OSCILLATOR CIRCUIT

CONTENTS

1. GENERAL INFORMATION

1.1 This section describes the tests to be performed on the oscillator circuit per SD-95827-01.

CAUTION: Avoid grounding the casing of transistor Q3 (Protrudes from the rear of the mounting plate) or the metal plate to which it is attached. Also avoid grounding the emitter terminal of Q3 and terminals 3, 4, 7 and 8 of transformer T3.

2. RECORDS AND REQUIREMENTS

2.1 Records:

2.11 Forms ID-1313 and ID-1315 are required for recording the results of these tests. For further information on preparing records, refer to Handbook 50, Section 3.

2.2 Requirements:

2.21 Tests of this section agree with performance requirements contained in BSP's AA633.006, AA632.007 and AA634.008.

3. TEST EQUIPMENT

Amount	Code	Description
★ 1	ITE-4414	Vacuum Tube Voltmeter
★★ 1	72A	Frequency Meter
1	R-9572	Test Receiver
1	ITE-4442	Volt-Ohmmeter

★ Requisition only if telephone company maintenance voltmeter (Hewlett-Packard 400D) is not available.

★★ Obtain from the Telephone Company.

4. OUTPUT VOLTAGE

4.1 Resistance Measurement

4.11 Set the switches of ITE-4442 volt-ohmmeter for the ohmmeter function.

4.12 Connect the two leads of the volt-ohmmeter to terminals 4 and 5 of the TST jack. Verify no plug is inserted in the TST jack.

4.13 Observe that the volt-ohmmeter reads between 95 and 105 ohms.

4.14 Remove volt-ohmmeter leads from the TST jack.

4.2 Voltage Measurement

4.21 Connect the ITE-4414 vacuum tube voltmeter to the TST jack.

4.22 If output voltage is not 2.2 volts, adjust the V potentiometer until the voltage reading is 2.2 volts.

4.23 If desired voltage is not obtainable, verify that the voltages shown on SD-95827-01 - FS1 are obtained, using ITE-4414.

5. FREQUENCY MEASUREMENT

5.1 Calibrate 72A Frequency Meter as outlined in BSP A702.636.

5.2 Connect the "BRDG IN" jacks of the No. 72A frequency meter to the TST jack of the oscillator.

5.3 A pattern two loops side, and one loop high should be seen on the 72A frequency meter. This figure is similar to a figure eight lying on its side.

5.4 Check the meter setting, and verify that the pattern of Paragraph 5.2 is observed when the setting is between 2897.5 cycles per second and 29.02.5 cycles per second. Do not readjust if output is within Required Limits.

5.5 If the pattern of Paragraph 5.2 is not observed, adjust the N1 network until a stationary double loop occurs at a setting of 2900 cycles per second on the frequency meter.

5.6 Remove connections.

6. OSCILLATOR TRANSFER

NOTE: This test is to be performed only on paired oscillators such as used on the AN1 trunk frames.

6.1 Connect one lead of a test receiver to ground.

6.2 Touch the other lead of the test receiver to terminal 5 of the unit terminal strip.

6.3 Verify that relay OSC operates.

6.4 Remove lead from terminal 5. Relay releases.

6.5 Insert a make busy pkg into the MB jack of the oscillator under test.

6.6 Again touch lead of the test receiver to terminal 5 of the unit terminal strip.

6.7 Observe that the OSC relay of the second oscillator on the frame operates.

6.8 Remove lead from terminal 5, and the OSC relay releases. Remove make busy plug.

6.9 Repeat Paragraphs 6.2 through 6.8 on the second oscillator.

➔ Arrowed lines indicate new or changed information.

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Reason for Reissue:
To clarify observation of oscilloscope figure.

Replaces Section 113 dated 3-16-61.