

## SECTION IX

### DIAGRAMS

#### 9-1. GENERAL

This section contains schematic diagrams for the Model 762-2A Microwave Spectrum Analyzer.

#### 9.2 MODEL 762-2A MICROWAVE SPECTRUM ANALYZER DIAGRAMS

Figure 9-1 is a diagram of the Std Persistence Display Unit. Figures 9-6 and 9-7 are diagrams of the Microwave Tuning IF Section and RF Deck. The remaining diagrams are of circuit boards and other modules referenced by figure numbers in figures 9-1, 9-6, and 9-7.

- 9-1 Std Persistence Display Unit, Schematic Diagram
- 9-2 Power Supply Board A101, Schematic Diagram
- 9-3 Sweep & Vertical Amplifier Board A102, Schematic Diagram
- 9-4 Fast Sweep/Sync Amplifier Board A103, Schematic Diagram
- 9-5 Hi Voltage Divider & Blank Board A-04, Schematic Diagram
- 9-6 Microwave Tuning Unit IF Section, Schematic Diagram
- 9-7 Microwave Tuning Unit RF Deck Interconnect, Schematic Diagram
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- 9-9 60 MHz +6.5 MHz 4th Frequency Converter Board A202, Schematic Diagram
- 9-10 100 KHz B. P. Filter Board A203, Schematic Diagram
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- 9-12 LIN-LOG Amplifier Board A205, Schematic Diagram
- 9-13 Harmonic Attenuator Board A206, Schematic Diagram
- 9-14 RF Board A208, Schematic Diagram
- 9-15 Phase Lock Module A209, Schematic Diagram
- 9-16 IF Attenuator AT202, Schematic Diagram

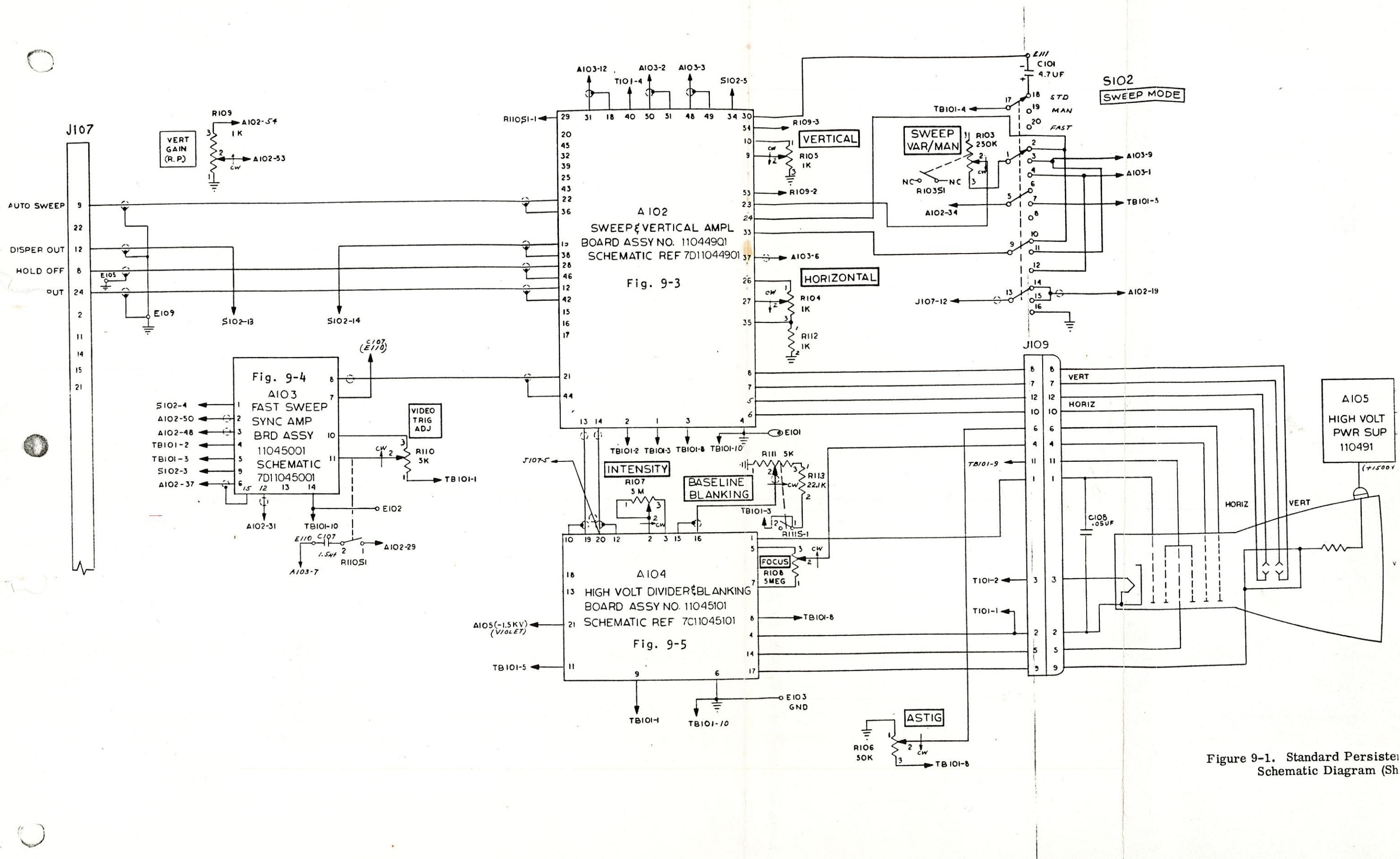


Figure 9-1. Standard Persistence Schematic Diagram (Sheet 1)

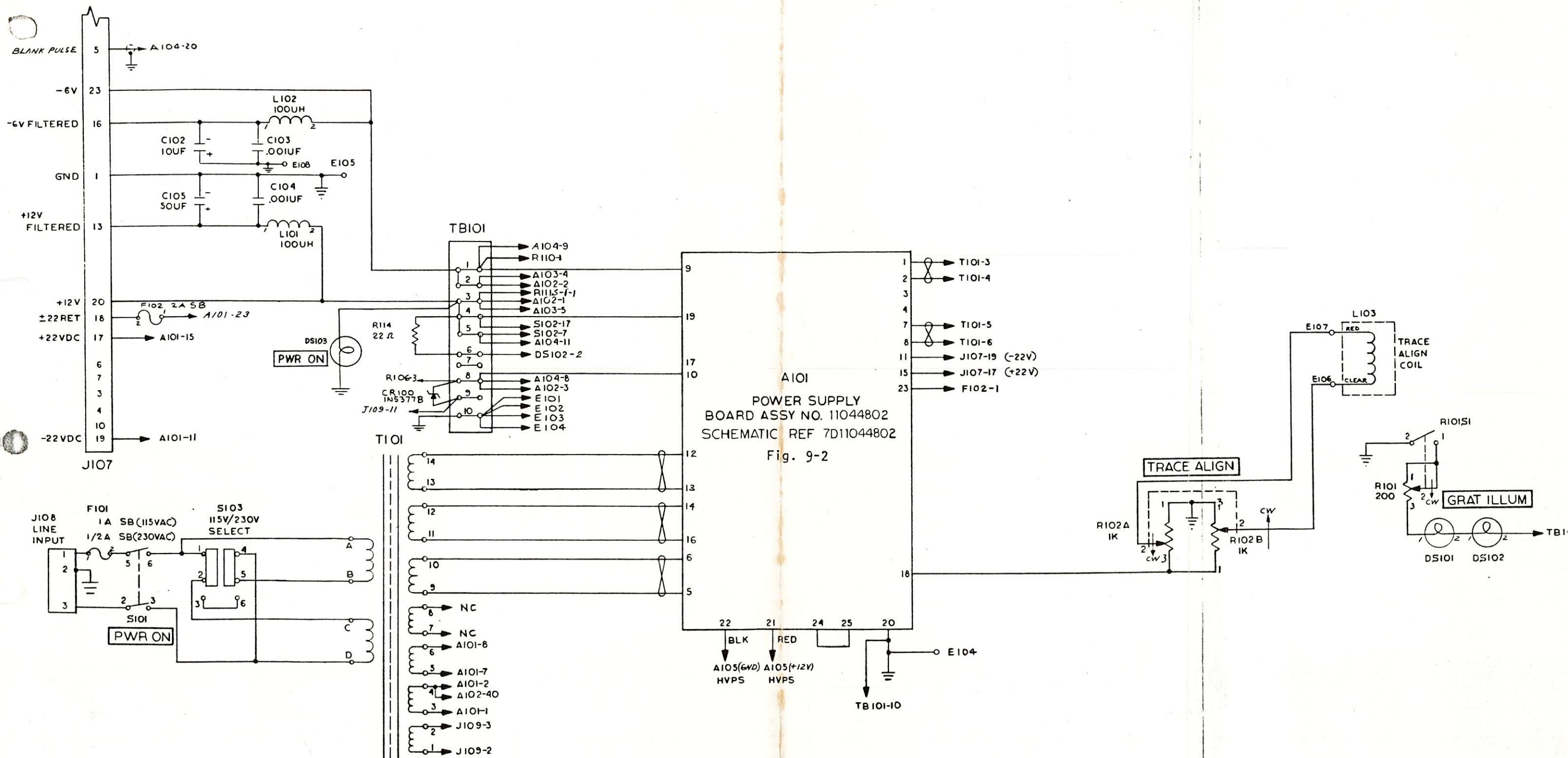


Figure 9-1. Standard Persistence Display Unit Schematic Diagram (Sheet 2 of 2)

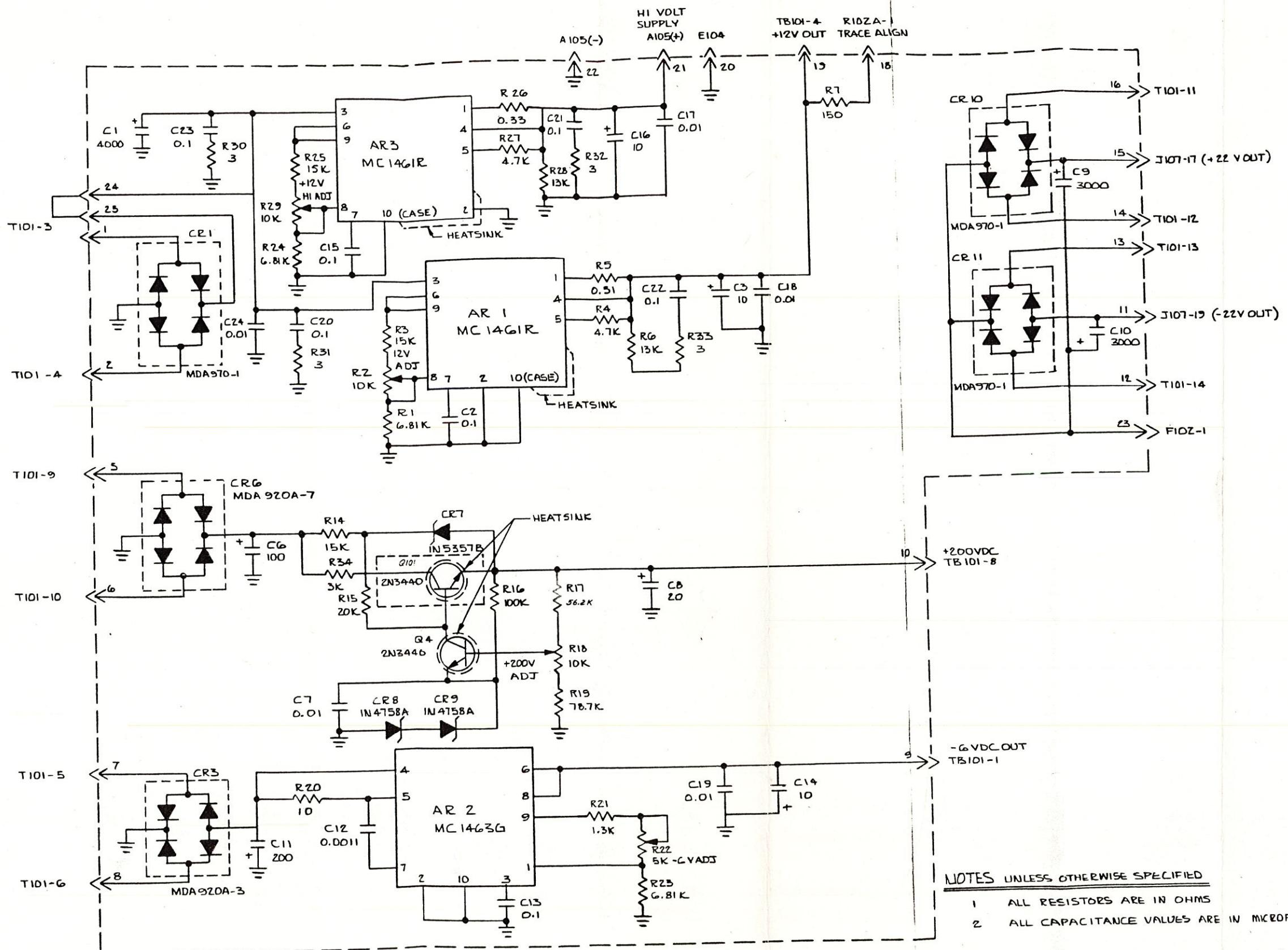
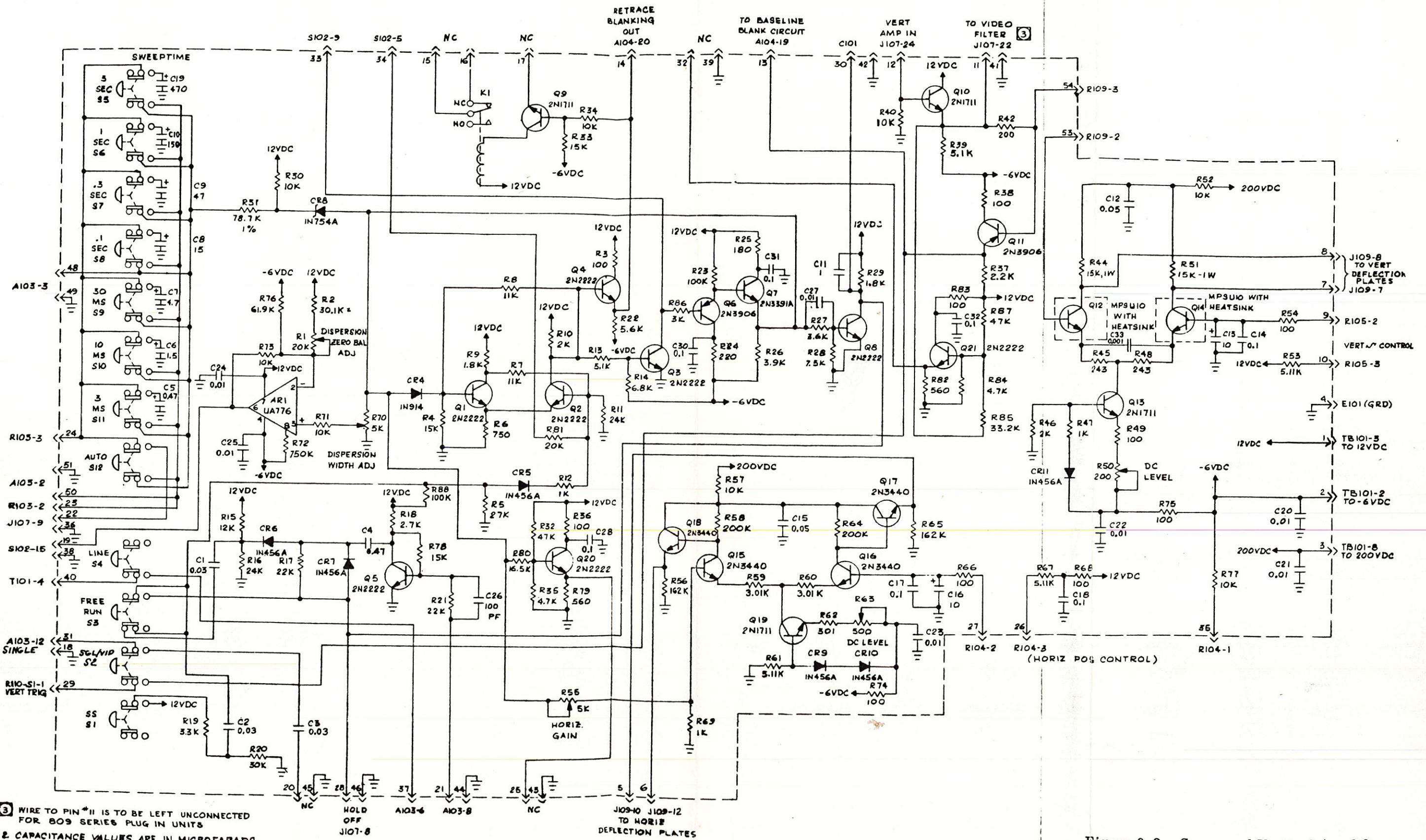
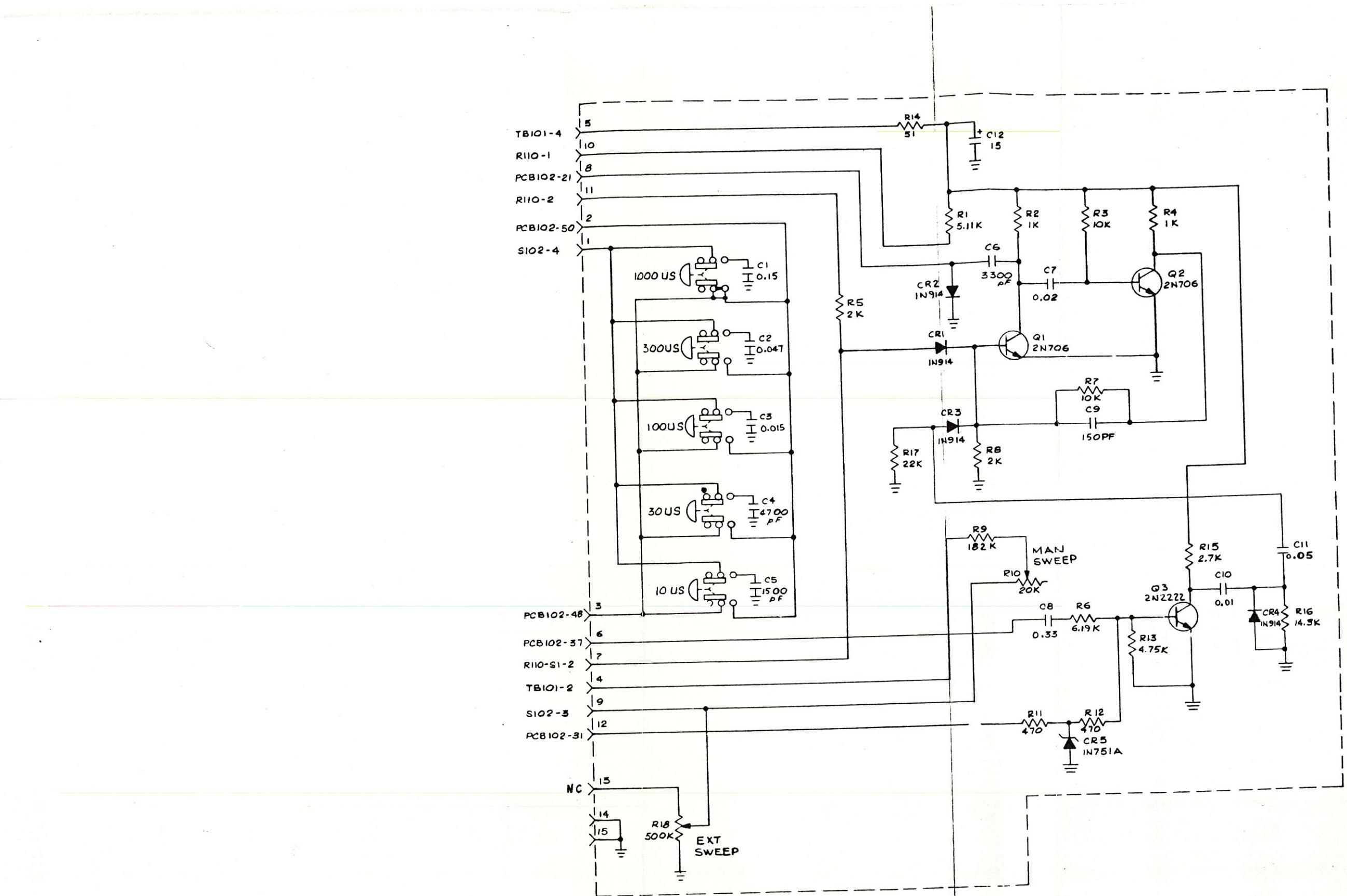


Figure 9-2. Power Supply Board A101,  
Schematic Diagram

9-7/9-8

NOTES UNLESS OTHERWISE SPECIFIED  
 1 ALL RESISTORS ARE IN OHMS  
 2 ALL CAPACITANCE VALUES ARE IN MICROFARADS





2. ALL CAPACITANCE VALUES ARE IN MICRO FARADS.  
 1. ALL RESISTORS ARE IN OHMS  
 NOTES: UNLESS OTHERWISE SPECIFIED

Figure 9-4. Fast Sweep/Sync Amplifier  
Board A103, Schematic Diagram

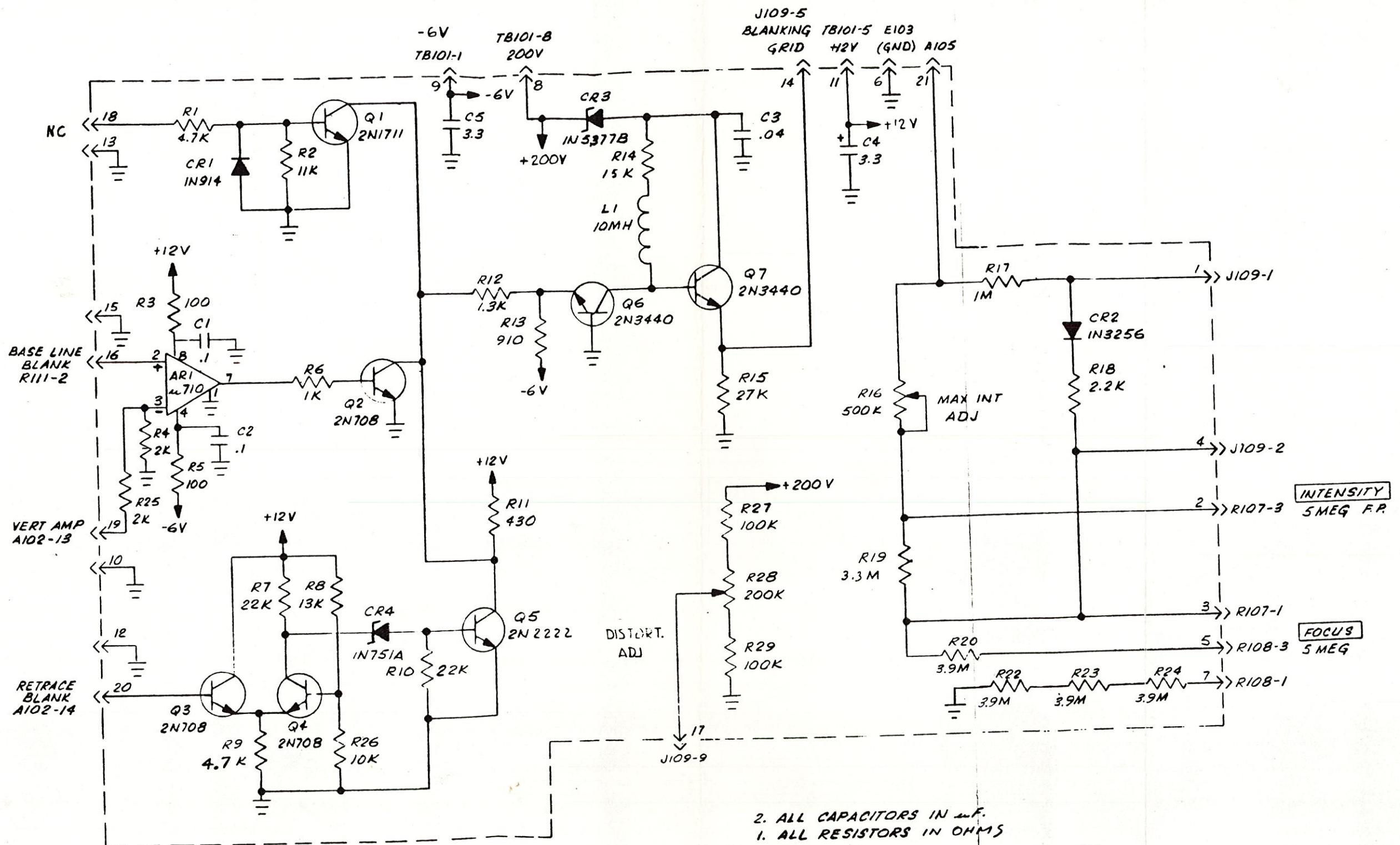


Figure 9-5. Hi Voltage Divider and Blanking Board A104, Schematic Diagram

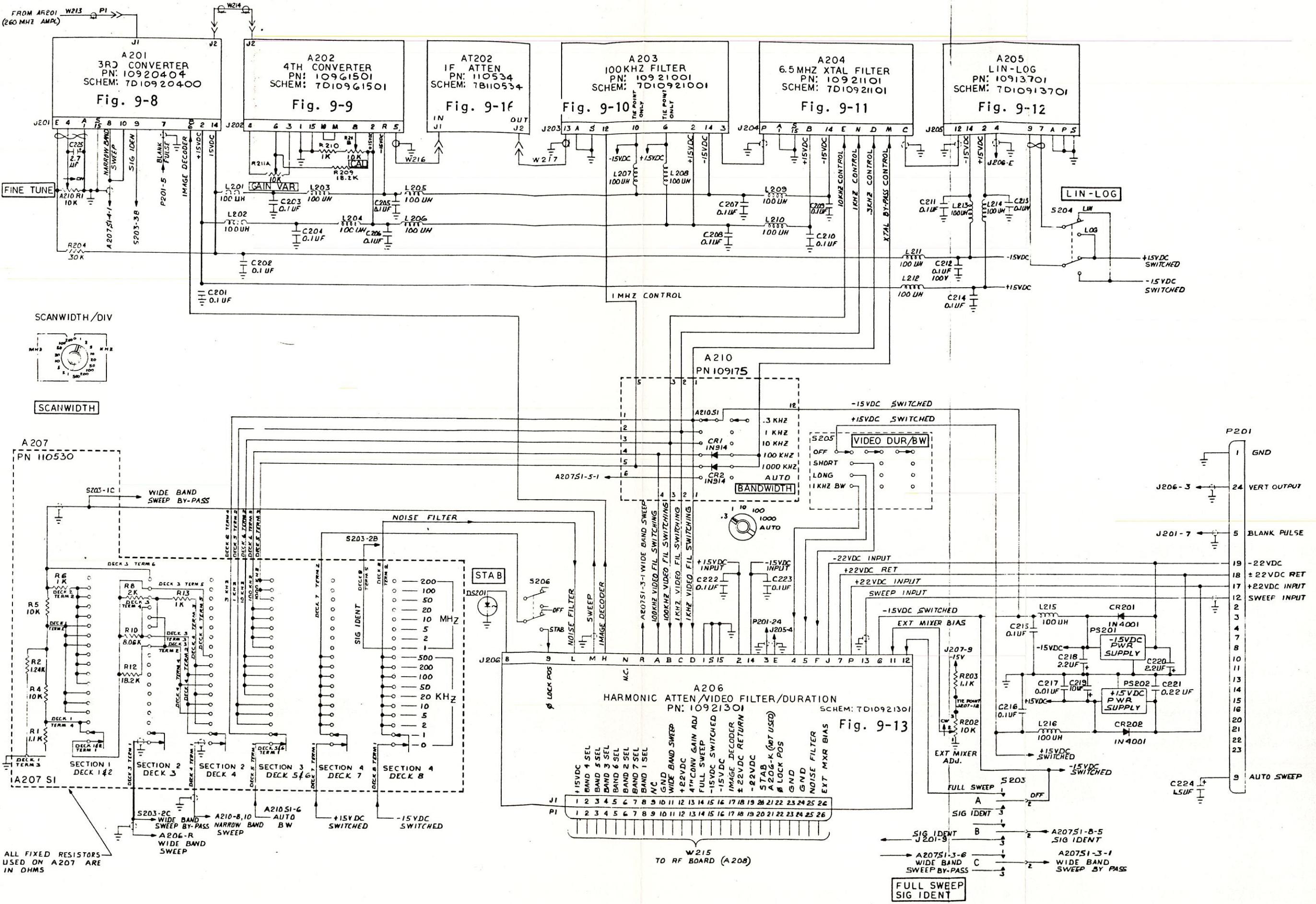
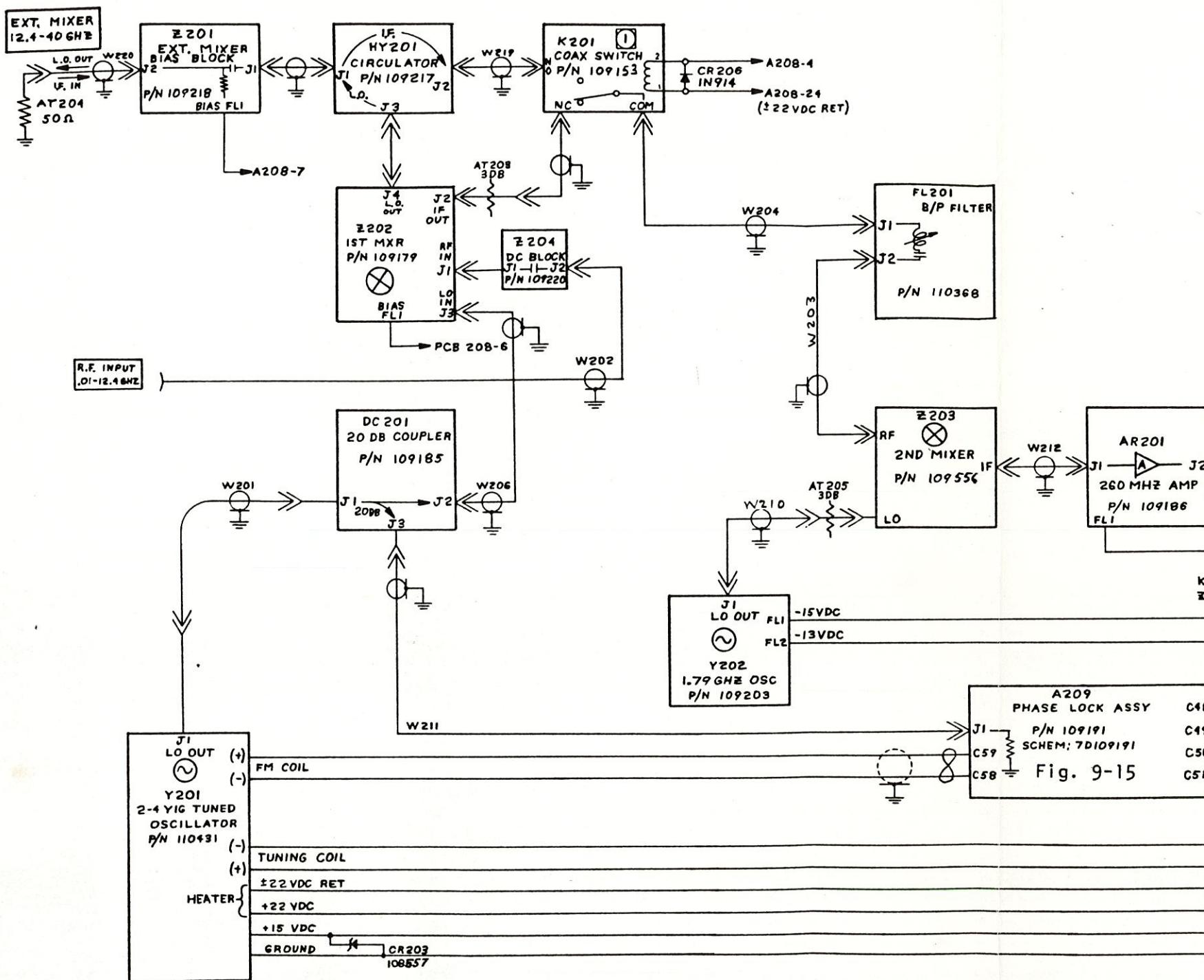


Figure 9-6. Microwave Tuning Unit IF Section,  
Schematic Diagram



NOTES:

(1) K201 ENERGIZED BANDS 5, 6, & 7 ONLY

<b>J3</b>	
1	+15VDC
2	BAND 4 SEL
3	BAND 5 SEL
4	BAND 3 SEL
5	BAND 6 SEL
6	BAND 2 SEL
7	BAND 7 SEL
8	BAND 1 SEL
9	NC
10	GROUND
11	SWEET INPUT
12	+22VDC
13	4TH CONV GAIN ADJ
14	FULL SWEEP
15	-15 VDC SWITCHED
16	-15 VDC
17	IMAGE DECODER
18	±22 VDC RET
19	-22 VDC
20	STAB. LED
21	PIN 18(X10 SWEEP)
22	θ LOCK POS
23	GROUND
24	GROUND
25	NOISE FILTER
26	EXT MXR BIAS
<b>A208 J1 3RD CONVERTER 260 MHZ TO I.F. CHASSIS</b>	
21(+15VDC)	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
<b>A208 RF BOARD ASSY P/N 11043802 SCHEM 7D1043802</b>	
21(+15VDC)	
4	
6 (MXR BIAS)	
K201-2	
Z202-FL1	
8	
15	
16	
24 (±22 VDC RET)	
5	
K201-1	
17 (θ LOCK INDICATOR)	
20(+15VDC)	
12, 13, 26 (-15VDC)	
19 (+15VDC SWITCHED)	
NC 18 (X10 SWEEP)	
1 (GND)	
2 -18VDC TUNING COIL	
3 +	
10, 25 (±22 VDC RET)	
9 (+22 VDC)	
11 (+15 VDC)	
23 (GROUND)	
22 SWEEP	
7 EXT MXR BIAS	

Fig. 9-14

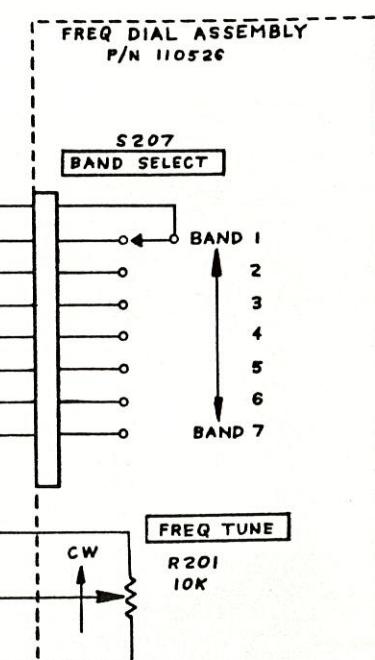
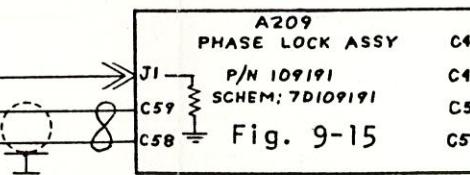


Figure 9-7. Microwave Tuning Unit RF Deck Interconnect, Schematic Diagram

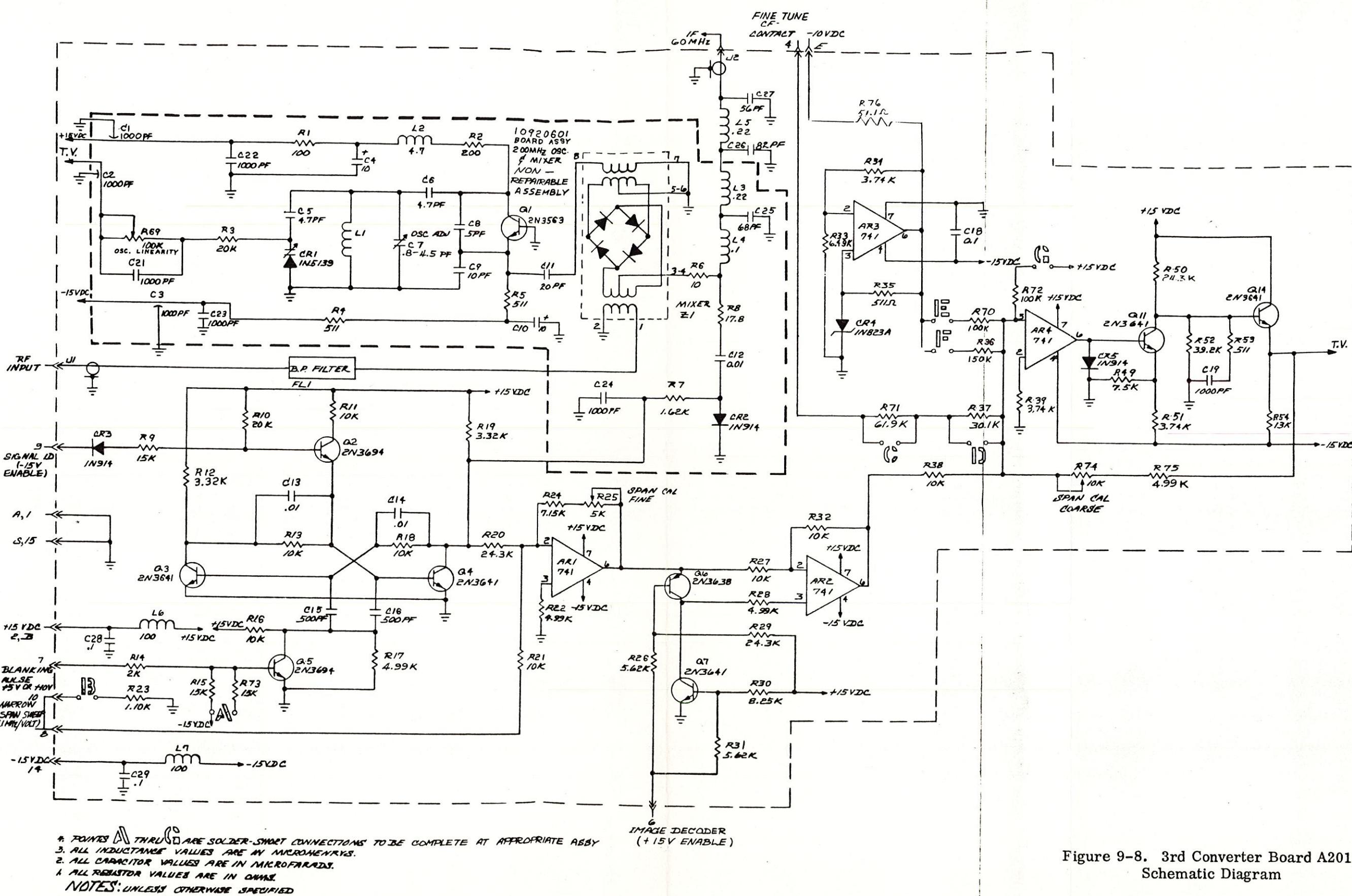
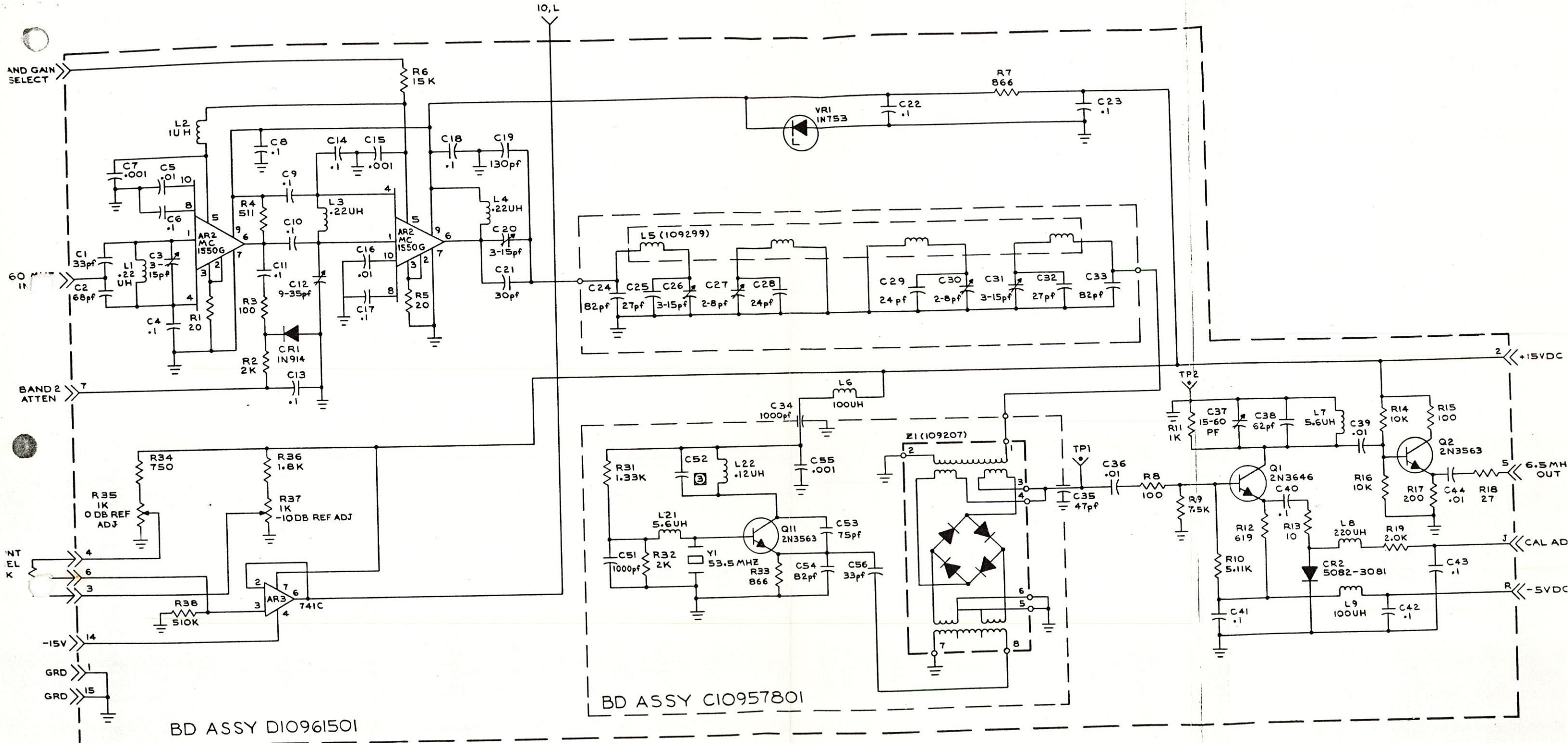
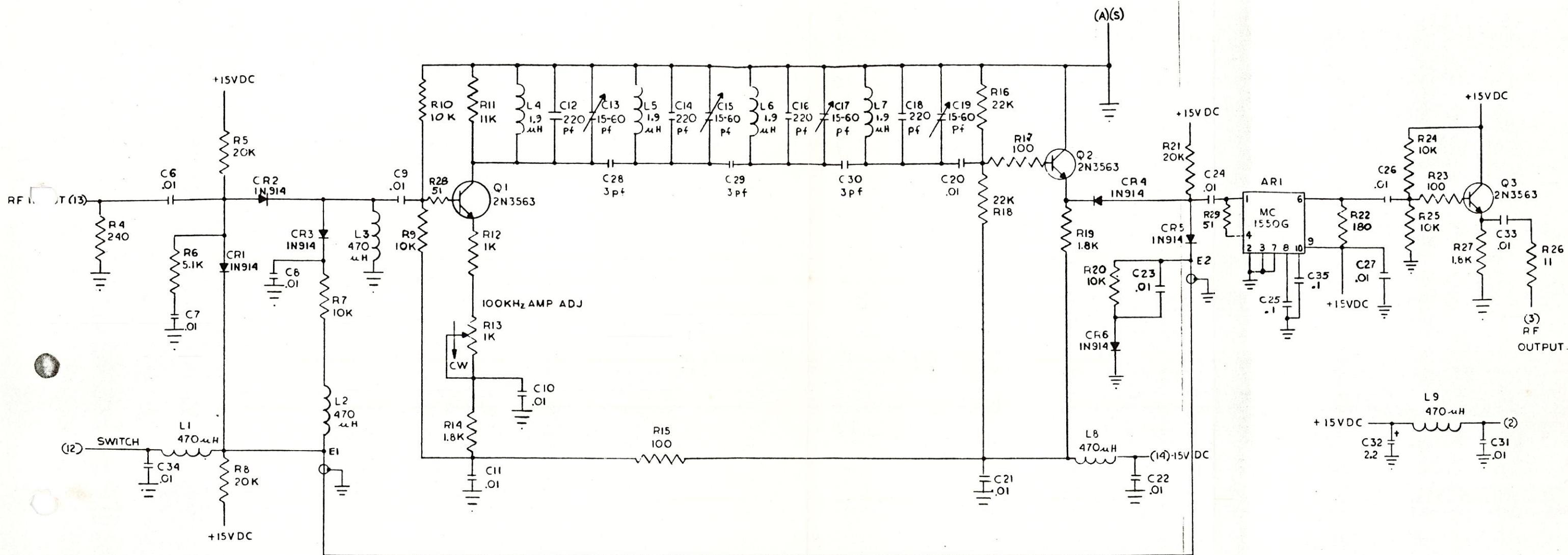


Figure 9-8. 3rd Converter Board A201,  
Schematic Diagram

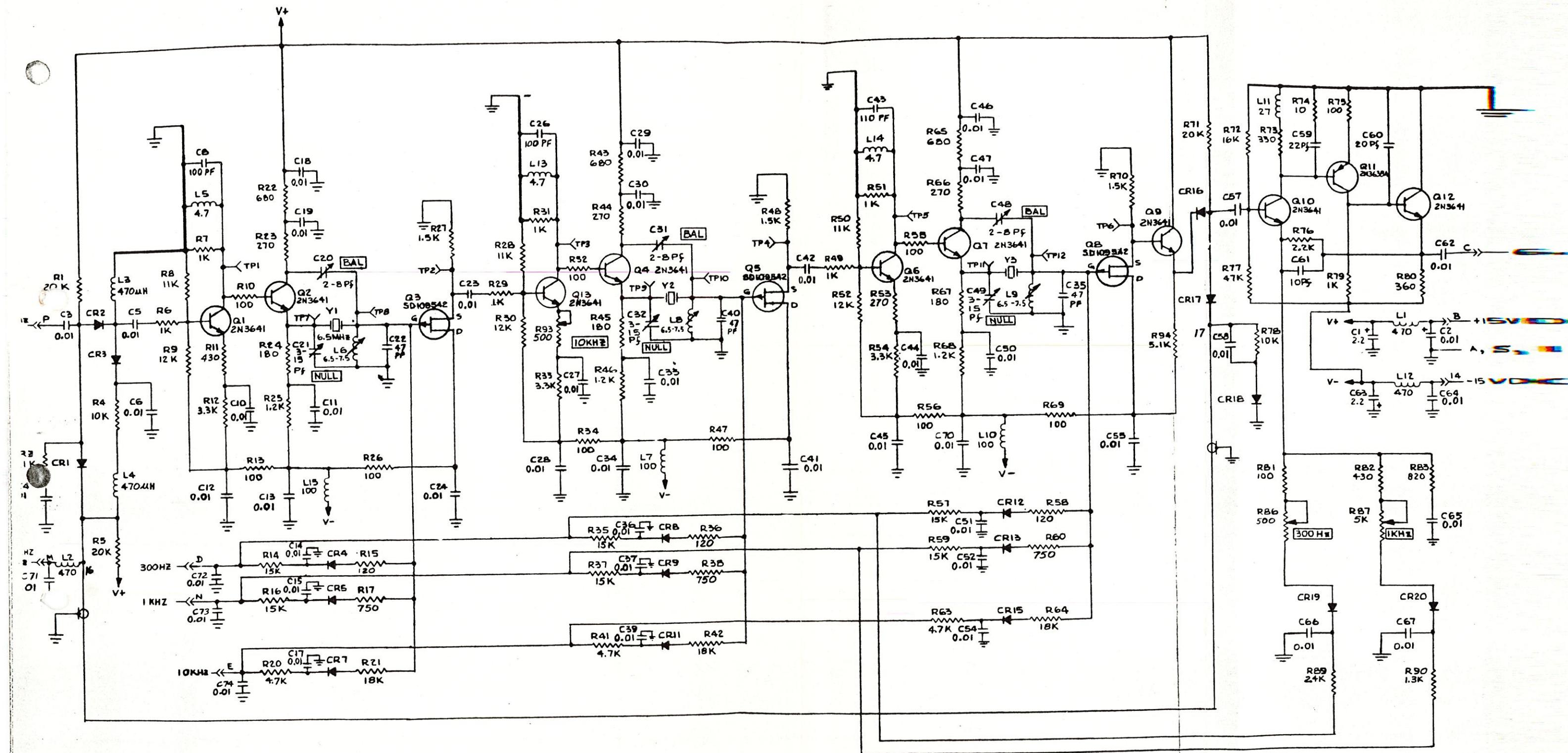




NOTES: UNLESS OTHERWISE SPECIFIED

1. RESISTORS ARE IN OHMS
2. CAPACITORS ARE IN  $\mu$ F

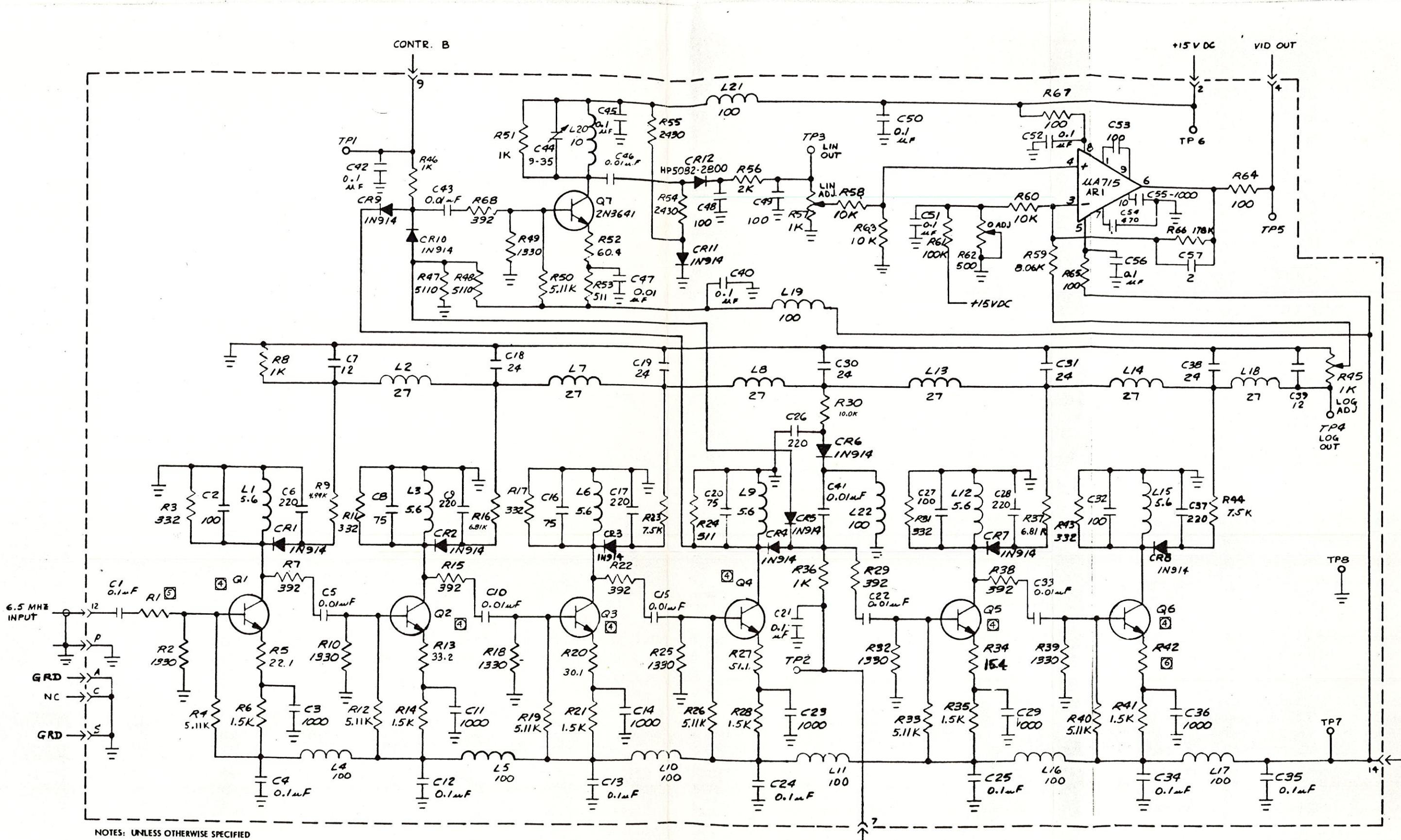
Figure 9-10. 100 KHz B.P. Filter Board A203,  
Schematic Diagram



NOTES: UNLESS OTHERWISE SPECIFIED.

1. ALL RESISTORS ARE IN OHMS.
2. ALL CAPACITORS ARE IN  $\mu$ F.
3. ALL INDUCTORS ARE IN  $\mu$ H.
4. ALL DIODES ARE IN914.

Figure 9-11. 6.5 MHz Crystal Filter Board Schematic Diagram



NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL CAPACITORS ARE IN PICO FARADS.
2. ALL RESISTORS ARE OHMS.
3. ALL INDUCTORS ARE IN MICRO HENRY'S.
4. TRANSISTOR Q1 THRU Q6 ARE MATCHED FOR BETA VALUE. REPLACEMENT PARTS ARE OBTAINED BY ORDERING TRANSISTOR KIT, PART NO. 110735. EACH KIT CONTAINS SIX MATCHED TRANSISTORS, COLOR CODED AS SHOWN IN TABLE.

COLOR CODE	BETA VALUE	R1 VALUE
GREEN	50-60	392Ω
BLUE	60-70	681Ω
VIOLET	70-80	909Ω
GRAY	80-90	1.1kΩ
WHITE	90-100	1.3kΩ

5. THE VALUE OF RESISTOR R1 IS DEPENDENT UPON THE BETA VALUE OF TRANSISTORS Q1 THRU Q6 AS SHOWN IN TABLE. THE CORRECT REPLACEMENT RESISTOR R1 IS SUPPLIED WITH EACH TRANSISTOR KIT, PART NO. 110735.

6. RESISTOR R42 IS NOM. 20Ω. VALUES OF 17.8Ω OR 22.1Ω MAY BE USED.

Figure 9-12. LIN-LOG Amplifier Board Schematic Diagram

NOTES: UNLESS OTHERWISE SPECIFIED  
1. RESISTORS ARE IN OHMS,  $\frac{1}{4}$ W,  $\pm 5\%$ .

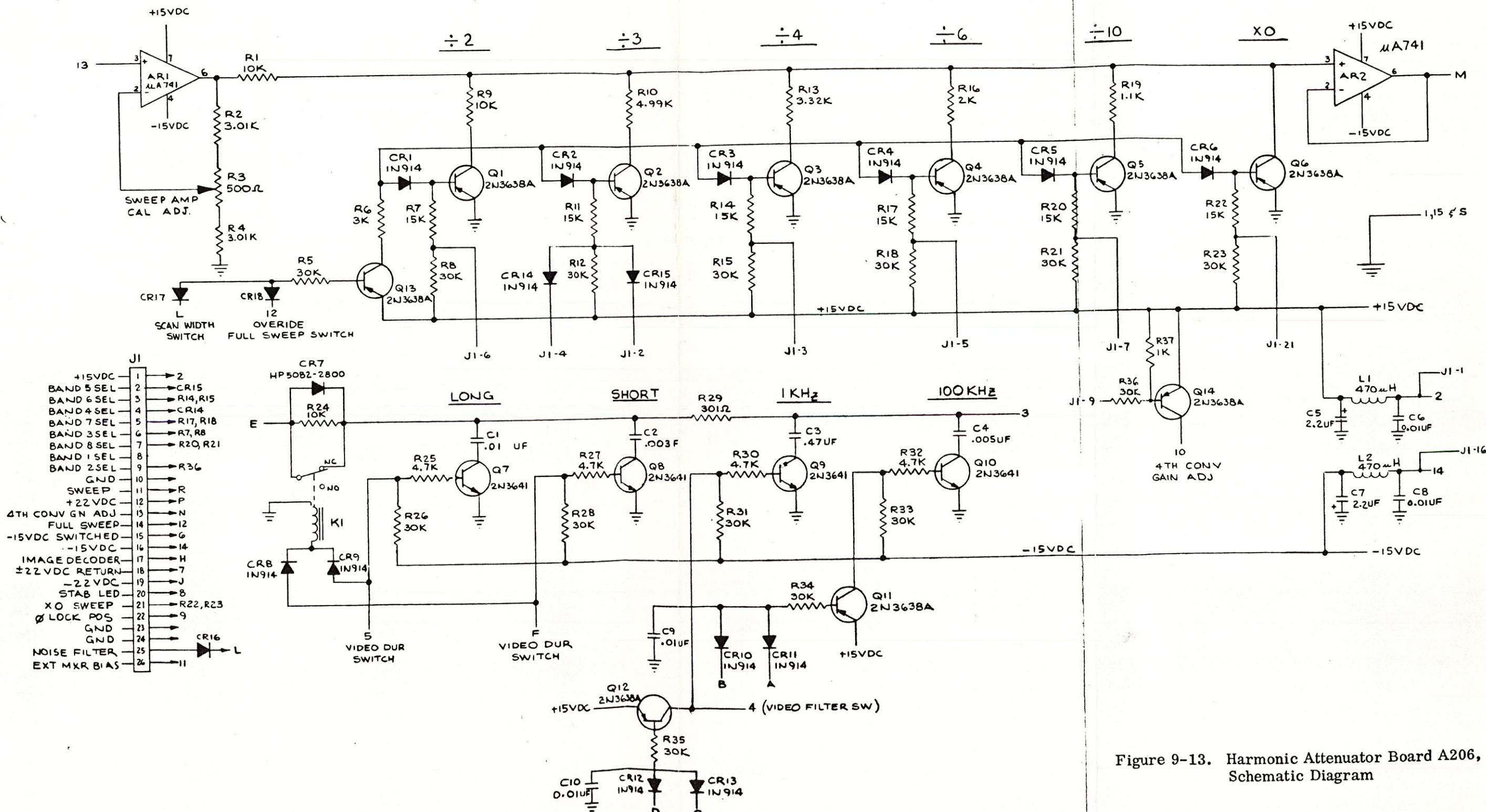
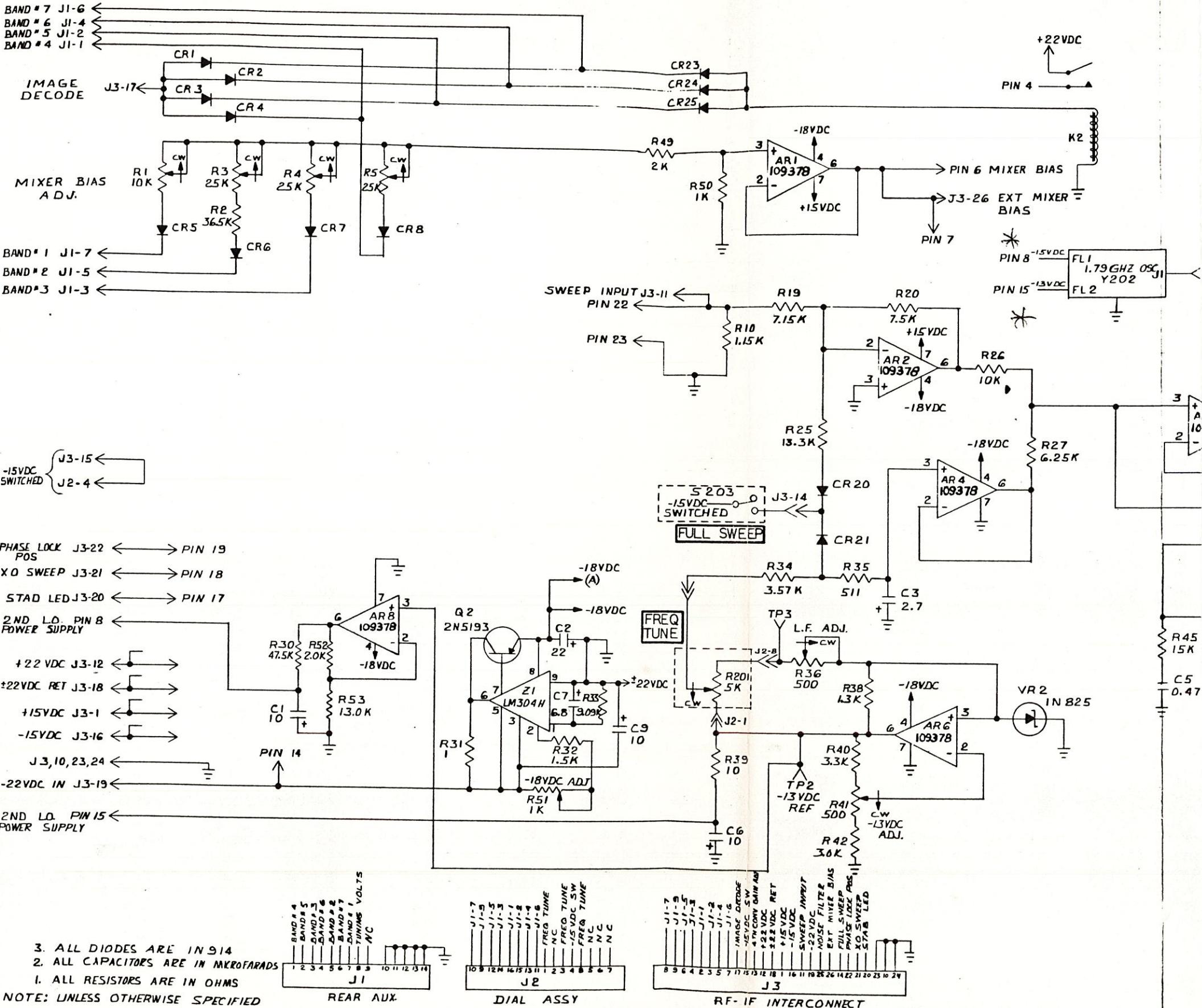


Figure 9-13. Harmonic Attenuator Board A206, Schematic Diagram



3. ALL DIODES ARE IN 914
  2. ALL CAPACITORS ARE IN MKROFARADS
  1. ALL RESISTORS ARE IN OHMS
- NOTE: UNLESS OTHERWISE SPECIFIED

Figure 9-14. RF Board A208,  
Schematic Diagram

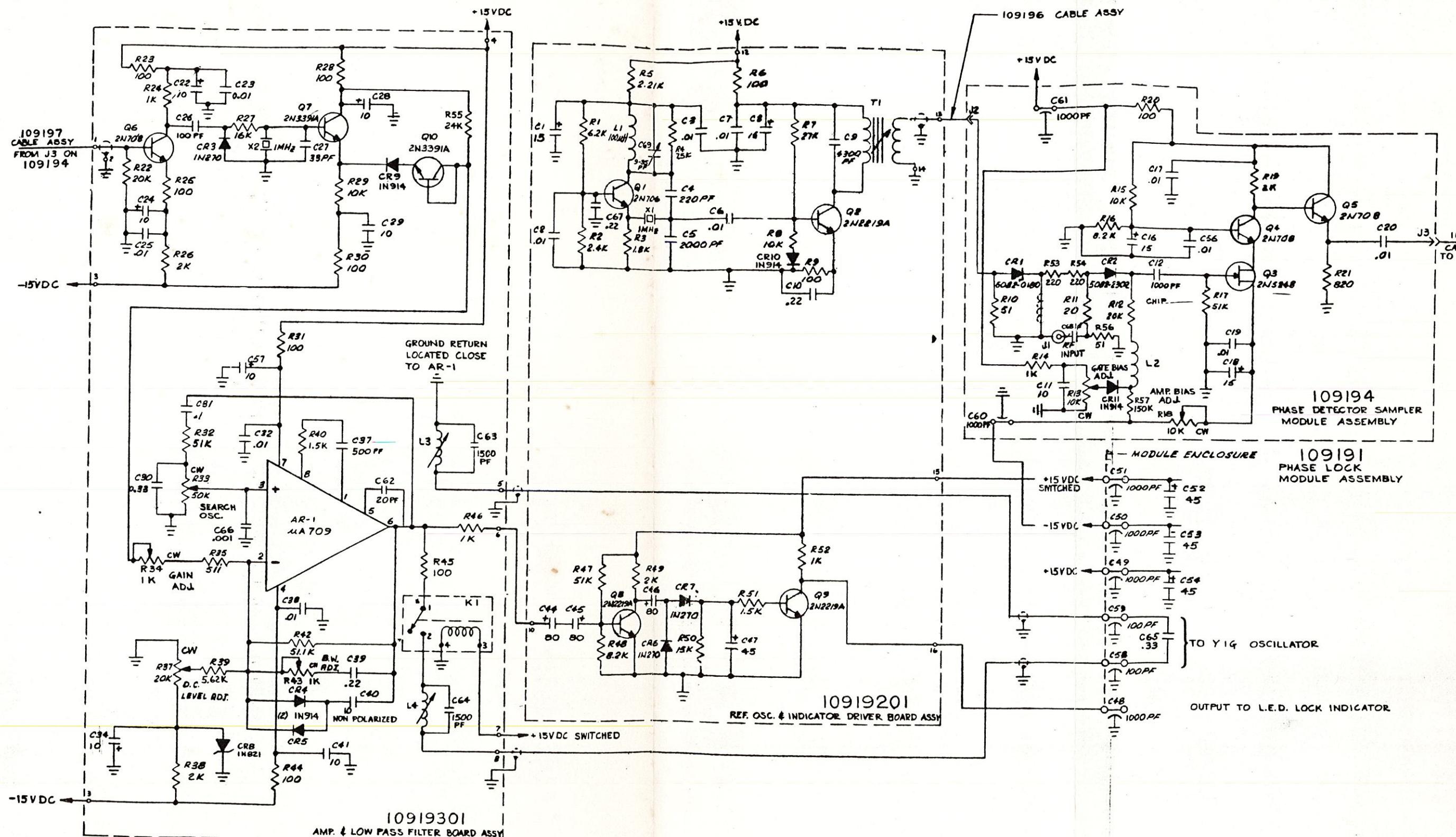
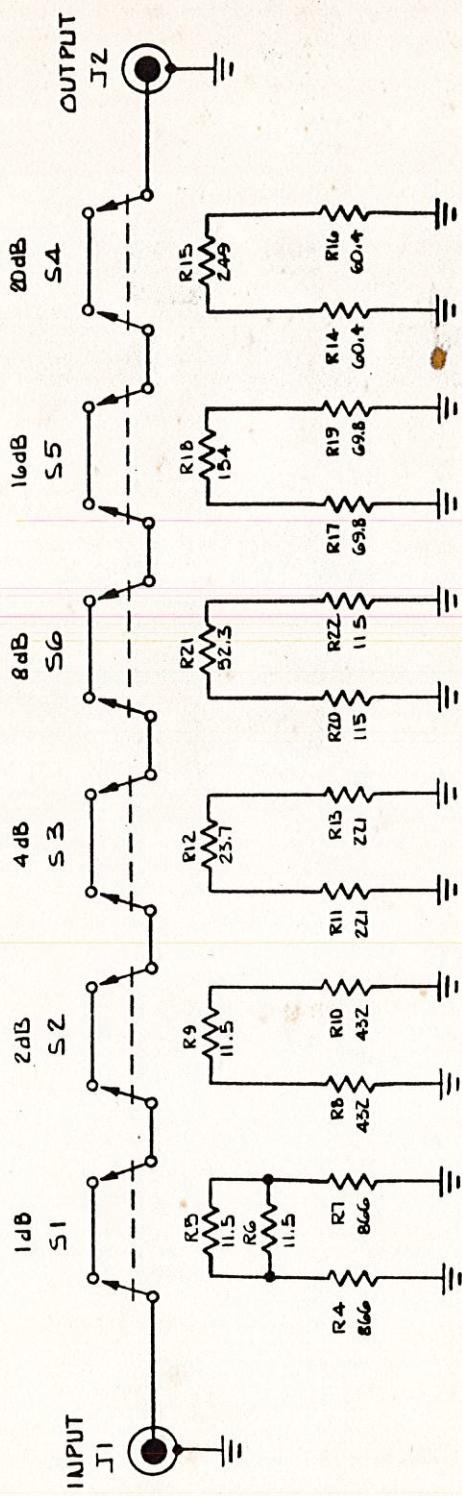


Figure 9-15. Phase Lock Module A  
Schematic Diagram



ALL RESISTORS ARE IN OHMS, 1/8W 1%

Figure 9-16. IF Attenuator AT202,  
Schematic Diagram