L MULTIPLEX TERMINALS

LMX-1

64-KHZ SYNCHRONIZING FREQUENCY AMPLIFIER

TESTS AND ADJUSTMENTS

The information in this section supersedes information contained in Sections 356-082-501 and 356-082-502 which are now cancelled. ***Equipment Test Lists are affected.***

Chart 1 is a test procedure for measuring the gain of the 64-kHz synchronizing frequency amplifier (Fig. 1). The maximum output power of the amplifier is measured at the OUT jacks when an external 64-kHz signal at 0 dBm is applied to the input through the AMP IN jacks. Upon conclusion of this test, the test in Chart 2 must be performed in order to set the proper operating level of the amplifier when the regular 64-kHz pilot signal is connected. The test in Chart 2 can be performed by itself unless the test requirements cannot be met. However, the test in Chart 1 must be followed by the test in Chart 2.

CHART **PAGE**

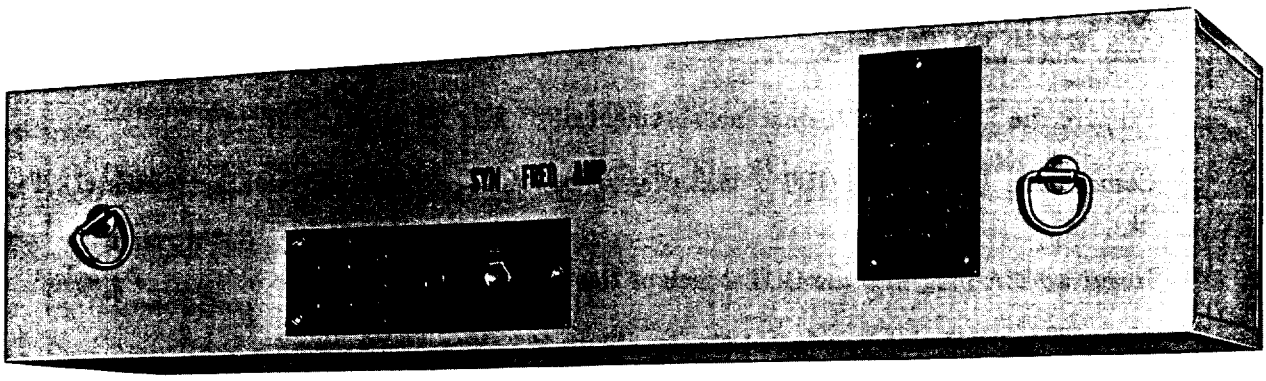

Fig. 1—64-kHz Synchronizing Frequency Amplifier—Front View

APPARATUS

Receiving Test Equipment (RTE) having the following input characteristics:

Impedance: 135 ohms

Frequency: 64 kHz

Power: +74.0 dBm (Chart 1) and +23.5 dBm (Chart 2)

Sending Test Equipment (STE) having the following output characteristics (Chart 1 only):

Impedance: 135 ohms

Frequency: 64 kHz

Power: 0 dBm

323A Plugs as required

3P20B Cords as required

P2BJ Cords as required

CHART 1

AMPLIFIER GAIN MEASUREMENT

STEP	PROCEDURE
	Note: Performing this test will activate a pilot loss alarm which should be silenced in accordance with local procedure.
1	Prepare the RTE for a 135-ohm measurement of 64 kHz at +74.0 dBm.
2	Connect the RTE to the OUT 1 jack (Fig. 1) of the synchronizing amplifier [patch (1), Fig. 2].
3	Insert a 323A plug into the OUT 2 jack of the synchronizing amplifier.
4	Prepare the STE to deliver a 64-kHz signal into 135 ohms at 0.0 dBm.
5	Connect the STE to the AMP IN jack of the synchronizing amplifier [patch (2), Fig. 2].
6	Rotate the amplifier GAIN control to the maximum clockwise position.
7	Read the RTE meter.
	Requirement: −0.1 dBm ±4.0 dB (when measured through a 74-dB attenuator)

CHART 1 (Cont)

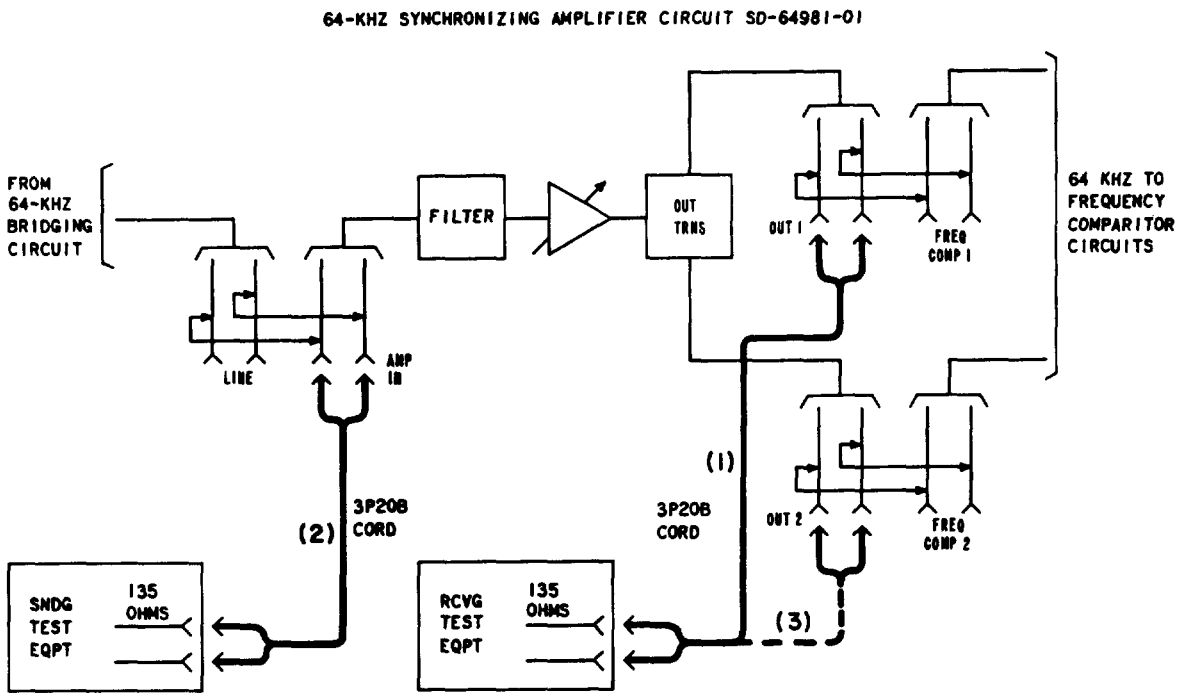

Fig. 2—64-kHz Synchronizing Frequency Amplifier—Gain Measurement

STEP	PROCEDURE
8	If the requirement of Step 7 is not met, perform electron tube tests per Section 356-150-501.
9	Remove patch (1), Fig. 2 and the 323A plug from the OUT 2 jack.
10	Connect the RTE to the OUT 2 jack [patch (3), Fig. 2].
11	Insert a 323A plug into the OUT 1 jack.
12	Repeat Step 7.
13	Remove all patches and plugs.
14	Adjust the output power of the synchronizing frequency amplifier per Chart 2 of this section.

CHART 2 OUTPUT POWER ADJUST	
STEP	**PROCEDURE**
1	Prepare the RTE for a 135-ohm measurement of 64 kHz at +13.5 dBm.
2	Connect the RTE to the OUT 1 jack of the synchronizing amplifier [patch (1), Fig. 3].
3	Read the RTE meter. ***Requirement:*** 0.0 dBm ±2.0 dB (when measured through a 13.5-dB attenuator)
4	If the requirement of Step 3 is not met, perform the following steps until the requirement is met: (a) Adjust the amplifier GAIN control. (b) Perform the tests in Chart 1 of this section.
5	Remove patch (1), Fig. 3.
6	Connect the RTE to the OUT 2 jack [patch (2), Fig. 3].
7	Repeat Steps 3 and 4.
8	Remove all patches.

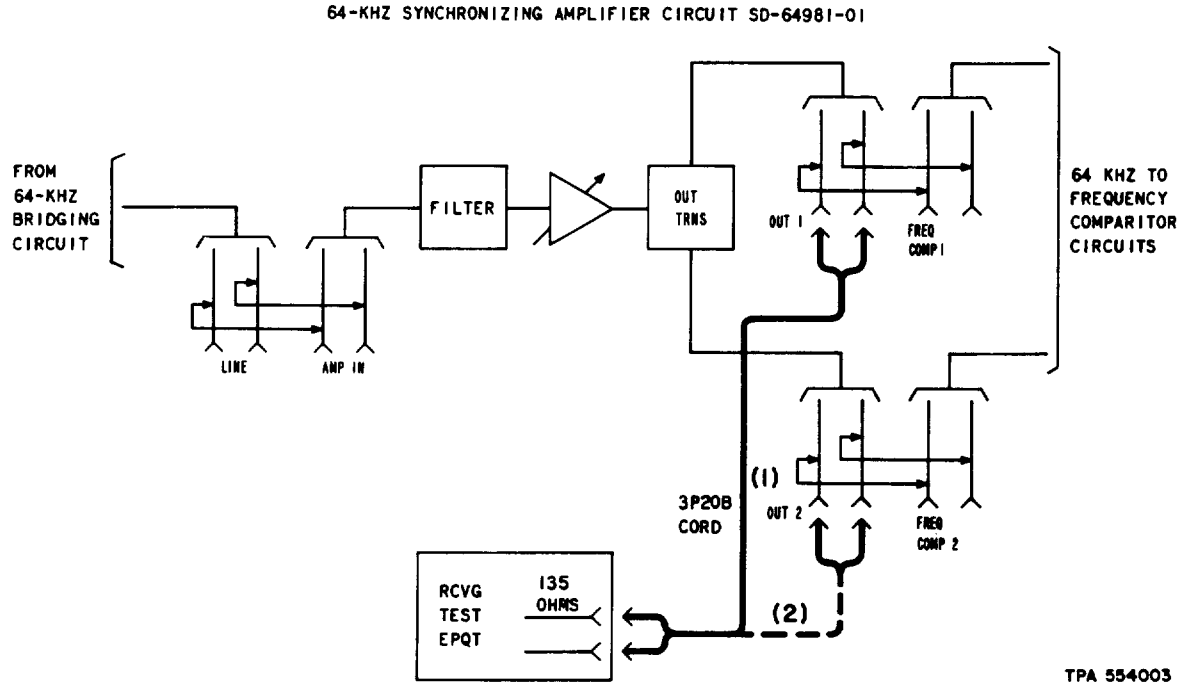

Fig. 3—64-kHz Synchronizing Frequency Amplifier—Measurement of Output Power