
L MULTIPLEX TERMINALS
COMMON EQUIPMENT
J68858 SCANNER, TEST, AND ALARM CIRCUITS
315.92-KHZ SUPERGROUP PILOT MEASURING CIRCUIT CALIBRATION

In LMX-1 and LMX-2 multiplex terminals, the 104.08-kHz pilot of group 1 is modulated to produce the 315.92-kHz supergroup pilot. The supergroup pilot is transmitted through the system, and a circuit is provided at the receiving terminal for measuring the pilot output power of the receiving supergroup amplifier. The supergroup pilot measuring circuit compares the pilot output power with a reference power derived from the stabilized 104.08-kHz group pilot supply circuit. The difference is amplified, rectified, and used to drive a zero-center meter displaying the deviation above and below nominal pilot power. The supergroup pilot measuring circuit is so selective that it is impractical to calibrate the circuit by means of a variable frequency oscillator. In this test, the 104.08-kHz group pilot signal is mixed with a 420-kHz carrier frequency. The resultant 315.92-kHz difference is then used as a test signal. Calibration of the supergroup pilot measuring circuit is performed by first measuring and, if necessary, adjusting the level of the 315.92-kHz test signal which is then used to calibrate the supergroup pilot measuring circuit.

This section is reissued to delete the calibration procedure for the supergroup pilot measuring circuit of the J68918 scanner, which is now in Section 356-225-503. *Equipment Test Lists are not affected.* Arrows are used to indicate significant changes.

APPARATUS

Receiving test equipment (RTE) (Section 356-010-500)

Frequency: 315.92 kHz

Power: -48.5 dBm

Impedance: 75 ohms

P2BJ Cord (For 75-ohm patches)

STEP

PROCEDURE

Note 1: The requirements in this test are based on the assumption that the level of the 104.08-kHz group pilot signal is correct. The power of the group pilot can be tested in accordance with the appropriate section.

STEP

PROCEDURE

Note 2: Access to the 838B network and 226F amplifier units on the J68774P pilot measuring panel (Fig. 1) is required when performing this test.

- 1 Remove the two machine screws and coverplate from the right front side of the J68774P pilot measuring panel.
- 2 Adjust the RTE as follows:
 - Impedance: 75 ohms, unbalanced
 - Frequency: 315.92 kHz
 - Power: -48.5 dBm
- 3 Connect the RTE to the SG CAL jack [patch (1), Fig. 1].

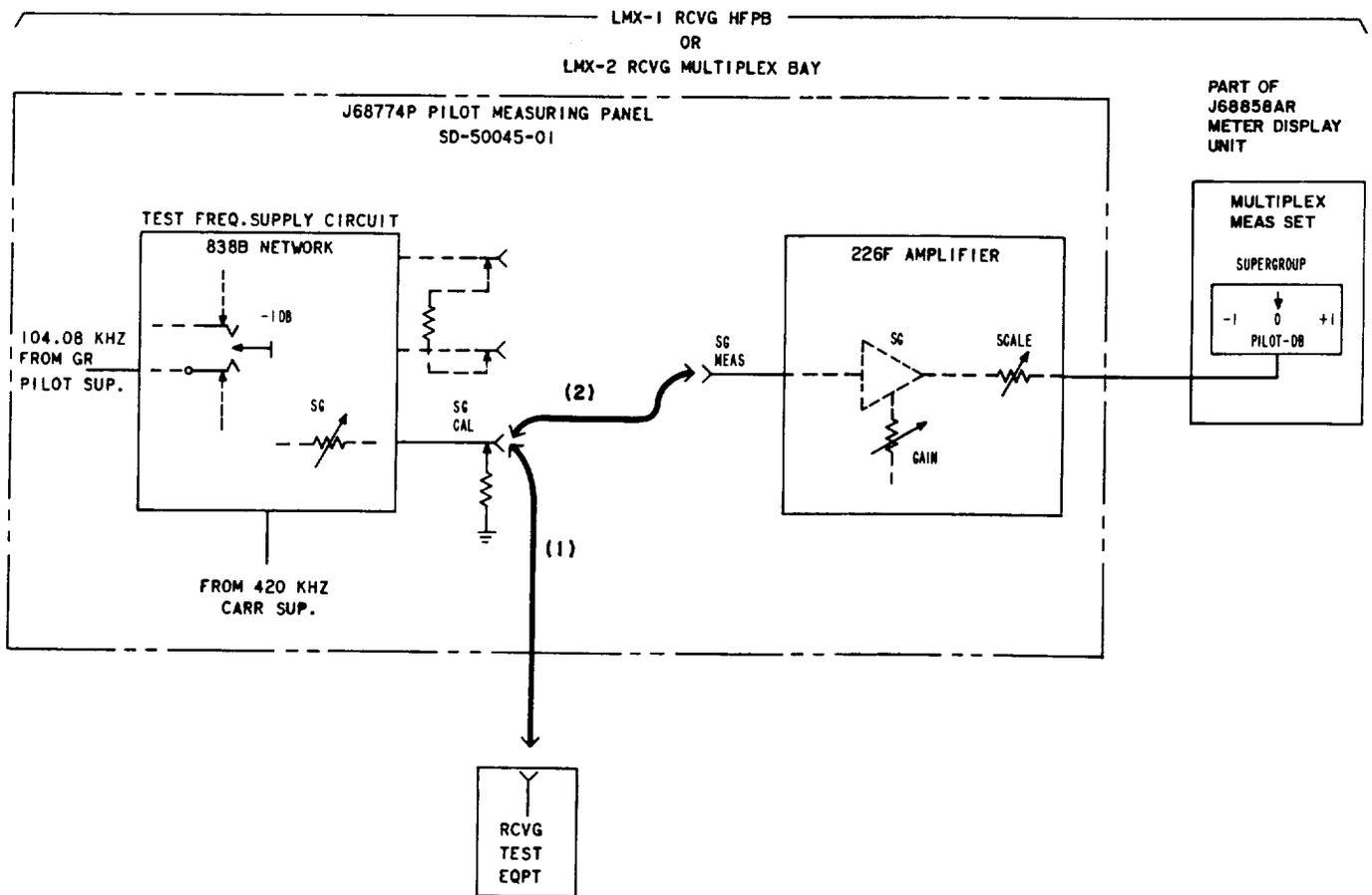


Fig. 1—315.92-kHz Supergroup Pilot Measuring Circuit Calibration (Using J68858 Scanner)

STEP	PROCEDURE
4	Measure the 315.92-kHz signal power at the SG CAL jack. Requirement: $-48.5 \text{ dBm} \pm 0.05 \text{ dB}$
5	If the requirement of Step 4 is not met, adjust the SG control on the 838B network for -48.5 dBm at the SG CAL jack.
6	Remove patch (1), Fig. 1.
7	Connect the SG CAL jack to the SG MEAS jack [patch (2), Fig. 1].
8	Read the SUPERGROUP PILOT-DB meter. Requirement: $0 \pm 0.0 \text{ dB}$
9	If the requirement of Step 8 is not met, adjust the GAIN control on the SG amplifier for a reading as close to zero as possible, but in no case outside a $\pm 0.1 \text{ dB}$ deviation.
10	Press and hold the -1 DB switch on the 838B network.
11	Read the SUPERGROUP PILOT-DB meter. Requirement: 1-dB less than the value read in Step 8 (or Step 9 if adjustment was required)
12	If the requirement of Step 11 is met, release the -1 DB switch and proceed to Step 15. If it is not met, maintain the -1 DB switch depressed and adjust the SCALE control on the SG amplifier to meet the requirement.
13	Repeat Steps 8 through 12, in the order given, until the requirements of Steps 8 or 9 and 11 are met. Note: There is some interaction between the GAIN and SCALE controls.
14	If the requirements of Steps 8 or 9 and Step 11 cannot be met, locate and correct the trouble in the supergroup measuring circuit under test. Then repeat Steps 8 through 13, as required.
15	Remove patch (2), Fig. 1.
16	Replace the front coverplate and the two machine screws removed in Step 1.
