

SUPPLEMENTARY TEST
 DISTRICT JUNCTOR TEST FRAME

CONTENTS

- | | |
|------------------------|-----------------------|
| 1. GENERAL INFORMATION | 3. SUPPLEMENTARY TEST |
| 2. TEST EQUIPMENT | 4. OPERATIONAL TESTS |

1. GENERAL INFORMATION

1.1 This section describes a method of verifying the modification for the Dial Tone First Feature, Apparatus Figure AH and WY wiring of the District Junctor Test Circuit, SD-25158-01.

1.2 When performing the tests of this section, that relay operation listed in the results column of Paragraph 3 is of primary importance. However, any additional relay operation, which appears to be false, should be investigated.

1.3 After performing the tests of Paragraph 3 and prior to returning the test frame to the Operating Company, operational tests of existing features are required. See Paragraph 4.

1.4 Functional Description of Added Equipment.

Relays:

- DTF - Dial Tone First
- FCP - False Coin Potential
- FPD - False Potential Detected
- RP1 - Reverse Polarity
- RP2 - Reverse Polarity Check
- RP2A - Reverse Polarity Check Auxiliary
- RP3 - Reverse Polarity Check Auxiliary

Lamps:

RP - Lamp RP lighted indicates the reversal of talking battery when a coin supervisory circuit is seized.

FCP - Lamp FCP lighted indicates a foreign potential on the ring lead when key DTF is operated.

2. TEST EQUIPMENT

2.1 Cords and Accessories

AMT	CODE	DESCRIPTION	WITH ITE
1	R-9572	Test Receiver	4023
As Req.	508A	Tool, Blocking	
As Req.	419A	Clip, Spring	4023
As Req.	ITE-8507	Clip, Alligator	4023
1	ITE-9427, or Equiv.	One End, ITE-2461 Socket, Other End	
1	ITE-4442	Volt-Ohmmeter	

3. SUPPLEMENTARY TESTS

STEP	BLOCK RELAY (O) Operated (N) Normal	ACTION	RESULTS
1.		Restore all test frame keys and switches to normal.	
2.		Verify absence of ground on TST selector, Arc 4, Terminal 18.	
3.	RS(O)	If option X0 or XN is provided, block relay TTF operated.	Ground present on TST selector, Arc 4, Terminal 18.
4.	DTF(O)		Ground absent on TST selector, Arc 4, Terminal 18.
5.	RP1(O)		Ground present on TST selector, Arc 4, Terminal 18.
6.		Connect ground to 4B, Relay CB. Connect +48V battery to 4T, Relay CB.	Relay RP2A operates. (Verifies operation of 316 type relay RP2.)
7.		Remove blocking tools from relays DTF and RP1.	Relay RP2A remains operated.
8.		Disconnect battery and ground connections from relay CB.	Relay RP2A releases.

STEP	BLOCK RELAY (O) Operated (N) Normal	ACTION	RESULTS
9.		Connect the ITE-4442 Volt-Ohmmeter, adjusted to the RX100 scale, across contacts 4T and 4B of Relay CB.	Ohmmeter reading: Options ZA and BB = 3367 Ohms, Options ZA and AA = 3947 Ohms. If option ZA is not furnished, ohmmeter indicates an open circuit.
10.	RP3(O)		Lamp RP is lighted. Ohmmeter indicates a direct short.
11.		Operate and Hold relay RP1.	OSR*
12.		Insulate Contacts 3 and 4B, Relay RP1 and 3 and 4T, Relay RP2A.	
13.		Operate and release, one at a time, Relays RP1 and RP2A.	Ohmmeter indicates an open circuit when relays are operated.
14.	CN2(N) CN1(O)		Ohmmeter indicates an open circuit.
15.		Move Ohmmeter connection from 4T, Relay CB to 3B, Relay CNR.	Ohmmeter indicates an open circuit.
16.		Operate Key DTF.	Relay DTF operates. Ohmmeter indicates a direct short.
17.	FCP(O)		Relay FPD operates. Lamp FCP is lighted. Ohmmeter indicates an open circuit.
18.		Disconnect the Ohmmeter from Relays CB and CNR. Remove blocking tools from Relays RS, RP3, CN1, CN2 and FCP. Remove insulators from Relays RP1 and RP2A. Restore Key DTF.	All relays restore to normal and all lamps are extinguished.
19.		Insulate Contacts 1, 2 and 3B, Relay CN1. Operate Key DTF. Connect Ohmmeter, adjusted to RX100 scale, from 5B, Relay RP2A to 1T, Relay RP3.	Ohmmeter indicates direct short.
20.	RP3(O)		Ohmmeter indicates open circuit.
21.	RP2A(O)		Ohmmeter indicates direct short.
22.		Disconnect Ohmmeter, remove blocking tools from Relays RP3 and RP2A, remove insulators from Relay CN1 and restore Key DTF.	
23.	ST(O)	Manually operate Relay FPD.	Relay FPD locks operated.
24.		Remove blocking tool from Relay ST.	Relay FPD restores to normal.
25.		Insulate Contacts 1 and 2B, Relay CB and 7 and 8B, Relay CD. Connect the ITE-4442 Volt-Ohmmeter, adjusted to the RX100 scale, from 1B, Relay CB to 1T, Relay LT.	
26.		Operate Key OLT.	Ohmmeter reads approximately 4885 ohms.
27.		Restore Key OLT and operate Key NO-LT.	Ohmmeter reads approximately 6855 ohms.
28.		Operate Key DTF.	Ohmmeter reads approximately 9885 ohms.
29.		Disconnect Ohmmeter from Relays CB and LT. Remove insulators from Relays CB and CD. Restore Key NO-LT.	

*OSR - Represents "Ohm Scale Reading". It is to be interpreted as neither zero nor infinity but does imply any specific value. This is used as the Test Result Verification when diodes and/or networks are involved.

STEP	BLOCK RELAY (O) Operated (N) Normal	ACTION	RESULTS
30.	CN1(O)	Connect -48V battery through a test receiver to 4T, Relay CB.	Relay FCP operates.
31.		Restore Key DTF.	Relay FCP releases.
32.		Disconnect test receiver. Remove blocking tool from Relay CN1.	
33.		Operate Key NO-CN. Momentarily apply ground, through a test receiver, to 7B, Relay RS.	Relays RS and SS operate and release.
34.		Momentarily apply ground, through a test receiver, to TST selector, Arc 1, Terminal 13.	Relay SS operates and releases. Relay RS does not operate.
35.		Connect a ground, through a test receiver to TST selector, Arc 1, Terminal 16.	Relay SS operates.
36.		Operate Key DTF.	Relay RP1 operates.
37.		Manually operate Relay RP2A.	Relay RP1 releases. Relay RP3 operates.
38.		Restore Key DTF.	Relay RP3 releases.
39.		Disconnect test receiver from TST selector. Restore Key NO-CN. Restore Test Frame to normal.	

4. OPERATIONAL TESTS

- 4.1 Prior to returning the test frame to the operating company, tests per Handbook 61, Section 131, Paragraphs 5, 6 and 11 should be performed.

Manager, Crossbar Product Engineering
Control Center