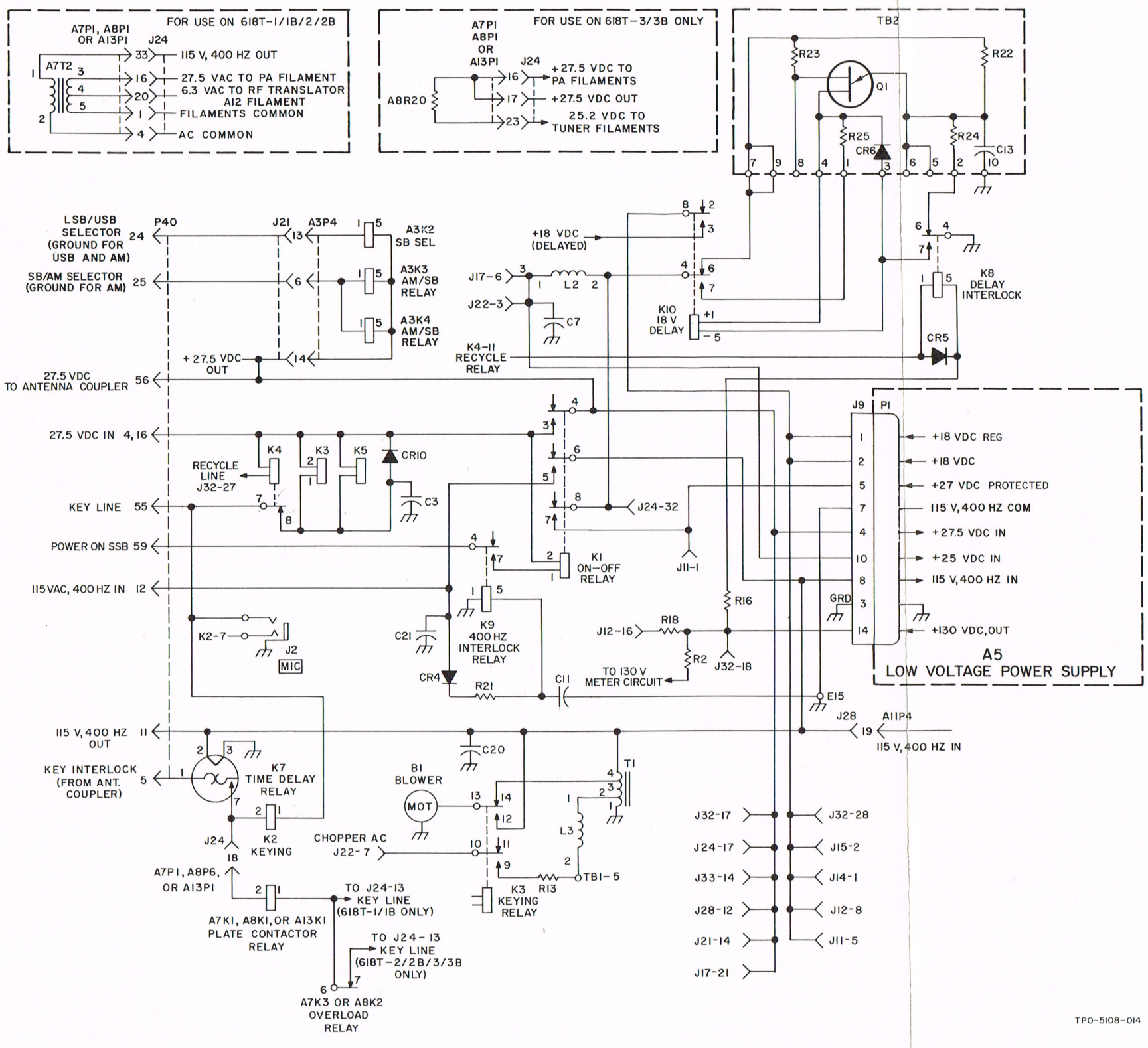


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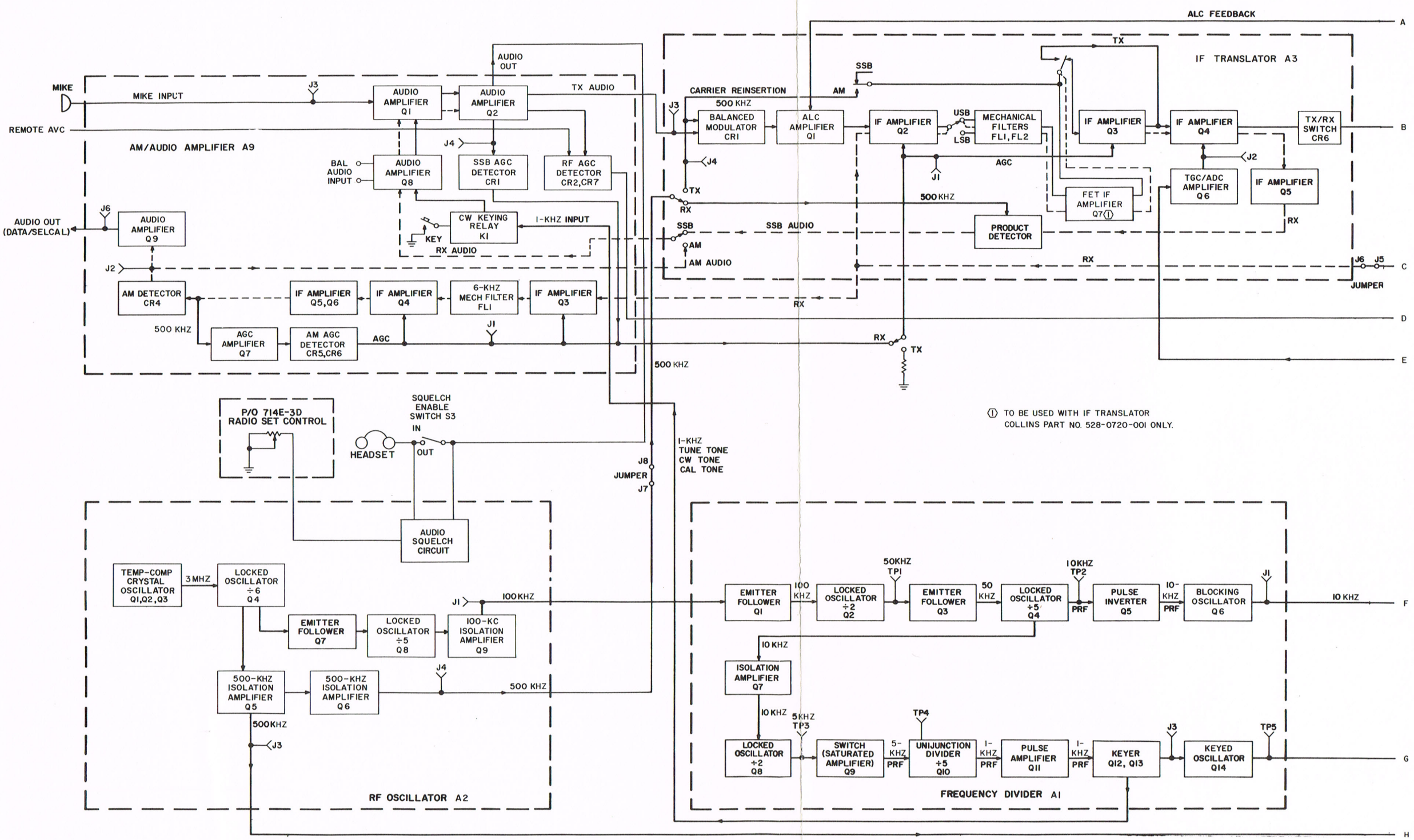
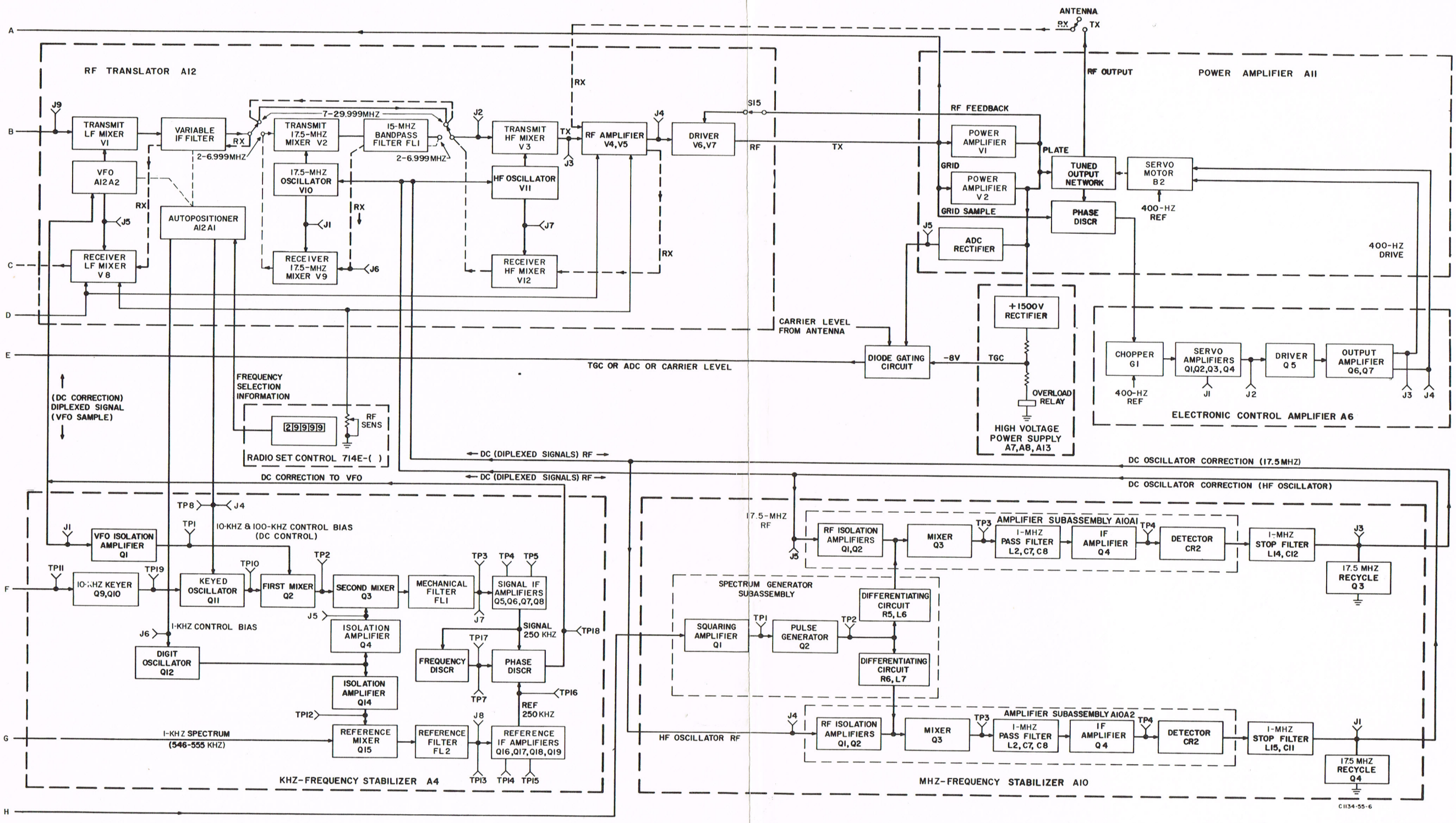
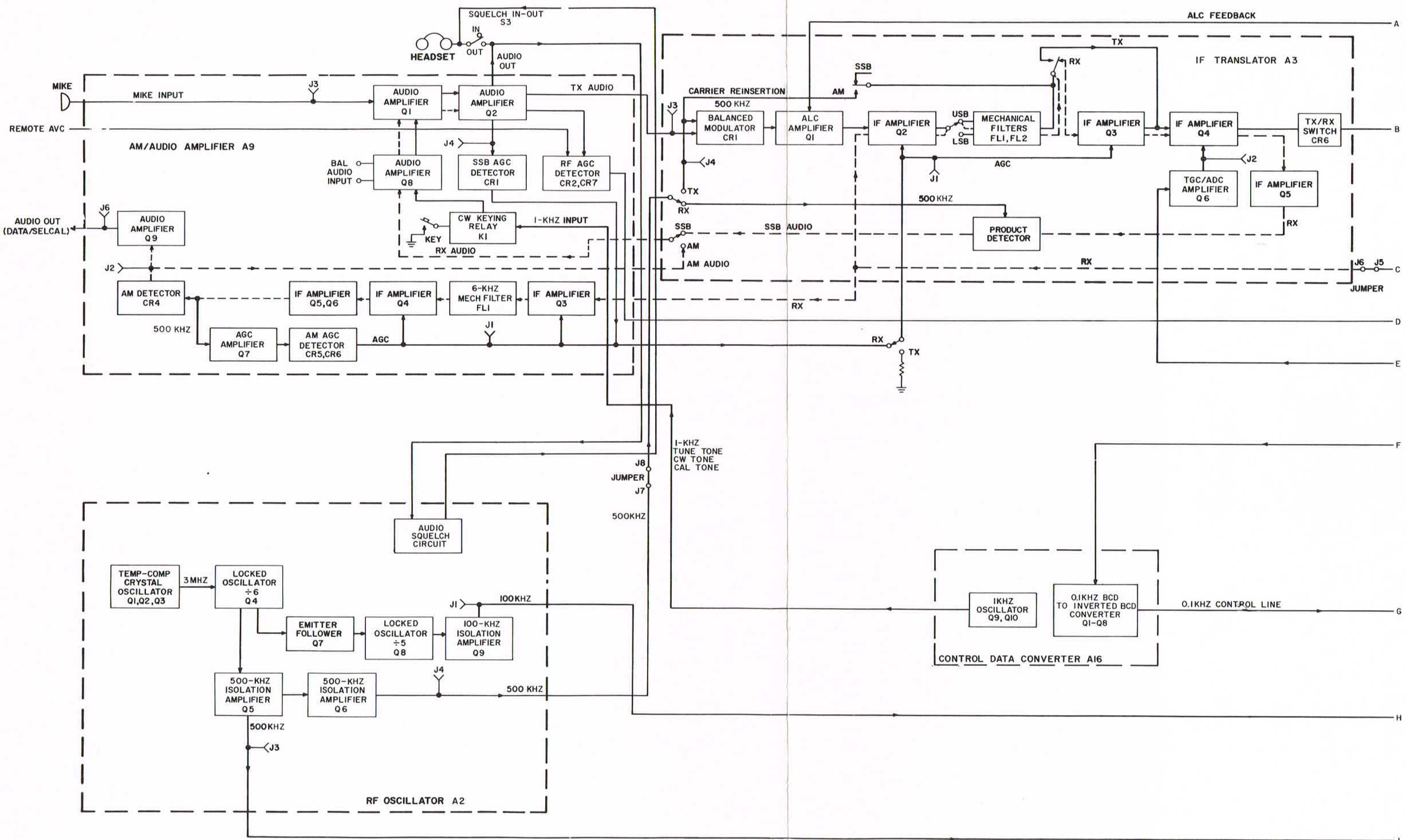
Power Distribution Circuits, Simplified Schematic Diagram
Figure 13



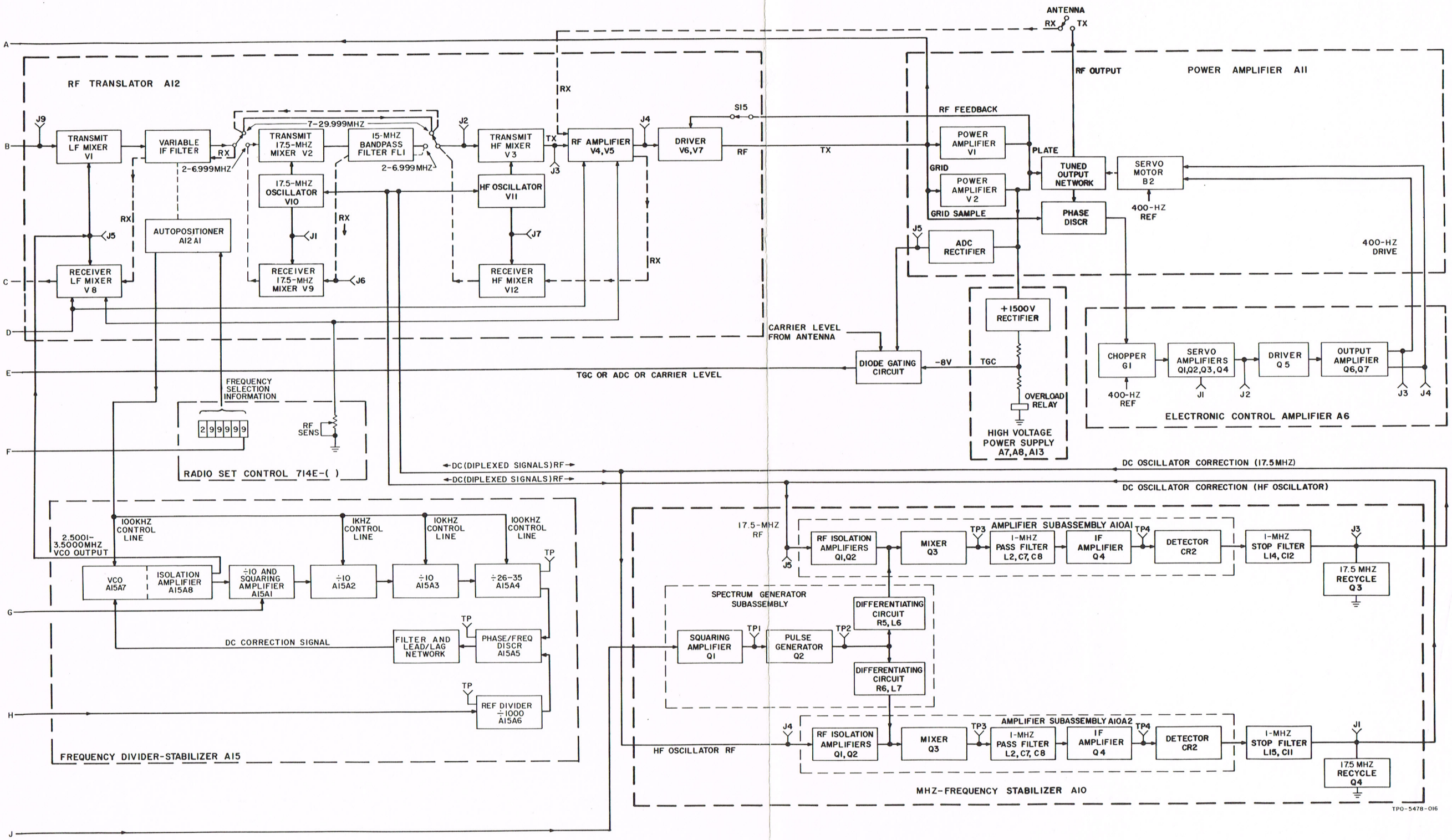

618T-1/2/3 Airborne SSB Transceiver, Block Diagram (Sheet 1 of 2)
Figure 19



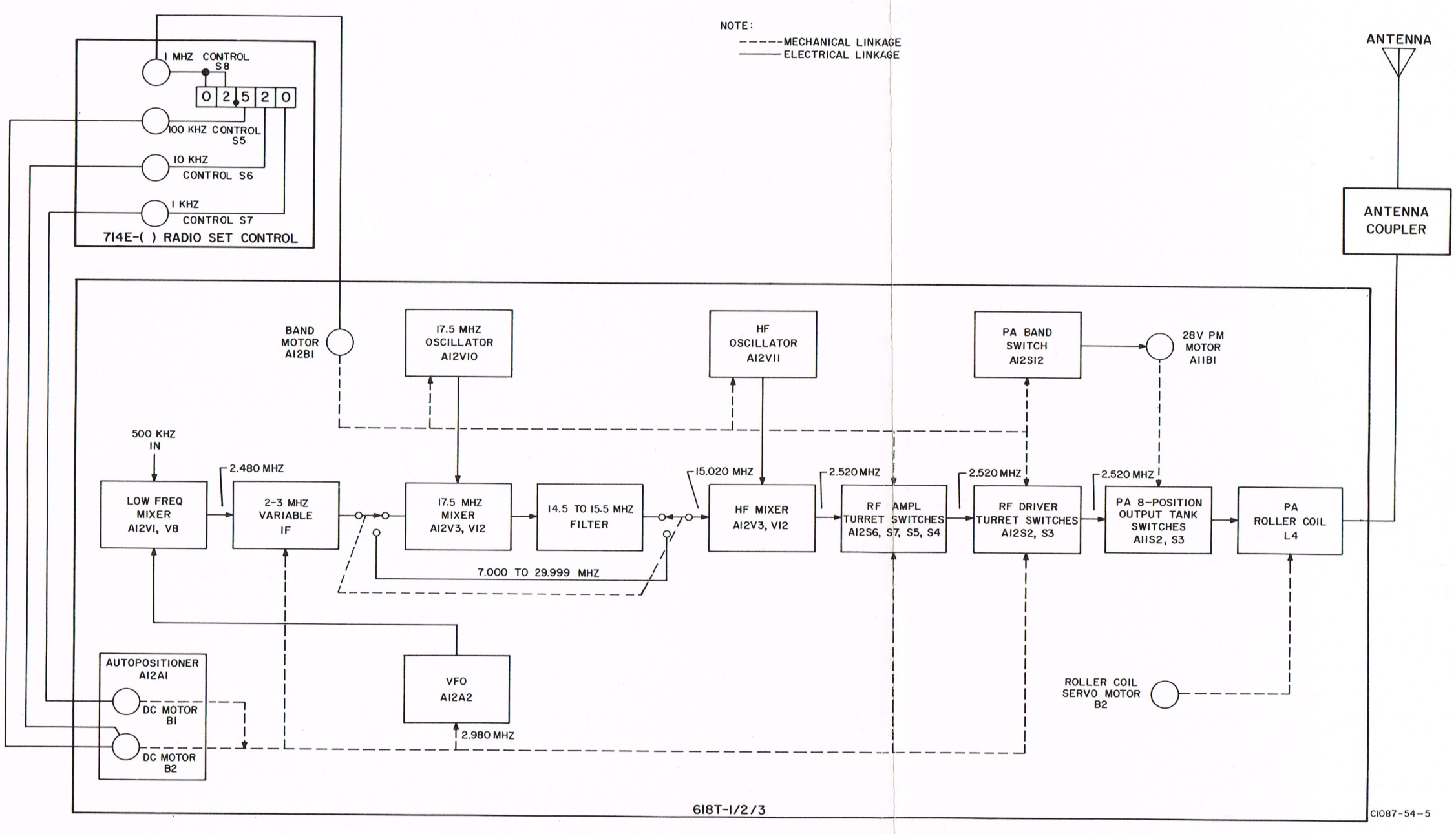

618T-1/2/3 Airborne SSB Transceiver, Block Diagram (Sheet 2 of 2)
Figure 19



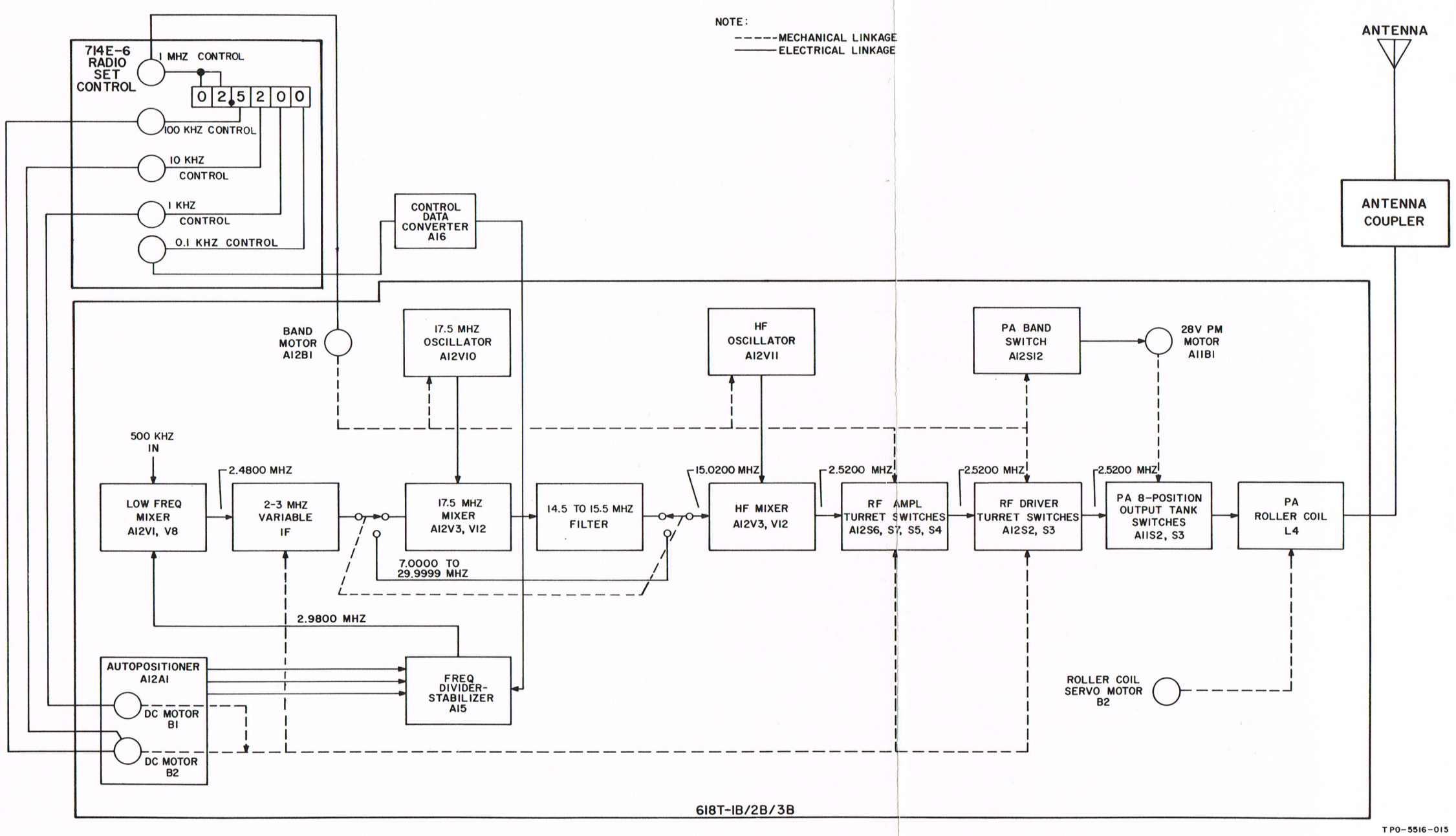

618T-1B/2B/3B Airborne SSB Transceiver, Block Diagram (Sheet 1 of 2)
Figure 20



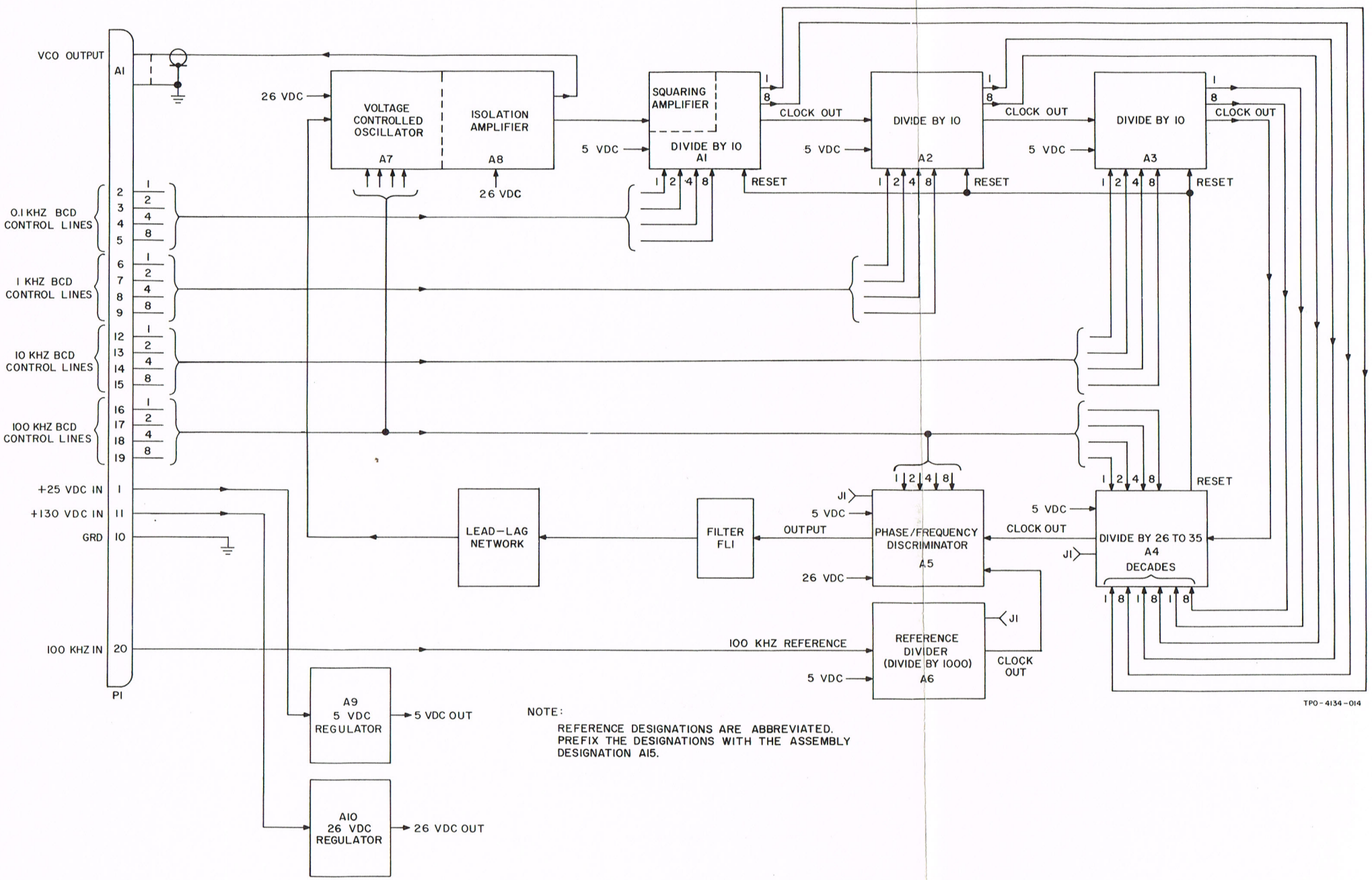

618T-1B/2B/3B Airborne SSB Transceiver, Block Diagram (Sheet 2 of 2)
Figure 20



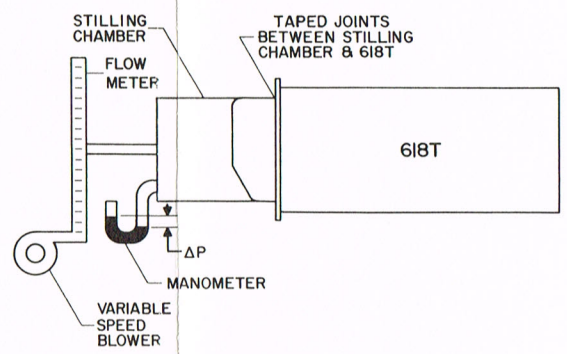
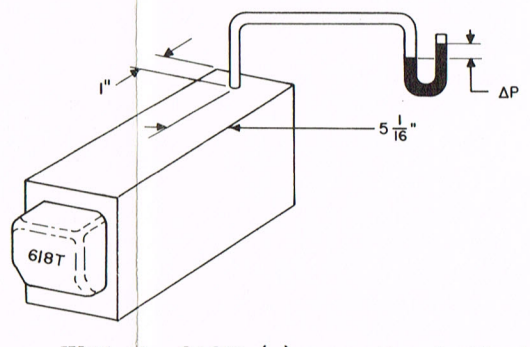
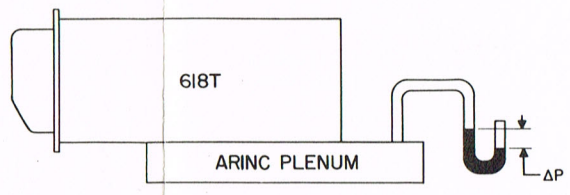

618T-1/2/3 Frequency Selection and Translation, Block Diagram
Figure 21

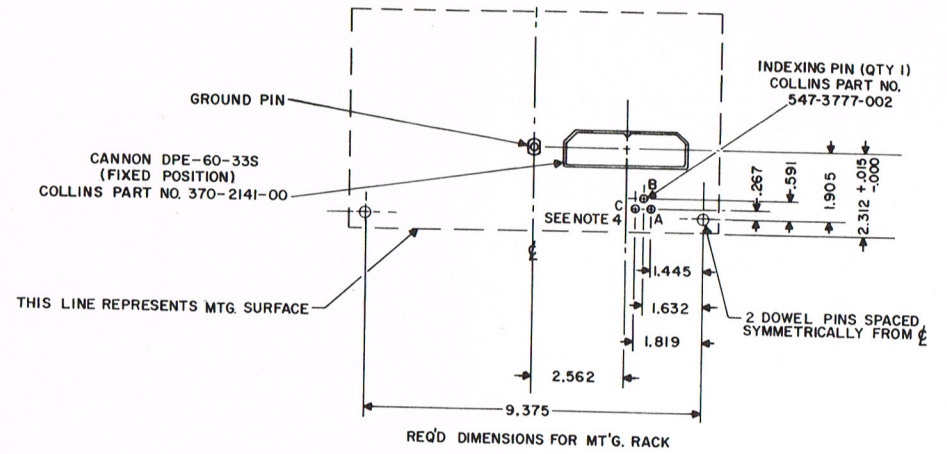



618T-1B/2B/3B Frequency Selection and Translation, Block Diagram
Figure 22

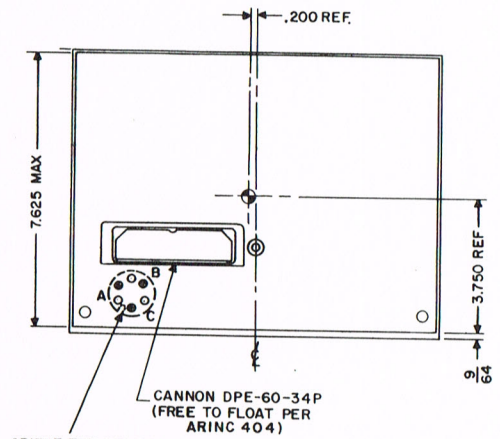



618T-1B/2B/3B Frequency Divider-Stabilizer A15, Block Diagram
Figure 23

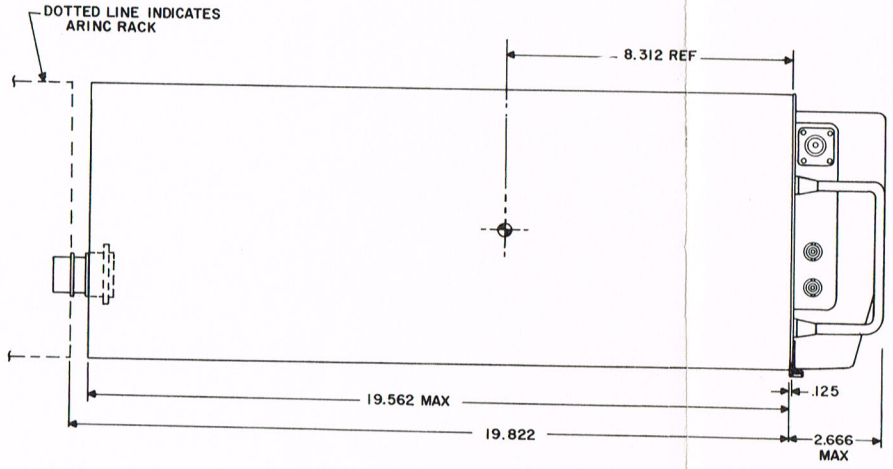
| METHOD | WHEN USED | DESCRIPTION | OPERATING VALUES |
|---|---|---|---|
| 1. Measurement of air mass flow entering the 618T-( ). | May be used in any installation and is the <u>most</u> accurate method of determining cooling adequacy. |  <br><u>Procedure:</u> With the 618T-( ) operating in the transmit mode, adjust variable speed blower for 0 Δ P in stilling chamber. Read mass flow rate into 618T-( ) on the flow meter. | Flow should be (190 lb/hr) X ($\sigma$)<br>where $\sigma = \frac{\rho \text{ altitude of test}}{\rho \text{ sea level}}$<br>$\rho$ = air density = 0.0765 lb/ft$^3$ at sea level<br>Example: At 10,000 ft and 25 ℃<br>$\rho$ = 0.0508 lb/ft$^3$<br>$\sigma$ at 10,000 ft and 25 ℃ = $\frac{0.0508}{0.0765} = 0.664$<br>Therefore at an altitude of 10,000 ft and 25 ℃ ambient, the measured flow rate should be<br>= (190)(0.664)<br>= 126 lb/hr |
| 2. Measurement of static pressure in 618T-( ) chassis. | Used when the 618T-( ) is on a Collins type 390J-1 vibration mount or on any system allowing free discharge of cooling air. This is the quickest and simplest check. |  <br><u>Procedure:</u> With the 618T-( ) operating in the transmit mode, hold the manometer hose tightly over a 0.015 dia hole (no. 60 drill) located as shown in the above sketch. The hole may be left unsealed. Later production radios have this hole. Read Δ P. | The measured pressure should be (0.55 in $H_20$) X ($\sigma$)<br>Example: Using 10,000 feet and 25 ℃, the measured pressure should be<br>= (0.55)(0.664)<br>= 0.37 in $H_20$ |
| 3. Measurement of static pressure in the ARINC plenum under the 618T-( ). | This method is used in ARINC installations of 618T-( ). A check must be made to ensure that the internal blower is operating at "Transmit Speed" and that gaskets under the 618T-( ) are in place. |  <br><u>Procedure:</u> Check the pressure in the ARINC plenum to ensure that it is zero (0) or negative at the exhaust openings of the 618T-( ), <u>including</u> effects of any orifice plates, if any are used. Avoid measuring static pressure in areas of high velocity. | Δ P must be 0 or a negative value under all conditions of aircraft operation. |

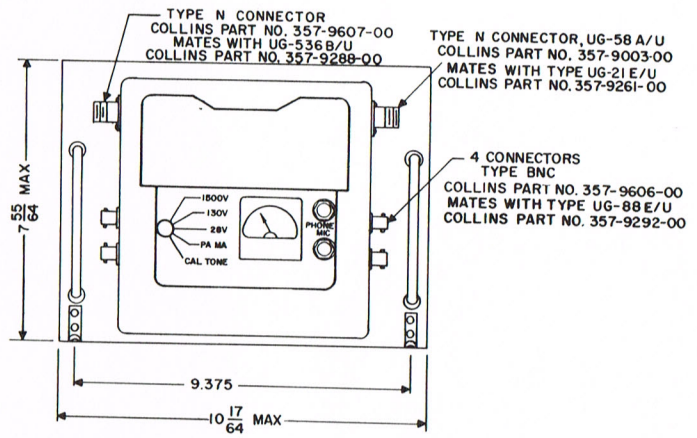



REQ'D DIMENSIONS FOR MT'G. RACK




ORIENT THE BANG PLATE SUCH THAT THE SILK SCREEN APPEARING IN NOTCH DENOTES THE TYPE HV PWR SUPPLY USED.




NOTES:

① APPROXIMATE LOCATIONS TO CENTERS OF EXHAUST OPENINGS INDICATED BY THE SHADED AREAS.

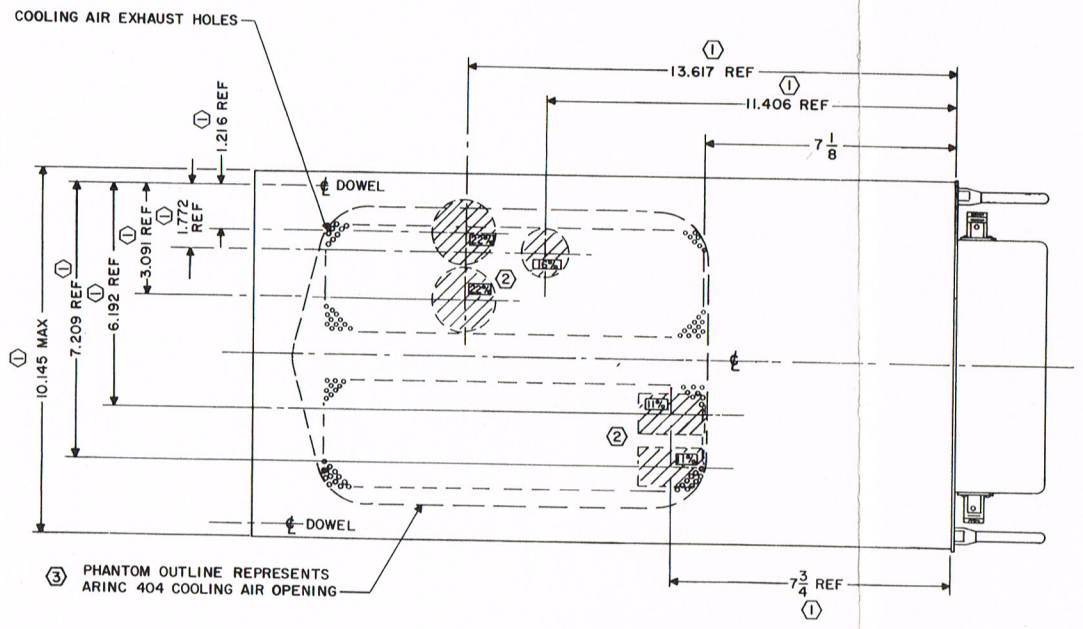
② % DENOTES PERCENTAGE OF TOTAL AIR EXHAUSTED THROUGH OPENING. ANY SHELF OR PLENIUM PLACED UNDER THE RADIO MUST NOT DISTURB THE INDICATED AIR BALANCE.

③ THE REMAINING AIR MUST BE EXHAUSTED UNIFORMLY OVER THE REMAINING AREA.

④ INDEX PIN CODE:
A. 3 PHASE 400 CPS
B. DIRECT CURRENT
C. 1 PHASE 400 CPS

⑤

| EQUIPMENT | WEIGHT | COLLINS PART NO. |
|---|---|---|
| 618T-1 | 50 LB | 522-1230-XXX |
| 618T-2 | 52 LB | 522-1501-XXX |
| 618T-3 | 51 LB | 522-1660-XXX |

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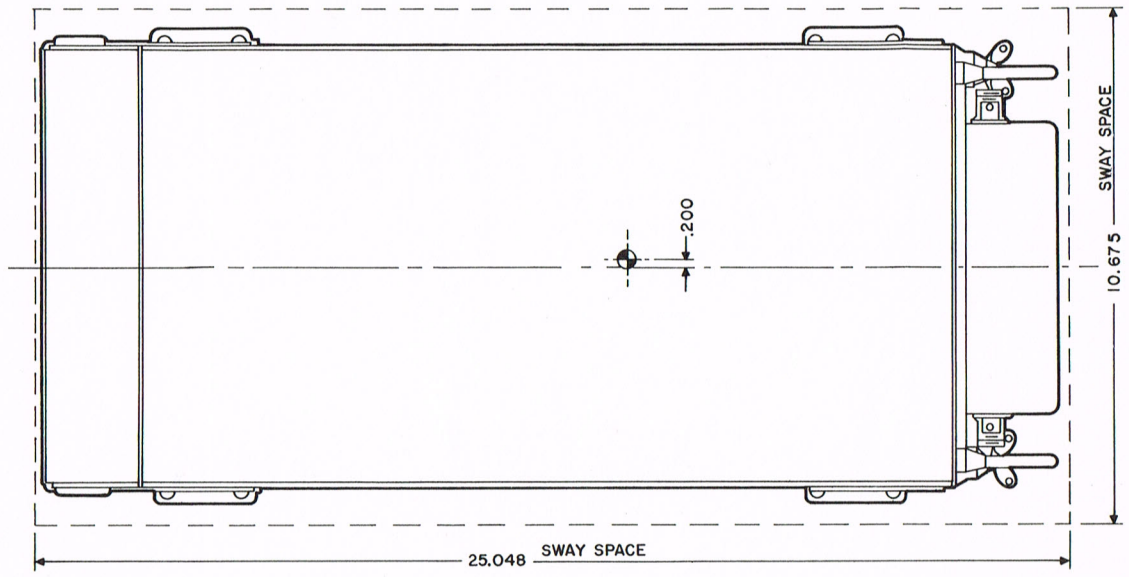
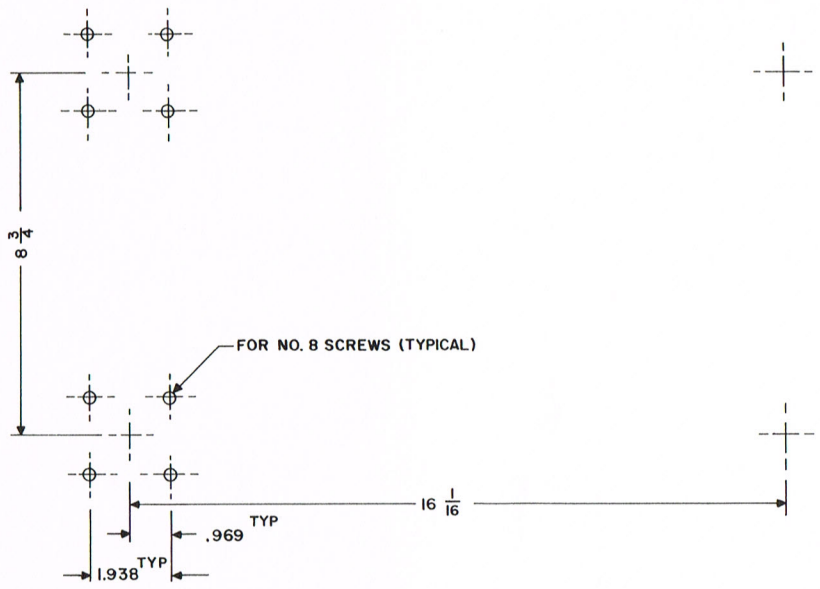
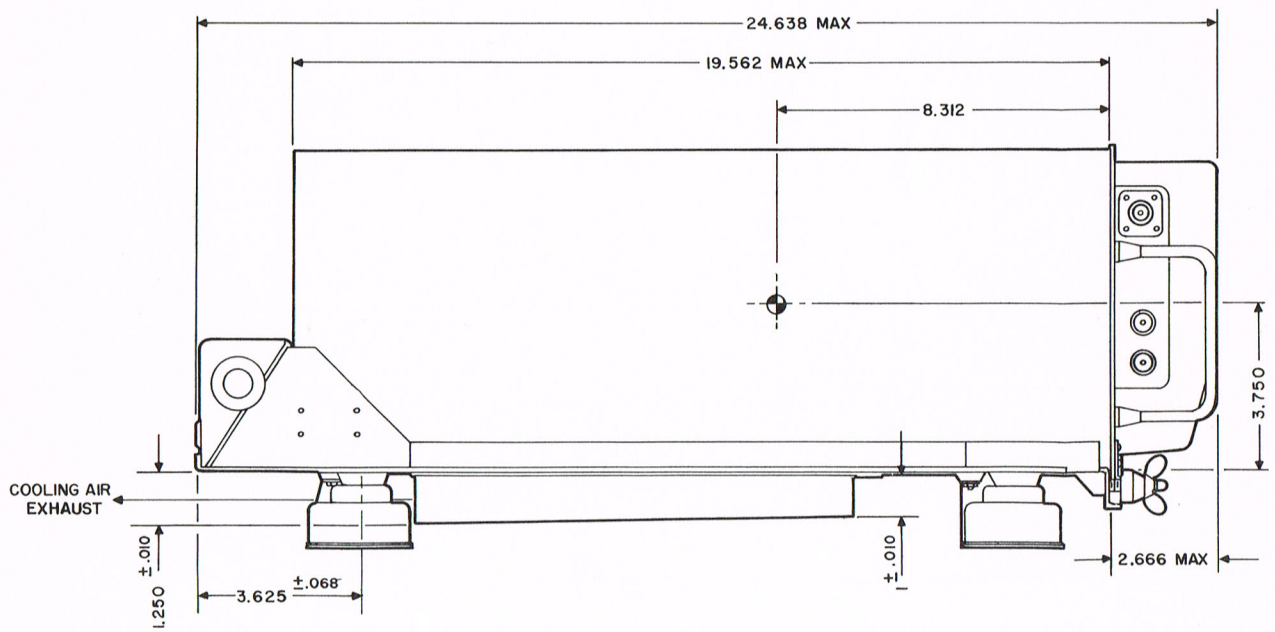
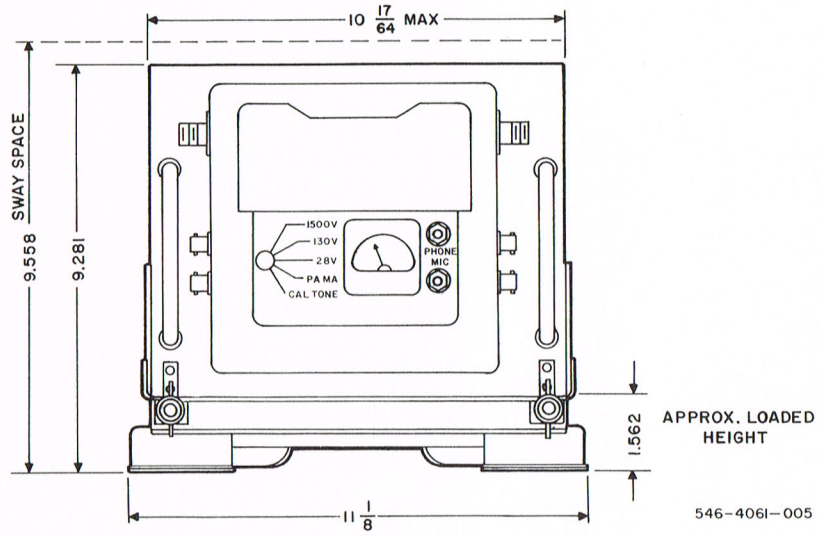
618T-( ) Airborne SSB Transceiver, Outline and Mounting Dimensions
Figure 402



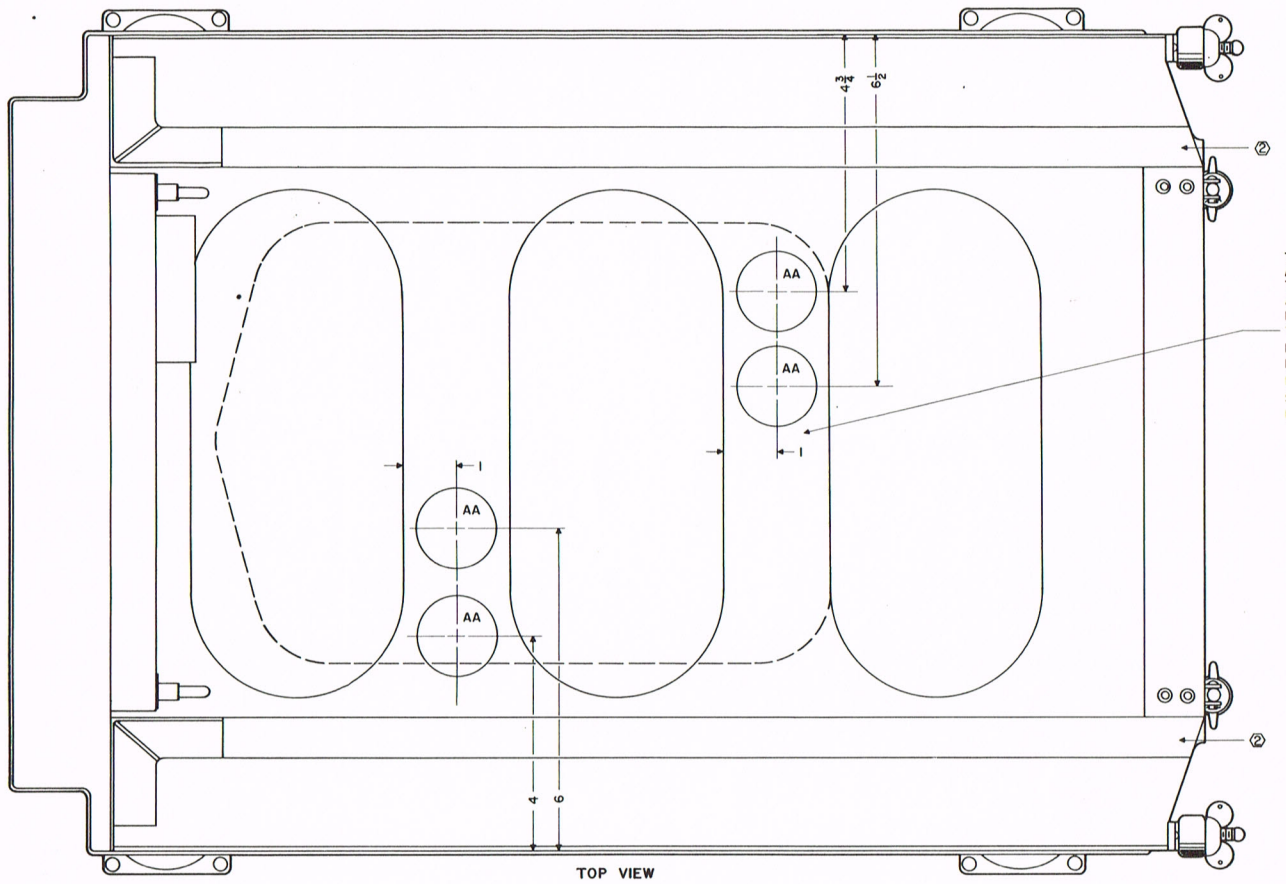




| EQUIPMENT TYPE | COLLINS PART NO. |
|---|---|
| 390J-1 | 552-3533-XXX |

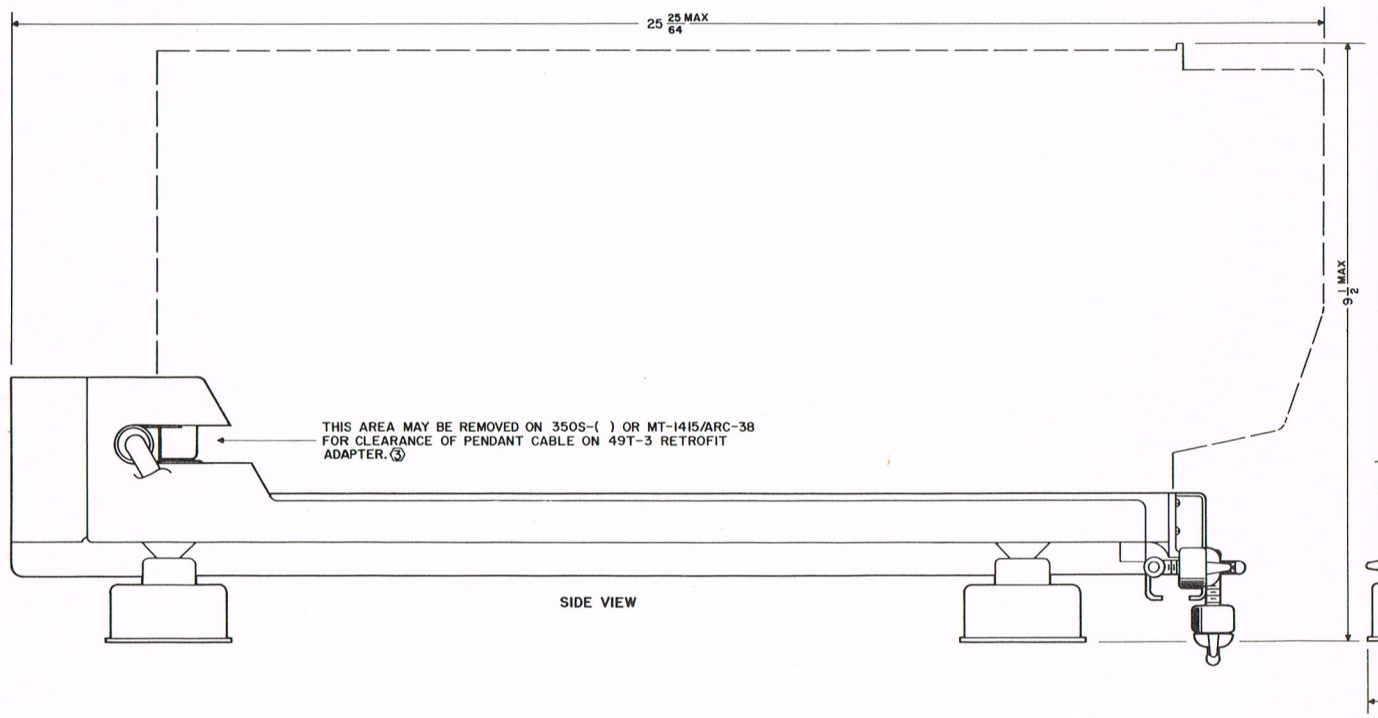



618T-( ) Airborne SSB Transceiver on 390J-1 Shockmount, Outline and Mounting Dimensions
Figure 403




THE 350S-1, 350S-3 AND MT-1415 ARC-38 ARE PRODUCED WITH EITHER A RECTANGULAR CUT-OUT (NOT SHOWN) OR OVAL CUT-OUTS AS SHOWN. TRAYS WITH RECTANGULAR CUT-OUTS ALLOW DISCHARGE OF THE EXHAUST AIR FOR PROPER OPERATION OF THE 618T. THE 618T WILL OPERATE ON A REDUCED RATING WHEN ADAPTED TO MOUNTS HAVING OVAL CUT-OUTS. THE MANUFACTURER STRONGLY RECOMMENDS THAT THE (4) HOLES "AA" BE PUNCHED IN THE POSITIONS SHOWN USING A $1\frac{1}{2}$ DIAMETER GREENLEE PUNCH OR EQUIVALENT FOR INCREASED PREFORMANCE AND MAXIMUM RELIABILITY OF THE 618T. THE CUP PORTION OF THE GREENLEE PUNCH SHOULD BE PLACED ON THE TOP SIDE OF THE MOUNT FLOOR TO AVOID DISTORTING THE TRAY DURING PUNCHING OPERATION.




NOTE

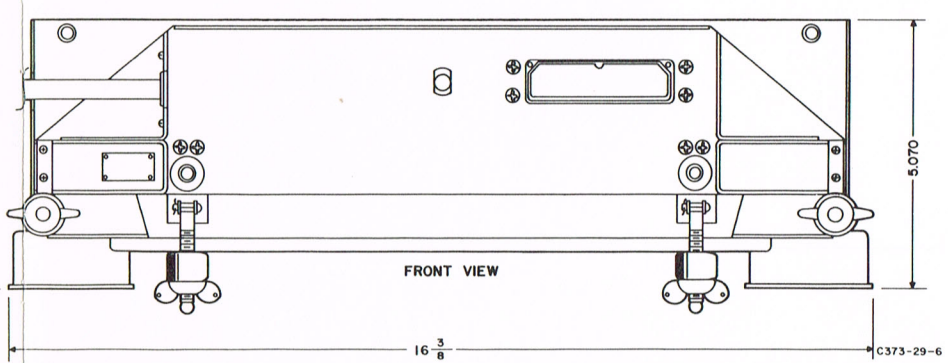
① CLEARANCE FOR SWAY MOVEMENT OF UNIT ON VIBRATION MOUNT EQUALS $\frac{1}{2}$ INCH ON ALL SIDE.

② GUIDE RAILS ARE TO BE REMOVED WHEN 49T-( ) RETROFIT ADAPTER IS USED WITH SHOCKMOUNT 350S-1, 350S-3 OR MT-1415/ARC-38, BUT LEFT ON WHEN USED WITH SHOCKMOUNT 350S-2, OR 350S-4.

③ PENDANT CABLE AS SHOWN IS PART OF RETROFIT ADAPTER 49T-3 ONLY. RETROFIT ADAPTER 49T-4 DOES NOT HAVE PENDANT CABLE.

④

| EQUIPMENT | PART NUMBER |
|---|---|
| 49T-3 | 522-1645-XX |
| 49T-4 | 522-1697-XX |




49T-3/3A/4/4A/6/6A Retrofit Adapter, Outline and Mounting Dimensions