"BELLBOY"
PERSONAL SIGNALING SYSTEM NO. 1A
J1 CONTROL TERMINAL

OPERATION TESTS

CONTENTS

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1. GENERAL INFORMATION

1.1 Description: This section describes a method for operation tests of various features of the J1 Control Terminal for use with Personal Signaling System 1A (Bellboy).

1.2 Application of Test: The tests of this section shall be performed after Section 314 is completed as outlined in Section 310 of this handbook.

1.21 Verify that test setup specified in Paragraph 6 of Section 314 has been completed and the various key operations and insulations are in effect.

1.3 Bellboy Test Set Functions: The test setup using ITE-4608 Bellboy Test Set provides arrangement for originating 4-digit calls into Incoming Trunk Registers and displaying translated information from Transmitter Control Circuit.

1.31 Functions of Test Set Controls

1.311 The start (ST) key places ITR loops under control of TRK- keys and (20PPS) dial.

1.312 The trunk (TRK-) keys select the ITR to be pulsed by the dial. Any or all TRK- keys may be operated to pulse any number of ITR simultaneously.

1.313 The monitor (MON-) keys select the ITR to be connected to the Test Set speaker - amplifier. Only one MON- key should be operated at any time.

1.314 The speaker-amplifier has a combined volume control and "on-off" switch.

1.315 The F1-33 lamps display the presence of grounds on the frequency selecting leads of TC.

1.316 The "cancel delay timer" (CDT) key provides control of display delay feature of Test Set. The normal "TNC" (Transmission Complete) signal from TC to SC-C is prevented by insulating 8B (TCR) and 9M (CKA) of TC. The CDT key normal provides F- lamp display for approximately 2 seconds by delaying the TNC signal. The CDT key operated provides the TNC signal as soon as the transmitter starts when it is not desired to verify the F- lamp display.

1.317 The "transmitter busy" (TB) key operates MB relay in SC-C to provide delay in passing calls to TC.

1.318 The "cancel number check" (CNC) key provides a ground to the C2 lead of RC-C (shown on FS3 of SD-96565-01-B3) to bypass functions of NCT. If a call fails to pass to completion, the CNC key may be operated and the call placed again. Completion on the second try with CNC key operated indicates lack of continuity through NCT.

2. OPERATOR AND CUSTOMER DIALING FEATURES

2.1 Incoming Trunk Register Types

2.11 The equipped ITR may be of three types:

(a) Customer Dialing with normal supervision ("Z" option)

(b) Customer Dialing with delayed supervision ("R" option)

(c) Operator Dialing ("Y" option)

2.12 If all the equipped ITR are not of the same type, the TRK- and MON- keys should be identified on the ITE-4608 Test Set. A small piece of paper taped below the MON- keys may note the different types of ITR associated with the keys.

2.13 The call indications of ITR with Customer Dialing are provided by announcements, while ITR with Operator Dialing give lamp supervision signals by operations of the REV relay.

2.14 The DIS-C, DIS-U and REV to DIS1-10 cross connections of ITR with Customer Dialing provide control of the number of announcement cycles the calling party hears before a timed disconnection occurs.

2.141 A DIS-C to DIS-2 cross-connection will provide at least one completion announcement cycle; DIS-C to DIS-3 will provide at least two cycles, and so forth.

2.142 A DIS-U to DIS-2 cross connection will provide three 16 to 29 second intercept announcement intervals on an unassigned number call when ITR is arranged with direct connection to an

Intercept announcement set; DIS-U to DIS-3 will provide four intervals; and so forth. REV to DIS-1 cross-connection will cause REV relay to operate for trunk supervision in one 16 to 29 second intervals, and so forth.

2.143 ITR may also be arranged through an intercept trunk to connect to an Intercept Operator or Machine announcement without a timed disconnection.

2.2 Customer Dialing Tests

2.21 Completion Call (Normal Supervision - "Z" option)

2.211 Operate ITE-4608 Test Set TRK- and MON- keys associated with first ITR arranged for Customer Dialing with normal supervision.

2.212 Operate Test Set ST key. Dial 3715. Ringing tone is heard in Test Set Speaker. After Register Check Circuit functions to operate ST relay of S used, ringing stops and tinkle-tone followed by a completion announcement heard. Verify REV relay in ITR is operated. Call is passed from S to TC three times to light F1, F12 and F25 lamps on Test Set. It is not necessary to wait for call to be passed to TC to proceed with test.

2.213 After the number of announcement cycles provided by DIS-C cross-connection, REV relay releases.

2.214 Release Test Set ST key. In ITR, verify that SRA relay and DIS selector are released.

2.215 Repeat Paragraph 2.212.

2.216 Before number of announcement cycles provided by DIS-C cross-connections are heard from speaker, release Test Set ST key. Announcement ceases. Verify REV relay is released.

2.217 Release Test Set TRK- and MON- keys.

2.218 Repeat Paragraphs 2.211 through 2.217 in other ITR arranged for Customer Dialing with normal supervision.

2.22 Completion Call (Delayed Supervision - "R" option)

2.221 Operate Test Set TRK- and MON- keys associated with first ITR arranged for Customer Dialing with delayed supervision.

2.222 Operate Test Set ST key. Dial 3715. Ringing tone is heard in speakers. When ringing stops, tinkle-tone followed by a completion announcement is heard. Verify REV relay in ITR is not operated. Call is passed from S to TC three times to light F1, F12 and F25 lamps on Test Set. It is not necessary to wait for call to be passed to TC to proceed with test.

2.223 After number of announcement cycles provided by DIS-C cross-connection, REV relay operates.

2.224 REV relay remains operated for 5 to 9 seconds and then releases.

2.225 Release Test Set ST key. In ITR, verify that SRA relay and DIS selector are released.

2.226 Repeat Paragraph 2.222.

2.227 Before number of announcement cycles provided by DIS-C cross-connection are heard, release Test Set ST key. Announcement ceases. Verify SRA relay of ITR is released.

2.228 Release Test Set TRK- and MON- keys.

2.229 Repeat Paragraphs 2.221 through 2.228 in other ITR arranged for Customer Dialing with delayed supervision.

2.23 Unassigned Number Call

2.231 Operate Test Set TRK- and MON- keys associated with first ITR arranged for Customer Dialing.

2.232 Operate Test Set ST key. Dial 2811.

2.2321 (ITR with direct connection to an intercept announcement set - "K" option.)

(a) A spurt of ringing tone may be heard from speaker. Intercept announcement is heard. Verify SUP relay is operated.

(b) In 16 to 29 seconds, DIS selector steps to first terminal. SUP relay releases and reoperates. (If REV terminal is cross-connected to DIS-1 terminal, REV relay operates.)

(c) After second 16 to 29 second interval, DIS selector steps to second terminal. SUP relay releases and reoperates.

(d) If DIS-U terminal is cross-connected to DIS-2 terminal, after third 16 to 29 second interval, SUP and REV relays release. Announcement ceases.

(e) If DIS-U and REV terminals are cross-connected to terminals other than indicated in (b) and (d), the sequence of (b) and (c) would continue until these terminals were reached by DIS selector to disconnect announcement.

(f) Release Test Set ST key. Verify CKL relay and DIS selector release.

2.2322 (ITR with Intercept Trunk connection to Intercept Operator - Apparatus Figure 4.)

(a) Ringing tone is heard from speaker. Verify S relay of ITR is operated.

(b) Intercept Operator answers and ringing stops.

(c) Release Test Set ST key. Verify TK relay of ITR Intercept Trunk Unit releases. Verify CKL relay of ITR releases.

2.2323 (ITR with Intercept Trunk connection to Machine Announcement - Apparatus Figure 4 and "M" option).

(a) A spurt of ringing tone may be heard in speaker. Verify SX relay of ITR Intercept Trunk Unit is released.

(b) Ringing stops and intercept announcement is heard.

(c) Release Test Set ST key. Verify TK relay of ITR Intercept Trunk Unit releases. Verify CKL relay of ITR releases.

2.24 Reorder Call

2.241 Operate IMB key on TCF. GL lamp lights on TCF. SOS lamp lights on CCF lamp panel.

2 242 Operate Test Set ST key. Dial 1111.

2.243 A spurt of ringing tone may be heard from speaker. Verify ON relay of ITR releases.

2.244 120 IPM reorder tone is heard from speaker. Verify SA relay of ITR is operated.

2.245 Release Test Set ST key. Reorder tone ceases. Verify CKL relay of ITR releases.

2.25 All Storage Busy Call

2.2501 Block operated SB relay in RC-C. RCSB lamp lights on CCF lamp panel.

2.2502 Operate Test Set ST key. Dial 1111.

2.2503 A spurt of ringing tone may be heard from speaker. Verify ON relay of ITR releases.

2.2504 60 IPM busy tone is heard from speaker.

2.2505 Release Test Set ST key. Busy tone ceases. Verify CKL relay of ITR releases.

2.2506 Operate TAM key on CCF lamp panel. GL lamp lights.

2.2507 Operate Test Set ST key. Dial 1111.

2.2508 Ringing tone and then a trouble announcement is heard from speaker.

2.2509 Release Test Set ST key. Announcement ceases. Verify CKL relay of ITR is released.

2.2510 Release TAM key. GL lamp goes out.

2.2511 Release IMB key on TCF. GL lamp on TCF and SOS lamp on CCF go out.

2.2512 Remove block from SB relay of RC-C, RCSB lamp goes out.

2.2513 Release Test Set TRK- and MON- keys.

2.26 Repeat Paragraphs2.23 through 2.25 in each ITR arranged for Customer Dialing.

2.3 Operator Dialing Tests

2.31 Completion Call

2.311 Connect Tip of SP jack on CCF lamp panel to contact 6 of REV relay in first ITR arranged for Operator Dialing.

2.312 Operate ITE-4608 Test Set TRK- and MON- keys associated with first ITR arranged for Operator Dialing.

2.313 Operate Test Set ST key. Dial 3715. Ringing tone is heard in Test Set speaker. After Register Check Circuit functions to operate ST relay of S used, SP lamp lights on CCF lamp panel and ringing stops. Call is passed from S to TC three times to light F1, F12 and F25 lamps on Test Set. It is not necessary to wait for call to be passed to TC to proceed with test.

2.314 Release Test Set ST key. Operate RL key on CCF lamp panel. SP lamp goes out.

2.32 Unassigned Number Call

2.321 Operate Test Set ST key. Dial 2811. A spurt of ringing tone may be heard from speaker. SP lamp on CCF lamp panel lights. Clicking at 120 IPM rate is heard from speaker.

2.322 Release Test Set ST key. Operate RL key on CCF lamp panel. SP lamp goes out.

2.33 Reorder Call

2.331 Operate IMB key on TCF. GL lamp lights on TCF. SOS lamp lights on CCF lamp panel.

2.332 Repeat Paragraphs 2.321 through 2.322 Dialing 1111 instead of 2811.

2.333 Release IMB key and GL lamp goes out on TCF. SOS lamp goes out on TCF.

2.34 All Storage Busy Call

2.341 Block operated SB relay in RC-C. RCSB lamp lights on CCF lamp panel.

2.342 Operate Test Set ST key. Dial 1111. A spurt of ringing tone may be heard from speaker. SP lamp on CCF lamp panel lights. Busy tone is heard from speaker.

2.343 Release Test Set ST key. Busy tone ceases.

2.344 Operate RL key on CCF. SP lamp goes out.

2.345 Remove block from SB relay of RC-C. RCSB lamp goes out.

2.346 Release TRK- and MON- keys on Test Set. Remove connection from tip of SP jack to 6 (REV) in ITR.

2.35 Repeat Paragraphs 2.31 through 2.34 in each ITR arranged for Operator Dialing.

3. TROUBLE HOLD JACK FEATURE

3.1 Register Check Hold Jacks. The RHA and RHB jacks on CCF lamp panel are provided to stop the sequence of operation in RC-A or RC-B on certain trouble conditions.

3.11 Check Failure on ITR Information

3.111 Verify WC and ZC relays in RC-C are not operated. Release WC relay, if necessary.

3.112 Place 349A plug in RHA jack. Block nonoperated TM relay in ITR-O to prevent time-out by ITR.

3.113 Block nonoperated the CKA relay in RC-A.

3.114 Operate ST, TRK-O, and MON-O keys on ITE-4608 Test Set. Dial 1039. Ringing tone is heard from speaker of Test Set. RCA lamp lights and minor alarm sounds.

3.115 In RC-A, AO, A1, B4, B7, C1, C2, D2 and D7 relays are operated. In RC-C, AAO, AA1, and BA7 are operated.

3.116 Release TM relay in ITR-O. RAL lamp on CCF lamp panel and TAL lamp on ITR-O light after 34-64 seconds. The A-D (0, 1, 2, 4, 7) relays of RC-A and AA (0,1,2) and BA (0, 1, 2, 7) relays of RC-C are released. Reorder tone is heard in Test Set speaker.

3.117 Remove 349A plug from RHA jack. Release all Test Set Keys. Operate AR key in CCF lamp panel. RCA, RAL, and TAL lamps go out and alarm is silenced. Remove block from CKA relay of RC-A.

3.118 Operate WC relay in RC-C. ZC relay operates. Repeat Paragraphs 3.112, through 3.117 in RC-B using RHB jack.

3.12 Time-out After Operation of CKB Relay

3.121 Verify WC and ZC relays in RC-C are not operated. Release WC relay, if necessary.

3.122 Place 349A plug in RHA jack Block TM relay nonoperated in ITR-O.

3.123 Block nonoperated BA7 relay in RC-C.

3.124 Operate ST, TRK-O, and MON-O keys on Test Set. Dial 3715. Ringing tone is heard from speaker. RC-TA lamps and RCA lamps in CCF lamp panel light and minor alarm sounds.

3.125 In RC-A, A1, A2, BO, B7, CO, C1, D1 and D4 relays are operated. In RC-C, AA1, AA2, and BAO relays are operated.

3.126 Release TM relay of ITR-O. RAL lamp on CCF lamp panel and TAL lamp on ITR-O light when ITR TM Timer Interval (35-64 seconds) has passed. The A-D (0, 1, 2, 4, 7) relays of RC-A and AA (0, 1, 2) relays of RC-C are released. Reorder tone is heard from speaker.

3.127 Remove 349A plug from RHA jack. Release all Test Set keys. Operate AR key. RC-TA, RCA, RAL and TAL lamps go out and alarm is silenced. Verify WC relay operates in RC-C. Remove block from BA7 relay in RC-C.

3.128 Repeat Paragraphs 3.122 through 3.127 in RC-B using RHB jack.

3.13 Check Failure on Stored Information

3.131 Verify WC and ZC relays in RC-C are not operated. Release WC relay, if necessary. Manually release ST relays of all S, if necessary.

3.132 Place 349A plug in RHA jack. Block nonoperated TM relay in ITR-O.

3.133 Insulate contact 12M of ST relay in S1. Verify that ASI selector is at terminal 1.

3.134 Operate ST, TRK-O, and MON-O keys on Test Set. Dial 1640, Ringing tone is heard from speaker. SAL lamp in CCF lamp panel and TAL1 lamp in S unit light and minor alarm sounds.

3.135 In RC-A, AO, A1, B2,B4, CO, C4, D4, and D7 relays are not operated. In RC-C, AAO, AA1, and BA2 relays are operated. In NCT for HG 16, CO, and D7 relays are operated.

3.136 Release TM relay in ITR-O. RAL and TAL lamps light. A-D (0, 1, 2, 4, 7) relays in RC-A and AA (0, 1, 2) and BA (0, 1, 2, 7) relays in RC-C are released. Reorder tone is heard from speaker.

3.137 Remove 349A plug from RHA jack. Release all Test Set keys. Operate AR key in CCF. SAL, RAL and TAL lamps on ITR and S unit go out and alarm is silenced.

3.138 Operate WC relay in RC-C, ZC relay operates. Repeat Paragraphs 3.132 through 3.137 in RC-B using RHB jack.

3.139 Remove insulator from ST relay of S1 unit.

3.2 Storage Control Hold Jacks - The SHA and SHB jacks on CCF lamp panel are provided to stop the sequence of operation in SC-A or SC-B on certain trouble conditions. If trouble occurs after operation of P1 relay in SC-A or SC-B (indicating "transmission complete" on first transmission of first scan), the circuit will hold for length of Channel Busy Interval.

3.21 3-out-of-32 Check Failure

3.2101 Verify W1 and Z1 relays in SC-C are not operated. Release W1 relay, if necessary.

3.2102 Place 349A plug in SHA jack on CCF lamp panel.

3.2103 Block nonoperated CKA relay in TC on TCF.

3.2104 Operate TB, ST, TRK-O, and MON-O keys on Test Set. Dial 2301. Ringing tone and then a completion announcement are heard in Test Set speaker.

3.2105 Release ST, TRK-O, and MON-O keys on Test Set. The ITR releases.

3.2106 Release TB key on Test Set. The F13, F27, and F33 lamps light on Test Set. TA and SCCB lamps light on CCF lamp panel and minor alarm sounds.

3.2107 Remove 349A plug from SHA jack. TA lamp remains lit, SCCB lamp goes out. Test Set F-lamps go out.

3.2108 Operate AR key on CCF. TA lamp goes out and minor alarm is silenced.

3.2109 Verify that W1 and Z1 relays in SC-C are operated.

3.2110 Place 349A plug in SHB jack on CCF lamp panel.

3.2111 Operate Test Set TB key. Repeat Paragraphs 3.2104 through 3.2106. TB lamp lights instead of TA lamp.

3.2112 Remove 349A plug from SHB jack. SCCB lamp goes out. Test Set F- lamps go out.

3.2113 Operate AR key on CCF. TB lamp goes out and minor alarm is silenced.

3.2114 Remove block from CKA relay of TC.

3.22 Transmission Time-out with (TCK) Relay Operated

3.2201 Verify W1 and Z1 relays in SC-C are not operated. Release W1 relay, if necessary.

3.2202 Place 349A plug in SHA jack on CCF lamp panel.

3.2203 Block nonoperated TNC relay in SC-C.

3.2204 Operate TB, ST, TRK-O, and MON-O keys on Test Set. Dial 4192. Ringing tone and then a completion announcement are heard in Test Set speaker.

3.2205 Release ST, TRK-O, and MON-O keys on Test Set. The ITR releases.

3.2206 Release TB key on Test Set. The F9, F15, F28 lamps light on Test Set. In 14 to 22 seconds (depending on TT timer), the SCA and TA lamps light and minor alarm sounds. Verify SCCB lamp lights. Observe ST relay in S used for call is operated.

3.2207 Remove 349A plug from SHA jack. SCCB lamp goes out and TO relay in SC-C operates. Operate OMB key in TCF. GL lamp lights.

3.2208 Remove block from TNC relay in SC-C. Test Set F-lamps go out. SC-A restores to normal and ST relay of S used for call is released.

3.2209 Operate AR key. SCA lamp goes out and minor alarm is silenced. Verify W1 and Z1 relays are operated in SC-C.

3.2210 Repeat Paragraphs 3.2202 through 3.2209 in SC-B using SHB jack and SCB lamp on CCF lamp panel.

3.23 Transmission Time-Out With (TCK) Relay Normal

3.2301 Verify W1 and Z1 relays in SC-C are not operated. Release W1 relay, if necessary.

3.2302 Place 349A plugs in SHA jack on CCF lamp panel.

3.2303 Block nonoperated CKA relays in T-A and T-B.

3.2304 Operate TB, ST, TRK-O and MON-O keys on Test Set. Dial 1039. Ringing tone and then a completion announcement are heard in Test Set speaker.

3.2305 Release ST, TRK-O, and MON-O keys on Test Set. The ITR releases.

3.2306 Release TB key on Test Set. The F1, F20, and F25 lamps light on Test Set. In 14 to 22 seconds (depending on TT timer), the SCCB and TA lamps light and minor alarm sounds.

3.2307 Remove 349A plug from SHA jack. SCCB lamp goes out. F1, F20, F25 lamps remain lit.

3.2308 Manually operate CKF relay in SC-C. TB lamp lights and major alarm sounds.

3.2309 Operate OMB key on TCF lamp panel. TOR relay in SC-B operates. The F- lamps on Test Set go out. SC-A and SC-B are released.

3.2310 Operate AR key in CCF. TA and TB lamps go out and alarms are silenced.

3.2311 Remove blocks from CKA relays in T-A and T-B. Release OMB key in TC.

3.24 Release Timer Time-out

3.2401 Connect terminal U of S3B relay winding to terminal 10M of S3B relay and connect ground to contact 10 of S3B relay in SC-A.

3.2402 Verify W1 and Z1 relays in SC-C are not operated. Release W1 relay if necessary.

3.2403 Place 349A plug in SHA jack. Operate TMT key on CCF lamp panel. GL lamp lights.

3.2404 Operate TB, ST, TRK-O, and MON-O keys on Test Set. Dial 3715. Ringing tone and then a completion announcement are heard from Test Set Speaker. Block operated RW relay in SC-C.

3.2405 Release ST, TRK-O and MON-O keys on Test Set. The ITR releases.

3.2406 Release TB key on Test Set. The F1, F12, and F25 lamps light on Test Set for two second period. After approximately 15 seconds intertransmission interval, the F1, F12, and F25 lamps light on Test Set for another two second period.

3.2407 After 15 second interval, the F1, F12, and F25 lamps light on Test Set for last two second period. Approximately 10 seconds after F- lamps go out, the SCA and SCRA lamps light on CCF lamp panel and minor alarm sounds. AON relay in SC-C remains operated.

3.2408 In SC-A, remove connection from U (S3B) to 10M (S3B). Remove ground from 10 (S3B).

3.2409 Remove 349A plug from SHA jack. SC-A releases. AON relay in SC-C is released.

3.2410 Operate AR key. SCA and SCRA lamps go out and minor alarm is silenced.

3.2411 Repeat Paragraph 3.2401 for SC-B.

3.2412 Verify W1 and Z1 relays in SC-C are operated. Operate W1 relay, if necessary.

3.2413 Place 349A plug in SHB jack.

3.2414 Repeat Paragraphs 3.2404 through 3.2410 for SC-B. Observe SCB and SCRA lamps.

3.2415 Release TMT key. GL lamp goes out.

4. TRANSFER AND ALTERNATION FUNCTIONS

4.1 The redundant control circuits are arranged to alternate with each other in normal service and to transfer into service on certain trouble conditions.

4.2 Register Check Circuit Alternation

4.21 Verify all keys in CCF lamp panel are normal and GL lamp is out.

4.22 Verify WT and ZT relays of RC-C are not operated. Release WT relay, if necessary.

4.23 On Test Set, operate TB, CDT and all TRK- (for equipped ITR) keys.

4.24 Operate Test Set ST key. Dial 1039. Verify RC-A and RC-B alternate in operation.

4.25 Operate and release each MON- key associated with an ITR arranged for Customer Dialing. Observe that "completion announcement B" is heard from speaker as each MON- is operated.

4.26 Observe REV relays are operated in each ITR arranged for Operator Dialing.

4.27 Release Test Set ST key.

4.3 Storage Control and Translator Alternation

4.31 Verify W1 and Z1 relays of SC-C are not operated. Release W1 relay, if necessary.

4.32 Release TB key on Test Set. Observe SC-A and T-A are used as calls are passed to TC.

4.33 At end of first scan, operate TRT-B key. GL lamp lights on CCF lamp panel.

4.34 Observe SC-A and T-B are used as calls are passed to TC during second scan.

4.35 At end of second scan, operate TRT-A key. GL lamp remains lit.

4.36 Observe SC-A and T-A are used as calls are passed to TC during third scan.

4.37 At end of third scan, verify all ST relays of S units are released.

4.38 Restore TRT-A key to normal. GL lamp goes out.

4.4 Announcement Set Alternation

4.401 Operate PT key in CCF lamp panel.

4.402 Verify ZT and WT relays in RC-C are operated. Verify W1 and Z1 relays in SC-C are operated.

4.403 On Test Set, operate TB key.

4.404 Operate Test Set ST key. Dial 2301. Verify RC-A and RC-B alternate in operation.

4.405 Operate and release each MON- key associated with an ITR arranged for Customer Dialing. Observe that "completion announcement A" is heard from speaker as each MON- key is operated.

4.406 Observe REV relays are operated in each ITR arranged for Operator Dialing.

4.407 Release Test Set ST key.

4.408 Release Test Set TB key. Observe SC-B and T-B are used as calls are passed to TC.

4.409 At end of first scan, operate TRT-A key. GL lamp lights.

4.410 Observe SC-B and T-A are used as calls are passed to TC during second scan.

4.411 At end of second scan, operate TRT-B key.

4.412 Observe SC-B and T-B are used as calls are passed to TC during third scan.

4.413 At end of third scan, verify all ST relays of S units are released.

4.414 Restore PT and TRT-B to normal. GL lamp goes out.

4.415 Release all Test Set keys.

5. TEST CALL FEATURES

5.1 F- Lead Test Calls

5.101 Block operated TST relays in all ITR. Operate IMB key on TCF. SOS lamp lights on CCF lamp panel.

NOTE: With S option of SD-96501-01, insulate contacts 1 and 2 of TST relays in each ITR.

5.102 Connect FTA, FTB, and FTC jacks to F- jacks on CCF lamp panel as shown in Table A for ITRO. Operate FT key on CCF lamp panel. GL lamp lights.

TABLE A

ITR	DIAL	CONNECT: FTA	FTB	FTC
0	3211	F1	F16	F20
1	3322	F2	F15	F21
2	3433	F3	F14	F22
3	3544	F4	F13	F23
4	3655	F5	F12	F24
5	1583	F6	F31	F25
6	1602	F7	F32	F27
7	1700	F8	F33	F28
8	1815	F9	F18	F29
9	1924	F10	F19	F30
0	2191	F11	F26	F33

5.103 Operate Test Set TB, CDT, TRK-O and MON-O keys. Operate ST key. Dial four digits as shown in Table A for ITRO. Observe completion announcement or REV relay operation in ITR. TAL- lamp lights on S used to indicate test call location.

5.104 Release Test Set ST key. ITR restores to normal.

5.105 Release Test Set TB key. Observe that ST1 relay in TC does not operate as call is passed indicating transmission was not made on test call.

5.106 Observe FA, FB, and FC lamps are lit on CCF lamp panel.

5.107 Operate and release Test Set TB key. Observe all ST relays of S units are released.

5.108 Operate and release RL key on CCF lamp panel. FA, FB, and FC lamps go out. Remove connection from FT- to F- jacks.

5.109 Repeat Paragraphs 5.103 through 5.108 for each equipped ITR according to Table A. Use any ITR to make calls in Table A assigned to unequipped ITR.

5.110 Release IMB key in TCF. SOS lamp goes out in CCF lamp panel.

5.111 Remove blocks from TST relays of all ITR.

5.112 Restore all Test Set keys to normal.

5.2 Transmission Test Calls

5.201 Remove RL1 to TM1 and TMC to GRD cross-connections in SC-C.

5.202 Operate TMT key on CCF lamp panel. GL lamp lights. Operate MB keys of S2-40, if equipped.

5.203 Operate TRK-O, MON-O and ST keys on Test Set. Dial 4192. Observe completion announcement or REV relay operation in ITRO.

5.204 Release Test Set ST key. ITR restores to normal.

5.205 On, Test Set, F9, F15, and F28 lamps light for first 2 second display.

5.206 After 15 seconds, display is repeated.

5.207 Observe at least six displays. After each third display, there is only slight delay before display is repeated.

5.208 Operate Test Set TB key.

5.209 Replace RLk to TM1 and TMC to GRD cross-connections in SC-C.

5.210 Release and reoperate Test Set TB key. Verify all ST relays of S units are released.

5.211 Restore TMT key on CCF lamp panel. GL lamp goes out.

5.212 Release all Test Set keys to normal.

R. W. HILLEGAS

Superintendent, Installation Engineering