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REMOTE CONTROL UNIT
015-0240-00

REMOTE MONITOR UNIT
015-0239-00

INSTRUCTION MANUAL

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

Serial Number _____

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015-0240-00

REMOTE CONTROL UNIT

OPERATING INSTRUCTIONS

The REMOTE CONTROL UNIT 015-0240-00 enables control of the six correction functions of the 1440 from remote positions.

Three CONTROL modes are provided at the front panel of the 015-0240-00: MANUAL, which allows operator control of through-put gains and phase; VIRS, which holds the output gains and phase constant; and PRESET, which is similar to MANUAL, but has a different set of controls. The 015-0240-00 is automatically switched to PRESET when the CONTROL switch is in the VIRS position and there is no VIR Signal present.

With the 015-0240-00 CONTROL switch set to MANUAL, the 1440 gains and phase will be as set by the MANUAL controls without regard to the VIR Signal amplitudes or phase, or to the presence or absence of the VIR Signal.

The VIRS controls set output gains and phase when a VIR Signal is included in the incoming video signal. If there is no VIR Signal in the incoming video, the 1440 automatically switches to PRESET control. In this case, output gains and phase are set by the 015-0240-00 PRESET controls.

Two 36 pin rear panel connectors provide interface between the 015-0240-00 and the 1440, and loop-through access for monitoring equipment. (see Fig. 1-1.)

MANUAL control levels are applied through the remote connector to the 1440 as follows:

pin 7	MASTER GAIN
pin 13	CHROMA GAIN
pin 14	BURST PHASE
pin 25	SETUP
pin 31	SYNC GAIN
pin 32	BURST GAIN

These levels are then applied to Correction Drive Amps in the 1440 (Diagrams 14 & 15) to control gains and phase of the output signal, when in MANUAL control.

VIRS control levels are applied through the remote connector to the 1440 as follows:

pin 4	MASTER GAIN
pin 5	CHROMA GAIN
pin 6	BURST PHASE
pin 22	SETUP
pin 23	SYNC GAIN
pin 24	BURST GAIN

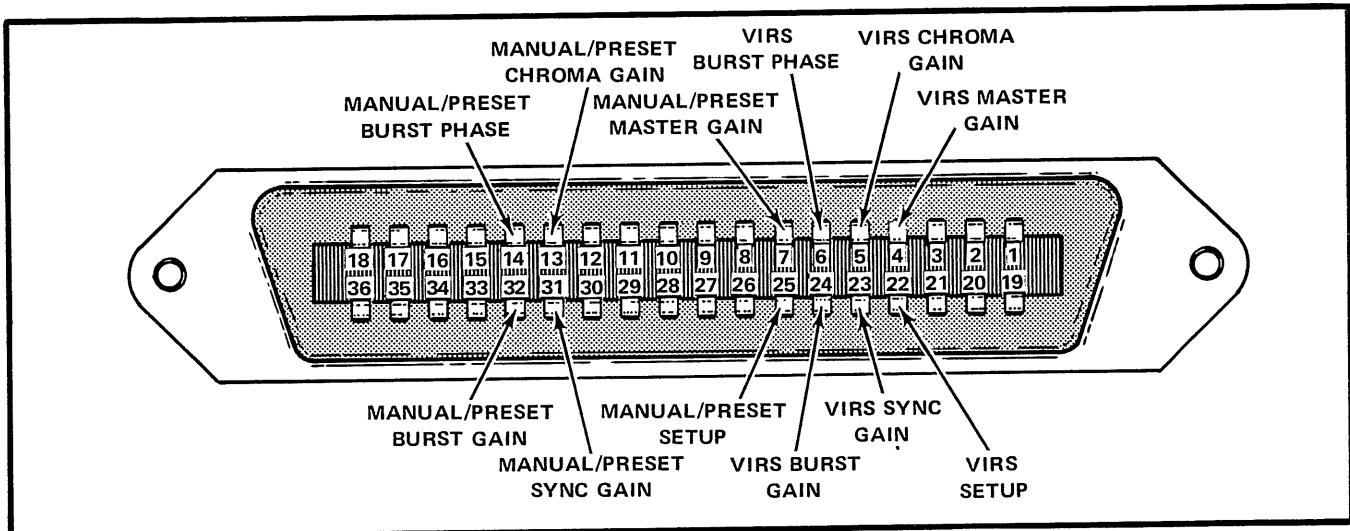


Fig. 1-1. Rear panel connector showing control routing.

These levels are applied to the slew-rate limited amplifiers in the 1440 (Diagrams 14 & 15) as comparison reference for the 1440 memory output.

PRESET control levels are applied to the 1440 Correction Drive Amps through the same set of remote pins as the **MANUAL** levels. This mode allows output gains and phase to be set by the 015-0240-00 front panel controls.

FUNCTIONAL CHECK-OUT PROCEDURE

A Tektronix 1440, a waveform monitor, a vectorscope, and a video source with VIR Signal (a Tektronix 149A, for example) are needed for this procedure.

1. Connect the video source Program Line Out to the 1440 Program In. Connect the 1440 Program Out to the waveform monitor A input and loop through to the vectorscope CH A Input. Terminate the vectorscope CH A Input loop-through in $75\ \Omega$. Connect the video source Program Monitor Out to the waveform monitor B Input and loop through to the vectorscope CH B Input. Terminate the vectorscope CH B Input loop-through in $75\ \Omega$. Connect the 1440 Remote connector to the 015-0240-00. The two 36 pin connectors on the 015-0240-00 are in parallel, so either may be used.

2. Set the 015-0240-00 CONTROL switch to **MANUAL** and the OPERATE/BYPASS switch to **BYPASS**. Set the waveform monitor Input switch to **A**, Volts Full Scale to **1.0**, Response to **Flat**, and Display to **10 μ s/cm**. Depress the vectorscope Ch A, A \emptyset , Full Field, and Vector buttons.

3. Rotate the 015-0240-00 **MANUAL** controls and note that there is no change in the waveform monitor or vectorscope displays. Note also that the **OPERATE** indicator on the 015-0240-00 is not lit, but the **PRESET** (VIRS ABSENT) indicator is lit.

4. Set the 015-0240-00 OPERATE/BYPASS switch to **OPERATE**. The **OPERATE** indicator should be lit. Rotate the 015-0240-00 **MANUAL** controls and note the changes in the waveform monitor and vectorscope displays.

5. Set the 015-0240-00 CONTROL switch to **VIRS**. Only the **OPERATE** indicator should be lit and the **MANUAL** controls should no longer have any affect on the displays. Adjust the **VIRS** controls and note the changes in the waveform monitor and vectorscope displays. Remove the **VIR** Signal from the video source signal. Note that the **PRESET** (VIRS ABSENT) indicator is lit. Adjust the **PRESET** controls and note the changes in the waveform monitor and vectorscope displays. This indicates that the 1440 mode has switched to **PRESET**. Restore the **VIR** Signal to the video source signal.

6. Remove the burst from the video source signal, leaving the **VIR** Signal in. Note that the **MONOCHROME** indicator is lit and that control of the displays is with the **VIRS** controls. Restore burst to the video source signal. This concludes the Functional Check-Out Procedure.

CALIBRATION

Set the waveform monitor Input switch to **A-B** and the 015-0240-00 **CONTROL** switch to **MANUAL**. All connections remain the same as during the Functional Check-Out Procedure in the preceding section. Adjust **MANUAL** controls as in the following table:

CONTROL	NOTES
MASTER GAIN	Set for null on waveform monitor, differential operation.
SETUP	Set for null on waveform monitor, differential operation.
CHROMA GAIN	Set for flat bottom 12.5 T pulse on waveform monitor, single channel operation..
SYNC GAIN	Set for null on waveform monitor, differential operation.
BURST GAIN	Set to overlay burst and VIR Signal amplitude on vectorscope.
BURST PHASE	Set to overlay burst and VIR Signal phase on vectorscope.

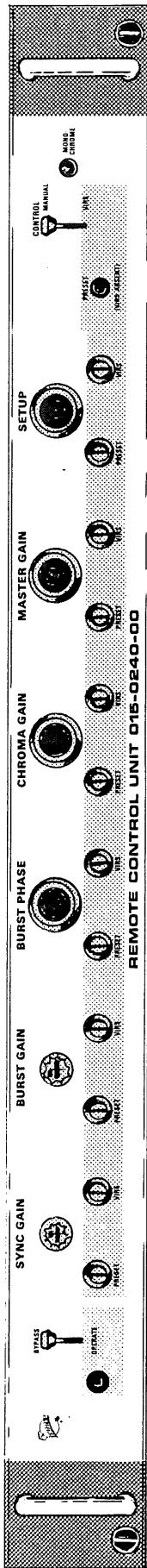
Set the 015-0240-00 **CONTROL** switch to **VIRS** and repeat the above table, using the **VIRS** controls.

Remove the **VIR** Signal from the video source signal and adjust the 015-0240-00 **PRESET** controls as in the above table. Restore the **VIR** Signal to the video source signal.

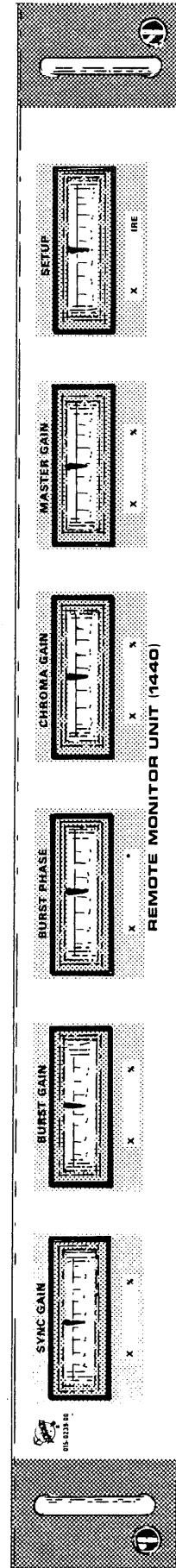
CIRCUIT DESCRIPTION

Since there is not much in the way of circuitry in the 015-0240-00, the circuit description must deal mainly with the effect of the Remote controls on the 1440.

Referring to Diagram 14 in the 1440 Instruction Manual, notice the circuitry around U5122. This will be used as an example to explain the operation of the 015-0240-00 on the 1440.



REMOTE CONTROL UNIT
015-0240-00



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015-0239-00

When the 015-0240-00 CONTROL switch is in MANUAL, Q5114 and Q5116 are turned on, grounding the input of U5122 and feeding the output back through R5118 to the input. The ultimate effect of this action is to inhibit most of the circuitry on Diagrams 10, 11, 12, and 13, and the AUTO controls on Diagrams 14 & 15. So, the control of all six signal elements is from the MANUAL controls on the front panel of the 015-0240-00. (See Fig. 1-2A.)

When the 015-0240-00 CONTROL switch is in VIRS and there is no incoming VIR Signal, the operation of the 1440 circuits is the same as in the MANUAL mode, but the control of the signal elements is from the 015-0240-00 PRESET controls.

When the 015-0240-00 CONTROL switch is in VIRS and a VIR Signal is present, the mode control transistors

(Q5114, Q5116, etc.) are turned off. The amplifiers in these circuits, such as U5122, are no longer grounded, and can perform the function of comparing the drive voltages being applied from memory circuits on Diagram 13 with the levels set by the VIRS controls in the 015-0240-00. (see Fig. 1-2B.)

The memory circuits on Diagram 13 remember phase and amplitude characteristics of the VIR Signal. Any change on the memory caps results in a voltage change at the output of the amplifiers on Diagrams 14 & 15. This change is applied to correction circuits on Diagrams 2, 3, 4, and 5 to change the phase and amplitudes of the output signal and bring the input of the amplifiers back to the correct level.

The 1440 output signal, when operating in the VIRS mode, is determined by the settings of the VIRS controls in the 015-0240-00 compared to decoded VIR Signal levels.

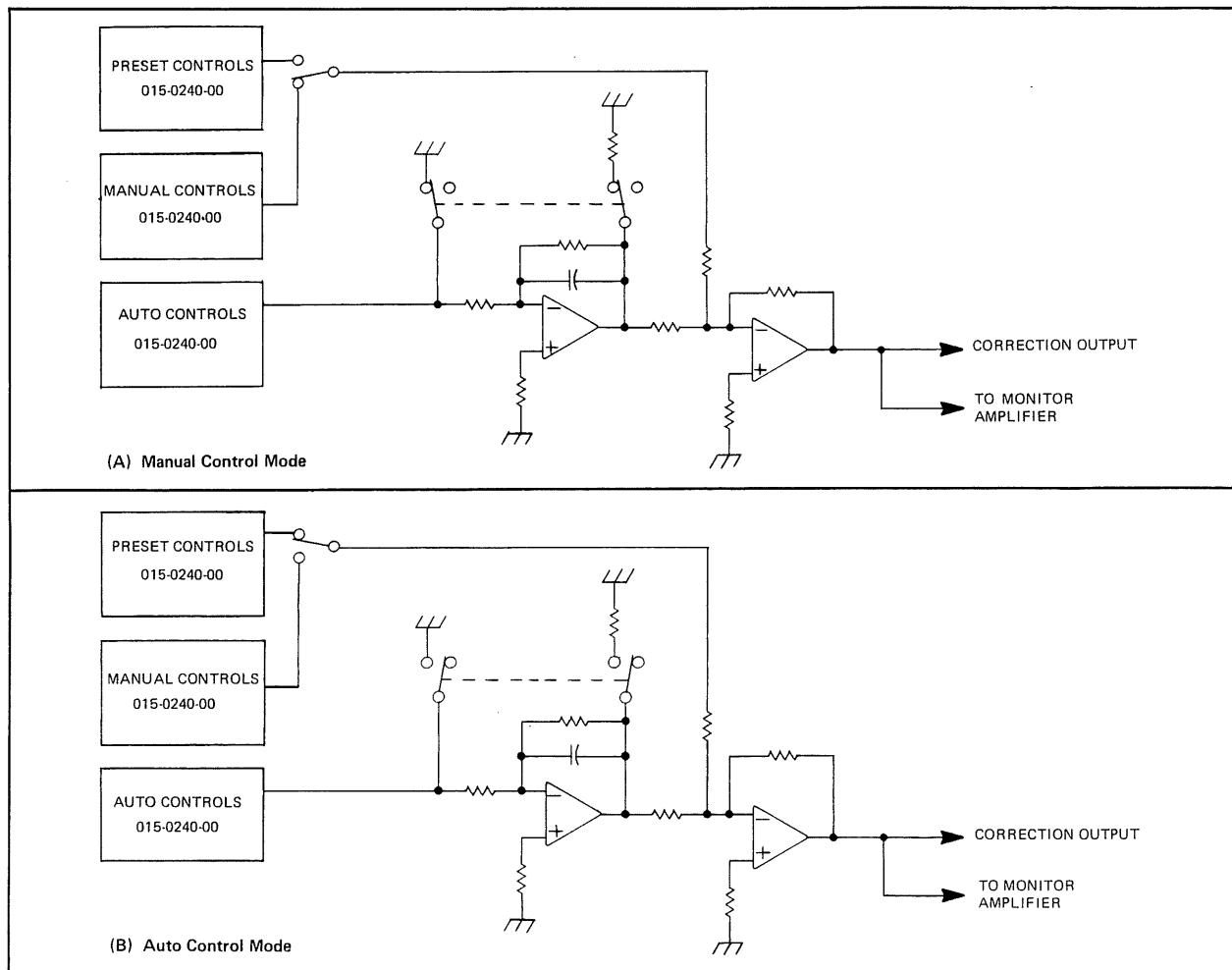
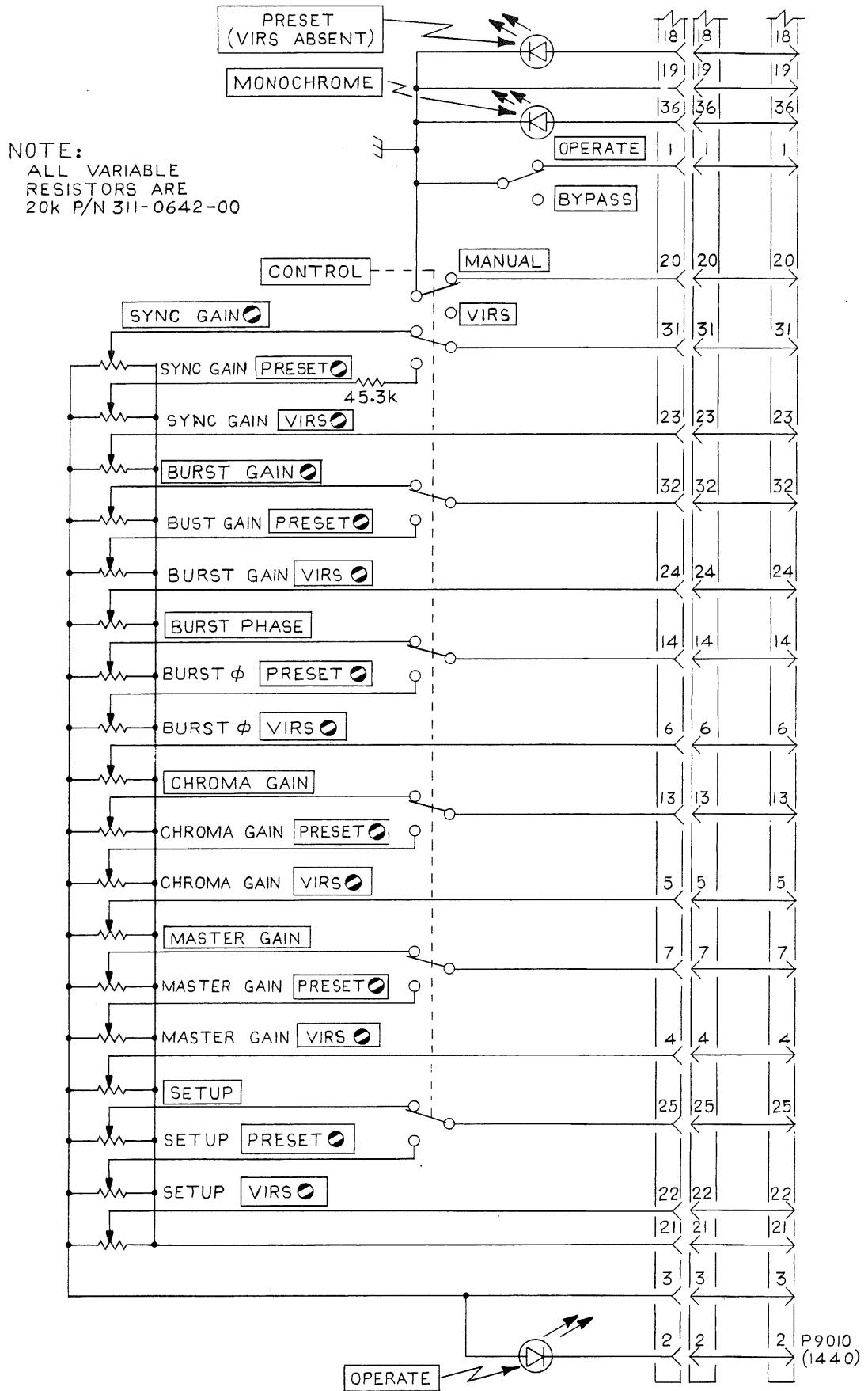


Fig. 1-2. 1440 modes of control. (A) Manual Control Mode (Manual/Preset). (B) Auto Control Mode (VIRS).



015-0240-00

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REMOTE MONITOR UNIT

OPERATING INSTRUCTIONS

The REMOTE MONITOR UNIT 015-0239-00 provides a visual display of the amount of correction needed to set the 1440 output gains and phase to the correct levels.

Six meters are mounted on the 015-0239-00 front panel; one for each controllable signal element. The drive for each of the meters is from the Correction Monitor Output Amps in the 1440. (Diagrams 14 & 15) Each amplifier has a Gain adjustment to set meter range, and a DC Level adjustment to center the meter.

Meter drive signals from the 1440 are applied to the 015-0039-00 through the rear panel as follows:

pin 15	MASTER GAIN
pin 16	CHROMA GAIN
pin 17	BURST PHASE
pin 33	SETUP
pin 34	SYNC GAIN
pin 35	BURST GAIN

(see Fig. 2-1).

CALIBRATION/CHECK-OUT PROCEDURE

A Tektronix 1440, a waveform monitor, a vectorscope, a video source with VIR Signal (a Tektronix 149A, for example), and a Tektronix 015-0240-00 are needed for this procedure.

1. Connect equipment as in step 1 of the 015-0240-00 Functional Check-Out Procedure, then connect the 015-0239-00 to the 015-0240-00.
2. Perform the 015-0240-00 Calibration Procedure.
3. Set the 015-0240-00 Control switch to Manual.
4. Adjust the 1440 Monitor Output DC Level controls for meter zero.

Meter	1440 Control
MASTER GAIN	R5876
CHROMA GAIN	R5874
BURST PHASE	R5174
SETUP	R5464
SYNC GAIN	R5470
BURST GAIN	R5172

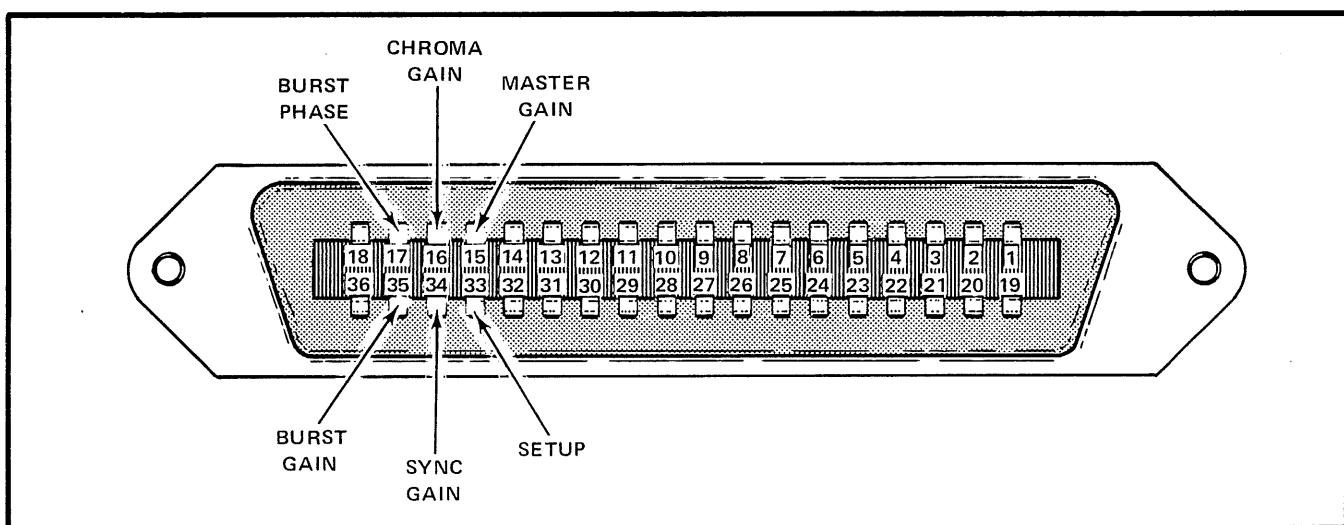


Fig. 2-1. Rear panel connector showing monitor drive routing.

5. To adjust meter range, decide the amount of offset desired for each meter division, set the 015-0240-00 control for that amount of change in the signal, then adjust the 1440 Monitor Output Gain control for the correct meter reading. For example, rotate the 015-0240-00 Burst Phase control to change burst phase 20° , and adjust the 1440 Monitor Output Burst Phase Gain control, R5188, for a full scale reading on the meter. Using the same procedure, adjust meter ranges as follows:

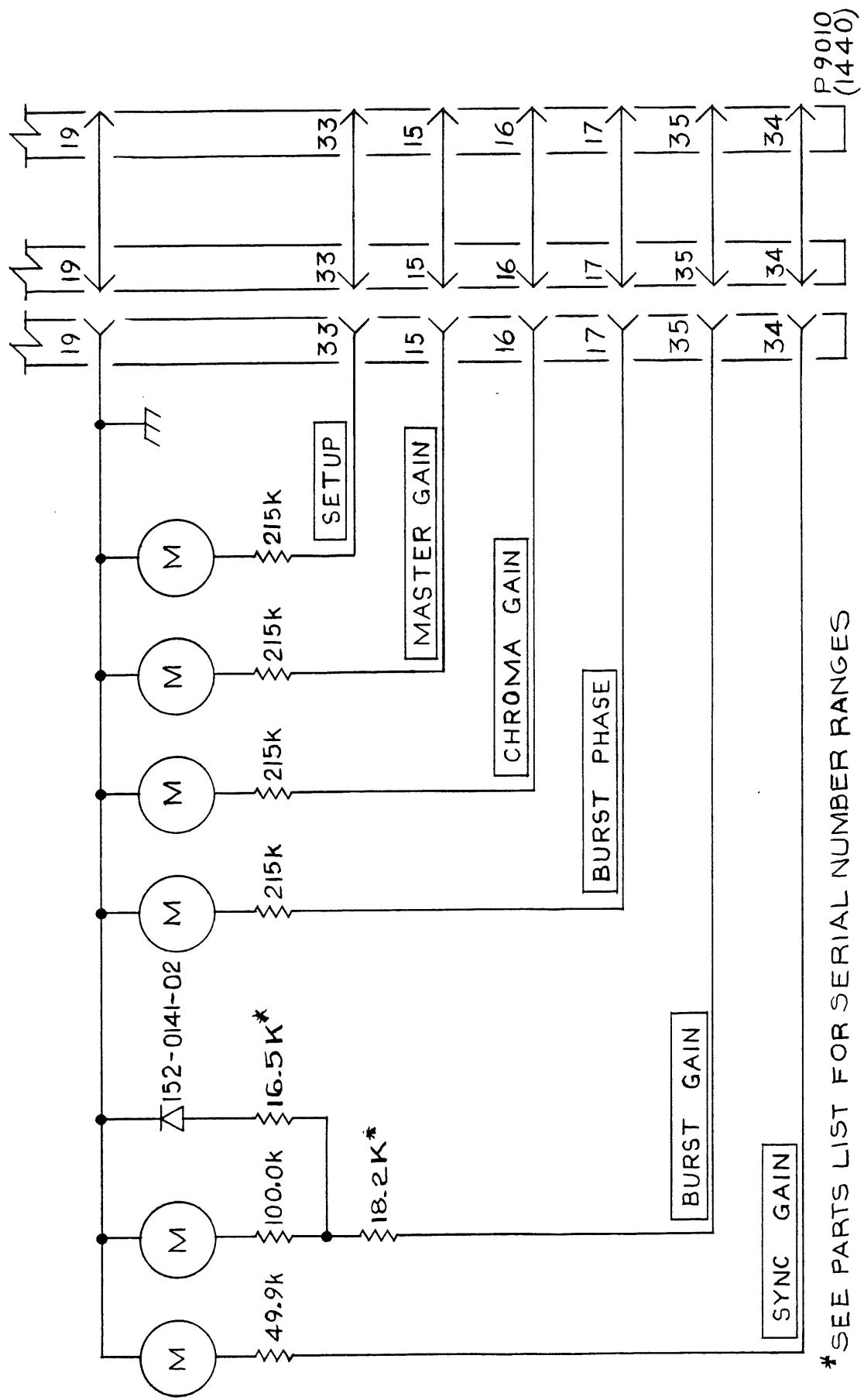
Meter	1440 Control
MASTER GAIN	R5894
CHROMA GAIN	R5892
BURST PHASE	R5188
SETUP	R5484
SYNC GAIN	R5490
BURST GAIN	R5186

For closed loop operation, Burst Gain, and Setup are X 0.5 meter reading; for Master Gain, X 1/3.

CIRCUIT DESCRIPTION

Meter drive is from the Correction Monitor Output Amps in the 1440 (see Diagrams 14 & 15). Each circuit consists of a variable gain amplifier with a clamping transistor on the output to set the meters to 0 volts when the 1440 is in bypass mode.

Each meter is center 0 and $50 \mu\text{A}$ full scale deflection in either direction.



* SEE PARTS LIST FOR SERIAL NUMBER RANGES

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REPLACEABLE 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
	<i>Assembly and/or Component</i>
	<i>Attaching parts for Assembly and/or Component</i>

	<i>Detail Part of Assembly and/or Component</i>
	<i>Attaching parts for Detail Part</i>

	<i>Parts of Detail Part</i>
	<i>Attaching parts for Parts of Detail Part</i>

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.

CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER

Mfr. Code	Manufacturer	Address	City, State, Zip
000CY	NORTHWEST FASTENER SALES, INC.	7923 SW CIRRUS DRIVE	BEAVERTON, OREGON 97005
01295	TEXAS INSTRUMENTS, INC., SEMICONDUCTOR GROUP	P O BOX 5012, 13500 N CENTRAL EXPRESSWAY	DALLAS, TX 75222
02660	BUNKER RAMO CORP., CONNECTOR DIVISION	2801 S 25TH AVENUE	BROADVIEW, IL 60153
09422	PLASTIC STAMPING CORPORATION	2216 W. ARMITAGE AVE.	CHICAGO, IL 60647
12697	CLAROSTAT MFG. CO., INC.	LOWER WASHINGTON STREET	DOVER, NH 03820
22526	BERG ELECTRONICS, INC.	YOUK EXPRESSWAY	NEW CUMBERLAND, PA 17070
24546	CORNING GLASS WORKS, ELECTRONIC COMPONENTS DIVISION	550 HIGH STREET	BRADFORD, PA 16701
50437	RELIANCE STEEL PRODUCTS COMPANY	3700 WALNUT STREET	MCKEESPORT, PA 15132
50522	MONSANTO CO., ELECTRONIC SPECIAL PRODUCTS	3400 HILLVIEW AVENUE	PALO ALTO, CA 94304
73743	FISCHER SPECIAL MFG. CO.	446 MORGAN ST.	CINCINNATI, OH 45206
78189	ILLINOIS TOOL WORKS, INC.	ST. CHARLES ROAD	ELGIN, IL 60120
	SHAKEPROOF DIVISION	47-16 AUSTEL PLACE	LONG ISLAND CITY, NY 11101
79136	WALDES, KOHINOOR, INC.	2100 S. O BAY ST.	MILWAUKEE, WI 53207
79807	WROUGHT WASHER MFG. CO.	P O BOX 500	BEAVERTON, OR 97077
80009	TEKTRONIX, INC.	2530 CRESCENT DR.	BROADVIEW, IL 60153
83385	CENTRAL SCREW CO.	P. O. BOX 609	COLUMBUS, NE 68601
91637	DALE ELECTRONICS, INC.		LESTER, PA 19113
94222	SOUTHCO, INC.		

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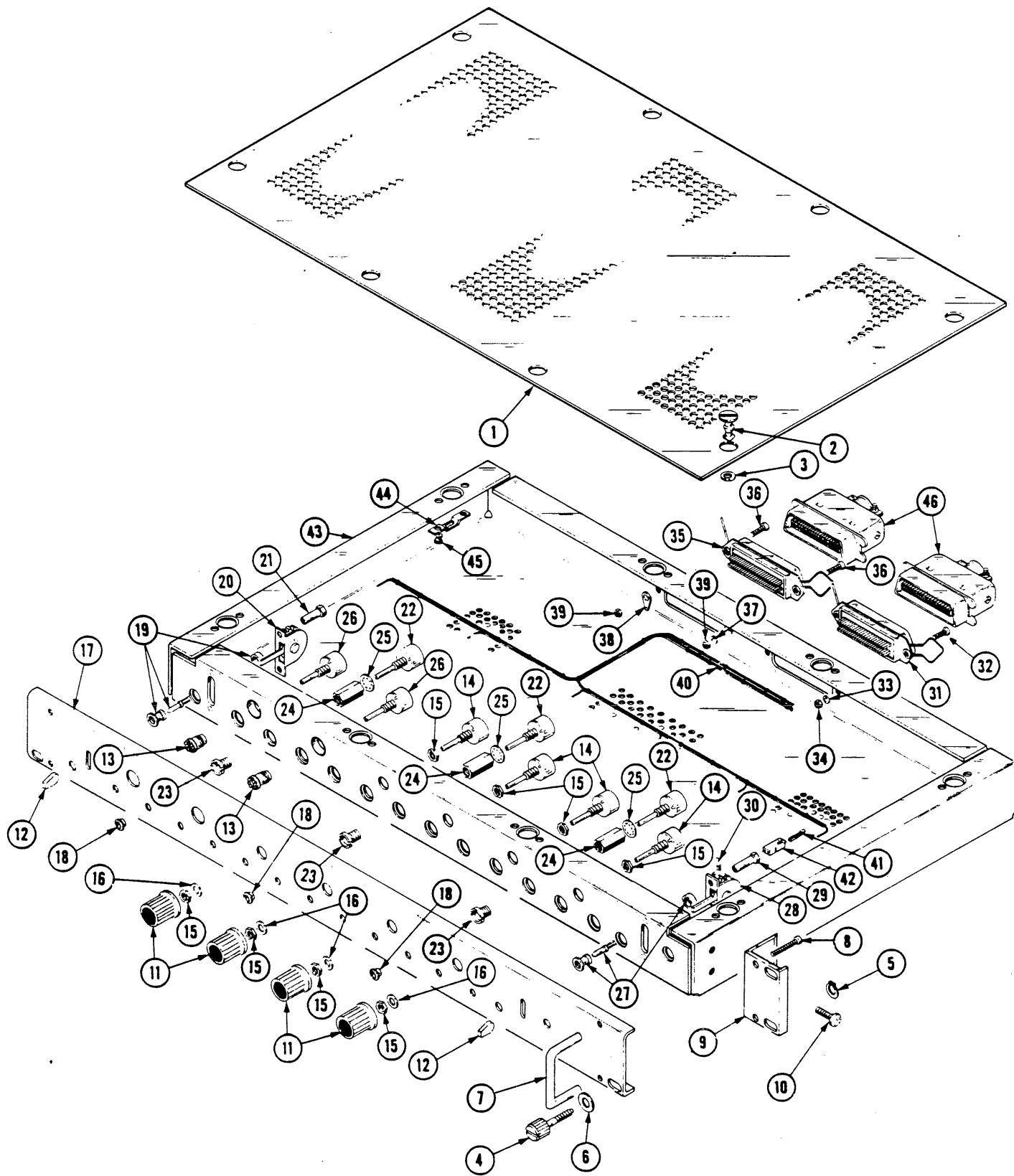


Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Dscont	Qty	1 2 3 4 5	Name & Description	Mfr Code	Mfr Part Number
-1	390-0399-00			1	CABINET, TOP:		80009	390-0399-00
-2	355-0134-00			8	. STUD, TURNLOCK F:FLAT HEAD STEEL		94222	82-14-140-16
-3	214-0389-00			8	. FSTNR, RETAINER:SPLIT RING		94222	82-32-101-17
-4	213-0216-00			2	THUMBSCREW:10-32 X 0.85,0.375 OD HD SST (ATTACHING PARTS)		80009	213-0216-00
-5	354-0025-00			2	RING, RETAINING:0.181 INCH FREE ID		79136	5555-18
-6	210-0894-00			2	WASHER, NONMETAL:0.19 ID X 0.438" OD, PLSTC -----*		09422	OBD
-7	367-0160-00			2	HANDLE, BOW:1.25 L, AL ANODIZED (ATTACHING PARTS)		80009	367-0160-00
-8	211-0014-00			4	SCREW, MACHINE:4-40 X 0.50 INCH, PNH STL -----*		83385	OBD
-9	407-1073-00			2	BRACKET, ANGLE:RACKMOUNT, ALUMINUM (ATTACHING PARTS)		80009	407-1073-00
-10	212-0004-00			4	SCREW, MACHINE:8-32 X 0.312 INCH, PNH STL -----*		83385	OBD
-11	366-0497-00			4	KNOB:GY, 0.127 ID X 0.706 OD		80009	366-0497-00
	213-0153-00			1	. SETSCREW:5-40 X 0.125, STL BK OXD, HEX		000CY	OBD
-12	366-0215-02			2	KNOB:LEVER SWITCH		80009	366-0215-02
-13	366-0261-00			2	KNOB:0.312 OD X 0.406 INCH LONG		80009	366-0261-00
-14	311-0642-00			4	RES., VAR, NONWIR:20K OHM, 20%, 0.50W (ATTACHING PARTS)		12697	382-CM39820
-15	210-0562-00			8	NUT, PLAIN, HEX.:0.25-40 X 0.312 INCH, BBS		73743	2X20224-402
-16	210-0940-00			4	WASHER, FLAT:0.25 ID X 0.375 INCH OD, STL -----*		79807	OBD
-17	333-1808-00			1	PANEL, FRONT:		80009	333-1808-00
-18	358-0301-00			12	BUSHING, SLEEVE:FOR 0.185 DIA HOLE, GRAY		80009	358-0301-00
-19	150-1017-00			1	LT EMITTING DIO:GREEN, 550NM, 55MA MAX		50437	LSM-16L-100
-20	260-0731-00			1	SWITCH, LEVER:1 SECT, 2 POSN, 30 DEG (ATTACHING PARTS)..		80009	260-0731-00
-21	220-0413-00			2	NUT, SLEEVE:4-40 X 0.562 INCH LONG -----*		80009	220-0413-00
-22	311-0642-00			12	RES., VAR, NONWIR:20K OHM, 20%, 0.50W (ATTACHING PARTS)		12697	382-CM39820
-23	358-0409-00			12	BSHG, MACH. THD:0.25-32 X 0.159 ID X 0.24		80009	358-0409-00
-24	220-0484-00			12	NUT, PLAIN, HEX.:0.25-32 X 0.375 INCH AL		80009	220-0484-00
-25	210-0046-00			12	WASHER, LOCK:0.261 ID, INTL, 0.018 THK, BRS -----*		78189	1214-05-00-0541C
-26	311-0642-00			2	RES., VAR, NONWIR:20K OHM, 20%, 0.50W		12697	382-CM39820
-27	150-1001-00			2	LT EMITTING DIO:RED, 660NM, 100MA MAX		50522	MV5024
-28	260-1636-00			1	SWITCH, LEVER:2 SECTION, 2 POSITION (ATTACHING PARTS)		80009	260-1636-00
-29	220-0413-00			2	NUT, SLEEVE:4-40 X 0.562 INCH LONG -----*		80009	220-0413-00
-30	321-0352-00			1	RES., FXD, FILM:45.3K OHM, 1%, 0.125W		91637	MFF1816G45301F
-31	131-0294-00			1	CONNECTOR, RCPT, :36 PIN FEMALE (ATTACHING PARTS)		02660	57-40360
-32	211-0062-00			2	SCREW, MACHINE:2-56 X 0.312 INCH, RDH STL		83385	OBD
-33	210-0001-00			2	WASHER, LOCK:INTL, 0.092 ID X 0.18"OD, STL		78189	1202-00-00-0541C
-34	210-0405-00			2	NUT, PLAIN, HEX.:2-56 X 0.188 INCH, BRS -----*		73743	2X12157-402
-35	131-0294-00			1	CONNECTOR, RCPT, :36 PIN FEMALE (ATTACHING PARTS)		02660	57-40360
-36	211-0062-00			2	SCREW, MACHINE:2-56 X 0.312 INCH, RDH STL		83385	OBD
-37	210-0001-00			1	WASHER, LOCK:INTL, 0.092 ID X 0.18"OD, STL		78189	1202-00-00-0541C
-38	210-0259-00			1	TERMINAL, LUG:0.099"ID INT TOOTH, SE		80009	210-0259-00
-39	210-0405-00			2	NUT, PLAIN, HEX.:2-56 X 0.188 INCH, BRS -----*		73743	2X12157-402
-40	179-2072-00			1	WIRING HARNESS, :MAIN		80009	179-2072-00
-41	131-0707-00			4	. CONNECTOR, TERM.:22-26 AWG, BRS& CU BE GOLD		22526	47439
-42	352-0169-00			3	. HLDR, TERM CONN:2 WIRE BLACK		80009	352-0169-00
-43	441-1200-00			1	CHAS, ELEC EQUIP:		80009	441-1200-00
-44	214-0388-00			8	. FASTENER, RCPT:LEAF SPRING (ATTACHING PARTS)		94222	82-35-295-15
-45	210-0657-01			16	. EYELET, METALLIC:0.089 OD X 0.218 INCH LONG -----*		80009	210-0657-01
					ACCESSORIES			
-46	131-0293-00		070-1674-00	2	CONNECTOR, PLUG, :36 PIN CABLE PLUG, MALE		02660	57-30360
				1	MANUAL, TECH:SERVICE(NOT SHOWN)		80009	070-1674-00

015-0239-00

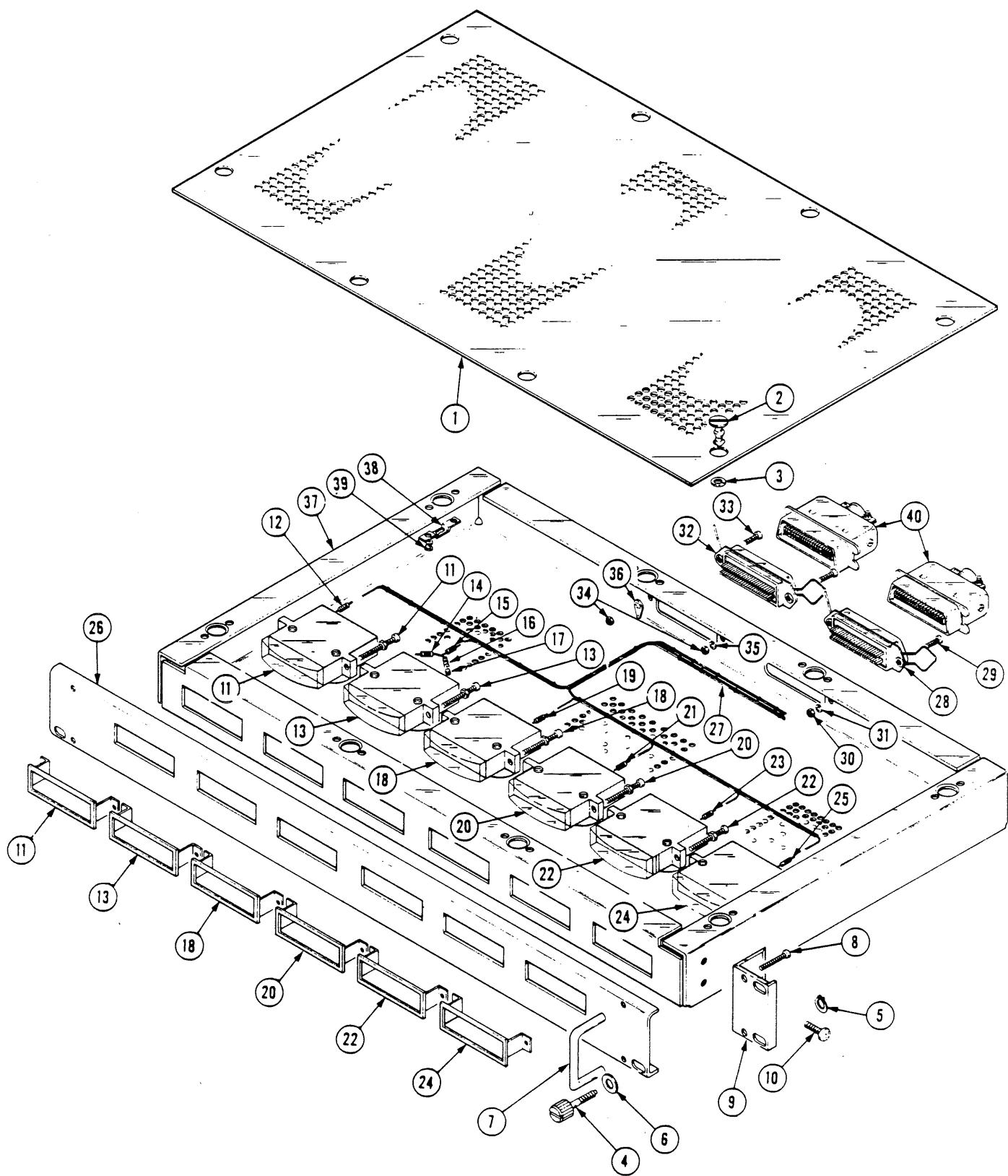


Fig. & Index No.	Tektronix Part No.	Serial/Model No. Eff	Qty	1 2 3 4 5	Name & Description	Mfr Code	Mfr Part Number
-1	390-0399-00		1	CABINET, TOP:		80009	390-0399-00
-2	355-0134-00		8	. STUD, TURNLOCK F:FLAT HEAD STEEL		94222	82-14-140-16
-3	214-0389-00		8	. FSTNR, RETAINER:SPLIT RING		94222	82-32-101-17
-4	213-0216-00		2	THUMBSCREW:10-32 X 0.85,0.375 OD HD SST (ATTACHING PARTS)		80009	213-0216-00
-5	354-0025-00		2	RING, RETAINING:0.181 INCH FREE ID		79136	5555-18
-6	210-0894-00		2	WASHER, NONMETAL:0.19 ID X 0.438" OD,PLSTC -----*		09422	OBD
-7	367-0160-00		2	HANDLE, BOW:1.25 L,AL ANODIZED (ATTACHING PARTS)		80009	367-0160-00
-8	211-0014-00		4	SCREW,MACHINE:4-40 X 0.50 INCH,PNH STL -----*		83385	OBD
-9	407-1073-00		2	BRACKET,ANGLE:RACKMOUNT,ALUMINUM (ATTACHING PARTS)		80009	407-1073-00
-10	212-0004-00		2	SCREW,MACHINE:8-32 X 0.312 INCH,PNH STL -----*		83385	OBD
-11	149-0040-00		1	SCALEPLATE,ELEC:100UA ON 20-0-20 SCALE		80009	149-0040-00
-12	321-0356-00		1	RES.,FXD,FILM:49.9 OHM,1%,0.125W		91637	MFF1816G49901F
-13	149-0041-00		1	SCALEPLATE,ELEC:100UA ON 40-0-40 SCALE		80009	149-0041-00
-14	321-0385-00		1	RES.,FXD,FILM:100K OHM,1%,0.125W		91637	MFF1816G10002F
-15	321-0385-00	B010100 B020144	1	RES.,FXD,FILM:100K OHM,1%,0.125W		91637	MFF1816G10002F
	321-0314-00	B020145	1	RES.,FXD,FILM:18.2K OHM,1%,0.125W		91637	MFF1816G18201F
-16	321-0385-00	B010100 B020144	1	RES.,FXD,FILM:100K OHM,1%,0.125W		91637	MFF1816G10002F
	321-0310-00	B020145	1	RES.,FXD,FILM:16.5K OHM,1%,0.125W		91637	MFF1816G16501F
-17	152-0141-02		1	SEMICOND DEVICE:SILICON,30V,150MA		01295	1N4152R
-18	149-0040-00		1	SCALEPLATE,ELEC:100UA ON 20-0-20 SCALE		80009	149-0040-00
-19	321-0417-00		1	RES.,FXD,FILM:215K OHM,1%,0.125W		24546	NA55D2153F
-20	149-0041-00		1	SCALEPLATE,ELEC:100UA ON 40-0-40 SCALE		80009	149-0041-00
-21	321-0417-00		1	RES.,FXD,FILM:215K OHM,1%,0.125W		24546	NA55D2153F
-22	149-0041-00		1	SCALEPLATE,ELEC:100UA ON 40-0-40 SCALE		80009	149-0041-00
-23	321-0417-00		1	RES.,FXD,FILM:215K OHM,1%,0.125W		24546	NA55D2153F
-24	149-0039-00		1	SCALEPLATE,ELEC:100UA ON 10-0-10 SCALE		80009	149-0039-00
-25	321-0417-00		1	RES.,FXD,FILM:215K OHM,1%,0.125W		24546	NA55D2153F
-26	333-1807-00		1	PANEL,FRONT:		80009	333-1807-00
-27	179-2073-00		1	WIRING HARNESS,:MAIN		80009	179-2073-00
-28	131-0294-00		1	CONNECTOR,RCPT,:36 PIN FEMALE (ATTACHING PARTS)		02660	57-40360
-29	211-0062-00		2	SCREW,MACHINE:2-56 X 0.312 INCH,RDH STL		83385	OBD
-30	210-0405-00		2	NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS		73743	2X12157-402
-31	210-0001-00		2	WASHER,LOCK:INTL,0.092 ID X 0.18"OD,STL -----*		78189	1202-00-00-0541C
-32	131-0294-00		1	CONNECTOR,RCPT,:36 PIN FEMALE (ATTACHING PARTS)		02660	57-40360
-33	211-0062-00		2	SCREW,MACHINE:2-56 X 0.312 INCH,RDH STL		83385	OBD
-34	210-0405-00		2	NUT,PLAIN,HEX.:2-56 X 0.188 INCH,BRS		73743	2X12157-402
-35	210-0001-00		1	WASHER,LOCK:INTL,0.092 ID X 0.18"OD,STL		78189	1202-00-00-0541C
-36	210-0259-00		1	TERMINAL,LUG:0.099"ID INT TOOTH,SE -----*		80009	210-0259-00
-37	441-1116-00		1	CHAS,ELEC EQUIP:		80009	441-1116-00
-38	214-0388-00		8	. FASTENER,RCPT:LEAF SPRING (ATTACHING PARTS)		94222	82-35-295-15
-39	210-0657-01		16	. EYELET,METALLIC:0.089 OD X 0.218 INCH LONG -----*		80009	210-0657-01
ACCESORIES							
-40	131-0293-00 070-1674-00		2	CONNECTOR,PLUG,:36 PIN CABLE PLUG,MALE		02660	57-30360
			1	MANUAL,TECH:SERVICE(NOT SHOWN)		80009	070-1674-00

