

SERVICE GROUP M - OPTIONS: HIGH VOLTAGE OUTPUT (OPT. 002) AND HIGH STABILITY REFERENCE (OPT. 001).**High Voltage Output Amplifier Troubleshooting.**

Before servicing the A8 assembly, be sure that it is being used within its limits of operation:

Frequency Range: 0 - 1MHz
Output Load: 500 Ω minimum

If the standard output is normal but there is no high voltage output, move the small shorting connector marked AMP IN (on A14) from the NORM position to the opposite position. Measure the dc voltage at A8TP5 and at both ends of A8F1. This voltage should be approximately +15 V.

If voltage is present at only one end of A8F1, replace the fuse (.25 A, -hp- Part No. 2110-0343).

If the fuse is good, return the shorting connector to the NORM position. Disconnect the cable (marked 20 HI V1) from A8J20. Measure dc voltages with the circuit as shown on the schematic. Voltages should be within $\pm 10\%$.

Check that jumper A6W1 is clipped or missing. The absence of this jumper indicates to the processor that the High Voltage option is installed and the processor will then allow voltages greater than 10Vp-p to be programmed.

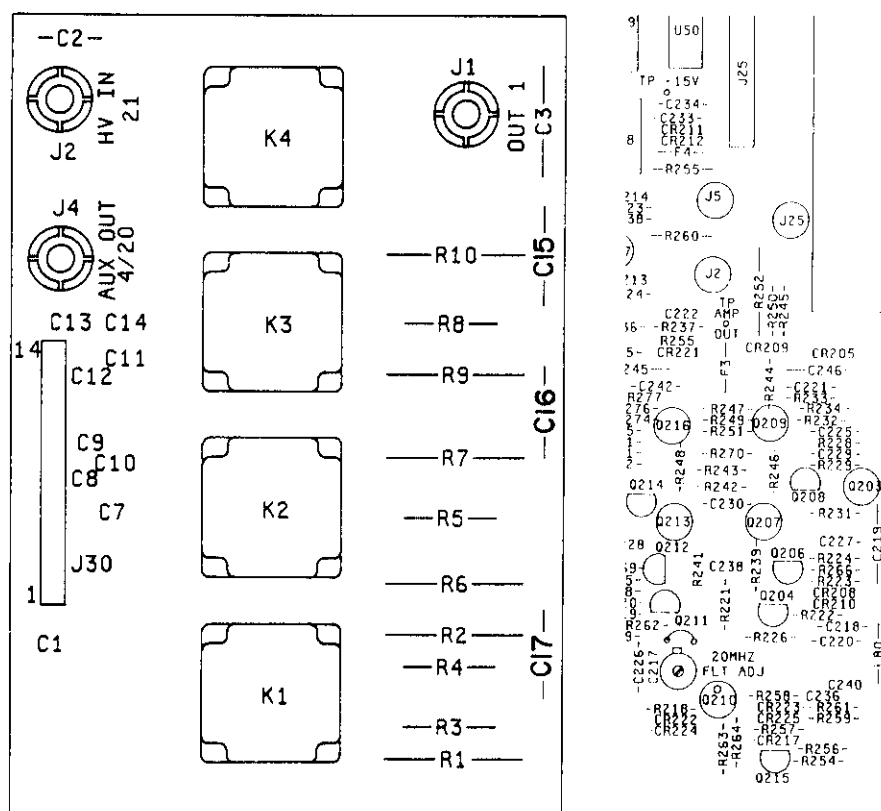
Note that the A8 assembly has its own +30V power supply.

Be sure to reconnect the cable to U8J20 after troubleshooting.

REAR PANEL OUTPUT WITH OPTION 002.

Normally, instruments having the High Voltage Output Option 002 are shipped from the factory with the signal output at the front panel. The signal output can be changed to the rear panel by reconnecting Cables 1 and 4.

- a. Disconnect Cable 1 (to the front panel signal output) from the attenuator assembly J1 OUT.
- b. Disconnect Cable 4 (to rear panel signal output) from the connector on A14 labeled "4 DUMMY", and connect it to J1 OUT on the attenuator assembly. It may be necessary to cut a cable tie to reach J1.
- c. Connect Cable 1 to the "4 DUMMY" connector.
- d. The standard and high voltage outputs will now appear at the rear panel SIGNAL connector.



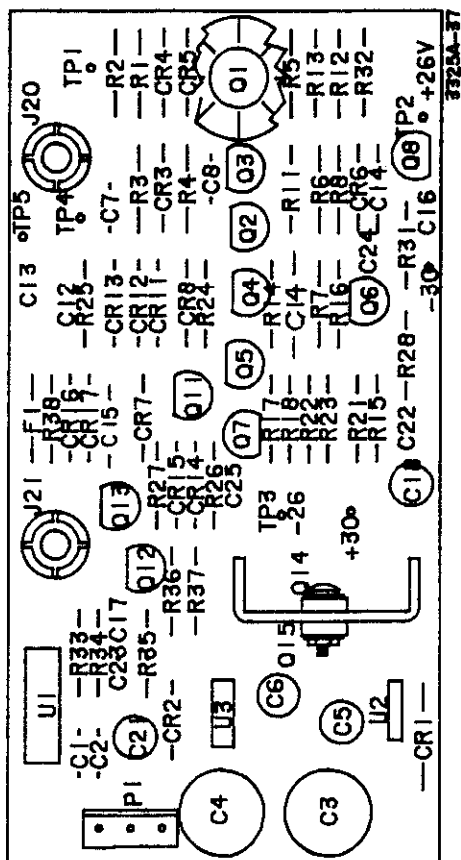
CHANGING OPTION 002 TO STANDARD (FRONT/REAR) OUTPUT.

Use the following procedure to change an instrument with High Voltage Output Option 002 to the standard instrument Front/Rear signal output configuration. The High Voltage output will then not be available at either the front or rear panel.

- a. Disconnect Cable 20 from the attenuator assembly connector labeled "AUX OUT 4/20".
- b. Disconnect Cable 21 from the attenuator assembly connector labeled "HV IN".
- c. Disconnect Cable 4 from the connector on A6 labeled "4 DUMMY" and connect it to the attenuator assembly connector labeled "AUX OUT 4/20".
- d. Connect Cable 20 to the "4 DUMMY" connector.
- e. Secure Cable 21 in a position that does not allow the connector to touch the printed circuit board or any component.
- f. Solder a small wire jumper in the position on A6 that is between A6U43 and A6S1. This jumper is marked W1 on the schematic diagram and the component location drawing in Service Group C. When this jumper is in place, the logic circuits recognize the standard (no high voltage output) configuration.
- g. Attach a tag or other identification to the front panel to indicate that the high voltage output has been disabled and that the standard signal output is available at the front or rear panel (switchable).

Block diagram of the control section of a radio receiver. The diagram is organized into three horizontal sections labeled A, B, and C on the left. Section A contains a large rectangular block J51, a horizontal resistor R51 below it, and three vertical dashed rectangular blocks U66, U67, and U68 to the right. Section B contains a vertical component labeled IO with a series of dots, three circular capacitors C40, C39, and C38, a vertical resistor R18, a component S1 with a grid of dots, and three vertical dashed rectangular blocks U57, U58, and U59. Section C contains a vertical dashed rectangular block U43, a horizontal resistor TP2 below it, a horizontal resistor R25 above a dashed rectangular block U44, a horizontal resistor R21 below U44, a horizontal capacitor C58 above a dashed rectangular block U52, and a horizontal capacitor CR5 above a dashed rectangular block CR4. A large arrow points from the right towards the S1 component. Various other labels like -VI- and -C57- are at the top, and -R25-, -R21-, -CR5-, and -CR4- are at the bottom right.

A2
03325-66502
Rev F



A8
03325-66508

Fig 8-46
Sht 2 of 3

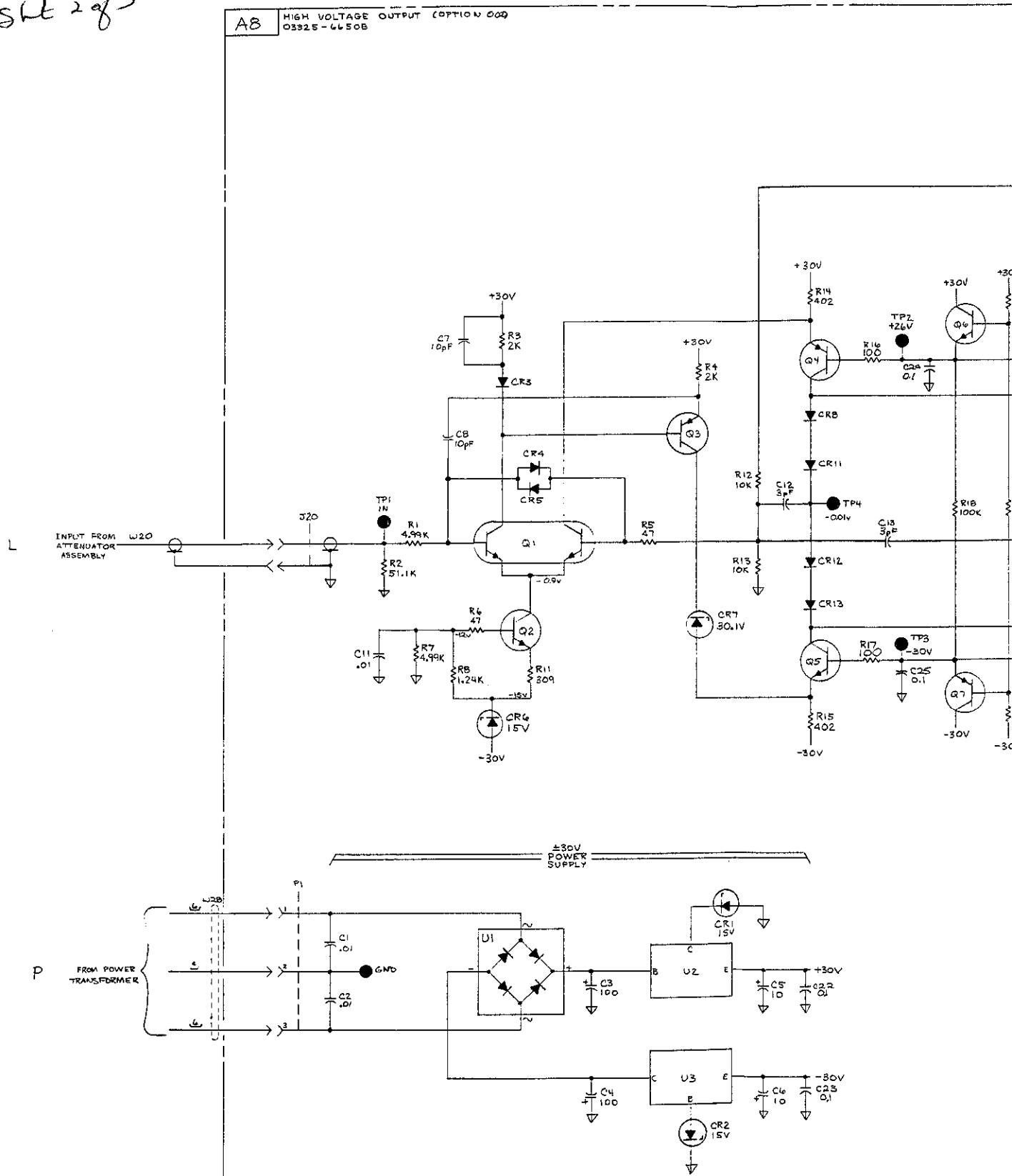
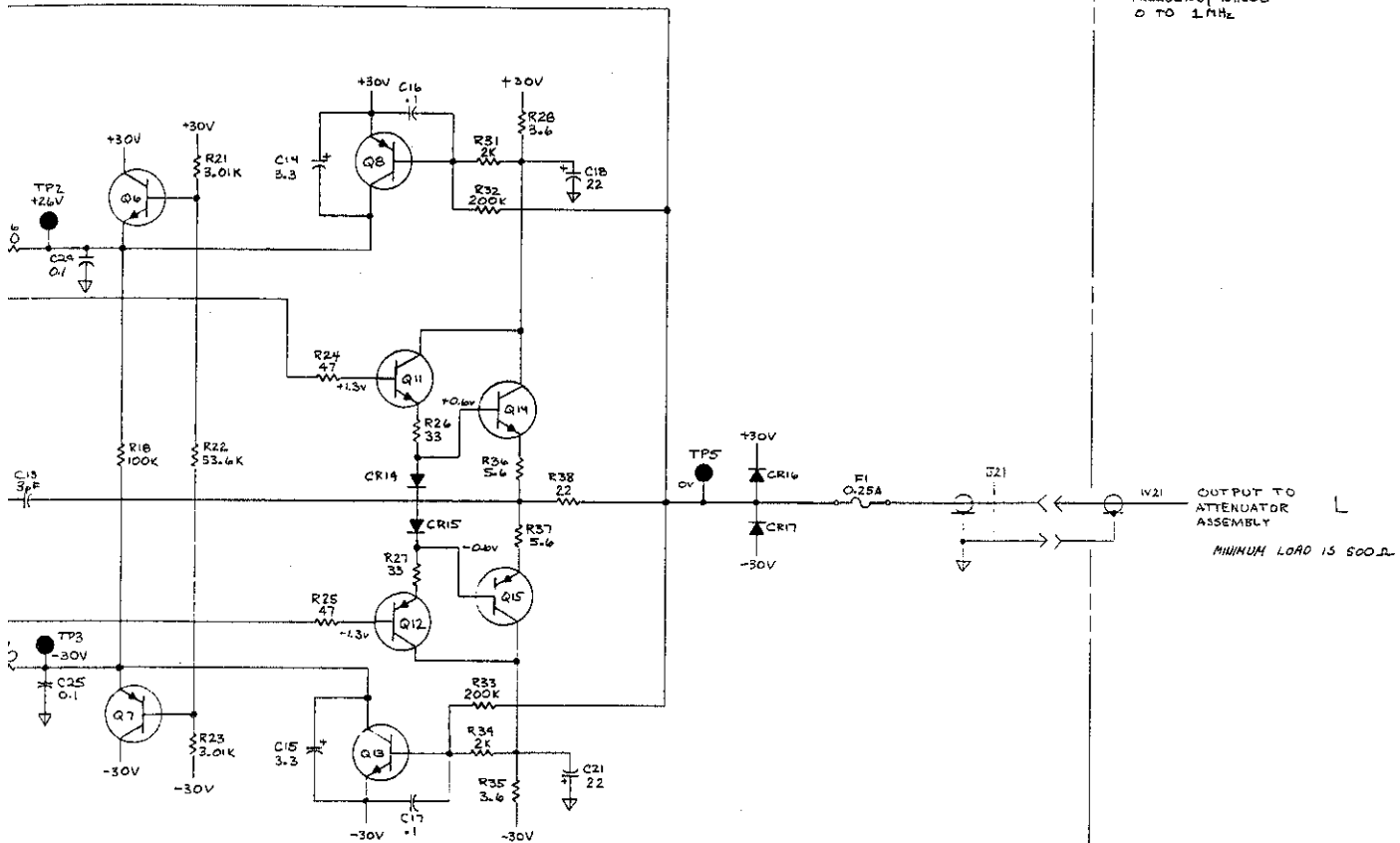


Fig 8-46
Sht 3 of 3

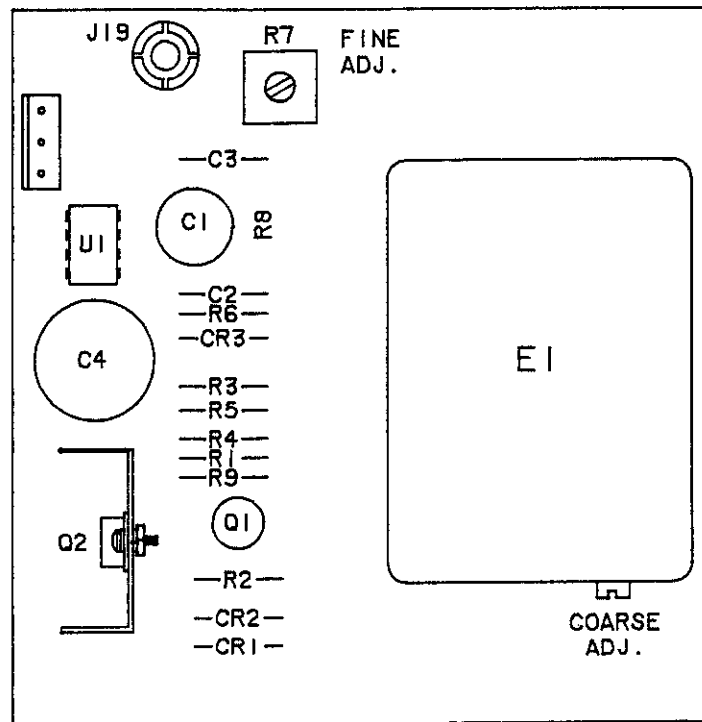
OPTION 002
FREQUENCY RANGE
0 TO 1 MHz



3326A-8A-1

Figure 8-46. High Voltage Output Option 002, A8.
8-M-3/8-M-4

Fig 8-47
 Sht 1 of 4



3325A-39

A9
 03325-66509
 Rev A