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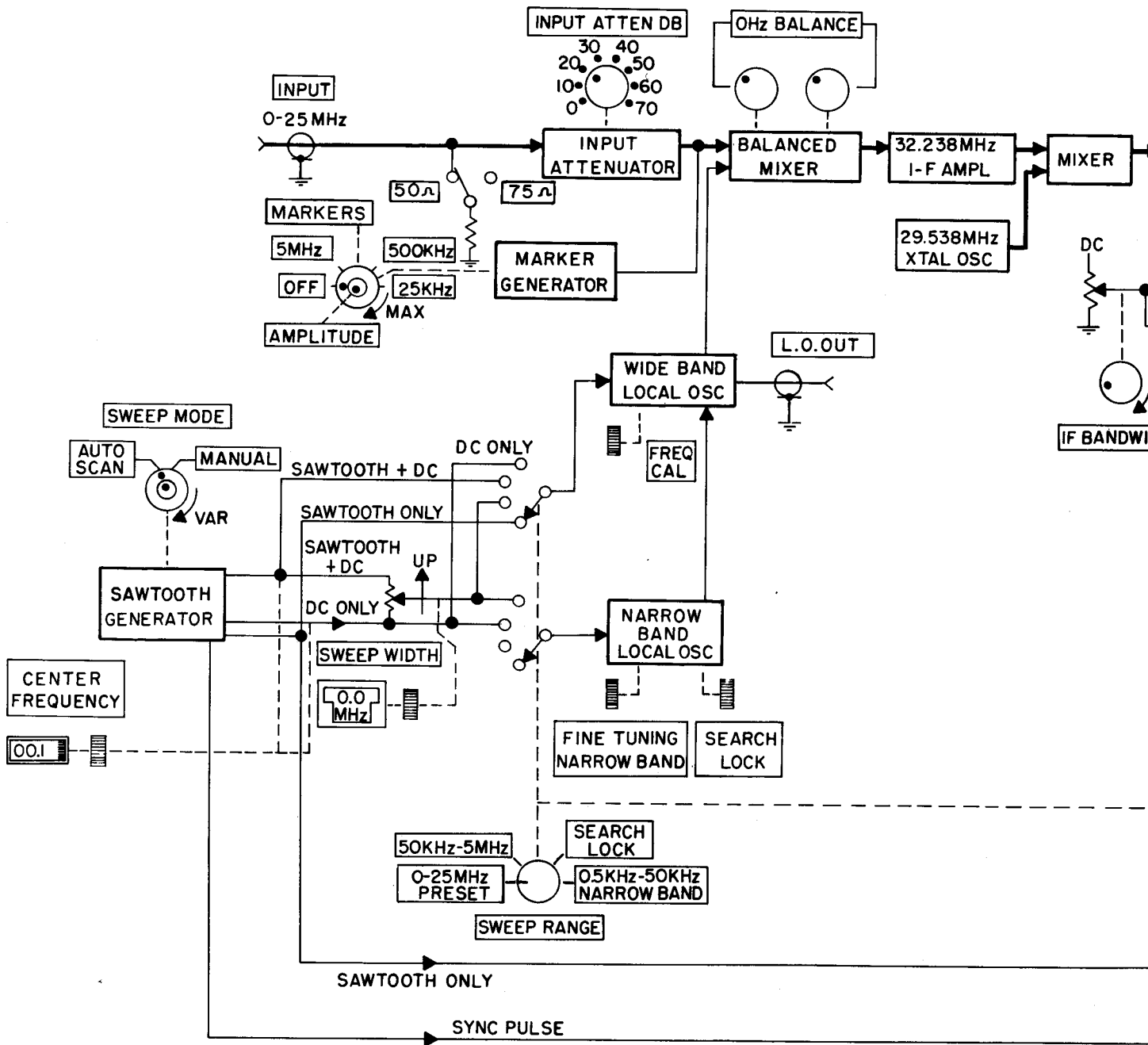
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SECTION V
SCHEMATIC DIAGRAMS

Section V
Schematic Diagrams



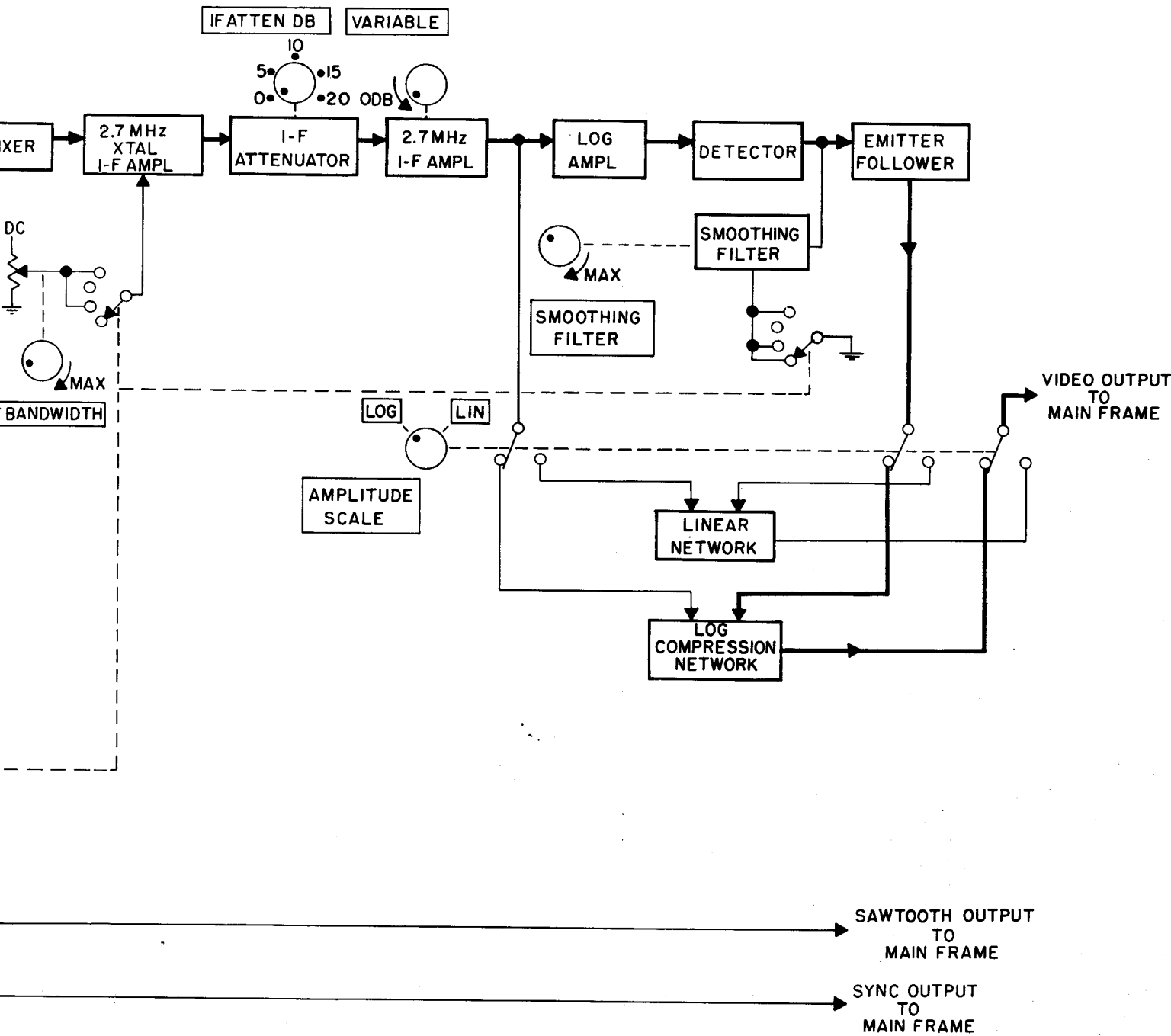
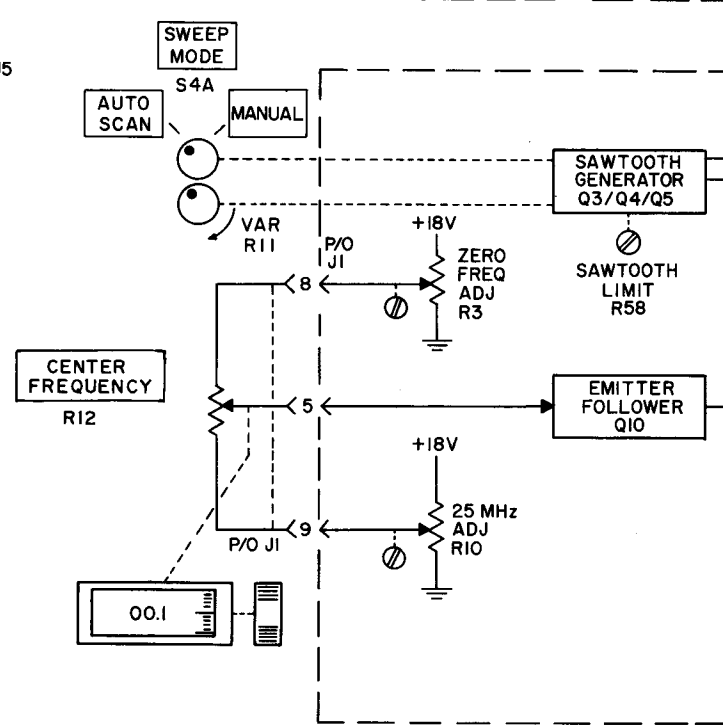
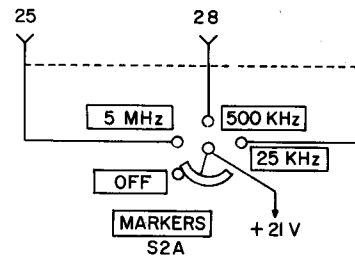
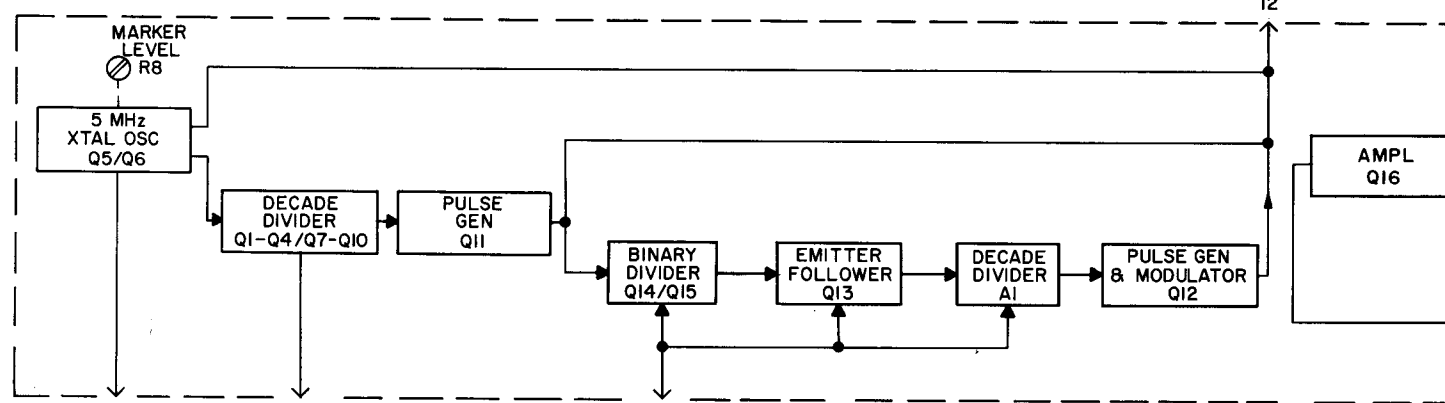
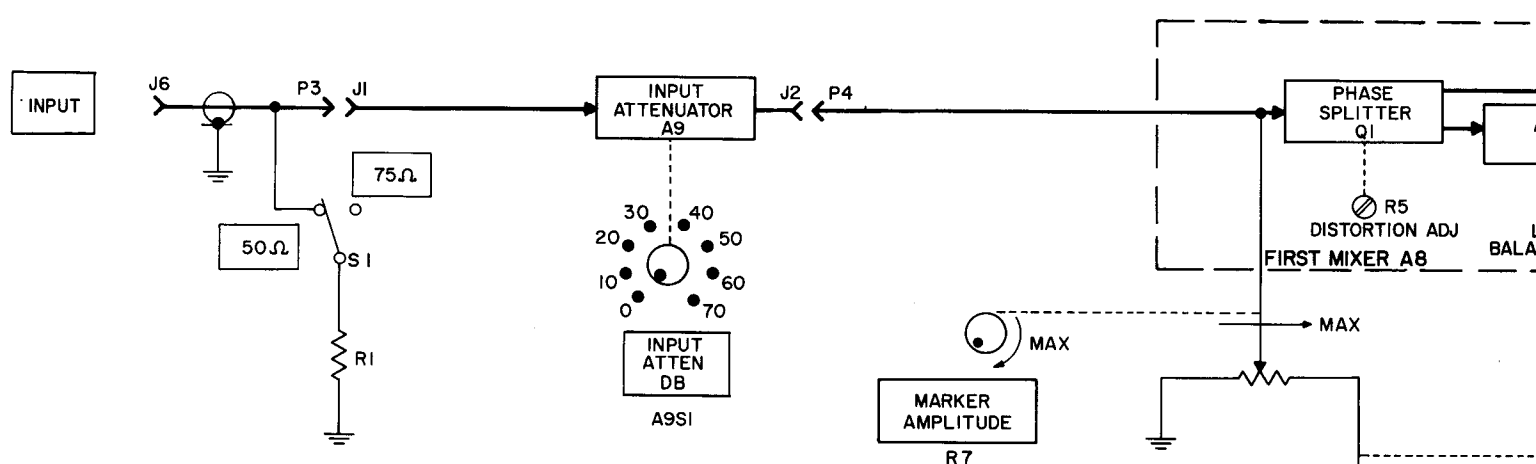
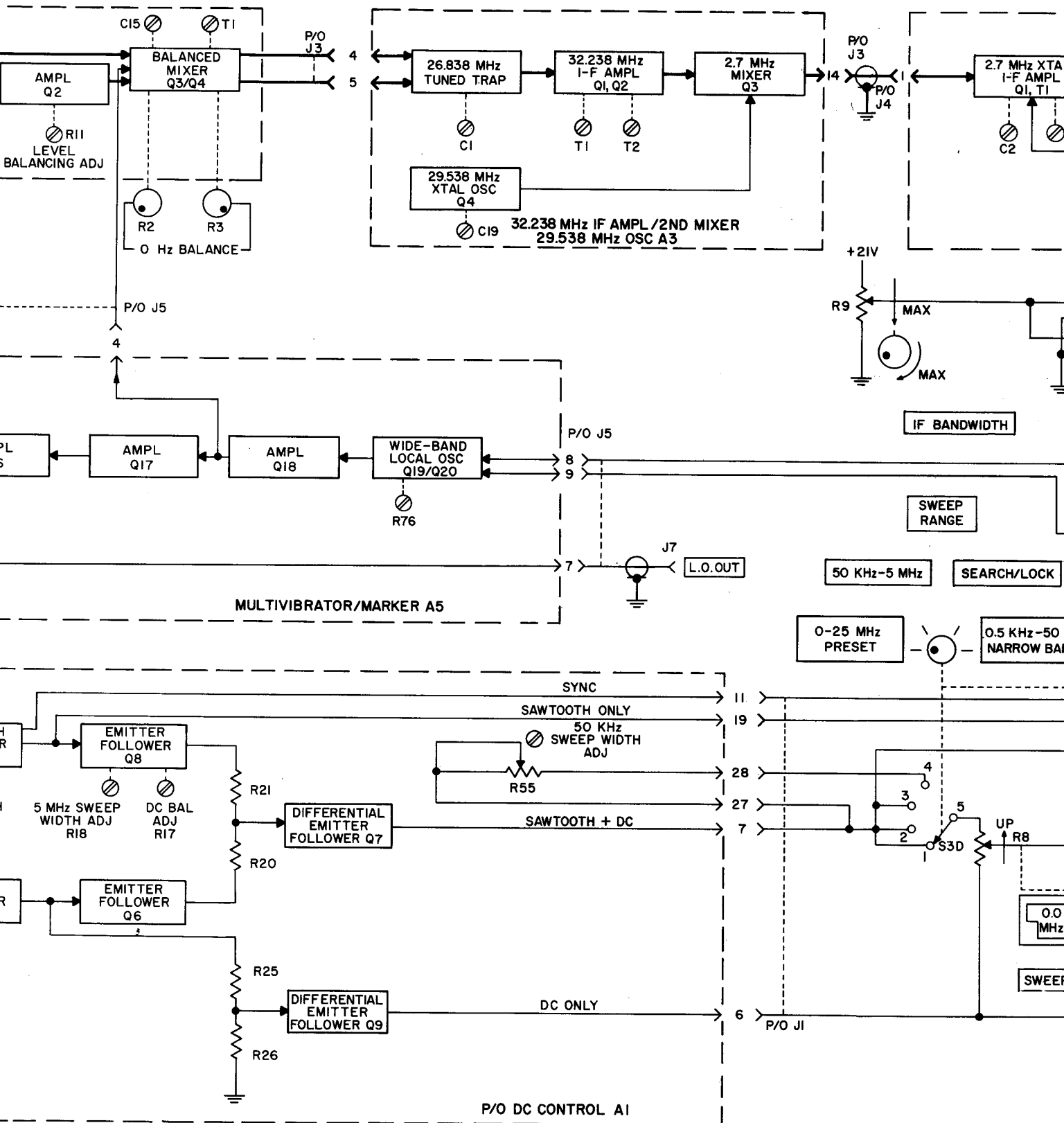
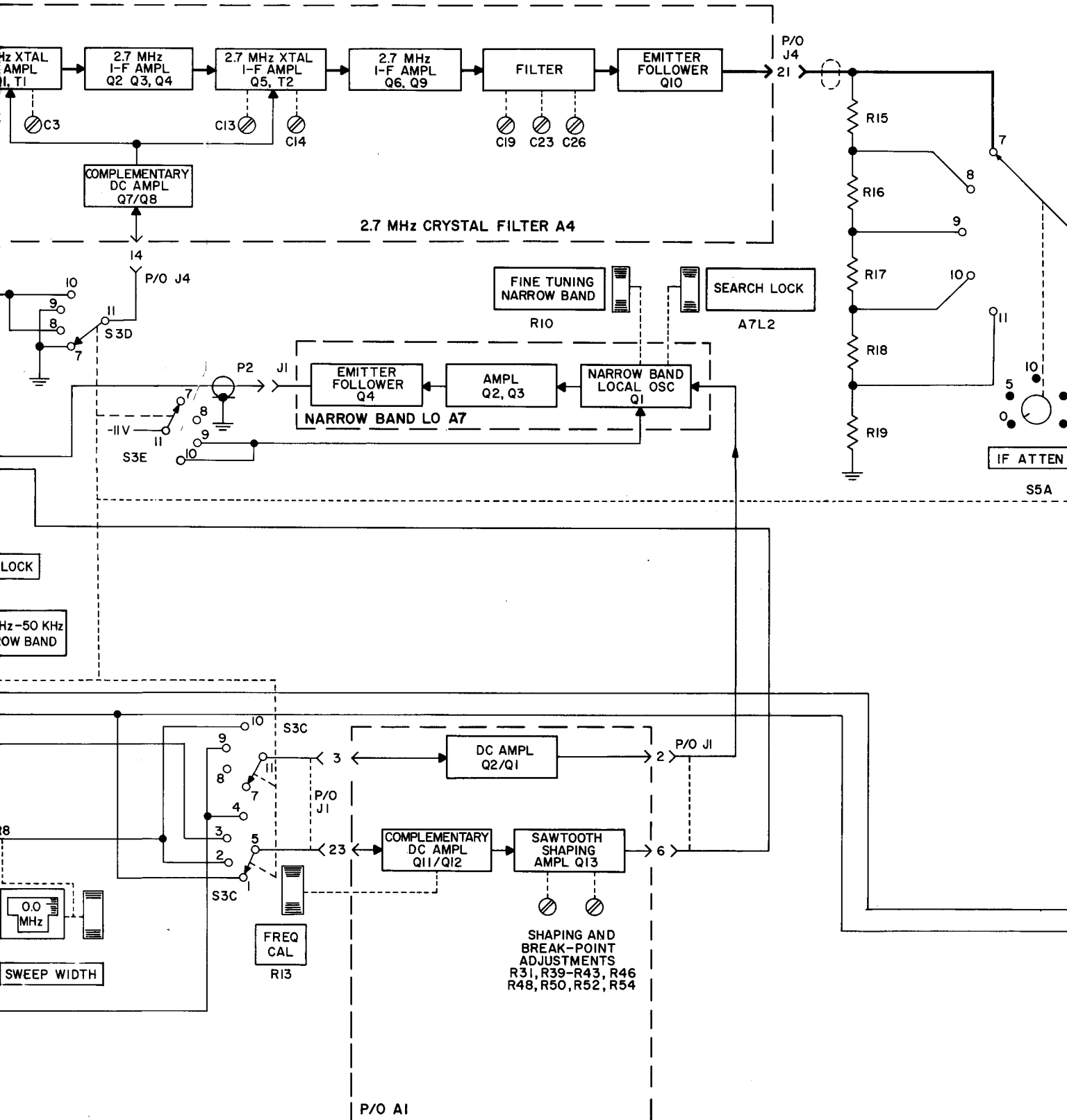
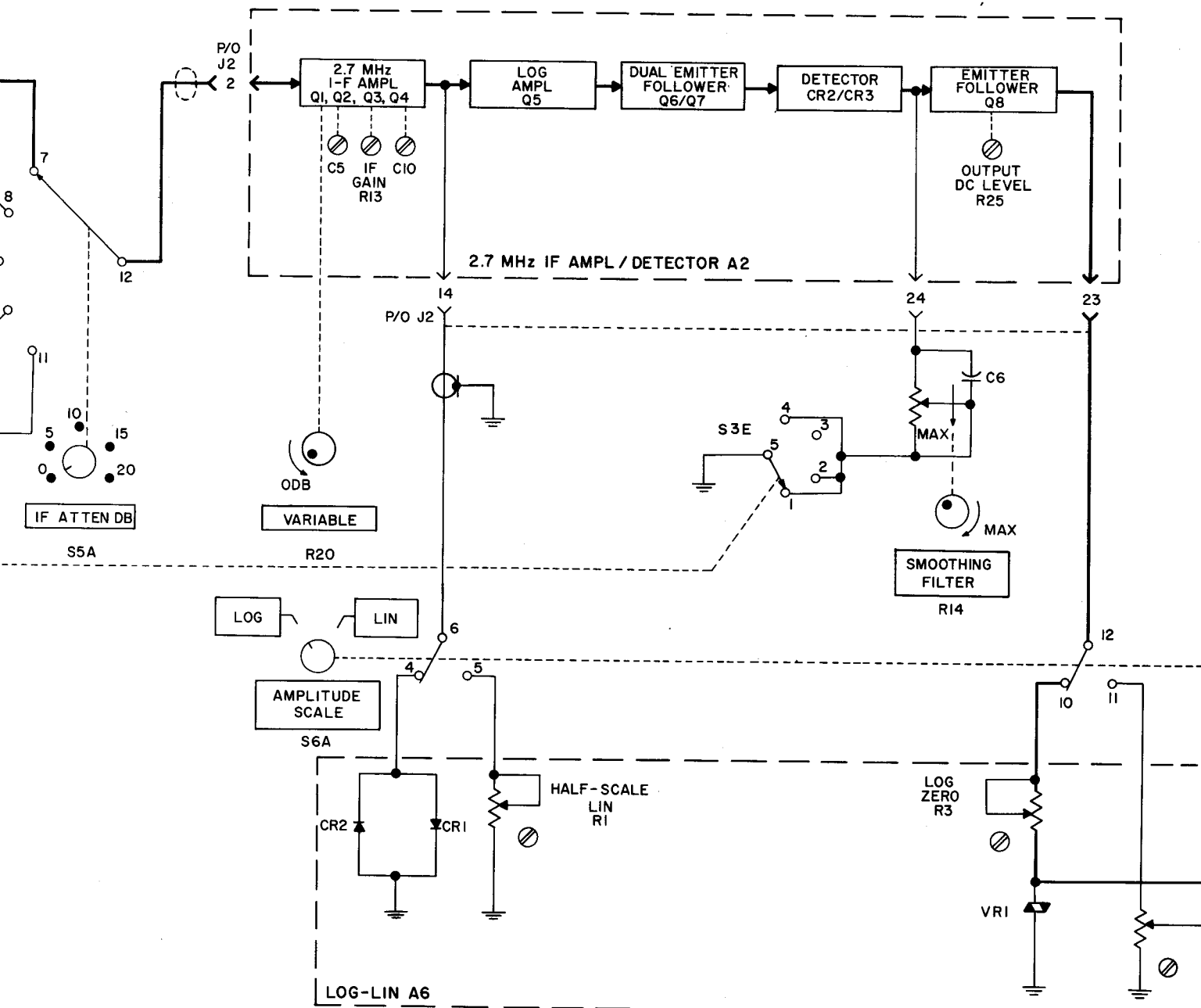


Figure 3-1. Video Module Model VR-4,
Simplified Block Diagram









Figure

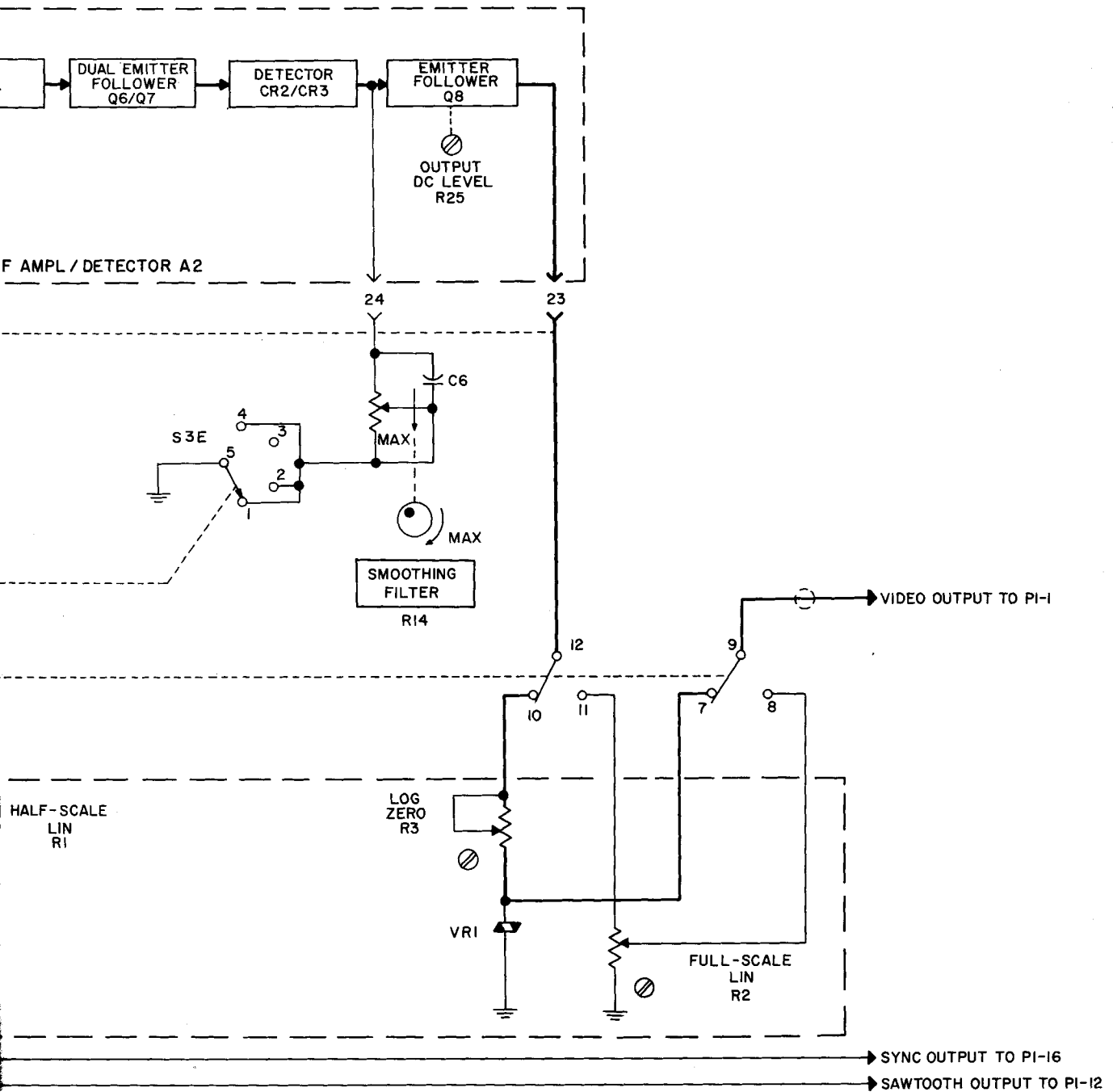
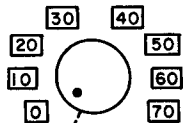


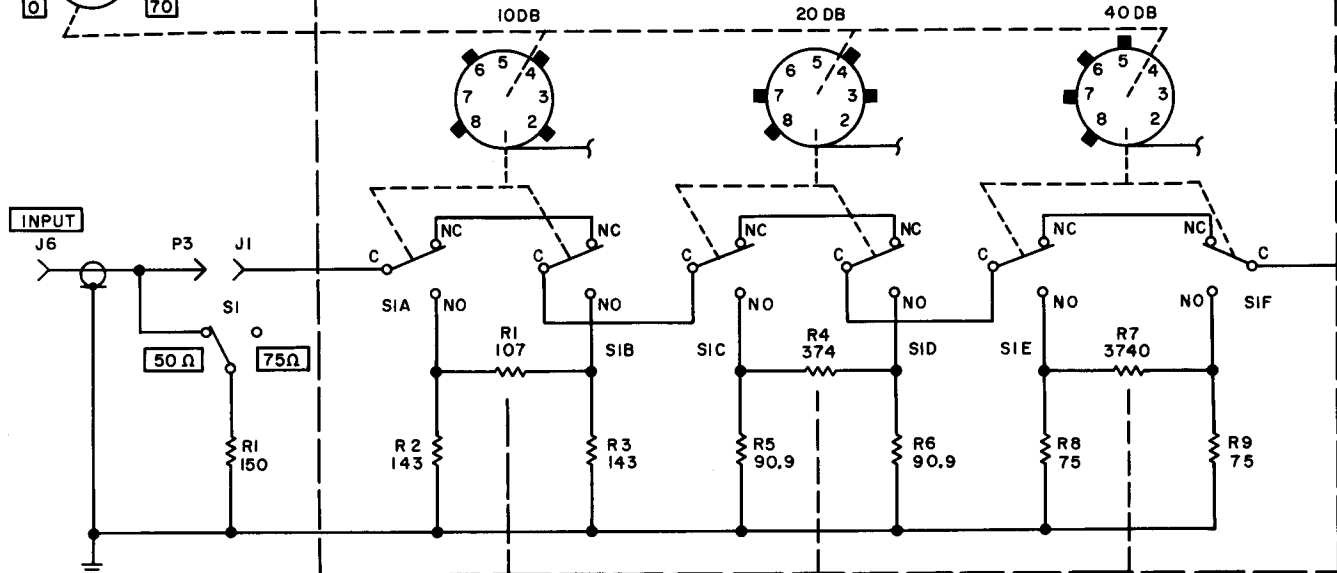
Figure 3-2. Video Module Model VR-4,
Detailed Block Diagram

INPUT ATTEN DB



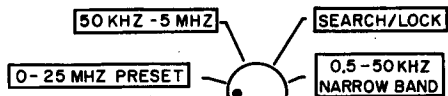
A9

ALL RESISTORS IN THIS ASSY ARE ±1%, 1/8W

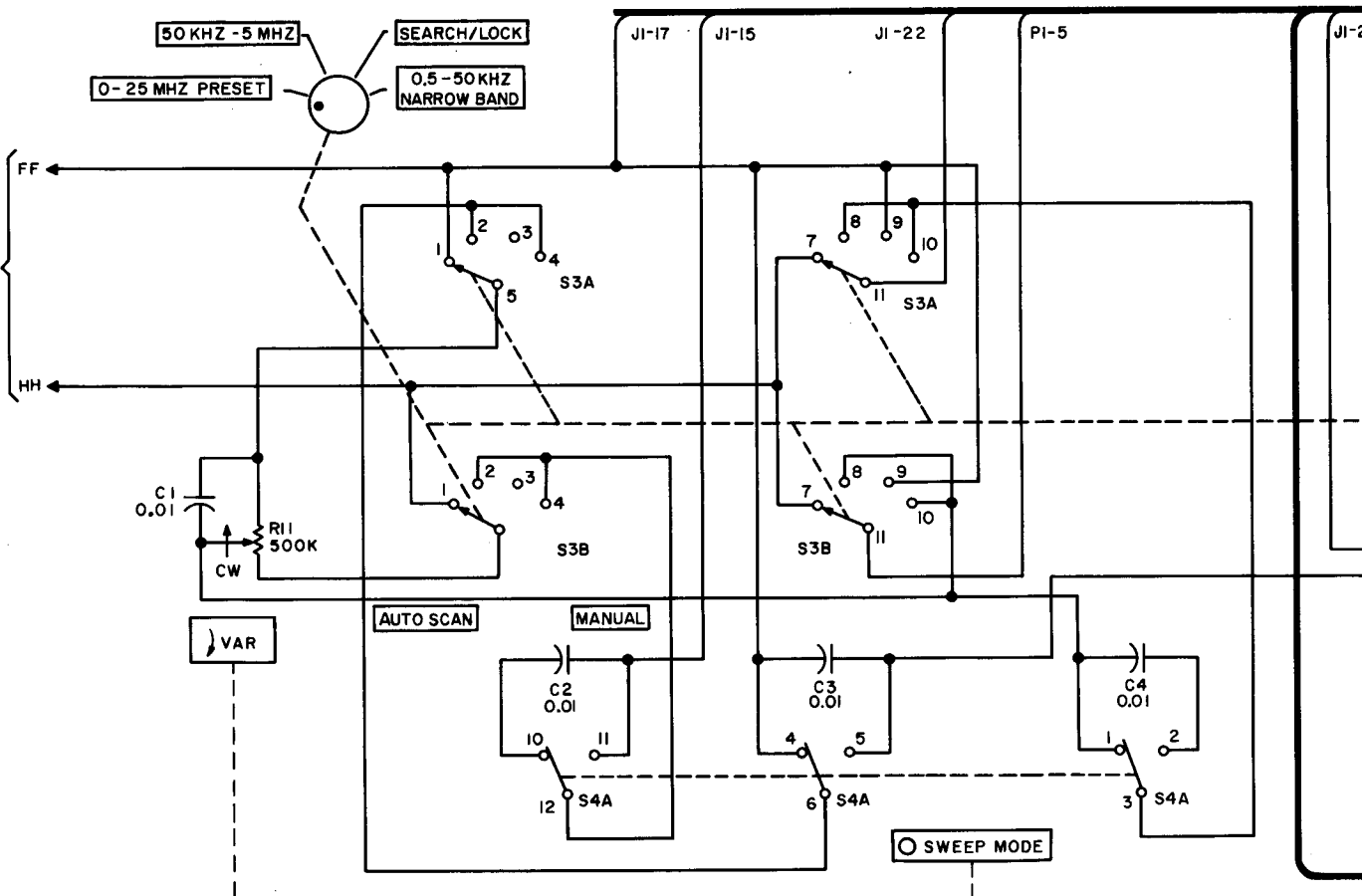


SWEEP RANGE

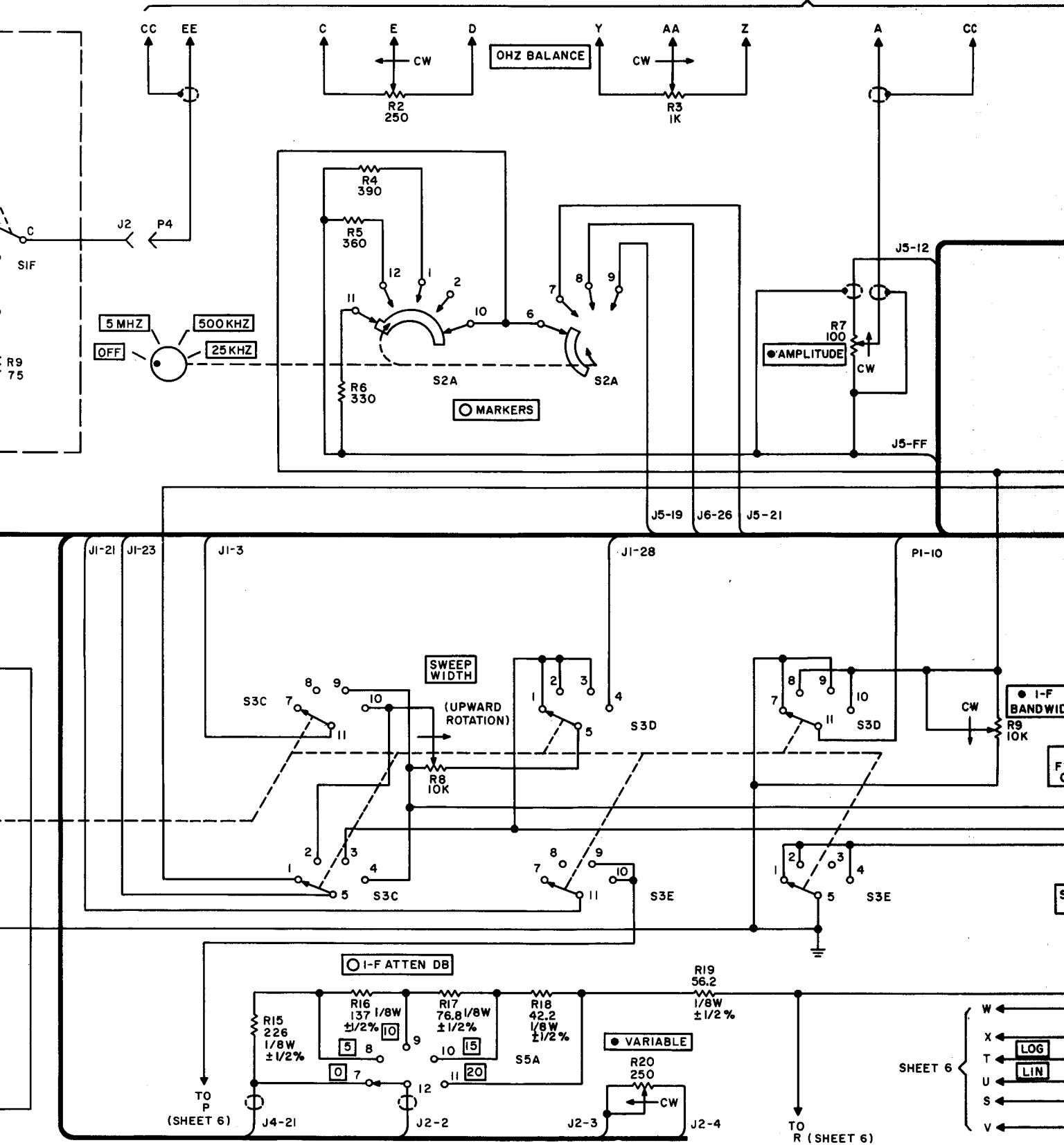
106-0451 09

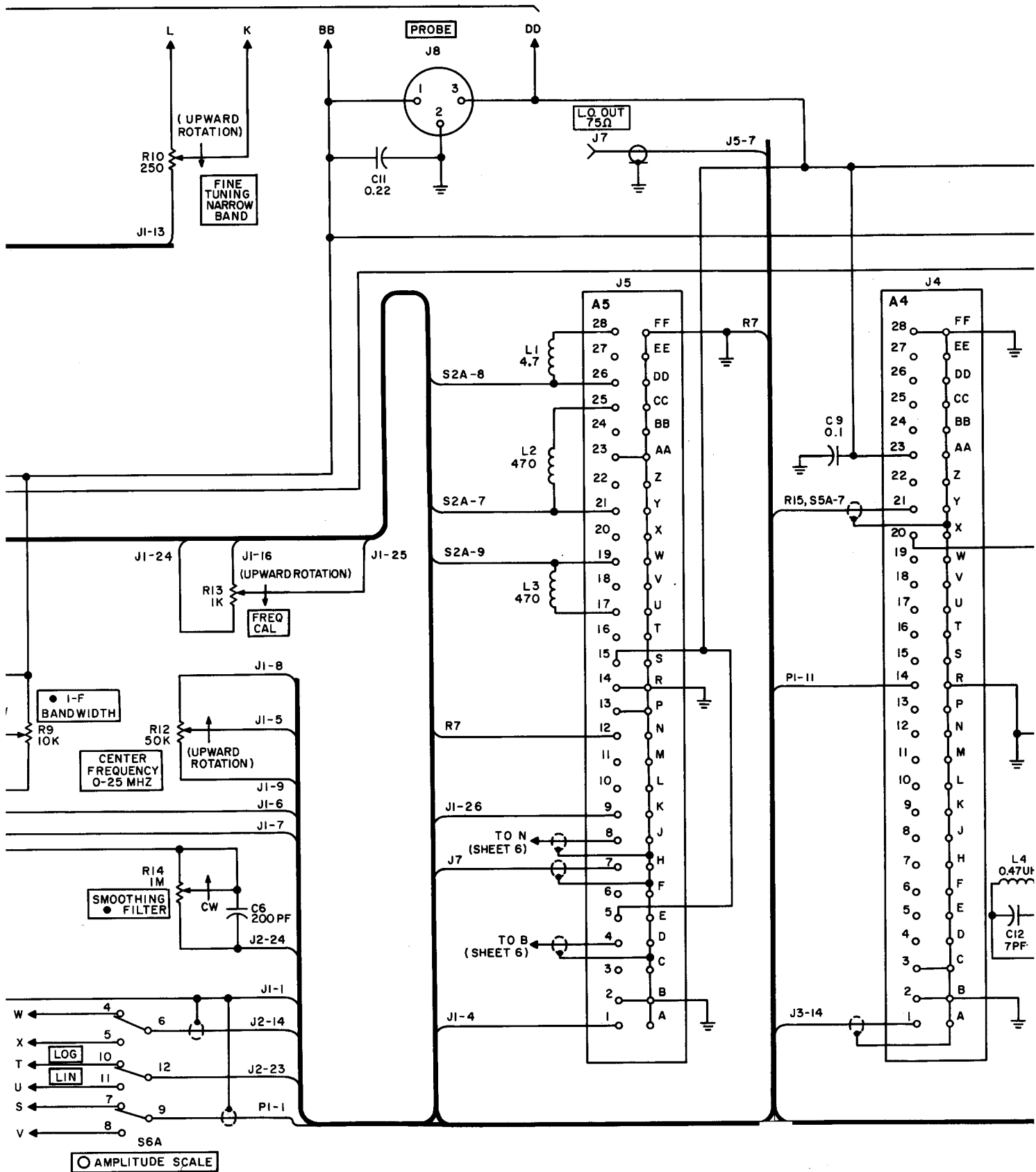


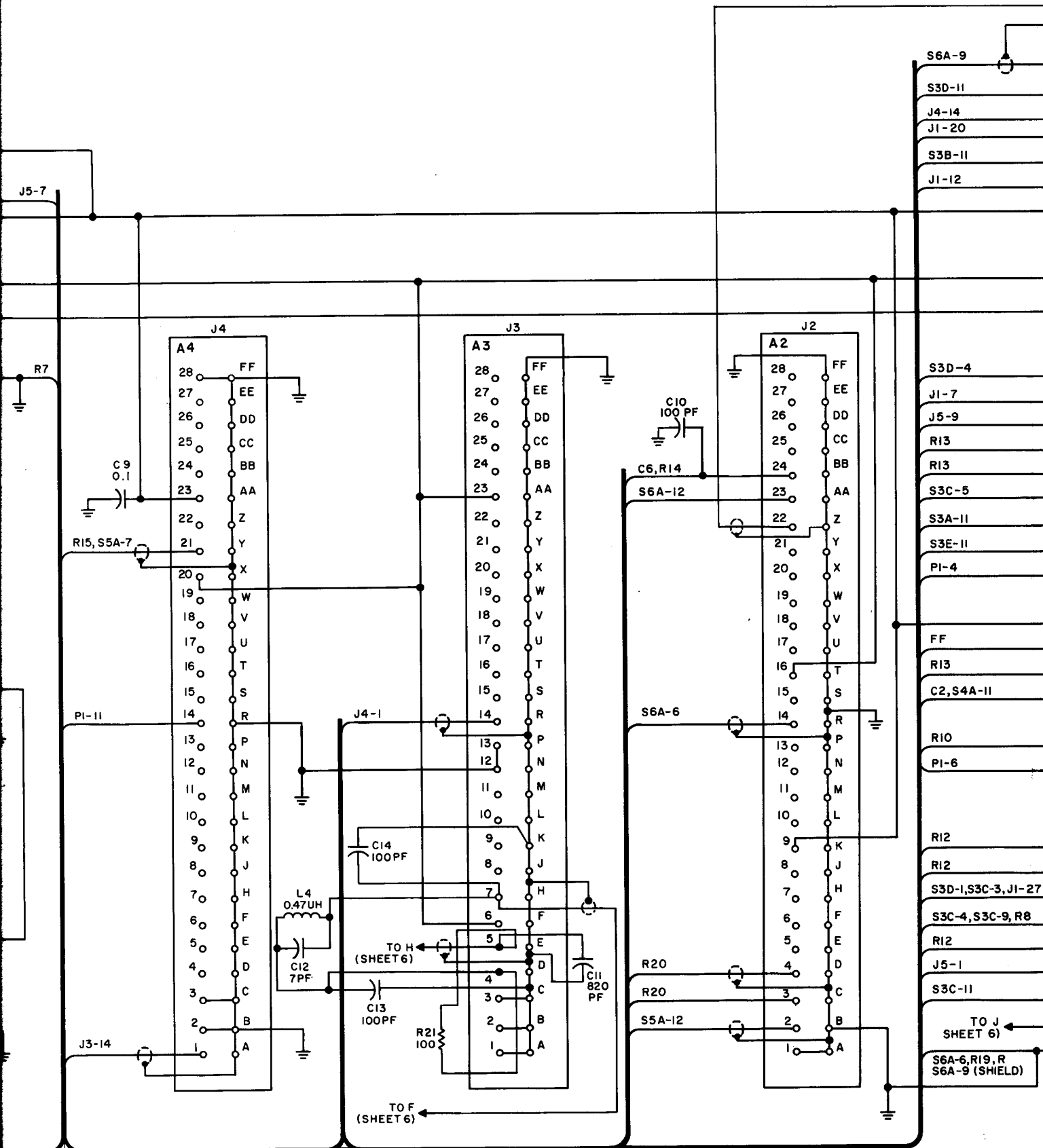
SHEET 6

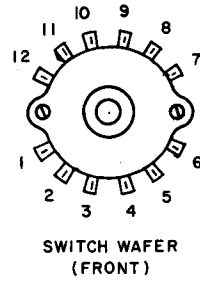
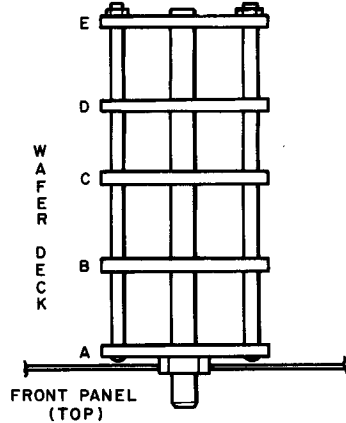
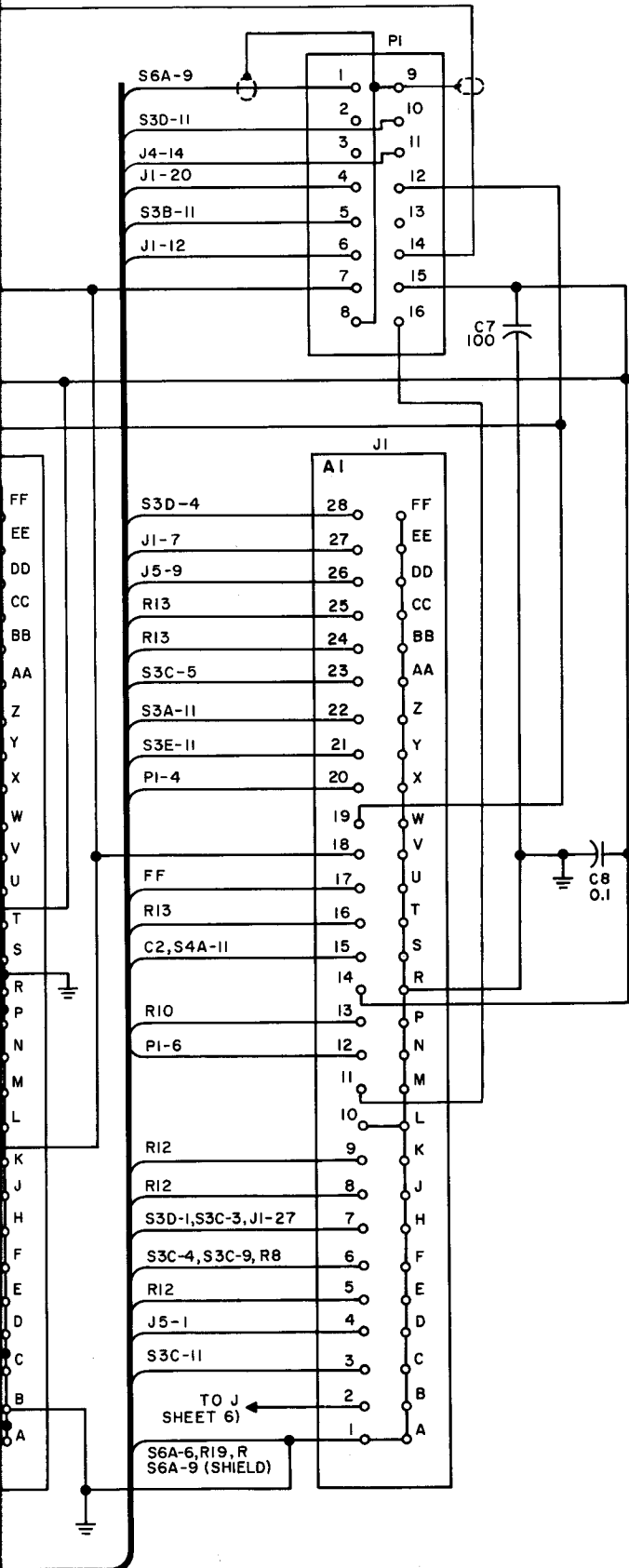


SWEEP MODE



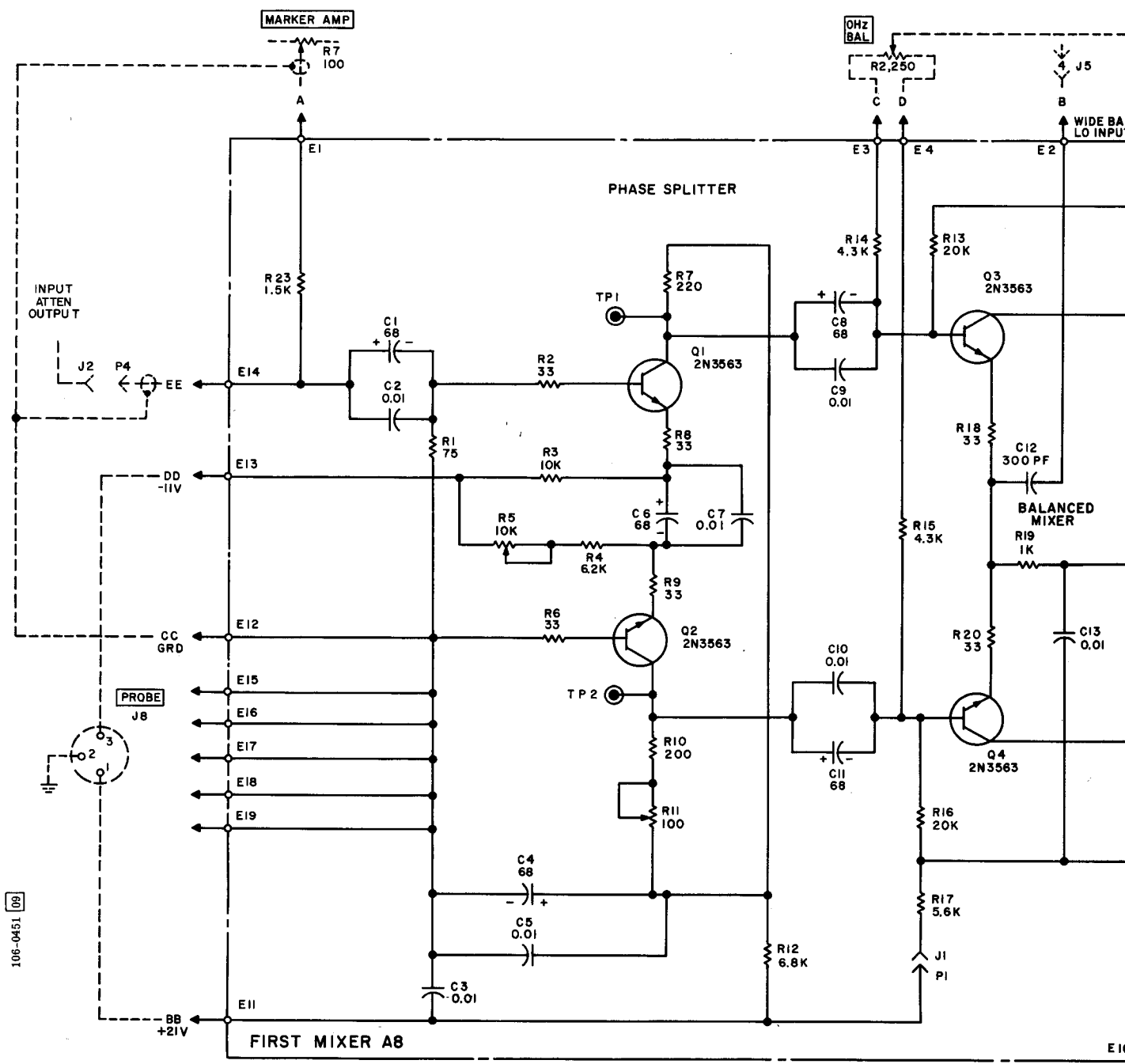




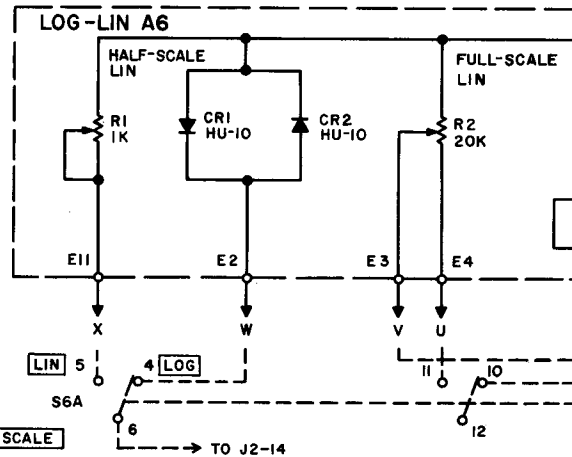
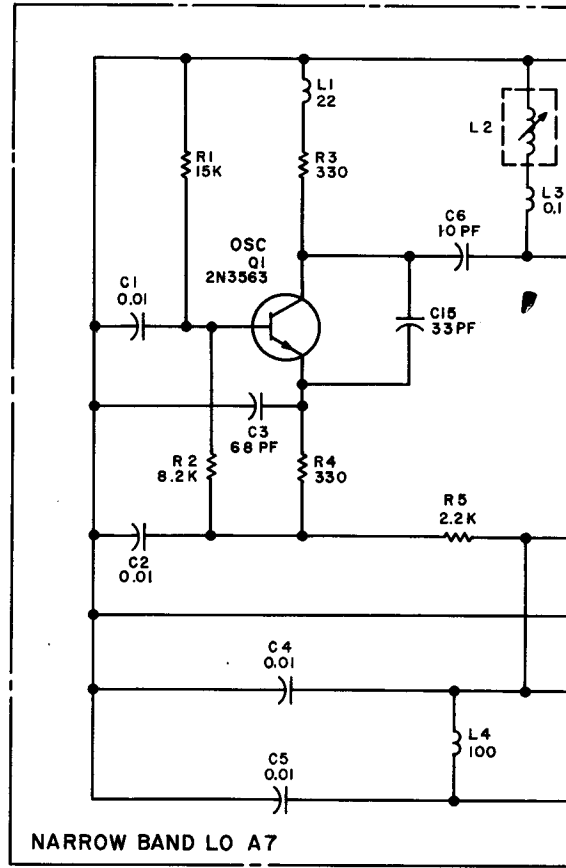
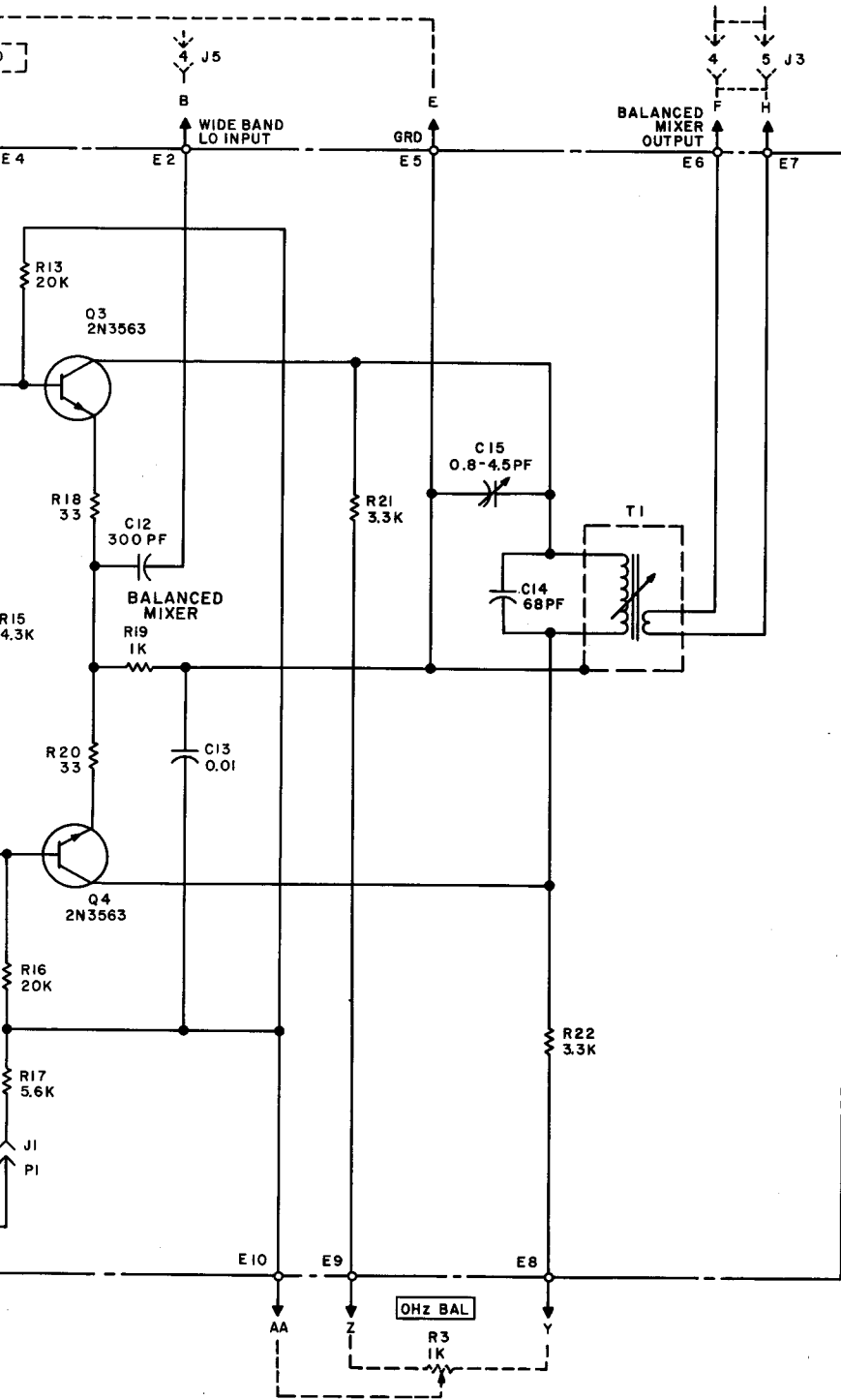


- NOTES:
1. ALL WAFER SWITCHES ARE DESIGNATED AS SHOWN ABOVE.
 2. UNLESS OTHERWISE SPECIFIED; ALL RESISTORS ARE IN OHMS.
 3. ALL CAPACITORS ARE IN MICROFARADS.
 4. ALL INDUCTORS ARE IN MICROHENRIES.
 5. INDICATES FRONT PANEL MARKINGS.

Figure 5-1. Video Module Model VR-4,
Schematic of Interconnection

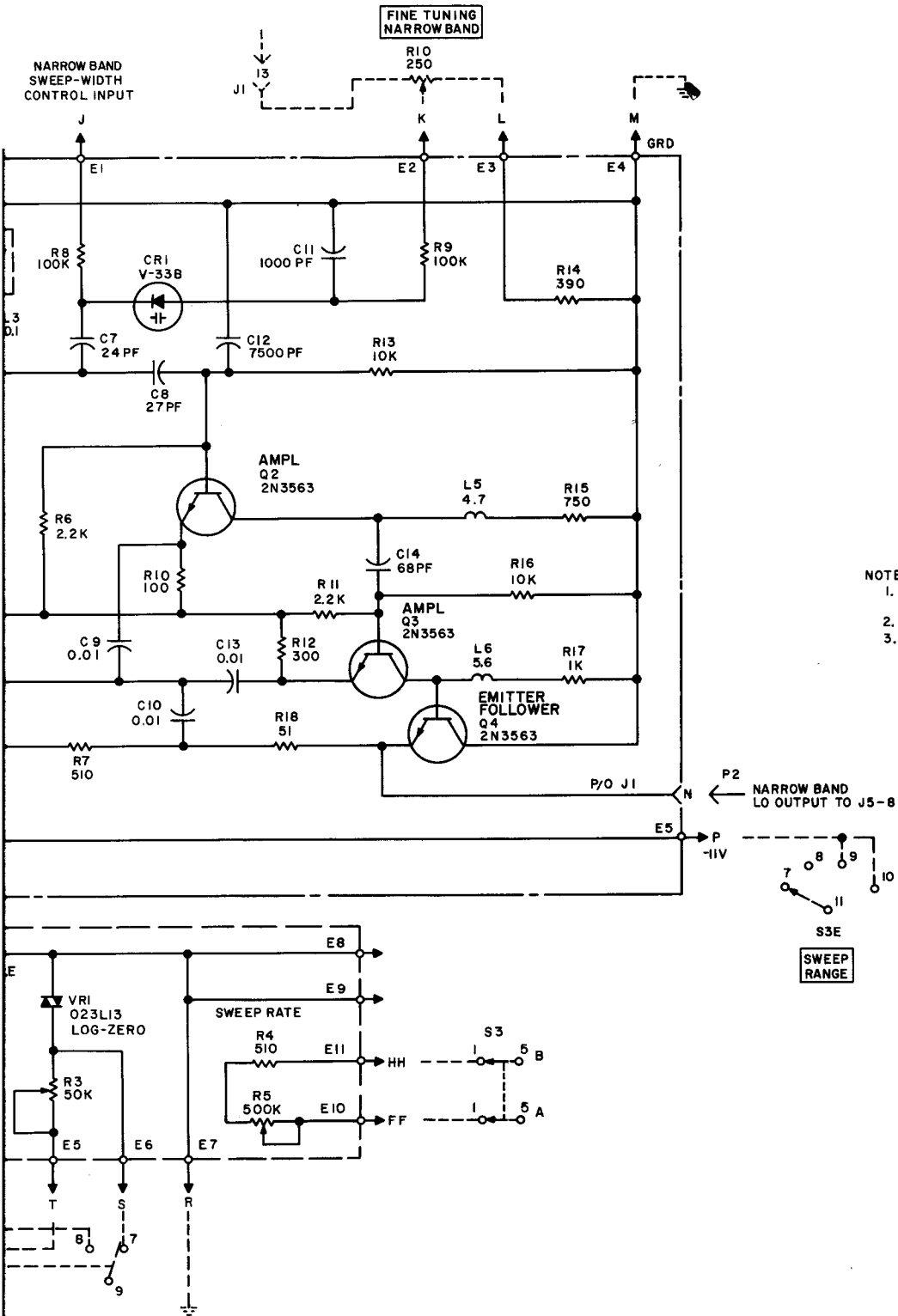


106-0451 09



AMPLITUDE SCALE

TO J2-14

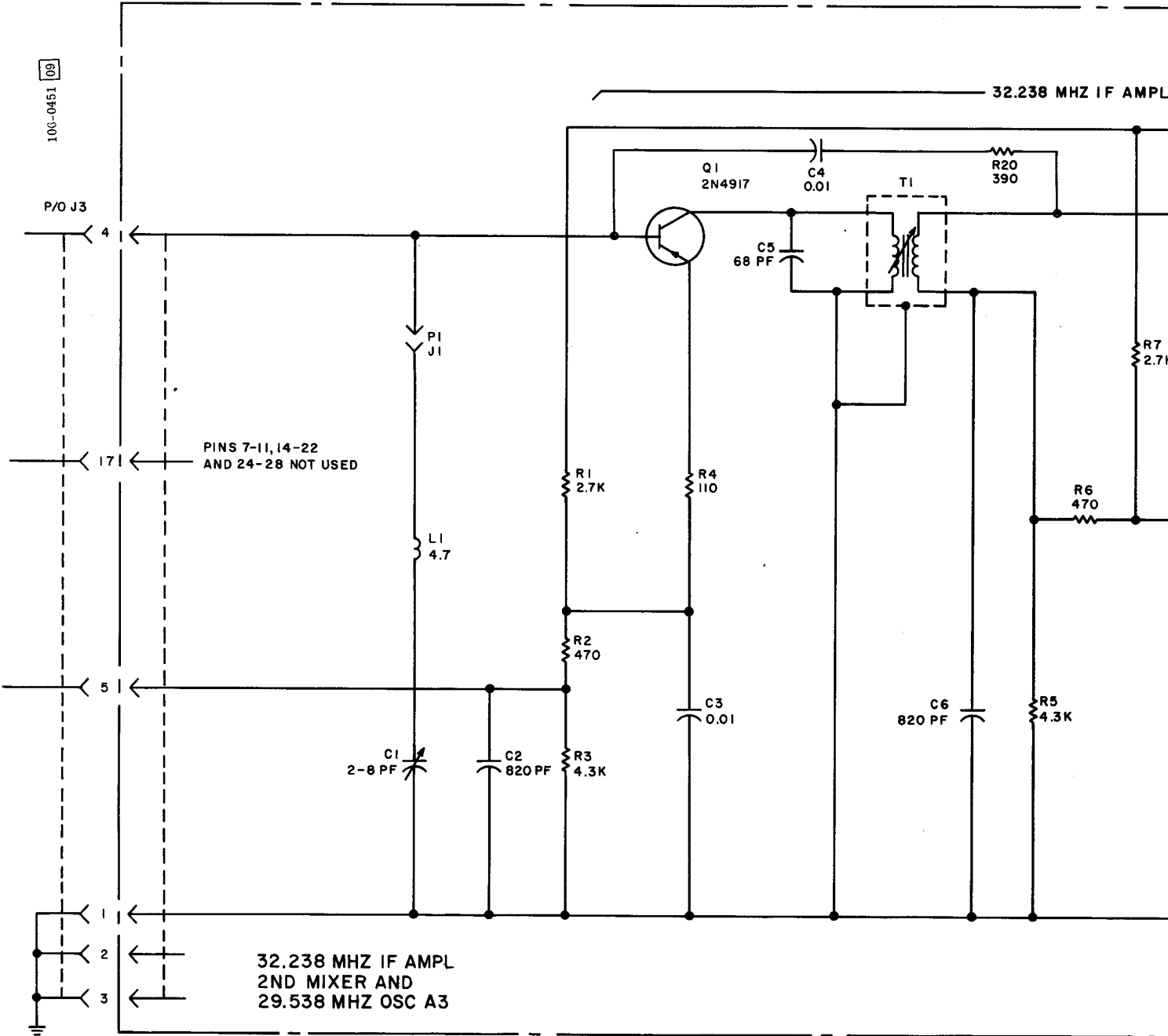


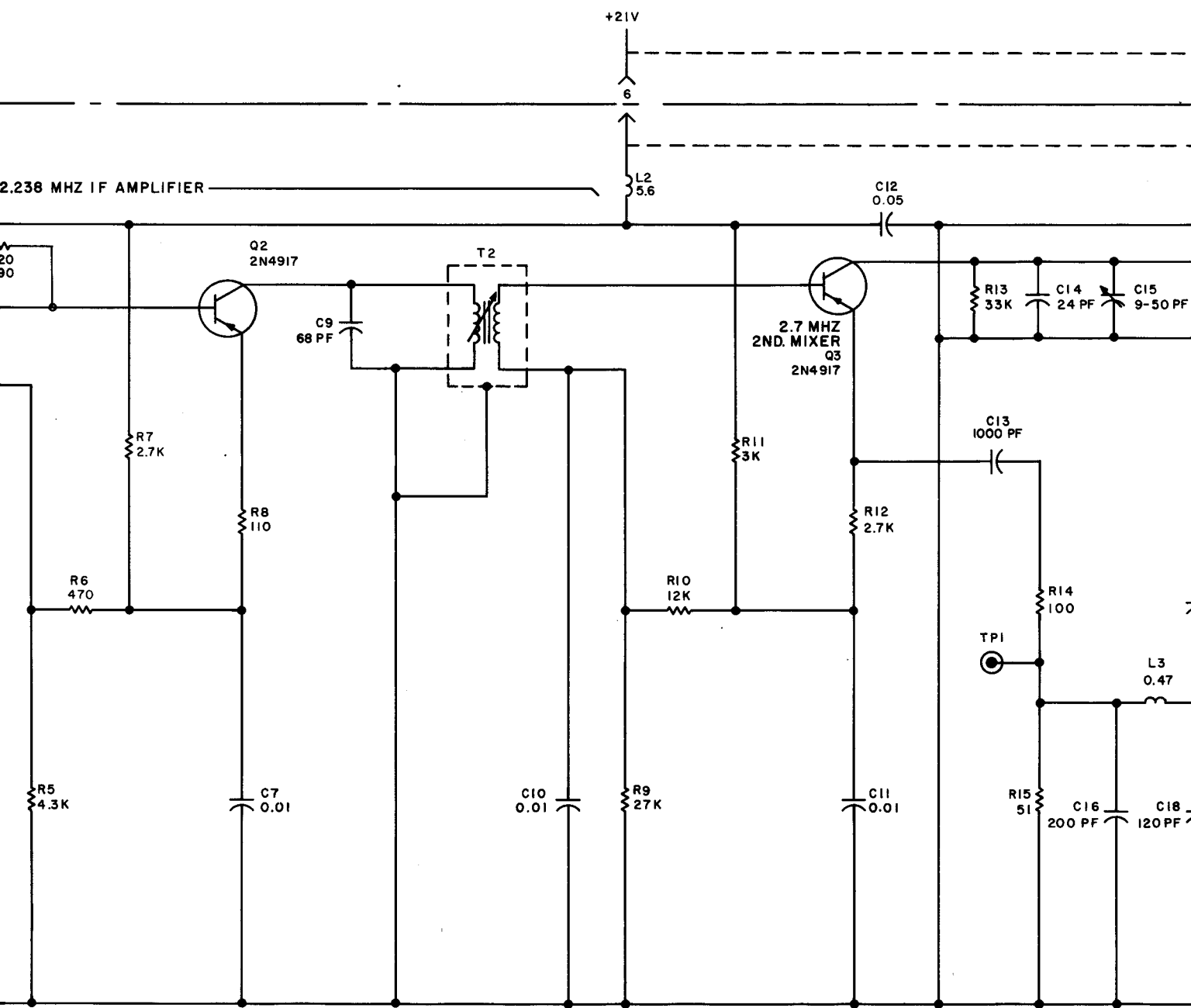
- NOTES:
1. UNLESS OTHERWISE SPECIFIED: ALL RESISTORS ARE IN OHMS, 1/4W, ±5%.
 2. ALL CAPACITORS ARE IN MICROFARADS.
 3. ALL INDUCTORS ARE IN MICROHENRIES.

Figure 5-2. Log/Lin Assembly A6, Narrow Band Local Oscillator Assembly A7, and First Mixer Assembly A8, Schematic Diagram

106-0451 03

32.238 MHZ IF AMPL





2.238 MHz IF AMPLIFIER

+21V

6

L2
5.6

C12
0.05

Q2
2N4917

T2

2.7 MHz
2ND. MIXER
Q3
2N4917

C13
1000 PF

TPI

L3
0.47

C18
120 PF

20
90

R7
2.7K

R8
110

R6
470

R5
4.3K

C7
0.01

C10
0.01

R9
27K

R10
12K

R11
3K

R12
2.7K

C11
0.01

R13
33K

C14
24 PF

C15
9-50 PF

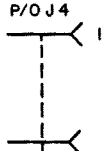
R14
100

R15
51

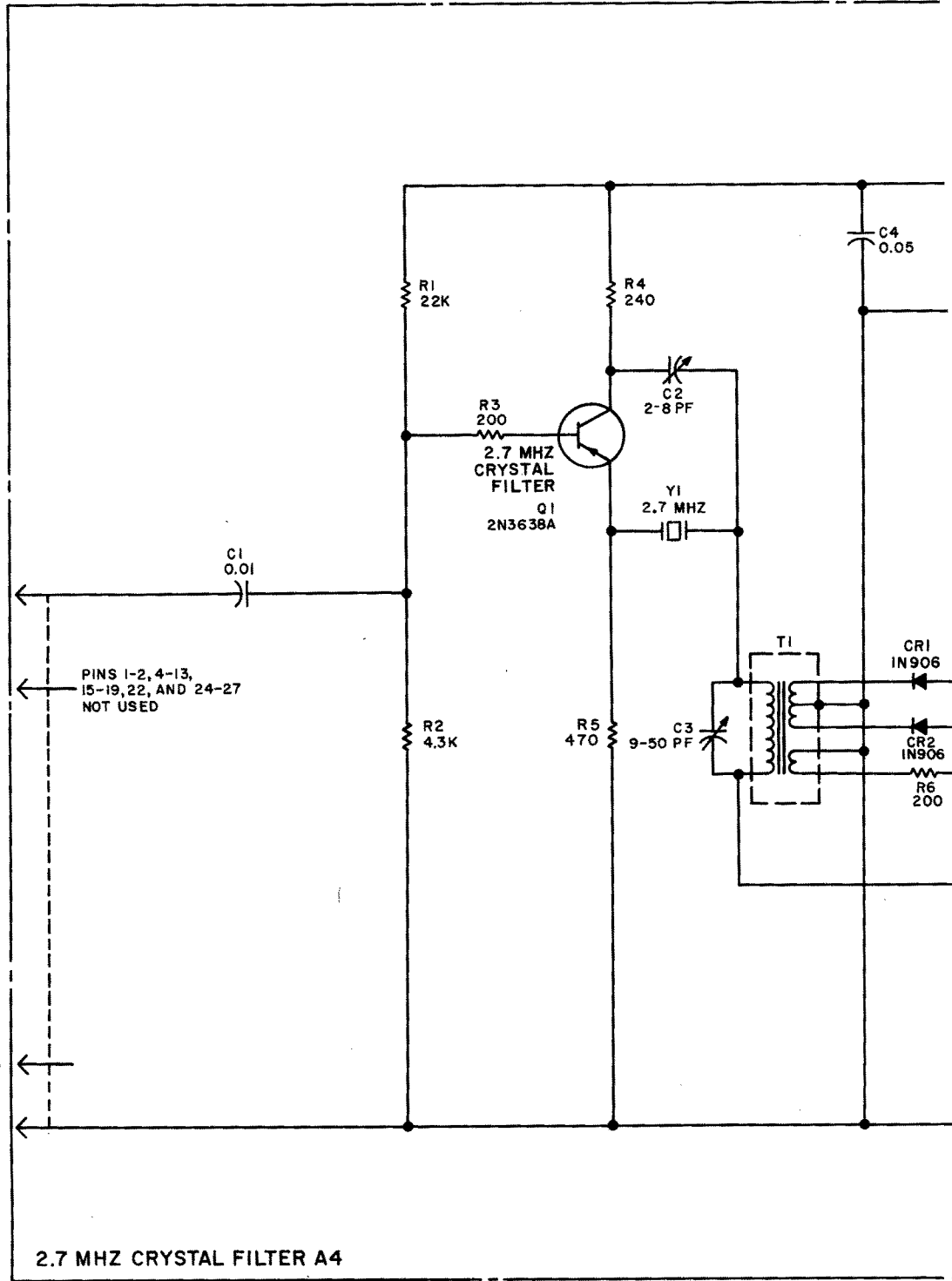
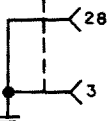
C16
200 PF

106-0451 09

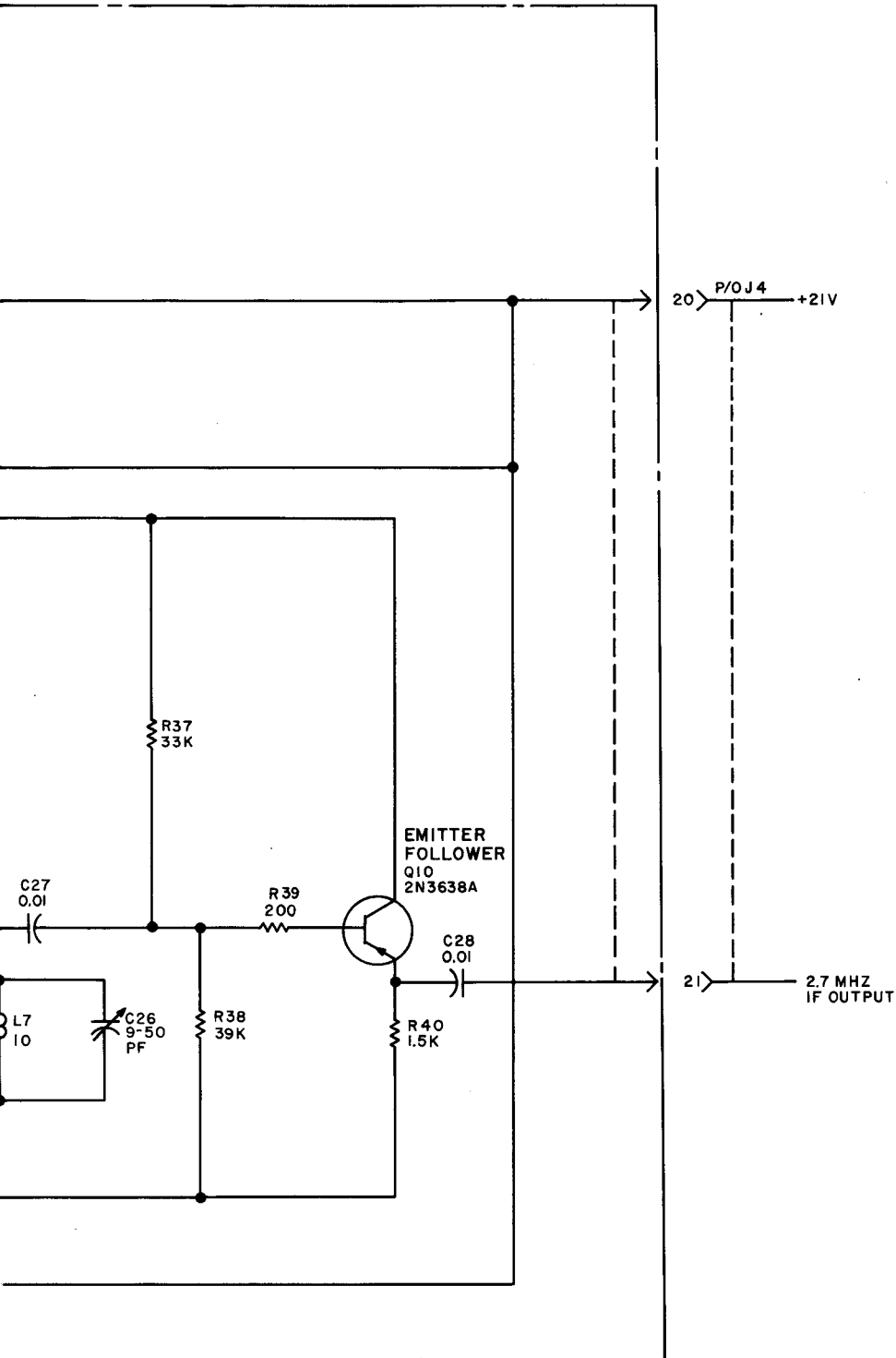
2.7 MHZ INPUT P/O J4



PINS 1-2, 4-13, 15-19, 22, AND 24-27 NOT USED

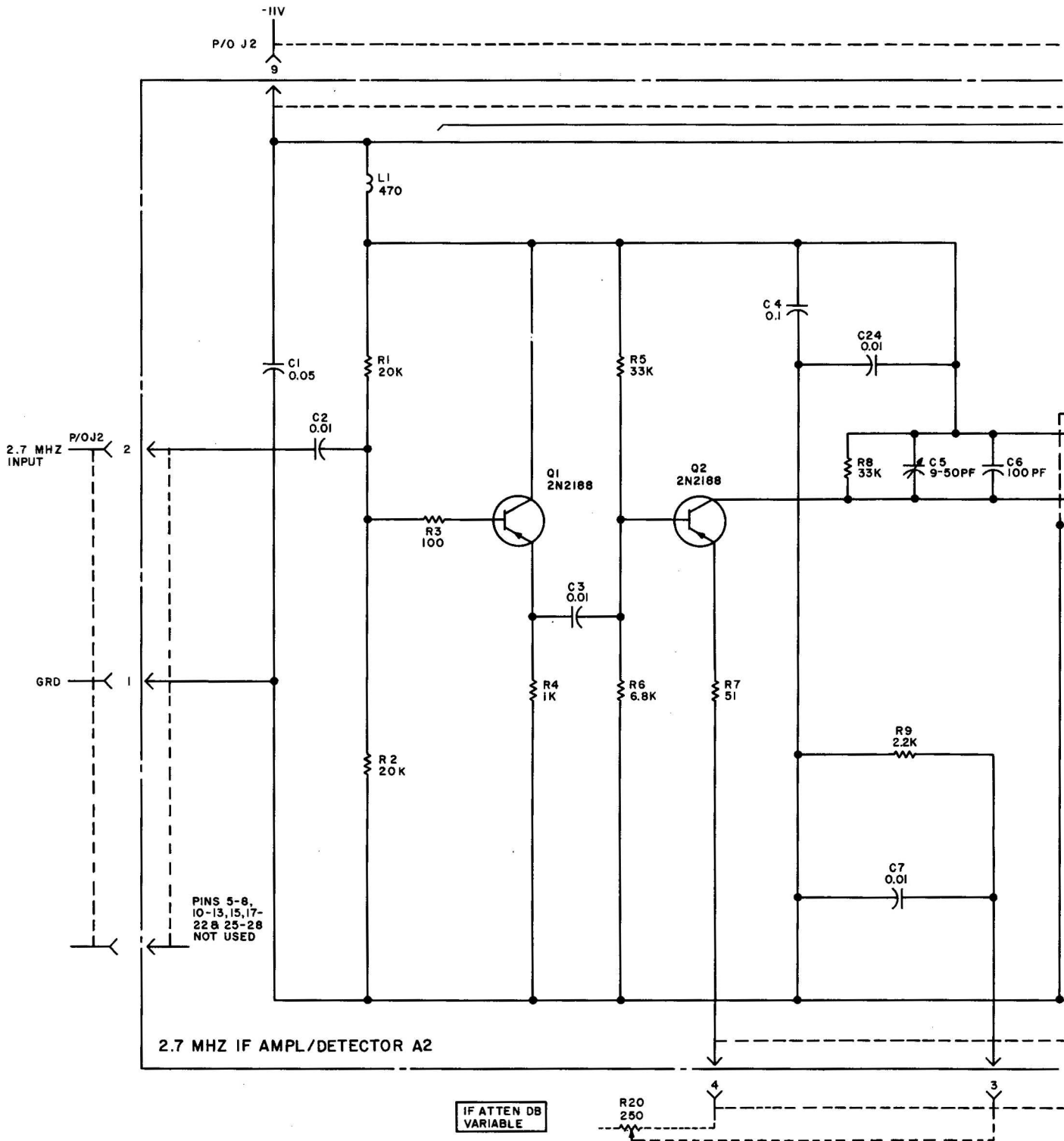


2.7 MHZ CRYSTAL FILTER A4



- NOTES:
1. UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE IN OHMS, 1/4 W, $\pm 5\%$.
 2. ALL CAPACITORS ARE IN MICROFARADS.
 3. ALL INDUCTORS ARE IN MICROHENRIES.

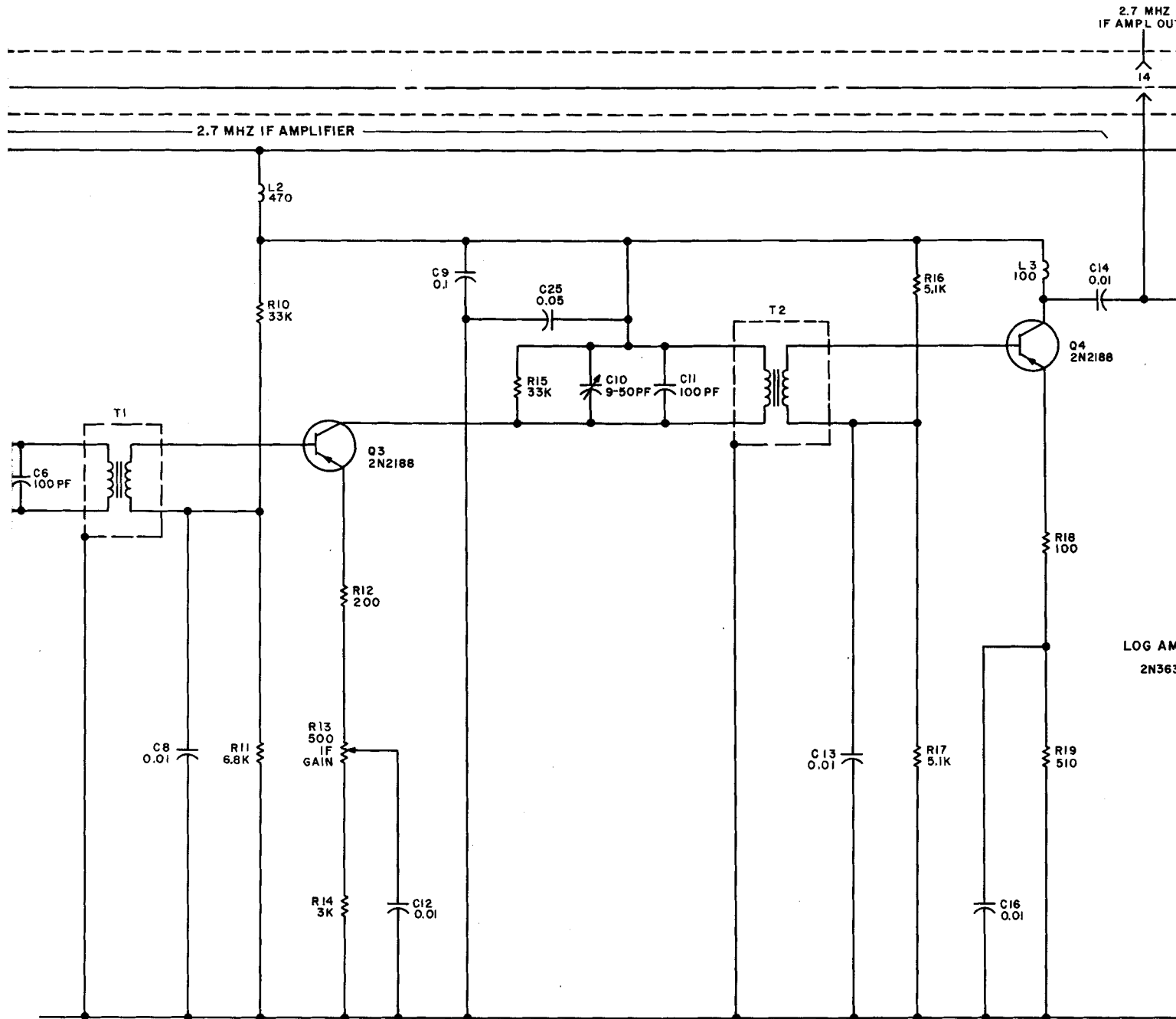
Figure 5-4. 2.7 MHz Crystal Filter Assembly A4,



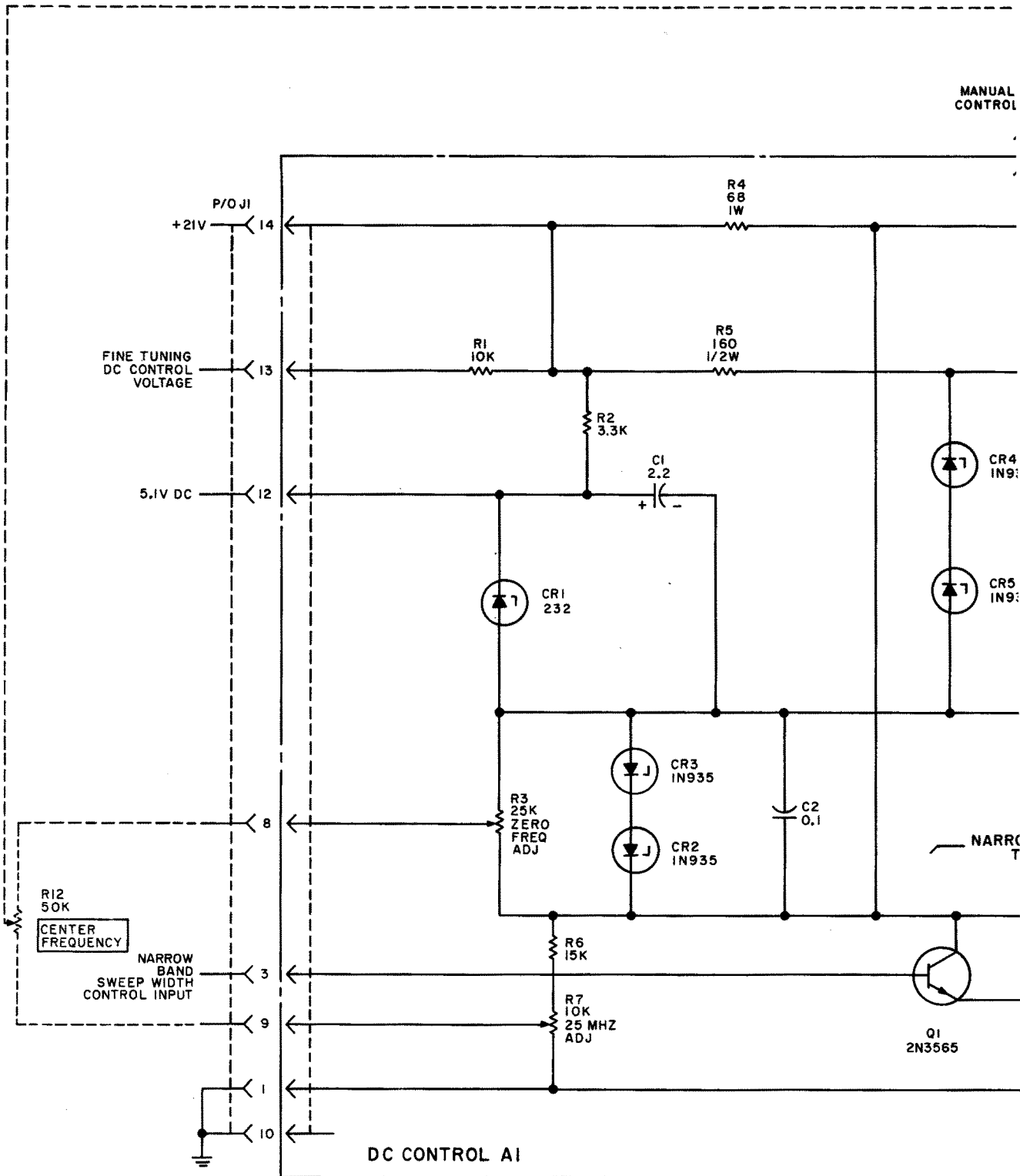
2.7 MHZ
IF AMPL OU

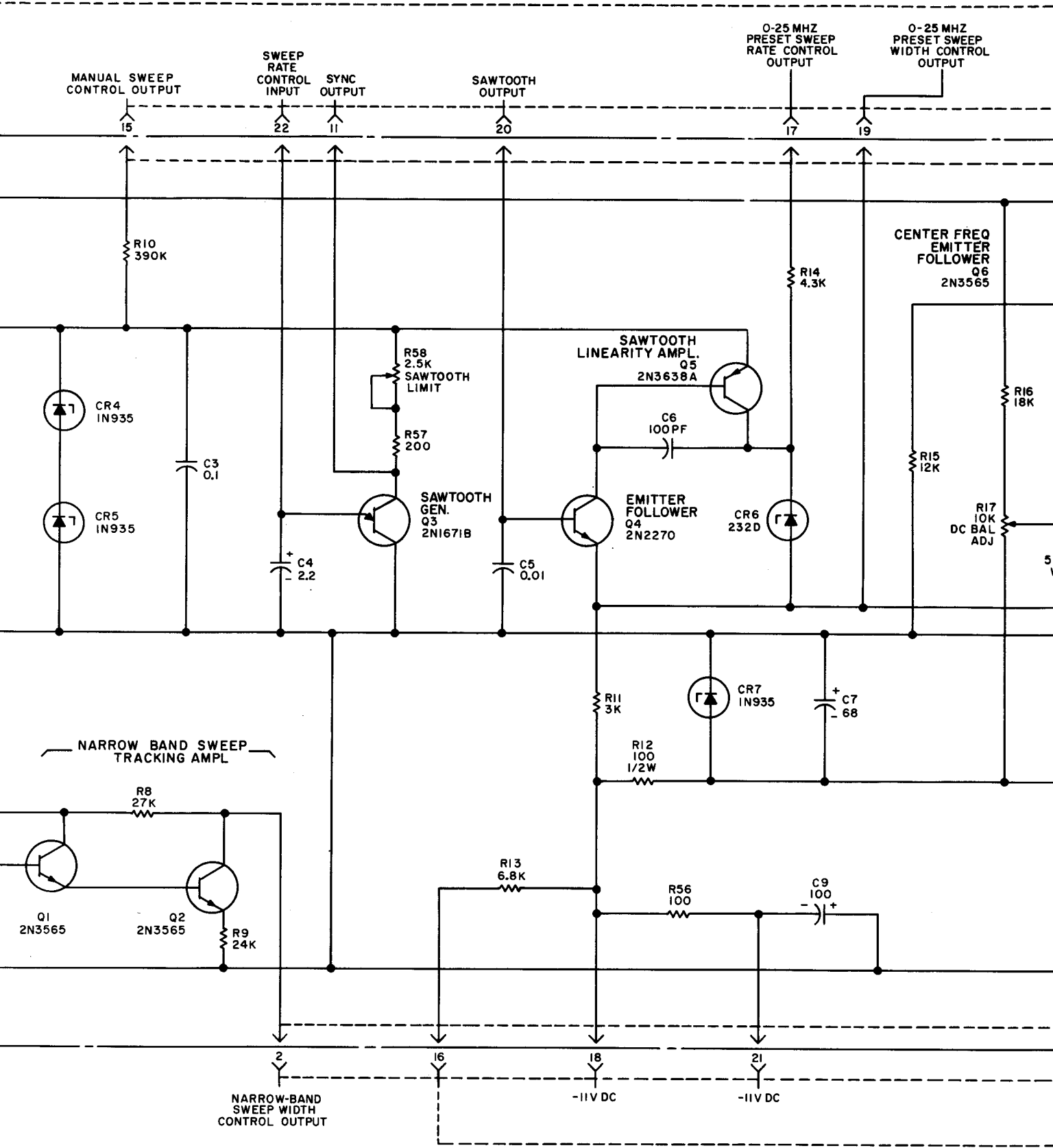
2.7 MHZ IF AMPLIFIER

LOG AM
2N363



MANUAL CONTROL





EP
ROL

SWEEP
WIDTH CONTROL
OUTPUT

P/O J1

500 KHZ SHAPI
CONTROLS

EQ
ER
Q6
365

C8
100PF

CENTER
FREQ CONTROL
EMITTER
FOLLOWER
Q10
2N3565

DIFF. EMITTER
FOLLOWER
Q7
2N3638A

DIFF. EMITTER
FOLLOWER
Q9
2N3638A

EMITTER
FOLLOWER
Q8
2N3565

COMPLEMENTARY
SAWTOOTH AMPL.

Q11
2N3565

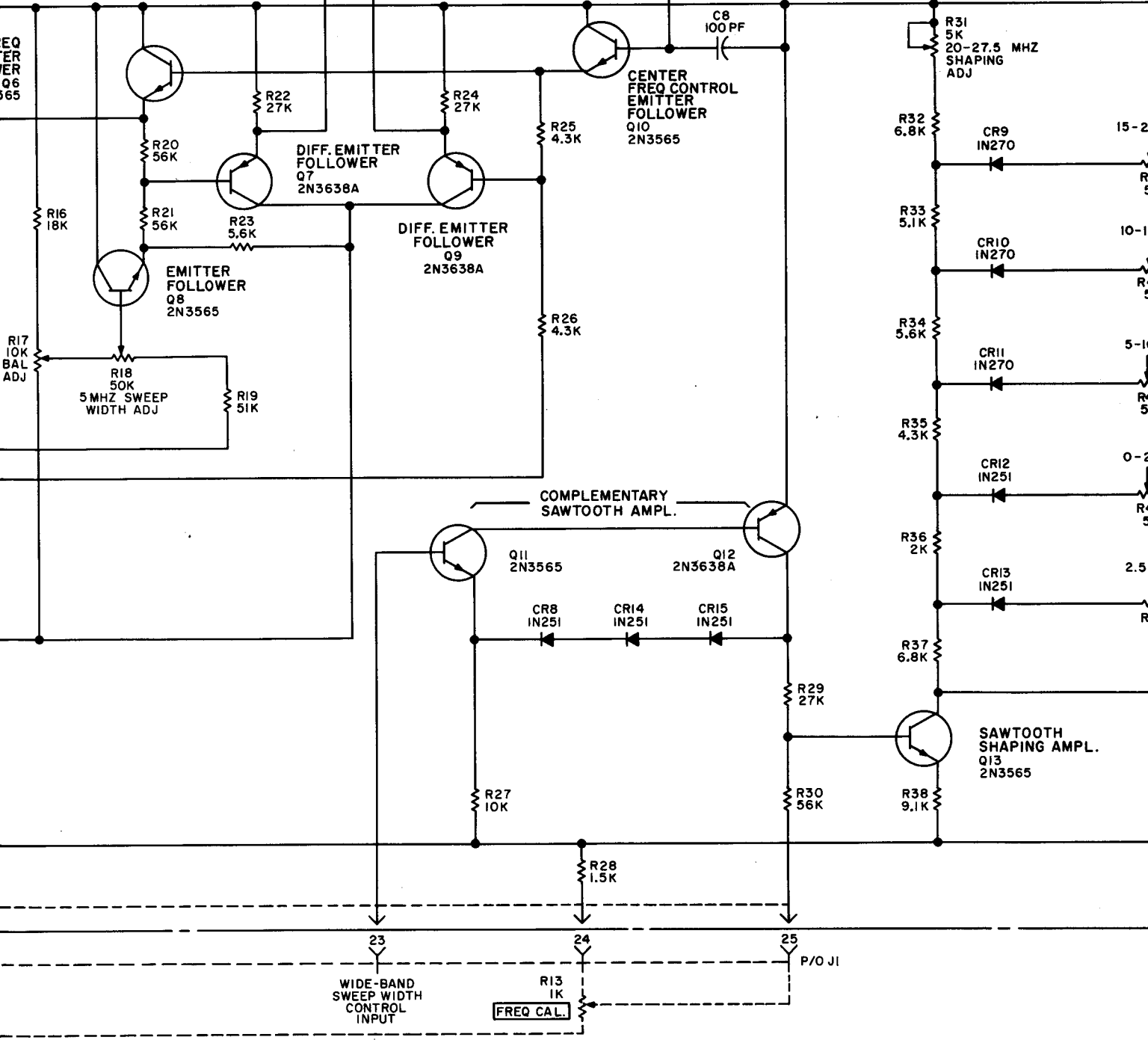
Q12
2N3638A

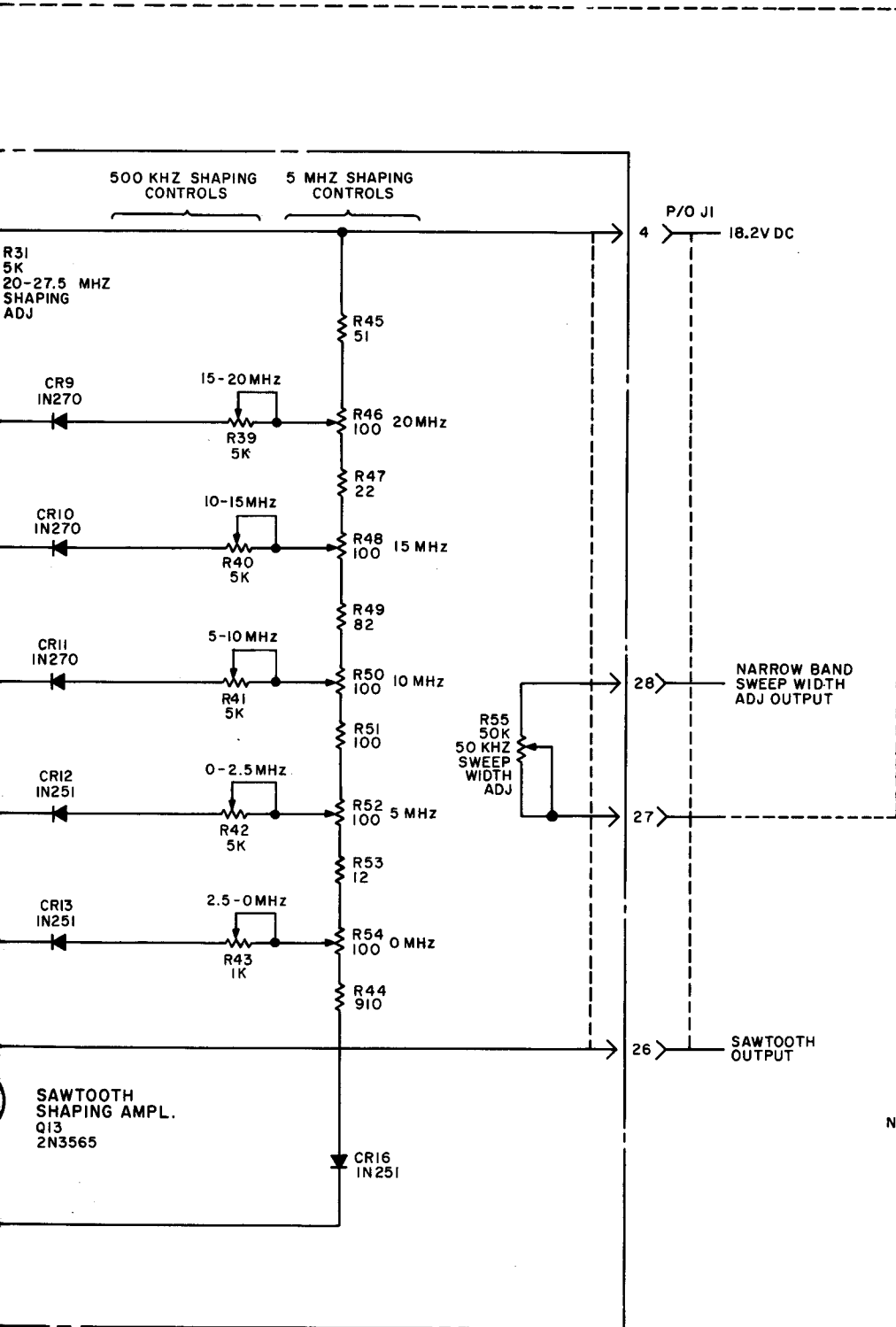
SAWTOOTH
SHAPING AMPL.
Q13
2N3565

WIDE-BAND
SWEEP WIDTH
CONTROL
INPUT

R13
1K
FREQ CAL

P/O J1



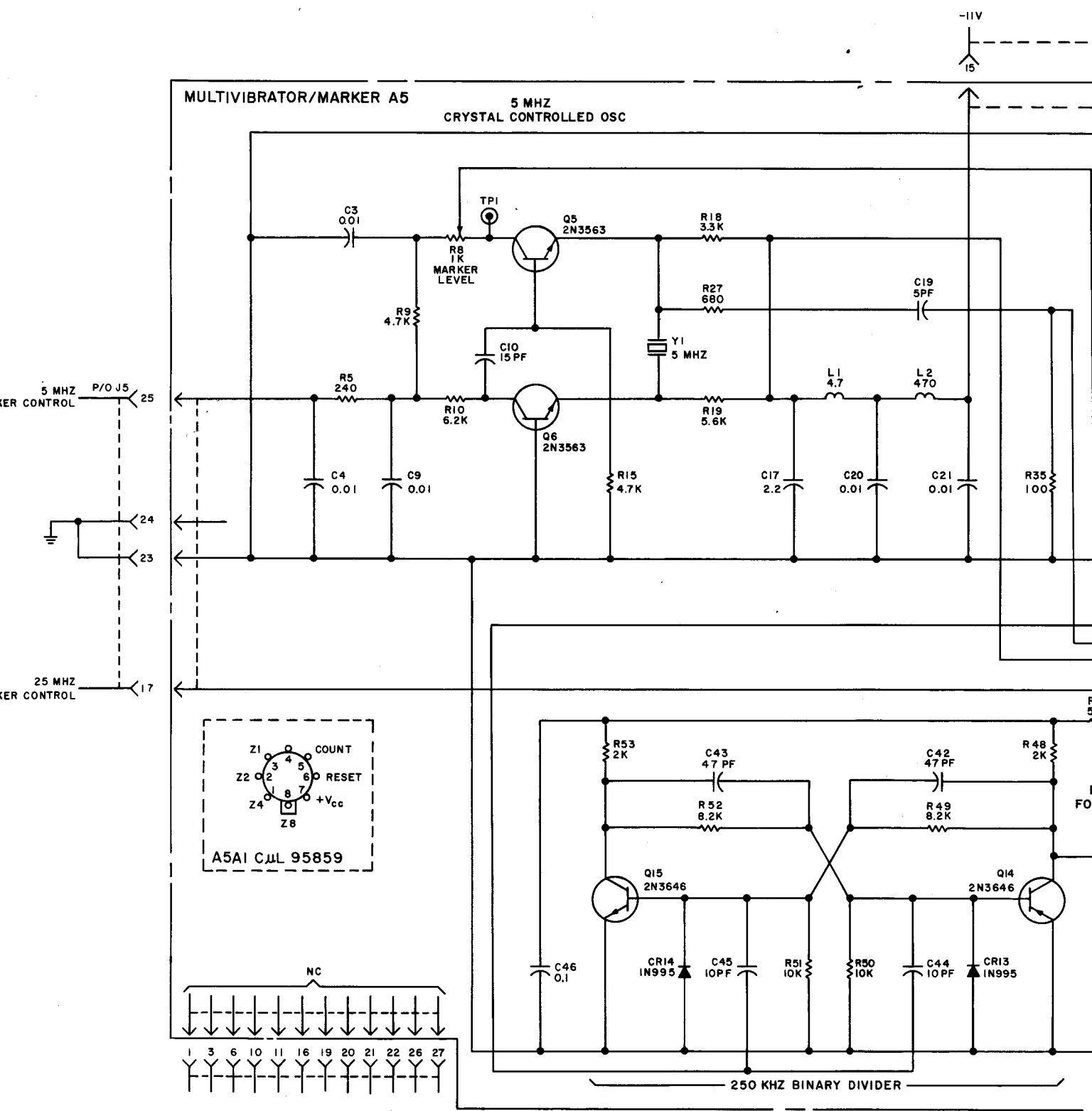


- NOTES:
1. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE IN OHMS, 1/4W, ±5%.
 2. ALL CAPACITORS ARE IN MICROFARADS.

Figure 5-6. DC Control Assembly A1,
Schematic Diagram

MULTIVIBRATOR/MARKER A5

5 MHZ
CRYSTAL CONTROLLED OSC

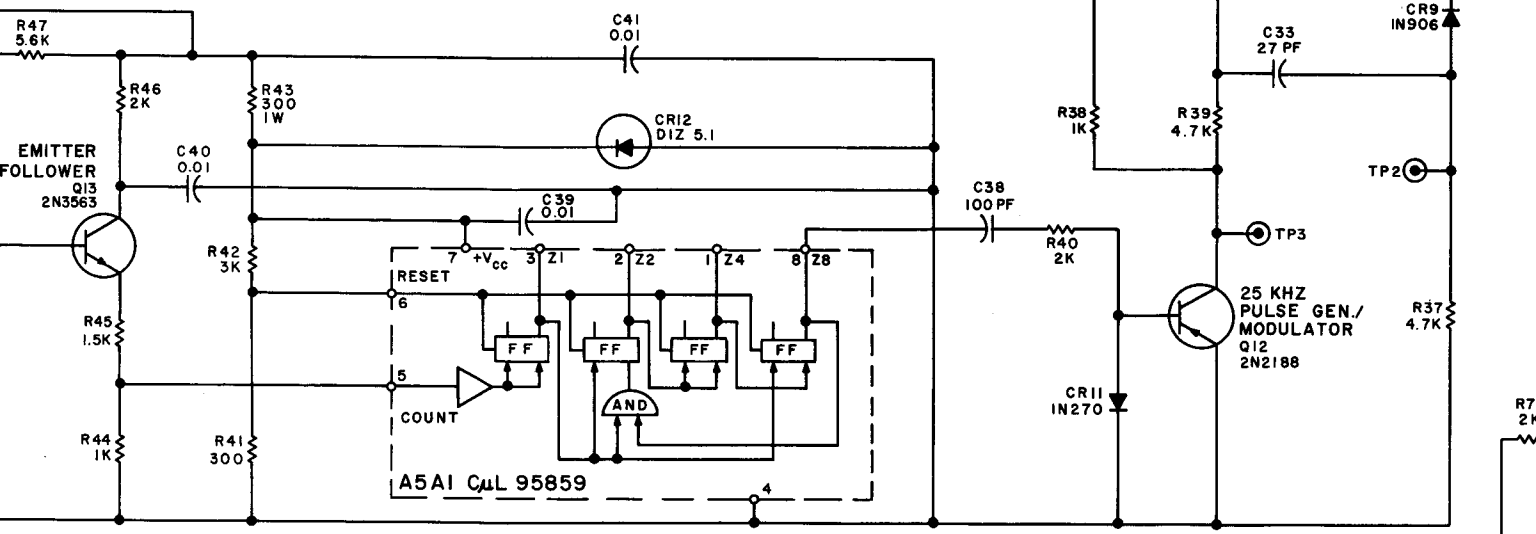
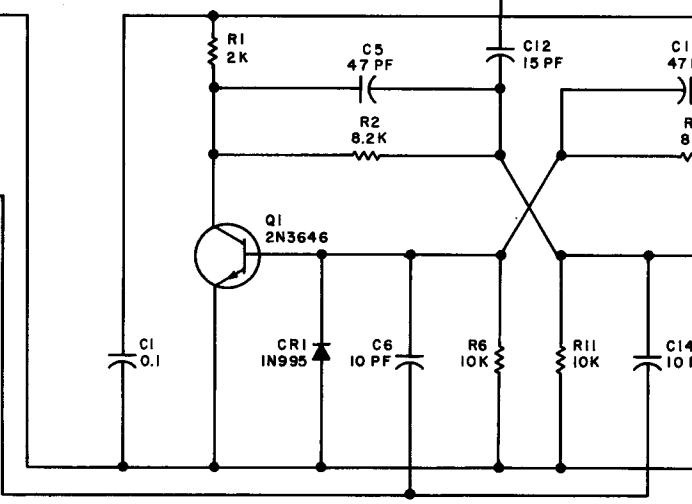
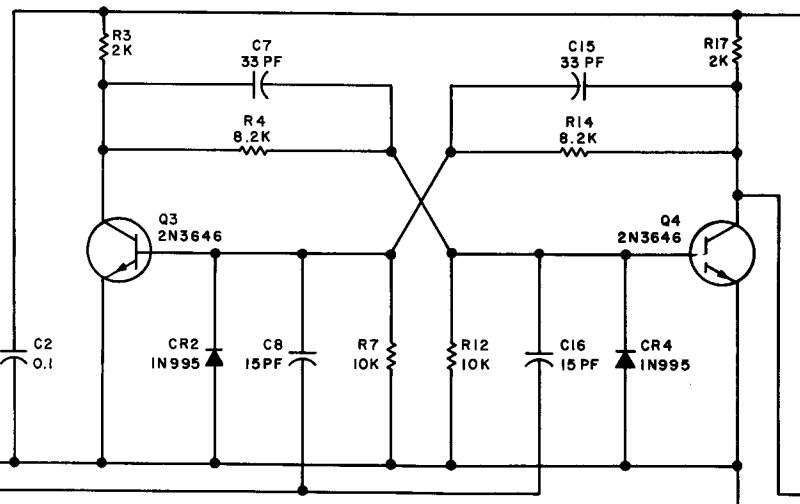


500 MHZ MARKER CONTROL

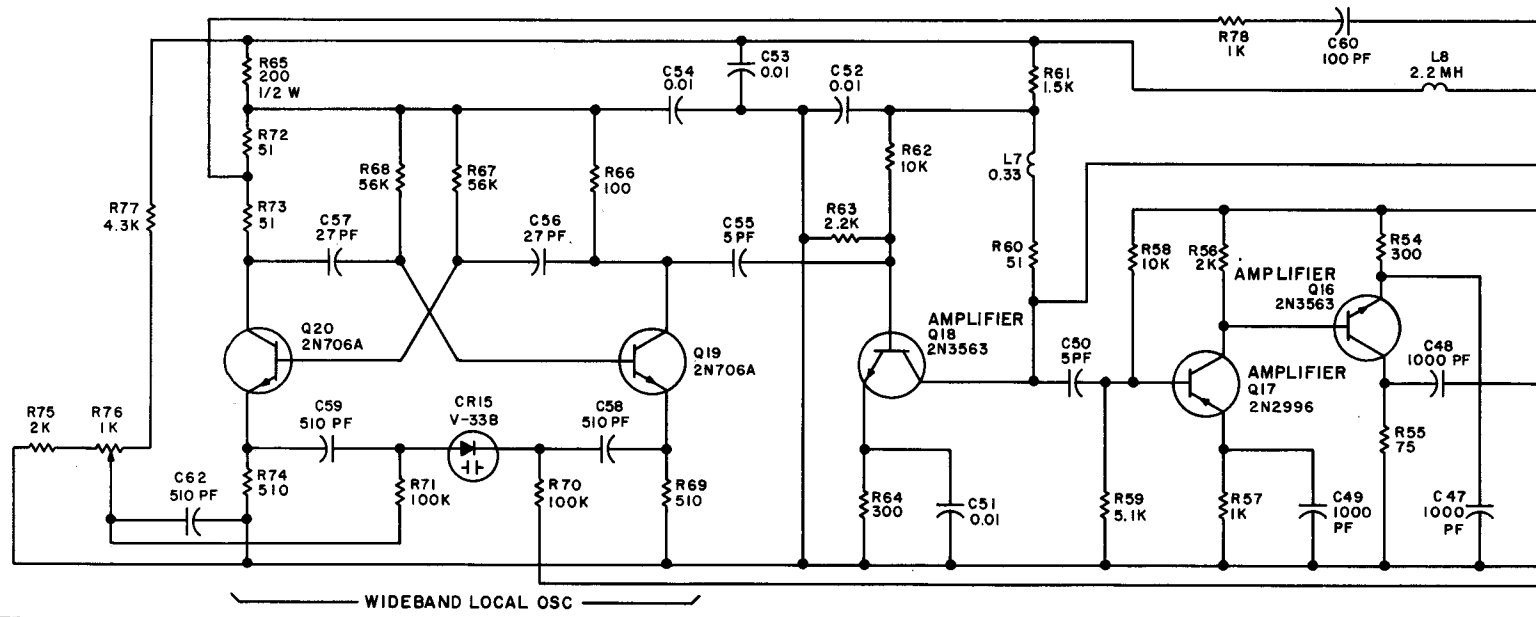
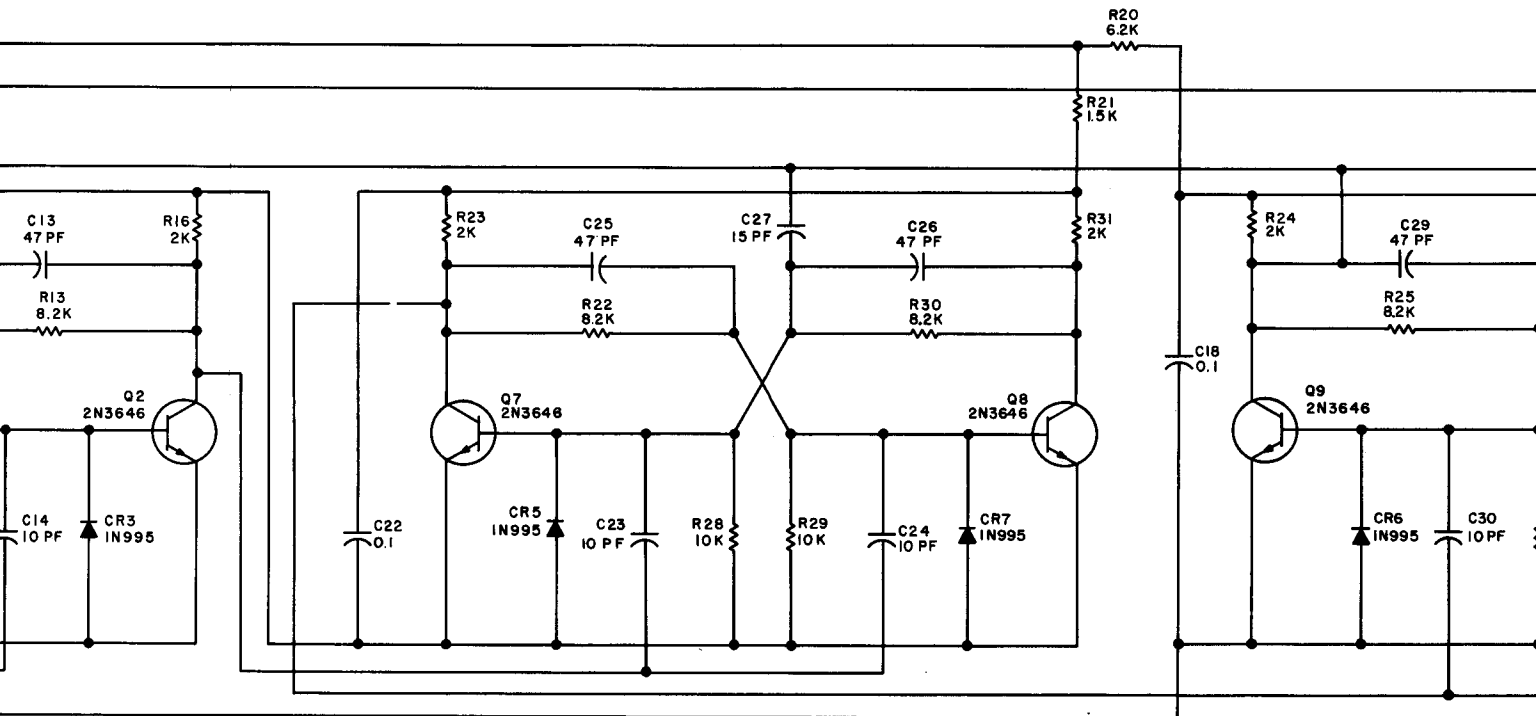
P/O J5

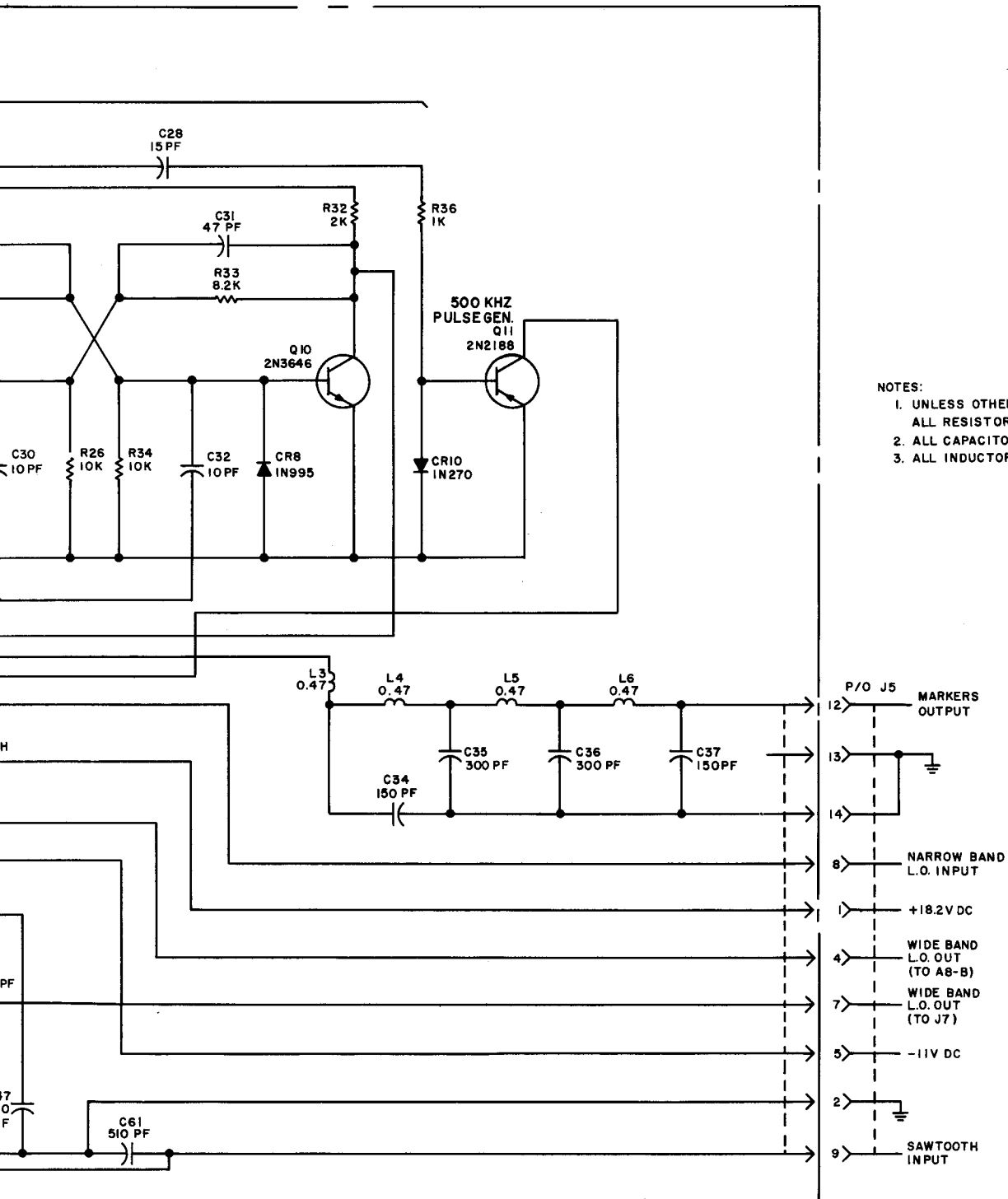
C11, 0.01

500 KHZ DECADE DIVIDER



25 KHZ DECADE DIVIDER





- NOTES:
1. UNLESS OTHERWISE SPECIFIED.
ALL RESISTORS ARE IN OHMS, 1/4 W, ±5%.
 2. ALL CAPACITORS ARE IN MICROFARADS
 3. ALL INDUCTORS ARE IN MICROHENRIES.

Figure 5-7. Multivibrator/Marker Assembly A5,
Schematic Diagram