Installation Engineering Handbook 59
Western Electric
Hawthorne Works

Section 903C4
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DIVIDED ACCESS LINE CIRCUIT - FIXED AND PORTABLE UNIT - (SD-98139-01)

CONTENTS

1. GENERAL INFORMATION

1.1 This section describes the tests to be made on the following:

SD-98139-01 Divided Access Line Circuit

1.2 The circuit under test is provided either as a relay rack mounted unit or in a portable mounting box per J70144E. For relay rack mounted units, the circuit leads are cabled to a distributing frame and test connections shall be made at the distributing frame. For portable units, test connections shall be made at the terminal strip in the mounting box. In either case, cross connections should not be connected until tests have been completed. This will simplify trouble locating procedures.

2. RECORDS AND REQUIREMENTS

2.1 Records

2.11 Forms SD-4-1313 and SD-4-1315 are required for recording the results of these tests. For further information on preparing records, refer to Handbook 3, Section 6B.

2.2 Requirements

2.21 The tests in this section are based on SD and CD information.

3. TESTING EQUIPMENT

3.1 Test Sets

Amt	ITE	Description
1	4011	Miscellaneous Trunk Test Set
1	4442A	Volt-Ohmmeter

3.2 Cords

Amt	ITE	Lgth	Cdrs	One End	Other End	With ITE
2	9639	12'	3	310 Plug	3-2455 Plugs	4011
2	9547	12'	1	2455 Plug	2455 Plug	4011
10	9548	9"	1	2455 Plug	2455 Plug	4011
1	9598	12'	2	310 Plug	310 Plug	4011

3.3 Accessories

Amt	ITE or Code	Description	With ITE
8	ITE-8507	Alligator Clip	4011
1	ITE-4631	Test Receiver	

4. FUSING

4.1 Using a volt-ohmmeter, check each fuse post for absence of battery and ground.

4.2 Using fuses of correct type as indicated by circuit drawing and fuse panel designations, install fuses one at a time. Check that each fuse is associated with the correct equipment and is free from crosses with other unfused posts on the fuse panel.

5. OPERATION TESTS

5.1 Test Setup

5.11 Locate the ITE-4011, Trunk Test Set, at the distributing frame or mounting box location of the cable leads for the circuit under test.

5.12 Using two ITE-9639 cords equipped with insulated alligator clips, connect plugs to jacks (O) and (T) of ITE-4011. Connect leads at other end to circuit cable leads as shown in Table 1 and Figure 1.

TABLE 1

Jack	ITE-4011 Lead	DIVIDED ACCESS LINE CIRCUIT
(0)	T	T to Subscribers Line Ckt.
"	R	R to Subscribers Line Ckt.
(T)	T	T to SXS or XBR Office (Terminating)
(T)	R	R to SXS or XBR Office (Terminating)
(0)	S	R1 to FX Line Ckt.
(T)	S	T1 to FX Line Ckt.

NOTE: For crossbar offices, connect a second ITE-9547 cord to the L2 jack on ITE-4011. Connect other end to the ALS lead at the terminal strip. If ANS and ALS designations are not used and only the T1 and R1 designations are shown, as indicated in CAD figures of SD-98139-01, the ANS lead is The R1 lead connecting to jack V of the unit multicontact connector. The ALS lead is the T1 lead connecting to jack U of the unit.

5.2 Test Procedure

5.21 Perform test operations as outlined in Table 2 and observe results as indicated. Relay operations shown are for trouble locating assistance only and need not be verified if the test set lamp indications are received properly.

5.22 After completion of test, restore circuit to normal and remove all associated cords, plugs, strapping, insulators and blocking tools if applicable.

5.23 Assigned cross connections if applicable may be connected as soon as tests per Table 2 are completed.

TABLE 2

OPERATION TESTS FOR

DIVIDED ACCESS LINE CIRCUIT SD-98139-01

Test No.	Function	Test Operation At ITE-4011	Observe Results At ITE-4011	Observe Results At Relay Unit
1	Normal	Operate STO, STT and BG keys.	No lamps lighted	
2	Seizure from SXS or XBR	HOLD OPERATED RG key	BG, BG1, MB, MG Lamps light (L2 lp lights, if connected).	SL operates
5	Cross Test of SL Relay	Operate REV and REV-1 keys.	BG, BG1, MB, MG, (L2) lamps extinguished.	
6	Seizure of Data Line	Release RG key.	BG, BG1, MB, MG, L1 lamp light (L2 lp out)	SL release, L operates.
7	Loop control	Operate LP key (Release BG key)	Lamps remain lighted	L holds operated (See Note 1)
8	Open loop	Release REV key	All lamps extinguished	L releases
9	Disconnect	Release STO, STT, LP and REV-1 keys	All lamps out	

NOTE 1: If lamps go out on momentary open of transfer contacts when operating LP key, it will be necessary to operate L relay manually and observe that it holds operated over the 2000 ohm test loop.

➡ Arrowed lines indicate new or changed information.

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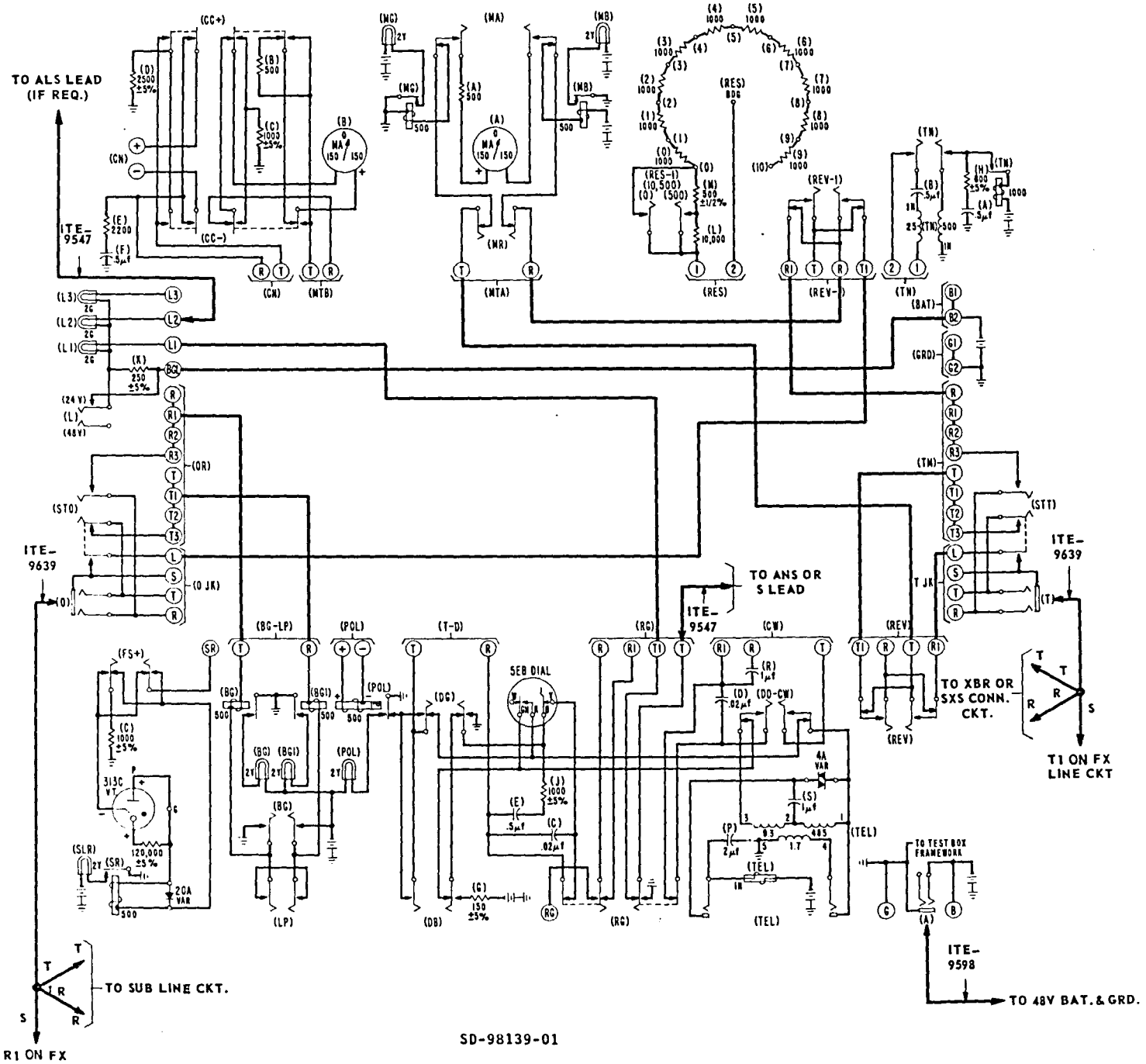
ATTACHMENTS

Figure 1 on page 3.

Reason for Reissue:

To incorporate miscellaneous Handbook Sections into one Handbook Section and to make general revisions to update to current engineering standards.



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NOTE: ARROWS OR KEY CHART INDICATE KEYS OPERATED BEFORE START OF TEST.

CIRCUIT REQUIREMENTS						
DESIG.	CODE	RES.%	TEST	SOAK MA	TEST MA	READJ. MA
POL	258FN	5%	0	-15	3.0	3
			R	15		1
			NO	15		1.0
POL	289J	10%	0	-12	-	* .5
			NO	-12	-	* .2
			0	-12	5.2	5.
			NO	12	1.7	1.8
			R	12	.9	1.
TR	280C	5%	0		13	12
			NO		10.5	11
BG,BGI	R-473	5%	0		12	11
			NO		9	10
MG,MB		5%	0		8.5	8.3
			NO			5.9
SR		5%	0		T	

*APPLIED WITH TENSION OF BIASING SPRING RELEASED.

REQ.	CORDS AND ACCESSORIES						WITH ITE
	AMT.	ITE	LENGTH	CORD.	END	END	
	4	8547	12'	1	2455	2455	
	1	8801	12'	3	310	310	
	1	9605	12'	3	310	309	
	2	8839	12'	3	310	3-2458	
	14	8548	9"	1	2455	2455	
	1	9588	12'	2	310	310	
	2	9314	12'	3	310	3-4085	
	8	8507	ALLIGATOR CLIPS				
	8	2455	PLUGS				
	6	4188	SPADE TIPS				
	2	4412	CONNECTOR 2-POINT				
	2	4413	CONNECTOR 4-POINT				

MISCELLANEOUS TRUNK TEST SET, ITE-401I

	CC-	LP	DD-CW	
STO	CC+	BG	REV	REV-1
STT	TN	MA	DB	FS+
	RG	MR	DG	

NOTE: ALL RESISTOR VALUES ARE ±1% UNLESS OTHERWISE SPECIFIED.

(24V) (48V) (L)

(10,800) (0) (500) (RES-1)

(5) (4) (6) (3) (7) (2) (8) (1) (9) (0) (10) (RES)

(RP-19073)

FIGURE 1