

**INCOMING TRUNK SWITCH, TRUNK PREFERENCE,  
OPERATORS TELEPHONE AND POSITION, SERVICE ASSISTANT  
TELEPHONE AND POSITION TRANSFER CIRCUITS  
TESTS USING TEST SET SD-95535-01 (J94729A) OR  
TRUNK TEST CIRCUIT SD-94478-01 (J94729B)  
NO. 23A, 23B, 23C, AND 23D OPERATING ROOM DESKS**

**1. GENERAL**

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**1.01** This section is reissued to incorporate comments and to generally update the section. Tests C, D, E, G, L, O, P, and Q are corrected. Tests H and J are deleted and Tests I through S are relettered. Tests R, S, T, and U are added. Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

and the CW lamps from each group circuit through the associated positions. . . . .

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**1.02** The tests covered are:

**E. Group Progression Trouble Detection**  
**Features:** This test checks that the group progression control relay operates on either winding. It also checks the trouble detection feature for checking the operation of the group progression timing relays. . . . .

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**A. Test of CO, CT, and CW Lamps:**  
This test checks that the CO, CT, and CW lamps light. . . . .

**6**

**F. GT Relay Trouble Detection**  
**Feature:** This test checks that the GT relay, which controls the connection of the call distributing trunks to the desk position, operates on either winding. . . . .

**9**

**B. Trunk Preference Lockout Feature:**  
This test checks that a call will not enter the trunk preference circuit falsely when a prior call is waiting closure to a position. . . . .

**6**

**G. RL Relay Trouble Detection**  
**Feature—Using the Trunk Test Set to Originate a Call (in offices equipped with 275A LRL relay):** This test checks that the RL relay, which verifies that a connection being set up is properly established between the call distributing trunk and the position, operates on either winding. . . . .

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**C. Timing, Recycle, Group Blocking and Alarm Features:** This test checks that the incoming trunk switch circuit will make a second trial to establish a connection with a position and that if it fails on the second trial, it will block subsequent calls in the group preference circuit and bring in a major alarm. . . . .

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**H. PS Relay Trouble Detection Feature—Using the Trunk Test Set to Originate a Call:** This test checks that the PS relay, which controls the connection of a call distributing trunk to an available position, operates on either winding. . . . .

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**D. Night Alarm Feature and CW Lamps in Desk Positions:** This test checks the operation of the night alarm

**I. SS Relay Trouble Detection Feature:**  
This test checks that the SS relay,

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which controls the connection of a call distributing trunk to an available service assistant's position, operates on either winding. . . . .	12
<b>J. Test of Position Idle and Busy Indications, Traffic Register and Operator Hold Conditions:</b> This test checks for idle occupied and busy occupied position indications and the operation of the position traffic register. It also checks that the operator can hold or release a call and when a call is held that the position is not available for other calls. . . . .	13
<b>K. Service Assistant Calling Signals:</b> This test checks all the calling signal lamps and bells associated with the service assistant and messenger call circuit. . . . .	14
<b>L. Transfer Feature for Service Assistant Calls:</b> This test checks that a call can be transferred from a position to the service assistant's telephone circuit and that the position is available to handle other calls when the service assistant is busy on a call. It checks that the service assistant can hold a trunk with the telephone set transmitter and receiver cut off. It also checks for a visual signal in all positions in the service assistant's division. . . . .	15
<b>M. Position Busy and Lockout Feature:</b> This test checks that a position which is busy with an outgoing trunk, interposition trunk or key-ended incoming trunk will not accept a call from an incoming call distributing trunk. . . . .	16
<b>N. Availability of Position for Incoming Calls when Service Assistant Makes an Outgoing Call:</b> This test checks that a position is available to incoming calls when the service assistant is making an outgoing call from the position. . . . .	17
<b>O. Position Transfer Circuit:</b> This test checks that a call on an incoming call distributing trunk can be transferred	

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to another 23 desk or switchboard from positions arranged to transfer calls. . . . .	18
<b>P. Trunk Selection:</b> This test checks that the trunks of highest priority are served before trunks of a lower priority and that the trunks in the priority group are selected alternately from either end of the group as positions become available. . . . .	19
<b>Q. Position Selection:</b> This test checks that traffic is distributed over all occupied positions in a group and that no one occupied position will accept a call until all the other positions in the group have had a call. . . . .	19
<b>R. Call Originated from Centralized Console:</b> This test checks the position and lamp functions when a call is received from a centralized supervisory console. . . . .	19
<b>S. Call from Position to Supervisor:</b> This test checks the position and lamp functions when a call is originated from a position to a supervisor. . . . .	19
<b>T. Position Trace Key Feature:</b> This test checks the position trace feature, which is used when poor transmission or a double connection condition is encountered. . . . .	20
<b>U. Position Disconnect Function:</b> This test checks the position disconnect (PD) function. The PD key when operated will automatically hold the trunk for tracing purposes when a zip no customer condition is encountered. . . . .	20
<b>1.03</b> Test A requires verification at relay rack and all lamp cabinet appearances.	
<b>1.04</b> Test C requires action and verification at relay rack lamp panel and the message register bay.	
<b>1.05</b> Test D, G, H, I, L, M, N, and O require action and verification at relay rack lamp panel and the position.	

- 1.06** Test J requires action and verification at the relay rack lamp panel, position, and message register bay.
- 1.07** In the tests which require the operation of the NA key, the key should be placed in a position (either operated or released) to make the night alarm effective.
- 1.08** All lamp verifications in the section are made at the relay rack lamp panel unless other locations are given.
- 1.09** Verification in Tests A and P should be made at all lamp cabinet appearances.
- 1.10** Tests G, J, L, M, T, and U are made with the telephone sets removed from all positions except the position under test.
- 1.11** *Lettered Steps:* A letter a, b, c, etc, added to a step number in Parts 3 or 4 of this section, indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.
- 1.12** Local instructions should be followed for recording and reporting any register operations caused by performing these tests.
- 1.13** Table C provides ST key operation in relation to the type of trunk used for testing.
- 1.14** Table D provides ST key release in relation to the type of trunk used for testing.
- 2. APPARATUS**
- 2.01** The apparatus required for each test is shown in Table A. The description of each item is covered in the indicated paragraphs.
- 2.02** Head telephone set.
- 2.03** Test receiver, 716C receiver, attached to a W2AB cord equipped with two 360A tools (2W21A cord) equipped with a 411A (test pick) tone and a KS-6278 connecting clip.
- 2.04** Trunk test set SD-95535-01 (J94729A), or trunk test circuit SD-96478-01 (J94729B).
- 2.05** Patching cord, P3E cord, 6 feet long, equipped with two 310 plugs (3P7A cord).
- 2.06** Patching cord P2J cord, 6 feet long, equipped with two 310 plugs (2P9B cord). (not required when using trunk test circuit SD-96478-01.)
- 2.07** Testing cord W3M cord, 6 feet long, equipped with one 310 plug, one 360A tool, one 360B tool, and one 360C tool (3W4A cord).
- 2.08** 365 connecting clips.
- 2.09** Testing cord 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) equipped with a KS-6780 connecting clip on one end and a 411A tool on the other end.
- 2.10** Testing cord 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord) equipped with two 419A tools.
- 2.11** 349A plug.
- 2.12** 1011G handset.
- 2.13** Testing cord 4W10A cord, 8 feet long, equipped with one 240A plug and one 471A jack to be used when testing with a SD-96478-01 test set and 1011G handset (W4AY cord). 2W38A cord, 5 feet long, equipped with one 310 plug and one 471A jack to be used when testing with a SD-95535-01 test set and a 1011G handset (W2CK cord).
- 2.14** Blocking and insulating tools as required. Use tools and apply as covered in Section 069-020-801.

TABLE A

APPARATUS	REQUIRED FOR TEST																				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
Headset telephone (2.02)	1			1			1	1	1	1		1	2	2	1				1	1	1
Test receiver (2.03)		1																			
Trunk test set (2.04)							1	1	1	1		1	1	1	1					1	1
Patching cord (2.05)							3	3	3	3		3	3	3	3					3	3
Patching cord (2.06)							1	1	1	1		1	1	1	1					1	1
Testing cord (2.07)															1						
Connecting clips (2.08)															1						
Testing cord (2.09)										1											
Testing cord (2.10)	1																				
Plug (2.11)							1	1	1	1		1	1	1	1					1	1
Handset (2.12)							1	1	1	1		1	1	1	1					1	1
Testing cord (2.13)							1	1	1	1		1	1	1	1					1	1
Blocking and insulating tools (2.14)			√	√	√	√	√	√	√	√		√									

√ As required

3. PREPARATION

<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
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Tests A, G, H, J, L, M, O, T, and U.

- 1 Remove the head telephone sets from all positions except position being used for test.

Tests G, H, I, J, L, M, O, T, and U

- 2 Make one call distributing trunk busy in the group to be tested.  
An additional trunk must be made busy for Test L.
- 3 Patch BAT G jack of test set to BAT G jack on relay rack using P2J cord (not required when using trunk test circuit SD-96478-01).
- 4 Patch T jack of test set to T jack of trunk using P3E cord.

STEP	ACTION	VERIFICATION
5a	If T1 jack is provided on trunk— Patch T1 jack of test set to T1 jack of trunk using a P3E cord.	
6b	If trunk is equipped for E and M signaling— Patch DROP jack of trunk to E and M jack of test set using P3E cord.	
7c	If trunk is not equipped for E and M signaling— Insert 349A plug in DL jack (not required when using trunk test set SD-96478-01).	
8d	If trunk is equipped for E and M signaling with call distinction— Connect 1011G handset to DL jack.  <i>Note:</i> If 4W10A cord is used, operate switch on cord to the ON position.	
9d	Operate handset key to talk position.	
10	Determine the type of trunk to be used for the test and, except for "intercept" trunks, whether battery or ground is present on the tip and ring when the trunk is idle. Depending on the type of trunk and the tip and ring condition, operate the proper key as specified in the following listing:	

Key	Type of Trunk and Condition When Idle	Key	Type of Trunk and Condition When Idle
BAT TIP	Two-wire trunk, other than intercept, from dial with ground on the tip	REG INCPT	Two-wire regular intercept from dial office
BAT RING	Two-wire trunk, other than intercept, from dial with battery on the tip	REG INCPT	Two-wire regular and trouble intercept from dial office when used for regular intercept
H-L	Two-wire trunk, other than intercept, from dial with neither ground nor battery on the tip	TBL INCPT	Two-wire regular and trouble intercept from dial office when used for trouble intercept
WET DRY	Three-wire trunk from toll with ground on the tip and battery on the ring		
SLV	Three-wire trunk from toll with neither ground nor battery on the tip or ring	E and M SIG	E and M signal trunk used for regular intercept and/or information.

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
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**Tests C, F, G, H, and I**

11 Operate TL key on relay rack.

**4. METHOD**

<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
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**A. Test of CO, CT, and CW Lamps**

2	In trunk preference circuit— Apply ground to 8T of LO relay using 893 cord.	At relay rack lamp panel— Associated CO lamp lighted. At operating room lamp panel— Associated CW lamp lighted.
3	Operate LO relay.	At relay rack lamp panel— CO lamp extinguished. Associated CT lamp lighted.
4	Remove ground from 8T of LO relay.	CO and CW lamps extinguished.
5	Release LO relay.	CT lamp extinguished.
6	Repeat Steps 2 through 5 on each LO relay in trunk preference circuit.	

**B. Trunk Preference Lockout Feature**

1	In trunk preference circuit— Operate G relay of trunk group to be tested.	Check for absence of ground on contacts 2B, 4B, 6B, 8B, 10T, and 11T of G relay.
2	Release G relay.	

**C. Timing, Recycle, Group Blocking and Alarm Features**

1	In group preference circuit to be tested— Block PS relay nonoperated.	
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*Note:* If during the test a CO lamp associated with any of the trunks in the group being

STEP	ACTION	VERIFICATION
	tested lights, remove the blocking tool from the PS relay to allow the call to go through.	
2	Momentarily operate PGS relay.	While circuit is timing out— SGS, PGS, GT, WT, AL, and ARL lamps momentarily lighted. ZA and ZP lamps lighted and locked in. At register bay— Recycle and traffic registers score once.
3a	If automatic reset (Fig. 9) is not provided— Momentarily operate SGS relay.	While circuit is timing out— SGS, PGS, GT, WT, AL, and ARL lamps momentarily lighted. ZA and ZP lamps extinguished. GB lamp lighted. Major alarm sounded. At register bay— Recycle and traffic registers score once.
4b	If automatic reset (Fig. 9) is provided— Momentarily operate SGS relay.	While circuit is timing out— SGS, PGS, GT, WT, AL, and ARL lamps momentarily lighted. ZA and ZP lamps extinguished. GB lamp momentarily lighted. At register bay— Recycle and traffic registers score once.
5b	Momentarily operate SGS relay.	While circuit is timing out— SGS, PGS, GT, WT, AL, and ARL lamps momentarily lighted. ZP and ZA lamps lighted. At register bay— Recycle and traffic registers score once.
6b	Momentarily operate SGS relay.	While circuit is timing out— SGS, PGS, GT, WT, AL, and ARL lamps momentarily lighted. ZP and ZA lamps extinguished. GB lamp lighted. Major alarm sounded. At register bay— Recycle and traffic registers score once.
7	Operate MJ-CO key.	Major alarm silenced. MJ-GD lamp lighted.
8	Momentarily operate AR key.	GBR relay momentarily operated.
9c	If AR key is provided in operating room— Momentarily operate AR key.	GBR relay momentarily operated.
10	Remove block from PS relay.	

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
11	Release MJ-CO key.	MJ-GD lamp extinguished.
12	Repeat Steps 1 through 11 as required for all group preference circuits.	
13	In incoming trunk switch circuit to be tested— Block SS relay nonoperated.	
14	Momentarily operate SPGS relay.	SPGS, SSGS, GT, WT, AL, and ARL lamps momentarily lighted. ZA and ZS lamps lighted.
15	Momentarily operate SSGS relay.	SPGS, SSGS, GT, WT, AL, and ARL lamps momentarily lighted. ZA and ZS lamps extinguished. GBS lamp lighted. Major alarm sounds.
16	Operate MJ-CO key.	Major alarm silenced. MJ-GD lamp lighted.
17	Momentarily operate AR key.	GBS lamp extinguished.
18	Remove block from SS relay.	
19	Restore MJ-CO key.	MJ-GD lamp extinguished.
20c	If AR key is provided in operating room— Momentarily operate AR key.	GBR relay momentarily operated.

**D. Night Alarm Feature and CW Lamps in Desk Positions**

1	At information desk— Operate NA key.	
2	Vacate all positions arranged to serve trunk group being tested.	
3	In trunk preference circuit associated with trunk group under test— Block operated CW relay.	Night alarm sounds. CW lamp lighted in each operator's position arranged to serve trunk group.
4	Momentarily insert a head telephone set successively in each pair of telephone jacks for all positions in group.	On each insertion of plug— Night alarm silenced.
5	Restore NA key.	Night alarm silenced.
6	Remove block from CW relay.	CW lamp extinguished.

STEP	ACTION	VERIFICATION
7	Repeat Steps 2 through 6 on all other trunk groups.	

**E. Group Progression Trouble Detection Features**

1	Make tests outlined in Steps 1 through 6 of Table B.	
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**F. GT Relay Trouble Detection Feature**

1	At incoming trunk switch circuit— Block SSGS relay nonoperated.	
2	Momentarily operate SPGS relay.	At relay rack lamp panel— GT lamp momentarily lighted. LGT lamp lighted.
3	Remove block from SSGS relay.	
4	Momentarily operate LR key.	LGT lamp extinguished.
5	Block SPGS relay nonoperated.	
6	Momentarily operate SSGS relay.	GT lamp momentarily lighted. LGT lamp lighted.
7	Remove block from SPGS relay.	
8	Momentarily operate LR key.	LGT lamp extinguished.

**TABLE B**

Step	Insulate Contact	Block Relay Nonoperated	Momentarily Operate Relay	Observe Lamp Lights	Remove Insulator From	Momentarily Operate Key	Observe Lamp Ext.
1	1T G	GA	G	LGE	G	LR	LGE
2	4T G	GA	G	LGE	G	LR	LGE
3	1T GA	—	—	LGE	GA	LR	LGE
4	3T GA	—	—	LGE	GA	LR	LGE
5	1B GE	—	G & GA	LET	GE	LR	LET
6	5B GE	—	G & GA	LET	GE	LR	LET

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
<b>G. RL Relay Trouble Detection Feature—Using the Trunk Test Set to Originate a Call (In Offices Equipped with 275A LRL Relay)</b>		
12	At position circuit to be tested— Insulate 1T of L relay.	
13	Operate ST key of test set per Table C.	At desk position— Call answered. At relay rack lamp panel— LRL lamp lighted.
14	At desk position— Momentarily operate R key.	
15	At position circuit— Remove insulator from L relay.	
16	At relay rack lamp panel— Momentarily operate LR key.	LRL lamp extinguished.
17	Restore ST key of test set per Table D.	
18	At position circuit— Insulate 1B of L relay used in Step 12.	
19	Operate ST key of test set per Table C.	At desk position— Call is answered. At relay rack lamp panel— LRL lamp is lighted.
20	At desk position— Momentarily operate R key.	

**TABLE C**

<b>ST KEY OPERATION</b>	
If trunk not arranged for E and M signaling.	Operate ST key.
If trunk arranged for E and M signaling with call distinction and test set SD-95535-01 used.	Operate ST key. (TST lamp lighted) Dial digit 1 on 1011G handset.
If trunk arranged for E and M signaling with call distinction and test set SD-96478-01 used.	Dial digit 1 on 1011G handset.

TABLE D

ST KEY RELEASE OPERATION	
If trunk not arranged for E and M signaling.	Restore ST key.
If trunk arranged for E and M signaling with call distinction and test set SD-95535-01 used.	Restore ST key. (TST lamp extinguished if lighted) Operate 1011G handset key to MON position. Restore key on handset cord assembly.
If trunk arranged for E and M signaling with call distinction and test set SD-96478-01 used.	Operate 1011G handset key to MON position.

STEP	ACTION	VERIFICATION
21	At position circuit— Remove insulator from L relay.	
22	At relay rack lamp panel— Momentarily operate LR key.	LRL lamp extinguished.
23	Restore ST key of test set per Table D.	
24	Restore TL key.	
25e	If no further tests are to be performed— Remove all test cords and restore to service all trunks and positions made busy.	
<b>H. PS Relay Trouble Detection Feature—Using the Trunk Test Set to Originate a Call</b>		
12	In incoming trunk switch circuit to be tested— Insulate GB relay contacts as follows. 9B if U58 relay is provided 12T if U227 relay is provided.	
13	Operate ST key of test set per Table C.	At relay rack lamp panel— PS lamp momentarily lighted. LPS lamp lighted. At desk position— Call answered.
14	At desk position— Momentarily operate R key.	
15	At incoming trunk switch circuit— Remove insulator from GB relay.	

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
16	Momentarily operate LR key.	At relay rack lamp panel— LPS lamp extinguished.
17	Restore ST key of test set per Table D.	
18	Insulate 5T of GB relay.	
19	Operate ST key of test set per Table C.	PS lamp momentarily lighted. LPS lamp lighted. At desk position— Call is answered.
20	At desk position— Momentarily operate R key.	
21	At incoming trunk switch circuit— Remove insulator from GB relay.	
22	Momentarily operate LR key.	At relay rack lamp panel— LPS lamp extinguished.
23	Restore ST key of test set per Table D.	
24	Repeat Steps 12 through 23 on other circuits to be tested.	
25	Restore TL key.	
26e	If no further tests are to be performed— Remove all test cords and restore to service all trunks and positions made busy.	

**I. SS Relay Trouble Detection Feature**

12	In incoming trunk switch circuit— Insulate 4T GBS relay.	
13	Operate ST key in test set per Table C.	At desk position— Call is answered.
14	At desk position— Momentarily operate TR S key.	At relay rack lamp panel— SS lamp momentarily lighted. LSS lamp lighted.
15	At incoming trunk switch circuit— Remove insulator from GBS relay.	
16	Momentarily operate LR key.	LSS lamp extinguished.
17	Restore ST key in test set per Table D.	
18	Insulate 9B of GBS relay.	

STEP	ACTION	VERIFICATION
19	Operate ST key in test set per Table C.	At desk position— Call is answered.
20	At desk position— Momentarily operate TR S key.	At relay rack lamp panel— SS lamp momentarily lighted. LSS lamp lighted.
21	At incoming trunk switch circuit— Remove insulator from GBS relay.	
22	Momentarily operate LR key.	LSS lamp extinguished.
23	Restore ST key in test set per Table D.	
24	Restore TL key.	
25e	If no further tests are to be performed— Remove all test cords and restore to service all trunks and positions made busy.	

**J. Test of Position Idle and Busy Indications, Traffic Register and Operator Hold Conditions**

**POS Lamps Provided**

11	Operate ST key in test set per Table C.	At desk position— 2 spurts of tone heard. TRK lamp lighted. POS lamp flashes. At traffic register bay— Traffic register scores once.
12	At desk position— Operate H key for several seconds.	While H key is operated— Verify talking path open.
13	Operate and release R key.	Trunk released. TRK lamp extinguished. POS lamp lighted steadily.
14	Release ST key in test per Table D.	
15	Operate H key.	
16	Operate ST key in test set per Table C.	CW lamp lighted.
17	Release H key.	CW lamp extinguished.
18	Restore ST key in test set per Table D.	
19	Repeat Steps 11 through 18 for each position.	

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
<b>PO and PB Lamps Provided</b>		
20	Operate ST key in test set per Table C.	At desk position— 2 spurts of tone heard. TRK lamp lighted. PB lamp lighted. At traffic register bay— Traffic register scored once.
21	At desk position— Operate H key.	Verify talk path open. PO lamp flashing (120 ipm).
22	Release H key.	PO lamp lighted.
23	Operate R key.	PB lamp extinguished. PO lamp flashing (120 ipm). TRK lamp extinguished. Trunk released.
24	Release R key.	PO lamp lighted.
25	Restore ST key in test set per Table D.	
26	At position circuit to be tested— Insulate 4 and 5T of SO relay.	
27	Operate ST key in test set per Table C.	At desk position— Call is not answered. Within 12 seconds associated P0 lamp flashes at 60 ipm. Major alarm sounds. TST lamp lighted.
28	Remove insulation from 4 and 5T of S0 relay.	
29	Momentarily operate AR key.	P0 lamp lighted.
30	Restore ST key in test set per Table D.	
31	Repeat Steps 20 through 30 for each position.	
32e	If no further tests are to be performed— Remove all test cords and restore to service all trunks and positions made busy.	

**K. Service Assistant Calling Signals**

1	At desk position— Operate SA LP key.	At desk position— MP lamp lighted. All SC lamps flash.
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STEP	ACTION	VERIFICATION
2	Restore SA LP key.	MP lamp extinguished. All SC lamps extinguished.
3a	If testing 23D desk— Operate MC key.	MC lamp lighted. At messenger desk or cabinet— P lamp lighted.
4a	Restore MC key.	MP lamp extinguished. P lamp extinguished.
5a	If quiet operating room practices are not used— Operate SA BELL key.	SC bell rings.
6a	Restore SA BELL key.	SC bell silent.

#### L. Transfer Feature for Service Assistant Calls

11	At desk position— Connect head telephone set to a service assistant's position serving group of positions being tested.	
12	Operate ST key in test set per Table C.	At desk position— Call is answered.
13	Momentarily operate TR S key.	S lamp lighted in all positions of division. Verify talking path from test set to service assistant's position.
14	Connect head telephone set to service assistant's telephone jacks of first position in division.	Verify talking path to test set.
15	Momentarily operate H key.	Verify that transmitter and receiver are cut off without releasing trunk.
16	Remove head telephone set used in Step 14.	
17	Repeat Steps 11 through 16 in all positions to be tested.	
18	At relay rack— Block L1 relay operated in trunk being used in test.	
19	Restore ST key in test set per Table D.	
20	Connect test set to another trunk.	
21	Operate ST key in test set per Table C.	Call is answered.

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
22	At desk position— Momentarily operate TR S key.	Verify that call not transferred to service assistant.
23	Remove block from L1 relay.	S lamp extinguished in all positions.
24	At desk position— Operate TR S key.	Call is transferred to service assistant.
25	Restore TR S keys.	
26	Restore ST key in test set per Table D.	
27	Remove head telephone sets.	
28e	If no further tests are to be performed— Remove all test cords and restore to service all trunks and positions made busy.	

**M. Position Busy and Lockout Feature**

**Nonlocking GP Keys Provided**

11	At desk position— Connect head telephone set.	
12	Momentarily operate GP key associated with an outgoing trunk.	OGT lamp lighted. Outgoing trunk call is answered.
13	Release GP key.	
14	Operate ST key in test set per Table C.	CW lamp lighted.
15	Momentarily operate outgoing trunk R key.	Call is answered. CW lamp extinguished. OGT lamp extinguished.
16	Restore ST key in test set per Table D.	
17	Repeat Steps 11 through 16 for each position.	

**Locking GP Keys Provided**

18	Operate GP key associated with outgoing trunk.	BY lamp lighted. Outgoing trunk call answered.
19	Operate ST key in test set per Table C.	CW lamp lighted.
20	Release GP key.	Call answered. CW lamp extinguished. BY lamp extinguished.
21	Restore ST key in test set per Table D.	

STEP	ACTION	VERIFICATION
22	Repeat Steps 17 through 21 for each position.	
23e	If no further tests are to be performed— Remove all test cords and restore to service all trunks and positions made busy.	

**N. Availability of Position for Incoming Calls when Service Assistant Makes an Outgoing Call**

**Nonlocking GP Keys Provided**

1	At desk position— Connect a head telephone set to the service assistant telephone jacks and another head telephone set to the operator jacks.	
2	Operate SA key.	
3	Momentarily operate GP key associated with outgoing trunk.	At desk position— OGT lamp lighted. Call answered. Verify transmission satisfactory.
4	Operate ST key in test set per Table C.	Call answered.
5	Momentarily operate R key.	OGT lamp extinguished.
6	Restore SA key.	
7	Release ST key in test set per Table D.	
8	Remove head telephone sets connected in Step 1.	
9	Repeat Steps 1 through 8 for each position.	

**Locking GP Keys Provided**

10	At desk position— Connect head telephone set to the service assistant telephone jacks and another head telephone set to the operator jacks.	
11	Operate S key.	
12	Operate GP key.	BY lamp lighted. Call answered. Verify transmission satisfactory.
13	Operate ST key in test set per Table C.	Call answered.
14	Momentarily operate R key.	OGT lamp extinguished.

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
15	Release GP key.	BY lamp extinguished.
16	Restore S key.	
17	Restore ST key in test set per Table D.	
18	Remove head telephone sets connected in Step 10.	
19	Repeat Steps 9 through 18 for each position.	

**O. Position Transfer Circuit**

11	Connect head telephone set to a position arranged to transfer calls.	
12	Operate ST key in test set per Table C.	At desk position— Call is answered.
13	At lamp signal cabinet— Operate TR key.	At lamp signal cabinet— TR lamp lighted. Verify that call not transferred.
14	Restore ST key in test set per Table D.	
15	Remove head telephone set used in Step 11.	
16e	If using an incoming key-ended trunk for test— Operate NA key.	
17	Operate ST key in test set per Table C.	Verify that call answered at position transferred. If using an incoming key-ended trunk— Verify that night alarm silent and the T lamp in desk not lighted.
18	At lamp signal cabinet— Restore TR key.	TR lamp extinguished. Verify that test call not transferred.
19	Restore ST key in test set per Table D.	
20e	If using an incoming key-ended trunk for test— Restore NA key.	
21f	If no further tests are to be performed— Remove all test cords and restore to service all trunks and positions made busy.	

STEP	ACTION	VERIFICATION
<b>P. Trunk Selection</b>		
1	At relay rack lamp panel— Observe a succession of service calls.	At relay rack lamp panel— CT lamps extinguished alternately from either end of the group as positions available. Trunk groups served in order of priority.
<b>Q. Position Selection</b>		
1	At lamp cabinet in operating room— Observe the position busy lamps of a group of positions that no one occupied position in a group will accept a call until all the other positions in the group have had a call.	If POS lamp only is provided— No lamp in the group of positions changes from steady (idle indication) to flashing (busy indication) until all other lamps in the group have changed to flashing. If PO and PB lamps are provided— No PB lamp, after having been lighted, shall relight until all other PB lamps in group have lighted.
<b>R. Call Originated from Centralized Supervisory Console</b>		
1	Verify position under test occupied.	
2	Originate a call from the centralized supervisory console to the position under test.	At position— PO lamp lighted. FRS lamp flashing.
3	At position— Momentarily operate FRS key.	FRS lamp lighted steady. PO lamp flashing. At centralized supervisory console— Verify call answered.
4	At centralized supervisory console— Release call.	At position— FRS lamp extinguished. PO lamp steadily lighted.
5	Repeat Steps 1 through 4 for each position.	
<b>S. Call from Position to Supervisor</b>		
1	Connect head telephone set to position under test.	
2	Operate H key.	
3	Operate TOS-1 key.	SBY-1 lamp lighted. Call answered.
4	Release TOS-1 key.	SBY-1 lamp extinguished.

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<b>STEP</b>	<b>ACTION</b>	<b>VERIFICATION</b>
5	Operate TOS-1 key.	SBY-2 lamp lighted. Call answered.
6	Release TOS-2 key.	SBY-2 lamp extinguished.
7	Release H key.	
8	Remove head telephone set from position.	
9	Repeat Steps 1 through 8 for each position.	
10a	If no further tests are to be performed— Remove all test cords and restore to service all trunks and positions made busy.	

**T. Position Trace Key Feature**

11	Connect head telephone set to position under test.	
12	Operate ST key of test set per Table C.	Call answered.
13	At position— Operate TRC key.	
14	Restore ST key in test set per Table D.	At incoming trunk switch circuit— Verify incoming trunk crossbar switch hold magnet remains operated.
15	Operate ST key in test set per Table C.	Call answered.
16	Release TRC key.	At incoming trunk switch circuit— Verify incoming trunk crossbar switch hold magnet released.
17	Restore ST key per Table D.	
18	Remove head telephone set connected in Step 11.	
19	Repeat Steps 11 through 18 for each position equipped with a TRC key.	
20e	If no further tests are to be performed— Remove all test cords and restore to service all trunks and positions made busy.	

**U. Position Disconnect Function**

11	Operate PD key.	
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STEP	ACTION	VERIFICATION
12	Connect head telephone set to position under test.	
13	Operate ST key of test set per Table C.	Call answered.
14	Release ST key in test set per Table D.	Verify incoming trunk crossbar switch hold magnet remains operated.
15	Operate ST key in test set per Table C.	Call answered.
16	Operate R key.	Verify incoming trunk crossbar switch hold magnet released.
17	Release ST key in test set per Table D.	
18	Disconnect head telephone set connected in Step 12.	
19	Repeat Steps 11 through 18 for each position equipped with a PD key.	
20e	If there are no further tests to be performed— Remove all test connections and restore to service all trunks and positions made busy.	