OFFICE ALARM TESTS

NO. 2B ELECTRONIC SWITCHING SYSTEM

1. GENERAL

1.01 This section describes a method of testing those office alarms which are detected locally at the various equipment frames in a No. 2B Electronic Switching System (ESS) office.

1.02 This section is reissued to include changes to procedures, to include revisions introduced by the 13A recorded announcement frame, and to add tests for the remreed network frame and supplementary remreed network frame. Since this is a general revision, change arrows ordinarily used have been omitted.

1.03 The office alarm tests are performed on a periodic basis as prescribed by the equipment test list or when a malfunction is suspected.

1.04 Tests are performed to determine that the frame alarm circuits function properly when a fuse operates, that the office alarm circuit gives the proper response to an operated fuse, and that the system has the ability to print out the proper messages on the local maintenance TTY.

1.05 The TTY output messages are given in output message manual (OM-2H200).

1.06 The tests covered in this section shall be made during periods of light traffic. It is important to minimize the period during which the equipment is out of service.

1.07 During the progress of these tests, action is required at the various fuse mountings and frame controls. Verification is required at various office alarm indicator locations and at the local maintenance TTY.

1.08 If a system alarm sounds while these tests are being performed, tests should be discontinued immediately. This alarm should be taken care of in the normal manner.

1.09 Mechanically interlocked keys are provided on frame control panels in ESS central offices. Therefore, no attempt should be made to operate more than one key at the same time.

1.10 While performing certain tests, automatic system diagnosis may cause additional alarms to sound. These alarms must be retired before continuing the test. Since these additional alarms are not consistently present, they have not been included in this section.

1.11 *Lettered Steps:* A letter a, b, c, etc, added to a step number in Parts 4 and 5 of this section, indicate 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.

2. APPARATUS

2.01 The following apparatus is required for the performance of the fuse alarm tests.

- Testing cord, W1AF cord, 8 feet 6 inches long, equipped with two 360A tools and two 411C (test pick) tools.

- Blocking tools (768A), as required.

3. PRECAUTIONARY MEASURES

Caution: The tests described in Part 5 will result in severe service reaction and possible failure of the ESS if improperly conducted.

3.01 Check the out-of-service lamps associated with the frame to be tested to determine whether the frame or circuit is active or out of service. These lamps are located either at the frame control panel or at the maintenance center depending on the type of frame.

3.02 Before performing any test, clear any active alarm that exists in the office. Failure to clear these alarms may result in masking of a valid trouble.

3.03 *Caution: Do not test alarms on a frame that has a mate frame or a duplicated circuit out of service as this can cause the system to fail.*

3.04 The verification messages or lamps resulting from performing these tests must be continually examined to determine that a valid trouble indication has not been masked due to the test. If a trouble is found (indicated by an output message or a lamp response which does not correspond to the message or lamp response given in verification for the particular test), restore the frame being tested to normal and do not proceed until the trouble has been cleared.

3.05 Under certain conditions, the verification messages will also contain certain diagnostic or maintenance type messages. The appearance

of these messages is due to variations in the timing of the transmission and execution of orders within the ESS. Since these messages are not consistently present in the verification messages, these messages have not been included in this practice.

3.06 Reference to an output message index in this practice means that in the VERIFICATION column only the message prefix will be given. Explanation of data fields printed will be found in the OM-2H200.

4. PREPARATION

STEP	ACTION	VERIFICATION
1	At local maintenance TTY— Check that system is under control of the local maintenance TTY.	At System Status Panel (SSP)— ALARMS TRANSFERRED lamp extinguished.
2a	If ALARMS TRANSFERRED lamp is *not* extinguished— Type the following input message: M SY:RST:ALM!	ALARMS TRANSFERRED lamp extinguished.

5. METHOD

STEP	ACTION	VERIFICATION
	Note: When testing switchroom alarms, exit pilot (EP) lamps are lighted on all floors other than the floor on which the test is made. If the alarm grouping keys (AG) are operated, other floor (OF) pilot lamps are lighted; all audible alarms are sounded on all floors to which the alarms are grouped.	

A. Miscellaneous Power (MP) Frame

Caution: Before performing alarm tests on this frame, determine which power wiring option is used. Miscellaneous power frames have power wiring options to permit the use of both +24V and -48V power or only -48V power. Equipment damage results if test steps are not properly performed.

STEP	ACTION	VERIFICATION
3b	If miscellaneous power frame is wired for both +24 and -48V power— Apply +24V to ring in fuse cap of fuse B1.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4b	At MP frame control panel— Operate AUD ALM OFF key.	OFF NOR lamp lighted. PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.

STEP	ACTION	VERIFICATION
5b	Operate AUD ALM NOR key. Remove +24V applied in Step 3b.	OFF NOR lamp extinguished. PWR OFF lamp extinguished.
6b	Apply -48V to ring in fuse cap of fuse D1.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY ABA printed.
7b	At MP frame control panel— Operate AUD ALM OFF key.	OFF NOR lamp lighted. PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
8b	Operate AUD ALM NOR key. Remove -48V applied in Step 6b.	OFF NOR lamp extinguished. PWR OFF lamp extinguished.
9c	If miscellaneous power frame is wired only for -48V power— Apply -48V to ring in fuse cap of equipped fuse B1 or D1.	PWR OFF lamp lighted. Minor alarm sounds. At TTY— Output message index MA SY ABA printed.
10c	At MP frame control panel— Operate AUD ALM OFF key.	OFF NOR lamp lighted. PWR OFF lamp extinguished. Minor alarm silenced. Aisle pilot lamp extinguished.
11c	Operate AUD ALM NOR key. Remove -48V applied in Step 9c.	OFF NOR lamp extinguished.
12d	If miscellaneous power frame contains alarm battery supply control unit and ABS AUD ALM key is not mounted on unit— Block operated FAR relay with blocking tool 768A.	PWR OFF lamp lighted. Alarm battery alarm sounds. At TTY— Output message index MA SY ABA printed.
13d	At MP frame control panel— Operate ABS AUD ALM OFF key.	OFF NOR lamp lighted. Alarm battery alarm silenced.
14d	At miscellaneous power frame— Unblock FAR relay.	PWR OFF lamp extinguished.
15d	At control panel— Operate ABS AUD ALM NOR key.	OFF NOR lamp extinguished.
16e	If miscellaneous power frame contains alarm battery supply control unit and ABS AUD ALM key is mounted on unit— Block operated FAR relay with blocking tool 768A.	PWR OFF lamp lighted. Alarm battery supply alarm sounds. At TTY— Output message index MA SY ABA printed.

STEP	ACTION	VERIFICATION
17e	At alarm battery supply control unit— Operate ABS AUD ALM key.	OFF NOR lamp lighted. ABS AUD ALM lamp in key lighted. Alarm battery supply alarm silenced.
18e	Unblock FAR relay.	PWR OFF lamp extinguished. ABS AUD ALM lamp in key lighted.
19e	Release ABS AUD ALM key operated in Step 17e.	OFF NOR lamp extinguished. ABS AUD ALM lamp in key extinguished.
20f	If miscellaneous power frame is equipped with minor alarm relay— Block operated MN relay with blocking tool 768A.	Minor alarm sounds.
21f	At miscellaneous power frame— Unblock MN relay.	Minor alarm silenced.

B. Master Scanner (MS) Frame

STEP	ACTION	VERIFICATION
3	At TTY— Remove controller 1 from service by typing the following TTY message: M MS:RMV:fg 1-! fg=Two-digit decimal equipment number of the master scanner frame (00-11) or (00-30) for EF-2 and later generic programs. *Note:* Reference office record for frame number.	The following TTY message should be received: MR MS RMV fg 1i
4	At master scanner frame— Apply +24V to ring in fuse cap of fuse SC-B1.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
5	At MS frame— Remove +24V applied in Step 4.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
6	At MS frame— Remove fuse SC-B5.	SCANNER BIAS TBL-1 lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
7	At MS frame— Replace fuse SC-B5.	SCANNER BIAS TB-1 lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.

STEP	ACTION	VERIFICATION
8	At MS frame— Remove fuse SC-B7.	SCANNER BIAS TBL-1 lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
9	At MS frame— Replace fuse SC-B7.	SCANNER BIAS TBL-1 lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
10	At TTY— Restore controller 1 to service by typing the following TTY message: M MS:RST:fg 1-!	One or more of the following TTY messages will be received: MR MS DGN fg 1-nnnn oooooo ppppp MR MS DGN fg 1- ATP MR MS RST fg 1i
11	Remove controller 0 from service by typing the following TTY message: M MS:RMV:fg 0-!	The following TTY message should be received: MR MS RMV fg 0i
12	At Master Scanner (MS) frame— Remove fuse SC-A5.	SCANNER BIAS TBL-0 lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
13	At MS frame— Replace fuse SC-A5.	SCANNER BIAS TBL-0 lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
14	At MS frame— Remove fuse SC-A7.	SCANNER BIAS TBL-0 lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
15	At MS frame— Replace fuse SC-A7.	SCANNER BIAS TBL-0 lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
16	At TTY— Restore controller 0 to service by typing the following TTY message: M MS:RST:fg 0-!	One or more of the following TTY messages will be received: MR MS DGN fg 0- nnnn oooooo ppppp MR MS DGN fg 0- ATP MR MS RST fg 0i

STEP	ACTION	VERIFICATION

C. Miscellaneous Trunk (MT) Frame

STEP	ACTION	VERIFICATION
3	At MT frame— Apply –48V to ring in fuse cap of any equipped fuse in the –48V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4	At MT frame control panel— Operate AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
5	Operate AUDIBLE ALM NOR key. Remove –48V applied in Step 3.	OFF NOR lamp extinguished. PWR OFF lamp extinguished.
6	At MT frame— Apply +24V to ring in fuse cap of any equipped fuse in the +24V TRK fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
7	At MT frame control panel— Operate AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
8	At MT frame— Block operated POT relay.	At TTY— Output message index MI SY PTO printed.
9	At MT frame control panel— Operate AUDIBLE ALM NOR key. At MT frame— Remove +24V applied in Step 6 and unblock POT relay.	OFF NOR lamp extinguished. PWR OFF lamp extinguished.
10	At MT frame— Apply +24V to ring in fuse cap of any fuse in the +24V PD fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
11	At MT control panel— Operate AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
12	Operate AUDIBLE ALM NOR key and remove +24V applied in Step 10.	PWR OFF lamp extinguished. OFF NOR lamp extinguished. Major alarm silenced.

STEP	ACTION	VERIFICATION

D. Recorded Announcement (RA) Frame

3b	If the 13A RA system is used— At recorded announcement frame— Strap –48V to terminal 2 on TS-B on frame control panel.	
4c	If the 6A RA system is used— At record announcement frame— Strap –48V to terminal 36 on TS-B on frame control panel. *Note:* The strapping in Step 3 and Step 4 is required to avoid voice alarms. The strapping bypasses the break contact of the RCDR-REPRO key; therefore maintaining power to the recorder.	
5	At recorded announcement frame— Apply –48V to ring in fuse cap of fuse RR.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
6	At recorded announcement frame control panel— Operate RCDR-REPRO OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished. At TTY— Output message index MA SY PTO printed.
7	At recorded announcement frame— Remove –48V applied in Step 5 and at recorded announcement frame control panel— Operate RCDR-REPRO NOR key.	OFF NOR lamp extinguished. PWR OFF lamp extinguished.
8	Remove strap installed in Step 3b or Step 4c.	

CONTROL UNIT

Note: The 2B processor frame consists of two identical control units (CU). Each of these CUs contains a main store, a main store controller, a 3A central control unit, a power and fuse unit, and a 2B input/output (I/O) control circuit. The I/O control circuit contains the central pulse distributor (CPD) and busses that interface with the 3A central control and other frames in the office. To perform alarm tests on the 2B processor frame, it is necessary to remove the CU from service.

STEP	ACTION	VERIFICATION
	Caution: Do not perform any tests on an active CU. After tests are performed on the out of service CU, place it in service before performing tests on the other CU.	

E. 2B Processor Frame

STEP	ACTION	VERIFICATION
3b	If CU 0 is in on-line mode— At TTY— Place CU 0 in the off-line mode by typing the following TTY message: SW:CU!	Output message index REPT SW CU printed. At System Status Panel (SSP)— CU 0—STAND BY lamp lighted. CU 1—ACTIVE lamp lighted. At 3A CC 0 STATUS panel— ACTIVE lamp extinguished. STANDBY lamp lighted.
4	At TTY— Remove off-line CU 0 from service by typing the following TTY message: RMV:CU!	At SSP— CU 0—OUT OF SERVICE lamp lighted. CU 0—STANDBY lamp extinguished.
5	At SSP— Operate LOCK key.	LOCK, FORCE CU ACTIVE-SELECT 1, and FORCE lamps lighted. At TTY— Output message index REPT CU STAT UAV printed.
6	At 3A CC control panel— Operate MANUAL key.	At control panel— MANUAL key lights. At SSP— MANUAL FORCED lamp lights.
7	At processor 0 frame— Apply +24V to ring in fuse cap of fuse AA0 (+24V fuse block).	Major alarm sounds. Aisle pilot lamp lighted. PWR RESET lamp lighted. At 3A CC 0 STATUS panel— POWER lamp extinguished. At TTY— Output message index MA SY FA printed.
8	At processor 0 frame— Remove +24V applied in Step 6 and operate PWR RESET key.	Major alarm silenced. Aisle pilot lamp extinguished. PWR RESET lamp extinguished. At 3A CC 0 STATUS panel— POWER lamp lighted.
9	At processor 0 frame— Apply -48V to ring in fuse cap of fuse A0P (-48V fuse block).	Major alarm sounds. Aisle pilot lamp lighted. PWR RESET lamp lighted. At 3A CC 0 STATUS panel—

STEP	ACTION	VERIFICATION
		POWER lamp extinguished. At TTY— Output message index MA SY FA printed.
10	At processor 0 frame— Remove -48V applied in Step 8 and operate PWR RESET key.	Major alarm silenced. Aisle pilot lamp extinguished. PWR RESET lamp extinguished. At 3A CC 0 STATUS panel— POWER lamp lighted.
11	At SSP— Operate LOCK key.	LOCK, FORCE CU ACTIVE-SELECT 1, and FORCE lamps extinguished. At TTY— Output message index REPT CU STAT AVL printed.
12	At 3A CC control panel— Release MANUAL key.	At control panel— MANUAL key lamp extinguished. At SSP— MANUAL FORCED lamp extinguished.
13	At TTY— Restore CU 0 to service by typing the following TTY message: RST:CU	At SSP— CU 0—OUT OF SERVICE lamp extinguished. CU 0—STAND BY lamp lighted. One or more of the following TTY messages will be received: DGN CU 0 COMPL ATP RST CU COMPL UPD OMAS COMPL
14	Repeat Steps 3b through 11 for CU 1.	Same as Steps 3b through 11.

F. Supplementary Central Pulse Distributor (SCPD) Frame

Note: Before performing the following tests, make sure the BUS CONTROL and SCPD CONTROL keys are in the appropriate positions for the step being performed.

Caution: Apply voltages to ring in fuse cap with 411C test pick. Do not remove fuses.

STEP	ACTION	VERIFICATION
3b	If CU 0 is in on-line mode — At TTY— Place CU 0 in the off-line mode by typing the following TTY message: SW:CU!	Output message index REPT SW CU printed. At Systems Status Panel (SSP)— CU 0—STAND BY lamp lighted CU 1—ACTIVE lamp lighted

STEP	ACTION	VERIFICATION
4	At TTY— Remove off-line CU from service by typing the following TTY message: RMV:CU!	At SSP— CU 0—OUT OF SERVICE lamp lighted. CU 0—STANDBY lamp extinguished.
5	At SSP— Operate LOCK key.	LOCK, FORCE CU ACTIVE-SELECT 1, and FORCE lamps lighted. At TTY— Output message index REPT CU STAT UAV printed.
6	At TTY— Remove controller 0 from service by typing the following TTY message: M DS:RMV:fg 0-!	The following TTY message should be received: MR DS RMV fg 0-. At SSP— MISC lamp lighted.
7	At the SCPD frame— With the BUS CONTROL in NOR position and the SCPD CONTROL in NOR position— Apply +6V to ring in fuse cap of fuse F16 (+6V fuse block).	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
8	At the SCPD frame— Depress BUS CONTROL OFF-0 key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
9	Remove +6V applied in Step 7 and depress BUS CONTROL NOR key.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
10	At the SCPD frame— With the BUS CONTROL in NOR position and the SCPD CONTROL in NOR position— Apply +24V to ring in fuse cap of fuse F44. (+24V fuse block).	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
11	At the SCPD frame— Depress BUS CONTROL OFF-0 key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
12	Remove +24V applied in Step 10 and depress BUS CONTROL NOR key.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
13	At TTY— Restore SCPD controller 0 to service by typing the following TTY message: M DS:RST:fg 0-!	One or more of the following TTY messages will be received: MR DS DGN fg 0- nnnn oooooo ppppppp MR DS DGN fg 0-ATP MR DS RST fg 0- At SSP— MISC lamp extinguished.

STEP	ACTION	VERIFICATION
14	At the SSP— Release LOCK key.	LOCK, FORCE CU ACTIVE-SELECT 1, and FORCE lamps extinguished. At TTY— Output message index REPT CU STAT AVL printed.
15	Restore CU 0 to service by typing the following message: RST:CU!	One or more of the following TTY messages will be received: DGN CU 0 COMPL ATP UPD OMAS COMPL RST CU COMPL At SSP— CU 0—OUT OF SERVICE lamp extinguished. CU 0—STAND BY lamp lighted.
16	At TTY— Place CU 1 in the off-line mode by typing the following TTY message: SW:CU!	Output message index REPT SW CU 0 printed. At SSP— CU 0—ACTIVE lamp lighted. CU 1—STAND BY lamp lighted.
17	At TTY— Remove off-line CU from service by typing the following TTY message: RMV:CU!	At SSP— CU 1—OUT OF SERVICE lamp lighted. CU 1—STAND BY lamp extinguished.
18	Operate LOCK key.	LOCK, FORCE CU ACTIVE-SELECT 0, and FORCE lamps lighted.
19	At TTY— Remove SCPD controller 1 from service by typing the following TTY message: M DS:RMV:fg 1-!	The following TTY message should be received: MR DS RMV fg 1-. At SSP— MISC lamp lighted.
20	At the SCPD frame with the BUS CONTROL in NOR position— Apply +6V to ring in fuse cap of fuse F1 (+6V fuse block).	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
21	At the SCPD frame— Depress BUS CONTROL OFF 1 key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
22	Remove +6V applied in Step 20 and depress BUS CONTROL NOR key.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
23	At the SCPD frame with the BUS CONTROL in NOR position— Apply +24V to ring in fuse cap of fuse F18 (+24V fuse block).	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY—

STEP	ACTION	VERIFICATION
		Output message index MA SY FA printed.
24	At the SCPD frame— Depress BUS CONTROL OFF 1 key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
25	Remove +24V applied in Step 23 and depress BUS CONTROL NOR key.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
26	At TTY— Restore SCPD controller 1 to service by typing the following TTY message: M DS:RST:fg 0-!	One or more of the following TTY messages will be received: MR DS DGN fg 1- nnnn oooooo ppppp MR DS DGN fg 1- ATP MR DS RST fg 1- At SSP— MISC lamp extinguished.
27	At the SSP— Release LOCK key.	LOCK, FORCE CU ACTIVE-SECECT 0, and FORCE lamps extinguished. At the TTY— Output message index REPT CU STAT AVL printed.
28	Restore CU 1 to service by typing the following message: RST:CU!	One or more of the following TTY messages will be received: DGN CU COMPL ATP RST CU COMPL RST CU STOPPED DGN CU 1 STOPPED UPD OMAS COMPL At SSP— CU 1—OUT OF SERVICE lamp extinguished. CU 1—STAND BY lamp extinguished.
29	Repeat Steps 3b through 15 for the SCPD CONTROL— OFF-0.	Same as Steps 3b through 15.
30	Repeat Steps 16 through 28 for the SCPD CONTROL— OFF-1.	Same as Steps 16 through 28.

G. Ringing and Tone (RT) Frame

Note: Although the ringing and tone frame is located in the switchroom, it is considered part of the office power equipment. The alarm testing of this frame is covered in Section 167-732-301.

STEP	ACTION	VERIFICATION

H. Maintenance (MTCE) Frame

STEP	ACTION	VERIFICATION
3	At TTY if CU 0 is active— Switch CU 0 to STAND BY by typing the following TTY message: SW:CU!	Output message index REPT SW CU printed.
4	At MTCE frame— Apply +24V to ring in fuse cap of fuse AB0AP.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
5	At MTCE frame— Remove +24V applied in Step 4 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
6	Apply +24V to ring in fuse cap of fuse AA0AP.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
7	At MTCE frame— Remove +24V applied in Step 6 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
8	Apply +24V to ring in fuse cap of fuse AA1A.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
9	At MTCE frame— Remove +24V applied in Step 8 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
10	Apply +24V to ring in fuse cap of fuse AC0A.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
11	At MTCE frame— Remove +24V applied in Step 10 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.

STEP	ACTION	VERIFICATION
12	Apply +24V to ring in fuse cap of fuse AA0BP.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
13	At MTCE frame— Remove +24V applied in Step 12 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
14	Apply +24V to ring in fuse cap of fuse AA1B.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
15	At MTCE frame— Remove +24V applied in Step 14 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
16	Apply +24V to ring in fuse cap of fuse AC0B.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
17	At MTCE frame— Remove +24V applied in Step 16 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
18	Apply +24V to ring in fuse cap of fuse AB0BP.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
19	At MTCE frame— Remove +24V applied in Step 18 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
20	Apply +24V to ring in fuse cap of fuse AA2.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.

STEP	ACTION	VERIFICATION
21	At MTCE frame— Remove +24V applied in Step 20 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
22	Apply +24V to ring in fuse cap of fuse AA4.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
23	At MTCE frame— Remove +24V applied in Step 22 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle lamp extinguished.
24	Apply +24V to ring in fuse cap of fuse AA3.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
25	At MTCE frame— Remove +24V applied in Step 24 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle lamp extinguished.
26	Apply –48V to ring in fuse cap of fuse A0A.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
27	At MTCE frame— Remove –48V applied in Step 26 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
28	Apply –48V to ring in fuse cap of fuse B0A.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
29	At MTCE frame— Remove –48V applied in Step 28 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
30	Apply –48 volt to ring in fuse cap of fuse C0A.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY—

STEP	ACTION	VERIFICATION
		Output message index MA SY FA printed.
31	At MTCE frame— Remove –48V applied in Step 30 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
32	Apply –48V to ring in fuse cap of fuse C1A.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
33	At MTCE frame— Remove –48V applied in Step 32 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
34	Apply –48V to ring in fuse cap of fuse A0B.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
35	At MTCE frame— Remove –48V applied in Step 34 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
36	Apply –48V to ring in fuse cap of fuse B0B.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
37	At MTCE frame— Remove –48V applied in Step 36 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
38	Apply –48V to ring in fuse cap of fuse C0B.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
39	At MTCE frame— Remove –48V applied in Step 38 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.

STEP	ACTION	VERIFICATION
40	Apply –48V to ring in fuse cap of fuse C1B.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
41	At MTCE frame— Remove –48V applied in Step 40 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
42	Apply –48V to ring in fuse cap of fuse A1.	PWR RESET lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
43	At MTCE frame— Remove –48V applied in Step 42 and operate PWR RESET key.	PWR RESET lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
44	Restore CU 0 to service by typing the following message: SW:CU!	One or more of the following TTY messages will be received: DGN CU COMPL ATP RST CU COMPL RMV CU RST CU STOPPED DGN CU 0 STOPPED UPD OMAS COMPL At SSP— CU 0- OUT OF SERVICE lamp extinguished. CU 0- STANDBY lamp extinguished.
45	Repeat Steps 3 through 44 for CU 1.	Same as Steps 3 through 44.

I. Universal Trunk and Junctor (UTJ) Frame

STEP	ACTION	VERIFICATION
3	At the UTJ frame control panel— AUDIBLE ALM NOR key depressed. At the UTJ frame— Apply +24V to ring in fuse cap of any spare bay 0 +24V Peripheral Decoder (PD) fuse.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4	At the UTJ frame control panel— Depress AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
5	Depress AUDIBLE ALM NOR key and remove +24V applied in Step 3.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.

STEP	ACTION	VERIFICATION
6	Apply +24V to ring in fuse cap of any bay 2 +24V PD fuse.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
7	At the UTJ frame control panel— Depress AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
8	Depress AUDIBLE ALM NOR key and remove +24V applied in Step 6.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
9	Apply -48V to ring in fuse cap of any bay 2 -48V TALK fuse.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
10	At the UTJ frame control panel— Depress AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
11	Depress AUDIBLE ALM NOR key and remove -48V applied in Step 9.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
12	Apply -48V to ring in fuse cap of any bay 0 -48V TALK fuse.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
13	At the UTJ frame control panel— Depress AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
14	Depress AUDIBLE ALM NOR key and remove -48V applied in Step 12.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
15b	If frame is equipped with scanner control — At TTY— Remove controller 0 from service by typing the following TTY message: M US:RMV:fg 0-!	The following TTY message should be received: MR US RMV fg 0i
16b	At UTJ frame control panel— Depress FRAME CONTROL NOR key. Depress BUS CONTROL NOR key. Apply +24V to ring in fuse cap of fuse SC-A0.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY—

STEP	ACTION	VERIFICATION
		Output message index MA SY FA printed.
17b	At UTJ frame control panel— Depress AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
18b	Depress AUDIBLE ALM NOR key and remove +24V applied in Step 16b.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
19b	At TTY— Restore controller 0 to service by typing the following TTY message: M US:RST:fg 0-!	One or more of the following TTY messages will be received: MR US DGN fg 0- nnnn oooooo ppppppp MR US DGN fg 0- ATP MR US RST fg 0i
20b	Remove controller 1 from service by typing the following TTY message: M US:RMV:fg 1-!	The following TTY message should be received: MR US RMV fg 1i
21b	At UTJ frame— Depress FRAME CONTROL NOR key. Depress BUS CONTROL NOR key. Apply +24V to ring in fuse cap of fuse SC-B0.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
22b	At UTJ frame control panel— Depress AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
23b	Depress AUDIBLE ALM NOR key and remove +24V applied in Step 21b.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
24b	At TTY— Restore controller 1 to service by typing the following TTY message: M US:RST:fg 1-!	One or more of the following TTY messages will be received: MR US DGN fg 1- nnnn oooooo ppppppp MR US DGN fg 1- ATP MR US RST fg 1i

J. Trunk Test Panel (TTP) Frame

STEP	ACTION	VERIFICATION
3	At TTP frame— Apply -48V to ring in fuse cap of fuse -48A.	FA lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4	At TTP frame test and control panel— Depress ALM RLS key.	ALM RLS lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.

STEP	ACTION	VERIFICATION
5	Remove –48V applied in Step 3, and depress and release ALM RLS key.	FA lamp extinguished. ALM RLS lamp extinguished.
6	At TTP frame— Apply +24V to ring in fuse cap of fuse +24A.	FA lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
7	At TTP frame test and control panel— Depress ALM RLS key.	ALM RLS lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
8	Remove +24V applied in Step 6, and depress and release ALM RLS key.	FA lamp extinguished. ALM RLS lamp extinguished.

K. Network Control and Junctor Switching (NCJS) Frame

STEP	ACTION	VERIFICATION
3	At TTY— Remove network controller 0 and line scanner controller 0 of the AB and CD scanners from service by typing the following TTY message: M LS:RMV:fg 0- 0!	One or more of the following TTY messages should be received: MR LS RMV fg 0i 0 MA NW RMV fg 0i MA LS RMV fg 0i 1 At NCJS— OS-0 lamp lighted.
4	Remove fuse B4; insulate contact 9B of A relay, and block released A relay.	SCANNER BIAS TBL-A lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
5	At NCJS— Unblock A relay; remove insulator from contact 9B of A relay, and replace fuse B4.	SCANNER BIAS TBL-A lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
6b	If line scanner 1 is equipped— At NCJS— Remove fuse D4; insulate contact 9B of C relay, and block released C relay.	SCANNER BIAS TBL-C lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
7b	At NCJS— Unblock C relay; remove insulator from contact 9B of C relay, and replace fuse D4.	SCANNER BIAS TBL-C lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
8	At TTY— Restore network controller 0 and line scanner	One or more of the following TTY messages should be received:

STEP	ACTION	VERIFICATION
	controller 0 to service by typing the following TTY message: M LS:RST:fg 0- 0!	MR NW DGN fg 0- ATP MR LS DGN fg 0- 0 ATP MR LS RST fg 0i 00 0 MA NW RST fg 00 At NCJS— OS-0 lamp extinguished.
9	At TTY— Remove network controller 1 and line scanner controller 1 from service by typing the following TTY input message: M LS:RMV:fg 1- 0!	One or more of the following TTY messages should be received: MR LS RMV fg 1- 0 MA NW RMV fg 1i MA LS RMV fg 1- 1 At NCJS— OS-1 lamp lighted.
10	Remove fuse A4; insulate contact 9B of B relay, and block released B relay.	SCANNER BIAS TBL-B lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
11	At NCJS— Unblock B relay; remove insulator from contact 9B or B relay, and replace fuse A4.	SCANNER BIAS TBL-B lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
12c	If line scanner 1 is equipped— Remove fuse C4; insulate contact 9B of D relay and block released D relay.	SCANNER BIAS TBL-D lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
13c	At NCJS— Unblock D relay; remove insulator from contact 9B of D relay, and replace fuse C4.	SCANNER BIAS TBL-D lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
14	At TTY— Restore network controller 1 and line scanner controller 1 to service by typing the following TTY input message: M LS:RST:fg 1- 0!	One or more of the following TTY messages will be received: MR NW DGN fg 1- ATP MR LS DGN fg 1- 0 ATP MR LS RST fg 1i 0 MA NW RST fg 10 At NCJS— OS-1 lamp extinguished.

L. Line and/or Trunk Switching (LTS) Frame

STEP	ACTION	VERIFICATION
3	At each line and/or trunk switching (LTS) frame— Apply -48V to ring in fuse cap of any fuse in the -48V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY—

STEP	ACTION	VERIFICATION
		Output message index MA SY FA printed.
4	At LTS frame— Remove -48V applied in Step 3.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
5	Apply -48V to ring in fuse cap of any fuse in the -48VB fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
6	At LTS frame— Remove -48V applied in Step 5.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.

M. Power Distributing Frame (PDF) (+24V and -48V)

STEP	ACTION	VERIFICATION
3	At the power distributing frame— Apply +24V to ring in fuse cap of any fuse in the +24V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4	At the power distributing frame— Depress AUDIBLE ALARM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
5	Remove +24V applied in Step 3 and depress AUDIBLE ALARM NOR key.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
6	Apply -48V to ring in fuse cap of any fuse in the -48 fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
7	At the power distributing frame— Depress AUDIBLE ALARM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
8	Remove -48V applied in Step 6 and depress AUDIBLE ALARM NOR key.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.

STEP	ACTION	VERIFICATION

N. Miscellaneous (M) Frame

Caution: Before performing alarm tests on this frame, determine which power option was used. Miscellaneous frames have power wiring options to permit the use of both +24V and -48V power or only -48V power. Equipment damage results if test steps are not properly performed.

STEP	ACTION	VERIFICATION
3b	At M frame— If frame is wired for both +24V and -48V power— Apply +24V to ring in fuse cap of any equipped +24V A or B fuse.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4b	At control panel— Operate AUD ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
5b	Operate AUD ALM NOR key. Remove +24V applied in Step 3b.	OFF NOR lamp extinguished. PWR OFF lamp extinguished.
6b	Apply -48V to ring in fuse cap of fuse D1.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
7b	At control panel— Operate AUD ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
8b	Operate AUD ALM NOR key. Remove -48V applied in Step 6b.	OFF NOR lamp extinguished. PWR OFF lamp extinguished.
9c	If frame is wired only for -48V power— Apply -48V to ring in fuse cap of fuse D1.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
10c	At control panel— Operate AUD ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
11c	Operate AUD ALM NOR key. Remove -48V applied in Step 9c.	OFF NOR lamp extinguished. PWR OFF lamp extinguished.

STEP	ACTION	VERIFICATION
12d	If miscellaneous frame is equipped with minor alarm relay— Block operated MN relay.	Minor alarm sounds. Aisle pilot lamp lighted.
13d	At maintenance frame system status panel— Operate ALM RLS key.	Minor alarm silenced.
14d	At miscellaneous frame— Unblock MN relay and at control panel— Operate AUD ALM OFF key.	OFF NOR lamp lighted. Minor alarm sounds. Aisle pilot lamp extinguished.
15d	At maintenance frame system status panel— Operate ALM RLS key.	Minor alarm silenced.
16d	At control panel— Operate AUD ALM NOR key.	OFF NOR lamp extinguished.
17	At miscellaneous frame— Block operated FA relay.	Major alarm sounds. Aisle pilot lamp lighted.
18	At miscellaneous frame— Unblock MJ relay.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
19	At miscellaneous frame control panel— Operate AUD ALM NOR key.	OFF NOR lamp extinguished.

O. Automatic Message Accounting (AMA) Frame

Note: The following tests are to be performed on the standby AMA. REPLACE THE AMA MAGNETIC TAPE BEFORE PROCEEDING WITH ANY TESTS TO PREVENT INADVERTENT LOSS OF REVENUE. Replace tape in accordance with Section 232-112-301. It is necessary to test one AMA before a scheduled switch and the other AMA after the switch. Spare tapes should be available because an AMA cannot be removed from service if data has been written on tape and an end of file mark has not been written.

STEP	ACTION	VERIFICATION
3	At TTY— Remove the standby AMA from service by typing the following TTY input message: M AM:RMV:fg hi! fg = two-digit number of the AMA frame (00-01) h = transport on the AMA frame (0-1) i = control unit of interest (0-1)	Output message index MR AM RMV fg hi printed. *Note:* If the remove message is not accepted, an end-of-file message must be written and the tape removed in accordance with Section 232-112-301 before continuing this test.

STEP	ACTION	VERIFICATION
4	At out-of-service AMA fuse panel— Momentarily apply +24V to ring in fuse cap of fuse 2.	PWR OFF lamp lighted. Aisle pilot lamp lighted. Major alarm sounds. At TTY— Output message index MA SY FA printed.
5	At out-of-service AMA control panel— Depress AUD ALM OFF key.	OFF NOR lamp lighted. Aisle pilot lamp extinguished. Major alarm silenced.
6	Depress AUD ALM NOR key.	Aisle pilot lamp lighted. Major alarm sounds. OFF NOR lamp extinguished.
7	Depress POWER CONTROL OFF ( ) key for the out-of-service AMA.	Aisle pilot lamp extinguished. Major alarm silenced. At TTY— Output message index MI SY PTO printed.
8	At out-of-service AMA control panel— Depress POWER CONTROL NOR key.	PWR OFF lamp extinguished. *Note:* The AMA may appear to be in any state until it has been restored. This will not affect the testing of the AMA.
9	At out-of-service AMA fuse panel— Momentarily apply –48V to ring in fuse cap of fuse 10.	PWR OFF lamp lighted. Aisle pilot lamp lighted. Major alarm sounds. At TTY— Output message index MA SY FA printed.
10	At out-of-service AMA control panel— Depress AUD ALM OFF key.	OFF NOR lamp lighted. Aisle pilot lamp extinguished. Major alarm silenced.
11	Depress AUD ALM NOR key.	Aisle pilot lamp lighted. Major alarm sounds. OFF NOR lamp extinguished.
12	Depress POWER CONTROL OFF ( ) key for the out-of-service AMA.	Aisle pilot lamp extinguished. Major alarm silenced. At TTY— Output message index MI SY PTO printed.
13	At out-of-service AMA control panel— Depress POWER CONTROL NOR key.	PWR OFF lamp extinguished.

STEP	ACTION	VERIFICATION
		Note: The AMA may appear to be in any state until it has been restored. This will not affect the testing of the AMA.
14	At TTY— Restore the out of service AMA to service and place it in the stand-by mode by typing the following TTY input message: M AM:RST:fg hi fg = two-digit number of the AMA frame (00-01) h = transport on the AMA frame (0-1) i = control unit of interest (0-1)	STAND BY lamp on tape transport lighted. At TTY— Output message index MR AM RST fg hi printed. fg = two-digit number of the AMA frame (00-01) h = transport on the AMA frame (0-1) i = control unit which was ON-LINE when the trouble occurred (0,1)
15	Repeat Steps 3 through 14 for the other AMA after an end-of-file message has been printed on the AMA tape and a scheduled switch has occurred.	

P. Range Extension (RE) Frame

STEP	ACTION	VERIFICATION
3	At each RE frame— Apply +24V to ring in fuse cap of any +24VT fuse in the +24V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4	At test and control panel— Depress AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
5	At control panel— Operate AUDIBLE ALM NOR key. Remove +24V applied in Step 3.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.
6	Repeat Steps 3 through 5 for any +24V PD fuse.	

Q. Remote Office Test Line (ROTL) Frame

STEP	ACTION	VERIFICATION
3	At the ROTL frame— Apply -48V to ring in fuse cap of any -48VS or -48VT fuse in the -48V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4	At test and control panel— Depress AUDIBLE ALM OFF key.	PWR OFF lamp lighted OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.

STEP	ACTION	VERIFICATION
5	At control panel— Operate AUDIBLE ALM NOR key. Remove -48V applied in Step 3.	PWR OFF lamp extinguished. OFF NOR lamp extinguished.

R. Centrex Data Link (CDL) Frame

STEP	ACTION	VERIFICATION
3	At CDL frame— Apply +24V to ring in fuse cap of fuse A00.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4	At control panel— Operate AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
5	Remove +24V applied in Step 3.	PWR OFF lamp extinguished.
6	At control panel— Operate AUDIBLE ALM NOR key.	OFF NOR lamp extinguished.
7	At CDL frame— Apply +24V to ring in fuse cap of fuse A0.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
8	At control panel— Operate AUDIBLE ALM OFF key.	OFF NOR lamp lighted Major alarm silenced. Aisle pilot lamp extinguished.
9	Remove +24V applied in Step 7.	PWR OFF lamp extinguished.
10	At control panel— Operate AUDIBLE ALM NOR key.	OFF NOR lamp extinguished.
11	Repeat Steps 3 through 10 for each CDL frame.	

S. T-Carrier Direct Interface Frame

STEP	ACTION	VERIFICATION
3	At T-carrier direct interface frame— Apply +24V to ring in fuse cap of any +24A fuse on interface unit.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.

STEP	ACTION	VERIFICATION
4	At test and alarm control panel— Operate AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
5	Remove +24V applied in Step 3.	PWR OFF lamp extinguished.
6	At test and alarm control panel— Operate AUDIBLE ALM NOR key.	OFF NOR lamp extinguished.
7	Repeat Steps 3 through 6 for any one of the +24B fuses on interface unit.	
8b	If equipped with more than one interface unit— Repeat Steps 3 through 7 for each interface unit.	

T. Automatic Identification Outward Dialing (AIOD Interface) Interface Circuit

STEP	ACTION	VERIFICATION
3	At AIOD Frame— Apply +24V to ring in fuse cap of +24A fuse.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4	At alarm control panel— Operate AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
5	Remove +24V applied in Step 3.	PWR OFF lamp extinguished.
6	At alarm control panel— Operate AUDIBLE ALM NOR key.	OFF NOR lamp extinguished.
7	Repeat Steps 3 through 6 for +24B fuse.	
8	At AIOD frame— Apply -48V to ring in fuse cap of -48A fuse.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
9	At alarm control panel— Operate AUDIBLE ALM OFF key.	OFF NOR lamp lighted. Major alarm silenced. Aisle pilot lamp extinguished.
10	Remove -48V applied in Step 8.	PWR OFF lamp extinguished.

STEP	ACTION	VERIFICATION
11	At alarm control panel— Operate AUDIBLE ALM NOR key.	OFF NOR lamp extinguished.
12	Repeat Steps 8 through 11 for –48B fuse.	

U. Remreed Network (RN) Frame

STEP	ACTION	VERIFICATION
3	At TTY— Remove network controller 0 and line scanner controller from service by typing the following TTY message: M LS:RMV:fg 0-0!	One or more of the following TTY messages should be received: MR LS RMV fg 0i 0 MA NW RMV fg 0i MA LS RMV fg 0i 1 At NCJS— OS—0 lamp lighted.
4	At bay 1 of RN frame— Apply +24V to ring in fuse cap of fuse CAA0 in +24V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
5	Remove +24V applied in Step 4.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
6	Apply +24V to ring in fuse cap of fuse A0B in +24V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
7	Remove +24V applied in Step 6.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
8	Apply –48V to ring in fuse cap of fuse A0A in –48V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
9	Remove –48V applied in Step 8.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
10	At TTY— Restore network controller 0 and line scanner controller 0 to service by typing the following	One or more of the following TTY messages should be received: MR NW DGN fg 0- ATP

STEP	ACTION	VERIFICATION
	TTY message: M LS:RST:fg 0- 0!	MR LS DGN fg 0- 0 ATP MR LS RST fg 0i 00 0 MA NW RST fg 00 At NCJS— OS—0 lamp extinguished.
11	At TTY— Remove network controller 1 and line scanner controller 1 from service by typing the following TTY input message: M LS:RMV:fg 1- 0!	One or more of the following TTY messages should be received: MR LS RMV fg 1- 0 MA NW RMV fg 1i MA LS RMV fg 1- 1 At NCJS— OS—1 lamp lighted.
12	At bay 1 of RN frame— Apply +24V to ring in fuse cap of fuse CAB0 in +24V fuse.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
13	Remove +24V applied in Step 12.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
14	Apply +24V to ring in fuse cap of fuse B0B in +24V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
15	Remove +24V applied in Step 14.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
16	Apply -48V to ring in fuse cap of fuse B0A in -48V fuse block.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
17	Remove -48V applied in Step 16.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
18	At TTY— Restore network controller 1 and line scanner controller 1 to service by typing the following TTY input message: M LS:RST:fg 1- 0!	One or more of the following TTY messages will be received: MR NW DGN fg 1- ATP MR LS DGN fg 1- 0 ATP MR LS RST fg 1i 0

STEP	ACTION	VERIFICATION
		MA NW RST fg 10 At NCJS— OS—1 lamp extinguished.

V. Supplementary Remreed Network (SRN) Frame

Note: This test is for any equipped L fuse in SRN FUSE PANEL from L40 through L67.

STEP	ACTION	VERIFICATION
3	At SRN frame –48V fuse panel— Apply –48V to ring in fuse cap of any equipped L fuse.	PWR OFF lamp lighted. Major alarm sounds. Aisle pilot lamp lighted. At TTY— Output message index MA SY FA printed.
4	Remove –48V applied in Step 3.	PWR OFF lamp extinguished. Major alarm silenced. Aisle pilot lamp extinguished.
5	Repeat Steps 3 and 4 for each equipped L fuse from L40 through L67.	