OPERATING AND SERVICE MANUAL

MODEL 1715A OSCILLOSCOPE

(Including Options 001, 003, 011, 034/035, 090, 091, 092, 101, and 580.)

SERIAL NUMBERS

This manual applies directly to instruments with serial numbers prefixed **2025A**

For additional important information about serial numbers, see INSTRUMENTS COVERED BY MANUAL in SECTION I.

Manual Part Number 01715-90903
Microfiche Part Number 01715-90803

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SAFETY SUMMARY

The following general safety precautions must be observed during all phases of operation, service, and repair of this instrument. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use of the instrument. Hewlett-Packard Company assumes no liability for the customer's failure to comply with these requirements.

GROUND THE INSTRUMENT.

To minimize shock hazard, the instrument chassis and cabinet must be connected to an electrical ground. The instrument is equipped with a three-conductor ac power cable. The power cable must either be plugged into an approved three-contact electrical outlet or used with a three-contact to two-contact adapter with the grounding wire (green) firmly connected to an electrical ground (safety ground) at the power outlet. The power jack and mating plug of the power cable meet International Electrotechnical Commission (IEC) safety standards.

DO NOT OPERATE IN AN EXPLOSIVE ATMOSPHERE.

Do not operate the instrument in the presence of flammable gases or fumes. Operation of any electrical instrument in such an environment constitutes a definite safety hazard.

KEEP AWAY FROM LIVE CIRCUITS.

Operating personnel must not remove instrument covers. Component replacement and internal adjustments must be made by qualified maintenance personnel. Do not replace components with power cable connected. Under certain conditions, dangerous voltages may exist even with the power cable removed. To avoid injuries, always disconnect power and discharge circuits before touching them.

DO NOT SERVICE OR ADJUST ALONE.

Do not attempt internal service or adjustment unless another person, capable of rendering first aid and resuscitation, is present.

USE CAUTION WHEN EXPOSING OR HANDLING THE CRT.

Breakage of the Cathode-ray Tube (CRT) causes a high-velocity scattering of glass fragments (implosion). To prevent CRT implosion, avoid rough handling or jarring of the instrument. Handling of the CRT shall be done only by qualified maintenance personnel using approved safety mask and gloves.

DO NOT SUBSTITUTE PARTS OR MODIFY INSTRUMENT.

Because of the danger of introducing additional hazards, do not install substitute parts or perform any unauthorized modification to the instrument. Return the instrument to a Hewlett-Packard Sales and Service Office for service and repair to ensure that safety features are maintained.

DANGEROUS PROCEDURE WARNINGS.

Warnings, such as the example below, precede potentially dangerous procedures throughout this manual. Instructions contained in the warnings must be followed.

WARNING

Dangerous voltages, capable of causing death, are present in this instrument. Use extreme caution when handling, testing, and adjusting.

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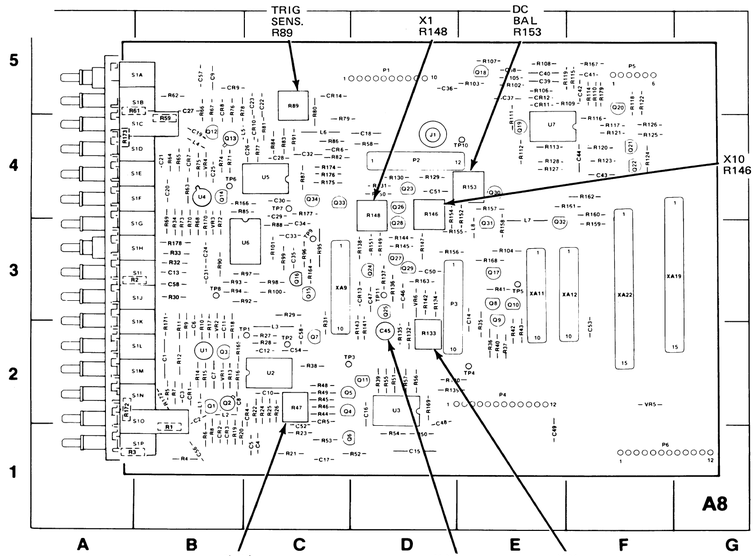

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C1	B-2	C34	C-3	CR12	E-5	Q18	E-5	R20	B-1	R55	D-2	R90	B-3	R124	F-4	R158	E-3	S1M	B-2
C2	B-2	C35	C-3	CR13	D-3	Q19	E-4	R21	C-1	R56	D-2	R91	C-4	R125	F-4	R159	F-3	S1N	B-2
C3	B-2	C36	D-5	CR14	D-3	Q20	E-4	R22	C-2	R57	D-2	R92	C-3	R126	F-4	R160	F-4	S1Q	B-2
C4	C-1	C37	E-5	J1	D-4	Q21	F-4	R23	C-1	R58	D-4	R93	B-3	R127	E-4	R161	F-4	S1P	B-1
C5	C-1	C38	E-5	L1	B-2	Q22	D-4	R24	C-2	R59	B-5	R94	B-3	R128	E-4	R162	F-4	S1R	C-2
C6	B-2	C39	E-5	L2	B-2	Q23	D-4	R25	C-2	R61	A-5	R95	C-3	R129	D-4	R163	D-3	TP2	C-2
C7	B-2	C40	E-5	L3	C-2	Q24	D-3	R26	C-2	R62	B-5	R96	C-3	R130	D-4	R164	C-3	TP3	C-2
C8	B-2	C41	F-5	L4	B-4	Q25	D-4	R27	C-2	R63	B-4	R97	C-3	R131	D-4	R165	B-2	TP4	E-3
C9	B-5	C42	F-5	L5	C-4	Q26	D-4	R28	C-2	R64	B-4	R98	C-3	R132	D-3	R166	C-4	TP5	E-3
C10	C-2	C43	F-4	L6	E-5	Q27	D-3	R29	C-2	R65	B-4	R99	C-3	R133	D-3	R167	F-5	TP6	B-4
C11	B-2	C44	F-4	L7	E-3	Q28	D-3	R30	B-3	R66	B-5	R100	C-3	R134	D-3	R168	E-3	TP7	C-4
C12	C-2	C45	D-2	L8	E-3	Q29	D-3	R31	C-3	R67	B-5	R101	C-3	R135	D-3	R169	D-2	TP8	B-3
C13	B-3	C46	D-3	P1	D-5	Q30	E-4	R32	B-3	R68	B-3	R102	E-5	R136	D-3	R170	B-3	TP9	C-3
C14	E-3	C47	D-3	P2	D-4	Q31	E-3	R33	B-3	R69	B-3	R103	E-5	R137	D-3	R171	B-2	TP10	E-4
C15	D-1	C48	D-2	P3	D-3	Q32	E-3	R34	B-3	R70	B-3	R104	E-3	R138	D-3	R172	B-2	TP11	D-3
C16	D-2	C49	E-1	P4	F-2	Q33	C-4	R35	E-5	R71	B-4	R105	E-5	R139	D-3	R173	B-4	U1	B-2
C17	C-1	C50	D-3	P5	F-5	Q34	C-4	R36	E-3	R72	B-3	R106	E-5	R140	D-3	R174	C-4	U2	C-2
C18	D-4	C51	D-4	P6	F-1	R1	B-2	R37	E-3	R73	B-3	R107	E-5	R141	D-2	R175	C-4	U3	D-3
C19	B-4	C52	C-1	Q1	B-2	R3	B-1	R38	E-2	R74	B-4	R108	E-5	R142	D-3	R176	C-4	U4	B-4
C20	B-4	C53	F-2	Q2	B-2	R4	B-1	R39	D-2	R75	B-4	R109	F-5	R143	D-2	R177	C-4	U5	C-4
C21	B-4	C54	C-2	Q3	C-2	R5	B-2	R40	E-2	R76	B-5	R110	F-5	R144	D-3	R178	B-3	U6	C-3
C22	C-5	C56	B-1	Q4	C-2	R6	B-1	R41	E-3	R77	C-4	R111	E-4	R145	D-3	R179	F-5	U7	E-4
C23	C-5	C57	B-5	Q5	C-2	R7	B-2	R42	E-2	R78	B-5	R112	F-5	R146	D-4	S1A	B-5	VR1	B-2
C24	B-3	C58	B-3	Q6	D-1	R8	B-1	R43	E-2	R79	C-4	R113	F-4	R147	D-3	S1B	B-5	VR2	B-3
C25	B-4	CR1	B-2	Q7	B-2	R9	B-2	R44	C-2	R80	C-5	R114	F-5	R148	D-3	S1C	B-4	VR3	B-3
C26	C-4	CR2	B-1	Q8	E-5	R10	B-2	R45	C-2	R81	C-4	R115	F-5	R149	D-3	S1D	B-4	VR4	B-4
C27	B-5	CR3	B-1	Q9	E-5	R11	B-2	R46	C-2	R82	C-4	R116	F-4	R150	D-4	S1E	B-4	VR5	F-2
C28	C-4	CR4	C-2	Q10	E-5	R12	B-2	R47	C-2	R83	C-4	R117	F-4	R151	D-3	S1F	B-4	VR6	D-3
C29	C-4	CR5	C-2	Q11	D-2	R13	B-2	R48	C-2	R84	C-4	R118	F-5	R152	E-4	S1G	B-3	XA9	C-3
C30	C-4	CR6	C-4	Q12	B-4	R14	B-2	R49	C-2	R85	C-4	R119	F-5	R153	E-4	S1H	B-3	XA11	E-3
C31	B-3	CR7	B-4	Q13	B-4	R15	B-2	R50	D-1	R86	C-4	R120	F-4	R154	D-4	S1I	B-3	XA12	E-3
C32	C-4	CR8	B-5	Q14	B-4	R16	B-2	R51	D-2	R87	C-4	R121	F-4	R155	D-3	S1J	B-3	XA19	G-3
C33	C-3	CR9	B-5	Q15	C-3	R17	B-2	R52	D-1	R88	C-3	R122	F-5	R156	D-3	S1K	B-2	XA22	F-3
C34	C-3	CR10	C-4	Q16	C-3	R18	B-2	R53	C-1	R89	C-5	R123	F-4	R157	E-4	S1L	B-2		
C35	C-3	CR11	E-5	Q17	E-3	R19	B-1	R54	D-1										

Figure 7-3. Replacement for A8 Component Locator

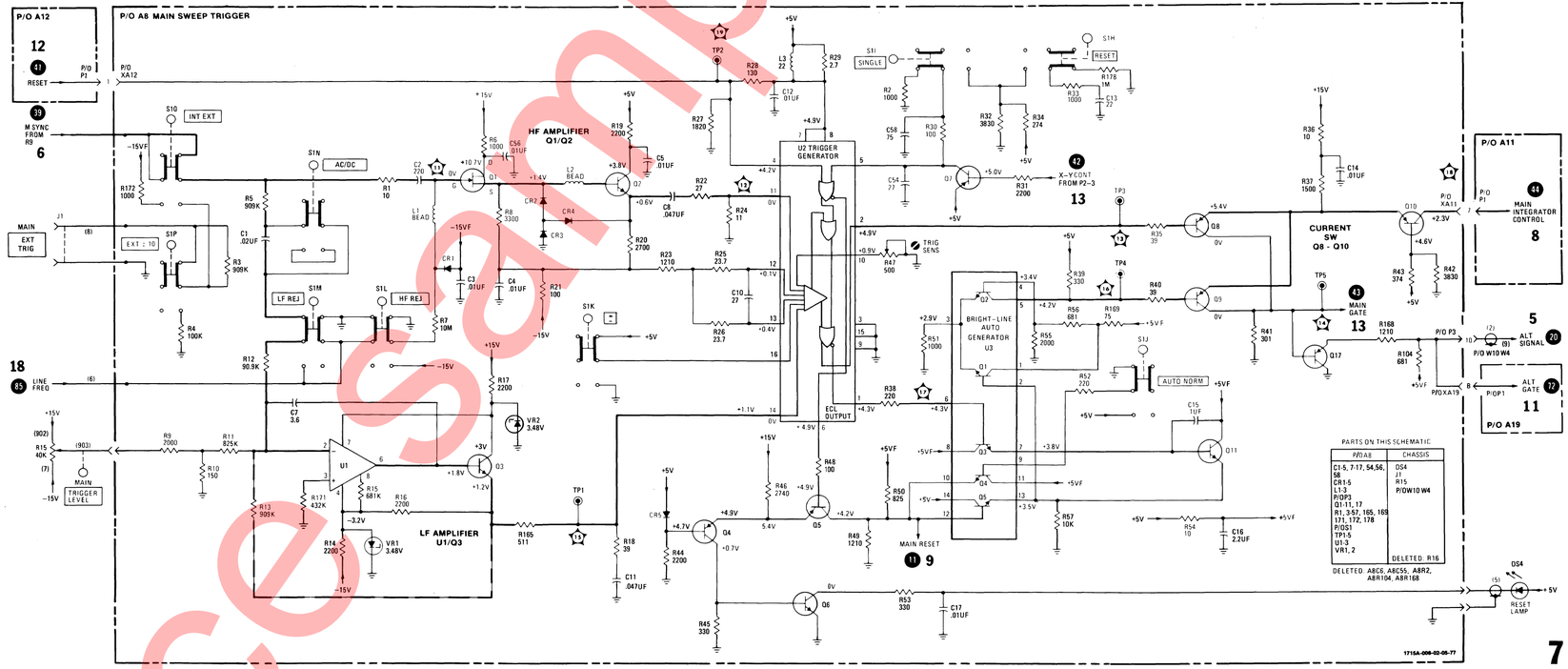

Figure 7-4
Replacement for Schematic 7
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