

TRANSLATOR CONNECTORS-DECODER CONNECTORS
MISCELLANEOUS TESTS
STEP-BY-STEP COMMON CONTROL OFFICES

1. GENERAL

1.01 This section is reissued to make corrections to Tests C and E and to clarify locational statements throughout the section.

1.02 The tests covered are:

A. **Register Preference:** This test checks the operating and lockout features of register connector relays. 2

B. **Translator-Decoder Preference:** This test checks that when the preferred translator-decoder is busy, an incoming start signal will be advanced to the next preferred translator-decoder connector relays. 3

C. **Alternate Translator-Decoder Selection:** This test checks that first choice and alternate choice translators-decoders will be alternately selected. 4

D. **Connector Timing:** This test checks the functions of the TRS and RC timers. 5

E. **Traffic Control Timing and Alarms:** This test checks that the ALA or ALB alarm circuits time out when a connector cannot be served in sufficient time although translators-decoders were available. It also checks that timing is cancelled when all translators-decoders are busy. 6

1.03 Tests should be made during periods of light traffic. Translators-decoders are common to all translator connectors-decoder connectors. Avoid making busy an excessive number of

translators-decoders to prevent service from being adversely affected.

1.04 For Tests B and C, office records should be consulted to determine first and alternate choice of translator-decoder associated with each originating register for the translator connector-decoder connector under test.

1.05 **Lettered Steps:** A letter a, b, c, etc, added to a step number in Part 4 of this section indicates an action which may or may not be required, depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

PAGE

2. APPARATUS

All Tests

2.01 322A (make-busy) plugs, as required.

2.02 Blocking and insulating tools, as required. Use tools and apply as covered in Section 069-020-801.

Test A

2.03 Two testing cords, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 624A tool.

Test E

2.04 Five testing cords, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), one KS-6278 connecting clip, and one 419A test connector.

SECTION 227-720-501

2.05 One testing cord, 893 cord, 6 feet long, equipped with two 360A tools (1W13B cord), two 639A (relay contact connector) tools, and two 651D (relay contact connector holder) tools (for making test connection to fixed contacts of wire-spring

type relays). Use tools and apply as covered in Section 069-131-811.

2.06 KS-3008 stopwatch, or equivalent.

3. PREPARATION

STEP	ACTION	VERIFICATION
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All Tests

1	At jack, key, and lamp circuit— Operate BAT key.	
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Caution: Do not hold all registers busy any longer than necessary as this interferes with incoming calls.

Tests A, B, C, D

2	Insert make-busy plugs into all OR MB- jacks for registers associated with translator connector-decoder connector under test.	OR- lamps lighted.
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Tests A, B, C

3	At translator connector frame— At translator connector-decoder connector under test— Block nonoperated RC, TRS relays.	
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4. METHOD

STEP	ACTION	VERIFICATION
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A. Register Preference

4	At translator connector-decoder connector under test— Connect battery to L winding of RS0 relay, using 893 cord.	RS0 relay operated. At originating register frame— RA0, RB0, relays operated. If controlled outpulsing is provided— RC0, RD0 relays operated.
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5	At translator connector-decoder connector under test— Connect battery to L winding of RS1 relay, using 893 cord.	RS1 relay did not operate.
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6	At translator connector-decoder connector under test— Remove battery from RS0 relay.	RS0 relay released. At originating register frame— RA0, RB0, relays released. RA1, RB1, relays operated. If controlled outpulsing is provided—
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STEP	ACTION	VERIFICATION
		RC0, RD0 relays released. RC1, RD1 relays operated.
7	At translator connector-decoder connector under test— Momentarily reapply battery to L winding of RS0 relay, using 893 cord.	RS0 relay did not operate.
8	Repeat Steps 5, 6, and 7 for RS2 and succeeding higher numbered RS- relays until the complete preference chain is tested.	
9	Remove blocking tools from RC, TRS relays.	
10a	If no further tests are to be made— At jack, key, and lamp circuit— Remove make-busy plugs and restore BAT key.	OR- lamps extinguished.
B. Translator-Decoder Preference		
4a	If W, Z relays are operated— At translator connector-decoder connector under test— Momentarily operate TFC, TFC1 relays simultaneously.	W, Z relays released.
5	Block nonoperated W, TR, TR1, TM relays.	
6	At originating register whose first choice is first translator-decoder— Block nonoperated TDSA relay.	
7	Block operated TDST relay.	At translator connector frame— TS0, TA0, TB0 relays operated. At decoder connector frame— TC0, TD0 relays operated.
8	At translator connector-decoder connector under test— Remove blocking tool from TR relay.	
9	Block operated TR relay.	At translator connector frame— TS0, TA0, TB0 relays released. At decoder connector frame— TC0, TD0 relays released.
10	At jack, key, and lamp circuit— Insert make-busy plug into CB- jack for first choice translator-decoder associated with the translator connector-decoder connector under test.	At translator connector-decoder connector under test— CB- relay operated.

SECTION 227-720-501

STEP	ACTION	VERIFICATION
11	Remove blocking tool from TR relay.	
12	Block nonoperated TR relay.	At translator connector frame— TS-, TA-, TB- relays for next preferred translator-decoder operated. At decoder connector frame— TC-, TD- relays for next preferred translator operated.
13	Repeat Steps 8 through 12, making succeeding translators-decoders busy to this translator connector-decoder connector until the complete preference chain is tested.	
14	At translator connector-decoder connector under test— Remove blocking tools.	
15	At jack, key, and lamp circuit— Remove make-busy plugs from CB- jacks.	At translator connector-decoder connector under test— CB- relays released.
16	At selected originating register— Remove blocking tools.	
17b	If no further tests are to be made— At jack, key, and lamp circuit— Remove make-busy plugs and restore BAT key.	OR- lamps extinguished.

C. Alternate Translator-Decoder Selection

4a	If W, Z relays are operated— At translator connector-decoder connector under test— Momentarily operate TFC, TFC1 relays simultaneously.	W, Z relays released.
5	At made-busy originating registers— Select a register and determine its first and alternate translator-decoder choice.	
6	At selected originating register— Block nonoperated TDSA relay.	
7	Block operated TDST relay.	At translator connector frame— TS- relay of first choice translator-decoder operated.
8	Remove blocking tool from TDST relay.	TS- relay of first choice translator-decoder released.

STEP	ACTION	VERIFICATION
9	Block operated TDST relay.	TS- relay of alternate choice translator-decoder operated.
10	Remove blocking tools from TDST, TDSA relays.	TS- relay of alternate choice translator-decoder released.
11	At translator connector-decoder connector under test— Remove blocking tools from RC, TRS relays.	
12b	If no further tests are to be made— At jack, key, and lamp circuit— Remove make-busy plugs and restore BAT key.	OR- lamps extinguished.

D. Connector Timing

TRS Timer

Caution: *When insulating springs, use care not to dislodge movable springs from grooves of comb.*

3	At translator connector frame— At translator connector-decoder connector under test— Insulate 6M of RC relay.	
4	Insulate 1M of TRS relay.	
5	Block operated IT relay.	After approximately 150 msec— TRS relay operated. At jack, key, and lamp circuit— TCT- lamp lighted.
6	At translator connector-decoder connector under test— Remove blocking tool from IT relay.	
7	At jack, key, and lamp circuit— Momentarily operate TCAR key.	TCT- lamp extinguished. At translator connector-decoder connector under test— TRS relay released.

RC Timer

8	At translator connector-decoder connector under test— Block operated TK relay.	After approximately 750 msec— RC relay operated. At jack, key, and lamp circuit— TCR- lamp lighted.
9	Remove blocking tool from TK relay.	

SECTION 227-720-501

STEP	ACTION	VERIFICATION
10	At jack, key, and lamp circuit— Momentarily operate TCAR key.	TCR- lamp extinguished. At translator connector-decoder connector under test— RC relay released.
11	At translator connector-decoder connector under test— Remove insulating tools from RC, TRS relays.	
12a	◆If no further tests are to be made— At jack, key, and lamp circuit— Remove make-busy plugs and restore BAT key.◆	OR- lamps extinguished.

E. Traffic Control Timing and Alarms

Caution: ◆When insulating springs, use care not to dislodge movable springs from grooves of comb.◆

2	At translator connector frame— At translator connector-decoder connector under test— Insulate ◆3B◆ of ALA relay.	
3	Insulate 10M of ◆ALA,◆ ALB relays.	
4	Block operated TCA relay.	After approximately 5.6 seconds— At jack, key, and lamp circuit— ALA lamp lighted.
5	At translator connector-decoder connector under test— Remove blocking tool from TCA relay.	
6	◆At jack, key, and lamp circuit— Momentarily operate TCTC AR key.	ALA lamp extinguished.
7	At translator connector-decoder connector under test— Block operated CWA relay.	After approximately 5.6 seconds— At jack, key, and lamp circuit— ALA lamp lighted.
8	At translator connecotr-decoder connector under test— Connect ground to 4M of TCA relay, 8F of GCA1 relay, 8B of GCA2 relay.	ABA relay operated.
9	Connect ground to 5M, 6M of TCA relay.	GCA1, GCA2 relays operated.
10	Remove contact covers and substitute 651D relay contact connector holders on ABA and CWA relays.◆	

STEP	ACTION	VERIFICATION
11	Connect 12F of ABA relay to 8F of CWA relay.	
	<i>Caution: Before connecting to a wire-spring relay from the apparatus side of frame, insert the terminal end of the 639A relay contact connector into the 360-type tool associated with the test cord.</i>	
12	At jack, key, and lamp circuit— Momentarily operate TCTC AR key.	ALA lamp extinguished. After approximately 5.6 seconds— ALB lamp lighted. At translator connector-decoder connector under test— TCA relay operated.
13	Remove connecting tools from 12F of ABA relay and 8F of CWA relay.	At jack, key, and lamp circuit— After approximately 10 seconds— ALA lamp remains extinguished.
14	At translator connector-decoder connector under test— Remove ground from 8B of GCA2 relay.	TCA relay remains operated.
15	Connect 12F of ABA relay to 8F of CWA relay.	
16	Remove blocking tool from CWA relay.	
17	At jack, key, and lamp circuit— Insert make-busy plug into MBA jack.	MBA lamp lighted. At translator connector-decoder connector under test— TCA relay released.
18	Remove ground from TCA, GCA1 relays.	GCA1, GCA2, ABA relays released.
19	Remove connecting tools from 12F of ABA relay and 8F of CWA relay.	After approximately 10 seconds— ALA lamp remains extinguished.
20	At jack, key, and lamp circuit— Remove make-busy plug from MBA jack.	MBA lamp extinguished.
21	Momentarily operate TCTC AR key.	ALB lamp extinguished.
22	Repeat Steps 7 through 21 for B circuit.	
23	At translator connector-decoder connector under test— Remove insulating tools from ALA, ALB relays.	

SECTION 227-720-501

STEP	ACTION	VERIFICATION
24	◆ Remove 651D relay contact connector holders from ABA and CWA relays and replace contact covers.)
25	If no further tests are to be made— At jack, key, and lamp circuit— Restore BAT key.◆)