

L MULTIPLEX TERMINALS

LMX-1

308-KHZ SYNCHRONIZING FREQUENCY AMPLIFIER OUTPUT TESTS

This section supersedes and updates information contained in Sections 356-083-501 and 359-078-501 which have been cancelled. *Equipment Test Lists are affected.*

The 308-kHz synchronizing frequency amplifier (Fig. 1) receives its input signal from the 308-kHz pilot generator circuit or from the bridging circuit of the L3 line. After filtering and two stages of fixed amplification, the 308-kHz signal is divided equally through a hybrid transformer for connection to two frequency comparator circuits.

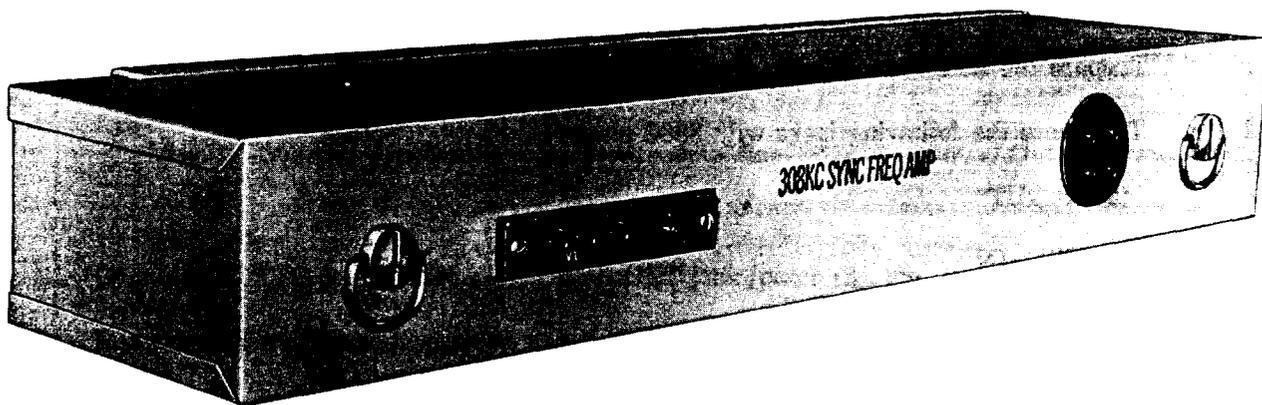


Fig. 1—308-kHz Synchronizing Frequency Converter—Front View

Since the 308-kHz synchronizing frequency amplifier is a fixed-gain type, the output power is determined by the amplitude of the input signal, nominally -46.0 dBm.

APPARATUS

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

Impedance: 75 ohms

Frequency: 308 kHz

APPARATUS (Cont)

Power: -46.0 dBm and +16.0 dBm

Sending Test Equipment (STE) per Section 356-010-500, having the following output characteristics:

Impedance: 75 ohms

Frequency: 308 kHz

Power: -46.0 dBm

386C Plugs as required

P2BJ Cord

P2CD Cord

STEP	PROCEDURE
1	Prepare the RTE for a 75-ohm measurement of 308 kHz at +15.0 dBm.
2	Terminate the following jacks with 386C plugs: (a) B OUT (b) FCA IN (c) FCB IN
3	Connect the RTE to the A OUT jack [patch (1), Fig. 2].
4	Read the RTE meter. Requirement: 0 dBm ±1.0 dB
5	If the requirement of Step 4 is met, proceed to Step 21. If it is not met, proceed to Step 6.
6	Remove patch (1), Fig. 2.
7	Prepare the RTE for a 75-ohm measurement of 308 kHz at -46.0 dBm.
8	Remove the patch plug from between the SYN FREQ HYB OUT jack and the SYN FREQ AMP IN jack.

STEP	PROCEDURE
	<div style="text-align: center;"> <p>308-KHZ SYNCHRONIZING FREQUENCY AMPLIFIER SD-59665-01</p> </div> <p style="text-align: right;">TPA 554072</p>
<p style="text-align: center;">Fig. 2—308-kHz Synchronizing Frequency Amplifier—Measurement of Output Power</p>	
9	Connect the RTE to the SYN FREQ HYB OUT jack [patch (2), Fig. 2].
10	Read the RTE meter indication.
	Requirement: $-46.0 \text{ dBm} \pm 0.2 \text{ dB}$
11	If the requirement of Step 10 is met, proceed to Step 12. If it is not met, perform tests in accordance with Section 356-185-501.
12	Remove patch (2), Fig. 2.
13	Repeat Step 1.
14	Prepare the STE to deliver 308 kHz into 75 ohms at -46.0 dBm .
15	Connect the STE to the SYN FREQ AMP IN jack [patch (1), Fig. 3].

STEP	PROCEDURE
	<div style="text-align: center;"> <p>308 KHZ-SYNCHRONIZING FREQUENCY AMPLIFIER SD-59665-01</p> </div> <p style="text-align: right;">TPA 554073</p>
<p>16</p>	<p>Connect the RTE to the A OUT jack [patch (2), Fig. 3]. Tune the STE for a maximum RTE meter reading.</p>
<p>17</p>	<p>Read the RTE meter.</p>
<p>Requirement:</p>	<p>0 dBm \pm1.0 dB</p>
<p>18</p>	<p>If the requirement of Step 17 is met, proceed to Step 19. If it is not met, perform electron tube tests per Section 356-051-501 (to be reissued as 356-150-501).</p>
<p>19</p>	<p>Remove patch (1), Fig. 3.</p>
<p>20</p>	<p>Replace the patch plug between the SYN FREQ HYB OUT jack and the SYN FREQ AMP IN jack.</p>
<p>21</p>	<p>Repeat the entire test with the A OUT jack terminated with a 386C plug and the RTE connected to the B OUT jack.</p>
<p>22</p>	<p>Remove all plugs and test connections.</p>

Fig. 3—308-kHz Synchronizing Amplifier—Gain Measurement