

10A ALERTING SYSTEM

PERIODIC MAINTENANCE AND OVERALL TESTS

1. GENERAL

1.01 This section provides test procedures for the various installations which comprise the 10A Alerting System. The tests enable confidence checks to be made of NORAD, Region, Sector, and Site equipment by means of in-service operational tests, out-of-service operational tests, and out-of-service periodic maintenance tests. Proper operation of the equipment is verified by observing lamp and *principal* relay operations for the operational tests, and timed VOM reading and/or relay action for the routine maintenance tests.

Note: The relays observed in these tests are not the only relays which may operate or release for a given functional operation. The observed relays are termed *principal* relays in these tests because their operation or release indicates receipt or transmission of principal signals by the equipment under test.

Caution: The 10A Alerting System is a security-type system that utilizes dedicated telegraph channels for alerting all system locations. The customer requires extremely reliable, uninterrupted service, free from false alerting signals. Accordingly, the equipment should never be taken out of service at any location without the approval of the customer's maintenance control center at the location to be tested, and without notifying all other locations likely to receive false signals resulting from tests at the selected location.

1.02 The periodic out-of-service maintenance tests included are:

A. AL and TT Alert Logic and Test Logic Timers: This test checks the ability of the AL alert logic and TT test logic timers to operate between 4 and 6 seconds after being energized

and, if required, provides instructions for adjusting the timer interval. These timers open the alert and test alert logic input gates for 5 seconds after one valid code is received. If another identical code is not received during this interval, the timers function to restore the circuit to normal.

B. GA1 and GA2 Code Sender Failure Alarm Timers: This test checks the ability of GA1 and GA2 code sending failure alarm timers to operate between 2 and 4 seconds after being energized and, if required, provides instructions for adjusting the timer interval. In addition, verifications at the office alarm panel resulting indirectly from the timer operation are included.

C. PG Continuity Pulse Generator Timer: This test checks the ability of the PG continuity pulse generator timer to momentarily operate and release every 5 to 7 seconds in order to trigger the continuity pulse generator each 5 to 7 seconds and, if required, provides instructions for adjusting the timer interval.

D. KT Key Timer: This test checks the ability of the KT key timer to operate between 2 and 4 seconds after being energized and, if required, provides instructions for adjusting the timer interval. This timer is associated with "time-out" retirement of ALERT, TEST ALERT, ALERT RLS, and ALERT ACK — TEST ACK key operation functions when such operation is not followed within 3 seconds by operation of the MASTER OPERATE key.

E. LT Local Test Timer: This test checks the ability of the LT local test timer to operate between 8 and 12 seconds after being energized and, if required, provides test instructions for adjustment of the timer interval. The LT timer is associated with retirement of the local test

function following completion of local test of equipment.

F. CT (CT1, CT2, CT-) Continuity Failure

Alarm Timers: This test checks the ability of the CT1, CT2, or CT- timers to operate between certain specified time limits ranging from 19 to 31 seconds, depending on where the timer is used (at NORAD, Region, Sector, or Site), and on whether the timer is associated with upstream or downstream lines. This test must be performed for each line at each location. The CT() timer is associated with initiating a continuity failure alarm in the event that the line continuity failure duration exceeds the preset time interval.

Note: See 1.07 for additional tests specified in SD-1G214-01.

1.03 The in-service operational tests included are:

G. Lamp Filament and Local Test of NORAD, Region, or Sector Equipment:

This test checks the ability of a NORAD, Region, or Sector location to initiate and complete a console lamp filament test and functional exercise of the sending and receiving equipment and logic packages at the location without affecting any upstream or downstream locations. Successive tests should not be attempted since each test causes a continuity failure alarm at the downstream locations. This test is initiated at the location console by key operation and is provided for use when the system is in service. This test is automatically completed in approximately 8 to 12 seconds; successful completion is an indication that the local equipment can send, receive, and recognize alert code signals. If an upstream alert or test alert is initiated within the 8- to 12-second interval required for the local test, the test will be automatically overridden and the override alert or test alert indications will appear at the control and monitor consoles.

H. Lamp Filament and Local Test of Site

Equipment: This test is similar to Test G except that it checks for similar performance of Site location equipment. No override capabilities are provided at Site.

1.04 The out-of-service operational tests included are:

I. Code Generator Failure Alarm: This test is similar to Test B. However, Test B is primarily intended as a check of the time interval of the GA1 or GA2 timer associated with sender 1 or sender 2, respectively, at each location. This test is a check only of the proper function of the alarms at the office alarm panel associated with sender failure and assumes that the timer interval requirements of Test B have been met.

J. Local Test with One Sender Inoperative:

This test checks the ability of equipment at any location to perform the local test function (similar to Tests G and H) first while sender 1 is disabled and then while sender 2 is disabled. A system location must be able to receive, recognize, and send alert signals in the normal manner even if one sender has failed. Successful completion of this test will verify that capability.

K. Continuity Failure Downstream at NORAD, Region, or Sector:

This test checks the ability of the equipment at NORAD, Region, or Sector locations to recognize continuity failure of the downstream lines from the test location within a specified time interval when a line failure is simulated. The recognition is in the form of normal buzzer and lamp alarms at the control and monitor consoles within a specified time after simulation of the line failure.

L. Continuity Failure Upstream at Region or Sector:

This test is similar to Test K except it is a check of the upstream line failure recognition from Region or Sector instead of downstream line failure recognition.

M. Continuity Failure Upstream at Site:

This test is similar to Test L except Site location equipment is checked instead of Region or Sector location.

N. 3-Second Time-Out for Alert, Test Alert, Alert Release, or Test Acknowledge Key

Function at NORAD or Region: This test checks the ability of the equipment at NORAD or Region to provide 3-second "time-out" of

lamp signals following operation of the ALERT, TEST ALERT, ALERT RLS, or ALERT ACK — TEST ACK key at the control console.

O. Receiving Alert at NORAD while in Automatic Mode: This test checks the ability of the equipment at NORAD to (1) be switched from the manual mode to the automatic mode of operation, (2) to receive and recognize an alert code signal from BMEWS or similar facility, and (3) to be switched back from automatic to manual mode of operation. Downstream alert signal broadcast is blocked during this test.

Caution: *This test is for initial line-up only. After customer service date, this test will not be initiated by the telephone company.*

P. Manual Alert from NORAD or Region: This test checks the ability of either a NORAD or Region location to broadcast an alert to the downstream locations as is intended in normal service.

Caution: *This test is for initial line-up only. After customer service date, this test will not be initiated by the telephone company.*

Q. Receiving Alert at Region and Sector and Manual Acknowledgment: This test checks the ability of the Region or Sector locations to receive an alert signal initiated at an upstream location and manually acknowledge receipt of the alert signal. All circuit operations for receiving an alert at Region or Sector are exercised in Test G. Circuit operations for manual acknowledgment are exercised in Test T.

R. Receiving Alert at Site and Manual Acknowledgement: This test is similar to Test Q except that it checks the ability of the Site location to receive and manually acknowledge the upstream alert signal. All circuit operations for receiving an alert at Site are exercised in Test H. Circuit operations for manual acknowledgment are exercised in Test U, except that the alert key instead of the test alert key is operated to acknowledge an alert.

S. Test Alert at NORAD or Region: This test checks the ability of the equipment at NORAD or Region locations to broadcast a test alert to the downstream locations as intended in normal service.

Caution: *Performance of this test must be coordinated through the customer.*

T. Receiving and Sending Test Alert at Region or Sector and Manual Acknowledgment: This test checks the ability of the equipment at Region or Sector locations to receive, rebroadcast, and manually acknowledge a test alert signal initiated at an upstream location as intended in normal service.

U. Receiving Test Alert at Site and Manual Acknowledgment: This test checks the ability of the equipment at Site locations to receive and manually acknowledge an upstream test alert as intended in normal service.

V. Receiving and Sending Capability with One Facility Inoperative at Region or Sector: This test checks the ability of the equipment at Region or Sector locations to receive and rebroadcast a test alert initiated at an upstream location first while facility 1 is disabled and then while facility 2 is disabled. The equipment must be able to receive, recognize, and send test alert signals in the normal manner even when one of the two facilities is disabled. Successful completion of this test will verify that capability.

W. Test Alert from NORAD to Individual Region or Region to Individual Sector: This test checks the ability of the equipment at NORAD or Region to initiate a test alert to a selected downstream location, as intended in normal service.

Caution: *Performance of this test must be coordinated through the customer.*

X. Override Local Test at Region or Sector by Upstream Alert: This test checks the ability of the equipment at Region or Sector to recognize a simulated upstream alert and to override and cancel a local test in progress at the time of receipt of the simulated alert signal.

Caution: *This test is for initial line-up only. After customer service date, this test will not be initiated by the telephone company.*

Y. Override Test Alert at NORAD by BMEWS Alert: This test checks the ability of the equipment at NORAD to recognize a simulated BMEWS alert and override and cancel a test alert in progress at the time of receipt of the simulated alert signal.

Caution: Performance of this test must be coordinated through the customer.

Z. Override Local Test at Region or Sector by Upstream Test Alert: This test checks the ability of the equipment at Region or Sector to recognize a simulated upstream test alert and

override and cancel a local test alert in progress at the time of receipt of the simulated upstream test alert signal.

1.05 Tests require action or verification at the locations indicated in Table A.

1.06 Tests are to be performed at the various locations in accordance with Table B.

1.07 Tests A through F are periodic out-of-service tests which must be performed at initial installation and at six-month intervals thereafter. In addition, the tests specified in

TABLE A	
ACTION OR VERIFICATION REQUIRED AT	TESTS AFFECTED
Equipment Location	Tests A through Z (all tests)
Control or Monitor Consoles	F,G,H, and J through Z
Distant Location Console	F,L,P,S,T,V,W,Y
Office Alarm Panel	B,I,J

TABLE B	
LOCATION	TESTS REQUIRED
All Locations	A, B, E, F, I, J (see 1.07 also)
NORAD	O,Y
NORAD, Region	D,N,P,S,W
NORAD, Region, Sector	C,G,K
Region, Sector	L,Q,T,V,X,Z
Site	H,M,R,U

SD-1G214-01 under *Timing Requirements* for code generator, long pulse relay, and under circuit notes for associated timers must also be performed at similar intervals. Tests G and H are in-service type operational tests of a semi-automatic nature which may be initiated from the control console at each location at any time while the system is either in service *or* out of service. Successful completion of Tests G and H is a satisfactory confidence check of the ability of the equipment at each location to receive, recognize, and send an alert code signal. Tests I through Z are out-of-service checks of numerous system functions. Tests I through Z are useful as confidence checks to be made at the time of initial installation. However, they should *not* be performed until Tests A through H (as applicable) and tests specified in SD-1G214-01 have been performed first.

1.08 These tests assume that the equipment at each alerting installation is operating properly. Obvious defects such as broken wires, loose connections, etc., should be corrected prior to performance of these tests.

1.09 *Lettered Steps:* A letter a, b, c, etc, added to a step number in Part 3 of this section indicates an action which may or may not be required, depending on location or 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.

1.10 *Terminology:* Tests are performed at one or more types of locations included in the 10A Alerting System (i.e., NORAD, Region, Sector, or Site). The alert signaling chain of command proceeds in the same order in which the locations are listed from NORAD downstream to Site. To facilitate identification of other system locations with respect to the location at which a test is being performed, the terms "upstream" and "downstream" are applied. When tests are being performed at a Region location, the NORAD location is referred to as the "upstream location" and the

two telegraph lines provided between NORAD and Region are referred to as "upstream lines." All Sector locations reporting to the Region are referred to as "downstream locations," and the two lines connecting Region to each Sector are referred to as "downstream lines." At each Sector, the Region and its associated lines are "upstream" and each Site and its line are called "downstream." The Site which is the last in the signaling chain has only an "upstream" line to its associated Sector; NORAD, the first in the signaling chain, will have only downstream lines to each Region location.

1.11 *RM, SM Relay Identification:* To facilitate correct *functional* identification of the five RM and five SM relays mounted on the code register circuit relay panel, Table C is provided. It is arranged from left to right, facing the equipment side, by position, the same way the panel is laid out. In addition, a sixth RM and a sixth SM relay, which are not presently used, are installed in position six.

2. APPARATUS

TESTS A THROUGH F

2.01 Stop Watch, KS-3008.

TESTS B THROUGH F

2.02 Volt-Ohm-Milliammeter (VOM) KS-14510, List 1.

2.03 Testing Cord, No. 893, 3 feet long, equipped with two No. 360A tools (No. 1W13A cord) and two KS-6278 connecting clips.

TESTS B, F, I, J, K, L, M, O, AND V

2.04 Blocking and insulating tools, as required. Apply tools as described in Section 069-020-801.

TABLE C
CODE REGISTER PANEL
(EQUIPMENT SIDE)

1 ALERT	2 TEST ALERT	3 RELEASE	4 ACKNOWLEDGE	5 CONTINUITY	6 (NOT WIRED)
RM	RM	RM	RM	RM	RM
SM	SM	SM	SM	SM	SM

Note: When observation of RM and SM relay action is required, the relays are listed typically as RM (alert), SM (rls), RM (ack), SM (test), SM (con), etc., for proper position identification at the code register circuit panel.

3. METHOD

STEP	ACTION	VERIFICATION
A. AL and TT Alert Logic and Test Logic Timers		
1a	If checking AL timer — At switching control circuit — Momentarily operate W1 relay.	At switching control circuit — W1 relay locks operated; between 4 and 6 seconds later, W1 relay releases. See Step 2b.
2b	If requirement of Step 1a is not met, adjust potentiometer of AL timer to obtain reading.	
3c	If checking TT timer — At switching control circuit — Momentarily operate TW relay.	At switching control circuit — TW relay locks operated; between 4 and 6 seconds later, TW relay releases. See Step 4d.
4d	If requirement of Step 3c is not met, adjust potentiometer of TT timer to obtain reading.	

B. GA1 and GA2 Code Sender Failure Alarm Timers

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|----|--|
| 1a | If checking GA1 timer —
At switching control circuit —
Block operated relay EC1. |
| 2b | If checking GA2 timer —
At switching control circuit —
Block operated relay EC2. |

STEP	ACTION	VERIFICATION
3a	If checking GA1 timer — Connect VOM to terminal 10 of GA1 timer and to —48 volt terminal on J1G019() as follows at test location: NORAD; TS(B) 57, E unit Region; TS(J) 57, M unit Sector; TS(H) 57, N unit Site; TS(C) 47, P unit	At switching control circuit — VOM reads zero volts.
4b	If checking GA2 timer — Connect VOM to terminal 10 of GA2 timer and to —48 volt terminal on J1G019() as follows at test location: NORAD; TS(B) 57, E unit Region; TS(J) 57, M unit Sector; TS(H) 57, N unit Site; TS(C) 47, P unit	VOM reads zero volts.
5	Connect 1W13A test cord between terminals 12 and 13 of timer.	Between 2 and 4 seconds later, VOM reads —48 VDC.
		At office alarm panel — GA- alarm sounds continuously and GA- lamp lights steadily. See Step 6c.
6c	If requirement of Step 5 is not met, remove 1W13A test cord from terminal 13 of timer to allow for recycling.	
7c	Adjust potentiometer on timer.	
8c	Repeat Step 5.	Same as Step 5.
9	Remove blocking tool, test cord, and VOM.	

C. PG Continuity Pulse Generator Timer

1a	If PG timer is at NORAD — At switching control circuit — Connect VOM to TS(B) 57, J1G019E (—48 volts) and to terminal 10 of PG timer.	At switching control circuit — VOM momentarily reads —48 VDC every 5 to 7 seconds and zero volts during interven- ing “off” time. See Step 2b.
2b	If requirement of Step 1a is not met, adjust potentiometer on PG timer to obtain reading.	
3c	If PG timer is at Region or Sector, connect VOM to terminal 10 of PG timer and to —48 volt terminal on J1G019() as follows at test location: Region; TS(J) 18, M unit Sector; TS(H) 18, N unit	VOM reads zero volts.

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STEP	ACTION	VERIFICATION
4c	Connect 1W13A test cord between stationary terminal 10 of PG relay and to -48 volt terminal on J1G019() as follows at test location: Region; TS(J) 18, M unit Sector; TS(H) 18, N unit	VOM momentarily reads -48 VDC every 5 to 7 seconds and zero volts during intervening "off" time. See Step 5d.
5d	If requirement of Step 4c is not met, adjust potentiometer on PG timer to obtain reading.	
6	Remove test cord and VOM.	

D. KT Key Timer

1	At switching control circuit — Connect VOM to terminal 10 of KT timer and to -48 volt terminal on J1G019() as follows at test location: NORAD; TS(B) 46, E unit Region; TS(J) 46, M unit	At switching control circuit — VOM reads zero volts.
2	Connect 1W13A test cord between terminals 12 and 13 of KT timer.	Between 2 and 4 seconds later, VOM reads -48 VDC. See Step 3a.
3a	If requirement of Step 2 is not met, remove 1W13A test cord from terminal 13 of KT timer to allow for recycling.	
4a	Adjust potentiometer of KT timer.	
5a	Repeat Step 2.	Same as Step 2.
6	Remove VOM and test cord.	

E. LT Local Test Timer

1	At switching control circuit — Connect VOM to terminal 5 of LT timer and to -48 volt terminal on J1G019() as follows at test location: NORAD; TS(B) 17, E unit Region; TS(J) 17, M unit Sector; TS(H) 17, N unit Site; TS(C) 27, P unit	At switching control circuit — VOM reads -48 VDC.
2	Connect 1W13A test cord between terminals 12 and 13 of LT timer.	Between 8 and 12 seconds later, VOM reads zero volts. See Step 3a.
3a	If requirement of Step 2 is not met, remove 1W13A test cord from terminal 13 of LT timer to allow for recycling.	
4a	Adjust potentiometer of LT timer.	

STEP	ACTION	VERIFICATION
5a	Repeat Step 2.	Same as Step 2.
6	Remove VOM and test cord.	
F. CT (CT1, CT2, CT-) Continuity Failure Alarm Timers		
<i>Caution: Notify console locations that this test will initiate continuity failure alarm indications at test location console and, if CT() timer is associated with upstream line, similar alarm indications will appear at upstream location console at Region or NORAD only.</i>		
<i>Note:</i> This test must be performed for each line at each location.		
1a	If CT() timer is at NORAD, Region, or Sector location — At switching control circuit — Block operated OK() relay.	
2b	If CT() timer is at Site — At switching control circuit — Block operated CMA relay.	
3	Connect VOM to one terminal of timer as follows according to timer and location: CT- timer, terminal 8 CT1 or CT2 timer at Region or Sector, terminal 11 CT1 timer at site, terminal 8	At switching control circuit — VOM reads zero volts.
<i>and</i>		
to —48 volt terminal on J1G019() as follows by test location: NORAD; TS(C) 31, L unit Region; TS(C) 31, L unit Sector; TS(C) 31, L unit Site; TS(C) 18, P unit		
4c	If checking CT- timer at NORAD location or CT1 or CT2 timer at Region location — Connect 1W13A test cord between terminals 12 and 13 of CT timer.	Between 19 and 21 seconds later, VOM reads —48 VDC.
At location console — Buzzer sounds continuously and LINE() FAIL lamp flashes for line associated with CT timer. See Step 7f.		
5d	If checking CT- timer at Region or CT1 or CT2 timer at Sector — Same as Step 4c.	Same as Step 4c except time is 24 to 26 seconds instead of 19 to 21 seconds. See Step 7f.
6e	If checking CT- timer at Sector or CT1 timer at Site — Same as Step 4c.	Same as Step 4c except time is 29 to 31 seconds instead of 19 to 21 seconds. See Step 7f.
7f	If requirement is not met — Remove 1W13A test cord from terminal 13 of CT() timer to allow for recycling.	

STEP	ACTION	VERIFICATION
8f	Adjust potentiometer of CT() timer.	
9f	Repeat either Step 4c, Step 5d, or Step 6e (as applicable).	Same as Step 4c, Step 5d, or Step 6e (as applicable).
10	Remove blocking tool, test cord, and VOM.	At test location console (and, if checking upstream line CT() timer, at upstream location console at Region or NORAD only) — LINE() FAIL lamp is extinguished and buzzer is retired.

G. Lamp Filament and Local Test of NORAD, Region, or Sector Equipment

Note: Successive local tests should not be attempted since each test causes a continuity failure alarm at downstream locations.

1a	If local testing facility No. 1 — At control console — Operate and hold LOCAL TEST 1 key.	At control and monitor consoles — All indicators light steadily and buzzer sounds continuously. At switching control circuit — KFT relay operates.
2b	If local testing facility No. 2 — At control console — Operate and hold LOCAL TEST 2 key.	Same as Step 1a.
3a	If local testing facility No. 1, release LOCAL TEST 1 key.	At control and monitor consoles — Buzzer is retired and all lamps are extinguished except LOCAL TEST 1. In approximately 2 seconds ALERT ACK lamps flash red for each downstream location. In approximately 6 seconds, ALERT lamp flashes red and bell rings continuously. In approximately 8 to 12 seconds bell and all lamps are retired. At switching control circuit — KFT relay releases. In approximately 6 seconds ALL relay operates. In approximately 8 to 12 seconds AR relay operates for the second time and releases; all other relays release. At code register circuit (line 1) — RM (alert) relay and SM (alert) relay operate for approximately 6 seconds; RM (alert) relay, then SM (alert) relay releases. At code sender circuit (line 1) — EC relay pulses 3 times during a 6-second interval.

STEP	ACTION	VERIFICATION
4b	If local testing facility No. 2, release LOCAL TEST 2 key.	Same as Step 3a except LOCAL TEST 2 lamp remains lighted and relay verifications are made at code register circuit and code sender circuit for line 2 instead of line 1.

Note: If at the time alert is released the alert lamp flashes and bell rings but the acknowledgment lamps do not function, check to see if the 2C relay is operated. If this condition exists, manually release the 2C relay and test the AL timer (Test A) for proper operation.

H. Lamp Filament and Local Test of Site Equipment

1	At console — Operate and hold LOCAL TEST key.	At console — All indicators light steadily and buzzer sounds continuously. At switching control circuit — KFT relay operates.
2	Release LOCAL TEST key.	At console — Buzzer is retired and all lamps are extinguished except LOCAL TEST lamp. In approximately 6 seconds alert lamp flashes red and bell rings continuously. In approximately 8 to 12 seconds bell and lamps are retired. At switching control circuit — KFT releases immediately. In approximately 6 seconds ALL relay operates; LT timer operates, releasing all relays. At code register circuit — RM (alert) relay and SM (alert) relay operate for approximately 6 seconds; RM (alert) relay, then SM (alert) relay release. At code sender circuit — EC relay pulses 3 times during a 6-second interval.

Note: If at the time alert is released the alert lamp flashes and bell rings, check to see if the 2C relay is operated. If this condition exists, manually release the 2C relay and test the AL timer (Test A) for proper operation.

I. Code Generator Failure Alarm

1a	If checking NORAD, Region or Sector — At switching control circuit — Block EC1 relay unoperated. Block SB relay unoperated in associated generator.	At office alarm panel — In approximately 3 seconds GA- lamp associated with code sender 1 lights steadily and GA- audible alarm sounds continuously.
2a	At office alarm panel — Operate CO key.	GA- audible alarm is retired.

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STEP	ACTION	VERIFICATION
3a	Remove blocking tools. Restore CO key.	GA- lamp is extinguished.
4a	At switching control circuit — Block EC2 relay unoperated. Block SB relay unoperated in associated generator.	Same as 1a except GA- lamp lights associated with code sender 2.
5a	At office alarm panel — Operate CO key.	Same as 2a.
6a	Same as 3a.	Same as 3a.
7b	If checking Site location, same as Step 1a.	Same as Step 1a for only code sender provided.
8b	Same as Step 2a.	Same as Step 2a.
9b	Same as Step 3a.	Same as Step 3a.

J. Local Test with One Sender Inoperative

1a	If checking at NORAD, Region or Sector location — At switching control circuit — Block EC1 relay unoperated. Block SB relay unoperated in associated generator.	At office alarm panel — In approximately 3 seconds GA- lamp associated with code sender 1 lights steadily and GA- audible alarm sounds continuously.
2a	At office alarm panel — Operate the CO key.	GA- audible alarm is retired.
3a	At control console — Operate and release LOCAL TEST 1 key.	At control and monitor consoles — LOCAL TEST 1 lamp lights steadily white. In approximately 2 seconds all ALERT ACK lamps flash red. In approximately 6 seconds, ALERT lamp flashes red and bell rings continuously. In approximately 8 to 12 seconds bell and all lamps are retired.
4a	Remove blocking tool. Restore CO key.	At office alarm panel — GA- lamp is extinguished.
5a	At switching control circuit — Block EC2 unoperated. Block SB relay unoperated in associated generator.	Same as Step 1a except GA-lamp is associated with code sender 2.
6a	Same as Step 2a.	Same as Step 2a.
7a	At control console — Operate and release LOCAL TEST 2 key.	Same as Step 3a except LOCAL TEST 2 lamp instead of LOCAL TEST 1 lamp lights steadily white.

STEP	ACTION	VERIFICATION
8a	Remove blocking tool. Restore CO key.	GA- lamp is extinguished.
9b	If checking Site location, block EC1 relay unoperated. Block SB relay unoperated in associated generator.	Same as Step 1a for the only code sender provided.
10b	Same as Step 2a.	Same as Step 2a.
11b	At console — Operate and release LOCAL TEST key.	At console — LOCAL TEST lamp lights steadily white. In approximately 6 seconds alert lamp flashes red and bell rings continuously. In approximately 10 seconds bell and lamps are retired.
12b	Remove blocking tool. Restore CO key.	GA- lamp is extinguished.

Note: If at the time alert is released the alert lamp flashes and bell rings but the acknowledgment lamps do not function, check to see if the 2C relay is operated. If this condition exists, manually release the 2C relay and test the AL timer (Test A) for proper operation.

K. Continuity Failure Downstream at NORAD, Region, or Sector

1a	If checking NORAD location line 1 — At switching control circuit — Block OK- relay unoperated associated with code receiver for line 1 for first downstream location.	At control and monitor consoles — In approximately 20 seconds, LINE 1 FAIL (or equivalent designation) lamp flashes white and buzzer sounds continuously.
2b	If checking NORAD location line 2 — At switching control circuit — Block OK- relay unoperated associated with code receiver for line 2 for first downstream location.	Same as Step 1a except LINE 2 FAIL (or equivalent designation) lamp flashes instead of LINE 1 FAIL lamp.
3c	If checking Region location line 1 — At switching control circuit — Same as Step 1a.	Same as Step 1a except time lapse is approximately 25 seconds instead of 20 seconds.
4d	If checking Region location line 2 — At switching control circuit — Same as Step 2b.	Same as Step 2b except time lapse is 25 seconds instead of 20 seconds.
5e	If checking Sector location — At switching control circuit — Block OK- relay unoperated associated with first downstream location to be checked.	At control console — In approximately 30 seconds, LINE FAIL (or equivalent designation) lamp flashes white and buzzer sounds continuously.
6a	At NORAD monitor console — Operate and release ALM CO (or equivalent designation) key.	At NORAD monitor console — Buzzer is retired.

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STEP	ACTION	VERIFICATION
7a	At NORAD control console — Operate and release LINE 1 FAIL — LINE 2 FAIL (or equivalent designation) key.	At control console — Buzzer is retired and LINE 1 FAIL lamp switches from flash to steady. At switching control circuit — TF- relay operates.
8b	Same as Step 7a.	Same as Step 7a except LINE 2 FAIL lamp lights instead of LINE 1 FAIL and BF- relay operates instead of TF-.
9c	At Region monitor console — Same as Step 6a.	At Region monitor console — Buzzer is retired.
10c	If checking Region location line 1 — At Region control console — Same as Step 7a.	At Region control console — Same as Step 7a.
11d	If checking Region location line 2 — At Region control console — Same as Step 7a.	Same as Step 7a except LINE 2 FAIL lamp lights steadily instead of LINE 1 FAIL lamp and BF- relay operates instead of TF- relay.
12e	At Sector monitor console — Same as Step 6a.	At Sector monitor console — Buzzer is retired.
13e	At Sector control console — Operate and release LINE FAIL key.	At Sector control console — LINE FAIL lamp changes from flash to steady. At switching control circuit — Either TF- or BF- relay associated with that line facility operates (consult office records to see which relay is used).
14a	Remove blocking tool.	LINE 1 FAIL lamp is extinguished and TF- relay releases.
15b	Remove blocking tool.	LINE 2 FAIL lamp is extinguished and BF- relay releases.
16c	Remove blocking tool.	Same as Step 14a.
17d	Remove blocking tool.	Same as Step 15b.
18e	Remove blocking tool.	LINE FAIL lamp is extinguished and either TF- or BF- relay releases.
19a	Repeat Steps 1a, 7a, and 14a for each remaining downstream location.	Same as for Steps 1a, 7a, and 14a.
20b	Repeat Steps 2b, 8b, and 15b for each remaining downstream location.	Same as for Steps 2b, 8b, and 15b.

STEP	ACTION	VERIFICATION
21c	Repeat Steps 3c, 10c, and 16c for each remaining downstream location.	Same as for Steps 3c, 10c, and 16c.
22d	Repeat Steps 4d, 11d, and 17d for each remaining downstream location.	Same as for Steps 4d, 11d, and 17d.
23e	Repeat Steps 5e, 13e, and 18e for each remaining downstream location.	Same as for Steps 5e, 13e, and 18e.

L. Continuity Failure Upstream at Region or Sector

Caution: Prior to performing this test, notify upstream location that line failure alarm indications associated with location being tested will result at upstream control and monitor consoles.

1a	If checking Region location — At switching control circuit — Block OK1 relay unoperated associated with line 1.	At control and monitor consoles — In approximately 20 seconds, LINE 1 FAIL lamp flashes white (top half of LINE 1 FAIL — LOCAL TEST 1 indicator) and buzzer sounds continuously. At upstream control and monitor consoles — LINE 1 FAIL lamp flashes (top half of LINE 1 FAIL — LINE 2 FAIL indicator) and buzzer sounds.
2b	If checking Sector location — At switching control circuit — Same as Step 1a.	Same as Step 1a except time lapse is approximately 25 seconds instead of 20 seconds.
3	At control console — Operate and release LINE 1 FAIL — LOCAL TEST 1 key.	At control and monitor consoles — Buzzer is retired and LINE 1 FAIL lamp switches from flash to steady. At switching control circuit — LFZ relay operates.
4	Remove blocking tool.	At control and monitor consoles — When next code appears in approximately 6 seconds, LINE 1 FAIL lamp is extinguished. At switching control circuit — LFZ relay releases. At upstream location control and monitor consoles — LINE 1 FAIL lamp is extinguished and buzzer is retired.
5a	If checking Region location — At switching control circuit — Block OK2 relay unoperated associated with line 2.	Same as Step 1a except LINE 2 FAIL lamp flashes instead of LINE 1 FAIL lamp.

STEP	ACTION	VERIFICATION
6b	If checking Sector location — At switching control circuit — Same as Step 5a.	Same as Step 5a except time lapse is approximately 25 seconds instead of 20 seconds.
7	At control console — Operate and release LINE 2 FAIL — LOCAL TEST 2 key.	Same as Step 3 except LINE 2 FAIL lamp lights steadily instead of LINE 1 FAIL lamp and RFZ relay operates instead of LFZ relay.
8	Remove blocking tool.	Same as Step 4 except LINE 2 FAIL lamp is extinguished instead of LINE 1 FAIL and RFZ relay releases instead of LFZ relay.

M. Continuity Failure Upstream at Site

1	At switching control circuit — Block CMA relay unoperated.	At console — In approximately 30 seconds LINE FAIL lamp flashes white (upper half of LINE FAIL — LOCAL TEST indicator) and buzzer sounds continuously.
2	At console — Operate and release LINE FAIL — LOCAL TEST key.	Buzzer is retired and LINE FAIL lamp portion of indicator switches from flash to steady white. At switching control circuit — LFZ relay operates.
3	Remove blocking tool.	At console — When next code appears in approximately 6 seconds, LINE FAIL lamp is extinguished. At switching control circuit — LFZ relay releases.

N. 3-Second Time-Out for Alert, Test Alert, Alert Release, or Test Acknowledge Key Functions at NORAD or Region

1	At control console — Operate and release ALERT key.	At control and monitor consoles — ALERT lamp lights steadily red. In approximately 3 seconds ALERT lamp is extinguished. At switching control circuit — AL relay operates for approximately 3 seconds and then releases.
2	At control console — Operate and release TEST ALERT key.	At control and monitor consoles — TEST ALERT lamp lights steadily amber. In approximately 3 seconds TEST ALERT lamp is extinguished. At switching control circuit — TST relay operates for approximately 3 seconds and then releases.

STEP	ACTION	VERIFICATION
3	At control console — Operate and release ALERT RLS key.	At control and monitor consoles — ALERT RLS lamp lights steadily white. In approximately 3 seconds ALERT RLS lamp is extinguished. At switching control circuit — RLS relay operates for approximately 3 seconds and then releases.
4	At control console — Operate and release any selected ALERT ACK — TEST ACK key.	Same as Step 2.
5	Repeat Step 4 for each remaining ALERT ACK — TEST ACK key.	Same as Step 2.

O. Receiving Alert at NORAD from BMEWS or Similar Facility

CAUTION: THIS TEST IS FOR INITIAL LINE-UP ONLY. AFTER CUSTOMER SERVICE DATE, THIS TEST WILL NOT BE INITIATED BY THE TELEPHONE COMPANY.

1	At control console — Operate and release AUTOMATIC key.	At control and monitor consoles — AUTOMATIC lamp lights steadily green. At switching control circuit — BMW and BMZ relays operate.
2	At switching control circuit — Insulate contact 7 of LF1 relay and contact 5 of relay LF2.	
3	Block BM relay operated.	At control and monitor consoles — ALERT lamp flashes red, AUTOMATIC lamp changes from steady to flashing green, and bell rings continuously. At switching control circuit — BP and ALL relays operate.
4	At monitor console — Operate and release ALM CO (or equivalent designation) key.	At monitor console — Bell is retired.
5	Remove blocking tool from BM relay.	
6	At control console — Operate and release ALERT key.	At control and monitor consoles — ALERT lamp and AUTOMATIC lamp change from flash to steady. At control console — Bell is retired. At switching control circuit — AL relay operates and ALL relay releases.

STEP	ACTION	VERIFICATION
7	Operate ALERT RLS key.	At control and monitor consoles — ALERT RLS lamp lights steadily white for approximately 3 seconds and then is extinguished. ALERT lamp is extinguished. At switching control circuit — RLS relay operates for approximately 3 seconds and then releases.
8	Remove insulating tools.	
9	At control console — Operate and release AUTOMATIC key.	At control and monitor consoles — AUTOMATIC lamp is extinguished. At switching control circuit — BMW and BMZ relays release.

Note: If at the time alert is released the alert lamp flashes and bell rings but the acknowledgment lamps do not function, check to see if the 2C relay is operated. If this condition exists, manually release the 2C relay and test the AL timer (Test A) for proper operation.

P. Manual Alert from NORAD or Region

CAUTION: THIS TEST IS FOR INITIAL LINE-UP ONLY. AFTER CUSTOMER SERVICE DATE, THIS TEST WILL NOT BE INITIATED BY THE TELEPHONE COMPANY.

1a	If checking at NORAD — At control console — Operate and release ALERT key; within 3 seconds operate and release MASTER OPERATE key.	At control and monitor consoles — ALERT lamp lights steadily red and MASTER OPERATE lamp lights steadily green (if optional wiring is provided, bell rings). In approximately 4 seconds MASTER OPERATE lamp is extinguished (if optional wiring is provided, bell retires). In approximately 6 seconds ALERT ACK (upper half of ALERT ACK — TEST ACK) lamp for each downstream location flashes red.
2a	Wait for downstream manual acknowledgment for each location.	
3a	At each downstream location — Manual acknowledgment initiated.	Each ALERT ACK lamp changes from flash to steady. At switching control circuit — AL and MAS relays operate. In approximately 6 seconds AA relay associated with each downstream location operates. As each downstream location manually acknowledges, AM relay associated with each downstream location operates. At code register circuits — RM (alert) relay and SM (alert) relay operate for approximately 6 seconds; RM (alert) relay, then SM (alert) relay release.

STEP	ACTION	VERIFICATION
4b	If checking at Region — <i>Caution: Notify NORAD that an alert is being initiated at Region.</i> At control console — Same as Step 1a.	Same as for Step 1a except that a flashing ALERT ACK lamp associated with Region being tested will appear at NORAD control and monitor consoles.
5b	Same as Step 2a.	
6b	Same as Step 3a.	Same as Step 3a.
<i>Note:</i> If alert has been initiated at NORAD, only NORAD can release it. If alert has been initiated at Region, either Region or NORAD can initiate release. This test assumes that alert release is initiated at the same location that initiated alert.		
7a	If checking at NORAD location — At control console — Operate and release ALERT RLS key; within 3 seconds, operate and release MASTER OPERATE key.	At control and monitor consoles — ALERT lamp is extinguished; ALERT RLS lamp lights steadily white and MASTER OPERATE lamp lights steadily green for approximately 2 seconds and then both are extinguished. In approximately 4 seconds ALERT ACK lamps for each downstream location are extinguished. At switching control circuit — RLS and MAS relays operate and in approximately 2 seconds, release. In approximately 4 seconds AM relay and AA relay associated with each downstream location release.
8b	If checking at Region location — Same as Step 7a.	Same as Step 7a except that flashing ALERT ACK lamp at NORAD is extinguished.

Q. Receiving Alert at Region or Sector and Manual Acknowledgment

Note: All circuit operations for receiving alert at Region or Sector are exercised in Test G. Circuit operations for manual acknowledgment are exercised in Test T.

R. Receiving Alert at Site and Manual Acknowledgment

Note: All circuit operations for receiving alert at Site are exercised in Test H. Circuit operations for manual acknowledgment are exercised in Test U, except alert key instead of test alert key is operated to acknowledge an alert.

STEP	ACTION	VERIFICATION
S. Test Alert from NORAD or Region		
<i>Caution: Before initiating this test, notify customer that a test alert is to be sent as a system exercise. If the test alert is initiated at Region, also notify NORAD.</i>		
1a	If checking NORAD location — At control console — Operate and release TEST ALERT key; within 3 seconds, operate and release MASTER OPERATE key.	At control and monitor consoles — TEST ALERT lamp lights steadily amber and MASTER OPERATE lamp lights steadily green (if optional wiring is provided, bell rings). In approximately 4 seconds MASTER OPERATE lamp is extinguished (if optional wiring is provided, bell retires). In approximately 6 seconds TEST ACK (lower half of ALERT ACK — TEST ACK indicator) lamp associated with each downstream location flashes amber.
2a	Wait for downstream manual acknowledgment from each location.	
3a	At each downstream location — Manual acknowledgment initiated.	Each TEST ACK lamp changes from flash to steady.
		At switching control circuit — TST and MAS relays operate. In approximately 6 seconds AT relay associated with each downstream location operates. As each downstream location manually acknowledges, AM relays associated with each downstream location operate.
		At code register circuits — RM (test) relay and SM (test) relay operate for approximately 6 seconds; RM (test) relay, then SM (test) relay releases.
4b	If checking at Region location — <i>Caution: Notify NORAD that a test alert is being initiated at Region.</i>	Same as Step 1a except that a flashing TEST ACK lamp associated with Region being tested will appear at NORAD control and monitor consoles.
	At control console — Same as Step 1a.	
5b	Same as Step 2a.	
6b	Same as Step 3a.	Same as Step 3a.

Note: If test alert has been initiated at NORAD, only NORAD can release it. If test alert has been initiated at Region, either Region or NORAD can initiate release. This test assumes that test alert release is at the same location that initiated test alert.

STEP	ACTION	VERIFICATION
7a	If checking at NORAD — At control console — Operate and release ALERT RLS key; within 3 seconds, operate and release MASTER OPERATE key.	At control and monitor consoles — ALERT RLS lamp lights steadily white and MASTER OPERATE lamp lights steadily green for approximately 2 seconds; then both lamps are extinguished. In approximately 4 seconds TEST ACK lamps for each downstream location are extinguished. At switching control circuit — RLS and MAS relays operate and in approximately 2 seconds, release. In approximately 4 seconds AT and AM relays associated with each downstream location release.
8b	If checking at Region location — Same as Step 7a.	Same as Step 7a except that flashing TEST ACK lamp at NORAD is extinguished.

T. Receiving and Sending Test Alert at Region or Sector and Manual Acknowledgment

Caution: Before requesting upstream initiation of this test, notify customer that a test alert is being initiated as a system exercise.

1	Via voice facility provided, request upstream location to initiate test alert and, upon receipt of manual acknowledgment, to initiate release.	
2	At upstream location — Test alert initiated.	At control and monitor consoles — TEST ALERT lamp flashes amber and bell rings continuously. In approximately 6 seconds, each TEST ACK lamp associated with each downstream location flashes amber (lower half of ALERT ACK — TEST ACK indicator). At switching control circuit — TW and RT relays operate.
3	At monitor console — Operate and release ALM CO (or equivalent designation) key.	At monitor console — Bell is retired.
4	At control console — Operate and release TEST ALERT key.	At control and monitor consoles — TEST ALERT lamp changes from flash to steady. At control console — Bell is retired. At switching control circuit — TST relay operates.

STEP	ACTION	VERIFICATION
5	Wait for downstream manual acknowledgment from each location.	
6	At each downstream location — Manual acknowledgment initiated.	TEST ACK lamp associated with each downstream location changes from flash to steady as each location manually acknowledges receipt of test alert.
7	Operate and release MANUAL ACK key.	MANUAL ACK lamp lights steadily white. At switching control circuit — CMA relay operates. At code register circuits — RM (ack) relay and SM (ack) relay operate for approximately 2 seconds; RM (ack) relay releases, then SM (ack) relay releases.
8	Wait for upstream release of test alert.	
9	At upstream location — Release initiated.	At control and monitor consoles — MANUAL ACK lamp and TEST ALERT lamp are extinguished. In approximately 4 seconds, all TEST ACK lamps are extinguished. At switching control circuit — TST relay and CMA relay release. At code register circuit — RM (rls) relay and SM (rls) relay operate. In approximately 2 seconds, RM (rls) relay releases, then SM (rls) relay releases.

Note: If at the time test alert is released the test alert lamp flashes and bell rings but the acknowledgment lamps do not function, check to see if the T2C relay is operated. If this condition exists, manually release the T2C relay and test the TT timer (Test A) for proper operation.

U. Receiving Test Alert at Site and Manual Acknowledgment

Caution: Before requesting upstream initiation of this test, notify customer that a test alert is being initiated as a system exercise.

1	Via voice facility provided, request upstream location to initiate test alert and, upon receipt of manual acknowledgment, to initiate release.	
2	At upstream location — Test alert initiated.	At console — Test alert lamp flashes amber and bell rings continuously. At switching control circuit — TW and RT relays operate.

STEP	ACTION	VERIFICATION
3	At console — Operate and release test alert key.	At console — Test alert lamp switches from flash to steady. At switching control circuit — TST relay operates. At code register circuit — RM (ack) relay and SM (ack) relay operate for approximately 6 seconds; RM (ack) relay releases, then SM (ack) relay releases.
4	Wait until upstream release is received.	
5	At upstream location — Release initiated.	At console — Test alert lamp is extinguished. At switching control circuit — TST relay releases. At code register circuit — RM (rls) relay and SM (rls) relay operate for approximately 3 seconds; RM (rls) relay releases, then SM (rls) relay releases.

Note: If at the time test alert is released the test alert lamp flashes and bell rings, check to see if the T2C relay is operated. If this condition exists, manually release the T2C relay and test the TT timer (Test A) for proper operation.

V. Receiving and Sending Capability with One Facility Inoperative at Region or Sector

Caution: Before initiating this test, inform customer that line failure indications will appear at upstream console. Inform downstream locations that test alerts will be received as system exercises and should be manually acknowledged in the normal manner.

1a	If facility 1 is made inoperative — At switching control circuit — Insulate contact 5 of L2A relay; block operated EC1 relay.	
2a	Block operated CT1 relay.	At control and monitor consoles — LINE 1 FAIL lamp (upstream) flashes white and buzzer sounds continuously.
3a	At control console — Operate LINE 1 FAIL (upstream) key.	LINE 1 FAIL lamp changes from flash to steady and buzzer is retired. At switching control circuit — LFZ relay operates.
4a	Via voice facility provided, request upstream location to initiate test alert.	

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STEP	ACTION	VERIFICATION
5a	At upstream location — Test alert initiated.	At control and monitor consoles — TEST ALERT lamp flashes amber and bell rings continuously. In approximately 6 seconds, each TEST ACK lamp associated with each downstream location flashes amber (lower half of ALERT ACK — TEST ACK indicator). At switching control circuit — TW and RT relays operate.
6a	At control console — Operate and release TEST ALERT key.	At control and monitor consoles — TEST ALERT lamp changes from flash to steady and bell is retired.
7a	Wait for downstream manual acknowledgment from each location.	
8a	At downstream location — Manual acknowledgment initiated.	TEST ACK lamp associated with each downstream location changes from flash to steady as each location manually acknowledges receipt of test alert.
9a	Operate and release MANUAL ACK key.	MANUAL ACK lamp lights steadily. At switching control circuit — CMA relay operates. At code register circuit — RM (ack) relay and SM (ack) relay operate for approximately 2 seconds; RM (ack) relay releases, then SM (ack) relay releases.
10a	Wait for upstream release of test alert.	
11a	At upstream location — Release initiated.	At control and monitor consoles — MANUAL ACK and TEST ALERT lamps are extinguished. In approximately 6 seconds all TEST ACK lamps are extinguished. At switching control circuit — TST and CMA relays release. At code register circuit — RM (rls) and SM (rls) relays operate. In approximately 3 seconds, RM (rls) relay releases; then SM (rls) relay releases.
12a	Remove insulating tool and unblock EC1 relay.	
13a	Remove blocking tool from CT1 relay.	At control and monitor consoles — LINE 1 FAIL lamp is extinguished. LFZ relay releases.

STEP	ACTION	VERIFICATION
14b	If facility 2 is made inoperative — At switching control circuit — Insulate contact 5 of L1A relay. Block operated EC2 relay.	
15b	Block operated CT2 relay.	Same as Step 2a except LINE 2 FAIL lamp flashes instead of LINE 1 FAIL.
16b	At control console — Operate and release LINE 2 FAIL (upstream) key.	Same as Step 3a except LINE 2 FAIL lamp steadies instead of LINE 1 FAIL, and RFZ relay operates instead of LFZ.
17b	Repeat Step 4a through Step 10a.	Same as Step 4a through Step 10a.
18b	Repeat Step 11a.	Same as Step 11a.
19b	Remove insulating tool and unblock relay EC2.	
20b	Remove blocking tool from CT2 relay.	At control and monitor consoles — LINE 2 FAIL lamp is extinguished. RFZ relay releases.

Note: If at the time test alert is released the test alert lamp flashes and bell rings but the acknowledgment lamps do not function, check to see if the T2C relay is operated. If this condition exists, manually release the T2C relay and test the TT timer (Test A) for proper operation.

W. Test Alert from NORAD to Individual Region or Region to Individual Sector

Caution: Before initiating test alert, notify customer that a test alert is being initiated as a system exercise. If test is being initiated at Region, also notify NORAD.

1a	If checking NORAD location — At control console — Operate and release TEST ACK key associated with downstream location to be test alerted; within 3 seconds, operate and release MASTER OPERATE key.	At control and monitor consoles — TEST ALERT lamp lights steadily amber and MASTER OPERATE lamp lights steadily green (if optional wiring is provided, bell rings). In approximately 4 seconds MASTER OPERATE lamp is extinguished (if optional wiring is provided, bell retires). In approximately 6 seconds, TEST ACK lamp associated with downstream location being checked (lower half of ALERT ACK — TEST ACK indicator) flashes amber. At switching control circuit — COA relay operates and R- relay associated with selected downstream location operates. In approximately 6 seconds AT relay operates. At code register circuit — RM (test) relay and SM (test) relay operate for approximately 6 seconds; RM (test) relay releases, then SM (test) relay releases.
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STEP	ACTION	VERIFICATION
2a	Wait for selected downstream location to manually acknowledge receipt of test alert.	
3a	At downstream location — Test alert manually acknowledged.	At control and monitor consoles — TEST ACK lamp changes from flash to steady. At switching control circuit — AM relay operates.
4b	If checking at Region location — <i>Caution: Notify NORAD that a test alert is being initiated at Region.</i> At control console — Same as Step 1a.	Same as Step 1a except that a flashing TEST ACK lamp associated with Region conducting test will appear at NORAD control and monitor consoles.
5b	Same as Step 2a.	
6b	Same as Step 3a.	Same as Step 3a.
7a	If checking at NORAD location — At control console — Operate and release ALERT RLS key; within 3 seconds operate and release MASTER OPERATE key.	At control and monitor consoles — ALERT RLS lamp lights steadily white and MASTER OPERATE lamp lights steadily green for approximately 2 seconds; then both lamps are extinguished. In approximately 4 seconds, TEST ACK lamp associated with selected downstream location is extinguished. At switching control circuit — RLS and MAS relays operate and, in approximately 2 seconds, release. In approximately 4 seconds, all other relays release.
8b	If checking at Region location — Same as Step 7a.	Same as Step 7a except that flashing TEST ACK lamp at NORAD is extinguished.

X. Override Local Test at Region or Sector by Upstream Alert

CAUTION: THIS TEST IS FOR INITIAL LINE-UP ONLY. AFTER CUSTOMER SERVICE DATE, THIS TEST WILL NOT BE INITIATED BY THE TELEPHONE COMPANY.

1a	If overriding Local Test 1 — At control console — Operate and release LOCAL TEST 1 key.	At control and monitor consoles — LOCAL TEST 1 lamp (lower half of LINE 1 FAIL — LOCAL TEST 1 indicator) lights steadily white, ALERT lamp flashes red, and bell rings.
2a	Notify switching control circuit location as soon as bell starts to ring.	
3a	At switching control circuit — Operate and release AL2 relay <i>one</i> time.	All lamps are extinguished and bell is retired. (ALERT ACK lamps may start flashing but will then be extinguished.)

Caution: Do not operate AL2 relay more than one time, since two operations would initiate a false alert.

STEP	ACTION	VERIFICATION
4b	If overriding Local Test 2 — At control console — Operate and release LOCAL TEST 2 key.	Same as Step 1a except LOCAL TEST 2 lamp lights instead of LOCAL TEST 1 lamp.
5b	Same as Step 2a.	
6b	Same as Step 3a except operate and release AL1 relay one time instead of AL2 relay.	Same as Step 3a.

Note: If at the time alert is released the alert lamp flashes and bell rings but the acknowledgment lamps do not function, check to see if the 2C relay is operated. If this condition exists, manually release the 2C relay and test the AL timer (Test A) for proper operation.

Y. Override Test Alert at NORAD by BMEWS Alert

Caution: Performance of this test must be coordinated through the customer. Notify all downstream locations that test alert may appear momentarily and then be released as a system test exercise.

1	At control console — Operate and release TEST ALERT key; within 3 seconds, operate and release MASTER OPERATE key.	At control and monitor consoles — TEST ALERT lamp lights amber, MASTER OPERATE lamp lights green (if optional wiring is provided, bell rings). In approximately 4 seconds, MASTER OPERATE lamp is extinguished (if optional wiring is provided, bell retires).
2	Notify switching control circuit location as soon as bell starts ringing.	
3	At switching control circuit — Operate and release OLB relay one time.	All lamps are extinguished. (TEST ACK lamps may start flashing but will then be extinguished)

Z. Override Local Test at Region or Sector by Upstream Test Alert

1a	If overriding Local Test 1 — At control console — Operate and release LOCAL TEST 1 key.	At control and monitor consoles — LOCAL TEST 1 lamp (lower half of LINE 1 FAIL — LOCAL TEST indicator) lights steadily white, ALERT lamp flashes red, and bell rings.
2a	Notify switching control circuit location as soon as bell starts to ring.	
3a	At switching control circuit — Operate and release TE2 relay one time.	All lamps are extinguished and bell stops ringing (ALERT ACK lamps may start flashing but will then be extinguished).
4b	If overriding Local Test 2 — At control console — Operate and release LOCAL TEST 2 key.	Same as Step 1a except LOCAL TEST 2 lamp lights instead of LOCAL TEST 1 lamp.
5b	Same as Step 2a.	

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STEP	ACTION	VERIFICATION
6b	Same as Step 3a except operate and release TE1 relay one time instead of TE2.	Same as Step 3a.

Note: If at the time alert is released the alert lamp flashes and bell rings but the acknowledgment lamps do not function, check to see if the 2C relay is operated. If this condition exists, manually release the 2C relay and test the AL timer (Test A) for proper operation.