

- | | |
|-------------------------------|---------------------|
| 1 Retaining ring | 44 Coupler assembly |
| 2 Sleeve | 45 Retaining ring |
| 3 Bushing | 46 Retaining ring |
| 4 Arm | 47 Setscrew |
| 5 Pin | 48 Taper pin |
| 6 Spring | 49 Arm assembly |
| 7 Taper pin | 50 Screw |
| 8 Setscrew | 51 Lockwasher |
| 9 Screw | 52 O-ring |
| 10 Lockwasher | 53 Mask assembly |
| 11 Plate | 54 Mask assembly |
| 12 Retaining ring | 55 O-ring |
| 13 Taper pin | 56 Spring |
| 14 Stop | 57 Shaft assembly |
| 15 Setscrew | 58 Thrust washer |
| 16 Shaft assembly | 59 Housing assembly |
| 17 Thrust washer | 60 Spacer |
| 18 Spring retainer | 61 Retaining ring |
| 19 Thrust washer | 62 Taper pin |
| 20 Gear | 63 Coupler assembly |
| 21 Worm | 64 Setscrew |
| 22 Thrust washer | 65 O-ring |
| 23 Bushing | 66 Setscrew |
| 24 Lamp | 67 Gear |
| 25 Housing | 68 Taper pin |
| 26 Flat washer | 69 Shaft assembly |
| 27 Lockwasher | 70 Thrust washer |
| 28 Screw | 71 Retaining ring |
| 29 O-ring | 72 Gear arm |
| 30 Shaft assembly | 73 Spur gear |
| 31 Thrust washer | 74 Stud |
| 32 Spring | 75 Shaft assembly |
| 33 Arm assembly | 76 Thrust washer |
| 34 Retaining ring | 77 Thrust washer |
| 35 Retaining arm | 78 Arm assembly |
| 36 Antibacklash gear assembly | 79 Retaining ring |
| 37 Thrust washer | 80 Cam |
| 38 Ball plunger | 81 Gear segment |
| 39 Screw | 82 Gear |
| 40 Yoke | 83 Spring |
| 41 Retaining ring | 84 Sleeve |
| 42 Taper pin | 85 Sleeve |
| 43 Setscrew | |

Figure 7-87. Selector mechanism, exploded view.

NOTES:

1. SETSCREWS (8), (15), (47), AND (66) ARE NOT SUPPLIED WITH THE SELECTOR MECHANISM, BUT ARE USED TO SECURE REPLACEMENT PARTS TO GEAR SHAFTS WHILE DRILLING. THESE SETSCREWS ARE REMOVED AFTER DRILLING OPERATION IS COMPLETED.
2. SETSCREWS (43) AND (64) ARE SUPPLIED WITH THE SELECTOR MECHANISM AND IF REMOVED ARE TO BE REPLACED IN COUPLER ASSEMBLIES (44) AND (63)

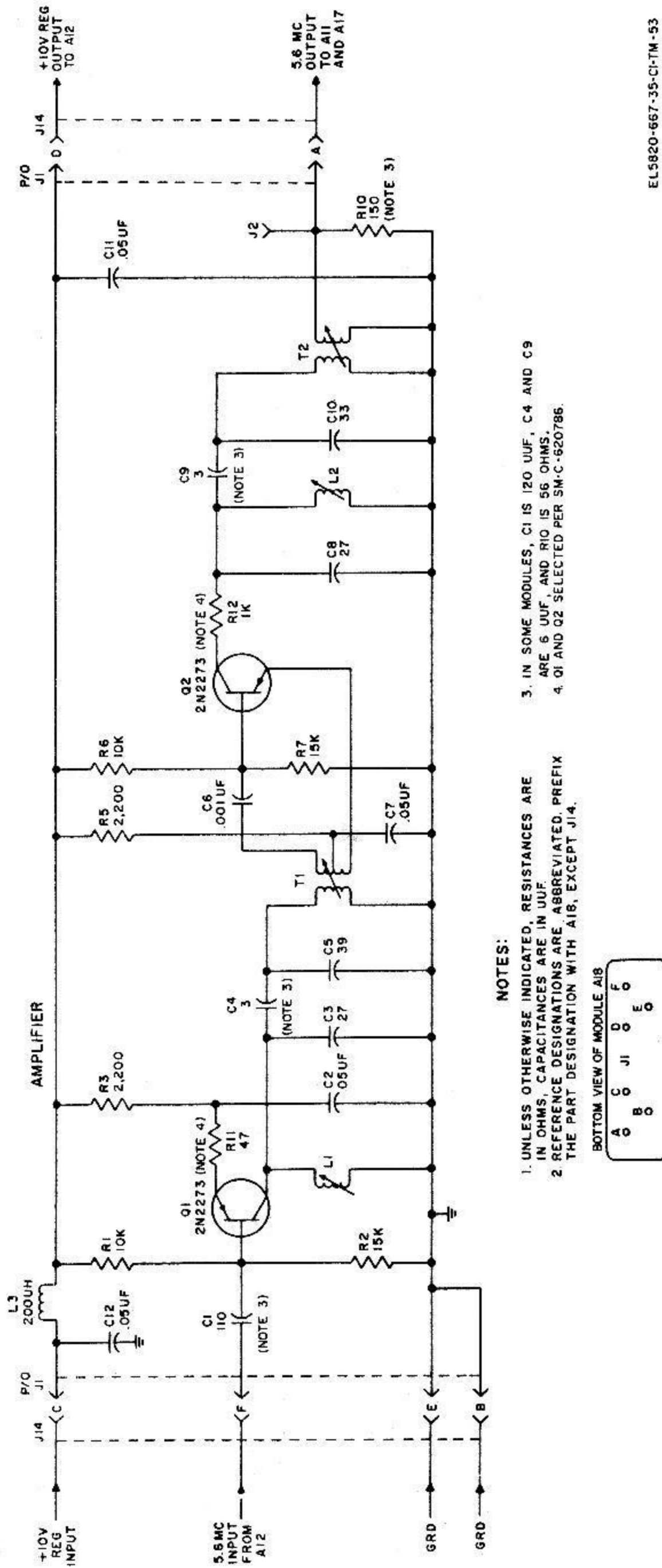


Figure 7-1-1. 5.6-megacycle if. amplifier module A18, schematic diagram.

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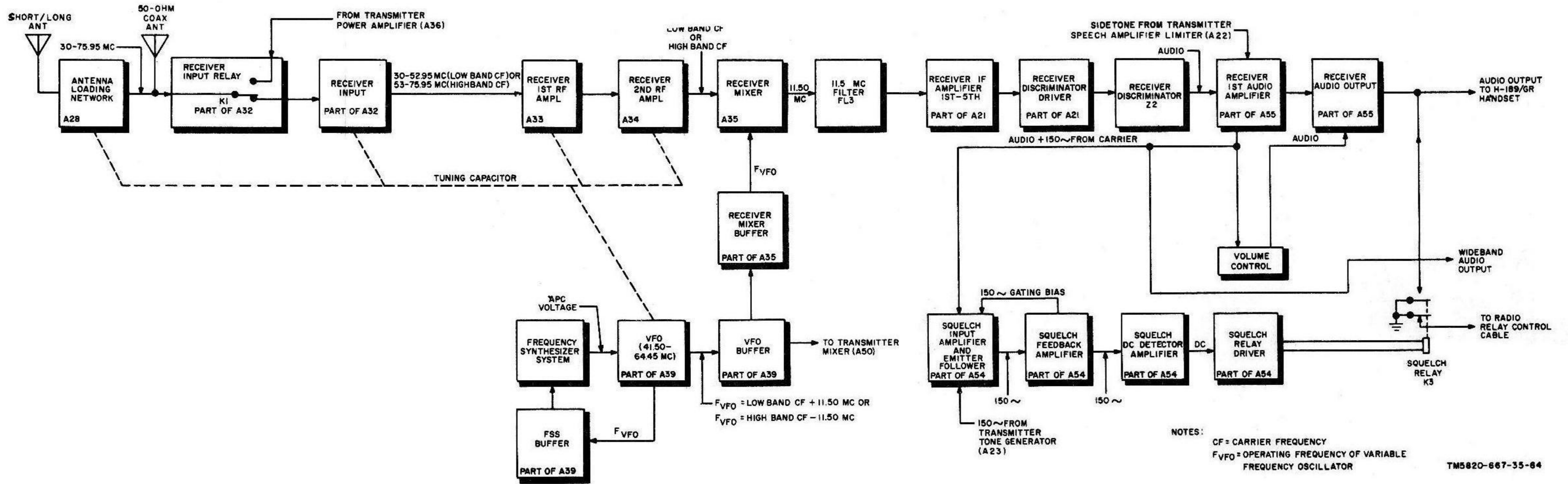
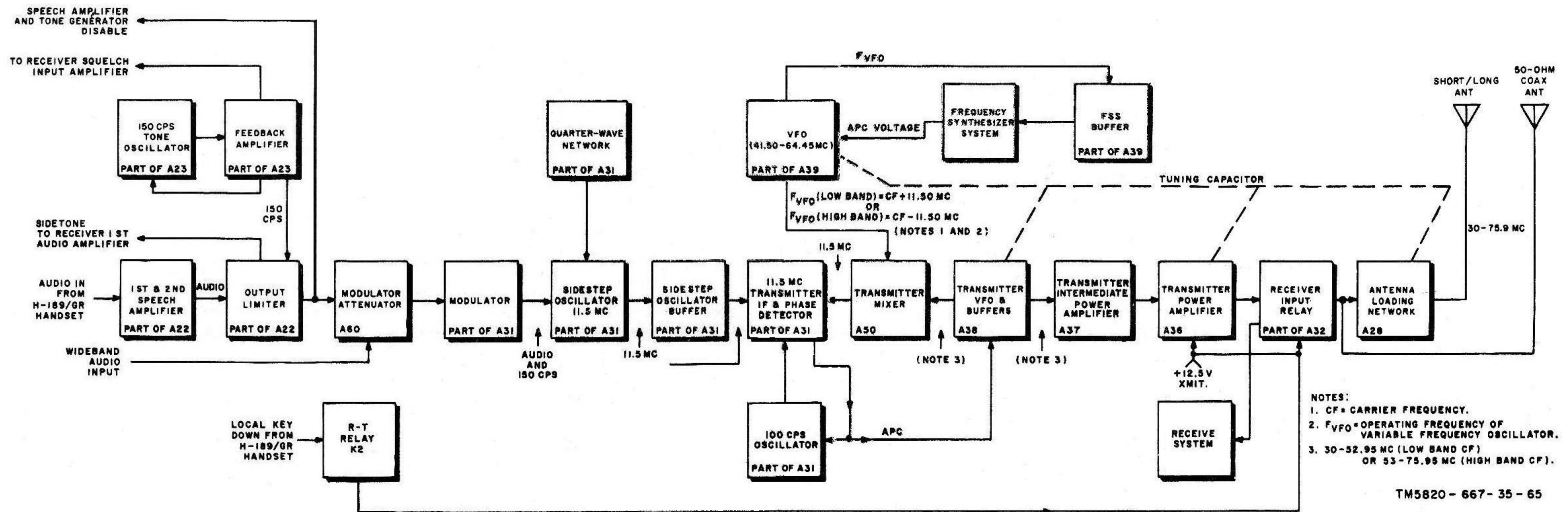
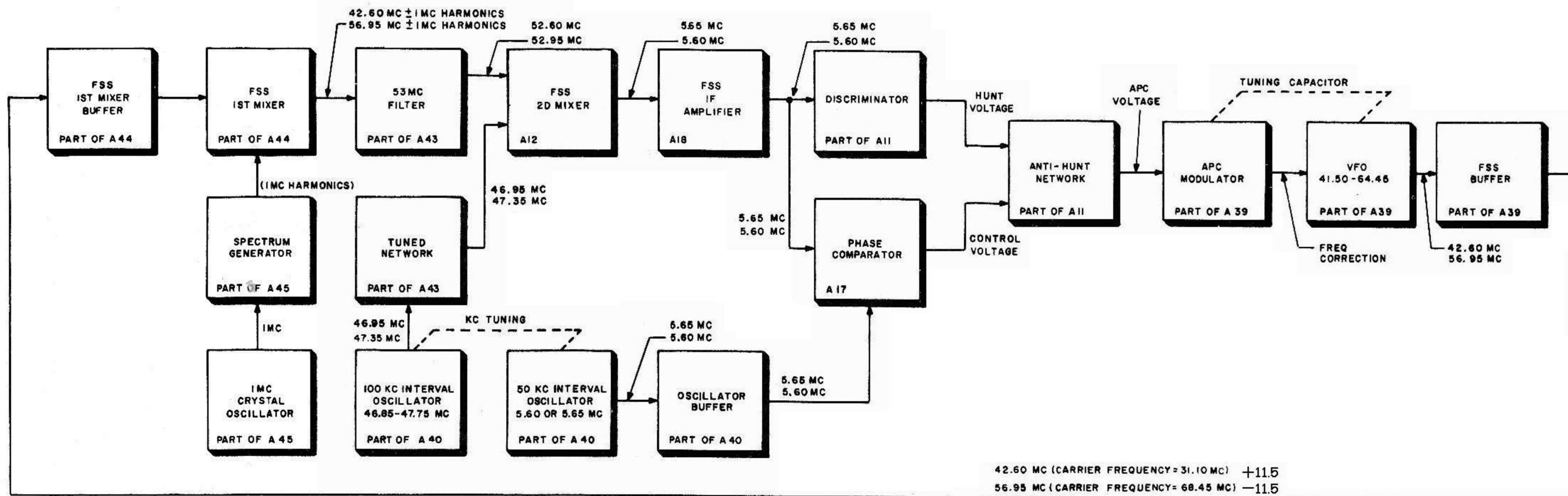


Figure 7-15. Receiver-transmitter, receiver mode signal path, block diagram.



TM5820-667-35-65

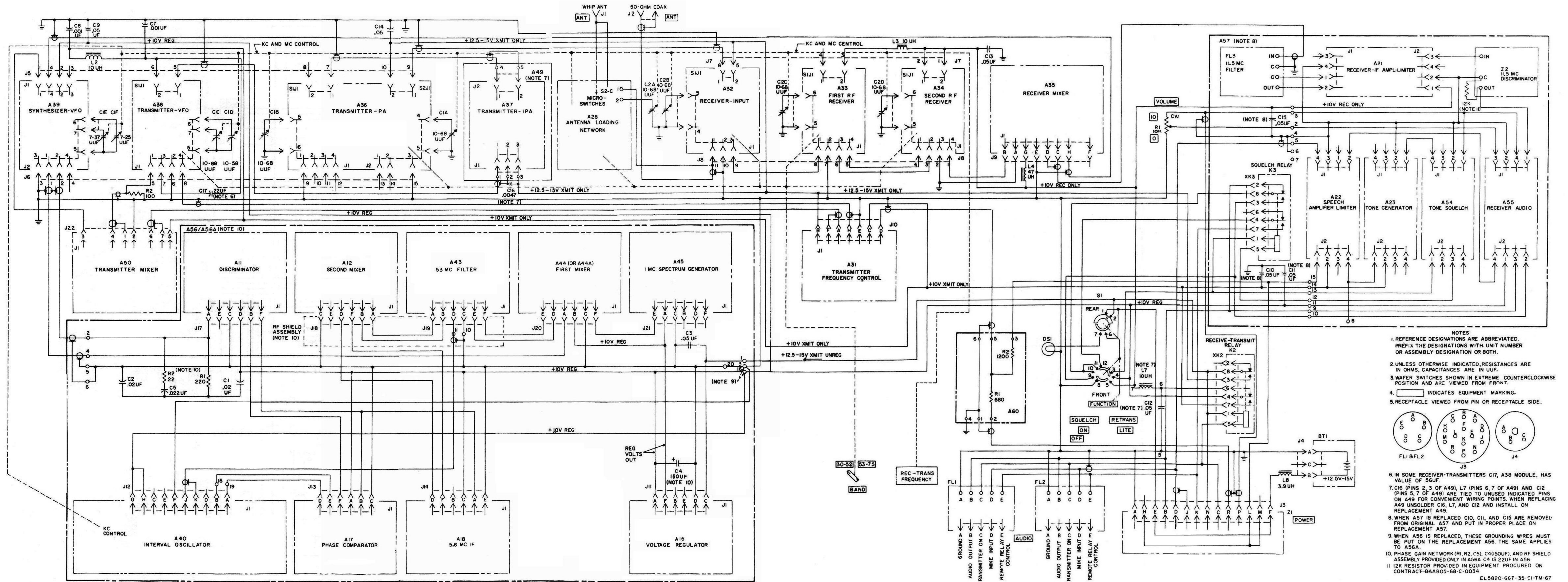
Figure 7-16. Receiver-transmitter, transmit mode signal path, block diagram.



NOTES:

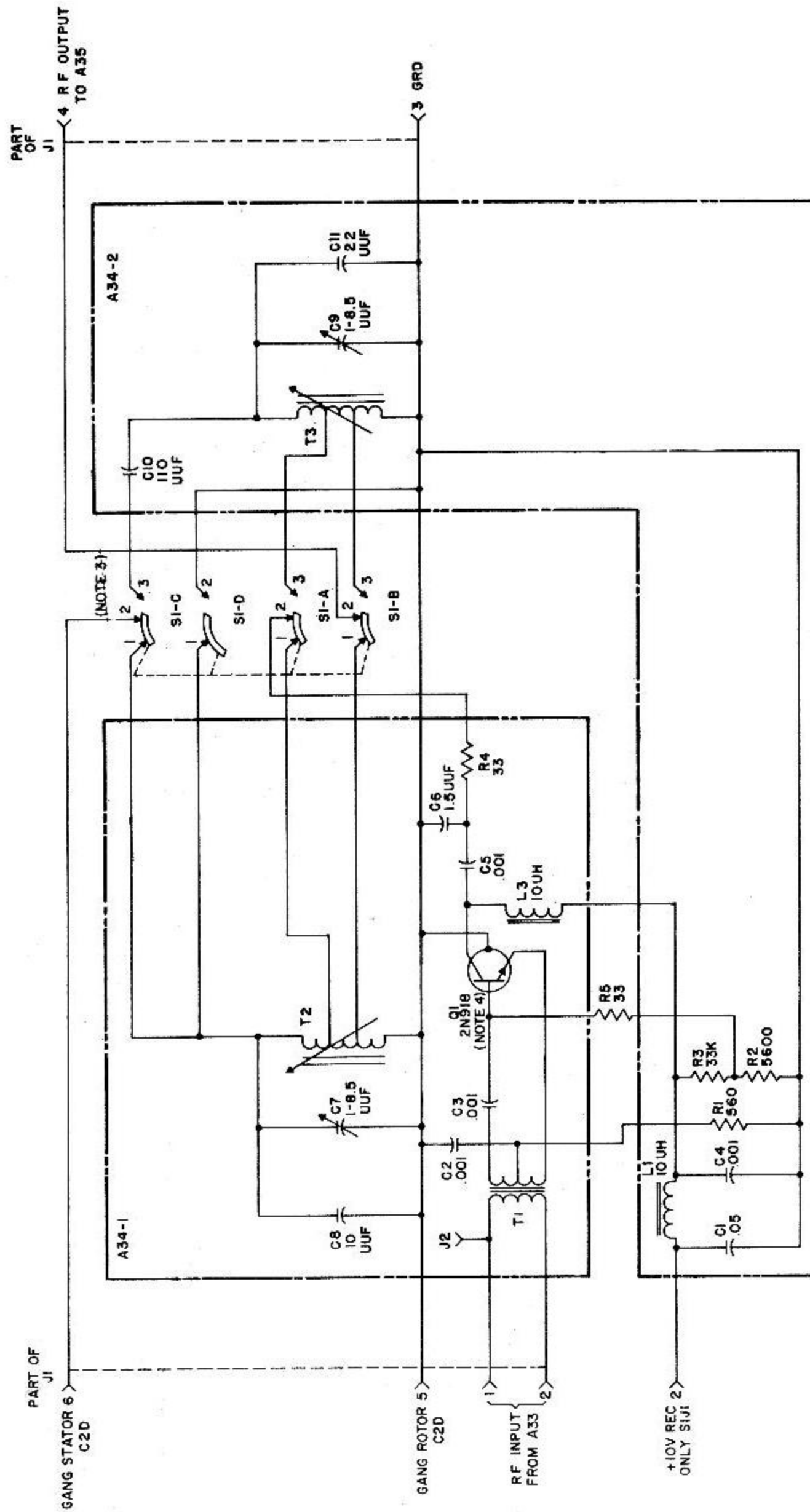
1. TWO RT-841/PRC-77 CARRIER FREQUENCIES ARE USED TO ILLUSTRATE THE FREQUENCY RELATIONSHIPS OF THE FSS 31.10 MC (LOW BAND), AND 68.45 MC (HIGH BAND). FREQUENCIES ASSOCIATED WITH THE LOW BAND CARRIER ARE INDICATED ABOVE THE FREQUENCIES ASSOCIATED WITH THE HIGH BAND CARRIER.
2. FSS DENOTES FREQUENCY SYNTHESIZER SYSTEM.

Figure 7-17. Frequency synthesizer system, block diagram.

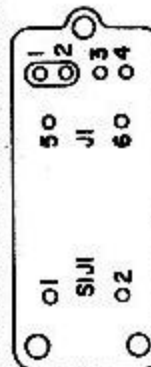


- NOTES:
- REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE DESIGNATIONS WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH.
 - UNLESS OTHERWISE INDICATED, RESISTANCES ARE IN OHMS, CAPACITANCES ARE IN UUF.
 - WAFER SWITCHES SHOWN IN EXTREME COUNTERCLOCKWISE POSITION AND ARE VIEWED FROM FRONT.
 - INDICATES EQUIPMENT MARKING.
 - RECEPTACLE VIEWED FROM PIN OR RECEPTACLE SIDE.
-
- IN SOME RECEIVER-TRANSMITTERS C17, A38 MODULE, HAS VALUE OF 56UUF.
 - C16 (PINS 2, 3 OF A49), L7 (PINS 6, 7 OF A49) AND C12 (PINS 5, 7 OF A49) ARE TIED TO UNUSED INDICATED PINS ON A49 FOR CONVENIENT WIRING POINTS. WHEN REPLACING A49 UNSOLDER C16, L7, AND C12 AND INSTALL ON REPLACEMENT A49.
 - WHEN A57 IS REPLACED C10, C11, AND C15 ARE REMOVED FROM ORIGINAL A57 AND PUT IN PROPER PLACE ON REPLACEMENT A57.
 - WHEN A56 IS REPLACED, THESE GROUNDING WIRES MUST BE PUT ON THE REPLACEMENT A56. THE SAME APPLIES TO A56A.
 - PHASE GAIN NETWORK (R1, R2, C5, C4) IS PROVIDED ONLY IN A56A C4 IS 22UUF IN A56.
 - 12K RESISTOR PROVIDED IN EQUIPMENT PROCURED ON CONTRACT DAAB05-68-C-0034.
- EL5820-667-35-C1-TM-67

Figure 7-18. Overall chassis interconnection diagram.



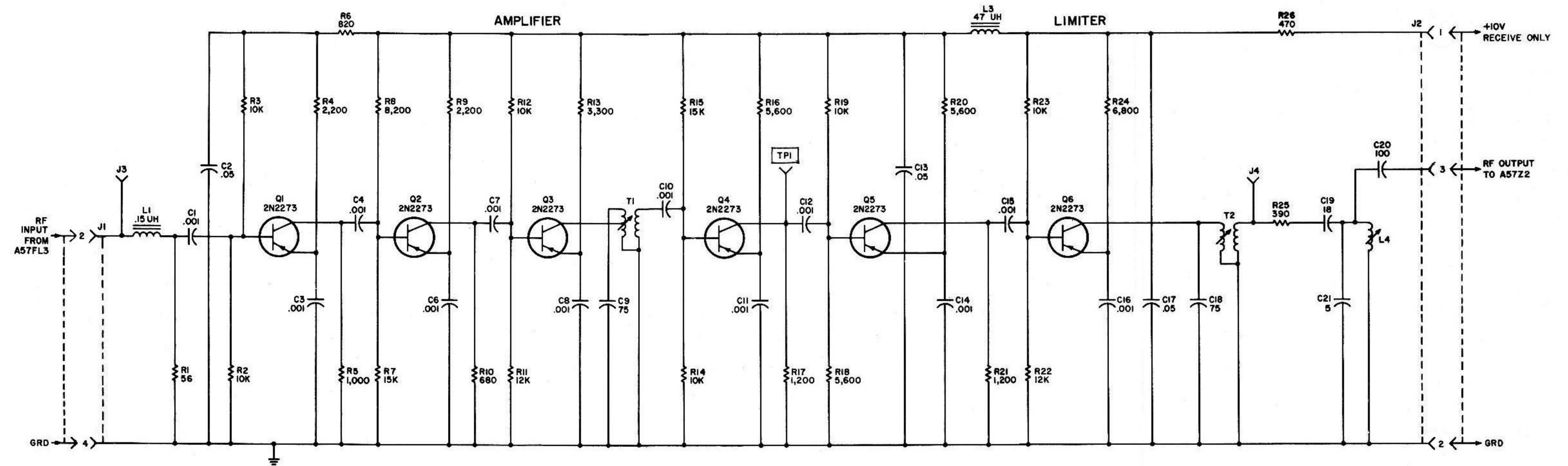
BOTTOM VIEW OF MODULE A34



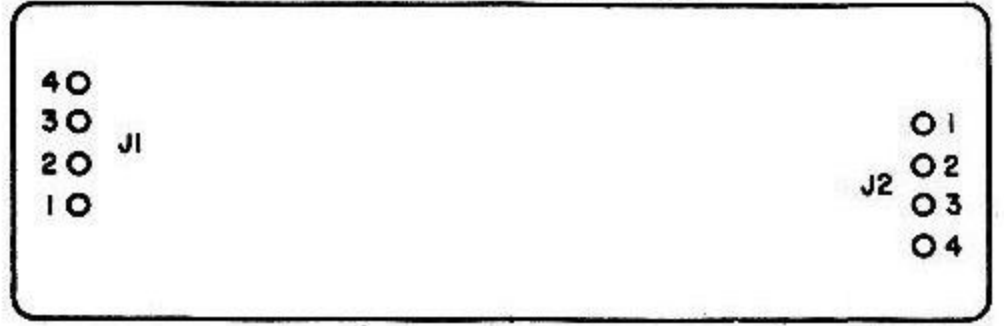
- NOTES:
1. UNLESS OTHERWISE INDICATED, RESISTANCES ARE IN OHMS, CAPACITANCES ARE IN UF.
 2. REFERENCE DESIGNATIONS ARE ABBREVIATED, PREFIX DESIGNATIONS WITH A34.
 3. SWITCH SI IS SHOWN IN THE POSITION RESULTING WHEN THE BAND SWITCH CONTROL (ON THE FRONT PANEL) IS SET AT 30-52 FOR LOW BAND OPERATION.
 4. Q1 IN ACCORDANCE WITH SM-B-620789.

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Figure 7-19. Second RF amplifier module A34, schematic diagram.



BOTTOM VIEW OF MODULE A21

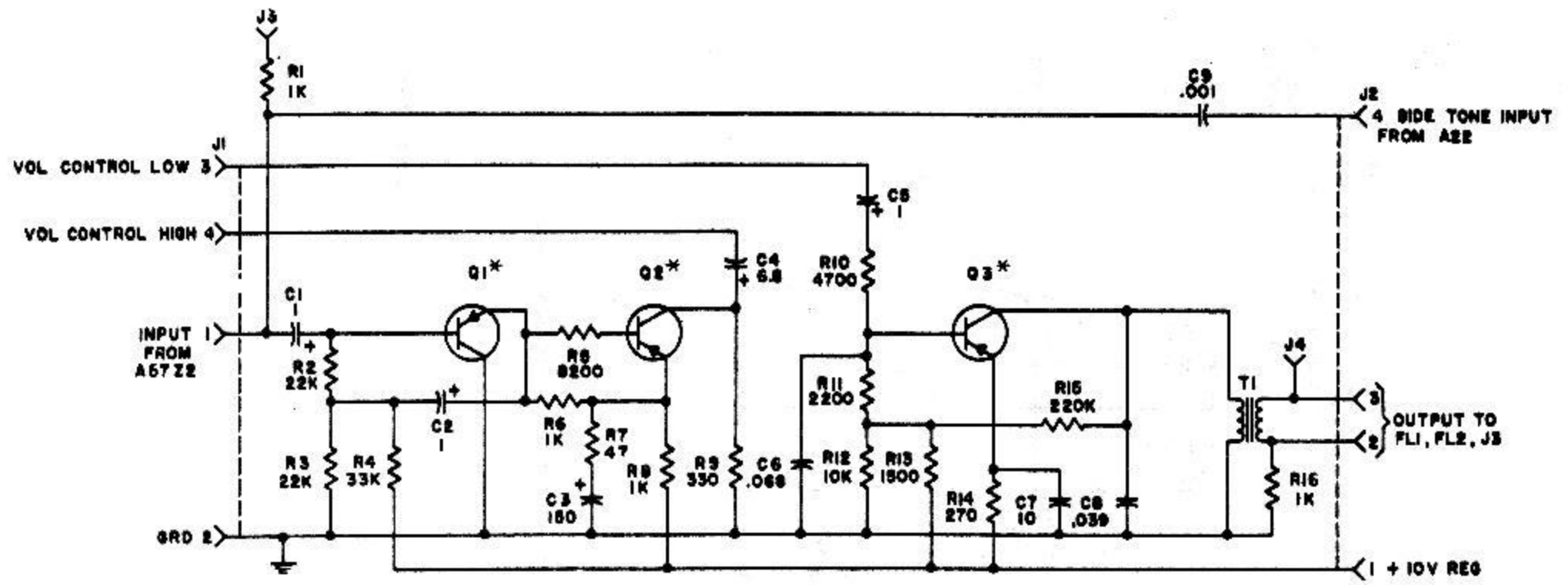


NOTES:

1. UNLESS OTHERWISE INDICATED, RESISTANCES ARE IN OHMS, CAPACITANCES ARE IN UUF.
2. REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX PART DESIGNATION WITH A21.
3. ALL TRANSISTORS, Q1 THRU Q6, SELECTED PER SM-C-620786.

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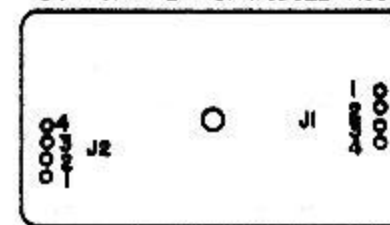
Figure 7-20. Receiver IF amplifier module A21, schematic diagram.



NOTES:
 1. UNLESS OTHERWISE SPECIFIED RESISTANCES ARE IN OHMS, CAPACITANCES ARE IN UF.
 2. REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE PART DESIGNATION WITH A55.

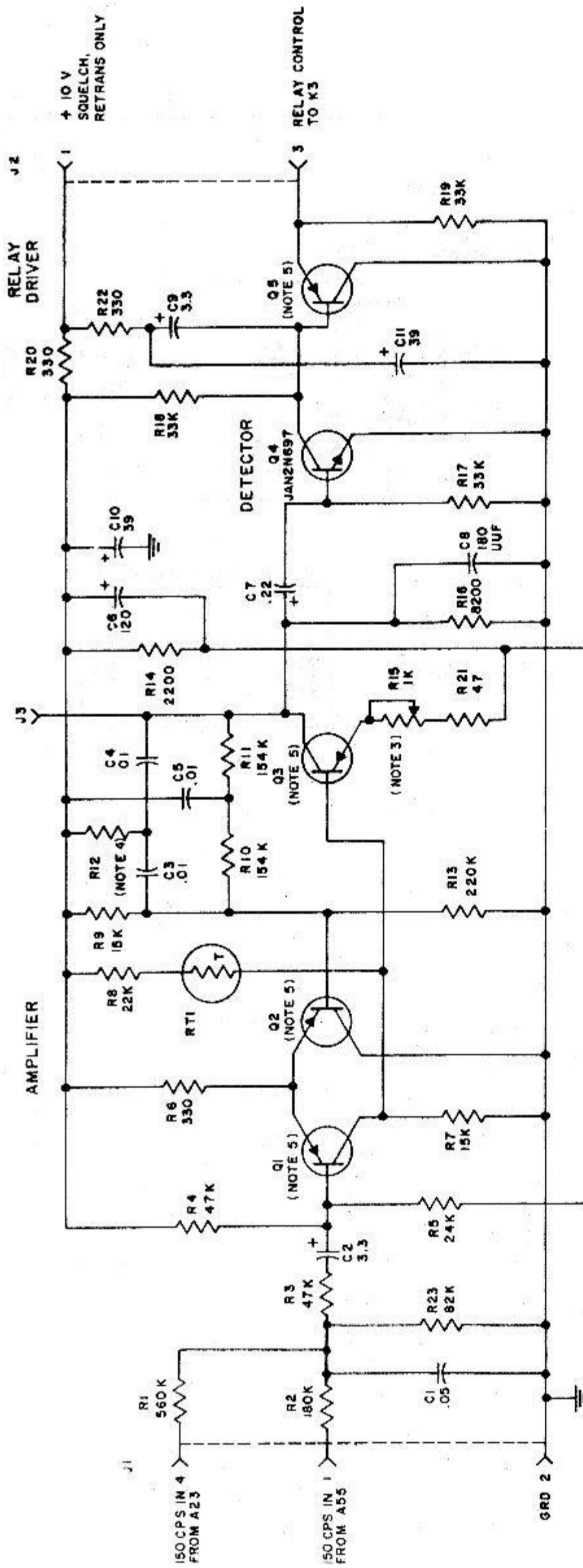
*Q1, Q2, AND Q3 SELECTED PER SM-B-447610.

BOTTOM VIEW OF MODULE A55

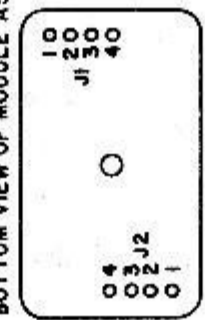


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Figure 7-21. Receiver audio amplifier module A55, schematic diagram.



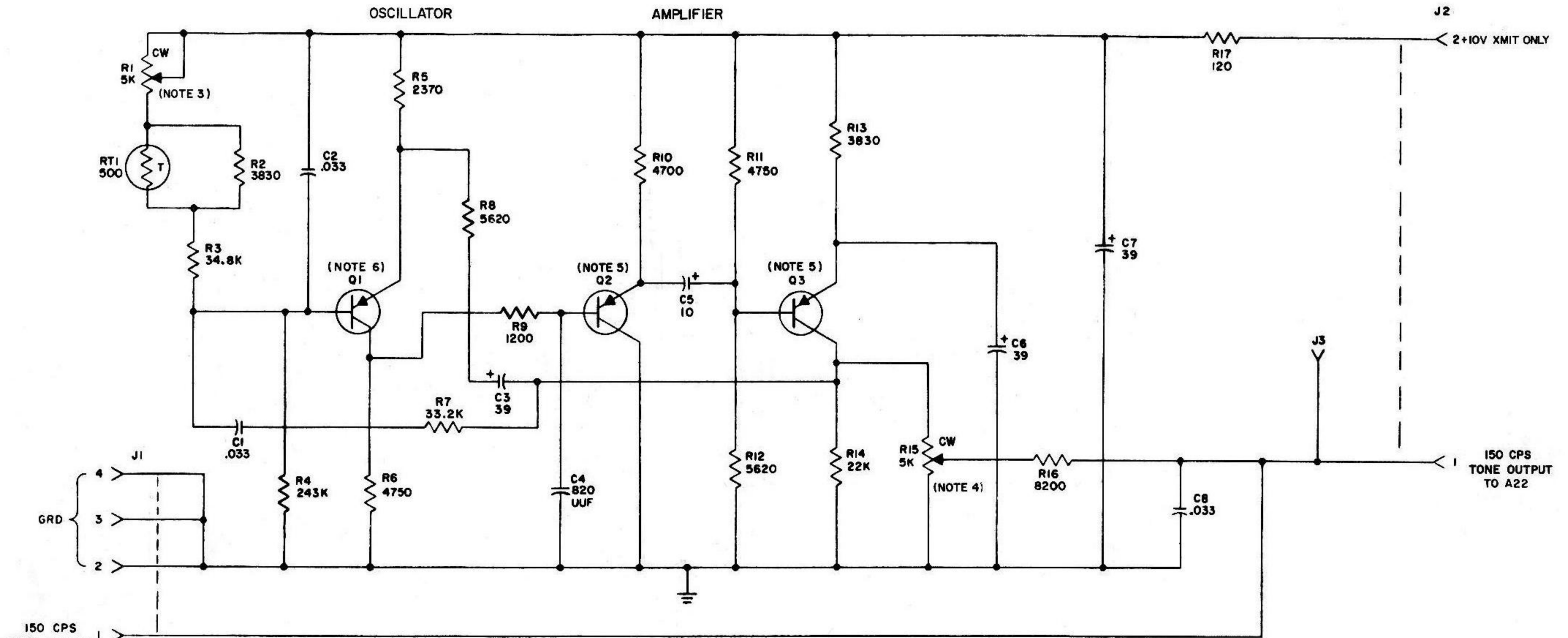
- NOTES:
1. UNLESS OTHERWISE SPECIFIED RESISTANCES ARE IN OHMS.
 2. CAPACITANCE ARE IN UF.
 3. THE PART DESIGNATION A54
 4. R15 ADJUSTED WITH 10KV RF SIGNAL WITH 10KC OF DEVIATION AT 1KC MODULATION AND WITH 3KC OF DEVIATION AT 150 CPS MODULATION, SO THAT K3 IS ENERGIZED.
 5. Q1, Q2, Q3 AND Q5 SELECTED PER SM-B-621960.



- NOTES (CONT'D)
1. UNLESS OTHERWISE SPECIFIED RESISTANCES ARE IN OHMS.
 2. CAPACITANCE ARE IN UF.
 3. THE PART DESIGNATION A54
 4. R15 ADJUSTED WITH 10KV RF SIGNAL WITH 10KC OF DEVIATION AT 1KC MODULATION AND WITH 3KC OF DEVIATION AT 150 CPS MODULATION, SO THAT K3 IS ENERGIZED.
 5. Q1, Q2, Q3 AND Q5 SELECTED PER SM-B-621960.

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Figure 7-22. Tone squelch module A54, schematic diagram.

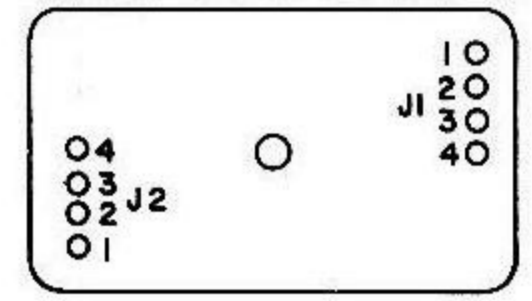


150 CPS
TONE OUTPUT
TO A54

NOTES:

1. UNLESS OTHERWISE INDICATED: RESISTANCES ARE IN OHMS, CAPACITANCES ARE IN UF.
2. REFERENCE DESIGNATIONS ARE ABBREVIATED, PREFIX THE PART DESIGNATION WITH A23.
3. R1 ADJUSTED FOR 150 CPS FREQUENCY TONE OUTPUT AT J3 AND J2-1.
4. R15 ADJUSTED FOR 3KC TRANSMITTER DEVIATION AT J2-2.

BOTTOM VIEW OF MODULE A23

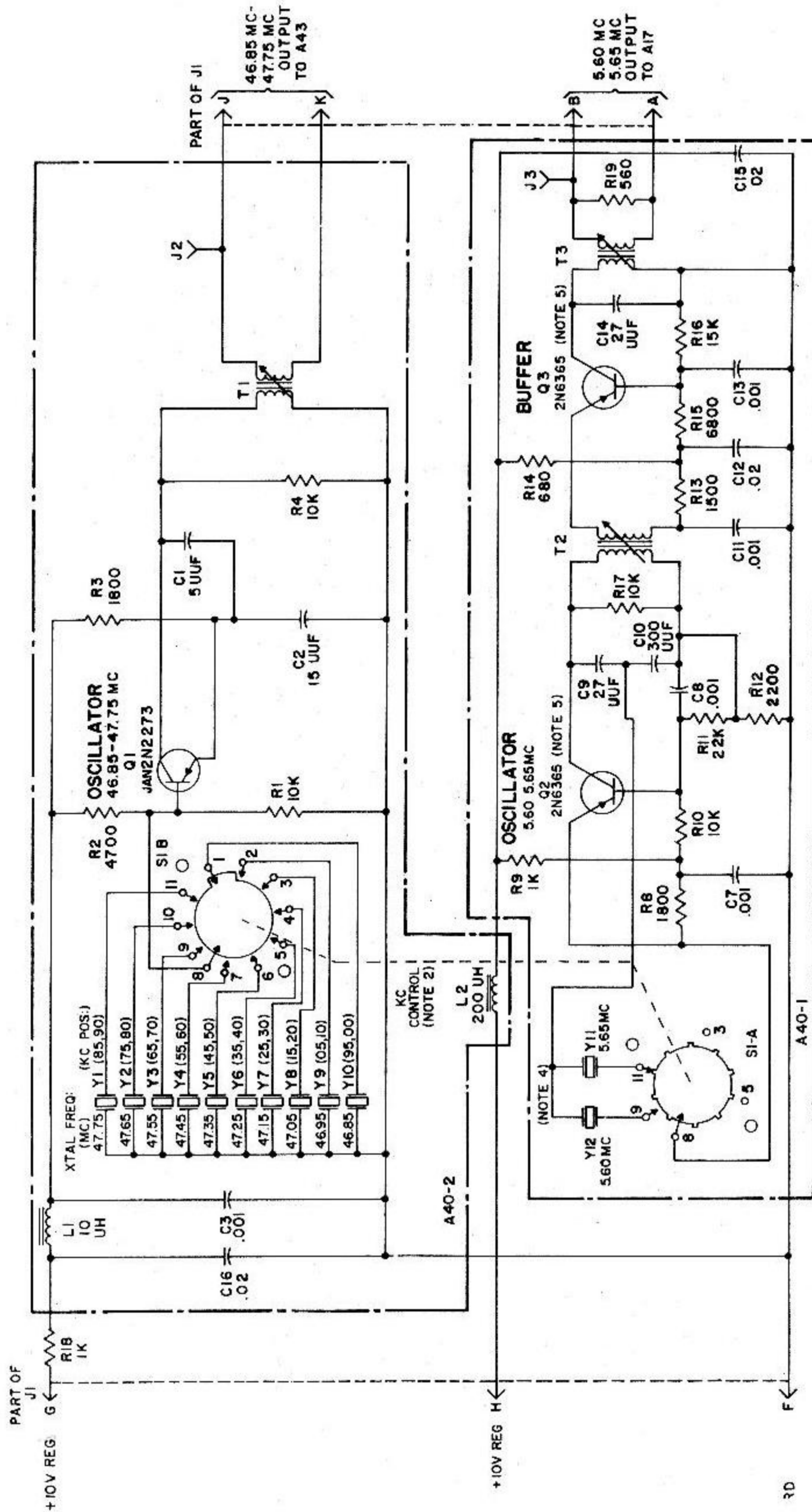


NOTES: (CONT'D)

5. Q2 AND Q3 SELECTED PER SM-B-447610.
6. Q1 SELECTED PER SM-B-447883.

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Figure 7-23. Tone generator module A23, schematic diagram.



- NOTES:
1. UNLESS OTHERWISE SPECIFIED, RESISTANCE ARE IN OHMS, CAPACITANCE ARE IN UF.
 2. SWITCH SHOWN IN 30.00 MC POSITION OF THE KC TUNING CONTROL ON THE FRONT PANEL.
 3. REFERENCE DESIGNATIONS ARE ABBREVIATED, PREFIX THE PART DESIGNATION WITH A40.
 4. 5.65 MC ± 500 CPS ON EVEN POSITIONS OF KC CONTROL (00, 10, 20, 30, ETC); 5.60 MC ON ODD POSITIONS (05, 15, 25, 35 ETC)
 5. Q2 AND Q3 ARE TYPE 2N2273 IN SOME UNITS.

Figure 7-24. Interval oscillator module A40, schematic diagram.

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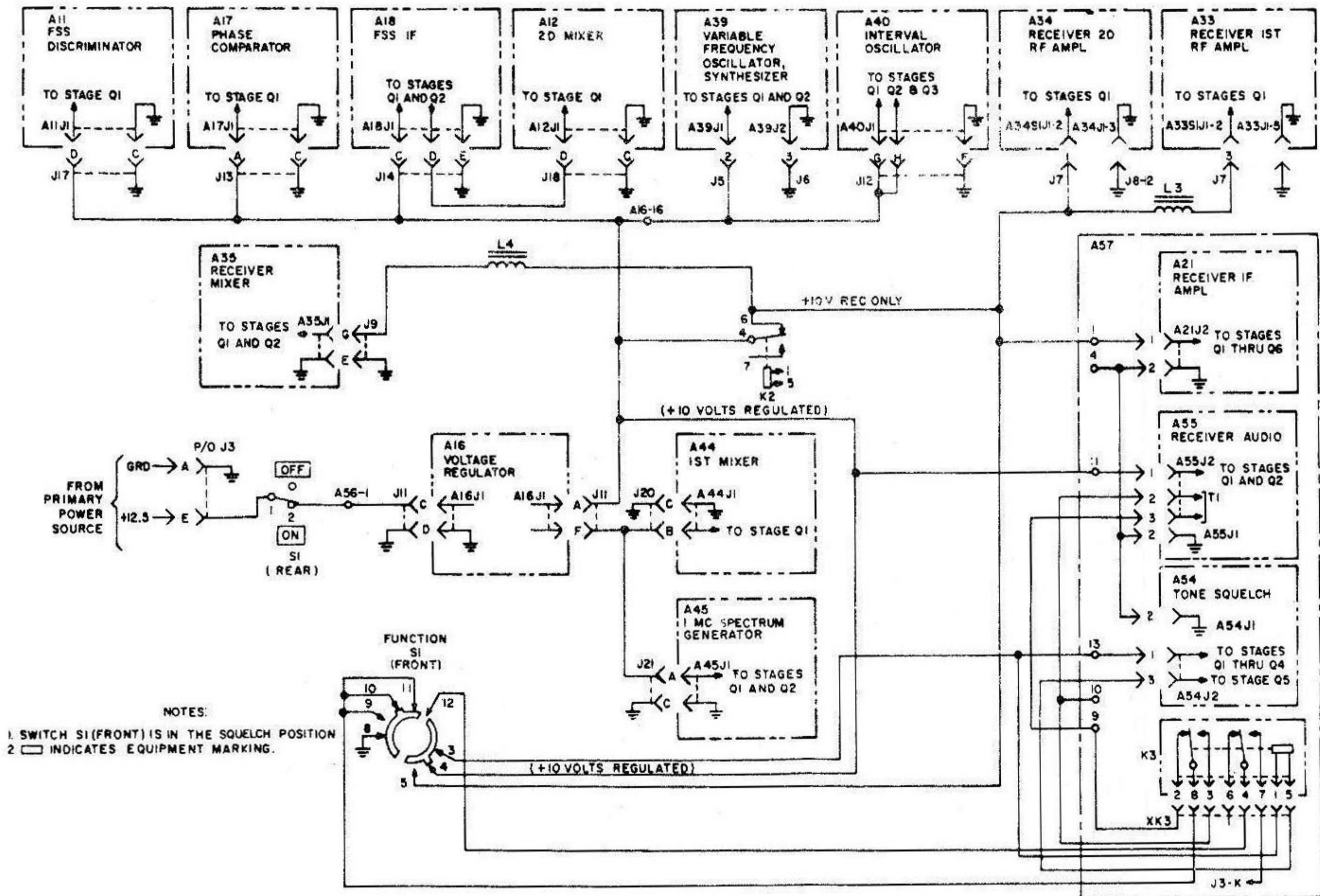
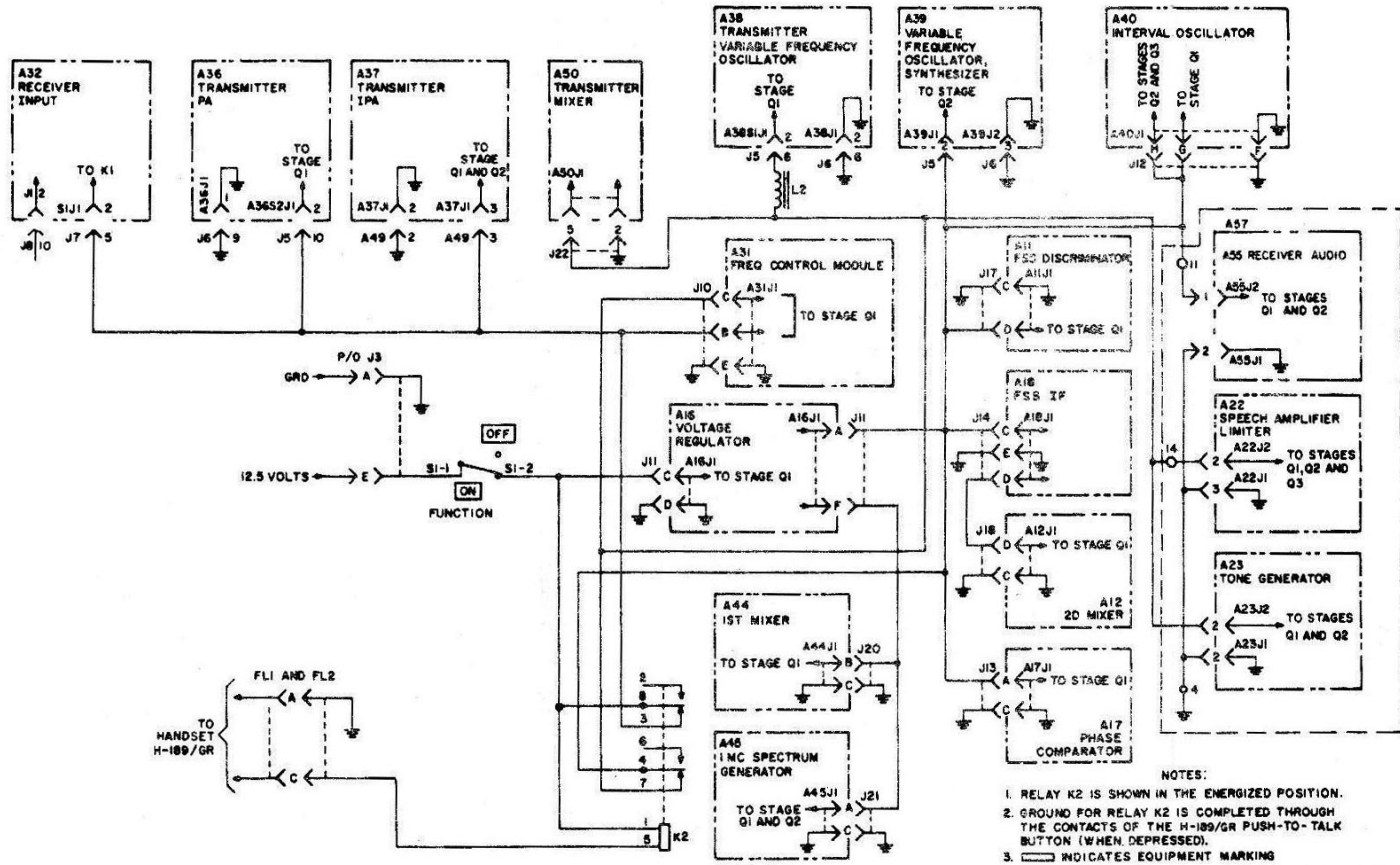


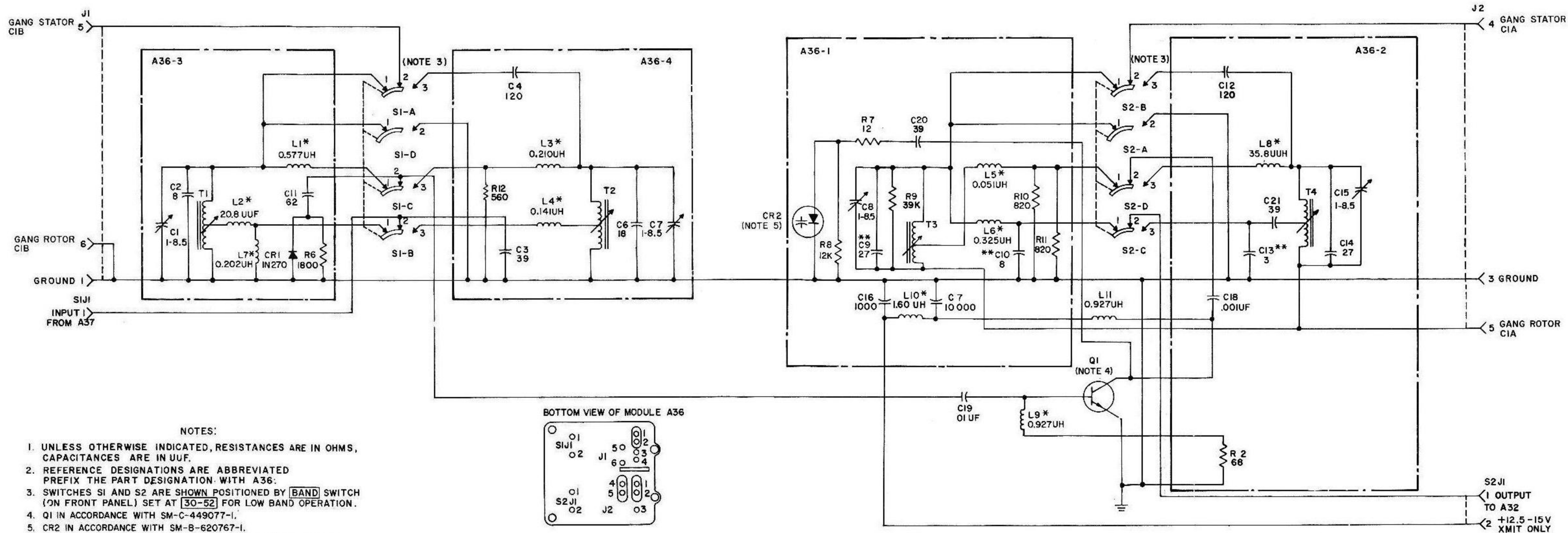
Figure 7-25. Power distribution, receive condition, simplified schematic diagram.



- NOTES:
1. RELAY K2 IS SHOWN IN THE ENERGIZED POSITION.
 2. GROUND FOR RELAY K2 IS COMPLETED THROUGH THE CONTACTS OF THE H-189/GR PUSH-TO-TALK BUTTON (WHEN DEPRESSED).
 3. INDICATES EQUIPMENT MARKING

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Figure 7-86. Power distribution, transmit condition, simplified schematic diagram.



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Figure 7-13. Transmitter power amplifier module A36, schematic diagram.