



067-0902-00

SYSTEM TEST FIXTURE

INSTRUCTION MANUAL

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

MANUAL PART NO.
061-2224-00

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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.

WARRANTY

Tektronix warrants to the original purchaser that this product and options, excluding customer supplied equipment, is free from defects in materials and workmanship, under normal use, for a period of one (1) year from the date of shipment. Tektronix will, at its option, repair or replace the product if Tektronix determines it is defective within the warranty period, and it is returned, freight prepaid, to a Tektronix Service Center.

In the forty-eight (48) contiguous United States and the District of Columbia, and in other areas where Tektronix normally has service available for this product, Tektronix will provide on-site warranty service at no charge during the first ninety (90) days from the date of shipment.

Tektronix shall be under no obligation to furnish warranty service if:

- a. Attempts to repair or service the product are made by personnel other than Tektronix service representatives.
- b. Modifications are made to the hardware or software by personnel other than Tektronix representatives.
- c. Damage results from connecting the product to incompatible equipment.

There is no implied warranty of fitness for a particular purpose. Tektronix is not liable for consequential damages.

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This instrument, in whole or in part, may be protected by one or more U.S. or foreign patents or patent applications. Information provided on request by Tektronix, Inc., P.O. Box 500, Beaverton, Oregon 97077.

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PRODUCT 067-0902-00 SYSTEM TEST FIXTURE

This manual supports the following versions of this product: B010100 and up

MANUAL REVISION STATUS

REV.	DATE	DESCRIPTION
@	10/79	Original Issue

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Section 1

GENERAL DESCRIPTION

INTRODUCTION

The 067-0902-00 System Test Fixture (Figure 1-1) is an aid in troubleshooting microprocessor hardware. The System Test Fixture must be used with a test fixture interface (personality) board that is designed specifically for the system under test. The personality board defines what the System Test Fixture can do and allows it to be connected to the system under test.

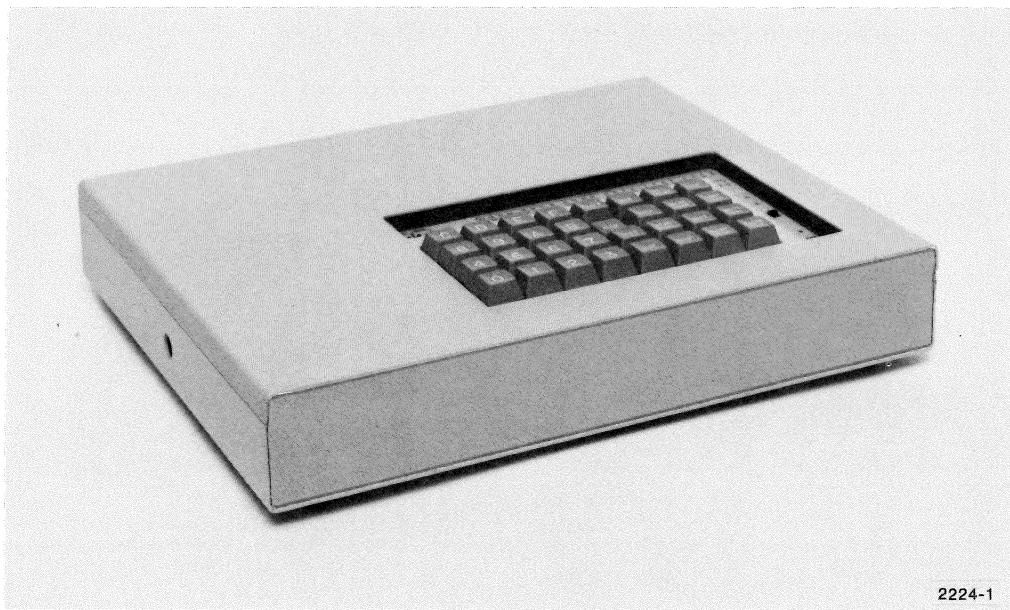


Figure 1-1. 067-0902-00 System Test Fixture.

DESCRIPTION

The System Test Fixture has a keypad, LEDs to display information, and some control switches. The function of the keys and LEDs is set by the personality board connected to the test fixture. Refer to the manual on the personality board for a description of keypad functions, LED meanings, and how to use the Fixture board.

GENERAL DESCRIPTION

The 067-0902-00 System Test Fixture uses common circuitry built around a 6800 microprocessor. The fixture's circuit board contains the 6800 chip, clock circuitry, address and data bus buffers, RAM, keypad decoder, and LEDs. Memory space for the 6800 is divided as shown in Figure 1-2. The function of much of memory space depends on the attached personality board.

GENERAL DESCRIPTION

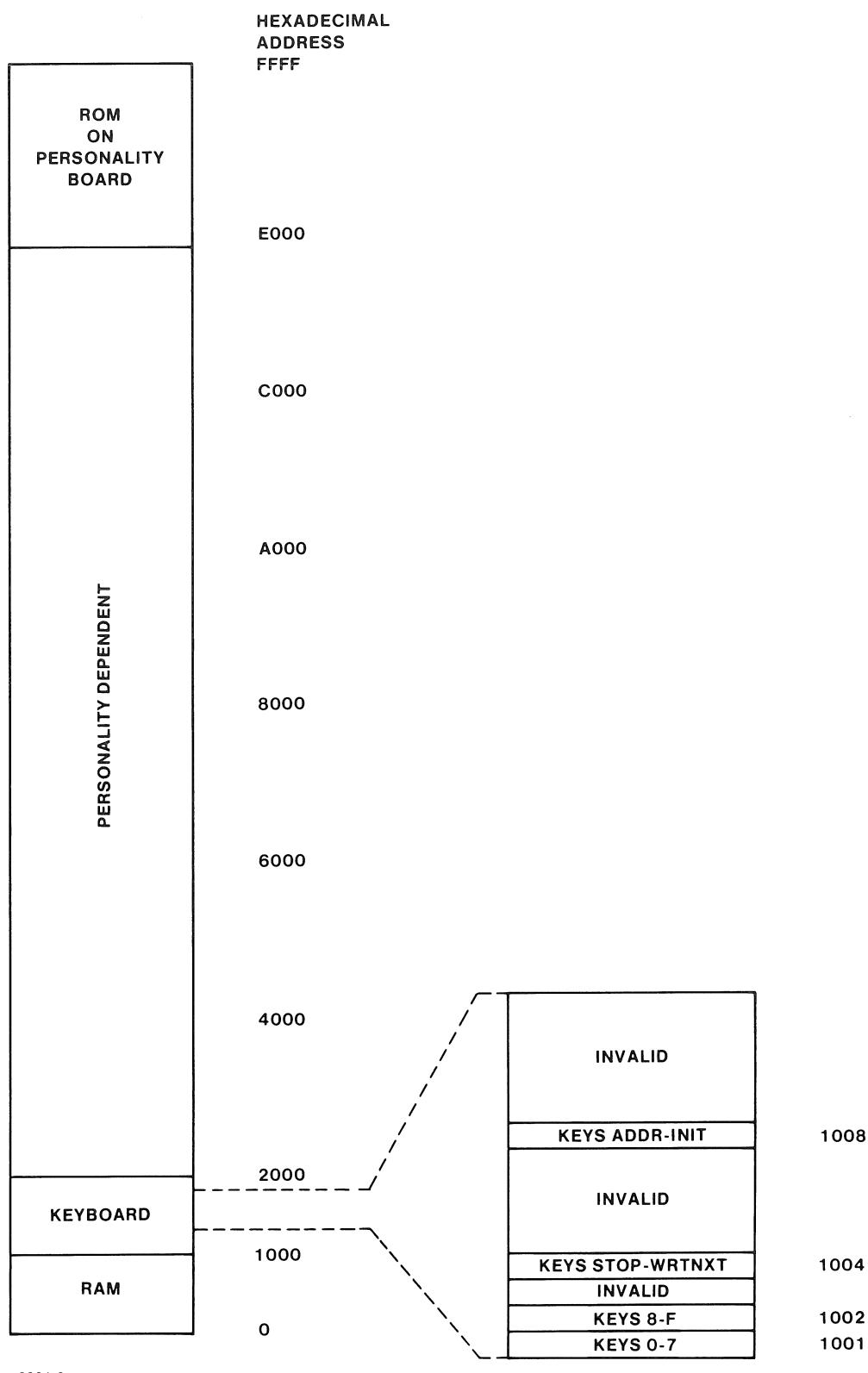


Figure 1-2. Memory Address Space Utilization.

Section 2

SPECIFICATIONS

PERFORMANCE

The 067-0902-00 System Test Fixture will be part of a unit. The complete unit will check out a microprocessor-based system.

Environmental Limits

The Test Fixture is used in an indoor environment and requires a static-free workstation for servicing. Table 2-1 lists the Test Fixture environmental limits.

Table 2-1
ENVIRONMENTAL LIMITS

Temperature	
Operating	10 to 40 degrees C (50 to 104 degrees F)
Non-Operating	-40 to 65 degrees C (-40 to 113 degrees F)
Altitude	
Operating	to 4,500 M (15,000 ft)
Non-Operating	to 15,000 M (50,000 ft)
Humidity	
Operating	80% relative humidity, non-condensing
Non-Operating	95% relative humidity, non-condensing
Heat Dissipation	
Operating (average)	approximately 41 BTU/HV (12 watts)

SPECIFICATIONS

Physical

The unit consists of a circuit board (the controller) encased in a mechanical package. Another circuit board (the personality board) is added for the particular system under test. The unit has a 12-key keypad that allows commands to be entered into the system under test; LEDs display the output.

Power

The power is normally supplied by the system under test, but can be supplied by an external source. The requirements are 5V at approximately 2.5A for the Test Fixture Controller. Additional power requirements are dependent on the personality board used in the complete test unit.

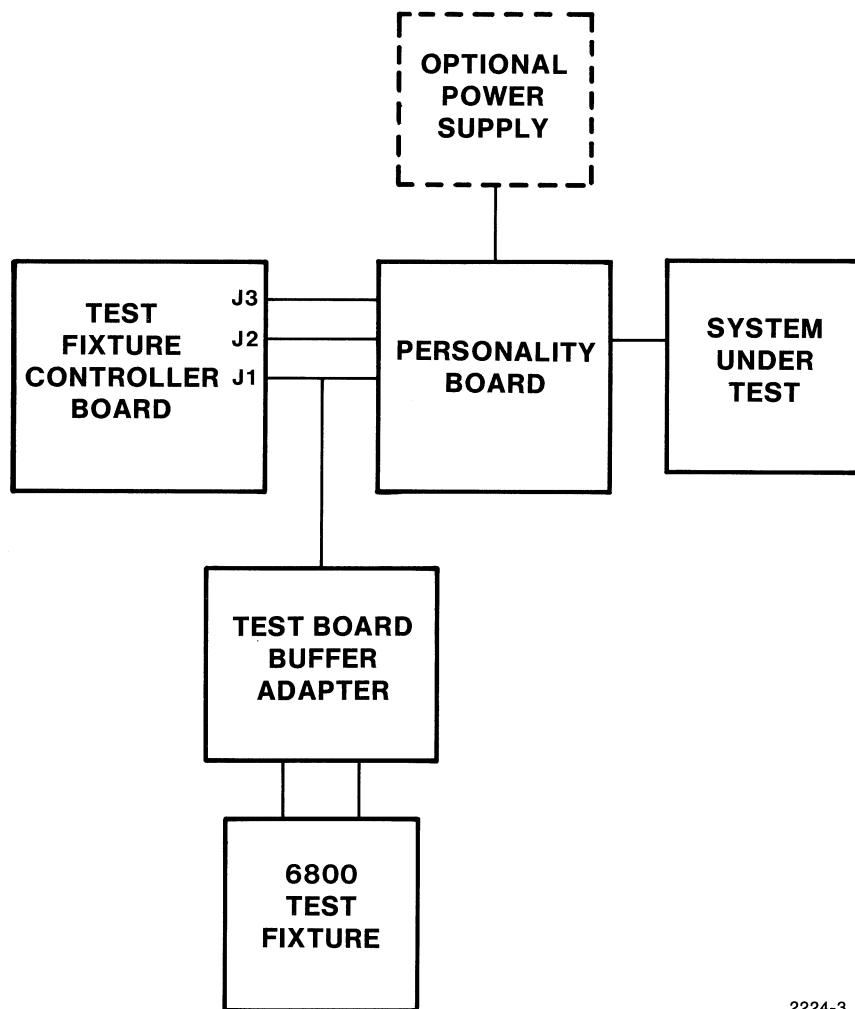
Section 3

MAINTENANCE

There are no internal adjustments to the Test Fixture. Routine maintenance of the System Test Fixture consists of an occasional cleaning. If the electronics are to be serviced, it should be done at a static-free workstation.

When the 067-0902-00 System Test Fixture requires repair, the 067-0746-00 System Test Fixture may be used to troubleshoot the 6800-related circuitry. To connect the 067-0746-00, first remove the cable between the 50-pin connectors on the personality board and the 067-0902-00 fixture's circuit board (see Figure 3-1). Substitute a ribbon cable with a loop-through connector cable assembly (175-5087-00) for the removed cable. Attach the loop-through connector to a 067-0811-00 Test Board Buffer Adapter. The 067-0746-00 Fixture's two ribbon cables plug onto the 067-0811-00 Test Board Buffer Adapter. Then use the 067-0746-00 Fixture to test RAM, ROM, and other circuitry. Refer to the manual for the 6800 System Test Fixture for instructions.

MAINTENANCE



2224-3

Figure 3-1. Test Fixture Text Cabling.

Section 4

THEORY OF OPERATION

The 067-0902-00 System Test Fixture is the controller of a complete test unit. The Test Fixture must be used with a personality board designed for the system under test. Information on the personality board will be found in its own manual.

The Test Fixture Controller is composed of a clock, a 6800 microprocessor, latches, LED drivers, decoders, RAM, a keyboard and 66 LEDs for readout. The LEDs are in groups of 32, 24, 6 and 4. The personality board contains the necessary circuitry for the instrument being checked, latches, memory, decoders, ROM and a multiplexer (see Figure 4-1).

The keyboard has 32 keys, 16 for hexadecimal coding and 16 are available for special commands such as STEP, STOP READ, etc. The FUNCTION key operates like a shift key and makes it possible to have another set of 12 functions for the keyboard. A block diagram of a system under test using the System Test Fixture is shown in Figure 4-2.

THEORY OF OPERATION

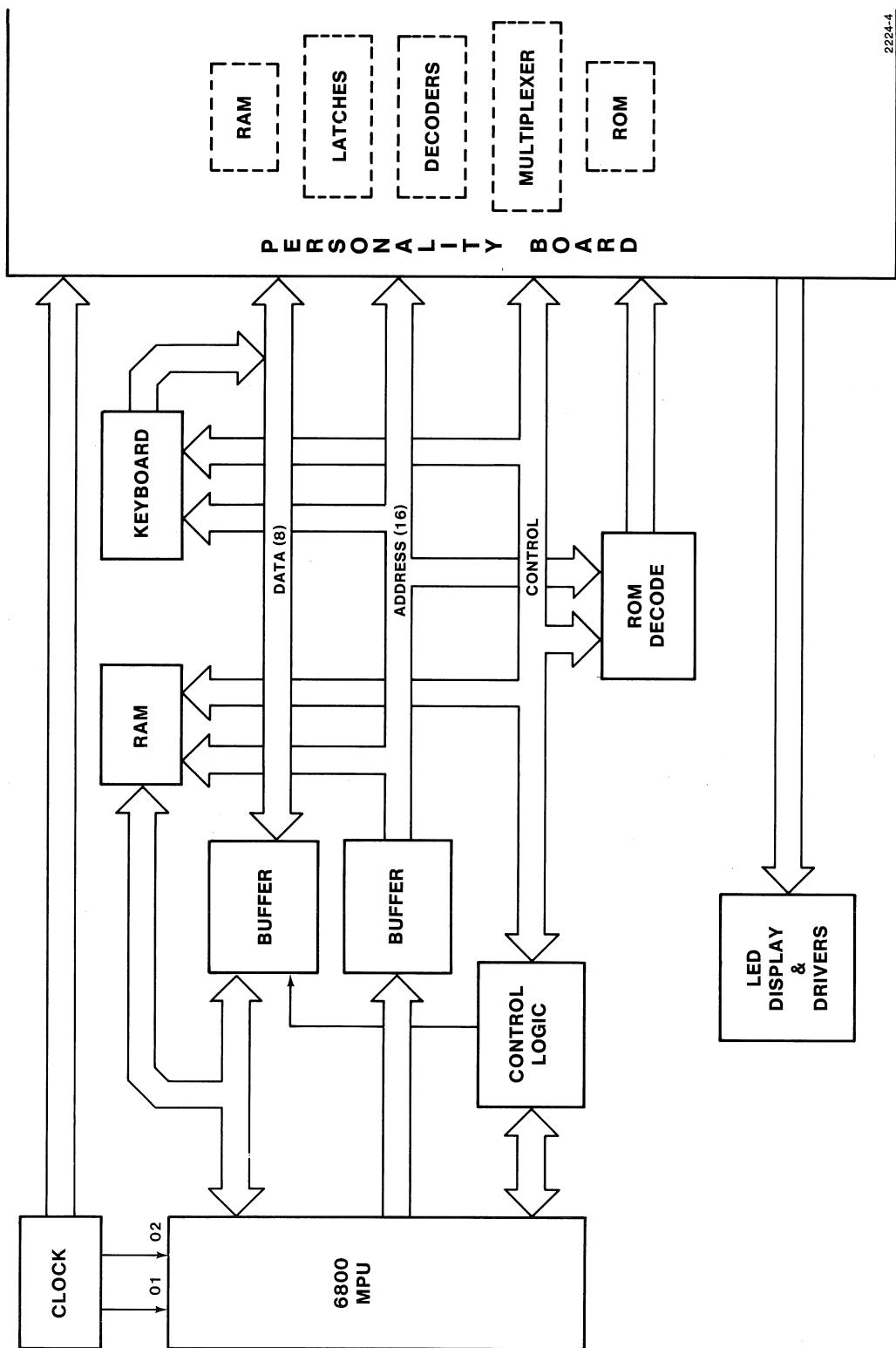
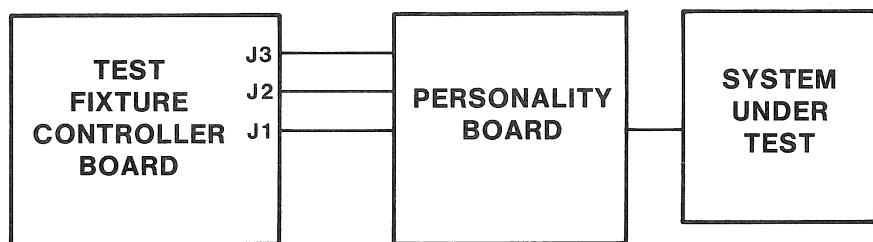


Figure 4-1. Controller Board Block Diagram.



2224-5

Figure 4-2. System Test Cabling.

Section 5 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.

ABBREVIATIONS

"	INCH	ELCTRN	ELECTRON	IN	INCH	SE	SINGLE END
#	NUMBER SIZE	ELEC	ELECTRICAL	INCAND	INCANDESCENT	SECT	SECTION
ACTR	ACTUATOR	ELCLTLT	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

REPLACEABLE PARTS**CROSS INDEX—MFR. CODE NUMBER TO MANUFACTURER**

Mfr. Code	Manufacturer	Address	City, State, Zip
000BN	HI-TEK	3115 W. WARNER	SANTA ANA, CA 92704
00779	AMP, INC.	P O BOX 3608	HARRISBURG, PA 17105
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
04222	AVX CERAMICS, DIVISION OF AVX CORP.	P O BOX 867, 19TH AVE. SOUTH	MYRTLE BEACH, SC 29577
10389	CHICAGO SWITCH, INC.	2035 WABANIA AVE.	CHICAGO, IL 60647
18324	SIGNETICS CORP.	811 E. ARQUES	SUNNYVALE, CA 94086
22526	BERG ELECTRONICS, INC.	YOUK EXPRESSWAY	NEW CUMBERLAND, PA 17070
27014	NATIONAL SEMICONDUCTOR CORP.	2900 SEMICONDUCTOR DR.	SANTA CLARA, CA 95051
32159	WEST-CAP ARIZONA	2201 E. ELVIRA ROAD	TUCSON, AZ 85706
33096	COLORADO CRYSTAL CORPORATION	2303 W 8TH STREET	LOVELAND, CO 80537
50347	OPCOA, DIVISION OF IDS	330 TALMADGE ROAD	EDISON, NJ 08817
56289	SPRAGUE ELECTRIC CO.	644 W. 12TH ST.	NORTH ADAMS, MA 01247
72982	ERIE TECHNOLOGICAL PRODUCTS, INC.	446 MORGAN ST.	ERIE, PA 16512
73743	FISCHER SPECIAL MFG. CO.	P O BOX 500	CINCINNATI, OH 45206
80009	TEKTRONIX, INC.	2530 CRESCENT DR.	BEAVERTON, OR 97077
83385	CENTRAL SCREW CO.	P. O. BOX 609	BROADVIEW, IL 60153
91637	DALE ELECTRONICS, INC.		COLUMBUS, NE 68601

REPLACEABLE PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	Descont	Name & Description	Mfr Code	Mfr Part Number
A1	670-5728-00			CKT BOARD ASSY:STROKE ROM SIMULATOR	80009	670-5728-00
C101	290-0746-00			CAP.,FXD,ELCLTLT:47UF,+50-10%,16V	56289	502D226
C141	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C171	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C181	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C191	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C201	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C211	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C221	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C231	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C251	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C271	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C291	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C401	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C411	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C421	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C501	283-0114-00			CAP.,FXD,CER DI:0.0015UF,5%,200V	72982	805-509B152J
C507	283-0114-00			CAP.,FXD,CER DI:0.0015UF,5%,200V	72982	805-509B152J
C511	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C521	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
C611	283-0647-00			CAP.,FXD,MICA D:70PF,1%,100V	00853	D151E700F0
C621	283-0422-00			CAP.,FXD,CER DI:0.047UF,+80-20%,50V	04222	DG015E473Z
DS331	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS332	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS333	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS334	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS351	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS352	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS353	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS354	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS361	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS362	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS363	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS364	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS371	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS372	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS373	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS374	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS375	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS376	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS377	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS378	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS381	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS382	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS383	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS384	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS391	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS392	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS393	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS394	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS431	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS432	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS433	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS434	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS441	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A
DS442	150-1040-00			LAMP,LED:RED,5MA,2.0V	50347	LLL-7A

REPLACEABLE PARTS

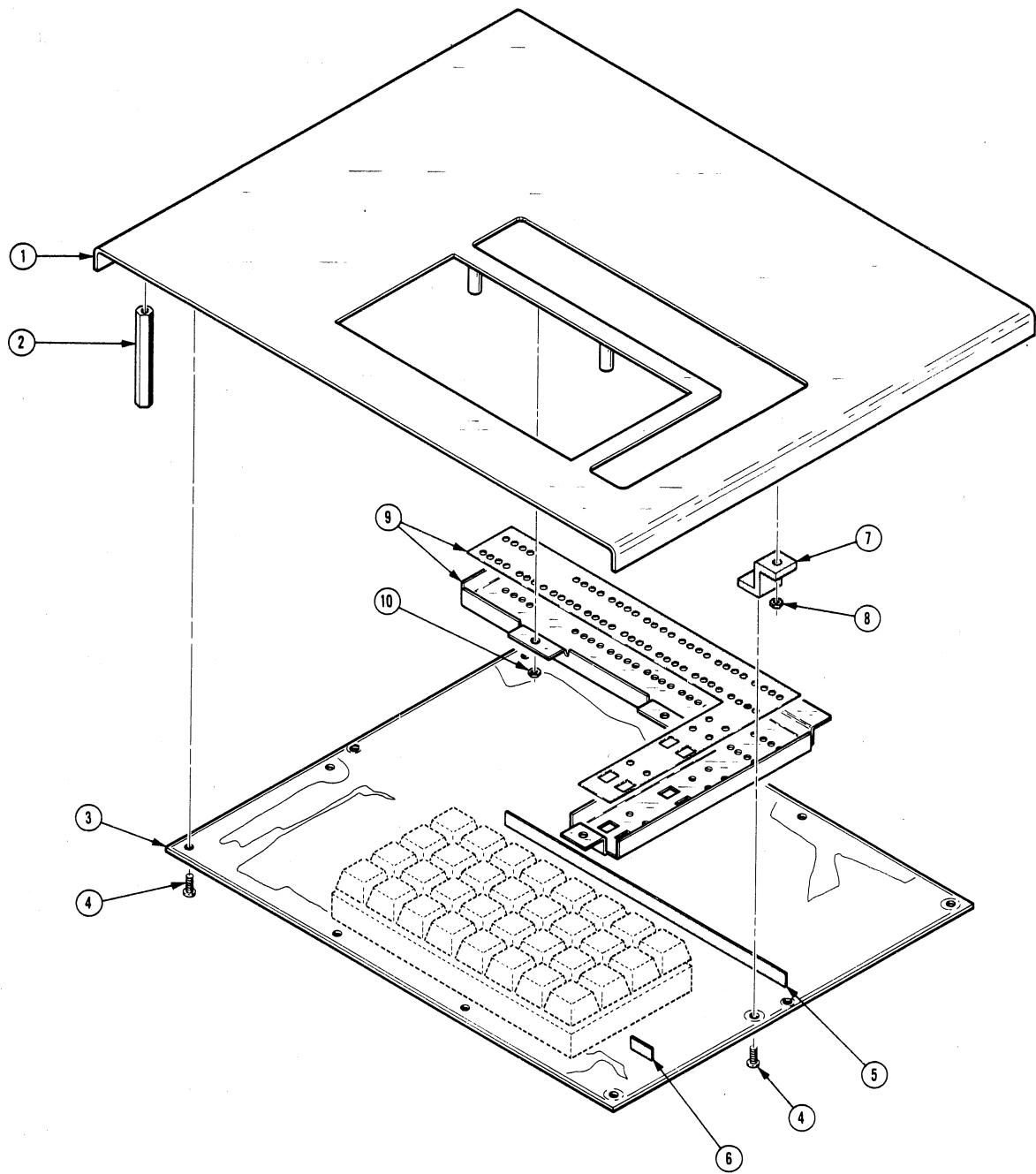
Ckt No.	Tektronix Part No.	Serial/Model No. Eff	DScont	Name & Description	Mfr Code	Mfr Part Number
DS443	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS444	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS451	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS452	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS453	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS454	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS461	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS462	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS463	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS464	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS471	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS472	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS473	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS474	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS475	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS476	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS477	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS478	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS481	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS482	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS483	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS484	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS491	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS492	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS493	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS494	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS496	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS497	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS498	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS499	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS691	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
DS692	150-1040-00			LAMP, LED:RED, 5MA, 2.0V	50347	LLL-7A
J1	131-2221-00			CONN, RCPT, ELEC:CKT BD, 50 CONT, MALE (QUANTITY OF 2)	00779	2-86479-9
J1	-----					
J2	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J2	131-1426-00			CONTACT SET,ELE:R ANGLE,0.250L,STRIP OF 36	22526	65524-136
J3	131-1425-00			CONTACT SET,ELE:R ANGLE,0.150" L,STR OF 36	22526	65521-136
J3	131-1426-00			CONTACT SET,ELE:R ANGLE,0.250L,STRIP OF 36	22526	65524-136
J4	131-0589-00			TERM,PIN:0.46 L X 0.025 SQ.PH BRZ GL (QUANTITY OF 4)	22526	47350
J4	-----					
L611	108-0317-00			COIL,RF:FIXED,15UH	32159	71501M
Q401	151-0188-00			TRANSISTOR:SILICON,PNP	80009	151-0188-00
Q402	151-0188-00			TRANSISTOR:SILICON,PNP	80009	151-0188-00
R101	307-0365-00			RES.,FxD, FILM:1K OHM,2%,15 RES NETWORK	91637	LDP1602102GS7
R121	307-0365-00			RES.,FxD, FILM:1K OHM,2%,15 RES NETWORK	91637	LDP1602102GS7
R321	315-0103-00			RES.,FxD,CMPSN:10K OHM,5%,0.25W	01121	CB1035
R330	315-0391-00			RES.,FxD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R331	315-0391-00			RES.,FxD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R332	315-0391-00			RES.,FxD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R333	315-0391-00			RES.,FxD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R334	315-0391-00			RES.,FxD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R335	315-0391-00			RES.,FxD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R336	315-0391-00			RES.,FxD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R337	315-0391-00			RES.,FxD,CMPSN:390 OHM,5%,0.25W	01121	CB3915
R338	315-0391-00			RES.,FxD,CMPSN:390 OHM,5%,0.25W	01121	CB3915

REPLACEABLE PARTS

REPLACEABLE PARTS

Ckt No.	Tektronix Part No.	Serial/Model No. Eff	DScont	Name & Description	Mfr Code	Mfr Part Number
R401	315-0220-00			RES.,FWD,CMPSN:22 OHM,5%,0.25W	01121	CB2205
R402	315-0100-00			RES.,FWD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
R405	315-0100-00			RES.,FWD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
R406	315-0220-00			RES.,FWD,CMPSN:22 OHM,5%,0.25W	01121	CB2205
R441	307-0445-00			RES,NTWK,FWD,FI:4.7K OHM,20%,(9) RES	91637	MSP10A01-472M
R501	315-0221-00			RES.,FWD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R502	315-0102-00			RES.,FWD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R505	315-0102-00			RES.,FWD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R506	315-0221-00			RES.,FWD,CMPSN:220 OHM,5%,0.25W	01121	CB2215
R611	315-0821-00			RES.,FWD,CMPSN:820 OHM,5%,0.25W	01121	CB8215
R612	315-0821-00			RES.,FWD,CMPSN:820 OHM,5%,0.25W	01121	CB8215
R615	315-0100-00			RES.,FWD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
R616	315-0102-00			RES.,FWD,CMPSN:1K OHM,5%,0.25W	01121	CB1025
R617	315-0100-00			RES.,FWD,CMPSN:10 OHM,5%,0.25W	01121	CB1005
S541	260-1854-03			SW,MDL,PUSH:4 BTN X 4 ROWS,W/ETCHED KEY CAPS	000BN	DS1234-4X4
S571	260-1854-02			SW,MDL,PUSH:4 BTN X 4 ROWS,W/ETCHED KEY CAPS	000BN	DS1234-4X4
S591	260-1116-00			SWITCH,SLIDE:SPDT	10389	23-021-144
S592	260-1116-00			SWITCH,SLIDE:SPDT	10389	23-021-144
S691	260-1116-00			SWITCH,SLIDE:SPDT	10389	23-021-144
S692	260-1116-00			SWITCH,SLIDE:SPDT	10389	23-021-144
U111	156-1111-00			MICROCIRCUIT,DI:OCTAL BUS TRANSCEIVERS	80009	156-1111-00
U131	156-0469-00			MICROCIRCUIT,DI:3-LINE TO 8-LINE DECODER	01295	SN74LS138N
U141	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U151	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U161	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U171	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U181	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U191	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U201	156-0956-00			MICROCIRCUIT,DI:OCTAL BFR W/3STATE OUT	80009	156-0956-00
U211	156-0426-00			MICROCIRCUIT,DI:MICROPROCESSOR	80009	156-0426-00
U221	156-0956-00			MICROCIRCUIT,DI:OCTAL BFR W/3STATE OUT	80009	156-0956-00
U231	156-0985-00			MICROCIRCUIT,DI:DUAL 5-INPUT NOR GATE	80009	156-0985-00
U241	156-0467-00			MICROCIRCUIT,DI:QUAD 2-INPUT NAND BUFFER	01295	SN74LS38N
U251	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U261	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U271	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U281	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U291	156-0724-00			MICROCIRCUIT,DI:HEX INVERTER/WOPEN COL OUT	80009	156-0724-00
U301	156-0480-00			MICROCIRCUIT,DI:QUAD 2-INPUT AND GATE	80009	156-0480-00
U321	156-0385-00			MICROCIRCUIT,DI:HEX. INVERTER	80009	156-0385-00
U401	156-0403-00			MICROCIRCUIT,DI:HEX. INV W/OPEN COLL OUTPS	01295	SN74S05N
U411	156-0695-00			MICROCIRCUIT,DI:RAM,256 X 4 STATIC 2606B-1	18324	2606B-1
U421	156-0695-00			MICROCIRCUIT,DI:RAM,256 X 4 STATIC 2606B-1	18324	2606B-1
U501	156-0479-00			MICROCIRCUIT,DI:QUAD 2-INPUT OR GATE	27014	DM74LS32N
U511	156-0387-00			MICROCIRCUIT,DI:DUAL J-K NEG EDGE TRIG	80009	156-0387-00
U521	156-0916-00			MICROCIRCUIT,DI:EIGHT 2-INP 3-STATE BFR	80009	156-0916-00
U611	156-0323-00			MICROCIRCUIT,DI:HEX. INVERTER	01295	SN74S04N
U621	156-1172-00			MICROCIRCUIT,DI:DUAL 4-BIT BINARY COUNTER	01295	SN74LS393N
Y605	158-0072-00		-----	XTAL UNIT,QTZ:4.9152 MHZ,0.05% (CRYSTAL REQUIRES FOAM ADHESIVE)	33096	OBD

FIG. 1 EXPLODED VIEW



REPLACEABLE PARTS

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	390-0748-00			1	CAB.,TEST FXTR:TOP,ALUMINUM		80009	390-0748-00
-2	129-0139-00			6	SPACER,POST:4-40 THRU,2 INCHES LONG		80009	129-0139-00
-3	670-5728-00			1	CKT BOARD ASSY:STROKE ROM SIMULATOR (ATTACHING PARTS)		80009	670-5728-00
-4	211-0097-00			12	SCREW,MACHINE:4-40 X 0.312 INCH,PNH STL -----		83385	OBD
					- . CKT BOARD ASSY INCLUDES:			
-5	361-0999-00			2	. SPACER,PLATE:0.03 X 7.0 L X 0.218		80009	361-0999-00
-6	361-1000-00			2	. SPACER,PLATE:0.03 X 0.5 L X 0.281		80009	361-1000-00
-7	386-4311-00			1	SUPPORT,CKT BD:DELRIN (ATTACHING PARTS)		80009	386-4311-00
-8	210-0406-00			1	NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS -----		73743	2X12161-402
-9	386-4264-00			1	PANEL, TOP:AL, TV GRAY (ATTACHING PARTS)		80009	386-4264-00
-10	210-0406-00			5	NUT,PLAIN,HEX.:4-40 X 0.188 INCH,BRS -----		73743	2X12161-402
				1	MARKER, IDENT:MARKED PATENT		80009	334-3193-00

Section 6

DIAGRAMS

Symbols and Reference Designators

Electrical components shown on the diagrams are in the following units unless noted otherwise:

Capacitors = Values one or greater are in picofarads (μF).

Values less than one are in microfarads (μF).

Resistors = Ohms (Ω).

Graphic symbols and class designation letters are based on ANSI Standard Y32.2-1975.

Logic symbology is based on ANSI Y32.14-1973 in terms of positive logic. Logic symbols depict the logic function performed and may differ from the manufacturer's data.

Abbreviations are based on ANSI Y1.1-1972.

Other ANSI standards that are used in the preparation of diagrams by Tektronix, Inc. are:

Y14.15, 1966 Drafting Practices.

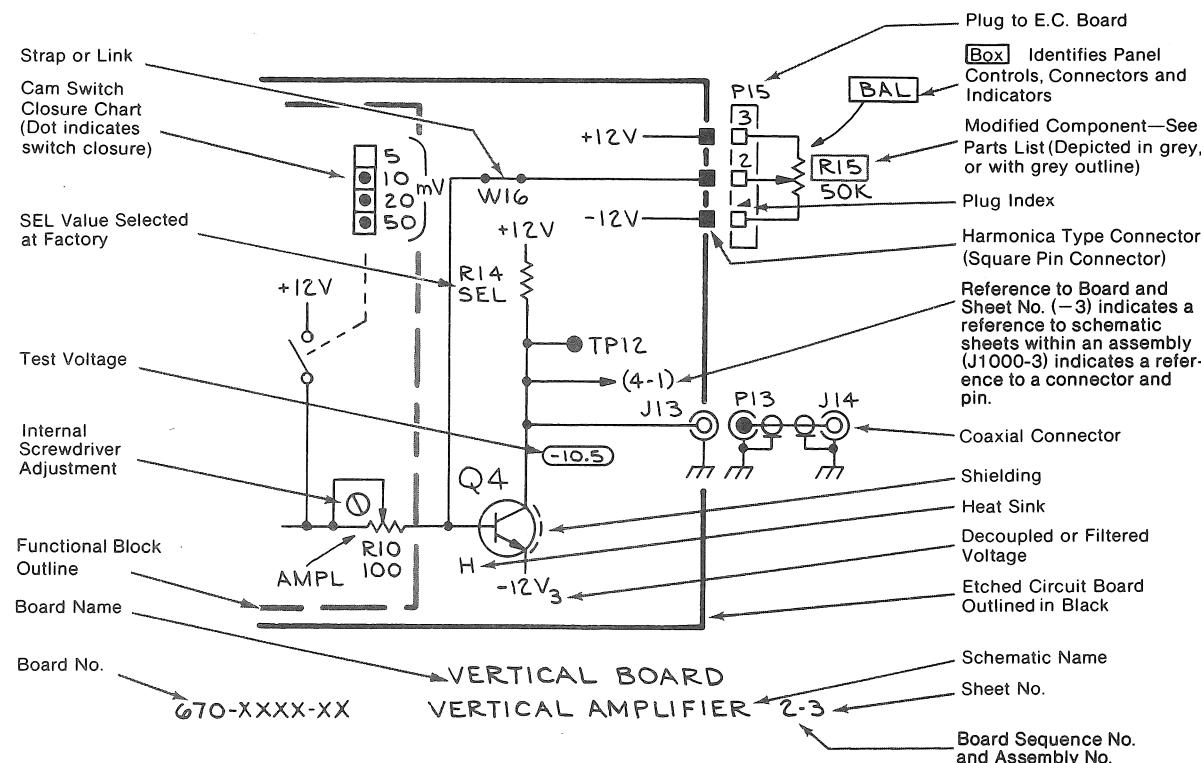
Y14.2, 1973 Line Conventions and Lettering.

Y10.5, 1968 Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering.

The following prefix letters are used as reference designators to identify components or assemblies on the diagrams.

A	Assembly, separable or repairable (circuit board, etc)	H	Heat dissipating device (heat sink, heat radiator, etc)	S	Switch or contactor
AT	Attenuator, fixed or variable	HR	Heater	T	Transformer
B	Motor	HY	Hybrid circuit	TC	Thermocouple
BT	Battery	J	Connector, stationary portion	TP	Test point
C	Capacitor, fixed or variable	K	Relay	U	Assembly, inseparable or non-repairable (integrated circuit, etc.)
CB	Circuit breaker	L	Inductor, fixed or variable	V	Electron tube
CR	Diode, signal or rectifier	M	Meter	VR	Voltage regulator (zener diode, etc.)
DL	Delay line	P	Connector, movable portion	W	Wirestrap or cable
DS	Indicating device (lamp)	Q	Transistor or silicon-controlled rectifier	Y	Crystal
E	Spark Gap, Ferrite bead	R	Resistor, fixed or variable	Z	Phase shifter
F	Fuse	RT	Thermistor		
FL	Filter				

The following special symbols may appear on the diagrams:



DIAGRAMS

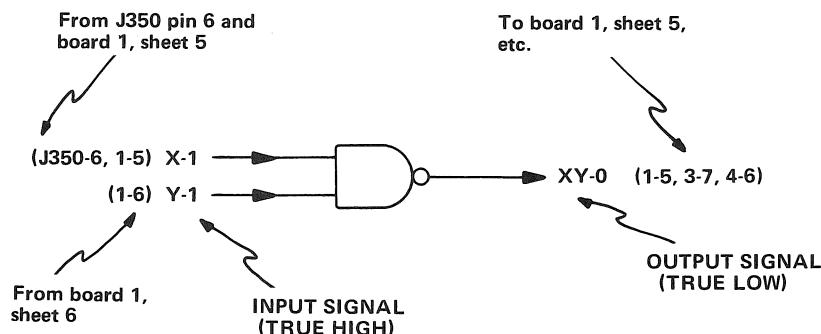
1. TRUE HIGH and TRUE LOW Signals

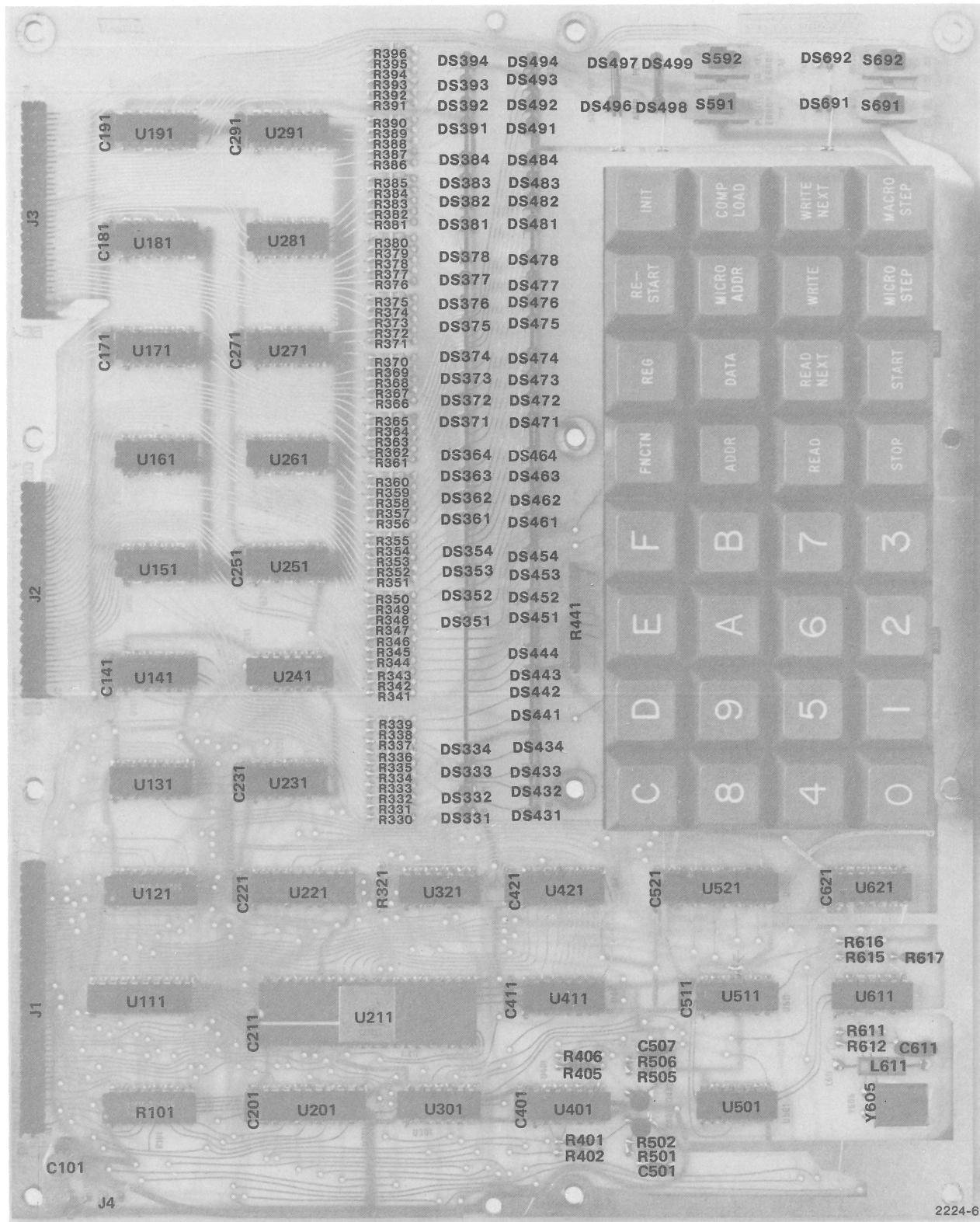
Signal names on the schematics are followed by -1 or -0. A TRUE HIGH signal is indicated by -1, and a TRUE LOW signal is indicated by -0.

SIGNAL-1 = TRUE HIGH
SIGNAL-0 = TRUE LOW

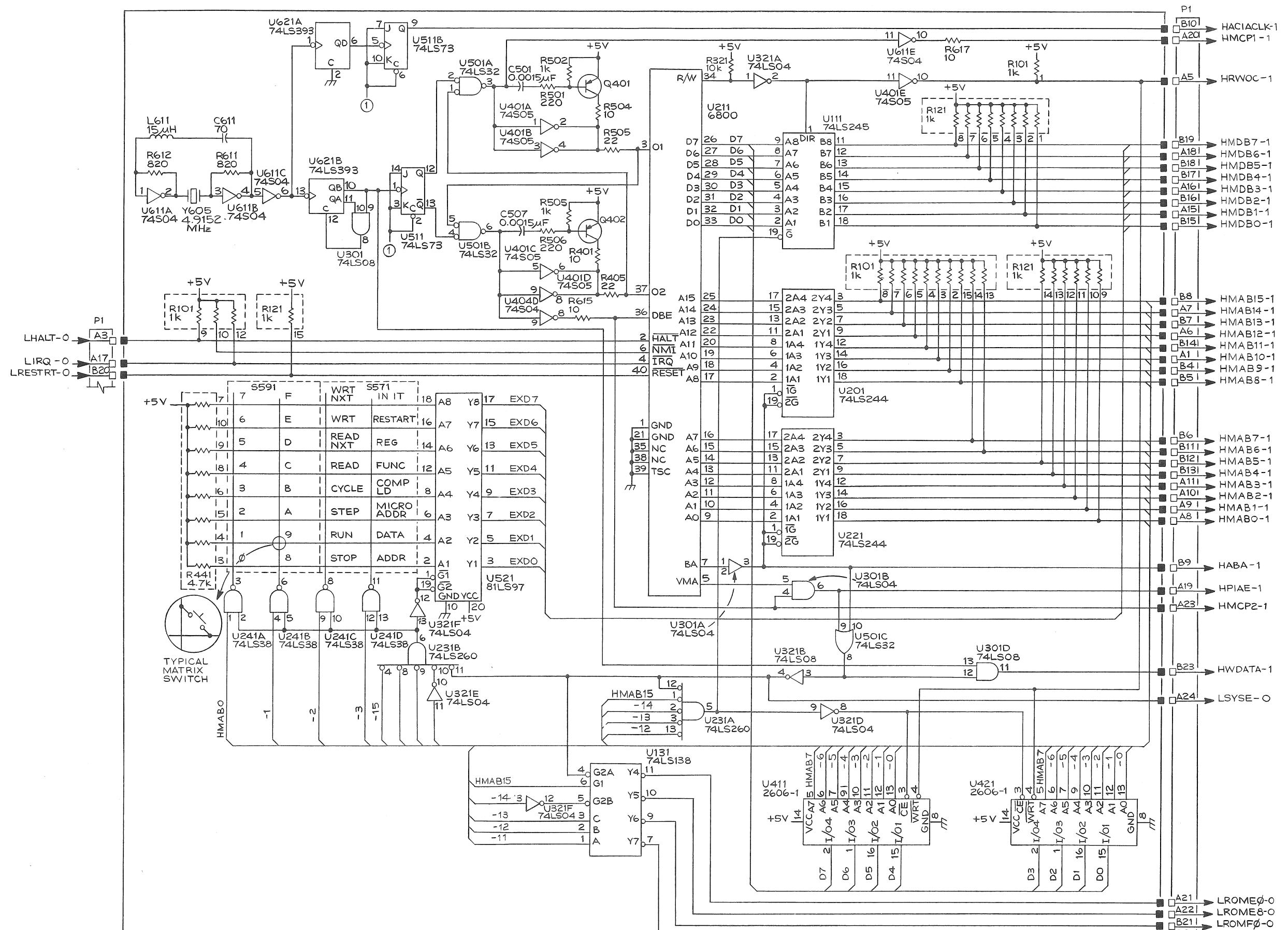
2. Cross-References

Schematic cross-references (from/to information) are included on the schematics. The "from" reference only indicates the signal "source," and the "to" reference lists all loads where the signal is used. All from/to information will be enclosed in parentheses.





Test Fixture Controller Component Locations (670-5728-00).

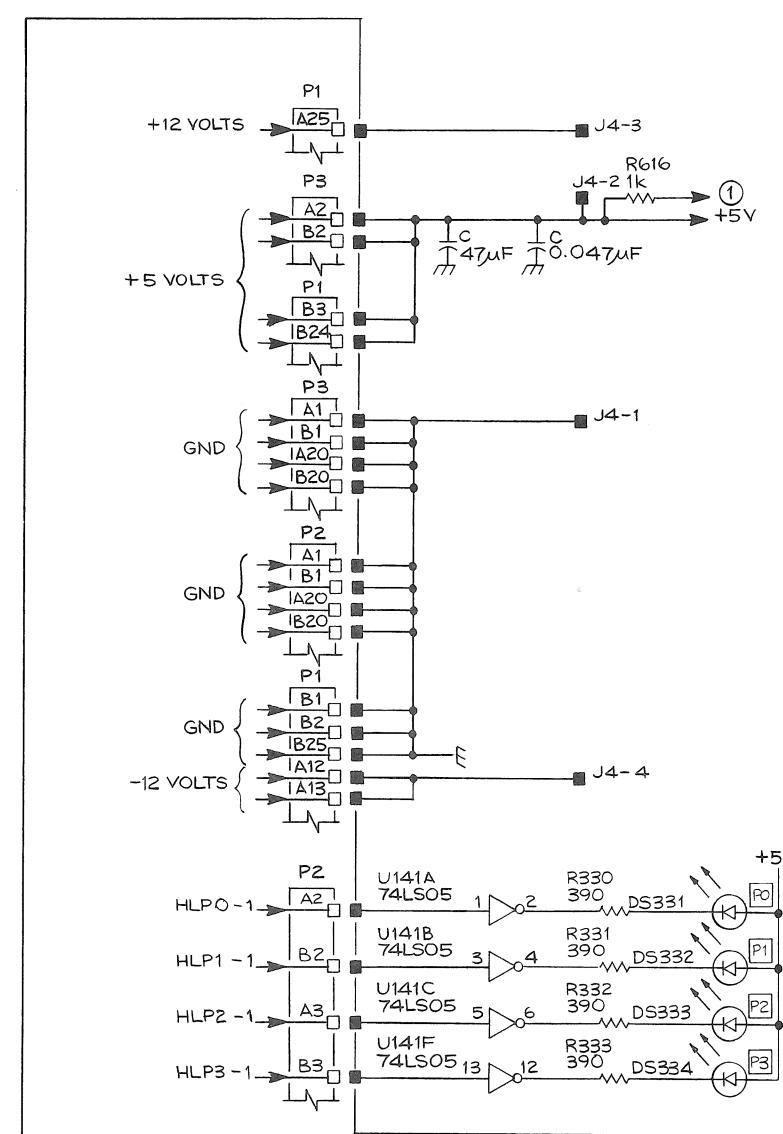
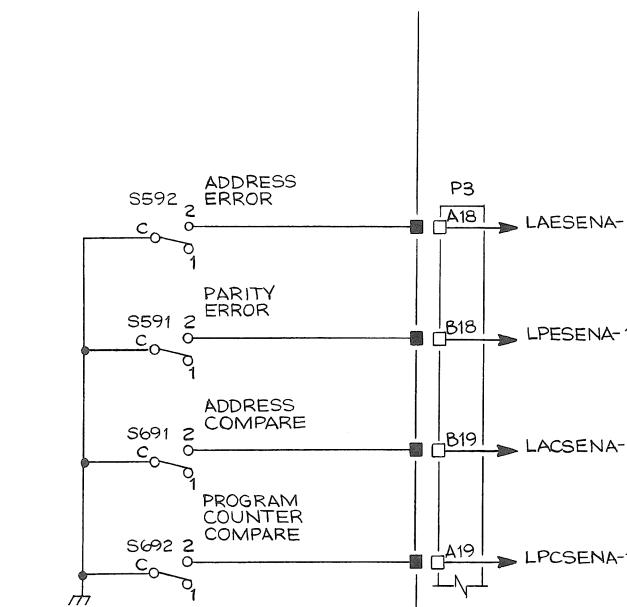
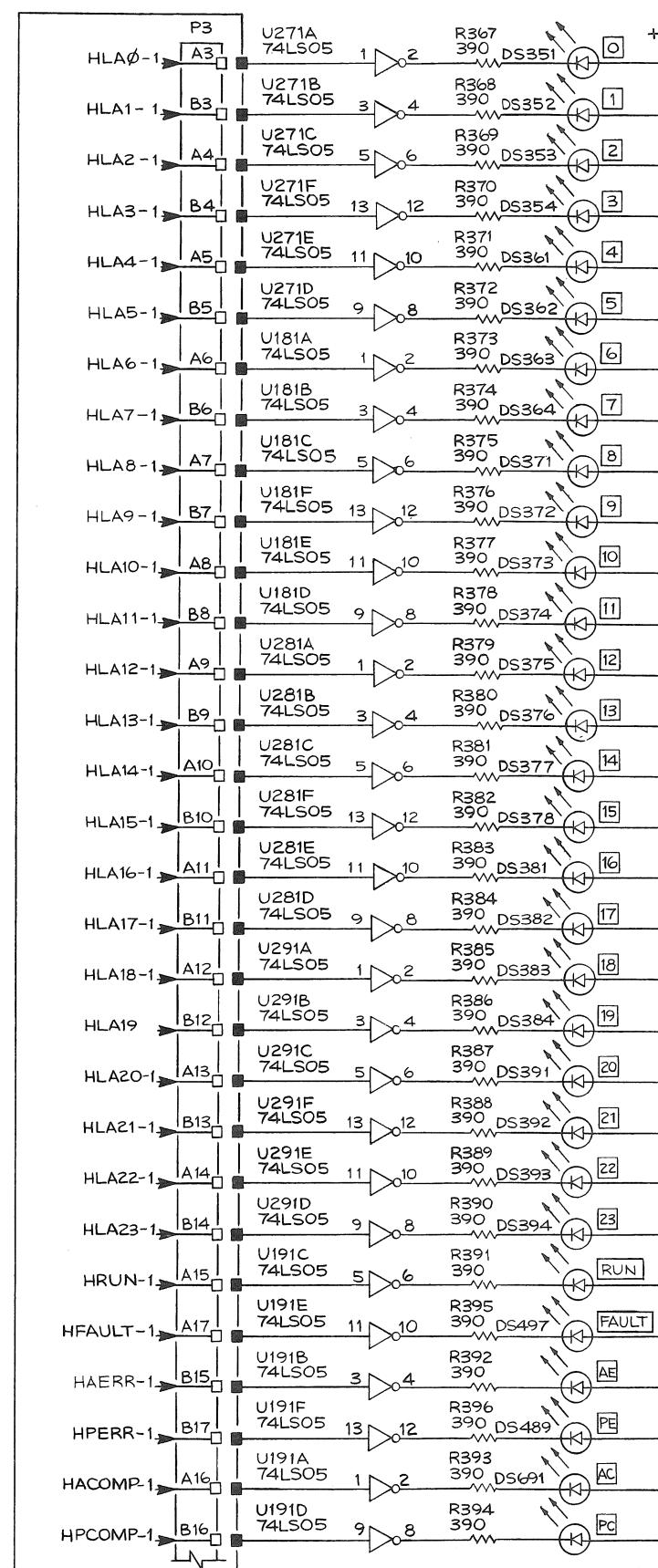
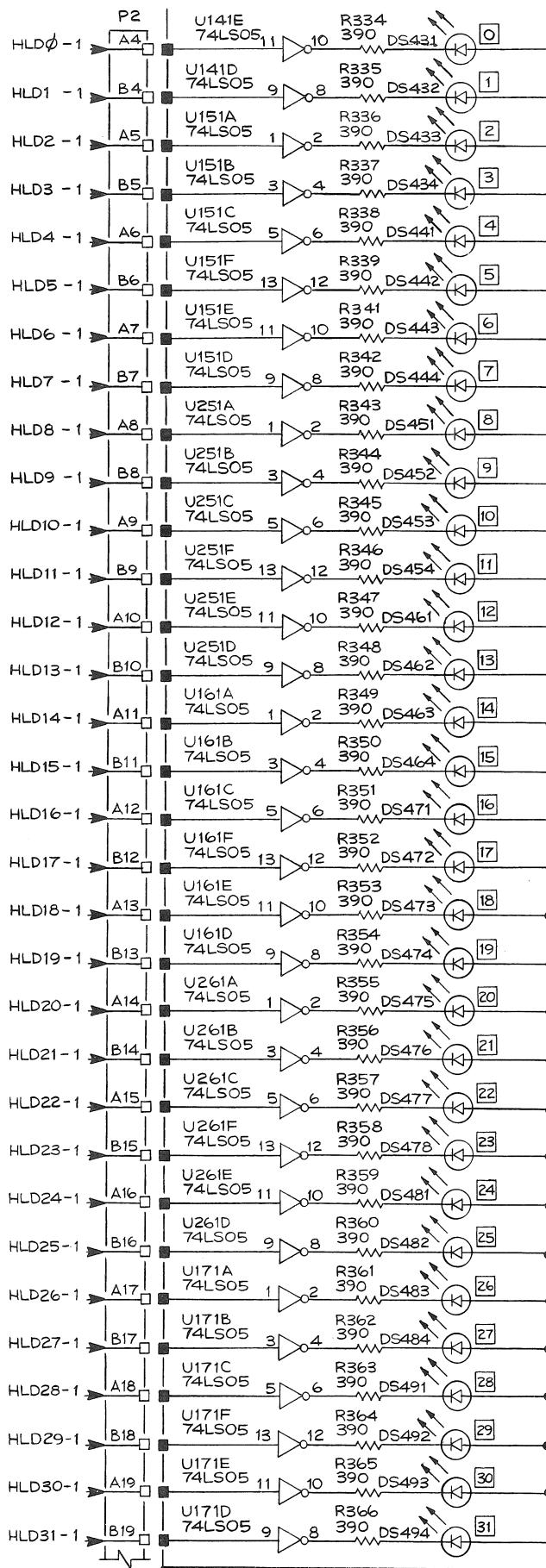


067-0902-00

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670-5728-00

TEST FIXTURE CONTROLLER 1-1



067-0902-00

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670-5728-00 TEST FIXTURE CONTROLLER 1-2