

AMARS
 ANI-B IDENTIFIER
 "Q-Z" BILLING

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1. GENERAL INFORMATION

1.1 Description

1.11 This section describes tests to be performed on an identifier (SD-1C593-01) for the PBX "Q-Z" billing feature. The "Q-Z" billing consists of "ZS" wiring and changing the JW139 circuit pack to a JW139B circuit pack.

1.12 The Outpulser-Identifier Test Ckt., SD-95815-01 is used to verify the multiparty indication is generated on toll multiparty calls.

1.13 The Line Verification Circuit, SD-32246-01, is used to verify multiparty and ring indications from the Number Network and Miscellaneous Number Network respectively with the multiparty class of service indication suppressed by the JW139B pack.

1.14 Local calls are monitored by the EXECUPORT or under arrangement monitored by AMARC to verify an 074 status (ring party) is sent to AMARC by the CDA.

1.2 Sequence of Operation

1.21 The tests of this section must be performed in numerical order.

1.22 The tests of Section 115C must be completed before performing the tests of Paragraph 5.

1.23 All Number Network and Miscellaneous Number Network straps and jumpers must be in place and the tests of Section 115D completed before performing the tests of Paragraph 6.

NOTE: Arrange with the telephone company to have the straps and jumpers in the number networks before beginning these tests.

1.24 The tests of Sections 115E and 115F must be completed before performing the tests of Paragraph 8.

1.3 General Precautions

1.31 Before engaging or disengaging any circuit pack, refer to Section 115C, Paragraph 4. Insertion or removal of a circuit pack with power applied may result in damage to the integrated circuits on that circuit pack.

1.32 On field modifications make busy the identifier at the trouble ticketer and remove the A1, B1 and C1 fuses while adding the "ZS" wiring. Shorts or grounds on the fused circuit could easily damage the integrated circuitry.

2. RECORDS AND REQUIREMENTS

2.1 Records

2.11 Results of this section shall be recorded on forms SD-97-1313 and SD-97-1315.

3. TEST EQUIPMENT

<u>ITE</u>	<u>DESCRIPTION</u>	<u>NOTE</u>
J1C081G	Identifier Test Set	1
5469	EXECUPORT	2

NOTE 1: The J1C081G is only available as telephone maintenance test equipment.

NOTE 2: Arrangements may be made with AMARC to monitor the local calls, in which case the EXECUPORT is not required.

4. PREPARATION

- 4.1 Make the 1st identifier busy at the Trouble Ticketer.
- 4.2 Operate the ICO- key for the 1st Identifier.
- 4.3 Remove the A1, B1 and C1 fuses.
- 4.4 Install ZS wiring.
- 4.5 Replace the JW139 pack with a JW139B pack.
- 4.6 Replace the A1, B1 and C1 fuses.
- 4.7 Restore the ICO- key.

5. OIT TESTS

- 5.1 The tests of this paragraph are only provided on field modifications, i.e., where the JW139B circuit packs and ZS wiring are installed in the field.
- 5.2 Remove the -48V F1 fuse and insert the J1C081G Identifier Test Set in the upper right hand corner of the A unit, (Position 1B9 and 1B16) and then replace the -48V F1 fuse.
- 5.3 At the OIT operate the following keys:
 - (a) OIT, IDK, OP(0), PTY, appropriate IG- if provided, and ID- associated with the identifier under test.
 - (b) OFF(0), TH(0), H(1), T(2), U(3)
- 5.4 Operate the ST key and verify the following:
 - (a) The PTY lamp lights at the OIT, indicating a multiparty indication is correctly generated by the identifier, JW139B circuit pack.
 - (b) Verify the OFF(0) is displayed at the OIT, the TH-, H-, T-, U- digits are not displayed.
 - (c) Verify the OFF(0), TH(0) and Class of Service (1) are displayed on the J1C081G Identifier Test Set. The H-, T-, U- digits are not displayed.

6. LVT TESTS

- 6.1 Obtain from the telephone company all numbers associated with the PBX having the "Q-Z" billing feature.

6.2 At the Trouble Ticketer remove the make busy plug from the identifier under test, and make the other identifier busy. This will steer the LVT tests to the identifier under test.

6.3 At the LVT test each number associated with the PBX having the "Q-Z" billing feature and observe the following:

- (a) The MP lamp lights indicating a multiparty call.
- (b) The Office and Thousands digit of each number is displayed on the nixies. No Hundreds, Tens and Units digits are displayed.

NOTE: If one number works satisfactorily the identifier and secondary network should be okay and trouble on any other calls is probably with the multiparty straps in the number network which must be corrected by the telephone craftsman.

- (c) Verify the OFF(0), TH(0) and Class of Service (0) are displayed on the J1C081G Identifier Test Set. The H-, T-, and U- digits are not displayed.

7. 2ND IDENTIFIER

- 7.1 Release the 1st identifier for service and repeat Paragraphs 4, 5, and 6 for identifier 1.

8. OVERALL LOCAL TEST

- 8.1 These tests may be performed at the office where an ITE-5469 EXECUPORT is available or under arrangements the tests may be made by AMARC.
- 8.2 For set-up procedure of the ITE-5469 EXECUPORT refer to Section 115G.
- 8.3 Both identifiers should be active during these tests.
- 8.4 Type the following command to monitor each of the telephone numbers associated with the PBX having the "Q-Z" billing feature.

Command: MON LIN cccdddeeee!

Response: OK

where ccc = calling area code
 ddd = calling office
 eeee = calling telephone number

- 8.5 The EXECUPORT printout for each answer and disconnect of a call on each telephone number will be as follows:

Answer: tt MON LIN CONN aaabbbcccc dddxxxx hh:nn:ss.f
eee pqq rrr.

Disconnect: tt MON LIN DISC aaabbbcccc dddxxxx hh:nn:ss.f
eee pqq rrr.

where: tt = minutes after the hour
aaa = calling area
bbb = calling office
cccc = calling telephone number
ddd = called office
xxxx = called telephone number
eee = status
pqq = scan port address through which call was placed
rrr = channel number
hh:nn:ss.f = time of connect - hours:minutes:seconds, tenths of a second.

- 8.6 Verify the status (eee) is 074 for each answer printout obtained. The status (eee) for each disconnect will always be 047.

NOTE: The 074 status indicates that a ring party indication was generated by the JW139B on local calls with the multiparty indication suppressed. If the multiparty indication was not properly suppressed the status would be 014 which would be a trouble condition. The ring party indication is obtained from the Miscellaneous Number Network via a multiple from the ring busses of the associated multiparty network on the Number Network.

- 8.7 As each telephone number obtains a printout with the correct 074 status, remove the monitor from the telephone number as follows:

Command: STOP MON LIN aaabbbcccc!

Response: OK

9. TROUBLE LOCATING

9.1 Toll Calls

- (a) No PTY lamp is obtained at OIT.

CHECK

Verify 2A8-212(B14) is a logical "1" during the extended MC34 pulse of the OFF- scan associated with the "Q-Z" billing PBX.

Verify the above pulse is also obtained at 2B7-1(B21).

CORRECTIVE ACTION

1. Replace JW139B.
2. Replace JW139B with JW139 and check multiparty functions as described in Section 115C.

Correct TOLL-PTY wiring.

- (b) A class of service 1 is not obtained at the J1C081G test set during OIT tests.

CHECK

Verify 2A8-29(B14) remains a logical "1" during the extended MC34 pulse of the OFF- scan associated with the "Q-Z" billing PBX.

Verify 2A8-204(B14) is a logical "1" during the above extended MC34 pulse.

CORRECTIVE ACTION

Correct CK wiring to 2A13-21(B15).

1. Replace JW139B.
2. Check multiparty functions as described in Section 115C.

- (c) The MP lamp does not light during LVT tests.

CHECK

Verify 1A14-20(B13) is a logical "1" during the first 2/3rds of the extended MC34 pulse of the OFF- scan associated with the "Q-Z" billing PBX.

CORRECTIVE ACTION

Verify the multiparty straps option "T" is provided in the Secondary Network SD-95814-01.

- (d) A class of service 0 is not obtained at the J1C081G test set during LVT tests.

CHECK

Verify 2A13-21(B15) is a logical "1" during the last third of the extended MC34 pulse of the OFF- scan associated with the "Q-Z" billing PBX.

CORRECTIVE ACTION

Check the Miscellaneous Number Network is properly jumpered to the Number Network to obtain the ring party identification.

Verify 2A8-29(B14) is a logical "1" as above.

Correct CK wiring to 2A13-21(B15).

Verify 2A8-204(B14) remains a logical "0" throughout the extended MC34 pulse above.

Replace JW139B.

9.2 Local Calls

- (a) An overall test is performed with local calls monitored by the EXECUPORT. Troubles encountered at this time would not be located in the "Q-Z" billing modification but would relate to the overall functioning of the system. Existing CDA and ANI-B sections would be used to clear these problems.

Manager, Product Engineering
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