# INFORMATION AND RECOMMENDED PROCEDURES FOR APPLICATION OF THE NO. 1 CROSSBAR AIS WITHOUT LLP FEATURE

CONTENTS



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## 1. CIRCUIT AND TEST INFORMATION SUMMARY

1.1 Refer to Table A for a list of the new and modified circuits for AIS without LLP operation and their associated test sections.

## 2. CIRCUIT FUNCTION AND MODIFICATION SUMMARY

2.1 Refer to Table B for a discription of the new circuit function and existing circuit modification for AIS without LLP operation.

TABLE A

AIS Without LLP Circuit and Test Information Summary

| Circuit Title | SD No. | HB | Section |
|---|---|---|---|
| Term. Marker | 25283-01 | 62 | 225.4 |
| N.G. Conn. | 25276-01 | 62 | 242 |
| Term. Tbl. Ind. | 25284-01 | 62 | 225.4 |
| AIS Line Ckt. | 27963-01 | 62 | 254 |
| AIS Line Ckt | 27964-01 | 62 | 254 |
| AIS MF Sender | 27962-01 | 62 | 252,253 |
| AIS Cont.&Conn. | 27961-01 | 62 | 251,253,254 |
| AIS Tst Ckt | 27965-01 | 62 | 252 |
| OGT Test Fr. | 25177-01 | 62 | 253,254 |
| TM(ADRT) | 27960-01 | 62 | 225.4 |
| TM(APPL) | 27765-01 | 62 | 225.4 |
| AIS MISC | 27966-01 | 62 | 250 |
| TUR | 95738-01 | 62 | 250 |
| MF Recv. | 99493-01 | 50 | 31.2 |
| Fuse & Time Alm | 25046-01 | 62 | 250 |
| Int. | 25062-01 | 62 | 253 |
| Traffic Reg. | 25317-01 | 62 | 250 |
| Traffic Reg. | 25942-01 | 62 | 250 |
| MF CS | 95391-01 | 62 | 253 |

TABLE B

AIS Without LLP Circuit Function and Modification Summary

| Circuit Title | Modification |
|---|---|
| Term. Mkr SD-25283-01 | The TM is modified to work with the AIS Control & Connector Ckt. The AIS Cont. & Conn. Ckt directs the marker via the Number Group Conn. to connect intercept calls to an AIS Line Ckt. and transmit called number to AIS MF Sender. |
| N.G. Conn. SD-25276-01 | Modification Involves the addition of wiring and terminal punchings to provide for operation with the AIS Cont. & Conn. Ckt. |
| Term.Tbl.Ind. SD-25284-01 | To provide indications for AIS without LLP the addition of eight lamps, and associate wiring is required. |
| AIS Line Ckts SD-27963-01 & SD-27964-01 | The New Line Circuits provide supervision and a one-way trunk facility between the No. 1 Crossbar Office and the Intercept Center. The Circuit requires one line link appearance and conjunctive use of an MF sender. |
| MF Sender SD-27962-01 | To provide a No. 1 Crossbar Outgoing Sender for AIS without LLP. Sender is arranged to register and MF outpulse a class of call digit plus seven numerical digits over line circuits originating locally on the line link frame. It is arranged to receive "Winkstart" start dial signals, only. |

TABLE B (Cont'd)

| Circuit Title | Modification |
|---|---|
| AIS Cont & Conn Ckt. SD-27961-01 | Provided to recognize an Intercept Indication from Term. Mkr. and N.G. Conn. Selects idle AIS MF Outgoing Sender and Simultaneously connect it to Term. Mkr. and idle AIS Line Circuit it selected. Informs Term. Mkr. of Line Location so Mkr. can preform normal function to complete channel and give sender the called number. Reconstructs dialed office code & class of intercept digit and gives it to sender. Release Term. Mkr & itself to service while maintaining sender line circuit connection until sender releases. |
| AIS Test Ckt. SD-27965-01 | Provided to test the outpulsing of the MF Outgoing Senders used for AIS without LLP. In addition, it provides trouble recording and locating lamps under control of TTI Ckt, and enables the OGTT Frame to complete AIS trunk cut through and provide ring detection. |
| Term.Mkr(ADRT) SD-27960-01 | One circuit is provided for each Term. Mkr. Provides the four digits of the called number on a 2 out of 5 basis to the AIS Cont. & Conn. Ckt. This circuit registers the called number of every call the marker handles. |
| AIS MISC SD-27966-01 | Provides fuse alarms, battery and ground feeders, and misc. test connections for AIS Frame. |
| OGT Test Frame SD-25177-01 | Modified to preform tests on the AIS without LLP Line Ckts. and MF Outgoing Senders. Contains make busy jacks and Rotary switches for AIS Line Ckts. and Senders, line circuit testing access jacks, lamps, keys and control circuitry. |
| TM(APPL) SD-27765-01 | (Where Equipped) Modified to provide the number series office to AIS Cont. & Conn. Ckt. |
| MF Recv. SD-99493-01 | To show connections to the AIS Sender Test Ckt. |

TABLE B (Cont'd)

| Circuit Title | Modification |
|---|---|
| Traffic Reg. SD-25317-01 & SD-25942-01 | To provide overflow counts for AIS Cont. and Conn. Ckt. and to determine usage of AIS Outgoing Senders. |
| MF CS SD-95391-01 | To show connections to the AIS MF Outgoing Sender |
| Office Interrupter SD-25062-01 | To show connections to the AIS MF Outgoing Sender and Line Circuits |
| TUR SD-95738-01 | To show connections to the AIS MF Outgoing Sender and Line Circuits. |
| Fuse & Time Alarm SD-25046-01 | To show connections to AIS Misc. Ckt. |

3. WORK OPERATIONS AND TESTING

3.1 A new double bay frame provides all the new circuits necessary to equip a terminating marker group with AIS without LLP.

3.2 Only one Number Group Connector Circuit will have access to the AIS Frame. Therefore, at the beginning of the job period, the numbers in a NGC to be assigned to AIS should be determined. Preferable the numbers will be in sequence but this is not a binding requirement.

3.3 If the Automatic Intercept Center (AIC) is not ready to work with the AIS Frame at time modification takes place, the ST, HB, TB and L cross connections for AIS in the marker must be disconnected and the original intercept ST, HB, TB and L cross-connections must be reconnected before the marker can be returned to service. In addition, the AIS to BLK, CHG & TI cross-connections must be disconnected. For this reason, the AIS and original intercept cross-connection should be well noted.

3.31 To change a modified terminating marker from working with AIS back to original intercept service, the following must be done. (1) For AIS intercept, the AIS, ST, HB, TB and L cross-connections for TI, CHG & BLK type intercept must be disconnected. (Refer to Table C) (2) The original intercept ST, HB, TB and L cross-connections for BLK, CHG, LTI & TTI type intercept must be reconnected. (Refer to Table D).

TABLE C

| Office | Type Intercept | Type Number | X- Conn to NGC |
|---|---|---|---|
| A/B | BLK | P/T | ST HB TB L |
| A/B | CHG | P/T | ST HB TB L |
| A/B | TI | P/T | ST HB TB L |

NOTE: AIS X-Conn is one X-Conn per marker to the BLK, CHG and TI intercept. (See Figure 36 or 36A, SD-25283-01)

TABLE D

| Office | Type Intercept | Type Number | X- Conn to NGC |
|---|---|---|---|
| A/B | BLK | P/T | ST HB TB L |
| A/B | CHG | P/T | ST HB TB L |
| A/B | LTI | P/T | ST HB TB L |
| A/B | TTI | P/T | ST HB TB L |

3.32 As can be seen from Tables C & D the number of cross-connections that must be changed is dependent on the following office conditions: (1) Office arranged for both physical and theoretical operation. (2) Terminating Marker group arranged for A & B office operation. (3) Number of intercept types the office has equipped. For each type of intercept there is a maximum of 4 possible combinations with 4 X-Connections per combination.

3.33 With AIS, the LTI & TTI type intercept calls are combined in TI type intercept.

3.4 The first terminating marker modified should be Marker 0 or 1, since only these two markers work with the OGTT Frame. This will allow the OGTT Frame to test the AIS Line Circuits before the other terminating markers are modified.

3.5 Recommended Installation Procedure

3.51 Install the new double bay AIS Frame. At this time the modification of the OGTT Frame and the Terminating Trouble Indicator may be started.

3.52 Make connections to the AIS Frame for the Traffic Registers, MF Current Supply, Office Interrupter and the Traffic Usage Recorder.

3.53 Make the AIS Frame connections to the Fuse and Time Alarm Circuit, then fuse the AIS Frame.

3.54 At this point the following tests can be made.

(a) Handbook 62, Section 250 will test the Fuse and Time Alarm Circuit, Traffic Registers, Traffic Usage Recorder, and the AIS Miscellaneous Circuit.

(b) Handbook 50, Section 31.2 will test the MF Receiver Circuit.

(c) Handbook 61, Section 251 will test part of the AIS Control and Connector Circuit.

(d) Handbook 61, Section 252 will test the AIS MF Outgoing Sender, part of the AIS Sender Test Circuit and the AIS Control & Connector Circuit.

3.55 Modification of the Number Group Connector, a Terminating Marker, and, if applicable, the Terminating Marker Applique should be made. The Terminating Trouble Indicator modification should be completed by this time.

3.56 Handbook 62, Section 242, Paragraph 8.244 will test the NGC.

3.57 Handbook 62, Section 225, Paragraph 6 will test Terminating Marker and Applique, Terminating Trouble Indicator, NGC and associated AIS Circuits.

3.58 Complete the OGTT Frame modification.

3.59 Handbook 62, Sections 253 & 254 will test the OGTT Frame, AIS Line Circuits, and provide a general overall test of the AIS System.

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