2600-HZ TONE SUPPLY AND TRANSFER CIRCUIT TESTS TYPE F SIGNALING SYSTEM

1. GENERAL

1.01 This section describes a method of testing the 2600-Hz tone supply and transfer circuit used with type F single-frequency signaling circuits.

1.02 This section is being reissued to make note of the use of a J87304A-1, List 2 dc-to-dc converter in Tests A and B.

1.03 The tests covered are:

A. Output Power Level

B. Output Frequency

C. Load Transfer

D. Double Failure

1.04 In the standard arrangement, two tone supply and transfer circuits are used for each bay of signaling circuits. In the arrangement, the tone supply of each unit is monitored by the transfer circuit. Outputs of the transfer circuits control load switching relays mounted on the oscillator shelf. The two units are designated ODD and EVEN. In this section, the ODD tone supply and transfer circuit is referred to as the ODD oscillator and the EVEN tone supply and transfer circuit as the EVEN oscillator.

1.05 The 21A transmission measuring set is referred to in this section as the TMS.

1.06 The 72A frequency meter is referred to in this section as the frequency meter.

1.07 Units not meeting the requirements of this section should be replaced by another unit and returned to Western Electric Co.

2. APPARATUS

Test A

2.01 21A TMS J94021A.

2.02 Patching cord, W2GB cord, 6 feet long, equipped with a 241A plug and two KS-19531, L2 plugs (2W51A cord).

Test B

2.03 72A Frequency Meter J64072A.

2.04 Patching cord, W2GB cord, 6 feet long equipped with a 241A plug and two KS-19531, L2 plugs (2W51A cord).

3. METHOD

STEP	ACTION	VERIFICATION
A. Output Power Level		
	▶*Note:* To obtain the correct output level and output frequency for this test, a J87304A-1, List 2 dc-to-dc converter must be used in the F signaling bay.◀	
1	TMS should be known to be properly calibrated.	
2	Using 2W51A cord, connect 241A plug to DET IN jack of TMS and KS-19531 plugs to TP1 and TP2 jacks of ODD oscillator.	TMS meter indicates -10 ± 0.5 dB.
3	Remove patching cord.	
4	Repeat Steps 2 and 3 for EVEN oscillator.	
B. Output Frequency		
	▶*Note:* To obtain the correct output level and output frequency for this test, a J87304A-1, List 2 dc-to-dc converter must be used in the F signaling bay.◀	
1	Frequency meter should be known to be properly calibrated.	
2	At frequency meter— Operate CAL-MEAS-SEARCH switch to MEAS.	
3	Using 2W51A cord, connect 241A plug to 600 ohm IN jack of frequency meter and KS-19531 plugs to TP1 and TP2 jacks of ODD oscillator.	Frequency meter indicates 2600 ±3 Hz.
4	Remove patching cord.	
5	Repeat Steps 3 and 4 for EVEN oscillator.	

STEP	ACTION	VERIFICATION
C. Load Transfer		
ODD to EVEN Transfer		
	Note: Perform this test only during periods of light traffic, as calls in progress may be affected by the momentary interruption of the tone supply during transfer.	
1	At ODD oscillator— Release locking device and slide ODD oscillator forward until connection between oscillator and bay mounting is broken.	Minor alarm sounds.
2	Return ODD oscillator to in-service position.	At ODD oscillator— ALM lamp lighted. ***Note:*** If ALM lamp and minor alarm is automatically extinguished within 3 seconds, omit Step 3.
3	At ODD oscillator— Operate and release RST key.	Minor alarm silenced. At ODD oscillator— ALM lamp extinguished.
EVEN to ODD Transfer		
4	At EVEN oscillator— Release locking device and slide EVEN oscillator forward until connection between oscillator and bay mounting is broken.	Minor alarm sounds.
5	Return EVEN oscillator to in-service position.	At EVEN oscillator— ALM lamp lighted. ***Note:*** If ALM lamp and minor alarm is automatically extinguished within 3 seconds, omit Step 6.
6	At EVEN oscillator— Operate and release RST key.	Minor alarm silenced. At EVEN oscillator— ALM lamp extinguished.
D. Double Failure		
	Note: This test should never be made on an in-service bay as it will cause a mass seizure of the associated trunks. Testing should be performed only before the bay is placed in service.	
1	At ODD oscillator— Release locking device and slide ODD oscillator forward until connection between oscillator and bay mounting is broken.	Minor alarm sounds.

STEP	ACTION	VERIFICATION
2	At EVEN oscillator— Release locking device and slide EVEN oscillator forward until connection between oscillator and bay mounting is broken.	Minor alarm silenced. Major alarm sounds.
3	Simultaneously— Return ODD and EVEN oscillators to in-service positions.	ODD and EVEN ALM lamps lighted. ***Note:*** If major alarm and ALM lamps are automatically extinguished, Steps 4 and 5 may be omitted.
4	At ODD oscillator— Operate and release RST key.	Major alarm silenced. Minor alarm sounds. At ODD oscillator— ALM lamp extinguished. At EVEN oscillator— ALM lamp remains lighted.
5	At EVEN oscillator— Operate and release RST key.	Minor alarm silenced. At EVEN oscillator— ALM lamp extinguished.