



Ⓜ MODEL 175A OSCILLOSCOPE

SWEEP AND GATE OUTPUT MODIFICATION KIT

Ⓜ Stock No. 175A-95A

The Ⓜ Stock No. 175A-95A Modification Kit, when added to the Ⓜ Model 175A Oscilloscope, provides the sweep and gate voltages at the rear panel of the instrument. These outputs may be used to sweep or synchronize external equipment or circuits with the oscilloscope.

The SWEEP OUTPUT voltage provided is approximately 5 volts in amplitude and is centered about 0 volts. The GATE OUTPUT voltage is approximately 4 volts in amplitude and is riding a -2.5 volt level.

The Modification Kit is complete with all necessary components, wire, and hardware. You can install the kit with simple hand tools. Holes for mounting the few components are already provided in the instruments.

INSTALLATION PROCEDURE

1. Remove the horizontal plug-in, top, bottom, and left side covers.
2. Prefabricate coax cables and wires to etched circuit board 175A-65J supplied with kit. Use 24" yellow-white for #1, and 9" yellow-white for #2. (See figure 1.)
3. Install the etched circuit board on left side frame adjacent to the low voltage power supply fuses (see figures 2 and 3). Align board holes with existing holes in side frame. Install board with hardware as shown.
4. Dress leads as shown in figure 3.

PARTS SUPPLIED 175A-95A KIT

<u>Quantity</u>	<u>Description</u>	<u>Ⓜ Stock No.</u>
1	Etched circuit board	175A-65J
1	Cable, coax	175A-16S
1	Cable, coax	175A-16T
2	Connector, RF, UG-1094/U, female BNC	1250-0083
2	Washer, #6, external lock	2190-0008
2	Screws, flat head, 6-32 x 1/2 inch	2370-0003
2	Nut, hex w/lockwasher, 6-32	2420-0001
2	Washer, #6, flat	3050-0016
1	Wire, 22 gauge stranded, black, 2-1/2 inch length	8150-0005
1	Wire, 22 gauge stranded, brown, 4 inch length	8150-0007
1	Wire, 22 gauge stranded, gray, 3 inch length	8150-0027
1	Wire, 22 gauge stranded, yellow-white, 9 inch length	8150-0040
1	Wire, 22 gauge, stranded, yellow-white, 24 inch length	8150-0040

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01584-2

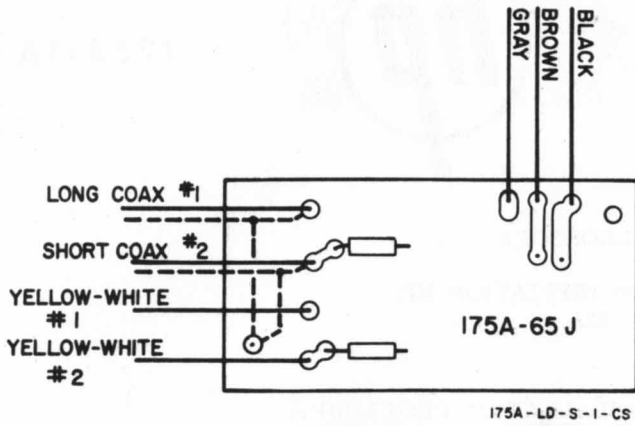


Figure 1. Description and Position of Wires on 175A-65J Board

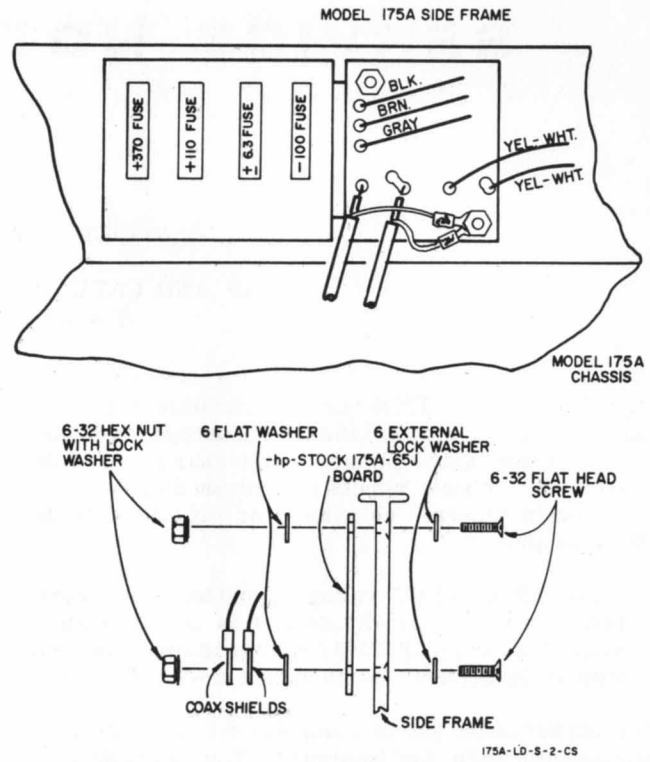


Figure 2. Mounting Position and Sequence of Etched Circuit Board, 175A-65J

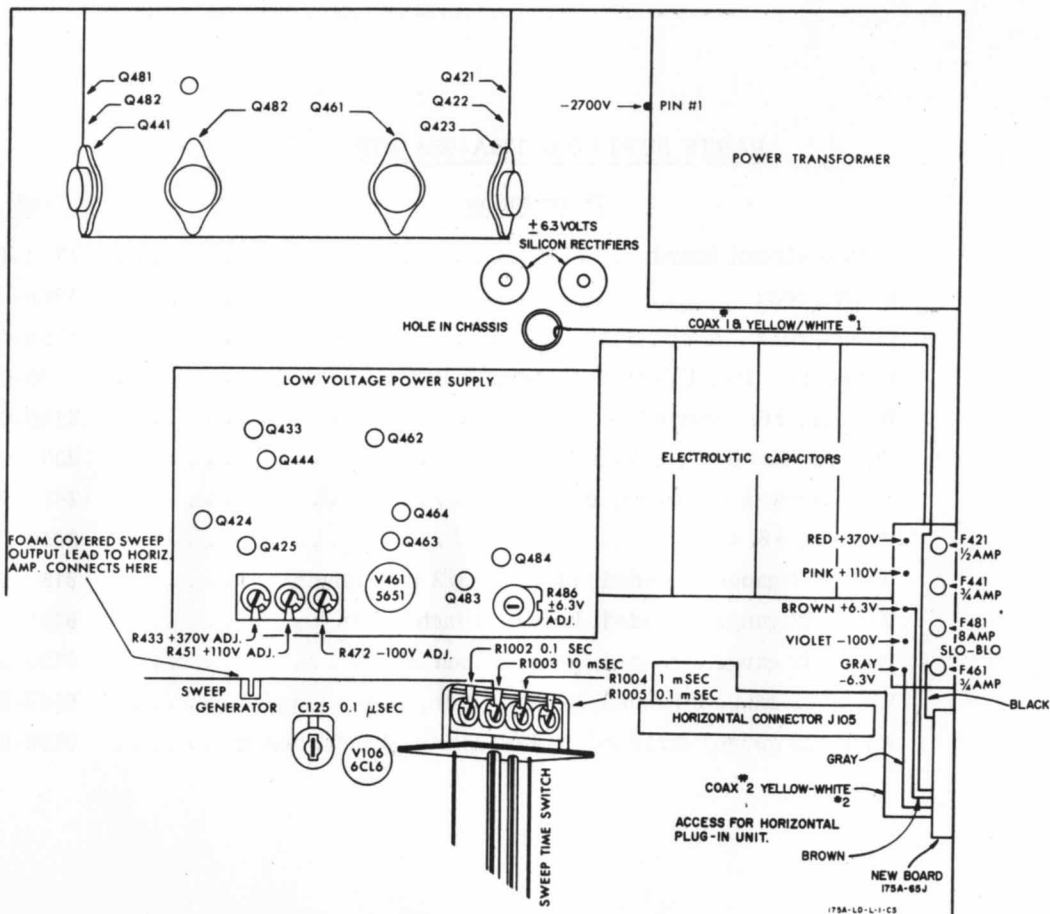


Figure 3. Component Location - Bottom View, Rear Half of Oscilloscope

5. Connect and solder the shortest coaxial lead (coax #2 on figure 1) to pin 1 of the horizontal plug-in connector, J105.

6. Connect and solder the 9 inch yellow-white lead (marked #2 on figure 1) to pin 17 of the horizontal plug-in connector, J105.

7. Connect and solder the gray lead to the -6.3 volt take-off point on the etched circuit board mounted at right angles and adjacent to the fuses. Use the existing vacant hole.

8. Connect and solder the brown lead to the +6.3 volt take-off point.

9. Connect and solder the black lead to the end of the -100 volt fuseholder nearest the chassis. Another black wire is already soldered to this point.

10. Dress the longest coaxial lead (coax #1) and 24 inch yellow-white lead (#1) from the hole in the chassis to the sweep and gate output holes in the rear gusset.

11. Remove plug buttons from the SWEEP and GATE OUTPUT holes.

12. Install the two BNC connectors in these holes.

13. Connect and solder coax #1 to the GATE OUTPUT BNC.

14. Connect and solder yellow-white lead (#1) to the SWEEP OUTPUT BNC.

15. Install the horizontal plug-in.


CAUTION

Dress components on the newly installed etched circuit board to clear the plug-in when installing.

16. Install the left side, top, and bottom covers.

This completes the modification. Calibration is not affected.

OPERATION CHECK

Turn the instrument on and set the SWEEP MODE control to FREE RUN. Check the sweep and gate outputs for agreement with the specifications listed in the  Model 175A Operating and Service Manual.