L MULTIPLEX TERMINALS

LMX-1

CARRIER AND PILOT SUPPLY

SUPERGROUP CARRIER

DISTRIBUTION BUS POWER

Purpose of Tests

To verify the correct output power at the carrier distribution bus (Fig. 1).

Reason for Issue

This section supersedes and updates the information contained in Section 356-060-503 which has been cancelled. ***Equipment Test Lists are affected.***

SYNOPSIS

The working 124-kHz harmonic generator (A or B) receives its input from an associated 124-kHz filter located in the channel carrier supply bay. The output of the working generator is fed to filters which select the individual carrier frequencies. The output of each filter is connected to a resistive hybrid where the signal is divided equally for connection to two fixed-gain amplifiers. The amplifier outputs are paralleled and connected to a common 30- or 50-ohm distribution bus for connection to supergroup modulators, demodulators, and alarm circuits.

APPARATUS

Receiving Test Equipment, per Section 356-010-500, having the following input characteristics:

Impedance: 75 ohms

Frequency: 620 to 3100 kHz

Power: +20.0 dBm

W2DC Cord

Suitable ***18.5-dB Attenuator*** (if required)

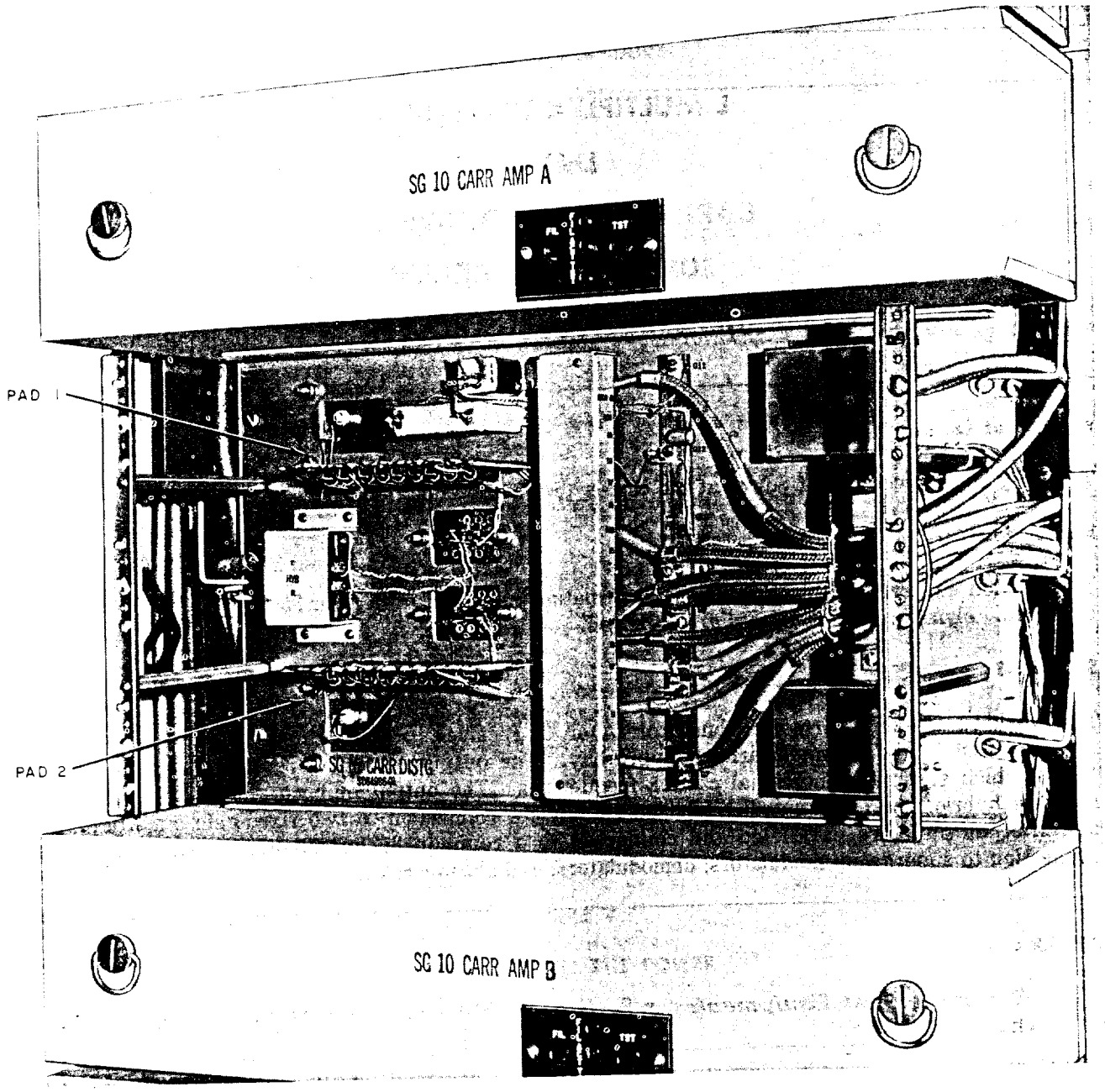

Fig. 1—Supergroup Carrier Amplifiers and Associated Distribution Bus

STEP	PROCEDURE
1	Prepare the Receiving Test Equipment (RTE) for a 75-ohm measurement of the carrier frequency to be tested (Table A) and insert 18.5 dB of attenuation (Fig. 2).

TABLE A

SUPERGROUP CARRIER FREQUENCIES

SUPERGROUP	1	3	4	5	6	7	8	9	10
FREQUENCY (KHZ)	612	1116	1364	1612	1860	2108	2356	1860	3100

2	At the distribution bus (Fig. 1), connect the RTE through a suitable attenuator to an unused bus tap [patch (1), Fig. 2].

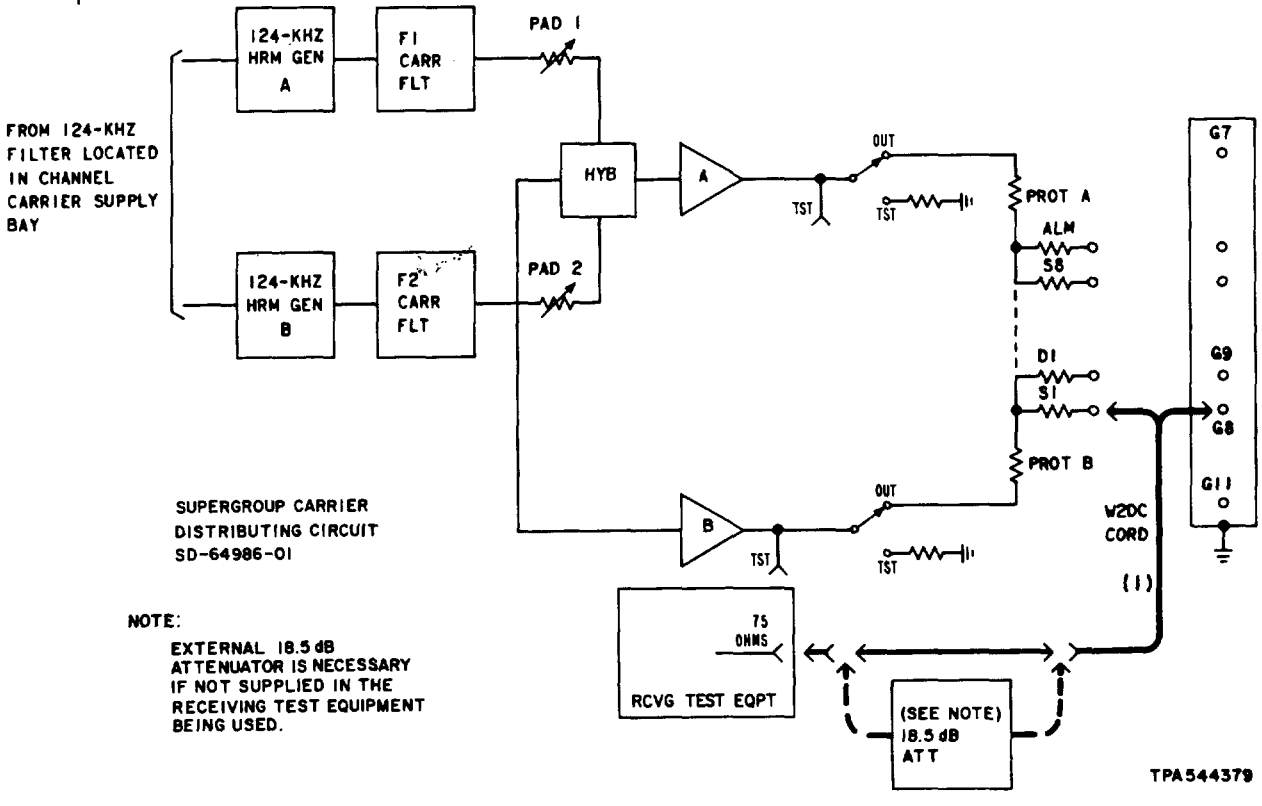

Fig. 2—Supergroup Carrier Supply—Measurement of Distribution Bus Power

STEP	PROCEDURE
3	Record the RTE meter indication. ***Requirement:*** See Table B.
4	If the requirement of Step 3 is met, proceed to Step 5. If it is not met, perform tests of the carrier amplifiers per Section 356-155-503.
5	At the carrier generator transfer panel, determine the working 4-kHz harmonic generator by depressing the TEST key. The working generator will be indicated by a lighted A or B panel lamp.
6	Manually transfer service to the standby 4-kHz harmonic generator, per Section 356-150-300. ***Caution: Transfer of the carrier supply will cause hits on data and telegraph service; therefore, the number of transfers should be limited to minimize service interruptions.***
7	Read the RTE meter. ***Requirement:*** This indication should not differ from that obtained in Step 3 by more than $\pm$0.5 dB.
8	If the requirement of Step 7 is met, proceed to Step 9. If it is not met, perform tests of the carrier amplifier per Section 356-155-503.
9	Remove patch (1), Fig. 2.
10	At the carrier generator transfer panel, return the generator transfer switch to NORM.

TABLE B

DISTRIBUTION BUS POWER

	30-OHM TAP	50-OHM TAP
METER INDICATION USING 18 DB ATT	+0.5 dBm $\pm$1 dB	+1.8 dBm $\pm$1 dB
ACTUAL POWER	+18.5 dBm $\pm$1 dB	+19.8 dBm $\pm$1 dB