

**TYPE L3 CARRIER SYSTEM
ASSOCIATED POWER SUPPLIES
PS1 AND PS2 POWER SYSTEMS**

This section covers tests and adjustments on equipment associated with the power loop or Type L3 carrier system as follows:

- (A) Maintenance Power Supply
- (B) Carrier Power Transfer Circuit

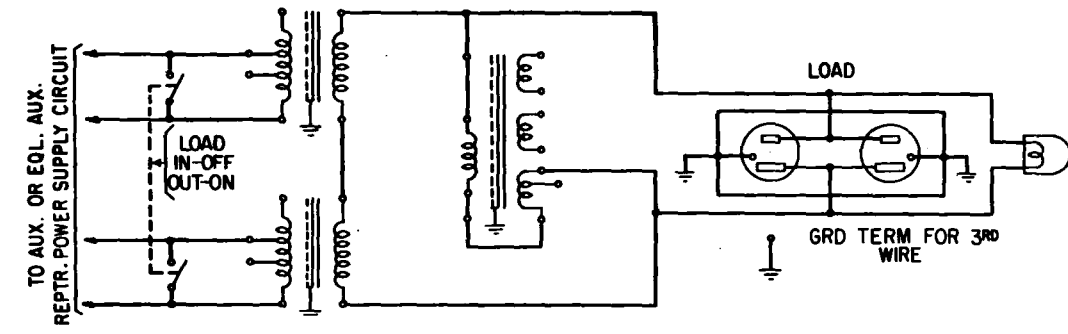
This section is reissued to show reference to the PS1 and PS2 power systems.

APPARATUS:

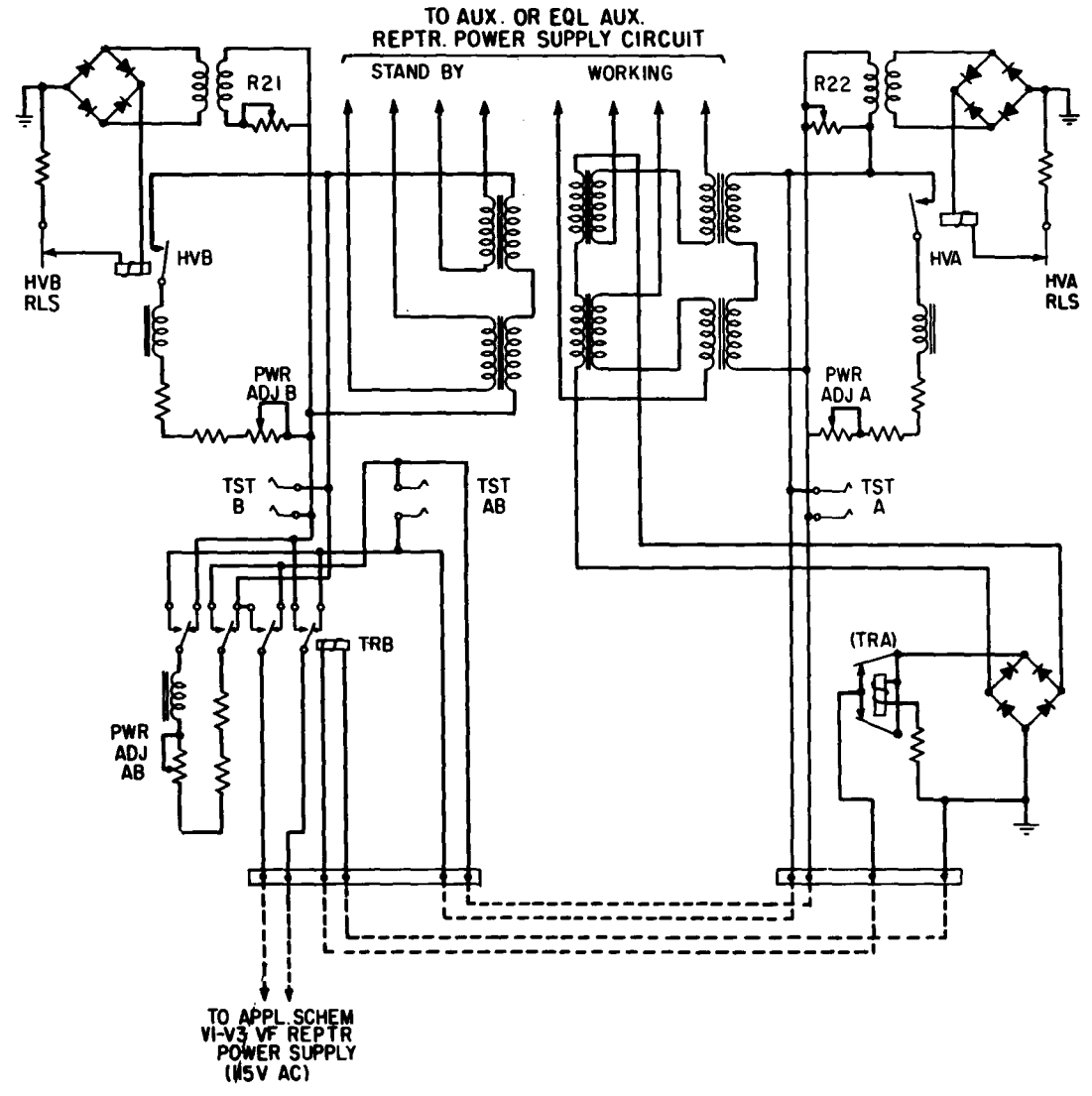
KS-14510, L1 or L5 Volt-Ohmmeter (or equivalent)

STEP	PROCEDURE
1	(A) Maintenance Power Supply (See Fig. 1) The maintenance power supply provides 75 to 100 watts of ac power for test and maintenance equipment at auxiliary and equalizing auxiliary repeaters which are inaccessible to commercial or mobile power. Procedure for connecting and disconnecting load: With the cover of the LOAD receptacle lifted, plug in a load of between 75 watts minimum and 100 watts maximum. Pull the load switch handle out to the ON position to supply power to the load. When the load consists of electron tubes, output voltages will be high until the tubes become conducting. To disconnect the load, push the handle of the LOAD switch into the panel to the OFF position. Disconnect the plug from the LOAD receptacle. <i>Caution: Objectionable hits and possible line switching are avoided by throwing the switch to OFF position when connecting or disconnecting the load.</i> <i>Do not operate switch to the ON position except when a 75 to 100 watt load is connected to the receptacle.</i>
2	(B) Carrier Power Transfer Circuit (See Fig. 2) The carrier power transfer circuit provides a nominal voltage of 115 volts ac for use with VF repeater power supplies. Power is derived from either of two L3 power loops. One circuit is "working" and the other is "standby." In case of a power failure or power turndown on the "working" line the power is automatically transferred to the "standby" line.

STEP	PROCEDURE
	Caution: The transfer of power may cause objectional hits and possible line switching so the number of transfers should be kept to a minimum. Procedure for adjusting power output: - L3 carrier power line-up must be complete. - Two VF repeater power supply must be connected to the carrier power transfer circuit. - Adjust resistor R22 to obtain 115 ± 5 volts ac at TST A jacks. Note: Normal differences in line currents may require the use of different taps on transformers T2, T3, T6, and T7 to obtain the correct output voltage. The same taps must be used on each pair of transformers, T2 and T3, or T6 and T7, in order to keep the power system balanced. The winding between taps 5 and 6 must always be used. Moving connections from terminal 3 to terminal 4 or 5 increases output voltage by about 2 or 4 percent, respectively. Similarly, moving connections from terminal 8 to terminal 7 or 6 increases output voltage by about 5 or 10 percent, respectively. Any required tap changes must be made with the power removed from the power transfer units. - Block relay TRA to nonoperate and adjust resistor R21 to obtain the same voltage at TST B jacks as measured in (c). - Allow relay TRA to operate and adjust PWR ADJ AB to obtain the same voltage at TST B jacks as is obtained between Test A, B jacks.
3	Procedure for adjusting dummy power loads in the transfer circuit. - L3 carrier power line-up must be complete. - Block relay TRA to nonoperate. This will release relay TRB. - Block open the A3-B3 and A4-B4 contacts on the TRB relay. This will operate relay HVA. Adjust PWR ADJ A to obtain at TST A jacks the same voltage as that measured in Step 2(c). - Remove contact insulation from TRB relay and operate the HVA RLS key to release the HVA relay. - Allow relay TRA to operate. This will also operate relay TRB. - Block open the A8-T8 and the A4-T4 contacts on the TRB relay. This will operate relay HVB. Adjust PWR ADJ B to obtain at TST B jacks the same voltage as measured in (c). - Remove contact insulation from TRB relay and operate the HVB RLS key to release the HVB relay.



MAINTENANCE POWER SUPPLY AND



CARRIER POWER TRANSFER CIRCUIT

Fig. 1 and Fig. 2 —

TYPICAL POWER SUPPLY ARRANGEMENT
MAINTENANCE POWER SUPPLY AND
CARRIER POWER TRANSFER CIRCUIT