

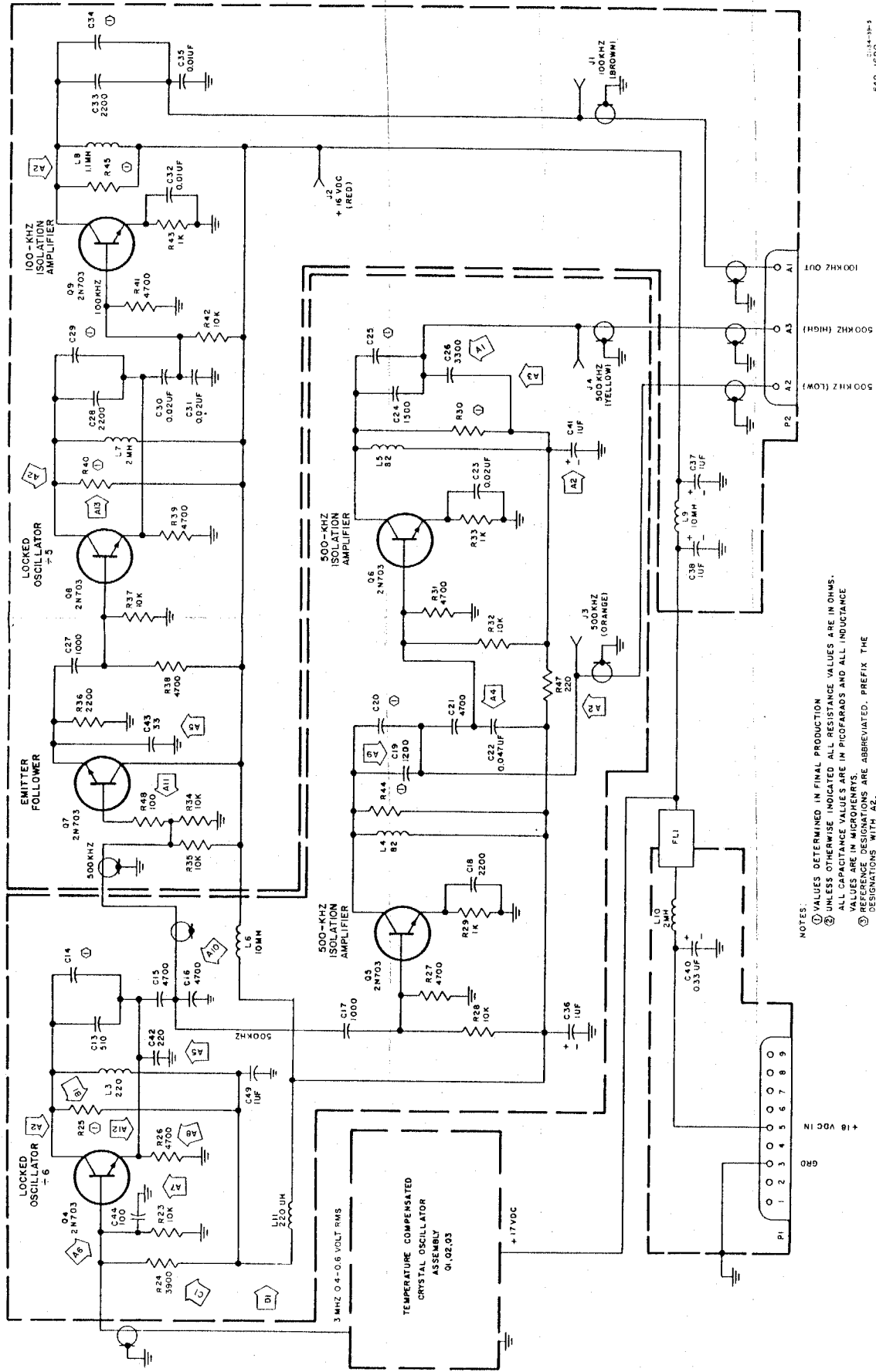


Collins 618T-(x) HF SSB Airborne transceiver



Schematic Diagrams

Courtesy AC5XP

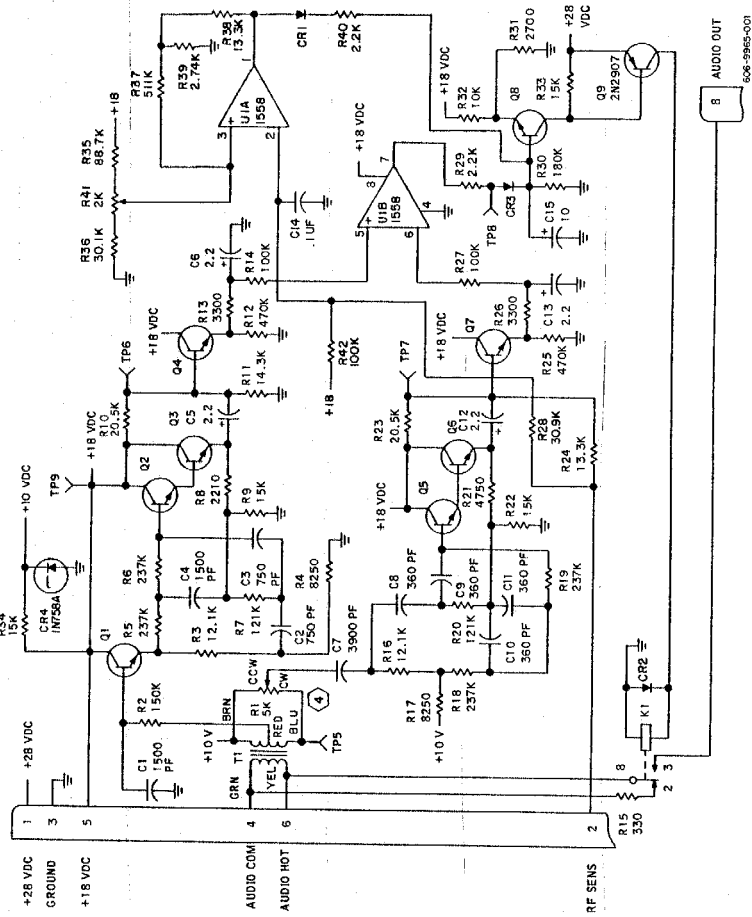


NOTES:
 ① VALUES DETERMINED IN FINAL PRODUCTION
 ② UNLESS OTHERWISE INDICATED ALL RESISTANCE VALUES ARE IN OHMS.
 ALL CAPACITANCE VALUES ARE IN PICOFARADS AND ALL INDUCTANCE
 VALUES ARE IN MICROHENRYS
 ③ REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE
 DESIGNATIONS WITH A2.

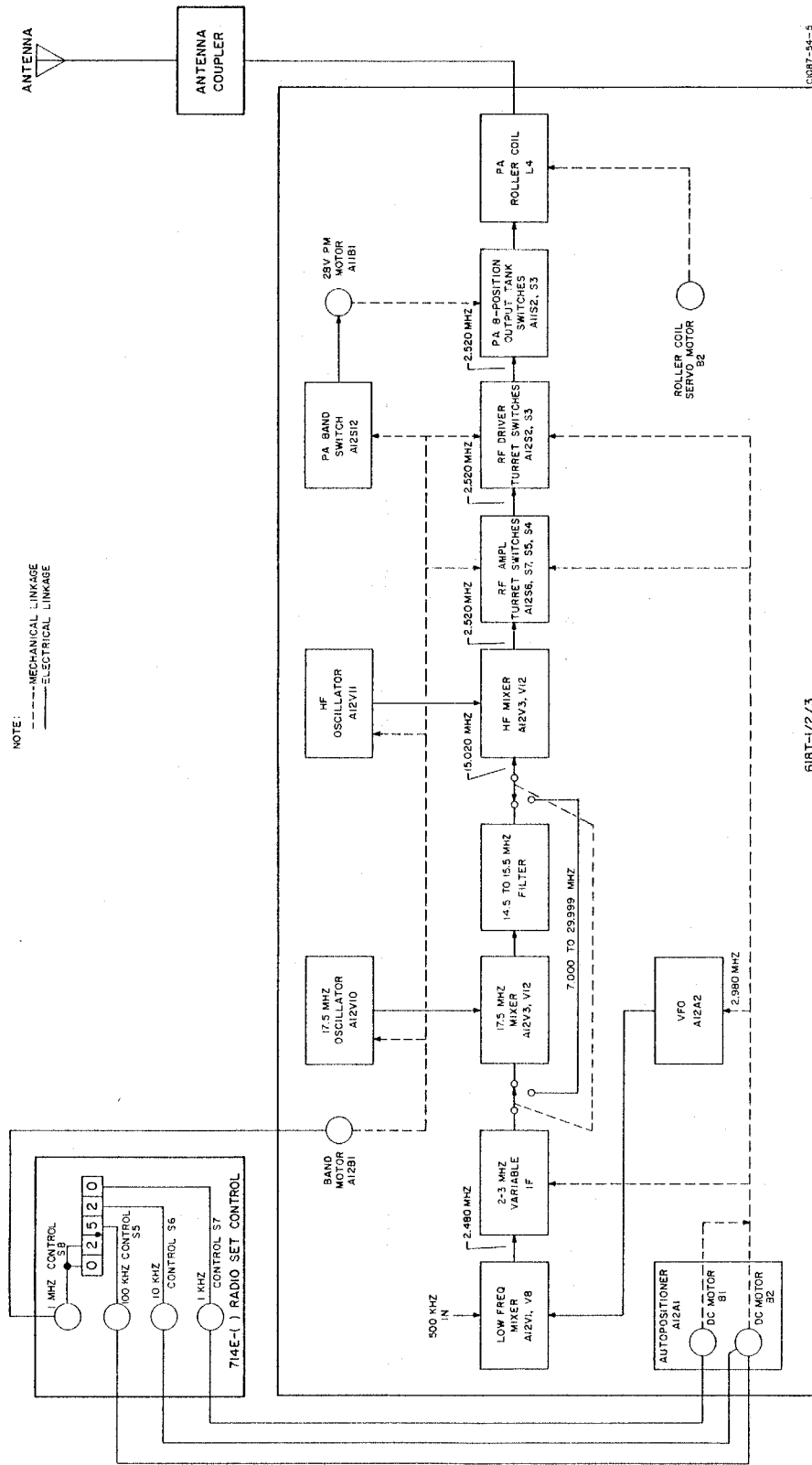
RF Oscillator A2 (528-0251-005),
Schematic Diagram
Figure 811

549-1650*

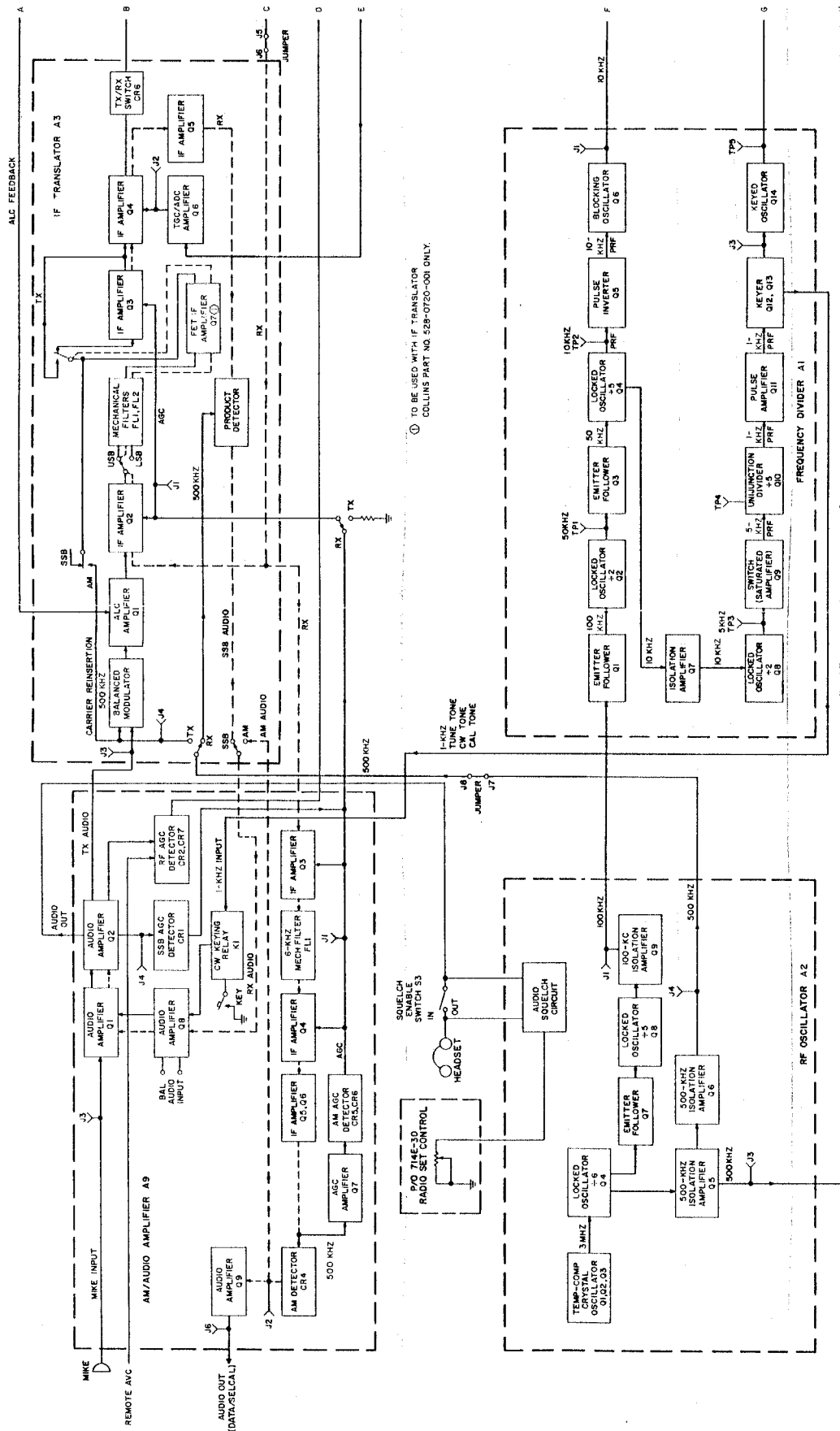
NOTE:
UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS
DIODES ARE TYPE 1N3064 AND TRANSISTORS ARE TYPE 2N930.



RF Oscillator (528-0690-002) Squelch Board (797-3684-002)
With Production Incorporation of Positive Override
Squelch, Schematic Diagram (Sheet 3 of 3) Pages 840G/840H
Figure 810A

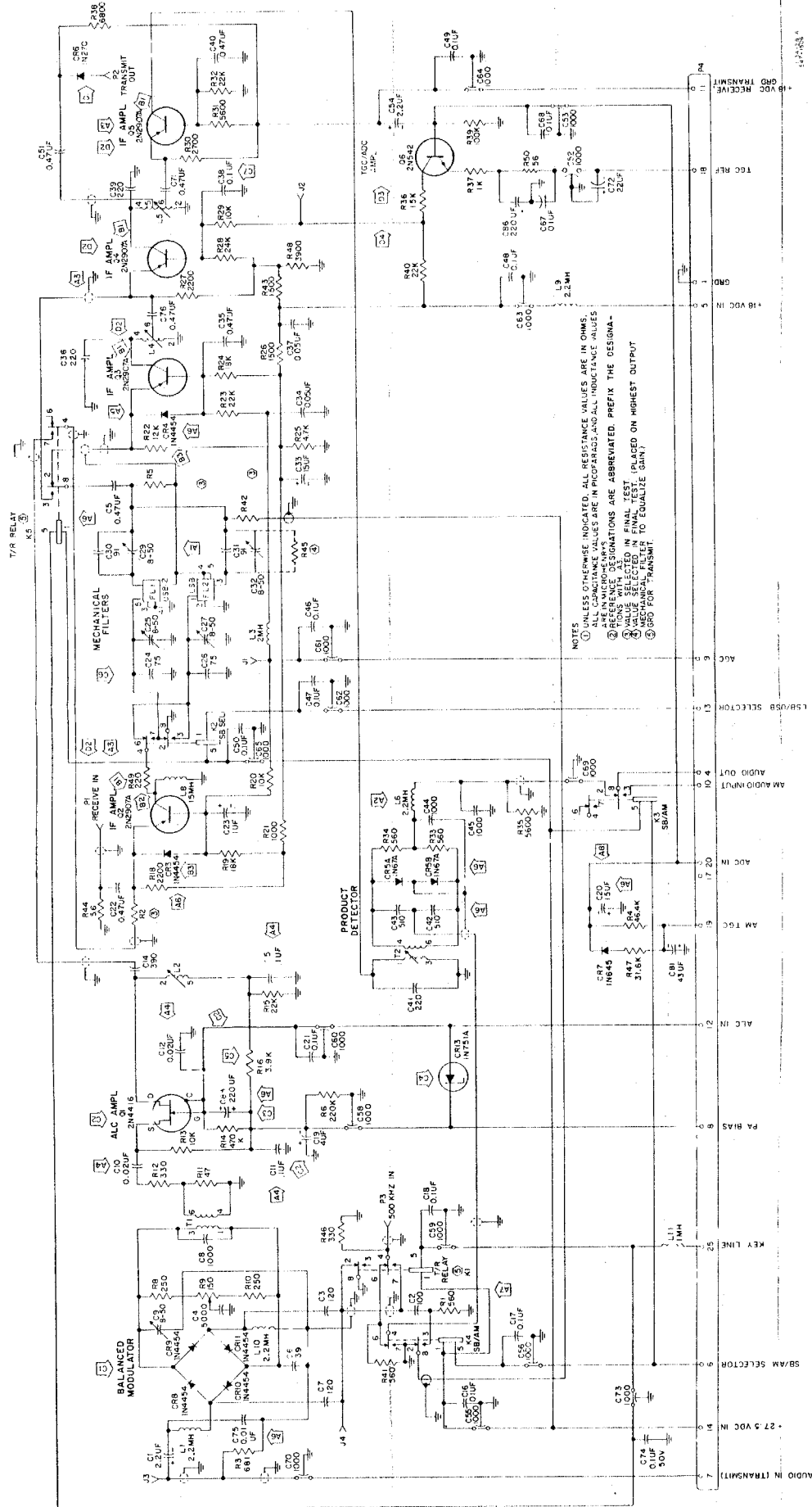


618T-1/2/3 Frequency Selection and Translation, Block Diagram
Figure 19



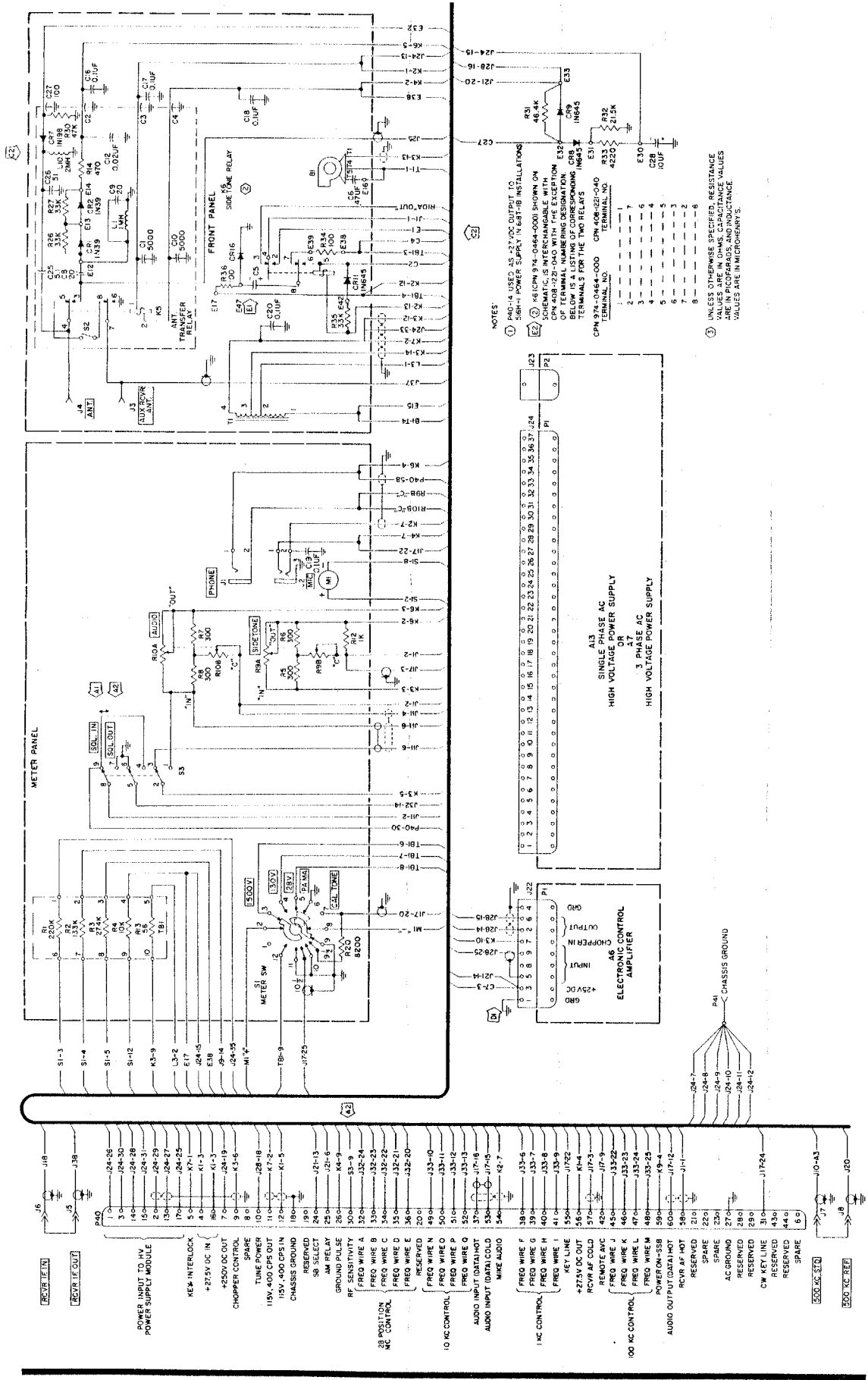
⊙ TO BE USED WITH IF TRANSLATOR
COLLINS PART NO. 528-0720-001 ONLY.

618T-1/2/3 Airborne SSB Transceivers, Block Diagram
Figure 17 (Sheet 1 of 2)



NOTES:
 ① UNLESS OTHERWISE INDICATED, ALL RESISTANCE VALUES ARE IN OHMS.
 ② ALL CAPACITANCE VALUES ARE IN MICROFARADS AND ALL INDUCTANCE VALUES ARE IN MILLIHENRYS.
 ③ RESISTORS WITH ALPHANUMERICAL DESIGNATIONS ARE ABBREVIATED. PREFIX THE DESIGNATION WITH AN "R" FOR RESISTOR.
 ④ VALUE SELECTED IN FINAL TEST.
 ⑤ MECHANICAL FILTER TO EQUALIZE GAIN.
 ⑥ 500 PPF TRANSMIT.

IF Translator A3 (544-9286-001), Schematic Diagram
Figure 813



618T-1/2/3 Chassis A, Schematic Diagram
(Late Model)
Figure 807 (Sheet 1 of 3)

618T-() AIRBORNE SSB TRANSCEIVERS

OVERHAUL MANUAL (520-5970003)

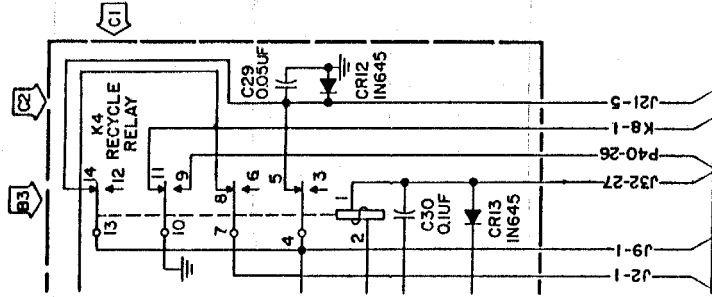
TEMPORARY REVISION NO 23-10-0-8

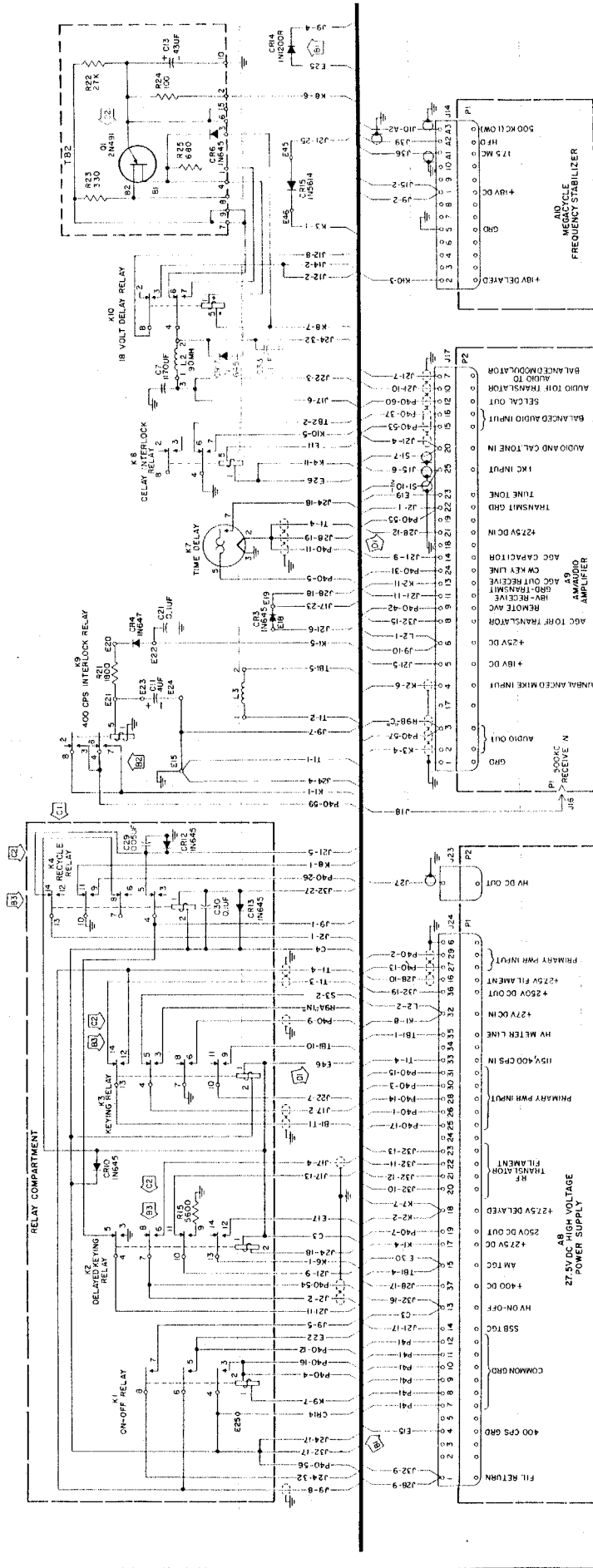
This TEMPORARY REVISION replaces TEMPORARY REVISION NO 23-10-0-7

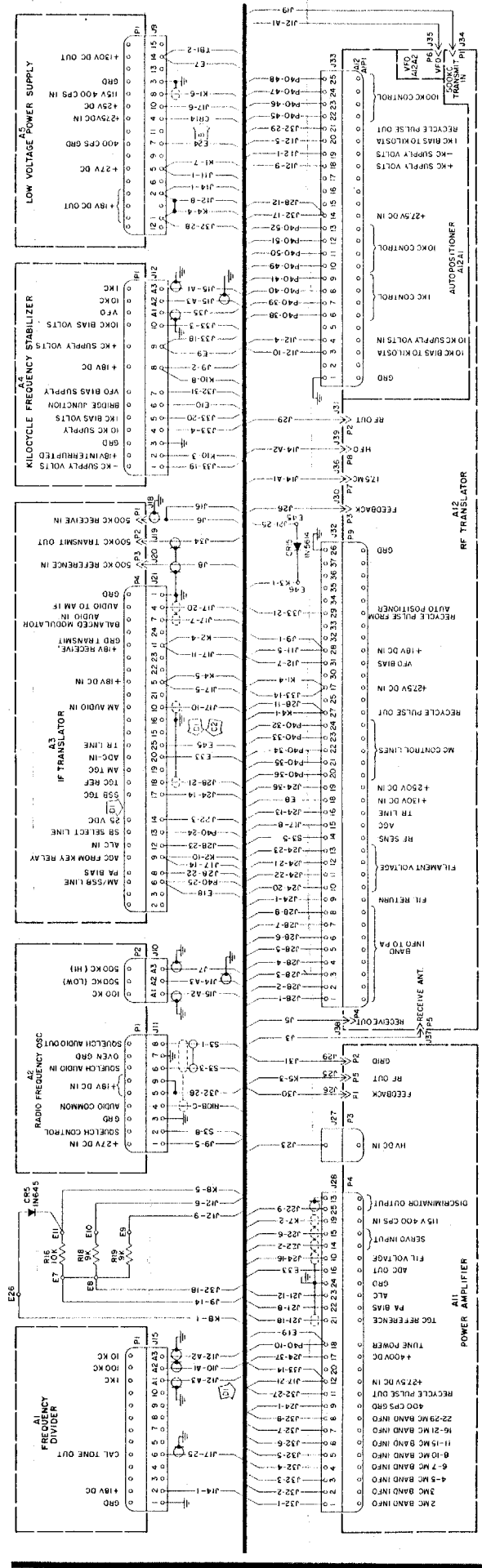
Insert facing page 817/818, 23-10-0

Subject: 618T-1/2/3 Chassis A, Schematic Diagram (Late Model), Figure 807
(Sheet 2).

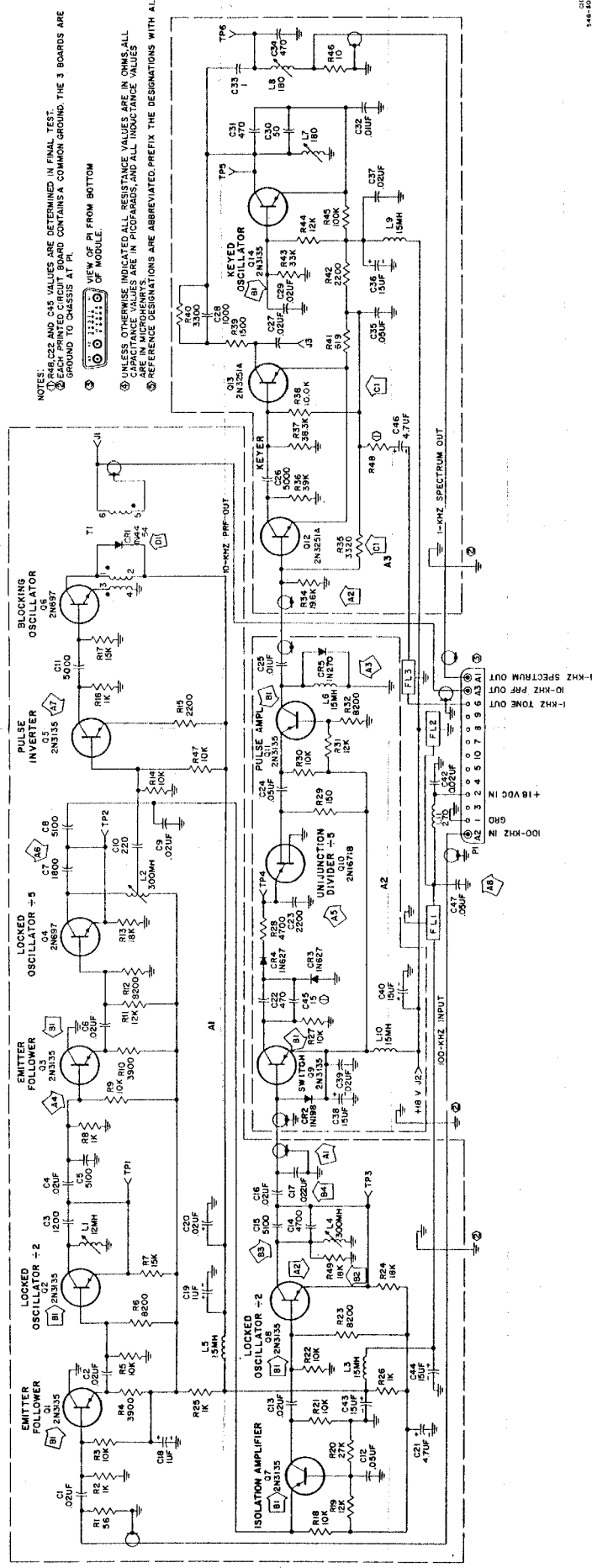
Correct schematic wiring error of relay K4 pins 7 and 13 as follows:





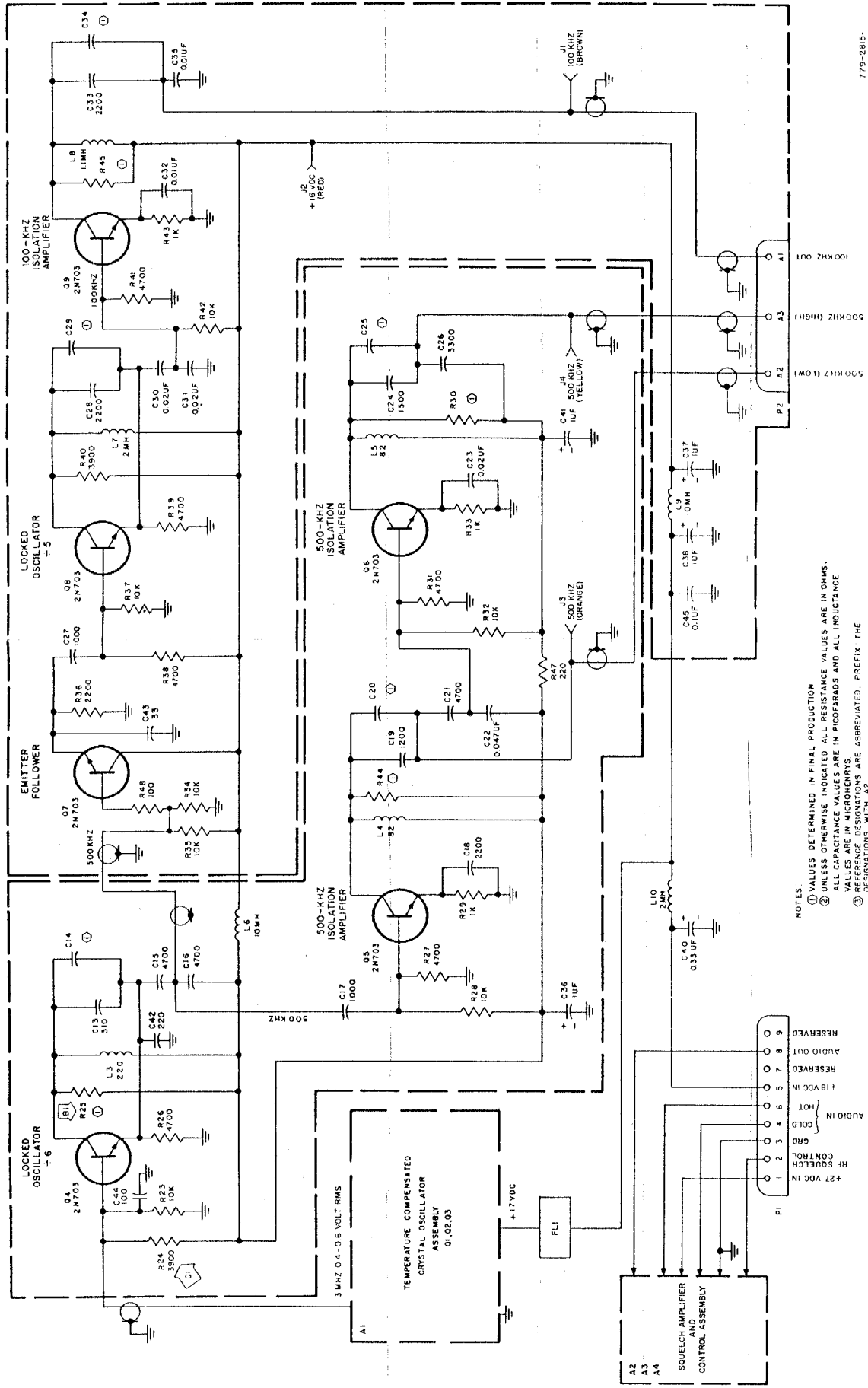


618T-1/2/3 Chassis A, Schematic Diagram (Late Model)
 Figure 807 (Sheet 3)



NOTES:
 1. R48, C22, AND C45 VALUES ARE DETERMINED IN FINAL TEST.
 2. R48, C22, AND C45 CONTAIN A COMMON GROUND. THE 3 BOARDS ARE GROUND TO CHASSIS AT P1.
 3. VIEW OF P1 FROM BOTTOM OF MODULE.
 4. UNLESS OTHERWISE INDICATED ALL RESISTANCE VALUES ARE IN OHMS. ALL CAPACITANCE VALUES ARE IN PICOFARADS, AND ALL INDUCTANCE VALUES ARE IN MILLIHENRIES.
 5. REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE DESIGNATIONS WITH A1.

618T-1/2/3 Frequency Divider A1, Schematic Diagram
Figure 809

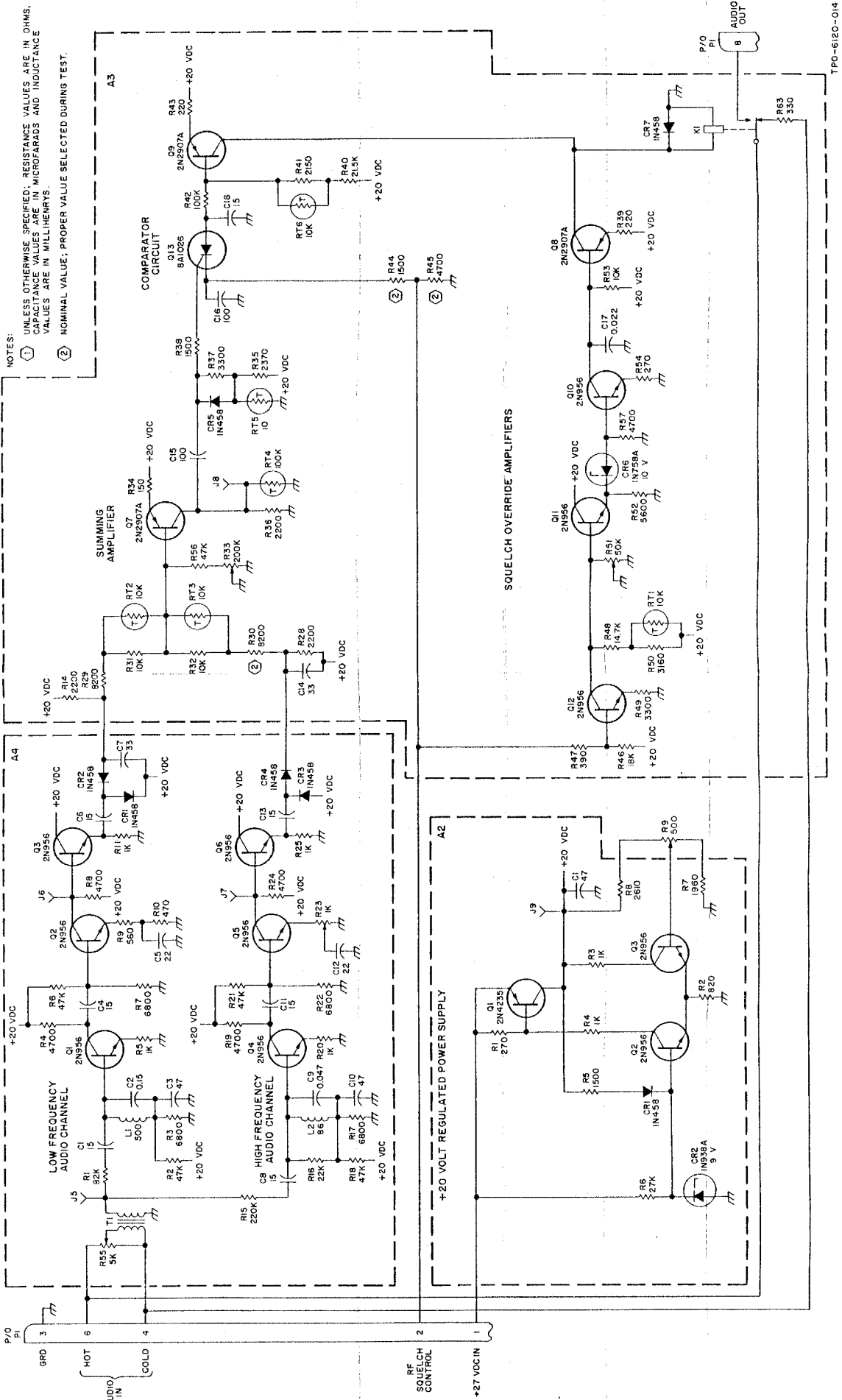


NOTES:
 ① VALUES DETERMINED IN FINAL PRODUCTION
 ② UNLESS OTHERWISE INDICATED ALL RESISTANCE VALUES ARE IN OHMS.
 ALL CAPACITANCE VALUES ARE IN PICOFARADS AND ALL INDUCTANCE
 VALUES ARE IN MICROHENRYS.
 ③ REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE
 DESIGNATIONS WITH A2.

779-2805

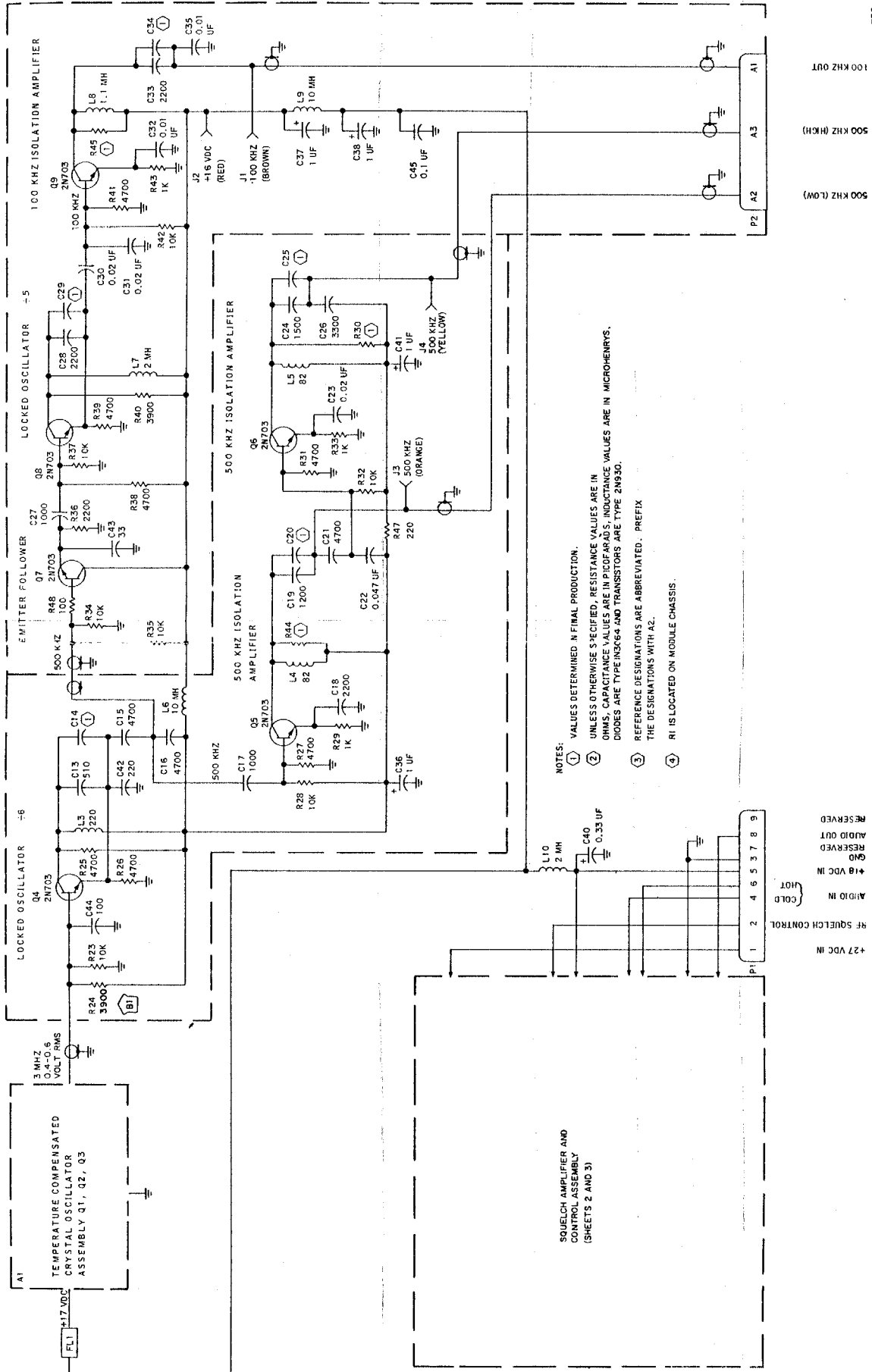
RF Oscillator A2 (528-0690-001),
Schematic Diagram
Figure 810 (Sheet 1 of 2)

23-10-0
Pages 837/838
Oct 1/78

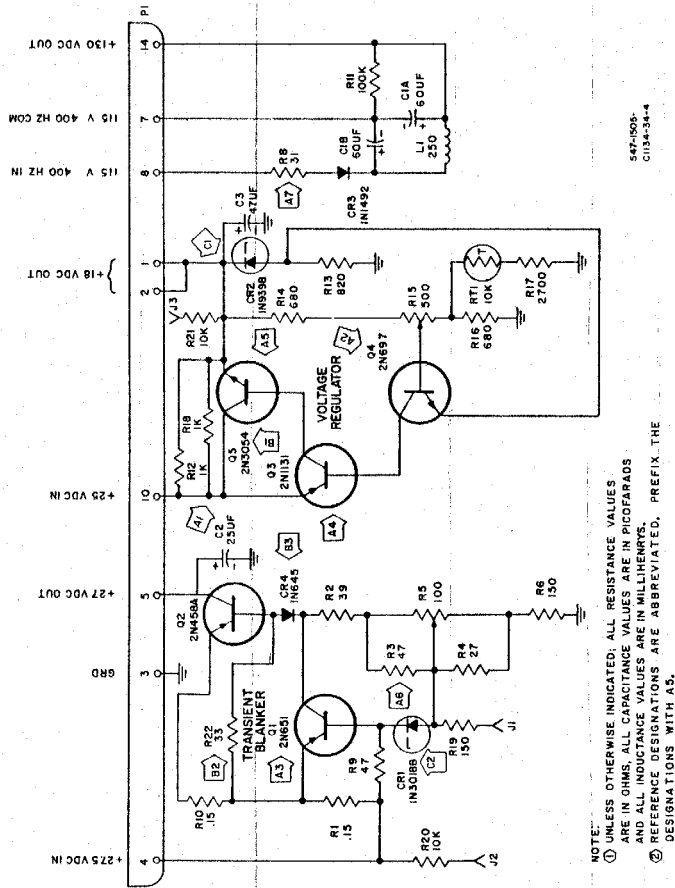


NOTES:
 (1) UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS AND INDUCTANCE VALUES ARE IN MILLIHENRYS.
 (2) NOMINAL VALUE, PROPER VALUE SELECTED DURING TEST.

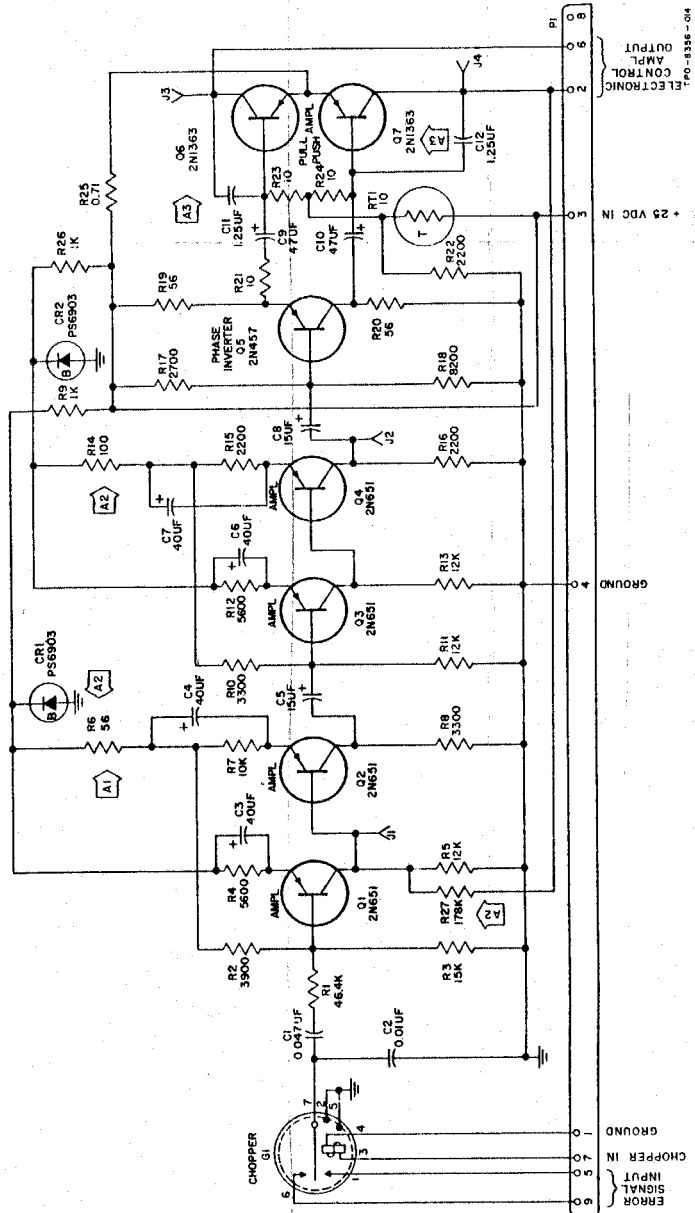
RF Oscillator A2 (528-0690-001), Schematic Diagram (Sheet 2 of 2)
 Figure 810



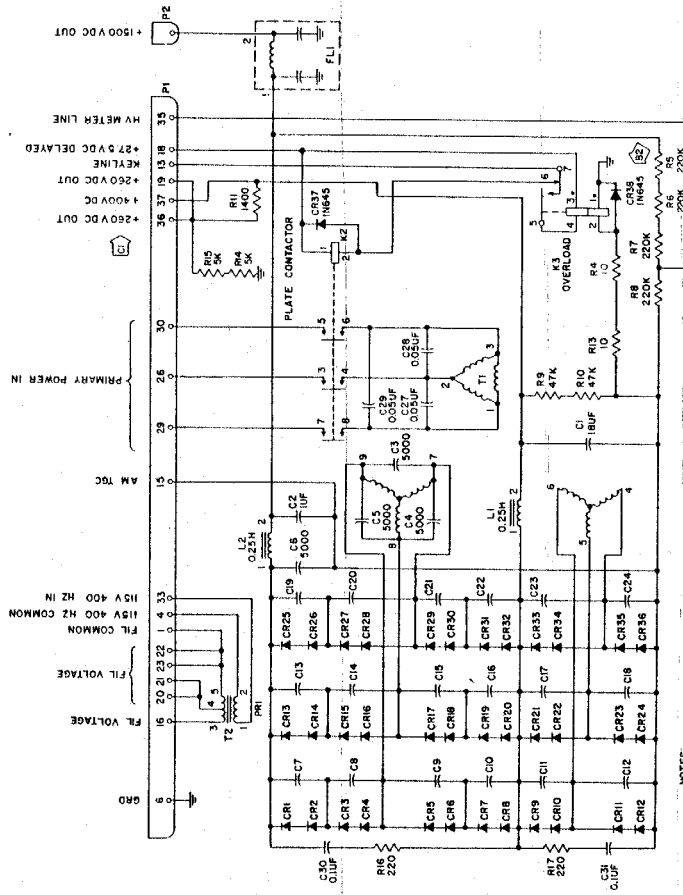
TP2-8042-013



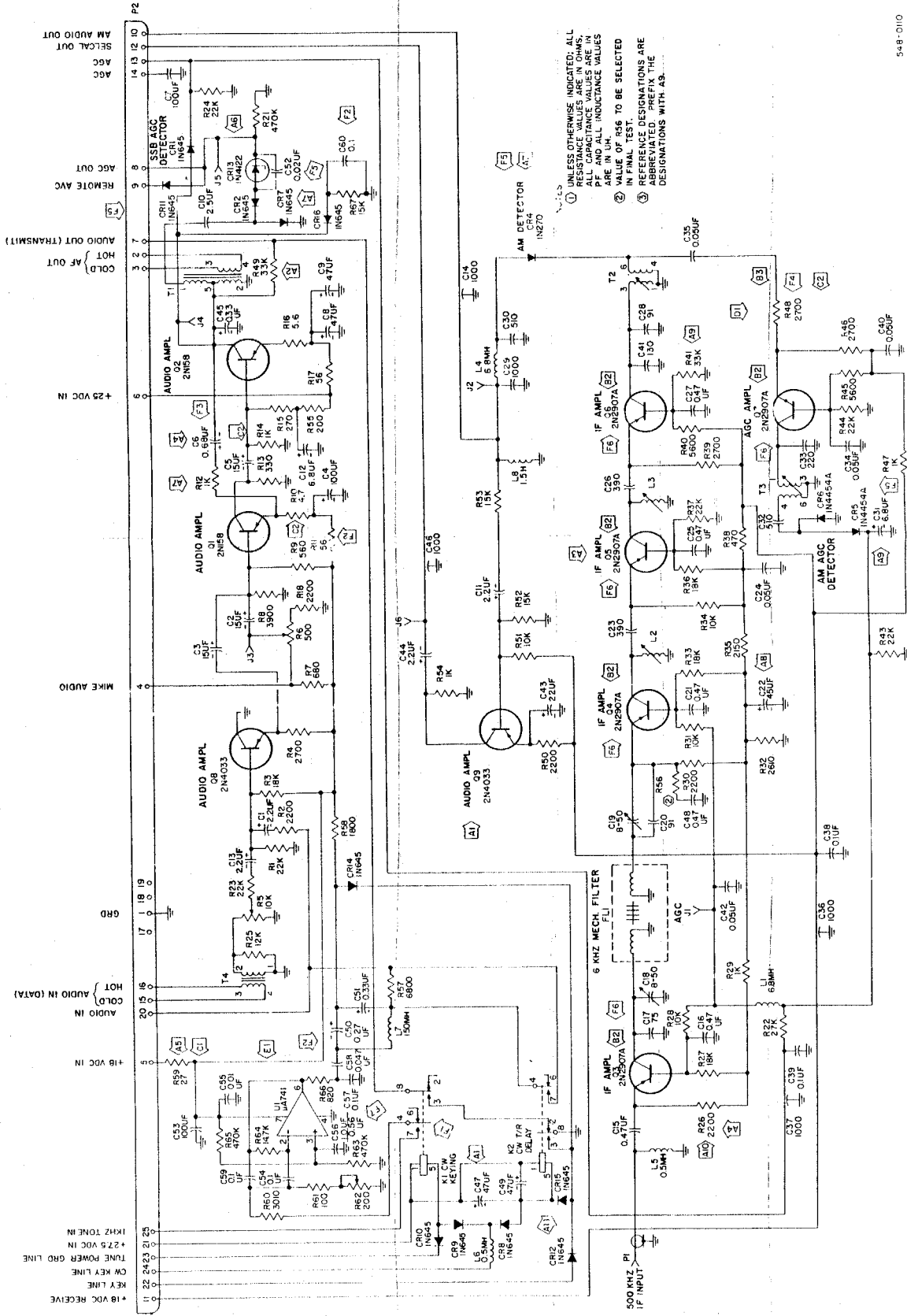
Low-Voltage Power Supply A5, Schematic Diagram
Figure 816



Electronic Control Amplifier A6, Schematic Diagram
Figure 817

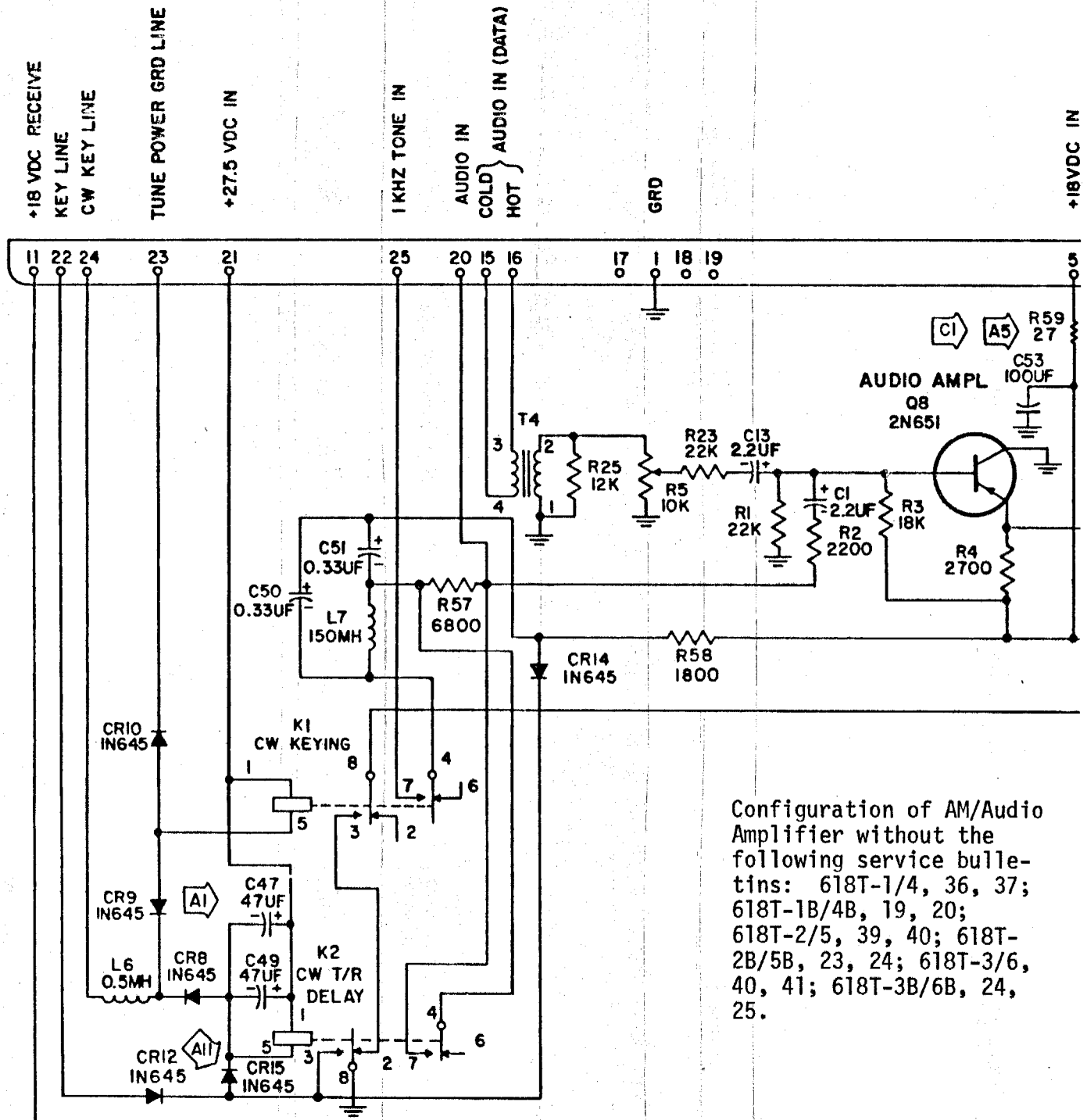


NOTES:
1. CR1 THRU CR36 ARE TYPE IN4932 OR IN4005
2. CT THRU C24 ARE 1000 UF
3. UNLESS OTHERWISE INDICATED, ALL RESISTANCE VALUES ARE IN OHMS
4. RESISTANCE VALUES ARE IN OHMS UNLESS OTHERWISE INDICATED
5. PREFIX THE DESIGNATIONS WITH .47



① UNLESS OTHERWISE INDICATED, ALL RESISTANCE VALUES ARE IN OHMS, ALL CAPACITANCE VALUES ARE IN P.F. AND ALL INDUCTANCE VALUES ARE IN MH. VALUE OF 566 TO BE SELECTED IN FINAL TEST. REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE DESIGNATIONS WITH AS...

AM/Audio Amplifier A9, Schematic Diagram
(Late Model)
Figure 822

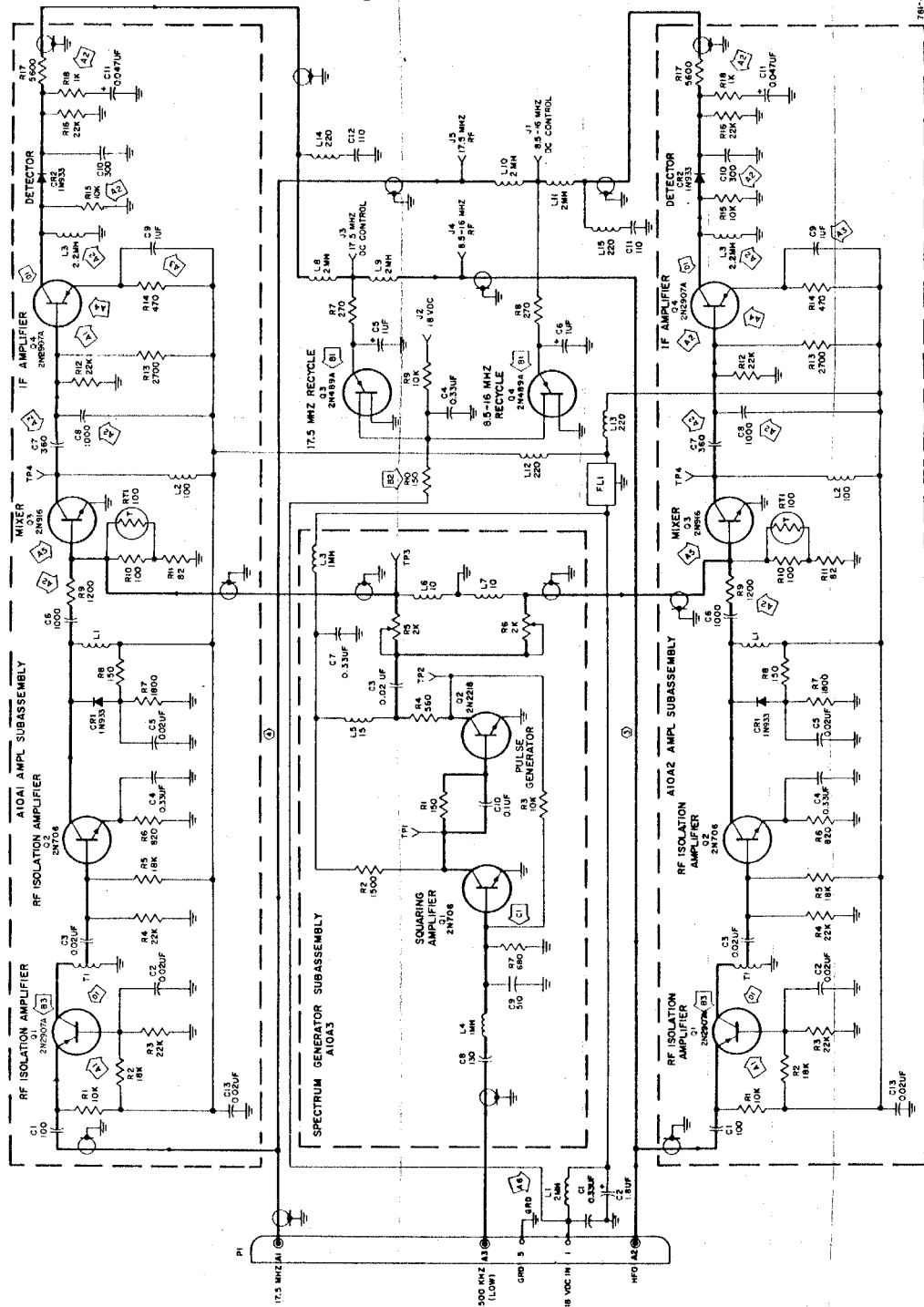


Configuration of AM/Audio Amplifier without the following service bulletins: 618T-1/4, 36, 37; 618T-1B/4B, 19, 20; 618T-2/5, 39, 40; 618T-2B/5B, 23, 24; 618T-3/6, 40, 41; 618T-3B/6B, 24, 25.

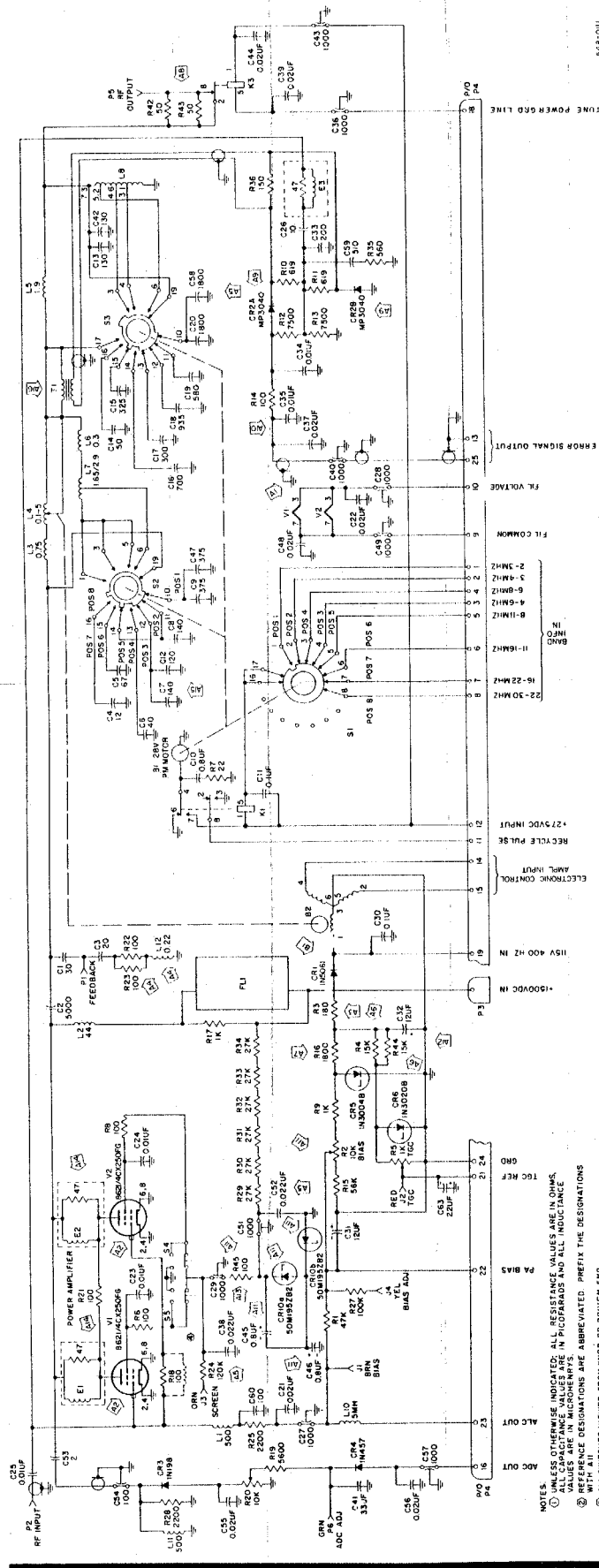
AM/Audio Amplifier A9, Schematic Diagram

(Late Model) Sheet 2

Figure 822

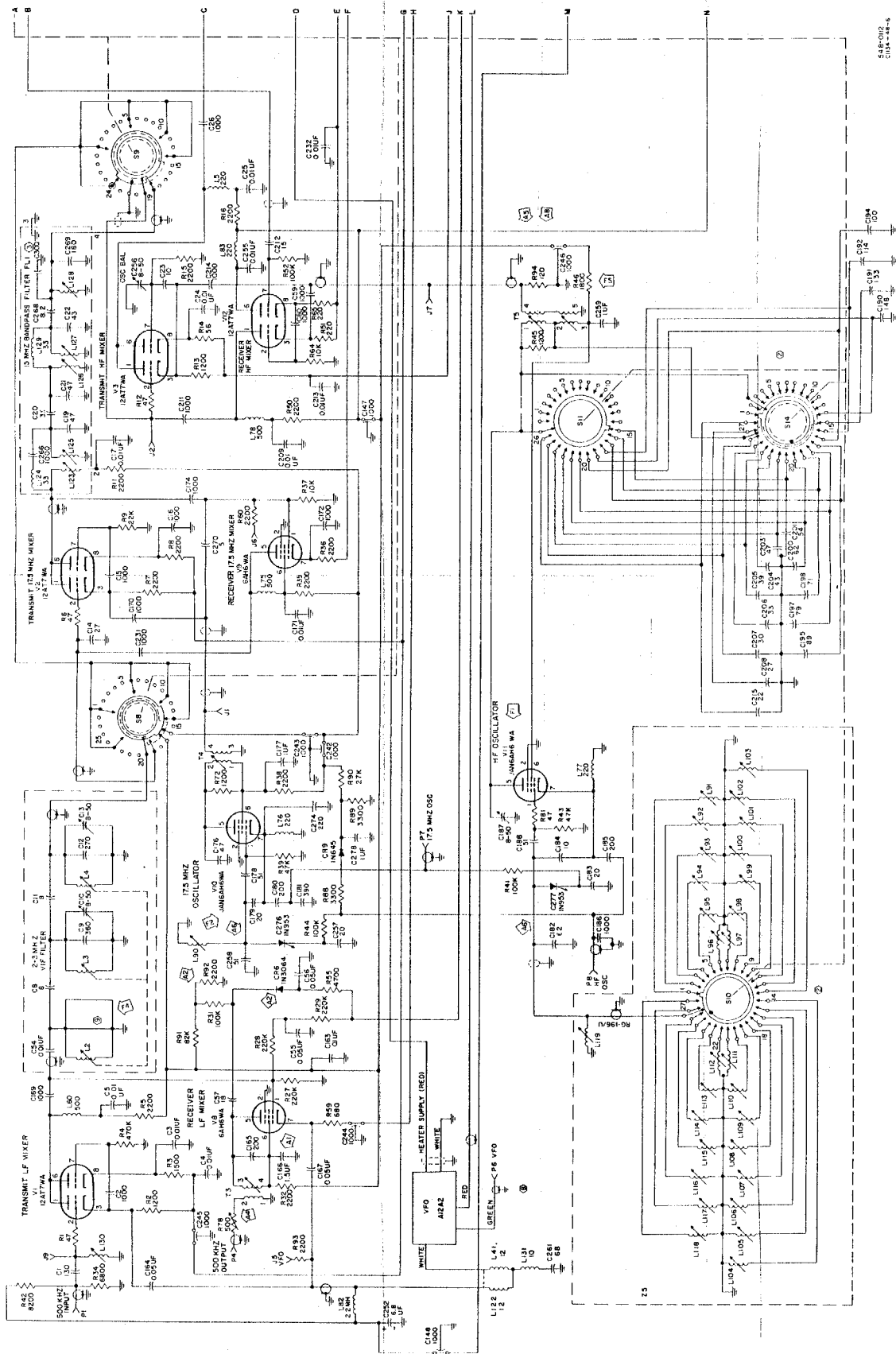


NOTES:
 ① UNLESS OTHERWISE INDICATED, ALL RESISTANCE VALUES ARE IN OHMS, ALL CAPACITANCE VALUES ARE IN PICOFARADS, AND ALL INDUCTANCE VALUES ARE IN MICROHENRYS.
 ② REFERENCE DESIGNATIONS ARE ABBREVIATED-PREFIX THE DESIGNATIONS WITH THE ASSEMBLY/SUBASSEMBLY DESIGNATION.
 ③ 17.5-MHZ DC CONTROL IS RETURNED TO RF TRANSLATOR BY 17.5-MHZ RF LINE.
 ④ 85-16-MHZ DC CONTROL IS RETURNED TO RF TRANSLATOR BY 17.5-MHZ RF LINE.

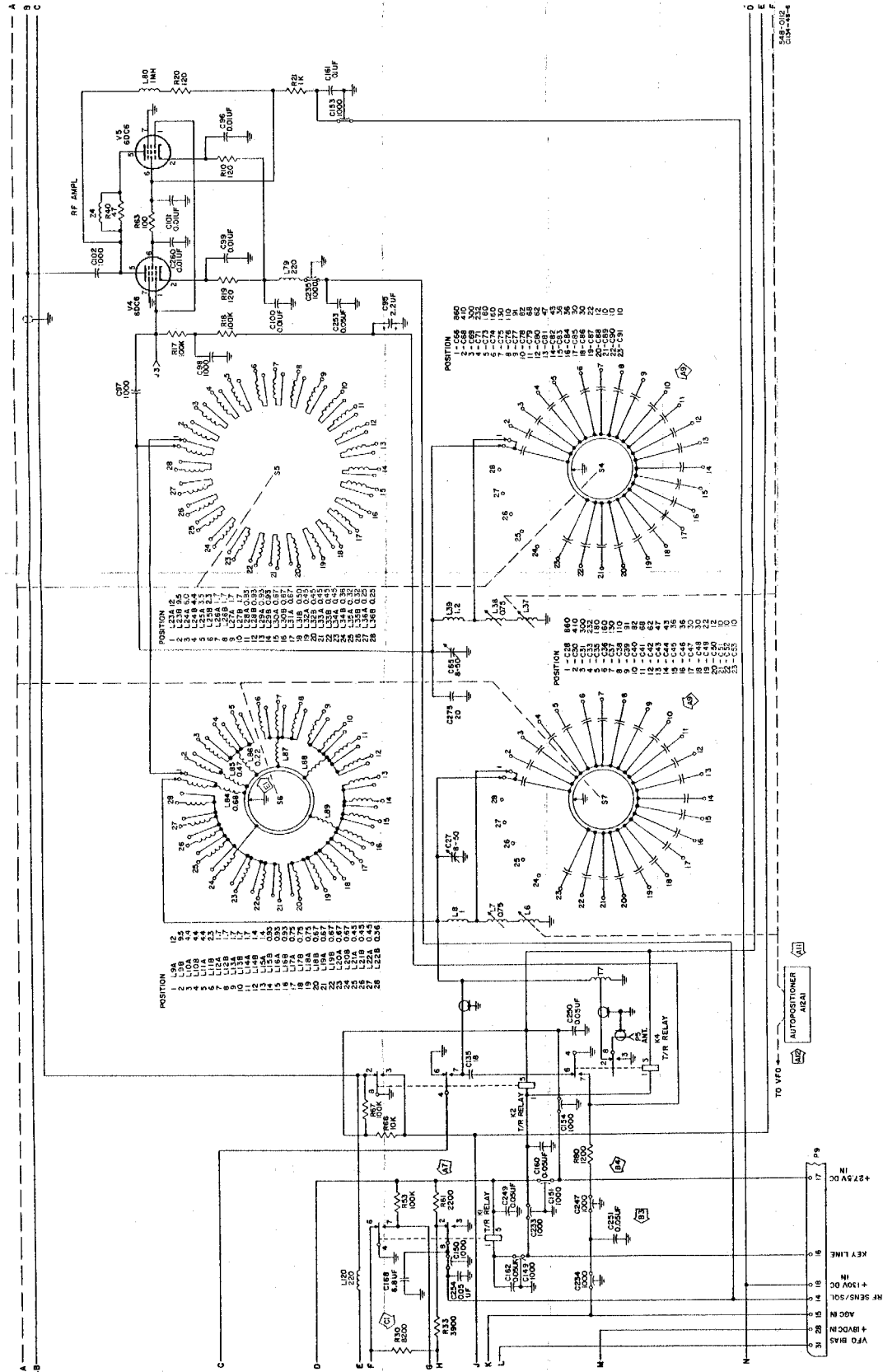


- NOTES:
 ① ALL RESISTANCE VALUES ARE IN OHMS.
 ② ALL CAPACITANCE VALUES ARE IN MICROFARADS AND ALL INDUCTANCE VALUES ARE IN MICROHENRYS.
 ③ WITH THE SWITCH DESIGNATIONS ARE ABBREVIATED. PREPARE THE DESIGNATIONS WITH THE SWITCH VIEWED FROM ANO8 OR DRIVEN END.
 ④ ALL SWITCHES VIEWED FROM ANO8 OR DRIVEN END.
 ⑤ INDUCTANCE IS A STRAP TIED ACROSS R19.

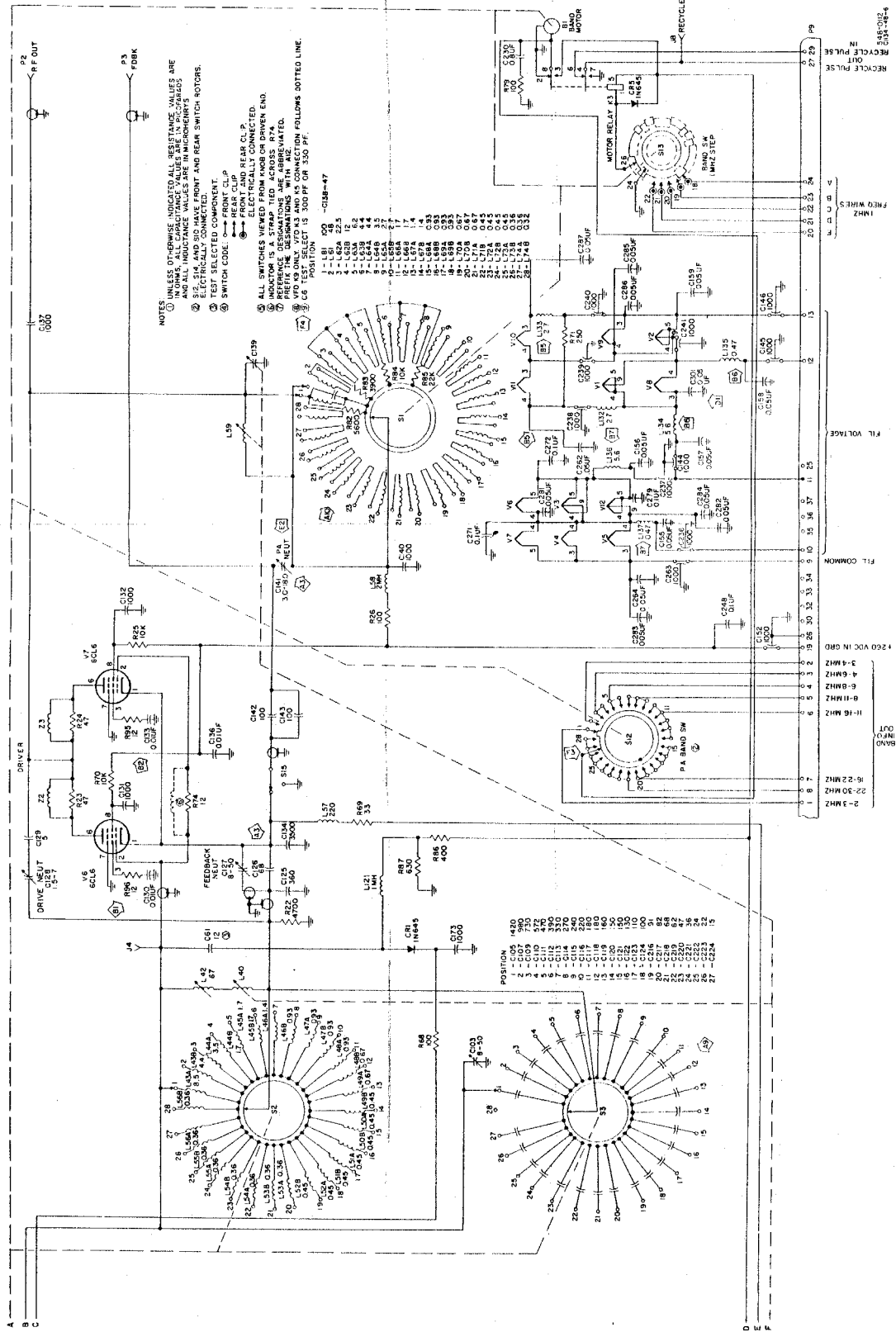
Power Amplifier A11, Schematic
Diagram (Late Model)
Figure 826



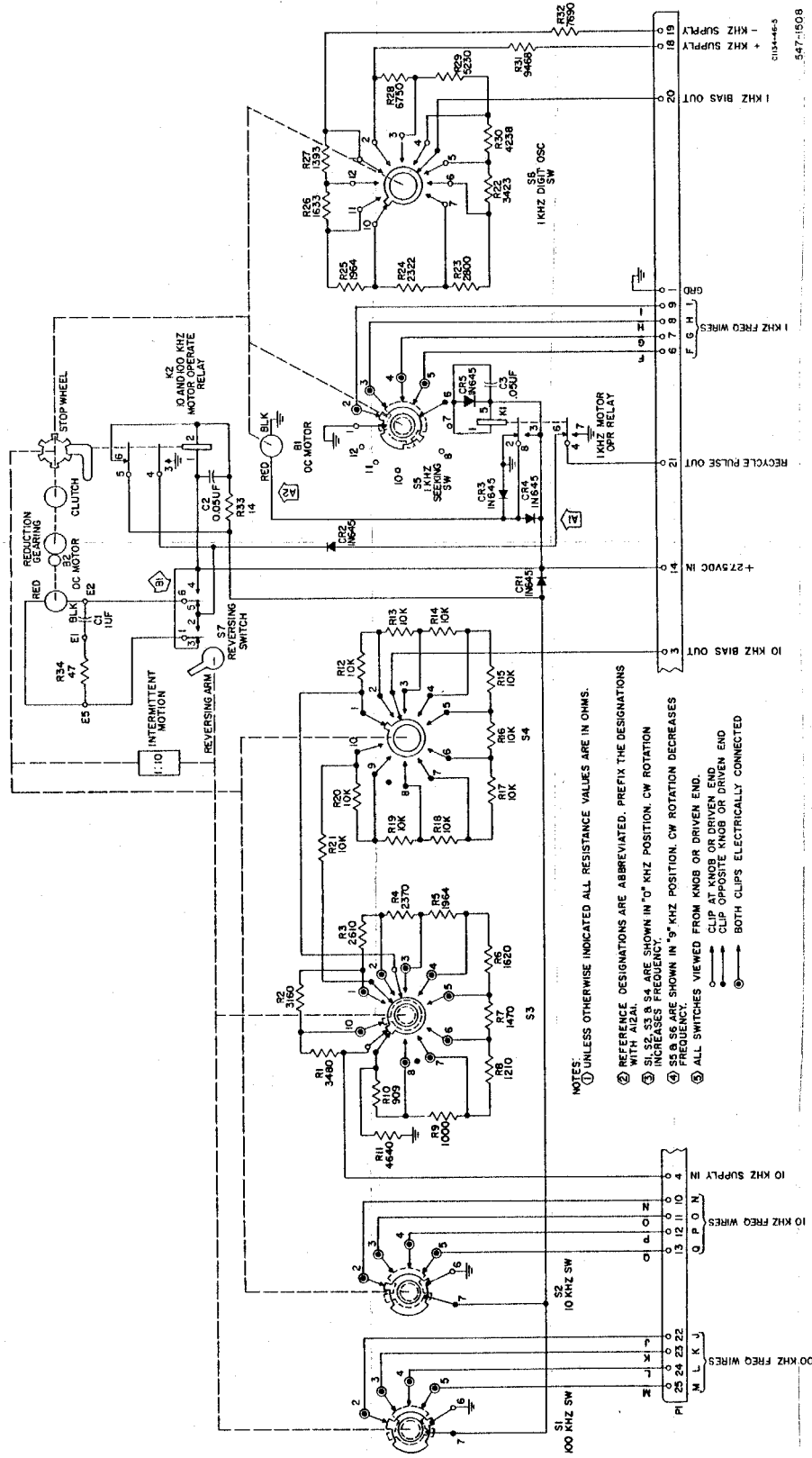
618T-1/2/3 RF Translator A12, Schematic
 Diagram (Late Model)
 Figure 830 (Sheet 1 of 3)



618T-1/2/3 RF Translator A12,
Schematic Diagram (Late Model)
Figure 830 (Sheet 2)

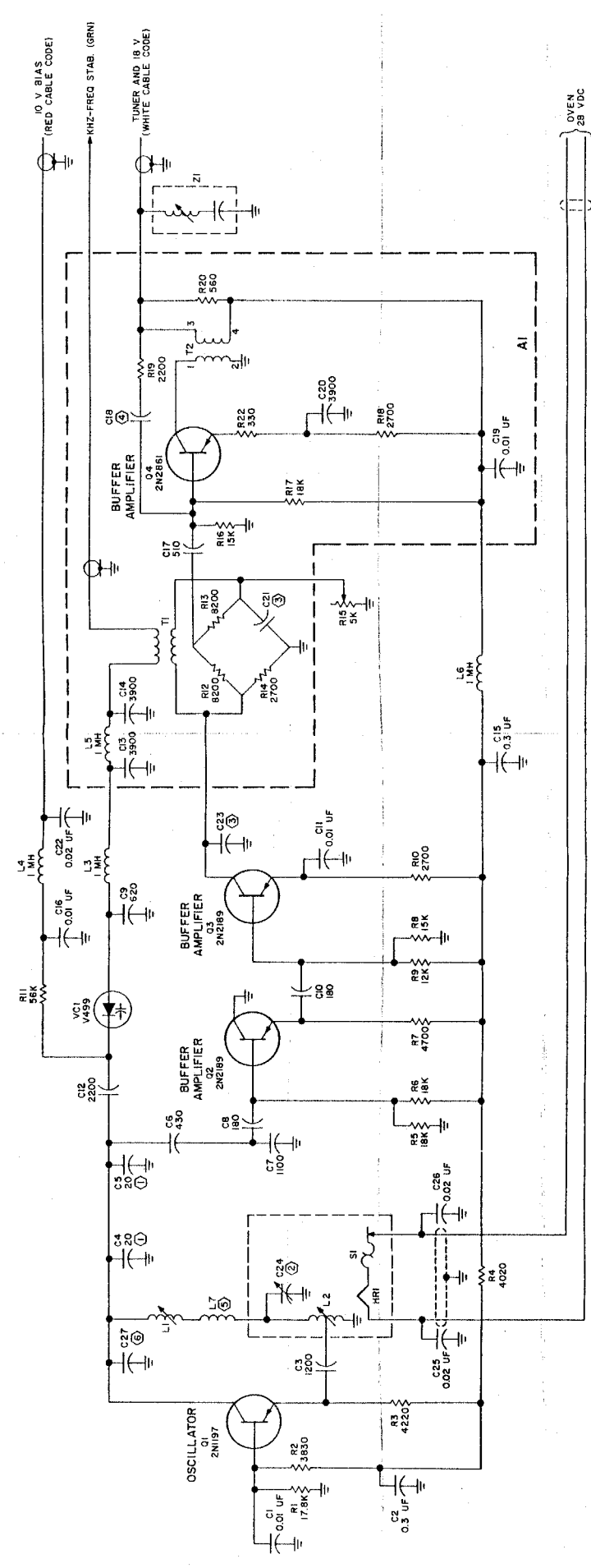


618T-1/2/3 R.F. Translator A12, Schematic
 Diagram (Late Model)
 Figure 830 (Sheet 3)



- NOTES:
- ① UNLESS OTHERWISE INDICATED ALL RESISTANCE VALUES ARE IN OHMS.
 - ② REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE DESIGNATIONS WITH ALFA. R4 ARE SHOWN IN "0" KHZ POSITION. CW ROTATION INCREASES FREQUENCY.
 - ③ S5 & S6 ARE SHOWN IN "9" KHZ POSITION. CW ROTATION DECREASES FREQUENCY.
 - ④ ALL SWITCHES VIEWED FROM KNOB OR DRIVEN END.
 - CLIP AT KNOB OR DRIVEN END.
 - CLIP OPPOSITE KNOB OR DRIVEN END
 - BOTH CLIPS ELECTRICALLY CONNECTED

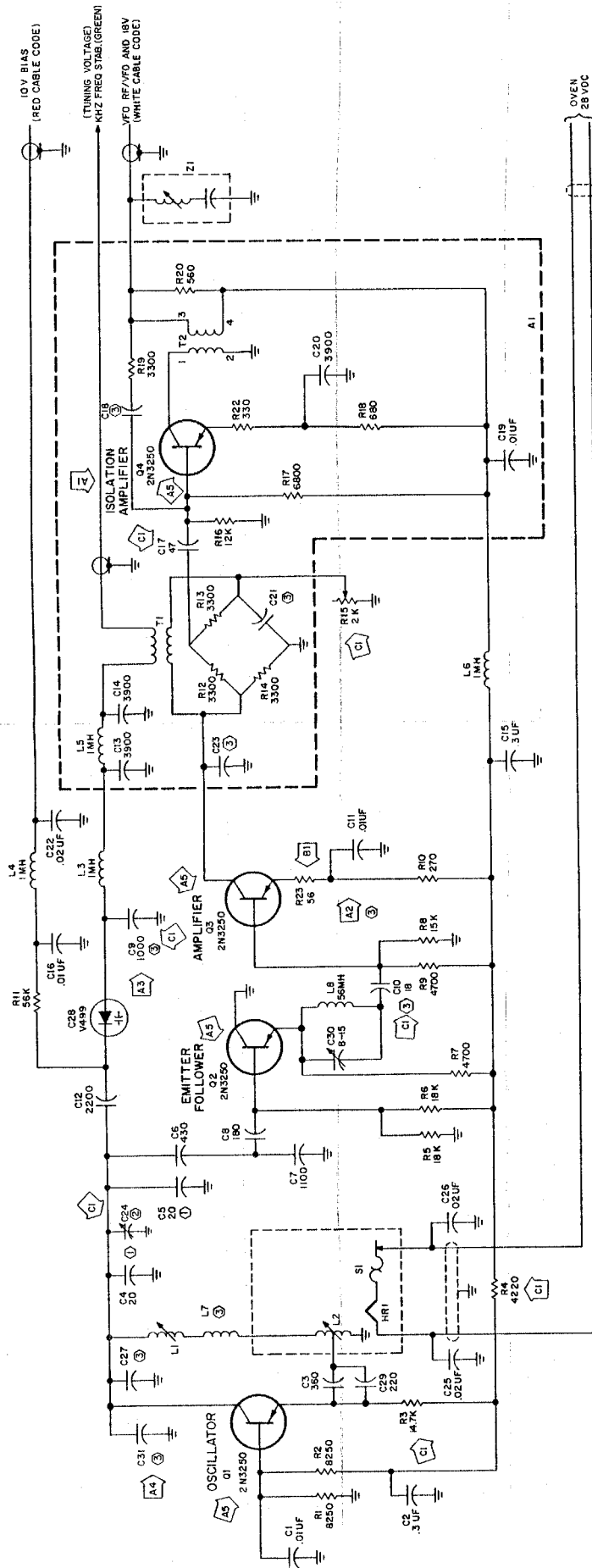
618T-1/2/3 Autopositioner A12A1, Schematic Diagram
Figure 832



- NOTES:
- ① TEMPERATURE COMPENSATION SELECTED IN FINAL TEST.
 - ② VIBRATING COMPENSATING CAPACITOR.
 - ③ SELECTED IN FINAL TEST FROM FOLLOWING VALUES:
- | | | | | | |
|----|-----|-----|------|------|------|
| C1 | 0.5 | 1.0 | 1.5 | 2.0 | 2.4 |
| C2 | 3.0 | 6.8 | 15.0 | 20.0 | 24.0 |
| C3 | 4.0 | 7.5 | 20.0 | 24.0 | 30.0 |
- ④ SELECTED IN FINAL TEST FROM FOLLOWING VALUES:
- | | | | |
|-----|-----|----|----|
| C15 | 8.2 | 10 | 15 |
|-----|-----|----|----|
- ⑤ SELECTED IN FINAL TEST FROM FOLLOWING VALUES:
- | | | |
|--------|---------|------|
| C10 UH | 0.22 UH | NONE |
|--------|---------|------|
- ⑥ TEST SELECT.
 - ⑦ UNLESS OTHERWISE SPECIFIED, RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN PICOFARADS, AND INDUCTANCE VALUES ARE IN MICROHENRYS.

770-4458-014

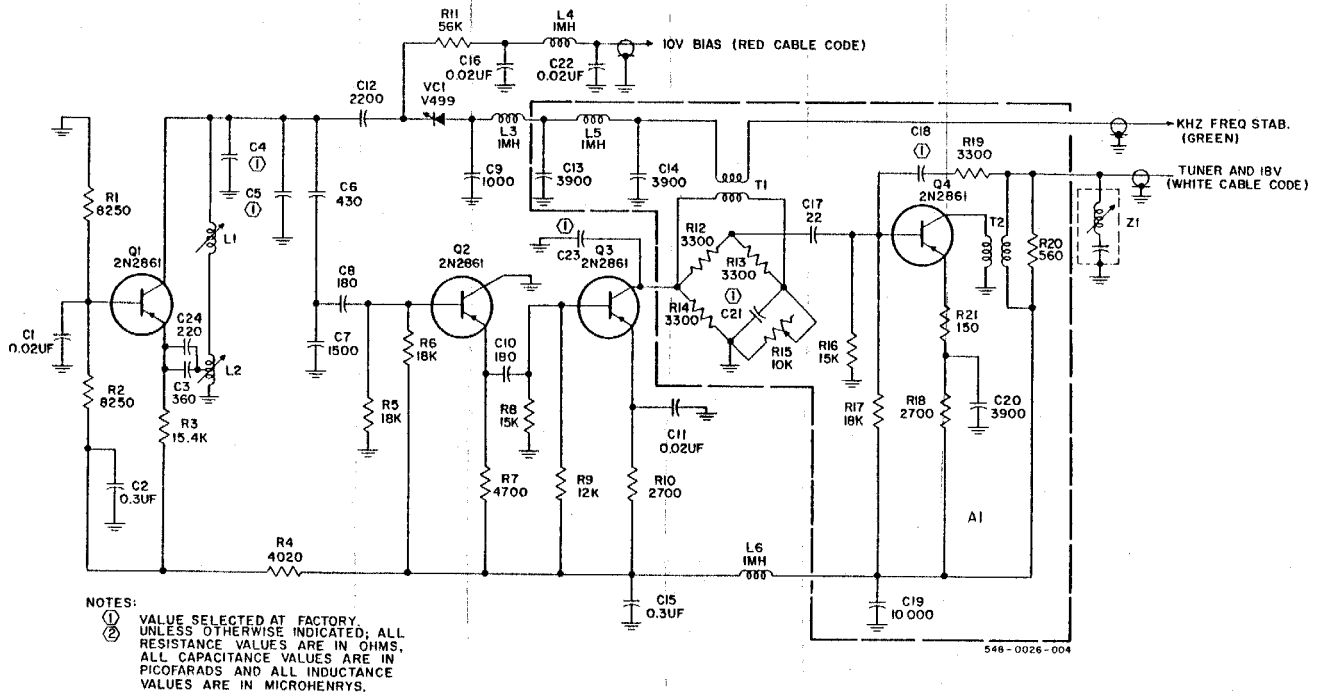
618T-1/2/3 VFO A12A2 (Model 70K-9), Schematic Diagram (Early Model)
Figure 834



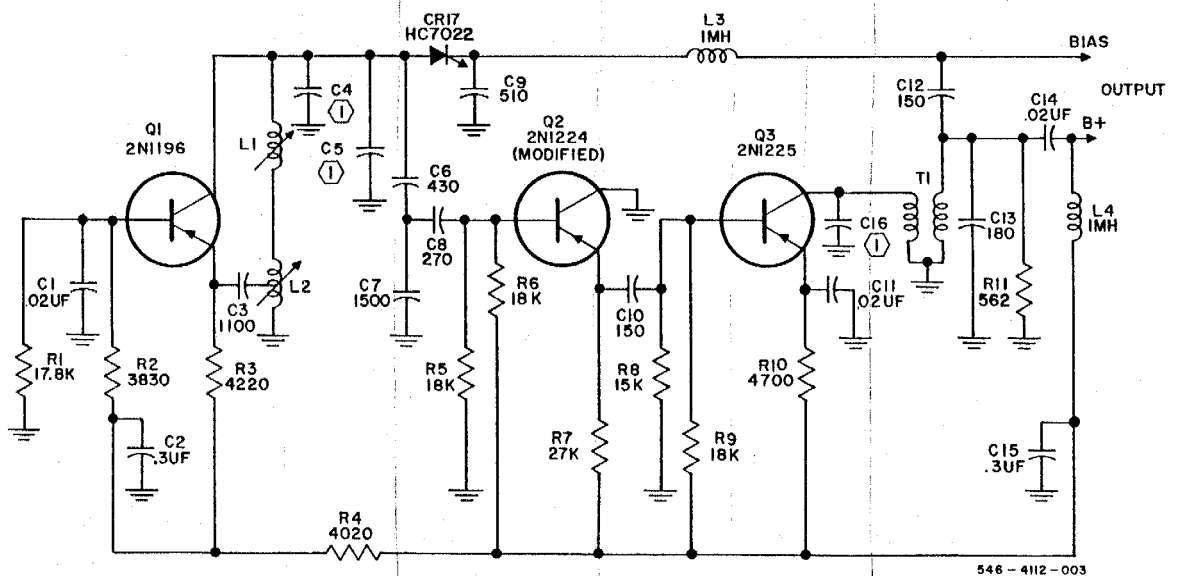
- NOTES:
- ① TEMPERATURE COMPENSATION SELECTED IN FINAL TEST.
 - ② VIBRATING COMPENSATING CAPACITOR.
 - ③ TEST SELECT.
 - ④ UNLESS OTHERWISE INDICATED, ALL RESISTANCE VALUES ARE IN OHMS, ALL CAPACITANCE VALUES ARE IN MICROFARADS, AND ALL INDUCTANCE VALUES ARE IN MICROHENRYS.
 - ⑤ REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE DESIGNATION WITH THE REFERENCE DESIGNATION A12A2.

618T-1/2/3 VFO A12A2 (Model 70 K-9), Schematic Diagram (Late Model)
Figure 833

554-4245-005
5154-81-4



618T-1/2/3 VFO A12A2 (Model 70K-5), Schematic Diagram
Figure 835



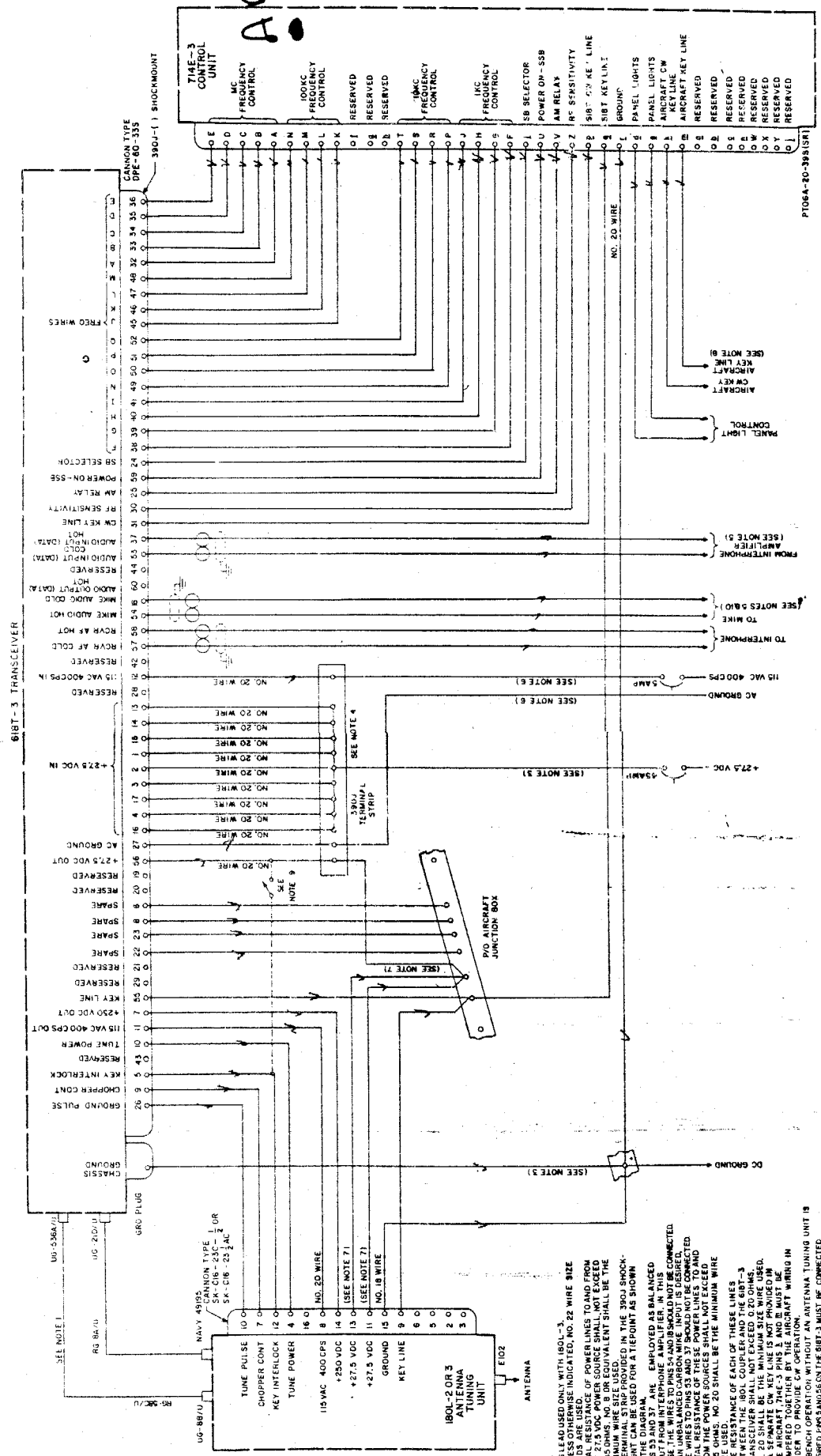
NOTES:

- ① SELECTED AT FACTORY.
- ② UNLESS OTHERWISE SPECIFIED; RESISTANCE VALUES ARE IN OHMS, CAPACITANCE VALUES ARE IN MICROFARADS, AND INDUCTANCE VALUES ARE IN MICROHENRYS.

618T-1/2/3 VFO A12A2 (Model 70K-3), Schematic Diagram
Figure 836



INSTALLATION MANUAL



Airborne SSB Transceiver 618T-3, Control Unit
714E-3, and Antenna Tuner 180L-3,
Interconnecting Wiring Diagram
Figure 123

- NOTES**
1. THIS LEAD USED ONLY WITH 180L-3.
 2. UNLESS OTHERWISE INDICATED, NO. 22 WIRE SIZE.
 3. TOTAL RESISTANCE OF POWER LINES TO AND FROM THE 275 VDC POWER SOURCE SHALL NOT EXCEED 0.01 OHMS, NO. 18 OR EQUIVALENT SHALL BE THE MINIMUM.
 4. A TERMINAL STRIP PROVIDED IN THE 390J SHOCKMOUNT CAN BE USED FOR A TIEPOINT AS SHOWN.
 5. PINS 53 AND 37 ARE EMPLOYED AS BALANCED INPUT FROM INTERPHONE AMPLIFIER. IN THIS CASE THE WIRES TO PINS 53 AND 37 SHOULD NOT BE CONNECTED TOGETHER.
 6. TOTAL RESISTANCE OF THESE POWER LINES TO AND FROM THE 115 VAC 400 CPS SOURCE SHALL NOT EXCEED 0.01 OHMS, NO. 20 SHALL BE THE MINIMUM WIRE SIZE USED.
 7. THE RESISTANCE OF EACH OF THESE LINES SHALL NOT EXCEED 0.20 OHMS.
 8. NO. 20 SHALL BE THE MINIMUM WIRE SIZE USED.
 9. THE AIRCRAFT CW KEY PINS 13 AND 14 MUST BE JUMPED TOGETHER BY THE AIRCRAFT WIRING IN ORDER TO PROVIDE CW OPERATION.
 10. IF BENCH OPERATION WITHOUT AN ANTENNA TUNING UNIT IS DESIRED, THE ANTENNA TUNING UNIT SHOULD BE CONNECTED TOGETHER TO COMPLETE THE KEY INTERLOCK CIRCUIT. DO NOT CONNECT PINS 53 OR 34 TO AN EXTERNAL DC POWER SOURCE.
 11. WHEN THE UNBALANCED CARRIER MIC INPUT IS USED, THE MIC INPUT SHOULD BE BALANCED AND THE MIC GROUND EXTERNAL TO THE 618T-3 CHASSIS BE PLACED ON THIS LINE.