

The **if** bandpass filter is essentially flat from 25 MHz to 60 MHz. The output load impedance for the filter is determined by the 1.5 dB, 50 Ω pad consisting of R66, R71, and the input impedance of Q72. Transistors Q72 and Q85 are identical in operation with Q16 and Q04.

Emitter follower Q47 supplies +3 Vdc to the bases of the four amplifier transistors.

Signals feed from the output of Q85 and T89 at 50 Ω impedance through a 50 Ω coaxial cable to the **if** input of the mixer at P81 on A1A2.

RF Mixer (A1A2)

The RF Mixer board (A1A2) contains a LO Amplifier and the mixer circuit. (See Fig. 3-3.) The **if** signal is mixed with the **lo** signal to produce the radio frequency (**rf**). The **rf** signal is equal to the difference between the **lo** and the **if** signals.

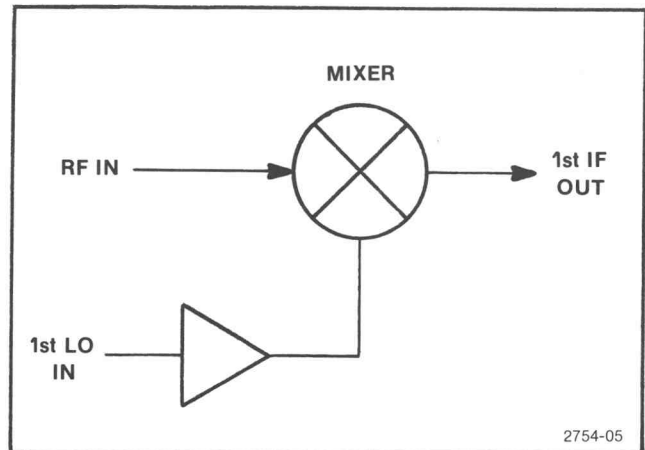


Fig. 3-3. RF Mixer Board Block Diagram.

The **if** signal is fed to the mixer at P81 on A3. The LO Amplifier is similar to those in the RF LO Amplifier (A1A1). The LO INput signal must be at about -5 dBm. The LO Amplifier supplies 10 dB of power gain, so that a total of $+5$ dBm is available at the output of the LO Amplifier. L46 allows Q27 to reach higher signal levels before clipping, resulting in high **lo**-signal power level at the output.

The output of the LO Amplifier is attenuated approximately 1.5 dB by R55 and R54, then fed to the primary of T63.

The mixer is a diode-ring type, using a hot-carrier diode in each of the four legs.

The mixer is driven by T63 with the **lo** signal at a high power level. This switches the diodes on and off at the **lo** rate. The **if** signal is fed via T63. The diode ring switches the primary leads of T63 so that the difference between the **lo** and **if** is present at the secondary of T63. This is the **rf**. The **if** and **lo** components at the **rf** port will be reduced by the balanced mixer. (See Fig. 3-4.)

The mixer output is attenuated by a 50 Ω pad (R67, R68, and R70). This allows the mixer to be properly terminated into 50 Ω and accurately sets the RF OUTput level.

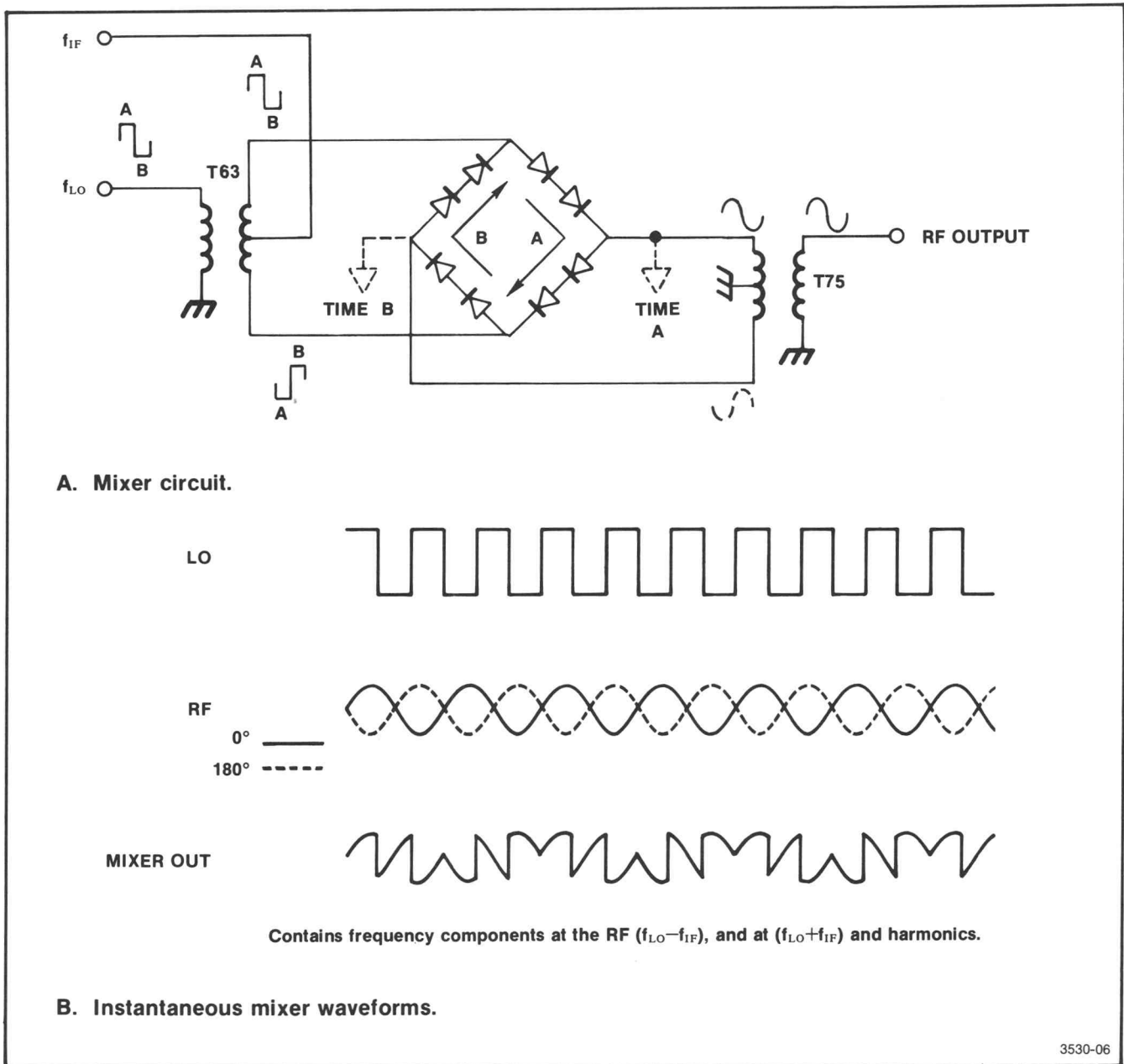


Fig. 3-4. RF Mixer Operation.

POWER SUPPLY 4

Power Supply (A70)

The +15 V and +5 V supplies are referenced to the -15 V supply, which is referenced to zener diode VR62. All supplies have the series-pass transistors configured as collector outputs. This allows the regulated outputs to operate closer (approximately 1 V drop) to the unregulated busses.

-15 V Supply

In the -15 V supply, the voltage at the base of Q73 holds at -6.2 V. Should the -15 V go more negative, Q72 conducts more current. This causes Q82 to increase conduction, reducing conduction in Q83 and Q95. This action reduces current flow to the -15 V bus, causing the supply to return to the preset level. The regulating circuitry for all three supplies is fast enough to respond to the 120 Hz ripple present from the rectifiers. Should the

current from the supply passing through R91 exceed about 0.8 A, Q81 comes into conduction. This action causes Q82 to conduct, which reduces conduction in Q83, holding the current through Q95 to a safe value. The output impedance of Q72 and Q73 is matched to reduce unequal feedback from collectors to bases, resulting in increased ripple rejection. Loop compensation to prevent oscillation is provided by C84, C85 and R86. Constant voltage across R94, to reduce hum, is provided by VR73. The LED mounted on the power-supply circuit board indicates when voltage is present on the -15 V bus.

+15 V Supply

Reference for the +15 V supply is obtained through divider R20 and R21, connected to the -15 V supply. If the +15 V supply increases in voltage due to decreasing load, Q22B increases conduction. This action increases conduction in Q14 and reduces conduction in Q13 and Q05. The reduced current supplied to the decreased load lowers the voltage to the predetermined level. If more than about 0.09 A of current flows through R02, Q10 comes into conduction, limiting the current to a safe value. Loop compensation to prevent oscillation is provided by C13, C14 and R15. Start-up current for Q13 is provided by Q23, which as a collector-current source for Q14, also reduces ripple.



CALIBRATION

Introduction

The procedures in this section serve as guides to perform the calibration steps necessary to ensure the proper operation of the Test Modulator (067-0886-0X). The symbol X in the part number will be replaced by a numeral denoting the Test Modulator version. For example, 067-0886-05 is a System I Test Modulator with 38.9 MHz **if**. Refer to Table 4-7 for Test Modulator versions. Limits, tolerances, and waveforms appearing in this section are not instrument specifications except as listed in Section 1, Specification.

The Test Modulator front-panel names in the text are capitalized; e.g., RF IN. Control and connector names on test equipment and internal controls in the Test Modulator have only the first letter capitalized; e.g., Time/Div.

The capabilities of the test equipment listed are the minimum required to calibrate the Test Modulator. If alternative equipment is used, it must meet or exceed the specifications of the listed equipment.

The following calibration is in an orderly manner, and will result in a calibrated instrument within the specifications. Note that if an adjustable component is replaced in an LC filter, the filter may be severely

misadjusted by the component replaced. In such a case, it is recommended that the adjustment step associated with the circuit board be performed, then the overall calibration performed.

The calibration section is divided into two main parts: Performance Check and Adjustment Procedure. The performance check is preceded by an equipment table and a short-form performance check procedure, while the adjustment procedure is preceded by a short-form adjustment procedure.

The table of contents at the front of this manual lists the page numbers of all the performance checks and adjustment steps.

Refer to Table 4-1 for recommended test equipment needed to verify performance specifications and perform adjustments.

Refer to Table 4-2 for channel frequencies associated with television channels in the United States and Canada; Table 4-3 for channel frequencies associated with television channels in Europe including Britain; and Table 4-4 for channel frequencies associated with television channels in Japan.

Table 4-1
RECOMMENDED TEST EQUIPMENT

Test Equipment Used

Description	Minimum Specification	Where Used	Equipment Used
Television Demodulator	Visual and Aural if must be the same as the TEST MODULATOR version	Performance Check and Calibration	TEKTRONIX 1450-X Series Demodulator
Oscilloscope	At least 50 MHz bandwidth	Performance Check and Calibration	TEKTRONIX 7704
Differential Comparator Plug-in	At least 20 MHz bandpass	Performance Check and Calibration	TEKTRONIX 7A13
Time Base Plug-in	5 ns/div to 5 s/div calibrated time base	Return Loss	TEKTRONIX 7B53A

Table 4-1 (cont)

Description	Minimum Specification	Where Used	Equipment Used
Spectrum Analyzer	3 kHz to 3 MHz, resolution in decade steps	Performance Check and Calibration	TEKTRONIX 7L13
Tracking Generator	Compatible with the Spectrum Analyzer	Performance Check and Calibration	TEKTRONIX TR 502
Power Supply Module	Capable of driving several loads	Performance Check and Calibration	TEKTRONIX TM 503 Opt. 07
Multimeter	0.1% accuracy	Performance Check and Calibration	TEKTRONIX DM 501
Frequency Counter	Compatible with TR 502 Tracking Generator	Performance Check and Calibration	TEKTRONIX DC 508 with Opt. 07
RF Signal Generator	Low phase noise and stability in the order of 10 ppm/10 min.	Performance Check and Adjustment	HP 8640B
Audio Oscillator	30 Hz to 20 kHz; distortion less than 0.035% from 20 Hz to 50 kHz	Performance Check and Adjustment	TEKTRONIX SG 502
50 Ω Step Attenuator	50 dB in 10 dB steps	Performance Check and Adjustment	HP 8495A
50 Ω Step Attenuator	9 dB in 1 dB steps	Performance Check and Adjustment	HP 8494A
Audio Spectrum Analyzer	10 Hz to 3 kHz resolution; 600 Ω input; 5 kHz and 10 kHz frequency spans	Performance Check and Adjustment	TEKTRONIX 7L5 with L3 Head
Full Field Signal Source	Color Bars, Linearity, 2T Pulse and Bar, Field Sweep, Black Burst Color Bars, Linearity, 2T Pulse and Bar, Field Sweep, Black Burst	Performance Check and Adjustment Performance Check and Adjustment	TEKTRONIX 1410 with SPG2, TSG1, TSG3, and TSG5, and TSG6; or TEKTRONIX 1411 with SPG12, TSG11, TSG13, and TSG15, and TSG16
Waveform Monitor	Display field rate and line rate waveforms, for 525/60 and 625/50 Television systems with a CCIR-compatible graticule	Performance Check and Adjustment	TEKTRONIX 1480-Series Waveform Monitor
8 Ω to 600 Ω Matching Network with Switchable 30 dB Pad	N/A	Performance Check and Adjustment	See Fig. 4-1
High-Frequency Return Loss Bridge	10 MHz to 1 GHz and 40 dB directivity; 50 Ω	IF IN Return Loss Check	Wiltron VSWR Bridge 62N50
sma male-to-bnc Female Adapter	N/A	Performance Check	Tektronix Part No. 015-1018-00
Variable dc Power Supply	ac ripple 5 mV or less; Range: 0 V to 1 V	Checking and adjusting PRESET levels	TEKTRONIX PS 501-1

Table 4-2

CHANNEL FREQUENCIES ASSOCIATED WITH TELEVISION CHANNELS IN THE U.S.A. AND CANADA (SYSTEM M)

Note

Channels A through I and channels J through W are CATV channels.

Channel	Limits	Visual
2	54-60	55.25
3	60-66	61.25
4	66-72	67.25
5	76-82	77.25
6	82-88	83.25
A	120-126	121.25
B	126-132	127.25
C	132-138	133.25
D	138-144	139.25
E	144-150	145.25
F	150-156	151.25
G	156-162	157.25
H	162-168	163.25
I	168-174	169.25
7	174-180	175.25
8	180-186	181.25
9	186-192	187.25
10	192-198	193.25
11	198-204	199.25
12	204-210	205.25
13	210-216	211.25
J	216-222	217.25
K	222-228	223.25
L	228-234	229.25
M	234-240	235.25
N	240-246	241.25
O	246-252	247.25
P	252-258	253.25
Q	258-264	259.25
R	264-270	265.25
S	270-276	271.25
T	276-282	277.25
U	282-288	283.25
V	288-294	289.25
W	294-300	295.25
14	470-476	471.25
15	476-482	477.25
16	482-488	483.25
17	488-494	489.25
18	494-500	495.25
19	500-506	501.25
20	506-512	507.25
21	512-518	513.25
22	518-524	519.25
23	524-530	525.25
24	530-536	531.25

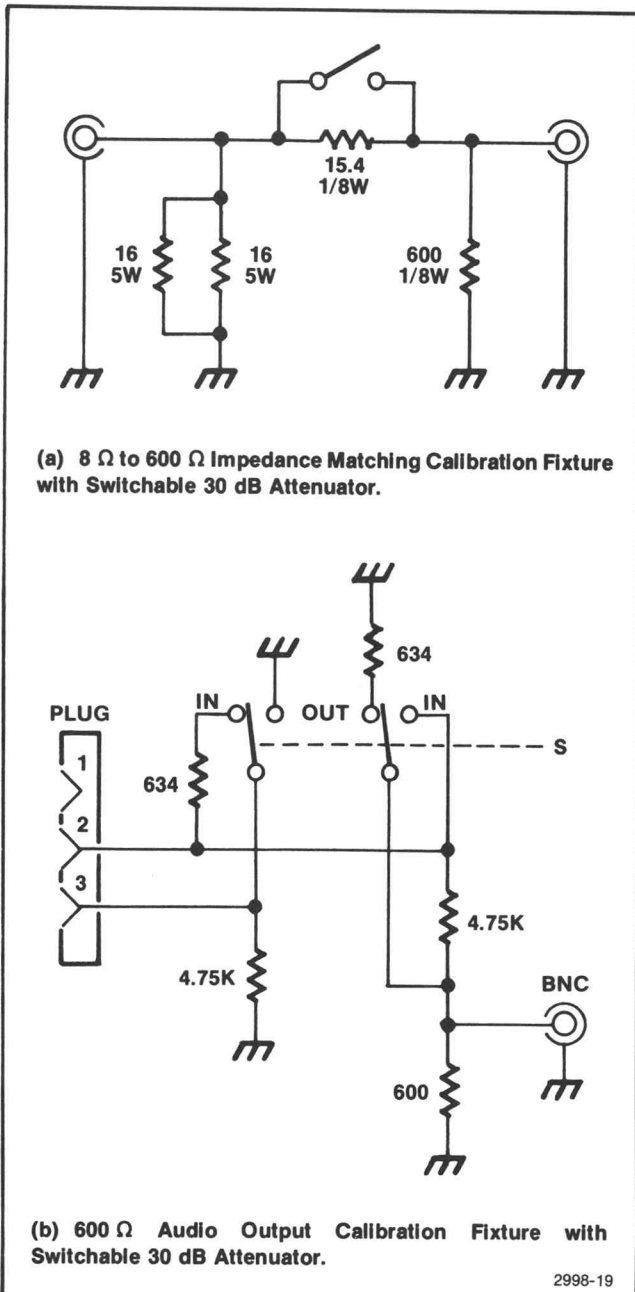


Fig. 4-1. 1450-Series Audio Output Calibration Fixture.

NOTE

An sma male-to-bnc Female Adapter (015-1018-00) must be used when making frequency measurements with the DC 508 Option 07, TR 502, and 7L13 combination. This adapter is not provided with either the DC 508 Option 07 or the TR 502, and must be ordered separately.

Table 4-2 (cont)

Channel	Limits	Visual
25	536-542	537.25
26	542-548	543.25
27	548-554	549.25
28	554-560	555.25
29	560-566	561.25
30	566-572	567.25
31	572-578	573.25
32	578-584	579.25
33	584-590	585.25
34	590-596	591.25
35	596-602	597.25
36	602-608	603.25
37	608-614	609.25
38	614-620	615.25
39	620-626	621.25
40	626-632	627.25
41	632-638	633.25
42	638-644	639.25
43	644-650	645.25
44	650-656	651.25
45	656-662	657.25
46	662-668	663.25
47	668-674	669.25
48	674-680	675.25
49	680-686	681.25
50	686-692	687.25
51	692-698	693.25
52	698-704	699.25
53	704-710	705.25
54	710-716	711.25
55	716-722	717.25
56	722-728	723.25
57	728-734	729.25
58	734-740	735.25
59	740-746	741.25
60	746-752	747.25
61	752-758	753.25
62	758-764	759.25
63	764-770	765.25
64	770-776	771.25
65	776-782	777.25
66	782-788	783.25
67	788-794	789.25
68	794-800	795.25
69	800-806	801.25
70	806-812	807.25
71	812-818	813.25
72	818-824	819.25
73	824-830	825.25
74	830-836	831.25
75	836-842	837.25
76	842-848	843.25
77	848-854	849.25
78	854-860	855.25
79	860-866	861.25
80	866-872	867.25
81	872-878	873.25

Table 4-2 (cont)

Channel	Limits	Visual
82	878-884	879.25
83	884-890	885.25

NOTE

Image Aural Carrier Frequency = 2 (Aural IF) + Aural RF

Image Visual Carrier Frequency = 2 (Visual IF) + Visual RF

LO (Local Oscillator) Frequency = Visual RF Carrier + Visual IF Carrier

Table 4-3

CHANNEL FREQUENCIES ASSOCIATED WITH TELEVISION CHANNELS IN WESTERN EUROPE FOR CCIR SYSTEMS B, G, AND I

Channel	Limits	Visual Carrier	Aural Carrier	
			Systems B&G	System I
2	47-54	48.25	53.75	.....
2A	48.25-55.50	49.75	55.25	.....
3	54-61	55.25	60.75	.....
4	61-68	62.25	67.75	.....
5	174-181	175.25	180.75	.....
6	181-188	182.25	187.75	.....
7	188-195	189.25	194.75	.....
8	195-202	196.25	201.75	.....
9	202-209	203.25	208.75	.....
10	209-216	210.25	215.75	.....
11	216-223	217.25	222.75	.....
12	223-230	224.25	229.75	.....
21	470-478	471.25	476.75	477.25
22	478-486	479.25	484.75	485.25
23	486-494	487.25	492.75	493.25
24	494-502	495.25	500.75	501.25
25	502-510	503.25	508.75	509.25
26	510-518	511.25	516.75	517.25
27	518-526	519.25	524.75	525.25
28	526-534	527.25	532.75	533.25
29	534-542	535.25	540.75	541.25
30	542-550	543.25	548.75	549.25
31	550-558	551.25	556.75	557.25
32	558-566	559.25	564.75	565.25
33	566-574	567.25	572.75	573.25
34	574-582	575.25	580.75	581.25
35	582-590	583.25	588.75	589.25
36	590-598	591.25	596.75	597.25
37	598-606	599.25	604.75	605.25
38	606-614	607.25	612.75	613.25
39	614-622	615.25	620.75	621.25
40	622-630	623.25	628.75	629.25
41	630-638	631.25	636.75	637.25
42	638-646	639.25	644.75	645.25

Table 4-3 (cont)

Channel	Limits	Visual Carrier	Aural Carrier Systems	
			B&G	System I
43	646-654	647.25	652.75	653.25
44	654-662	655.25	660.75	661.25
45	662-670	663.25	668.75	669.25
46	670-678	671.25	676.75	677.25
47	678-686	679.25	684.75	685.25
48	686-694	687.25	692.75	693.25
49	694-702	695.25	700.75	701.25
50	702-710	703.25	708.75	709.25
51	710-718	711.25	716.75	717.25
52	718-726	719.25	724.75	725.25
53	726-734	727.25	732.75	733.25
54	734-742	735.25	740.75	741.25
55	742-750	743.25	748.75	749.25
56	750-758	751.25	756.75	757.25
57	758-766	759.25	764.75	765.25
58	766-774	767.25	772.75	773.25
59	774-782	775.25	780.75	781.25
60	782-790	783.25	788.75	789.25
61	790-798	791.25	796.75	797.25
62	798-806	799.25	804.75	805.25
63	806-814	807.25	812.75	813.25
64	814-822	815.25	820.75	821.25
65	822-830	823.25	828.75	829.25
66	830-838	831.25	836.75	837.25
67	838-846	839.25	844.75	845.25
68	846-854	847.25	852.75	853.25
69	854-862	855.25	860.75	861.25

NOTE

Visual Carrier IF = 38.9 MHz
 Aural Carrier IF = 33.4 MHz
 LO Frequency = Visual Carrier Frequency + 38.9 MHz

NOTE

1. The IF OUT signal on the down-converter front panel has a frequency bandpass orientation that is inverted from the rf bandpass. For example, the Aural IF Carrier Frequency is 5.5 MHz below the Visual IF Carrier Frequency for Systems B and B. Thus for Option 2 (Visual IF Carrier Frequency = 38.9 MHz), the Aural IF Carrier Frequency is 33.4 MHz.

2. In Table 4-3, Channels 2 through 12 cover System B while Channels 21 through 69 cover System G and System I.

Table 4-4

FREQUENCIES ASSOCIATED WITH JAPANESE TELEVISION CHANNELS IN MHz (SYSTEM M)

Channel	Limits	Visual
1	90-96	81.25
2	96-102	97.25
3	102-108	103.25
4	170-176	171.25
5	176-182	177.25
6	182-188	183.25
7	188-194	189.25
8	192-198	193.25
9	198-204	199.25
10	204-210	205.25
11	210-216	211.25
12	216-222	217.25
13	470-476	471.25
14	476-482	477.25
15	482-488	483.25
16	488-494	489.25
17	494-500	495.25
18	500-506	501.25
19	506-512	507.25
20	512-518	513.25
21	518-524	519.25
22	524-530	525.25
23	530-536	531.25
24	536-542	537.25
25	542-548	543.25
26	548-554	549.25
27	554-560	555.25
28	560-566	561.25
29	566-572	567.25
30	572-578	573.25
31	578-584	579.25
31	584-590	585.25
33	590-596	591.25
34	596-602	597.25
35	602-608	603.25
36	608-614	609.25
37	614-620	615.25
38	620-626	621.25
39	626-632	627.25
40	632-638	633.25
41	638-644	639.25
42	644-650	645.25
43	650-656	651.25
44	656-662	657.25
45	662-668	663.25
46	668-674	669.25
47	674-680	675.25
48	680-686	681.25
49	686-692	687.25
50	692-698	693.25
51	698-704	699.25
52	704-710	705.25
53	710-756	711.25

Table 4-4 (cont)

Channel	Limits	Visual
54	716-722	717.25
55	722-728	723.25
56	728-734	729.25
57	734-740	735.25
58	740-746	741.25
59	746-752	747.25
60	752-758	753.25
61	758-764	759.25
62	764-770	765.25

NOTE

Aural Carrier = Visual RF Carrier + 4.5 MHz (Inter-carrier)

LO Frequency = Visual RF Carrier + Visual IF Carrier

Visual IF Carrier is specified by option, namely:

Option 01 = 37 MHz

Option 02 = 38.9 MHz

Option 03 = 45.75 MHz

PERFORMANCE CHECK

Measurement Techniques

In the following procedure, frequency is measured in several steps and the test oscilloscope must be calibrated for 0.2 dB/div to perform IF OUT and RF OUT frequency-response checks. The information that follows provides details on these techniques and must be referred to before starting the procedure.

Measuring Frequency

The Option 07 feature in the TEKTRONIX DC 508 Frequency Counter and TM 503 Power Module in conjunction with the 7L13 Spectrum Analyzer, can be used to make accurate frequency measurements.

(a) Using the cables supplied with the 7L13 accessories kit, connect the TR 502 Tracking Generator 1st and 2nd LO outputs to the 7L13 1st and 2nd LO inputs. Connect the spectrum analyzer Tracking Generator Logic output to the TR 502 Tracking Generator input. Figure 4-2 illustrates the test equipment setup.

(b) Connect the TR 502 Aux RF to the DC 508 input. An **sma-to-bnc** adapter is required to complete the connection to the TR 502 Aux RF output connector. Set the TR 502 Dot Intensity control out of detent.

NOTE

The TR 502 features a sweep-stop operational mode that stops the sweep at the center of screen and instructs the frequency counter to take a frequency measurement, then allows the sweep to continue. When the analyzer is phase-locked, the accuracy of the count is to the nearest 10 Hz; when the analyzer is not phase-locked, the accuracy is to the nearest 100 kHz. This sweep-stop mode can be turned off by the Dot Intensity control on the TR 502 front panel. Thus, when the 7L13 Center Frequency control is set such that the signal is centered about the intensified dot on the analyzer display, the DC 508 counter reads the frequency at the intensified dot accurately.

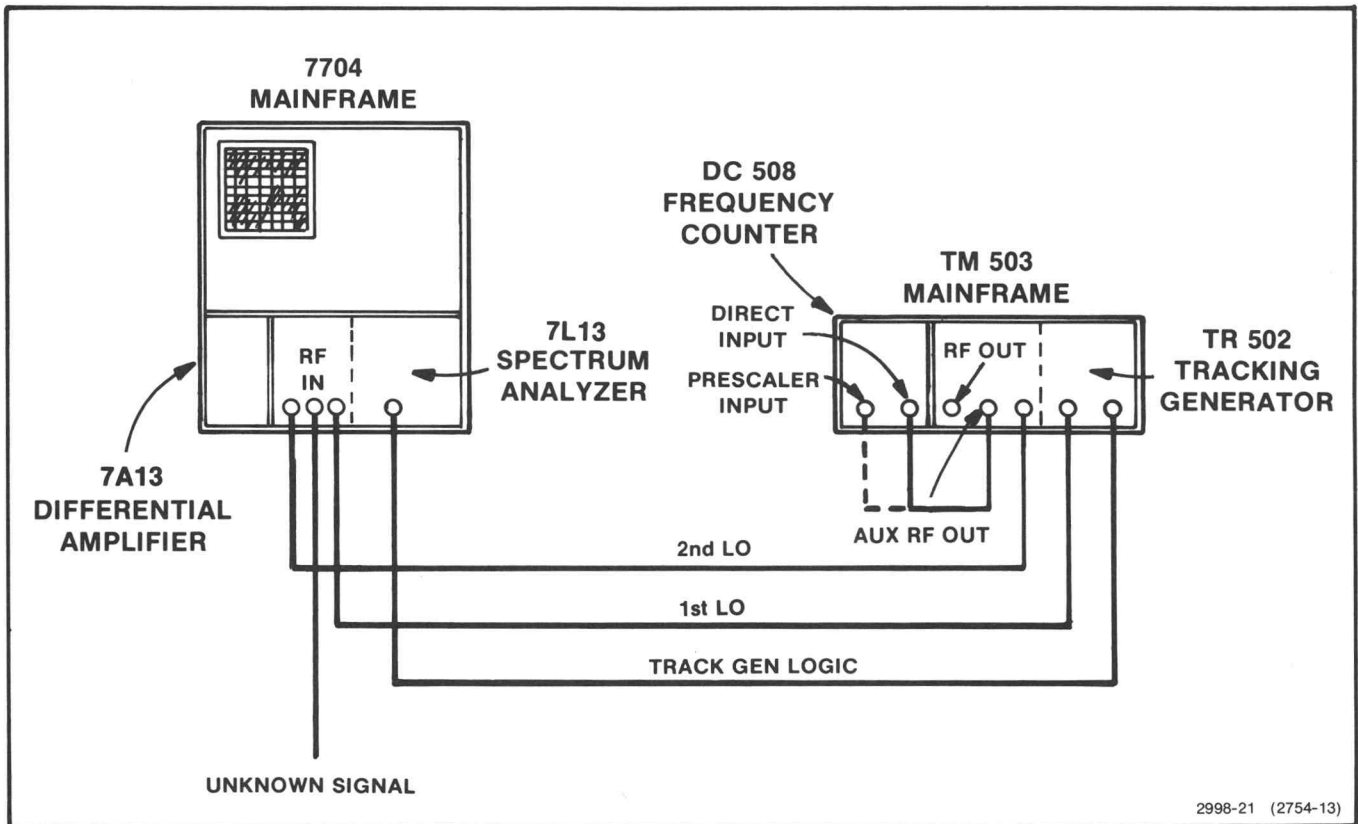


Fig. 4-2. Equipment Setup For Measuring Frequency Using The Spectrum Analyzer/Tracking Generator/Frequency Counter.

2998-21 (2754-13)

**Calibration—067-0886-01 & up
Performance Check**

Setting Up 0.2 dB/Div Reference Flatness

The IF OUTPUT and RF OUTPUT frequency-response checks performed using a spectrum analyzer have tolerances of 0.1 dB. Therefore, the test oscilloscope must be calibrated for 0.2 dB/div in order to perform these checks. Performing the following steps will suffice:

(a) Connect the test equipment as shown in Fig. 4-3. Make the appropriate connections between the tracking generator and the spectrum analyzer [1st LO, 2nd LO, and Track Gen (Logic)].

(b) Set the spectrum analyzer Reference Level to locate the power level set with the tracking generator Output Level control; then push in the test oscilloscope mainframe Left Vertical Mode button.

NOTE

The spectrum analyzer center frequency may be set at either the IF OUTPUT or the RF OUTPUT bandpass center, depending on the performance check.

(c) Use the Comparison Voltage control on the differential comparator plug-in to bring the trace within the viewing area.

(d) Use the Variable Volts/Div control on the differential amplifier to set up a 5-division excursion of the trace as

1 dB of attenuation is added and removed from the tracking generator signal.

(e) The test oscilloscope is now calibrated for 0.2 dB/div. A grease pen may be used to mark the trace on the implosion shield or graticule. This will be the reference flatness at 0.2 dB/div.

Short-Form Performance Check

1. Check Power Supplies

(-15 V \pm 0.5%; +15 V \pm 1%)

(ac ripple = 1 mV or less)

2. Test Modulator Preliminary Check

3. Check Return Loss

(IF IN = 18 dB or better)

(IF OUT = 20 dB or better)

(RF OUT = 16 dB or better)

(VIDEO IN = 20 dB or better)

4. Check Audio Input Level Range

(25 mV p-p/kHz peak)

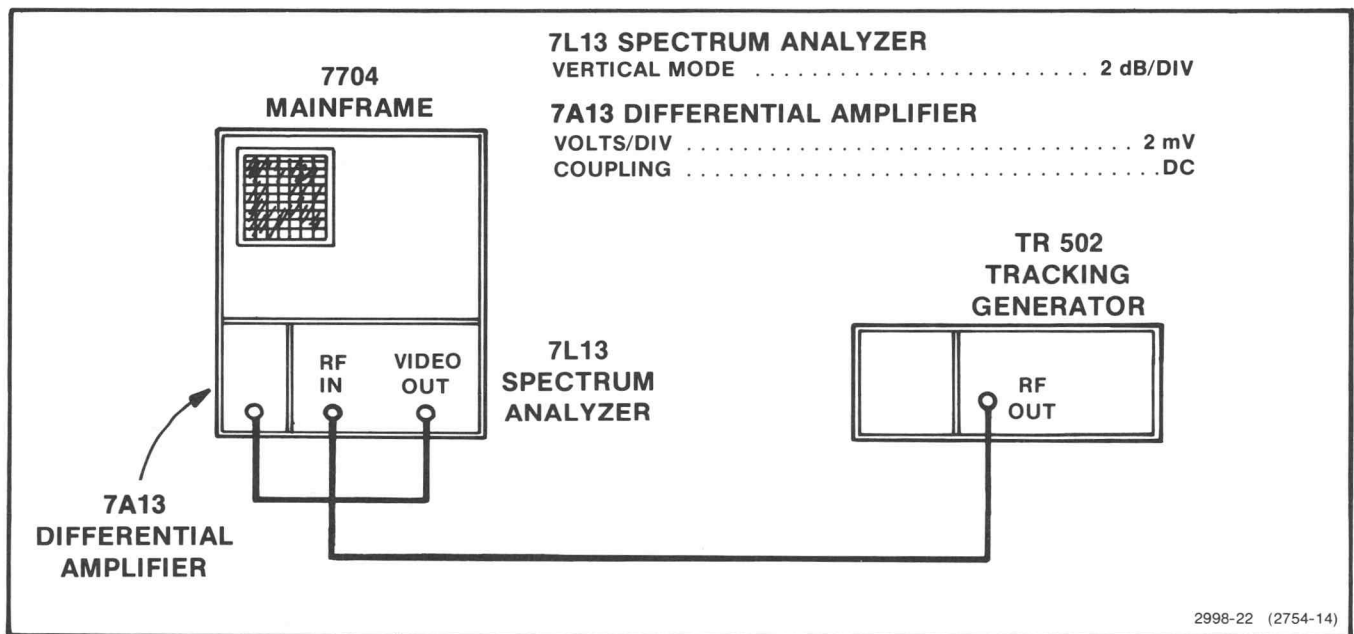


Fig. 4-3. Equipment Setup For Establishing a 0.2 dB/div Reference Flatness.

5. Check LO INput Level

(-3 dBm \pm 3 dB)

6. Check IF OUTput Frequency Response

(\pm 0.1 dB)

7. Check RF OUTput Frequency Response

(\pm 0.1 dB)

8. Check RF OUTput Level

(-25 dBm \pm 3 dB)

9. Check IF Frequency

(\pm 0.01%)

10. Check IF OUTput Level

(-24 dBm \pm 3 dB)

11. Check Group Delay at Subcarrier Frequency

(170 ns \pm 10 ns)

12. Check Video Back Porch Clamp

(0 V \pm 50 mV)

13. Check Modulation Preset

(100% \pm 20% of carrier)

14. Check Audio PRE-EMphasis Frequency Response

(See Table 4-5: 50 μ s and 75 μ s Curves \pm 0.5 dB)

15. Check Audio Harmonic Distortion

(60 dB down)

1. Check Power Supplies

(-15 V \pm 0.5%; +15 V \pm 1%)

(ac ripple = 1 mV or less)

(a) Line voltage capabilities of the Test Modulator can be selected with a circuit card located in the power cord receptacle at the rear of the instrument. Caution should be taken that the correct line fuse is installed in the instrument. See Table 4-5. Select the proper line voltage and range.

(b) Connect a voltmeter between P80-1 (on the Power Supply board) and chassis ground. Set the voltmeter on the proper scale for reading -15 V.

(c) Check that the -15 V supply is within \pm 0.5% (-14.925 V to -15.075 V).

(d) Disconnect the voltmeter lead from P80-1 and connect it to P10-1.

(e) Check that the +15 V supply is within \pm 1% (+14.85 V to +15.15 V).

(f) Disconnect the voltmeter from the Test Modulator.

(g) Connect a 1X probe from the test oscilloscope to P80-1.

(h) Check that ac ripple is 1 mV or less. Check power supply ac ripple across the ac voltage range according to Table 4-5.

(i) Disconnect the 1X probe from P80-1 and connect it to P10-1.

(j) Check that ac ripple is 1 mV or less. Again check the ac ripple across the ac voltage range.

NOTE

Refer to the installation instructions in Section 2 for information relating to Line Voltage selection and fuse data. This information may also be obtained from schematic diagram 14, Power Supply. Table 4-5 lists all the possible line voltage ranges.

Table 4-5
POSSIBLE LINE VOLTAGE RANGES

Line	Range	Fuse
115 V	LOW 90 V - 110 V	0.5 A
	HIGH 108 V - 132 V	
230 V	LOW 198 V - 242 V	0.25 A
	HIGH 216 V - 250 V	

**Calibration—067-0886-01 & up
Performance Check**

2. Test Modulator Preliminary Check

(a) Refer to Fig. 4-4.

(b) Set the VISUAL IF SYSTEM CARRIER, PRESET, AURAL IF SYSTEM CARRIER, and CRYSTAL buttons 'ON'. Set the CARRIER LEVEL control fully clockwise.

(c) Monitor the IF OUT connector with a spectrum analyzer. Set the spectrum analyzer RF dB at 10, Reference Level at -20 dBm, Frequency Span/DIV at 2 MHz, Resolution at 300 kHz, Vertical Mode at 10 dB/DIV, and Center Frequency at the if carrier frequency of the Test Modulator.

(d) Check that the spectrum analyzer displays a visual if carrier signal of about -24 dBm, and an aural if carrier a few Megahertz below the visual if carrier. The separation between the visual and aural carriers is dependent on the CCIR System. See Table 4-6.

Table 4-6

INTERCARRIER FREQUENCIES

CCIR System	Intercarrier Frequency
B/G	5.5 MHz
I	6.0 MHz
M	4.5 MHz

(d) Disconnect the spectrum analyzer from the IF OUT connector, and monitor the RF OUT with the analyzer.

(f) Connect the IF OUTput to the IF INput using a **bnc** cable supplied in the accessories package. Connect a low phase-noise **rf** signal generator to the LO INput. Set the generator frequency at a known channel **lo** frequency and the output level at -3 dBm.

(g) Reset the spectrum analyzer Center Frequency to the channel visual carrier frequency (channel visual carrier frequency is the sum of the visual **if** carrier and **lo** frequencies).

(h) Check that the spectrum analyzer displays a visual **rf** carrier signal of about -25 dBm and an aural carrier signal a few megahertz above the visual carrier.

3. Check Return Loss

(IF IN = 18 dB or better)

(IF OUT = 20 dB or better)

(RF OUT = 16 dB or better)

(VIDEO IN = 20 dB or better)

(a) Parts b through i are performed using a high-frequency return loss bridge (**vswr** bridge) such as a Wiltron Model 62NF50; parts j through r are performed using a video return loss bridge such as a Tektronix Part No. 015-0149-00.

(b) Connect the spectrum analyzer 1st LO and 2nd LO outputs to the tracking generator 1st LO and 2nd LO inputs respectively. Connect the tracking generator **rf** output to the **vswr** bridge **rf** input, and connect the **vswr** bridge **rf** output to the spectrum analyzer **rf** input.

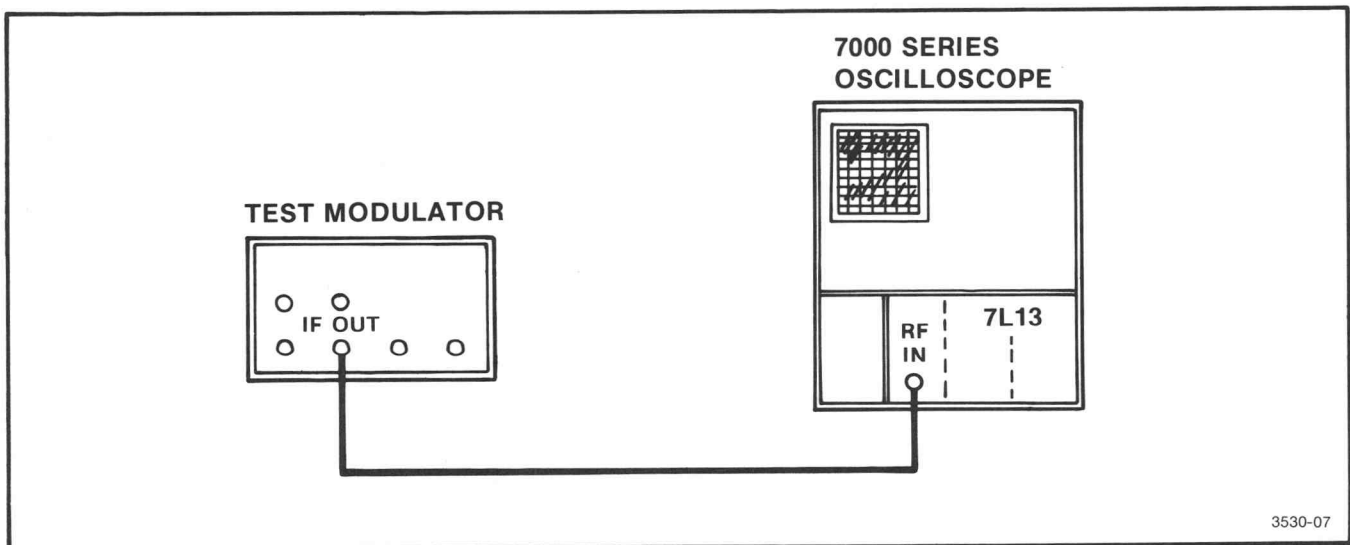


Fig. 4-4. Equipment Setup For Checking Carrier Signals.

(c) Set the tracking generator **rf** output level at -10 dBm and set the spectrum analyzer reference level at -10 dBm, RF dB at 20, Vertical Mode at 10 dB/Div, Time/Div at 10 ms, Triggering in Internal/Normal, Frequency Span/Div at 10 MHz, and Resolution at 3 MHz. Note the level on the spectrum analyzer. This is the measurement reference level.

(d) Connect the **vswr** bridge test arm to the IF IN connector.

(e) Check that return loss is at least 18 dB; that is, the trace is down at least 18 dB from the reference established in part c. Check return loss across the **if** bandpass (24.0 MHz to 65 MHz).

(f) Disconnect the **vswr** bridge from the IF IN connector, and connect it to the IF OUT connector. Set the spectrum analyzer center frequency at 45 MHz.

(g) Check that return loss is 20 dB or better from 24.0 MHz to 65 MHz.

(h) Disconnect the **vswr** bridge from the IF OUT connector, and connect it to the RF OUT connector.

(i) Check that return loss is 16 dB or better from 48 MHz to 890 MHz. Disconnect the **vswr** bridge from the RF OUT connector.

(j) Use the video return loss bridge (Tektronix Part No. 015-0149-00) to check return loss from part j through part r. Connect the return loss bridge to a Differential Comparator plug-in in the test oscilloscope. **Dc**-couple the (+) and (–) inputs on the plug-in.

(k) Connect a leveled sine-wave generator to the return loss bridge input through a 50 Ω -to-75 Ω Minimum Loss Attenuator (Tektronix Part No. 015-0149-00).

(l) Set the leveled sine-wave generator Frequency to 5 MHz and the test oscilloscope Volts/Div to 0.1 V.

(m) Remove the 75 Ω termination from the return loss bridge Unknown arm, and adjust the leveled sine-wave generator output for a 500 mV p-p (5 divisions) display as viewed on the test oscilloscope.

(n) Replace the 75 Ω termination to the return loss bridge Unknown arm.

(o) Set the test oscilloscope Volts/Div at 10 mV, and adjust the return loss bridge Bal control for minimum display amplitude on the test oscilloscope.

(p) Remove the 75 Ω termination from the return loss bridge Unknown arm, and connect the Unknown arm to the VIDEO IN connector.

(q) Check that the test oscilloscope display (return loss) is 50 mV or less (20 dB or better).

(r) Disconnect the return loss bridge Unknown arm from the VIDEO IN connector.

4. Check Audio Input Level Range

(25 mV p-p/kHz peak)

(a) Connect an audio generator to a frequency counter. Set the generator output frequency at 20.790 kHz (as read on the frequency counter) if checking a System B, G, or I Test Modulator, or 10.395 kHz if checking a System M Test Modulator. Disconnect the audio generator from the frequency counter, and connect it to the AUDIO INput.

(b) Set the VISUAL IF CARRIER, PRESET, AURAL IF CARRIER, and MODULATE buttons 'ON'. Set the PRE-EMP button OFF, and the CARRIER LEVEL control fully clockwise.

(c) Monitor the IF OUTput with a spectrum analyzer. Set the spectrum analyzer RF dB at 10, Reference Level at -20 dBm, Time/Div at 10 ms, Frequency Span/Div at 2 MHz, Resolution at 300 kHz, and Center Frequency at the **if** frequency of the Test Modulator.

(d) Locate the aural carrier on the analyzer, and reset the Center Frequency to position the aural carrier at the horizontal center of the graticule.

(e) Reset the spectrum analyzer Resolution to 3 kHz, Frequency Span/Div to 20 kHz if checking a System B, G, or I Test Modulator, or 10 kHz if checking a System M Test Modulator. Reset the Center Frequency to position the carrier at the horizontal center of the graticule.

(f) Set the audio generator output level control for minimum output, then slowly increase the generator output level until the carrier nulls (carrier at least 60 dB down from maximum). This sets up 50 kHz peak deviation for System B, G, and I Test Modulators, or 25 kHz deviation for System M Test Modulators.

Calibration—067-0886-01 & up Performance Check

(g) Disconnect the audio generator from the Test Modulator without disturbing the output level control, and connect it to a multimeter (DM 502).

NOTE

Since most audio generators have an output impedance of 600 Ω , and most test oscilloscopes have an input impedance of about 1,000,000 Ω , the test multimeter will display twice the amplitude.

(h) Check that the audio generator output level is 5.0 V p-p $\pm 5\%$ if checking a System B, G, or I Test Modulator, or 2.50 V p-p $\pm 5\%$ if checking a System M Test Modulator.

5. Check LO Input Level

(-3 dBm ± 3 dB)

(a) Connect an **rf** signal generator to the LO IN connector. Set the generator output level at -6 dBm.

(b) Monitor the RF OUT connector with a spectrum analyzer.

Set the spectrum analyzer RF dB at 10, Reference Level at -20 dBm, Vertical Mode at 10 dB/div, Time/div at 10 ms, Frequency Span/div at 2 MHz, Resolution at 300 kHz, and Center Frequency at visual **rf** carrier frequency. Visual **rf** carrier frequency is the difference frequency between the 10 frequency and the visual **if** carrier frequency.

(c) Connect the IF OUTput to the IF INput, using the **bnc** cable provided in the accessories package.

(d) Set the VISUAL IF SYSTEM CARRIER and PRESET buttons 'ON'. Make a note of the spectrum analyzer display amplitude (about -25 dBm).

(e) Change the generator output level to 0 dBm. Again make a note of the spectrum analyzer reading.

(f) Check that the difference between the spectrum analyzer readings in part d and e is less than 0.5 dB.

6. Check IF OUTput Frequency Response

(± 0.1 dB)

(a) Connect an **rf** signal generator to a spectrum analyzer **rf** input.

(b) Set the spectrum analyzer Time/Div at 10 ms, Frequency Span/Div at 1 MHz, Resolution at 300 kHz, RF dB at 30, Reference Level at 0 dBm, Vertical Mode at 10 dB/Div, and Center Frequency at 4 MHz.

(c) Set the generator output frequency at 500 kHz, and output level at 0 dBm as read on the spectrum analyzer. Vary the generator output frequency from 500 kHz to 5 MHz, and check that the generator 2nd harmonic is at least 50 dB down from the fundamental as viewed on the analyzer. Note that the spectrum analyzer Center Frequency may have to be changed in order to view the 2nd harmonic when the generator is set at 5 MHz.

(d) Connect the test equipment as shown in Fig. 4-5. Set the differential comparator Volts/Div control at 5 mV, and change the spectrum analyzer Vertical Mode to 2 dB/Div. Vary the generator frequency from 500 kHz to 5 MHz, and mark the excursion of the top of the trace using a grease pen. This is the 0.2 dB/div reference flatness.

(e) Disconnect the **rf** generator from the spectrum analyzer, and connect it to the VIDEO IN connector. Set the VISUAL IF CARRIER and PRESET buttons 'ON' (all other buttons 'OFF'). Connect the IF OUTput to the spectrum analyzer **rf** input.

(f) Change the spectrum analyzer RF dB to 0 and Reference Level to -40 dBm. Use the Comparison Voltage control on the differential comparator to bring the trace within the viewing area, and align the sideband signal with the grease pen trace.

(g) Vary the generator frequency from 500 kHz to 5 MHz, and note the excursion of the top of the trace.

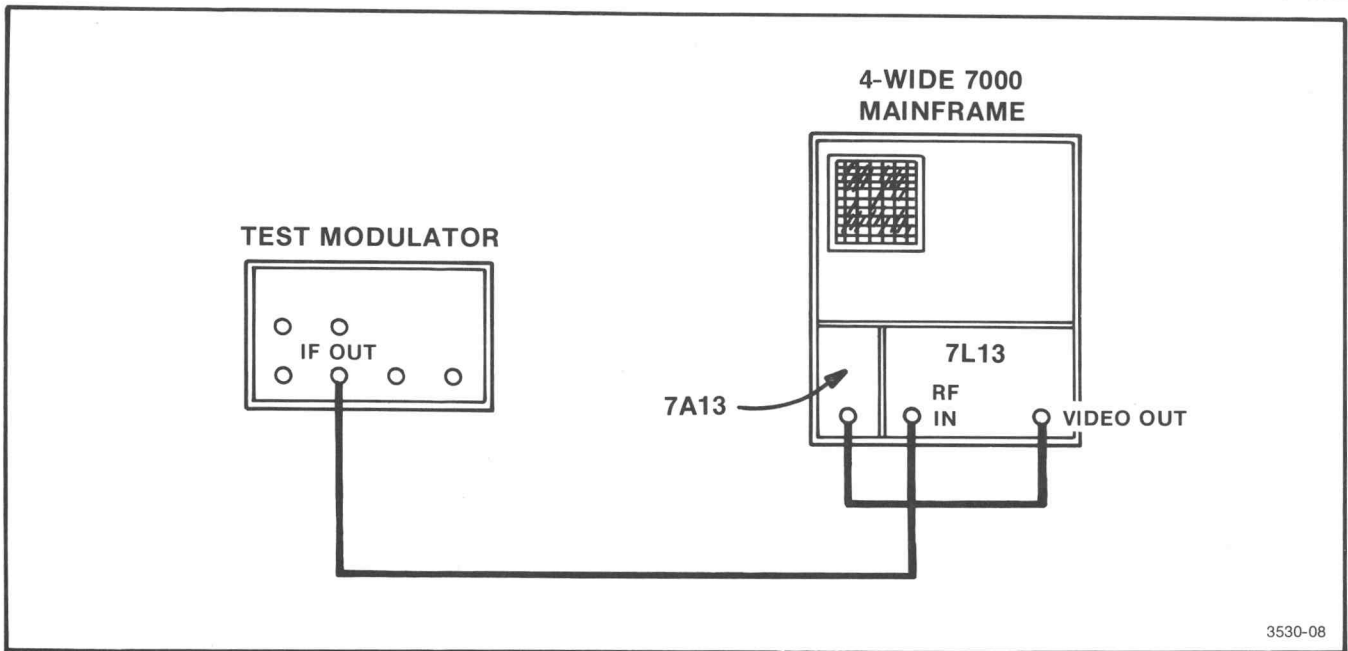
(h) Check that the excursion of the top of the trace is within half a division of the grease pen trace. Check flatness from (**if** carrier -5 MHz) to (**if** carrier +2 MHz).

7. Check RF OUTput Frequency Response

(± 0.1 dB)

(a) Connect an **rf** signal generator to a spectrum analyzer **rf** input.

(b) Set the spectrum analyzer Time/Div at 10 ms, Frequency Span/Div at 1 MHz, Resolution at 300 kHz, RF dB at 30, Reference Level at 0 dBm, Vertical Mode at 10 dB/Div, and Center Frequency at 3 MHz.

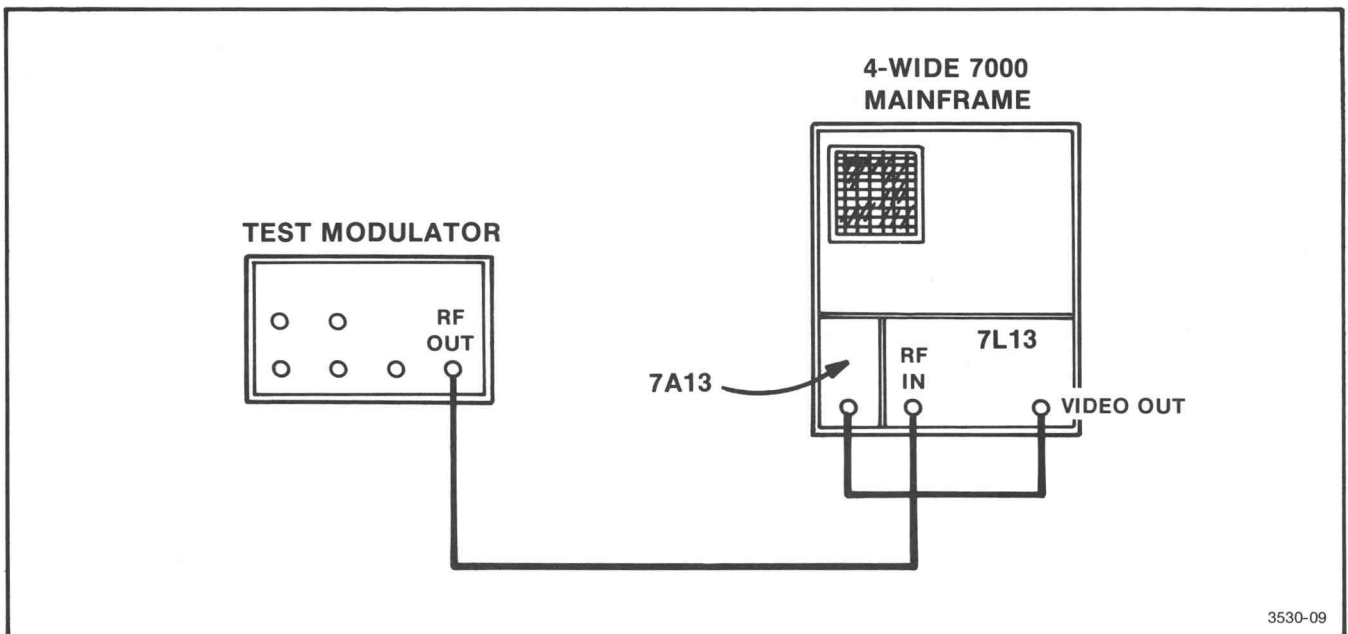


3530-08

Fig. 4-5. Equipment Setup For Checking IF OUT Frequency Response.

(c) Set the generator output frequency at 500 kHz, and output level at 0 dBm as read on the spectrum analyzer. Vary the generator output frequency from 500 kHz to 5 MHz, and check that the generator 2nd harmonic is at least 50 dB down from the fundamental as viewed on the analyzer. Note that the spectrum analyzer Center Frequency may have to be changed in order to view the 2nd harmonic when the generator is set at 5 MHz.

(d) Connect the test equipment as shown in Fig. 4-6. Set the differential comparator Volts/Div control at 5 mV, and change the spectrum analyzer Vertical Mode to 2 dB/Div. Vary the generator frequency from 500 kHz to 5 MHz, and mark the excursion of the top of the trace using a grease pen. This is the 0.2 dB/div reference flatness.



3530-09

Fig. 4-6. Equipment Setup For Checking RF OUT Frequency Response.

**Calibration—067-0886-01 & up
Performance Check**

(e) Disconnect the rf generator from the spectrum analyzer, and connect it to the VIDEO IN connector. Set the VISUAL IF CARRIER and PRESET buttons 'ON' (all other buttons 'OFF'). Connect the IF OUTput to IF INput, and connect the RF OUTput to the spectrum analyzer RF INput.

(f) Connect a low phase-noise rf signal generator to the LO IN connector. Set the low phase-noise generator frequency at the lo frequency of any one channel, and amplitude at -3 dBm. (Lo frequency is the sum of the visual rf and if carriers. See Tables 4-2 through 4-4 for channel carrier frequencies.)

(g) Change the spectrum analyzer RF dB to 0 and Reference Level to -40 dBm. Use the Comparison Voltage control on the differential comparator to bring the trace within the viewing area, and align the sideband signal with the grease pen trace.

(h) Vary the generator frequency from 500 kHz to 5 MHz, and note the excursion of the top of the trace.

(i) Check that the excursion of the top of the trace is within half a division of the grease pen trace. Check flatness from (rf carrier -2 MHz) to (rf carrier +5 MHz).

8. Check RF OUTput Level

(-25 dBm ±3 dB)

(a) Connect a 50 Ω cable from an rf signal generator to a spectrum analyzer. Set the generator output level at -6 dBm as read on the spectrum analyzer.

(b) Disconnect the 50 Ω cable from the spectrum analyzer and connect it to the LO IN connector.

(c) Connect the IF OUTput to the IF INput, using the bnc cable provided in the accessories package.

(d) Connect a 1 V p-p composite video test signal to the VIDEO IN connector.

(e) Monitor the RF OUT connector with the spectrum analyzer.

(f) Set the VISUAL IF SYSTEM CARRIER and PRESET buttons 'ON'.

(g) Check that the spectrum analyzer indicates -25 dBm ±3 dBm.

(h) Change the generator output level to 0 dBm.

(i) Check that the spectrum analyzer indicates -25 dBm ±3 dBm.

9. Check IF Frequency

(±0.01%)

(a) Connect the IF OUTput to a frequency counter such as a TEKTRONIX DC 508. Set the VISUAL IF SYSTEM CARRIER and PRESET buttons 'ON'. All other buttons must be 'OFF', and nothing connected to the VIDEO INput.

(b) Check that the frequency counter indicates the visual if within ±0.01%. See Table 4-7 for if frequencies.

**Table 4-7
IF FREQUENCIES**

Test Modulator Version	Visual IF Carrier	Aural IF Carrier
067-0886-01	37 MHz	32.5 MHz
067-0886-02	38.9 MHz	34.4 MHz
067-0886-03	45.75 MHz	41.25 MHz
067-0886-04	38.9 MHz	33.4 MHz
067-0886-05	38.9 MHz	32.9 MHz

(c) Set the VISUAL IF CARRIER button 'OFF', and set the AURAL IF CARRIER and MODULATE buttons 'ON'.

(d) Check that the frequency counter indicates the aural if. See Table 4-7 for if frequencies. Note that the aural if carrier frequency can be set correctly by adjusting the CENTER FREQ adjustment.

(e) Disconnect the IF OUTput from the frequency counter.

10. Check IF OUTput Level

(-24 dBm ±3 dB)

(a) Monitor the IF OUTput with a spectrum analyzer.

(b) Set the VISUAL IF CARRIER and PRESET buttons 'ON'.

(c) Connect a 1 V p-p composite video test signal to the VIDEO IN connector.

(d) Set the spectrum analyzer RF dB at 10, Reference Level at -20 dBm, Vertical Mode at 10 dB/Div, Time/Div at 10 ns, Frequency Span/Div at 5 MHz, Resolution at 3 MHz, and Center Frequency at the carrier frequency of the Test Modulator.

(e) Check that the IF OUTPUT level is -24 dBm ±3 dB as viewed on the spectrum analyzer.

11. Check Group Delay at Subcarrier Frequency

(170 ns ±10 ns)

(a) Remove the Video Processor and the Visual Modulator boards (A1A6 and A1A5 respectively) from their compartments.

(b) Connect the output of a video test signal generator to pin 11 (pin 9 = ground) in A1A6 location, using a bnc-to-square pin adapter cable. Set the video test signal generator front panel controls for a Pulse and Bar output signal with a Modulated 20T Pulse for Systems B and G or 12.5T Pulse for System M.

(c) Monitor pin 5 (pin 4 = ground) in A1A5 location with a 1480-Series Waveform Monitor. Set the waveform monitor front panel controls for a 2 Line (Display at 10 μs), and 1 V p-p (Volts Full Scale at 1.0). Position the modulated pulse at the center of the graticule.

(d) Reset the Volts Full Scale control to 0.2 (X5). Reposition the modulated pulse at the center of the graticule if necessary. See Fig. 4-7. Delay at subcarrier frequency can be determined by measuring the baseline errors on the modulated pulse. The peak-to-peak amplitude (Y1 to Y2 in Fig. 4-7) will be 0.085 V p-p for Systems B and G, and 17 IRE p-p for System M. Thus at 0.2 Volts Full Scale, delay time is:

$$t = \frac{2000 \text{ ns} (Y1' + Y2')}{5} \quad \text{where } Y1' \text{ and } Y2' \text{ are absolute values of } Y1 \text{ and } Y2 \text{ relative to blanking level.}$$

$$= 400(Y1 + Y2)\text{ns for System B and G, and}$$

$$t = 10 \text{ ns} \frac{(Y1' + Y2')}{5}$$

$$= 2(Y1' + Y2')\text{ns for System M.}$$

NOTE

In Systems B and G, 0.1 V p-p amplitude (Y1 to Y2) is equal to 200 ns; and in System M, 1 IRE p-p is equal to 10 ns.

(e) Set the PRECORRECTOR button 'ON'.

(f) Check that delay is 170 ns ±10 ns.

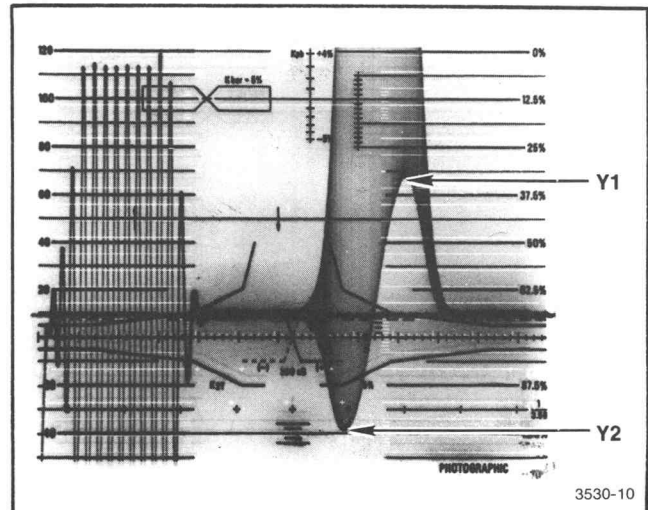


Fig. 4-7. Subcarrier Delay Waveform.

NOTE

The preceding procedure checks group delay at subcarrier frequency only. In general, this is sufficient to assure that the Precorrector board is working properly.

Three extra pieces of equipment are required to check the entire group delay. This equipment is bulky, expensive, and hard to use. However, if one wishes to check the entire group delay, the equipment can be obtained from Rhode and Schwarz.

Figure 4-8 provides a typical test setup for this check using Rhode and Schwarz LFM Group Delay Measurement equipment. Note that front panel names may be slightly different from those shown in Fig. 4-8, but can easily be correlated. Refer also to Table 4-8 for group-delay values and tolerances.

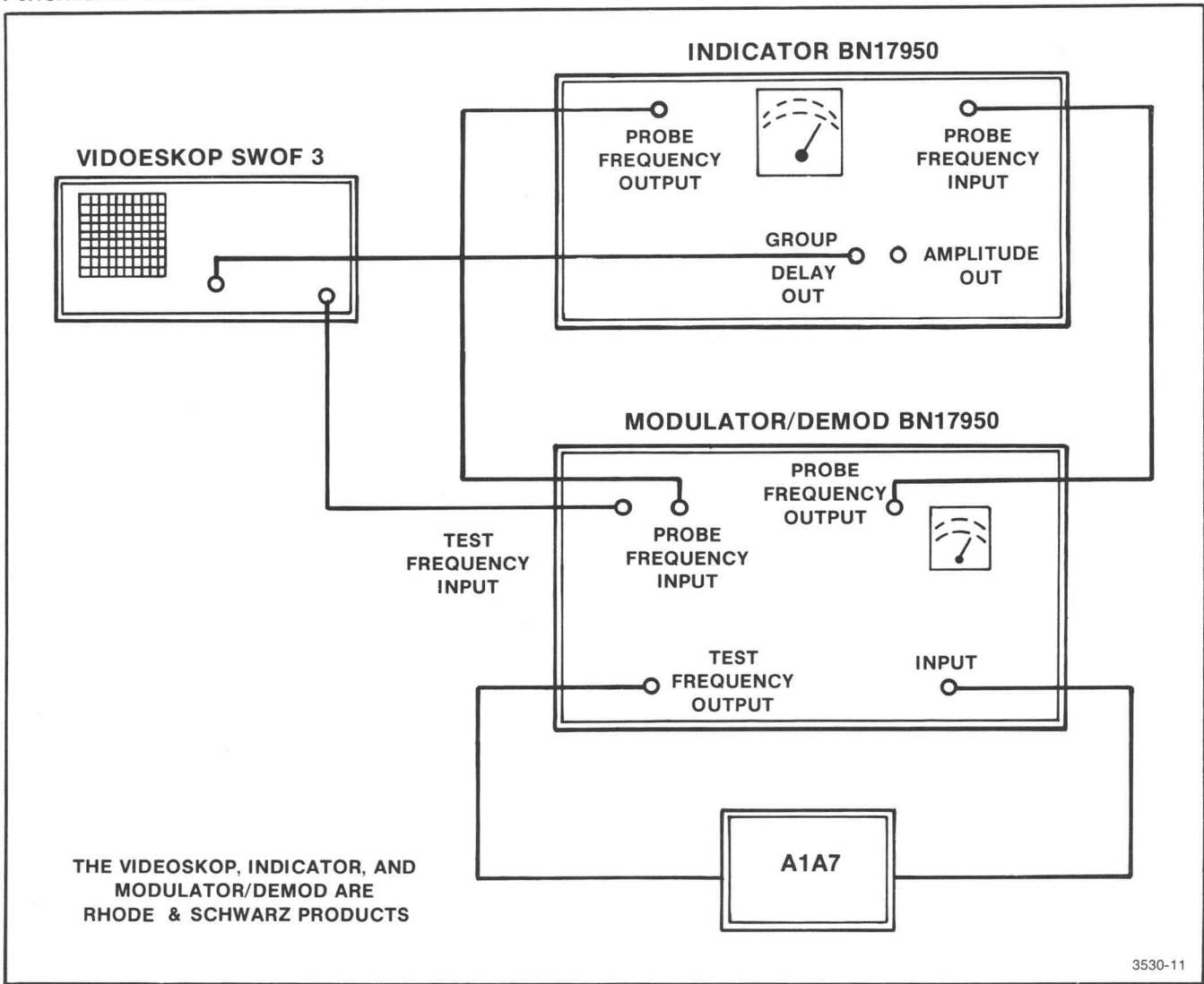


Fig. 4-8. Typical Group Delay Measurement Test Setup.

Table 4-8
ENVELOPE DELAY vs.
BASEBAND FREQUENCY RESPONSE

System B and System G

Frequency (MHz)	Delay (ns)	Tolerance (ns)
0.25	+5	±6
1.00	+53	±6
2.00	+90	±6
3.00	+75	±6
3.75	0.0	±6
4.43	-170	±10
4.80	-400	±45

System M

Frequency (MHz)	Delay (ns)	Tolerance (ns)
0.50	0.0	±10
1.00	0.0	±10
2.50	0.0	±10
3.00	-25	±10
3.58	-170	±10
4.00	-293	±20
4.18	-340	±40

Remove the Video Processor and the Visual Modulator boards (A1A6 and A1A5 respectively) from their compartments. The input to the Video Processor board can be

accessed by connecting a **bnc**-to-square pin adapter cable to pin 11 (pin 10 = ground) in A1A6 location, and the output from this board can be accessed by connecting a **bnc**-to-square pin adapter cable to pin 5 (pin 4 = ground) in A1A5 location.

12. Check Video Back-Porch Clamp

(0 V \pm 50 mV)

(a) Connect a video test signal generator to a 1480-Series Waveform Monitor channel A input through a 75 Ω termination, and connect the output from a function generator through a 10X attenuator to the same waveform monitor channel B input.

(b) Set the video signal generator front-panel controls for a 1 V p-p composite video test signal, and set the function generator front-panel controls for a low-frequency square wave signal.

(c) Set the waveform monitor Input switch to A-B.

(d) Connect the waveform monitor Aux Output to a test oscilloscope through a 75 Ω termination. Set the test oscilloscope controls for 10 μ s/Div and 100 mV/Div. The test oscilloscope will display a line-rate signal whose blanking level changes at the function generator square-wave rate.

(e) Set the function generator **Dc** Offset control such that the blanking level varies 200 mV above and below 0 V **dc** on the test oscilloscope.

(f) Disconnect the waveform monitor Aux Output from the test oscilloscope, and connect it to the VIDEO IN connector.

(g) Remove the Video Precorrector board (A1A7) from its compartment, and monitor the input pins (pin 11 = signal input/pin 12 = ground) with a test oscilloscope using a square pin-to-**bnc** adapter cable and a 75 Ω termination.

(h) Set the CLAMP button 'ON'.

(i) Check that the blanking level is at 0 V \pm 50 mV as viewed on the test oscilloscope.

(j) Set the CLAMP button 'OFF'.

(k) Check that the blanking level is varying at the function generator square-wave rate.

13. Check Modulation Preset

(100% \pm 20% of carrier)

(a) Connect a variable **dc** supply to the VIDEO IN connector. Be sure that the **dc** supply is set for 0 V.

(b) Monitor the IF OUT connector with a spectrum analyzer. Set the spectrum analyzer RF dB at 0, Reference Level at -30 dBm, Log (Vertical Mode) at 10 dB/Div, Time/Div at 20 ms, Frequency Span/Div at 2 MHz, Resolution at 300 kHz, and Center Frequency at the visual **if** carrier frequency of the Test Modulator.

(c) Set the VISUAL IF CARRIER and PRESET buttons 'ON'. Leave all other buttons 'OFF'.

(d) Set the variable **dc** supply such that the carrier signal displayed on the spectrum analyzer is minimum, typically more than 60 dB down.

(e) Disconnect the variable **dc** supply from the Test Modulator without disturbing its final setting, and connect it to the voltmeter.

(f) Check that the voltmeter indicates the zero carrier **dc** level. Refer to Table 4-9 for zero carrier levels:

Table 4-9
ZERO CARRIER LEVELS

Test Modulator Version	Zero Carrier Level
067-0886-01	+857 mV
067-0886-02	+857 mV
067-0886-03	+857 mV
067-0886-04	+811 mV
067-0886-05	+950 mV

14. Check Audio PRE-EMphasis Frequency Response

(See Table 4-10: 50 μ s and 75 μ s Curves \pm 0.5 dB)

Table 4-10

DE-EMPHASIS AUDIO FREQUENCY RESPONSE

50 μ s Time Constant
Systems B, G, and I

Frequency	Attenuation
10.00 Hz	0.00 dB
1.000 kHz	+0.41 dB
2.000 kHz	+1.44 dB
3.000 kHz	+2.76 dB
3.183 kHz	+3.01 dB
4.000 kHz	+4.11 dB
5.000 kHz	+5.40 dB
6.000 kHz	+6.58 dB
7.000 kHz	+7.66 dB
8.000 kHz	+8.64 dB
9.000 kHz	+9.54 dB
10.000 kHz	+10.36 dB
11.000 kHz	+11.12 dB
12.000 kHz	+11.82 dB
13.000 kHz	+12.47 dB
14.000 kHz	+13.08 dB
15.000 kHz	+13.66 dB
16.000 kHz	+14.19 dB
17.000 kHz	+14.70 dB
18.000 kHz	+15.22 dB
19.000 kHz	+15.64 dB
20.000 kHz	+16.07 dB

75 μ s Time Constant
System M

Frequency	Attenuation
10.00 Hz	0.00 dB
1.000 kHz	+0.87 dB
2.000 kHz	+2.76 dB
2.122 kHz	+3.01 dB
3.000 kHz	+4.77 dB
4.000 kHz	+6.58 dB
5.000 kHz	+8.16 dB
6.000 kHz	+9.54 dB
7.000 kHz	+10.75 dB
8.000 kHz	+11.82 dB
9.000 kHz	+12.78 dB
10.000 kHz	+13.66 dB
11.000 kHz	+14.45 dB
12.000 kHz	+15.18 dB
13.000 kHz	+15.86 dB
14.000 kHz	+16.49 dB
15.000 kHz	+17.07 dB
16.000 kHz	+17.62 dB
17.000 kHz	+18.14 dB
18.000 kHz	+18.63 dB
19.000 kHz	+19.09 dB
20.000 kHz	+19.53 dB

(a) Connect the test equipment as shown in Fig. 4-9. Set the audio generator output amplitude at 1 V p-p, and frequency at 10 Hz.

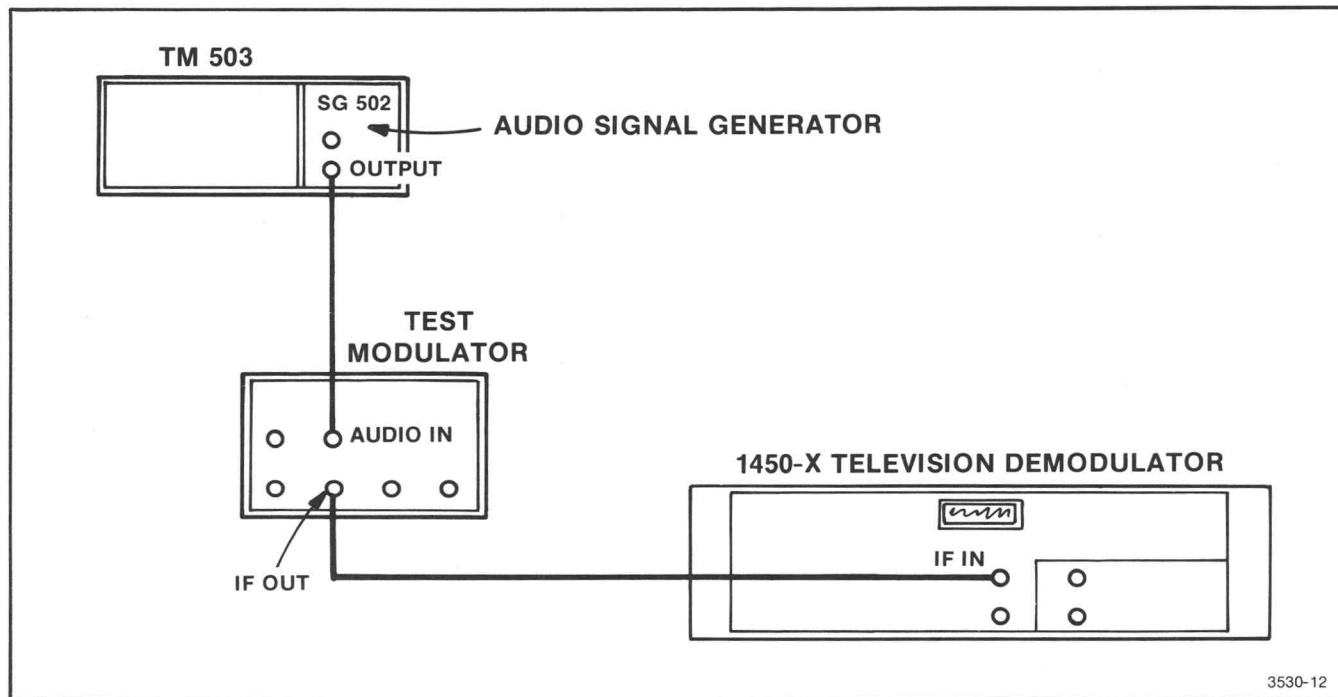


Fig. 4-9. Equipment Setup For Checking De-Emphasis Frequency Response.

(b) Set the AUDIO, AURAL IF CARRIER and MODULATE buttons 'ON', and set the CARRIER LEVEL control fully clockwise. Be sure that the PRE-EMPHASIS button is 'OFF'.

(c) Push in the Man, Oral Only, Split, and De-Emphasis Out buttons on the 1450-Series front panel and set the Gain control fully counterclockwise.

(d) Monitor the demodulator audio output with a voltmeter set to read in dB.

(e) Note the audio amplitude on the voltmeter; then set the PRE-EMPHASIS button 'ON'. Note the new audio amplitude on the voltmeter.

(f) Check that the difference between the amplitudes noted in part e conforms to Table 4-10.

(g) Repeat parts b through f while resetting the audio generator output frequency according to Table 4-10.

15. Check Audio Harmonic Distortion

(60 dB down)

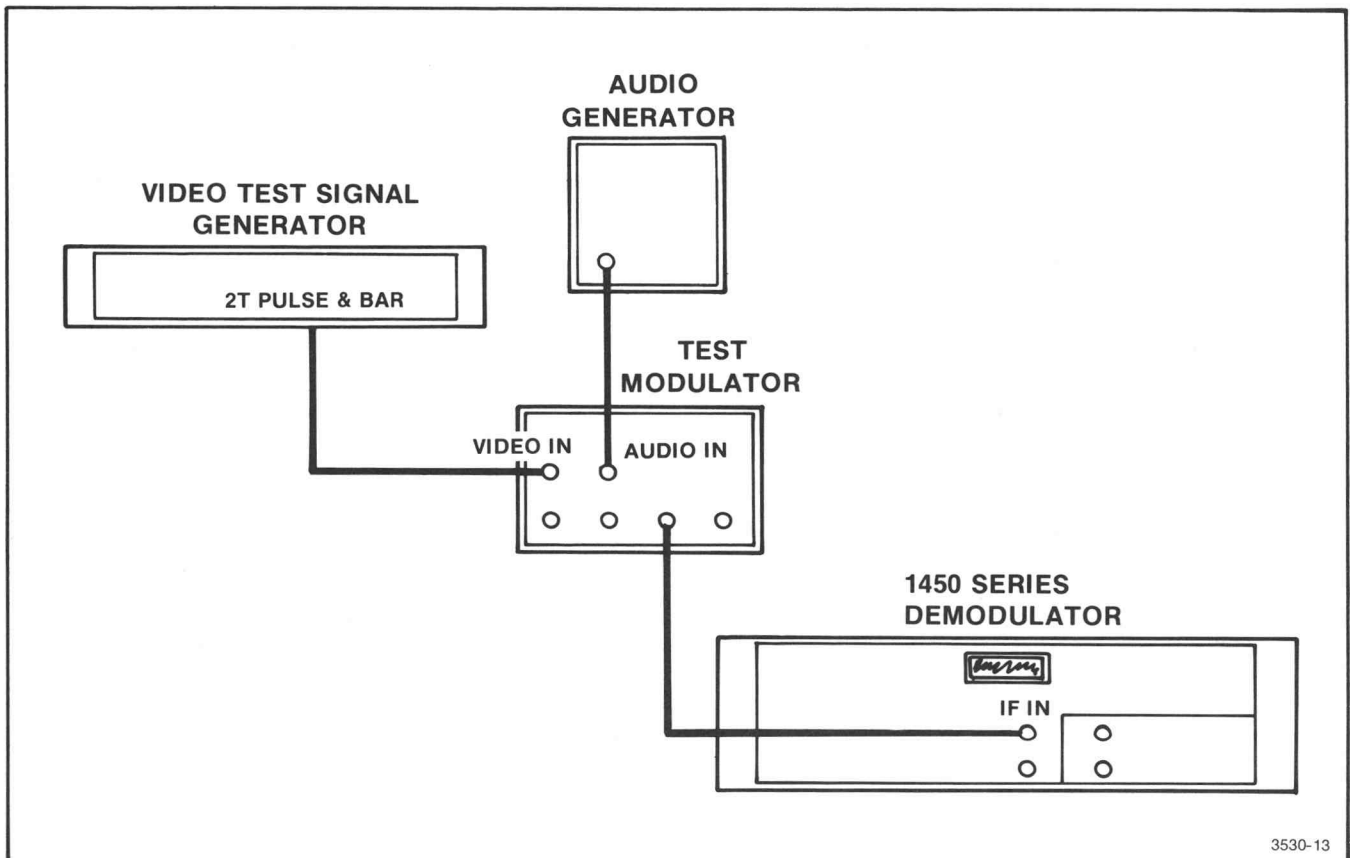
(a) Connect the test equipment as shown in Fig. 4-10.

(b) Set the audio generator output frequency at 10.395 kHz if checking a System M Test Modulator, or 20.790 kHz if checking a System B, G, or I Test Modulator.

(c) Set the VISUAL IF SYSTEM CARRIER, PRESET, AURAL IF SYSTEM CARRIER, MODULATE, and AUDIO buttons 'ON'. Set the CARRIER LEVEL control fully clockwise. Make sure that the PRE-EMP button is OFF.

(d) Push in the Intr and De-Emphasis buttons on the demodulator front panel.

(e) Disconnect the cable at the demodulator if input, and connect it to a spectrum analyzer rf input. Set the spectrum analyzer Frequency Span/Div at 2 MHz, Resolution at 3 MHz, Time/Div at 20 ms, Vertical Mode at 10 dB/Div, Reference Level at -20 dBm, and Center



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Fig. 4-10. Equipment Setup For Checking Harmonic Distortion.

**Calibration—067-0886-01 & up
Performance Check**

Frequency at the intercarrier frequency of the Test Modulator under test. Locate the aural carrier on the spectrum analyzer, then reset the analyzer Resolution to 3 kHz and Frequency Span/Div to 10 kHz for System M Test Modulator, or 20 kHz for System B, G, and I Test Modulators.

(f) Monitor the demodulator audio output with an audio analyzer using the 8 Ω -to-600 Ω impedance-matching network shown in Fig. 4-1. Set the audio

analyzer vertical reference at +10 dBm, Vertical Mode at 10 dB/Div, Frequency Span/Div at 1 kHz, Resolution at 3 kHz, Triggering in Normal/Free Run, Time/Div in Auto, Input terminating impedance and reference at 600 Ω , and Center Frequency at 20.75 kHz for System M or 41.5 kHz for System B, G, I (20.75 kHz is the 2nd harmonic for System M and 41.5 kHz for System B, G, I).

(g) Check that the 2nd harmonic is down at least 60 dB from the fundamental.

ADJUSTMENT PROCEDURE

Short-Form Adjustment Procedure

1. Adjust Power Supply

(R66 on A70 Power Supply board)

2. Check Video Processing

(A1A6 Video Processor board)

3. Check the Video Precorrector board (A1A7)

4. Adjust Visual LO

(L214 and L221 on A1A4 Visual LO board)

5. Adjust Visual Modulator

(L333, L421, C315, C612, L521, MOD PRESET [R74], and L114 on A1A5 Visual Modulator board)

6. Adjust Precorrector Balance

(R445 for Systems B and G or R321 for System M on A1A7 Precorrector board)

7. Adjust Aural Carrier Crystal Oscillator

(C326 and R128 on A1A8 Aural Modulator board)

8. Adjust Aural Carrier LC Oscillator

(L126 and R103 on A1A8 Aural Modulator board)

9. Check RF LO Amplifier Gain

(Approximately 16 dB)

10. Adjust IF Filter

(C212, C311, C511, L311, and L412 on A1A3 IF Filter board)

11. Check RF Mixer board (A1A2)

1. Adjust Power Supply

(R66 on A70 Power Supply board)

(a) Monitor P80-1 on the Power Supply board with a voltmeter.

(b) Adjust R66 (–15 V Adjust) on the Power Supply board for –15 V $\pm 0.5\%$ as read on the voltmeter.

(c) Connect the voltmeter to P10-1 on the Power Supply board and check that the +15 V supply is within $\pm 1\%$.

NOTE

1. Some circuit boards in the Test Modulator have adjustable components that can be accessed only by using an extender board supplied in the accessories. The extender board has test points for accessing the pins on the Interconnect board. The test points are numbered left to right from 1 through 12. Only test point numbers 1, 6, 7, and 12 appear on the extender board.

2. When an adjustment on a circuit board is called out and cannot easily be reached with an adjustment tool, the circuit board involved must be installed in the Test Modulator using one of the board extenders.

2. Check Video Processing

(A1A6 Video Processor board)

(a) Remove the Video Processor board (A1A6) from its compartment, and install an extender board in the compartment.

(b) Install the Video Processor board on the extender.

(c) Connect the output from a video test signal generator to the VIDEO INput. Do not use a 75 Ω termination.

(d) Remove the Video Precorrector board (A1A7) from its compartment, and monitor the input pins (pin 11 = signal input/pin 12 = ground) with the test oscilloscope, using a square pin-to-bnc adapter cable and a 75 Ω termination.

(e) Check that the test oscilloscope display is 1 V p-p.

(f) Connect a 10X probe to pin 4 of U510 or the base of Q541 on A1A6.

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(g) Check that the test oscilloscope displays a back-porch pulse (a pulse occurring during burst time with a half-amplitude duration of approximately $2.5 \mu\text{s}$).

(h) Disconnect the video test signal generator from the VIDEO INput and connect it to a 1480-Series Waveform Monitor channel A input through a 75Ω termination, and connect the output from a function generator through a 10X attenuator to the same waveform monitor channel B input. Set the video signal generator front panel controls for a 1 V p-p composite video test signal, and set the function generator front panel controls for a low-frequency square wave signal. Set the waveform monitor Input switch to A-B.

(i) Connect the waveform monitor Aux Output to a test oscilloscope through a 75Ω termination. Set the test oscilloscope controls for $10 \mu\text{s}/\text{Div}$ and $100 \text{ mV}/\text{Div}$. The test oscilloscope will display a line-rate signal whose blanking level changes at the function generator square-wave rate.

(j) Set the function generator **Dc** Offset control such that the blanking level varies 200 mV above and below 0 V **dc** on the test oscilloscope.

(k) Set the CLAMP button 'ON'.

(l) Check that the blanking level is at $0 \text{ V} \pm 50 \text{ mV}$ as viewed on the test oscilloscope.

(m) Set the CLAMP button 'OFF'.

(n) Check that the blanking level is varying at the function generator square-wave rate.

3. Check the Video Precorrector board (A1A7)

(a) Drive the VIDEO INput with a Modulated \sin^2 Pulse and Bar signal from a video test signal generator. Set the CLAMP, VISUAL IF CARRIER, and PRECORRECTOR buttons 'ON'.

(b) Connect the IF OUTput to a TEKTRONIX Demodulator if input. On the demodulator, push in Sync Tip (Synchronous Detection), (Sound Trap) In, and Sync Tip (**agc**) buttons. Monitor the demodulator video output with a waveform monitor set to view line rate signals.

(c) Make a note of the Modulated \sin^2 Pulse display (no apparent chrominance-to-luminance delay inequalities or differential gain).

(d) Set the PRECORRECTOR button 'OFF', and push in the demodulator (Sound Trap) In button. Make a note of the Modulated \sin^2 Pulse display.

(e) Check that the Modulated 2T Pulse displays noted in parts c and d are identical. For comparison, set the PRECORRECTOR button 'ON' and note the apparent chrominance-to-luminance delay inequalities present.

NOTE

Since Video Precorrector board (A1A7) is difficult to adjust, it is recommended that this board (A1A7) be returned to the nearest Tektronix, Inc. Service Center for repair and recalibration.

4. Adjust Visual LO

(L214 and L221 on A1A4 Visual LO board)

(a) Remove the Visual LO board from its compartment and install an extender board in the compartment.

(b) Install the Visual LO board on the extender board.

(c) Connect a voltmeter between the emitter of Q216 and ground. After L214 and L221 are adjusted properly, the **dc** level at the emitter of Q216 should be no greater than 325 mV.

(d) Monitor the IF OUT connector with a test oscilloscope using a 50Ω cable. Set the test oscilloscope Volts/Div control at 10 mV, and Time/Div at $1 \mu\text{s}$.

(e) Adjust L214 such that the **dc** level at the emitter of Q216 is 325 mV as read on the voltmeter. This sets optimum current through Q216.

NOTE

Minimum current through Q216 is achieved when the adjustable core in L214 is all the way in.

(f) Adjust L221 for maximum peak-to-peak amplitude on the test oscilloscope.

(g) L214 and L221 interact. Repeat parts e and f until the **dc** level at the emitter of Q216 is no greater than 325 mV, and the test oscilloscope display is at maximum peak-to-peak amplitude.

(h) Remove the extender board from the Visual LO board compartment, and replace the Visual LO board in its compartment.

5. Adjust Visual Modulator

(L333, L421, C315, C612, L521, MOD PRESET [R74], and L114 on A1A5 Visual Modulator board)

L421 is adjusted for minimum 2nd harmonic, L333 for minimum 3rd harmonic, C315, C612, and L521 for bandpass flatness. Refer to Table 4-11 for bandpass limits.

Table 4-11
IF BANDPASS LIMITS

Visual IF	2nd Harmonic	3rd Harmonic	Bandpass
37 MHz	74.0 MHz	111.0 MHz	22 to 42 MHz
38.9 MHz	77.8 MHz	116.7 MHz	28 to 44 MHz
45.75 MHz	91.5 MHz	137.25 MHz	32 to 50 MHz

(a) Remove J311 jumper on the Modulator board and connect a tracking generator (sweep generator) to pin 4 (pin 5 = ground) using a **bnc**-to-square pin receptacle adapter cable. Make sure that the ground wire on the cable touches the inside wall of the extrusion at all times.

(b) Monitor the IF OUT connector with a spectrum analyzer, using a short 50 Ω cable.

(c) Set the tracking generator output level at -10 dBm.

(d) Set the spectrum analyzer RF dB at 0, Reference Level at -30 dBm, Resolution at 3 MHz, Vertical Mode at 10 dB/Div, Frequency Span/Div at 5 MHz, and Center Frequency at the 2nd harmonic of the Test Modulator visual **if** carrier frequency.

(e) Adjust L421 for minimum signal amplitude at the center frequency (2nd harmonic trap). Adjust L421 by squeezing the coil turns closer together or pushing them farther apart.

(f) Reset the center frequency to the 3rd harmonic of the Test Modulator visual **if** carrier frequency.

(g) Adjust L333 for minimum signal amplitude at the center frequency (3rd harmonic trap). L333 is adjusted by squeezing the turns closer together or pulling them apart to change inductance.

(h) Reset the tracking generator output level to -20 dBm.

(i) Reset the spectrum analyzer RF dB to 10, Reference Level to -20 dBm, Vertical Mode to 2 dB/Div, and Center Frequency as desired to view the **if** bandpass according to Table 4-11.

NOTE

The following adjustment uses a 4-wide plug-in oscilloscope mainframe, such as a TEKTRONIX 7704 Oscilloscope System.

The 7L13 Spectrum Analyzer takes up three plug-in compartments in the oscilloscope mainframe (two horizontal and one vertical). A differential comparator plug-in is needed for setting up a 0.2 dB/div reference flatness, and takes up the free (left) vertical plug-in compartment.

(j) Connect the spectrum analyzer Video Output to the differential comparator, using a **bnc**-to-pin jack adapter cable. Set the differential comparator Volts/Div control at 5 mV. On the test oscilloscope mainframe, push in the left (Vertical Mode) button.

(k) Use the Comparison Voltage control to bring the display within the viewing area.

(l) Adjust C315, C612, and L521 on A1A5 for bandpass flatness within one-half division as viewed on the test oscilloscope. Refer to Table 4-11 for bandpass limits.

(m) Disconnect the tracking generator and the spectrum analyzer from the Test Modulator, and replace J311 jumper to pins 3 and 4.

(n) Set the (VISUAL IF) CARRIER, and PRECORRECTOR buttons 'ON', and set the PRESET and CLAMP buttons 'OFF'.

(o) Monitor the IF OUTPUT with the spectrum analyzer. Set the spectrum analyzer RF dB at 0, Reference Level at -30 dBm, Resolution at 300 kHz, Frequency Span/Div at 2 MHz, Time/Div at 10 ms, and Center Frequency at the visual **if** carrier frequency of the Test Modulator.

(p) Set the QUAD BALANCE (R84) on the front panel to midrange, and set the MODULATION LEVEL control for minimum visual carrier as viewed on the spectrum analyzer.

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Adjustment Procedure**

(q) Adjust L114 on A1A5 for minimum visual **if** carrier signal as viewed on the spectrum analyzer.

(r) Repeat parts p and q until the visual carrier is hardly visible on the spectrum analyzer (at least 60 dB down as compared to the carrier level when the PRESET button is 'ON').

(s) Set the PRESET button 'ON', and connect a variable **dc** power supply to the VIDEO INput. Set the power supply **dc** voltage to a level equal to 100% modulation (Zero Carrier). See Table 4-12 for **dc** levels.

Table 4-12

VIDEO DC (ZERO CARRIER) LEVELS

System	Peak White	Blanking	Sync Tip	Zero Carrier
M	+0.714 V	0 V	-0.286 V	+0.857 V
B and G	+0.700 V	0 V	-0.300 V	+0.811 V
I	+0.700 V	0 V	-0.300 V	+0.950 V

(t) Adjust MOD PRESET (R74) on the front panel for minimum visual **if** carrier signal as viewed on the spectrum analyzer (greater than 60 dB down).

(u) Disconnect all test equipment from the Test Modulator.

6. Adjust Precorrector Balance

(R445 on A1A7 Precorrector board for Systems B and G)

(a) Omit parts b through d if proceeding from adjustment step 5.

(b) Set the (VISUAL IF) CARRIER, PRESET, and PRECORRECTOR buttons 'ON', and set the CLAMP button 'OFF'. Connect a variable power supply to the VIDEO INput. Set the power supply **dc** voltage to a level equal to 100% modulation (Zero Carrier). See Table 4-12 for **dc** levels.

(c) Monitor the IF OUTput with the spectrum analyzer. Set the spectrum analyzer RF dB at 0, Reference Level at -30 dBm, Resolution at 300 kHz, Frequency Span/Div at 2 MHz, Time/Div at 10 ms, and Center Frequency at the visual **if** carrier frequency of the Test Modulator.

(d) Set the MOD PRESET control (R74) on the front panel for minimum visual **if** carrier signal as viewed on the spectrum analyzer (carrier null).

(e) Set the PRECORRECTOR button 'OFF'.

(f) Adjust R445 on A1A7 for minimum visual **if** carrier as viewed on the spectrum analyzer (carrier null).

7. Adjust Aural Carrier Crystal Oscillator

(C326 and R128 on A1A8 Aural Modulator board)

(a) Remove the Aural Modulator board from its compartment and install an extender board in the compartment.

(b) Install the Aural Modulator board on the extender board.

(c) Monitor pin 7 on the extender board with a test oscilloscope using a 10X probe. Set the test oscilloscope Volts/Div control at 10 mV.

(d) Set the (AURAL IF) CARRIER switch 'ON' and push in the CRYSTAL button. Set the CENTER FREQ control to midrange and set the AUDIO switch OFF.

(e) Adjust C326 for maximum peak-to-peak amplitude on the test oscilloscope.

(f) Adjust R128 for 320 mV p-p amplitude on the test oscilloscope.

(g) Remove the extender board from the Aural Modulator board compartment and replace the Aural Modulator board in its compartment.

8. Adjust Aural Carrier LC Oscillator

(C318, L126 and R103, R102, R125, and R312 on A1A8 Aural Modulator board)

(a) Remove the Aural Modulator board from its compartment and install an extender board. Install the Aural Modulator board on the extender board. Set the CENTER FREQ control at the middle of its range and set the MODULATE button 'ON'.

(b) Monitor the IF OUTput with a spectrum analyzer set to view the aural **if** (Center Frequency at the aural **if** carrier frequency, and Resolution at 3 kHz). See Table 4-13 for carrier frequencies.

Table 4-13
CARRIER FREQUENCIES

TEST MODULATOR Version	Aural Carrier	Visual Carrier
067-0886-01	32.5 MHz	37.0 MHz
067-0886-02	34.4 MHz	38.9 MHz
067-0886-03	41.25 MHz	45.75 MHz
067-0886-04	33.4 MHz	38.9 MHz
067-0886-05	32.9 MHz	38.9 MHz

(c) Adjust L126 to set the aural carrier **if** at the correct frequency. The LC oscillator frequency can be conveniently checked by momentarily depressing the CENTER FREQ REF button (turning 'on' the Crystal Oscillator while the LC Oscillator is 'on'). When the two signals displayed on the spectrum analyzer are overlaid, the LC oscillator is at the correct frequency.

(d) Connect the IF OUTput to a TEKTRONIX Demodulator **if** input. On the Demodulator push in Sync Tip (**agc**, Aural Only, Split, and De-Emphasis In buttons.

(e) Connect a **bnc**-T adapter to the output of an audio generator (such as a TEKTRONIX SG 502). Connect one end of the **bnc**-T adapter to the AUDIO IN connector and the other end to an **ac** voltmeter. Set the audio generator output frequency at 10 kHz, and amplitude at 0.442 V **rms** (1.25 V p-p) as viewed on the **ac** voltmeter.

(f) Set the AUDIO button 'ON' and the PRE-EMP button 'OFF'.

(g) On the Demodulator, monitor the Deviation Output with an **ac** voltmeter and monitor the 8 Ω Speaker output with an audio spectrum analyzer using an 8 Ω-to-600 Ω impedance-matching network. See Fig. 4-1. Set the Audio Level control on the Demodulator fully clockwise. Set the audio spectrum analyzer front-panel controls such that the 2nd audio harmonic is displayed.

(h) Note the 2nd harmonic amplitude (distortion), then set R103 in one direction (neither fully clockwise nor fully counterclockwise). R103 affects the 2nd harmonic distortion and the LC Oscillator frequency. Therefore, the 2nd harmonic distortion can be checked only after the LC Oscillator frequency has been reset. Reset the frequency by adjusting L126. Note the distortion, and, if it decreased from the original setting, reset R103 in the same direction as before. Again, reset the LC Oscillator and look at the 2nd harmonic. Repeat these adjustments of R103 and L126 until the 2nd harmonic distortion is minimum. At

some point during the adjustments of R103 and L126, the distortion will start increasing. The point of minimum distortion can be reached by resetting R103 in the opposite direction just a hair.

If the distortion increased after the initial adjustments of R103 and L126, set R103 in the opposite direction. Again go back-and-forth between R103 and L126 until the distortion is minimum.

(i) Adjust R102 for minimum 2nd harmonic distortion as viewed on the audio analyzer.

(j) Disconnect the IF OUTput from the Demodulator, and connect it to the spectrum analyzer. Set the spectrum analyzer front-panel controls to view both the visual and aural **if** carriers.

(k) Set the CARRIER LEVEL control fully clockwise, and set the VISUAL IF CARRIER, PRESET, AURAL IF CARRIER, and MODULATE buttons 'ON'.

(l) Adjust C318 on A1A8 for maximum aural **if** carrier amplitude as viewed on the spectrum analyzer.

(m) Adjust R125 on A1A8 such that the aural carrier amplitude is the same as the visual **if** carrier amplitude. R125 slightly affects the carrier frequency. Therefore, L126 has to be reset.

(n) Adjust R312 on A1A8 such that the voltmeter indicates 0.884 V **rms**.

9. Check A1A1 RF LO Amplifier Gain

(Approximately 16 dB from 50 MHz to 900 MHz)

(a) Connect the output of a tracking generator to the LO IN connector. Set the tracking generator output level at -20 dBm.

(b) Remove the RF Mixer board (A1A2) from its compartment, and monitor the **lo** input (J213) in A1A2 location with a spectrum analyzer using a **bnc**-to-Conhex adapter cable.

(c) Set the spectrum analyzer RF dB at 30, Reference Level at 0 dBm, Vertical Mode at 10 dB/Div, Freq Span/Div at 2 MHz, Resolution at 3 MHz, and Time/Div at 10 ms.

(d) Check that the spectrum analyzer display is about -4 dB (the LO Amplifier has a gain of about 16 dB).

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(e) Disconnect the spectrum analyzer and tracking generator from the Test Modulator, and return A1A2 to its compartment.

10. Adjust IF Filter

(C212, C311, C511, L311, and L412 on A1A3 IF Filter board)

NOTE

This adjustment requires use of a 4-wide plug-in oscilloscope mainframe such as a TEKTRONIX 7704 Oscilloscope System.

The 7L13 Spectrum Analyzer takes up three plug-in compartments in the oscilloscope mainframe (two horizontal and one vertical). A differential comparator plug-in is needed for setting up a 0.2 dB/div reference flatness, and it takes up the free (left) vertical plug-in compartment.

(a) Drive the IF INput with a TR 502 Tracking Generator (sweep generator). Set the tracking generator output level at -20 dBm.

(b) Remove the RF Mixer board (A1A2) from its compartment, and monitor the input (J295) in A1A2 location with a spectrum analyzer. Set the spectrum analyzer Vertical Mode at 10 dB/Div, RF dB at 30, Reference Level at 0 dBm, Frequency Span/Div at 20 MHz, and center at 35 MHz (bandpass is 24 MHz to 65 MHz).

(c) Reset the spectrum analyzer Vertical Mode to 2 dB/Div, and set the Reference Level to view the display. Reset the Frequency Span/Div to 5 MHz.

(d) Connect the spectrum analyzer video output to the differential comparator, using a **bnc**-to-pin jack adapter cable. Set the differential comparator Volts/Div control at 5 mV/Div. On the test oscilloscope, push in the Left (Vertical Mode) button.

(e) Use the Comparison Voltage control on the differential comparator to bring the display within the viewing area.

(f) Adjust C212, C311, L311, and L412 for a flat response from 24 MHz to 65 MHz. The display must be flat within 0.1 dB.

(g) Disconnect the spectrum analyzer from J295 in A1A2 location, and replace A1A2 in its compartment. Disconnect the tracking generator from the IF IN connector.

11. Check RF Mixer board (A1A2)

(a) Connect the IF OUTput to the IF INput, using the short 50 Ω cable provided with the accessories. Set the VISUAL IF CARRIER, PRESET, AURAL IF CARRIER, and CRYSTAL buttons 'ON'.

(b) Connect the output of an **rf** generator (such as an HP8640B) to the LO IN connector. Set the generator output level at -5 dBm, and output frequency for the desired channel. By design, **lo** frequency is the sum of the visual **if** carrier and the visual **rf** carrier. Refer to Tables 4-2 through 4-4 for visual **rf** carrier frequencies.

(c) Monitor TP57 (a Peltola connector) on A1A2 with a spectrum analyzer using a **bnc**-to-Peltola adapter cable.

(d) Set the spectrum analyzer RF dB at 50, Reference Level at $+20$ dBm, Frequency Span/Div at 2 MHz, Resolution at 300 kHz, Time/Div at 10 ms, and Center Frequency at the same frequency as the **rf** generator.

(e) Check that the spectrum analyzer display is approximately $+10$ dBm at the **lo** frequency.

(f) Monitor the RF OUTput with the spectrum analyzer, using a 50 Ω cable.

(g) Reset the spectrum analyzer RF dB to 10, Reference Level to -20 dBm, and Center Frequency to the visual **rf** carrier frequency.

(h) Check that the **rf** visual carrier level is approximately -22 dBm, and the **rf** aural carrier signal is present a few MHz above the visual carrier signal. The **rf** aural carrier amplitude is dependent on the setting of the CARRIER LEVEL control.

MAINTENANCE

Introduction

This section describes the procedure for reducing or preventing instrument malfunction, plus troubleshooting, and corrective maintenance. Preventive maintenance improves instrument reliability. Should the instrument fail to function properly, corrective measures should be taken immediately; otherwise, additional problems may develop within the instrument.

PREVENTIVE MAINTENANCE

Preventive maintenance consists of cleaning, visual inspection, performance check, and if needed, readjustment. The preventive maintenance schedule that is established for the instrument should be based on the environment in which the instrument is operated and the amount of use. Under average conditions, a preventive maintenance check should be performed every 3000 hours of instrument operation.

Cleaning

Clean the instrument often enough to prevent dust or dirt from accumulating in or on it. Dirt acts as a thermal insulating blanket and prevents efficient heat dissipation. It also provides high-resistance electrical leakage paths between conductors or components in a humid environment.

Exterior. Clean the dust from the outside of the instrument by wiping or brushing the surface with a soft cloth or small brush. The brush will remove dust from around the front-panel knobs and selector buttons. Hardened dirt may be removed with a cloth dampened in water that contains a mild detergent. Abrasive cleaners should not be used.

Interior. Clean the interior by loosening accumulated dust with a dry soft brush, then remove the loosened dirt with low-pressure air to blow the dust clear. (High-velocity air can damage some components.) Hardened dirt or grease may be removed with a cotton-tipped applicator dampened with a solution of mild detergent in water. Abrasive cleaners should not be used. If the circuit-board assemblies need cleaning, remove the circuit board by referring to the instructions under Corrective Maintenance in this section.

After cleaning, allow the interior to thoroughly dry before applying power to the instrument.

CAUTION

Do not allow water to get inside any enclosed assembly or components. Do not clean any plastic materials with organic cleaning solvents such as benzene, toluene, xylene, acetone or similar compounds because they may damage the plastic.

Visual Inspection

After cleaning, carefully check the instrument for such defects as defective connections, damaged parts, and improperly seated transistors and integrated circuits. The remedy for most visible defects is obvious; however, if heat-damaged parts are discovered, try to determine the cause of overheating before the damaged part is replaced; otherwise, the damage may be repeated.

Transistor and Integrated Circuit Checks

Periodic checks of the transistors and integrated circuits are not recommended. The best measure of performance is the actual operation of the component in the circuit. Performance of these components is thoroughly checked during the performance check or adjustment procedures, and any substandard transistors or integrated circuits will usually be detected at that time.

Static-Sensitive Components

CAUTION

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 5-1 for relative susceptibility of various classes of semiconductors. Static voltages of 1 kV to 30 kV are common in unprotected environments.

Observe the following precautions to avoid damage:

1. Minimize handling of static-sensitive components.
2. Transport and store static-sensitive components or assemblies in their original containers, on a metal rail, or on conductive foam. Label any package that contains static-sensitive assemblies or components.

3. Discharge the static voltage from your body by wearing a wrist strap while handling these components. Servicing static-sensitive assemblies or components should be performed only at a static-free work station by qualified personnel.

4. Nothing capable of generating or holding a static charge should be allowed 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 components 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 or wick-type desoldering tools.

Performance Checks and Readjustment

The instrument performance should be checked after each 3000 hours of operation, or every six months if the instrument is used intermittently, to ensure maximum performance and assist in locating defects that may not be apparent during regular operation. Instructions for conducting a performance check are provided in the Performance Check and Adjustment section.

TROUBLESHOOTING

The following are a few aids and suggestions that may assist in locating a problem. After the defective assembly or component has been located, refer to the Corrective Maintenance part of this section for removal and replacement instructions.

NOTE

No repair should be attempted during the warranty period or by unqualified personnel.

Table 5-1

RELATIVE SUSCEPTIBILITY TO STATIC DISCHARGE DAMAGE

Semiconductor Classes	Levels ^a
MOS or CMOS microcircuits or discretes, or linear microcircuits with MOS inputs (Most Sensitive)	1
ECL	2
Schottky signal diodes	3
Schottky TTL	4
High-frequency bipolar transistors	5
JFETS	6
Linear microcircuits	7
Low-power Schottky TTL	8
TTL (Least Sensitive)	9

^a Voltage equivalent for levels:

- 1 = 100 to 500 V 4 = 500 V 7 = 400 to 1000 V (est.)
- 2 = 200 to 500 V 5 = 400 to 600 V 8 = 900 V
- 3 = 250 V 6 = 600 to 800 V 9 = 1200 V

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

Troubleshooting Aids

Foldout Pages. The foldout pages at the back of the manual contain significant information useful for troubleshooting the instrument. Block and schematic diagrams, waveforms, circuit-board illustrations, parts locating charts, and IC (Integrated Circuit) diagrams are located on foldout pages. See Fig. 5-1.

Diagrams. Block and circuit diagrams are the most often used aids to troubleshooting. The circuit number and electrical value of each component is shown on the diagrams (see the first page in the Diagrams section for definition of the reference symbology used to identify components in each circuit). Refer to the Replaceable Electrical Parts list for a complete description of each component. Those portions of the circuit that are mounted on circuit boards or assemblies are enclosed in a black border, with the name and assembly number shown on the border.

NOTE

Check the Change Information section at the rear of the manual for inserts describing corrections and modifications to the instrument and manual.

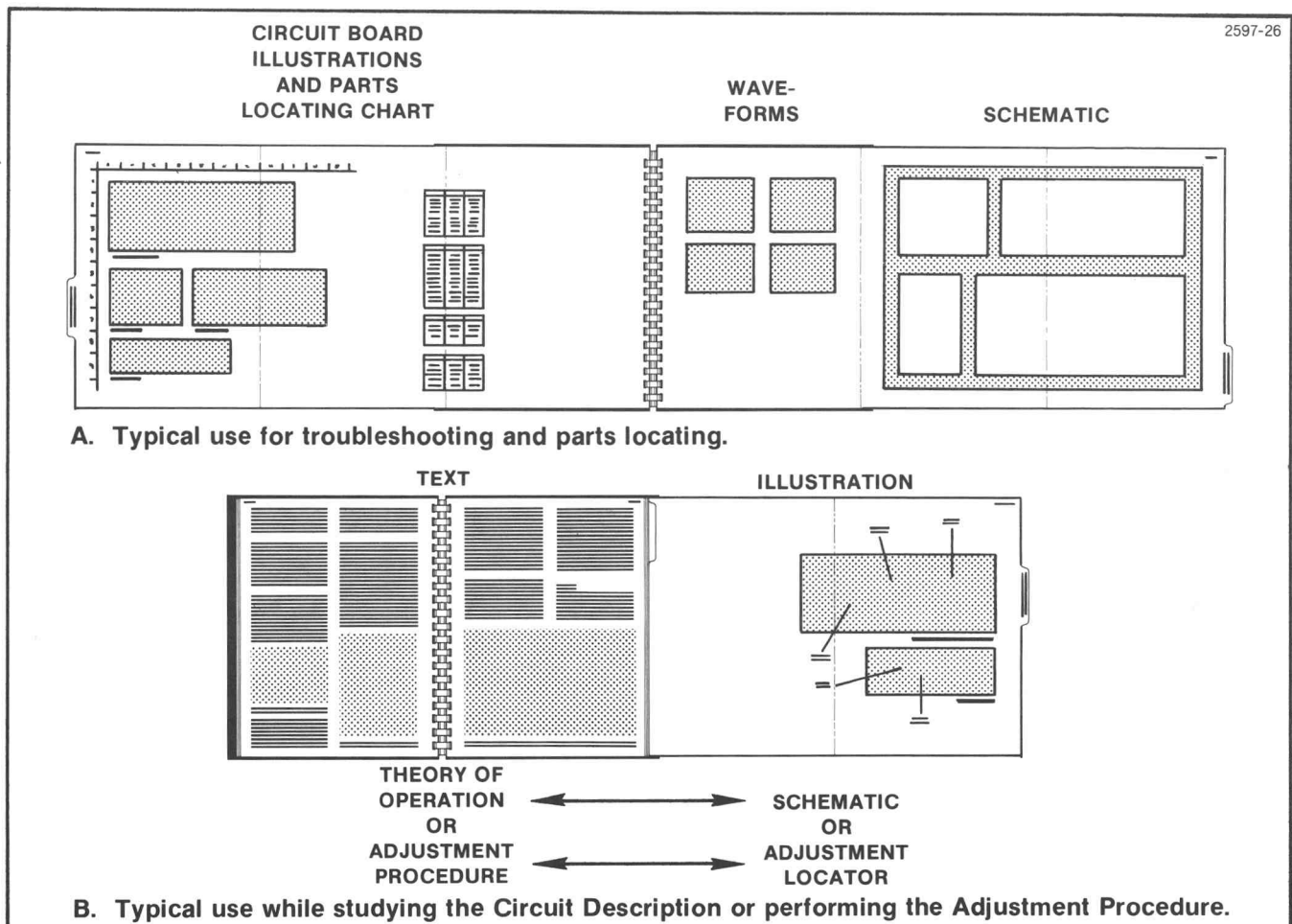


Fig. 5-1. Using The Foldout Pages.

Circuit-Board Illustrations. Electrical components, connectors, and test points are identified on circuit-board illustrations located on the inside fold of the corresponding circuit diagram, or the back of the preceding diagram.

Parts Locating Charts. The schematic diagrams and the circuit-board illustrations are assigned location grids. A parts locating chart for each assembly gives grid locations of components on both the circuit board and the schematic.

Assembly and Circuit Numbering

The circuit boards and other assemblies (except for the chassis and the front- and rear-panel mounted assemblies, and the Power Supply) are assigned assembly numbers according to their location on the Interface board, starting from the front of the instrument. See Fig. 5-2.

Each component is assigned a circuit number according to its geographic location within an assembly. Except for the RF Mixer board (A1A2), component circuit numbers increase in units from top to bottom, and in tens from left to right.

The Replaceable Electrical Parts list is arranged in assembly-by-assembly order, as designated by ANSI Standard Y32.16-1975. The circuit number in the parts list is made up by combining the assembly number and the circuit number.

EXAMPLE: R250 on A1A6 would be listed in the Replaceable Parts list as A1A6R250.

In the case of chassis, and front- and rear-panel mounted parts, which have no assembly number, the parts list number is the same as shown on the schematic. Any

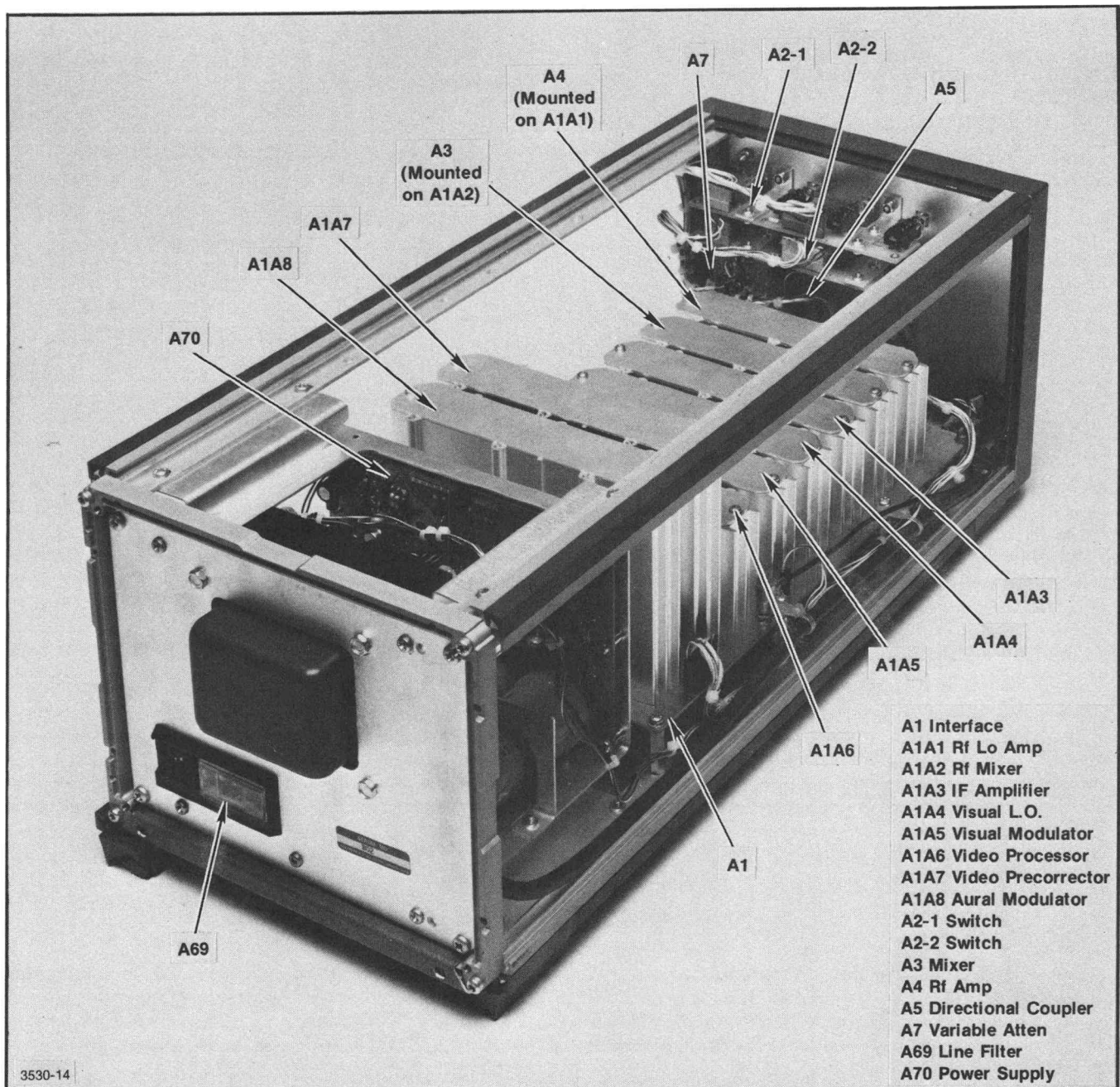


Fig. 5-2. Assembly Numbers and Locations.

one- or two-digit circuit number in the parts list is a part mounted on the front or rear panel, or the chassis.

In the Replaceable Electrical Parts list, assemblies are listed first, followed by circuit-board mounted parts in alphanumeric order, then followed by front- and rear-panel mounted parts.

NOTE

The parts list number should be used when ordering replacement parts.

Components

Wire Color Codes. Insulated wires are color-coded to facilitate circuit tracing. Table 5-2 summarizes the coding system used in this instrument.

Table 5-2
WIRE COLOR CODING

Color Code	Significance
Black	Chassis Ground
White on Black	Floating Ground
Yellow on Green	Safety Ground
Gray ^a	AC Line
White ^a	Signal
Red ^b	+Vcc
Violet ^b	-Vcc

^a Color stripes are used on these wires as an aid to circuit tracing.

^b Color stripe on wire indicates position of supply with respect to 0 V (e.g., a black stripe on a red wire would be the first voltage in the positive direction). If a second stripe is used (white only) this indicates a non-regulated supply.

Connectors. Most rf signal connections are made through Conhex coaxial connectors to the Interface board (A1), and all other interconnect connections are made through pin connectors. Rf signal connections to the front panel are all made through Conhex coaxial connectors at the Interface board, and through **bnc** (IF IN, IF OUT, and AUDIO IN), **n-type** (RF OUT), and **sma** (LO IN) connectors at the front panel.

NOTE

When reconnecting a Conhex connector, be careful to avoid bending the coaxial center conductor on the male connector.

Resistors. Composition (brown body), metal-film (gray or light blue body), and chip resistors are used in this instrument. The resistance values of composition and metal-film resistors are color coded on the component with EIA color code (some metal-film resistors may have the value printed on the body). Chip resistors are generally too small to be marked, and therefore should be handled cautiously to avoid mixing resistors of different values if replacing more than one.

Capacitors. The capacitance value of common disc capacitors or small electrolytics are marked in microfarads or picofarads on the side of the component body. The white ceramic capacitors and tantalum electrolytics are color coded. Chip capacitors are generally too small to be marked, and so again, care should be taken against mixing more than one value of chip component at a time.

Diodes. The cathode of each glass-encased diode is indicated by a stripe, a series of stripes, or a dot. Some diodes have a diode symbol printed on one side.

Most diodes can be checked in the circuit by taking measurements across the diode and comparing these with voltages listed on the diagram. Forward-to-back resistance ratios can usually be taken by referring to the schematic and pulling appropriate transistors and pin connectors to remove low-resistance loops around the diode.



Do not use an ohmmeter scale with a high external current to check the diode junction.

Transistors. Lead identification for the transistors and IC is shown in Fig. 5-3.

Semiconductor failures account for the majority of electronic equipment failures. Substitution is often the most practical means for checking their performance. The following guide lines should be followed when substituting these components:

- First, determine that circuit voltages are safe for the substituted component, so the replacement will not be damaged.
- Use only components known to be good for substitution.
- Turn the power off before a component is substituted.
- Be sure the component is inserted properly in its socket (see Fig. 5-3 or the manufacturer's data sheet).
- After the operational check, return the good components to their original sockets to reduce calibration time and burn-in period.

NOTE

When replacing transistors mounted with heatsinks, check that they have adequate thermal-conducting grease for proper thermal conduction. See listing at the rear of this section for Tektronix part number.

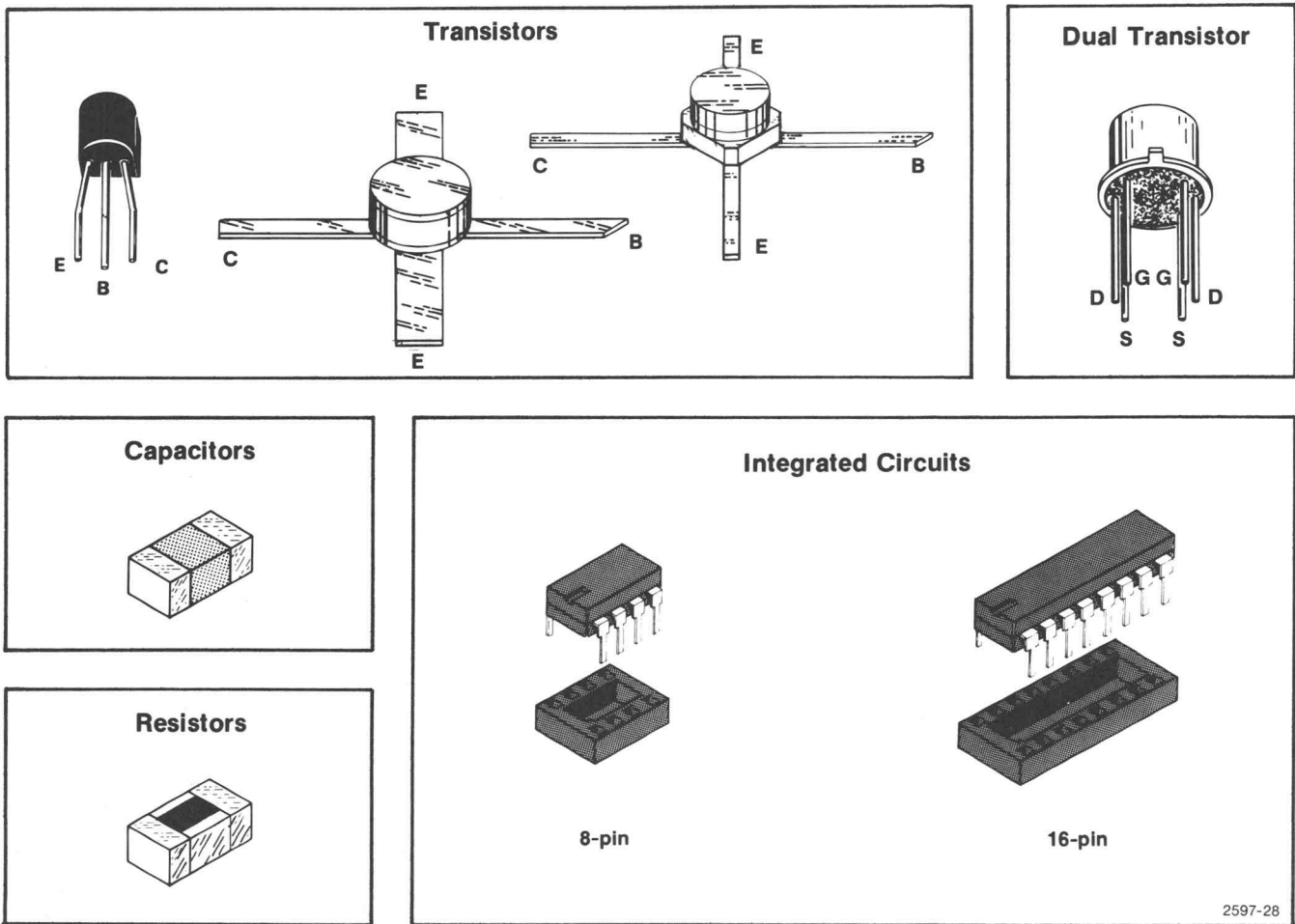


Fig. 5-3. Component Basing Diagrams.

WARNING

Handle thermal-conducting grease with care. Avoid getting the grease in eyes. Wash hands thoroughly after use.

NOTE

If a substitute is not available, check the transistor with a dynamic tester (curve tracer). See listing at the rear of this section for recommended type.

Curve Tracer. Static-type testers, such as an ohmmeter, can be used to check the resistance ratio across some semiconductor junctions if no other method is available. Use the high-resistance ranges (R X 1k or higher) so the external test current is limited to less than 6 mA. If uncertain, measure the external test current with an ammeter. Resistance ratios across base-to-emitter or base-to-collector

junctions usually run 100:1 or higher. The ratio is measured by connecting the meter leads across the terminals, noting the reading, then reversing the leads and noting the second reading.

Integrated Circuits (IC). Integrated circuits are most easily checked by direct replacement. When substitution is impossible, check input- and output-signal states as described in the circuit description and on the diagram. Lead configurations for the IC types used in this instrument are provided on the inside fold of the schematic or the back of the previous schematic.

Check calibration and performance after a faulty component has been replaced.

If the above procedure fails to locate the trouble, a more detailed analysis must be performed. The Theory of Operation section describes the operational theory of each circuit, and may aid to further evaluate the problem.

GENERAL TROUBLESHOOTING TECHNIQUES

The following procedure is recommended to isolate a problem and expedite repairs.

1. Ensure that the malfunction exists in the instrument. Check the operation of associated equipment and the operating procedure of the instrument (see Operating Instructions).

2. Determine and evaluate all trouble symptoms. Try to isolate the problem to a circuit or assembly. The block diagram in the Diagrams section can aid in signal tracing and circuit isolation. The circuit boards are generally interconnected via connectors on the Interface board, so circuit assemblies can easily be isolated and checked assembly-by-assembly. A spectrum analyzer and tracking generator are convenient tools for these checks.

CAUTION

When measuring voltages and waveforms, use extreme care in placing meter leads or probes. Because of high component density and limited access within the instrument, an inadvertent movement of the leads or probe could cause a short circuit. This may produce transient voltages that can destroy many components.

3. Make an educated guess as to the nature of the problem, such as component failure or calibration, and the functional area most likely at fault.

4. Visually inspect the area or the assembly for such defects as broken or loose connections, improperly seated components, overheated or burned components, chafed insulation, etc. Use a magnifying glass or a jeweler's eye loupe to inspect chip parts. Repair or replace all obvious defects. In the case of overheated components, try to determine the cause of the overheated condition and correct before reapplying power.

5. By successive electrical checks, locate the problem. At this time, an oscilloscope and spectrum analyzer are valuable test items for evaluating circuit performance. If applicable, check the calibration adjustments. Before changing an adjustment, note its position so it can be returned to the original setting. This will facilitate recalibration after the trouble has been located and repaired.

6. Determine the extent of the repair needed; if complex, we recommend contacting your local Tektronix Field

Office or representative. If minor, such as a simple component replacement, see the parts list for replacement information. Removal and replacement procedure of the assemblies is described under Corrective Maintenance.

Troubleshooting Shield-Mounted Boards (see Fig. 5-4). An extender board (included in the standard accessories kit) allows the shield-mounted boards to be extended out of the shield for troubleshooting or calibration. Extra pins are added to the interface boards where necessary to provide grounds for signal connections. To look at the output of a stage, remove the following board and connect a **bnc**-to-square pin adapter cable to the input pins. This will give the output of the stage under test. To isolate a board or stage, remove both the input and output stages. A signal can be fed to this board (stage) and the output measured for this stage only.

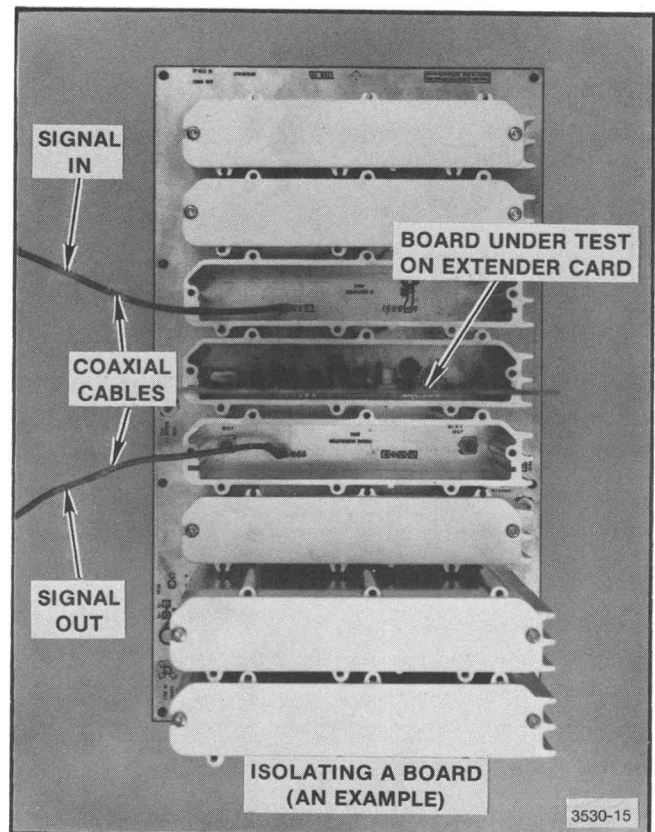


Fig. 5-4. Troubleshooting Shield-Mounted Boards.

Refer to the Corrective Maintenance portion of this section for instructions on removing the shield-mounted boards.

Troubleshooting the Power Supply (see Fig. 5-5). A useful troubleshooting feature of the Test Modulator is that the power supply can virtually be removed from the instrument for troubleshooting. The following steps will assist in troubleshooting:

1. Disconnect the power cord, and disconnect all harmonica connectors from the power supply board except at P08. This removes all loads from the power supply.

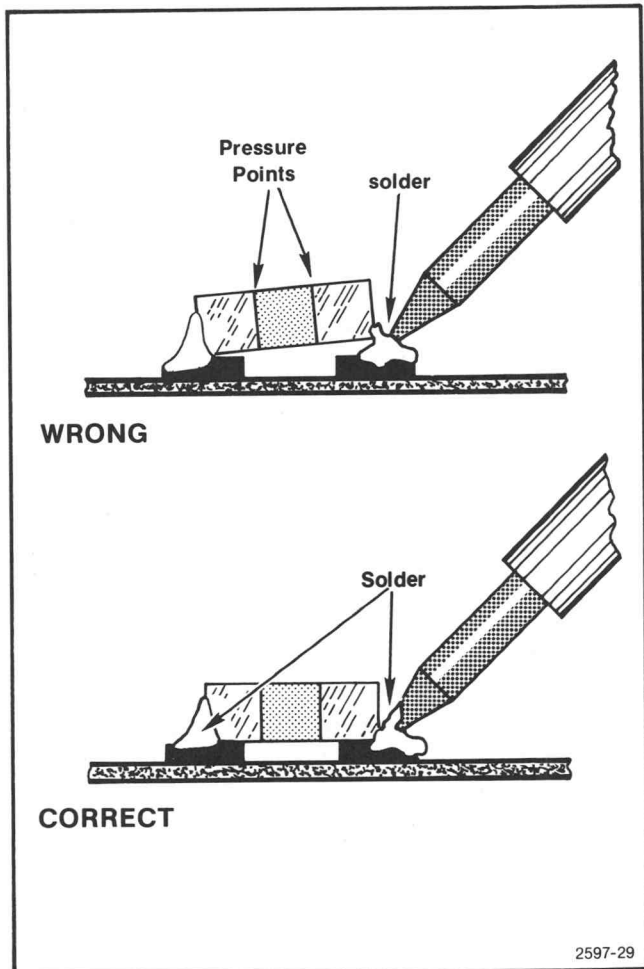


Fig. 5-5. Soldering Chip Components.

2. Reconnect the power cord, and check the power supply for proper dc voltages. Note that the -15 V reference power supply may be reset by adjusting R66 (-15 V Adjust). If the supplies are not correct, proceed to parts 3 through 9.

3. Disconnect the power cord.

4. Remove all harmonica connectors from the power supply board.

5. Remove the five screws shown in Fig. 5-5.
6. Remove the top two aluminum slide guides.
7. Remove the top left side plastic slide.
8. Gently slide the power supply board cradle out the left side of the instrument.

CAUTION

Care should be taken that the terminals at the power-cord connector are not damaged while the power supply cradle is being removed from the instrument.

9. Turn the instrument over on its side, and reconnect the transformer leads at P08.

The power supply can be worked on after reconnecting the power cord. Note that there is no load to the power supply.

To replace, reverse the procedure.

NOTE

Be sure to connect a ground strap between the power supply board and chassis ground when operating the instrument with the power supply detached.

CORRECTIVE MAINTENANCE

Corrective maintenance consists of component replacement and instrument repair. Special techniques and procedures, required to replace components in this instrument, are described here.

Obtaining Replacement Parts

All electrical and mechanical parts are available through your local Tektronix Field Office or representative. The parts list sections contain information on how to order these replacement parts. Many standard electronic components can be obtained locally in less time than that required to order from Tektronix, Inc. It is best to duplicate the original component as closely as possible. Parts orientation and lead dress should be duplicated because some components are oriented to reduce interaction or to control circuit characteristics.

If a part you have ordered has been replaced with a new or improved part, your local Field Office or representative will contact you concerning any change in the part number. After repair, the circuits may need recalibration.

Repair and Return Program

The Video Precorrector board (A1A7) must be recalibrated after an adjustable inductor or a capacitor is replaced. Calibration of this board requires cumbersome, unique, and expensive equipment. It is also time-consuming.

Tektronix, Inc. provides a Repair and Return service for this board. Return the board to the nearest Tektronix Field Office for repair and recalibration.

For shipping, obtain a corrugated cardboard box of suitable dimensions (slightly larger than the circuit board). Put the board in the box, and cushion on all sides by tightly packing dunnage or urethane foam between the box and the board. Seal the box with shipping tape or with staples.

Note that while the Video Precorrector board is absent, the instrument can still be used in a wideband mode by shorting between pins 11 and 5 in A1A7 location. The front-panel PRECORRECTOR ON/OFF button has no effect on the processed signal while the Test Modulator is in this mode.

Soldering Chip Components (see Fig. 5-6)

Two circuit boards (A1A1 and A1A2) in this instrument have chip components. The contacts on chip resistors and capacitors are usually plated with silver. These components should be soldered with a 3% silver-bearing solder. See listing at the rear of this section for Tektronix part number.

Remove excess solder from the circuit board pads before soldering so the component will lie flat. If the first solder joint is made with the component at an angle, soldering the second joint will cause pressure to be applied to the first, possibly breaking it. Use solder wick or other solder removers to remove the excess solder and clean the surface.

CAUTION

Do not apply a soldering iron directly to the chip component contacts. This will burn the silver plating.

TORX¹ Screws

This instrument uses TORX head screws. A TORX screwdriver is supplied in the accessories kit for the TEKTRONIX Television Demodulator. Also, a tip for magnetic-tip or air-driven screwdrivers is available. See listing at the rear of this section for Tektronix part number.

Do not use more than about 8 to 10 inch-pounds of torque when tightening the TORX screws. If a screw head breaks off, leaving the screw body in the metal, the screw should be replaced using the following procedure:

1. Remove any other screws holding down the shield cover, and lift the cover off. This will expose part of the screw stud.
2. Use a pair of pliers or vise-grips to remove the screw.
3. Replace the shield cover, and insert a 3 mm X 20 mm TORX screw. See listing at the rear of this section for Tektronix part number.

Fuse Replacement

The line fuse is located in the rear-panel line-voltage selector. Use only correct value fuses when replacing. Refer to Section 1, Specification, or the rear panel of the instrument for fuse data.

Power Transformer Replacement

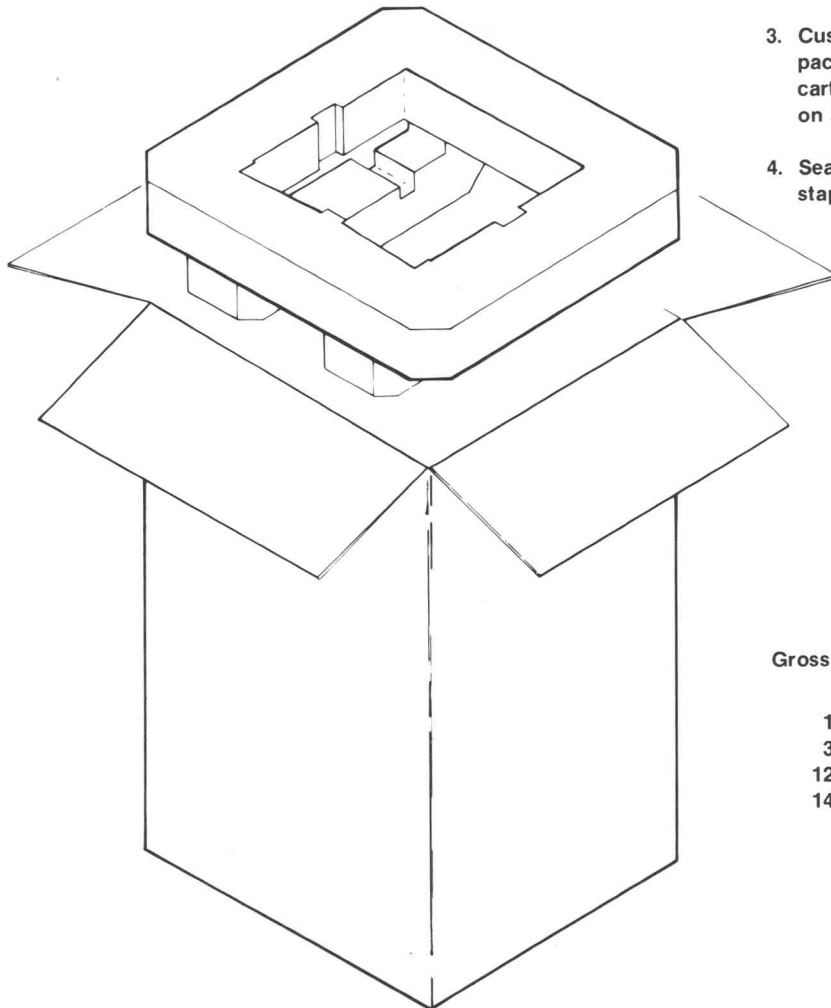
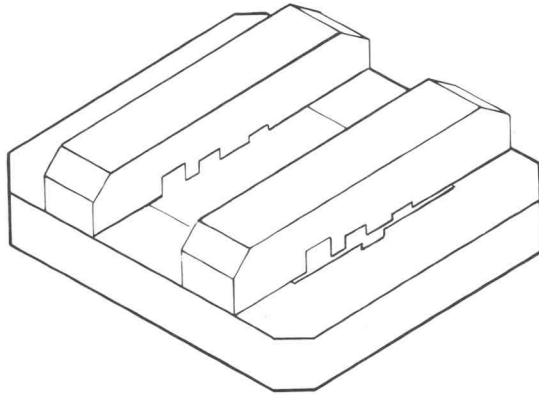
If the power transformer becomes defective, contact your local Tektronix Field Office or representative for replacement. Replace only with a direct replacement Tektronix transformer.

Power Switch Replacement

If the power switch becomes defective, replace only with a direct replacement, safety-approved switch. Use the following replacement procedure.

1. Disconnect the power cord.
2. Remove the left side panel.
3. Use a small hammer to tap the switch out the front panel.
4. Pull the power switch back from the front panel, and remove the power cable from the switch using a pair of

¹ TORX is a registered trademark of Camcar Screw & Mfg.



Repackaging for Shipment:

If the Tektronix instrument is to be shipped to a Tektronix Service Center for service or repair, attach a tag showing: owner (with address) and the name of an individual at your firm that can be contacted, complete instrument serial number and a description of the service required.

Save and re-use the package in which your instrument was shipped. If the original packaging is unfit for use or not available, repackage the instrument as follows:

1. Obtain a carton of corrugated cardboard having inside dimensions of no less than six inches more than the instrument dimensions; this will allow for cushioning. Refer to Table 1 for carton test strength requirements.
2. Surround the instrument with polyethylene sheeting to protect the finish of the instrument.
3. Cushion the instrument on all sides by tightly packing dunnage or urethane foam between carton and instrument, allowing three inches on all sides.
4. Seal carton with shipping tape or industrial stapler.

Table 1
Shipping Carton Test Strength

Gross Weight (lb.)	Carton Test Strength (lb.)
0 — 10	200
10 — 30	275
30 — 120	375
120 — 140	500
140 — 160	600

3530-26

Fig. 5-6. Repackaging.

needlenose pliers to grasp the connectors at the switch contacts. (Note the locations of the wires on the switch for replacement.)

NOTE

Do not pull on the wires to remove as this may weaken the connection between the wires and the end connectors.

To replace, reverse the procedure.

Replacing the Front Panel

1. Remove the top and side panels.
2. Unsolder the coaxial cable at the AUDIO INput **bnc** connector.
3. Remove the knobs, nuts, and washers on the MODULATION LEVEL and CARRIER LEVEL controls.
4. Remove the nuts and washers from the IF OUT, LO IN, and RF OUT connectors.
5. Remove the power switch.
6. Remove the VIDEO IN, AUDIO IN, and IF IN connectors.
7. Remove two kee nuts holding the front panel to the front casting.
8. Remove the front panel.

To replace, reverse the procedure.

Replacing the Indicator LED Lamp

1. Remove the harmonica connector from the LED leads.
2. Remove the front panel.
3. Remove the lamp assembly from the front panel.

To replace, reverse the procedure.

Square Pin Replacement

A pin replacement kit including necessary tools, instructions, and replacement pins is available from Tektronix, Inc. See listing at the rear of this section for Tektronix part number.

To replace a square pin mounted on a circuit board, first disconnect the multi-pin connector. Then, unsolder the damaged pin and pull it out of the circuit board with a pair of pliers. Be careful not to damage the etched-circuit runs on the board with too much heat. Ream out the square-pin hole in the circuit board with a 0.31 inch drill. Press the new pin into the hole, and position it in the same manner as the old pin. Then, solder the pin on both sides of the board.

Replacing Assemblies

Replacing Shield Mounted Boards

Each shield-mounted board has a tooling hole for extracting the board from the shield. (The RF LO Amplifier board, A1A1, and the RF Mixer board, A1A2, have two tooling holes.) A small screwdriver or the tip of a pair of needlenose pliers may be used as levers against the shield to get the board loose.

To remove the boards:

1. Remove the shield cover from the desired board location.

CAUTION

The RF LO Amplifier and the RF Mixer boards (A1A1 and A1A2) have extra connections to the Interface board made through coaxial cables. A small pair of needlenose pliers may be used to disconnect these cables before the boards are pulled out of the shields.

2. Use a small screwdriver or needlenose pliers to remove the board.

CAUTION

When replacing the board into the shield, keep the board to the outside rail (fin side) of the shield to align on the proper interface-board pins. Avoid forcing the board, as pins may be easily bent.

To replace, reverse the procedure.

Replacing the Interface Board (A1)

1. Remove all wire connectors from the board.
2. Remove the eight screws holding the board.

NOTE

For troubleshooting purposes, simply turn the instrument over and remove the eight screws from the circuit stand-off posts. In this manner, the assembly can be placed on the work bench without the bottom of the Interface touching the bench top.

To replace, reverse the procedure.

Replacing the Power Supply Assembly

NOTE

The Power Supply board, the transformer, the fuse holder, and some metal parts form a power supply assembly that can be removed from the instrument as an assembly.

1. Disconnect the power cord.
2. Remove all harmonica connectors from the power-supply board.
3. Remove the seven screws shown in Fig. 5-5.
4. Remove the two top slide guides.

5. Remove the top left side plastic slide.

6. Gently slide the power supply board cradle out the left side of the instrument.



Care should be taken that the terminals at the power cord connector are not damaged while the power supply cradle is being removed from the instrument.

7. Turn the instrument over on its side, and reconnect the transformer leads at P08.

To replace, reverse the procedure.

Tektronix Part Numbers for Recommended Tools, Kits, and Materials for Maintenance

Description	Tektronix Part No.
Thermal Junction Compound (#249 THERMALLOY)	006-2655-00
Solder, 3% Silver Bearing, .032", small roll	006-0664-00
Bit, Screwdriver, 0.25 Drive w/TORX T10 Tip M	003-0814-00
Screw, 3mm X 20 mm L, TORX Drive, TAPTITE PNH	213-0812-00
Circuit Board Square Terminal Replacement Kit	040-0542-01

Recommended Test Equipment

TEKTRONIX 577 Curve Tracer (Transistor)

OPTIONS

There are no options planned for this instrument.



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

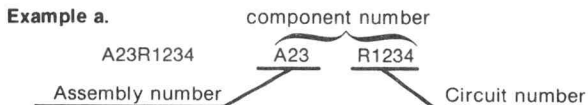
The Mfr. Code Number to Manufacturer index for the Electrical Parts List is located immediately after this page. The Cross Index provides codes, names and addresses of manufacturers of components listed in the Electrical Parts List.

ABBREVIATIONS

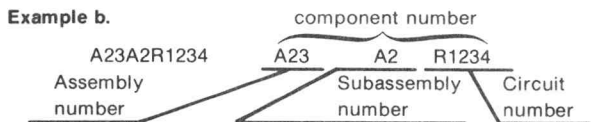
Abbreviations conform to American National Standard Y1.1.

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:



Read: Resistor 1234 of Assembly 23



Read: Resistor 1234 of Subassembly 2 of Assembly 23

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
000FJ	MARCOM SWITCHES INC.	67 ALBANY STREET	CAZENOVIA, N.Y. 13035
00853	SANGAMO ELECTRIC CO., S. CAROLINA DIV.	P O BOX 128	PICKENS, SC 29671
01121	ALLEN-BRADLEY COMPANY	1201 2ND STREET SOUTH	MILWAUKEE, WI 53204
01295	TEXAS INSTRUMENTS, INC., SEMICONDUCTOR GROUP	P O BOX 5012, 13500 N CENTRAL EXPRESSWAY	DALLAS, TX 75222
02114	FERROXCUBE CORPORATION	PO BOX 359, MARION ROAD	SAUGERTIES, NY 12477
02735	RCA CORPORATION, SOLID STATE DIVISION	ROUTE 202	SOMERVILLE, NY 08876
02777	HOPKINS ENGINEERING COMPANY	12900 FOOHILL BLVD.	SAN FERNANDO, CA 91342
04222	AVX CERAMICS, DIVISION OF AVX CORP.	P O BOX 867, 19TH AVE. SOUTH	MYRTLE BEACH, SC 29577
04713	MOTOROLA, INC., SEMICONDUCTOR PROD. DIV.	5005 E MCDOWELL RD, PO BOX 20923	PHOENIX, AZ 85036
07263	FAIRCHILD SEMICONDUCTOR, A DIV. OF FAIRCHILD CAMERA AND INSTRUMENT CORP.	464 ELLIS STREET	MOUNTAIN VIEW, CA 94042
09023	CORNELL-DUBILIER ELECTRONIC DIVISION	FEDERAL PACIFIC ELECTRIC CO.	SANFORD, NC 27330
12617	HAMLIN, INC.	2652 DALRYMPLE ST.	LAKÉ MILLS, WI 53551
14433	ITT SEMICONDUCTORS	GROVE & LAKE STS. 3301 ELECTRONICS WAY P O BOX 3049	WEST PALM BEACH, FL 33402
24546	CORNING GLASS WORKS, ELECTRONIC COMPONENTS DIVISION	550 HIGH STREET	BRADFORD, PA 16701
27851	FILM MICROELECTRONICS, INC.	17 A STREET	BURLINGTON, MA 01803
32436	SYSCON INTERNATIONAL, INC.	205 SYCAMORE ST.	SOUTH BEND, IN 46622
32997	BOURNS, INC., TRIMPOT PRODUCTS DIV.	1200 COLUMBIA AVE.	RIVERSIDE, CA 92507
33096	COLORADO CRYSTAL CORPORATION	2303 W 8TH STREET	LOVELAND, CO 80537
50522	MONSANTO CO., ELECTRONIC SPECIAL PRODUCTS	3400 HILLVIEW AVENUE	PALO ALTO, CA 94304
52262	B AND H ELECTRONICS, INC., DBA MICRO COMPONENTS ASSOCIATES	202 E STEVENS ST., SUITE 6	SANTA ANA, CA 92707
55680	NICHICON/AMERICA/CORP.	6435 N PROESEL AVENUE	CHICAGO, IL 60645
56289	SPRAGUE ELECTRIC CO.		NORTH ADAMS, MA 01247
71400	BUSSMAN MFG., DIVISION OF MCGRAW-EDISON CO.	2536 W. UNIVERSITY ST.	ST. LOUIS, MO 63107
71590	CENTRALAB ELECTRONICS, DIV. OF GLOBE-UNION, INC.	P O BOX 858	FORT DODGE, IA 50501
72136	ELECTRO MOTIVE CORPORATION, SUB OF INTERNATIONAL ELECTRONICS CORPORATION	LAUTER AVE, P O BOX 7600	FLORENCE, SC 29501
72619	DIALIGHT, DIV. AMPEREX ELECTRONIC	203 HARRISON PLACE	BROOKLYN, NY 11237
72982	ERIE TECHNOLOGICAL PRODUCTS, INC.	644 W. 12TH ST.	ERIE, PA 16512
73138	BECKMAN INSTRUMENTS, INC., HELIPOT DIV.	2500 HARBOR BLVD.	FULLERTON, CA 92634
75042	TRW ELECTRONIC COMPONENTS, IRC FIXED RESISTORS, PHILADELPHIA DIVISION	401 N. BROAD ST.	PHILADELPHIA, PA 19108
76493	BELL INDUSTRIES, INC., MILLER, J. W., DIV.	19070 REYES AVE., P O BOX 5825	COMPTON, CA 90224
80009	TEKTRONIX, INC.	P O BOX 500	BEAVERTON, OR 97077
91637	DALE ELECTRONICS, INC.	P. O. BOX 609	COLUMBUS, NE 68601
95275	VITRAMON, INC.	P O BOX 544	BRIDGEPORT, CT 06601

Replaceable Electrical Parts—067-0886-01 & up

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
	067-0886-01		TEST MODULATOR 37.0 MHZ(SYSTEM M)	80009	067-0886-01
	067-0886-02		TEST MODULATOR 38.9 MHZ(SYSTEM M)	80009	067-0886-02
	067-0886-03		TEST MODULATOR 45.75 MHZ(SYSTEM M)	80009	067-0886-03
	067-0886-04		TEST MODULATOR 38.9 MHZ(SYSTEM B & G)	80009	067-0886-04
	067-0886-05		TEST MODULATOR 38.9 MHZ(SYSTEM I)	80009	067-0886-05
A1	670-6962-00		CKT BOARD ASSY:INTERFACE	80009	670-6962-00
A1A1	-----		CKT BOARD ASSY:R.F.L.O. AMP		
	-----		(REPLACEABLE AS A UNIT WITH A8)		
A1A2	-----		CKT BOARD ASSY:R.F. MIXER		
	-----		(REPLACEABLE AS A UNIT WITH A9)		
A1A3	670-6965-00		CKT BOARD ASSY:I.F. AMP	80009	670-6965-00
A1A4	670-6967-01		CKT BOARD ASSY:VISUAL L.O. 37.0 MHZ	80009	670-6967-01
A1A4	670-6967-02		CKT BOARD ASSY:VISUAL L.O. 38.9 MHZ	80009	670-6967-02
A1A4	670-6967-03		CKT BOARD ASSY:VISUAL L.O. 45.75 MHZ	80009	670-6967-03
A1A5	670-6966-01		CKT BOARD ASSY:VISUAL MODULATOR 37.0 MHZ	80009	670-6966-01
A1A5	670-6966-02		CKT BOARD ASSY:VISUAL MODULATOR 38.9 MHZ	80009	670-6966-02
A1A5	670-6966-03		CKT BOARD ASSY:VISUAL MODULATOR 47.75 MHZ	80009	670-6966-03
A1A6	670-6968-00		CKT BOARD ASSY:VIDEO PROCESSOR	80009	670-6968-00
A1A7	670-6969-00		CKT BOARD ASSY:VIDEO PRECORRECTOR	80009	670-6969-00
	-----		(SYSTEM B & G)		
A1A7	670-6990-00		CKT BOARD ASSY:VIDEO PRECORRECTOR	80009	670-6990-00
	-----		(SYSTEM M)		
A1A8	670-6970-01		CKT BOARD ASSY:AURAL MODULATOR 37.0 MHZ	80009	670-6970-01
A1A8	670-6970-02		CKT BOARD ASSY:AURAL MODULATOR 38.9 MHZ	80009	670-6970-02
A1A8	670-6970-03		CKT BOARD ASSY:AURAL MODULATOR 45.75 MHZ	80009	670-6970-03
A1A8	670-6970-04		CKT BOARD ASSY:AURAL MODULATOR 38.9 MHZ	80009	670-6970-04
A1A8	670-6970-05		CKT BOARD ASSY:AURAL MODULATOR 38.9 MHZ	80009	670-6970-05
A2-1	670-7027-00		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-00
A2-2	670-7027-01		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-01
A3	-----		CKT BOARD ASSY:FIRST MIXER		
	-----		(REPLACEABLE AS A UNIT WITH A9)		
A4	-----		CKT BOARD ASSY:R.F. AMP		
	-----		(REPLACEABLE AS A UNIT WITH A8)		
A5	670-6972-00		CKT BOARD ASSY:DIRECTIONAL COUPIER	80009	670-6972-00
A7	670-6971-00		CKT BOARD ASSY:VARIABLE ATTENUATOR	80009	670-6971-00
A8	672-0942-00		CKT BOARD ASSY:R.F. LO AMP(A4,A1A1)	80009	672-0942-00
A9	672-0943-00		CKT BOARD ASSY:R.F. MIXER(A3,A1A2)	80009	672-0943-00
A10	670-6973-00		CKT BOARD ASSY:EXTENDER BD	80009	670-6973-00
A70	670-4987-01		CKT BOARD ASSY:POWER SUPPLY	80009	670-4987-01

Replaceable Electrical Parts—067-0886-01

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1	067-0886-01		TEST MODULATOR: 37.0 MHZ (SYSTEM M)	80009	067-0886-01
A1A1	670-6962-00		CKT BOARD ASSY: INTERFACE	80009	670-6962-00
A1A2	-----		CKT BOARD ASSY: R.F. L.O. AMP (REPLACEABLE AS A UNIT WITH A8)		
A1A3	670-6965-00		CKT BOARD ASSY: I.F. AMP	80009	670-6965-00
A1A4	670-6967-01		CKT BOARD ASSY: VISUAL L.O. 37.0 MHZ	80009	670-6967-01
A1A5	670-6966-01		CKT BOARD ASSY: VISUAL MODULATOR 37.0 MHZ	80009	670-6966-01
A1A6	670-6968-00		CKT BOARD ASSY: VIDEO PROCESSOR	80009	670-6968-00
A1A7	670-6990-00		CKT BOARD ASSY: VIDEO PRECORRECTOR	80009	670-6990-00
A1A8	670-6970-01		CKT BOARD ASSY: AURAL MODULATOR 37.0 MHZ	80009	670-6970-01
A2-1	670-7027-00		CKT BOARD ASSY: SWITCH BOARD	80009	670-7027-00
A2-2	670-7027-01		CKT BOARD ASSY: SWITCH BOARD	80009	670-7027-01
A3	-----		CKT BOARD ASSY: FIRST MIXER (REPLACEABLE AS A UNIT WITH A9)		
A4	-----		CKT BOARD ASSY: R.F. AMP (REPLACEABLE AS A UNIT WITH A8)		
A5	670-6972-00		CKT BOARD ASSY: DIRECTIONAL COUPLER	80009	670-6972-00
A7	670-6971-00		CKT BOARD ASSY: VARIABLE ATTENUATOR	80009	670-6971-00
A8	672-0942-00		CKT BOARD ASSY: R.F. L.O. AMP (A4, A1A1)	80009	672-0942-00
A9	672-0943-00		CKT BOARD ASSY: R.F. MIXER (A3, A1A2)	80009	672-0943-00
A10	670-6973-00		CKT BOARD ASSY: EXTENDER BD	80009	670-6973-00
A70	670-4987-01		CKT BOARD ASSY: POWER SUPPLY	80009	670-4987-01
A1	670-6962-00		CKT BOARD ASSY: INTERFACE	80009	670-6962-00
A1C160	283-0353-00		CAP., FXD, CER DI: 0.1UF, 10%, 50V	95275	VJ1210Y104K-H
A1C565	283-0353-00		CAP., FXD, CER DI: 0.1UF, 10%, 50V	95275	VJ1210Y104K-H
A1C760	283-0353-00		CAP., FXD, CER DI: 0.1UF, 10%, 50V	95275	VJ1210Y104K-H
A1C765	283-0353-00		CAP., FXD, CER DI: 0.1UF, 10%, 50V	95275	VJ1210Y104K-H
A1C792	290-0745-00		CAP., FXD, ELCLTL: 22UF, +50-10%, 25V	56289	502D225
A1C863	283-0353-00		CAP., FXD, CER DI: 0.1UF, 10%, 50V	95275	VJ1210Y104K-H
A1C864	283-0353-00		CAP., FXD, CER DI: 0.1UF, 10%, 50V	95275	VJ1210Y104K-H
A1C894	290-0745-00		CAP., FXD, ELCLTL: 22UF, +50-10%, 25V	56289	502D225
A1A3	670-6965-00		CKT BOARD ASSY: I.F. AMP	80009	670-6965-00
A1A3C116	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C118	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C121	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C124	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C126	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C133	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C212	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A3C218	283-0635-00		CAP., FXD, MICA D: 51PF, 1%, 100V	00853	D151E510F0
A1A3C233	283-0407-00		CAP., FXD, CER DI: 27PF, 5%, 50V	02114	ULA105A270JH
A1A3C236	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C311	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A3C312	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A3C331	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C432	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C434	290-0804-00		CAP., FXD, ELCLTL: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A3C511	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A3C513	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C531	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C618	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C621	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z

Replaceable Electrical Parts—067-0886-01

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscnt	Name & Description	Mfr Code	Mfr Part Number
A1A3C622	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C631	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C636	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3L117	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3L231	108-0260-00		COIL, RF: 98NH	80009	108-0260-00
A1A3L311	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L412	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L528	108-0655-00		COIL, RF: FIXED, 75NH	80009	108-0655-00
A1A3L632	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3Q121	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3Q216	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q332	151-0195-00		TRANSISTOR: SILICON, NPN	80009	151-0195-00
A1A3Q613	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q624	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3R115	315-0161-00		RES., FXD, CMPSN: 160 OHM, 5%, 0.25W	01121	CB1615
A1A3R122	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R124	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R126	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R132	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R133	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R226	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100R0F
A1A3R233	317-0510-00		RES., FXD, CMPSN: 51 OHM, 5%, 0.125W	01121	BB5105
A1A3R331	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A3R333	321-0358-00		RES., FXD, FILM: 52.3K OHM, 1%, 0.125W	91637	MFF1816G52301F
A1A3R334	321-0308-00		RES., FXD, FILM: 15.8K OHM, 1%, 0.125W	91637	MFF1816G15801F
A1A3R431	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A3R522	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R523	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A3R524	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R526	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100R0F
A1A3R527	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R531	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R533	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R534	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R614	315-0360-00		RES., FXD, CMPSN: 36 OHM, 5%, 0.25W	01121	CB3605
A1A3R616	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R618	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R626	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R633	315-0361-00		RES., FXD, CMPSN: 360 OHM, 5%, 0.25W	01121	CB3615
A1A3T132	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T516	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T634	120-1159-00		XFMR, RF: TOROID, 7 T, TRIFILAR	80009	120-1159-00
A1A4	670-6967-01		CKT BOARD ASSY: VISUAL L.O. 37.0 MHZ	80009	670-6967-01
A1A4C211	283-0598-00		CAP., FXD, MICA D: 253PF, 5%, 300V	09023	CD15EC(253)J03
A1A4C215	283-0640-00		CAP., FXD, MICA D: 160PF, 1%, 100V	00853	D151E161F0
A1A4C216	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C217	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C221	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C223	283-0631-00		CAP., FXD, MICA D: 95PF, 1%, 100V	00853	D151E950F0
A1A4C228	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A4C231	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A4C232	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A4C320	283-0032-00		CAP., FXD, CER DI: 470PF, 5%, 500V	72982	0831085Z5E00471J
A1A4C325	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A4L214	114-0405-00		COIL, RF: VARIABLE, 130UH-225UH	80009	114-0405-00

Replaceable Electrical Parts—067-0886-01

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A4L215	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L221	114-0307-00		COIL, RF: VARIABLE, 220-440NH	80009	114-0307-00
A1A4L222	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L225	108-0182-00		COIL, RF: 0.3UH	80009	108-0182-00
A1A4L226	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A4L231	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A4Q216	151-0260-00		TRANSISTOR: SILICON, NPN	80009	151-0260-00
A1A4Q225	151-0333-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS918	04713	SPS1752
A1A4R212	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R213	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A4R222	315-0271-00		RES., FXD, CMPSN: 270 OHM, 5%, 0.25W	01121	CB2715
A1A4R224	315-0331-00		RES., FXD, CMPSN: 330 OHM, 5%, 0.25W	01121	CB3315
A1A4R225	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A4R233	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R234	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R315	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R319	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4R321	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4Y238	158-0234-00		XTAL UNIT, QTZ: 37.0MHZ 0.01%, SERIES	33096	HC-25/U
A1A5	670-6966-01		CKT BOARD ASSY: VISUAL MODULATOR 37.0 MHZ	80009	670-6966-01
A1A5C115	283-0158-00		CAP., FXD, CER DI: 1PF, 10%, 50V	72982	8101B057C0K0109B
A1A5C116	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200C0G569C
A1A5C202	283-0000-00		CAP., FXD, CER DI: 0.001UF, +100-0%, 500V	72982	831-516E102P
A1A5C217	283-0140-00		CAP., FXD, CER DI: 4.7PF, 5%, 50V	72982	8101E003A479C
A1A5C315	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C316	283-0646-00		CAP., FXD, MICA D: 170PF, 1%, 100V	00853	D151E171F0
A1A5C317	283-0639-00		CAP., FXD, MICA D: 56PF, 1%, 100V	00853	D151E560F0
A1A5C515	283-0644-00		CAP., FXD, MICA D: 150PF, 1%, 500V	00853	D155E151F0
A1A5C612	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C615	283-0728-00		CAP., FXD, MICA D: 120PF, 1%, 500V	00853	D155F121F03
A1A5C700	283-0636-00		CAP., FXD, MICA D: 36PF, 1.4%, 100V	00853	D155F360G0
A1A5C701	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200C0G569C
A1A5CR114	152-0650-00		SEMICON DEVICE: VVC, 11.5PF NOM -3V, 30 PIV	04713	BB105B
A1A5E110	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5E112	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5E113	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5E114	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5L333	108-1060-00		COIL, RF: FIXED, 3 TURN	80009	108-1060-00
A1A5L421	108-1059-00		COIL, RF: FIXED 2 TURN	80009	108-1059-00
A1A5L514	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L515	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L521	114-0232-00		COIL, RF: VARIABLE, 130-220NH	80009	114-0232-00
A1A5L616	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5Q110	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q112	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q113	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q114	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5R202	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R205	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R206	321-0064-00		RES., FXD, FILM: 45.3 OHM, 1%, 0.125W	91637	MFF1816G45R30F
A1A5R207	321-0233-00		RES., FXD, FILM: 2.61K OHM, 1%, 0.125W	91637	MFF1816G26100F
A1A5R208	321-0096-00		RES., FXD, FILM: 97.6 OHM, 1%, 0.125W	91637	MFF1816G97R60F
A1A5R209	321-0144-00		RES., FXD, FILM: 309 OHM, 1%, 0.125W	91637	MFF1816G309R0F
A1A5R210	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815
A1A5R215	315-0300-00		RES., FXD, CMPSN: 30 OHM, 5%, 0.25W	01121	CB3005

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A5R216	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815
A1A5R217	315-0182-00		RES., FXD, CMPSN: 1.8K OHM, 5%, 0.25W	01121	CB1825
A1A5R315	315-0152-00		RES., FXD, CMPSN: 1.5K OHM, 5%, 0.25W	01121	CB1525
A1A5R612	315-0471-00		RES., FXD, CMPSN: 470 OHM, 5%, 0.25W	01121	CB4715
A1A5T121	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A5T214	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A6	670-6968-00		CKT BOARD ASSY: VIDEO PROCESSOR	80009	670-6968-00
A1A6C220	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C227	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C319	290-0804-00		CAP., FXD, ELCLTL: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C320	290-0745-00		CAP., FXD, ELCLTL: 22UF, +50-10%, 25V	56289	502D225
A1A6C325	281-0798-00		CAP., FXD, CER DI: 51PF, 1%, 100V	04222	MC101A510G
A1A6C330	290-0745-00		CAP., FXD, ELCLTL: 22UF, +50-10%, 25V	56289	502D225
A1A6C341	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C345	281-0786-00		CAP., FXD, CER DI: 150PF, 10%, 100V	72982	8035D2AADX5P151K
A1A6C421	290-0290-00		CAP., FXD, ELCLTL: 10UF, 20%, 25V	56289	30D472
A1A6C422	281-0774-00		CAP., FXD, CER DI: 0.022UF, 20%, 100V	72982	8045A9ABDZ5U223M
A1A6C424	281-0809-00		CAP., FXD, CER DI: 200PF, 5%, 100V	72982	8013T2ADDC1G201J
A1A6C433	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C435	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C513	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A1A6C514	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C531	290-0804-00		CAP., FXD, ELCLTL: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C541	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6CR533	152-0141-02		SEMICONV DEVICE: SILICON, 30V, 50NA	01295	1N4152R
A1A6L339	108-0226-00		COIL, RF: 100UH	76493	DWG B4257
A1A6Q322	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6Q541	151-0188-00		TRANSISTOR: SILICON, PNP	04713	SPS6868K
A1A6Q543	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6R137	315-0151-00		RES., FXD, CMPSN: 150 OHM, 5%, 0.25W	01121	CB1515
A1A6R139	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R220	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R225	315-0753-00		RES., FXD, CMPSN: 75K OHM, 5%, 0.25W	01121	CB7535
A1A6R229	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R231	321-0145-00		RES., FXD, FILM: 316 OHM, 1%, 0.125W	91637	MFF1816G306R0F
A1A6R233	321-0143-00		RES., FXD, FILM: 301 OHM, 1%, 0.125W	91637	MFF1816G301R0F
A1A6R325	315-0102-00		RES., FXD, CMPSN: 1K OHM, 5%, 0.25W	01121	CB1025
A1A6R333	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R335	315-0103-00		RES., FXD, CMPSN: 10K OHM, 5%, 0.25W	01121	CB1035
A1A6R341	315-0105-00		RES., FXD, CMPSN: 1M OHM, 5%, 0.25W	01121	CB1055
A1A6R345	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825
A1A6R413	321-0336-00		RES., FXD, FILM: 30.9K OHM, 1%, 0.125W	91637	MFF1816G30901F
A1A6R414	321-0891-00		RES., FXD, FILM: 800K OHM, 1%, 0.125W	91637	MFF1816G80002F
A1A6R422	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R433	315-0104-00		RES., FXD, CMPSN: 100K OHM, 5%, 0.25W	01121	CB1045
A1A6R437	315-0512-00		RES., FXD, CMPSN: 5.1K OHM, 5%, 0.25W	01121	CB5125
A1A6R521	315-0683-00		RES., FXD, CMPSN: 68K OHM, 5%, 0.25W	01121	CB6835
A1A6R523	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R528	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R531	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A6R533	315-0152-00		RES., FXD, CMPSN: 1.5K OHM, 5%, 0.25W	01121	CB1525
A1A6R538	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R541	315-0153-00		RES., FXD, CMPSN: 15K OHM, 5%, 0.25W	01121	CB1535
A1A6R545	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R548	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825

Replaceable Electrical Parts—067-0886-01

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A6U130	155-0233-00		MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	80009	155-0233-00
A1A6U339	156-0356-01		MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	80009	156-0356-01
A1A6U346	156-1134-00		MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A6U510	155-0144-00		MICROCIRCUIT,LI:DUAL IN-LINE,16 LEAD	80009	155-0144-00
A1A6VR223	152-0195-00		SEMICONV DEVICE:ZENER,0.4W,5.1V,5%	04713	SZ11755
A1A6VR225	152-0195-00		SEMICONV DEVICE:ZENER,0.4W,5.1V,5%	04713	SZ11755
A1A7	670-6990-00		CKT BOARD ASSY:VIDEO PRECORRECTOR (SYSTEM M)	80009	670-6990-00
A1A7C103	283-0594-00		CAP.,FXD,MICA D:0.001UF,1%,100V	00853	D151F102F0
A1A7C104	283-0605-00		CAP.,FXD,MICA D:678PF,1%,300V	00853	D153F6780F0
A1A7C107	283-0642-00		CAP.,FXD,MICA D:33PF,+/-0.5PF,300V	00853	D10-5E330G
A1A7C115	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C116	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C118	283-0699-00		CAP.,FXD,MICA D:100PF,5%,500V		
A1A7C119	283-0699-00		CAP.,FXD,MICA D:100PF,5%,500V		
A1A7C135	283-0689-00		CAP.,FXD,MICA D:550PF,0.5%,300V	00853	D153F551E0
A1A7C138	283-0696-00		CAP.,FXD,MICA D:2300PF,1%,500V	00853	D19-5E232F0
A1A7C142	283-0696-00		CAP.,FXD,MICA D:2300PF,1%,500V	00853	D19-5E232F0
A1A7C143	283-0623-00		CAP.,FXD,MICA D:1200PF,1%,100V	00853	D191F122F0
A1A7C211	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C212	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C213	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C214	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C215	283-0696-00		CAP.,FXD,MICA D:2300PF,1%,500V	00853	D19-5E232F0
A1A7C223	283-0636-00		CAP.,FXD,MICA D:36PF,1.4%,100V	00853	D155F360G0
A1A7C224	283-0622-00		CAP.,FXD,MICA D:450PF,1%,300V	00853	D153F451F0
A1A7C225	283-0648-00		CAP.,FXD,MICA D:10PF,5%,100V	00853	D151C100D0
A1A7C226	283-0622-00		CAP.,FXD,MICA D:450PF,1%,300V	00853	D153F451F0
A1A7C314	285-0719-00		CAP.,FXD,PLSTC:0.015UF,5%,100V	56289	410P15351
A1A7C338	283-0696-00		CAP.,FXD,MICA D:2300PF,1%,500V	00853	D19-5E232F0
A1A7C406	283-0635-00		CAP.,FXD,MICA D:51PF,1%,100V	00853	D151E510F0
A1A7C415	285-0719-00		CAP.,FXD,PLSTC:0.015UF,5%,100V	56289	410P15351
A1A7CR315	152-0141-02		SEMICONV DEVICE:SILICON,30V,50NA	01295	1N4152R
A1A7CR325	152-0141-02		SEMICONV DEVICE:SILICON,30V,50NA	01295	1N4152R
A1A7L110	114-0388-00		COIL,RF:VAR,2.3-2.5UH	80009	114-0388-00
A1A7L125	114-0391-00		COIL,RF:VAR,5.7-5.9UH	80009	114-0391-00
A1A7L205	114-0392-00		COIL,RF:VARIABLE,5.7-5.9UH	80009	114-0392-00
A1A7L218	114-0393-00		COIL,RF,VARIABLE,2.5-2.7UH	80009	114-0393-00
A1A7L230	114-0390-00		COIL,RF,VARIABLE,36-40UH	80009	114-0390-00
A1A7L231	114-0389-00		COIL,RF,VARIABLE,13.2-15.0UH	80009	114-0389-00
A1A7L241	114-0393-00		COIL,RF:VARIABLE,2.5-2.7UH	80009	114-0393-00
A1A7L242	114-0393-00		COIL,RF:VARIABLE,2.5-2.7UH	80009	114-0393-00
A1A7L310	108-0733-00		COIL,RF:113NH	80009	108-0733-00
A1A7L319	108-0358-00		COIL,REED SW:12V	80009	108-0358-00
A1A7L325	108-0358-00		COIL,REED SW:12V	80009	108-0358-00
A1A7L405	114-0209-00		COIL,RF:28-60UH,CORE NOT REPLACEABLE	80009	1148-0209-00
A1A7R305	321-0001-00		RES.,FXD,FILM:10 OHM,1%,0.125W	75042	CEATO-10R00F
A1A7R306	321-0001-00		RES.,FXD,FILM:10 OHM,1%,0.125W	75042	CEATO-10R00F
A1A7R321	311-1731-00		RES.,VAR,NONWIR:20 OHM,0.5W	73138	91-94-0
A1A7R322	321-0216-00		RES.,FXD,FILM:1.74K OHM,1%,0.125W	91637	MFF1816G17400F
A1A7R323	321-0216-00		RES.,FXD,FILM:1.74K OHM,1%,0.125W	91637	MFF1816G17400F
A1A7R407	321-0085-00		RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MFF1816G75R00F
A1A7R410	321-0085-00		RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MFF1816G75R00F
A1A7R423	315-0131-00		RES.,FXD,CMPSN:130 OHM,5%,0.25W	01121	CB1315
A1A7S316	260-0817-00		SWITCH,REED:SPDT,0.25A,100V	12617	1152234160

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A7S336	260-0817-00		SWITCH, REED: SPDT, 0.25A, 100V	12617	1152234160
A1A8	670-6970-01		CKT BOARD ASSY: AURAL MODULATOR 37.0 MHZ	80009	670-6970-01
A1A8C102	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A1A8C103	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A8C104	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A8C105	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C125	283-0594-00		CAP., FXD, MICA D: 0.001UF, 1%, 100V	00853	D151F102F0
A1A8C126	281-0562-00		CAP., FXD, CER DI: 39PF, 10%, 500V	72982	301-000U2J0390K
A1A8C127	281-0526-00		CAP., FXD, CER DI: 1.5PF, +/-0.5PF, 500V	72982	301-000S2K0159D
A1A8C202	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C212	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C213	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C214	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C216	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C222	283-0674-00		CAP., FXD, MICA D: 85PF, 1%, 500V	00853	D155F850F0
A1A8C223	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C225	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C227	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C301	283-0655-00		CAP., FXD, MICA D: 0.0033UF, 1%, 500V	00853	D195E332F0
A1A8C305	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C306	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C315	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C316	283-0599-00		CAP., FXD, MICA D: 98PF, 5%, 500V	00853	D105E980J0
A1A8C317	283-0639-00		CAP., FXD, MICA D: 56PF, 1%, 100V	00853	D151E560F0
A1A8C318	283-0672-00		CAP., FXD, MICA D: 200PF, 1%, 500V	00853	D155F2010F0
A1A8C319	281-0096-00		CAP., VAR, AIR DI: 5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C324	283-0599-00		CAP., FXD, MICA D: 98PF, 5%, 500V	00853	D105E980J0
A1A8C325	283-0639-00		CAP., FXD, MICA D: 56PF, 1%, 100V	00853	D151E560F0
A1A8C326	281-0096-00		CAP., VAR, AIR DI: 5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C401	285-1098-00		CAP., FXD, PLSTC: 0.22UF, 10%, 80V	56289	192P2249R8
A1A8C402	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C407	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C413	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C425	283-0672-00		CAP., FXD, MICA D: 200PF, 1%, 500V	00853	D155F2010F0
A1A8CR126	152-0665-00		SEMICOND DEVICE: SILICON, VVC, 30V	04713	SMV1344
A1A8L125	108-0897-00		COIL, RF: FIXED, 220UH	80009	108-0897-00
A1A8L126	114-0220-00		COIL, RF: 1-3UH, CORE 276-0568-00	80009	114-0220-00
A1A8L223	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A8L224	108-0182-00		COIL, RF: 0.3UH	80009	108-0182-00
A1A8L226	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A8L228	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A8L315	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A8L316	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A8L318	108-0072-00		COIL, RF: 0.75UH	80009	108-0072-00
A1A8L326	108-0072-00		COIL, RF: 0.75UH	80009	108-0072-00
A1A8Q202	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q204	151-0188-00		TRANSISTOR: SILICON, PNP	04713	SPS6868K
A1A8Q206	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q207	151-1005-00		TRANSISTOR: SILICON, JFE, N-CHANNEL	80009	151-1005-00
A1A8Q213	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q214	151-0472-00		TRANSISTOR: SILICON, NPN	80009	151-0472-00
A1A8Q302	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q325	151-0472-00		TRANSISTOR: SILICON, NPN	80009	151-0472-00
A1A8R101	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R102	311-1918-00		RES., VAR, NONWIR: 2K OHM, 10%, 0.50W	73138	72-199-0

Replaceable Electrical Parts—067-0886-01

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A8R103	311-1319-00		RES.,VAR, NONWIR:10K OHM,10%,0.75W	73138	89-126-1
A1A8R106	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R107	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R108	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A1A8R125	311-1138-00		RES.,VAR, NONWIR:1K OHM,20%,0.50W	73138	72XW-44-0-102M
A1A8R128	311-1918-00		RES.,VAR, NONWIR:2K OHM,10%,0.50W	73138	72-199-0
A1A8R200	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R201	321-0239-00		RES.,FXD,FILM:3.01K OHM,1%,0.125W	91637	MFF1816G30100F
A1A8R202	321-0251-00		RES.,FXD,FILM:4.02K OHM,1%,0.125W	91637	MFF1816G40200F
A1A8R203	315-0104-00		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A1A8R204	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R208	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R212	321-0184-00		RES.,FXD,FILM:806 OHM,1%,0.125W	91637	MFF1816G806ROF
A1A8R213	321-0273-00		RES.,FXD,FILM:6.81K OHM,1%,0.125W	91637	MFF1816G68100F
A1A8R214	315-0510-00		RES.,FXD,CMPSN:51 OHM,5%,0.25W	01121	CB5105
A1A8R215	315-0510-00		RES.,FXD,CMPSN:51 OHM,5%,0.25W	01121	CB5105
A1A8R216	321-0273-00		RES.,FXD,FILM:6.81K OHM,1%,0.125W	91637	MFF1816G68100F
A1A8R217	321-0273-00		RES.,FXD,FILM:6.81K OHM,1%,0.125W	91637	MFF1816G68100F
A1A8R221	321-0184-00		RES.,FXD,FILM:806 OHM,1%,0.125W	91637	MFF1816G806ROF
A1A8R225	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R226	321-0193-00		RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A1A8R227	321-0193-00		RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A1A8R300	321-0323-00		RES.,FXD,FILM:22.6K OHM,1%,0.125W	91637	MFF1816G22601F
A1A8R301	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R303	315-0106-00		RES.,FXD,CMPSN:10M OHM,5%,0.25W	01121	CB1065
A1A8R304	315-0473-00		RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A1A8R305	315-0243-00		RES.,FXD,CMPSN:24K OHM,5%,0.25W	01121	CB2435
A1A8R306	321-0258-00		RES.,FXD,FILM:4.75K OHM,1%,0.125W	91637	MFF1816G47500F
A1A8R309	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R312	311-1917-00		RES.,VAR, NONWIR:TRMR,5K OHM,10%,0.5W	73138	72-198-0
A1A8R319	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R327	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R401	315-0224-00		RES.,FXD,CMPSN:220K OHM,5%,0.25W	01121	CB2245
A1A8R402	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R405	315-0621-00		RES.,FXD,CMPSN:620 OHM,5%,0.25W	01121	CB6215
A1A8R415	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A1A8R419	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R425	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A1A8U400	156-1134-00		MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A8Y129	158-0229-00		XTAL UNIT,QTZ:32.5MHZ 0.01%,SERIES	33096	HC-25/U
A2-1	670-7027-00		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-00
A2-1S110	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S115	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S120	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S125	260-1576-01		SWITCH,PUSH:5 STA,2 POLE,CORR/UNCORRECT (FURN AS A UNIT WITH A2-1S129)	80009	260-1576-01
A2-1S129	260-1576-01		SWITCH,PUSH:5 STA,2 POLE,CORR/UNCORRECT (FURN AS A UNIT WITH A2-1S125)	80009	260-1576-01
A2-2	670-7027-01		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-01
A2-2S110	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S115	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S120	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S125	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A2-2S129	260-1665-00		SWITCH,PUSH:1 STA,2 POLE,MOMENTARY	71590	2KAA010000-673
A3	-----		CKT BOARD ASSY:FIRST MIXER (REPLACEABLE AS A UNIT WITH A9)		
A3C15	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A3C17	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C22	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A3C23	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A3C24	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A3C25	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C26	283-0254-00		CAP.,FXD,CER DI:7PF,+/-7.5%,100V	95275	VJ0805-A-709DH
A3C28	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C31	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A3C47	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C52	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C53	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A3C86	283-0403-00		CAP.,FXD,CER DI:5.75PF,+/-0.25PF,100V (NOMINAL VALUE, SELECTED)	72982	A01AL4A4LC0G0259
A3CR63	152-0715-00		SEMICONV DEVICE:SCHOTTKY,SI,RING QUAD	80009	152-0715-00
A3L46	108-0983-00		COIL,RF:FIXED,230NH,30% TOROIDAL	80009	108-0983-00
A3Q27	151-0658-00		TRANSISTOR:SILICON,NPN	80009	151-0658-00
A3Q34	151-0216-00		TRANSISTOR:SILICON,PNP	04713	SPS8803
A3R22	317-0202-00		RES.,FXD,CMPSN:2K OHM,5%,0.125W	01121	BB2025
A3R24	317-0332-00		RES.,FXD,CMPSN:3.3K OHM,5%,0.125W	01121	BB3325
A3R25	307-0570-00		RES.,FXD,FILM:18 OHM,2%,0.12KW	52262	MCRA180FZ
A3R26	307-0279-00		RES.,FXD,FILM:10 OHM,10%,100 MW	27851	3C301K
A3R27	307-0569-00		RES.,FXD,FILM:249 OHM,1%,0.125W	52262	MCRA249ROFYZ
A3R31	317-0122-00		RES.,FXD,CMPSN:1.2K OHM,5%,0.125W	01121	BB1225
A3R41	315-0100-00		RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A3R42	301-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.50W	01121	EB1015
A3R54	307-0276-00		RES.,FXD,FILM:300 OHM,10%,100MW	03888	0BD
A3R55	307-0279-00		RES.,FXD,FILM:10 OHM,10%,100 MW	03888	0BD
A3R86	317-0240-00		RES.,FXD,CMPSN:24 OHM,5%,0.125W	01121	BB2405
A3R87	317-0150-00		RES.,FXD,CMPSN:15 OHM,5%,0.125W	01121	BB1505
A3T63	120-1153-00		XFMR,RF: BALUN	80009	120-1153-00
A3T75	120-1153-00		XFMR,RF: BALUN	80009	120-1153-00
A4	-----		CKT BOARD ASSY:R.F. AMP (REPLACEABLE AS A UNIT WITH A8)		
A4C21	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A4C23	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A4C26	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C33	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A4C34	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C42	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C43	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C46	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C53	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A4C54	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C55	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A4C57	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C58	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A4C62	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C64	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C66	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z

Replaceable Electrical Parts—067-0886-01

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A4L42	108-0896-00		COIL, RF: FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00
A4L55	108-0896-00		COIL, RF: FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00
A4Q33	151-0216-00		TRANSISTOR: SILICON, PNP	04713	SPS8803
A4Q36	151-0630-00		TRANSISTOR: SILICON, NPN	80009	151-0630-00
A4Q52	151-0216-00		TRANSISTOR: SILICON, PNP	04713	SPS8803
A4Q56	151-0630-00		TRANSISTOR: SILICON, NPN	80009	151-0630-00
A4R21	315-0242-00		RES., FXD, CMPSN: 2.4K OHM, 5%, 0.25W	01121	CB2425
A4R22	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A4R32	315-0361-00		RES., FXD, CMPSN: 360 OHM, 5%, 0.25W	01121	CB3615
A4R36	317-0332-00		RES., FXD, CMPSN: 3.3K OHM, 5%, 0.125W	01121	BB3325
A4R37	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R46	307-1103-00		RES., FXD, FILM: 225 OHM, 1%, 0.125W	52262	MCRA2250FYZ
A4R47	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R51	301-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.50W	01121	EB1815
A4R54	317-0332-00		RES., FXD, CMPSN: 3.3K OHM, 5%, 0.125W	01121	BB3325
A4R55	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R56	307-0336-00		RES., FXD, FILM: 50 OHM, 1%, 0.105W	52262	MCRA 500 FYZ
A4R58	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R65	307-0571-00		RES., FXD, FILM: 57 OHM, 1%, 0.125W	52262	MCRA570FZ
A5	670-6972-00		CKT BOARD ASSY: DIRECTIONAL COUPLER	80009	670-6972-00
A5L221	120-1344-00		XFMR, RF: TOROID, 2 WINDS	80009	120-1344-00
A5R111	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R112	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R121	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R122	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R211	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R212	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A7	670-6971-00		CKT BOARD ASSY: VARIABLE ATTENUATOR	80009	670-6971-00
A7R100	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100ROF
A7R110	321-0116-00		RES., FXD, FILM: 158 OHM, 1%, 0.125W	91637	MFF1816G158ROF
A7R225	311-0169-00		RES., VAR, NONWIR: 100 OHM, 20%, 0.50W	01121	W-7564B
A7R335	321-0819-07		RES., FXD, FILM: 84 OHM, 0.1%, 0.125W	91637	MFF1816C84R00B
A70	670-4987-01		CKT BOARD ASSY: POWER SUPPLY	80009	670-4987-01
A70C01	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A70C04	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A70C12	283-0003-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z
A70C13	283-0060-00		CAP., FXD, CER DI: 100PF, 5%, 200V	72982	855-535U2J101J
A70C14	283-0067-00		CAP., FXD, CER DI: 0.001UF, 10%, 200V	72982	835-515B102K
A70C21	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C57	290-0520-00		CAP., FXD, ELCTLT: 4500UF, +100-0%, 40V	56289	68D10474
A70C62	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C71	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C84	283-0067-00		CAP., FXD, CER DI: 0.001UF, 10%, 200V	72982	835-515B102K
A70C85	283-0060-00		CAP., FXD, CER DI: 100PF, 5%, 200V	72982	855-535U2J101J
A70C87	290-0520-00		CAP., FXD, ELCTLT: 4500UF, +100-0%, 40V	56289	68D10474
A70C91	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A70C92	283-0003-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z
A70C93	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A70CR06	152-0066-00		SEMICONV DEVICE: SILICON, 400V, 750MA	14433	LG4016
A70CR20	152-0066-00		SEMICONV DEVICE: SILICON, 400V, 750MA	14433	LG4016

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A70CR55	152-0659-00		SEMICONV DEVICE:SILICON,100V,6A	04713	MR751
A70CR65	152-0659-00		SEMICONV DEVICE:SILICON,100V,6A	04713	MR751
A70CR75	152-0659-00		SEMICONV DEVICE:SILICON,100V,6A	04713	MR751
A70CR76	152-0659-00		SEMICONV DEVICE:SILICON,100V,6A	04713	MR751
A70CR81	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
A70DS10	150-1001-00		LT EMITTING DIO:RED,660NM,100MA MAX	50522	MV5024
A70DS70	150-1001-00		LT EMITTING DIO:RED,660NM,100MA MAX	50522	MV5024
A70Q10	151-0192-00		TRANSISTOR:SILICON,NPN,SEL FROM MPS6521	04713	SPS8801
A70Q13	151-0389-00		TRANSISTOR:SILICON,PNP	80009	151-0389-00
A70Q14	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q22	151-0232-00		TRANSISTOR:SILICON,NPN,DUAL	80009	151-0232-00
A70Q23	151-0190-00		TRANSISTOR:SILICON,NPN	07263	S032677
A70Q72	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q73	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q81	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q82	151-0192-00		TRANSISTOR:SILICON,NPN,SEL FROM MPS6521	04713	SPS8801
A70Q83	151-0207-00		TRANSISTOR:SILICON,NPN	80009	151-0207-00
A70R02	308-0755-00		RES.,FXD,WW:0.75 OHM,5%,2W	75042	BWH-R7500J
A70R06	315-0471-00		RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A70R10	315-0122-00		RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A70R11	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A70R12	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A70R13	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A70R14	315-0471-00		RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A70R15	315-0241-00		RES.,FXD,CMPSN:240 OHM,5%,0.25W	01121	CB2415
A70R20	321-0779-03		RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
A70R21	321-0779-03		RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
A70R22	315-0153-00		RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
A70R23	315-0102-00		RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A70R24	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R25	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R32	315-0472-00		RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A70R62	315-0362-00		RES.,FXD,CMPSN:3.6K OHM,5%,0.25W	01121	CB3625
A70R63	315-0363-00		RES.,FXD,CMPSN:36K OHM,5%,0.25W	01121	CB3635
A70R64	315-0562-00		RES.,FXD,CMPSN:5.6K OHM,5%,0.25W	01121	CB5625
A70R66	311-1241-00		RES.,VAR,NONWIR:100K OHM,10%,0.5W	32997	3386X-T07-104
A70R70	321-0200-00		RES.,FXD,FILM:1.18K OHM,1%,0.125W	91637	MFF1816G11800F
A70R71	321-0669-00		RES.,FXD,FILM:6.08K OHM,0.5%,0.125W	91637	MFF1816D60800D
A70R72	321-0283-08		RES.,FXD,FILM:8.66K OHM,1%,0.125W	24546	NC55C8660F
A70R73	315-0105-00		RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A70R74	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R75	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R80	315-0122-00		RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A70R82	315-0102-00		RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A70R83	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A70R84	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A70R85	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A70R86	315-0241-00		RES.,FXD,CMPSN:240 OHM,5%,0.25W	01121	CB2415
A70R91	307-0113-00		RES.,FXD,CMPSN:5.1 OHM,5%,0.25W	01121	CB51G5
A70R93	301-0102-00		RES.,FXD,CMPSN:1K OHM,5%,0.50W	01121	EB1025
A70R94	315-0202-00		RES.,FXD,CMPSN:2K OHM,5%,0.25W	01121	CB2025
A70VR62	152-0317-00		SEMICONV DEVICE:ZENER,0.25W,6.2V,5%	80009	152-0317-00
A70VR73	152-0127-00		SEMICONV DEVICE:ZENER,0.4W,7.5V,5%	04713	SZG35009K2

Replaceable Electrical Parts—067-0886-01

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
CHASSIS PARTS					
DS18	150-1055-00		LT EMITTING DIO:GREEN,560NM,40 MAX	72619	559-0201-001
F10	159-0032-00		FUSE, CARTRIDGE:3AG,0.5A,250V,SLOW-BLOW	71400	MDL 1/2
F10	159-0044-00 -----		FUSE, CARTRIDGE:3AG,0.2A,250V,SLOW-BLOW (SPARE)	71400	MDL 2/10
Q05	151-0373-00		TRANSISTOR:SILICON,PNP	80009	151-0373-00
Q95	151-0349-04 -----		TRANSISTOR:SILICON,NPN,SEL MJE2801 (SCREENED)	80009	151-0349-04
R74	311-1484-00		RES.,VAR, NONWIR:PNL,2.5K OHM,1W	01121	11M110
R76	311-1484-00		RES.,VAR, NONWIR:PNL,2.5K OHM,1W	01121	11M110
R84	311-1365-00		RES.,VAR, NONWIR:50K OHM,20%,1W	01121	11M164
R94	311-1368-00		RES.,VAR, NONWIR:5K OHM,20%,1W	01121	73A1G040L502M
S19	260-1961-00		SWITCH ROCKER:DPST,6(4)A,250V	000FJ	1802-1121
T10	120-1145-00		XFMR,PWR,STPDN:	80009	120-1145-00
U10	119-0813-00		SELECTOR,VOLTS:W/LINE FLTR RCPT & FUSE	02777	F65003

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1	067-0886-02		TEST MODULATOR 38.9 MHZ(SYSTEM M)	80009	067-0886-02
A1A1	670-6962-00		CKT BOARD ASSY:INTERFACE	80009	670-6962-00
A1A2	-----		CKT BOARD ASSY:R.F. L.O. AMP (REPLACEABLE AS A UNIT WITH A8)		
A1A3	670-6965-00		CKT BOARD ASSY:I.F. AMP	80009	670-6965-00
A1A4	670-6967-02		CKT BOARD ASSY:VISUAL L.O. 38.9 MHZ	80009	670-6967-02
A1A5	670-6966-02		CKT BOARD ASSY:VISUAL MODULATOR 38.9 MHZ	80009	670-6966-02
A1A6	670-6968-00		CKT BOARD ASSY:VIDEO PROCESSOR	80009	670-6968-00
A1A7	670-6990-00		CKT BOARD ASSY:VIDEO PRECORRECTOR	80009	670-6990-00
A1A8	670-6970-02		CKT BOARD ASSY:AURAL MODULATOR 38.9 MHZ	80009	670-6970-02
A2-1	670-7027-00		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-00
A2-2	670-7027-01		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-01
A3	-----		CKT BOARD ASSY:FIRST MIXER (REPLACEABLE AS A UNIT WITH A9)		
A4	-----		CKT BOARD ASSY:R.F. AMP (REPLACEABLE AS A UNIT WITH A8)		
A5	670-6972-00		CKT BOARD ASSY:DIRECTIONAL COUPLER	80009	670-6972-00
A7	670-6971-00		CKT BOARD ASSY:VARIABLE ATTENUATOR	80009	670-6971-00
A8	672-0942-00		CKT BOARD ASSY:R.F. L.O. AMP(A4,A1A1)	80009	672-0942-00
A9	672-0943-00		CKT BOARD ASSY:R.F. MIXER(A3,A1A2)	80009	672-0943-00
A10	670-6973-00		CKT BOARD ASSY:EXTENDER	80009	670-6973-00
A70	670-4987-01		CKT BOARD ASSY:POWER SUPPLY	80009	670-4987-01
A1	670-6962-00		CKT BOARD ASSY:INTERFACE	80009	670-6962-00
A1C160	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C565	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C760	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C765	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C792	290-0745-00		CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A1C863	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C864	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C894	290-0745-00		CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A1A3	670-6965-00		CKT BOARD ASSY:I.F. AMP	80009	670-6965-00
A1A3C116	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C118	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C121	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C124	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C126	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C133	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C212	281-0097-00		CAP.,VAR,CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C218	283-0635-00		CAP.,FXD,MICA D:51PF,1%,100V	00853	D151E510F0
A1A3C233	283-0407-00		CAP.,FXD,CER DI:27PF,5%,50V	02114	ULA105A270JH
A1A3C236	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C311	281-0097-00		CAP.,VAR,CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C312	283-0634-00		CAP.,FXD,MICA D:65PF,1%,100V	00853	D151E650F0
A1A3C331	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C432	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C434	290-0804-00		CAP.,FXD,ELCTLT:10UF,+50-10%,25V	55680	25ULA10V-T
A1A3C511	281-0097-00		CAP.,VAR,CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C513	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C531	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z

Replaceable Electrical Parts—067-0886-02

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A3C618	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C621	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C622	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C631	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C636	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3L117	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3L231	108-0260-00		COIL, RF: 98NH	80009	108-0260-00
A1A3L311	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L412	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L528	108-0655-00		COIL, RF: FIXED, 75NH	80009	108-0655-00
A1A3L632	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3Q121	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3Q216	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q332	151-0195-00		TRANSISTOR: SILICON, NPN	80009	151-0195-00
A1A3Q613	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q624	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3R115	315-0161-00		RES., FXD, CMPSN: 160 OHM, 5%, 0.25W	01121	CB1615
A1A3R122	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R124	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R126	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R132	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R133	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R226	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100R0F
A1A3R233	317-0510-00		RES., FXD, CMPSN: 51 OHM, 5%, 0.125W	01121	BB5105
A1A3R331	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A3R333	321-0358-00		RES., FXD, FILM: 52.3K OHM, 1%, 0.125W	91637	MFF1816G52301F
A1A3R334	321-0308-00		RES., FXD, FILM: 15.8K OHM, 1%, 0.125W	91637	MFF1816G15801F
A1A3R431	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A3R522	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R523	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A3R524	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R526	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100R0F
A1A3R527	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R531	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R533	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R534	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R614	315-0360-00		RES., FXD, CMPSN: 36 OHM, 5%, 0.25W	01121	CB3605
A1A3R616	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R618	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R626	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R633	315-0361-00		RES., FXD, CMPSN: 360 OHM, 5%, 0.25W	01121	CB3615
A1A3T132	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T516	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T634	120-1159-00		XFMR, RF: TOROID, 7 T, TRIFILAR	80009	120-1159-00
A1A4	670-6967-02		CKT BOARD ASSY: VISUAL L.O. 38.9 MHZ	80009	670-6967-02
A1A4C211	283-0598-00		CAP., FXD, MICA D: 253PF, 5%, 300V	09023	CD15EC(253)J03
A1A4C215	283-0640-00		CAP., FXD, MICA D: 160PF, 1%, 100V	00853	D151E161F0
A1A4C216	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C217	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C221	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C223	283-0676-00		CAP., FXD, MICA D: 82PF, 1%, 500V	00853	D105E820F0
A1A4C228	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A4C231	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A4C232	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A4C320	283-0032-00		CAP., FXD, CER DI: 470PF, 5%, 500V	72982	083108525E00471J

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A4C325	283-0111-00		CAP., FXD, CER DI:0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A4L214	114-0405-00		COIL, RF: VARIABLE, 130UH + 1-225UH	80009	114-0405-00
A1A4L215	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L221	114-0307-00		COIL, RF: VARIABLE, 220-440NH	80009	114-0307-00
A1A4L222	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L225	108-0182-00		COIL, RF: 0.3UH	80009	108-0182-00
A1A4L226	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A4L231	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A4Q216	151-0260-00		TRANSISTOR: SILICON, NPN	80009	151-0260-00
A1A4Q225	151-0333-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS918	04713	SPS1752
A1A4R212	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R213	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A4R222	315-0271-00		RES., FXD, CMPSN: 270 OHM, 5%, 0.25W	01121	CB2715
A1A4R224	315-0331-00		RES., FXD, CMPSN: 330 OHM, 5%, 0.25W	01121	CB3315
A1A4R225	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A4R233	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R234	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R315	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R319	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4R321	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4Y238	158-0235-00		XTAL UNIT, QTZ: 38.9MHZ 0.01%, SERIES	33096	HC-25/U
A1A5	670-6966-02		CKT BOARD ASSY: VISUAL MODULATOR 38.9 MHZ	80009	670-6966-02
A1A5C115	283-0158-00		CAP., FXD, CER DI: 1PF, 10%, 50V	72982	8101B057COK0109B
A1A5C116	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200COG569C
A1A5C202	283-0000-00		CAP., FXD, CER DI: 0.001UF, +100-0%, 500V	72982	831-516E102P
A1A5C217	283-0140-00		CAP., FXD, CER DI: 4.7PF, 5%, 50V	72982	8101E003A479C
A1A5C315	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C316	283-0646-00		CAP., FXD, MICA D: 170PF, 1%, 100V	00853	D151E171F0
A1A5C317	283-0639-00		CAP., FXD, MICA D: 56PF, 1%, 100V	00853	D151E560F0
A1A5C515	283-0644-00		CAP., FXD, MICA D: 150PF, 1%, 500V	00853	D155E151F0
A1A5C612	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C615	283-0728-00		CAP., FXD, MICA D: 120PF, 1%, 500V	00853	D155F121F03
A1A5C700	283-0636-00		CAP., FXD, MICA D: 36PF, 1.4%, 100V	00853	D155F360G0
A1A5C701	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200COG569C
A1A5CR114	152-0650-00		SEMICOND DEVICE: VVC, 11.5PF NOM -3V, 30 PIV	04713	BB105B
A1A5E110	276-0528-00		SHIELDING BEAD, :0.1UH	02114	56-0590-65C/3B
A1A5E112	276-0528-00		SHIELDING BEAD, :0.1UH	02114	56-0590-65C/3B
A1A5E113	276-0528-00		SHIELDING BEAD, :0.1UH	02114	56-0590-65C/3B
A1A5E114	276-0528-00		SHIELDING BEAD, :0.1UH	02114	56-0590-65C/3B
A1A5L333	108-1060-00		COIL, RF: FIXED, 3 TURN	80009	108-1060-00
A1A5L421	108-1059-00		COIL, RF: FIXED, 2 TURN	80009	108-1059-00
A1A5L514	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L515	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L521	114-0232-00		COIL, RF: VARIABLE, 130-220NH	80009	114-0232-00
A1A5L616	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5Q110	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q112	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q113	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q114	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5R202	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R205	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R206	321-0064-00		RES., FXD, FILM: 45.3 OHM, 1%, 0.125W	91637	MFF1816G45R30F
A1A5R207	321-0233-00		RES., FXD, FILM: 2.61K OHM, 1%, 0.125W	91637	MFF1816G26100F
A1A5R208	321-0096-00		RES., FXD, FILM: 97.6 OHM, 1%, 0.125W	91637	MFF1816G97R60F
A1A5R209	321-0144-00		RES., FXD, FILM: 309 OHM, 1%, 0.125W	91637	MFF1816G309R0F

Replaceable Electrical Parts—067-0886-02

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A5R210	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815
A1A5R215	315-0300-00		RES., FXD, CMPSN: 30 OHM, 5%, 0.25W	01121	CB3005
A1A5R216	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815
A1A5R217	315-0911-00		RES., FXD, CMPSN: 910 OHM, 5%, 0.25W	01121	CB9115
A1A5R315	315-0152-00		RES., FXD, CMPSN: 1.5K OHM, 5%, 0.25W	01121	CB1525
A1A5R612	315-0471-00		RES., FXD, CMPSN: 470 OHM, 5%, 0.25W	01121	CB4715
A1A5T121	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A5T214	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A6	670-6968-00		CKT BOARD ASSY: VIDEO PROCESSOR	80009	670-6968-00
A1A6C220	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C227	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C319	290-0804-00		CAP., FXD, ELCTLT: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C320	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A6C325	281-0798-00		CAP., FXD, CER DI: 51PF, 1%, 100V	04222	MC101A510G
A1A6C330	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A6C341	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C345	281-0786-00		CAP., FXD, CER DI: 150PF, 10%, 100V	72982	8035D2AADX5P151K
A1A6C421	290-0290-00		CAP., FXD, ELCTLT: 10UF, 20%, 25V	56289	30D472
A1A6C422	281-0774-00		CAP., FXD, CER DI: 0.022UF, 20%, 100V	72982	8045A9ABDZ5U223M
A1A6C424	281-0809-00		CAP., FXD, CER DI: 200PF, 5%, 100V	72982	8013T2ADDC1G201J
A1A6C433	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C435	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C513	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A1A6C514	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C531	290-0804-00		CAP., FXD, ELCTLT: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C541	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6CR533	152-0141-02		SEMICONV DEVICE: SILICON, 30V, 50NA	01295	1N4152R
A1A6L339	108-0226-00		COIL, RF: 100UH	76493	DWG B4257
A1A6Q322	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6Q541	151-0188-00		TRANSISTOR: SILICON, PNP	04713	SPS6868K
A1A6Q543	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6R137	315-0151-00		RES., FXD, CMPSN: 150 OHM, 5%, 0.25W	01121	CB1515
A1A6R139	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R220	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R225	315-0753-00		RES., FXD, CMPSN: 75K OHM, 5%, 0.25W	01121	CB7535
A1A6R229	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R231	321-0143-00		RES., FXD, FILM: 301 OHM, 1%, 0.125W	91637	MFF1816G301ROF
A1A6R233	321-0143-00		RES., FXD, FILM: 301 OHM, 1%, 0.125W	91637	MFF1816G301ROF
A1A6R325	315-0102-00		RES., FXD, CMPSN: 1K OHM, 5%, 0.25W	01121	CB1025
A1A6R333	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R335	315-0103-00		RES., FXD, CMPSN: 10K OHM, 5%, 0.25W	01121	CB1035
A1A6R341	315-0105-00		RES., FXD, CMPSN: 1M OHM, 5%, 0.25W	01121	CB1055
A1A6R345	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825
A1A6R413	321-0336-00		RES., FXD, FILM: 30.9K OHM, 1%, 0.125W	91637	MFF1816G30901F
A1A6R414	321-0891-00		RES., FXD, FILM: 800K OHM, 1%, 0.125W	91637	MFF1816G80002F
A1A6R422	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R433	315-0104-00		RES., FXD, CMPSN: 100K OHM, 5%, 0.25W	01121	CB1045
A1A6R437	315-0512-00		RES., FXD, CMPSN: 5.1K OHM, 5%, 0.25W	01121	CB5125
A1A6R521	315-0683-00		RES., FXD, CMPSN: 68K OHM, 5%, 0.25W	01121	CB6835
A1A6R523	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R528	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R531	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A6R533	315-0152-00		RES., FXD, CMPSN: 1.5K OHM, 5%, 0.25W	01121	CB1525
A1A6R538	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R541	315-0153-00		RES., FXD, CMPSN: 15K OHM, 5%, 0.25W	01121	CB1535

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscnt	Name & Description	Mfr Code	Mfr Part Number
A1A6R545	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R548	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825
A1A6U130	155-0233-00		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	80009	155-0233-00
A1A6U339	156-0356-01		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	80009	156-0356-01
A1A6U346	156-1134-00		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A6U510	155-0144-00		MICROCIRCUIT, LI: DUAL IN-LINE, 16 LEAD	80009	155-0144-00
A1A6VR223	152-0195-00		SEMICONV DEVICE: ZENER, 0.4W, 5.1V, 5%	04713	SZ11755
A1A6VR225	152-0195-00		SEMICONV DEVICE: ZENER, 0.4W, 5.1V, 5%	04713	SZ11755
A1A7	670-6990-00		CKT BOARD ASSY: VIDEO PRECORRECTOR	80009	670-6990-00
A1A7C103	283-0594-00		CAP., FXD, MICA D: 0.001UF, 1%, 100V	00853	D151F102F0
A1A7C104	283-0605-00		CAP., FXD, MICA D: 678PF, 1%, 300V	00853	D153F6780F0
A1A7C107	283-0642-00		CAP., FXD, MICA D: 33PF, +/-0.5PF, 300V	00853	D10-5E330G
A1A7C115	283-0597-00		CAP., FXD, MICA D: 470PF, 10%, 300V	00853	D153E471K0
A1A7C116	283-0597-00		CAP., FXD, MICA D: 470PF, 10%, 300V	00853	D153E471K0
A1A7C118	283-0699-00		CAP., FXD, MICA D: 100PF, 5%, 500V		
A1A7C119	283-0699-00		CAP., FXD, MICA D: 100PF, 5%, 500V		
A1A7C135	283-0689-00		CAP., FXD, MICA D: 550PF, 0.5%, 300V	00853	D153F551E0
A1A7C138	283-0696-00		CAP., FXD, MICA D: 2300PF, 1%, 500V	00853	D19-5E232F0
A1A7C142	283-0696-00		CAP., FXD, MICA D: 2300PF, 1%, 500V	00853	D19-5E232F0
A1A7C143	283-0623-00		CAP., FXD, MICA D: 1200PF, 1%, 100V	00853	D191F122F0
A1A7C211	283-0597-00		CAP., FXD, MICA D: 470PF, 10%, 300V	00853	D153E471K0
A1A7C212	283-0597-00		CAP., FXD, MICA D: 470PF, 10%, 300V	00853	D153E471K0
A1A7C213	283-0597-00		CAP., FXD, MICA D: 470PF, 10%, 300V	00853	D153E471K0
A1A7C214	283-0597-00		CAP., FXD, MICA D: 470PF, 10%, 300V	00853	D153E471K0
A1A7C215	283-0696-00		CAP., FXD, MICA D: 2300PF, 1%, 500V	00853	D19-5E232F0
A1A7C223	283-0636-00		CAP., FXD, MICA D: 36PF, 1.4%, 100V	00853	D155F360G0
A1A7C224	283-0622-00		CAP., FXD, MICA D: 450PF, 1%, 300V	00853	D153F451F0
A1A7C225	283-0648-00		CAP., FXD, MICA D: 10PF, 5%, 100V	00853	D151C100D0
A1A7C226	283-0622-00		CAP., FXD, MICA D: 450PF, 1%, 300V	00853	D153F451F0
A1A7C314	285-0719-00		CAP., FXD, PLSTC: 0.015UF, 5%, 100V	56289	410P15351
A1A7C338	283-0696-00		CAP., FXD, MICA D: 2300PF, 1%, 500V	00853	D19-5E232F0
A1A7C406	283-0635-00		CAP., FXD, MICA D: 51PF, 1%, 100V	00853	D151E510F0
A1A7C415	285-0719-00		CAP., FXD, PLSTC: 0.015UF, 5%, 100V	56289	410P15351
A1A7CR315	152-0141-02		SEMICONV DEVICE: SILICON, 30V, 50NA	01295	1N4152R
A1A7CR325	152-0141-02		SEMICONV DEVICE: SILICON, 30V, 50NA	01295	1N4152R
A1A7L110	114-0388-00		COIL, RF: VARIABLE, 2.3-2.5UH	80009	114-0388-00
A1A7L125	114-0391-00		COIL, RF: VARIABLE, 4.7-5.0UH	80009	114-0391-00
A1A7L205	114-0392-00		COIL, RF: VARIABLE, 5.7-5.9UH	80009	114-0392-00
A1A7L218	114-0393-00		COIL, RF: VARIABLE, 2.5-2.7UH	80009	114-0393-00
A1A7L230	114-0390-00		COIL, RF: VARIABLE 36-40UH	80009	114-0390-00
A1A7L231	114-0389-00		COIL, RF: VARIABLE, 13.2-15.0UH	80009	114-0389-00
A1A7L241	114-0393-00		COIL, RF: VARIABLE, 2.5-2.7UH	80009	114-0393-00
A1A7L242	114-0393-00		COIL, RF: VARIABLE, 2.5-2.7UH	80009	114-0393-00
A1A7L310	108-0733-00		COIL, RF: 113NH	80009	108-0733-00
A1A7L325	108-0358-00		COIL, REED, SW: 12V	80009	108-0358-00
A1A7L405	114-0209-00		COIL, RF: 28-60UH, CORE NOT REPLACEABLE	80009	114-0209-00
A1A7L319	108-0358-00		COIL, REED SW: 12V	80009	108-0358-00
A1A7R321	311-1731-00		RES., VAR, NONWIR: 20 OHM, 0.5W	73138	91-94-0
A1A7R322	321-0216-00		RES., FXD, FILM: 1.74K OHM, 1%, 0.125W	91637	MFF1816G17400F
A1A7R323	321-0216-00		RES., FXD, FILM: 1.74K OHM, 1%, 0.125W	91637	MFF1816G17400F
A1A7R405	321-0202-00		RES., FXD, FILM: 1.24K OHM, 1%, 0.125W	91637	MFF1816G12400F
A1A7R407	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A7R410	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A7R423	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A7S316	260-0817-00		SWITCH, REED: SPDT, 0.25A, 100V	12617	1152234160

Replaceable Electrical Parts—067-0886-02

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A7S336	260-0817-00		SWITCH, REED: SPDT, 0.25A, 100V	12617	1152234160
A1A8	670-6970-02		CKT BOARD ASSY:AURAL MODULATOR 38.9 MHZ	80009	670-6970-02
A1A8C102	290-0770-00		CAP., FXD, ELCTLT:100UF, +50-10%, 25V	56289	502D230
A1A8C103	290-0745-00		CAP., FXD, ELCTLT:22UF, +50-10%, 25V	56289	502D225
A1A8C104	290-0745-00		CAP., FXD, ELCTLT:22UF, +50-10%, 25V	56289	502D225
A1A8C105	290-0782-00		CAP., FXD, ELCTLT:4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C125	283-0594-00		CAP., FXD, MICA D:0.001UF, 1%, 100V	00853	D151F102FO
A1A8C126	281-0562-00		CAP., FXD, CER DI:39PF, 10%, 500V	72982	301-000U2J0390K
A1A8C127	281-0526-00		CAP., FXD, CER DI:1.5PF, +/-0.5PF, 500V	72982	301-000S2K0159D
A1A8C202	290-0782-00		CAP., FXD, ELCTLT:4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C212	283-0629-00		CAP., FXD, MICA D:62PF, 1%, 500V	00853	D105E620FO
A1A8C213	283-0629-00		CAP., FXD, MICA D:62PF, 1%, 500V	00853	D105E620FO
A1A8C214	283-0111-00		CAP., FXD, CER DI:0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C216	283-0629-00		CAP., FXD, MICA D:62PF, 1%, 500V	00853	D105E620FO
A1A8C222	283-0634-00		CAP., FXD, MICA D:65PF, 1%, 100V	00853	D151E650FO
A1A8C223	283-0629-00		CAP., FXD, MICA D:62PF, 1%, 500V	00853	D105E620FO
A1A8C225	283-0204-00		CAP., FXD, CER DI:0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C227	283-0111-00		CAP., FXD, CER DI:0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C301	283-0655-00		CAP., FXD, MICA D:0.0033UF, 1%, 500V	00853	D195E332FO
A1A8C305	283-0111-00		CAP., FXD, CER DI:0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C306	283-0204-00		CAP., FXD, CER DI:0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C315	283-0204-00		CAP., FXD, CER DI:0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C316	283-0599-00		CAP., FXD, MICA D:98PF, 5%, 500V	00853	D105E980J0
A1A8C317	283-0636-00		CAP., FXD, MICA D:36PF, 1.4%, 100V	00853	D155F360G0
A1A8C318	283-0672-00		CAP., FXD, MICA D:200PF, 1%, 500V	00853	D155F2010FO
A1A8C319	281-0096-00		CAP., VAR, AIR DI:5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C324	283-0599-00		CAP., FXD, MICA D:98PF, 5%, 500V	00853	D105E980J0
A1A8C325	283-0636-00		CAP., FXD, MICA D:36PF, 1.4%, 100V	00853	D155F360G0
A1A8C326	281-0096-00		CAP., VAR, AIR DI:5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C401	285-1098-00		CAP., FXD, PLSTC:0.22UF, 10%, 80V	56289	192P2249R8
A1A8C402	283-0111-00		CAP., FXD, CER DI:0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C407	290-0782-00		CAP., FXD, ELCTLT:4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C413	283-0111-00		CAP., FXD, CER DI:0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C425	283-0672-00		CAP., FXD, MICA D:200PF, 1%, 500V	00853	D155F2010FO
A1A8CR126	152-0665-00		SEMICOND DEVICE:SILICON, VVC, 30V	04713	SMV1344
A1A8L125	108-0897-00		COIL, RF:FIXED, 220UH	80009	108-0897-00
A1A8L126	114-0220-00		COIL, RF:1-3UH, CORE 276-0568-00	80009	114-0220-00
A1A8L223	108-0262-00		COIL, RF:FIXED, 510MH	80009	108-0262-00
A1A8L224	108-0182-00		COIL, RF:0.3UH	80009	108-0182-00
A1A8L226	108-0215-00		COIL, RF:1.1UH	80009	108-0215-00
A1A8L228	120-0382-00		XFMR, TOROID:14 TURNS, SINGLE	80009	120-0382-00
A1A8L315	108-0215-00		COIL, RF:1.1UH	80009	108-0215-00
A1A8L316	120-0382-00		XFMR, TOROID:14 TURNS, SINGLE	80009	120-0382-00
A1A8L318	108-0072-00		COIL, RF:0.75UH	80009	108-0072-00
A1A8L326	108-0072-00		COIL, RF:0.75UH	80009	108-0072-00
A1A8Q202	151-0192-00		TRANSISTOR:SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q204	151-0188-00		TRANSISTOR:SILICON, PNP	04713	SPS6868K
A1A8Q206	151-0192-00		TRANSISTOR:SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q207	151-1005-00		TRANSISTOR:SILICON, JFE, N-CHANNEL	80009	151-1005-00
A1A8Q213	151-0192-00		TRANSISTOR:SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q214	151-0472-00		TRANSISTOR:SILICON, NPN	80009	151-0472-00
A1A8Q302	151-0192-00		TRANSISTOR:SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q325	151-0472-00		TRANSISTOR:SILICON, NPN	80009	151-0472-00
A1A8R101	315-0302-00		RES., FXD, CMPSN:3K OHM, 5%, 0.25W	01121	CB3025
A1A8R102	311-1918-00		RES., VAR, NONWIR:2K OHM, 10%, 0.50W	73138	72-199-0

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A8R103	311-1319-00		RES.,VAR, NONWIR:10K OHM,10%,0.75W	73138	89-126-1
A1A8R106	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R107	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R108	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A1A8R125	311-1138-00		RES.,VAR, NONWIR:1K OHM,20%,0.50W	73138	72XW-44-0-102M
A1A8R128	311-1918-00		RES.,VAR, NONWIR:2K OHM,10%,0.50W	73138	72-199-0
A1A8R200	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R201	321-0239-00		RES.,FXD,FILM:3.01K OHM,1%,0.125W	91637	MFF1816G30100F
A1A8R202	321-0251-00		RES.,FXD,FILM:4.02K OHM,1%,0.125W	91637	MFF1816G40200F
A1A8R203	315-0104-00		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A1A8R204	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R208	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R212	321-0184-00		RES.,FXD,FILM:806 OHM,1%,0.125W	91637	MFF1816G806ROF
A1A8R213	321-0273-00		RES.,FXD,FILM:6.81K OHM,1%,0.125W	91637	MFF1816G68100F
A1A8R214	315-0510-00		RES.,FXD,CMPSN:51 OHM,5%,0.25W	01121	CB5105
A1A8R215	315-0510-00		RES.,FXD,CMPSN:51 OHM,5%,0.25W	01121	CB5105
A1A8R216	321-0273-00		RES.,FXD,FILM:6.81K OHM,1%,0.125W	91637	MFF1816G68100F
A1A8R217	321-0273-00		RES.,FXD,FILM:6.81K OHM,1%,0.125W	91637	MFF1816G68100F
A1A8R221	321-0184-00		RES.,FXD,FILM:806 OHM,1%,0.125W	91637	MFF1816G806ROF
A1A8R225	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R226	321-0193-00		RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A1A8R227	321-0193-00		RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A1A8R300	321-0323-00		RES.,FXD,FILM:22.6K OHM,1%,0.125W	91637	MFF1816G22601F
A1A8R301	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R303	315-0106-00		RES.,FXD,CMPSN:10M OHM,5%,0.25W	01121	CB1065
A1A8R304	315-0473-00		RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A1A8R305	315-0243-00		RES.,FXD,CMPSN:24K OHM,5%,0.25W	01121	CB2435
A1A8R306	321-0258-00		RES.,FXD,FILM:4.75K OHM,1%,0.125W	91637	MFF1816G47500F
A1A8R309	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R312	311-1917-00		RES.,VAR, NONWIR:TRMR,5K OHM,10%,0.5W	73138	72-198-0
A1A8R319	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R327	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R401	315-0224-00		RES.,FXD,CMPSN:220K OHM,5%,0.25W	01121	CB2245
A1A8R402	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R405	315-0621-00		RES.,FXD,CMPSN:620 OHM,5%,0.25W	01121	CB6215
A1A8R415	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A1A8R419	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R425	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A1A8U400	156-1134-00		MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A8Y129	158-0233-00		XTAL UNIT,QTZ:34.4MHZ 0.01%,SERIES	33096	HC-25/U
A2-1	670-7027-00		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-00
A2-1S110	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S115	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S120	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S125	260-1576-01		SWITCH,PUSH:5 STA,2 POLE,CORR/UNCORRECT	80009	260-1576-01
	-----		(FURN AS A UNIT WITH A2-1S129)		
A2-1S129	260-1576-01		SWITCH,PUSH:5 STA,2 POLE,CORR/UNCORRECT	80009	260-1576-01
	-----		(FURN AS A UNIT WITH A2-1S125)		
A2-2	670-7027-01		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-01
A2-2S110	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S115	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S120	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S125	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00

Replaceable Electrical Parts—067-0886-02

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A2-2S129	260-1665-00		SWITCH,PUSH:1 STA,2 POLE,MOMENTARY	71590	2KAA010000-673
A3	-----		CKT BOARD ASSY:FIRST MIXER (REPLACEABLE AS A UNIT WITH A9)		
A3C15	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A3C17	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C22	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A3C23	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A3C24	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A3C25	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C26	283-0254-00		CAP.,FXD,CER DI:7PF,+/-7.5%,100V	95275	VJ0805-A-709DH
A3C28	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C31	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A3C47	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C52	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C53	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A3C86	283-0403-00		CAP.,FXD,CER DI:5.75PF/-0.25PF,100V (NOMINAL VALUE, SELECTED)	72982	A01AL4A4LCOG0259
A3CR63	152-0715-00		SEMICONV DEVICE:SCHOTTKY,SI,RING QUAD	80009	152-0715-00
A3L46	108-0983-00		COIL,RF:FIXED,230NH,30% TOROIDAL	80009	108-0983-00
A3Q27	151-0658-00		TRANSISTOR:SILICON,NPN	80009	151-0658-00
A3Q34	151-0216-00		TRANSISTOR:SILICON,PNP	04713	SPS8803
A3R22	317-0202-00		RES.,FXD,CMPNSN:2K OHM,5%,0.125W	01121	BB2025
A3R24	317-0332-00		RES.,FXD,CMPNSN:3.3K OHM,5%,0.125W	01121	BB3325
A3R25	307-0570-00		RES.,FXD,FILM:18 OHM,2%,0.12KW	52262	MCRA180FZ
A3R26	307-0279-00		RES.,FXD,FILM:10 OHM,10%,100 MW	27851	3C301K
A3R27	307-0569-00		RES.,FXD,FILM:249 OHM,1%,0.125W	52262	MCRA249ROFYZ
A3R31	317-0122-00		RES.,FXD,CMPNSN:1.2K OHM,5%,0.125W	01121	BB1225
A3R41	315-0100-00		RES.,FXD,CMPNSN:10 OHM,5%,0.25W	01121	CB1005
A3R42	301-0101-00		RES.,FXD,CMPNSN:100 OHM,5%,0.50W	01121	EB1015
A3R54	307-0276-00		RES.,FXD,FILM:300 OHM,10%,100MW	03888	OBD
A3R55	307-0279-00		RES.,FXD,FILM:10 OHM,10%,100 MW	03888	OBD
A3R86	317-0240-00		RES.,FXD,CMPNSN:24 OHM,5%,0.125W	01121	BB2405
A3R87	317-0150-00		RES.,FXD,CMPNSN:15 OHM,5%,0.125W	01121	BB1505
A3T63	120-1153-00		XFMR,RF:BALUN	80009	120-1153-00
A3T75	120-1153-00		XFMR,RF:BALUN	80009	120-1153-00
A4	-----		CKT BOARD ASSY:R.F. AMP (REPLACEABLE AS A UNIT WITH A8)		
A4C21	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A4C23	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A4C26	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C33	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A4C34	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C42	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C43	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C46	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C53	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A4C54	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C55	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A4C57	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C58	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A4C62	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C64	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C66	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscnt	Name & Description	Mfr Code	Mfr Part Number
A4L42	108-0896-00		COIL, RF: FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00
A4L55	108-0896-00		COIL, RF: FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00
A4Q33	151-0216-00		TRANSISTOR: SILICON, PNP	04713	SPS8803
A4Q36	151-0630-00		TRANSISTOR: SILICON, NPN	80009	151-0630-00
A4Q52	151-0216-00		TRANSISTOR: SILICON, PNP	04713	SPS8803
A4Q56	151-0630-00		TRANSISTOR: SILICON, NPN	80009	151-0630-00
A4R21	315-0242-00		RES., FXD, CMPSN: 2.4K OHM, 5%, 0.25W	01121	CB2425
A4R22	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A4R32	315-0361-00		RES., FXD, CMPSN: 360 OHM, 5%, 0.25W	01121	CB3615
A4R36	317-0332-00		RES., FXD, CMPSN: 3.3K OHM, 5%, 0.125W	01121	BB3325
A4R37	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R46	307-1103-00		RES., FXD, FILM: 225 OHM, 1%, 0.125W	52262	MCRA2250FYZ
A4R47	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R51	301-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.50W	01121	EB1815
A4R54	317-0332-00		RES., FXD, CMPSN: 3.3K OHM, 5%, 0.125W	01121	BB3325
A4R55	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R56	307-0336-00		RES., FXD, FILM: 50 OHM, 1%, 0.105W	52262	MCRA 500 FYZ
A4R58	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R65	307-0571-00		RES., FXD, FILM: 57 OHM, 1%, 0.125W	52262	MCRA570FZ
A5	670-6972-00		CKT BOARD ASSY: DIRECTIONAL COUPLER	80009	670-6972-00
A5L221	120-1344-00		XFMR, RF: TOROID, 2 WINDS	80009	120-1344-00
A5R111	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R112	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R121	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R122	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R211	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R212	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A7	670-6971-00		CKT BOARD ASSY: VARIABLE ATTENUATOR	80009	670-6971-00
A7R100	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100ROF
A7R110	321-0116-00		RES., FXD, FILM: 158 OHM, 1%, 0.125W	91637	MFF1816G158ROF
A7R225	311-0169-00		RES., VAR, NONWIR: 100 OHM, 20%, 0.50W	01121	W-7564B
A7R335	321-0819-07		RES., FXD, FILM: 84 OHM, 0.1%, 0.125W	91637	MFF1816C84R00B
A70	670-4987-01		CKT BOARD ASSY: POWER SUPPLY	80009	670-4987-01
A70C01	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A70C04	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A70C12	283-0003-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z
A70C13	283-0060-00		CAP., FXD, CER DI: 100PF, 5%, 200V	72982	855-535U2J101J
A70C14	283-0067-00		CAP., FXD, CER DI: 0.001UF, 10%, 200V	72982	835-515B102K
A70C21	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C57	290-0520-00		CAP., FXD, ELCTLT: 4500UF, +100-0%, 40V	56289	68D10474
A70C62	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C71	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C84	283-0067-00		CAP., FXD, CER DI: 0.001UF, 10%, 200V	72982	835-515B102K
A70C85	283-0060-00		CAP., FXD, CER DI: 100PF, 5%, 200V	72982	855-535U2J101J
A70C87	290-0520-00		CAP., FXD, ELCTLT: 4500UF, +100-0%, 40V	56289	68D10474
A70C91	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A70C92	283-0003-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z
A70C93	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A70CR06	152-0066-00		SEMICONV DEVICE: SILICON, 400V, 750MA	14433	LG4016
A70CR20	152-0066-00		SEMICONV DEVICE: SILICON, 400V, 750MA	14433	LG4016

Replaceable Electrical Parts—067-0886-02

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A70CR55	152-0659-00		SEMICOND DEVICE:SILICON,100V,6A	04713	MR751
A70CR65	152-0659-00		SEMICOND DEVICE:SILICON,100V,6A	04713	MR751
A70CR75	152-0659-00		SEMICOND DEVICE:SILICON,100V,6A	04713	MR751
A70CR76	152-0659-00		SEMICOND DEVICE:SILICON,100V,6A	04713	MR751
A70CR81	152-0066-00		SEMICOND DEVICE:SILICON,400V,750MA	14433	LG4016
A70DS10	150-1001-00		LT EMITTING DIO:RED,660NM,100MA MAX	50522	MV5024
A70DS70	150-1001-00		LT EMITTING DIO:RED,660NM,100MA MAX	50522	MV5024
A70Q10	151-0192-00		TRANSISTOR:SILICON,NPN,SEL FROM MPS6521	04713	SPS8801
A70Q13	151-0389-00		TRANSISTOR:SILICON,PNP	80009	151-0389-00
A70Q14	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q22	151-0232-00		TRANSISTOR:SILICON,NPN,DUAL	80009	151-0232-00
A70Q23	151-0190-00		TRANSISTOR:SILICON,NPN	07263	S032677
A70Q72	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q73	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q81	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q82	151-0192-00		TRANSISTOR:SILICON,NPN,SEL FROM MPS6521	04713	SPS8801
A70Q83	151-0207-00		TRANSISTOR:SILICON,NPN	80009	151-0207-00
A70R02	308-0755-00		RES.,FXD,WW:0.75 OHM,5%,2W	75042	BWH-R7500J
A70R06	315-0471-00		RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A70R10	315-0122-00		RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A70R11	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A70R12	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A70R13	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A70R14	315-0471-00		RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A70R15	315-0241-00		RES.,FXD,CMPSN:240 OHM,5%,0.25W	01121	CB2415
A70R20	321-0779-03		RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
A70R21	321-0779-03		RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
A70R22	315-0153-00		RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
A70R23	315-0102-00		RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A70R24	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R25	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R32	315-0472-00		RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A70R62	315-0362-00		RES.,FXD,CMPSN:3.6K OHM,5%,0.25W	01121	CB3625
A70R63	315-0363-00		RES.,FXD,CMPSN:36K OHM,5%,0.25W	01121	CB3635
A70R64	315-0562-00		RES.,FXD,CMPSN:5.6K OHM,5%,0.25W	01121	CB5625
A70R66	311-1241-00		RES.,VAR,NONWIR:100K OHM,10%,0.5W	32997	3386X-T07-104
A70R70	321-0200-00		RES.,FXD,FILM:1.18K OHM,1%,0.125W	91637	MFF1816G11800F
A70R71	321-0669-00		RES.,FXD,FILM:6.08K OHM,0.5%,0.125W	91637	MFF1816D60800D
A70R72	321-0283-08		RES.,FXD,FILM:8.66K OHM,1%,0.125W	24546	NC55C8660F
A70R73	315-0105-00		RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A70R74	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R75	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R80	315-0122-00		RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A70R82	315-0102-00		RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A70R83	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A70R84	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A70R85	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A70R86	315-0241-00		RES.,FXD,CMPSN:240 OHM,5%,0.25W	01121	CB2415
A70R91	307-0113-00		RES.,FXD,CMPSN:5.1 OHM,5%,0.25W	01121	CB51G5
A70R93	301-0102-00		RES.,FXD,CMPSN:1K OHM,5%,0.50W	01121	EB1025
A70R94	315-0202-00		RES.,FXD,CMPSN:2K OHM,5%,0.25W	01121	CB2025
A70VR62	152-0317-00		SEMICOND DEVICE:ZENER,0.25W,6.2V,5%	80009	152-0317-00
A70VR73	152-0127-00		SEMICOND DEVICE:ZENER,0.4W,7.5V,5%	04713	SZG35009K2

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
CHASSIS PARTS					
DS18	150-1055-00		LT EMITTING DIO:GREEN,560NM,40 MAX	72619	59-0201-001
F10	159-0032-00		FUSE, CARTRIDGE:3AG,0.5A,250V,SLOW-BLOW	71400	MDL 1/2
F10	159-0044-00		FUSE, CARTRIDGE:3AG,0.2A,250V,SLOW-BLOW	71400	MDL 2/10
	-----		(SPARE)		
Q05	151-0373-00		TRANSISTOR:SILICON,PNP	80009	151-0373-00
Q95	151-0349-04		TRANSISTOR:SILICON,NPN,SEL MJE2801	80009	151-0349-04
	-----		(SCREENED)		
R74	311-1484-00		RES.,VAR, NONWIR:PNL,2.5K OHM,1W	01121	11M110
R76	311-1484-00		RES.,VAR, NONWIR:PNL,2.5K OHM,1W	01121	11M110
R84	311-1365-00		RES.,VAR, NONWIR:50K OHM,20%,1W	01121	11M164
R94	311-1368-00		RES.,VAR, NONWIR:5K OHM,20%,1W	01121	73A1G040L502M
S19	260-1961-00		SWITCH,ROCKER:DPST,6 (4)A,250V	000FJ	1802-1121
T10	120-1145-00		XFMR,PWR,STPDN:	80009	120-1145-00
U10	119-0813-00		SELECTOR,VOLTS:W/LINE FLTR RCPT & FUSE	02777	F65003

Replaceable Electrical Parts—067-0886-03

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1	067-0886-03		TEST MODULATOR:45.75 MHZ(SYSTEM M)	80009	067-0886-03
A1A1	670-6962-00		CKT BOARD ASSY:INTERFACE(SYSTEM M)	80009	670-6962-00
A1A2	-----		CKT BOARD ASSY:R.F. L.O. AMP (REPLACEABLE AS A UNIT WITH A8)		
A1A3	670-6965-00		CKT BOARD ASSY:I.F. AMP	80009	670-6965-00
A1A4	670-6967-03		CKT BOARD ASSY:VISUAL L.O. 45.75 MHZ	80009	670-6967-03
A1A5	670-6966-03		CKT BOARD ASSY:VISUAL MODULATOR 45.75 MHZ	80009	670-6966-03
A1A6	670-6968-00		CKT BOARD ASSY:VISUAL PROCESSOR	80009	670-6968-00
A1A7	670-6990-00		CKT BOARD ASSY:VIDEO PRECORRECTOR	80009	670-6990-00
A1A8	670-6970-03		CKT BOARD ASSY:AURAL MODULATOR 45.75 MHZ	80009	670-6970-03
A2-1	670-7027-00		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-00
A2-2	670-7027-01		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-01
A3	-----		CKT BOARD ASSY:FIRST MIXER (REPLACEABLE AS A UNIT WITH A9)		
A4	-----		CKT BOARD ASSY:R.F. AMP (REPLACEABLE AS A UNIT WITH A8)		
A5	670-6972-00		CKT BOARD ASSY:DIRECTIONAL COUPLER	80009	670-6972-00
A7	670-6971-00		CKT BOARD ASSY:VARIABLE ATTENUATOR	80009	670-6971-00
A8	672-0942-00		CKT BOARD ASSY:R.F. L.O. AMP(A4,A1A1)	80009	672-0942-00
A9	672-0943-00		CKT BOARD ASSY:R.F. MIXER(A3,A1A2)	80009	672-0943-00
A10	670-6973-00		CKT BOARD ASSY:EXTENDER	80009	670-6973-00
A70	670-4987-01		CKT BOARD ASSY:POWER SUPPLY	80009	670-4987-01
A1	670-6962-00		CKT BOARD ASSY:INTERFACE	80009	670-6962-00
A1C160	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C565	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C760	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C765	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C792	290-0745-00		CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A1C863	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C864	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C894	290-0745-00		CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A1A3	670-6965-00		CKT BOARD ASSY:I.F. AMP	80009	670-6965-00
A1A3C116	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C118	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C121	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C124	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C126	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C133	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C212	281-0097-00		CAP.,VAR,CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C218	283-0635-00		CAP.,FXD,MICA D:51PF,1%,100V	00853	D151E510F0
A1A3C233	283-0407-00		CAP.,FXD,CER DI:27PF,5%,50V	95275	VJ0805A270JH
A1A3C236	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C311	281-0097-00		CAP.,VAR,CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C312	283-0634-00		CAP.,FXD,MICA D:65PF,1%,100V	00853	D151E650F0
A1A3C331	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C432	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C434	290-0804-00		CAP.,FXD,ELCTLT:10UF,+50-10%,25V	55680	25ULA10V-T
A1A3C511	281-0097-00		CAP.,VAR,CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C513	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C531	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscnt	Name & Description	Mfr Code	Mfr Part Number
A1A3C618	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C621	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C622	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C631	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C636	283-0178-00		CAP., FXD, CER DI:0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3L117	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3L231	108-0260-00		COIL, RF: 98NH	80009	108-0260-00
A1A3L311	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L412	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L528	108-0655-00		COIL, RF: FIXED, 75NH	80009	108-0655-00
A1A3L632	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3Q121	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3Q216	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q332	151-0195-00		TRANSISTOR: SILICON, NPN	80009	151-0195-00
A1A3Q613	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q624	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3R115	315-0161-00		RES., FXD, CMPSN: 160 OHM, 5%, 0.25W	01121	CB1615
A1A3R122	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R124	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R126	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R132	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R133	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R226	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100ROF
A1A3R233	317-0510-00		RES., FXD, CMPSN: 51 OHM, 5%, 0.125W	01121	BB5105
A1A3R331	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A3R333	321-0358-00		RES., FXD, FILM: 52.3K OHM, 1%, 0.125W	91637	MFF1816G52301F
A1A3R334	321-0308-00		RES., FXD, FILM: 15.8K OHM, 1%, 0.125W	91637	MFF1816G15801F
A1A3R431	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A3R522	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R523	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A3R524	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R526	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100ROF
A1A3R527	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R531	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R533	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R534	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R614	315-0360-00		RES., FXD, CMPSN: 36 OHM, 5%, 0.25W	01121	CB3605
A1A3R616	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R618	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R626	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R633	315-0361-00		RES., FXD, CMPSN: 360 OHM, 5%, 0.25W	01121	CB3615
A1A3T132	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T516	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T634	120-1159-00		XFMR, RF: TOROID, 7 T, TRIFILAR	80009	120-1159-00
A1A4	670-6967-03		CKT BOARD ASSY: VISUAL L.O. 45.75 MHZ	80009	670-6967-03
A1A4C211	283-0672-00		CAP., FXD, MICA D: 200PF, 1%, 500V	00853	D155F2010F0
A1A4C215	283-0638-00		CAP., FXD, MICA D: 130PF, 1%, 100V	00853	D151F131F0
A1A4C216	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C217	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C221	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C223	283-0616-00		CAP., FXD, MICA D: 75PF, 5%, 500V	00853	D155E750J0
A1A4C228	283-0600-00		CAP., FXD, MICA D: 43PF, 5%, 500V	00853	D105E430J0
A1A4C231	283-0600-00		CAP., FXD, MICA D: 43PF, 5%, 500V	00853	D105E430J0
A1A4C232	283-0600-00		CAP., FXD, MICA D: 43PF, 5%, 500V	00853	D105E430J0
A1A4C325	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M

Replaceable Electrical Parts—067-0886-03

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A4L214	114-0294-00		COIL, RF: VARIABLE, 98-150NH	80009	114-0294-00
A1A4L215	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L221	114-0405-00		COIL, RF: VARIABLE 130UH-225UH	80009	114-0405-00
A1A4L222	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L225	108-0182-00		COIL, RF: 0.3UH	80009	108-0182-00
A1A4L226	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A4L231	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A4Q216	151-0260-00		TRANSISTOR: SILICON, NPN	80009	151-0260-00
A1A4Q225	151-0333-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS918	04713	SPS1752
A1A4R212	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R213	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A4R222	315-0271-00		RES., FXD, CMPSN: 270 OHM, 5%, 0.25W	01121	CB2715
A1A4R224	315-0331-00		RES., FXD, CMPSN: 330 OHM, 5%, 0.25W	01121	CB3315
A1A4R225	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A4R233	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R234	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R315	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R319	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4R321	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4Y238	158-0228-00		XTAL UNIT, QTZ: 45.75MHZ 0.01%, SERIES	33096	HC-25/U
A1A5	670-6966-03		CKT BOARD ASSY: VISUAL MODULATOR 45.75 MHZ	80009	670-6966-03
A1A5C115	283-0158-00		CAP., FXD, CER DI: 1PF, 10%, 50V	72982	8101B057C0K0109B
A1A5C116	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200COG569C
A1A5C202	283-0000-00		CAP., FXD, CER DI: 0.001UF, +100-0%, 500V	72982	831-516E102P
A1A5C217	283-0157-00		CAP., FXD, CER DI: 7PF, 5%, 500V	72982	8111B064COH0709J
A1A5C315	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C316	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A5C317	283-0779-00		CAP., FXD, MICA D: 27PF, 2%, 500V	00853	D155E27060
A1A5C515	283-0599-00		CAP., FXD, MICA D: 98PF, 5%, 500V	00853	D105E980J0
A1A5C612	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C615	283-0636-00		CAP., FXD, MICA D: 36PF, 1.4%, 100V	00853	D155F360G0
A1A5C700	283-0636-00		CAP., FXD, MICA D: 36PF, 1.4%, 100V	00853	D155F360G0
A1A5C701	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200COG569C
A1A5CR114	152-0650-00		SEMICONV DEVICE: VVC, 11.5PF NOM -3V, 30 PIV	04713	BB105B
A1A5E110	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5E112	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5E113	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5E114	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5L333	108-1072-00		SHIELDING BEAD, : 3.5 TURNS	80009	108-1072-00
A1A5L421	108-1060-00		COIL, RF: FIXED, 3 TURN	80009	108-1060-00
A1A5L514	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L515	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L521	114-0232-00		COIL, RF: VARIABLE, 130-220NH	80009	114-0232-00
A1A5L616	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5Q110	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q112	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q113	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q114	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5R202	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R205	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R206	321-0064-00		RES., FXD, FILM: 45.3 OHM, 1%, 0.125W	91637	MFF1816G45R30F
A1A5R207	321-0233-00		RES., FXD, FILM: 2.61K OHM, 1%, 0.125W	91637	MFF1816G26100F
A1A5R208	321-0096-00		RES., FXD, FILM: 97.6 OHM, 1%, 0.125W	91637	MFF1816G97R60F
A1A5R209	321-0144-00		RES., FXD, FILM: 309 OHM, 1%, 0.125W	91637	MFF1816G309R0F
A1A5R210	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A5R215	315-0300-00		RES., FXD, CMPSN: 30 OHM, 5%, 0.25W	01121	CB3005
A1A5R216	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815
A1A5R217	315-0153-00		RES., FXD, CMPSN: 15K OHM, 5%, 0.25W	01121	CB1535
A1A5R612	315-0471-00		RES., FXD, CMPSN: 470 OHM, 5%, 0.25W	01121	CB4715
A1A5T121	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A5T14	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A6	670-6968-00		CKT BOARD ASSY: VIDEO PROCESSOR	80009	670-6968-00
A1A6C220	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C227	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C319	290-0804-00		CAP., FXD, ELCTLT: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C320	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A6C325	281-0798-00		CAP., FXD, CER DI: 51PF, 1%, 100V	04222	MC101A510G
A1A6C330	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A6C341	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C345	281-0786-00		CAP., FXD, CER DI: 150PF, 10%, 100V	72982	8035D2AADX5P151K
A1A6C421	290-0290-00		CAP., FXD, ELCTLT: 10UF, 20%, 25V	56289	30D472
A1A6C422	281-0774-00		CAP., FXD, CER DI: 0.022UF, 20%, 100V	72982	8045A9ABDZ5U223M
A1A6C424	281-0809-00		CAP., FXD, CER DI: 200PF, 5%, 100V	72982	8013T2ADDC1G201J
A1A6C433	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C435	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C513	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A1A6C514	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C531	290-0804-00		CAP., FXD, ELCTLT: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C541	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6CR533	152-0141-02		SEMICONV DEVICE: SILICON, 30V, 50NA	01295	1N4152R
A1A6L339	108-0226-00		COIL, RF: 100UH	76493	DWG B4257
A1A6Q322	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6Q541	151-0188-00		TRANSISTOR: SILICON, PNP	04713	SPS6868K
A1A6Q543	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6R137	315-0151-00		RES., FXD, CMPSN: 150 OHM, 5%, 0.25W	01121	CB1515
A1A6R139	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R220	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R225	315-0753-00		RES., FXD, CMPSN: 75K OHM, 5%, 0.25W	01121	CB7535
A1A6R229	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R231	321-0143-00		RES., FXD, FILM: 301 OHM, 1%, 0.125W	91637	MFF1816G301ROF
A1A6R233	321-0143-00		RES., FXD, FILM: 301 OHM, 1%, 0.125W	91637	MFF1816G301ROF
A1A6R325	315-0102-00		RES., FXD, CMPSN: 1K OHM, 5%, 0.25W	01121	CB1025
A1A6R333	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R335	315-0103-00		RES., FXD, CMPSN: 10K OHM, 5%, 0.25W	01121	CB1035
A1A6R341	315-0105-00		RES., FXD, CMPSN: 1M OHM, 5%, 0.25W	01121	CB1055
A1A6R345	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825
A1A6R413	321-0336-00		RES., FXD, FILM: 30.9K OHM, 1%, 0.125W	91637	MFF1816G30901F
A1A6R414	321-0891-00		RES., FXD, FILM: 800K OHM, 1%, 0.125W	91637	MFF1816G80002F
A1A6R422	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R433	315-0104-00		RES., FXD, CMPSN: 100K OHM, 5%, 0.25W	01121	CB1045
A1A6R437	315-0512-00		RES., FXD, CMPSN: 5.1K OHM, 5%, 0.25W	01121	CB5125
A1A6R521	315-0683-00		RES., FXD, CMPSN: 68K OHM, 5%, 0.25W	01121	CB6835
A1A6R523	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R528	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R531	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A6R533	315-0152-00		RES., FXD, CMPSN: 1.5K OHM, 5%, 0.25W	01121	CB1525
A1A6R538	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R541	315-0153-00		RES., FXD, CMPSN: 15K OHM, 5%, 0.25W	01121	CB1535
A1A6R545	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R548	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825

Replaceable Electrical Parts—067-0886-03

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A6U130	155-0233-00		MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	80009	155-0233-00
A1A6U339	156-0356-01		MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	80009	156-0356-01
A1A6U346	156-1134-00		MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A6U510	155-0144-00		MICROCIRCUIT,LI:DUAL IN-LINE,16 LEAD	80009	155-0144-00
A1A6VR223	152-0195-00		SEMICONV DEVICE:ZENER,0.4W,5.1V,5%	04713	SZ11755
A1A6VR225	152-0195-00		SEMICONV DEVICE:ZENER,0.4W,5.1V,5%	04713	SZ11755
A1A7	670-6990-00		CKT BOARD ASSY:VIDEO PRECORRECTOR(SYSTEM M)	80009	670-6990-00
A1A7C103	283-0594-00		CAP.,FXD,MICA D:0.001UF,1%,100V	00853	D151F102F0
A1A7C104	283-0605-00		CAP.,FXD,MICA D:678PF,1%,300V	00853	D153F6780F0
A1A7C107	283-0642-00		CAP.,FXD,MICA D:33PF,+/-0.5PF,300V	00853	D10-5E330G
A1A7C115	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C116	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C118	283-0699-00		CAP.,FXD,MICA D:100PF,5%,500V		
A1A7C119	283-0699-00		CAP.,FXD,MICA D:100PF,5%,500V		
A1A7C135	283-0689-00		CAP.,FXD,MICA D:550PF,0.5%,300V	00853	D153F551E0
A1A7C138	283-0696-00		CAP.,FXD,MICA D:2300PF,1%,500V	00853	D19-5E232F0
A1A7C142	283-0696-00		CAP.,FXD,MICA D:2300PF,1%,500V	00853	D19-5E232F0
A1A7C143	283-0623-00		CAP.,FXD,MICA D:1200PF,1%,100V	00853	D191F122F0
A1A7C211	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C212	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C213	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C214	283-0597-00		CAP.,FXD,MICA D:470PF,10%,300V	00853	D153E471K0
A1A7C215	283-0696-00		CAP.,FXD,MICA D:2300PF,1%,500V	00853	D19-5E232F0
A1A7C223	283-0636-00		CAP.,FXD,MICA D:36PF,1.4%,100V	00853	D155F360G0
A1A7C224	283-0622-00		CAP.,FXD,MICA D:450PF,1%,300V	00853	D153F451F0
A1A7C225	283-0648-00		CAP.,FXD,MICA D:10PF,5%,100V	00853	D151C100D0
A1A7C226	283-0622-00		CAP.,FXD,MICA D:450PF,1%,300V	00853	D153F451F0
A1A7C314	285-0719-00		CAP.,FXD,PLSTC:0.015UF,5%,100V	56289	410P15351
A1A7C338	283-0696-00		CAP.,FXD,MICA D:2300PF,1%,500V	00853	D19-5E232F0
A1A7C406	283-0635-00		CAP.,FXD,MICA D:51PF,1%,100V	00853	D151E510F0
A1A7C415	285-0719-00		CAP.,FXD,PLSTC:0.015UF,5%,100V	56289	410P15351
A1A7CR315	152-0141-02		SEMICONV DEVICE:SILICON,30V,50NA	01295	1N4152R
A1A7CR325	152-0141-02		SEMICONV DEVICE:SILICON,30V,50NA	01295	1N4152R
A1A7L110	114-0388-00		COIL,RF:VARIABLE,2.3-2.5UH	80009	114-0388-00
A1A7L125	114-0391-00		COIL,RF:VARIABLE,4.7-5.0UH	80009	114-0391-00
A1A7L205	114-0392-00		COIL,RF:VARIABLE,5.7-5.9UH	80009	114-0392-00
A1A7L218	114-0393-00		COIL,RF:VARIABLE,2.5-2.7UH	80009	114-0393-00
A1A7L230	114-0390-00		COIL,RF:VARIABLE,36-40UH	80009	114-0390-00
A1A7L231	114-0389-00		COIL,RF:VARIABLE,13.2-15.0UH	80009	114-0389-00
A1A7L241	114-0393-00		COIL,RF:VARIABLE,2.5-2.7UH	80009	114-0393-00
A1A7L242	114-0393-00		COIL,RF:VARIABLE,2.-2.7UH	80009	114-0393-00
A1A7L310	108-0733-00		COIL,RF:113NH	80009	108-0733-00
A1A7L319	108-0358-00		COIL,REED SW:12V	80009	108-0358-00
A1A7L325	108-0358-00		COIL,REED SW:12V	80009	108-0358-00
A1A7L405	114-0209-00		COIL,RF:28-60UH,CORE NOT REPLACEABLE	80009	114-0209-00
A1A7R305	321-0001-00		RES.,FXD,FILM:10 OHM,1%,0.125W	75042	CEATO-10R00F
A1A7R306	321-0001-00		RES.,FXD,FILM:10 OHM,1%,0.125W	75042	CEATO-10R00F
A1A7R321	311-1731-00		RES.,VAR, NONWIR:20 OHM,0.5W	73138	91-94-0
A1A7R322	321-0216-00		RES.,FXD,FILM:1.74K OHM,1%,0.125W	91637	MFF1816G17400F
A1A7R323	321-0216-00		RES.,FXD,FILM:1.74K OHM,1%,0.125W	91637	MFF1816G17400F
A1A7R405	321-0202-00		RES.,FXD,FILM:1.24K OHM,1%,0.125W	91637	MFF1816G12400F
A1A7R407	321-0085-00		RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MFF1816G75R00F
A1A7R410	321-0085-00		RES.,FXD,FILM:75 OHM,1%,0.125W	91637	MFF1816G75R00F
A1A7R423	315-0131-00		RES.,FXD,CMPNSN:130 OHM,5%,0.25W	01121	CB1315
A1A7S316	260-0817-00		SWITCH,REED:SPDT,0.25A,100V	12617	1152234160

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A7S336	260-0817-00		SWITCH, REED: SPDT, 0.25A, 100V	12617	1152234160
A1A8	670-6970-03		CKT BOARD ASSY: AURAL MODULATOR 45.75 MHZ	80009	670-6970-03
A1A8C102	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A1A8C103	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A8C104	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A8C105	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C125	283-0594-00		CAP., FXD, MICA D: 0.001UF, 1%, 100V	00853	D151F102F0
A1A8C126	281-0562-00		CAP., FXD, CER DI: 39PF, 10%, 500V	72982	301-000U2J0390K
A1A8C127	281-0526-00		CAP., FXD, CER DI: 1.5PF, +/-0.5PF, 500V	72982	301-000S2K0159D
A1A8C202	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C212	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C213	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C214	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C216	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C222	283-0635-00		CAP., FXD, MICA D: 51PF, 1%, 100V	00853	D151E510F0
A1A8C223	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C225	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C227	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C301	283-0655-00		CAP., FXD, MICA D: 0.0033UF, 1%, 500V	00853	D195E332F0
A1A8C305	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C306	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C315	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C316	283-0599-00		CAP., FXD, MICA D: 98PF, 5%, 500V	00853	D105E980J0
A1A8C317	283-0615-00		CAP., FXD, MICA D: 33PF, 5%, 500V	00853	D155E330J0
A1A8C318	283-0672-00		CAP., FXD, MICA D: 200PF, 1%, 500V	00853	D155F2010F0
A1A8C319	281-0096-00		CAP., VAR, AIR DI: 5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C324	283-0599-00		CAP., FXD, MICA D: 98PF, 5%, 500V	00853	D105E980J0
A1A8C325	283-0615-00		CAP., FXD, MICA D: 33PF, 5%, 500V	00853	D155E330J0
A1A8C326	281-0096-00		CAP., VAR, AIR DI: 5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C401	285-1098-00		CAP., FXD, PLSTC: 0.22UF, 10%, 80V	56289	192P2249R8
A1A8C402	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C407	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C413	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C425	283-0672-00		CAP., FXD, MICA D: 200PF, 1%, 500V	00853	D155F2010F0
A1A8CR126	152-0665-00		SEMICONV DEVICE: SILICON, VVC, 30V	04713	SMV1344
A1A8L125	108-0897-00		COIL, RF: FIXED, 220UH	80009	108-0897-00
A1A8L126	114-0220-00		COIL, RF: 1-3UH, CORE 276-0568-00	80009	114-0220-00
A1A8L224	108-0182-00		COIL, RF: 0.3UH	80009	108-0182-00
A1A8L226	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A8L228	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A8L315	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A8L316	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A8L318	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A8L326	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A8Q202	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q204	151-0188-00		TRANSISTOR: SILICON, PNP	04713	SPS6868K
A1A8Q206	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q207	151-1005-00		TRANSISTOR: SILICON, JFE, N-CHANNEL	80009	151-1005-00
A1A8Q213	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q214	151-0472-00		TRANSISTOR: SILICON, NPN	80009	151-0472-00
A1A8Q302	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q325	151-0472-00		TRANSISTOR: SILICON, NPN	80009	151-0472-00
A1A8R101	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R102	311-1918-00		RES., VAR, NONWIR: 2K OHM, 10%, 0.50W	73138	72-199-0
A1A8R103	311-1319-00		RES., VAR, NONWIR: 10K OHM, 10%, 0.75W	73138	89-126-1

Replaceable Electrical Parts—067-0886-03

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A8R106	321-0289-00		RES., FXD, FILM: 10K OHM, 1%, 0.125W	91637	MFF1816G10001F
A1A8R107	321-0289-00		RES., FXD, FILM: 10K OHM, 1%, 0.125W	91637	MFF1816G10001F
A1A8R108	315-0103-00		RES., FXD, CMPSN: 10K OHM, 5%, 0.25W	01121	CB1035
A1A8R125	311-1138-00		RES., VAR, NONWIR: 1K OHM, 20%, 0.50W	73138	72XW-44-0-102M
A1A8R128	311-1918-00		RES., VAR, NONWIR: 2K OHM, 10%, 0.50W	73138	72-199-0
A1A8R200	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R201	321-0239-00		RES., FXD, FILM: 3.01K OHM, 1%, 0.125W	91637	MFF1816G30100F
A1A8R202	321-0251-00		RES., FXD, FILM: 4.02K OHM, 1%, 0.125W	91637	MFF1816G40200F
A1A8R203	315-0104-00		RES., FXD, CMPSN: 100K OHM, 5%, 0.25W	01121	CB1045
A1A8R204	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R208	321-0289-00		RES., FXD, FILM: 10K OHM, 1%, 0.125W	91637	MFF1816G10001F
A1A8R212	321-0184-00		RES., FXD, FILM: 806 OHM, 1%, 0.125W	91637	MFF1816G806R0F
A1A8R213	321-0273-00		RES., FXD, FILM: 6.81K OHM, 1%, 0.125W	91637	MFF1816G68100F
A1A8R214	315-0510-00		RES., FXD, CMPSN: 51 OHM, 5%, 0.25W	01121	CB5105
A1A8R215	315-0510-00		RES., FXD, CMPSN: 51 OHM, 5%, 0.25W	01121	CB5105
A1A8R216	321-0273-00		RES., FXD, FILM: 6.81K OHM, 1%, 0.125W	91637	MFF1816G68100F
A1A8R217	321-0273-00		RES., FXD, FILM: 6.81K OHM, 1%, 0.125W	91637	MFF1816G68100F
A1A8R221	321-0184-00		RES., FXD, FILM: 806 OHM, 1%, 0.125W	91637	MFF1816G806R0F
A1A8R225	315-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.25W	01121	CB1015
A1A8R226	321-0193-00		RES., FXD, FILM: 1K OHM, 1%, 0.125W	91637	MFF1816G10000F
A1A8R227	321-0193-00		RES., FXD, FILM: 1K OHM, 1%, 0.125W	91637	MFF1816G10000F
A1A8R300	321-0323-00		RES., FXD, FILM: 22.6K OHM, 1%, 0.125W	91637	MFF1816G22601F
A1A8R301	321-0289-00		RES., FXD, FILM: 10K OHM, 1%, 0.125W	91637	MFF1816G10001F
A1A8R303	315-0106-00		RES., FXD, CMPSN: 10M OHM, 5%, 0.25W	01121	CB1065
A1A8R304	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A8R305	315-0243-00		RES., FXD, CMPSN: 24K OHM, 5%, 0.25W	01121	CB2435
A1A8R306	321-0258-00		RES., FXD, FILM: 4.75K OHM, 1%, 0.125W	91637	MFF1816G47500F
A1A8R309	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R312	311-1917-00		RES., VAR, NONWIR: TRMR, 5K OHM, 10%, 0.5W	73138	72-198-0
A1A8R319	315-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.25W	01121	CB1015
A1A8R327	315-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.25W	01121	CB1015
A1A8R401	315-0224-00		RES., FXD, CMPSN: 220K OHM, 5%, 0.25W	01121	CB2245
A1A8R402	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R405	315-0621-00		RES., FXD, CMPSN: 620 OHM, 5%, 0.25W	01121	CB6215
A1A8R415	315-0680-00		RES., FXD, CMPSN: 68 OHM, 5%, 0.25W	01121	CB6805
A1A8R419	315-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.25W	01121	CB1015
A1A8R425	315-0680-00		RES., FXD, CMPSN: 68 OHM, 5%, 0.25W	01121	CB6805
A1A8U400	156-1134-00		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A8Y129	158-0232-00		XTAL UNIT, QTZ: 41.25MHZ 0.01%, SERIES	33096	HC-25/U
A2-1	670-7027-00		CKT BOARD ASSY: SWITCH BOARD	80009	670-7027-00
A2-1S110	260-1771-00		SWITCH, PUSH: 1 BUTTON, DPDT	80009	260-1771-00
A2-1S115	260-1771-00		SWITCH, PUSH: 1 BUTTON, DPDT	80009	260-1771-00
A2-1S120	260-1771-00		SWITCH, PUSH: 1 BUTTON, DPDT	80009	260-1771-00
A2-1S125	260-1576-01		SWITCH, PUSH: 5 STA, 2 POLE, CORR/UNCORRECT (FURN AS A UNIT WITH A2-1S129)	80009	260-1576-01
A2-1S129	260-1576-01		SWITCH, PUSH: 5 STA, 2 POLE, CORR/UNCORRECT (FURN AS A UNIT WITH A2-1S125)	80009	260-1576-01
A2-2	670-7027-01		CKT BOARD ASSY: SWITCH BOARD	80009	670-7027-01
A2-2S110	260-1771-00		SWITCH, PUSH: 1 BUTTON, DPDT	80009	260-1771-00
A2-2S115	260-1771-00		SWITCH, PUSH: 1 BUTTON, DPDT	80009	260-1771-00
A2-2S120	260-1771-00		SWITCH, PUSH: 1 BUTTON, DPDT	80009	260-1771-00
A2-2S125	260-1771-00		SWITCH, PUSH: 1 BUTTON, DPDT	80009	260-1771-00
A2-2S129	260-1665-00		SWITCH, PUSH: 1 STA, 2 POLE, MOMENTARY	71590	2KAA010000-673

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A3	-----		CKT BOARD ASSY:FIRST MIXER (REPLACEABLE AS A UNIT WITH A9)		
A3C15	283-0321-00		CAP., FXD, CER DI:1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A3C17	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A3C22	283-0177-00		CAP., FXD, CER DI:1UF, +80-20%, 25V	56289	273C5
A3C23	283-0204-00		CAP., FXD, CER DI:0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A3C24	283-0177-00		CAP., FXD, CER DI:1UF, +80-20%, 25V	56289	273C5
A3C25	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A3C26	283-0254-00		CAP., FXD, CER DI:7PF, +/-7.5%, 100V	95275	VJ0805-A-709DH
A3C28	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A3C31	283-0204-00		CAP., FXD, CER DI:0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A3C47	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A3C52	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A3C53	283-0321-00		CAP., FXD, CER DI:1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A3C86	283-0403-00		CAP., FXD, CER DI:5.75PF, +/-0.25PF, 100V (NOMINAL VALUE, SELECTED)	72982	A01AL4A4LC0G0259
A3CR63	152-0715-00		SEMICONV DEVICE: SCHOTTKY, SI, RING QUAD	80009	152-0715-00
A3L46	108-0983-00		COIL, RF: FIXED, 230NH, 30% TOROIDAL	80009	108-0983-00
A3Q27	151-0658-00		TRANSISTOR: SILICON, NPN	80009	151-0658-00
A3Q34	151-0216-00		TRANSISTOR: SILICON, PNP	04713	SPS8803
A3R22	317-0202-00		RES., FXD, CMPSN: 2K OHM, 5%, 0.125W	01121	BB2025
A3R24	317-0332-00		RES., FXD, CMPSN: 3.3K OHM, 5%, 0.125W	01121	BB3325
A3R25	307-0570-00		RES., FXD, FILM: 18 OHM, 2%, 0.12KW	52262	MCRA180FZ
A3R26	307-0279-00		RES., FXD, FILM: 10 OHM, 10%, 100 MW	27851	3C301K
A3R27	307-0569-00		RES., FXD, FILM: 249 OHM, 1%, 0.125W	52262	MCRA249R0FYZ
A3R31	317-0122-00		RES., FXD, CMPSN: 1.2K OHM, 5%, 0.125W	01121	BB1225
A3R41	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A3R42	301-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.50W	01121	EB1015
A3R54	307-0276-00		RES., FXD, FILM: 300 OHM, 10%, 100MW	03888	OBD
A3R55	307-0279-00		RES., FXD, FILM: 10 OHM, 10%, 100 MW	03888	OBD
A3R86	317-0240-00		RES., FXD, CMPSN: 24 OHM, 5%, 0.125W	01121	BB2405
A3R87	317-0150-00		RES., FXD, CMPSN: 15 OHM, 5%, 0.125W	01121	BB1505
A3T63	120-1153-00		XFMR, RF: BALUN	80009	120-1153-00
A3T75	120-1153-00		XFMR, RF: BALUN	80009	120-1153-00
A4	-----		CKT BOARD ASSY: R.F. AMP (REPLACEABLE AS A UNIT WITH A8)		
A4C21	283-0204-00		CAP., FXD, CER DI:0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A4C23	283-0321-00		CAP., FXD, CER DI:1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A4C26	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C33	283-0177-00		CAP., FXD, CER DI:1UF, +80-20%, 25V	56289	273C5
A4C34	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C42	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C43	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C46	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C53	283-0177-00		CAP., FXD, CER DI:1UF, +80-20%, 25V	56289	273C5
A4C54	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C55	283-0321-00		CAP., FXD, CER DI:1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A4C57	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C58	283-0321-00		CAP., FXD, CER DI:1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A4C62	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C64	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C66	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4L42	108-0896-00		COIL, RF: FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00

Replaceable Electrical Parts—067-0886-03

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A4L55	108-0896-00		COIL, RF: FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00
A4Q33	151-0216-00		TRANSISTOR: SILICON, PNP	04713	SPS8803
A4Q36	151-0630-00		TRANSISTOR: SILICON, NPN	80009	151-0630-00
A4Q52	151-0216-00		TRANSISTOR: SILICON, PNP	04713	SPS8803
A4Q56	151-0630-00		TRANSISTOR: SILICON, NPN	80009	151-0630-00
A4R21	315-0242-00		RES., FXD, CMPSN: 2.4K OHM, 5%, 0.25W	01121	CB2425
A4R22	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A4R32	315-0361-00		RES., FXD, CMPSN: 360 OHM, 5%, 0.25W	01121	CB3615
A4R36	317-0332-00		RES., FXD, CMPSN: 3.3K OHM, 5%, 0.125W	01121	BB3325
A4R37	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R46	307-1103-00		RES., FXD, FILM: 225 OHM, 1%, 0.125W	52262	MCRA2250FYZ
A4R47	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R51	301-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.50W	01121	EB1815
A4R54	317-0332-00		RES., FXD, CMPSN: 3.3K OHM, 5%, 0.125W	01121	BB3325
A4R55	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R56	307-0336-00		RES., FXD, FILM: 50 OHM, 1%, 0.105W	52262	MCRA 500 FYZ
A4R58	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R65	307-0571-00		RES., FXD, FILM: 57 OHM, 1%, 0.125W	52262	MCRA570FZ
A5	670-6972-00		CKT BOARD ASSY: DIRECTIONAL COUPLER	80009	670-6972-00
A5L221	120-1344-00		TRANSFORMER, RF: TOROID, 2 WINDS	80009	120-1344-00
A5R111	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R112	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R121	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R122	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R211	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R212	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A7	670-6971-00		CKT BOARD ASSY: VARIABLE ATTENUATOR	80009	670-6971-00
A7R100	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100ROF
A7R110	321-0116-00		RES., FXD, FILM: 158 OHM, 1%, 0.125W	91637	MFF1816G158ROF
A7R225	311-0169-00		RES., VAR, NONWIR: 100 OHM, 20%, 0.50W	01121	W-7564B
A7R335	321-0819-07		RES., FXD, FILM: 84 OHM, 0.1%, 0.125W	91637	MFF1816C84R00B
A70	670-4987-01		CKT BOARD ASSY: POWER SUPPLY	80009	670-4987-01
A70C01	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A70C04	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A70C12	283-0003-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z
A70C13	283-0060-00		CAP., FXD, CER DI: 100PF, 5%, 200V	72982	855-535U2J101J
A70C14	283-0067-00		CAP., FXD, CER DI: 0.001UF, 10%, 200V	72982	835-515B102K
A70C21	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C57	290-0520-00		CAP., FXD, ELCTLT: 4500UF, +100-0%, 40V	56289	68D10474
A70C62	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C71	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C84	283-0067-00		CAP., FXD, CER DI: 0.001UF, 10%, 200V	72982	835-515B102K
A70C85	283-0060-00		CAP., FXD, CER DI: 100PF, 5%, 200V	72982	855-535U2J101J
A70C87	290-0520-00		CAP., FXD, ELCTLT: 4500UF, +100-0%, 40V	56289	68D10474
A70C91	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A70C92	283-0003-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z
A70C93	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A70CR06	152-0066-00		SEMICONV DEVICE: SILICON, 400V, 750MA	14433	LG4016
A70CR20	152-0066-00		SEMICONV DEVICE: SILICON, 400V, 750MA	14433	LG4016
A70CR55	152-0659-00		SEMICONV DEVICE: SILICON, 100V, 6A	04713	MR751
A70CR65	152-0659-00		SEMICONV DEVICE: SILICON, 100V, 6A	04713	MR751

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A70CR75	152-0659-00		SEMICONV DEVICE:SILICON,100V,6A	04713	MR751
A70CR76	152-0659-00		SEMICONV DEVICE:SILICON,100V,6A	04713	MR751
A70CR81	152-0066-00		SEMICONV DEVICE:SILICON,400V,750MA	14433	LG4016
A70DS10	150-1001-00		LT EMITTING DIO:RED,660NM,100MA MAX	50522	MV5024
A70DS70	150-1001-00		LT EMITTING DIO:RED,660NM,100MA MAX	50522	MV5024
A70Q10	151-0192-00		TRANSISTOR:SILICON,NPN,SEL FROM MPS6521	04713	SPS8801
A70Q13	151-0389-00		TRANSISTOR:SILICON,PNP	80009	151-0389-00
A70Q14	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q22	151-0232-00		TRANSISTOR:SILICON,NPN,DUAL	80009	151-0232-00
A70Q23	151-0190-00		TRANSISTOR:SILICON,NPN	07263	S032677
A70Q72	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q73	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q81	151-0220-00		TRANSISTOR:SILICON,PNP	07263	S036228
A70Q82	151-0192-00		TRANSISTOR:SILICON,NPN,SEL FROM MPS6521	04713	SPS8801
A70Q83	151-0207-00		TRANSISTOR:SILICON,NPN	80009	151-0207-00
A70R02	308-0755-00		RES.,FXD,WW:0.75 OHM,5%,2W	75042	BWH-R7500J
A70R06	315-0471-00		RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A70R10	315-0122-00		RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A70R11	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A70R12	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A70R13	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A70R14	315-0471-00		RES.,FXD,CMPSN:470 OHM,5%,0.25W	01121	CB4715
A70R15	315-0241-00		RES.,FXD,CMPSN:240 OHM,5%,0.25W	01121	CB2415
A70R20	321-0779-03		RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
A70R21	321-0779-03		RES.,FXD,FILM:7.020K OHM,0.25%,0.125W	91637	MFF1816D70200C
A70R22	315-0153-00		RES.,FXD,CMPSN:15K OHM,5%,0.25W	01121	CB1535
A70R23	315-0102-00		RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A70R24	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R25	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R32	315-0472-00		RES.,FXD,CMPSN:4.7K OHM,5%,0.25W	01121	CB4725
A70R62	315-0362-00		RES.,FXD,CMPSN:3.6K OHM,5%,0.25W	01121	CB3625
A70R63	315-0363-00		RES.,FXD,CMPSN:36K OHM,5%,0.25W	01121	CB3635
A70R64	315-0562-00		RES.,FXD,CMPSN:5.6K OHM,5%,0.25W	01121	CB5625
A70R66	311-1241-00		RES.,VAR,NONWIR:100K OHM,10%,0.5W	32997	3386X-T07-104
A70R70	321-0200-00		RES.,FXD,FILM:1.18K OHM,1%,0.125W	91637	MFF1816G11800F
A70R71	321-0669-00		RES.,FXD,FILM:6.08K OHM,0.5%,0.125W	91637	MFF1816D60800D
A70R72	321-0283-08		RES.,FXD,FILM:8.66K OHM,1%,0.125W	24546	NC55C8660F
A70R73	315-0105-00		RES.,FXD,CMPSN:1M OHM,5%,0.25W	01121	CB1055
A70R74	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R75	315-0152-00		RES.,FXD,CMPSN:1.5K OHM,5%,0.25W	01121	CB1525
A70R80	315-0122-00		RES.,FXD,CMPSN:1.2K OHM,5%,0.25W	01121	CB1225
A70R82	315-0102-00		RES.,FXD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
A70R83	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A70R84	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A70R85	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A70R86	315-0241-00		RES.,FXD,CMPSN:240 OHM,5%,0.25W	01121	CB2415
A70R91	307-0113-00		RES.,FXD,CMPSN:5.1 OHM,5%,0.25W	01121	CB51G5
A70R93	301-0102-00		RES.,FXD,CMPSN:1K OHM,5%,0.50W	01121	EB1025
A70R94	315-0202-00		RES.,FXD,CMPSN:2K OHM,5%,0.25W	01121	CB2025
A70VR62	152-0317-00		SEMICONV DEVICE:ZENER,0.25W,6.2V,5%	80009	152-0317-00
A70VR73	152-0127-00		SEMICONV DEVICE:ZENER,0.4W,7.5V,5%	04713	SZG35009K2

Replaceable Electrical Parts—067-0886-03

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
CHASSIS PARTS					
DS18	150-1055-00		LT EMITTING DIO:GREEN,560NM,40 MAX	72619	559-0201-001
F10	159-0032-00		FUSE,CARTRIDGE:3AG,0.5A,250V,SLOW-BLOW	71400	MDL 1/2
F10	159-0044-00		FUSE,CARTRIDGE:3AG,0.2A,250V,SLOW-BLOW	71400	MDL 2/10
	-----		(SPARE)		
Q05	151-0373-00		TRANSISTOR:SILICON,PNP	80009	151-0373-00
Q95	151-0349-04		TRANSISTOR:SILICON,NPN,SEL MJE2801	80009	151-0349-04
	-----		(SCREENED)		
R74	311-1484-00		RES.,VAR, NONWIR:PNL,2.5K OHM,1W	01121	11M110
R76	311-1484-00		RES.,VAR, NONWIR:PNL,2.5K OHM,1W	01121	11M110
R84	311-1365-00		RES.,VAR, NONWIR:50K OHM,20%,1W	01121	11M164
R94	311-1368-00		RES.,VAR, NONWIR:5K OHM,20%,1W	01121	73A1G040L502M
T10	120-1145-00		XFMR,PWR,STPDN:	80009	120-1145-00
S19	260-1961-00		SWITCH,ROCKER:DPST,6 (4)A,250V	000FJ	1802-1121
U10	119-0813-00		SELECTOR,VOLTS:W/LINE FLTR RCPT & FUSE	02777	F65003

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscnt	Name & Description	Mfr Code	Mfr Part Number
A1	067-0886-04		TEST MODULATOR:38.9 MHZ(SYSTEM B & G)	80009	067-0886-04
A1A1	670-6962-00		CKT BOARD ASSY:INTERFACE	80009	670-6962-00
A1A2	-----		CKT BOARD ASSY:R.F. L.O. AMP (REPLACEABLE AS A UNIT WITH A8)		
A1A3	670-6965-00		CKT BOARD ASSY:I.F. AMP	80009	670-6965-00
A1A4	670-6967-02		CKT BOARD ASSY:VISUAL L.O. 38.9 MHZ	80009	670-6967-02
A1A5	670-6966-02		CKT BOARD ASSY:VISUAL MODULATOR 38.9 MHZ	80009	670-6966-02
A1A6	670-6968-00		CKT BOARD ASSY:VIDEO PROCESSOR	80009	670-6968-00
A1A7	670-6969-00		CKT BOARD ASSY:VIDEO PRECORRECTOR	80009	670-6969-00
A1A8	670-6970-04		CKT BOARD ASSY:AURAL MODULATOR 38.9 MHZ	80009	670-6970-04
A2-1	670-7027-00		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-00
A2-2	670-7027-01		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-01
A3	-----		CKT BOARD ASSY:FIRST MIXER (REPLACEABLE AS A UNIT WITH A9)		
A4	-----		CKT BOARD ASSY:R.F.AMP (REPLACEABLE AS A UNIT WITH A8)		
A5	670-6972-00		CKT BOARD ASSY:DIRECTIONAL COUPLER	80009	670-6972-00
A7	670-6971-00		CKT BOARD ASSY:VARIABLE ATTENUATOR	80009	670-6971-00
A8	672-0942-00		CKT BOARD ASSY:R.F. L.O. AMP(A4,A1A1)	80009	672-0942-00
A9	672-0943-00		CKT BOARD ASSY:R.F. MIXER(A3,A1A2)	80009	672-0943-00
A10	670-6973-00		CKT BOARD ASSY:EXTENDER	80009	670-6973-00
A70	670-4987-01		CKT BOARD ASSY:POWER SUPPLY	80009	670-4987-01
A1	670-6962-00		CKT BOARD ASSY:INTERFACE	80009	670-6962-00
A1C160	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C565	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C760	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C765	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C792	290-0745-00		CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A1C863	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C864	283-0353-00		CAP.,FXD,CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C894	290-0745-00		CAP.,FXD,ELCTLT:22UF,+50-10%,25V	56289	502D225
A1A3	670-6965-00		CKT BOARD ASSY:I.F. AMP	80009	670-6965-00
A1A3C116	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C118	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C121	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C124	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C126	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C133	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C212	281-0097-00		CAP.,VAR,CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C218	283-0635-00		CAP.,FXD,MICA D:51PF,1%,100V	00853	D151E510F0
A1A3C233	283-0407-00		CAP.,FXD,CER DI:27PF,5%,50V	95275	VJ0805A270JH
A1A3C236	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C311	281-0097-00		CAP.,VAR,CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C312	283-0634-00		CAP.,FXD,MICA D:65PF,1%,100V	00853	D151E650F0
A1A3C331	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C432	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C434	290-0804-00		CAP.,FXD,ELCTLT:10UF,+50-10%,25V	55680	25ULA10V-T
A1A3C511	281-0097-00		CAP.,VAR,CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C513	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C531	283-0178-00		CAP.,FXD,CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z

Replaceable Electrical Parts—067-0886-04

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A3C618	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C621	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C622	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C631	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C636	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3L117	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3L231	108-0260-00		COIL, RF: 98NH	80009	108-0260-00
A1A3L311	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L412	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L528	108-0655-00		COIL, RF: FIXED, 75NH	80009	108-0655-00
A1A3L632	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3Q121	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3Q216	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q332	151-0195-00		TRANSISTOR: SILICON, NPN	80009	151-0195-00
A1A3Q613	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q624	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3R115	315-0161-00		RES., FXD, CMPSN: 160 OHM, 5%, 0.25W	01121	CB1615
A1A3R122	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R124	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R126	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R132	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R133	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R226	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100R0F
A1A3R233	317-0510-00		RES., FXD, CMPSN: 51 OHM, 5%, 0.125W	01121	BB5105
A1A3R331	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A3R333	321-0358-00		RES., FXD, FILM: 52.3K OHM, 1%, 0.125W	91637	MFF1816G52301F
A1A3R334	321-0308-00		RES., FXD, FILM: 15.8K OHM, 1%, 0.125W	91637	MFF1816G15801F
A1A3R431	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A3R522	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R523	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A3R524	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R526	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100R0F
A1A3R527	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R531	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R533	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R534	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R614	315-0360-00		RES., FXD, CMPSN: 36 OHM, 5%, 0.25W	01121	CB3605
A1A3R616	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R618	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R626	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R633	315-0361-00		RES., FXD, CMPSN: 360 OHM, 5%, 0.25W	01121	CB3615
A1A3T132	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T516	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T634	120-1159-00		XFMR, RF: TOROID, 7 T, TRIFILAR	80009	120-1159-00
A1A4	670-6967-02		CKT BOARD ASSY: VISUAL L.O. 38.9 MHZ	80009	670-6972-02
A1A4C211	283-0598-00		CAP., FXD, MICA D: 253PF, 5%, 300V	09023	CD15EC(253)J03
A1A4C215	283-0640-00		CAP., FXD, MICA D: 160PF, 1%, 100V	00853	D151E161F0
A1A4C216	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C217	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C221	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C223	283-0676-00		CAP., FXD, MICA D: 82PF, 1%, 500V	00853	D105E820F0
A1A4C228	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A4C231	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A4C232	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A4C320	283-0032-00		CAP., FXD, CER DI: 470PF, 5%, 500V	72982	0831085Z5E00471J

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A4C325	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A4L214	114-0405-00		COIL, RF: VARIABLE 130UH-225UH	80009	114-0405-00
A1A4L215	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L221	114-0307-00		COIL, RF: VARIABLE, 220-440NH	80009	114-0307-00
A1A4L222	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L225	108-0182-00		COIL, RF: 0.3UH	80009	108-0182-00
A1A4L226	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A4L231	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A4Q216	151-0260-00		TRANSISTOR: SILICON, NPN	80009	151-0260-00
A1A4Q225	151-0333-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS918	04713	SPS1752
A1A4R212	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R213	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A4R222	315-0271-00		RES., FXD, CMPSN: 270 OHM, 5%, 0.25W	01121	CB2715
A1A4R224	315-0331-00		RES., FXD, CMPSN: 330 OHM, 5%, 0.25W	01121	CB3315
A1A4R225	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A4R233	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R234	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R315	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R319	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4R321	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4Y238	158-0235-00		XTAL UNIT, QTZ: 38.9MHZ 0.01%, SERIES	33096	HC-25/U
A1A5	670-6966-02		CKT BOARD ASSY: VISUAL MODULATOR 38.9 MHZ	80009	670-6966-02
A1A5C115	283-0158-00		CAP., FXD, CER DI: 1PF, 10%, 50V	72982	8101B057COK0109B
A1A5C116	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200COG569C
A1A5C202	283-0000-00		CAP., FXD, CER DI: 0.001UF, +100-0%, 500V	72982	831-516E102P
A1A5C217	283-0140-00		CAP., FXD, CER DI: 4.7PF, 5%, 50V	72982	8101E003A479C
A1A4C315	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C316	283-0646-00		CAP., FXD, MICA D: 170PF, 1%, 100V	00853	D151E171F0
A1A5C317	283-0639-00		CAP., FXD, MICA D: 56PF, 1%, 100V	00853	D151E560F0
A1A5C515	283-0644-00		CAP., FXD, MICA D: 150PF, 1%, 500V	00853	D155E151F0
A1A5C612	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C615	283-0728-00		CAP., FXD, MICA D: 120PF, 1%, 500V	00853	D155F121F03
A1A5C700	283-0636-00		CAP., FXD, MICA D: 36PF, 1.4%, 100V	00853	D155F360G0
A1A5C701	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200COG569C
A1A5CR114	152-0650-00		SEMICONV DEVICE: VVC, 11.5PF NOM -3V, 30 PIV	04713	BB105B
A1A5E110	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5E112	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5E113	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5E114	276-0528-00		SHIELDING BEAD, : 0.1UH	02114	56-0590-65C/3B
A1A5L333	108-1060-00		COIL, RF: FIXED, 3 TURN	80009	108-1060-00
A1A5L421	108-1059-00		COIL, RF: FIXED, 2 TURN	80009	108-1059-00
A1A5L514	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L515	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L521	114-0232-00		COIL, RF: VARIABLE, 130-220NH	80009	114-0232-00
A1A5L616	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5Q110	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q112	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q113	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q114	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5R202	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R205	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R206	321-0064-00		RES., FXD, FILM: 45.3 OHM, 1%, 0.125W	91637	MFF1816G45R30F
A1A5R207	321-0233-00		RES., FXD, FILM: 2.61K OHM, 1%, 0.125W	91637	MFF1816G26100F
A1A5R208	321-0096-00		RES., FXD, FILM: 97.6 OHM, 1%, 0.125W	91637	MFF1816G97R60F
A1A5R209	321-0144-00		RES., FXD, FILM: 309 OHM, 1%, 0.125W	91637	MFF1816G309R0F

Replaceable Electrical Parts—067-0886-04

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A5R210	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815
A1A5R215	315-0300-00		RES., FXD, CMPSN: 30 OHM, 5%, 0.25W	01121	CB3005
A1A5R216	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815
A1A5R217	315-0911-00		RES., FXD, CMPSN: 910 OHM, 5%, 0.25W	01121	CB9115
A1A5R315	315-0152-00		RES., FXD, CMPSN: 1.5K OHM, 5%, 0.25W	01121	CB1525
A1A5R612	315-0471-00		RES., FXD, CMPSN: 470 OHM, 5%, 0.25W	01121	CB4715
A1A5T121	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A5T214	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A6	670-6968-00		CKT BOARD ASSY: VIDEO PROCESSOR	80009	670-6968-00
A1A6C220	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C227	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C319	290-0804-00		CAP., FXD, ELCTLT: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C320	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A6C325	281-0798-00		CAP., FXD, CER DI: 51PF, 1%, 100V	04222	MC101A510G
A1A6C330	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A6C341	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C345	281-0786-00		CAP., FXD, CER DI: 150PF, 10%, 100V	72982	8035D2AADX5P151K
A1A6C421	290-0290-00		CAP., FXD, ELCTLT: 10UF, 20%, 25V	56289	30D472
A1A6C422	281-0774-00		CAP., FXD, CER DI: 0.022UF, 20%, 100V	72982	8045A9ABDZ5U223M
A1A6C424	281-0809-00		CAP., FXD, CER DI: 200PF, 5%, 100V	72982	8013T2ADDC1G201J
A1A6C433	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C435	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C513	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A1A6C514	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C531	290-0804-00		CAP., FXD, ELCTLT: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C541	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6CR533	152-0141-02		SEMICONV DEVICE: SILICON, 30V, 50NA	01295	1N4152R
A1A6L339	108-0226-00		COIL, RF: 100UH	76493	DWG B4257
A1A6Q322	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6Q541	151-0188-00		TRANSISTOR: SILICON, PNP	04713	SPS6868K
A1A6Q543	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6R137	315-0151-00		RES., FXD, CMPSN: 150 OHM, 5%, 0.25W	01121	CB1515
A1A6R139	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R220	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R225	315-0753-00		RES., FXD, CMPSN: 75K OHM, 5%, 0.25W	01121	CB7535
A1A6R229	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R231	321-0143-00		RES., FXD, FILM: 301 OHM, 1%, 0.125W	91637	MFF1816G301R0F
A1A6R233	321-0143-00		RES., FXD, FILM: 301 OHM, 1%, 0.125W	91637	MFF1816G301R0F
A1A6R325	315-0102-00		RES., FXD, CMPSN: 1K OHM, 5%, 0.25W	01121	CB1025
A1A6R333	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R335	315-0103-00		RES., FXD, CMPSN: 10K OHM, 5%, 0.25W	01121	CB1035
A1A6R341	315-0105-00		RES., FXD, CMPSN: 1M OHM, 5%, 0.25W	01121	CB1055
A1A6R345	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825
A1A6R413	321-0336-00		RES., FXD, FILM: 30.9K OHM, 1%, 0.125W	91637	MFF1816G30901F
A1A6R414	321-0891-00		RES., FXD, FILM: 800K OHM, 1%, 0.125W	91637	MFF1816G80002F
A1A6R422	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R433	315-0104-00		RES., FXD, CMPSN: 100K OHM, 5%, 0.25W	01121	CB1045
A1A6R437	315-0512-00		RES., FXD, CMPSN: 5.1K OHM, 5%, 0.25W	01121	CB5125
A1A6R521	315-0683-00		RES., FXD, CMPSN: 68K OHM, 5%, 0.25W	01121	CB6835
A1A6R523	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R528	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R531	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A6R533	315-0152-00		RES., FXD, CMPSN: 1.5K OHM, 5%, 0.25W	01121	CB1525
A1A6R538	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R541	315-0153-00		RES., FXD, CMPSN: 15K OHM, 5%, 0.25W	01121	CB1535

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A6R545	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R548	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825
A1A6U130	155-0233-00		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	80009	155-0233-00
A1A6U339	156-0356-01		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	80009	156-0356-01
A1A6U346	156-1134-00		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A6U510	155-0144-00		MICROCIRCUIT, LI: DUAL IN-LINE, 16 LEAD	80009	155-0144-00
A1A6VR223	152-0195-00		SEMICONV DEVICE: ZENER, 0.4W, 5.1V, 5%	04713	SZ11755
A1A6VR225	152-0195-00		SEMICONV DEVICE: ZENER, 0.4W, 5.1V, 5%	04713	SZ11755
A1A7	670-6969-00		CKT BOARD ASSY: VIDEO PRECORRECTOR (SYSTEM B & G)	80009	670-6969-00
A1A7C121	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A7C142	283-0637-00		CAP., FXD, MICA D: 20PF, 2.5%, 100V	00853	D151E200D0
A1A7C152	283-0637-00		CAP., FXD, MICA D: 20PF, 2.5%, 100V	00853	D151E200D0
A1A7C211	283-0725-00		CAP., FXD, MICA D: 214PF, 1%, 500V	00853	D15-5E2140F0
A1A7C212	283-0665-00		CAP., FXD, MICA D: 190PF, 1%, 100V	00853	D151F19F0
A1A7C213	283-0725-00		CAP., FXD, MICA D: 214PF, 1%, 500V	00853	D15-5E2140F0
A1A7C214	283-0665-00		CAP., FXD, MICA D: 190PF, 1%, 100V	00853	D151F19F0
A1A7C221	283-0676-00		CAP., FXD, MICA D: 82PF, 1%, 500V	00853	D105E820F0
A1A7C222	283-0640-00		CAP., FXD, MICA D: 160PF, 1%, 100V	00853	D151E161F0
A1A7C223	283-0676-00		CAP., FXD, MICA D: 82PF, 1%, 500V	00853	D105E820F0
A1A7C224	283-0640-00		CAP., FXD, MICA D: 160PF, 1%, 100V	00853	D151E161F0
A1A7C231	283-0791-00		CAP., FXD, MICA D: 156PF, 1%, 500V	09023	CD15FD1560F03
A1A7C232	283-0791-00		CAP., FXD, MICA D: 156PF, 1%, 500V	09023	CD15FD1560F03
A1A7C241	283-0632-00		CAP., FXD, MICA D: 87PF, 1%, 100V	00853	D151E870F0
A1A7C411	283-0622-00		CAP., FXD, MICA D: 450PF, 1%, 300V	00853	D153F451F0
A1A7C417	283-0641-00		CAP., FXD, MICA D: 180PF, 1%, 100V	00853	D151E181F0
A1A7C421	283-0596-00		CAP., FXD, MICA D: 528PF, 1%, 300V	00853	D153F5280F0
A1A7C422	283-0636-00		CAP., FXD, MICA D: 36PF, 1.4%, 100V	00853	D155F360G0
A1A7C431	283-0673-00		CAP., FXD, MICA D: 455PF, 1%, 500V	00853	D155F4550F0
A1A7C432	283-0665-00		CAP., FXD, MICA D: 190PF, 1%, 100V	00853	D151F19F0
A1A7C433	283-0636-00		CAP., FXD, MICA D: 36PF, 1.4%, 100V	00853	D155F360G0
A1A7C435	283-0689-00		CAP., FXD, MICA D: 550PF, 0.5%, 300V	00853	D153F551E0
A1A7C443	283-0637-00		CAP., FXD, MICA D: 20PF, 2.5%, 100V	00853	D151E200D0
A1A7C444	283-0596-00		CAP., FXD, MICA D: 528PF, 1%, 300V	00853	D153F5280F0
A1A7C611	283-0786-00		CAP., FXD, MICA D: 745PF, 1%, 500V	09023	CD19FD(745)F03
A1A7C613	283-0786-00		CAP., FXD, MICA D: 745PF, 1%, 500V	09023	CD19FD(745)F03
A1A7C621	283-0793-00		CAP., FXD, MICA D: 3035PF, 1%, 500V	09023	CD19FD(3035)F03
A1A7C713	283-0791-00		CAP., FXD, MICA D: 156PF, 1%, 500V	09023	CD15FD1560F03
A1A7C751	283-0772-00		CAP., FXD, MICA D: 497PF, 1%, 500V	00853	D15-5F4970F0
A1A7C753	283-0777-00		CAP., FXD, MICA D: 2275PF, 1%, 500V	00853	D19-5F22750F0
A1A7C754	283-0695-00		CAP., FXD, MICA D: 4440PF, 1%, 300V	72136	DM19FC4441F0
A1A7CR255	152-0141-02		SEMICONV DEVICE: SILICON, 30V, 50NA	01295	1N4152R
A1A7CR555	152-0141-02		SEMICONV DEVICE: SILICON, 30V, 50NA	01295	1N4152R
A1A7L111	114-0400-00		COIL, RF: VARIABLE, 3.6-3.9UH	80009	114-0400-00
A1A7L121	114-0400-00		COIL, RF: VARIABLE, 3.6-3.9UH	80009	114-0400-00
A1A7L131	114-0395-00		COIL, RF: VARIABLE, 4.0-4.4UH	80009	114-0395-00
A1A7L141	114-0280-00		COIL, RF: 12-43UH, CORE 276-0568-00	80009	114-0280-00
A1A7L151	114-0280-00		COIL, RF: 12-43UH, CORE 276-0568-00	80009	114-0280-00
A1A7L155	114-0177-00		COIL, RF: 280-650UH, SHIELDED	32436	5E-003-4
A1A7L311	114-0399-00		COIL, RF: VARIABLE, 4.4-4.8UH	80009	114-0399-00
A1A7L321	114-0402-00		COIL, RF: VARIABLE, 2.6-2.8UH	80009	114-0402-00
A1A7L331	114-0403-00		COIL, RF: VARIABLE, 1.8-1.9UH	80009	114-0403-00
A1A7L351	108-0358-00		COIL, REED SW: 12V	80009	108-0358-00
A1A7L455	108-0358-00		COIL, REED SW: 12V	80009	108-0358-00
A1A7L511	114-0396-00		COIL, RF: VARIABLE, 7.8-8.6UH	80009	114-0396-00

Replaceable Electrical Parts—067-0886-04

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A7L531	114-0397-00		COIL, RF: VARIABLE: 16.0-17.2UH	80009	114-0397-00
A1A7L541	114-0398-00		COIL, RF: VARIABLE: 39.8-44.3UH	80009	114-0398-00
A1A7L711	114-0394-00		COIL, RF: VARIABLE, 3.2-3.6UH	80009	114-0394-00
A1A7L731	114-0394-00		COIL, RF: VARIABLE, 3.2-3.6UH	80009	114-0394-00
A1A7L741	114-0401-00		COIL, RF: VARIABLE, 2.9-3.2UH	80009	114-0401-00
A1A7R243	311-1561-00		RES., VAR, NONWIR: 2.5K OHM, 20%, 0.50W	73138	91-83-0
A1A7R244	321-0202-00		RES., FXD, FILM: 1.24K OHM, 1%, 0.125W	91637	MFF1816G12400F
A1A7R245	321-0210-00		RES., FXD, FILM: 1.5K OHM, 1%, 0.125W	91637	MFF1816G15000F
A1A7R341	315-0160-00		RES., FXD, CMPSN: 16 OHM, 5%, 0.25W	01121	CB1605
A1A7R342	315-0160-00		RES., FXD, CMPSN: 16 OHM, 5%, 0.25W	01121	CB1605
A1A7R445	311-1731-00		RES., VAR, NONWIR: 20 OHM, 0.5W	73138	91-94-0
A1A7R451	321-0186-00		RES., FXD, FILM: 845 OHM, 1%, 0.125W	91637	MFF1816G845R0F
A1A7R453	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A7R455	321-0186-00		RES., FXD, FILM: 845 OHM, 1%, 0.125W	91637	MFF1816G845R0F
A1A7S344	260-0817-00		SWITCH, REED: SPDT, 0.25A, 100V	12617	1152234160
A1A7S444	260-0817-00		SWITCH, REED: SPDT, 0.25A, 100V	12617	1152234160
A1A8	670-6970-04		CKT BOARD ASSY: AURAL MODULATOR 38.9 MHZ	80009	670-6970-04
A1A8C102	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A1A8C103	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A8C104	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A8C105	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C125	283-0594-00		CAP., FXD, MICA D: 0.001UF, 1%, 100V	00853	D151F102F0
A1A8C126	281-0562-00		CAP., FXD, CER DI: 39PF, 10%, 500V	72982	301-000U2J0390K
A1A8C127	281-0526-00		CAP., FXD, CER DI: 1.5PF, +/-0.5PF, 500V	72982	301-000S2K0159D
A1A8C202	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C212	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C213	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C214	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C216	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C222	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A8C223	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C225	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N06125U0103M
A1A8C227	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C301	283-0655-00		CAP., FXD, MICA D: 0.0033UF, 1%, 500V	00853	D195E332F0
A1A8C305	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C306	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N06125U0103M
A1A8C315	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N06125U0103M
A1A8C316	283-0599-00		CAP., FXD, MICA D: 98PF, 5%, 500V	00853	D105E980J0
A1A8C317	283-0600-00		CAP., FXD, MICA D: 43PF, 5%, 500V	00853	D105E430J0
A1A8C318	283-0672-00		CAP., FXD, MICA D: 200PF, 1%, 500V	00853	D155F2010F0
A1A8C319	281-0096-00		CAP., VAR, AIR DI: 5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C324	283-0599-00		CAP., FXD, MICA D: 98PF, 5%, 500V	00853	D105E980J0
A1A8C325	283-0600-00		CAP., FXD, MICA D: 43PF, 5%, 500V	00853	D105E430J0
A1A8C326	281-0096-00		CAP., VAR, AIR DI: 5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C401	285-1098-00		CAP., FXD, PLSTC: 0.22UF, 10%, 80V	56289	192P2249R8
A1A8C402	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C407	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C413	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C425	283-0672-00		CAP., FXD, MICA D: 200PF, 1%, 500V	00853	D155F2010F0
A1A8CR126	152-0665-00		SEMICONV DEVICE: SILICON, VVC, 30V	04713	SMV1344
A1A8L125	108-0897-00		COIL, RF: FIXED, 220UH	80009	108-0897-00
A1A8L126	114-0220-00		COIL, RF: 1-3UH, CORE 276-0568-00	80009	114-0220-00
A1A8L223	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A8L224	108-0182-00		COIL, RF: 0.3UH	80009	108-0182-00
A1A8L226	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A8L228	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A8L315	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A8L316	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A8L318	108-0072-00		COIL, RF: 0.75UH	80009	108-0072-00
A1A8L326	108-0072-00		COIL, RF: 0.75UH	80009	108-0072-00
A1A8Q202	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q204	151-0188-00		TRANSISTOR: SILICON, PNP	04713	SPS6868K
A1A8Q206	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q207	151-1005-00		TRANSISTOR: SILICON, JFE, N-CHANNEL	80009	151-1005-00
A1A8Q213	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q214	151-0472-00		TRANSISTOR: SILICON, NPN	80009	151-0472-00
A1A8Q302	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q325	151-0472-00		TRANSISTOR: SILICON, NPN	80009	151-0472-00
A1A8R101	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R102	311-1918-00		RES., VAR, NONWIR: 2K OHM, 10%, 0.50W	73138	72-199-0
A1A8R103	311-1319-00		RES., VAR, NONWIR: 10K OHM, 10%, 0.75W	73138	89-126-1
A1A8R106	321-0289-00		RES., FXD, FILM: 10K OHM, 1%, 0.125W	91637	MFF1816G10001F
A1A8R107	321-0289-00		RES., FXD, FILM: 10K OHM, 1%, 0.125W	91637	MFF1816G10001F
A1A8R108	315-0103-00		RES., FXD, CMPSN: 10K OHM, 5%, 0.25W	01121	CB1035
A1A8R125	311-1138-00		RES., VAR, NONWIR: 1K OHM, 20%, 0.50W	73138	72XW-44-0-102M
A1A8R128	311-1918-00		RES., VAR, NONWIR: 2K OHM, 10%, 0.50W	73138	72-199-0
A1A8R200	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R201	321-0239-00		RES., FXD, FILM: 3.01K OHM, 1%, 0.125W	91637	MFF1816G30100F
A1A8R202	321-0251-00		RES., FXD, FILM: 4.02K OHM, 1%, 0.125W	91637	MFF1816G40200F
A1A8R203	315-0104-00		RES., FXD, CMPSN: 100K OHM, 5%, 0.25W	01121	CB1045
A1A8R204	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R208	321-0289-00		RES., FXD, FILM: 10K OHM, 1%, 0.125W	91637	MFF1816G10001F
A1A8R212	321-0184-00		RES., FXD, FILM: 806 OHM, 1%, 0.125W	91637	MFF1816G806ROF
A1A8R213	321-0273-00		RES., FXD, FILM: 6.81K OHM, 1%, 0.125W	91637	MFF1816G68100F
A1A8R214	315-0510-00		RES., FXD, CMPSN: 51 OHM, 5%, 0.25W	01121	CB5105
A1A8R215	315-0510-00		RES., FXD, CMPSN: 51 OHM, 5%, 0.25W	01121	CB5105
A1A8R216	321-0273-00		RES., FXD, FILM: 6.81K OHM, 1%, 0.125W	91637	MFF1816G68100F
A1A8R217	321-0273-00		RES., FXD, FILM: 6.81K OHM, 1%, 0.125W	91637	MFF1816G68100F
A1A8R221	321-0184-00		RES., FXD, FILM: 806 OHM, 1%, 0.125W	91637	MFF1816G806ROF
A1A8R225	315-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.25W	01121	CB1015
A1A8R226	321-0193-00		RES., FXD, FILM: 1K OHM, 1%, 0.125W	91637	MFF1816G10000F
A1A8R227	321-0193-00		RES., FXD, FILM: 1K OHM, 1%, 0.125W	91637	MFF1816G10000F
A1A8R300	321-0306-00		RES., FXD, FILM: 15K OHM, 1%, 0.125W	91637	MFF1816G15001F
A1A8R301	321-0289-00		RES., FXD, FILM: 10K OHM, 1%, 0.125W	91637	MFF1816G10001F
A1A8R303	315-0106-00		RES., FXD, CMPSN: 10M OHM, 5%, 0.25W	01121	CB1065
A1A8R304	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A8R305	315-0243-00		RES., FXD, CMPSN: 24K OHM, 5%, 0.25W	01121	CB2435
A1A8R306	321-0258-00		RES., FXD, FILM: 4.75K OHM, 1%, 0.125W	91637	MFF1816G47500F
A1A8R309	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R312	311-1917-00		RES., VAR, NONWIR: TRMR, 5K OHM, 10%, 0.5W	73138	72-198-0
A1A8R319	315-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.25W	01121	CB1015
A1A8R327	315-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.25W	01121	CB1015
A1A8R401	315-0224-00		RES., FXD, CMPSN: 220K OHM, 5%, 0.25W	01121	CB2245
A1A8R402	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A8R405	315-0621-00		RES., FXD, CMPSN: 620 OHM, 5%, 0.25W	01121	CB6215
A1A8R415	315-0680-00		RES., FXD, CMPSN: 68 OHM, 5%, 0.25W	01121	CB6805
A1A8R419	315-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.25W	01121	CB1015
A1A8R425	315-0680-00		RES., FXD, CMPSN: 68 OHM, 5%, 0.25W	01121	CB6805
A1A8U400	156-1134-00		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A8Y129	158-0231-00		XTAL UNIT, QTZ: 33.4MHZ 0.01%, SERIES	33096	HC-25/U

Replaceable Electrical Parts—067-0886-04

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A2-1	670-7027-00		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-00
A2-1S110	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S115	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S120	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S125	260-1576-01		SWITCH,PUSH:5 STA,2 POLE,CORR/UNCORRECT	80009	260-1576-01
	-----		(FURN AS A UNIT WITH A2-1S129)		
A2-1S129	260-1576-01		SWITCH,PUSH:5 STA,2 POLE,CORR/UNCORRECT	80009	260-1576-01
	-----		(FURN AS A UNIT WITH A2-1S125)		
A2-2	670-7027-01		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-01
A2-2S110	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S115	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S120	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S125	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S129	260-1665-00		SWITCH,PUSH:1 STA,2 POLE,MOMENTARY	71590	2KAA010000-673
A3	-----		CKT BOARD ASSY:FIRST MIXER		
	-----		(REPLACEABLE AS A UNIT WITH A9)		
A3C15	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A3C17	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C22	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A3C23	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A3C24	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A3C25	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C26	283-0254-00		CAP.,FXD,CER DI:7PF,+/-7.5%,100V	95275	VJ0805-A-709DH
A3C28	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C31	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A3C47	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C52	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C53	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A3C86	283-0403-00		CAP.,FXD,CER DI:5.75PF,+/-0.25PF,100V	72982	A01AL4A4LC0G0259
	-----		(NOMINAL VALUE, SELECTED)		
A3CR63	152-0715-00		SEMICONV DEVICE:SCHOTTKY,SI,RING QUAD	80009	152-0715-00
A3L46	108-0983-00		COIL,RF:FIXED,230NH,30% TOROIDAL	80009	108-0983-00
A3Q27	151-0658-00		TRANSISTOR:SILICON,NPN	80009	151-0658-00
A3Q34	151-0216-00		TRANSISTOR:SILICON,PNP	04713	SPS8803
A3R22	317-0202-00		RES.,FXD,CMPSN:2K OHM,5%,0.125W	01121	BB2025
A3R24	317-0332-00		RES.,FXD,CMPSN:3.3K OHM,5%,0.125W	01121	BB3325
A3R25	307-0570-00		RES.,FXD,FILM:18 OHM,2%,0.12KW	52262	MCRA180FZ
A3R26	307-0279-00		RES.,FXD,FILM:10 OHM,10%,100 MW	27851	3C301K
A3R27	307-0569-00		RES.,FXD,FILM:249 OHM,1%,0.125W	52262	MCRA249R0FYZ
A3R31	317-0122-00		RES.,FXD,CMPSN:1.2K OHM,5%,0.125W	01121	BB1225
A3R41	315-0100-00		RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A3R42	301-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.50W	01121	EB1015
A3R54	307-0276-00		RES.,FXD,FILM:300 OHM,10%,100MW	03888	OBV
A3R55	307-0279-00		RES.,FXD,FILM:10 OHM,10%,100 MW	03888	OBV
A3R86	317-0240-00		RES.,FXD,CMPSN:24 OHM,5%,0.125W	01121	BB2405
A3R87	317-0150-00		RES.,FXD,CMPSN:15 OHM,5%,0.125W	01121	BB1505
A3T63	120-1153-00		XFMR,RF: BALUN	80009	120-1153-00
A3T75	120-1153-00		XFMR,RF: BALUN	80009	120-1153-00
A4	-----		CKT BOARD ASSY:R.F. AMP		
	-----		(REPLACEABLE AS A UNIT WITH A8)		
A4C21	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A4C23	283-0321-00		CAP., FXD, CER DI:1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A4C26	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C33	283-0177-00		CAP., FXD, CER DI:1UF, +80-20%, 25V	56289	273C5
A4C34	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C42	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C43	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C46	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C53	283-0177-00		CAP., FXD, CER DI:1UF, +80-20%, 25V	56289	273C5
A4C54	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C55	283-0321-00		CAP., FXD, CER DI:1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A4C57	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C58	283-0321-00		CAP., FXD, CER DI:1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A4C62	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C64	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C66	283-0324-00		CAP., FXD, CER DI:0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4L42	108-0896-00		COIL, RF:FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00
A4L55	108-0896-00		COIL, RF:FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00
A4Q33	151-0216-00		TRANSISTOR:SILICON, PNP	04713	SPS8803
A4Q36	151-0630-00		TRANSISTOR:SILICON, NPN	80009	151-0630-00
A4Q52	151-0216-00		TRANSISTOR:SILICON, PNP	04713	SPS8803
A4Q56	151-0630-00		TRANSISTOR:SILICON, NPN	80009	151-0630-00
A4R21	315-0242-00		RES., FXD, CMPSN:2.4K OHM, 5%, 0.25W	01121	CB2425
A4R22	315-0302-00		RES., FXD, CMPSN:3K OHM, 5%, 0.25W	01121	CB3025
A4R32	315-0361-00		RES., FXD, CMPSN:360 OHM, 5%, 0.25W	01121	CB3615
A4R36	317-0332-00		RES., FXD, CMPSN:3.3K OHM, 5%, 0.125W	01121	BB3325
A4R37	307-0278-00		RES., FXD, FILM:20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R46	307-1103-00		RES., FXD, FILM:225 OHM, 1%, 0.125W	52262	MCRA2250FYZ
A4R47	307-0278-00		RES., FXD, FILM:20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R51	301-0181-00		RES., FXD, CMPSN:180 OHM, 5%, 0.50W	01121	EB1815
A4R54	317-0332-00		RES., FXD, CMPSN:3.3K OHM, 5%, 0.125W	01121	BB3325
A4R55	307-0278-00		RES., FXD, FILM:20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R56	307-0336-00		RES., FXD, FILM:50 OHM, 1%, 0.105W	52262	MCRA 500 FYZ
A4R58	307-0278-00		RES., FXD, FILM:20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R65	307-0571-00		RES., FXD, FILM:57 OHM, 1%, 0.125W	52262	MCRA570FZ
A5	670-6972-00		CKT BOARD ASSY: DIRECTIONAL COUPLER	80009	670-6972-00
A5L221	120-1344-00		XFMR, RF:TOROID, 2 WINDS	80009	120-1344-00
A5R111	317-0101-00		RES., FXD, CMPSN:100 OHM, 5%, 0.125W	01121	BB1015
A5R112	317-0101-00		RES., FXD, CMPSN:100 OHM, 5%, 0.125W	01121	BB1015
A5R121	317-0101-00		RES., FXD, CMPSN:100 OHM, 5%, 0.125W	01121	BB1015
A5R122	317-0101-00		RES., FXD, CMPSN:100 OHM, 5%, 0.125W	01121	BB1015
A5R211	317-0101-00		RES., FXD, CMPSN:100 OHM, 5%, 0.125W	01121	BB1015
A5R212	317-0101-00		RES., FXD, CMPSN:100 OHM, 5%, 0.125W	01121	BB1015
A7	670-6971-00		CKT BOARD ASSY: VARIABLE ATTENUATOR	80009	670-6971-00
A7R100	321-0097-00		RES., FXD, FILM:100 OHM, 1%, 0.125W	91637	MFF1816G100R0F
A7R110	321-0116-00		RES., FXD, FILM:158 OHM, 1%, 0.125W	91637	MFF1816G158R0F
A7R225	311-0169-00		RES., VAR, NONWIR:100 OHM, 20%, 0.50W	01121	W-7564B
A7R335	321-0819-07		RES., FXD, FILM:84 OHM, 0.1%, 0.125W	91637	MFF1816C84R00B
A70	670-4987-01		CKT BOARD ASSY: POWER SUPPLY	80009	670-4987-01
A70C01	290-0770-00		CAP., FXD, ELCTLT:100UF, +50-10%, 25V	56289	502D230
A70C04	283-0177-00		CAP., FXD, CER DI:1UF, +80-20%, 25V	56289	273C5
A70C12	283-0003-00		CAP., FXD, CER DI:0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z

Replaceable Electrical Parts—067-0886-04

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A70C13	283-0060-00		CAP., FXD, CER DI:100PF, 5%, 200V	72982	855-535U2J101J
A70C14	283-0067-00		CAP., FXD, CER DI:0.001UF, 10%, 200V	72982	835-515B102K
A70C21	290-0517-00		CAP., FXD, ELCTLT:6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C57	290-0520-00		CAP., FXD, ELCTLT:4500UF, +100-0%, 40V	56289	68D10474
A70C62	290-0517-00		CAP., FXD, ELCTLT:6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C71	290-0517-00		CAP., FXD, ELCTLT:6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C84	283-0067-00		CAP., FXD, CER DI:0.001UF, 10%, 200V	72982	835-515B102K
A70C85	283-0060-00		CAP., FXD, CER DI:100PF, 5%, 200V	72982	855-535U2J101J
A70C87	290-0520-00		CAP., FXD, ELCTLT:4500UF, +100-0%, 40V	56289	68D10474
A70C91	290-0770-00		CAP., FXD, ELCTLT:100UF, +50-10%, 25V	56289	502D230
A70C92	283-0003-00		CAP., FXD, CER DI:0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z
A70C93	283-0177-00		CAP., FXD, CER DI:1UF, +80-20%, 25V	56289	273C5
A70CR06	152-0066-00		SEMICONV DEVICE:SILICON, 400V, 750MA	14433	LG4016
A70CR20	152-0066-00		SEMICONV DEVICE:SILICON, 400V, 750MA	14433	LG4016
A70CR55	152-0659-00		SEMICONV DEVICE:SILICON, 100V, 6A	04713	MR751
A70CR65	152-0659-00		SEMICONV DEVICE:SILICON, 100V, 6A	04713	MR751
A70CR75	152-0659-00		SEMICONV DEVICE:SILICON, 100V, 6A	04713	MR751
A70CR76	152-0659-00		SEMICONV DEVICE:SILICON, 100V, 6A	04713	MR751
A70CR81	152-0066-00		SEMICONV DEVICE:SILICON, 400V, 750MA	14433	LG4016
A70DS10	150-1001-00		LT EMITTING DIO:RED, 660NM, 100MA MAX	50522	MV5024
A70DS70	150-1001-00		LT EMITTING DIO:RED, 660NM, 100MA MAX	50522	MV5024
A70Q10	151-0192-00		TRANSISTOR:SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A70Q13	151-0389-00		TRANSISTOR:SILICON, PNP	80009	151-0389-00
A70Q14	151-0220-00		TRANSISTOR:SILICON, PNP	07263	S036228
A70Q22	151-0232-00		TRANSISTOR:SILICON, NPN, DUAL	80009	151-0232-00
A70Q23	151-0190-00		TRANSISTOR:SILICON, NPN	07263	S032677
A70Q72	151-0220-00		TRANSISTOR:SILICON, PNP	07263	S036228
A70Q73	151-0220-00		TRANSISTOR:SILICON, PNP	07263	S036228
A70Q81	151-0220-00		TRANSISTOR:SILICON, PNP	07263	S036228
A70Q82	151-0192-00		TRANSISTOR:SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A70Q83	151-0207-00		TRANSISTOR:SILICON, NPN	80009	151-0207-00
A70R02	308-0755-00		RES., FXD, WW:0.75 OHM, 5%, 2W	75042	BWH-R7500J
A70R06	315-0471-00		RES., FXD, CMPSN:470 OHM, 5%, 0.25W	01121	CB4715
A70R10	315-0122-00		RES., FXD, CMPSN:1.2K OHM, 5%, 0.25W	01121	CB1225
A70R11	315-0103-00		RES., FXD, CMPSN:10K OHM, 5%, 0.25W	01121	CB1035
A70R12	315-0101-00		RES., FXD, CMPSN:100 OHM, 5%, 0.25W	01121	CB1015
A70R13	315-0680-00		RES., FXD, CMPSN:68 OHM, 5%, 0.25W	01121	CB6805
A70R14	315-0471-00		RES., FXD, CMPSN:470 OHM, 5%, 0.25W	01121	CB4715
A70R15	315-0241-00		RES., FXD, CMPSN:240 OHM, 5%, 0.25W	01121	CB2415
A70R20	321-0779-03		RES., FXD, FILM:7.020K OHM, 0.25%, 0.125W	91637	MFF1816D70200C
A70R21	321-0779-03		RES., FXD, FILM:7.020K OHM, 0.25%, 0.125W	91637	MFF1816D70200C
A70R22	315-0153-00		RES., FXD, CMPSN:15K OHM, 5%, 0.25W	01121	CB1535
A70R23	315-0102-00		RES., FXD, CMPSN:1K OHM, 5%, 0.25W	01121	CB1025
A70R24	315-0152-00		RES., FXD, CMPSN:1.5K OHM, 5%, 0.25W	01121	CB1525
A70R25	315-0152-00		RES., FXD, CMPSN:1.5K OHM, 5%, 0.25W	01121	CB1525
A70R32	315-0472-00		RES., FXD, CMPSN:4.7K OHM, 5%, 0.25W	01121	CB4725
A70R62	315-0362-00		RES., FXD, CMPSN:3.6K OHM, 5%, 0.25W	01121	CB3625
A70R63	315-0363-00		RES., FXD, CMPSN:36K OHM, 5%, 0.25W	01121	CB3635
A70R64	315-0562-00		RES., FXD, CMPSN:5.6K OHM, 5%, 0.25W	01121	CB5625
A70R66	311-1241-00		RES., VAR, NONWIR:100K OHM, 10%, 0.5W	32997	3386X-T07-104
A70R70	321-0200-00		RES., FXD, FILM:1.18K OHM, 1%, 0.125W	91637	MFF1816G11800F
A70R71	321-0669-00		RES., FXD, FILM:6.08K OHM, 0.5%, 0.125W	91637	MFF1816D60800D
A70R72	321-0283-08		RES., FXD, FILM:8.66K OHM, 1%, 0.125W	24546	NC55C8660F
A70R73	315-0105-00		RES., FXD, CMPSN:1M OHM, 5%, 0.25W	01121	CB1055
A70R74	315-0152-00		RES., FXD, CMPSN:1.5K OHM, 5%, 0.25W	01121	CB1525
A70R75	315-0152-00		RES., FXD, CMPSN:1.5K OHM, 5%, 0.25W	01121	CB1525
A70R80	315-0122-00		RES., FXD, CMPSN:1.2K OHM, 5%, 0.25W	01121	CB1225

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A70R82	315-0102-00		RES., FXD, CMPSN: 1K OHM, 5%, 0.25W	01121	CB1025
A70R83	315-0103-00		RES., FXD, CMPSN: 10K OHM, 5%, 0.25W	01121	CB1035
A70R84	315-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.25W	01121	CB1015
A70R85	315-0680-00		RES., FXD, CMPSN: 68 OHM, 5%, 0.25W	01121	CB6805
A70R86	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A70R91	307-0113-00		RES., FXD, CMPSN: 5.1 OHM, 5%, 0.25W	01121	CB51G5
A70R93	301-0102-00		RES., FXD, CMPSN: 1K OHM, 5%, 0.50W	01121	EB1025
A70R94	315-0202-00		RES., FXD, CMPSN: 2K OHM, 5%, 0.25W	01121	CB2025
A70VR62	152-0317-00		SEMICONV DEVICE: ZENER, 0.25W, 6.2V, 5%	80009	152-0317-00
A70VR73	152-0127-00		SEMICONV DEVICE: ZENER, 0.4W, 7.5V, 5%	04713	SZG35009K2
CHASSIS PARTS					
DS18	150-1055-00		LT EMITTING DIO: GREEN, 560NM, 40 MAX	72619	559-0201-001
F10	159-0032-00		FUSE, CARTRIDGE: 3AG, 0.5A, 250V, SLOW-BLOW	71400	MDL 1/2
F10	159-0044-00		FUSE, CARTRIDGE: 3AG, 0.2A, 250V, SLOW-BLOW, (SPARE)	71400	MDL 2/10
Q05	151-0373-00		TRANSISTOR: SILICON, PNP	80009	151-0373-00
Q95	151-0349-04		TRANSISTOR: SILICON, NPN, SEL MJE2801 (SCREENED)	80009	151-0349-04
R74	311-1484-00		RES., VAR, NONWIR: PNL, 2.5K OHM, 1W	01121	11M110
R76	311-1484-00		RES., VAR, NONWIR: PNL, 2.5K OHM, 1W	01121	11M110
R84	311-1365-00		RES., VAR, NONWIR: 50K OHM, 20%, 1W	01121	11M164
R94	311-1368-00		RES., VAR, NONWIR: 5K OHM, 20%, 1W	01121	73A1G040L502M
S19	260-1961-00		SWITCH, ROCKER: DPST, 6 (4)A, 250V	000FJ	1802-1121
T10	120-1145-00		XFMR, PWR, STPDN:	80009	120-1145-00
U10	119-0813-00		SELECTOR, VOLTS: W/LINE FLTR RCPT & FUSE	02777	F65003

Replaceable Electrical Parts—067-0886-05

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1	067-0886-05		TEST MODULATOR:38.9 MHZ(SYSTEM I)	80009	067-0886-05
A1A1	670-6962-00		CKT BOARD ASSY:INTERFACE	80009	670-6962-00
A1A2	-----		CKT BOARD ASSY:R.F. L.O. AMP (REPLACEABLE AS A UNIT WITH A8)		
A1A3	670-6965-00		CKT BOARD ASSY:I.F. AMP	80009	670-6965-00
A1A4	670-6967-02		CKT BOARD ASSY:VISUAL L.O. 38.9 MHZ	80009	670-6967-02
A1A5	670-6966-02		CKT BOARD ASSY:VISUAL MODULATOR 38.9 MHZ	80009	670-6966-02
A1A6	670-6968-00		CKT BOARD ASSY:VIDEO PROCESSOR	80009	670-6968-00
A1A8	670-6970-05		CKT BOARD ASSY:AURAL MODULATOR 38.9 MHZ	80009	670-6970-05
A2-1	670-7027-00		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-00
A2-2	670-7027-01		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-01
A3	-----		CKT BOARD ASSY:FIRST MIXER (REPLACEABLE AS A UNIT WITH A9)		
A4	-----		CKT BOARD ASSY:R.F. AMP (REPLACEABLE AS A UNIT WITH A8)		
A5	670-6972-00		CKT BOARD ASSY:DIRECTIONAL COUPLER	80009	670-6972-00
A7	670-6971-00		CKT BOARD ASSY:VARIABLE ATTENUATOR	80009	670-6971-00
A8	672-0942-00		CKT BOARD ASSY:R.F. L.O. AMP	80009	672-0942-00
A9	672-0943-00		CKT BOARD ASSY:R.F. MIXER	80009	672-0943-00
A10	670-6973-00		CKT BOARD ASSY:EXTENDER	80009	670-6973-00
A70	670-4987-01		CKT BOARD ASSY:POWER SUPPLY	80009	670-4987-01
A1	670-6962-00		CKT BOARD ASSY:INTERFACE	80009	670-6962-00
A1C160	283-0353-00		CAP., FXD, CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C565	283-0353-00		CAP., FXD, CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C760	283-0353-00		CAP., FXD, CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C765	283-0353-00		CAP., FXD, CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C792	290-0745-00		CAP., FXD, ELCTLT:22UF,+50-10%,25V	56289	502D225
A1C863	283-0353-00		CAP., FXD, CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C864	283-0353-00		CAP., FXD, CER DI:0.1UF,10%,50V	95275	VJ1210Y104K-H
A1C894	290-0745-00		CAP., FXD, ELCTLT:22UF,+50-10%,25V	56289	502D225
A1A3	670-6965-00		CKT BOARD ASSY:I.F. AMP	80009	670-6965-00
A1A3C116	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C118	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C121	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C124	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C126	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C133	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C212	281-0097-00		CAP., VAR, CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C218	283-0635-00		CAP., FXD, MICA D:51PF,1%,100V	00853	D151E510F0
A1A3C233	283-0407-00		CAP., FXD, CER DI:27PF,5%,50V	95275	VJ0805A270JH
A1A3C236	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C311	281-0097-00		CAP., VAR, CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C312	283-0634-00		CAP., FXD, MICA D:65PF,1%,100V	00853	D151E650F0
A1A3C331	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C432	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C434	290-0804-00		CAP., FXD, ELCTLT:10UF,+50-10%,25V	55680	25ULA10V-T
A1A3C511	281-0097-00		CAP., VAR, CER DI:9-35PF,200V	72982	538-006-D9-35
A1A3C513	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C531	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z
A1A3C618	283-0178-00		CAP., FXD, CER DI:0.1UF,+80-20%,100V	72982	8131N145651 104Z

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscnt	Name & Description	Mfr Code	Mfr Part Number
A1A3C621	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C622	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C631	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3C636	283-0178-00		CAP., FXD, CER DI: 0.1UF, +80-20%, 100V	72982	8131N145651 104Z
A1A3L117	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3L231	108-0260-00		COIL, RF: 98NH	80009	108-0260-00
A1A3L311	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L412	114-0404-00		COIL, RF: VARIABLE, 140-310UH	80009	114-0404-00
A1A3L528	108-0655-00		COIL, RF: FIXED, 75NH	80009	108-0655-00
A1A3L632	108-0212-00		COIL, RF: FIXED, 495NH	80009	108-0212-00
A1A3Q121	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3Q216	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q332	151-0195-00		TRANSISTOR: SILICON, NPN	80009	151-0195-00
A1A3Q613	151-0650-00		TRANSISTOR: SILICON, NPN	80009	151-0650-00
A1A3Q624	151-0451-00		TRANSISTOR: SILICON, NPN	02735	65128
A1A3R115	315-0161-00		RES., FXD, CMPSN: 160 OHM, 5%, 0.25W	01121	CB1615
A1A3R122	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R124	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R126	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R132	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R133	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R226	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100ROF
A1A3R233	317-0510-00		RES., FXD, CMPSN: 51 OHM, 5%, 0.125W	01121	BB5105
A1A3R331	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A3R333	321-0358-00		RES., FXD, FILM: 52.3K OHM, 1%, 0.125W	91637	MFF1816G52301F
A1A3R334	321-0308-00		RES., FXD, FILM: 15.8K OHM, 1%, 0.125W	91637	MFF1816G15801F
A1A3R431	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A3R522	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R523	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A3R524	315-0561-00		RES., FXD, CMPSN: 560 OHM, 5%, 0.25W	01121	CB5615
A1A3R526	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100ROF
A1A3R527	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R531	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R533	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A3R534	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A3R614	315-0360-00		RES., FXD, CMPSN: 36 OHM, 5%, 0.25W	01121	CB3605
A1A3R616	321-0080-00		RES., FXD, FILM: 66.5 OHM, 1%, 0.125W	91637	MFF1816G66R50F
A1A3R618	315-0241-00		RES., FXD, CMPSN: 240 OHM, 5%, 0.25W	01121	CB2415
A1A3R626	315-0200-00		RES., FXD, CMPSN: 20 OHM, 5%, 0.25W	01121	CB2005
A1A3R633	315-0361-00		RES., FXD, CMPSN: 360 OHM, 5%, 0.25W	01121	CB3615
A1A3T132	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T516	120-1158-00		XFMR, RF: BALUN ON 276-0712-00, TD-357	80009	120-1158-00
A1A3T634	120-1159-00		XFMR, RF: TOROID, 7 T, TRIFILAR	80009	120-1159-00
A1A4	670-6967-02		CKT BOARD ASSY: VISUAL L.O. 38.9 MHZ	80009	670-6967-02
A1A4C211	283-0598-00		CAP., FXD, MICA D: 253PF, 5%, 300V	09023	CD15EC(253)J03
A1A4C215	283-0640-00		CAP., FXD, MICA D: 160PF, 1%, 100V	00853	D151E161F0
A1A4C216	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C217	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C221	283-0028-00		CAP., FXD, CER DI: 0.0022UF, 20%, 50V	56289	19C606
A1A4C223	283-0676-00		CAP., FXD, MICA D: 82PF, 1%, 500V	00853	D105E820F0
A1A4C228	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A4C231	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A4C232	283-0634-00		CAP., FXD, MICA D: 65PF, 1%, 100V	00853	D151E650F0
A1A4C320	283-0032-00		CAP., FXD, CER DI: 470PF, 5%, 500V	72982	0831085Z5E00471J
A1A4C325	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M

Replaceable Electrical Parts—067-0886-05

Component No.	Tektronix Part No.	Serial/Model No. Eff. Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A4L214	114-0405-00		COIL, RF: VARIABLE 130UH-225UH	80009	114-0405-00
A1A4L215	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L221	114-0307-00		COIL, RF: VARIABLE, 220-440NH	80009	114-0307-00
A1A4L222	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A4L225	108-0182-00		COIL, RF: 0.3UH	80009	108-0182-00
A1A4L226	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A4L231	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A4Q216	151-0260-00		TRANSISTOR: SILICON, NPN	80009	151-0260-00
A1A4Q225	151-0333-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS918	04713	SPS1752
A1A4R212	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R213	315-0430-00		RES., FXD, CMPSN: 43 OHM, 5%, 0.25W	01121	CB4305
A1A4R222	315-0271-00		RES., FXD, CMPSN: 270 OHM, 5%, 0.25W	01121	CB2715
A1A4R224	315-0331-00		RES., FXD, CMPSN: 330 OHM, 5%, 0.25W	01121	CB3315
A1A4R225	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A4R233	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R234	315-0222-00		RES., FXD, CMPSN: 2.2K OHM, 5%, 0.25W	01121	CB2225
A1A4R315	315-0131-00		RES., FXD, CMPSN: 130 OHM, 5%, 0.25W	01121	CB1315
A1A4R319	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4R321	315-0100-00		RES., FXD, CMPSN: 10 OHM, 5%, 0.25W	01121	CB1005
A1A4Y238	158-0235-00		XTAL UNIT, QTZ: 38.9MHZ 0.01%, SERIES	33096	HC-25/U
A1A5	670-6966-02		CKT BOARD ASSY: VISUAL MODULATOR	80009	670-6966-02
A1A5C115	283-0158-00		CAP., FXD, CER DI: 1PF, 10%, 50V	72982	8101B057COK0109B
A1A5C116	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200COG569C
A1A5C202	283-0000-00		CAP., FXD, CER DI: 0.001UF, +100-0%, 500V	72982	831-516E102P
A1A5C217	283-0140-00		CAP., FXD, CER DI: 4.7PF, 5%, 50V	72982	8101E003A479C
A1A5C315	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C316	283-0646-00		CAP., FXD, MICA D: 170PF, 1%, 100V	00853	D151E171F0
A1A5C317	283-0639-00		CAP., FXD, MICA D: 56PF, 1%, 100V	00853	D151E560F0
A1A5C515	283-0644-00		CAP., FXD, MICA D: 150PF, 1%, 500V	00853	D155E151F0
A1A5C612	281-0097-00		CAP., VAR, CER DI: 9-35PF, 200V	72982	538-006-D9-35
A1A5C615	283-0728-00		CAP., FXD, MICA D: 120PF, 1%, 500V	00853	D155F121F03
A1A5C700	283-0636-00		CAP., FXD, MICA D: 36PF, 1.4%, 100V	00853	D155F360G0
A1A5C701	283-0260-00		CAP., FXD, CER DI: 5.6PF, 5%, 200V	72982	8111B200COG569C
A1A5CR114	152-0650-00		SEMICONV DEVICE: VVC, 11.5PF NOM -3V, 30 PIV	04713	BB105B
A1A5E110	276-0528-00		SHIELDING BEAD, :0.1UH	02114	56-0590-65C/3B
A1A5E112	276-0528-00		SHIELDING BEAD, :0.1UH	02114	56-0590-65C/3B
A1A5E113	276-0528-00		SHIELDING BEAD, :0.1UH	02114	56-0590-65C/3B
A1A5E114	276-0528-00		SHIELDING BEAD, :0.1UH	02114	56-0590-65C/3B
A1A5L333	108-1060-00		COIL, RF: FIXED, 3 TURN	80009	108-1060-00
A1A5L421	108-1059-00		COIL, RF: FIXED, 2 TURN	80009	108-1059-00
A1A5L514	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L515	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5L521	114-0232-00		COIL, RF: VARIABLE, 130-220NH	80009	114-0232-00
A1A5L616	108-0436-00		COIL, RF: FIXED, 240NH	80009	108-0436-00
A1A5Q110	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q112	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q113	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5Q114	151-0472-02		TRANSISTOR: SILICON, NPN NE41632BD, TO-92	80009	151-0472-02
A1A5R202	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R205	315-0473-00		RES., FXD, CMPSN: 47K OHM, 5%, 0.25W	01121	CB4735
A1A5R206	321-0064-00		RES., FXD, FILM: 45.3 OHM, 1%, 0.125W	91637	MFF1816G45R30F
A1A5R207	321-0233-00		RES., FXD, FILM: 2.61K OHM, 1%, 0.125W	91637	MFF1816G26100F
A1A5R208	321-0096-00		RES., FXD, FILM: 97.6 OHM, 1%, 0.125W	91637	MFF1816G97R60F
A1A5R209	321-0144-00		RES., FXD, FILM: 309 OHM, 1%, 0.125W	91637	MFF1816G309R0F
A1A5R210	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A5R215	315-0300-00		RES., FXD, CMPSN: 30 OHM, 5%, 0.25W	01121	CB3005
A1A5R216	315-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.25W	01121	CB1815
A1A5R217	315-0911-00		RES., FXD, CMPSN: 910 OHM, 5%, 0.25W	01121	CB9115
A1A5R315	315-0152-00		RES., FXD, CMPSN: 1.5K OHM, 5%, 0.25W	01121	CB1525
A1A5R612	315-0471-00		RES., FXD, CMPSN: 470 OHM, 5%, 0.25W	01121	CB4715
A1A5T121	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A5T214	120-0871-00		XFMR, TOROID: 4 TURNS, TRIFILAR	80009	120-0871-00
A1A6	670-6968-00		CKT BOARD ASSY: VIDEO PROCESSOR	80009	670-6968-00
A1A6C220	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C227	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C319	290-0804-00		CAP., FXD, ELCTLT: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C320	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A6C325	281-0798-00		CAP., FXD, CER DI: 51PF, 1%, 100V	04222	MC101A510G
A1A6C330	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A6C341	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C345	281-0786-00		CAP., FXD, CER DI: 150PF, 10%, 100V	72982	8035D2AADX5P151K
A1A6C421	290-0290-00		CAP., FXD, ELCTLT: 10UF, 20%, 25V	56289	30D472
A1A6C422	281-0774-00		CAP., FXD, CER DI: 0.022UF, 20%, 100V	72982	8045A9ABDZ5U223M
A1A6C424	281-0809-00		CAP., FXD, CER DI: 200PF, 5%, 100V	72982	8013T2ADDC1G201J
A1A6C433	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C435	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C513	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A1A6C514	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6C531	290-0804-00		CAP., FXD, ELCTLT: 10UF, +50-10%, 25V	55680	25ULA10V-T
A1A6C541	281-0775-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8005D9AABZ5U104M
A1A6CR533	152-0141-02		SEMICONV DEVICE: SILICON, 30V, 50NA	01295	1N4152R
A1A6L339	108-0226-00		COIL, RF: 100UH	76493	DWG B4257
A1A6Q322	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6Q541	151-0188-00		TRANSISTOR: SILICON, PNP	04713	SPS6868K
A1A6Q543	151-0190-00		TRANSISTOR: SILICON, NPN	07263	S032677
A1A6R137	315-0151-00		RES., FXD, CMPSN: 150 OHM, 5%, 0.25W	01121	CB1515
A1A6R139	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R220	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R225	315-0753-00		RES., FXD, CMPSN: 75K OHM, 5%, 0.25W	01121	CB7535
A1A6R229	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R231	321-0143-00		RES., FXD, FILM: 301 OHM, 1%, 0.125W	91637	MFF1816G301ROF
A1A6R233	321-0143-00		RES., FXD, FILM: 301 OHM, 1%, 0.125W	91637	MFF1816G301ROF
A1A6R325	315-0102-00		RES., FXD, CMPSN: 1K OHM, 5%, 0.25W	01121	CB1025
A1A6R333	321-0085-00		RES., FXD, FILM: 75 OHM, 1%, 0.125W	91637	MFF1816G75R00F
A1A6R335	315-0103-00		RES., FXD, CMPSN: 10K OHM, 5%, 0.25W	01121	CB1035
A1A6R341	315-0105-00		RES., FXD, CMPSN: 1M OHM, 5%, 0.25W	01121	CB1055
A1A6R345	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825
A1A6R413	321-0336-00		RES., FXD, FILM: 30.9K OHM, 1%, 0.125W	91637	MFF1816G30901F
A1A6R414	321-0891-00		RES., FXD, FILM: 800K OHM, 1%, 0.125W	91637	MFF1816G80002F
A1A6R422	315-0470-00		RES., FXD, CMPSN: 47 OHM, 5%, 0.25W	01121	CB4705
A1A6R433	315-0104-00		RES., FXD, CMPSN: 100K OHM, 5%, 0.25W	01121	CB1045
A1A6R437	315-0512-00		RES., FXD, CMPSN: 5.1K OHM, 5%, 0.25W	01121	CB5125
A1A6R521	315-0683-00		RES., FXD, CMPSN: 68K OHM, 5%, 0.25W	01121	CB6835
A1A6R523	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R528	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R531	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A1A6R533	315-0152-00		RES., FXD, CMPSN: 1.5K OHM, 5%, 0.25W	01121	CB1525
A1A6R538	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725
A1A6R541	315-0153-00		RES., FXD, CMPSN: 15K OHM, 5%, 0.25W	01121	CB1535
A1A6R545	315-0472-00		RES., FXD, CMPSN: 4.7K OHM, 5%, 0.25W	01121	CB4725

Replaceable Electrical Parts—067-0886-05

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A6R548	315-0682-00		RES., FXD, CMPSN: 6.8K OHM, 5%, 0.25W	01121	CB6825
A1A6U130	155-0233-00		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	80009	155-0233-00
A1A6U339	156-0356-01		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	80009	156-0356-01
A1A6U346	156-1134-00		MICROCIRCUIT, LI: OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A6U510	155-0144-00		MICROCIRCUIT, LI: DUAL IN-LINE, 16 LEAD	80009	155-0144-00
A1A6VR223	152-0195-00		SEMICONV DEVICE: ZENER, 0.4W, 5.1V, 5%	04713	SZ11755
A1A6VR225	152-0195-00		SEMICONV DEVICE: ZENER, 0.4W, 5.1V, 5%	04713	SZ11755
A1A8	670-6970-05		CKT BOARD ASSY: AURAL MODULATOR 38.9 MHZ	80009	670-6970-05
A1A8C102	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A1A8C103	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A8C104	290-0745-00		CAP., FXD, ELCTLT: 22UF, +50-10%, 25V	56289	502D225
A1A8C105	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C125	283-0594-00		CAP., FXD, MICA D: 0.001UF, 1%, 100V	00853	D151F102F0
A1A8C126	281-0562-00		CAP., FXD, CER DI: 39PF, 10%, 500V	72982	301-000U2J0390K
A1A8C127	281-0526-00		CAP., FXD, CER DI: 1.5PF, +/-0.5PF, 500V	72982	301-000S2K0159D
A1A8C202	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C212	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C213	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C214	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C216	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C222	283-0674-00		CAP., FXD, MICA D: 85PF, 1%, 500V	00853	D155F850F0
A1A8C223	283-0629-00		CAP., FXD, MICA D: 62PF, 1%, 500V	00853	D105E620F0
A1A8C225	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C227	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C301	283-0655-00		CAP., FXD, MICA D: 0.0033UF, 1%, 500V	00853	D195E332F0
A1A8C305	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C306	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C315	283-0204-00		CAP., FXD, CER DI: 0.01UF, 20%, 50V	72982	8121N061Z5U0103M
A1A8C316	283-0599-00		CAP., FXD, MICA D: 98PF, 5%, 500V	00853	D105E980J0
A1A8C317	283-0639-00		CAP., FXD, MICA D: 56PF, 1%, 100V	00853	D151E560F0
A1A8C318	283-0672-00		CAP., FXD, MICA D: 200PF, 1%, 500V	00853	D155F2010F0
A1A8C319	281-0096-00		CAP., VAR, AIR DI: 5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C324	283-0599-00		CAP., FXD, MICA D: 98PF, 5%, 500V	00853	D105E980J0
A1A8C325	283-0639-00		CAP., FXD, MICA D: 56PF, 1%, 100V	00853	D151E560F0
A1A8C326	281-0096-00		CAP., VAR, AIR DI: 5.5-18PF, 350V	72982	538-006-A5.5-18
A1A8C401	285-1098-00		CAP., FXD, PLSTC: 0.22UF, 10%, 80V	56289	192P2249R8
A1A8C402	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C407	290-0782-00		CAP., FXD, ELCTLT: 4.7UF, +75-10%, 35V	56289	503D475G035AS
A1A8C413	283-0111-00		CAP., FXD, CER DI: 0.1UF, 20%, 50V	72982	8121-N088Z5U104M
A1A8C425	283-0672-00		CAP., FXD, MICA D: 200PF, 1%, 500V	00853	D155F2010F0
A1A8CR126	152-0665-00		SEMICONV DEVICE: SILICON, VVC, 30V	04713	SMV1344
A1A8L125	108-0897-00		COIL, RF: FIXED, 220UH	80009	108-0897-00
A1A8L126	114-0220-00		COIL, RF: 1-3UH, CORE 276-0568-00	80009	114-0220-00
A1A8L223	108-0262-00		COIL, RF: FIXED, 510MH	80009	108-0262-00
A1A8L224	108-0182-00		COIL, RF: 0.3UH	80009	108-0182-00
A1A8L226	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A8L228	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A8L315	108-0215-00		COIL, RF: 1.1UH	80009	108-0215-00
A1A8L316	120-0382-00		XFMR, TOROID: 14 TURNS, SINGLE	80009	120-0382-00
A1A8L318	108-0072-00		COIL, RF: 0.75UH	80009	108-0072-00
A1A8L326	108-0072-00		COIL, RF: 0.75UH	80009	108-0072-00
A1A8Q202	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q204	151-0188-00		TRANSISTOR: SILICON, PNP	04713	SPS6868K
A1A8Q206	151-0192-00		TRANSISTOR: SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A1A8Q207	151-1005-00		TRANSISTOR: SILICON, JFE, N-CHANNEL	80009	151-1005-00

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A1A8Q213	151-0192-00		TRANSISTOR:SILICON,NPN,SEL FROM MPS6521	04713	SPS8801
A1A8Q214	151-0472-00		TRANSISTOR:SILICON,NPN	80009	151-0472-00
A1A8Q302	151-0192-00		TRANSISTOR:SILICON,NPN,SEL FROM MPS6521	04713	SPS8801
A1A8Q325	151-0472-00		TRANSISTOR:SILICON,NPN	80009	151-0472-00
A1A8R101	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R102	311-1918-00		RES.,VAR,NONWIR:2K OHM,10%,0.50W	73138	72-199-0
A1A8R103	311-1319-00		RES.,VAR,NONWIR:10K OHM,10%,0.75W	73138	89-126-1
A1A8R106	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R107	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R108	315-0103-00		RES.,FXD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
A1A8R125	311-1138-00		RES.,VAR,NONWIR:1K OHM,20%,0.50W	73138	72XW-44-0-102M
A1A8R128	311-1918-00		RES.,VAR,NONWIR:2K OHM,10%,0.50W	73138	72-199-0
A1A8R200	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R201	321-0239-00		RES.,FXD,FILM:3.01K OHM,1%,0.125W	91637	MFF1816G30100F
A1A8R202	321-0251-00		RES.,FXD,FILM:4.02K OHM,1%,0.125W	91637	MFF1816G40200F
A1A8R203	315-0104-00		RES.,FXD,CMPSN:100K OHM,5%,0.25W	01121	CB1045
A1A8R204	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R208	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R212	321-0184-00		RES.,FXD,FILM:806 OHM,1%,0.125W	91637	MFF1816G806ROF
A1A8R213	321-0273-00		RES.,FXD,FILM:6.81K OHM,1%,0.125W	91637	MFF1816G68100F
A1A8R214	315-0510-00		RES.,FXD,CMPSN:51 OHM,5%,0.25W	01121	CB5105
A1A8R215	315-0510-00		RES.,FXD,CMPSN:51 OHM,5%,0.25W	01121	CB5105
A1A8R216	321-0273-00		RES.,FXD,FILM:6.81K OHM,1%,0.125W	91637	MFF1816G68100F
A1A8R217	321-0273-00		RES.,FXD,FILM:6.81K OHM,1%,0.125W	91637	MFF1816G68100F
A1A8R221	321-0184-00		RES.,FXD,FILM:806 OHM,1%,0.125W	91637	MFF1816G806ROF
A1A8R225	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R226	321-0193-00		RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A1A8R227	321-0193-00		RES.,FXD,FILM:1K OHM,1%,0.125W	91637	MFF1816G10000F
A1A8R300	321-0306-00		RES.,FXD,FILM:15K OHM,1%,0.125W	91637	MFF1816G15001F
A1A8R301	321-0289-00		RES.,FXD,FILM:10K OHM,1%,0.125W	91637	MFF1816G10001F
A1A8R303	315-0106-00		RES.,FXD,CMPSN:10M OHM,5%,0.25W	01121	CB1065
A1A8R304	315-0473-00		RES.,FXD,CMPSN:47K OHM,5%,0.25W	01121	CB4735
A1A8R305	315-0243-00		RES.,FXD,CMPSN:24K OHM,5%,0.25W	01121	CB2435
A1A8R306	321-0258-00		RES.,FXD,FILM:4.75K OHM,1%,0.125W	91637	MFF1816G47500F
A1A8R309	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R312	311-1917-00		RES.,VAR,NONWIR:TRMR,5K OHM,10%,0.5W	73138	72-198-0
A1A8R319	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R327	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R401	315-0224-00		RES.,FXD,CMPSN:220K OHM,5%,0.25W	01121	CB2245
A1A8R402	315-0302-00		RES.,FXD,CMPSN:3K OHM,5%,0.25W	01121	CB3025
A1A8R405	315-0621-00		RES.,FXD,CMPSN:620 OHM,5%,0.25W	01121	CB6215
A1A8R415	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A1A8R419	315-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.25W	01121	CB1015
A1A8R425	315-0680-00		RES.,FXD,CMPSN:68 OHM,5%,0.25W	01121	CB6805
A1A8U400	156-1134-00		MICROCIRCUIT,LI:OPERATIONAL AMPLIFIER	02735	CA3140EX
A1A8Y129	158-0230-00		XTAL UNIT,QTZ:32.9MHZ 0.01,SERIES	33096	HC-25/U
A2-1	670-7027-00		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-00
A2-1S110	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S115	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S120	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-1S125	260-1576-01		SWITCH,PUSH:5 STA,2 POLE,CORR/UNCORRECT	80009	260-1576-01
	-----		(FURN AS A UNIT WITH A2-1S129)		
A2-1S129	260-1576-01		SWITCH,PUSH:5 STA,2 POLE,CORR/UNCORRECT	80009	260-1576-01
	-----		(FURN AS A UNIT WITH A2-1S125)		

Replaceable Electrical Parts—067-0886-05

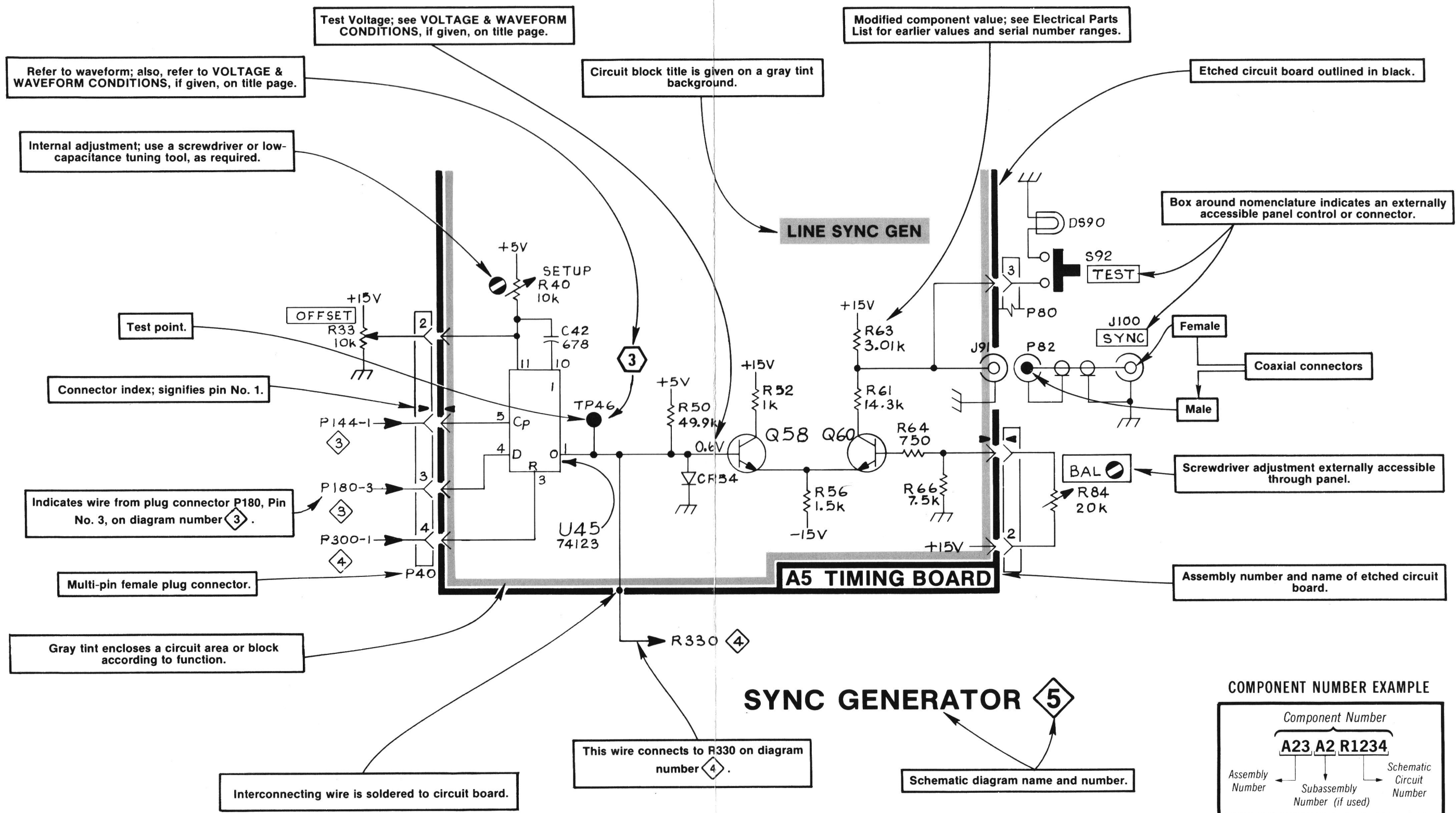
Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A2-2	670-7027-01		CKT BOARD ASSY:SWITCH BOARD	80009	670-7027-01
A2-2S110	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S115	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S120	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S125	260-1771-00		SWITCH,PUSH:1 BUTTON,DPDT	80009	260-1771-00
A2-2S129	260-1665-00		SWITCH,PUSH:1 STA,2 POLE,MOMENTARY	71590	2KAA010000-673
A3	-----		CKT BOARD ASSY:FIRST MIXER (REPLACEABLE AS A UNIT WITH A9)		
A3C15	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A3C17	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C22	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A3C23	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A3C24	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A3C25	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C26	283-0254-00		CAP.,FXD,CER DI:7PF,+/-7.5%,100V	95275	VJ0805-A-709DH
A3C28	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C31	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A3C47	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C52	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A3C53	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A3C86	283-0403-00		CAP.,FXD,CER DI:5.75PF,+/-0.25PF,100V (NOMINAL VALUE, SELETED)	72982	A01AL4A4LC0G0259
A3CR63	152-0715-00		SEMICONV DEVICE:SCHOTTKY,SI,RING QUAD	80009	152-0715-00
A3L46	108-0983-00		COIL,RF:FIXED,230NH,30% TOROIDAL	80009	108-0983-00
A3Q27	151-0658-00		TRANSISTOR:SILICON,NPN	80009	151-0658-00
A3Q34	151-0216-00		TRANSISTOR:SILICON,PNP	04713	SPS8803
A3R22	317-0202-00		RES.,FXD,CMPSN:2K OHM,5%,0.125W	01121	BB2025
A3R24	317-0332-00		RES.,FXD,CMPSN:3.3K OHM,5%,0.125W	01121	BB3325
A3R25	307-0570-00		RES.,FXD,FILM:18 OHM,2%,0.12KW	52262	MCRA180FZ
A3R26	307-0279-00		RES.,FXD,FILM:10 OHM,10%,100 MW	27851	3C301K
A3R27	307-0569-00		RES.,FXD,FILM:249 OHM,1%,0.125W	52262	MCRA249ROFYZ
A3R31	317-0122-00		RES.,FXD,CMPSN:1.2K OHM,5%,0.125W	01121	BB1225
A3R41	315-0100-00		RES.,FXD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
A3R42	301-0101-00		RES.,FXD,CMPSN:100 OHM,5%,0.50W	01121	EB1015
A3R54	307-0276-00		RES.,FXD,FILM:300 OHM,10%,100MW	03888	OBD
A3R55	307-0279-00		RES.,FXD,FILM:10 OHM,10%,100 MW	03888	OBD
A3R86	317-0240-00		RES.,FXD,CMPSN:24 OHM,5%,0.125W	01121	BB2405
A3R87	317-0150-00		RES.,FXD,CMPSN:15 OHM,5%,0.125W	01121	BB1505
A3T63	120-1153-00		XFMR,RF:BALUN	80009	120-1153-00
A3T75	120-1153-00		XFMR,RF:BALUN	80009	120-1153-00
A4	-----		CKT BOARD ASSY:R.F. AMP (REPLACEABLE AS A UNIT WITH A8)		
A4C21	283-0204-00		CAP.,FXD,CER DI:0.01UF,20%,50V	72982	8121N061Z5U0103M
A4C23	283-0321-00		CAP.,FXD,CER DI:1.8PF,0.25PF,50V	95275	VJ0805A1R8C-H
A4C26	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C33	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A4C34	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C42	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C43	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C46	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z
A4C53	283-0177-00		CAP.,FXD,CER DI:1UF,+80-20%,25V	56289	273C5
A4C54	283-0324-00		CAP.,FXD,CER DI:0.01UF,+80-20%,50V	72982	A01AA9AZLW5R103Z

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscnt	Name & Description	Mfr Code	Mfr Part Number
A4C55	283-0321-00		CAP., FXD, CER DI: 1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A4C57	283-0324-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C58	283-0321-00		CAP., FXD, CER DI: 1.8PF, 0.25PF, 50V	95275	VJ0805A1R8C-H
A4C62	283-0324-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C64	283-0324-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4C66	283-0324-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 50V	72982	A01AA9AZLW5R103Z
A4L42	108-0896-00		COIL, RF: FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00
A4L55	108-0896-00		COIL, RF: FIXED, 30MH, TOROIDAL INDUCTOR	80009	108-0896-00
A4Q33	151-0216-00		TRANSISTOR: SILICON, PNP	04713	SPS8803
A4Q36	151-0630-00		TRANSISTOR: SILICON, NPN	80009	151-0630-00
A4Q52	151-0216-00		TRANSISTOR: SILICON, PNP	04713	SPS8803
A4Q56	151-0630-00		TRANSISTOR: SILICON, NPN	80009	151-0630-00
A4R21	315-0242-00		RES., FXD, CMPSN: 2.4K OHM, 5%, 0.25W	01121	CB2425
A4R22	315-0302-00		RES., FXD, CMPSN: 3K OHM, 5%, 0.25W	01121	CB3025
A4R32	315-0361-00		RES., FXD, CMPSN: 360 OHM, 5%, 0.25W	01121	CB3615
A4R36	317-0332-00		RES., FXD, CMPSN: 3.3K OHM, 5%, 0.125W	01121	BB3325
A4R37	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R46	307-1103-00		RES., FXD, FILM: 225 OHM, 1%, 0.125W	52262	MCRA2250FYZ
A4R47	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R51	301-0181-00		RES., FXD, CMPSN: 180 OHM, 5%, 0.50W	01121	EB1815
A4R54	317-0332-00		RES., FXD, CMPSN: 3.3K OHM, 5%, 0.125W	01121	BB3325
A4R55	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R56	307-0336-00		RES., FXD, FILM: 50 OHM, 1%, 0.105W	52262	MCRA 500 FYZ
A4R58	307-0278-00		RES., FXD, FILM: 20 OHM, 5%, 100MW	52262	MCRA200JZ
A4R65	307-0571-00		RES., FXD, FILM: 57 OHM, 1%, 0.125W	52262	MCRA570FZ
A5	670-6972-00		CKT BOARD ASSY: DIRECTIONAL COUPLER	80009	670-6972-00
A5L221	120-1344-00		XFMR, RF: TOROID, 2 WINDS	80009	120-1344-00
A5R111	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R112	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R121	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R122	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R211	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A5R212	317-0101-00		RES., FXD, CMPSN: 100 OHM, 5%, 0.125W	01121	BB1015
A7	670-6971-00		CKT BOARD ASSY: VARIABLE ATTENUATOR	80009	670-6971-00
A7R100	321-0097-00		RES., FXD, FILM: 100 OHM, 1%, 0.125W	91637	MFF1816G100ROF
A7R110	321-0116-00		RES., FXD, FILM: 158 OHM, 1%, 0.125W	91637	MFF1816G158ROF
A7R225	311-0169-00		RES., VAR, NONWIR: 100 OHM, 20%, 0.50W	01121	W-7564B
A7R335	321-0819-07		RES., FXD, FILM: 84 OHM, 0.1%, 0.125W	91637	MFF1816C84R00B
A70	670-4987-01		CKT BOARD ASSY: POWER SUPPLY	80009	670-4987-01
A70C01	290-0770-00		CAP., FXD, ELCTLT: 100UF, +50-10%, 25V	56289	502D230
A70C04	283-0177-00		CAP., FXD, CER DI: 1UF, +80-20%, 25V	56289	273C5
A70C12	283-0003-00		CAP., FXD, CER DI: 0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z
A70C13	283-0060-00		CAP., FXD, CER DI: 100PF, 5%, 200V	72982	855-535U2J101J
A70C14	283-0067-00		CAP., FXD, CER DI: 0.001UF, 10%, 200V	72982	835-515B102K
A70C21	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C57	290-0520-00		CAP., FXD, ELCTLT: 4500UF, +100-0%, 40V	56289	68D10474
A70C62	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C71	290-0517-00		CAP., FXD, ELCTLT: 6.8UF, 20%, 35V	56289	196D685X0035KA1
A70C84	283-0067-00		CAP., FXD, CER DI: 0.001UF, 10%, 200V	72982	835-515B102K
A70C85	283-0060-00		CAP., FXD, CER DI: 100PF, 5%, 200V	72982	855-535U2J101J

Replaceable Electrical Parts—067-0886-05

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A70C87	290-0520-00		CAP., FXD, ELCTLT:4500UF, +100-0%, 40V	56289	68D10474
A70C91	290-0770-00		CAP., FXD, ELCTLT:100UF, +50-10%, 25V	56289	502D230
A70C92	283-0003-00		CAP., FXD, CER DI:0.01UF, +80-20%, 150V	72982	855-558Z5U-103Z
A70C93	283-0177-00		CAP., FXD, CER DI:1UF, +80-20%, 25V	56289	273C5
A70CR06	152-0066-00		SEMICONV DEVICE:SILICON, 400V, 750MA	14433	LG4016
A70CR20	152-0066-00		SEMICONV DEVICE:SILICON, 400V, 750MA	14433	LG4016
A70CR55	152-0659-00		SEMICONV DEVICE:SILICON, 100V, 6A	04713	MR751
A70CR65	152-0659-00		SEMICONV DEVICE:SILICON, 100V, 6A	04713	MR751
A70CR75	152-0659-00		SEMICONV DEVICE:SILICON, 100V, 6A	04713	MR751
A70CR76	152-0659-00		SEMICONV DEVICE:SILICON, 100V, 6A	04713	MR751
A70CR81	152-0066-00		SEMICONV DEVICE:SILICON, 400V, 750MA	14433	LG4016
A70DS10	150-1001-00		LT EMITTING DIO:RED, 660NM, 100MA MAX	50522	MV5024
A70DS70	150-1001-00		LT EMITTING DIO:RED, 660NM, 100MA MAX	50522	MV5024
A70Q10	151-0192-00		TRANSISTOR:SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A70Q13	151-0389-00		TRANSISTOR:SILICON, PNP	80009	151-0389-00
A70Q14	151-0220-00		TRANSISTOR:SILICON, PNP	07263	S036228
A70Q22	151-0232-00		TRANSISTOR:SILICON, NPN, DUAL	80009	151-0232-00
A70Q23	151-0190-00		TRANSISTOR:SILICON, NPN	07263	S032677
A70Q72	151-0220-00		TRANSISTOR:SILICON, PNP	07263	S036228
A70Q73	151-0220-00		TRANSISTOR:SILICON, PNP	07263	S036228
A70Q81	151-0220-00		TRANSISTOR:SILICON, PNP	07263	S036228
A70Q82	151-0192-00		TRANSISTOR:SILICON, NPN, SEL FROM MPS6521	04713	SPS8801
A70Q83	151-0207-00		TRANSISTOR:SILICON, NPN	80009	151-0207-00
A70R02	308-0755-00		RES., FXD, WW:0.75 OHM, 5%, 2W	75042	BWH-R7500J
A70R06	315-0471-00		RES., FXD, CMPSN:470 OHM, 5%, 0.25W	01121	CB4715
A70R10	315-0122-00		RES., FXD, CMPSN:1.2K OHM, 5%, 0.25W	01121	CB1225
A70R11	315-0103-00		RES., FXD, CMPSN:10K OHM, 5%, 0.25W	01121	CB1035
A70R12	315-0101-00		RES., FXD, CMPSN:100 OHM, 5%, 0.25W	01121	CB1015
A70R13	315-0680-00		RES., FXD, CMPSN:68 OHM, 5%, 0.25W	01121	CB6805
A70R14	315-0471-00		RES., FXD, CMPSN:470 OHM, 5%, 0.25W	01121	CB4715
A70R15	315-0241-00		RES., FXD, CMPSN:240 OHM, 5%, 0.25W	01121	CB2415
A70R20	321-0779-03		RES., FXD, FILM:7.020K OHM, 0.25%, 0.125W	91637	MFF1816D70200C
A70R21	321-0779-03		RES., FXD, FILM:7.020K OHM, 0.25%, 0.125W	91637	MFF1816D70200C
A70R22	315-0153-00		RES., FXD, CMPSN:15K OHM, 5%, 0.25W	01121	CB1535
A70R23	315-0102-00		RES., FXD, CMPSN:1K OHM, 5%, 0.25W	01121	CB1025
A70R24	315-0152-00		RES., FXD, CMPSN:1.5K OHM, 5%, 0.25W	01121	CB1525
A70R25	315-0152-00		RES., FXD, CMPSN:1.5K OHM, 5%, 0.25W	01121	CB1525
A70R32	315-0472-00		RES., FXD, CMPSN:4.7K OHM, 5%, 0.25W	01121	CB4725
A70R62	315-0362-00		RES., FXD, CMPSN:3.6K OHM, 5%, 0.25W	01121	CB3625
A70R63	315-0363-00		RES., FXD, CMPSN:36K OHM, 5%, 0.25W	01121	CB3635
A70R64	315-0562-00		RES., FXD, CMPSN:5.6K OHM, 5%, 0.25W	01121	CB5625
A70R66	311-1241-00		RES., VAR, NONWIR:100K OHM, 10%, 0.5W	32997	3386X-T07-104
A70R70	321-0200-00		RES., FXD, FILM:1.18K OHM, 1%, 0.125W	91637	MFF1816G11800F
A70R71	321-0669-00		RES., FXD, FILM:6.08K OHM, 0.5%, 0.125W	91637	MFF1816D60800D
A70R72	321-0283-08		RES., FXD, FILM:8.66K OHM, 1%, 0.125W	24546	NC55C8660F
A70R73	315-0105-00		RES., FXD, CMPSN:1M OHM, 5%, 0.25W	01121	CB1055
A70R74	315-0152-00		RES., FXD, CMPSN:1.5K OHM, 5%, 0.25W	01121	CB1525
A70R75	315-0152-00		RES., FXD, CMPSN:1.5K OHM, 5%, 0.25W	01121	CB1525
A70R80	315-0122-00		RES., FXD, CMPSN:1.2K OHM, 5%, 0.25W	01121	CB1225
A70R82	315-0102-00		RES., FXD, CMPSN:1K OHM, 5%, 0.25W	01121	CB1025
A70R83	315-0103-00		RES., FXD, CMPSN:10K OHM, 5%, 0.25W	01121	CB1035
A70R84	315-0101-00		RES., FXD, CMPSN:100 OHM, 5%, 0.25W	01121	CB1015
A70R85	315-0680-00		RES., FXD, CMPSN:68 OHM, 5%, 0.25W	01121	CB6805
A70R86	315-0241-00		RES., FXD, CMPSN:240 OHM, 5%, 0.25W	01121	CB2415
A70R91	307-0113-00		RES., FXD, CMPSN:5.1 OHM, 5%, 0.25W	01121	CB51G5
A70R93	301-0102-00		RES., FXD, CMPSN:1K OHM, 5%, 0.50W	01121	EB1025
A70R94	315-0202-00		RES., FXD, CMPSN:2K OHM, 5%, 0.25W	01121	CB2025

Component No.	Tektronix Part No.	Serial/Model No. Eff Dscont	Name & Description	Mfr Code	Mfr Part Number
A70VR62	152-0317-00		SEMICON D DEVICE:ZENER,0.25W,6.2V,5%	80009	152-0317-00
A70VR73	152-0127-00		SEMICON D DEVICE:ZENER,0.4W,7.5V,5%	04713	SZG35009K2
CHASSIS PARTS					
DS18	150-1055-00		LT EMITTING DIO:GREEN,560NM,40 MAX	72619	559-0201-001
F10	159-0032-00		FUSE,CARTRIDGE:3AG,0.5A,250V,SLOW-BLOW	71400	MDL 1/2
F10	159-0044-00		FUSE,CARTRIDGE:3AG,0.2A,250V,SLOW-BLOW (SPARE)	71400	MDL 2/10
Q05	151-0373-00		TRANSISTOR:SILICON,PNP	80009	151-0373-00
Q95	151-0349-04		TRANSISTOR:SILICON,NPN,SEL MJE2801 (SCREENED)	80009	151-0349-04
R74	311-1484-00		RES.,VAR, NONWIR:PNL,2.5K OHM,1W	01121	11M110
R76	311-1484-00		RES.,VAR, NONWIR:PNL,2.5K OHM,1W	01121	11M110
R84	311-1365-00		RES.,VAR, NONWIR:50K OHM,20%,1W	01121	11M164
R94	311-1368-00		RES.,VAR, NONWIR:5K OHM,20%,1W	01121	73A1G040L502M
S19	260-1961-00		SWITCH,ROCKER:DPST,6 (4)A,50V	000FJ	1802-1121
T10	120-1145-00		XFMR,PWR,STPDN:	80009	120-1145-00
U10	119-0813-00		SELECTOR,VOLTS:W/LINE FLTR RCPT & FUSE	02777	F65003



Test Voltage; see VOLTAGE & WAVEFORM CONDITIONS, if given, on title page.

Refer to waveform; also, refer to VOLTAGE & WAVEFORM CONDITIONS, if given, on title page.

Internal adjustment; use a screwdriver or low-capacitance tuning tool, as required.

Circuit block title is given on a gray tint background.

Modified component value; see Electrical Parts List for earlier values and serial number ranges.

Etched circuit board outlined in black.

Test point.

Connector index; signifies pin No. 1.

Box around nomenclature indicates an externally accessible panel control or connector.

Indicates wire from plug connector P180, Pin No. 3, on diagram number 3.

Multi-pin female plug connector.

Female
Male
Coaxial connectors

Screwdriver adjustment externally accessible through panel.

Assembly number and name of etched circuit board.

Gray tint encloses a circuit area or block according to function.

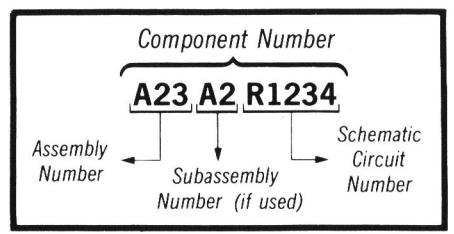
Interconnecting wire is soldered to circuit board.

This wire connects to R330 on diagram number 4.

Schematic diagram name and number.

SYNC GENERATOR 5

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

SCHEMATIC EXAMPLE

DIAGRAMS & CIRCUIT BOARD ILLUSTRATIONS

This section of the manual contains block and schematic diagrams with waveforms, and etched circuit board illustrations.

Symbols

Symbols used on the diagrams are based on ANSI Y32.2-1970 and IEEE No. 315 March 1971. Logic symbology is based on ANSI Y32.14-1973 (IEEE Std. 91-1973). Logic symbols depict the logic function performed and may differ from the manufacturer's data.

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).

Semiconductor Types

Refer to the Electrical Parts List.

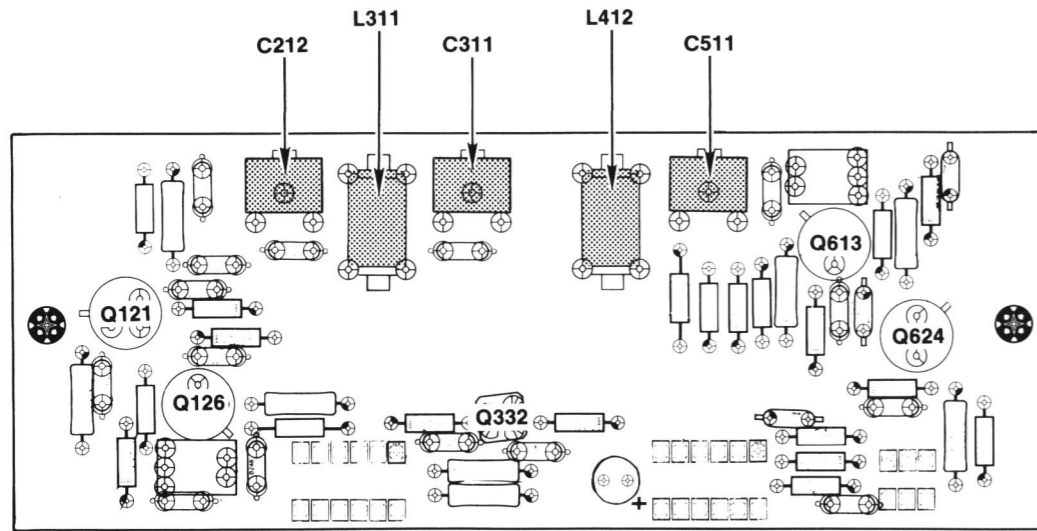
Reference Designators

The following letters are used as reference designators to identify components or assemblies on Tektronix, Inc. schematic diagrams.

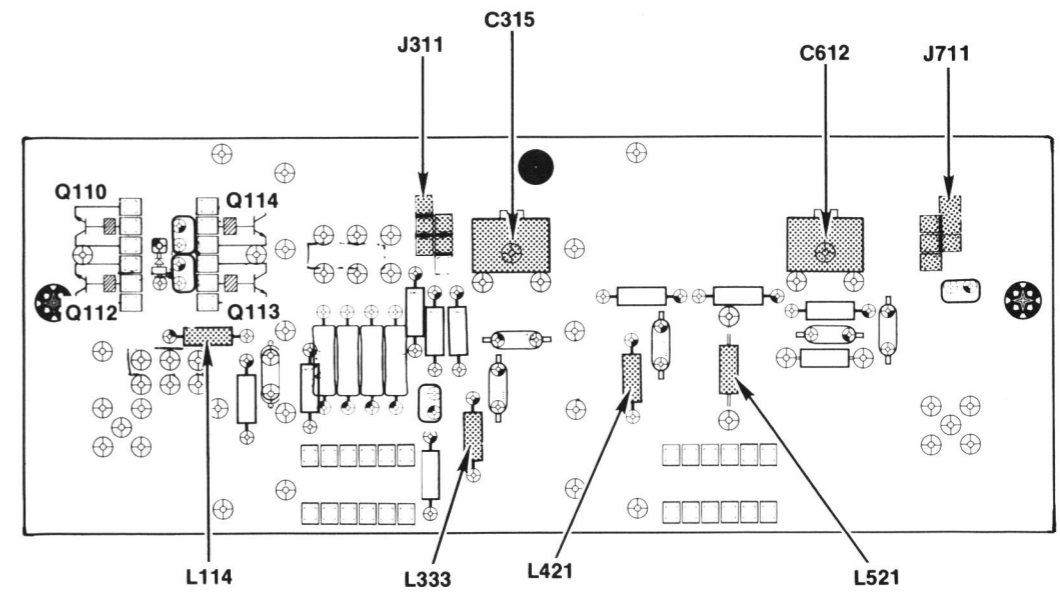
A	Assembly, separable or repairable (circuit board, etc.)	LR	Inductor/resistor combination
AT	Attenuator, fixed or variable	M	Meter
B	Motor	P	Connector, movable portion
BT	Battery	Q	Transistor, silicon-controlled rectifier, or programmable unijunction transistor
C	Capacitor, fixed or variable	R	Resistor, fixed or variable
CR	Diode, signal or rectifier	RT	Thermistors
DH	Decoupling Hybrid	S	Switch
DL	Delay Line	T	Transformer
DS	Indicating device (lamp)	TC	Thermocouple
E	Spark Gap	TP	Test Point
F	Fuse	U	Assembly, inseparable or non-repairable (integrated circuit, etc.)
FL	Filter	V	Electron tube
H	Heat dissipating device (heat sink, heat radiator, etc.)	VR	Voltage regulator (zener diode, etc.)
HR	Heater	Y	Crystal
J	Connector, stationary portion		
K	Relay		
L	Inductor, fixed or variable		

Partial Schematic Diagram With Explanations

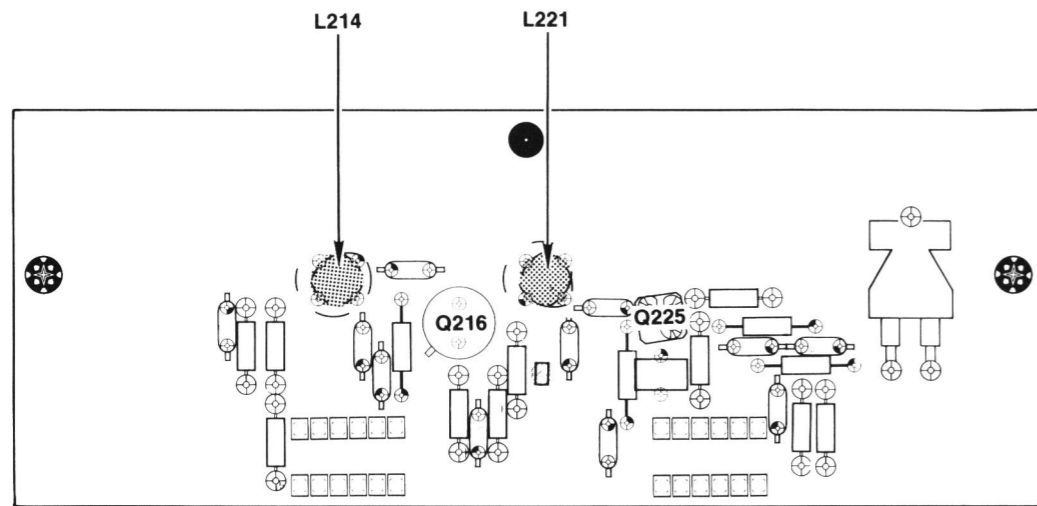
The partial diagram at the left is an example of the various symbols and other information provided on Tektronix, Inc. diagrams.



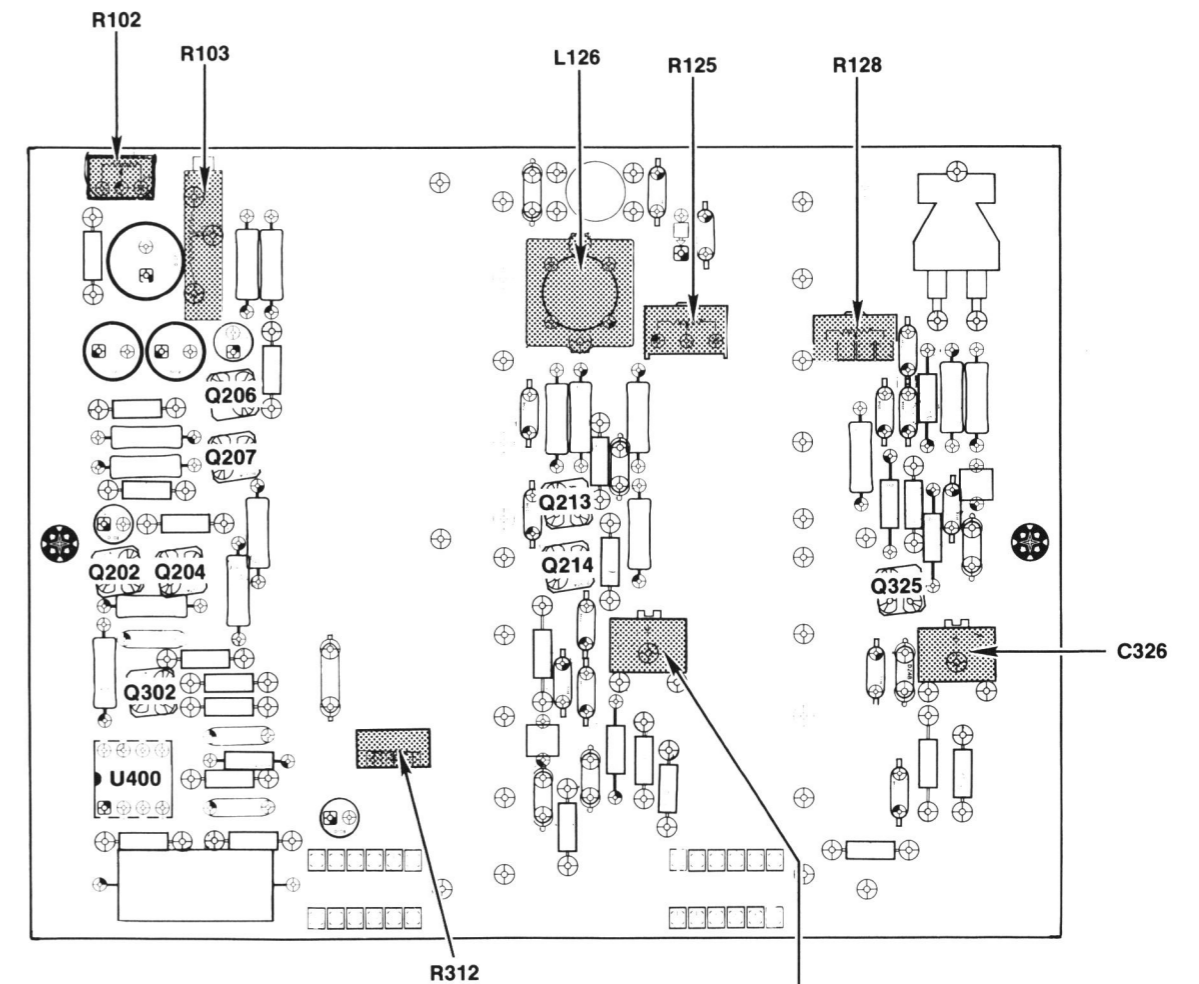
A1A3 IF AMPLIFIER BOARD



A1A5 VISUAL MODULATOR BOARD



A1A4 VISUAL L.O. BOARD

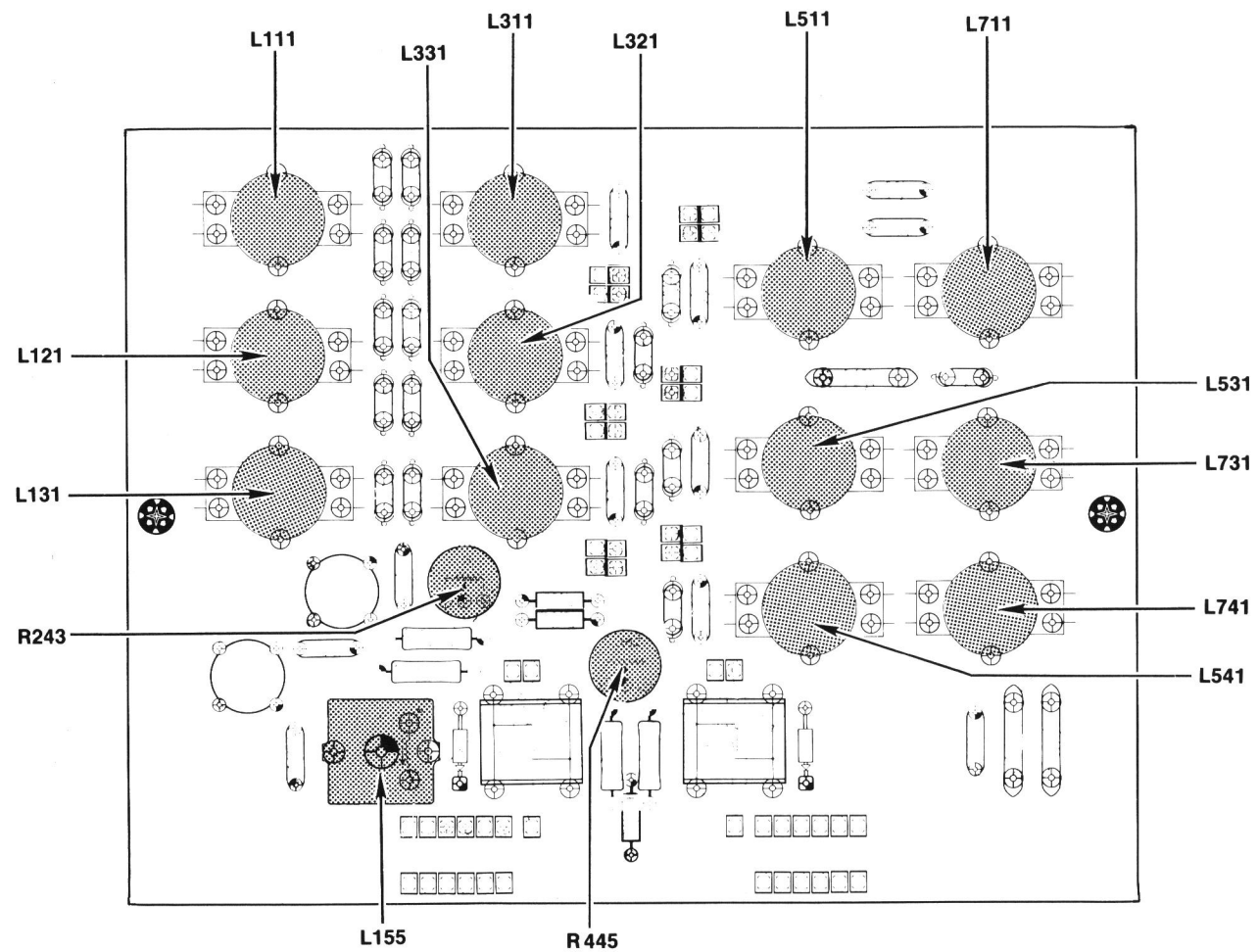


A1A8 AURAL MODULATOR BOARD

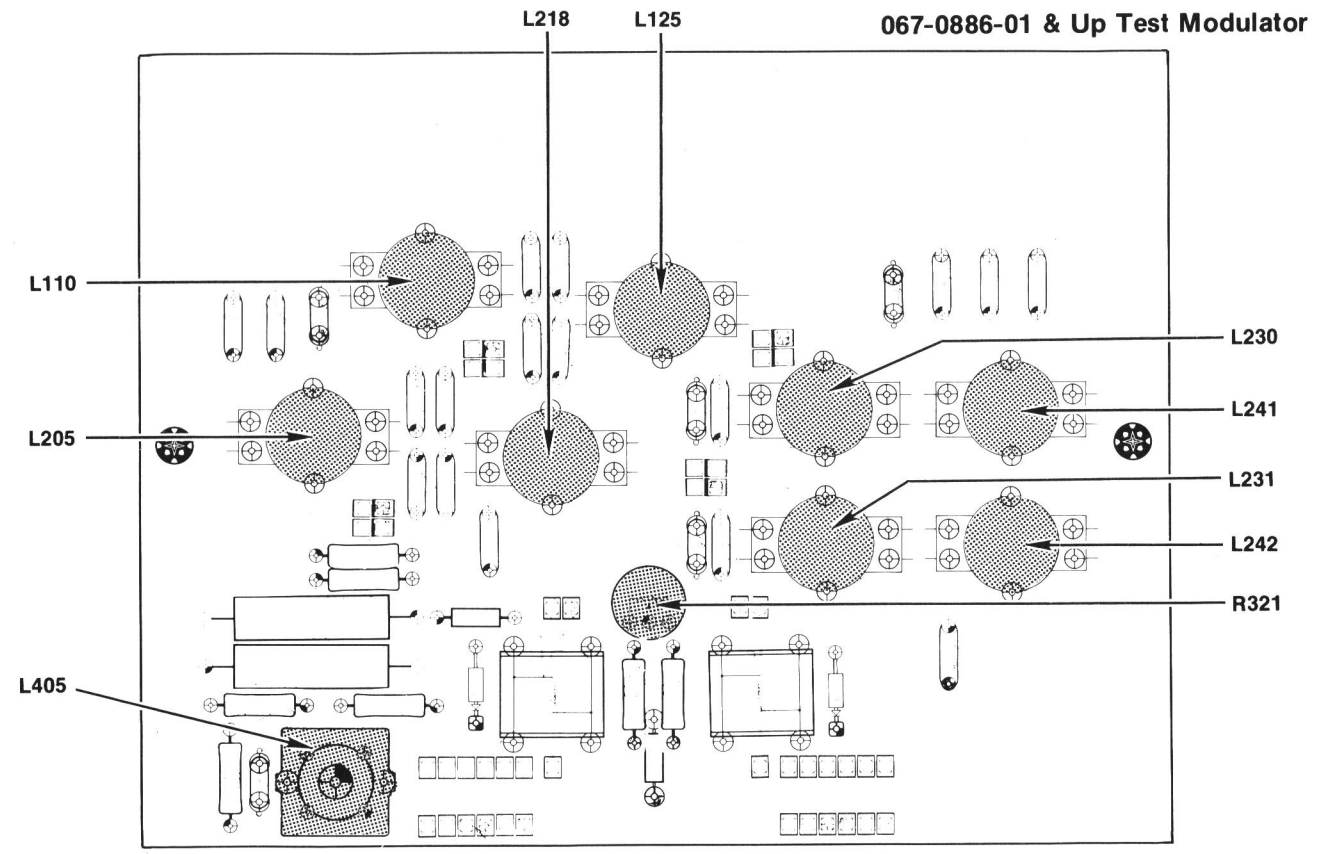
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FIG. 8-1. ADJUSTMENT AND JUMPER LOCATIONS.

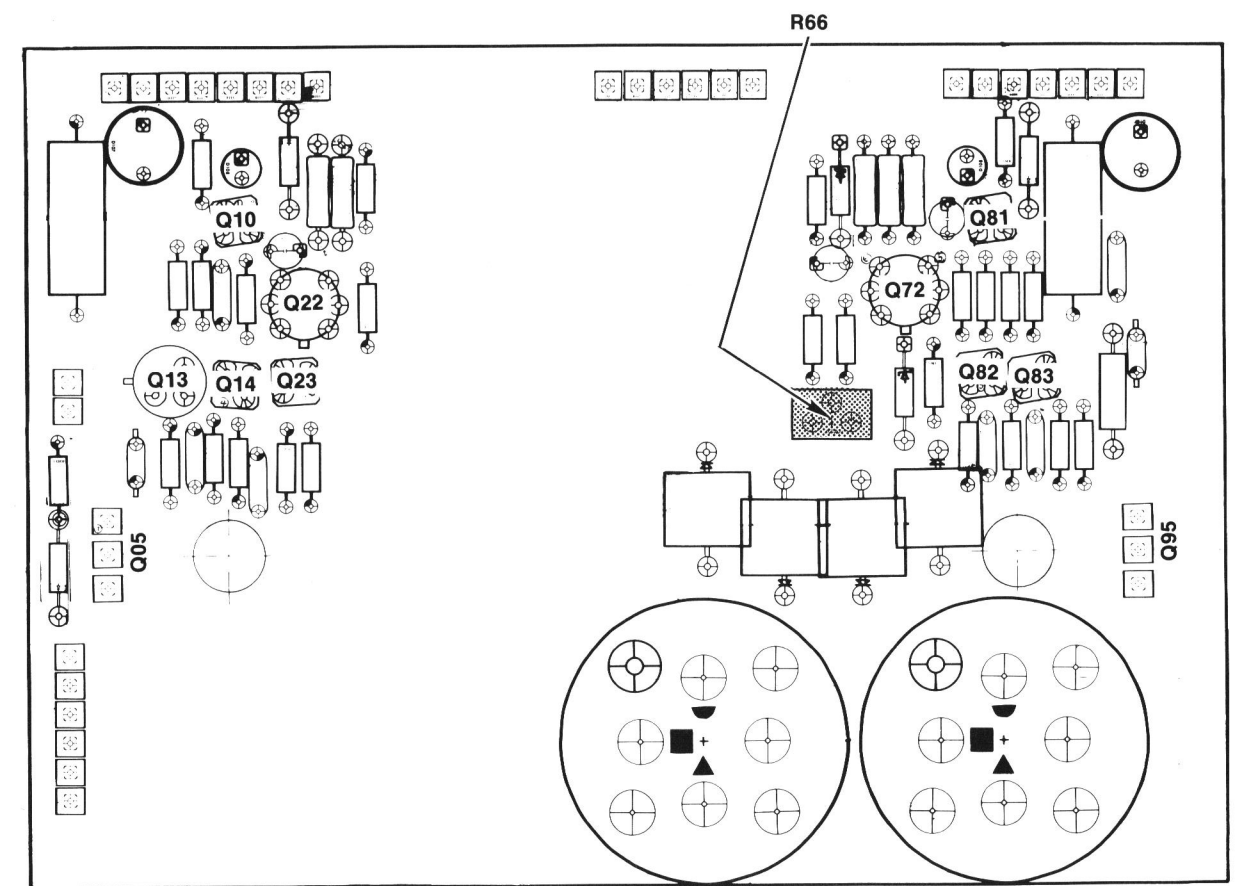
ADJUSTMENT LOCATIONS
A1A3, A1A4, A1A5, A1A8



A1A7 VIDEO PRECORRECTOR BOARD (SYSTEMS B & G)



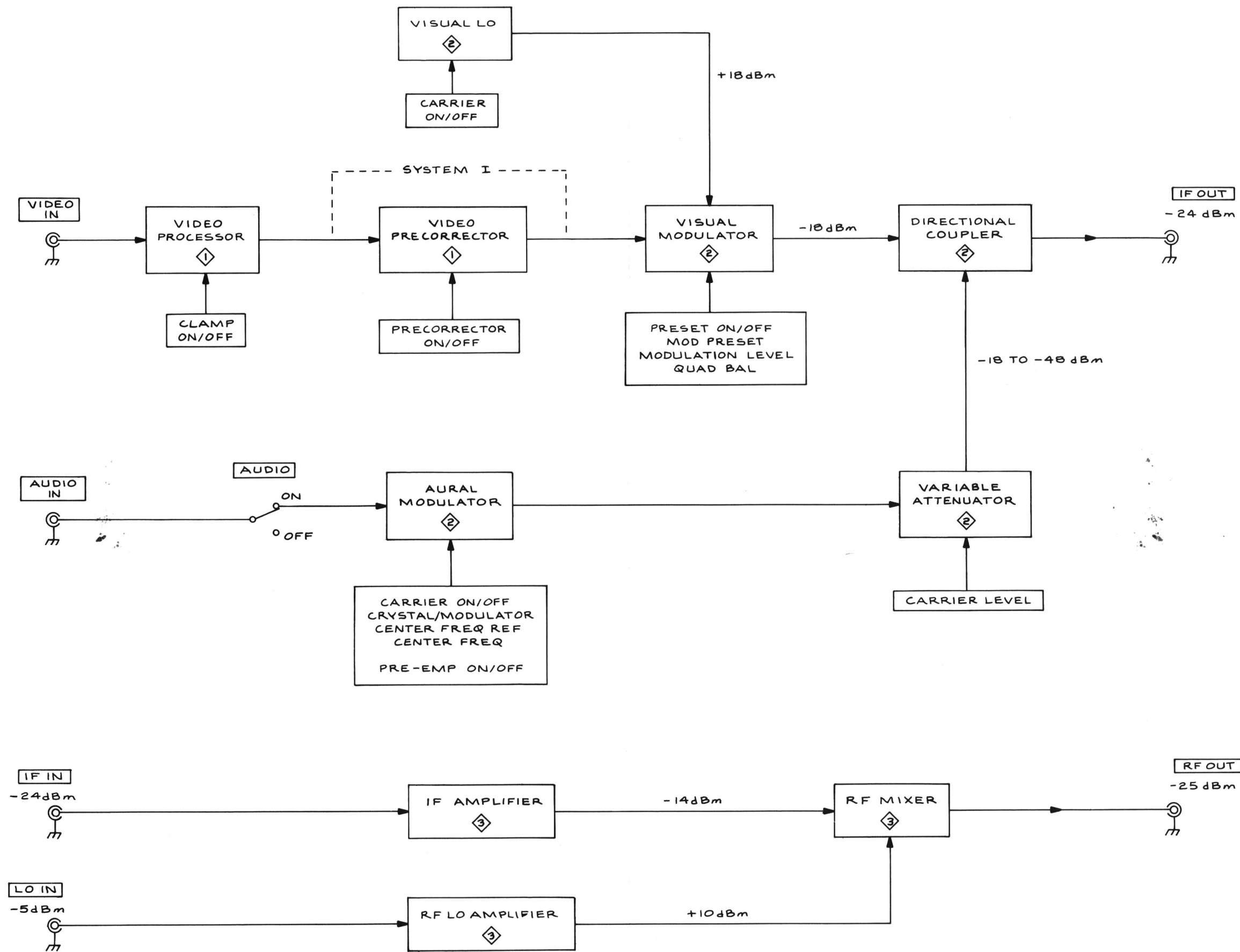
A1A7 VIDEO PRECORRECTOR BOARD (SYSTEM M)



A70 POWER SUPPLY BOARD

FIG. 8-2. ADJUSTMENT LOCATIONS.

ADJUSTMENT LOCATIONS
A1A7B/G, A1A7M, A70



067-0886-01 & UP
TEST MODULATOR

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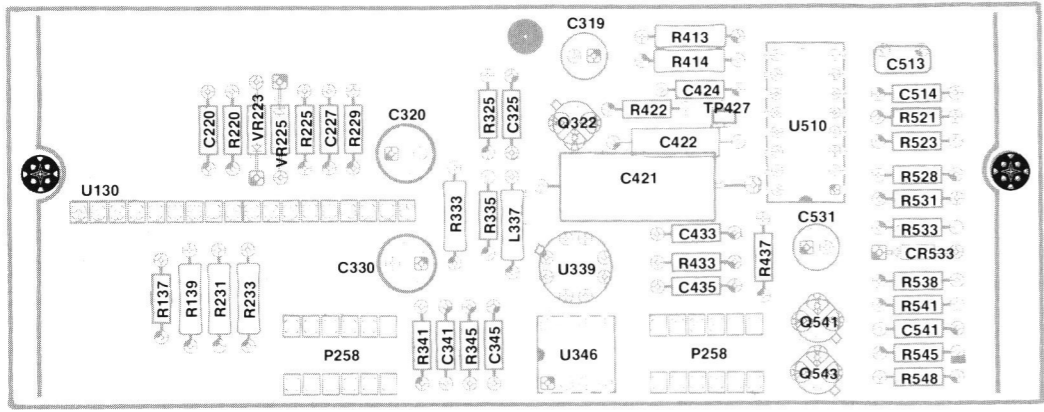
3530-27

BLOCK DIAGRAM

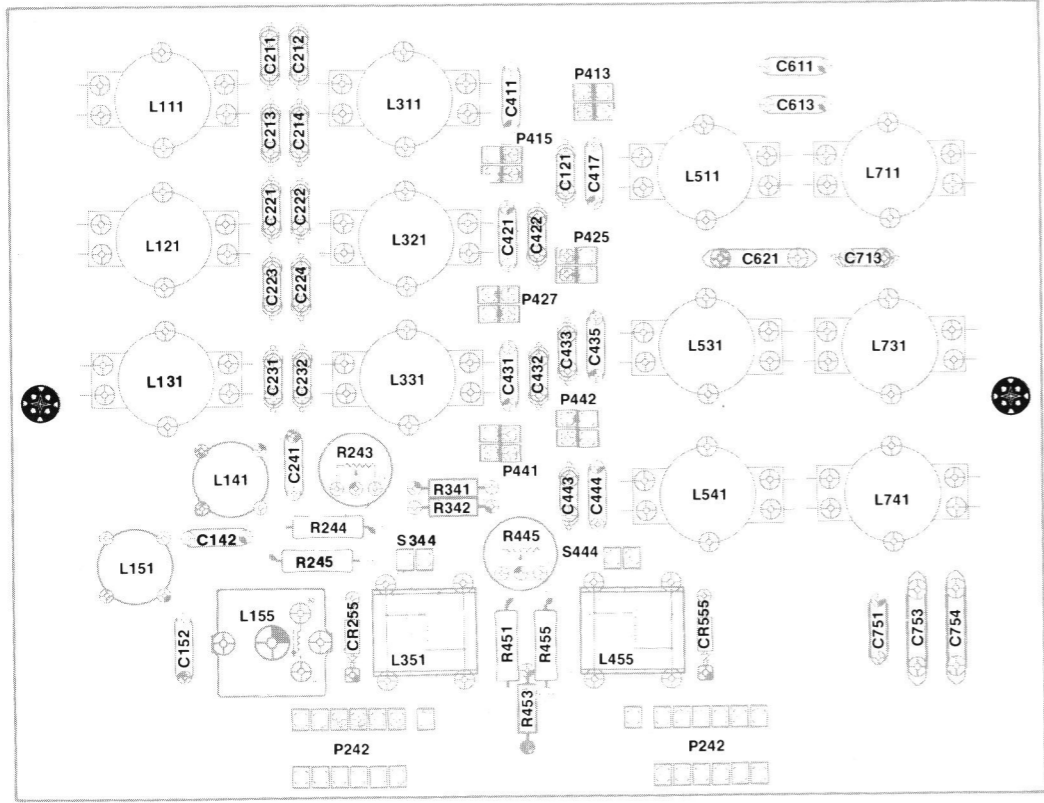
DIAGRAM

A B C D E F G H J K L M N

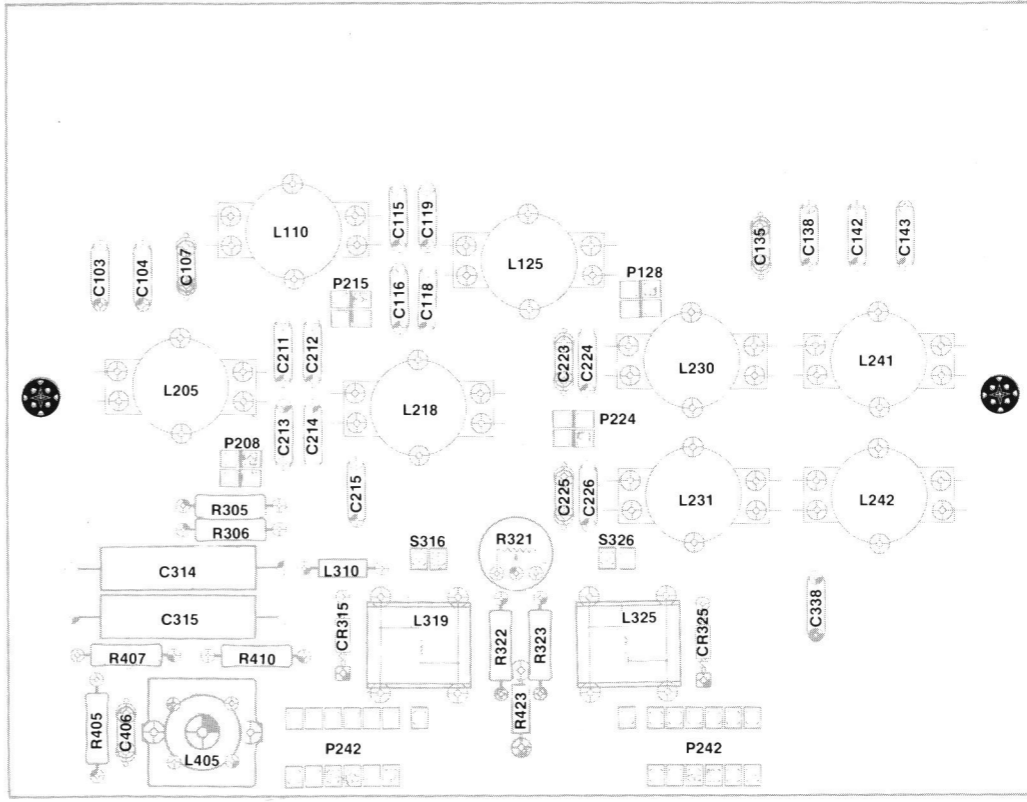
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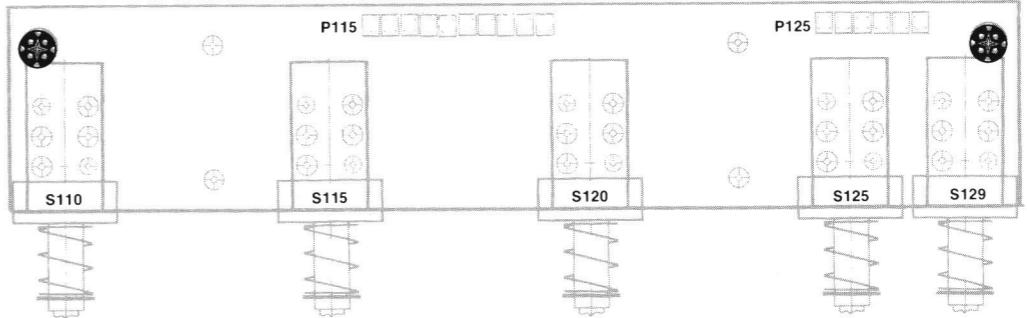
A1A6 VIDEO PROCESSOR BOARD



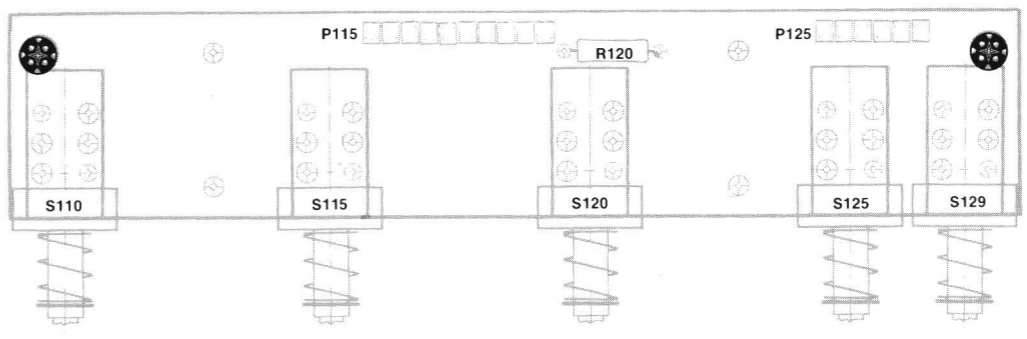
A1A7 VIDEO PRECORRECTOR BOARD (SYSTEMS B & G)



A1A7 VIDEO PRECORRECTOR BOARD (SYSTEM M)



A2-1 SWITCH BOARD



A2-2 SWITCH BOARD

ASSEMBLY A1A6			
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
C220	C2	B1	C51
C227	C1	C1	C51
C319	C2	D1	C53
C320	C1	C1	C54
C325	D2	C1	CR5
C330	C1	C2	CR5
C341	B2	C3	L33
C345	D2	C3	L33
C421	D3	D2	Q3
C422	C3	D2	Q5
C424	C3	D1	Q5
C433	B2	D2	Q5
C435	B2	D2	Q5

ASSEMBLY A1A7 (Systems B and G)			
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
C121	D4	D5	C41
C142	G4	B7	C42
C152	F5	B8	C42
C211	D4	B5	C43
C212	D5	B5	C43
C213	D4	B5	C43
C214	E5	B5	C43
C221	E5	B5	C44
C222	E4	B5	C44
C223	E5	B6	C61
C224	E4	B6	C61
C231	F4	B6	C62
C232	F4	B6	C71
C241	G5	B7	C75
C411	D4	C5	C75

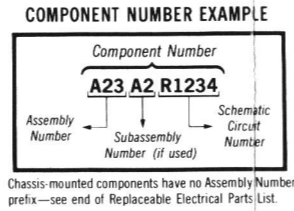
ASSEMBLY A1A7 (System M)			
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
C103	F1	H2	C21
C104	F1	H2	C21
C107	F1	J2	C21
C115	F1	K2	C21
C116	F1	K2	C22
C118	F1	K2	C22
C119	F1	K2	C22
C135	F1	M2	C22
C138	E1	M2	C31
C142	E1	M2	C31
C143	E1	M2	C33
C211	F1	J3	C40

ASSEMBLY A1*			
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
C792	A4	K7	J61
C894	A4	L7	J61

ASSEMBLY A2-1			
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
S110	A3	H7	J61

Partial A1 also shown on diagrams 2 and 3.
Partial A2-1 also shown on diagram 2.

Static Sensitive Devices
See Maintenance Section

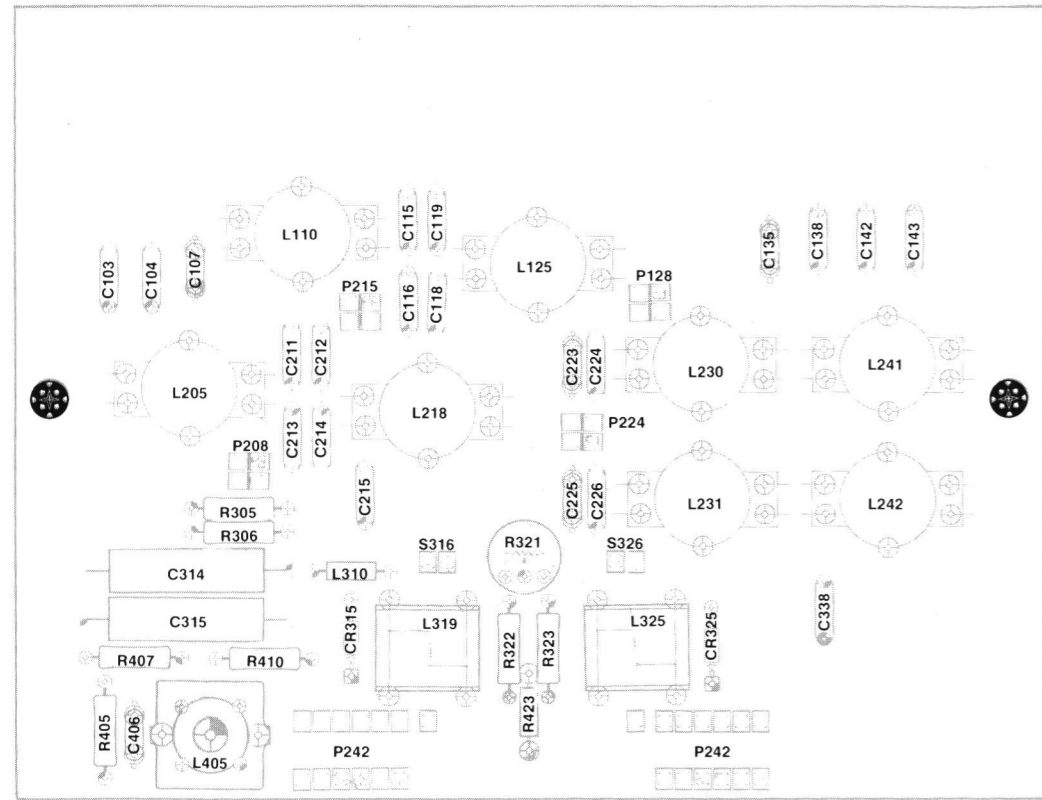


Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

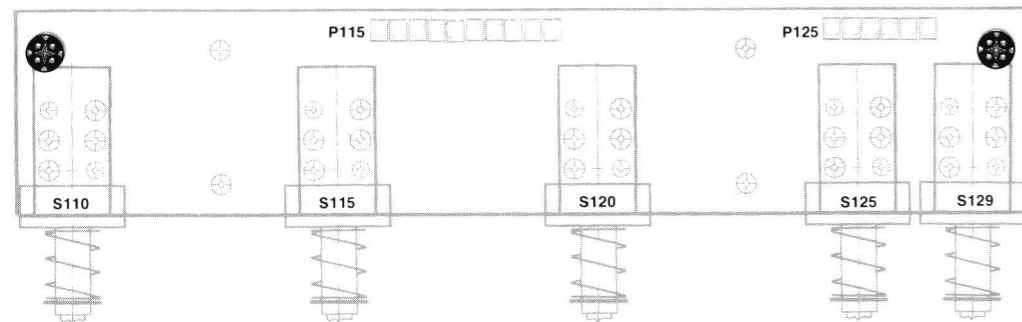
COMPONENT LOCATIONS A1A6, A1A7(B, G, A1A7M), A2-1, A2-2

G H J K L M N

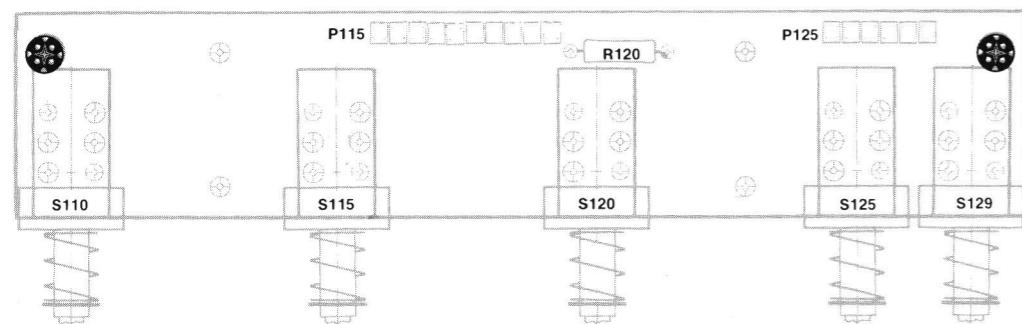
VIDEO PROCESSING DIAGRAM 1



A1A7 VIDEO PRECORRECTOR BOARD (SYSTEM M)



A2-1 SWITCH BOARD



A2-2 SWITCH BOARD

COMPONENT NUMBER EXAMPLE
 Component Number
 23 A2 R1234
 Schematic Circuit Number
 Subassembly Number (if used)
 Components have no Assembly Number
 Replaceable Electrical Parts List.

ASSEMBLY A1A6														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C220	C2	B1	C513	D3	F1	R137	B1	B2	R414	C3	D1	TP427	C3	E1
C227	C1	C1	C514	D3	F1	R139	A1	B2	R422	C2	D1	U130	C1	A2
C319	C2	D1	C531	C3	E2	R220	C2	B1	R433	B3	D2	U339	B2	D2
C320	C1	C1	C541	C3	F3	R225	C1	B1	R437	D3	E2	U346	A2	D3
C325	D2	C1				R229	C1	C1	R521	D3	F1	U510	C3	E1
C330	C1	C2	CR533	B3	F2	R231	B2	B2	R523	B3	F2	VR223	C2	B1
C341	B2	C3				R233	C2	B2	R528	B3	F2	VR225	C1	B1
C345	D2	C3	L337	D2	C2	R325	D2	C1	R531	C3	F2			
C421	D3	D2				R333	D1	C2	R533	C3	F2			
C422	C3	D2	Q322	D2	D1	R335	D3	C2	R538	B3	F2			
C424	C3	D1	Q541	B3	E3	R341	B2	C3	R541	B3	F2			
C433	B2	D2	Q543	B3	E3	R345	A2	C3	R545	B3	F3			
C435	B2	D2				R413	C3	D1	R548	A3	F3			

ASSEMBLY A1A7 (Systems B and G)														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C121	D4	D5	C417	D4	D5	C754	C5	F8	L455	G5	D8	R243	G4	C7
C142	G4	B7	C421	E4	C6				L511	D4	D5	R244	G4	C7
C152	F5	B8	C422	E4	D6	CR255	B5	C8	L531	C4	D6	R245	F4	B7
C211	D4	B5	C431	F4	C6	CR555	G5	D8	L541	C4	D7	R341	G4	C7
C212	D5	B5	C432	F4	D6				L711	D5	E5	R342	G4	C7
C213	D4	B5	C433	F4	D6	L111	D5	B5	L731	C5	E6	R445	E5	C7
C214	E5	B5	C435	C4	D6	L121	E5	B6	L741	C5	E7	R451	E5	C8
C221	E5	B5	C443	C4	D7	L131	F5	B6				R453	E5	D8
C222	E4	B5	C444	C4	D7	L141	G5	B7	P413	D4	D5	R455	E5	D8
C223	E5	B6	C611	D4	E5	L151	G5	B7	P415	E4	D5			
C224	E4	B6	C613	D4	E5	L155	F5	B8	P425	C4	D6	S344	G5	C7
C231	F4	B6	C621	C5	E6	L311	D4	C5	P427	E4	D6	S444	B5	D7
C232	F4	B6	C713	C5	E6	L321	E4	C6	P441	F4	C7			
C241	G5	B7	C751	C5	E8	L331	F4	C6	P442	C4	D6			
C411	D4	C5	C753	C5	F8	L351	B5	C8						

ASSEMBLY A1A7 (System M)														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C103	F1	H2	C212	F1	J3	CR315	D2	J4	L319	G2	K4	R322	F2	K4
C104	F1	H2	C213	G1	J3	CR325	G2	L4	L325	E2	L4	R323	F2	L4
C107	F1	J2	C214	G1	J3				L405	G1	J5	R405	G1	H5
C115	F1	K2	C215	G1	K3	L110	F1	J2				R407	G1	H4
C116	F1	K2	C223	E1	L3	L125	F1	K2	P128	F1	L2	R410	G1	J4
C118	F1	K2	C224	E1	L3	L205	G1	J3	P208	G1	J3	R423	F2	K5
C119	F1	K2	C225	E1	L3	L218	G1	K3	P215	F1	J2			
C135	F1	M2	C226	E1	L3	L230	E1	L3	P224	E1	L3	S316	G1	K4
C138	E1	M2	C314	G1	J4	L231	E1	L3				S326	E1	L4
C142	E1	M2	C315	G1	J4	L241	E1	M3	R305	G1	J3			
C143	E1	M2	C338	E1	M4	L242	E1	M3	R306	G1	J4			
C211	F1	J3	C406	G1	H5	L310	G1	J4	R321	F2	K4			

ASSEMBLY A1*														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C792	A4	K7	J613	A1	H1	P499	A3	F7	P812	H2	K1			
C894	A4	L7				P799	A4	K7	P812	H5	K1			

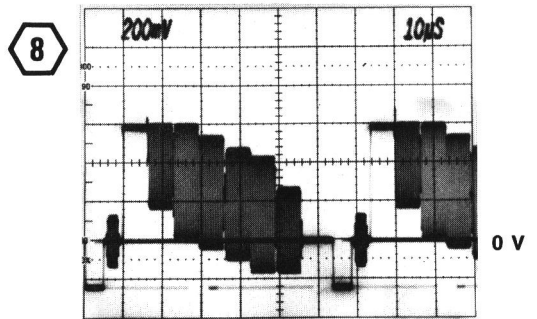
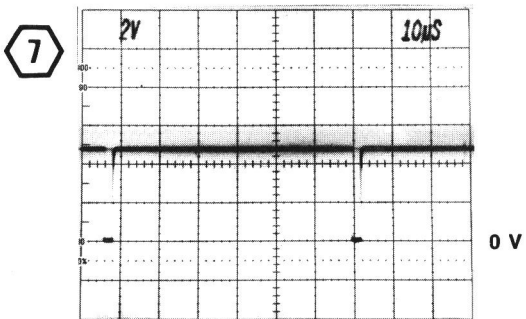
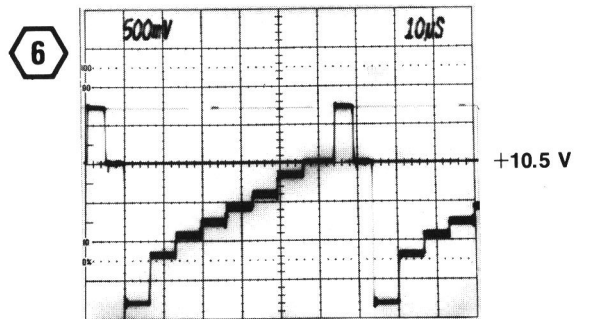
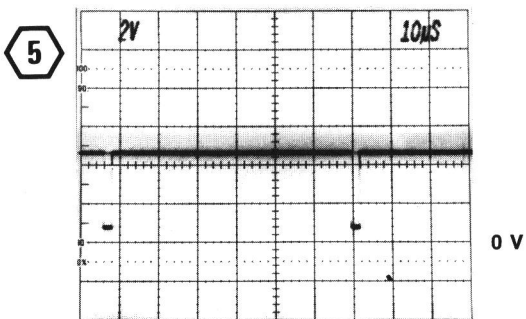
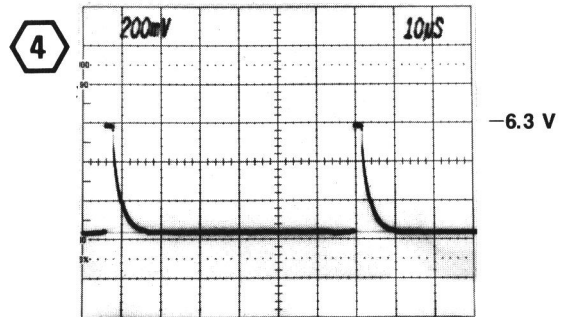
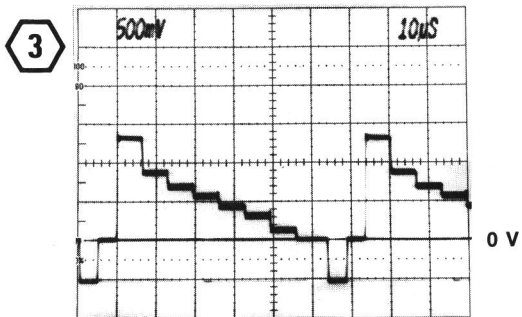
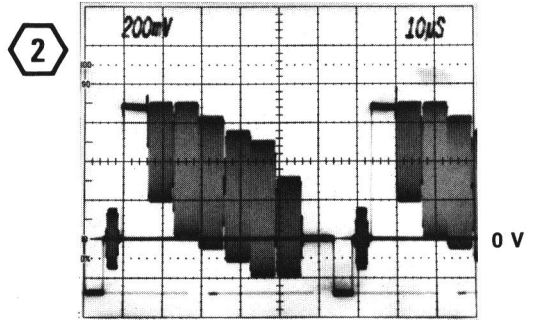
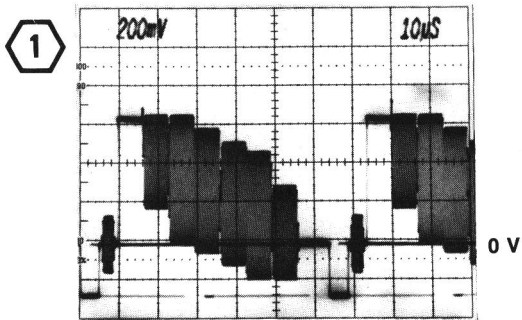
Partial A1 also shown on diagrams 2 and 3.

ASSEMBLY A2-1						ASSEMBLY A2-2						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	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
S110	A3	H7				P115	H2	J8	S110	H2	H9			
						P115	H5	J8	S110	H5	H9	W1	A1	CHASSIS

Partial A2-1 also shown on diagram 2.
 Partial A2-2 also shown on diagram 2.

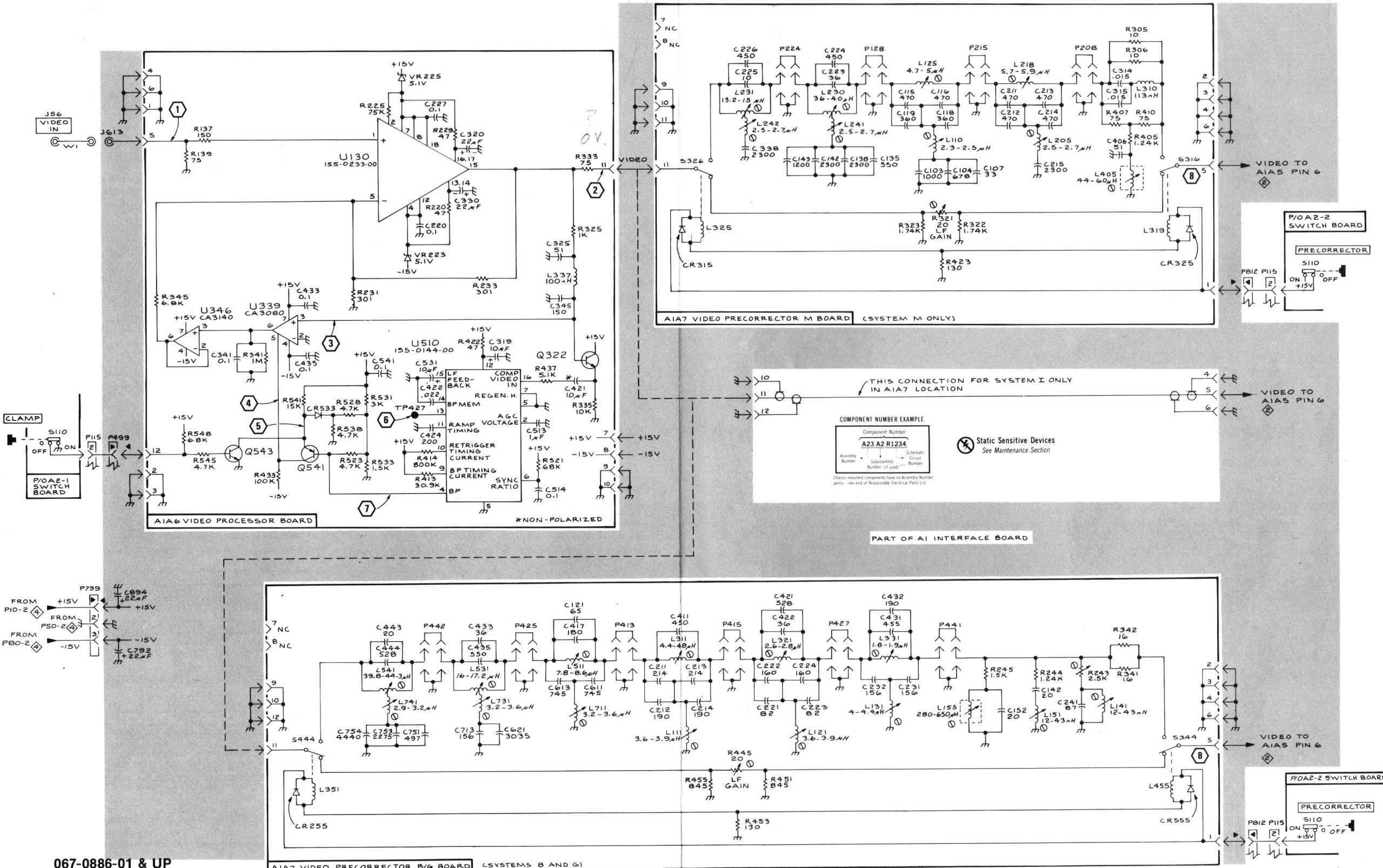
* Component locations for A1 are shown on reverse side of diagram 4

1



A B C D E F G H

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COMPONENT NUMBER EXAMPLE

Component Number			
A23	A2	R1234	
Assembly Number	Subassembly Number (if used)	Circuit Number	Number

Chassis mounted components have no Assembly Number prefix - see end of Replaceable Electrical Parts List

Static Sensitive Devices
See Maintenance Section

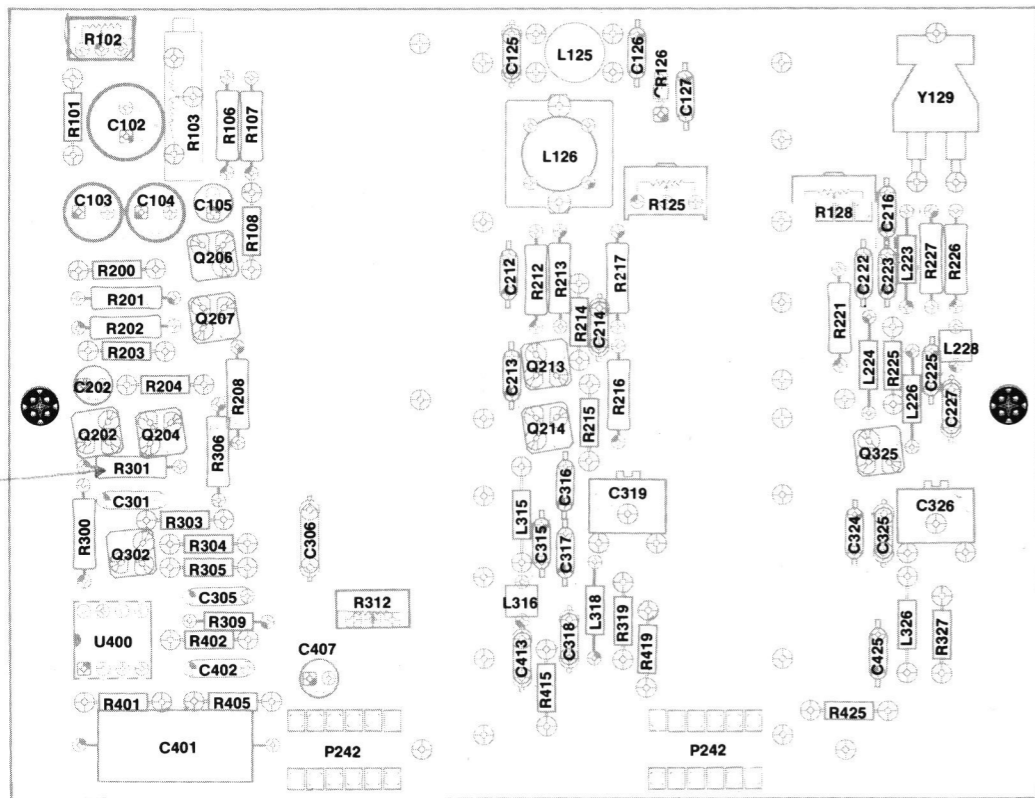
067-0886-01 & UP
TEST MODULATOR

3530-28

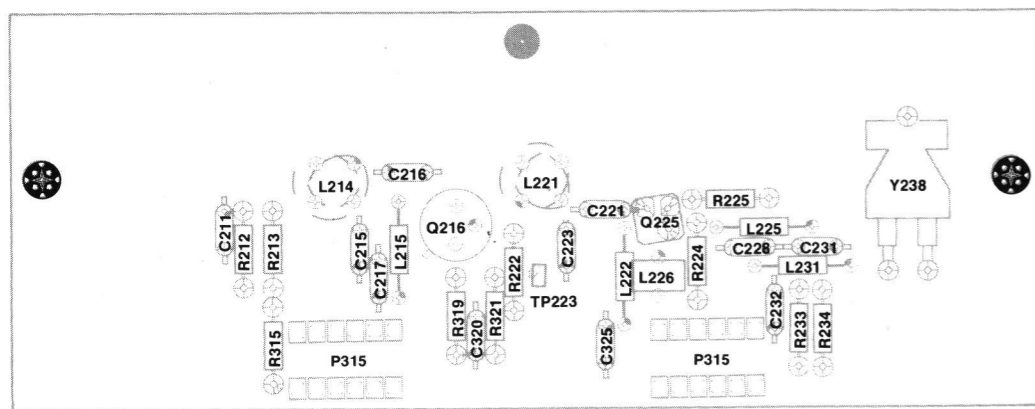
VIDEO PROCESSING

A B C D E F G H J K L M N

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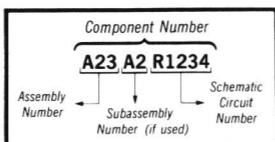


A1A8 AURAL MODULATOR BOARD



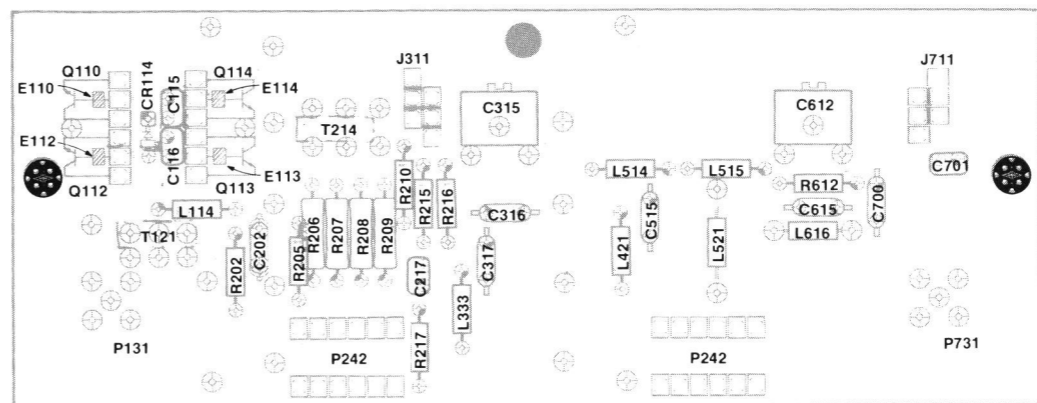
A1A4 VISUAL L.O. BOARD

COMPONENT NUMBER EXAMPLE

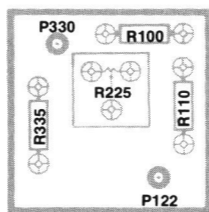


Static Sensitive Devices
See Maintenance Section

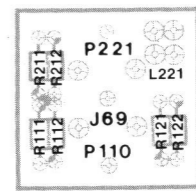
Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.



A1A5 VISUAL MODULATOR BOARD



A7 VARIABLE ATTEN BOARD



A5 DIRECTIONAL COUPLER BOARD

VISUAL AND AURAL IF MODULATORS DIAGRAM

ASSEMBLY A1A4								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C211	C4	B7	C320	C5	C8	Q216	B4	C7
C215	C4	C8	C325	B4	D8	Q225	B4	D7
C216	C4	C7						
C217	B4	C8	L214	C4	C7	R212	C4	B8
C221	B4	D7	L215	B4	C8	R213	C4	B8
C223	B4	D8	L221	B4	D7	R222	B4	C8
C228	B5	E8	L222	B4	D8	R224	B5	D8
C231	B5	E8	L225	B5	E7	R225	B4	E7
C232	B5	E8	L226	A4	D8	R233	A4	E8
			L231	A4	E8	R234	A5	E8

ASSEMBLY A1A5								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C115	D4	J1	E110	E4	H1	L521	F4	L2
C116	D5	J2	E112	D4	H2	L616	G4	M2
C202	D5	J2	E113	D4	J2			
C217	E5	K2	E114	E5	J1	P131	D4	H3
C315	F4	K1				P731	G4	N3
C316	F4	K2	J311	E4	K1			
C317	F5	K2	J711	G4	N1	Q110	E4	H1
C515	F4	L2				Q112	E4	H2
C612	F4	M1	L114	D4	J2	Q113	E5	J2
C615	F4	M2	L333	F5	K3	Q114	E5	J1
C700	G5	M2	L421	F4	L2			
C701	G4	N2	L514	F4	L2	R202	D5	J2
			L515	F4	L2	R205	D5	J2
						T121	D4	H2
						T214	E4	J2

ASSEMBLY A1A8

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
C102	C2	B2	C316
C103	E2	A2	C317
C104	E2	B2	C318
C105	E2	B2	C319
C125	E2	D1	C324
C126	F2	D1	C325
C127	F2	D1	C326
C202	D2	A3	C401
C212	F2	D2	C402
C213	F2	D3	C407
C214	F2	D3	C413
C216	D1	E2	C425
C222	D1	E2	
C223	D1	E2	CR126
C225	D1	F3	
C227	C1	F3	L125
C301	D2	A3	L126
C305	C2	B4	L223
C306	C2	B4	L224
C315	F1	D4	L226

ASSEMBLY A1*

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
J514	D4	G2	J582
J570	G4	G6	J898

Partial A1 also shown on diagrams 1 and 3.

ASSEMBLY A5

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
J69	H4	M5	P110
L221	H4	M5	P221

ASSEMBLY A7

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
P122	G1	J5	R100
P330	H1	J4	R110

ASSEMBLY A2-1**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
R315	C4	B8	
R319	C5	C8	
R321	C5	C8	
TP223	C5	D8	
Y238	A5	F7	
P115	A2	J6	P125
P115	A4	J6	

Partial A2-1 also shown on diagram 1.

ASSEMBLY A2-2**

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
P115	A3	J8	R120
P125	A2	M8	

Partial A2-2 also shown on diagram 1.

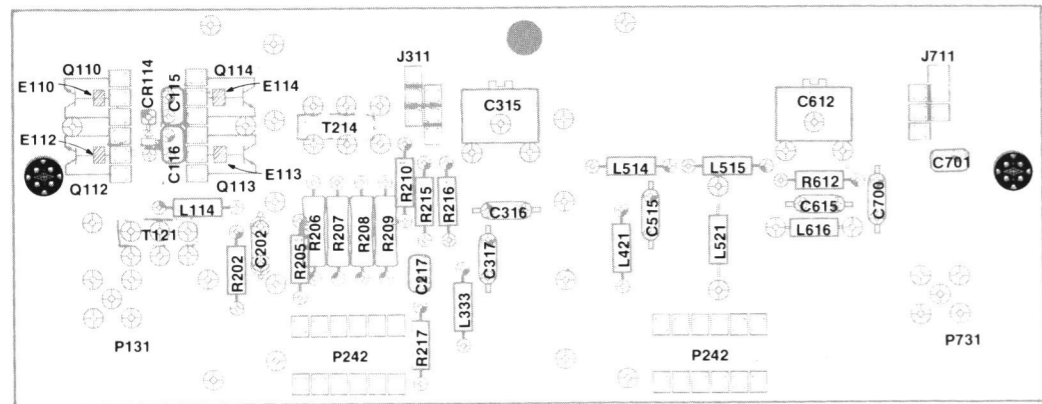
CHASSIS MOUNTED PARTS

CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER
J66	A2	CHASSIS	R74
			R76

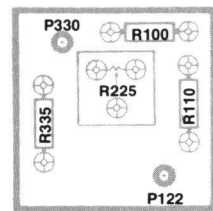
* Component locations for A1

** Component locations for A2-1 and A2-2

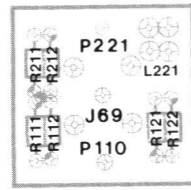
G H J K L M N



A1A5 VISUAL MODULATOR BOARD



A7 VARIABLE ATTEN BOARD



A5 DIRECTIONAL COUPLER BOARD

VISUAL AND AURAL IF MODULATORS DIAGRAM 2

ASSEMBLY A1A4								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C211	C4	B7	C320	C5	C8	Q216	B4	C7
C215	C4	C8	C325	B4	D8	Q225	B4	D7
C216	C4	C7				R212	C4	B8
C217	B4	C8	L214	C4	C7	R213	C4	B8
C221	B4	D7	L215	B4	C8	R222	B4	C8
C223	B4	D8	L221	B4	D7	R224	B5	D8
C228	B5	E8	L222	B4	D8	R225	B4	E7
C231	B5	E8	L225	B5	E7	R233	A4	E8
C232	B5	E8	L226	A4	D8	R234	A5	E8
			L231	A4	E8			

ASSEMBLY A1A5								
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C115	D4	J1	E110	E4	H1	L521	F4	L2
C116	D5	J2	E112	D4	H2	L616	F4	M2
C202	D5	J2	E113	D4	J2			
C217	E5	K2	E114	E5	J1	P131	D4	H3
C315	F4	K1				P731	G4	N3
C316	F4	K2	J311	E4	K1	R206	E5	J2
C317	F5	K2	J711	G4	N1	R207	E4	J2
C515	F4	L2				R208	E5	K2
C612	F4	M1				R209	E5	K2
C615	F4	M2	L114	D4	J2	R210	E4	K2
C700	G5	M2	L333	F5	K3	R215	E4	K2
C701	G4	N2	L421	F4	L2	R216	E4	K2
			L514	F4	L2	R217	E5	K3
			L515	F4	L2	R612	F4	M2
CR114	D4	H1						
			R202	D5	J2	T121	D4	H2
			R205	D5	J2	T214	E4	J2

ASSEMBLY A1A8														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C102	C2	B2	C316	F1	D3	L228	C1	F3	R108	E2	B2	R301	D2	A3
C103	E2	A2	C317	F1	D4	L315	F1	D4	R125	F2	D2	R303	D2	B4
C104	E2	B2	C318	F1	D4	L316	F1	D4	R128	D1	E2	R304	D2	B4
C105	E2	B2	C319	F1	D3	L318	F1	D4	R200	E2	A2	R305	C1	B4
C125	E2	D1	C324	D1	E4	L326	E1	F4	R201	E2	A2	R306	D2	B3
C126	F2	D1	C325	D1	E4				R202	E2	A3	R309	C2	B4
C127	F2	D1	C326	D1	F4	Q202	D2	A3	R203	D2	A3	R312	C2	C4
C202	D2	A3	C401	C2	B5	Q204	D2	B3	R204	D2	B3	R319	F1	D4
C212	F2	D2	C402	C2	B4	Q206	E2	B2	R208	D2	B3	R327	E1	F4
C213	F2	D3	C407	E2	B4	Q207	E2	B3	R212	F2	D2	R401	C2	A5
C214	F2	D3	C413	F1	D4	Q213	F2	D3	R213	F2	D2	R402	C2	B4
C216	D1	E2	C425	E1	E4	Q214	F2	D3	R214	F2	D3	R405	C2	B5
C222	D1	E2				Q302	C2	A4	R215	F2	D3	R415	F1	D4
C223	D1	E2	CR126	E2	D1	Q325	D1	E3	R216	F1	D3	R419	F1	D4
C225	D1	F3							R217	F2	D3	R425	E1	E5
C227	C1	F3	L125	E2	D1	R101	C2	A1	R221	D1	E3			
C301	D2	A3	L126	F2	D2	R102	E2	A1	R225	D1	E3	U400	C2	A4
C305	C2	B4	L223	D1	F2	R103	C3	B2	R226	C1	F2			
C306	C2	B4	L224	D1	E3	R106	E2	B2	R227	C1	F2	Y129	C1	F1
C315	F1	D4	L226	D1	F3	R107	E2	B2	R300	D2	A4			

ASSEMBLY A1*														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
J514	D4	G2	J582	G4	G7	P499	A4	F7	P612	C5	H1			
J570	G4	G6	J898	G1	L7	P612	B3	H1	P812	B1	K1			

Partial A1 also shown on diagrams 1 and 3.

ASSEMBLY A5														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
J69	H4	M5	P110	H4	M5	R111	H4	M5	R122	H4	M5			
			P221	H4	M4	R112	H4	M5	R211	H5	M5			
L221	H4	M5				R121	H4	M5	R212	H5	M5			

ASSEMBLY A7														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P122	G1	J5	R100	H1	J4	R225	H1	J5						
P330	H1	J4	R110	G1	J5	R335	H1	J5						

ASSEMBLY A2-1**														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P115	A2	J6	P125	A1	M6	S115	A2	J7	S125	A1	M7			
P115	A4	J6				S120	A4	L7	S129	A1	N7			

Partial A2-1 also shown on diagram 1.

ASSEMBLY A2-2**														
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
P115	A3	J8	R120	A3	L8	S115	A3	J9	S125	A2	M9			
P125	A2	M8				S120	A3	L9	S129	A2	N9			

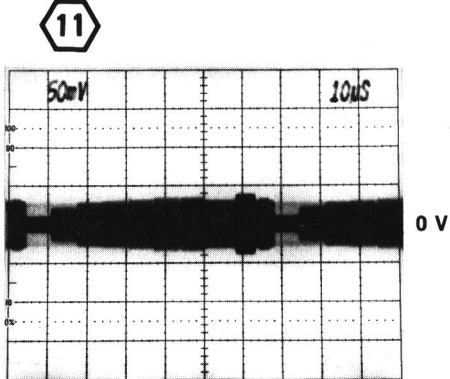
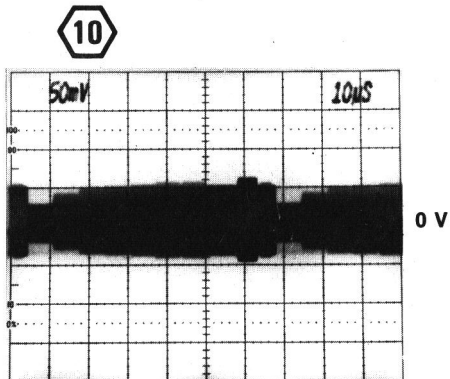
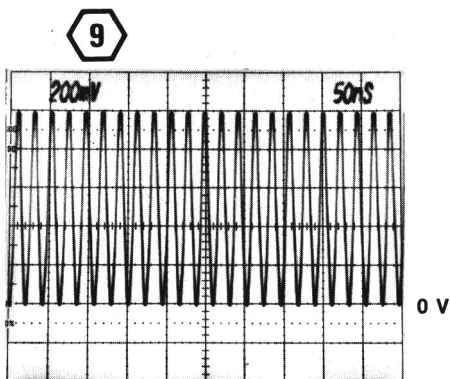
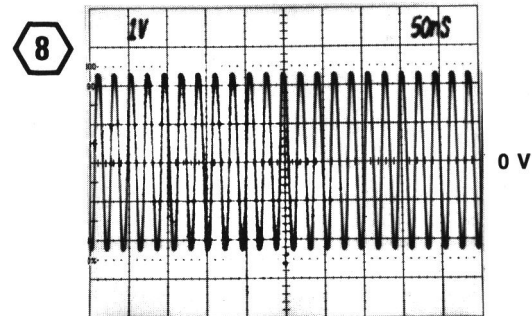
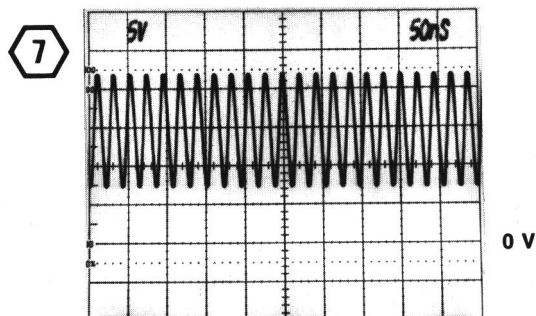
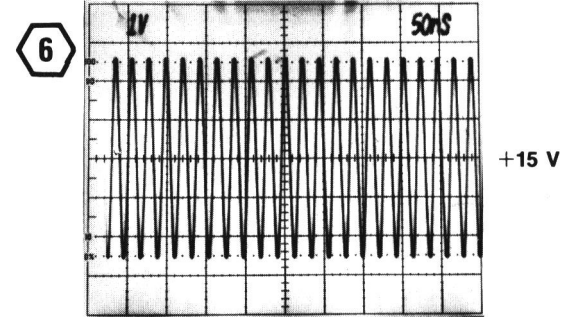
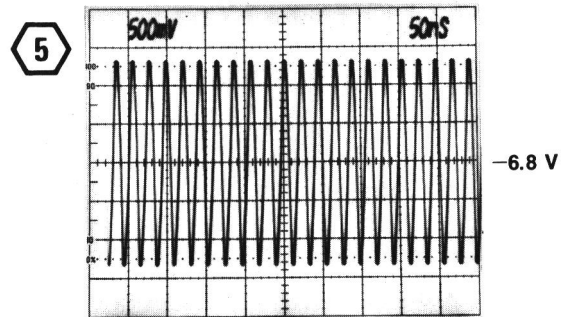
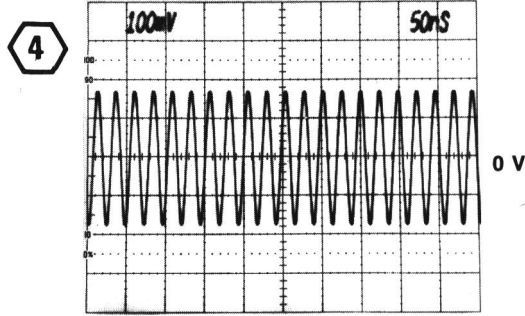
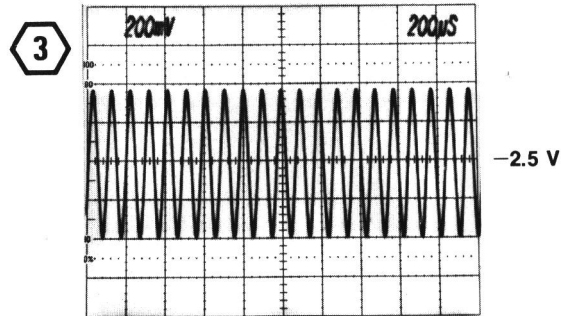
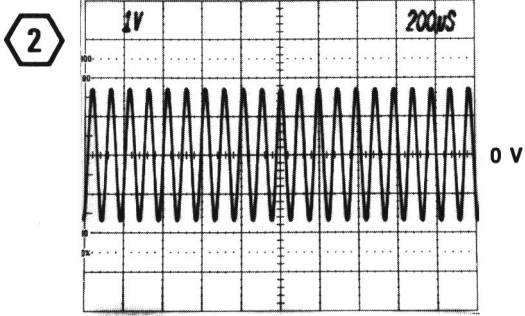
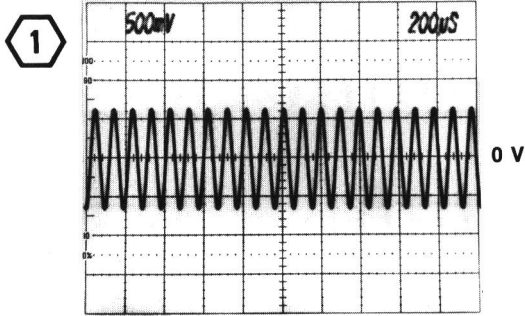
Partial A2-2 also shown on diagram 1.

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	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
J66	A2	CHASSIS	R74	A3	CHASSIS	R84	C5	CHASSIS	W1	G1	CHASSIS	W3	H3	CHASSIS
			R76	A3	CHASSIS				W2	H4	CHASSIS			

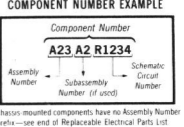
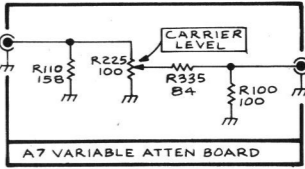
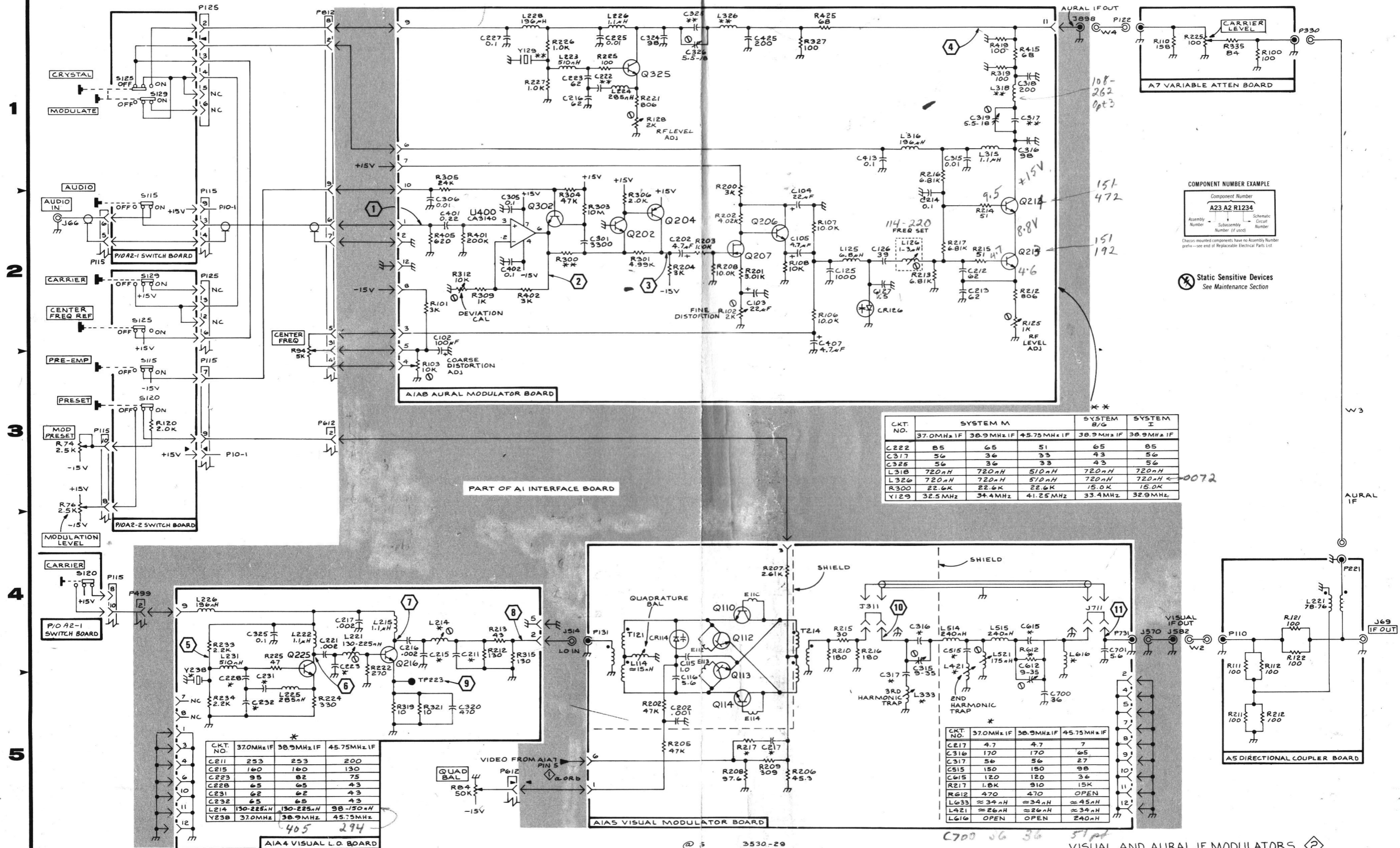
* Component locations for A1 are shown on reverse side of diagram 4

** Component locations for A2-1 and A2-2 are shown on reverse side of Block Diagram

2



A B C D E F G H



Static Sensitive Devices See Maintenance Section

CKT. NO.	SYSTEM M			SYSTEM B/G	SYSTEM I
	37.0MHz IF	38.9MHz IF	45.75MHz IF	38.9MHz IF	38.9MHz IF
C222	85	65	51	65	85
C317	56	36	33	43	56
C325	56	36	33	43	56
L318	720nH	720nH	510nH	720nH	720nH
L326	720nH	720nH	510nH	720nH	720nH
R300	22.6K	22.6K	22.6K	15.0K	15.0K
Y129	32.5MHz	34.4MHz	41.25MHz	33.4MHz	32.9MHz

CKT. NO.	37.0MHz IF	38.9MHz IF	45.75MHz IF
C211	253	253	200
C215	160	160	130
C223	95	82	75
C228	65	65	43
C231	62	62	43
C232	65	65	43
L214	130-225nH	130-225nH	98-150nH
Y238	37.0MHz	38.9MHz	45.75MHz

CKT. NO.	37.0MHz IF	38.9MHz IF	45.75MHz IF
C217	4.7	4.7	7
C316	170	170	65
C317	56	56	27
C515	150	150	98
C615	120	120	36
R217	1.0K	910	15K
R612	470	470	OPEN
L633	≈ 34nH	≈ 34nH	≈ 45nH
L421	≈ 26nH	≈ 26nH	≈ 34nH
L616	OPEN	OPEN	240nH

067-0886-01 & UP TEST MODULATOR

VISUAL AND AURAL IF MODULATORS

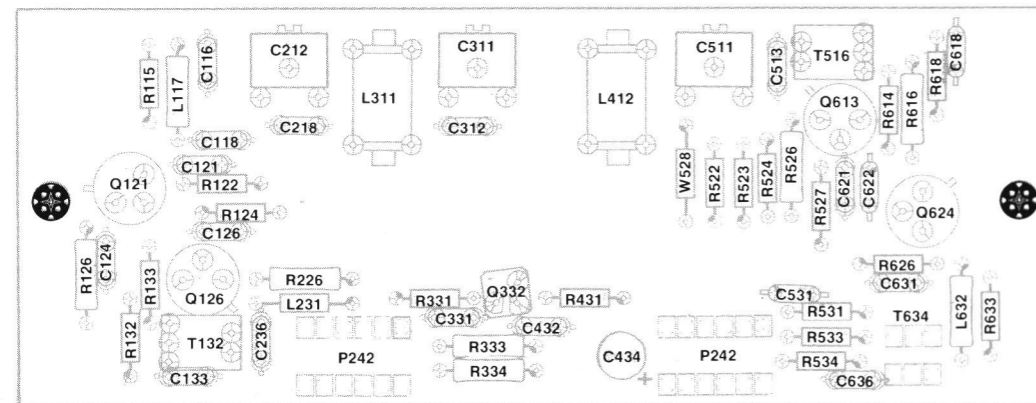
VISUAL AND AURAL IF MODULATORS

2

COMPONENT LOCATIONS
A1A3, A4, A3

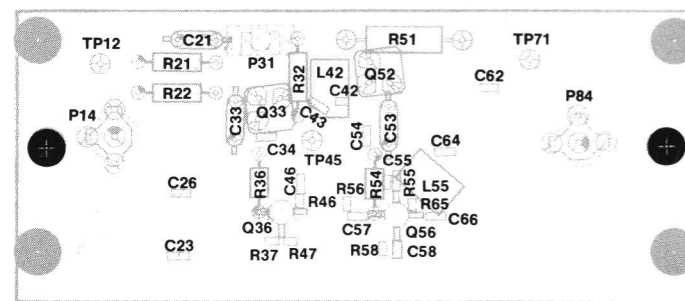
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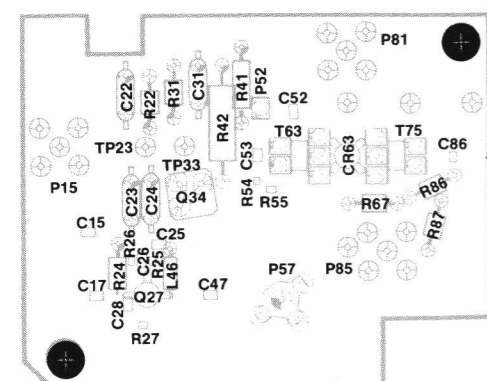


C233 R233 (On back of board)

A1A3 IF AMPLIFIER BOARD

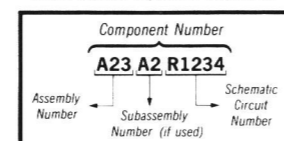


A4 RF AMP BOARD
(mounted on A1A1 RF LO AMP)



A3 MIXER BOARD
(mounted on A1A2 RF MIXER)

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

Static Sensitive Devices
See Maintenance Section

ASSEMBLY A1A3											
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C116	C2	B1	C531	G1	E2	Q624	G2	F2	R526	F2	E2
C118	C2	B2	C618	F2	F1				R527	F2	E2
C121	C2	B2	C621	F2	E2	R115	C2	B1	R531	H2	E2
C124	C2	A2	C622	F2	E2	R122	C2	B2	R533	H2	E3
C126	B2	B2	C631	F2	E2	R124	B2	B2	R534	H2	E3
C133	B2	B3	C636	G1	E3	R126	C2	A2	R614	F2	E1
C212	D2	B1				R132	B2	A3	R616	F2	F1
C218	D2	B1	L117	C2	B1	R133	B2	B2	R618	F1	F1
C233	A2	A3	L231	A2	B2	R226	B2	B2	R626	G1	E2
C236	B2	B3	L311	D2	C1	R233	A2	B3	R633	G2	F2
C311	D2	C1	L412	D2	D1	R331	B1	C2			
C312	D2	C1	L632	G2	F2	R333	A1	C3	T132	B2	B3
C331	B1	C2				R334	A1	C3	T516	F2	E1
C432	A1	D2	Q121	C2	A2	R431	B1	D2	T634	G1	E2
C434	G1	D3	Q126	B2	B2	R522	E2	D2			
C511	E2	D1	Q332	B1	C2	R523	E2	E2	W528	E2	D2
C513	E2	E1	Q613	F2	E1	R524	E2	E2			

ASSEMBLY A1*											
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
J119	A5	B6	J199	D4	B6	J295	H4	D6	J325	A2	E3
J119	A5	B6	J213	D4	D1	J298	H4	D7			

Partial A1 also shown on diagrams 1 and 2.

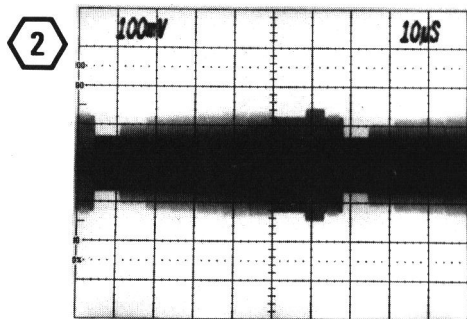
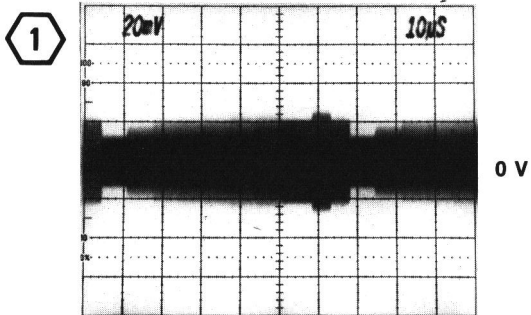
ASSEMBLY A3											
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C15	E4	A8	C53	F4	B8	Q34	E4	B8	R55	F4	B8
C17	E4	A9	C86	G4	C8				R67	G4	C8
C22	G3	A8				R22	E4	B8	R86	G4	C8
C23	E4	A8	CR63	F4	C8	R24	E4	A9	R87	G4	C8
C24	E4	B8				R25	E4	B9			
C25	E4	B8	L46	E4	B9	R26	E4	A8	T63	F4	B8
C26	E4	B9				R27	E4	B9	T75	G4	C8
C28	E4	A9	P52	G3	B8	R31	E3	B8			
C31	E3	B8	P57	F4	B9	R41	G3	B8	TP23	E3	A8
C47	E4	B9				R42	E3	B8	TP33	E3	B8
C52	F4	B8	Q27	E4	B9	R54	F4	B8			

ASSEMBLY A4											
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C21	C4	B4	C57	B4	C5	Q33	B4	B5	R47	B5	B5
C23	A5	B5	C58	C5	C5	Q36	B5	B5	R51	B4	C4
C26	A5	B5	C62	C5	C5	Q52	B4	C5	R54	B4	C5
C33	A4	B5	C64	C4	C5	Q56	C4	C5	R55	C5	C5
C34	A4	B5	C66	C4	C5				R56	B4	C5
C42	B4	C5				R21	A4	B5	R58	C5	C5
C43	B4	B5	L42	B4	C5	R22	A4	B5	R65	C4	C5
C46	B4	B5	L55	C4	C5	R32	B4	B5			
C53	B4	C5				R36	B5	B5	TP12	A4	A4
C54	B4	C5	P31	A3	B5	R37	B5	B5	TP45	B4	B5
C55	B5	C5				R46	B4	B5	TP71	C4	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
J59	A2	CHASSIS	J99	H4	CHASSIS	W5	A5	CHASSIS	W7	H4	CHASSIS
J79	A5	CHASSIS				W6	D4	CHASSIS	W8	A2	CHASSIS

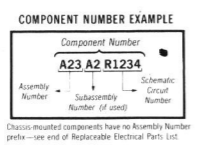
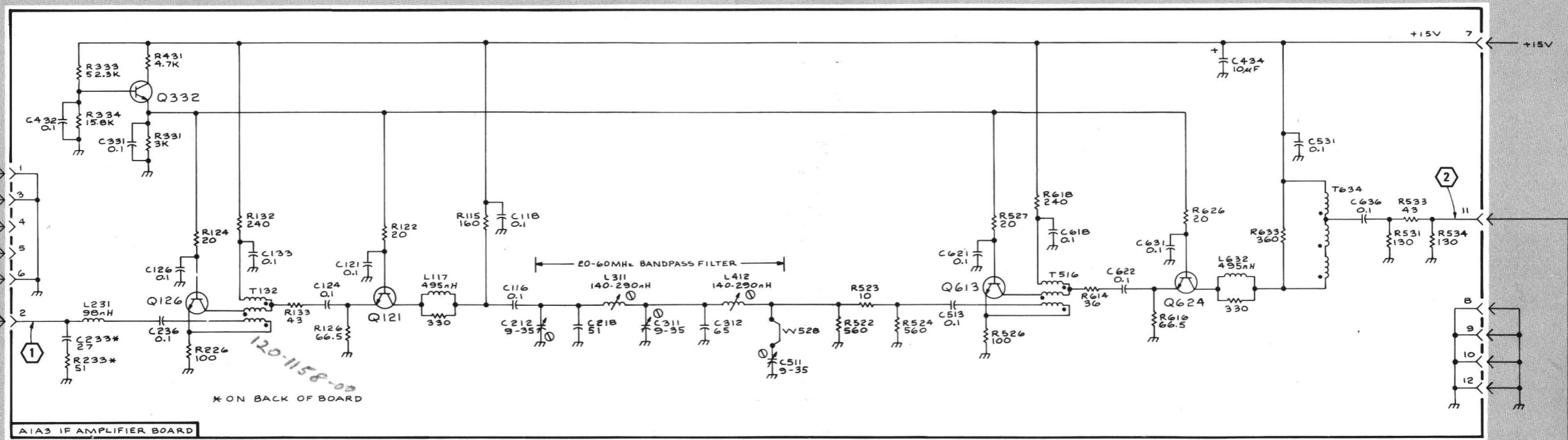
* Component locations for A1 are shown on reverse side of diagram 4

3

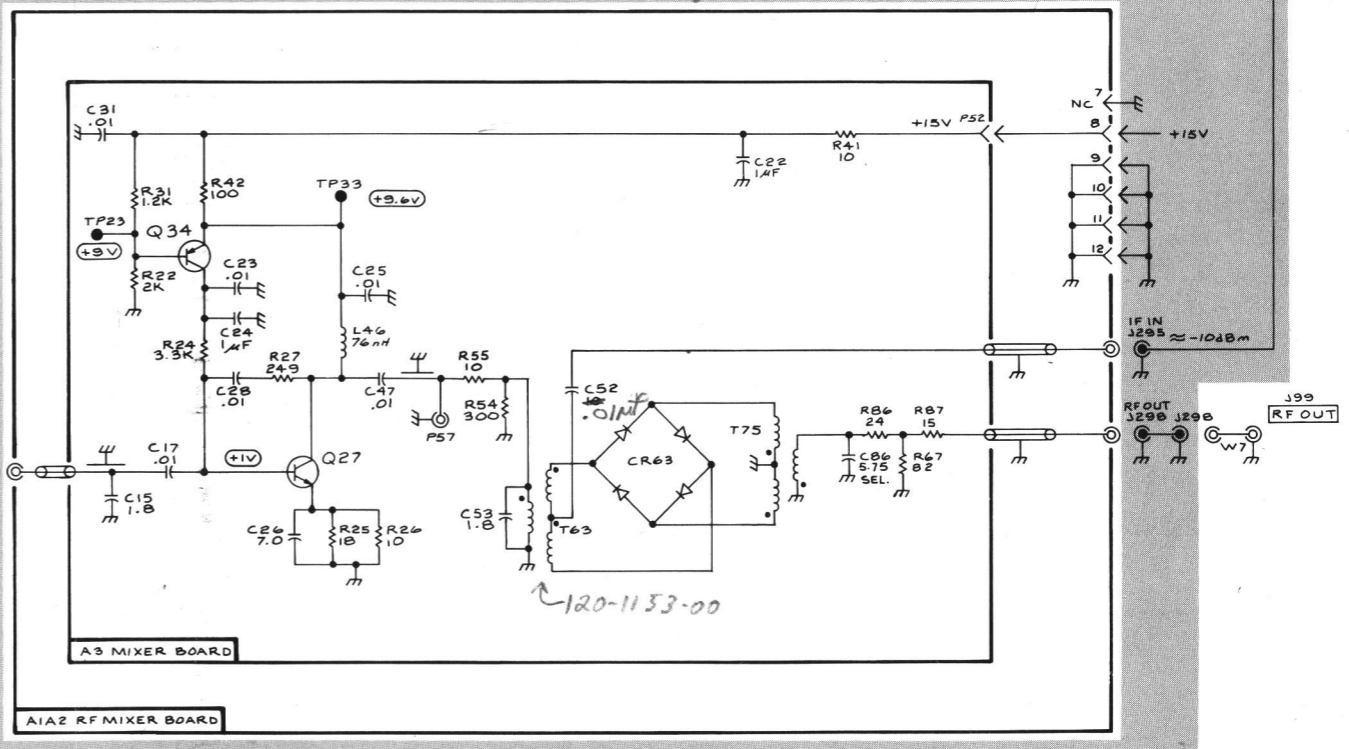
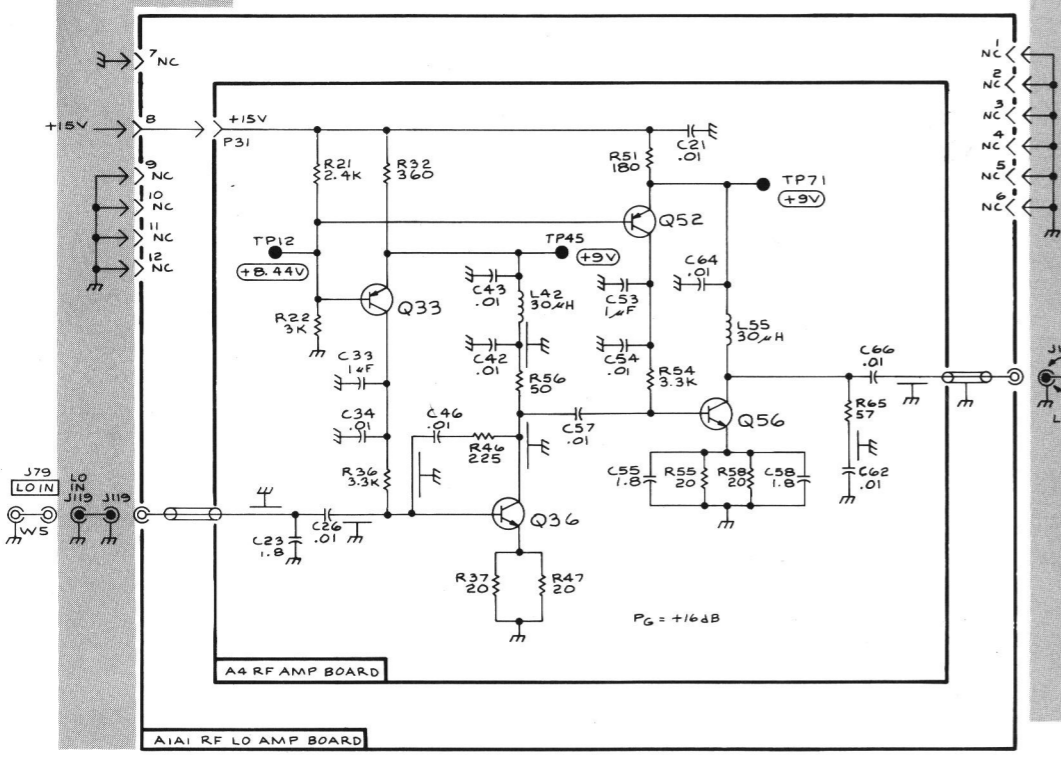


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⊗ Static Sensitive Devices
See Maintenance Section



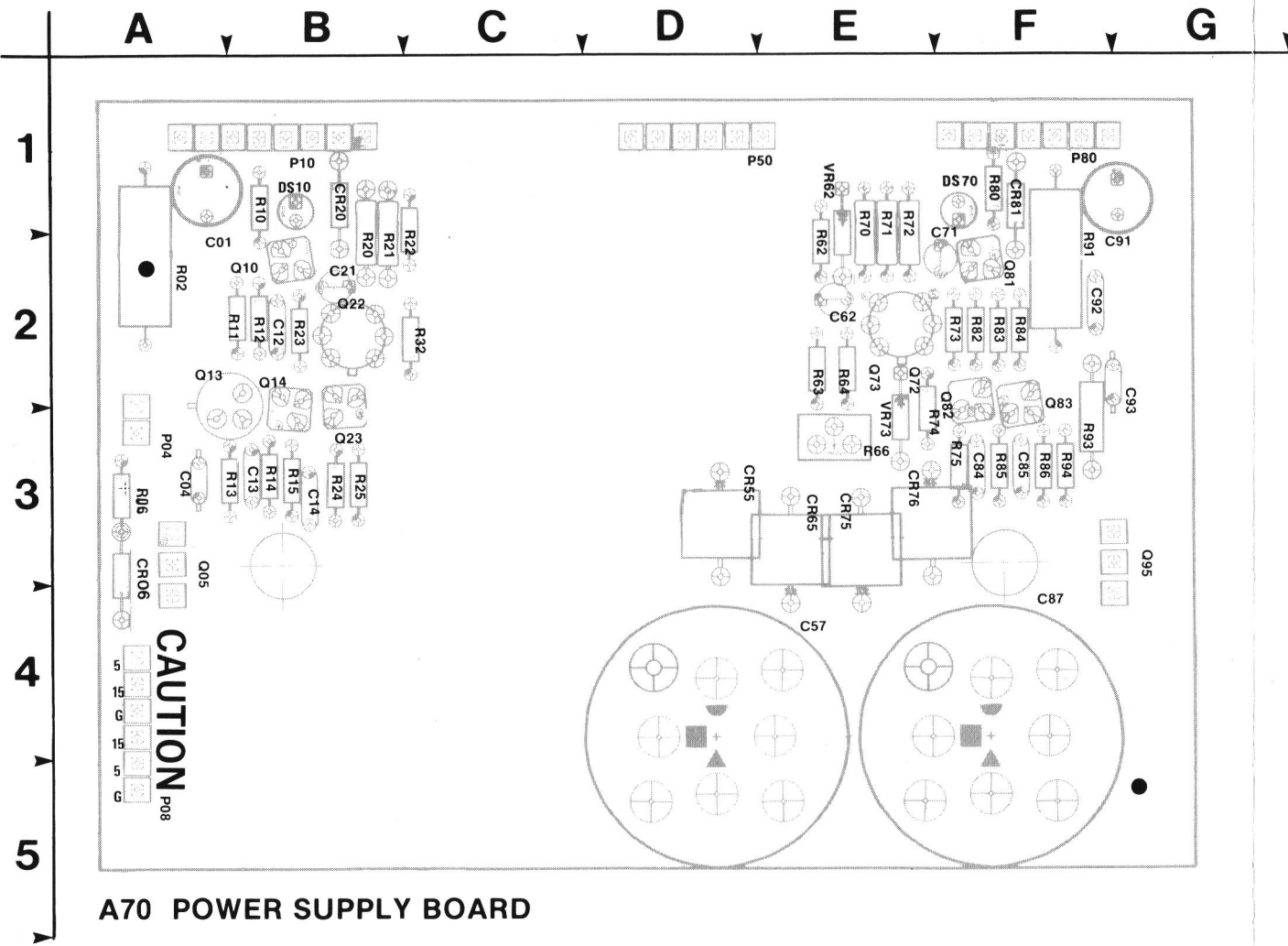
067-0886-01 & UP
TEST MODULATOR

3530-30

UP CONVERTER 3

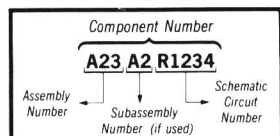
UP CONVERTER

3



A70 POWER SUPPLY BOARD

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

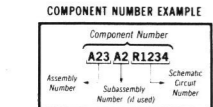
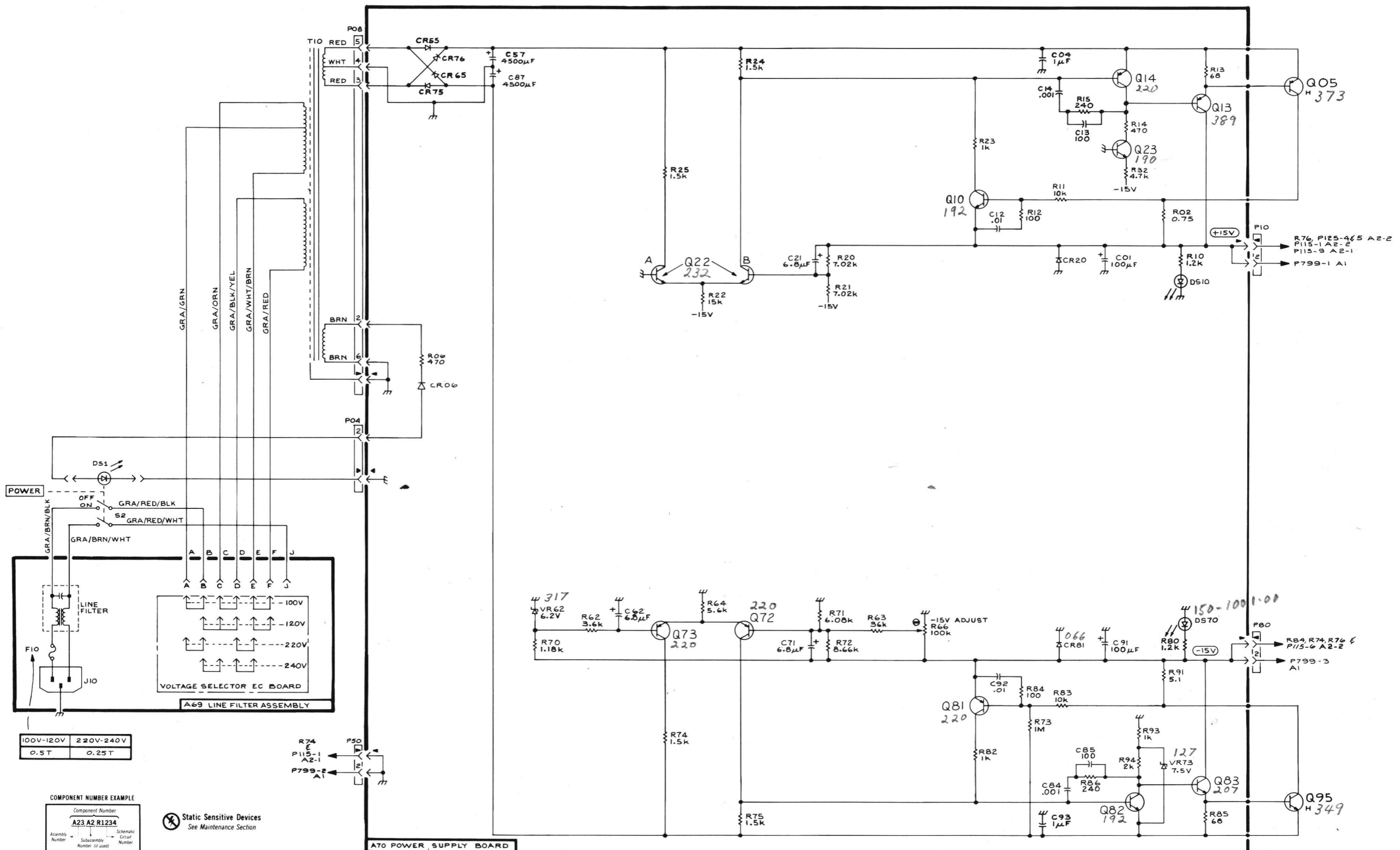
Static Sensitive Devices
See Maintenance Section

ASSEMBLY A70					
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
C1	G2	A2	Q81	F5	F2
C4	G1	A3	Q82	G5	F3
C12	F1	B2	Q83	H5	F3
C13	G1	B3	Q95	H5	G2
C14	G1	B3			
C21	E2	B2	R2	G2	A2
C57	C1	E4	R6	C2	A3
C62	D4	E2	R10	G2	B1
C71	E4	F2	R11	G1	B2
C84	G5	F3	R12	G2	B2
C85	G5	F3	R13	H1	B3
C87	C1	F4	R14	G1	B3
C91	G4	G2	R15	G1	B3
C92	F4	F2	R20	E2	B2
C93	G5	G2	R21	E2	B2
			R22	E2	C2
CR6	C3	A3	R23	F1	B2
CR20	G2	B1	R24	E1	B3
CR55	C1	D3	R25	D1	B3
CR65	C1	E3	R32	G1	C2
CR75	C1	E3	R62	D4	E2
CR76	C1	E3	R63	F4	E2
CR81	G4	F1	R64	E4	E2
			R66	F4	E3
DS10	G2	B1	R70	D4	E1
DS70	H4	F1	R71	E4	E1
			R72	E4	E1
			R73	G5	F2
P4	C3	A3	R74	D5	E3
P8	C1	A5	R75	E5	F3
P10	H2	B1	R80	G4	F1
P50	C5	E1	R82	F5	F2
P80	H4	F1	R83	G4	F2
			R84	G4	F2
Q5	H1	A3	R85	H5	F3
Q10	F1	B2	R86	G5	F3
Q13	H1	A2	R91	G4	F2
Q14	G1	B2	R93	G5	F3
Q22A	D2	B2	R94	G5	F3
Q22B	E2	B2			
Q23	G1	B3			
Q72	E4	E2	VR62	D4	E1
Q73	D4	E2	VR73	G5	E3

CHASSIS MOUNTED PARTS					
CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION	CIRCUIT NUMBER	SCHEM LOCATION	BOARD LOCATION
DS1	A3	CHASSIS	Q5	H1	CHASSIS
F10	A4	CHASSIS	Q95	H5	CHASSIS
J10	A4	CHASSIS	T10	B1	CHASSIS

COMPONENT LOCATIONS A70

A B C D E F G H



⊗ Static Sensitive Devices
See Maintenance Section

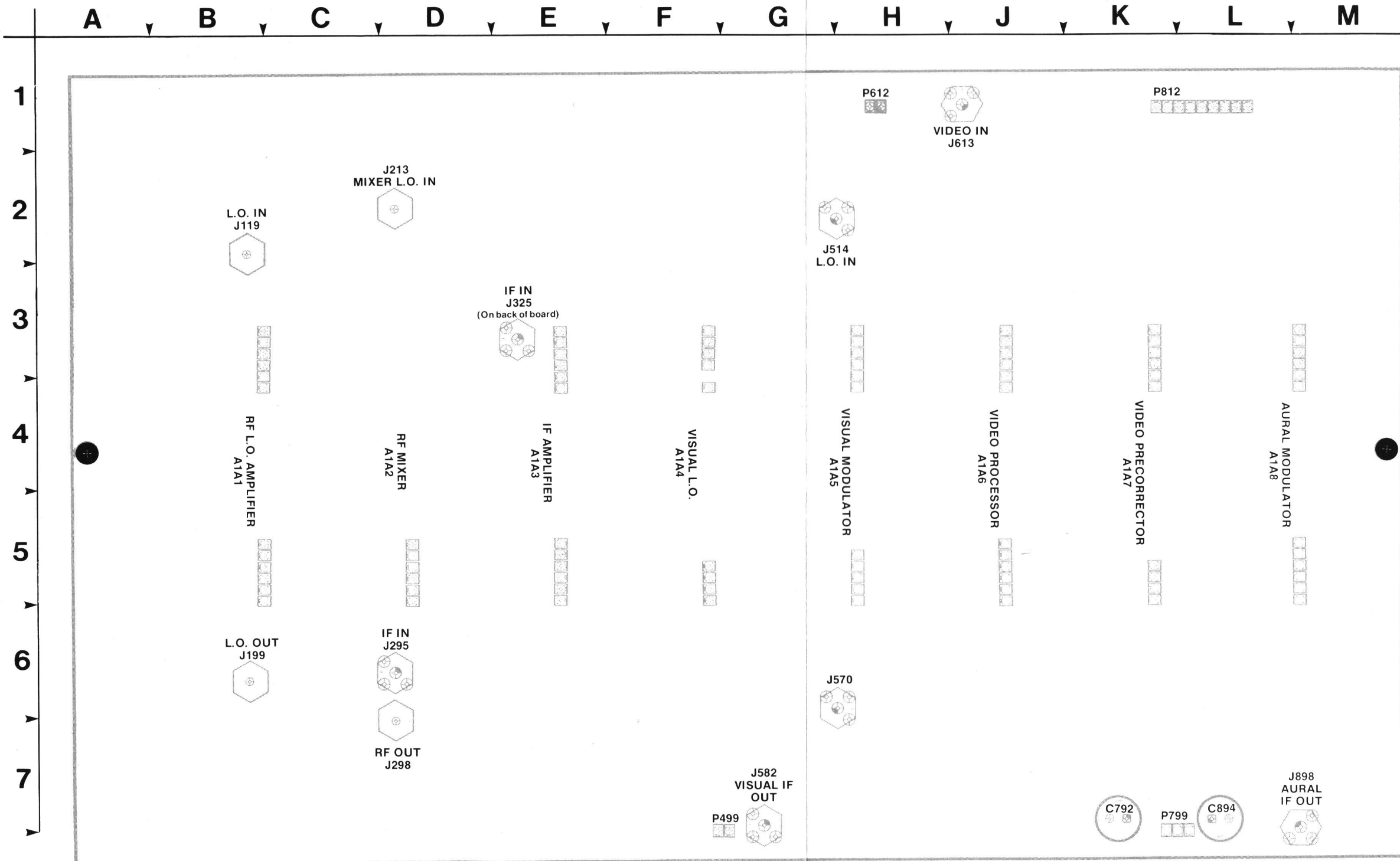
067-0886-01 & UP
TEST MODULATOR

@ f 3530-31

POWER SUPPLY

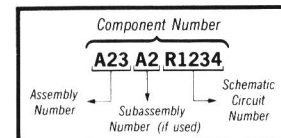
POWER SUPPLY

4



A1 INTERFACE

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.

 **Static Sensitive Devices**
See Maintenance Section

COMPONENT LOCATIONS
A1

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.

SPECIAL NOTES AND SYMBOLS

- X000 Part first added at this serial number
- 00X Part removed after this serial number

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
 ---*---
Detail Part of Assembly and/or Component
Attaching parts for Detail Part
 ---*---
Parts of Detail Part
Attaching parts for Parts of Detail Part
 ---*---

```

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. The separation symbol ---\*--- indicates the end of attaching parts.

**Attaching parts must be purchased separately, unless otherwise specified.**

## 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.

## ABBREVIATIONS

|       |                    |         |                       |          |                      |          |                 |
|-------|--------------------|---------|-----------------------|----------|----------------------|----------|-----------------|
| "     | INCH               | ELECTRN | ELECTRON              | IN       | INCH                 | SE       | SINGLE END      |
| #     | NUMBER SIZE        | ELEC    | ELECTRICAL            | INCAND   | INCANDESCENT         | SECT     | SECTION         |
| ACTR  | ACTUATOR           | ELCTLT  | ELECTROLYTIC          | INSUL    | INSULATOR            | SEMICOND | SEMICONDUCTOR   |
| ADPTR | ADAPTER            | ELEM    | ELEMENT               | INTL     | INTERNAL             | SHLD     | SHIELD          |
| ALIGN | ALIGNMENT          | EPL     | ELECTRICAL PARTS LIST | LPHLDR   | LAMPHOLDER           | SHLDR    | SHOULDERED      |
| AL    | ALUMINUM           | EQPT    | EQUIPMENT             | MACH     | MACHINE              | SKT      | SOCKET          |
| ASSEM | ASSEMBLED          | EXT     | EXTERNAL              | MECH     | MECHANICAL           | SL       | SLIDE           |
| ASSY  | ASSEMBLY           | FIL     | FILLISTER HEAD        | MTG      | MOUNTING             | SLFLKG   | SELF-LOCKING    |
| ATTEN | ATTENUATOR         | FLEX    | FLEXIBLE              | NIP      | NIPPLE               | SLVG     | SLEEVING        |
| AWG   | AMERICAN WIRE GAGE | FLH     | FLAT HEAD             | NON WIRE | NOT WIRE WOUND       | SPR      | SPRING          |
| BD    | BOARD              | FLTR    | FILTER                | OBD      | ORDER BY DESCRIPTION | SQ       | SQUARE          |
| BRKT  | BRACKET            | FR      | FRAME or FRONT        | OD       | OUTSIDE DIAMETER     | SST      | STAINLESS STEEL |
| BRS   | BRASS              | FSTNR   | FASTENER              | OVH      | OVAL HEAD            | STL      | STEEL           |
| BRZ   | BRONZE             | FT      | FOOT                  | PH BRZ   | PHOSPHOR BRONZE      | SW       | SWITCH          |
| BSHG  | BUSHING            | FXD     | FIXED                 | PL       | PLAIN or PLATE       | T        | TUBE            |
| CAB   | CABINET            | GSKT    | GASKET                | PLSTC    | PLASTIC              | TERM     | TERMINAL        |
| CAP   | CAPACITOR          | HDL     | HANDLE                | PN       | PART NUMBER          | THD      | THREAD          |
| CER   | CERAMIC            | HEX     | HEXAGON               | PNH      | PAN HEAD             | THK      | THICK           |
| CHAS  | CHASSIS            | HEX HD  | HEXAGONAL HEAD        | PWR      | POWER                | TNSN     | TENSION         |
| CKT   | CIRCUIT            | HEX SOC | HEXAGONAL SOCKET      | RCPT     | RECEPTACLE           | TPG      | TAPPING         |
| COMP  | COMPOSITION        | HLCPS   | HELICAL COMPRESSION   | RES      | RESISTOR             | TRH      | TRUSS HEAD      |
| CONN  | CONNECTOR          | HLEXT   | HELICAL EXTENSION     | RGD      | RIGID                | V        | VOLTAGE         |
| COV   | COVER              | HV      | HIGH VOLTAGE          | RLF      | RELIEF               | VAR      | VARIABLE        |
| CPLG  | COUPLING           | IC      | INTEGRATED CIRCUIT    | RTNR     | RETAINER             | W/       | WITH            |
| CRT   | CATHODE RAY TUBE   | ID      | INSIDE DIAMETER       | SCH      | SOCKET HEAD          | WSHR     | WASHER          |
| DEG   | DEGREE             | IDENT   | IDENTIFICATION        | SCOPE    | OSCILLOSCOPE         | XFMR     | TRANSFORMER     |
| DWR   | DRAWER             | IMPLR   | IMPELLER              | SCR      | SCREW                | XSTR     | TRANSISTOR      |

CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

| Mfr. Code | Manufacturer                                             | Address                          | City, State, Zip            |
|-----------|----------------------------------------------------------|----------------------------------|-----------------------------|
| 000CY     | NORTHWEST FASTENER SALES, INC.                           | 7923 SW CIRBUS DRIVE             | BEAVERTON, OREGON 97005     |
| 000FJ     | MARCOM SWITCHES INC.                                     | 67 ALBANY STREET                 | CAZENOVIA, N.Y. 13035       |
| 00779     | AMP, INC.                                                | P O BOX 3608                     | HARRISBURG, PA 17105        |
| 04713     | MOTOROLA, INC., SEMICONDUCTOR PROD. DIV.                 | 5005 E MCDOWELL RD, PO BOX 20923 | PHOENIX, AZ 85036           |
| 09922     | BURNDY CORPORATION                                       | RICHARDS AVENUE                  | NORWALK, CT 06852           |
| 12327     | FREEWAY CORPORATION                                      | 9301 ALLEN DRIVE                 | CLEVELAND, OH 44125         |
| 14566     | COORS PORCELAIN COMPANY                                  | 600 9TH STREET                   | GOLDEN, CO 80401            |
| 22526     | BERG ELECTRONICS, INC.                                   | YOUK EXPRESSWAY                  | NEW CUMBERLAND, PA 17070    |
| 22599     | ESNA, DIV. OF AMERACE CORPORATION                        | 16150 STAGG STREET               | VAN NUYS, CA 91409          |
| 24931     | SPECIALITY CONNECTOR CO., INC.                           | 2620 ENDRESS PLACE               | GREENWOOD, IN 46142         |
| 59730     | THOMAS AND BETTS COMPANY                                 | 36 BUTLER ST.                    | ELIZABETH, NJ 07207         |
| 70485     | ATLANTIC INDIA RUBBER WORKS, INC.                        | 571 W. POLK ST.                  | CHICAGO, IL 60607           |
| 71590     | CENTRALAB ELECTRONICS, DIV. OF<br>GLOBE-UNION, INC.      | P O BOX 858                      | FORT DODGE, IA 50501        |
| 71785     | TRW, CINCH CONNECTORS                                    | 1501 MORSE AVENUE                | ELK GROVE VILLAGE, IL 60007 |
| 73743     | FISCHER SPECIAL MFG. CO.                                 | 446 MORGAN ST.                   | CINCINNATI, OH 45206        |
| 73803     | TEXAS INSTRUMENTS, INC., METALLURGICAL<br>MATERIALS DIV. | 34 FOREST STREET                 | ATTLEBORO, MA 02703         |
| 77969     | RUBBERCRAFT CORP. OF CALIF., LTD.                        | 1800 W. 220TH ST.                | TORRANCE, CA 90507          |
| 78189     | ILLINOIS TOOL WORKS, INC.<br>SHAKEPROOF DIVISION         | ST. CHARLES ROAD                 | ELGIN, IL 60120             |
| 79807     | WROUGHT WASHER MFG. CO.                                  | 2100 S. O BAY ST.                | MILWAUKEE, WI 53207         |
| 80009     | TEKTRONIX, INC.                                          | P O BOX 500                      | BEAVERTON, OR 97077         |
| 83385     | CENTRAL SCREW CO.                                        | 2530 CRESCENT DR.                | BROADVIEW, IL 60153         |
| 86445     | PENN FIBRE AND SPECIALTY CO., INC.                       | 2032 E. WESTMORELAND ST.         | PHILADELPHIA, PA 19134      |
| 89663     | REESE, J. RAMSEY, INC.                                   | 71 MURRAY STREET                 | NEW YORK, NY 10007          |
| 91506     | AUGAT, INC.                                              | 33 PERRY AVE.                    | ATTLEBORO, MA 02703         |
| 93907     | CAMCAR SCREW AND MFG. CO.                                | 600 18TH AVE.                    | ROCKFORD, IL 61101          |
| 98291     | SEAELECTRO CORP.                                         | 225 HOYT                         | MAMARONECK, NY 10544        |

Replaceable Mechanical Parts—067-0886-01 & up

| Fig. & Index No. | Tektronix Part No. | Serial/Model No. Eff Dscont | Qty | 1 | 2 | 3 | 4 | 5 | Name & Description                                                            | Mfr Code | Mfr Part Number  |
|------------------|--------------------|-----------------------------|-----|---|---|---|---|---|-------------------------------------------------------------------------------|----------|------------------|
| 1-1              | 390-0655-03        |                             | 1   |   |   |   |   |   | CABINET TOP:W/HANDLE RETAINER,17.96                                           | 80009    | 390-0655-03      |
| -2               | 367-0248-03        |                             | 1   |   |   |   |   |   | HANDLE,CARRYING:16.34 L,W/CLIP,TV GRAY                                        | 80009    | 367-0248-03      |
| -3               | 200-2191-01        |                             | 2   |   |   |   |   |   | CAP,RETAINER:PLASTIC,TY GRAY                                                  | 80009    | 200-2191-01      |
| -4               | 343-0752-00        |                             | 2   |   |   |   |   |   | RETRAINER,HANDLE:STAINLESS STEEL                                              | 80009    | 343-0752-00      |
| -5               | 390-0783-01        |                             | 2   |   |   |   |   |   | CABINET SIDE:7.0 X 17.966,TV GRAY                                             | 80009    | 390-0783-01      |
| -6               | 390-0647-01        |                             | 1   |   |   |   |   |   | CABINET BOTTOM:0.5 RACK X 17.96,TV GRAY                                       | 80009    | 390-0647-01      |
| -7               | 348-0544-02        |                             | 4   |   |   |   |   |   | RTNR,CAB COVER:CORNER,TV GRAY,POLYCARBPMATE<br>(ATTACHING PARTS)              | 80009    | 348-0544-02      |
| -8               | 213-0782-00        |                             | 4   |   |   |   |   |   | SCREW,TPG,TF:8-32 X 0.625 FILH,STEEL CD PL<br>- - - * - - -                   | 93907    | OBD              |
| -9               | 124-0354-01        |                             | 2   |   |   |   |   |   | STRIP,TRIM:CORNER, TOP, BLUE, 17.41 L                                         | 80009    | 124-0354-01      |
| -10              | 348-0617-01        |                             | 2   |   |   |   |   |   | FOOT,CABINET:BOT,TV GRAY,POLYCARBONATE                                        | 80009    | 348-0617-01      |
| -11              | 348-0596-00        |                             | 2   |   |   |   |   |   | PAD,CAB.FOOT:0.69 X 0.255 X 0.06,PU                                           | 80009    | 348-0596-00      |
| -12              | 124-0355-01        |                             | 2   |   |   |   |   |   | STRIP,TRIM:CORNER,BOTTOM,PVC,TV GRAY                                          | 80009    | 124-0355-01      |
| -13              | 348-0617-01        |                             | 2   |   |   |   |   |   | FOOT,CABINET:BOT,TV GRAY,POLYCARBONATE                                        | 80009    | 348-0617-01      |
| -14              | 348-0596-00        |                             | 2   |   |   |   |   |   | PAD,CAB.FOOT:0.69 X 0.255 X 0.06,PU                                           | 80009    | 348-0596-00      |
| -15              | 348-0618-01        |                             | 2   |   |   |   |   |   | FLIP-STAND,CAB.:2.5 H,AL,FINISHED                                             | 80009    | 348-0618-01      |
| -16              | 260-1961-00        |                             | 1   |   |   |   |   |   | SWITCH,ROCKER:DPST,6(4),250V                                                  | 000FJ    | OBD              |
| -17              | -----              |                             | 1   |   |   |   |   |   | CABLE ASSY,RF:75 OHM COAX,14.5 L(SEE W1 EPL)                                  |          |                  |
| -18              | -----              |                             | 1   |   |   |   |   |   | CABLE ASSY,RF:50 OHM COAX,7.5 L(SEE W8 EPL)                                   |          |                  |
| -19              | -----              |                             | 1   |   |   |   |   |   | CONNECTOR,RCPT:CKT BD,28/56 CONTACT(SEE J66 EPL)                              |          |                  |
| -20              | 210-0255-00        |                             | 1   |   |   |   |   |   | TERMINAL,LUG:0.391" ID INT TOOTH                                              | 80009    | 210-0255-00      |
| -21              | -----              |                             | 1   |   |   |   |   |   | CKT BOARD ASSY:DIRECTIONAL COUPLER(SEE A5 EPL)                                |          |                  |
| -22              | 131-0156-00        |                             | 2   |   |   |   |   |   | . CONNECTOR,RCPT,:COAXIAL(A5P110,A5P221)                                      | 98291    | 051-043-0669     |
| -23              | 202-0222-03        |                             | 1   |   |   |   |   |   | . CAN,MU METAL:MARKED                                                         | 80009    | 202-0222-03      |
| -24              | 131-1097-00        |                             | 1   |   |   |   |   |   | . CONNECTOR,RCPT,:BNC,FEMALE,CKT BOARD MT(P220)                               | 24931    | 28JR20-2         |
| -25              | 210-0845-00        |                             | 1   |   |   |   |   |   | WASHER,FLAT:0.500 ID X 0.625 INCH OD,STL                                      | 89663    | 634-R            |
| -26              | 366-0497-00        |                             | 2   |   |   |   |   |   | KNOB:GY,0.127 ID X0.706 OD                                                    | 80009    | 366-0497-00      |
| -26              | 213-0153-00        |                             | 2   |   |   |   |   |   | . SETSCREW:5-40 X 0.125,STL BK OXD,HEX                                        | 000CY    | OBD              |
| -27              | -----              |                             | 1   |   |   |   |   |   | RES.,VAR, NONWIR:PNL,2.5K OHM,1W(SEE R76 EPL)<br>(ATTACHING PARTS)            |          |                  |
| -28              | 210-0583-00        |                             | 1   |   |   |   |   |   | NUT,PLAIN,HEX.:0.25-32 X 0.312 INCH,BRS                                       | 73743    | 2X20317-402      |
| -29              | 210-0940-00        |                             | 1   |   |   |   |   |   | WASHER,FLAT:0.25 ID X 0.375 INCH OD,STL                                       | 79807    | OBD              |
| -30              | 210-0046-00        |                             | 1   |   |   |   |   |   | WASHER,LOCK:0.261 ID,INTL,0.018 THK,BRS<br>- - - * - - -                      | 78189    | 1214-05-00-0541C |
| -31              | -----              |                             | 1   |   |   |   |   |   | CABLE ASSY,RF:50 OHM COAX,7.0 L,N-N(SEE W5 EPL)<br>(ATTACHING PARTS)          |          |                  |
| -32              | 210-0583-00        |                             | 1   |   |   |   |   |   | NUT,PLAIN,HEX.:0.25-32 X 0.312 INCH,BRS                                       | 73743    | 2X20317-402      |
| -33              | 210-0940-00        |                             | 1   |   |   |   |   |   | WASHER,FLAT:0.25 ID X 0.375 INCH OD,STL<br>- - - * - - -                      | 79807    | OBD              |
| -34              | -----              |                             | 1   |   |   |   |   |   | CKT BOARD ASSY:VARIABLE ATTENUATOR(SEE A7 EPL)                                |          |                  |
| -35              | 131-0391-01        |                             | 2   |   |   |   |   |   | . CONNECTOR,RCPT,:50 OHM,COAX,SNAP-ON MALE<br>(A7P122,A7P330)                 | 98291    | 51-051-0119      |
| -36              | -----              |                             | 1   |   |   |   |   |   | . RES.,VAR, NONWIR:100 OHM,20%,0.50W<br>(SEE A7R225 EPL)<br>(ATTACHING PARTS) |          |                  |
| -37              | 210-0583-00        |                             | 1   |   |   |   |   |   | NUT,PLAIN,HEX.:0.25-32 X 0.312 INCH,BRS                                       | 73743    | 2X20317-402      |
| -38              | 210-0940-00        |                             | 1   |   |   |   |   |   | WASHER,FLAT:0.25 ID X 0.375 INCH OD,STL                                       | 79807    | OBD              |
| -39              | 210-0046-00        |                             | 1   |   |   |   |   |   | WASHER,LOCK:0.261 ID,INTL,0.018 THK,BRS<br>- - - * - - -                      | 78189    | 1214-05-00-0541C |
| -40              | -----              |                             | 1   |   |   |   |   |   | CABLE ASSY,RF:50 OHM COAX,10.0 L,O-N(SEE W7 EPL)                              |          |                  |
| -41              | 210-1010-00        |                             | 1   |   |   |   |   |   | WASHER,FLAT:0.643 ID X 0.875 INCH OD                                          | 83385    | OBD              |
| -42              | 358-0301-00        |                             | 3   |   |   |   |   |   | BUSHING,SLEEVE:FOR 0.185 DIA HOLE,GRAY                                        | 80009    | 358-0301-00      |
| -43              | 333-2769-00        |                             | 1   |   |   |   |   |   | PANEL,FRONT:<br>(ATTACHING PARTS)                                             | 80009    | 333-2769-00      |
| -44              | 210-0457-00        |                             | 2   |   |   |   |   |   | NUT,PL,ASSEM WA:6-32 X 0.312 INCH,STL<br>- - - * - - -                        | 83385    | OBD              |
| -45              | -----              |                             | 1   |   |   |   |   |   | LT,EMITTING DIO:GREEN,560 NM,40 MA(SEE DS18 EPL)                              |          |                  |
| -46              | -----              |                             | 1   |   |   |   |   |   | RES.,VAR, NONWIR:PNL,2.5K OHM,1W(SEE R74 EPL)                                 |          |                  |
| -47              | -----              |                             | 1   |   |   |   |   |   | RES.,VAR, NONWIR:50K OHM,20%,1W(SEE R84 EPL)                                  |          |                  |
| -48              | -----              |                             | 1   |   |   |   |   |   | RES.,VAR, NONWIR:5K OHM,20%,1W(SEE R94 EPL)                                   |          |                  |
| -49              | 210-0046-00        |                             | 3   |   |   |   |   |   | WASHER,LOCK:0.261 ID,INTL,0.018 THK,BRS                                       | 78189    | 1214-05-00-0541C |
| -50              | 210-0471-00        |                             | 3   |   |   |   |   |   | NUT,SLEEVE:HEX.,0.312 X 0.594 INCH LONG<br>(ATTACHING PARTS)                  | 80009    | 210-0471-00      |
| -51              | 358-0409-00        |                             | 3   |   |   |   |   |   | BSHG,MACH.THD:0.25-32 X 0.159 ID X 0.24                                       | 80009    | 358-0409-00      |
| -52              | 210-1026-00        |                             | 3   |   |   |   |   |   | WASHER,LOCK:EXTERNAL,0.25 INCH DIAMETER<br>- - - * - - -                      | 78189    | 1114-00          |

# Replaceable Mechanical Parts—067-0886-01 & up

| Fig. & Index No. | Tektronix Part No. | Serial/Model No. Eff Dscont | Qty | 1 2 3 4 5 | Name & Description                                                                | Mfr Code | Mfr Part Number |
|------------------|--------------------|-----------------------------|-----|-----------|-----------------------------------------------------------------------------------|----------|-----------------|
| 1-53             | 386-4609-00        |                             | 1   |           | SUBPANEL, FRONT:<br>(ATTACHING PARTS)                                             | 80009    | 386-4609-00     |
| -54              | 213-0123-00        |                             | 8   |           | SCREW, TPG, TF: 6-32 X 0.375, SPCL TYPE, FLH<br>- - - * - - -                     | 93907    | OBD             |
| -55              | 366-1559-04        |                             | 9   |           | PUSH BUTTON: SIL GY, OFF                                                          | 80009    | 366-1559-04     |
| -56              | 366-1559-00        |                             | 1   |           | PUSH BUTTON: SIL GY, 0.18 SQ X 0.43                                               | 80009    | 366-1559-00     |
| -57              | -----              |                             | 1   |           | CKT BOARD ASSY: SWITCH BOARD (SEE A2-1 EPL)                                       |          |                 |
| -58              | -----              |                             | 1   |           | . SWITCH, PUSH: 5 STA, 2 POLE, CORR/UNCORRECT<br>- . (SEE A2-1S125, A2-1S129 EPL) |          |                 |
| -59              | -----              |                             | 3   |           | . SWITCH, PUSH: 1 BUTTON, DPDT<br>- . (SEE A2-1S110, A2-1S115, A2-1S120 EPL)      |          |                 |
| -60              | 361-0411-00        |                             | 10  |           | . SPACER, PUSH SW: 0.13 W X 0.375 INCH L, PLSTC                                   | 71590    | J64285-00       |
| -61              | 136-0608-00        |                             | 15  |           | . SKT, PL-IN ELEK: ELECTRON TUBE, 14 CONT                                         | 80009    | 136-0608-00     |
| -62              | 407-2680-00        |                             | 1   |           | . BRACKET, SUPPORT: CIRCUIT BOARD, AL<br>(ATTACHING PARTS)                        | 80009    | 407-2680-00     |
| -63              | 211-0007-00        |                             | 4   |           | . SCREW, MACHINE: 4-40 X 0.188 INCH, PNH STL<br>- - - * - - -                     | 83385    | OBD             |
| -64              | 220-0407-00        |                             | 2   |           | NUT, SLFLKG, HEX: 6-32 X 0.312 HEX, STL                                           | 22599    | 22NM-62         |
| -65              | -----              |                             | -   |           | CKT BOARD ASSY: SWITCH BOARD (SEE A2-2 EPL)                                       |          |                 |
| -66              | -----              |                             | 1   |           | . SWITCH, PUSH: 1 STA, 2 POLE, MOMENTARY<br>- . (SEE A2-2S129 EPL)                |          |                 |
| -67              | -----              |                             | 4   |           | . SWITCH, PUSH: 1 BUTTON, DPDT<br>- . (SEE A2-2S125 EPL)                          |          |                 |
| -68              | 361-0411-00        |                             | 10  |           | . SPACER, PUSH SW: 0.13 W X 0.375 INCH L, PLSTC                                   | 71590    | J64285-00       |
| -69              | 136-0608-00        |                             | 15  |           | . SKT, PL-IN ELEK: ELECTRON TUBE, 14 CONT                                         | 80009    | 136-0608-00     |
| -70              | 407-2680-00        |                             | 1   |           | . BRACKET, SUPPORT: CIRCUIT BOARD, AL<br>(ATTACHING PARTS)                        | 80009    | 407-2680-00     |
| -71              | 211-0007-00        |                             | 4   |           | . SCREW, MACHINE: 4-40 X 0.188 INCH, PNH STL<br>- - - * - - -                     | 83385    | OBD             |
| -72              | 220-0407-00        |                             | 2   |           | NUT, SLFLKG, HEX: 6-32 X 0.312 HEX, STL CD PL                                     | 22599    | 22NM-62         |
| -73              | 426-1555-02        |                             | 1   |           | FRAME CABINET: OPEN FRONT, 7.0 X 1/2 RACK<br>(ATTACHING PARTS)                    | 80009    | 426-1555-02     |
| -74              | 213-0863-00        |                             | 4   |           | SCREW, TPG, TF: 8-32 X 1.375, TAPTITE, FILH<br>- - - * - - -                      | 93907    | OBD             |
| -75              | 426-1469-04        |                             | 1   |           | FRAME, CABINET: REAR, AL<br>(ATTACHING PARTS)                                     | 80009    | 426-1469-04     |
| -76              | 213-0863-00        |                             | 4   |           | SCREW, TPG, TF: 8-32 X 1.375, TAPTITE, FILH<br>- - - * - - -                      | 93907    | OBD             |
| -77              | 351-0657-00        |                             | 4   |           | GUIDE, PLUG-IN: POWER SUPPLY, AL<br>(ATTACHING PARTS)                             | 80009    | 351-0657-00     |
| -78              | 211-0507-00        |                             | 8   |           | SCREW, MACHINE: 6-32 X 0.312 INCH, PNH STL<br>- - - * - - -                       | 83385    | OBD             |
| -79              | 426-1828-00        |                             | 4   |           | FRAME SECT. CAB.: CORNER                                                          | 80009    | 426-1828-00     |

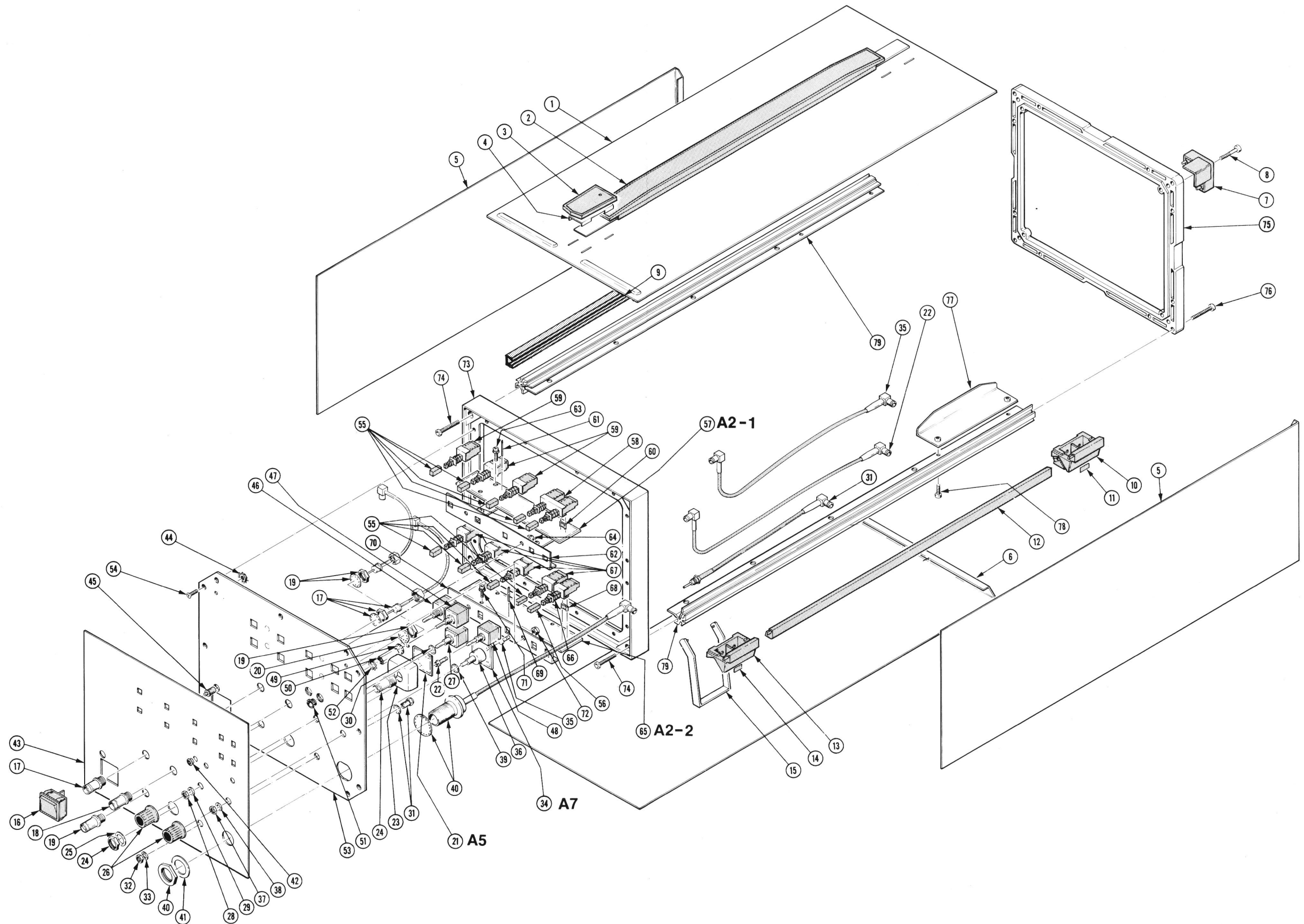
Replaceable Mechanical Parts—067-0886-01 & up

| Fig. & Index No. | Tektronix Part No. | Serial/Model No. Eff | Dscont | Qty | 1 2 3 4 5 | Name & Description                                            | Mfr Code | Mfr Part Number |
|------------------|--------------------|----------------------|--------|-----|-----------|---------------------------------------------------------------|----------|-----------------|
| 2-1              | 380-0502-01        |                      |        | 1   |           | HOUSING,CKT BD:5.775 L X 2.13 W,AL                            | 80009    | 380-0502-01     |
| -2               | 200-2077-00        |                      |        | 1   |           | COVER,CKT BD:ALUMINUM<br>(ATTACHING PARTS)                    | 80009    | 200-2077-00     |
| -3               | 211-0294-00        |                      |        | 8   |           | SCREW MACHINE:M3 X 0.5 X 10MM,PNH,TORX DR<br>- - - * - - -    | 93907    | OBD             |
| -4               | -----              |                      |        | 1   |           | CKT BOARD ASSY:R.F. AMP(SEE A8 EPL)                           |          |                 |
| -5               | 175-2590-00        |                      |        | 2   |           | . CABLE ASSY,RF:50 OHM COAX,3.0 L                             | 80009    | 175-2590-00     |
| -6               | 136-0263-04        |                      |        | 1   |           | . SOCKET,PIN TERM:FOR 0.025 INCH SQUARE PIN                   | 22526    | 75377-001       |
| -7               | 214-0579-00        |                      |        | 3   |           | . TERM,TEST POINT:BRS CD PL(A8TP13,A8TP45,<br>- . A8TP71 EPL) | 80009    | 214-0579-00     |
| -8               | -----              |                      |        | 1   |           | CKT BOARD ASSY:R.F. L.O. AMP(SEE A8 EPL)                      |          |                 |
| -9               | 131-1771-00        |                      |        | 1   |           | . CONNECTOR,RCPT,:CIRCUIT BOARD,6 FEMALE                      | 22526    | 65001-111       |
| -10              | 131-0589-00        |                      |        | 1   |           | . TERM,PIN:0.46 L X 0.025 SQ.PH BRZ GL<br>(ATTACHING PARTS)   | 22526    | 47350           |
| -11              | 211-0033-00        |                      |        | 4   |           | . SCR,ASSEM WSHR:4-40 X 0.312 PNH,STL,CD PL                   | 83385    | OBD             |
| -12              | 210-1002-00        |                      |        | 8   |           | . WASHER,FLAT:0.125 ID X 0.25 INCH OD,BRS                     | 12327    | OBD             |
| -13              | 210-0586-00        |                      |        | 4   |           | . NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL<br>- - - * - - -      | 83385    | 211-041800-00   |
| -14              | 380-0502-01        |                      |        | 1   |           | HOUSING,CKT BD:5.775 L X 2.13 W,AL                            | 80009    | 380-0502-01     |
| -15              | 200-2077-00        |                      |        | 1   |           | COVER,CKT BD:ALUMINUM<br>(ATTACHING PARTS)                    | 80009    | 200-2077-00     |
| -16              | 211-0294-00        |                      |        | 8   |           | . SCREW MACHINE:M3 X 0.5 X 10MM,PNH,TORX DR<br>- - - * - - -  | 93907    | OBD             |
| -17              | -----              |                      |        | 1   |           | CKT BOARD ASSY:I.F. AMP(SEE A1A3 EPL)                         |          |                 |
| -18              | 131-1771-00        |                      |        | 2   |           | . CONNECTOR,RCPT,:CIRCUIT BOARD,6 FEMALE                      | 22526    | 65001-111       |
| -19              | 214-0817-00        |                      |        | 4   |           | . HEAT SINK,XSTR:                                             | 14566    | A11193-T05      |
| -20              | 380-0502-01        |                      |        | 1   |           | SCREW MACHINE:M3 X 0.5 X 10MM,PNH,TORX DR                     | 93907    | OBD             |
| -21              | 200-2077-00        |                      |        | 1   |           | COVER,CKT BD:ALUMINUM<br>(ATTACHING PARTS)                    | 80009    | 200-2077-00     |
| -22              | 211-0294-00        |                      |        | 8   |           | SCREW MACHINE:M3 X 0.5 X 10MM,PNH,TORX DR<br>- - - * - - -    | 93907    | OBD             |
| -23              | -----              |                      |        | 1   |           | CKT BOARD ASSY:VISUAL MODULATOR(SEE A1A5 EPL)                 |          |                 |
| -24              | 131-1771-00        |                      |        | 2   |           | . CONNECTOR,RCPT,:CIRCUIT BOARD,6 FEMALE                      | 22526    | 65001-111       |
| -25              | 175-3675-00        |                      |        | 1   |           | . CABLE ASSY,RF:50 OHM COAX,2.75                              | 80009    | 175-3675-00     |
| -26              | 337-2881-00        |                      |        | 2   |           | . SHIELD,ELEC:CIRCUIT BOARD                                   | 80009    | 337-2881-00     |
| -27              | 131-2670-00        |                      |        | 2   |           | . CONTACT,ELEC:SST                                            | 80009    | 131-2670-00     |
| -28              | 337-2889-00        |                      |        | 1   |           | . SHIELD,ELEC:CIRCUIT BOARD                                   | 80009    | 337-2889-00     |
| -29              | 131-0608-00        |                      |        | 10  |           | TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD                      | 22526    | 47357           |
| -30              | 131-0993-00        |                      |        | 2   |           | . BUS,CONDUCTOR:2 WIRE BLACK                                  | 00779    | 530153-2        |
| -31              | 131-0265-00        |                      |        | 2   |           | . CONNECTOR,RCPT,:RIGHT ANGLE MOUNT                           | 98291    | 51-053-0000     |
| -32              | 200-0945-01        |                      |        | 2   |           | . COVER,HALF XSTR:DUAL TO-18,W/2-56 THD<br>(ATTACHING PARTS)  | 80009    | 200-0945-01     |
| -33              | 211-0001-00        |                      |        | 2   |           | . SCREW,MACHINE:2-56 X 0.25 INCH,PNH STL<br>- - - * - - -     | 83385    | OBD             |
| -34              | 380-0667-00        |                      |        | 1   |           | HOUSING,CKT BD:5.775 L X 1.44 W,AL                            | 80009    | 380-0667-00     |
| -35              | 200-2077-00        |                      |        | 1   |           | COVER,CKT BD:ALUMINUM<br>(ATTACHING PARTS)                    | 80009    | 200-2077-00     |
| -36              | 211-0294-00        |                      |        | 8   |           | SCREW MACHINE:M3 X 0.5 X 10MM COAX,3.0 L<br>- - - * - - -     | 80009    | 211-0294-00     |
| -37              | -----              |                      |        | 1   |           | CKT BOARD ASSY:VIDEO PRECORRECTOR(SEE A1A7 EPL)               |          |                 |
| -38              | 131-1771-00        |                      |        | 2   |           | . CONNECTOR,RCPT,:CIRCUIT BOARD,6 FEMALE                      | 22526    | 65001-111       |
| -39              | 131-0589-00        |                      |        | 22  |           | . TERM,PIN:0.46 L X 0.025 SQ.PH BRZ GL                        | 22526    | 47350           |
| -40              | 131-0993-00        |                      |        | 4   |           | . BUS,CONDUCTOR:2 WIRE BLACK<br>- . (670-6990-00 ONLY)        | 00779    | 530153-2        |
|                  | 131-0993-00        |                      |        | 6   |           | . BUS,CONDUCTOR:2 WIRE BLACK<br>- . (670-6969-00 ONLY)        | 00779    | 530153-2        |
| -41              | 380-0667-00        |                      |        | 1   |           | HOUSING,CKT BD:5.775 L X 1.44 W,AL                            | 80009    | 380-0667-00     |
| -42              | 348-0037-00        |                      |        | 2   |           | FOOT:BLACK RUBBER<br>(ATTACHING PARTS)                        | 70485    | 1059            |
| -43              | 211-0008-00        |                      |        | 2   |           | SCREW,MACHINE:4-40 X 0.250 PNH,STL,CD PL<br>- - - * - - -     | 83385    | OBD             |
| -44              | 200-2077-00        |                      |        | 1   |           | COVER,CKT BD:ALUMINUM<br>(ATTACHING PARTS)                    | 80009    | 200-2077-00     |
| -45              | 211-0294-00        |                      |        | 8   |           | SCREW MACHINE:M3 X 0.5 X 10MM,PNH,TORX DR<br>- - - * - - -    | 93907    | OBD             |

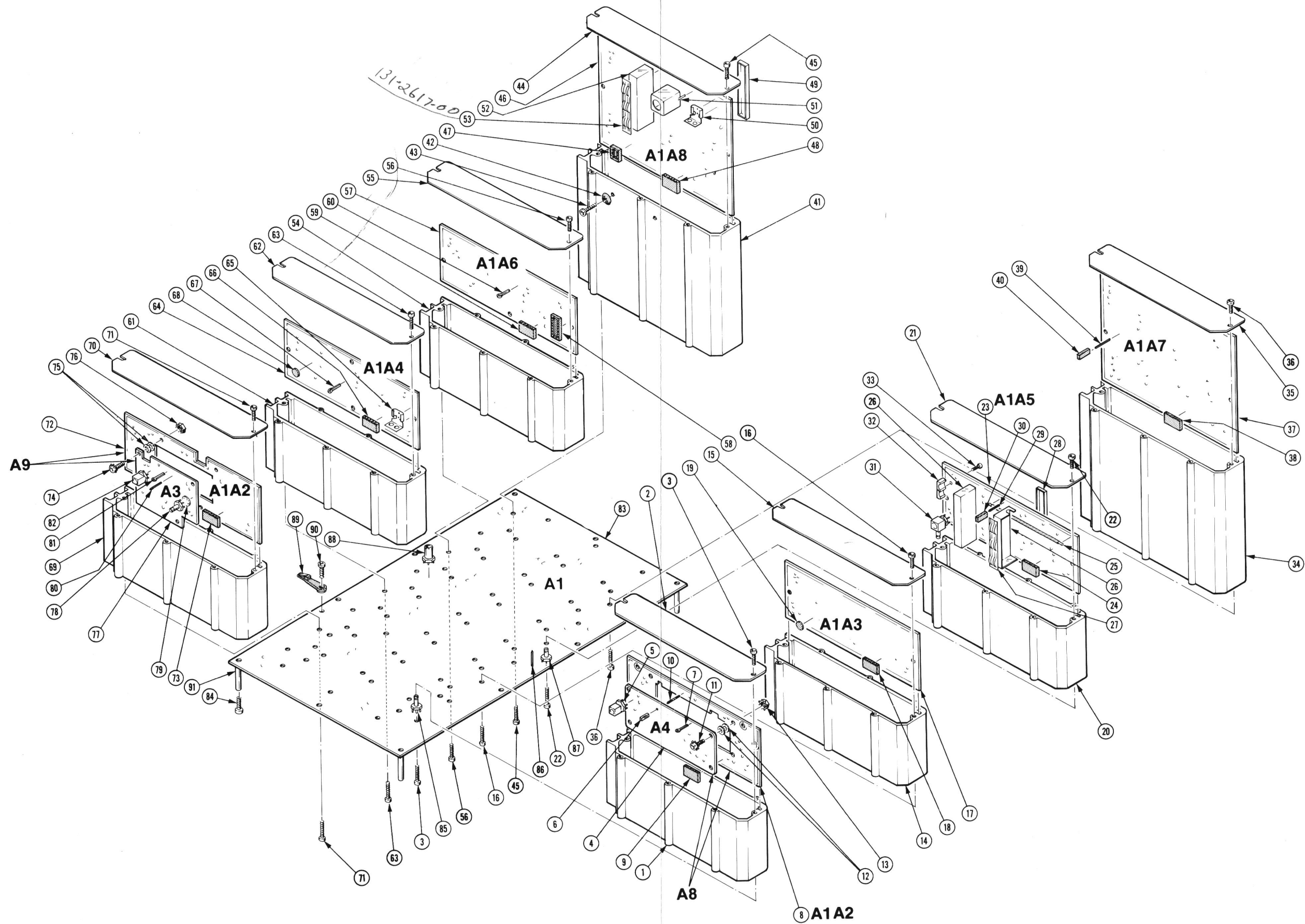
Replaceable Mechanical Parts—067-0886-01 & up

| Fig. & Index No. | Tektronix Part No. | Serial/Model No. Eff Dscont | Qty | 1 | 2 | 3 | 4 | 5 | Name & Description                                            | Mfr Code | Mfr Part Number |
|------------------|--------------------|-----------------------------|-----|---|---|---|---|---|---------------------------------------------------------------|----------|-----------------|
| 2-46             | -----              | -----                       | 1   |   |   |   |   |   | CKT BOARD ASSY:AURAL MODULATOR(SEE A1A8 EPL)                  |          |                 |
| -47              | 136-0514-00        |                             | 1   |   |   |   |   |   | . SKT,PL-IN ELEC:MICROCIRCUIT,8 DIP                           | 73803    | CS9002-8        |
| -48              | 131-1771-00        |                             | 2   |   |   |   |   |   | . CONNECTOR,RCPT,:CIRCUIT BOARD,6 FEMALE                      | 22526    | 65001-111       |
| -49              | 337-2899-00        |                             | 2   |   |   |   |   |   | . SHIELD,FAN:                                                 | 80009    | 337-2899-00     |
| -50              | 136-0208-00        |                             | 1   |   |   |   |   |   | . SOCKET,PLUG-IN:CRYSTAL AUGAT                                | 91506    | 8004-1G5        |
| -51              | 337-1417-00        |                             | 1   |   |   |   |   |   | . SHLD,ELECTRICAL:0.55 SQ X 0.685 INCH HIGH                   | 80009    | 337-1417-00     |
| -52              | 337-2881-00        |                             | 4   |   |   |   |   |   | . SHIELD,ELEC:CIRCUIT BOARD                                   | 80009    | 337-2881-00     |
| -53              | 131-2670-00        | 2617                        | 6   |   |   |   |   |   | . CONTACT,ELEC:SST                                            | 80009    | 131-2670-00     |
| -54              | 380-0502-01        |                             | 1   |   |   |   |   |   | HOUSING,CKT BD:5.775 L X 2.13 W,AL                            | 80009    | 380-0502-01     |
| -55              | 200-2077-00        |                             | 1   |   |   |   |   |   | COVER,CKT BD:ALUMINUM<br>(ATTACHING PARTS)                    | 80009    | 200-2077-00     |
| -56              | 211-0294-00        |                             | 8   |   |   |   |   |   | SCREW MACHINE:M3 X 0.5 X 10MM,PNH,TORX DR<br>- - - * - - -    | 93907    | OBD             |
| -57              | -----              | -----                       | 1   |   |   |   |   |   | CKT BOARD ASSY:VIDEO PROCESSOR(SEE A1A6 EPL)                  |          |                 |
| -58              | 136-0729-00        |                             | 1   |   |   |   |   |   | . SKT,PL-IN ELEC:MICROCKT,16 CONTACT                          | 09922    | DILB16P-108     |
| -59              | 131-1771-00        |                             | 2   |   |   |   |   |   | . CONNECTOR,RCPT,:CIRCUIT BOARD,6 FEMALE                      | 22526    | 65001-111       |
| -60              | 214-0579-00        |                             | 1   |   |   |   |   |   | . TERM,TEST POINT:BRS CD PL                                   | 80009    | 214-0579-00     |
| -61              | 380-0502-01        |                             | 1   |   |   |   |   |   | HOUSING,CKT BD:5.775 L X 2.13 W,AL                            | 80009    | 380-0502-01     |
| -62              | 200-2077-00        |                             | 1   |   |   |   |   |   | COVER,CKT BD:ALUMINUM<br>(ATTACHING PARTS)                    | 80009    | 200-2077-00     |
| -63              | 211-0294-00        |                             | 8   |   |   |   |   |   | SCREW MACHINE:M3 X 0.5 X 10MM,PNH,TORX DR<br>- - - * - - -    | 93907    | OBD             |
| -64              | -----              | -----                       | 1   |   |   |   |   |   | CKT BOARD ASSY:VISUAL L.O. (SEE A1A4 EPL)                     |          |                 |
| -65              | 136-0208-00        |                             | 1   |   |   |   |   |   | . SOCKET,PLUG-IN:CRYSTAL AUGAT                                | 91506    | 8004-1G5        |
| -66              | 131-1771-00        |                             | 2   |   |   |   |   |   | . CONNECTOR,RCPT,:CIRCUIT BOARD,6 FEMALE                      | 22526    | 65001-111       |
| -67              | 214-0579-00        |                             | 1   |   |   |   |   |   | . TERM,TEST POINT:BRS CD PL                                   | 80009    | 214-0579-00     |
| -68              | 214-0817-00        |                             | 1   |   |   |   |   |   | . HEAT SINK,XSTR:                                             | 14566    | A1193-T05       |
| -69              | 380-0502-01        |                             | 1   |   |   |   |   |   | HOUSING,CKT BD:5.775 L X 2.13 W,AL                            | 80009    | 380-0502-01     |
| -70              | 200-2077-00        |                             | 1   |   |   |   |   |   | COVER,CKT BD:ALUMINUM<br>(ATTACHING PARTS)                    | 80009    | 200-2077-00     |
| -71              | 211-0294-00        |                             | 8   |   |   |   |   |   | SCREW MACHINE:M3 X 0.5 X 10MM,PNH,TORX DR<br>- - - * - - -    | 93907    | OBD             |
| -72              | -----              | -----                       | 1   |   |   |   |   |   | CKT BOARD ASSY:R.F. MIXER(SEE A9 EPL)                         |          |                 |
| -73              | 131-1771-00        |                             | 1   |   |   |   |   |   | . CONNECTOR,RCPT,:CIRCUIT BOARD,6 FEMALE<br>(ATTACHING PARTS) | 22526    | 65001-111       |
| -74              | 211-0033-00        |                             | 4   |   |   |   |   |   | . SCR,ASSEM WSHR:4-40 X 0.312 PNH,STL,CD PL                   | 83385    | OBD             |
| -75              | 210-1002-00        |                             | 8   |   |   |   |   |   | . WASHER,FLAT:0.125 ID X 0.022 THK,BRS                        | 12327    | OBD             |
| -76              | 210-0586-00        |                             | 4   |   |   |   |   |   | . NUT,PL,ASSEM WA:4-40 X 0.25,STL CD PL<br>- - - * - - -      | 83385    | 211-041800-00   |
| -77              | -----              | -----                       | 1   |   |   |   |   |   | CKT BOARD ASSY:FIRST MIXER(SEE A9 EPL)                        |          |                 |
| -78              | 131-0391-00        |                             | 1   |   |   |   |   |   | . CONNECTOR,RCPT,:50 OHM,COAX,SNAP-ON MALE                    | 98291    | 51-051-0049     |
| -79              | 210-1160-00        |                             | 1   |   |   |   |   |   | . WASHER,NONMETAL:0.109 ID X 0.25 INCH OD                     | 86445    | OBD             |
| -80              | 131-0608-00        |                             | 1   |   |   |   |   |   | . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD                    | 22526    | 47357           |
| -81              | 214-0579-00        |                             | 2   |   |   |   |   |   | . TERM,TEST POINT:BRS CD PL                                   | 80009    | 214-0579-00     |
| -82              | 175-2590-00        |                             | 3   |   |   |   |   |   | . CABLE ASSY,RF:50 OHM COAX,3.0 L                             | 80009    | 175-2590-00     |
| -83              | 195-0453-00        |                             | 1   |   |   |   |   |   | . LEAD,ELECTRICAL:26 AWG,3.5 L,2-N                            | 80009    | 195-0453-00     |
| -84              | 211-0244-00        |                             | 1   |   |   |   |   |   | CKT BOARD ASSY:INTERFACE(SEE A1 EPL)<br>(ATTACHING PARTS)     |          |                 |
| -84              | 211-0244-00        |                             | 8   |   |   |   |   |   | SCR,ASSEM WSHR:4-40 X 0.312 INCH,PNH STL<br>- - - * - - -     | 78189    | OBD             |
| -85              | 131-0146-00        |                             | 4   |   |   |   |   |   | CKT BOARD ASSY INCLUDES:<br>. CONN ASSY,ELEC:TWO UHF MALE     | 80009    | 131-0146-00     |
| -86              | 131-0608-00        |                             | 16  |   |   |   |   |   | . TERMINAL,PIN:0.365 L X 0.025 PH BRZ GOLD                    | 22526    | 47357           |
| -87              | 131-0391-00        |                             | 5   |   |   |   |   |   | . CONNECTOR,RCPT,:50 OHM,COAX,SNAP-ON MALE                    | 98291    | 51-051-0049     |
| -88              | 131-0582-00        |                             | 2   |   |   |   |   |   | . CONN,RCPT,ELEC:SNAP-ON FEMALE,MODIFIED                      | 98291    | 52-052-0049     |
|                  | 210-1160-00        |                             | 7   |   |   |   |   |   | . WASHER,FLAT:0.129 ID X 0.031 THK,TEFLON                     | 86445    | OBD             |
|                  | 131-0787-00        |                             | 78  |   |   |   |   |   | . TERMINAL,PIN:0.64 L X 0.025 SQ,PH,BRZ GOLD                  | 22526    | 47359           |
| -89              | 346-0121-00        |                             | 2   |   |   |   |   |   | STRAP,ELEC COMP:TIE DOWN,5.0 LONG<br>(ATTACHING PARTS)        | 59730    | 3Y-34M          |
| -90              | 211-0246-00        |                             | 2   |   |   |   |   |   | SCR,ASSEM WSHR:4-40 X 0.625,PNH,STL,POZ<br>- - - * - - -      | 78189    | OBD             |
| -91              | 129-0101-03        |                             | 8   |   |   |   |   |   | SPACER,POST:0.953 L X 0.219 W/4-40 INT THD THRU               | 80009    | 129-0101-03     |





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067-0886-01 & UP TEST MODULATOR

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Replaceable Mechanical Parts—067-0886-01 & up

| Fig. & Index No. | Tektronix Part No. | Serial/Model No. Eff Dscont | Qty | 1 2 3 4 5 | Name & Description                                                    | Mfr Code | Mfr Part Number  |
|------------------|--------------------|-----------------------------|-----|-----------|-----------------------------------------------------------------------|----------|------------------|
| 3-1              | 407-2681-00        |                             | 1   |           | BRACKET,CKT BD:ALUMINUM                                               | 80009    | 407-2681-00      |
| -2               | 351-0303-01        |                             | 4   |           | GUIDE,CKT BOARD:<br>(ATTACHING PARTS)                                 | 80009    | 351-0303-01      |
| -3               | 211-0038-00        |                             | 8   |           | SCREW,MACHINE:4-40 X 0.312,FLH,100 DEG,STL<br>- - - * - - -           | 83385    | OBD              |
| -4               | 348-0037-00        |                             | 2   |           | FOOT:RUBBER                                                           | 70485    | 1059             |
| -5               | -----              |                             | 1   |           | TRANSISTOR:SILICON,PNP<br>(SEE Q05 EPL)<br>(ATTACHING PARTS)          |          |                  |
| -6               | 211-0012-00        |                             | 1   |           | SCREW,MACHINE:4-40 X 0.375,PNH STL CD PL                              | 83385    | OBD              |
| -7               | 210-1122-00        |                             | 1   |           | WASHER,LOCK:0.228 ID X 0.375 INCH OD,STL                              | 04713    | B52200F006       |
| -8               | 342-0163-00        |                             | 1   |           | INSULATOR,PLATE:XSTR,0.675 X 0.625 X 0.001"<br>- - - * - - -          | 80009    | 342-0163-00      |
| -9               | -----              |                             | 1   |           | TRANSISTOR:SILICON,NPN,SCREENED<br>(SEE Q95 EPL)<br>(ATTACHING PARTS) |          |                  |
| -10              | 210-0012-00        |                             | 1   |           | WASHER,LOCK:INTL,0.375 ID X 0.50" OD STL                              | 78189    | 1220-02-00-0541C |
| -11              | 210-1122-00        |                             | 1   |           | WASHER,LOCK:0.228 ID X 0.375 INCH OD,STL                              | 04713    | B52200F006       |
| -12              | 342-0163-00        |                             | 1   |           | INSULATOR,PLATE:XSTR,0.675 X 0.625 X 0.001"<br>- - - * - - -          | 80009    | 342-0163-00      |
| -13              | -----              |                             | 1   |           | CKT BOARD ASSY:POWER SUPPLY<br>(SEE A70 EPL)<br>(ATTACHING PARTS)     |          |                  |
| -14              | 211-0244-00        |                             | 7   |           | SCR,ASSEM WSHR:4-40 X 0.312 INCH,PNH STL<br>- - - * - - -             | 78189    | OBD              |
| -15              | 131-0589-00        |                             | 14  |           | TERM,PIN:0.46 L X 0.025 SQ.PH BRZ GL                                  | 22526    | 47350            |
| -16              | 136-0235-00        |                             | 2   |           | SOCKET,PLUG-IN:6 CONTACT,ROUND                                        | 71785    | 133-96-12-062    |
| -17              | 214-0973-00        |                             | 1   |           | HEAT SINK,ELEC:0.28 X 0.18 OVAL X 0.187"H                             | 80009    | 214-0973-00      |
| -18              | 214-0817-00        |                             | 2   |           | HEAT SINK,XSTR:                                                       | 14566    | A11193-T05       |
| -19              | 343-0956-00        |                             | 1   |           | CLAMP,CAPACITOR:ALUMINUM<br>(ATTACHING PARTS)                         | 80009    | 343-0956-00      |
| -20              | 211-0507-00        |                             | 2   |           | SCREW,MACHINE:6-32 X 0.312 INCH,PNH STL<br>- - - * - - -              | 83385    | OBD              |
| -21              | 252-0571-00        |                             | 1   |           | NEOPRENE EXTR:CHAN,0.234 X 0.156                                      | 77969    | 1353             |
| -22              | -----              |                             | 1   |           | XFMR,PWR,STPDN:<br>(SEE T10 EPL)                                      |          |                  |
| -23              | 200-0772-08        |                             | 1   |           | COVER,ELEC XFMR:<br>(ATTACHING PARTS)                                 | 80009    | 200-0772-08      |
| -24              | 212-0515-00        |                             | 4   |           | SCREW,MACHINE:10-32 X 2.250" HEX.HD STL                               | 83385    | OBD              |
| -25              | 210-0812-00        |                             | 4   |           | WASHER,NONMETAL:#10,FIBER                                             | 86445    | OBD              |
| -26              | 210-1026-00        |                             | 4   |           | WASHER,LOCK:EXTERNAL,0.25 INCH DIAMETER                               | 78189    | 1114-00          |
| -27              | 166-0457-00        |                             | 4   |           | INSUL SLVG,ELEC:0.19 ID X 1.875"LONG MYLAR                            | 80009    | 166-0457-00      |
| -28              | 220-0410-00        |                             | 4   |           | NUT,EXTENDED WA:10-32 X 0.375 INCH,STL<br>- - - * - - -               | 83385    | OBD              |
| -29              | -----              |                             | 1   |           | SELECTOR,VOLTS:W/LINE FLTR RCPT & FUSE<br>(SEE U10 EPL)               |          |                  |
| -30              | 333-2763-00        |                             | 1   |           | PANEL,REAR<br>(ATTACHING PARTS)                                       | 80009    | 333-2763-00      |
| -31              | 211-0507-00        |                             | 5   |           | SCREW,MACHINE:6-32 X 0.312 INCH,PNH STL                               | 83385    | OBD              |
| -32              | 213-0801-00        |                             | 4   |           | SCREW,TPG,TF:8-32 X 0.312,TAPTITE,PNH<br>- - - * - - -                | 93907    | OBD              |
| -33              | 210-0202-00        |                             | 2   |           | TERMINAL,LUG:0.146 ID,LOCKING,BRZ TINNED                              | 78189    | 2104-06-00-2520N |
| -34              | 210-0551-00        |                             | 3   |           | NUT,PLAIN,HEX.:4-40 X 0.25 INCH,STL                                   | 83385    | OBD              |
| -35              | 195-0544-00        |                             | 1   |           | LEAD,ELECTRICAL:12 AWC,2.0 L,2-N                                      | 80009    | 195-0544-00      |



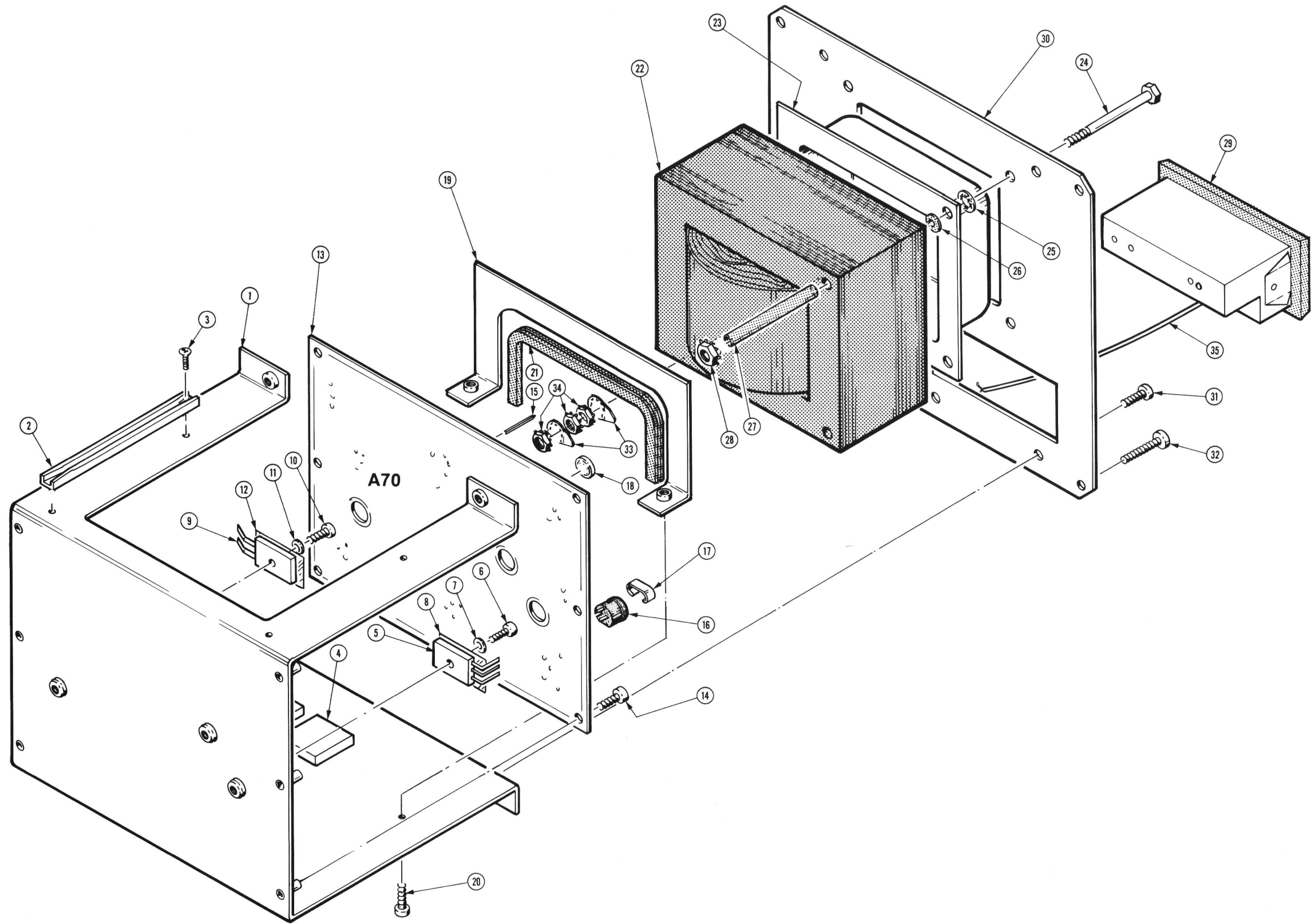


FIG. 3 POWER SUPPLY

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Accessories  
Kit 655-1468-00

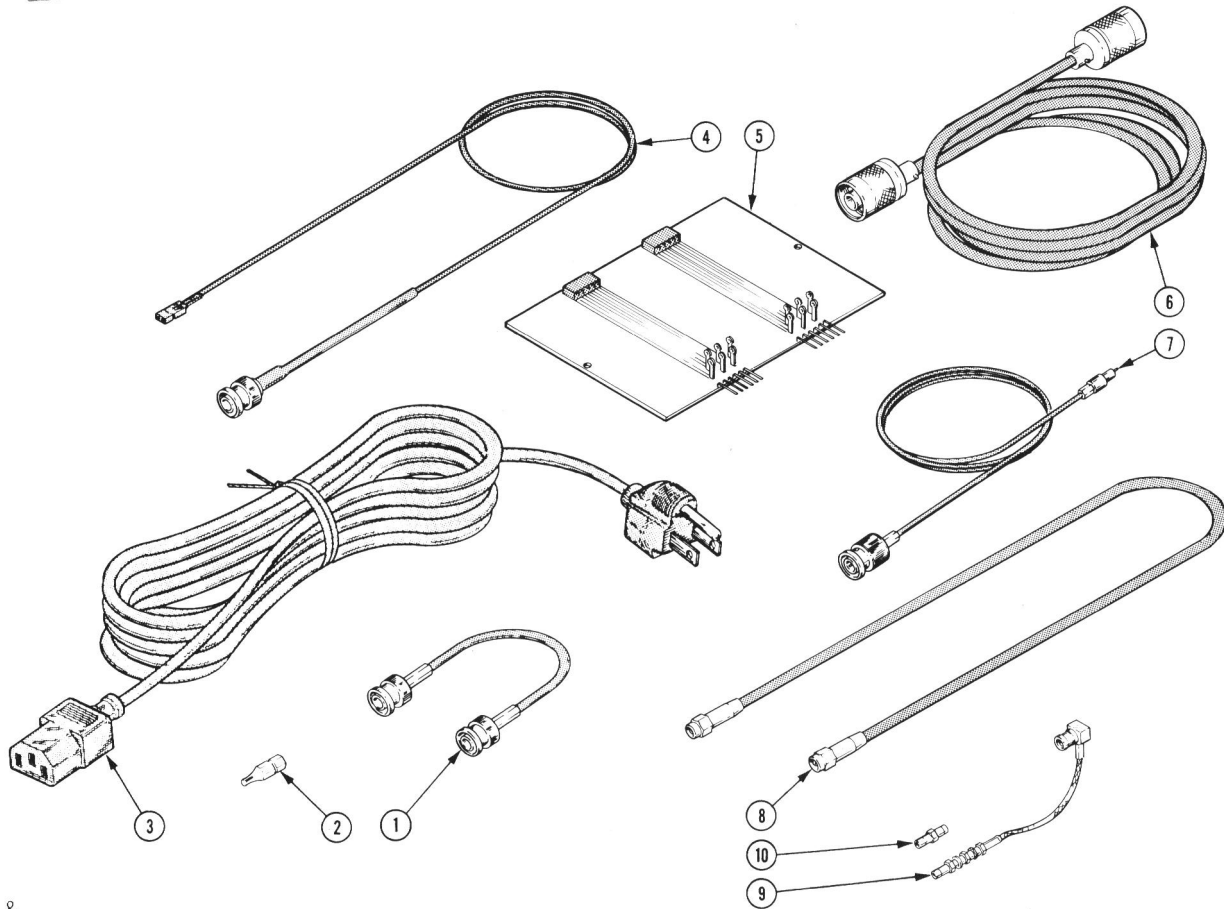


Fig. &  
Index  
No.

Tektronix  
Part No.

Serial/Model No.  
Eff Dscont

Qty 1 2 3 4 5

Name & Description

Mfr  
Code

Mfr Part Number

| Fig. & Index No.     | Tektronix Part No. | Serial/Model No. Eff Dscont | Qty | 1 | 2 | 3 | 4 | 5 | Name & Description                            | Mfr Code | Mfr Part Number |
|----------------------|--------------------|-----------------------------|-----|---|---|---|---|---|-----------------------------------------------|----------|-----------------|
| STANDARD ACCESSORIES |                    |                             |     |   |   |   |   |   |                                               |          |                 |
|                      | 070-3530-00        |                             | 1   |   |   |   |   |   | MANUAL, TECH: INSTRUCTION (NOT SHOWN)         | 80009    | 070-3530-00     |
| -1                   | 012-0751-00        |                             | 1   |   |   |   |   |   | CABLE, INTERCON: 7.375 L                      | 80009    | 012-0751-00     |
| -2                   | 003-0816-00        |                             | 1   |   |   |   |   |   | BIT, SCREWDRIVER: W/TORX T10 TIP, MAGNA#38217 | 000CB    | 38-217-2        |
| -3                   | 161-0066-00        |                             | 1   |   |   |   |   |   | CABLE ASSY, PWR, : 3, 18 AWG, 115V, 98.0 L    | 80009    | 161-0066-00     |
| -4                   | 175-2140-00        |                             | 1   |   |   |   |   |   | CABLE ASSY, RF: 50 OHM COAX, 30.0L            | 80009    | 175-2140-00     |
| -5                   | 670-6973-00        |                             | 1   |   |   |   |   |   | CKT, BOARD ASSY: EXTENDER                     | 80009    | 670-6973-00     |
| -6                   | 012-0114-01        |                             | 1   |   |   |   |   |   | CABLE ASSY, RF: 50 OHM COAX, 42.0 L           | 91836    | KN359-87TR5     |
| -7                   | 067-0709-00        |                             | 1   |   |   |   |   |   | FIXTURE, CAL: 30.0 L, CABLE ASSY              | 80009    | 067-0709-00     |
| -8                   | 012-0649-00        |                             | 1   |   |   |   |   |   | CABLE ASSY, RF: 50 OHM COAX, 28.5 INCH LONG   | 80009    | 012-0649-00     |
| -9                   | 175-0396-00        |                             | 1   |   |   |   |   |   | CABLE ASSY, RF: 50 OHM COAX, 6.25 INCH LONG   | 80009    | 175-0396-00     |
| -10                  | 103-0098-00        |                             | 2   |   |   |   |   |   | ADAPTER, CONN: 50 OHM JACK TO JACK            | 80009    | 103-0098-00     |
|                      | 159-0032-00        |                             | 1   |   |   |   |   |   | FUSE, CARTRIDGE: 3AG, 0.5A, 250V, SLOW-BLOW   | 71400    | MDL 1/2         |
|                      | 159-0044-00        |                             | 1   |   |   |   |   |   | FUSE, CARTRIDGE: 3AG, 0.2A, 250V, SLOW-BLOW   | 71400    | MDL 2/10        |
|                      | 070-3530-00        |                             | 1   |   |   |   |   |   | MANUAL, TEACH: INSTRUCTION                    | 80009    | 070-3530-00     |
| OPTIONAL ACCESSORIES |                    |                             |     |   |   |   |   |   |                                               |          |                 |
|                      | 020-0633-00        |                             | 1   |   |   |   |   |   | HARDWARE KIT:                                 | 80009    | 020-0633-00     |
|                      | 020-0634-00        |                             | 1   |   |   |   |   |   | HARDWARE KIT:                                 | 80009    | 020-0634-00     |
|                      | 351-0104-03        |                             | 1   |   |   |   |   |   | SLIDE SECT, DWR: 12.625 L, W/O HARDWARE       | 06666    | C-720-2         |
|                      | 351-0301-03        |                             | 1   |   |   |   |   |   | SLIDE, DWR, EXT: W/CLOSED MOUNTING SLOTS      | 80009    | 351-0301-03     |

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067-0886-01 & UP TEST MODULATOR

ACCESSORIES





## MANUAL CHANGE INFORMATION

At Tektronix, we continually strive to keep up with latest electronic developments by adding circuit and component improvements to our instruments as soon as they are developed and tested.

Sometimes, due to printing and shipping requirements, we can't get these changes immediately into printed manuals. Hence, your manual may contain new change information on following pages.

A single change may affect several sections. Since the change information sheets are carried in the manual until all changes are permanently entered, some duplication may occur. If no such change pages appear following this page, your manual is correct as printed.

## SERVICE NOTE

Because of the universal parts procurement problem, some electrical parts in your instrument may be different from those described in the Replaceable Electrical Parts List. The parts used will in no way alter or compromise the performance or reliability of this instrument. They are installed when necessary to ensure prompt delivery to the customer. Order replacement parts from the Replaceable Electrical Parts List.

# CALIBRATION TEST EQUIPMENT REPLACEMENT

## Calibration Test Equipment Chart

This chart compares TM 500 product performance to that of older Tektronix equipment. Only those characteristics where significant specification differences occur, are listed. In some cases the new instrument may not be a total functional replacement. Additional support instrumentation may be needed or a change in calibration procedure may be necessary.

Comparison of Main Characteristics

|                                                       |                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DM 501 replaces 7D13                                  |                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                       |
| PG 501 replaces 107<br>108                            | PG 501 - Risetime less than 3.5 ns into 50 $\Omega$ .<br>PG 501 - 5 V output pulse;<br>3.5 ns Risetime                                                                                                                                                                                                                                                               | 107 - Risetime less than 3.0 ns into 50 $\Omega$ .<br>108 - 10 V output pulse<br>1 ns Risetime                                                                                                                                                                                                                                                        |
| PG 502 replaces 107<br>108<br>111                     | PG 502 - 5 V output<br>PG 502 - Risetime less than 1 ns; 10 ns<br>Pretrigger pulse<br>delay                                                                                                                                                                                                                                                                          | 108 - 10 V output<br>111 - Risetime 0.5 ns; 30 to 250 ns<br>Pretrigger pulse<br>delay                                                                                                                                                                                                                                                                 |
| PG 508 replaces 114<br>115<br>2101                    | Performance of replacement equipment is the same or better than equipment being replaced.                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                       |
| PG 506 replaces 106<br>067-0502-01                    | PG 506 - Positive-going trigger output signal at least 1 V; High Amplitude output, 60 V.<br>PG 506 - Does not have chopped feature.                                                                                                                                                                                                                                  | 106 - Positive and Negative-going trigger output signal, 50 ns and 1 V; High Amplitude output, 100 V.<br>0502-01 - Comparator output can be alternately chopped to a reference voltage.                                                                                                                                                               |
| SG 503 replaces 190, 190A, 190B<br>191<br>067-0532-01 | SG 503 - Amplitude range 5 mV to 5.5 V p-p.<br>SG 503 - Frequency range 250 kHz to 250 MHz.                                                                                                                                                                                                                                                                          | 190B - Amplitude range 40 mV to 10 V p-p.<br>0532-01 - Frequency range 65 MHz to 500 MHz.                                                                                                                                                                                                                                                             |
| SG 504 replaces 067-0532-01<br>067-0650-00            | SG 504 - Frequency range 245 MHz to 1050 MHz.                                                                                                                                                                                                                                                                                                                        | 0532-01 - Frequency range 65 MHz to 500 MHz.                                                                                                                                                                                                                                                                                                          |
| TG 501 replaces 180, 180A<br>181<br>184<br>2901       | TG 501 - Trigger output-slaved to marker output from 5 sec through 100 ns. One time-mark can be generated at a time.<br>TG 501 - Trigger output-slaved to market output from 5 sec through 100 ns. One time-mark can be generated at a time.<br>TG 501 - Trigger output-slaved to marker output from 5 sec through 100 ns. One time-mark can be generated at a time. | 180A - Trigger pulses 1, 10, 100 Hz; 1, 10, and 100 kHz. Multiple time-marks can be generated simultaneously.<br>181 - Multiple time-marks<br>184 - Separate trigger pulses of 1 and 0.1 sec; 10, 1, and 0.1 ms; 10 and 1 $\mu$ s.<br>2901 - Separate trigger pulses, from 5 sec to 0.1 $\mu$ s. Multiple time-marks can be generated simultaneously. |

NOTE: All TM 500 generator outputs are short-proof. All TM 500 plug-in instruments require TM 500-Series Power Module.

Date: 10-27-80Change Reference: C1/1080Product: 067-0886-01 AND UP Test ModulatorManual Part No.: 070-3530-00**DESCRIPTION**

All Serial Numbers

**TEXT CORRECTIONS**

SECTION 1 - Introduction and Specification

Page 1-6, Table 1-9, STANDARD ACCESSORIES lines 12 and 13 change to read:

0.5 A Slow-Blow Fuse for 115 V Range 159-0034-00

0.25 A Slow-Blow Fuse for 230 V Range 159-0044-00



