

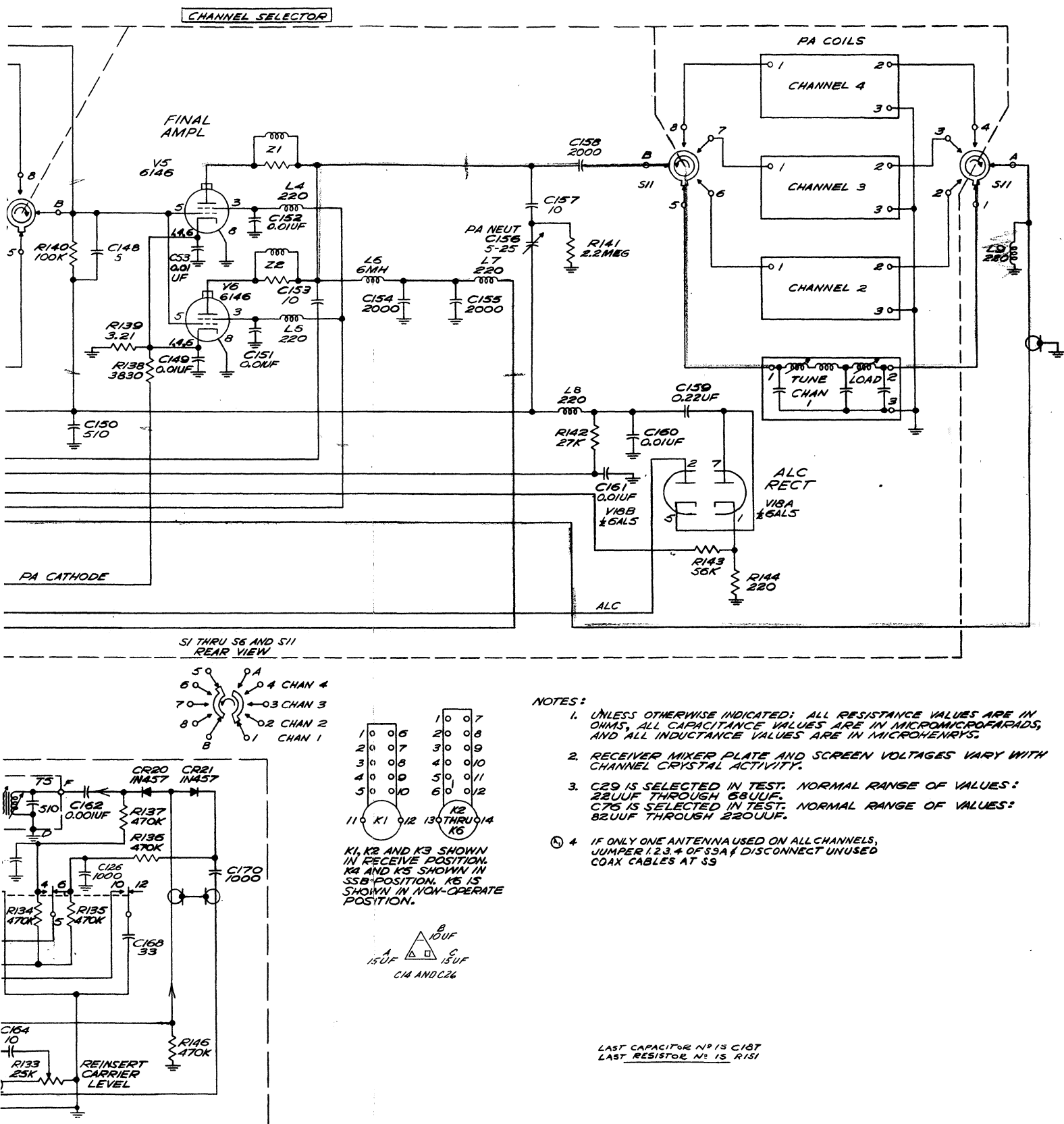
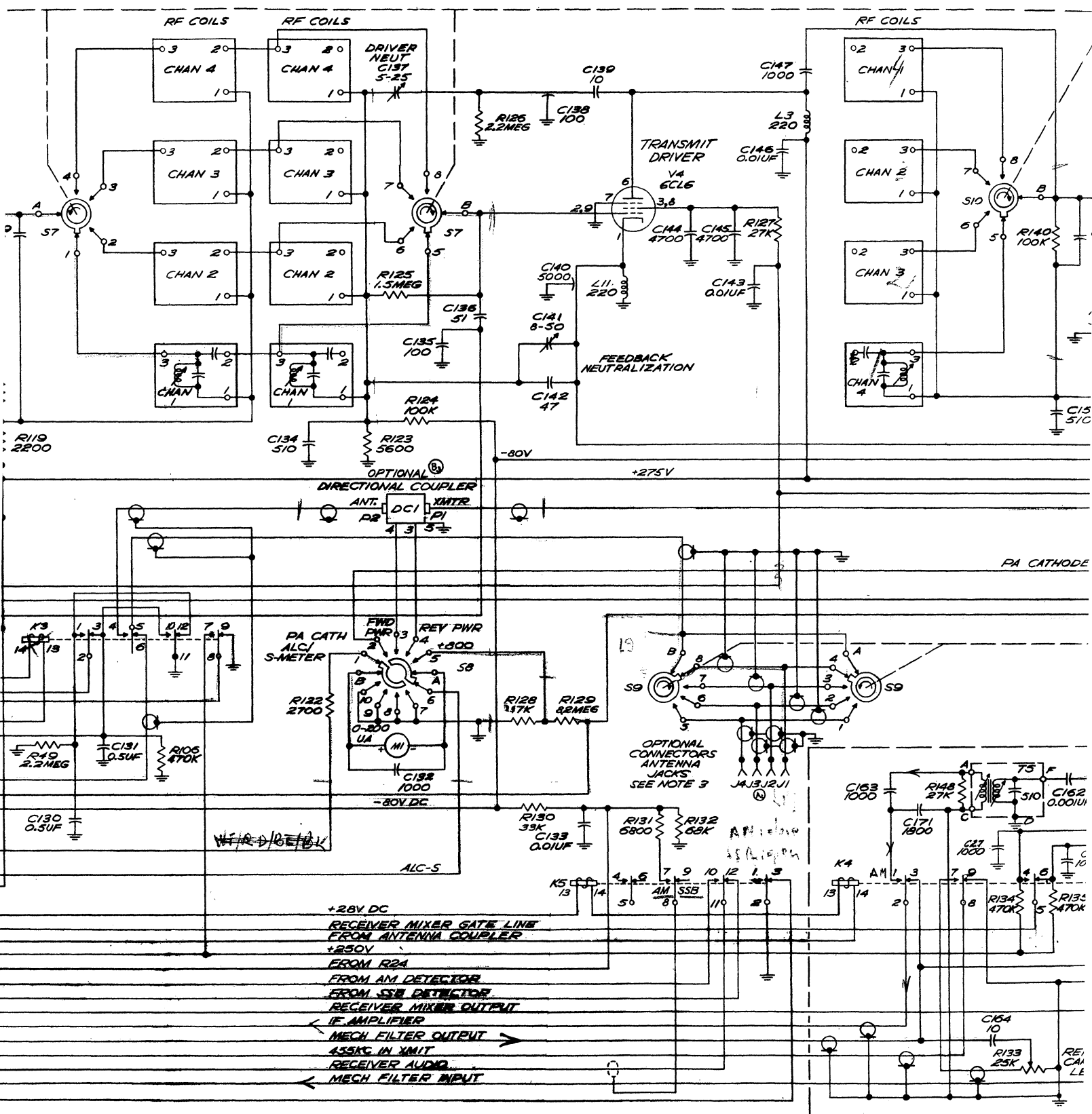
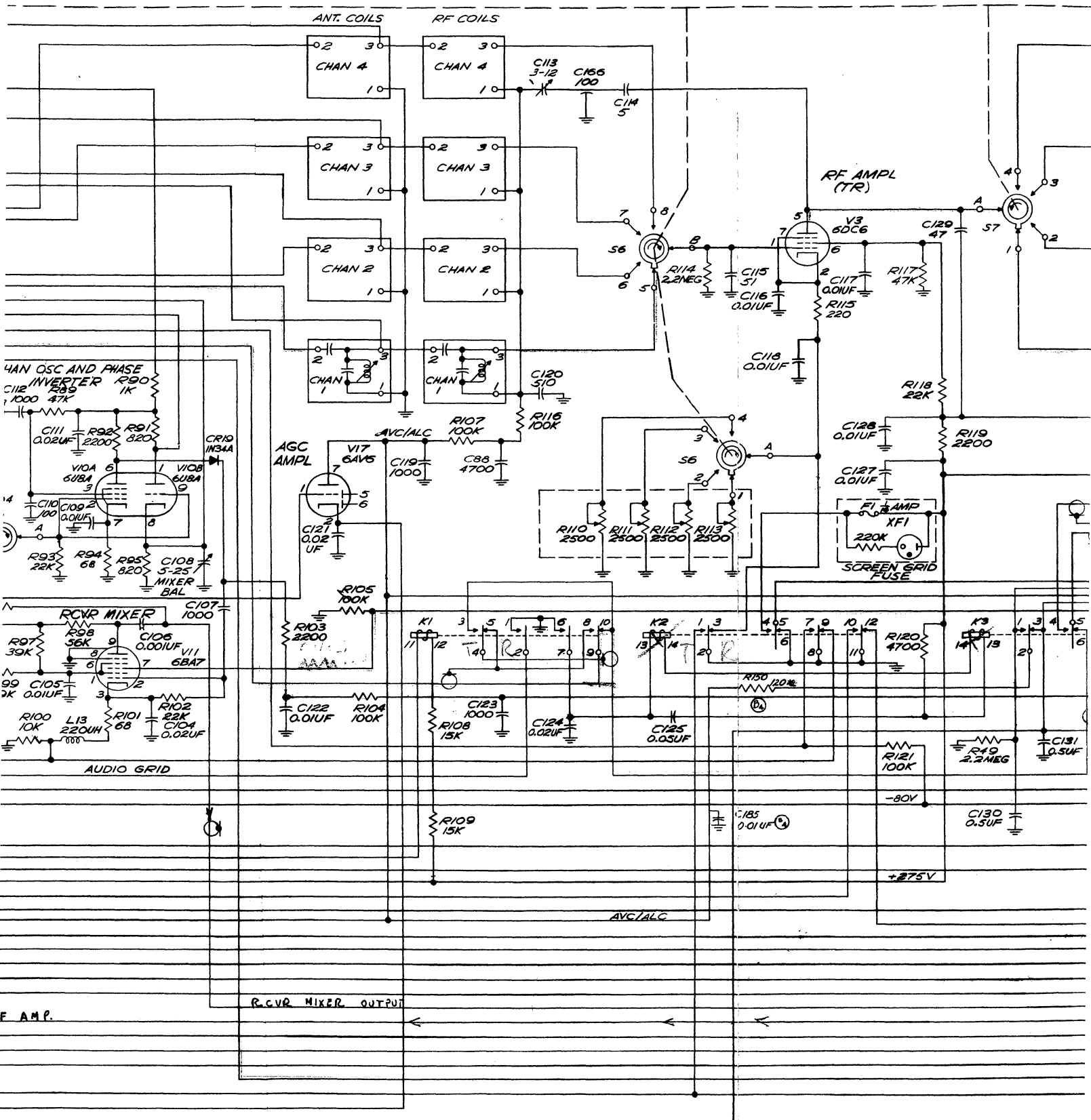
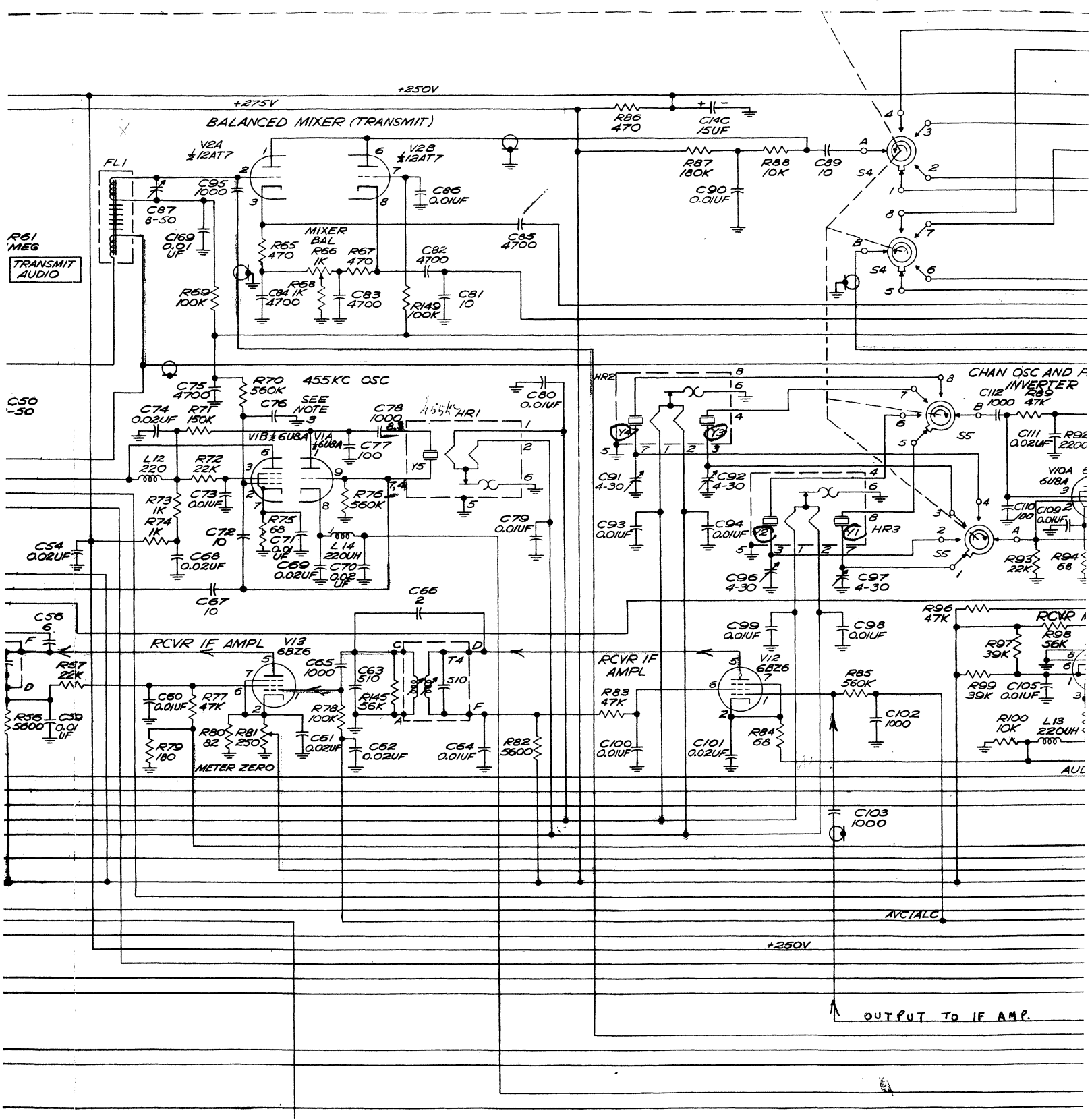


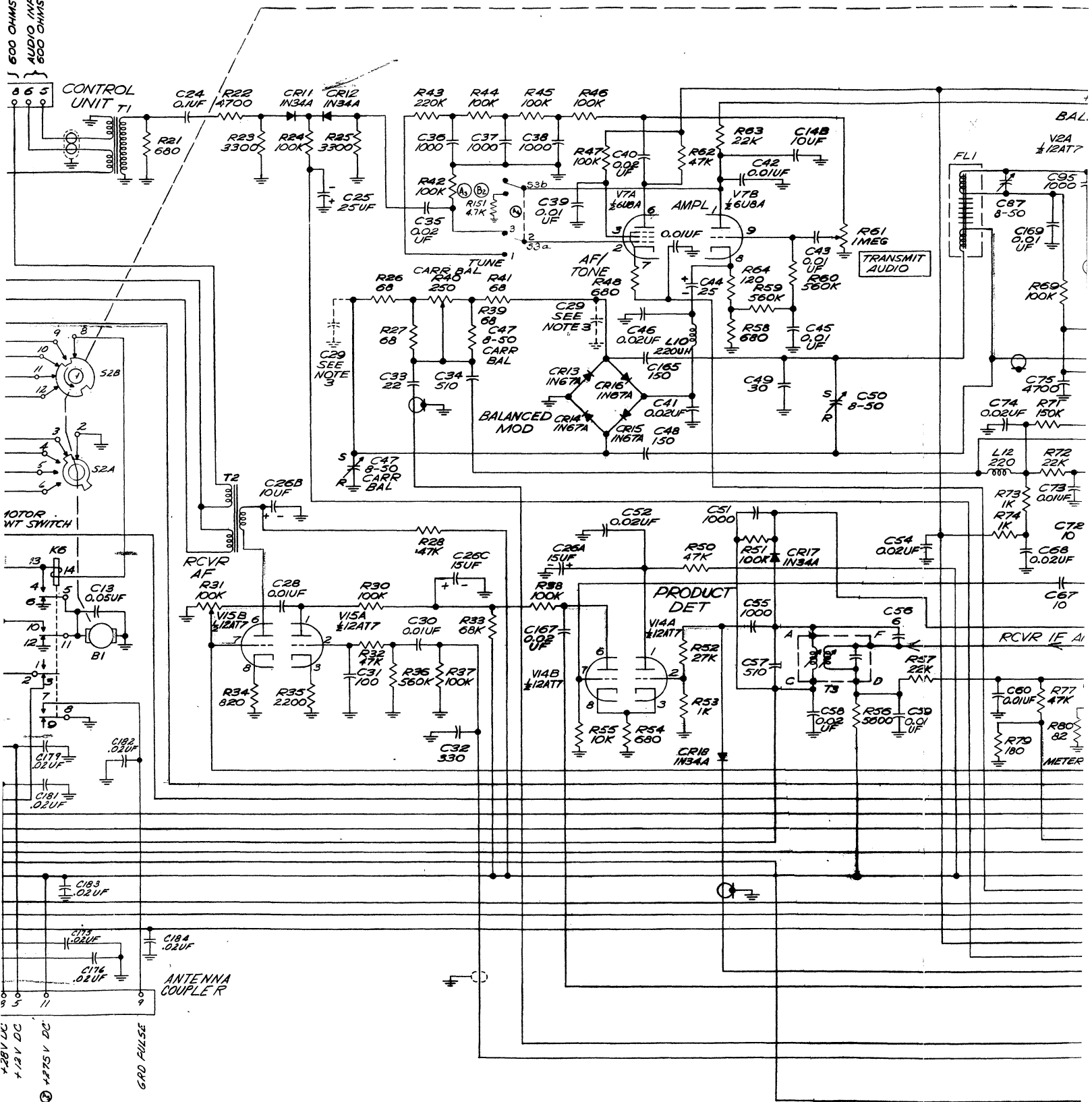
Figure 7-1 Transceiver 32MS-1A, Schematic Diagram

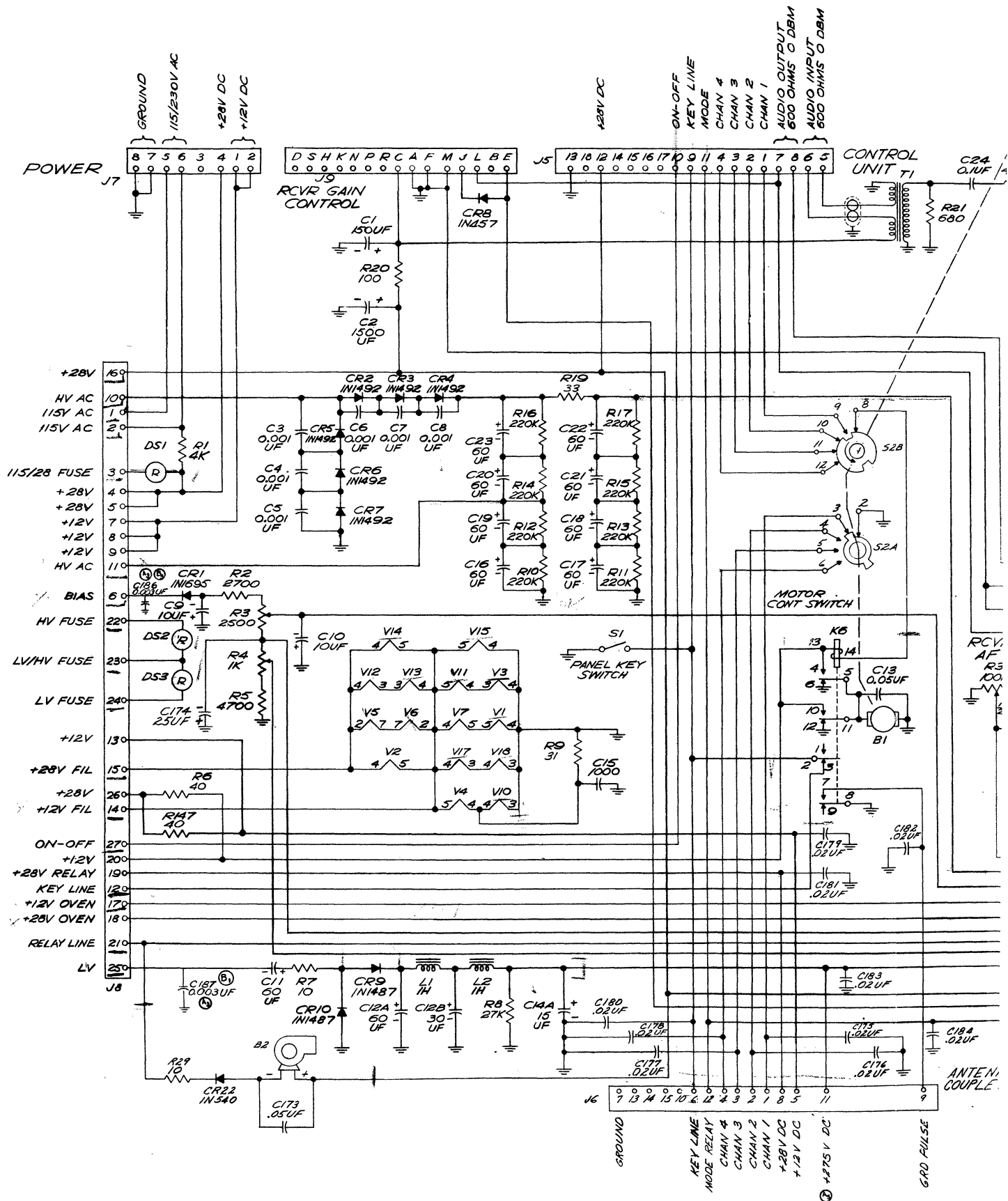






500 OHMS 0 DBM
AUDIO INPUT
500 OHMS 0 DBM





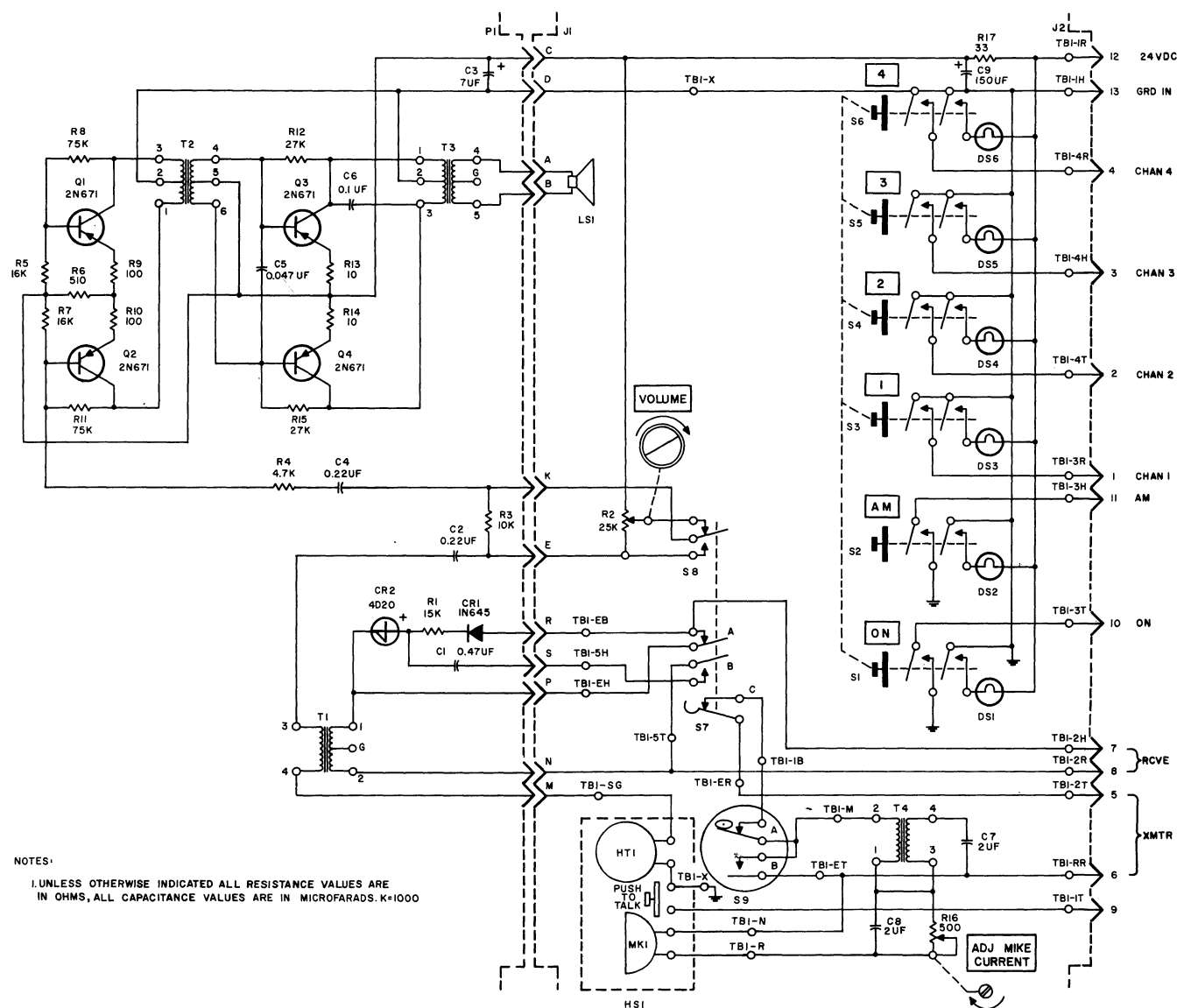


Figure 7-2 Control Unit 48A1-SW, Schematic Diagram

SECTION VII
Illustrations

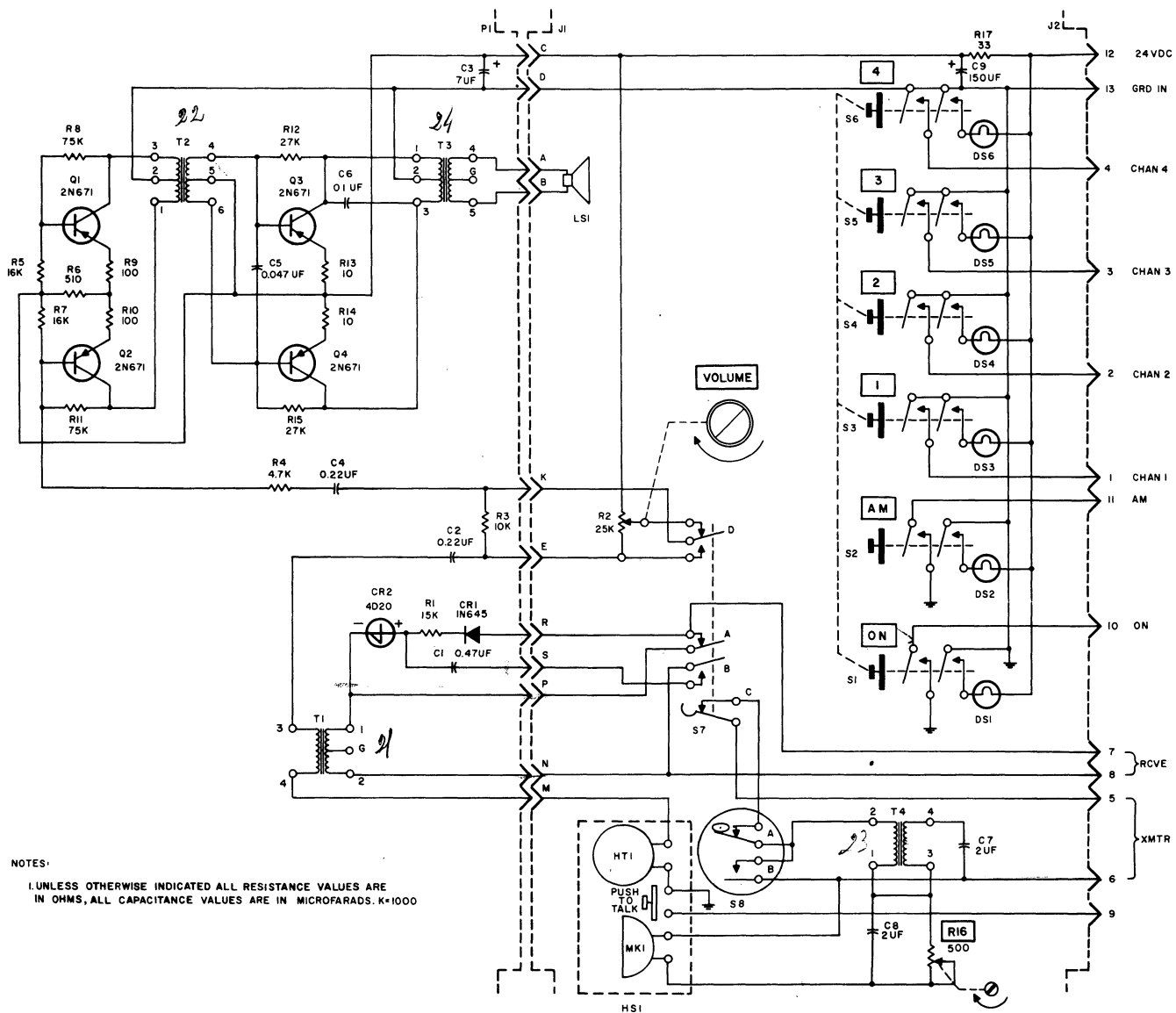


Figure 7-3 Control Unit 48B2-SW, Schematic Diagram

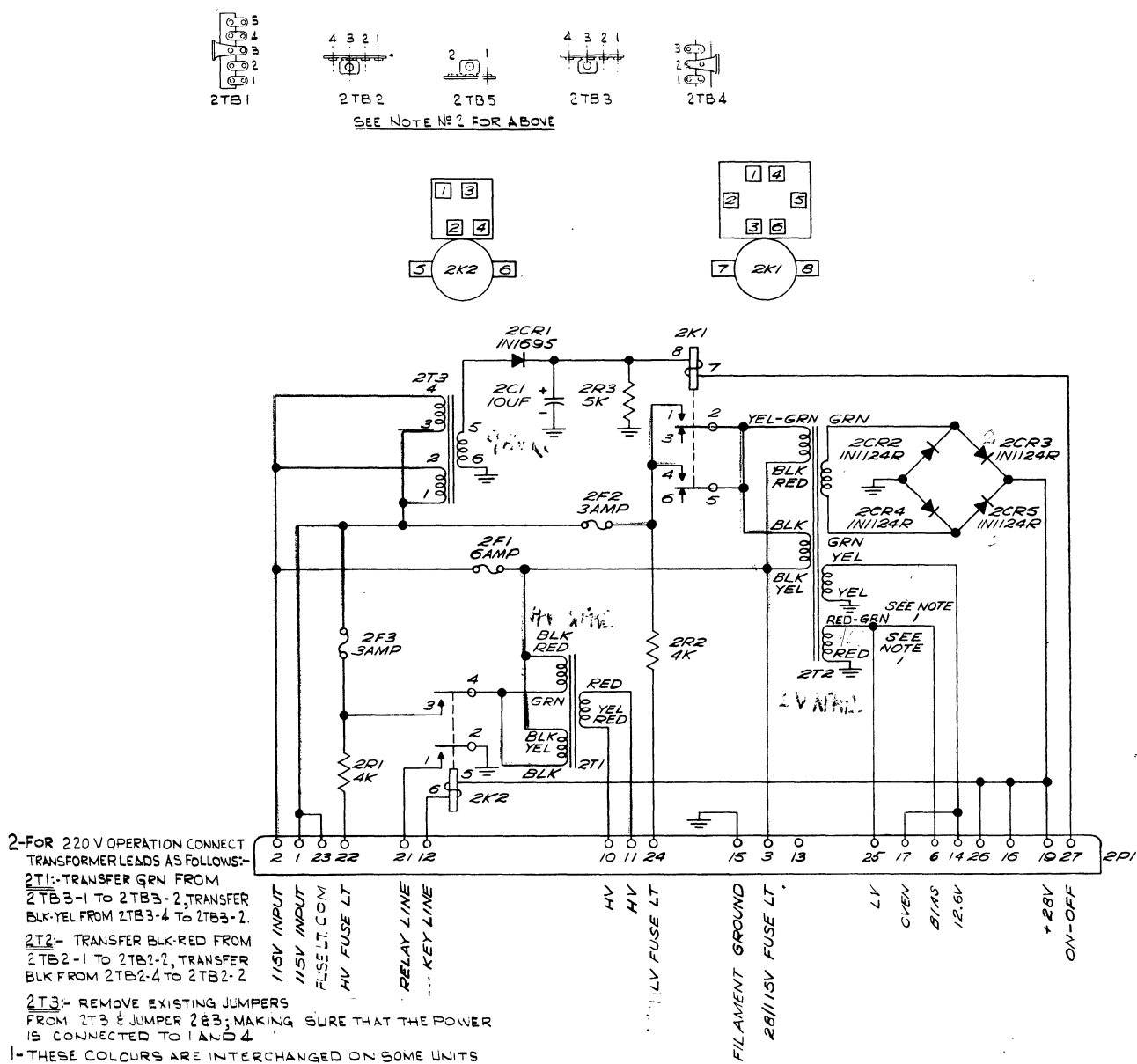
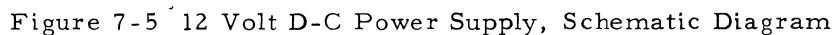


Figure 7-4 115 Volt A-C Power Supply, Schematic Diagram



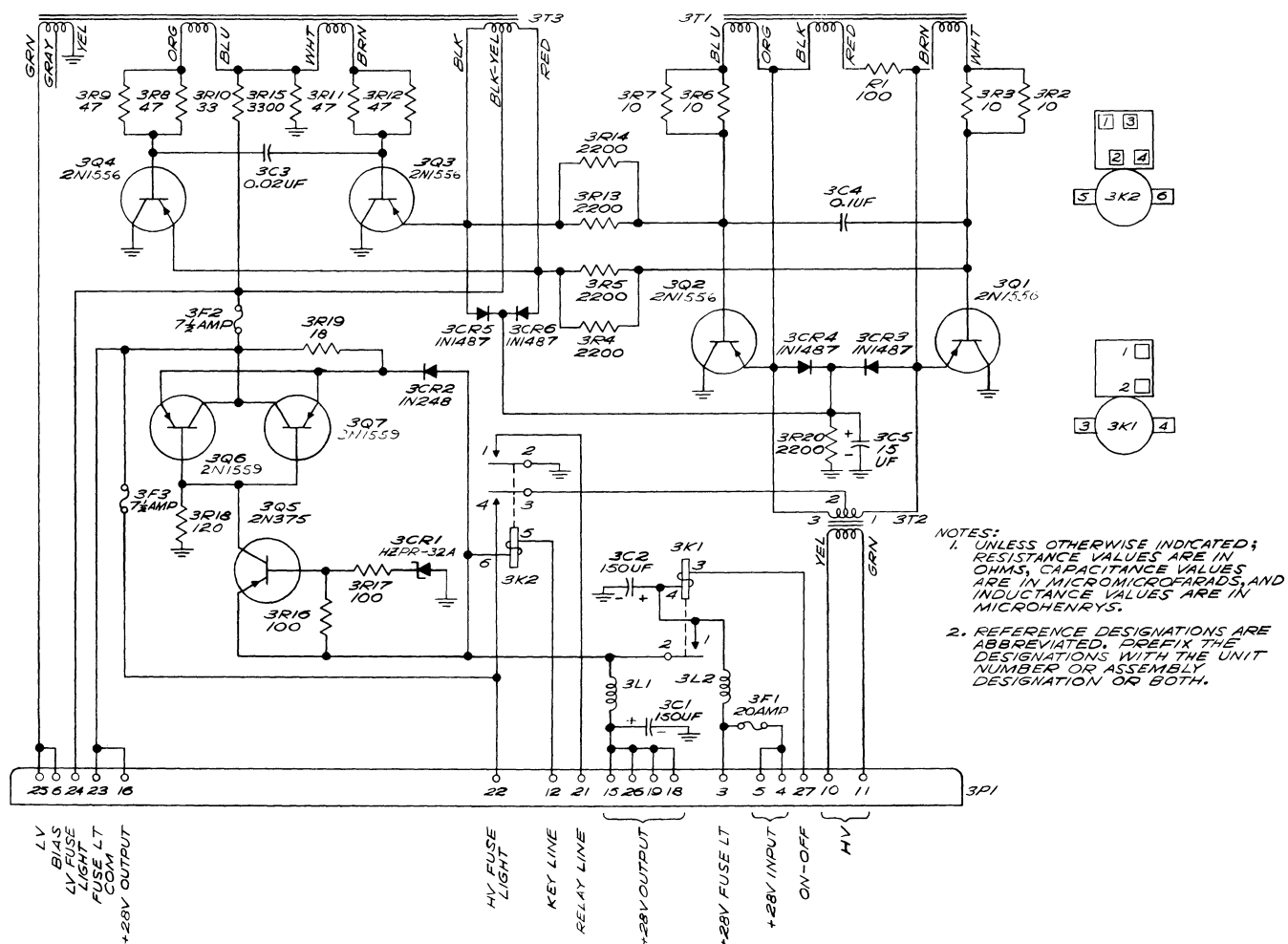


Figure 7-6 28 Volt D-C Power Supply, Schematic Diagram

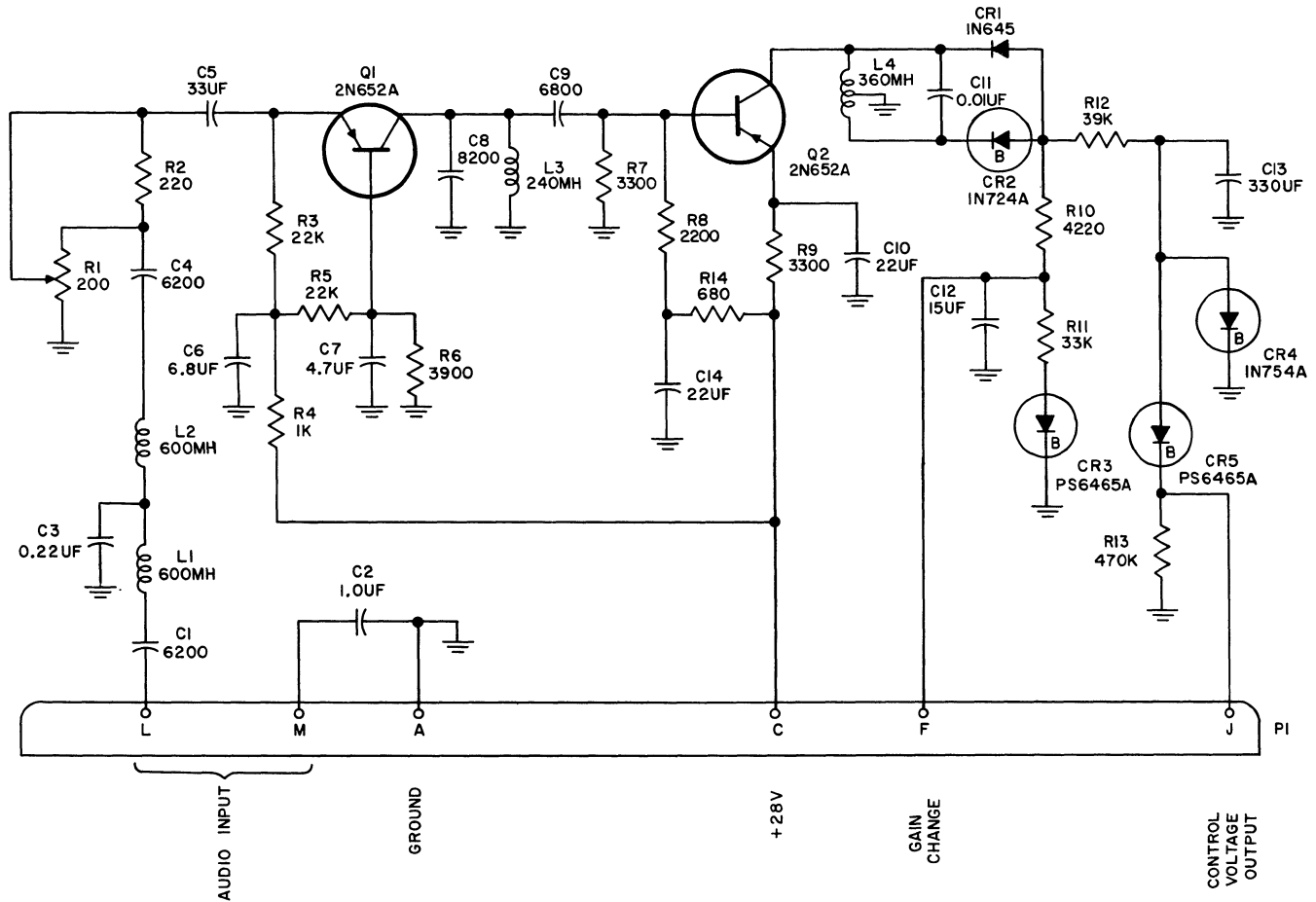
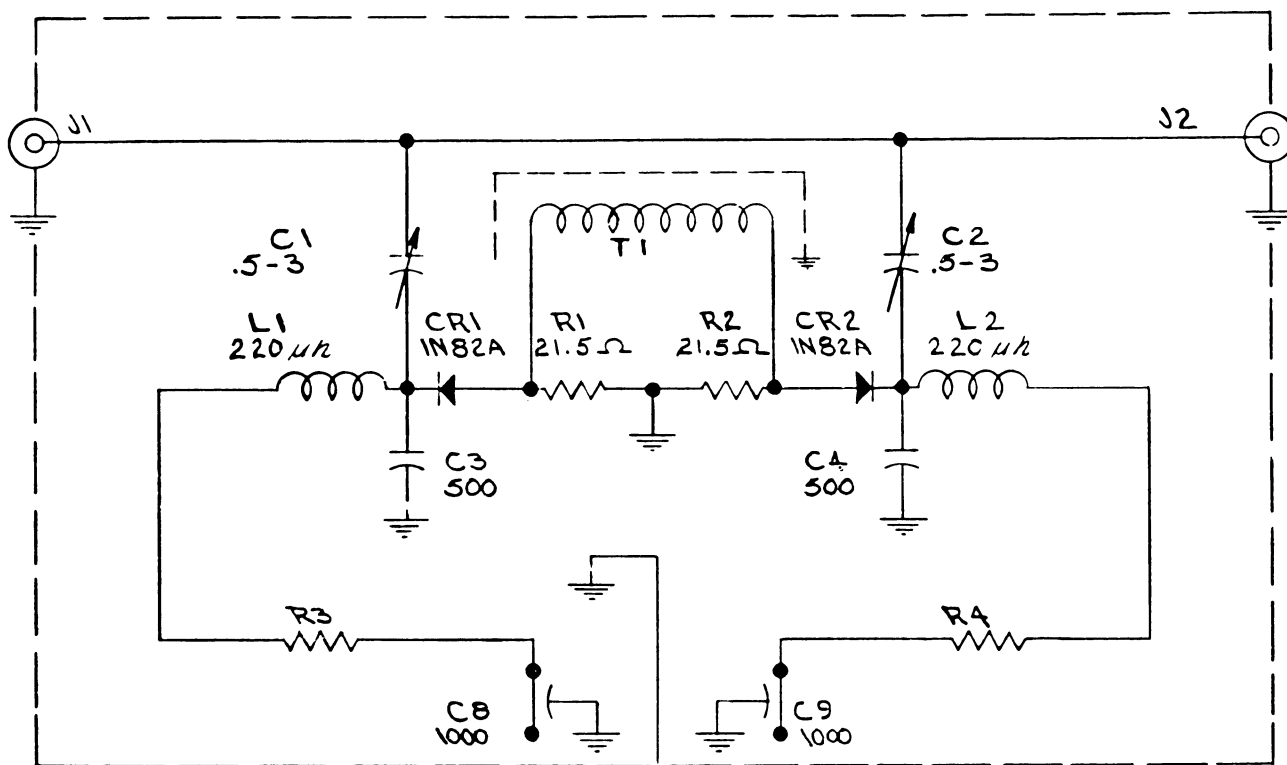


Figure 7-7 Automatic Receiver Gain Control, Schematic Diagram



R3 & R4 VALUE SELECTED TO CALIBRATE 200 WATT RANGE

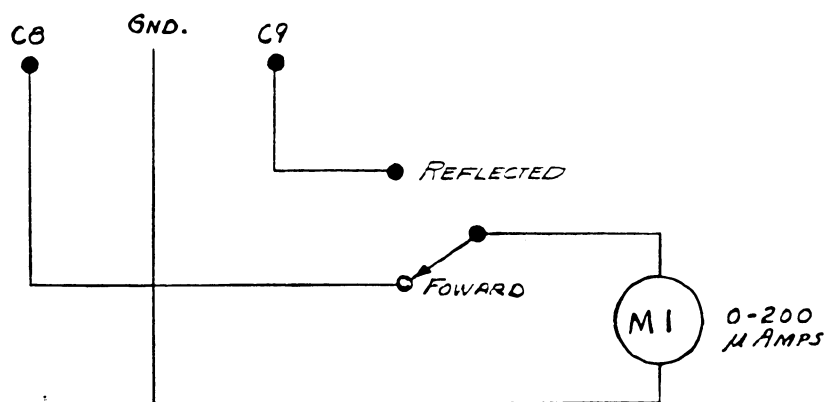
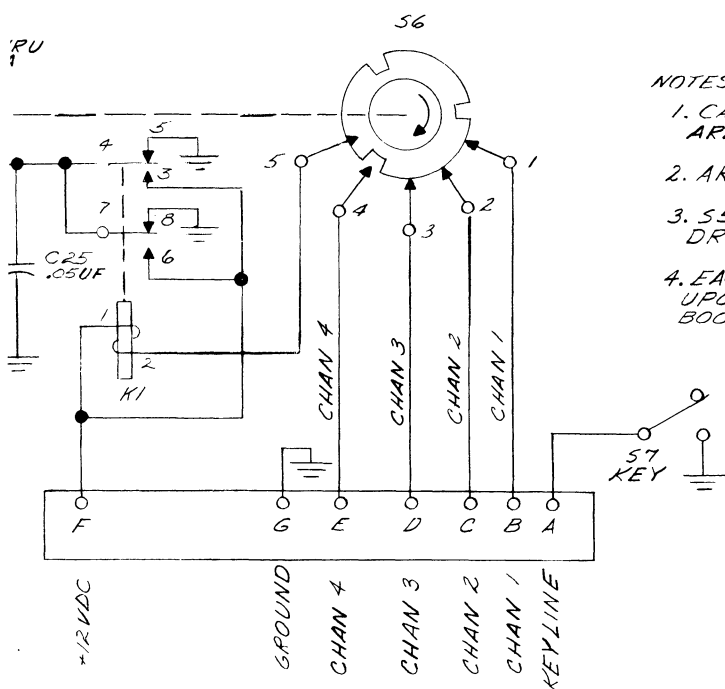


Figure 7-8 Directional Coupler 302E-1, Schematic Diagram



NOTES:

1. CAPACITANCE VALUES SHOWN ON CHANNEL 4 ARE TYPICAL ON CHANNELS 3, 2, AND 1.
2. ARROWS DENOTE CLOCKWISE ROTATION.
3. 55 AND 56 ARE VIEWED FROM OPPOSITE THE DRIVEN END.
4. EACH MUST GO TO EITHER TAP A OR B DEPENDING UPON FREQUENCY AND ANTENNA. (SEE INSTRUCTION BOOK FOR INSTALLATION DESCRIPTION.)

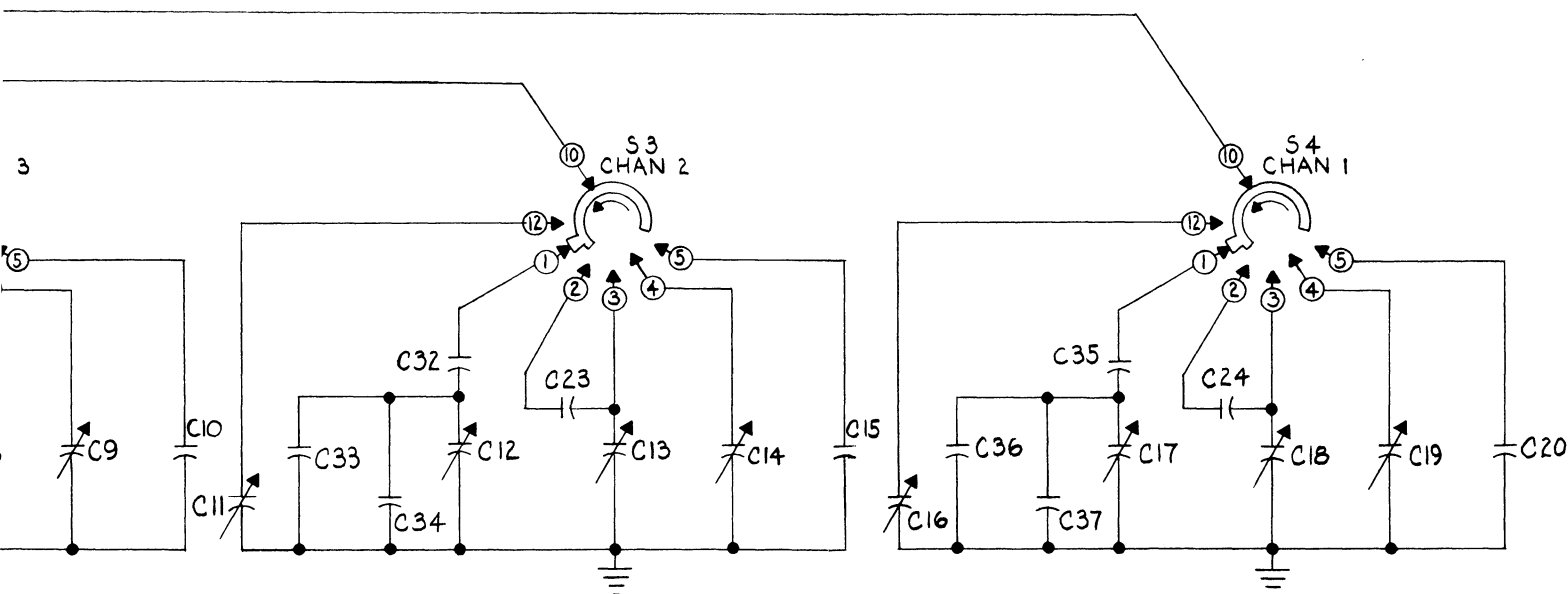
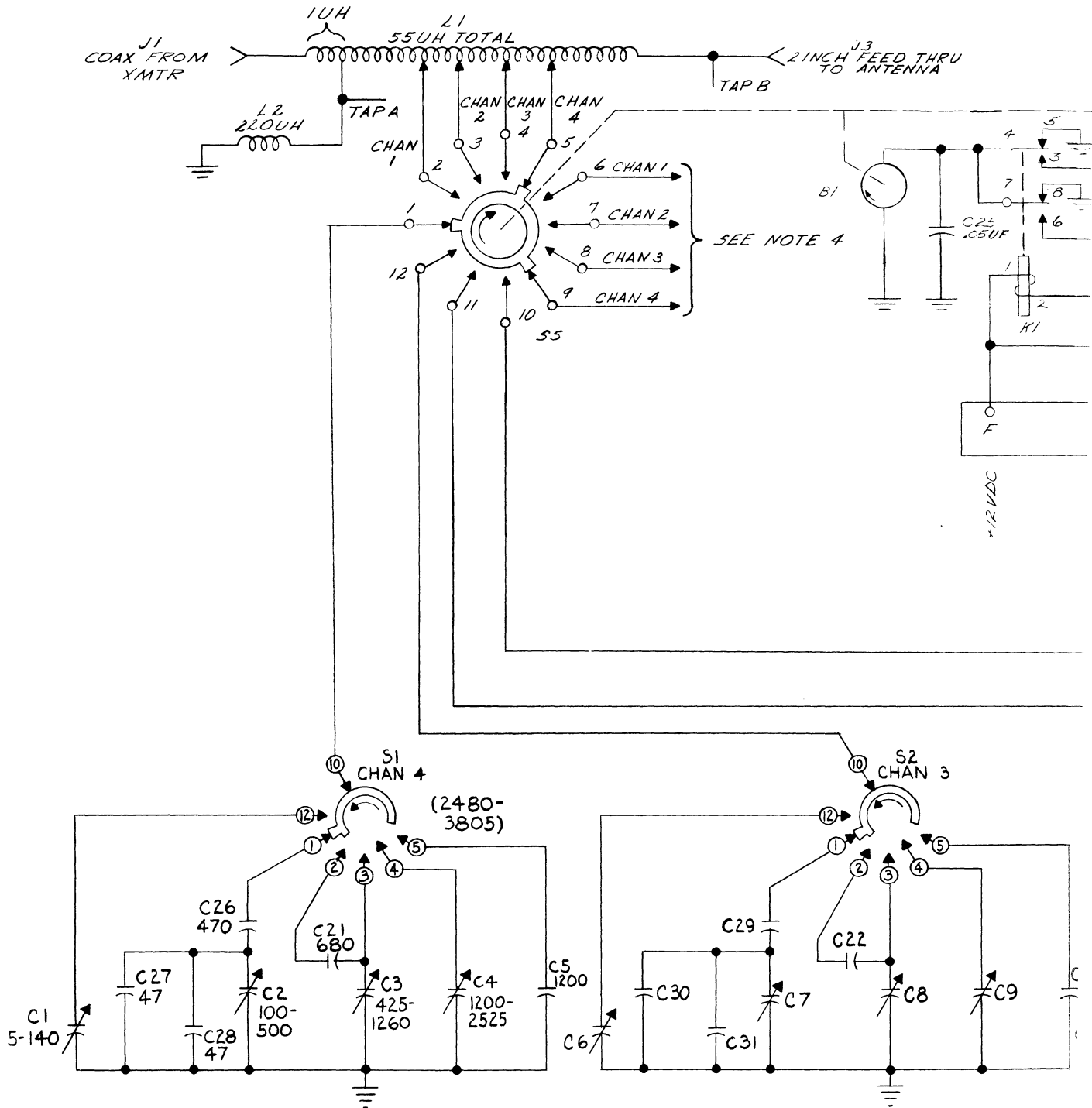


Figure 7-9 Antenna Coupler 180V-2 Schematic Diagram



ADDENDUM TO 32MS-1A INSTRUCTION BOOK (June 1962)

Make the following changes to the instruction book:

1. Figure 7-1

- a. Move L9 from between S11-A and ground, to between S9-B and ground.
- b. Remove Coax Cables from S9A(1, 2, 3) to J4, J3 and J2 respectively, and jumper S9A(1, 2, 3, 4).
- c. Reference below S9B, should read: "See Note 4".
- d. Change Note 4 to read: S9 may be used to connect separate antennas for each channel to Jacks 1, 2, 3 and 4. When individual antennas are used, remove jumpers from S9A(1, 2, 3, 4) and run separate lengths of RG-58/U cable (30" ea) from S9A (3), S9A (2) and S9A (1) to J2, J3 and J4 respectively.
- e. R150-120K located in AVC/ALC lead near the centre of schematic should read R150-120.
- f. Add choke L1001 - 680 uh between CR9 and C12A.
- g. Add capacitor C1001 - 0.02 uf from junction CR10 and CR9 to ground.
- h. Add capacitor C1002 - 2.5 uf from J8 pin 16 to ground.
- i. Add resistor R152 - 120 (ohms) between R105 and Pin 7 of V11.
- j. RF coils at S10 should be numbered bottom to top: CH1, CH2, CH3, CH4.
- k. Add Note 5: C67 on some units is connected to HR1-8, 3 instead of HR1-7, 4.
- l. Add Note 6: R55 is selected in Test. Normal range of values 3.3K through 10K.
- m. Add Note 7: Leads from C85 and from C82 to V2 cathodes on some units are interchanged.
- n. Change note at the right hand side of schematic to read: Last Resistor No. is R152.

2. Figure 7-2

- a. Delete CR2, CR1, C1 and R1 and leads.

- b. Jumper S7-A contacts.
- c. Delete S9
- d. Connect TB1-1B to TB1-M.
- e. Transfer connection from bottom contact of S8 to slider of R2.

3. Figure 7-3

- a. Delete CR2, CR1, C1 and R1 and leads.
- b. Jumper S7-A contacts.
- c. Delete S8.
- d. Connect S7C to T4-2.
- e. Transfer connection from bottom contact of S7-D to slider of R2.
- f. Lift from ground, then parallel ground lamp contacts of S3, 4, 5, 6 and add R18 - 330 (ohms) between this line and ground.
- g. Add R19 - 330 (ohms) between DS2 and 24VDC Line.
- h. Add R20 - 330 (ohms) between DS1 and 24VDC Line.

4. Figure 7-4

Add 2R4 - 820 (ohms) from 2T2 to 2P1 pin 6 (bias-line).

5. Figure 7-6

- a. Disconnect Junction of 3Q5 (Emitter) and 3R16 from Junction of 3K2-6 and 3L1.
- b. Connect the junction of 3Q5 and 3R16 to the cathode of 3CR2.

6. Figure 7-7

- a. Delete C12, R10, R11, R13, CR3.
- b. Jumper Cathode to anode of CR5.
- c. Change Value of R9 from 3.3K to 15K.
- d. Change Value of R12 from 39K to 10K.
- e. Change Value of C13 from 330 uf to 47 uf.

f. Add R10-120K between P1-J and P1-C.

7. Figure 7-9

a. Change Channel numbers accompanying S1, S2, S3 and S4 to read:
S1 - Channel 1, S2 - Channel 2, S3 - Channel 3, S4 - Channel 4.

b. Connections between S1, 2, 3, 4 and S5 should be as follows:

S1 - 10 to S5-10

S2 - 10 to S5-11

S3 - 10 to S5-12

S4 - 10 to S5-1

8. Page 3

Antenna Coupler 180V-2 Collins Part No. should be 522-2423-00.

9. Page 6

Receiver Sensitivity....."signal noise-to-noise ratio", should
be "signal-plus-noise-to-noise ratio".

10. Page 8

Add title at the top of the page: 28-VOLT POWER SUPPLY

11. Page 12

Paragraph 1.9 last sentence....."on signals on identical frequencies",
should be "of signals on identical frequencies".

12. Page 27

a. Delete the end of para. 4.5.21 starting "and CR5".

b. Add following: R1 is a multi turn gain pre-set control. It is
normally adjusted clockwise to produce a slight indication of AVC
on the S Meter on receive with antenna disconnected from the
32MS-1A. The minimum gain (AVC) position for R1 is fully
anticlockwise, recognized by a clicking sound in the potentiometer.
The automatic receiver gain control or noise operated gain
adjusting device (NOGAD) differs from normal AGC circuitry, in
that it automatically reduces sensitivity (and consequently noise
output) during monitor periods, whereas normal AGC action is
based rather on the average carrier level.

13. Page 33

Change paragraph 5.4 to read: "With the OPR-TUNE switch in TUNE
position, adjust the Transmit Audio gain to read between 10 and 15 on

the S Meter with meter switch in ALC-S position.

14. Page 44

C10, COIL RADIO FREQUENCY etc., should read L10 COIL, RADIO FREQUENCY etc.

15. Page 48

Add R152 - RESISTOR FIXED COMPOSITION: Same as R64
Collins Part No. 745-1314-00.

16. Page 51

Add the following items at bottom of page.

- a. L1001 - COIL, RADIO FREQUENCY: 680 uh inductance,
0.155 amp, Collins Part No. 240-2536-00.
- b. C1001 - CAPACITOR FIXED CERAMIC: Same as C35,
Collins Part No. 913-4364-00.
- c. C1002 - CAPACITOR ELECTROLYTIC TANTALUM: 2.5
uf - 15% +50%, 60 v dc, Collins Part No. 184-8324-00.

17. Page 53

1.6 to 2 mc: P.A. Coil should read: "P.A. Tank Assembly, Collins
Part No. 567-4652-00.

2.0 - 3.3 mc Kit coil should have Collins Part No. 567-4663-00.

2.0 - 3.3 mc P.A. coil should read: P.A. Tank Assy. Collins
Part No. 567-4653-00.

3.3 - 5.0 mc P.A. coil should read: P.A. Tank Assy. Collins
Part No. 567-4654-00

18. Page 54

5.5 - 9.0 mc P.A. coil should read: P.A. Tank Assy. Collins
Part No. 567-4655-00.

9.0 - 12.0 mc P.A. coil should read: P.A. Tank Assy. Collins
Part No. 567-4656-00.

12.0 - 15.0 mc P.A. coil should read: P.A. Tank Assy. Collins
Part No. 567-4656-00.

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