TEST OF INCOMING TRUNK TEST SET

J24751A (SD-25187)

CONTENTS

1. GENERAL INFORMATION

1.1 This section outlines all tests to be applied to the wagon type set J24751A (SD-25187) for testing incoming trunk circuits.

1.2 Test Lines: Assignments should be obtained from the telephone company for the incoming trunk test line, the return test lines, busy line and overflow line.

2. RECORDS AND REQUIREMENTS

2.1 Records: Forms ID-1313 and ID-1315 are required for recording the results of these tests. For further information on records see Handbook 50, Section 3.

2.2 Requirements: As indicated in Section 1A of this handbook the tests outlined herein are considered supplementary tests. This test shall be made before the test set is used for testing the incoming trunk circuits.

3. TEST EQUIPMENT

3.1 Test Sets

Amt	ITE	Description
1	4011	Misc. Trunk Test Set
1	4442	Volt-Ohmmeter
1	1883	Wheatstone Bridge
1	8253	Contact Protection Test Set

3.2 Accessories

Amt	Code or ITE	Description	With ITE
10	349A	Make Busy Plug	4023

3.3 Cords (See Note)

Amt	ITE	Lgth	Cdrs	One End	Other End	With ITE
1	9639	12'	3	310 Plug	ITE-2455	4011
1	9547	12'	1	ITE-2455	ITE-2455	4011

NOTE: These cords are required for making resistance measurements. The cords used for the operating tests are supplied with test set SD-25187 and ITE-4011.

4. RESISTANCE MEASUREMENTS

4.1 Refer to Handbook 50, Section 2 for instructions covering the use of the wheatstone bridge.

4.2 Check that all keys are normal and the selector is at position 22.

4.3 Connect test set ITE-1883 binding posts X and X1 as indicated in Table 1. Use cord ITE-9639 to make connections to jacks.

4.4 This test is also a continuity check of the keys operated.

5. CONTACT PROTECTION

5.1 Using ITE-8253 Contact Protection Circuit Test Set check the following networks in accordance with the method described in Handbook 50, Section 2.

Check At Relay	Check At Contact	Capacitance Desig.	Capacitance Value	Resistance Desig.	Resistance Value
F02	3T	B	2 M.F.	CD	1000 ohms
F02	1T	C	2 "	CD	1000 "
F02	6B	D	0.5 "	CE	800 "
RB1	2B	E	0.5 "	CB	1000 "

Resistance Checked	Connect Binding Posts X	Connect Binding Posts X1	Block Relays Operated	Operate Keys	Resistance (Ohms) "M" Option Min.	"M" Option Max.	"N" Option Min.	"N" Option Max.
A to D	T Jack TST	R Jack TST	TST,OP,DRB		2670	2730	3170	3230
" " E	" " "	" " "	" " "	AOUA,NO.1 TOLL	2875	2935	3370	3440
" " F	" " "	" " "	" " "	AOS	3225	3295	3720	3800
" " L	" " "	" " "	" " "	NO A SH	5455	5570	5950	6075
" " AK	" " "	" " "	" " ,IRB	NO A SH	19120	19510	19600	20020
" " F	" " "	" " "	" " "	AOS	3225	3295	3720	3800
" " C	" " "	" " "	" " "	AOUA	2375	2425	2870	2930
" " J	" " "	" " "	" " "	NO.1 TOLL	4825	4925	5315	5430
" " D	" " "	" " "	" " "		2670	2730	3170	3235
" " L	" " "	" " "	" " ,DRM		5455	5570	5950	6075
" " N	" " "	" " "	" " "	AOS	7060	7210	7560	7720
" " F	" " "	" " "	" " "	AOUA	3375	3445	3870	3950
" " AK	" " "	" " "	" " ,IRM		19310	19710	19810	20210
" " W	" " "	" " "	" " "	AOS	15190	15500	15680	16000
" " U	" " "	" " "	" " "	AOUA	10860	11080	11360	11600
" " L	" " "	" " "	" " " ,ANO	AOUA	5455	5570	5950	6075
" " R	" " "	" " "	" " " "	AOS	8245	8415	8740	8920
" " P	" " "	" " "	" " " "		7385	7535	7880	8040
" " P-AL to AS	" " "	" " "	" " " " ,AR1		25440	25950	26540	27070
" " L-" " CK	" " "	" " "	" ,ANO "	AOUA	27770	28330	28870	29460
" " R-" " S	" " "	" " "	" " "	AOS	26300	26830	27400	27950
" " W-" " AS	" " "	" " "	" ,IRM	AOS	33230	33900	34320	35020
" " AK-" " AS	" " "	" " "	" "		37370	38120	38470	39240
" " U-" " CK	" " "	" " "	" "	AOUA	33180	33850	34280	34970
" " F-" " CN	" " "	" " "	" ,DRM	AOUA	27410	27970	28520	29100
" " N-" " AR	" " "	" " "	" "	AOS	24480	24990	25590	26110
" " L-" " CG	" " "	" " "	" "		24160	24650	25270	25780
" " D-" " CJ	" " "	" " "	" ,IRB		24180	24780	25290	25800
" " F-" " CM	" " "	" " "	" "	AOS	26310	26840	27420	27970
" " C-" " CP	" " "	" " "	" "	AOUA	27920	28990	29020	29610
" " J-" " AP	" " "	" " "	" "	NO.1 TOLL	21790	22240	22890	23350
" " AK-" " AS	" " "	" " "	" "	NO A SH	37170	37940	38270	39050
" " L-" " CG	" " "	" " "	" ,DRB	NO A SH	24170	24660	25270	25780
" " E-" " CL	" " "	" " "	" "	NO.1 TOLL,AOUA	25440	25960	26540	27070
" " F-" " CJ	" " "	" " "	" "	AOS	24750	25260	25850	26370
" " D-" " CJ	" " "	" " "	" "		24190	24680	25290	25790
					Min.		Max.	
TG,AH,AG	" " "	" " "	FO2		19220		19850	
RB," "	" " "	" " "	" ,IA		3160		3230	
RB," ",CR	" " "	" " "	" "	AOS	3410		3480	
CF,AE	" " "	" " "	TST,NOTE 1	R+BR	2575		2625	
-	" " "	" " "	"	+BR	0		0	
RT	" " "	" " "	"	RNO	41.8		46.2	
AD,AB,AC,CA	S " BAT	3T(AUX).			6120		6270	
Z,AA,AB,AC,CA	" " "	4B(AR1)			3420		3520	
X,Y,BB	T " "	7T(AUX)			403		411	
BA	" " "	1B(AXO)			990		1010	
BC	" " "	1T(C)			1265		1295	
AC	R " ±	8B(TST)		R±BR,RNO,RST	1980		2020	

NOTE 1: Insert 398A MB plug in jack ±.

TABLE 1

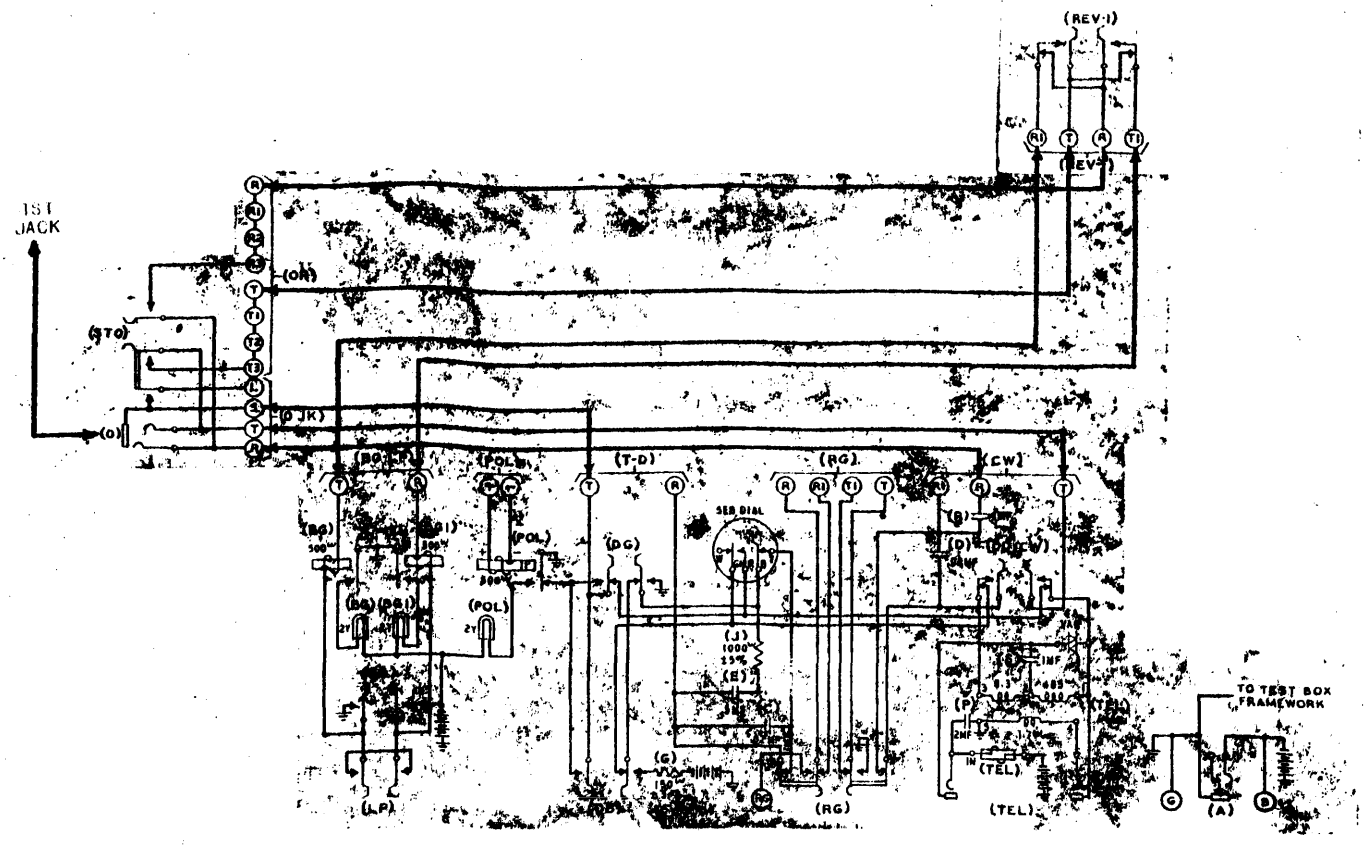

FIG. 1 PRELIMINARY TEST SETUP

6. PRELIMINARY TEST

6.1 Setup For Test (See Figure 1)

6.11 Setup test set ITE-4011 as follows:

Patch	To	Patch	To
T(O JK)	T(CW)	R(OR)	R(REV-1)
R(O JK)	R(CW)	T(BG-LP)	R1(REV-1)
S(O JK)	T(T-D)	R(BG-LP)	T1(REV-1)
T(OR)	T(REV-1)		

6.12 Connect an operator's telephone set to jacks TEL of both test sets.

6.13 Patch the test sets as follows:

Cord	J24751A	Frame	ITE-4011
2 P9C	BAT	A	
3 P7A	INT	INT	
3 P7A	TST		O
ITE-9601		A	A

6.2 Operation Test (Full Selector Trunk Circuit)

6.201 Operate keys ANO and IRM then set up on the keyset the number 9999. Operate test set ITE-4011 keys STO and BG. Operate and release key DSC. Lamp NOR lights if not previously lighted.

6.202 Operate and release key ST. Lamp NOR is extinguished and lamp SDR lights as selector S steps to terminal 3 or 14, Test Set ITE-4011 lamps BG and BG1 light.

6.203 Table 2 shows how many times key BG must be released and reoperated for IB, IG, FB, FT and FU corresponding to the number setup on the key set.

6.204 Verify that counting relay 4 corresponding to IB is operated. Release and reoperate key BG five times and observe that counting relay 4', 3, 3', 2, 2', 1, 1', 0, FO and BO operate in sequence under control of key BG. Selector S steps to terminal 4 or 15 operating counting relay 3 corresponding to IG.

6.205 Release and reoperate key BG four times. Selector S steps to terminal 5 or 16 corresponding to FB.

6.206 Release and reoperate key BG five times. Selector S steps to terminal 6 or 17 operating counting relay 9 corresponding to FT.

6.07 Release and reoperate key BG ten times. Selector S steps to terminal 7 or 18 operating counting relay 9 corresponding to FU.

NUMBER SETUP ON KEYSET				NUMBER OF KEY BG OPERATIONS				
TH	H	T	U	IB	IG	FB	FT	FU
9	9	9	9	5	4	5	10	10
8	8	8	8	5	2	4	9	9
7	7	7	7	4	4	3	8	8
6	6	6	6	4	2	2	7	7
5	5	5	5	3	4	1	6	6
4	4	4	4	3	1	5	5	5
3	3	3	3	2	3	4	4	4
2	2	2	2	2	1	3	3	3
1	1	1	1	1	3	2	2	2
0	0	0	0	1	1	1	1	1
≠3	6	0	0	2	9	2	1	1
≠3	1	0	0	2	8	2	1	1
≠2	6	0	0	2	7	2	1	1
≠2	1	0	0	2	6	2	1	1

≠ Key HF operated

TABLE 2

6.208 Release and reoperate key BG ten times. Selector S steps to terminal 8 or 19 for incoming advance.

6.209 Block relay TC1 non-operated. Operate ITE-4011 key REV-1 then release key BG. Selector S steps to terminal 9 or 20. Lamp SDR is extinguished and lamp TC lights.

6.210 A Relay Continuity Test: Block relay SU normal. Release ITE-4011 key REV-1 and operate key BG. Remove the block from relay TC1. Lamp TC is extinguished.

6.211 A Relay Non-Operate Test: Lamp ANO lights. Insulate the armature from contacts 1 and 2 of counting relay 8. Remove the block from relay SU. Counting relays 7 to 0 operate but relay FO does not operate. Remove insulation from counting relay 8. Lamp ANO is extinguished and lamp SUPV lights.

6.212 Supervision: Operate and release ITE-4011 key REV-1 several times. Lamp SUPV flashes under control of the key.

6.213 Transmission: Operate ITE-4011 key DD-CW and verify that talking between the two test sets is satisfactory.

6.214 Sleeve Ground Test: Operate and release key AR. Lamp SG lights. Operate ITE-4011 key DG. Lamp SG is extinguished and lamp AR lights.

6.215 A Relay Release: Release ITE-4011 key DG. Lamp AR is extinguished and lamp TST COMP lights.

6.216 Disconnect: Operate and release key DSC. Lamp TST COMP is extinguished and lamp NOR lights.

6.217 Numerical Keys: Repeat Paragraphs 6.201 to 6.208 using all 8's all 7's etc. Instead of proceeding through incoming advance operate and release key DSC to restore the set to normal after the selector steps to terminal 8 or 19.

6.218 High Five: After all the numerical keys have been verified four more calls per Paragraphs 6.201 to 6.205 are required to check the operation of key HF. Table 2 shows the numbers to be setup and the number of BG key operations required. After IG has been checked, selector S steps to terminal 5 or 16, operate and release key DSC to restore the set.

6.3 Operation Test (Key Pulsing Trunk Circuit - Stop-Go)

6.31 Connect one end of cord M15B to Jones socket on test wagon.

6.32 Operate key IRKP and ITE-4011 keys BG and STO. Operate and release key DSC. Lamp NOR lights if not previously lighted.

6.33 Operate and release key ST. Lamp TC lights momentarily. Operate ITE-4011 key REV-1. Lamp KN lights.

6.34 Using volt-ohmmeter ITE-4034 check for 1200 ohm loop across contacts 12 and 13 of Jones plug at the free end of cord M15B. Check also that 300 ohm battery is present on contacts designated in Table 3, and no others, while the corresponding key is depressed.

Depress Key	Resistance Battery On Contacts
KP	4 and 9
0	7 and 6
1	1 and 3
2	1 and 4
3	2 and 4
4	1 and 6
5	2 and 6
6	4 and 5
7	1 and 8
8	2 and 8
9	4 and 7

TABLE 3

6.35 Operate and release key AV. Lamp KN is extinguished and lamp SUPV lights. Verify with volt-ohmmeter ITE-4034 that the 1200 ohm loop across contacts 12 and 13 of Jones plug is open.

6.36 Release and reoperate ITE-4011 key REV-1 several times. Verify that lamp SUPV flashes under control of key REV-1.

6.37 Release all keys and operate and release key DSC.

6.4 Operation Test (Key Pulsing Trunk Circuit - Wink)

6.41 Operate keys W, DRKP and ITE-4011 keys BG and STO. Operate and release key DSC. Lamp NOR lights if not previously lighted.

6.42 Operate and release key ST. Lamp TC lights momentarily. Operate and release ITE-4011 key REV-1. Lamp KN lights.

6.43 Operate and release key REV-1. Lamp RO lights.

6.44 Operate and release key DSC. Lamps KN and RO are extinguished and lamp NOR lights.

6.45 Operate key RS then operate and release key ST. Lamp NOR is extinguished and lamp RO lights.

6.46 Release all keys then operate and release key DSC. Lamp NOR lights and lamp RO is extinguished. Remove all connections to test set ITE-4011.

7. PREPARATION FOR TEST

7.1 The test circuit is tested further by checking all functions using an incoming trunk circuit of each type available.

7.2 Patch test set J24751A jacks to trunk frame jacks as follows:

Cord	Test Set	Frame
2P9C	BAT	A
3P7A	+	E
"	INT	INT
"	AC	RC
"	RTL	TST
"	TST	T jack of trunk used for test
M15B	15 PT. jack	15 Pt. jack

7.3 Key AOUA or AOS is operated when the class key is operated if trunk relay A is type UA or S, respectively. If trunk relay A is type B keys AOS and AOUA are normal.

7.4 On controlled ringing trunks it may be necessary to operate key RST when lamp SUPV lights to prevent false operations of the trunk ringing relay before key R±BR or ±BR is operated.

7.5 Class keys IRM, IRB and IRKP are used for immediate ring trunks. Class keys DRM, DRB and DRKP are used for delayed ring trunks.

8. TESTS USING IMMEDIATE RING FULL SELECTOR TRUNK

NOTE: When testing trunks common to two office units operate key HF to direct the test call to a line in the second office unit.

8.1 Test Line Test

8.11 Operate key AOS or AOUA if required. Operate key IRM and set up on the numerical keys the directory number of the incoming trunk test line. If lamp NOR is not lit, operate and release key DSC to restore the set.

8.12 Operate and release key ST. Lamp SDR lights. The sender is seized and the test line number is registered. Lamp SDR is extinguished. Lamp TC lights momentarily. Lamp SUPV lights.

8.13 Ringing takes place. Check audible tone in a telephone set plugged into TEL jacks. The test line trips the ringing and returns six supervisory pulses (one long, two short, one long two short) which flash lamp SUPV. "Tick-tock" tone is heard when the test line completes its functions and lamp SUPV is lighted.

8.14 Operate and release key AR. The trunk A relay releases and lamp TST COMP lights. Operate and release key DSC. All lighted lamps are extinguished and lamp NOR lights.

8.15 Tell-Tale Test: Set up three digits on the test set numerical keys, and repeat the test line test. Lamp TT lights. Operate and release key DSC.

8.2 Busy Line Test

8.21 Set up the directory number of the office busy line on the test set numerical keys. Operate key ANO.

8.22 Operate and release key ST. The test proceeds as the test line test to the trunk continuity test (lamp TC lights momentarily) and lamp SUPV lights.

8.23 Lamp ANO lights while the non-operate test is applied to the trunk "A" relay. After about four seconds lamp ANO is extinguished and lamp SUPV flashes at 60 IPM. When provided check busy line tone in the telephone set.

8.24 Operate and release key AR. When lamp TST COMP lights, operate and release key DSC. All lighted lamps are extinguished and lamp NOR lights.

8.3 Overflow Test

8.31 Set up on the numerical keys the directory number of the line arranged for overflow test.

8.32 Operate and release key ST. The marker is directed to set up an overflow condition in the trunk under test. Lamp SUPV flashes at 120 IPM. When provided, check overflow tone in the telephone set.

8.33 Operate and release key AR. When lamp TST COMP lights, operate and release key DSC. All lighted lamps are extinguished and lamp NOR lights.

8.4 Return Test Line Tests

8.41 General

8.411 The following chart shows the various types of return test lines that may be provided, the type of ringing and the ringing indication lamp.

See Note	Party or Line	Ringing "FS"	Ringing "S" (N-1)	Ring. Lamp
N-2	Ring	± -	1 Ring Code	R -
N-2	Direct	± -	1 " "	R -
N-2	Free	± -	1 " "	R -
N-2	Tip	± -	1 " "	T -
N-2	Ring	± +	2 " "	R +
N-2	Tip	± +	2 " "	T +

(N-1) When testing in offices having semi-selective ringing, the ringing code should be verified by observing the number of times that the ringing indication lamp is lighted for each ringing period.

(N-2) When common incoming trunks are provided for two office units, the operation of key HF will direct the test call to the corresponding return test line in the second office unit, when such lines are provided.

8.42 Condenser Test and Time Measure Release

NOTE: The following tests may be made using one of the trunks SD-25022, SD-25292, SD-25304 or SD-25875.

8.421 Setup on the numerical keys the directory number of a tip or ring party return test line.

8.422 Operate and release key ST. A test is made to the return test line. Observe that lamp SUPV lights and the proper ringing indication lamp lights.

8.423 Operate key TMR to trip ringing. Lamp TMR lights and lamp SUPV is extinguished. When ringing is tripped release key TMR.

8.424 Operate key CTT to test the tip condenser. Lamp CT lights to indicate an OK test. Verify that lamp CT is extinguished when contacts 10T-11T of trunk relay D are manually opened. Release key CTT. Lamp CT is extinguished.

8.425 Operate key CTR to test the ring condenser. Lamp CT lights as an OK test. Verify that lamp CT is extinguished when contacts 4B-5B (or for SD-25875 only, 10B-11B) of trunk relay D are manually opened. Release key CTR. Lamp CT is extinguished.

8.426 Operate key TMR. Operate and release key AR. When lamp TST COMP lights, operate and release key DSC. Lamp TST COMP is extinguished but lamp TMR remains lighted indicating the trunk is held from the called end.

8.427 In from 2 to 4 minutes lamp TMR is extinguished and lamp NOR lights. Release key TMR.

8.43 Reselection Test

8.431 Setup on the numerical keys the directory number of a tip or ring party return test line.

8.432 Operate and release key ST. A test is made to the return test line. Observe that lamp SUPV lights and the proper ringing indication lamp lights.

8.433 Operate key TMR to trip ringing. Lamp TMR lights. Operate and release key DSC to cause the circuit to disconnect.

8.434 Operate key RST and start a new call on the same trunk. (The incoming trunk test line may be called.) Lamp TMR remains lighted until the trunk is released by the operation of its F relay. The second call is completed to the incoming trunk test line. Observe that lamp SUPV lights between calls and until trunk relays S and T are operated on the second call.

8.435 Operate and release key DSC to restore the equipment to normal. Release key TMR. Lamp NOR lights.

8.44 Remote Control Operation

8.441 Insert a remote control cord (32A test set) into jack RC. Set up the directory number of the incoming trunk test line.

8.442 Operate and release the WHITE button of the remote control cord. A test line test is made and the supervisory flashes are received.

8.443 Operate and release the WHITE button. The TST COMP lamp lights.

8.444 Operate and release the RED button. The circuits restore to normal and lamp NOR lights.

9. TEST USING IMMEDIATE RING B TRUNK

NOTE 1: Operate key No. 1 TOLL for trunks from a No. 1 Toll Switchboard, without outgoing trunks. Operate key NO A SH for a trunk, from a No. 1 Toll switchboard with outgoing trunks, whose A relay is not shunted.

NOTE 2: When testing incoming trunks common to two offices single order tone will be heard and the office code as well as the line number is to be passed to the B operator.

9.1 Test Line Test

9.11 Operate key AOS or AOUA, if required. Operate key IRB. If Lamp NOR is not lighted, operate and release key DSC to restore the set to normal.

9.12 Operate and release key ST. Lamp TC lights momentarily. Lamp SUPV lights. Order tone is heard in the telephone set. Pass the incoming test line number to the B operator.

9.13 Check audible ringing tone in the telephone set. Lamp SUPV may be extinguished momentarily when ringing is tripped. After ringing is tripped the SUPV lamp will flash six times. "Tick-tock" tone is heard and lamp SUPV remains lighted.

9.14 Operate and release key AR. Lamp TST COMP lights. Operate and release key DSC. All lighted lamps are extinguished. Lamp NOR lights.

10. TEST USING AUXILIARY INCOMING TRUNK FROM MANUAL

10.1 Operate key AOS or AOUA, if required. Operate key AUX then operate and release key ST. Lamp TC lights momentarily. When order tone is heard pass the incoming test line number to the B operator.

10.2 Lamp SUPV flashes six times (reverse supervision) then remains lighted. Operate and release key AR to apply the release test to trunk relay L. Lamp SUPV is extinguished and lamps SG and AR light momentarily.

10.3 When lamp TST COMP lights operate and release key DSC. Lamp TST COMP is extinguished and lamp NOR lights.

11. TEST USING DELAYED RING FULL SELECTOR TRUNK

11.1 Return Test Line Test

11.11 Operate key AOS or AOUA if required. Operate key DRM. Set up the directory number of the individual tip party return test line.

11.12 Operate and release key ST. Lamp SDR lights while selections are being made. Lamp TC lights momentarily. Lamp SUPV lights as a ringing signal.

11.13 Momentarily operate key R ± BR or ± BR. The T- ringing indication lamp lights.

11.14 Trip ringing by operating key TMR. Lamp TMR lights.

11.15 Rering Test: Operate key R ± BR or ± BR to start ringing. Ringing indication lamp R+ lights each time the key is operated. Lamp R- may also light under this condition.

11.16 Non-Operate Test of Ringing Relay: Operate key RNO and observe that no ringing indication lamp lights. Lamp RNO lights indicating that the non-operate test ringing current is being applied. Release key RNO.

11.17 Time Measure Release: Operate and release key AR and when lamp TST COMP lights operate and release key DSC. Lamp TST COMP is extinguished. Lamp TMR remains lighted indicating that the trunk is held from the called end. Release key TMR. Lamp TMR is extinguished and lamp NOR lights.

12. TEST USING DELAYED RING B TRUNK

NOTE 1: Operate key No. 1 TOLL for trunks from a No. 1 Toll switchboard, without outgoing trunks. Operate key NO A SH for a trunk, from a No. 1 Toll switchboard with outgoing trunks, whose A relay is not shunted.

NOTE 2: When testing over common incoming trunks, single order tone will be heard and the office code as well as the line number is to be passed to the B operator.

12.1 Test Line Test

12.11 Operate key AOS or AOUA, if required. Operate key IRB. If lamp NOR is not lighted, operate and release key DSC to restore the set to normal.

12.12 Operate and release key ST. Lamp TC lights momentarily. Lamp SUPV lights. Order tone is heard in the telephone set. Pass the incoming test line number to the B operator.

12.13 Check audible ringing tone in the telephone set. Lamp SUPV may be extinguished momentarily when ringing is tripped. After ringing is tripped lamp SUPV will flash six times. "Tick-tock" tone is heard and lamp SUPV remains lighted.

12.14 Operate and release key AR. Lamp TST COMP lights. Operate and release key DSC. All lighted lamps are extinguished. Lamp NOR lights.

13. TEST USING DIAL INCOMING TRUNK (DIAL TONE)

NOTE 1: When testing incoming trunks that are common to two office units, low dial tone is heard when four digit numbers are to be dialed. High dial tone is heard when five digit numbers are to be dialed.

NOTE 2: Keys No. 1 TOLL and NO A SH must be normal during this test.

13.1 Test Line Test

13.11 Operate keys AOS, AOUA, IRB or DRB as required. Operate key DIAL. Operate and release key DSC. Lamp NOR lights if not previously lighted.

13.12 Operate and release key ST. Lamp TC lights momentarily. Lamp SUPV lights as a start dialing signal.

13.13 Dial the directory number of the test line. See Note 1.

13.14 With delayed ringing trunks operate and release key R±BR or ±BR.

13.15 Ringing takes place. Ringing is tripped and lamp SUPV flashes six times then remains lighted.

13.16 Operate and release key AR. Lamp SUPV is extinguished and lamp TST COMP lights.

13.17 Operate and release key DSC. Lamp TST COMP is extinguished and lamp NOR lights.

13.2 Remote Control

13.21 Insert the remote control test set plugs R, BK and G into jacks DIAL, G and RC respectively. Connect the test set to an immediate ring dial trunk. Operate keys IRB and DIAL.

13.22 Operate and release key #3 of test set 40B. Dial the directory number of the incoming trunk test line when lamp SUPV lights. A test line test is made and the supervisory flashes are received.

13.23 Operate and release key #3. Lamp TST COMP lights.

13.24 Operate and release key #2. The circuits restore to normal and lamp NOR lights.

14. TEST USING TRUNKS WITH STOP-GO OR WINK

NOTE 1: Operate key No. 1 TOLL for trunks from Toll Switchboard No. 1 without outgoing trunks. Operate key NO A SH for a trunk from Toll Switchboard No. 1, with outgoing trunks, whose A relay is not shunted.

NOTE 2: Operate the AUX-MF key for Auxiliary Incoming Trunks associated with multi-frequency Incoming Trunks from manual. The RS and W keys are never operated for this test. (Notes 4 and 5)

NOTE 3: When testing incoming trunks that are common to two office units an office digit must be keyed or dialed immediately before the directory number is registered.

NOTE 4: If battery is on the tip when the trunk is normal key RS is normal. Operate key RS before operating key ST when battery is initially on the ring.

NOTE 5: If the start pulsing or dialing signal is Stop-Go key W is normal. When the start pulsing or dialing signal is Wink key W is operated before operating key ST.

NOTE 6: If keys W and DRKP are normal in Paragraph 14.1, when possible, they should be operated in Paragraph 14.2 and vice versa so that all six features (MFKP, DIAL, WINK, STOP-GO, IRKP and DRKP) may be tested in two calls.

→ Arrowed lines indicate new or changed information.

Reason for Reissue:
To add NOTE 2 to Paragraph 14.

14.1 MFKP

14.11 Operate keys AOS, AOUA, IRKP or DRKP as required. Operate keys W and RS if required. Operate and release key DSC. Lamp NOR lights if not previously lighted.

14.12 Operate and release key ST. Lamp TC lights momentarily. Lamp SUPV lights. Lamp KN lights indicating the line number may be keyed.

14.13 Operate key KP for approximately 1/4 second.

14.14 Key the test line number (See Note 3) on numerical key strip MFKP. Fully depress each key to allow for proper circuit operation.

14.15 Operate key AV at the completion of keying and observe that lamp KN is extinguished and lamp SUPV lights.

14.16 With delayed ringing trunks operate and release key R±BR or ±BR.

14.17 Ringing takes place. Ringing is tripped and lamp SUPV flashes six times then remains lighted.

14.18 Operate and release key AR. Lamp SUPV is extinguished and lamp TST COMP lights.

14.19 Operate and release key DSC. Lamp TST COMP is extinguished and lamp NOR lights.

14.2 DIAL

14.21 Operate keys AOS, AOUA, IRKP or DRKP as required. Operate keys W and RS if required. Operate key DIAL. Operate and release key DSC. Lamp NOR lights if not previously lighted.

14.22 Operate and release key ST. Lamp TC lights momentarily. Lamp SUPV lights. Lamp KN lights indicating the line number may be dialed.

14.23 Dial the test line number. (See Note 3).

14.24 Operate key AV at the completion of dialing and observe that lamp KN is extinguished and lamp SUPV lights.

14.25 With delayed ringing trunks operate and release key R±BR or ±BR.

14.26 Ringing takes place. Ringing is tripped and lamp SUPV flashes six times then remains lighted.

14.27 Operate and release key AR. Lamp SUPV is extinguished and lamp TST COMP lights.

14.28 Operate and release key DSC. Lamp TST COMP is extinguished and lamp NOR lights.

R. E. RAHMES

Engineer of Installation

Replaces Section 202 dated 1-20-49.