CAROT 2

ANALYSIS OF TEST RESULTS

CAROT CENTER AND REMOTE-USER

CENTRALIZED AUTOMATIC REPORTING ON TRUNKS (CAROT)

CONTENTS PAGE

1. GENERAL

1.01 This section describes the various test results, data displays, and test result reports compiled and produced by the centralized automatic reporting on trunks (CAROT) 2 controller. The CAROT 2 test results, displays, and test result reports are as follows:

Routine Test Results

Operational Summary Report

Management Summary Report

Index Summary Results Report

Demand Test Results

Data Displays

Daily Office Summary Report

Circuit Order.

1.02 This section is reissued to include the most up-to-date information on ROTLs (remote office test lines) and the CAROT 2 operations.

1.03 Except for the Demand Test Results, Data Displays, and the Daily Office Summary Report, which are available to the CAROT center upon request only, all of the test results and reports are printed automatically (daily or at a specified interval or date) at the CAROT center. All of the reports available to the CAROT center except the Operational Summary Report and the Daily Office Summary Report are also available to the remote users upon request.

2. ROUTINE TEST RESULTS

2.01 The CAROT center Routine Test Results are printed each morning at the conclusion of routine testing analysis. For each ROTL office a single-page summary sheet is printed, followed by a listing of those test results that reflect specific trunk troubles. A separate printout is provided for trunk troubles in the following categories:

(a) Trunks exceeding immediate-action limits (Q2s) that have been remotely made busy

(b) Trunks exceeding immediate-action limits (Q2s) that have been confirmed but not made busy

(c) Trunks exceeding immediate-action limits (Q2s) that have not been confirmed

(d) Operational test failures

(e) Trunks that were scheduled for a transmission test but that could not be accessed (transmission test call setup failures)

(f) Trunks that were scheduled for an operational test but could not be accessed (operational test call setup failures)

(g) Trunks exceeding maintenance limits (Q1s)

(h) Trunks with chronic intermittent troubles

(i) Local office equipment failure (ROTL and control office).

2.02 For each trouble category, the following information is provided:

(a) Remote office test line (ROTL) identification

(b) Date(s) of routine testing interval

(c) Trunk group and facility identification

(d) Transmission testing parameters

(e) ROTL priming information

(f) Test results.

2.03 The Routine Test Results can be requested each morning by the remote users after analysis has finished. These test results are available to the remote users until the next run of the update program. If the responsible control office does not have a remote-user terminal, the CAROT center is responsible for forwarding the Routine Test Results to the office involved.

2.04 A feature possible by the CAROT controller is the automatic dispersal of routine test results to its control office remote users. After the analysis period in the morning, the controller will automatically call up and send each control office remote user the test results from the previous night's routine tests. The amount of test results sent to the remote users is controlled by the CAROT center. The test results not sent, if any, can be obtained by the remote user at a later time (see Sections 190-102-103 and 190-102-305).

A. General Format of Routine Test Results Printout

2.05 Preceding the test results for each ROTL office is a summary page that describes the overall performance of the office for the test interval just elapsed. An example of this summary sheet is shown and described in Fig. 1A and 1B.

2.06 A detailed explanation of the Routine Test Results printout is described in paragraphs 2.08 through 2.22. That portion of the printout labeled TRUNKS EXCEEDING Q1 LIMITS is shown and described in Fig. 2. This figure provides a line-by-line description of the general format of the Routine Test Results printout. Circled line numbers are used to correlate the description with the corresponding line on the printout shown in Fig. 2 and do not appear on the actual report.

An underscore symbol (_) is used in the explanation of Fig. 2 to indicate the absence of a character when an entry requires fewer than the specified number of characters. The format of the remote-user Routine Test Results is identical. For detailed information on common language codes, see Sections 795-100-100 and 795-400-100.

2.07 The ROTL priming digits shown on the Routine (and Demand) Test Results are in the same order in which they are sent by CAROT 2 to a ROTL. These are called "configured" priming digits. They are not the same as the priming digits entered into the data base. "Unconfigured" priming digits, which are the same as the digits entered into the data base, appear on a trunk data display (see Part 7). In general, the configured priming contains the unconfigured digits in a different order, plus other digits that tell the ROTL the kind of test to make and identifies the far-end test line number. Tables A, B, C, and D show the format of the configured priming digits for all ROTLs. Table E shows the unconfigured priming digits for all ROTLs. Definitions and further explanations of the priming digits are given in Section 190-102-310 for generic 1 and Section 190-102-203 for generic 2.

B. Trunks Exceeding Q1 Limits

2.08 Figure 2 is an example of the portion of the Routine Test Results printout for trunks in a ROTL office tested during the previous night (or interval) which exceeded in at least one measurement the loss or noise maintenance limit (Q1). Not included are those trunks that exceeded in some other measurement the immediate-action limit (Q2). Trunks listed under the Q1 category do not require immediate action but should undergo analysis and corrective action as part of the office trunk and facility maintenance program.

2.09 Usually, at least one of the access dispositions (Table F) for the trunks in this category should be ANS. An exception to this rule occurs when a supervisory hit is detected on the trunk during the measurement; in this case, the disposition SPHT will appear instead of ANS. In addition, if two ANS dispositions are recorded, it may be that a Q2 was diagnosed on the first test pass and that on the second pass only a Q1 was detected. Only the Q1 would be printed.

2.10 It should be noted that if a measurement generates a Q flag, the measurement is immediately repeated (without releasing and reaccessing the trunk). Only if the measurement still generates a Q flag is the trunk charged with the reading.

C. Trunks Exceeding Q2 Limits (Confirmed)

2.11 Figure 3 shows an example of the TRUNKS EXCEEDING Q2 LIMITS (CONFIRMED) segment of the Routine Test Results printout, for trunks in a ROTL office tested during the previous night (or interval) which exceeded in at least one measurement the loss or noise immediate-action limit (Q2). In addition, this condition was detected on each of two trunk accesses. The format of this category is the same as that of the category labeled TRUNKS EXCEEDING Q1 LIMITS, shown in Fig. 2. The trunks listed under this category require immediate action.

2.12 A loss or noise measurement is considered to have exceeded its immediate-action limit under the following conditions:

(a) When a loss measurement deviates from the EML by more than 3.7 dB

(b) When a noise measurement exceeds the noise immediate-action limit specified in the test parameter information (see Fig. 2).

2.13 For a trunk to be listed in this category, it must have been tested and found to have a Q2 during one pass (a Q2 indication on two consecutive measurements without releasing the trunk) and also during another pass (again, a Q2 indication on each of two consecutive measurements without releasing the trunk). Hence, trunks listed in this category have been found to have a Q2 four times during the previous interval of testing. It is possible, however, in this category to have an indication of Q1 on a different measurement for the same trunk although at least one of the measurements will be a Q2.

D. Trunks Exceeding Q2 Limits (Confirmed and Made Busy)

2.14 THE TRUNKS EXCEEDING Q2 LIMITS (CONFIRMED AND MADE BUSY) segment of the Routine Test Results printout is shown in Fig. 4. Trunks in this category have had confirmed

Q2s (as described in paragraphs 2.11 through 2.13) and have been remotely made busy by their respective ROTL on command by CAROT 2. Only certain ROTLs have this capability and are designated as such in the data base record for the ROTL. If the ROTL is so equipped, an attempt will be made by CAROT to place in a remote-busy status any trunk for which a confirmed Q2 has occurred. Any problems encountered by the ROTL in attempting to make the trunk busy will be reported in the CAROT Operational Summary Report described in Part 3 of this section.

E. Trunks Exceeding Q2 Limits (Not Confirmed)

2.15 Shown in Fig. 5 is an example of the TRUNKS EXCEEDING Q2 LIMITS (NOT CONFIRMED) portion of the Routine Test Results printout. Trunks listed in this category differ from those listed under the heading TRUNKS EXCEEDING Q2 LIMITS (CONFIRMED) (Fig. 3) only in that no measurement was made during a subsequent test pass because either (a) the trunk could not be accessed later or (b) no more test passes were made. A total of four test passes are made, if necessary, each night on the trunks scheduled. Fewer passes may be made if testing takes longer than anticipated, or if a PERR, VA, or AR disposition (Table F) occurs, or if any equipment problems occur (see Part 3 of this section).

2.16 Trunks listed in this category should receive immediate action. If the trouble is within the trunk itself, it is highly probable that investigation will show the problem to still be there. However, some problems are due to malfunctions within the office switching equipment. If this is the case, the problem indicated by CAROT under the heading TRUNKS EXCEEDING Q2 LIMITS (NOT CONFIRMED) may not be found upon manual retest of the trunk.

F. Test Call Setup Failures

2.17 This category includes test call setup failures and operational test call setup failures. Examples of this results printout are shown in Fig. 6A and 6B. The format here is the same as that for the TRUNKS EXCEEDING Q1 LIMITS category, shown in Fig. 2, except that no test results are given.

2.18 Since there were no tests made, the test call dispositions for each trunk do not contain ANS. In addition, unless routine testing was aborted prematurely, or unless equipment problems have occurred, four dispositions will be listed. The time printed corresponds to the last access attempt.

2.19 Trunks listed in this category should be examined for such possible conditions as "permanent busy," "incorrect data base," etc. In general, the access attempts are spaced over the night nonbusy hours and the probability of a trunk being service-busy for all four accesses is small. On a suspended weekend, a trunk may appear on the results printout more than once as being tested due to rescheduling and being busy on the first test run. This is caused by the inability to be tested on the previous four tests.

G. Trunks With Chronic Intermittent Troubles

2.20 Under the heading TRUNKS WITH CHRONIC INTERMITTENT TROUBLES (Fig. 7) appears that portion of the Routine Test Results printout for trunks that test as Q2 on the first access during a routine test run but that do not generate any Q flags on a later retest. Note that the trunk dispositions should reflect two ANS dispositions—the first ANS for the Q2 measurement and the second ANS for the cleared measurement with no Q2 apparent.

2.21 If this had been the first Q2 occurrence for this particular trunk, the Q2 would have been printed only in the subsequent CAROT Operational Summary Report and not listed in the Routine Test Results printout. However, in the example shown in Fig. 7, the indication has occurred more than a specified number of times during a specified interval. The number of times and interval is specified at the CAROT console.

2.22 This strategy is intended to eliminate "no trouble found" reports on Q2 indications. Trunks listed in this category should be regarded as having troubles for which corrective action should be undertaken as part of the trunk and facility maintenance program.

H. Local Office Equipment Failures

2.23 The equipment failure report is that portion of the CAROT operational summary which affects this control office. The format is the same as the CAROT Operational Summary printout, Part 1: ROTL Problems (see Fig. 8).

3. OPERATIONAL SUMMARY REPORT

3.01 The CAROT Operational Summary is printed on the line printer each morning after the Routine Test Results. It contains an accounting of all equipment and/or data base problems that occurred the previous night (or interval) during the routine testing run. The printout is divided into two parts: Part 1 contains problems related to a specific ROTL; Part 2 contains problems associated with a far-end responder. Immediately preceding Part 1 on the same page as the listing heading, PART 1: ROTL PROBLEMS, is a statement of the trunk-testing goal for the previous night (or interval) and a statement of the number of trunks actually tested. This report is not available to the remote user.

A. Part 1: ROTL Problems

3.02 Figure 8 shows an example of the format of a PART 1: ROTL PROBLEMS page in the Operational Summary. The troubles following the listing heading EQUIPMENT MALFUNCTIONS FOR ROTL OFFICE—ATLNGAWE758Ø (see note) fall in the following categories:

(a) ROTL problems

(b) Trunk group problems

(c) ROTL responder problems

(d) Far-end test line problems

(e) Trunk problems.

For each trouble category, there are different types of troubles that may occur. Messages that may be printed, their meanings, and resulting CAROT 2 action are explained in Table G.

> ***Note:*** ATLNGADE37AØ is the common language ID for the ROTL, as described in Fig. 2.

B. Part 2: Far-End Responder Problems

3.03 Figure 9 shows an example of the format of a PART 2: FAR-END RESPONDER PROBLEMS page in the Operational Summary. In this example, the far-end responder is identified after the heading RESPONDER SELF-CHECK FAILURE by the 11-character common language ID of the office (ASTLGAMA94A) in which the responder is located, the 2-character floor number (_1), the 2-character aisle number (Ø4), a period, the 3-character bay number (Ø7_), and the 5-character bay unit number (__24). Following the heading FROM THE FOLLOWING ORIGINATING LOCATIONS are the ROTL responders (identified in the same manner as the far-end responder) from which the self-check failure occurred, the measurement results, and the date and time of the occurrence of the failure (far-end loss or noise Q9).

3.04 A self-check failure for a far-end responder is considered to exist under either of the following conditions:

(a) Q9 indicated for any self-check (near-to-far loss measurement deviation greater than 0.1 or far-end noise measurement deviation greater than 1)

(b) N/D (no data received) indicated on any measurement.

3.05 IF **NO RESPONDER ID DEFINED** is printed where responder identification (far-end or near-end) is normally printed, the responder ID information has not been included in the data base. For No. 1 ESS offices, the 5-character bay unit number for the responder may appear as RESP_.

C. Operational Test Line Tests

3.06 The CAROT 2, generic 2, software includes the capability of making tests from electromechanical ROTLs to synchronous, nonsynchronous, or 103-type test lines. These tests cannot be made from an ESS ROTL, on trunks with traffic use codes of IA, CA, or SP (intraoffice, CAMA, or TSPS), or on trunks originating in a step-by-step office with a traffic use code of DD (SAMA). When performing these tests, the failure modes to be expected from these tests fall into one of the following categories:

(a) Trip test failure

(b) Pretrip test failure

(c) Other failure (timing or not enough pulses)

(d) Timing disconnect failure (for SXS ROTLs)

(e) Centrex transfer test failure.

Operational Test Failures

3.07 An example of the operational test failures printout is shown in Fig. 10. One of the following failure codes will be presented for each trunk reported:

FAILURE CODE	INTERPRETATION
F (TO—X/Y)	Failure due to time-out. X tones were received but Y tones were expected.
T	Trip test failed.
R	Pretrip test failed.
F (NO SYNC)	Test failed due to no sync pulse.
F (7 SYNCS)	Test failed due to seven pulses on a synchronous test line.
F (SHORT 1)	Test failed due to short first 103 pulse.
F (RF1 TO)	Test failed due to TPT still on 2.4 seconds after first ring forward.
F (RF1 TPT)	Test failed due to TPT reappearing after no-tone after first ring forward.
F (RF2 TO)	Test failed due to flashing not appearing within 2.4 seconds after second ring forward.

In addition to the failure codes presented, a disconnect timing test failure or centrex transfer test failure may be reported as follows:

char 16 = D: Disconnect timing failure

char 21 = X: Centrex transfer test failure

4. MANAGEMENT SUMMARY REPORT

4.01 An example of the Management Summary Report for a particular ROTL (ATLNGAHR79A1) located in a control office (ATLNGAHREØ1) is shown in Fig. 11. This report is automatically printed on the line printer at the CAROT center on the last day of the predetermined interval (weekly, biweekly, monthly, etc). It can be requested by the CAROT center or remote user at any time during the interval. The format for a remote-user request of the Management Summary is shown in Fig. 12. As shown in Fig. 11 and 12, the 12 categories of test results are listed below the interval dates or the start-of-interval date.

5. INDEX SUMMARY RESULTS REPORT

5.01 An example of the Index Summary Results Report for a particular ROTL (ATLNGAHR79A1) located in a control office (ATLNGAHREØ1) is shown in Fig. 13. This data is automatically printed on the line printer at the CAROT center on the last day of a predetermined interval (weekly, biweekly, monthly, etc). The interval is independent of the interval assigned to the Management Summary Report; this data can be requested by the CAROT center or remote user at any time during the interval. The format for a remote-user request of the Index Summary Results Report is shown in Fig. 14.

5.02 The data listed under the 11 header designations below the interval dates or start-of-interval date can be used to compute the Trunk Transmission Maintenance Index (TTMI). ***It is emphasized that the CAROT 2 controller does not compute the index, but rather provides data for the computation of the index by the responsible organization.*** The 11 header designations and their meanings are given in Table H.

6. DEMAND TEST RESULTS

6.01 Demand tests for a particular trunk or trunk group can be requested by the CAROT center or by remote users. If no particular type of test is specified, the format and type of test results are identical to the Routine Test Results described in Part 2 of this section except that only a single-access disposition is printed. Types of tests that can be specified (if the responders and CAROT 2 are capable of making the tests) are given in Table I.

6.02 Figure 15 shows a typical example of the Demand Test Results for a trunk group (PH55IE) with TSALL specified. Note that --- is listed for test results that CAROT 2 or the responders are not equipped to make. When a demand test on a particular trunk is specified, the common language ID or the CAROT trunk number must be given.

6.03 A demand test to an operational test line which passes will present a P in the disposition column. Operational test failure dispositions are listed in paragraph 3.07.

7. DATA DISPLAY PRINTOUT

7.01 An example of a data display of trunks in a specified control office is shown and described in Fig. 16. This figure provides a line-by-line description of the general format of a data display printout. Circled line numbers are used to correlate the description with the corresponding line on the printout shown in Fig. 16 and do not appear on the actual report. An underscore symbol (_) is used in the explanation of Fig. 16 to indicate the absence of a character when an entry requires fewer than the specified number of characters. The format of a remote-user data display is identical. For detailed information on common language codes, see Sections 795-100-100 and 794-400-100.

8. DAILY OFFICE SUMMARY REPORT

8.01 The Daily Office Summary is basically three reports: CAROT Daily Office Summary, Daily Office Transmission Summary, and Daily Office Operational Summary. An example of the Daily Office Summary Report is shown in Fig. 17. This report summarizes the information available for each ROTL office port as described in Fig. 1A. This report also includes the results of operational testing. The column under the NO TRIES heading lists the number of trunks for which there was no access attempt made during the interval because of CAROT equipment or data base problems. The TROUBLES column includes all test call setup failures. Overall totals for the entire CAROT area are computed and printed at the conclusion of the report. The message **NOT SCHEDULED** is printed for all offices that had no trunks scheduled for testing during the previous interval.

8.02 The second report is the Daily Office Transmission Summary (example shown in Fig. 18). This report contains the results of transmission testing for each office and lists the percent of trunks scheduled which fall into the following categories:

(a) Not tried

(b) Not completed

(c) Tested

(d) Q2s

(e) Q1s.

8.03 The third report is the Daily Office Operational Summary (example printout shown in Fig. 19). This report contains the results of operational testing for each office and lists the percent of scheduled trunks which fall into the following categories:

(a) Not tried

(b) Not completed

(c) Tested

(d) Failed.

8.04 The reports are generated on the line printer from the CAROT console or at any remote terminal upon request. They are reported any time after analysis has been completed and before update is run.

9. UTILIZATION OF TEST RESULTS

9.01 The printouts described in this section can be used to identify the following conditions:

(a) CAROT System equipment troubles

(b) Individual trunks in trouble

(c) Data base errors.

In general, the CAROT center is responsible for identifying CAROT System equipment troubles, and central offices are responsible for handling individual trunk troubles; however, local practices may vary. Data base errors are usually a joint effort. The procedures described in the following paragraphs should be followed to identify and correct data base and CAROT equipment problems. For more information on troubleshooting, refer to TOP 190-102-300 for generic 1, TOP 190-102-301 for generic 2, and Section 190-102-500 for system trouble location procedures.

9.02 The first step to take in identifying CAROT System troubles or data base errors is to determine which offices have a low percentage of trunks tested by checking the entries in the

% TESTED column on the Daily Office Summary Report. The Operational Summary should then be checked for equipment troubles such as ROTL recycle failures or responder self-check failures that might have caused testing to be aborted for the offices with the low % TESTED numbers. Other reasons for a low % TESTED number may be found in the real-time messages printed out during routine testing (Section 190-102-311 for generic 1 and Section 190-102-201 for generic 2). For example, a real-time message such as RETEST FILE OVERFLOW: might explain a large number in the NO TRIES column on the Daily Office Summary Report.

9.03 If no apparent reasons for the low percentage of trunks tested are found in the real-time messages, and if equipment problems have been repaired or ruled out, a repeated low % TESTED number indicates that data base errors or trunk troubles are probably the case. At this point, an examination of the Routine Test Results or the data display of trunks must be made. The first data base error condition to look for is incorrect trunk group-dependent priming data (data that is the same for an entire trunk group). This condition manifests itself on the Routine Test Results as a long list of trunks not tested within a single-trunk group. It can also be found on a data display, identified by most trunks in a trunk group having no transmission test readings.

9.04 The call dispositions BUSY, H&D, PERR, and RO (see Table F) may also be caused in some cases by incorrect priming data. When any of these dispositions occur for a large number of trunks in a trunk group, examine the following items:

(a) Far-end test line (FETL) number in the test line directory.

(b) FETL information in the test parameters (TH) record. This may be checked by displaying the trunks with the SELEC program.

(c) Trunk group-related trunk location address information for the various ROTLs: for example, the route advance and translation digits for expanded No. 5XB ROTLs, or pulsing digits for SXS and XBT ROTLs.

Errors in these data must be resolved, usually with control office assistance, and corrected as specified by the local data base management arrangements. For more information, refer to Section 190-102-311 for generic 1 and Section 190-102-201 for generic 2.

9.05 Data base errors associated with individual trunks are more difficult to identify and require investigation by central office personnel. Again, however, these errors must be resolved, reported, and corrected through the proper channels.

10. CIRCUIT ORDER COMPLETION AND DEMAND TEST RESULTS

10.01 Any circuit order completion requiring a CAROT test and any circuit order demand test will have results as shown in Fig. 20.

10.02 Any circuit order completion will generate the entire subset of tests which the equipment is capable of making. This includes all transmission tests to either transmission test line and a test to an existing operational test line.

10.03 The status of each circuit order completion is printed at the beginning of the circuit order completion test results. A list of the various possibilities is provided in Table J. For more detailed information on circuit order activity, refer to Section 190-102-204.

```
(1) DGVLGAMAEØ1                    SUN Ø7/24/77
(2)   DGVLGAMA94AØ

MANAGEMENT SUMMARY -------
   -TRANSMISSION TESTING RESULTS-
(3) NO. TESTS SCHEDULED =     41      NO. TESTS COMPLETED        34
(4) NO. Q1 LOSS =              Ø      NO. Q1 NOISE =              Ø
(5) NO. Q2 LOSS =              Ø      NO. Q2 NOISE =              Ø
(6) NO. CHRONIC FAILURES =     Ø      NO. PERMANENT BUSY =        Ø
(7) NO. HIGH AND DRY =         Ø      NO. OTHERS NOT COMPLETED =  Ø
(8) NO. NO ATTEMPTS =          7
(9) -OPERATIONAL TESTING RESULTS-
(10) NO. TESTS SCHEDULED =    21Ø      NO. TESTS COMPLETED =      91
(11) NO. TEST FAILURES =       11      NO. PERMANENT BUSY =       1Ø
(12) NO. HIGH AND DRY =         1      NO. OTHERS NOT COMPLETED =  3
(13) NO. NO ATTEMPTS =        1Ø5
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FIG. 1A - ROTL OFFICE ROUTINE TEST RESULT SUMMARY SHEET
EXAMPLE FOR OFFICE WITH TRUNKS SCHEDULED

EXPLANATION OF FIG. 1A

(1) THIS LINE CONTAINS THE COMMON LANGUAGE IDENTIFICATION (ID) FOR THE ROTL CONTROL OFFICE (DGVLGAMAEØ1).

(2) COMMON LANGUAGE ID FOR THE ROTL (DGVLGAMA94AØ)

(3)-(13) MANAGEMENT SUMMARY RESULTS FOR THIS ROTL FOR THE CURRENT ROUTINE TEST INTERVAL ONLY. THE FORMAT IS IDENTICAL TO THE MANAGEMENT SUMMARY REPORT FORMAT DESCRIBED IN PARAGRAPH 4.01.

NOTE: CIRCLED NUMBERS APPEARING BEFORE LINES ON THE PRINTOUT ARE USED TO ASSOCIATE THE LINE WITH THE CORRESPONDING EXPLANATION AND DO NOT APPEAR ON THE ACTUAL PRINTOUT.

Fig. 1A—ROTL Office Routine Test Results Summary Sheet—Example for Office With Trunks Scheduled

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ATLNGAPPEØ2                    SUN    Ø7/24/77
  ATLNGAPP88AØ

    NO TRUNKS SCHEDULED
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Fig. 1B—ROTL Office Routine Test Results Summary Sheet—Example for Office With No Trunks Scheduled

EXPLANATION OF FIG. 2

(1) This line contains the ROTL identification (ATLNGADE37AØ) and testing dates (SUN Ø5 11 75 TO MON Ø5 12 75). The ROTL identification consists of the 11-character common language ID of the office associated with the ROTL (ATLNGADE37A) followed by a single digit (Ø) which uniquely identifies one of several ROTLs in the same office. The first date listed is the date when testing began; the second date listed is the date testing was completed.

(2) Listing heading of the particular trunk trouble (TRUNKS EXCEEDING Q1 LIMITS).

(3) Common language ID of the trunk group including CAROT trunk group number (Ø55321), trunk type (DF551E), 7-character modifier information ( ), space, originating office (ATLNGADE37A) space, type of pulsing (D-), space, and terminating office (ATLNGABH34A).

(4) Common language ID of facility including 5-character facility number of first facility leaving originating office (_1Ø4), 5-character facility type leaving originating office (D1), six spaces, 10-character common language name of far-end terminal building of facility (ATLNGABH_), and 10-character common language name of near-end terminal building of facility (ATLNGAELFØ1).

(5) This line contains the following test parameter information:

Direction code (Ø); Ø if 1-way trunk or if trunk was tested in direction in which it is most often accessed; 1 if trunk was accessed and tested in alternate direction.

2-character traffic usage code (IE); specifies traffic use during the tests.

Space, trunk impedance (9); 6 for 600Ω, 9 for 900Ω.

Space, test pad loss (Ø); Ø for Ø dB and 2 for 2 dB.

Space, expected measured loss (EMLS) (3.1).

Space, Q1 loss deviation limit (1.Ø).

Space, Q1 limit noise (28).

Space, Q2 limit noise (36).

(6) Indicates type of far-end test line (1Ø5), as listed below:

1Ø5–105 or 105-type (associated with responder).

1Ø2–102 or 102-type (common referred to as ***milliwatt test line***).

1ØØ–100 or 100-type (transmits 1004 Hz followed by a termination that permits a far-to-near loss measurement and a near-end noise measurement).

(7) CAROT trunk number (Ø32555), 4-character traffic trunk number (_ØØØ), space, 5-character facility or wire pair number (–1Ø), three spaces, and ROTL priming information (14Ø72). ROTL priming information can consist of up to 25 characters. (See paragraph 2.06.)

(8) Date and time of demand test (SUN Ø5/11/75 18:22); and access disposition (ANS) indicating the results of attempting to access the trunk up to four times. The possible access dispositions and their meanings are listed in TABLE F.

(9) Level measurement readings in dBm: far-to-near level (–1.8) followed by near-to-far level (–1.5). In this case the Q1 flag follows both readings. Measurements which are below the measurement range of the responder (< –15.5 dBm) are printed as:

–....

Measurements above range (> +5.0 dBm) are printed as:

+....

"No data received" is indicated by N/D.

(10) Results of near-end noise measurement in dBrn (19). Results that are below the measurement range of the responder (< 15 dBrn) are printed as:

–...

Above-range measurements (> 55 dBrn) are printed as:

+..

"No data received" is indicated by N/D.

(11) Results of far-end noise measurement in dBrn (23). Results of underrange and above-range measurements are printed as explained above for near-end noise measurements. "No data received" is indicated by N/D. It is important to note that when tests are made to a 100-type test line, an estimate is made of the far-end noise. This estimate is made by adding the numerical value of the near-end loss measurement to the near-end noise measurement.

Note: Circled numbers appearing before lines on the printout are used to associate the line with the corresponding explanation and do not appear on the actual printout.

```
(1) ATLNGADE37AØ    SUN Ø5 11 75  TO  MON Ø5 12 75

(2) TRUNKS EXCEEDING Q1 LIMITS

(3) Ø55321 DF55IE   ATLNGADE37A D- ATLNGABH34A
(4)  1Ø4D1A         ATLNGABH   ATLNGAELFØ1
(5) Ø1E 9 Ø  3.1 1.Ø  28 36
(6) 1Ø5
(7) Ø32555 ØØØ 1Ø  14Ø72
(8) SUN Ø5/11/75 18:22 ANS
(9) LEVEL - 1.8 (Q1) -1.5 (Q1)
(10) NSNE   19
(11) NSFE   23
   1Ø2D1A         ATLNGABH   ATLNAELFO1
  Ø1E 9 Ø  2.7 1.Ø  28 36
  1Ø5
  ØØ6554   ØØ2      14    14922
  MON Ø5/12/75 Ø6:39 BUSY ANS
  LEVEL - 2.9      - 1.4 (Q1)
  NSNE -..
  NSFE  16
  ØØ4321   ØØ3      15    14732
  SUN Ø5/12/75 18:24 ANS
  LEVEL - 2.8      - 1.4 (Q1)
  NSNE -..
  NSFE -17


  Ø45421  DF55IE   ATLNGADE37A  D- ATLNGABH34A
  TK27424NL       ATLNGAEL   ATLNGADE37A
  Ø1E 9 Ø  2.9 1.Ø 28 36
  1Ø5
  Ø34755   ØØ3    331    12472
  SUN Ø5/12/75 23:Ø6 ANS
  LEVEL - 2.8      - 1.6 (Q1)
  NSNE -..
  NSFE  17
  ØØ6321   ØØ4    382    12482
  SUN Ø5/12/75 23:Ø6 ANS
  LEVEL - 2.7      - 1.6 (Q1)
  NSNE   16
  NSFE   17
```

Fig. 2—Example of Printout Showing Trunks Exceeding Q1 Limits, With Explanations

Note 1: Refer to Section 190-102-310 or Section 190-102-203 for the meaning and numerical values of the priming digits.

Note 2: For small 5XB ROTLs, this is also digit A (see Table B).

Note 3: Test type value for small SXS ROTLs:
1 — Test to transmission test line
2 — Test to operational test line.

Note 4: Digit E value for small SXS ROTLs:
1 — MF outpulsing
2 — DP outpulsing.

Note 5: Test line number for expanded and Nos. 1, 2, and 3 ESS ROTLs consists of up to 11 digits followed immediately by S (start digit).

Note 6: Test pad code for OTTS/ROTLs:
0 — A-pad is switched out and OTTS test pad is used.
1 — A-pad is switched in and OTTS test pad is out.

Note 7: The tenth priming digit for OTTS/ROTLs is the code for switch train, test connector, and trunk relay type:

Digit 10 Code	Switch Train	Test Connector	Trunk Relay Type
0	TC	TC	TC
1	TC	TC	IT
2	TC	IT	TC
3	TC	IT	IT
4	IT	TC	TC
5	IT	TC	IT
6	IT	IT	TC
7	IT	IT	IT
8—9	Unassigned	Unassigned	Unassigned

For CCIS trunks set digit 10 code to 0.

Note 8: End test code for OTTS/ROTLs:
0 — None
1 — Incoming release or disconnect timing
2 — Trunk identification
3 — Trunk verification
4—9 — Unassigned.

Note 9: Lockout/restore code for OTTS/ROTLs:
0 — A locked-out trunk is to be automatically restored.
1 — Trunk is to remain in same state after test.

Note 10: Test line number for OTTS/ROTLs and No. 4 ESS ROTLs consists of up to seven digits followed immediately by S (start digit).

Note 11: For CCIS trunks, set fifth digit to 7, six to 0, and seventh to 0.

Note 12: For CCIS trunks, use T register or TREG number.

Note 13: For RSS channels, use digits 5 through 12 for line equipment numbers. No test line number is assigned with RSS applications.

TABLE A

ROTL PRIMING FORMATS

PRIMING DIGITS (NOTE 1)	SMALL 5XB ROTL-1	SMALL SXS ROTL-1	SXS ROTL-3	EXPANDED 5XB ROTL-2	EXPANDED 5XB ROTL-2 PBX TRUNKS WITH LLP, TYP=2	EXPANDED SXS ROTL-2	1XB XBT ROTL	4XB OTTS/ROTL	NO. 1 ESS NO. 2 ESS ROTL	NO. 3 ESS ROTL	NO. 4 ESS ROTL
1st	Test type (Note 2)	Test type (Note 2)	K (Keypulse)	K (Keypulse)	K (Keypulse)	K (Keypulse)	K (Keypulse)	K (Keypulse)	K (Keypulse)	K (Keypulse)	K (Keypulse)
2nd	Frame units	Test connector number	Test code (Table C)	Test code (Table C)	Test code (Table C)	Test code (Table C)	Test code (Table C)	Test Code (Table D)	Test code (Table C)	Test code (Table C)	Test code (Table C)
3rd	Digit C (Table B)										
4th	Trunk units		Always=0	TYP	TYP	Test connector number	Switch number		Local (0) or tandem (1,2) mode or RSS channel (7, 8, or 9)	Trunk state 0 = Local 1 = Bypass	Trunk appearance number
5th	Route translation units	Digit E (Note 4)	Test connector number	TR	TR			Signaling class and modifiers (Note 11)	Trunk network number (Note 13)	Group number	
6th				MG	MG		Select magnet				
7th				CTA	CTA		Hold magnet				
8th			Pulsing	CU	CG	Pulsing		A-pad mark		Member number	
9th			Test line number (Note 5)	CRU	TI	Test line number (Note 5)	Pulsing	Test pad (Note 6)			
10th				CG	TF			(Note 7)			
11th				TB	TT		Test line number (Note 5)	End test (Note 8)		Test line number (Note 5)	Test line number (Note 10)
12th				TI	Test line number (Note 5)			Lockout/ restore (Note 9)			
13th				TF				Test connector number (Note 12)	Test line number (Notes 5) and 13)		
14th				TT							
15th				Test line number (Note 5)				Test line number (Note 10)			S (Start)
16th											
17th											
18th											
19th			S (Start)			S (Start)					
20th											
21st						S (Start)	S (Start)		S (Start)		
22nd					S (Start)					S (Start)	
23rd											
24th											
25th				S (Start)				S (Start)			

TABLE B

VALUES OF ROTL DIGITS A AND C
(NOTES 1, 2, 3, AND 4)

DIGIT A	DIGIT C	ROUTE TRANSLATION TENS	BUSY TEST LEAD TENS	FRAME TENS
1/2	0	0	0	0
1/2	1	0	0	1
1/2	2	0	1	0
1/2	3	0	1	1
1/2	4	1	0	0
1/2	5	1	0	1
1/2	6	1	1	0
1/2	7	1	1	1
6/7	0	0	0	2
6/7	1	2	0	1
6/7	2	0	1	2
6/7	3	2	1	1
6/7	4	1	0	2
6/7	5	2	0	0
6/7	6	1	1	2
6/7	7	2	1	0
6/7	8	2	0	2
6/7	9	2	1	2

Note 1: Digit A values 1 and 6 are for transmission testing and values 2 and 7 are for operational testing.

Note 2: Digit A values 1 and 2 are used for trunk link frame locations 00 through 19.

Note 3: Digit A values 6 and 7 are used for trunk link frame locations 20 through 29.

Note 4: For trunk link frames 20 through 29, only transmission and operational tests are possible (ie, terminal balance, trunk make-busy, and status request operations are not possible).

TABLE C

TEST CODE VALUES AND MEANING FOR EXPANDED ROTLS

TEST CODE	MEANING
	Transmission Test To:
00	100-Type Test Line
02	102-Type Test Line
05	105-Type Test Line
	Transmission Test With Maintenance-Busy Override To:
10	100-Type Test Line
12	102-Type Test Line
15	105-Type Test Line
	Operational Test To:
23	103-Type Test Line
21	Synchronous Test Line
20	Nonsynchronous Test Line
	Operational Test With Maintenance-Busy Override To:
33	103-Type Test Line
31	Synchronous Test Line
30	Nonsynchronous Test Line

TABLE D

TEST CODE VALUES AND MEANING FOR OTTS/ROTL

TEST CODE	MEANING
	Transmission Test To:
008	100-Type Test Line
028	102-Type Test Line
068	104-Type Test Line*
058	105-Type Test Line
	Transmission Test With Maintenance-Busy Override To:
108	100-Type Test Line
128	102-Type Test Line
168	104-Type Test Line
158	105-Type Test Line
	Operational Test To:
238	103-Type Test Line
218	Synchronous Test Line
208	Nonsynchronous Test Line
	Operational Test With Maintenance-Busy Override To:
338	103-Type Test Line
318	Synchronous Test Line
308	Nonsynchronous Test Line
	*Long-Term Tests:**
408	Unassigned*
418	Maintenance-Busy Override*
	Home Office Test Line To:
708	100-Type Test Line
728	102-Type Test Line
768	104-Type Test Line*
758	105-Type Test Line
738	103-Type Test Line
718	Synchronous Test Line
748	Nonsynchronous Test Line
	No. 4XB Special Tests:
711	Quickie
712	ERLY RLS
713	Reorder
714	Announce
715	Operator

*Interrogator tests only.

TABLE E

TRUNK LOCATION ADDRESS DEFINITIONS–UNCONFIGURED PRIMING DIGITS

ROTL TYPE	CHARACTER POSITION													
	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Small 5XB ROTL-1	RTT	RTU	FT	FU	TT	TU								
Expanded 5XB ROTL-2	TYP (Ø,1, 4,5)	TB	FT	FU	TT	TU	TR	MG	CTA	CU	CRU	CG		
Expanded 5XB ROTL-2 term to PBX	TYP (2,3)			FU	TT	TU	TR	MG	CTA			CG		
Small SXS SXS ROTL-1				Test connector number			Pulsing							
SXS ROTL-3			Always Ø	Test connector number			Pulsing							
Expanded SXS SXS ROTL-2			Test connector number				Pulsing							
1XB or XBT	Switch		Select	Hold		Pulsing								
No. 1 ESS	Modifier	Trunk equipment number												
		Trunk network number												
No. 2 ESS	Modifier	Trunk group number			Trunk member number									
No. 3 ESS	Modifier	Trunk group number			Trunk member number									
No. 4 ESS	Trunk appearance number													
4XB OTTS/ROTL	Category	Signaling class and modifiers			Pad mark	Train	Con-nector	Test connector number					Relay type	
4XB OTTS/ROTL for CCIS trunks	Category	Always 7ØØ			Pad mark	Train	Always Ø	T register or TREG number					Relay type	

TABLE F

CAROT CALL DISPOSITIONS (NOTE)

CAROT CALL DISPOSITION	DEFINITION
FEBY	Far-end test line busy
MWT*	Unexpected 1000-Hz tone
ANS*	Answer
VA*	Voice or voice announcement
AR*	Audible ring
PKTO	105 test line parking circuit time-out
DT*	Dial tone
RO*	Reorder
BUSY*	Busy
PTF	Pretrip failure
H&D*	High and dry
RERR	ROTL signaling format error
OPBY	Operational test equipment busy
PERR	Priming error
NEBY	Near-end busy
NOAS	No answer supervision
SPHT	Supervisory hit detected
EFOB	Equipment failure or blockage
TPT	Test progress tone longer than expected (ROTL calls only)
UNA1	Unassigned 1
PF	Preference failure
NTC	No test connector number
MSF	Marker sleeve lead failure

See note at end of table.

* These dispositions are used for both ROTL call and trunk test call dispositions. The remaining dispositions (except TPT) are used for trunk test calls only.

TABLE F (Contd)

CAROT CALL DISPOSITIONS (NOTE)

CAROT CALL DISPOSITION	DEFINITION
SMF	Select magnet lead failure
HELP	OTTS bay failure
COF	Channel overflow
MKT	Market trouble
OSF	Outsleeve failure
BZSL	Sleeve failure following busy
DDFS	Delay dial to short or missing
ERF	Early release failure
HDOP	Hit during outpulsing
RF	Reorder failure
XSPT	Expect stop time-out
ENDF	End test failure
PMX	Pad mark error
LPO	Loop open
SCF	Sender class failure
HIT	Unexpected change in supervision (during trunk seizure)
DDFL	Delay dial failure long
PSL	Preliminary sleeve lead failure
FSL	Final sleeve lead failure
RC	Receive continuity failure
TC	Transmit continuity failure
PERR	Priming error
CTO	Connection time-out
RO	RO from far end

See note at end of table.

TABLE F (Contd)

CAROT CALL DISPOSITIONS (NOTE)

CAROT CALL DISPOSITION	DEFINITION
MSGR	Unexpected message from OTTS bay
NOAS	No answer supervision
UNA6	Unassigned 6
NEF	Near-end failure
UNA7	Unassigned 7

Note: Each of the dispositions shown are the result of an interrogation of the OTTS/ROTL following receipt of 120 IPM from the ROTL and are not the normal call disposition. However, they do have the same meaning as the normal call dispositions which have the same mnemonics. The user of the CAROT/ROTL system should be made aware that they occur in this manner as well as normal dispositions returned by the ROTL.

The dispositions labeled UNAX are currently assigned and should be considered error conditions from the ROTL or CAROT controller. They have no meaning except to indicate a failure of the OTTS/ROTL or of the CAROT controller data detector.

```
ATLNGATH63AØ    SUN Ø5 11 75  TO  MON Ø5 12 75


TRUNKS EXCEEDING Q2 LIMITS [CONFIRMED]


Ø55321 DFS3SP-CNALL   ATLNGATH63A D- [CONFIRMED]
  135D2          ATLNGANW   ATLNGATH
ØSP 9 Ø  5.Ø 1.Ø  28 36
1Ø5
Ø32Ø55   Ø15    16  Ø529B4Ø1Ø5
MON Ø5/12/75 05:13 ANS  ANS
LEVEL -.... (Q2) -.... (Q2)
NSNE   19
NSFE   26


Ø55415 DFS3SP-ØYØ   ATLNGATH63A D- ATLNGANW43T
  131D2          ATLNGANW   ATLNGATH
ØSP 9 Ø  5.Ø 1.Ø  28 36
1Ø5
Ø66545   158    18  Ø52883Ø1Ø5
MON Ø5/12/75 05:1Ø ANS  ANS
LEVEL   Ø.8 (Q2)  Ø.6 (Q2)
NSNE   33   (Q1)
NSFE   25
```

Fig. 3—Example of Printout Showing Trunks Exceeding Q2 Limits (Confirmed)

```
ATLNGATH63AØ    SUN Ø5 11 75  TO  MON Ø5 12 75

TRUNKS EXCEEDING Q2 LIMITS [CONFIRMED AND MADE BUSY]

Ø55321 DF53SP-CNALL   ATLNGATH63A D- ATLNGANW43T
  135D2          ATLNGANW   ATLNGATH
ØSP 9 Ø  5.Ø 1.Ø  28 36
1Ø5
Ø32Ø55   Ø15    16  Ø52984Ø1Ø5
MON Ø5/12/75 05:13 ANS  ANS
LEVEL -.... (Q2) -.... (Q2)
NSNE   19
NSFE   26


Ø55415 DF53SP-ØYØ   ATLNGATH63A D- ATLNGANW43T
  131D2          ATLNGANW   ATLNGATH
ØSP 9 Ø  5.Ø 1.Ø  28 36
1Ø5
Ø66545   153    18  Ø52883Ø1Ø5
MON Ø5/12/75 Ø5:1Ø ANS  ANS
LEVEL   Ø.8 (Q2)  Ø.6 (Q2)
NSNE   33   (Q1)
NSFE   25
```

Fig. 4—Example of Printout Showing Trunks Exceeding Q2 Limits (Confirmed and Made Busy)

```
ATLNGAEP76A1    WED Ø2 12 75  TO  THU Ø2 13 75

TRUNKS EXCEEDING Q2 LIMITS [NOT CONFIRMED]

DF53CA-ANI    ATLNGAEP76A D- ATLNGATL53T
TK17Ø22H88      ATLNGAWE   ATLNGAEP
ØCA 9 Ø  3.Ø 1.Ø  25 36
1Ø5
 Ø42     81   17182
2524 THU Ø2/13/75 Ø1:49 ANS  BUSY BUSY BUSY
 LEVEL - 7.Ø (Q2) - 6.9 (Q2)
 NSNE   28   (Q1)
 NSFE   37   (Q2)
```

Fig. 5—Example of Printout Showing Trunks Exceeding Q2 Limits (Not Confirmed)

```
ATLNGAPP89AØ      FRI  Ø7/22/77   TO   SAT  Ø7/23/77

TRANSMISSION TEST CALL SETUP FAILURES

Ø55321 AF5ØTO        ATLNGAPP89A M- ATLNGAB 12T
TK23222H88       ATLNGABUFØ1ATLNGAPP
ØTO 9 Ø  3.Ø 1.Ø  25 36
1Ø5
Ø32255 ØØØ    181   Ø5ØØ531227443334
3550 SAT Ø7/23/77 Ø5:37 H&D  RD

Ø53132 AF55IB        ATLNGAPP89A D- ATLNGAAU52A
TK16524H88       ATLNGATLFØ1ATLNGAPP89A
ØIE 9 Ø  4.5 1.0  25 36
1Ø5
Ø43152 ØØ1     4Ø   Ø5ØØØ1Ø5Ø5233199
3549 SAT Ø7/23/77 Ø5:Ø9 BUSY BUSY

Ø15324 DF51SP-COMB   ATLNGAPP89A M- RCDLGATL41T
  134D1A         RCDLGATL   ATLNGAPP
ØSP 9 Ø  5.Ø 1.Ø  28 36
1Ø5
Ø31452 ØØØ      8   Ø5ØØ22361Ø5
3541 SAT Ø7/23/77 Ø4:46 BUSY BUSY
Ø31453 ØØ1      9   Ø5ØØ22341Ø5
3542 SAT Ø7/23/77 Ø4:46 BUSY BUSY
Ø31454 ØØ2     1Ø   Ø5ØØ32341Ø5
3543 SAT Ø7/23/77 Ø4:46 BUSY BUSY
  135D1A         RCDLGATL   ATLNGAPP
ØSP 9 Ø  5.Ø 1.Ø  28 36
1Ø5
Ø31255 ØØ5      1   Ø5ØØ13341Ø5
3544 SAT Ø7/23/77 Ø4:47 BUSY BUSY
Ø31245 ØØ6      2   Ø5ØØ23341Ø5
3545 SAT Ø7/23/77 Ø4:47 BUSY BUSY
Ø41455 Ø16     12   Ø5ØØ21Ø511Ø5
3546 SAT Ø7/23/77 Ø4:5Ø BUSY BUSY
  139D1A         RCDLGATL   ATLNGAPP
ØSP 9 Ø  5.Ø 1.Ø  28 36
1Ø5
Ø55454 Ø49     21   Ø5ØØØØ251Ø5
22Ø5 FRI Ø7/22/77 22:Ø3 VA
```

Fig. 6A—Example of Transmission Test Call Setup Failures Printout

```
DGVLGAMA94A0    SAT 07/23/77  TO  SUN  07/24/77

OPERATIONAL TEST CALL SETUP FAILURES

035545 PH55IE-EAS    DGVLGAMA94A M- ATLNGATH32A
  1020 1A         ATLNGATH   DGVLGAMA
0IE 9 0  2.7 1.0  28 36
SYNC
045322 000       1   21000000020026325 3009
6313 SUN 07/24/77 05:58 BUSY BUSY BUSY
045323 001       2   21000000020036325 3009
6314 SUN 07/24/77 05:58 BUSY BUSY BUSY
045324 002       3   21000000020055325 3009
6315 SUN 07/24/77 05:58 BUSY BUSY BUSY
045325 003       4   21000000020081325 3009
6316 SUN 07/24/77 05:58 BUSY BUSY BUSY
045326 004       5   21000000020091325 3009
6317 SUN 07/24/77 05:58 BUSY BUSY BUSY
045330 005       6   21000000020045325 3009
6318 SUN 07/24/77 05:59 BUSY BUSY BUSY

013521 PH55IE-EAS    DGVLGAMA94A M- MRTTGAMA422
  101D1A         MRTTGAMA   DGVLGAMA
0IE 9 0  2.9 1.0  28 36
SYNC
004455 000       2   21000000020044422 3009
6319 SUN 07/24/77 06:00 BUSY FEBY H&D

015455 PH55IE-EAS    DGVLGAMA94A M- MRTTGAMA424
  101D1A         MRTTGAMA   DGVLGAMA
0IE 9 0  2.9 1.0  28 36
SYNC
011511 000       7   21000000020126424 2263
4505 SAT 07/23/77 18:52 VA
023545 001       8   21000000020006424 2263
5423 SAT 07/23/77 18:52 RO
023546 002       9   21000000020016424 2263
4507 SAT 07/24/77 18:52 VA
```

Fig. 6B—Example of Operational Test Call Setup Failures Printout

```
ATLNGABU12TØ    WED 1Ø/Ø8/75  TO  THU 1Ø/Ø9/75


TRUNKS WITH CHRONIC INTERMITTENT TROUBLES


Ø55312 DFO5TG-EAS   ATLNGABU12T D- WDSTGAMA926
   2Ø5N2          WDSTGAMA   ATLNGABUF2Ø
ØTG 9 Ø  3.Ø 1.Ø  23 3Ø
1Ø5
366339Ø   Ø52    9  Ø5ØØ8Ø1519263199
THU 1Ø/Ø9/75 Ø1:Ø7 ANS  ANS
LEVEL  -3.8       -2.7
NSNE   19
NSFE   17
```

Fig. 7—Example of Printout Showing Trunks With Chronic Intermittent Troubles

```
EQUIPMENT MALFUNCTIONS FOR ROTL OFFICE = ATLNGADE37AØ
COT = ATLNGADEEØ1


2 AR/VA'S ON TRUNK GROUP
Ø53521   DF5ØTO    ATLNGAWE758  D-  ATLNGAAU14T
 MON Ø5/12/75 ØØ:Ø3


4 CONSECUTIVE H&D'S ON TRUNK GROUP
Ø53433   DF53IE    ATLNGAWE758  D-  ATLNGADE37A
 SUN Ø5/11/75 19:48
 MON Ø5/12/75 Ø2:51


RESPONDER SELF CHECK FAILURE
ATLNGADE37A 266.254  24
Ø53434   DF55IE    ATLNGAWE758  D-  ATLNGADE37A
Ø43345 Ø12 76Ø Ø529840105
 MON Ø5/12/75 ØØ:13 ANS
 LEVEL N/D      N/D
 NSNE  N/D
 NSFE  N/D
ATLNGANW43T 131.273  24
Ø55531   DF53SP - ØYØ   ATLNGAWE758  D-  ATLNGANW43T
 Ø44344   153    18    Ø528830105
 MON Ø5/12/75 Ø3:22 ANS
 LEVEL N/D      N/D
 NSNE  N/D
 NSNE  N/D
```

Fig. 8—Example of CAROT Operational Summary Printout, Part 1: ROTL Problems

TABLE G

CAROT OPERATIONAL SUMMARY – PART 1: ROTL PROBLEMS

TROUBLE CATEGORY	CAROT MESSAGE	MESSAGE MEANING	CAROT ACTION
ROTL PROBLEMS	ROTL COULD NOT BE ACCESSED Ø1 SUN Ø1/12/75 23:56 BUSY Ø3 SUN Ø1/13/75 ØØ:53 BUSY	This message is printed whenever a ROTL cannot be accessed (with up to three attempts) during a routine test run. The CAROT test port number, date, time, and ROTL call disposition are listed for each occurrence.	The remainder of the trunks scheduled for the ROTL are bypassed until the next test pass.
	EIGHT RECYCLE FAILURES Ø1 TUE Ø1/14/75 23:Ø8 RO Ø4 WED Ø1/15/75 Ø1:ØØ H&D Ø6 WED Ø1/15/75 Ø2:1Ø RO Ø1 WED Ø1/15/75 Ø3:ØØ RO	This message is printed whenever a ROTL fails to recycle eight times during a single test pass. The CAROT test port number, date, time, and ROTL call disposition are listed for each occurrence.	
	CALLBACK INITIALIZATION ERROR Ø1 SUN Ø1/12/75 23:56 RO Ø1 MON Ø1/13/75 Ø1:53 RO	This message is printed whenever a security callback cannot be initiated by a ROTL equipped to make trunks busy.* The CAROT test port number, date, time, and ROTL call disposition are listed for each occurrence.	The trunk is not made busy.
	CALLBACK COMPLETION ERROR Ø2 MON Ø1/13/75 Ø2:58 H&D	This message is printed whenever a security callback cannot be completed by a ROTL equipped to make trunks busy.* The CAROT test port number, date, time, and ROTL call disposition are listed for each occurrence.	
	TRUNK COULD NOT BE TESTED Ø54312 DF55IE-EAS RVDLGAMA99A D- ATLNGAEP76A 246863 Ø12 76Ø Ø5ØØ333625447615199 MON Ø1/21/75 Ø5:13 ANS ANS LEVEL – 5.Ø (Q2) – 1.Ø NSNE 19 NSFE 26	This message is printed whenever a security callback has been completed to a ROTL, but the ROTL refused to make the trunk busy. This could be a signaling error from the ROTL or a ROTL make-busy overflow. The trunk group information (Fig. 2) is included, followed by CAROT trouble number, date and time of occurrence, call dispositions, and test results (Fig. 2).	

*This problem may be located in the CAROT test port callback circuitry

TABLE G (Contd)

CAROT OPERATIONAL SUMMARY – PART 1: ROTL PROBLEMS

TROUBLE CATEGORY	CAROT MESSAGE	MESSAGE MEANING	CAROT ACTION
TRUNK GROUP PROBLEMS	2 AR/VA'S ON TRUNK GROUP 246863 PHØ5TG ATLNGABU12T M- ATLNGACS58A Ø2 SUN Ø5/11/75 17:21	This message is printed whenever two audible rings or two voice announcements are detected during a routine test run. The trunk group information (Fig. 2), CAROT test port number, date, and time of occurrence are listed.	The trunk group is skipped for the rest of the routine test run.
	4 CONSECUTIVE H&D'S ON TRUNK GROUP Ø53321 DF55IE ATLNGAEP76A D- ATLNGASS25A Ø1 TUE Ø1/14/75 23:35 Ø3 WED Ø1/15/75 ØØ:51 Ø6 WED Ø1/15/75 Ø1:22 1Ø WED Ø1/15/75 Ø1:59	This message is printed whenever a trunk group experiences four consecutive high and drys on trunks within the group. The trunk group information (Fig. 2) is included, followed by the CAROT test port number, date, and time of each occurrence.	The remainder of the trunks in the group are bypassed until the next test pass.
	2 CONSECUTIVE PKTO'S ON TRUNK GROUP ØØ3215 DF54IE NRCRGAMA44A M- ATLNGABU12T Ø1 TUE Ø1/14/75 23:26 Ø1 TUE Ø1/14/75 23:3Ø	This message is printed whenever two consecutive 105 parking circuit timeouts are detected on a trunk group during a test pass.† The trunk group information (Fig. 2) is included, followed by the CAROT test port number, date, and time of each occurrence.	
	2 CONSECUTIVE PMX'S ON TRUNK GROUP Ø13524 DF55IE NRCRGAMA44A M- ATLNGABU12T Ø1 TUE Ø1/14/75 23:26 Ø1 TUE Ø1/14/75 23:3Ø	Two consecutive pad mark failures occurred on a single-trunk group (this is only applicable for 4xB originating office). The trunk group information is included, followed by the CAROT test port number, date, and time of each occurrence.	

†This does not necessarily indicate a trunk group problem but may be due to excessive competition for the far-end test line at a particular point in time. If this indication were to occur on every test pass, however, the test line itself may have a malfunction

TABLE G (Contd)

CAROT OPERATIONAL SUMMARY – PART 1: ROTL PROBLEMS

TROUBLE CATEGORY	CAROT MESSAGE	MESSAGE MEANING	CAROT ACTION
TRUNK PROBLEMS	IMPROPER TRUNK DISPOSITIONS ØØ3552 DF55IE-EAS DGVLGAMA35A M- ATLNGAEP87B Ø13472 Ø12 757 Ø533293215760 Ø3 TUE Ø1/14/78 23:32 ANS LEVEL N/D –Ø.2 NSNE 2Ø NSFE 21	This message is printed whenever no data is received for any trunk measurement. The trunk group information is included, followed by the traffic trunk number, CAROT test port number, date and time of occurrence, and the call disposition and measurement results.	Trunk is retried on next test pass.
	IMPROPER TRUNK DISPOSITIONS ØØ523Ø DF55IE RVDLGAMA99A D- ATLNGAEP76A ØØ123Ø Ø12 76Ø Ø5ØØ336325447615199 Ø2 TUE Ø1/14/75 23:48 PERR ØØ1231 Ø1Ø 758 Ø5ØØ133625447615199 Ø3 WED Ø1/15/75 ØØ:19 BUSY RERR	This message is printed whenever trunks have call dispositions (Table F) warranting CAROT attention. At the present time there are only two dispositions (PERR and RERR). The PERR disposition is detected by expanded ROTLs only. The RERR disposition is detected by CAROT only when testing to expanded ROTLs. The trunk group information (Fig. 2) is included, followed by the traffic trunk number and associated information, CAROT test port number, the date and time of occurrence, and the call disposition.	When PERR (priming errors) occurs, the trunk is not tested again on any subsequent test pass. When RERR (unallowed response in one of the three ROTL test progress tones) occurs, the trunk is tested again on the next test pass.

TABLE G (Contd)

CAROT OPERATIONAL SUMMARY – PART 1: ROTL PROBLEMS

TROUBLE CATEGORY	CAROT MESSAGE	MESSAGE MEANING	CAROT ACTION
OPERATIONAL TEST SETUP PROBLEMS	OPN TEST NOT ALLOWED FROM ESS ROTL Ø35512 DF55IE SMYRGMA43A D- ATLNGAAU15T ØIE 9 Ø 2.8 1.Ø 28 36 WED Ø1/15/75 Ø1:53	This message is printed whenever an operational test is scheduled from ESS ROTL (according to the data base) for a particular trunk group. The message is followed by the trunk group identification, test parameters, and date and time of the test attempt. This is a data base problem.	No operational tests are made from this ROTL.
	OPN TEST NOT ALLOWED FOR TRAFFIC USE CA, IA, SP Ø34541 DF55IE SMYRGMA43A D- ATLNGAAU15T ØIE 9 Ø 2.8 1.Ø 28 36 WED Ø1/15/75 Ø1:53	This message is printed whenever an operational test is scheduled for traffic use CA, IA, SP (according to the data base) for a particular trunk group. The message is followed by the trunk group identification, test parameters, and date and time of the test attempt. This is a data base problem.	No trunks in this trunk group are tested operationally.
	OPN TEST NOT ALLOWED FOR TRAFFIC USE DD FROM SXS ROTL Ø44351 DF55IE SMYRGMA43A D- ATLNGAAU15T ØIE 9 Ø 2.8 1.Ø 28 36 WED Ø1/15/75 Ø1:53	This message is printed whenever an operational test is scheduled for traffic use DD from SXS ROTL (according to the data base) for a particular trunk group. The message is followed by the trunk group identification, test parameters, and the date and time of the test attempt. This is a data base problem.	No trunks in this trunk group are tested operationally.

TABLE G (Contd)

CAROT OPERATIONAL SUMMARY – PART 1: ROTL PROBLEMS

TROUBLE CATEGORY	CAROT MESSAGE	MESSAGE MEANING	CAROT ACTION
NEAR-END RESPONDER PROBLEMS	RESPONDER SELF CHECK FAILURE ATNGALA62A 135.135 24 Ø14691 DF55IE ATLNGAED784 D- ATLNGALA62A 1469Ø1 5Ø3 161 Ø5ØØ63218732176 Ø3 SAT Ø5:15:76 Ø2:5Ø ANS LEVEL – 1.2(Q9) Ø.1 NSNE 4(Q9) NSFE Ø WED Ø1/15/75 Ø1:53	This message is printed whenever a responder failure occurs during routine testing. The far-end responder location information‡ (paragraph 3.03) is included, followed by the trunk group identification (Fig. 2), traffic number and associated information, CAROT test port number, the date and time of occurrence, the call disposition, and the measurement results. A self-check failure for near-end responder is defined as all self-checks with a Q9 (far-to-near loss or near-end noise deviations greater than 0.1 or 1, respectively); or N/D (no data received) on any measurement.	The remaining trunks in the current trunk group are bypassed until the next test pass.
FAR-END TEST LINE PROBLEMS	NO TRANSMISSION FAR END TEST LINE EXISTS Ø14691 DF55IE SMYRGMA43A D- ATLNGAAU15T ØIE 9 Ø 2.8 1.Ø 28 36 WED Ø1/15/75 Ø1:53	This message is printed whenever no transmission far-end test line exists (according to the data base) for a particular trunk group. The message is followed by the trunk group identification (Fig. 2), test parameters (Fig. 2), and date and time of the test attempt. This is a data base problem.	The entire trunk group is bypassed until the next routine test run.
	NO OPERATIONAL FAR END TEST LINE EXISTS Ø14691 DF55IE SMYRGMA43A D- ATLNGAAU15T ØIE 9 Ø 2.8 1.Ø 28 37 WED Ø1/15/75 Ø1:53	This message is printed whenever no operational far-end test line exists (according to the data base) for a particular trunk group. The message is followed by the trunk group identification, test parameters, and date and time of the test attempt. This is a data base problem.	The entire trunk group is bypassed until the next routine test run.

‡ If ** NO RESPONDER ID DEFINED ** is printed instead of the responder location, the responder ID information has not been included in the data base

```
RESPONDER SELF CHECK FAILURE
ASTLGAMA94A 1Ø4.Ø7 24


FROM THE FOLLOWING ORIGINATING LOCATIONS



ATLNGAWE758 266.254 24


 LEVEL  Ø.1    - 1.1 (Q9)
 NSNE   Ø
 NSFE - 4  (Q9)
  WED Ø1/15/75 ØØ:38


ATLNGAHR79A 121.123 24


 LEVEL  Ø.1    - 1.2 (Q9)
 NSNE   Ø
 NSFE - 5  (Q9)
  WED Ø1/15/75 Ø1:53
```

Fig. 9—Example of CAROT Operational Summary Printout, Part 2: Far-End Responder Problems

```
OGVLGAMA944Ø        SAT Ø7/23/77   TO  SUN Ø7/24/77

OPERATIONAL TEST FAILURES

Ø54531 PH55IE-EAS    DGVLGAMA94A M- ATLNGTL522
  1Ø2Ø3          ATLNGATL   DGVLGAMA
ØIE 9 Ø  3.Ø 1.Ø  28 36
SYNC
Ø55431 ØØ5     1Ø   21ØØØØØØ2Ø1835223ØØ9
4459 SAT Ø7/23/77 18:32 ANS
 R
Ø35451 ØØ8     13   21ØØØØØØ2Ø1375223ØØ9
5659 SUN Ø7/24/77 Ø5:59 BUSY FEBY ANS
 F (TO--2/6)

Ø54165 PH55IE-EAS    DGVLGAMA94A M- JN6OGAMA47A
  1Ø1O1A         JNBOGAMA   DGVLGAMA
ØIE 9 Ø  2.7 1.Ø  28 36
SYNC
Ø45431 ØØ1     2   21ØØØØØØ2Ø11Ø4783ØØ9
4487 SAT Ø7/23/77 18:42 ANS
 F (TO--5/6)
Ø44543 ØØ2     3   21ØØØØØØ2O1214783ØØ9
4488 SAT Ø7/23/77 18:43 ANS
               D
Ø44542 ØØ3    13   21ØØØØØØ2O1484783ØØ9
5419 SUN Ø7/24/77 03:38 BUSY ANS
 F (TO--5/6)
Ø45443 ØØ4    14   21ØØØØØØ2OO484783ØØ9
5420 SUN Ø7/24/77 03:38 BUSY ANS
                  X
Ø43541 ØØ5    15   21ØØØØØØ2OO274783ØØ9
4489 SAT Ø7/24/77 18:44 BUSY ANS
 F (TO--5/6)
Ø44352 ØØ6    16   21ØØØØØØ2OO574783ØØ9
5421 SUN Ø7/24/77 03:39 BUSY ANS
 F (TO--5/6)
Ø43452 ØØ7    1Ø   21ØØØØØØ2O1614783ØØ9
5422 SUN Ø7/24/77 03:39 BUSY ANS
 F (TO--5/6)

Ø55441 PH55IE-EAS    DGVLGAMA94A M- MRTTGAMA422
  1Ø1D1A         MRTTGAMA   UGVLGAMA
ØIE 9 Ø  2.9 1.Ø  28 36
SYNC
Ø15541 ØØ2     3    21ØØØØØØ2ØØ554223ØØ9
45Ø1 SAT Ø7/23/77 18:5Ø ANS
 T
```

Fig. 10—Example of Operational Test Failure Printout

```
MANAGEMENT SUMMARY REPORT FOR CONTROL OFFICE - ACWOGAMAEØ2
------------------------------------------------------------------------

  ROTL  ---  ACWOGAMA97CØ
  ----------------------

    SUMMMARY INTERVAL IS FROM:  FRI 1Ø/21/77 -TO- TUE Ø2/14/78
------------------------------------------------------------------------

--------TRANSMISSION TEST RESULTS--------
1-NUMBER OF TESTS SCHEDULED-                              649
2-NUMBER OF TESTS COMPLETED-                              492
3-NUMBER OF Q1 LOSS-                                        6
4-NUMBER OF Q1 NOISE-                                       3
5-NUMBER OF Q2 LOSS-                                        Ø
6-NUMBER OF Q2 NOISE-                                       Ø
7-NUMBER OF CHRONIC FAILURES-                               Ø
8-NUMBER OF TRUNKS PERMANENTLY BUSY-                        9
9-NUMBER OF TRUNKS HIGH AND DRY-                            3
1Ø-NUMBER OF OTHER TRANSMISSION TEST CALL FAILURES-       14Ø
--------OPERATIONAL TEST RESULTS--------
1-NUMBER OF TESTS SCHEDULED-                                Ø
2-NUMBER OF TESTS COMPLETED-                                Ø
3-NUMBER OF TEST FAILURES-                                  Ø
4-NUMBER OF TRUNKS PERMANENTLY BUSY-                        Ø
5-NUMBER OF TRUNKS FOUND HIGH AND DRY-                      Ø
6-NUMBER OF OTHER OPERATIONAL TEST CALL FAILURES-           Ø
```

Fig. 11—Example of Management Summary Report Printout—CAROT Center

```
? *DISP:MNGS.COFC=ATLNGABUE03
 DATA FROM CONTROL OFFICE---ATLNGABUE03---
 ROTL ID--ATLNGABU12T0
 MANAGEMENT RESULTS -- DATE OF INTERVAL START FRI 10/21/77

        --TRANSMISSION TESTING RESULTS--
   NO. TESTS SCHEDULED=      4426     NO. TESTS COMPLETED=        3582
   NO. Q1 LOSS=               490     NO. Q1 NOISE=                 25
   NO. Q2 LOSS=                 1     NO. Q2 NOISE=                  2
   NO. CHRONIC FAILURES=        0     NO. PERMANENT BUSY=          271
   NO. HIGH AND DRY=            9     NO. OTHERS NOT COMPLETED=    404
        --OPERATIONAL TESTING RESULTS--
   NO. TESTS SCHEDULED=         0     NO. TESTS COMPLETED=           0
   NO. TEST FAILURES=           0     NO. PERMANENT BUSY=            0
   NO. HIGH AND DRY=            0     NO. OTHERS NOT COMPLETED=      0
--------------------
```

Fig. 12—Example of Management Summary Report Printout—Remote User

```
INDEX SUMMARY RESULTS FOR CONTROL OFFICE - ACWOGAMAE02
------------------------------------------------------------------------------

  ROTL  ---  ACWOGAMA97C0
  ------------------------

    SUMMMARY INTERVAL IS FROM:  FRI 10/21/77 -TO- TUE 02/14/78
------------------------------------------------------------------------------

TYP  NTRKS FAC  FREQ      .7     1.7     3.7  L-TOT     Q1N      Q2N   N-TOT
------------------------------------------------------------------------------

8       0   5     0       0       0       0      0       0        0      0
8       0   5    10       0       0       0      0       0        0      0
8       0   5    20       0       0       0      0       0        0      0
8       0   5    30       0       0       0      0       0        0      0
9       0   6     0       0       0       0      0       0        0      0
9       0   6    10       0       0       0      0       0        0      0
9       0   6    20       0       0       0      0       0        0      0
9       0   6    30       0       0       0      0       0        0      0
9       0  10     0       0       0       0      0       0        0      0
9     318  10    10      19       2       0    984       3        0    984
9       0  10    20       0       0       0      0       0        0      0
9       0  10    30       0       0       0      0       0        0      0
```

Fig. 13—Example of Index Summary Results Printout—CAROT Center

```
 *DISP:INDX.COFC=ATLNGABUE03
DATA FROM CONTROL OFFICE---ATLNGABUE03
ROTL ID--ATLNGABU12T0
INDEX SUMMARY DATA -- DATE OF INTERVAL$START FRI 10/21/77
```

TYP	NTRKS	FAC	FREQ	.7	1.7	3.7	L-TOT	Q1N	Q2N	N-TOT
8	0	5	0	0	0	0	0	0	0	0
8	0	5	10	0	0	0	0	0	0	0
8	0	5	20	0	0	0	0	0	0	0
8	0	5	30	0	0	0	0	0	0	0
9	0	6	0	0	0	0	0	0	0	0
9	0	6	10	0	0	0	0	0	0	0
9	0	6	20	0	0	0	0	0	0	0
9	1047	6	30	60	9	1	920	9	1	920
9	0	10	0	0	0	0	0	0	0	0
9	2801	10	10	844	164	0	6244	21	1	6244
9	0	10	20	0	0	0	0	0	0	0
9	0	10	30	0	0	0	0	0	0	0

Fig. 14—Example of Index Summary Results Printout—Remote User

TABLE H

INDEX RESULTS SUMMARY HEADER DESIGNATIONS

HEADER	DEFINITION
TYP	Type of test: 9 — ROTL to 105-type or combination 100-type test line 8 — ROTL to 102-type test line
NTRKS	Total number of trunks in category according to TYP, FAC, and FREQ
FAC	Facility type: 6 — Combination E repeater, nongain with hybrid 5 — Combination E repeater, nongain 10 — Combination other repeater and carrier
FREQ	Frequency of testing: 10 — Weekly 20 — Semimonthly 30 — Monthly
.7	Number of loss measurements deviating from the EML by more than ±0.7 dB but less than or equal to ±1.7 dB
1.7	Number of loss measurements deviating from the EML by more than ±1.7 dB but less than or equal to ±3.7 dB
3.7	Number of loss measurements deviating from the EML by more than 3.7 dB
LTOT	Total number of loss measurements for period covered
Q1N	Total number of noise measurements exceeding maintenance limits
Q2N	Total number of noise measurements exceeding immediate-action limits
NTOT	Total number of noise measurements for period covered

TABLE I

CAROT DEMAND TEST DESIGNATIONS

TEST DESIGNATION	MEANING
LEVEL	Level measurement (near-end and far-end) in dBm
NOISE	Noise measurement (near-end and far-end) in dBrn
L400	Loss at 400 Hz and −16 dBm
L1000	Loss at 1000 Hz and −16 dBm
L2800	Loss at 2800 Hz and −16 dBm
GSALL	Gain slope (L400, L1000, and L2800)
NSNE	Near-end noise measurement
NSFE	Far-end noise measurement
N/T	Noise-with-tone measurement
PAR	Peak-to-average ratio measurement†
ERL	Echo return-loss measurement*
SRL	Singing return-loss measurement at a low frequency*
SRLHI	Singing return-loss measurement at a high frequency*
TSALL	Make all tests CAROT and responders can perform

*Future option for CAROT.
†Future option for CAROT and 52A responders.

```
  DEL:ALL
? TEST:TRK#=Ø54561,TSALL
? TEST:TRK#=Ø53251,OPRL
? SUB
EST. COMPLETION:  Ø9:46
TESTING HAS STARTED

?
*** RESULTS ARE READY ***

? BATRS:ALL
 1. TEST:TRK#=Ø54312,TSALL
ATLNGAFP36AØ
DD51SPØ Ø-    ATLNGAFP36A M- RCDLGATL41T
  1Ø3D1A        RCDLGATL   ATLNGAFP
ØSP 9 Ø  5.Ø 1.Ø  28 36
1Ø5
 Ø23     18   ANS  15Ø2ØØ1Ø2Ø1914Ø41Ø5
 LEVEL - 4.1      - 4.2
 L1ØØØ -19.9      -19.9
 L63ØØ -2Ø.4      -2Ø.5
 L4ØØ  -21.1      -2Ø.9
 NSNE   16
 NSFE  -..
 N/T    35         39

OPN. TEST$NOT ALLOWED FOR TRAFFIC USE SP
 2. TEST:TRK#=Ø54532,OPRL
 ASTLGAMA94AØ
 PH55IE-EAS   ASTLGAMA94A M- SMYRGAMA43A
   1Ø9D5A       SMYRGAMA   ASTLGAMA
ØIE 9 Ø  2.9 1.Ø  28 36
SYNC
 ØØ1      2   ANS  31ØØØØØØ2Ø3844343ØØ9
 P
***END RESULTS***
?
```

Fig. 15—Example of Demand Test Results Printout

EXPLANATION OF FIG. 16

(1) This line contains the listing heading for the partiicular display request (1. DISP:TRK. COFC=ATLNGATHEØ1).

(2) Listing heading (DATA FROM CONTROL OFFICE) and 11-character control office common language ID (ATLNGATHEØ1).

(3) Listing heading (ROTL ID) and ROTL common language ID (ATLNGATH63AØ).

(4) Trunk group number (Ø35454), listing heading (TGID), common language ID of the trunk group including trunk type (DF53CA), 7-character modifier information (-ANI) space, originating office (ATLNGATH63A), space, type of pulsing (D-), space, and terminating office (ALTNGANW43T).

(5) Listing heading indicating number of trunks in trunk group (GROUP HAS 185 TRUNKS).

(6) Listing heading (FAID), 2 spaces, common language ID of facility including 5-character facility number of first facility leaving originating office (_124), 5-character facility type leaving originating office (D2_), 6 spaces, 10-character common language name of far-end terminal building of facility (ATLNGANW_), space, and 10-character common language name of near-end terminal building of facility (ATLNGATH_).

(7) Listing heading (TEST PARM_) and the following test parameter information:

Direction code (Ø); Ø if 1-way trunk or if trunk was tested in direction in which it is most often accessed; 1 if trunk was accessed and tested in alternate direction.

2-character traffic usage code (CA); specifies traffic use during the tests.

Space, trunk impedance (9); 6 for 600Ω, 9 for 900Ω.

Space, test pad loss (Ø); Ø for Ø dB and 2 for 2 dB.

Two spaces, expected measured loss (EML) (5.Ø).

Space, Q1 loss deviation limit (1.Ø).

Two spaces, Q1 limit noise (28).

Space, Q2 limit noise (36).

(8) Trunk number (Ø43453), listing heading (TK NO.-), 4 character trunk identification number (1Ø33), three spaces, listing heading (CH NO.-), 5-character channel identification number (___1), three spaces, listing heading (PRM-), and 7-character priming digits (_2632Ø) in the unconfigured format (see Table F and Section 190-102-203).

(9) Four spaces; day, date, and time of the last test attempt (THU Ø7/1Ø/75 Ø5:52); and trunk test call dispostions (BUSY BUSY BUSY BUSY). In this case the trunk was busy on all four previous test passes. If this trunk were tested the next day on the first test pass, a data display request would then show ANS BUSY BUSY BUSY for the test call dispositions. Note that only the first call disposition would change.

(10) Four spaces; day, date, and time of the last test attempt (THU Ø7/1Ø/75 ØØ:ØØ); and trunk test call disposition (ANS) for trunk 1Ø34. It is important to note that the date and time shown apply to the following test results shown only if one of the dispositions is ANS, EFOB, or SPHT. The latter two dispositions occur during or after the transmission test, and therefore would be accompanied by measurement results. (See Table F).

(11) Level measurement readings in dBm; far-to-near level (–5.Ø) followed by near-to-far level (–5.Ø). Measurements which are below the measurement range of the responder (< –15.5 dBm) are printed as:

–....

Measurements range (> +5.0 dBm) are printed as:

+....

"No data received" is indicated by N/D.

(12) Results of near-end noise measurements in dBrn (3Ø). For this measurement, a Q1 flag is assigned. Results that are below the measurement range of the responder (< –15.5 dBm) are printed as:

–..

Above-range measurements (> 55 dBrn) are printed as:

+..

"No data received" is indicated by N/D.

(13) Results of far-end noise measurement in dBrn (16). Results of underrange and above-range measurements and "no data received" are printed as explained in (12) for near-end noise measurements. It is important to note that when tests are made to a 100-type test line, an estimate is made of the far-end noise. This estimate is made by adding the numerical value of the near-end loss measurement to the near-end noise measurement.

Note: Circled numbers appearing before lines on the printout are used to associate the line with the corresponding explanation.

PRINTOUT EXAMPLE

```
(1)  1. DISP:TRK.COFC=ATLNGATHEØ1
(2)  DATA FROM CONTROL OFFICE---ATLNGATHEØ1
(3)  ROTL ID---ATLNGATH63AØ
(4)  Ø35454 TGID-DF53CA-ANI ATLNGATH63A D- ATLNGAMW43T
(5)  GROUP HAS    185  TRUNKS
(6)    FAID-  124D2          ATLNGANW  ATLNGATH
(7)  TEST PARM--ØCA 9 Ø 5.Ø 1.Ø 28 36
(8)  Ø43453 TK NO.-1Ø33 CH NO.-1 PRM-  2632Ø
(9)       THU Ø7/1Ø/75 Ø5:52 BUSY BUSY BUSY BUSY
     Ø43454 TK NO.-1Ø34 CH NO.-2 PRM-  2633Ø
(10)      THU Ø7/1Ø/75 ØØ:ØØ ANS
(11) LEVEL - 5.Ø       - 5.Ø
(12) NSNE   3Ø    (Q1)
(13) NSFE   16
     Ø43455 TK NO.-1Ø35 CH NO.-3  PRM-  2634Ø
        THU Ø7/1Ø/75 Ø3:Ø8 BUSY ANS
     LEVEL  - 5.Ø     - 5.Ø
     NSNE   31    (Q1)
     NSFE   17
```

Fig. 16—Example of a Data Display With Explanation

CAROT - DAILY OFFICE SUMMARY

ROTL OFFICE	SCHEDULED	TESTED	TROUBLES	NO TRIES	% TESTED
ACWOGAMA974Ø	7Ø	6Ø	13	Ø	85.7 %
ATLNGABH34AØ	297	248	5	44	83.5 %
ATLNGABU23AØ	114	113	4	Ø	99.1 %
ATLNGABU23A1	82	76	1Ø	6	92.6 %
ATLNGABU26AØ	********** NOT SCHEDULED **********				
ATLNGABU12TØ	116Ø	952	184	133	82.Ø %
ATLNGABU23CØ	26	26	Ø	Ø	1ØØ.Ø %
ATLNGACD28AØ	4Ø5	375	141	16	92.5 %
ATLNGADE37AØ	141	111	15	2Ø	78.7 %
ATLNGADE37A1	217	191	5Ø	13	88.Ø %
ATLNGAEP76AØ	2ØØ	175	33	15	87.5 %
ATLNGAEP76A1	168	15Ø	9	9	89.2 %
ATLNGAGR24AØ	********** NOT SCHEDULED **********				
ATLNGAHR79AØ	2Ø7	157	13	37	75.8 %
ATLNGAHR79A1	78	6Ø	13	17	76.9 %
ATLNGAIC29AØ	********** NOT SCHEDULED **********				
ATLNGALA62AØ	2Ø6	185	21	16	89.8 %
ATLNGALA62A1	46	39	37	Ø	84.7 %
ATLNGAPP89AØ	226	2ØØ	28	13	88.4 %
ATLNGASS25AØ	589	539	144	7	91.5 %
ATLNGATH63AØ	534	427	188	13	79.9 %
ATLNGATH32AØ	********** NOT SCHEDULED **********				
TOTALS	4766	4Ø84	9Ø8	359	85.6 %

Fig. 17—Example of CAROT Daily Office Summary Printout

CAROT - DAILY OFFICE TRANSMISSION SUMMARY 07/25/77

ROTL/CONTROL OFFICE IO	SCHEDULED	% NOT TRIED	% NOT COMPLETED	% TESTED	% Q2	% Q1
ACWOGAMA970@ACWOGAMAE@2	********** NOT SCHEDULED **********					
AGSTGAAU863@AGSTGAAUE@1	41	7.3 %	68.2 %	24.3 %	0.0 %	0.0%
AGSTGAFL79A@AGSTGAFLE@1	56	33.9 %	3.5 %	62.5 %	2.8 %	17.1%
AGSTGAMT72A@AGSTGAMTE@1	74	48.6 %	13.5 %	37.8 %	0.0 %	35.7%
AGSTGAMT72A1AGSTGAMTE@1	21	23.8 %	39.0 %	38.0 %	0.0 %	0.0%
AGSTGATH73A@AGSTGATHE@1	64	39.0 %	3.1 %	57.8 %	0.0 %	8.1%
ALBYGAMA43A@ALBYGAMAE@1	30	3.3 %	0.0 %	96.6 %	0.0 %	3.4%
ALBYGAMA@11@ALBYGAMAT@1	92	4.3 %	21.7 %	73.9 %	1.4 %	32.3%
ASTLGAMA94A@ASTLGAMAE@1	100	2.1 %	3.6 %	94.2 %	0.0 %	0.5%
ATHNGAMA54C@ATHNGAMAE@1	14	7.1 %	21.4 %	71.4 %	0.0 %	20.0%
ATHNGAMA54A@ATHNGAMAE@2	31	41.9 %	12.9 %	45.1 %	64.2 %	35.7%
ATHNGAMA@21@ATHNGAMAT@1	78	29.4 %	46.1 %	24.3 %	0.0 %	68.4%
ATLNGAAD69A@ATLNGAADE@1	153	3.0 %	12.8 %	84.0 %	0.0 %	5.8%
ATLNGABH344@ATLNGAHHE@1	358	42.4 %	2.5 %	55.0 %	0.0 %	21.8%
ATLNGABU23A@ATLNGABUE@1	68	11.7 %	7.3 %	80.8 %	0.0 %	1.8%
ATLMGABU23A1ATLNGABUE@1	93	7.5 %	5.3 %	67.0 %	0.0 %	22.2%
ATLNGABU26A@ATLNGABUE@2	211	3.3 %	9.0 %	87.6 %	0.0 %	3.2%
ATLNGACO28A@ATLNGACOE@1	690	3.9 %	6.8 %	89.2 %	0.4 %	3.2%
ATLNGACO28A@ATLNGACOE@1	235	15.7 %	3.8 %	80.4 %	0.0 %	79.8%
ATLNGACS65AMATLNGACSE@1	231	0.4 %	1.2 %	98.2 %	0.0 %	0.4%
ATLNGACS65BA@ATLNGACE@1	149	0.0 %	15.4 %	78.5 %	0.0 %	11.1%
ATLNGACS22A@ATLNGACSE@3	59	35.5 %	1.6 %	62.7 %	0.0 %	0.0%
ATLNGADE37A@ATLNGADEE@1	97	31.9 %	6.1 %	61.8 %	0.0 %	0.0%
ATLNGADE37A1ATLNGADEE@1	182	9.8 %	3.0 %	90.1 %	0.0 %	6.5%
ATLNGAEL621@ATLNGAELE@1	609	67.1 %	8.8 %	23.9 %	0.0 %	13.0%

Fig. 18—Example of Transmission Summary Report

CAROT - DAILY OFFICE OPERATIONAL SUMMARY MON Ø7/25/77

ROTL/CONTROL OFFICE ID	SCHEDULED	% NOT TRIED	% NOT COMPLETED	% TESTED	% FAILED
LGRNGAMABBAØLGRNGAMAEØ1	********** NOT SCHEDULED **********				
LGVLGAMAA66ØLGVLGAMAEØ1	********** NOT SCHEDULED **********				
LLBNGAMA92AØLLBNGAMAEØ1	131	33.5 %	12.9 %	53.4 %	Ø.Ø %
LRVLGAO596AØLRVLGAOSEØ1	********** NOT SCHEDULED **********				
LTVLGAMA927ØLTVLGAMAEØ1	********** NOT SCHEDULED **********				
MACNGAGP78AØMACNGAGPEØ1	********** NOT SCHEDULED **********				
MACNGAMT74AØMACNGANTEØ1	********** NOT SCHEDULED **********				
MACNGAVN47AØNAONGAVENØ1	********** NOT SCHEDULED **********				
MCONGAMA95AØMCONGAMAEØ1	********** NOT SCHEDULED **********				
MLLNGAMAØ1TØMLLNGAMATØ1	********** NOT SCHEDULED **********				
MLLNGAMAØ1TØMLLNGAMATØ1	********** NOT SCHEDULED **********				
MRRWGAMA96AØMRRWGAMAEØ1	********** NOT SCHEDULED **********				
MRTTGAEA97AØMRTTGAEAEØ1	********** NOT SCHEDULED **********				
MRTTGAMA42EØMRTTGAMAEØ1	********** NOT SCHEDULED **********				
MRTTGAMA42E1MRTTGAMAEØ1	********** NOT SCHEDULED **********				
MRTTGAMA42CØMRTTGAMAEØ2	********** NOT SCHEDULED **********				
NRCRGAMA44AØNRCRGAMAEØ1	********** NOT SCHEDULED **********				
NWNNGAMA25AØNWNNGAMAEØ1	********** NOT SCHEDULED **********				
NWNNGAMA25AØNWNNGAMATØ1	********** NOT SCHEDULED **********				
PLMTGAMA463ØPLMTGAMAEØ1	********** NOT SCHEDULED **********				
POLRGAMA748ØPOLRGAMAEØ1	********** NOT SCHEDULED **********				
PTCYGAMA48AØPTCYGAMAEØ1	********** NOT SCHEDULED **********				
PWSPGAMA943ØPWSPGAMAEØ1	********** NOT SCHEDULED **********				
ROMEGADL23AØROMEGADLEØ1	********** NOT SCHEDULED **********				
ROMEGATLØ21ØROMEGATLEØ2	********** NOT SCHEDULED **********				

Fig. 19—Example of Operational Summary Report

EXPLANATION

(1) This is the request as entered by the user, preceded by the batch line number; in this case, a request to complete a specific item requiring a CAROT test

(2) This line is a representative example of the overall status of the completion request. Refer to Table J for a complete list of the possibilities at this point

(3) Common language ROTL office ID

(4) Test parameters used in making the measurement and in testing against circuit order limits. Using the example, they are as follows:

OIE	Direction & Traffic Usage
9	Impedance (900 ohms)
0	Test pad value (0 dB)
2.9	EML (expected measured loss) in dB
0.5	Circuit order level limit in dB
1.5	Upper 400-Hz circuit order limit in dB
2.0	Lower 400-Hz circuit order limit in dB
2.5	Upper 2800-Hz circuit order limit in dB
3.0	Lower 2800-Hz circuit order limit in dB
24	Circuit order noise limit in dBrnC
41	Circuit order noise with tone limit as a signal-to-noise ratio

(5) Transmission test line type

(6) Trunk traffic number (652), channel or wire pair number (2), test disposition (ANS) and ROTL trunk priming. This line is configured exactly as in the standard demand test request.

NOTE: In lines 7 through 12, measurements follow the same format. Shown below is an explanation of lines 7 and 11 as examples. Numbers enclosed in parentheses indicate circuit order limits.

For line 7, the first unenclosed number, -3.1, represents the near end (-2.4/-3.4) for loss measurements in the far-to-near direction. The second unenclosed number, -3.2, represents the far-end received level followed by the allowed tolerence (-2.4/-3.4) for loss measurements in the near-to-far direction

For line 11, the first enclosed number, -.., represents the near-end noise level followed by the upper noise limit (24). The second unenclosed number, -.., represents the far-end noise level measurement followed by the upper noise limit (24)

(7) Received level at 1000 Hz, 0 dBm

(8) Received level at 1000 Hz, -16 dBm

(9) Received level at 2800 Hz, -16 dBm. The F at the extreme right of the page indicates a failure to stay within the specified limits on either or both of the measurements

(10) Received level at 400 Hz, -16 dBm. Note that this measurement also exceeded (failed) a limit

(11) Measured background. C-message noise. Note that in this case the tolerance is an upper limit on the measured noise, as any level of noise less than this is acceptable. The symbol -.. indicates reading below range of the responder (<15 dBrn), and +.. indicates a reading above the range of the responder (>55 dBrn). No data received is indicated by N/D

(12) Measured noise with tone with similar limits

(13) Operational test line type (synchronous)

(14) Same as line 6, but with operational test line ROTL priming

(15) Results of operational test. In this instance the test failed (F) due to a time-out (TO) because only two tones were received in the time slot when six were expected (2/6)

```
(1) 1.COMP:ITEM=234100/91
(2) ***STATUS=COULD NOT COMPLETE; FAILED CIRCUIT ORDER LIMITS***
(3) RCMDGAMA94AO
(4) OIE 9 0 2.9 0.5 1.5 2.0 2.5 3.0  24  41
(5) 105
(6) 652       2    ANS 1501000020260404105
(7) LEVEL  -3.1  (-2.4/-3.4)-3.2  (-2.4/-3.4)
(8) L1000 -18.7  (-18.4/-19.4)-19.4  (-18.4/-19.4)
(9) L2800  -18.2  (-15.7/-21.2)-23.4  (-16.4/-21.9)  F
(10) L400   -16.6  (-16.7/-20.2)-19.1  (-17.4/-20.9)  F
(11) NOISE -..      (24)          17    (24)
(12) N/T   -..      (30)          28    (30)
(13) SYN
(14) 652     2     ANS    3101000020260404105
(15) F      (TO-2/6)
```

Fig. 20—Item/Order Completion Test Results Example

TABLE J

LIST OF ERROR MESSAGES

```
0001  *  A LIST OF THE PRESENT ERROR MESSAGES 01-27-78  SOM   MLIST
0002  *     . "*** STATUS: COMPLETED (NO TESTING INVOLVED) ***"
0003  *     . "*** STATUS: COMPLETED AND PASSED CIRCUIT ORDER LIMITS ***"
0004  *     . "*** STATUS: COMPLETED BY OVERRIDE;
0005  *        FAILED CIRCUIT ORDER LIMITS ***"
0006  *     . "*** STATUS: COMPLETED BY OVERRIDE; EQUIPMENT FAILURE ***"
0007  *     . "*** STATUS: COULD NOT COMPLETE;
0008  *        PLEASE REPORT ERROR (SEGNAME/CODEWORD) ***"
0009  *     . "*** STATUS: COULD NOT COMPLETE; FAILED CIRCUIT ORDER LIMITS ***"
0010  *     . "*** STATUS: COULD NOT COMPLETE; EQUIPMENT FAILURE ***"
0011  *     . "*** STATUS: COULD NOT COMPLETE; ALREADY COMPLETED ***"
0012  *     . "*** STATUS: COULD NOT COMPLETE; HAS BEEN CANCELLED ***"
0013  *     . "*** STATUS: COULD NOT COMPLETE; NOT ALL ITEMS COMPLETED ***"
0014  *     . "*** STATUS: COULD NOT COMPLETE; DUE DATE HAS BEEN PASSED ***"
0015  *     . "*** STATUS: COULD NOT TEST;
0016  *        PLEASE REPORT ERROR (SEGNAME/CODEWORD) ***"
0017  *     . "*** STATUS: COULD NOT TEST; EQUIPMENT FAILURE ***"
0018  *     . "*** STATUS: COULD NOT COMPLETE;
0019  *        TRUNK COULD NOT BE ACCESSED ***"
0020  *     . "*** STATUS: COMPLETED BY OVERRIDE;
0021  *        TRUNK COULD NOT BE ACCESSED ***"
0022  *     . "*** STATUS: TESTED CIRCUIT FAILED CIRCUIT ORDER LIMITS ***"
0023  *     . "*** STATUS: TESTED CIRCUIT PASSED CIRCUIT ORDER LIMITS ***"
0024  *     . "*** STATUS: COULD NOT TEST; TRUNK COULD NOT BE ACCESSED ***"
0025  *     . "*** STATUS: CIRCUIT ORDER AND ITEMS COMPLETED ***"
```

* If this message appears, please report this condition