MECHANIZED EVALUATION OF RADIO TRANSMISSION TESTS (MERTT)

CHANNEL MEASUREMENT PLAN

DESCRIPTION

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1. GENERAL

1.01 This section describes the Mechanized Evaluation of Radio Transmission Tests (MERTT), a software system that provides a transmission performance and maintenance measurement plan for microwave radio switch sections. Data entries to MERTT and indexes/reports generated by MERTT are described in detail. This section conforms to the second generic of MERTT.

1.02 Whenever this section is reissued, the reason for reissue will be explained in this paragraph.

1.03 The title for each figure includes a number in parentheses that identifies the paragraph in which the figure is referenced.

1.04 The MERTT software system uses the McGill University System for Interactive Computing (MUSIC)* as an operating system. In turn, MUSIC, which is a time-share system, is resident in the IBM/370† computer at American Telephone and Telegraph (AT&T) Long Lines, White Plains, New York.

1.05 Part 2 of this section provides an overview of the MERTT measurement plan.

1.06 Part 3 describes the procedures, forms, and modules by which data are entered into MERTT.

1.07 Part 4 describes the algorithm used by MERTT to compute the channel performance and maintenance indexes.

1.08 Part 5 describes the various MERTT reports that are available to the user on request.

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2. OVERVIEW OF MERTT MEASUREMENT PLAN

2.01 This part briefly describes the highlights of the MERTT measurement plan, including: data input, computation, and output; a sequence of MERTT-related events; and operational advantages of MERTT. A more detailed description is included in Parts 3, 4, and 5.

2.02 The performance of an overall microwave radio facility depends on the degree with which individual switch sections constituting that facility meet design, engineered, and maintenance criteria. The MERTT system provides a measurement of the static performance of radio facilities (ie, long term performance rather than dynamic, day-to-day performance) by analyzing the results of scheduled, periodic, radio switch section tests. Based on the test results, MERTT computes a performance index and a maintenance index for each radio channel in a switch section.

2.03 The three major aspects of the MERTT measurement plan are as follows:

- Data input—by the Field, the MERTT coordinator, and Headquarters Staff
- Data computation—channel performance and maintenance indexes
- Data output—via user-requested reports.

2.04 A brief sequence of MERTT-related events is as follows:

(a) The Field enters the results of regularly-scheduled radio channel tests on Form BS-1150, Channel Performance Data.

(b) Next, the contents of the form are input to MERTT, where the data are held in a temporary file area of the data base.

(c) If channel test results are out of limits [do not meet Bell System Practice (BSP) requirements] and the condition cannot be corrected locally, the Field requests Engineering assistance via Form BS-1151, Radio Channel Transmission Performance Out-of-Limit Report.

(d) For such channels, the MERTT coordinator (telephone company or AT&T Long Lines)

makes an entry in the channel record in MERTT that an authorized Engineering request is on file. The coordinator also enters any hardship limit granted by Engineering.

(e) On the first working day of the month, Headquarters Staff transfers the contents of the temporary (holding) file in the MERTT data base to the permanent (master) file in the data base.

(f) These new data are used by MERTT to compute the monthly channel performance and maintenance indexes.

(g) The last event is that, on request by a user, MERTT creates various reports that provide the indexes computed in (f) above and other performance indicators.

Figure 1 shows the sequence of major events in the MERTT process.

2.05 The following items are considered by MERTT in computing the channel indexes:

- Channel test interval
- Type and severity of out-of-limits test results
- Number of months out-of-limits conditions have existed
- Authorized Engineering assistance request on file
- Hardship limit granted by Engineering.

2.06 The user reports currently provided by MERTT are as follows:

- Channel Performance
- Channel Status
- Holding File Data
- Channel Trouble Type
- Message Unit Radio (MUR) Channel Status
- Worst Channel Status
- Responsibility Code List
- Channel Test Interval Listing.

In addition, an Out-of-Limits Report is planned. The reports may be obtained for an entire switch section, for a maintenance center, for a district, etc.

2.07 The MERTT measurement plan offers the following operational advantages:

- Requires a minimal amount of Field input
- Is flexible and adaptable to existing or future test procedures and equipment
- Provides for easy data input and retrieval
- Allows local management a degree of flexibility in adjusting test intervals, depending on local circumstances
- Directly relates the service impact of an out-of-limits condition with a numeric index (see note)
- Can be adapted to an automatic radio measurement system when available.

Note: An index of 100 indicates that the facilities are being maintained to design specifications. The designed maintenance specification is based on statistical results of subjective tests given to the telephone user. Should maintenance quality become degraded from the design criteria, MERTT indexes will be in direct correlation to the quality of service now tariffed and expected by the customer.

2.08 The MERTT measurement plan is a valuable management tool that should be used to identify potential or actual weakspots in radio transmission. Deteriorating trends and service-affecting test results should be a matter of concern. Local management should evaluate performance at the maintenance center/local office level. Staff managers should analyze results at company, regional, and office levels.

2.09 The objective of maintaining an overall radio facility to the point that all components constantly meet desired criteria is influenced by such factors as cost, productivity, scheduling, coordination, equipment stability, and supply availability. The MERTT measurement plan furnishes a service indicator that should be balanced with other measurement plans in producing optimum results.

3. DATA ENTRY

3.01 This part describes the following items associated with entry of data into MERTT:

- Data input conventions
- Responsibility codes
- Channel Performance Data Form BS-1150
- Engineering assistance and hardship limits (including Channel Performance Out-of-Limit Form BS-1151)
- Clocks (counters)
- User input modules.

DATA INPUT CONVENTIONS

3.02 Any type of data terminal with a dial-up data set may be used to enter data into MERTT. The data link to the MUSIC operating system, which supports MERTT, is via a 300- or 1200-baud, half duplex, asynchronous, American Standard Code for Information Interchange (ASCII) channel.

3.03 Field offices without access to a data terminal should complete Form BS-1150, Channel Performance Data, and mail, per local instructions, to the location designated as the data input location.

3.04 The current release of the MUSIC User's Guide should be consulted for log-in procedures, for file construction, and for the general use of MUSIC. This section is limited to the specific application for MERTT.

3.05 There are four user modules that provide the user with access to MERTT, as follows:

- Field's Input Module
- Coordinator's Update Module
- Headquarters' Update Module
- Users' Report Module.

3.06 The programs that the user can execute via the modules are as follows:

(a) **MERTT.INPUT:** Executed by the Field to input data

(b) **MERTT.CORD.UPD:** Executed by the MERTT coordinator to update data

(c) **MERT.HQ.UPD** and **MERT.HQ.TBL:** Executed by Headquarters Staff to update the data base or data base tables

(d) **MERTT.RPT:** Executed by any user.

3.07 The five data base files of specific interest to the user are as follows:

(a) ***Input Area:*** Input area for duration of terminal session. Each user has his/her own personal input area.

(b) ***Save Library <filename>:*** Permanent storage area. A user can have as many Save Library files as needed; each must be given a unique name of up to 17 characters.

(c) ***Error File (MERTT.ERROR):*** File to which MERTT moves channel data with input format errors.

(d) ***Holding File:*** Temporary storage area until first working day of the month.

(e) ***Master File:*** Permanent storage area into which the holding file is transferred on the first working day of the month. The updated contents of this file then are used by MERTT to compute the monthly radio channel performance and maintenance indexes.

3.08 User interaction with MERTT runs in a conversational mode, as MERTT prompts the user for inputs. Various lists (menus) are provided by MERTT from which the user specifies an item, eg, an update feature or report.

3.09 The user enters data in a field-aligned format, rather than in a column-aligned format. Delimiters are used to separate the fields. Any delimiter may be used, eg, a blank space, a dash, etc, as long as the same type of delimiter is used throughout the data entry.

3.10 The basic user input commands follow:

(a) **/INPUT:** Entered when the terminal is in the command mode. Entries made following this command are stored in the input file.

(b) **/END:** Ends the INPUT mode. (**/CANCEL** also ends the INPUT mode.)

(c) **/RUN:** Tells MUSIC to start running the job.

(d) **/ENDRUN:** Combines **/END** and **/RUN.** Ends the INPUT mode and starts the job running. (This combined form should be used only if the user is sure that the input data are correct.)

(e) **/SAVE <filename>:** Causes the current contents of the input area to be copied to the Save Library file and to be stored under the specified name.

(f) **/INCLUDE <filename>:** Causes the specified file to be located and read.

3.11 The three procedures listed below may be used to input data to MERTT:

(a) Punch data onto paper or magnetic tape (batch mode only)

(b) Input and save data in a Save Library file

(c) Type data from the terminal keyboard into the input area just before executing the MERTT.INPUT program.

3.12 The succeeding paragraphs of this part explain the application of these data input conventions in greater detail.

RESPONSIBILITY CODES

3.13 Each channel grouping for which data are entered into MERTT must be identified by its applicable Functional Accounting responsibility code, as listed in the Functional Accounting hierarchy tables. The code is a 9-position alphanumeric code that represents each administrative entity in the Operating Telephone Company (OTC) or AT&T Long Lines, down to the local maintenance manager's level. In those cases where the latter may be responsibile for more than one office, the last position on the right in the code may be used to designate subdivision by first line supervision or satellite maintenance location. An example responsibility code could be: X31212041.

3.14 In the event that channel groupings are consolidated or are affected by an organizational change, the MERTT coordinator (company or regional) must make the appropriate responsibility code change in the MERTT data base. The receiving office is responsible for requesting the coordinator to make the change; the request should be made via the Administrative Network (ADnet) or by letter. If the change is needed quickly, it may be requested by telephone, but the request should always be followed up with a letter for record purposes. The coordinator is responsible for executing the specified change, either during the month in which the request is made or at a time agreed to with the requesting office. Under no circumstances should the new responsibility code be used until the office has been notified by the coordinator that the change has been made in the data base.

CHANNEL PERFORMANCE DATA FORM BS-1150

3.15 Form BS-1150 is a work sheet to be used by the Field as a means of transferring test results from work locations to input terminal locations. The test results are entered into the MERTT data base, according to local procedures, and are used by MERTT to compute the channel performance and maintenance indexes. The following entries are required on Form BS-1150 for each channel tested:

(a) Responsibility code

(b) Channel type and number (see Table A for channel type)

(c) Common Language Location Identification (CLLI) code of transmitting office

(d) The CLLI code of receiving office

(e) Deviation from BSP test requirements for the following:

(1) Baseband response (BBR)

(2) Thermal noise (TH)

(3) Tones (TN)

(4) Noise load (NL)

In all cases, the actual deviation from BSP requirements must be entered even if a hardship limit has been granted.

(f) Actual reading for cochannel/interference (C/I).

The form also provides space for an optional entry of the actual worst hop reading for faded/interference

(F/I). The Field also indicates on the form if a particular channel is to be deleted from the data base due to retirement, etc.

3.16 ***No channel may be eliminated from the data base because of maintenance or engineering difficulty.*** The procedures to be followed for a channel with this type of difficulty are described in paragraphs 3.19 through 3.31.

3.17 Figure 2 is an example of a completed Form BS-1150, with an explanation of each entry. The form may be ordered from Western Electric as follows:

Western Electric Company, Inc.
Information Distribution Center
2833 North Franklin Road
Indianapolis, Indiana 46226

3.18 It is important to emphasize that the success or failure of the MERTT measurement plan depends on accurate reporting of test results on all radio channels within an area of responsibility. All levels in the hierarchy are responsible for ensuring that there are test records in the MERTT data base for all channels in the area of responsibility. The total number of channels should agree with item counts for work units included under switching section control responsibilities.

ENGINEERING ASSISTANCE AND HARDSHIP LIMITS

3.19 As stated in paragraph 3.16, a channel may not be eliminated from the MERTT data base because of maintenance or engineering difficulty. Instead, those channels requiring Engineering assistance, and those for which hardship limits subsequently are granted by Engineering, are identified as such in the data base. The MERTT coordinator (company or regional) is responsible for these entries in the data base (see paragraph 3.53). These two Engineering conditions are considered by MERTT when the channel maintenance index is computed.

3.20 Certain administrative procedures must be followed before a channel can be identified in MERTT as Engineering assistance requested. These procedures are described in the following paragraphs.

3.21 When the test results for baseband response, thermal noise, tone, or noise load are determined to be out of limits, the Field should sectionalize and attempt to correct the condition by performing the trouble analysis tests covered in Section 422-210-500. Switch section tests should be made in one direction at a time, with all other channels in a normal condition.

3.22 If the out-of-limits condition cannot be corrected, the Field should formally request Engineering assistance in resolving the problem by submitting Form BS-1151, Radio Channel Transmission Performance Out-of-Limit Report, to the District Operations Manager. Figure 3 is a sample Form BS-1151. The form can be ordered from Western Electric at the address listed in paragraph 3.17.

3.23 The following information should be included with Form BS-1151 when it is forwarded to the District Operations Manager:

(a) Original Scientific Atlanta Radio Performance Analyzer* plots for the four switch section test parameters on the channel in trouble, with all limits marked on each Scientific Atlanta sheet. If there is a tone problem, a C/I plot should be included.

(b) Detailed data obtained in the trouble analysis tests, a list of test equipment used, and a narrative of the steps taken to correct the problem.

(c) A statement indicating whether or not the trouble is causing service problems. Examples of service problems would be: noisy message circuits; failure to switch protection; excessive switching activity; customer complaints; turned down circuits; etc.

(d) A clear statement of the message circuit load on the channel, number of hops under test, mileage, type of frequency modulation (FM) terminal (transmit or receive) used.

3.24 The District Operations Manager will verify that proper action has been taken by the reporting location and will suggest additional tests if they have been overlooked. The District also should provide assistance in testing at the field location, and if necessary, consult with the Region or Company Operations Staff. If the problem cannot be cleared, Form BS-1151 will be forwarded to the Operations Staff.

3.25 The Operations Staff [projected Facility Technical Assistance Group (FTAG)] will verify

*Registered Trademark of Scientific Atlanta Co.

that the proper tests have been made, will suggest additional tests if they have been overlooked, and will provide assistance in testing at the field location if required. In addition, where necessary, the Operations Staff (FTAG) should consult with the Region/Company Engineering Staff. If the problem cannot be resolved, Form BS-1151 will be forwarded to Regional/Company Engineering.

3.26 The Radio Engineer will acknowledge receipt of the report by returning a copy of Form BS-1151 to the originating office within 30 days.

3.27 Figure 4 illustrates the Engineering request/hardship limit flow.

3.28 A joint Engineering/Operations field investigation should be scheduled so that a resolution of the out-of-limits case will be completed within 120 days of the receipt of Form BS-1151. ***Service-affecting cases will be assigned highest priority.***

3.29 ***It is the responsibility of the local Operations Manager to ensure that transmission performance will continue to be monitored and that maintenance will continue to be performed as required on those channels that have an authorized Engineering assistance.***

3.30 Hardship limits will be issued by Regional/Company Engineering under the following guidelines:

(a) Cases that a field investigation proves would require an unjustifiable expense to meet existing BSP limits will be granted hardship limits.

(b) Cases that will require more than 6 months to complete will be granted hardship limits.

(c) Hardship limits will be assigned only to specific parameters, ie, only 10-MHz tones; only tones between 500 KHz and 5 MHz; etc. All other switch section test parameters must be met.

(d) The level of hardship limits will be specific. The level should be determined during the field investigation by Engineering and Operations, taking into consideration the cause of the out-of-limits condition; the existing levels; and the ability of the maintenance force to maintain these levels. Once established, the channel must be maintained to the new limits.

(e) Cases for which hardship limits have been assigned will be available as a report (see paragraph 5.02). These cases will be reviewed annually by Engineering to ensure that corrective measures are being pursued or that the cases still fall in category (a) or (b) above. The results then will be reviewed with Operations, and a written status report will be provided to Operations.

3.31 When the necessity for Engineering assistance or hardship limits is no longer valid for a channel, the coordinator is responsible for removing these indications from the data base.

CLOCKS (COUNTERS)

3.32 Each channel record may have several types of clocks (counters) associated with it, as listed below:

- Test interval clock
- Out-of-limits clock

  (One clock each for BBR, TH, TN, NL—4 total)

- Engineering assistance clock/hardship clock

  (***Either*** an Engineering assistance clock ***or*** a hardship clock for BBR, TH, TN, NL, C/I—5 total)

- Tone clock

  (One clock each for C/I, equipment, common broadcast, unknown origin, and "other" tone categories as listed in Table B—5 total).

All the clocks start counting at zero. Their impact on the channel performance and maintenance indexes is described in Part 4.

3.33 ***Test Interval Clock:*** This clock indicates the number of calendar months between tests of a radio channel. The clock is started automatically on initial entry of a channel record into MERTT. Each calendar month thereafter, MERTT advances the clock by one until new test data are received indicating that the channel has been retested. At this time, MERTT resets the clock to zero, and the clock

once again advances by one each calendar month until it is reset by receipt of new data.

3.34 The Headquarters Staff and the MERTT coordinator can adjust the test interval clock (see paragraph 3.66).

3.35 ***Out-of-Limits Clock:*** This clock indicates the number of calendar months a channel remains out of limits for any one of its four test parameters, ie, baseband response, thermal noise, tone, or noise load. The clock is started automatically on the first input of the out-of-limits data. Each calendar month thereafter, MERTT advances the clock by one until in-limits data are input for the particular test parameter.

3.36 The coordinator can adjust the out-of-limits clock (see paragraph 3.65).

3.37 ***Engineering Assistance Clock:*** This clock indicates the number of calendar months since Engineering assistance was requested by the District Operations Manager for problems associated with baseband response, thermal noise, tone, noise load, or cochannel/interference test results. The MERTT coordinator starts this clock by an entry in the channel record in the MERTT data base (see paragraph 3.64). Each calendar month thereafter, MERTT advances the clock by one until the coordinator clears the clock or replaces it with a hardship clock.

3.38 ***Hardship Clock:*** This clock indicates the number of calendar months since Engineering granted a hardship limit to baseband response, thermal noise, tone, or noise load test parameters. The MERTT coordinator starts this clock by an entry in the channel record in the data base (see paragraph 3.64). Each calendar month thereafter, MERTT advances the clock by one until the coordinator clears the clock.

3.39 ***Tone Clock:*** This clock indicates the number of calendar months that there are problems with C/I, equipment, common broadcast, unknown origin, or other categories of tones. This is an optional entry. If used, the MERTT coordinator starts the clock by an entry in the channel record in the data base (see paragraph 3.68). Each calendar month thereafter, MERTT advances the clock by one until the coordinator clears the clock.

DATA INPUT MODULES

3.40 The three modules that provide user access to MERTT for input of data are the Field's Input Module, the Coordinator's Update Module, and the Headquarters' Update Module. (The fourth, the Report Module, is used to extract data from MERTT, as described in Part 5). Each input module provides specific user functions for interacting with MERTT; these functions are explained under the applicable headings that follow.

A. Field's Input Module

3.41 The Field accesses MERTT via the Input Module (MERTT.INPUT program) to perform the following functions:

- Enter radio channel switch section test data from Form BS-1150, Channel Performance Data
- Make changes to test data previously entered
- Delete channels from MERTT.

Only the Field can perform these functions. Figure 5 shows the channel record layout for inputting data to MERTT.

Input Modes

3.42 The Field has a choice of two modes (methods) for entering channel test data into MERTT: the Save Library file mode and the direct input mode.

3.43 In the Save Library file mode, the Field creates a Save Library file of all channel data from Form BS-1150 for each switch section. As many Save Library files as are required may be created, but each must have a unique name of no more than 17 characters. Each channel and its associated data from Form BS-1150 are entered in the Save Library file for the applicable switch section. After a Save Library file is created for a switch section, it is necessary only to enter new test deviation readings in the file in order to update a channel record. In the direct input mode, all of the channel data from Form BS-1150 are input to MERTT each time current test results are entered. Obviously, the direct input mode requires more input time and there is a greater chance for input errors than in the Save Library file mode. Therefore, the direct input mode should be

used to enter only one or two lines of data, while the Save Library mode should be used to enter numerous lines of data.

3.44 The Save Library input mode is as follows:

```
/INPUT
/INC MERTT.INP
/INC <FILENAME>] channel data
/ENDRUN
```

If MERTT returns a message that there is no space available in the /INPUT file area, use **/EDIT <filename,> NEW** to create a Save Library file. The size of the /EDIT file area is unlimited for all practical purposes. Consult the MUSIC User's Manual for details.

3.45 An example of the direct input mode is as follows:

```
/INPUT
/INC MERTT.INP
X31212040-2101-AMARTX-PASOTX-0.0-00-00-00-00-00
X31263420-1101-TRSNTX-RCVDTX-0.0-00-00-00-99-01
X31212040-1105-AMARTX-PASOTX-0.0-00-00-00-00-00X
.....
.....
/ENDRUN
```

Error File

3.46 As MERTT processes the channel data entered by either the Save Library or direct input mode, it edits the data for certain types of errors. If MERTT finds one of the following alpha errors in the channel type/number or deviation readings, it automatically corrects the error as shown:

- Alpha O corrected to numeric 0
- Alpha L corrected to numeric 1
- Alpha I corrected to numeric 1.

A message is returned by MERTT that identifies the errors it corrects as shown in Fig. 6. If MERTT finds any erroneous format data (such as delimiters missing or inconsistently used on the same input line, too many or too few characters in a field, etc), it returns an error message and moves the erroneous data into an error file (MERTT.ERROR) (see Fig. 7).

3.47 After the user has ended a data input terminal session, MERTT returns a message that defines the number of good (without errors) records and bad (with errors) records input during the terminal session, warns the user to correct any erroneous records, and asks if the user wants to update the holding file (with the good records). An example message is shown in Fig. 8.

3.48 The user has two options, described in (a) and (b) below, when MERTT indicates that there are bad records in the input data. First, however, it should be noted that there is one MERTT.ERROR file per ID/Save Library area and that, when an ID is shared, the error file is shared also. Since the error file is overwritten by new errors each time the MERTT.INPUT program is executed, it is possible for another user inputting data to overwrite the first user's data in the error file. It is important, therefore, for users who share IDs to save their data in the error file by renaming the file as soon as MERTT returns a message that there are bad records in the input data.

(a) This option should be used if an ID is not shared. Do not update the holding file with good records in response to MERTT's question (2 = no). Instead, when MERTT returns a *GO, list the contents of the error file by entering **L MERTT.ERROR.** The bad records will be displayed. Make corrections by overwriting the incorrect data. Then, execute the update module by using the direct or Save Library mode again. This time all the records should be good, and they can be used to update the holding file.

(b) ***It is important to choose this option if an ID is shared.*** Update the holding file with the good records in response to MERTT's question (1 = yes). When MERTT returns a *GO, save the error file under a new name. This protects the data in the error file from being erased by someone else's bad records. Now, list the contents of the file by entering **L <new filename>**. The bad records will be displayed. Make corrections by overwriting the incorrect data. Then execute MERTT.INPUT again. This time the corrected records can be used to update the holding file. Examples of the two methods for saving data in the error file follow. The first is the recommended method.

```
*GO 15:51:06
/RENAME MERTT.ERROR, XYYZZ
*IN PROGRESS
RENAMED
*END
```

```
*GO 15:53:06
/INPUT
/INS MERTT.ERROR
*IN PROGRESS
*END 00:00 SEC
/END
*GO 15:50:10
/SAVE XYYZZ
*IN PROGRESS
SAVED
*END 00:00 SEC
*GO 15:51:06
```

Holding File

3.49 The holding file is a temporary file area in the MERTT data base where the data entered by the Field are accumulated during the month. Data may be entered into the holding file at any time ***except on the first working day of the month;*** on that day, the Headquarters Staff transfers all data in the holding file to the master (permanent) file in the data base (see paragraphs 3.69, 3.70, and 3.71). Subsequent data that may be entered for the same channel during the month replace any previous data for the channel in the holding file; thus, the last data entered constitute the only record for a given channel in the holding file.

3.50 The contents of the holding file can be examined by requesting the Holding File Data Report via the Report Module, as described in Part 5.

Channel Record Deletion

3.51 When it is necessary to delete a channel from the master file or holding file, the Field enters an X (delete from master file) or Z (delete from holding file) in the last field position of the channel record. This is shown on Form BS-1150 (Fig. 2) and on the channel record layout (Fig. 5).

3.52 Deletion from the holding file is instantaneous. Deletion from the master file occurs on the first working day of the month, when the master file is updated via transfer of the contents of the holding file.

B. Coordinator's Update Module

3.53 The authorized MERTT coordinator (Company or Regional) accesses MERTT via the Coordinator's Update Module (MERTT.CORD.UPD program) to perform the following functions, all of which are updates to the master file:

- Change the responsibility code
- Change the channel type and number
- Change the transmit and receive CLLI codes
- Change deviation readings
- Change C/I and F/I readings
- Set, and clear when no longer required, the Engineering assistance request clock
- Enter, and clear when no longer required, hardship limits and set/stop the hardship clock
- Change the out-of-limits clock
- Change the test interval clock (last time tested counter)
- Change the maintenance and/or performance index
- Set and clear tone clocks.

The update capability is limited to channels in the coordinator's area of responsibility.

3.54 The coordinator can enter these updates to the master file at any time except on the first working day of the month (the day on which the Headquarters Staff updates the master file with the contents of the holding file). Only the updates made by the coordinator on the second working day through the fifth calendar day are reflected in the channel performance and maintenance indexes and reports for that month. The coordinator should use this update capability to change legitimate, inaccurate data—not to correct careless mistakes.

3.55 The coordinator interacts with MERTT in two modes: MAIN and SCAN. The MAIN mode is used to execute updates to the data base. The SCAN mode is used to locate a channel record in the data base and to print out a channel record.

3.56 The MAIN mode runs in a conversational mode. First, MERTT provides the coordinator

with a list (menu) of available update features and a number by which the coordinator designates the feature to be updated. Then, MERTT prompts the coordinator for the various inputs required. The list of update features and corresponding numbers are as follows:

1— RESPONSIBILITY CODE (BATCH MODE ONLY)

2— CHANNEL TYPE AND CHANNEL NUMBER

3— TRANSMIT CLLI CODE
RECEIVE CLLI CODE

4— DEVIATION READINGS

5— DEVIATION HARDSHIPS

6— ENGINEERING ASSISTANCE CLOCK HARDSHIP CLOCK

7— OUT-OF-LIMITS CLOCK

8— TEST INTERVAL

9— SCAN MODE

10— INDEX

11— TONE CLOCKS (T1-T5)

12— STOP.

3.57 If the coordinator enters a "9" (SCAN mode) from the above list, MERTT provides another list, this one of commands to use to locate a specific record in the data base:

"U" MOVES POINTER UP ONE RECORD.

"N" MOVES POINTER DOWN ONE RECORD.

"G" MOVES POINTER TO REQUESTED RECORD NUMBER.

"P" PRINTS ALL CHANNEL DATA IN PROPER FORMAT.

"L" LISTS PRESENT RECORD NUMBER.

"F" FINDS FIRST OCCURRENCE OF RC.

3.58 The items described in paragraphs 3.59 through 3.68 are relevant to the update features. An example printout of a channel record in the proper format is shown in Fig. 9. The coordinator may obtain a printout by entering **P** while in the SCAN mode.

3.59 ***Responsibility Code:*** As described in paragraph 3.14, the coordinator is responsible for changing responsibility codes (RCs) in the MERTT data base when requested to do so by the Field. Responsibility code changes can be made only in the batch mode. The coordinator has two optional formats when entering responsibility code changes into MERTT: either by changing each affected record or by putting the changes into a file and executing the file, as follows:

/INPUT
/INC MERTT.CORD.UPD
X31212040PASTOTX-X31212030?ASOTX] old-new RC
.....
.....
.....
/ENDRUN

or

/INPUT
/INC MERTT.CORD.UPD
/INC <FILE NAME>] RC changes
/ENDRUN

According to local procedures, the Field could set up a file with the changes and then notify the coordinator to execute the file.

3.60 ***Channel Type and Number:*** Both the channel type and number can be changed simultaneously.

3.61 ***Transmit and Receive CLLI Codes:*** No special instructions are required for this update.

3.62 ***Deviation Readings:*** In order to maintain a correct channel record, entries must be made for all four deviation readings even if only one is to be changed (ie, baseband response, thermal noise, tone, and noise load).

3.63 ***Deviation Hardships:*** The coordinator is responsible for making entries in a channel

record (as included in the master file) when hardship limit has been granted by Engineering, as described in paragraphs 3.19 through 3.31. If one hardship limit is entered or is changed, entries must be made for all four deviation readings (ie, baseband response, thermal noise, tone, and noise load). An entry of **00** must be made for those deviation readings without a hardship limit.

3.64 ***Engineering Assistance Clock/ Hardship Clock:*** An entry of **100** starts the Engineering assistance clock; **000** stops the clock. The clock may be set to start at some future month, eg, **102**. The range of this clock is from 100 to 199. An entry of **200** starts the hardship clock; **000** stops the clock. This clock also may be set to start at some future month, eg, **104**. The range of this clock is from 200 to 299. It is important to note that a reading may have an entry for only one of these two clocks at the same time. If a clock is started or stopped for one of the five pertinent readings (ie, baseband response, thermal noise, tone, noise load, and cochannel/ interference), an entry must be made for all. An entry of **0** must be made for those readings without an Engineering assistance or hardship clock.

3.65 ***Out-of-Limits Clocks:*** These clocks are started automatically by MERTT on the first input of out-of-limits data for baseband response, thermal noise, tones, and noise load. If the MERTT coordinator changes one clock reading, that is, number of months the out-of-limits condition has existed, entries must be made for all of these clocks in order to maintain current information concerning the channel.

3.66 ***Test Interval:*** This last time tested counter is started automatically by MERTT on initial entry of a channel record. The coordinator may change the test interval as shown in the channel record when circumstances require.

3.67 ***Index:*** The coordinator may change the performance and/or maintenance indexes when there is a legitimate reason for doing so.

3.68 ***Tone Clocks:*** The coordinator may, optionally, set tone clocks in a channel record to track the number of months that there are problems associated with the various types of tones. The types, categories, and on/off designations are defined in Table B. An entry of **100** starts a tone clock; **000** stops the clock. A tone clock may be set to start at some future month, eg, **104**. If an entry is made for one tone type, entries must be made for all. Figure 10 is an example of a MERTT coordinator's input to update (stop) the tone clocks.

C. Headquarters' Update Module

3.69 The Headquarters Staff accesses MERTT via the Headquarters' Update Module (MERT.HQ.UPD and MERT.HQ.TBL programs) to perform the following functions:

- Transfer the contents of the holding file to the master file
- Establish and change the test interval table in the data base
- Establish and change the deviation/ weighting table in the data base. This table is used by MERTT in computing the channel performance and maintenance indexes. (See paragraph 4.01.)

3.70 On the first working day of each month, the Headquarters Staff is responsible for transferring (dumping) all the channel/switch section record data accumulated in the holding file during the previous month into the master file in the MERTT data base. The master file is used for permanent storage of channel data. This transfer of data clears the holding file for input of new data and updates the master file. If the latter already contains data for a specific channel, any new data in the holding file update (overwrite) the existing data. If there are no new data for the channel, the existing data are retained and certain clocks (counters) are advanced as described in paragraphs 3.32 through 3.39. If there are no existing data in the master file for a channel, but there are data in the holding file, the channel record is added to the master file.

3.71 Using the updated data in the master file, MERTT computes the performance and maintenance indexes for all channels included in the master file (see Part 4).

4. COMPUTATION OF CHANNEL PERFORMANCE AND MAINTENANCE INDEXES

4.01 Once a month, after the Headquarters Staff transfers the contents of the holding file to the master file, MERTT computes the channel per-

formance and maintenance indexes. The algorithm used by MERTT is based on the following:

- Test results for baseband response, thermal noise, tone, noise load—expressed as deviations from BSP requirements
- Weightings, based on a relationship between the deviations and the impact on service (see Table C)
- Normalization factor of 100.

4.02 Additionally, the following items pertain to the channel maintenance index.

(a) If an out-of-limits condition for any one of the four test parameters (ie, baseband response, thermal noise, tone, or noise load) exceeds 3 months, the channel maintenance index is set to zero.

(b) If the test interval required for the particular radio type is exceeded by 2 months, the channel maintenance index is set to zero. The required test intervals are shown in Table D.

(c) If an Engineering assistance request clock has been entered by the coordinator for a test parameter, no penalty is imposed on that parameter.

(d) If a hardship limit has been entered, then that limit is considered as the requirement. If test results are within the hardship limit, no penalty is imposed on that parameter.

4.03 Cochannel/interference and the optional fading/interference test results are not included in the channel performance or maintenance indexes. These two categories of test results are used as a means of reporting the completion of the tests within the switch section.

4.04 Tone clocks are also excluded from computation of the indexes.

5. USER REPORTS

5.01 All MERTT users may access MERTT via the Report Module (MERTT.RPT program) to request any of a variety of reports that detail the channel performance and maintenance indexes and other pertinent channel information. The reports are as follows:

- Channel Performance
- Channel Status
- Holding File Data
- Channel Trouble Type
- Message Unit Radio (MUR) Channel Status
- Worst Channel Status
- Responsibility Code (RC) List
- Channel Test Interval (TI) Listing.

The reports may be requested at any responsibility code level.

5.02 The user obtains the reports by signing onto MUSIC 8300, and after receiving the *GO response from the system, typing **MERTT.RPT.** In response, MERTT returns a list of the reports with an associated alpha designation by which the user specifies the report to be provided. The user is prompted to enter the following data: option (report wanted), responsibility code, type of channel, and condition (**E** for only those channels with Engineering assistance requested or **H** for only those channels with hardship limits). The report, as requested, is then printed.

5.03 If the user specifies a Channel Trouble Type Report, MERTT returns a list of specific trouble types (ie, baseband, thermal, tone, noise load) and asks the user to select one.

5.04 The MUR Channel Status Report must be run in the batch mode, as follows:

```
/INPUT
/INC MERTT.RPT
/INC <FILENAME>] data
/ENDRUN
```

5.05 Figures 11 through 18 are examples of the MERTT reports, with an example of the input to obtain the individual report and an explanation of the data provided by each report.

5.06 To simplify the procedure for requesting the same reports on a monthly basis, it is recommended that a Save Library file be created to include requests for the reports. Then the MERTT.RPT program can be executed each month to obtain the reports. The File 9 feature of MUSIC provides this capability. User inputs for this feature follow.

(a) Create a Save Library file for reports wanted:

/INPUT
P, X31 - - - -
P, X3102 - - -
(etc)
Q,] This ends it
/END
/SAVE <FILENAME>

(b) Include Channel Trouble Type Reports ("T" reports) in the Save Library file:

/INPUT
T, X3100 - - - -, A, H
3
/SAVE <FILENAME>

(c) Include the Save Library file as part of the "File 9" feature of MUSIC (see the MUSIC User's Manual):

/INPUT
/FILE 9 N (FILENAME) OLD
/INC MERTT.RPT
/END
or
/ENDRUN
or
/SAVE <FILENAME>

In the File 9 input, the (**FILENAME**) in the second line is the Save Library file that identifies the reports to be provided. In the **/SAVE <FILENAME>** option, the <**FILENAME**> can be any other file name. To execute this option, that is, to tell MERTT to provide the reports identified in the (**FILENAME**), when MERTT responds *GO, enter the <**FILENAME**>; MERTT then will print out the reports.

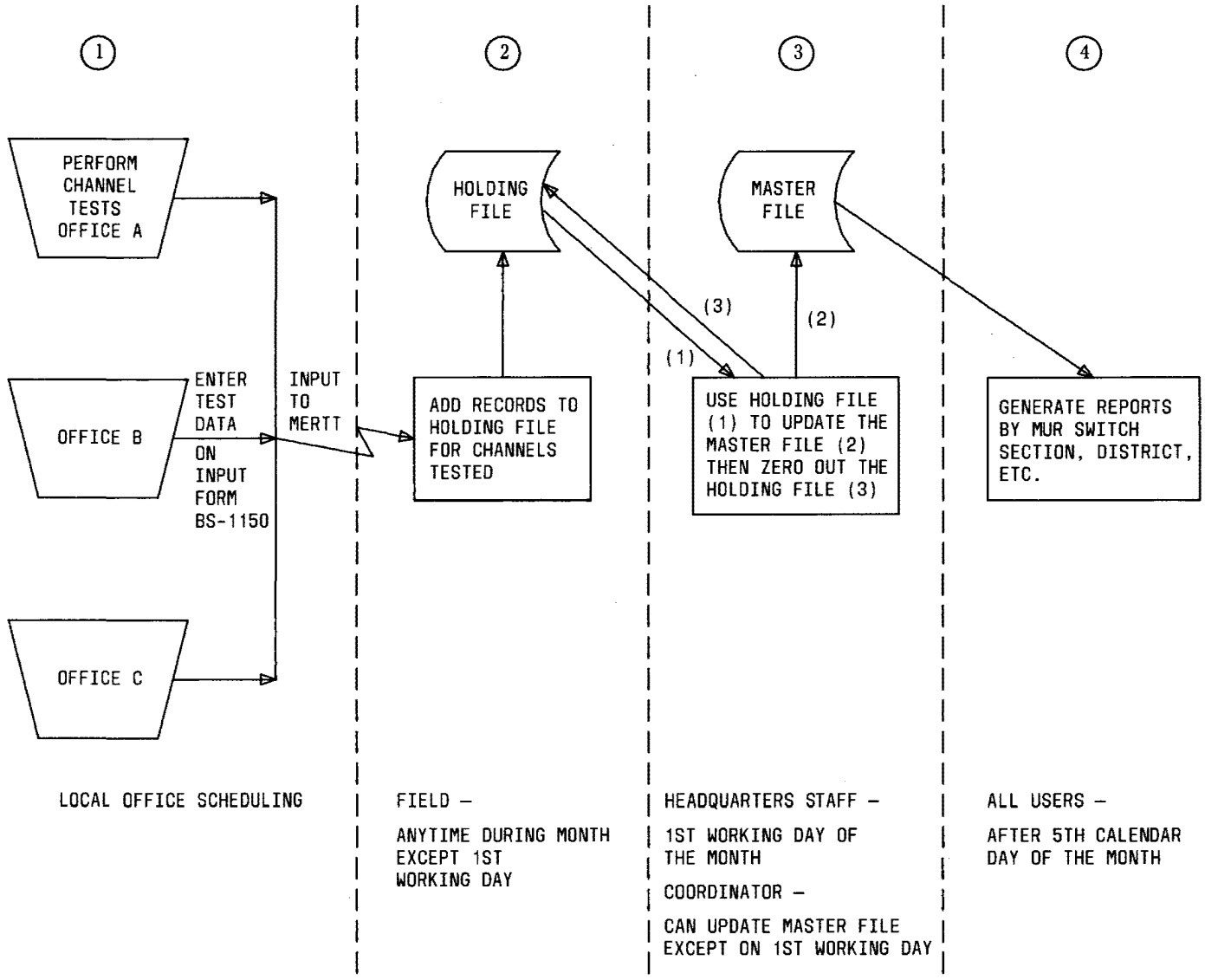


Fig. 1—Sequence of Major Events in MERTT Process (2.04)

Bell System

Channel Performance Data

BS 1150
11 81

(1) Responsibility Code	Channel Type & No. (2)	Transmit CLLI (3)	Receive CLLI (4)	Deviation Readings (5) BB	THML	TONE	NL	(6) C/I	(7) F/I	X (8) Z
X35123020	0102	LEE-IL	CHC2IL	0.1	10	00	00	00	00	
X35123020	0104	LEE-IL	CHC2IL	0.0	00	00	00	63	00	
X35123020	0105	LEE-IL	CHC2IL	0.0	00	00	00	00	00	
X35123020	0110	LEE-IL	CHC2IL	0.0	00	10	00	00	00	
X35123020	0111	LEE-IL	CHC2IL	0.0	00	00	00	00	00	
X35123020	0112	LEE-IL	CHC2IL	0.0	00	00	04	00	00	

Recorded By C. T. JONES Date 3-1-82 Transmitted By A.B. EVANS Date 3-3-82

FCC Item No. 441

Fig. 2 — Example Form BS-1150, Channel Performance Data (Sheet 1 of 2) (3.17) (3.51)

(1) Responsibility Code: 9-position alphanumeric code that represents the administrative entity for the particular radio channel switch section.

(2) Channel Type & No.: 4-digits. The first digit represents the channel type (see Table A of this section). The other three digits = the channel number.

(3) Transmit CLLI: Transmit end of switch section CLLI code. The CLLI codes listed in Sections 795-101-100 through 795-151-100 are used to designate the switch section end points of a radio channel. Only the first six characters of this 11-character code are used. The first four characters specify a place and the next two characters specify the state in which the place is resident. In a few instances, the first six characters of the CLLI code, as listed in the BSP, will not uniquely identify a radio switching location. For example, New York City has more than one radio switching station with the same place name of NYCR. In a case like this, change the last two characters of the place name to indicate a specific location within the geographic confines of the place, eg, NY05, NY07, etc.

(4) Receive CLLI: Receive end of switch section CLLI code. See item (3) above.

(5) Deviation Readings: (In all cases, the actual deviation from BSP requirements must be entered even if a hardship limit has been granted.)

BB (baseband response): Deviation from BSP requirement. Record to nearest tenth of a decibel; eg, 0.2, 2.4, 4.0. If there is no deviation, enter 0.0.

THML (thermal noise): Deviation from BSP requirement. Record in whole decibels; eg, 10, 12. If there is no deviation, enter 00.

TONE: Deviation from BSP requirement. Record in whole decibels. If there is no deviation, enter 00.

NL (noise load): Deviation from BSP requirement. Record in whole decibels. If there is no deviation, enter 00.

(6) C/I (cochannel/interference): Actual reading — 00 through 99. Where C/I tests are not performed during a switch section test interval, enter 00.

(7) F/I (faded/interference on worst hop): Actual reading — 00 through 99. This is an optional entry. However if this option is not used in a company/region, or if no measurement is made, enter 00.

(8) X,Z: X deletes channel from the master file. Z deletes channel from the holding file. Otherwise, do not make an entry.

Fig. 2 — Example Form BS-1150, Channel Performance Data (Sheet 2 of 2) (3.17) (3.51)

Bell System

Radio Channel Transmission Performance Out-Of-Limit Report

BS 1151 (11 81)

(A) Date	Reporting Office	District
Office Contact		Tel. No.
District Contact		Tel. No.

(B) Channel

(C) Is Trouble Condition Causing Adverse Service Reaction (If Yes, Give Details)

(D) Type Of Radio

(E) Switch Section	Toward	No. Of Hops

(F) Out-Of-Limit Condition (Attach Data Sheet)

(G) Has Trouble Condition Been Isolated To Hop, Station, Equipment, Etc. (If So, Indicate)

(H) Action Taken

SAMPLE

District Manager	Report No.

Engineering Use

(A) Date Received	Received By	Referred To
(B) Promised Action Date	Case No.	(C) Date Cleared

(D) Trouble Found

Comments

(E) Questions And/Or Comments Concerning This Report May Be Referred To	Tel. No.
(F) Final Report Sent	Radio Engineer

FCC Item No. 44L

Fig. 3—Sample Form BS-1151, Radio Channel Transmission Performance Out-of-Limit Report (3.22)

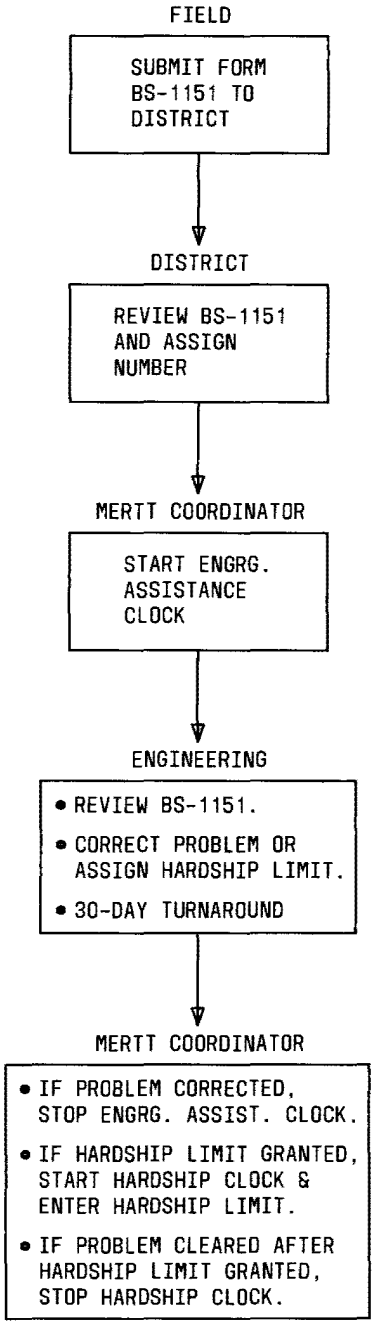


Fig. 4—Engineering Assistance Request/Hardship Limit Flow (3.27)

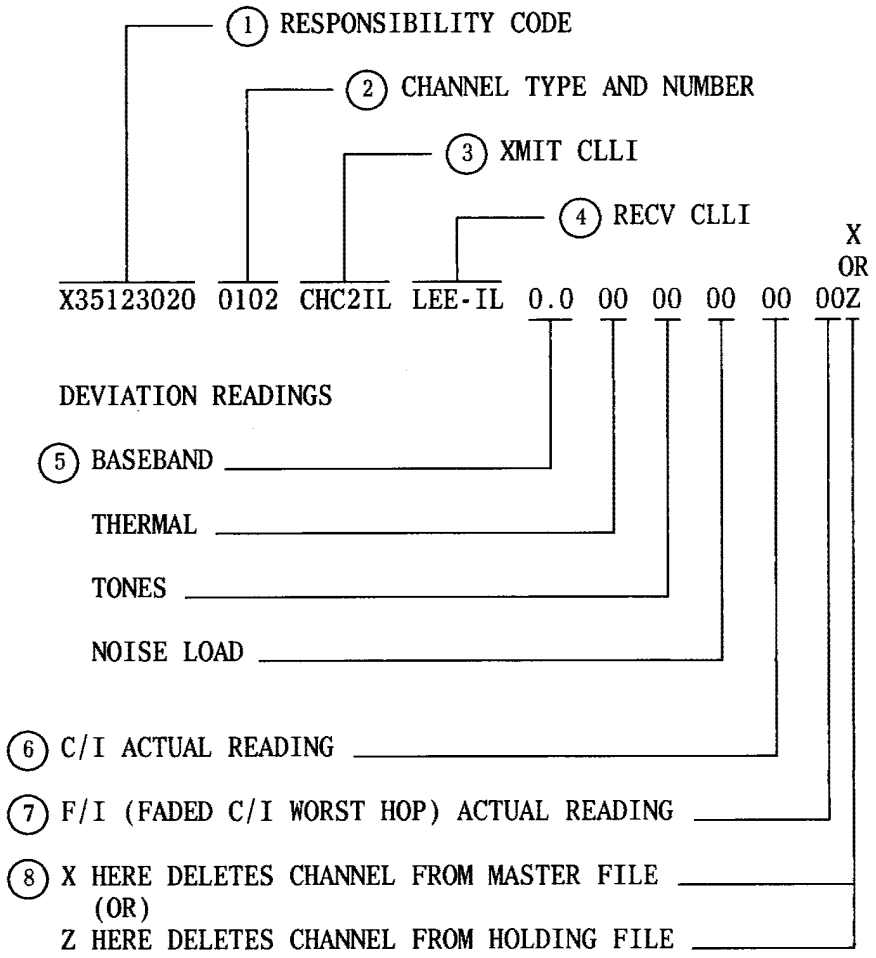


Fig. 5 — Example Field Input Channel Record Layout (Sheet 1 of 2) (3.41) (3.51)

INPUT CONVENTIONS:

Only the Field can create or delete a radio channel record.

It is important to note that all data fields except the last one must be filled.

Any delimiter may be used to separate the data fields; either a space or a dash is the recommended choice. Be sure to use the same delimiter consistently throughout an input.

(1) RESPONSIBILITY CODE: 9-position alphanumeric code that represents the administrative entity for the particular radio channel switch section.

(2) CHANNEL TYPE AND NUMBER: 4 digits. The first identifies the channel type (see Table A). The other three are the channel number.

(3) XMIT CLLI: 6-position CLLI code for the transmit end of the switch section.

(4) RECV CLLI: 6-position CLLI code for the receive section.

(5) DEVIATION READINGS: (In all cases, the actual deviation from BSP requirements must be entered even if a hardship limit has been granted.)

BASEBAND: 3-position (tenth of a decibel) deviation from BSP requirement. If no deviation, enter 0.0.

THERMAL: 2-digit (whole decibel) deviation from BSP requirement. If no deviation, enter 00.

TONES: 2-digit (whole decibel) deviation from BSP requirement. If no deviation, enter 00.

NOISE LOAD: 2-digit (whole decibel) deviation from BSP requirement. If no deviation, enter 00.

(6) C/I ACTUAL READING: 2 digits — 00 through 99. If C/I tests not performed during test interval, enter 00.

(7) F/I (FADED C/I WORST HOP) ACTUAL READING: 2 digits — 00 through 99. If F/I option not used, or measurements not made, enter 00.

(8) X (or) Z: 1 alpha. Enter X to delete the channel from the master (permanent) file. Enter Z to delete the channel from the holding (temporary) file. Otherwise, leave blank — an entry is not required.

Fig. 5 — Example Field Input Channel Record Layout (Sheet 2 of 2) (3.41) (3.51)

```
/INPUT
/INC MERTT.INP
/INC <FILE NAME>
/ENDRUN
*IN PROGRESS


ERRONEOUS RECORDS ENCOUNTERED WHILE IN THE INPUT
MODE WILL BE REPORTED IN FILENAME 'MERTT.ERROR'.
THIS FILE WILL OVERWRITE PREVIOUS INFORMATION REPORTED BY
AN EARLY RUN OF 'MERTT.INPUT'. TO AVOID THIS INCONVENIENCE,
MAKE SURE YOU PROCESS THE ERRONEOUS DATA IMMEDIATELY AFTER
THIS PROGRAM ENDS.


CHN215I CONVERT - ILLEGAL   DECIMAL   CHARACTER I
*IBCOM    CALLED FROM MAIN    +007AE0            ↑
*ERROR FOUND IN RECORD...                        |
X35123020 0I04 CHC2IL LEE-IL 0.0 00 00 00  00  00
          ↑
          |

TOTAL NUMBER OF RECORDS INPUTTED=      2
TOTAL NUMBER OF BAD RECORDS     =      0
TOTAL NUMBER OF GOOD RECORDS    =      2

DO YOU WANT TO UPDATE THE HOLDING FILE WITH THE
ABOVE DATA?. 1=YES, 2=NO
?
1
HOLDING FILE CONTAINS TOTAL OF   361 RECORDS
STOP         0
*END  01:80 SEC
*GO 15:13:48
```

NOTE: The input record shown contains an illegal decimal character "I". This character is automatically corrected to "1" and this error message is printed. As you can see, the corrected line is accepted into the holding file. (The arrows indicate the illegal character "I".)

Fig. 6—Example Automatic Alpha Character Correction (3.46)

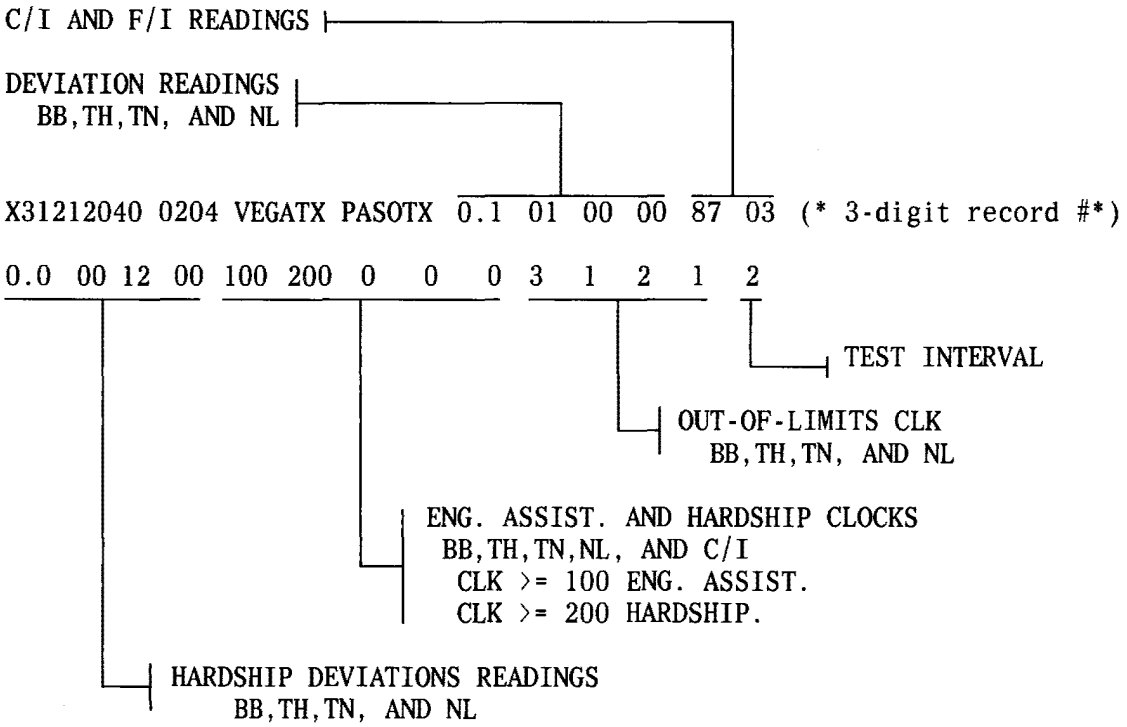
```
/INPUT
/INC MERTT.INP
/INC<FILE NAME>
/ENDRUN
*IN PROGRESS


ERRONEOUS RECORDS ENCOUNTERED WHILE IN THE INPUT
MODE WILL BE REPORTED IN FILENAME 'MERTT.ERROR'.
THIS FILE WILL OVERWRITE PREVIOUS INFORMATION REPORTED BY
AN EARLY RUN OF 'MERTT.INPUT'. TO AVOID THIS INCONVENIENCE,
MAKE SURE YOU PROCESS THE ERRONEOUS DATA IMMEDIATELY AFTER
THIS PROGRAM ENDS.




TOTAL NUMBER OF RECORDS INPUTTED=      2
TOTAL NUMBER OF BAD RECORDS      =     1
TOTAL NUMBER OF GOOD RECORDS     =     1

DO YOU WANT TO UPDATE THE HOLDING FILE WITH THE
ABOVE DATA?. 1=YES, 2=NO
?
2
STOP     PLEASE CHECK 'MERTT.ERROR'FILE
*END  01:11 SEC
*GO 15:48:30

L,MERTT.ERROR
*IN PROGRESS
X35123020 0102 CHC2IL LEE-IL 0.00 00  00  00  00  00
*END  00:00 SEC                 ↑
*GO 15:48:46
```

NOTE: This example shows that one of the two input records in "FILE NAME" is in error. By requesting "NO" update and then "listing" MERTT.ERROR, MERTT will print only the bad records. (The error is an extra zero in the baseband response field, as indicated by the arrow.)

Fig. 7—Example MERTT Message Regarding Incorrect Input Record (3.46)

```
*GO 17:21:45
/INPUT
/INC MERTT,INP
/INC<FILE NAME>
/ENDRUN
*IN PROGRESS


ERRONEOUS RECORDS ENCOUNTERED WHILE IN THE MERTT INPUT
MODE WILL BE REPORTED IN FILENAME 'MERTT.ERROR'.
THIS FILE WILL OVERWRITE PREVIOUS INFORMATION REPORTED BY
AN EARLY RUN OF 'MERTT.INPUT'. TO AVOID THIS INCONVENIENCE,
MAKE SURE YOU PROCESS THE ERRONEOUS DATA IMMEDIATELY AFTER
THIS PROGRAM ENDS.




TOTAL NUMBER OF RECORDS INPUTTED=       6
TOTAL NUMBER OF BAD RECORDS     =       0
TOTAL NUMBER OF GOOD RECORDS    =       6

DO YOU WANT TO UPDATE THE HOLDING FILE WITH THE
ABOVE DATA?, 1=YES, 2=NO
?
1
HOLDING FILE CONTAINS TOTAL OF  1775 RECORDS
STOP         0
*END  04:02 SEC
*GO 17:23:00
```

Fig. 8—Example MERTT Message Regarding Input Records (3.47)



NOTE: The 3-digit record number is a data base line number generated by the computer; it may be used for reference.

Fig. 9—Example Printout of Channel Record (3.58)

```
*END 00:07 SEC
*GO 12:33:33
MERTT.CORD.UPD
*IN PROGRESS
009998 BYTES USED
EXECUTION BEGINS

ENTER FIRST 3 CHARACTERS OF RC. (IE. X3D)
?
X36

THE FOLLOWING UPDATE FEATURES ARE AVAILABLE:

1-RESPONSIBILITY CODE (BATCH MODE ONLY)
2-CHANNEL TYPE AND CHANNEL NUMBER
3-TRANSMIT CLLI CODE
  RECEIVE CLLI CODE
4-DEVIATION READINGS
5-DEVIATION HARDSHIPS
6-ENGINEERING ASSISTANCE CLOCK
  HARDSHIP CLOCK
7-OUT OF LIMITS CLOCK
8-TEST INTERVAL
9-SCAN MODE
10-INDEX
11-TONE CLOCKS (T1-T5)
12-STOP

MAIN:
?
11

IS THIS THE CORRECT CHANNEL?, 1=YES, 2=NO, 3=STOP
X37111033 0109 CCCCCC DDDDDD
?
1

THE FOLLOWING IS THE STATUS OF THE T1 THRU T5 TONES.
(REMINDER.. START=100,  STOP=000  IE. 000,100,104,... ALL TONES MUST BE ENTERED.)
  0   0   0   0   0
?
000 000 000 000 000
DATA CHANNEL UPDATED!!

MAIN:
?
12
STOP          0
*END  37:43 SEC
*GO 12:38:11
```

Fig. 10—Example Update of Tone Clocks (3.68)

```
MERTT REPORT

THE FOLLOWING REPORTS ARE AVAILABLE:
P- CHANNEL PERFORMANCE
S- CHANNEL STATUS
H- HOLDING FILE DATA
T- CHANNEL TROUBLE DATA
M- MUR CHANNEL STATUS
W- WORST CHANNEL STATUS
R- RC LIST
L- CHANNEL TI LISTING
Q- QUIT SESSION


ENTER DATA IN THE FOLLOWING FORMAT: OPTION,RC,TYPE,COND
(S,X31212041,9,H) OR (P,X31212031,A,E)
?
P,X00000000
```

Format to request Channel Performance Report

Fig. 11 — Example Channel Performance Report (Sheet 1 of 3) (5.05)

RADIO CHANNEL PERFORMANCE RESULTS

(1) JAN 1982

(2) RESPONSIBILITY (3) RADIO TYPE

(2) X******** (3) A

(4) CONTROLLED CHANNELS	11366	
(5) TOTAL TESTED	2436	
(6) TESTED IN INTERVAL	11366	100.00%

(7) CHANNEL MAINTENANCE INDEX	99.16
(8) CHANNEL PERFORMANCE INDEX	99.02

(9) INDEX COMPONENTS

MAINTENANCE				PERFORMANCE			
BBAND	THERM	TONES	NLOAD	BBAND	THERM	TONES	NLOAD
99.05	99.63	98.29	99.40	99.25	99.61	97.43	99.40

(10) OUT OF LIMITS FOR 3 OR MORE MONTHS	176	1.55%
(11) UNDER REQUEST FOR ENGINEERING ASSIST.	219	1.93%
(12) UNDER HARDSHIP LIMITS GRANTED BY ENGR.	738	6.49%

Fig. 11 — Example Channel Performance Report (Sheet 2 of 3) (5.05)

CHANNEL PERFORMANCE REPORT (RADIO CHANNEL PERFORMANCE RESULTS)

(1) JAN 1982: Date of report.

(2) RESPONSIBILITY: The report includes overall performance indicators for all channels in all responsibility codes below the hierarchy of the code specified on input, eg, X00000000.

(3) RADIO TYPE: A = the report includes all radio types.

(4) CONTROLLED CHANNELS: The number of channels controlled by the responsibility code specified on input.

(5) TOTAL TESTED: The number of channels currently tested.

(6) TESTED IN INTERVAL: The number of channels tested in the specified interval, and the percent.

(7) CHANNEL MAINTENANCE INDEX: Current overall channel maintenance index, in percent.

(8) CHANNEL PERFORMANCE INDEX: Current overall channel performance index, in percent.

(9) INDEX COMPONENTS: The maintenance and performance indexes listed by baseband response, thermal noise, tones, and noise load, in percent.

(10) OUT OF LIMITS FOR 3 OR MORE MONTHS: The number and percent of channels.

(11) UNDER REQUEST FOR ENGINEERING ASSIST.: The number and percent of channels.

(12) UNDER HARDSHIP LIMITS GRANTED BY ENGR.: The number and percent of channels.

Fig. 11 — Example Channel Performance Report (Sheet 3 of 3) (5.05)

```
MERTT REPORT

THE FOLLOWING REPORTS ARE AVAILABLE:
P- CHANNEL PERFORMANCE
S- CHANNEL STATUS
H- HOLDING FILE DATA
T- CHANNEL TROUBLE TYPE
M- MUR CHANNEL STATUS
W- WORST CHANNEL STATUS
R- RC LIST
L- CHANNEL TI LISTING
Q- QUIT SESSION


ENTER DATA IN THE FOLLOWING FORMAT: OPTION,RC,TYPE,COND
(S,X31212041,9,H) OR (P,X31212031,A,E)
?



S,X00000000
```

Format to request Channel Status Report

Fig. 12 — Example Channel Status Report (Sheet 1 of 3) (5.05)

PAGE 1

RADIO CHANNEL STATUS

(1) JAN 1982

(2) RESPONSIBILITY (3) RADIO TYPE A

(4) CHNL	(6) TST	(7) BBR	(8) THRM	(9) TONE	(10) NLD	(11) C/I	(12) F/I	(13) MNTCE.	(15) PERF.
(5) X22112082 BNGHNY-NWBLNY									
0103	3	0.0	0	2	0	58	45	80.00	95.00
							(14)	80.00	95.00 (16)
(5) X31122026 CHVLNJ-NYCM07									
2101	6	0.0	0	8H	6H	59	0	100.00	50.00
2102	6	0.0	0	3H	3H	63	0	100.00	75.00
2103	4	0.0	0	4H	6H	56	0	100.00	50.00
2104	6	0.0	0	4H	6H	61	0	100.00	50.00
2105	6	0.0	0	3H	3H	56	0	100.00	75.00
2106	6	0.0	0	2H	5H	52	0	100.00	55.00
5107	6	0.0	0	2H	2H	64	0	100.00	75.00
5108	6	0.0	0	5H	4H	0	0	100.00	50.00
							(14)	100.00	60.00 (16)
(5) X31122026 CHVLTH-NYCM07									
1162	6	0.0	0	0	0	68	0	100.00	100.00
1163	6	0.0	0	9E	0	71	0	100.00	80.00
1164	6	0.0	0	0E	0	66	0	100.00	100.00
1165	6	0.0	0	0	0	67	0	100.00	100.00
1166	5	0.0	0	4E	0	64	0	100.00	90.00
1167	5	0.0	0	4E	0	72	0	100.00	90.00
1168	6	0.0	0	0	0	59	0	100.00	100.00
							(14)	100.00	94.29 (16)

Fig. 12 — Example Channel Status Report (Sheet 2 of 3) (5.05)

CHANNEL STATUS REPORT

(1) JAN 1982: Date of report

(2) RESPONSIBILITY: All responsibility codes (RCs) that are under the hierarchy of the code specified on input are listed on the report.

(3) RADIO TYPE A: A = the report is to include all radio types in the RCs.

(4) CHNL: Channel type and number.

(5) Responsibility codes and switch sections included in the hierarchy.

(6) TST: Number of months since the channel was tested.

(7) BBR: Baseband response reading — deviation from BSP requirement, in tenths of a decibel.

(8) THRM: Thermal noise reading — deviation from BSP requirement, in whole decibels.

(9) TONE: tone reading — deviation from BSP requirement, in whole decibels.

(10) NLD: Noise load reading — deviation from BSP requirement, in whole decibels.

Note: If Engineering assistance has been requested or a hardship limit has been granted for any of the four test parameters (baseband response, thermal noise, tone, or noise load), the number of months is shown for the test as indicated by an "E" or "H".

(11) C/I: Cochannel/interference actual reading.

(12) F/I: Faded/interference actual reading of the worst radio path in the switch section.

(13) MNTCE: Current maintenance index, in percent, for each channel.

(14) Average current maintenance index, in percent, for all channels reported in the switch section.

(15) PERF: Current performance index, in percent, for each channel.

(16) Average current performance index, in percent, for all channels reported in the switch section.

Fig. 12 — Example Channel Status Report (Sheet 3 of 3) (5.05)

```
MERTT REPORT

THE FOLLOWING REPORTS ARE AVAILABLE:
P- CHANNEL PERFORMANCE
S- CHANNEL STATUS
H- HOLDING FILE DATA
T- CHANNEL TROUBLE TYPE
M- MUR CHANNEL STATUS
W- WORST CHANNEL STATUS
R- RC LIST
L- CHANNEL TI LISTING
Q- QUIT SESSION


ENTER DATA IN THE FOLLOWING FORMAT: OPTION,RC,TYPE,COND
(S,X31212041,9,H) OR (P,X31212031,A,E)
?
H,X00000000
```

Format to request Holding File Data report

Fig. 13 — Example Holding File Data Report (Sheet 1 of 3) (5.05)

PAGE 1

RADIO CHANNEL TEST DATA

(1) FEB 1982

(2) RESP.CODE	(3) CHNL	(4) CLLITX	(5) CLLIRX	(6) BBR	(7) THR	(8) TNR	(9) NLR	(10) CI	(11) FI
X33133022	7262	AYLTVA	MSLYVA	0.0	0	0	0	69	70
X33133022	7264	AYLTVA	MSLYVA	0.0	0	0	0	69	70
X33133022	7266	AYLTVA	MSLYVA	0.0	0	10	0	65	70
X33133022	7268	AYLTVA	MSLYVA	0.0	0	0	0	58	70
X33133056	0205	GMTWMD	GRCYVA	0.0	0	0	0	65	0
X33133056	0107	LSBGVA	GRCYVA	0.0	0	0	0	69	0
X33133056	0108	LSBGVA	GRCYVA	0.0	0	0	0	69	0
X33133056	0109	LSBGVA	GRCYVA	0.0	0	0	0	69	0
X34112052	0108	HTVLSC	GIVLNC	0.0	0	0	0	70	0
X34112052	0111	HTVLSC	GIVLNC	0.0	0	0	0	70	0
X34112052	0101	PRMTSC	GIVLNC	0.0	0	0	0	70	0
X34134024	0101	PENSFL	CLTNFL	0.0	0	0	0	70	0
X34134024	0103	PENSFL	CLTNFL	0.0	0	0	0	70	0
X34134024	0104	PENSFL	CLTNFL	0.0	0	0	0	70	0
X34134024	0105	PENSFL	CLTNFL	0.0	0	0	0	70	0
X34134024	0106	PENSFL	CLTNFL	0.0	0	0	0	70	0
X35116066	3162	COVLIL	HGLDIL	0.0	0	0	0	70	0
X35116066	3164	COVLIL	HGLDIL	0.0	0	0	0	70	0
X35116066	3168	COVLIL	HGLDIL	0.0	0	0	0	70	0
X35132063	0101	AYVLOH	BFTNOH	0.0	0	0	0	70	0
X35132063	0102	AYVLOH	BFTNOH	0.0	0	0	0	68	0
X35132063	0103	AYVLOH	BFTNOH	0.0	0	0	0	70	0
X35132063	0104	AYVLOH	BFTNOH	0.0	0	0	0	64	0
X35132063	0105	AYVLOH	BFTNOH	0.0	0	0	0	69	0
X35132063	0106	AYVLOH	BFTNOH	0.0	0	0	0	66	0
X35132063	0108	AYVLOH	BFTNOH	0.0	0	0	0	60	0
X35132063	0109	AYVLOH	BFTNOH	0.0	0	0	0	70	0
X36112080	2101	RMDNTX	SNANTX	0.0	0	0	0	65	0
X36112080	2102	RMDNTX	SNANTX	0.0	0	0	0	75	0
X36112080	5103	RMDNTX	SNANTX	0.0	0	0	0	64	0
X36112080	5104	RMDNTX	SNANTX	0.0	0	0	0	79	0
X36122069	0104	BOONIA	MPLSMN	0.0	0	1	0	0	0
X36122069	0105	BOONIA	MPLSMN	0.0	0	0	0	0	0
X36122069	0106	BOONIA	MPLSMN	0.0	0	4	0	0	0
X36122069	0107	BOONIA	MPLSMN	0.0	0	1	0	0	0
X36122069	0108	BOONIA	MPLSMN	0.0	0	2	0	0	0
X36122069	0109	BOONIA	MPLSMN	0.0	0	4	0	0	0

Fig. 13 — Example Holding File Data Report (Sheet 2 of 3) (5.05)

HOLDING FILE DATA REPORT (RADIO CHANNEL TEST DATA)

(1) FEB 1982: Date of the report.

(2) RESP. CODE: The responsibility codes that appeared in the holding file when this report was requested. The codes are those that existed below the hierarchy of the code specified on input, eg, X00000000.

(3) CHNL: Channel type and number.

(4) CLLITX: Transmit CLLI code.

(5) CLLIRX: Receive CLLI code.

(6) BBR: Baseband response reading — deviation from BSP requirement, in whole decibels.

(7) THR: Thermal noise reading — deviation from BSP requirement, in whole decibels.

(8) TNR: Tone reading — deviation from BSP requirement, in whole decibels.

(9) NLR: Noise load reading — deviation from BSP requirement, in whole decibels.

(10) CI: Cochannel/interference actual reading.

(11) FI: Faded/interference actual reading of the worst radio path in the switch section.

Fig. 13 — Example Holding File Data Report (Sheet 3 of 3) (5.05)

```
MERTT REPORT

THE FOLLOWING REPORTS ARE AVAILABLE:
P- CHANNEL PERFORMANCE
S- CHANNEL STATUS
H- HOLDING FILE DATA
T- CHANNEL TROUBLE TYPE
M- MUR CHANNEL STATUS
W- WORST CHANNEL STATUS
R- RC LIST
L- CHANNEL TI LISTING
Q- QUIT SESSION


ENTER DATA IN THE FOLLOWING FORMAT: OPTION,RC,TYPE,COND
(S,X31212041,9,H) OR (P,X31212031,A,E)
?
T,X00000000


PLEASE ENTER ONE SELECTION. (ENTER NUMBER)
1- BASEBAND
2- THERMAL
3- TONE
4- NOISE LOAD
5- C/I

?
3
```

Format to request
Channel Trouble Type Report

Fig. 14 — Example Channel Trouble Type Report (Sheet 1 of 3) (5.05)

PAGE 1

RADIO CHANNEL TROUBLE TYPE

(1) JAN 1982

(2) RESPONSIBILITY (3) RADIO TYPE A

(5) CHNL	(7) AST	(8) OOL	(9) TONE T1	T2	T3	T4	T5	(10) DVR	(11) DVH	(12) MNTCE.	(14) PERF.
(6) X22112082 BNGHNY-NWBLNY											
0103	0	4	0	0	0	0	0	2	0	80.00	95.00
									(13)	80.00	95.00 (15)
(6) X31122026 CHVLNJ-NYCM07											
2101	8H	0	0	0	0	0	0	8	10	100.00	50.00
2102	8H	0	0	0	0	0	0	3	10	100.00	75.00
2103	8H	0	0	0	0	0	0	4	10	100.00	50.00
2104	8H	0	0	0	0	0	0	4	10	100.00	50.00
2105	8H	0	0	0	0	0	0	3	10	100.00	75.00
2106	8H	0	0	0	0	0	0	2	10	100.00	55.00
5107	8H	0	0	0	0	0	0	2	10	100.00	75.00
5108	8H	0	0	0	0	0	0	5	10	100.00	50.00
									(13)	100.00	60.00 (15)
(6) X31122026 CHVLTH-NYCM07											
1162	0	0	0	0	0	0	0	0	0	100.00	100.00
1163	6E	1	0	0	0	0	0	9	0	100.00	80.00
1164	6E	0	0	0	0	0	0	0	0	100.00	100.00
1165	0	0	0	0	0	0	0	0	0	100.00	100.00
1166	6E	1	0	0	0	0	0	4	0	100.00	90.00
1167	6E	0	0	0	0	0	0	4	0	100.00	90.00
1168	0	0	0	0	0	0	0	0	0	100.00	100.00
									(13)	100.00	94.29 (15)

Fig. 14 — Example Channel Trouble Type Report (Sheet 2 of 3) (5.05)

CHANNEL TROUBLE TYPE REPORT

(1) JAN 1982: Date of report.

(2) RESPONSIBILITY: All responsibility codes (RCs) are listed that are below the hierarchy of the RC specified on input, eg, X00000000.

(3) RADIO TYPE A: A = all radio types in the RCs are included on the report.

(4) TONE: This report is limited to tone readings, by channel.

(5) CHNL: Channel type and number.

(6) Responsibility codes and switch sections in the hierarchy.

(7) AST: Number of months since Engineering assistance was requested or hardship limit was granted for the tone test parameter for each channel listed.

(8) 00L: Number of months the tone test parameter has been out of limits for each channel listed.

(9) T1 through T5: Number of months, if any, that the various tone clocks have been set to track tone problems. See Table B of this section.

(10) DVR: Tone deviation reading from BSP requirements, in whole decibels.

(11) DVH: Tone deviation hardship limit granted.

(12) MNTCE: Current maintenance index, in percent, for each channel.

(13) Average current maintenance index, in percent, for all channels reported in the switch section.

(14) PERF.: Current performance index, in percent, for each channel.

(15) Average current performance index, in percent, for all channels reported in the switch section.

Fig. 14 — Example Channel Trouble Type Report (Sheet 3 of 3) (5.05)

```
*GO 14:48:09


/INPUT
/INCLUDE MERTT.RPT
X37111033 0201 PCTLID SLKJUT
X37111033 0203 SCIPUT SLKJUT
/END RUN
*IN PROGRESS

MERTT REPORT

THE FOLLOWING REPORTS ARE AVAILABLE:
P- CHANNEL PERFORMANCE
S- CHANNEL STATUS
H- HOLDING FILE DATA
T- CHANNEL TROUBLE TYPE
M- MUR CHANNEL STATUS
W- WORST CHANNEL STATUS
R- RC LIST
L- CHANNEL TI LISTING
Q- QUIT SESSION


ENTER DATA IN THE FOLLOWING FORMAT: OPTION,RC,TYPE,COND
(S,X31212041,9,H) OR (P,X31212031,A,E)
?
M


SRT000  BEGIN SORT.  RECORD LENGTH =      25, AREA =   31968
SRT000  RECORD COUNT =       2
SRT000  NORMAL END OF SORT
```

Format to request MUR Channel Status Report for two switch sections

Fig. 15 — Example MUR Channel Status Report (Sheet 1 of 2) (5.05)

PAGE 1

RADIO CHANNEL STATUS

(1) JAN 1982

RESPONSIBILITY RADIO TYPE

(3) CHNL	(4) TST	(5) BBR	(6) THRM	(7) TONE	(8) NLD	(9) C/I	(10) F/I	(11) MNTCE.	(13) PERF.
(2) X37111033 PCTLID-SLKJUT									
0201	4	0.0	0	0	0	58	0	100.00	100.00
(2) X37111033 SCIPUT-SLKJUT									
0203	4	0.4	0	0	0	58	0	90.00	90.00
								(12) 95.00	95.00 (14)

MUR CHANNEL STATUS (RADIO CHANNEL STATUS)

(1) JAN 1982: Date of report.

(2) Responsibility codes and switch sections. This report can be obtained for up to 20 switch sections.

(3) CHNL: Channel type and number.

(4) TST: Number of months since last test interval.

(5) BBR: Baseband response reading — deviation from BSP requirement, in tenths of a decibel.

(6) THRM: Thermal noise reading — deviation from BSP requirement, in whole decibels.

(7) TONE: Tone reading — deviation from BSP requirement, in whole decibels.

(8) NLD: Noise load reading — deviation from BSP requirement, in whole decibels.

(9) C/I: Cochannel/interference actual reading.

(10) F/I: Faded/interference actual reading for the worst radio path in the switch section.

(11) MNTCE.: Current maintenance index, in percent, for each switch section.

(12) Average current maintenance index, in percent, for all switch sections included on the report.

(13) PERF.: Current performance index, in percent, for each switch section.

(14) Average current performance index, in percent, for all switch sections included on the report.

Fig. 15 — Example MUR Channel Status Report (Sheet 2 of 2) (5.05)

```
MERTT REPORT

THE FOLLOWING REPORTS ARE AVAILABLE:
P- CHANNEL PERFORMANCE
S- CHANNEL STATUS
H- HOLDING FILE DATA
T- CHANNEL TROUBLE TYPE
M- MUR CHANNEL STATUS
W- WORST CHANNEL STATUS
R- RC LIST
L- CHANNEL TI LISTING
Q- QUIT SESSION

ENTER DATA IN THE FOLLOWING FORMAT: OPTION,RC,TYPE,COND
(S,X31212041,9,H) OR (P,X31212031,A,E)
?
W,X00000000

PLEASE ENTER THE UPPER AND LOWER LIMITS FOR
THE MAINT. INDEX, (IE. 95,05), 100 INDEX IS NOT GOOD
?
99,01

SRT000  BEGIN SORT.  RECORD LENGTH =       29, AREA =   31968
SRT000  RECORD COUNT =     510
SRT000  NORMAL END OF SORT
```

Format to request Worst Channel Status Report

Fig. 16 — Example Worst Channel Status Report (Sheet 1 of 3) (5.05)

PAGE 1

WORST RADIO CHANNEL INDEX

(1) JAN 1982

(2) ASCENDING MAINTENANCE INDEX (3) RADIO TYPE A

(4) RESP.CODE	(5) CHNL	(6) CLLITX	(7) CLLIRX	(8) MNT	(9) PRF
X33133011	0204	GRCYVA	TRMTVA	40	40
X33141091	0108	HRBGPA	ELMSPA	40	40
X34123050	2101	VLRCGA	ORMETN	40	70
X34123050	2103	VLRCGA	ORMETN	40	70
X35111064	0107	SBNDIN	MSHWIN	40	60
X35111064	0201	TOLDOH	MSHWIN	40	85
X36121022	0203	MRTWIA	DESMIA	40	85
X36136013	0111	OKCYOK	MNDSOK	40	80
X37112092	3162	LSLNNM	CRNRNM	40	55
X37114032	0106	STBGCO	HUGOCO	40	70
X37114033	0107	HUGOCO	EADSCO	40	40
X37114046	0204	PRVYCO	STBGCO	40	75
X37114046	0210	PRVYCO	STBGCO	40	50
X3713A040	0211	JULNCA	LSANCA	40	40
X32124061	0203	SPFDMA	PERUMA	50	50
X331330A3	0208	NRFLVA	NWTWVA	50	50
X34131037	0106	DYBHFL	JCBHFL	50	50
X34133020	0102	MIAMFL	OJUSFL	50	55
X36114053	0105	RRMTTX	ODSSTX	50	70
X36114053	0108	RRMTTX	ODSSTX	50	50
X36122061	0110	STPLMN	RDWNMN	50	40
X33134064	0112	GRCYVA	WASHDT	60	60
X33143040	0102	LIVLPA	WAYNPA	60	60
X34112052	0101	PRMTSC	GIVLNC	60	60
X34121011	0106	MTGMAL	BRHMAL	60	60
X34122015	0212	GNWDMS	PCKNMS	60	60
X34122015	2109	MNGHLA	PCKNMS	60	60
X34123050	2105	VLRCGA	ORMETN	60	80
X35111022	0204	LRBGIN	HRBGIN	60	60
X35111064	0108	MONNIN	MSHWIN	60	60
X35116023	5108	CHC1IL	PLMYWI	60	60
X35116045	0201	CHC2IL	LEE-IL	60	80
X35116066	0205	ODLLIL	HGLDIL	60	60
X36114075	0212	OKCYOK	ADMSTX	60	60

Fig. 16 — Example Worst Channel Status Report (Sheet 2 of 3) (5.05)

WORST CHANNEL STATUS REPORT (WORST RADIO CHANNEL INDEX)

(1) JAN 1982: Date of report.

(2) ASCENDING MAINTENANCE INDEX: Channels with worst maintenance indexes are listed first. An upper and lower limit is specified on input.

(3) RADIO TYPE A: All radio types are included in the report.

(4) RESP. CODE: Responsibility code for each channel listed.

(5) CHNL: Channel type and number.

(6) CLLITX: Transmit CLLI code.

(7) CLLIRX: Receive CLLI code.

(8) MNT: Current maintenance index for the channel, in percent.

(9) PRF: Current performance index for the channel, in percent.

Fig. 16 — Example Worst Channel Status Report (Sheet 3 of 3) (5.05)

```
MERTT REPORT

THE FOLLOWING REPORTS ARE AVAILABLE:
P- CHANNEL PERFORMANCE
S- CHANNEL STATUS
H- HOLDING FILE DATA
T- CHANNEL TROUBLE TYPE
M- MUR CHANNEL STATUS
W- WORST CHANNEL STATUS
R- RC LIST
L- CHANNEL TI LISTING
Q- QUIT SESSION


ENTER DATA IN THE FOLLOWING FORMAT: OPTION,RC,TYPE,COND
(S,X31212041,9,H) OR (P,X31212031,A,E)
?
R,X37000000
```

Format to request Responsibility Code List Report

Fig. 17 — Example Responsibility Code List Report (Sheet 1 of 3) (5.05)

PAGE 1

RESPONSIBILITY CODE LIST

(1) JAN 1982

(2) RESP.CODE	(3) TYP	(4) CLLITX	(5) CLLIRX	(6) QTY
X37111033	0	SCIPUT	PYSNUT	1
X37111033	0	ADHLNV	SLKJUT	11
X37111033	1	DELTUT	SLKJUT	7
X37111033	0	NRWLWY	SLKJUT	11
X37111033	1	NRWLWY	SLKJUT	8
X37111033	0	PCTLID	SLKJUT	11
X37111033	5	PCTLID	SLKJUT	1
X37111033	0	RCSPWY	SLKJUT	1
X37111033	0	SCIPUT	SLKJUT	10
X37111035	0	MRSMNV	DELTUT	12
X37111035	1	MRSMNV	DELTUT	7
X37111035	0	SCIPUT	DELTUT	4
X37111035	1	SLKJUT	DELTUT	7
X37111035	0	YLJCCO	DELTUT	12
X37111035	0	KELSCA	LUNDUT	8
X37111035	0	SCIPUT	LUNDUT	10
X37111035	0	DELTUT	SCIPUT	4
X37111035	0	LUNDUT	SCIPUT	9
X37111035	0	SLKJUT	SCIPUT	11
X37111041	0	BOSJID	PCTLID	12
X37111041	0	BOSJID	PCTLID	1
X37111041	0	SLKJUT	PCTLID	11
X37111041	5	SLKJUT	PCTLID	1
X37111041	2	TWBRMT	PCTLID	3
X37111041	5	TWBRMT	PCTLID	2
X37111042	0	BOSIID	BOSJID	7
X37111042	5	BOSSID	BOSJID	1
X37111042	0	MAUPOR	BOSJID	8
X37111042	0	PCTLID	BOSTID	8
X37111043	0	BHMTCO	NRWLWY	11
X37111043	1	BHMTCO	NRWLWY	1
X37111043	1	PRVYCO	NRWLWY	8
X37111043	0	SLKJUT	NRWLWY	11
X37111043	1	SLKJUT	NRWLWY	8
X37112011	0	KLVNAZ	TCSNAZ	5
X37112011	5	KLVNAZ	TCSNAZ	1
X37112012	3	APJTAZ	CSGRAZ	6

Fig. 17 — Example Responsibility Code List Report (Sheet 2 of 3) (5.05)

RESPONSIBILITY CODE LIST REPORT

(1) JAN 1982: Date of report.

(2) RESP. CODE: A list of responsibility codes (RCs) below the hierarchy of the RC specified on input, eg, X37000000.

(3) TYP: The type of radio channel in the specific switch section/responsibility code listed. See Table A of this section.

(4) CLLITX: Transmit CLLI code.

(5) CLLIRX: Receive CLLI code.

(6) QTY: Quantity of the specific type of radio channels in the switch section/responsibility code listed.

Fig. 17 — Example Responsibility Code List Report (Sheet 3 of 3) (5.05)

```
MERTT REPORT

THE FOLLOWING REPORTS ARE AVAILABLE:
P- CHANNEL PERFORMANCE
S- CHANNEL STATUS
H- HOLDING FILE DATA
T- CHANNEL TROUBLE TYPE
M- MUR CHANNEL STATUS
W- WORST CHANNEL STATUS
R- RC LIST
L- CHANNEL TI LISTING
Q- QUIT SESSION


ENTER DATA IN THE FOLLOWING FORMAT: OPTION,RC,TYPE,COND
(S,X31212041,9,H) OR (P,X31212031,A,E)
?
L,X37000000


PLEASE ENTER "TI" LOWER LIMIT. (IE.  5 )
?
3
```

Format to request Channel Test Interval Listing Report

Fig. 18 — Example Channel Test Interval Listing Report (Sheet 1 of 3) (5.05)

PAGE 1

CHANNEL TI LISTING

(1) JAN 1982

(2) RESP.CODE	(3) CHNL	(4) CLLITX	(5) CLLIRX	(6) TI
X37111033	0101	ADHLNV	SLKJUT	3
X37111033	0102	ADHLNV	SLKJUT	3
X37111033	0103	ADHLNV	SLKJUT	3
X37111033	0104	ADHLNV	SLKJUT	3
X37111033	0105	ADHLNV	SLKJUT	3
X37111033	0106	ADHLNV	SLKJUT	3
X37111033	0107	ADHLNV	SLKJUT	3
X37111033	0108	ADHLNV	SLKJUT	3
X37111033	0109	ADHLNV	SLKJUT	3
X37111033	0110	ADHLNV	SLKJUT	3
X37111033	0111	ADHLNV	SLKJUT	3
X37111033	1161	DELTUT	SLKJUT	5
X37111033	1162	DELTUT	SLKJUT	5
X37111033	1163	DELTUT	SLKJUT	5
X37111033	1164	DELTUT	SLKJUT	5
X37111033	1166	DELTUT	SLKJUT	5
X37111033	1167	DELTUT	SLKJUT	5
X37111033	1168	DELTUT	SLKJUT	5
X37111033	0201	NRWLWY	SLKJUT	4
X37111033	0203	NRWLWY	SLKJUT	5
X37111033	0204	NRWLWY	SLKJUT	4
X37111033	0205	NRWLWY	SLKJUT	5
X37111033	0206	NRWLWY	SLKJUT	5
X37111033	0207	NRWLWY	SLKJUT	4
X37111033	0208	NRWLWY	SLKJUT	4
X37111033	0209	NRWLWY	SLKJUT	5
X37111033	0212	NRWLWY	SLKJUT	5
X37111033	1262	NRWLWY	SLKJUT	5
X37111033	1263	NRWLWY	SLKJUT	5
X37111033	1264	NRWLWY	SLKJUT	5
X37111033	1265	NRWLWY	SLKJUT	5
X37111033	1266	NRWLWY	SLKJUT	5
X37111033	1267	NRWLWY	SLKJUT	5
X37111033	1268	NRWLWY	SLKJUT	5
X37111033	0201	PCTLID	SLKJUT	4
X37111033	0202	PCTLID	SLKJUT	4
X37111033	0203	PCTLID	SLKJUT	4

Fig. 18 — Example Channel Test Interval Listing Report (Sheet 2 of 3) (5.05)

CHANNEL TEST INTERVAL (TI) LISTING REPORT

(1) JAN 1982: Date of the report.

(2) RESP. CODE: Responsibility code for the channel.

(3) CHNL: Channel type and number.

(4) CLLITX: Transmit CLLI code.

(5) CLLIRX: Receive CLLI code.

(6) TI: Number of months since channel was last tested. A lower limit is specified on input.

Fig. 18 — Example Channel Test Interval Listing Report (Sheet 3 of 3) (5.05)

TABLE A

RADIO CHANNEL TYPES

0 = TD-2	5 = TD-3D
1 = TH-1	6 = AR-6A
2 = TD-3	7 = FR-6
3 = TH-3	8 = (not used)
4 = TN-1	9 = All other
	A = All (default)

TABLE B

TONE CLOCKS

ON	OFF	TONE CATEGORY	TONE TYPE
A	B	T1	Cochannel/interference (C/I) related tones
C	D	T2	Equipment-generated tones
E	F	T3	Common broadcast tones
G	H	T4	Unknown origin tones
I	J	T5	Other tones

TABLE C

DEVIATIONS/WEIGHTINGS USED IN COMPUTATION OF CHANNEL INDEXES

Weighting

Range A is the published switching section requirement. Ranges B, C, and D are deviations from these requirements and indicate a deterioration in overall system performance.

Range	A	B		C		D	
	WTG	DEV	WTG	DEV	WTG	DEV	WTG
Baseband response (without IF amplitude equalizers)	20	0 to 0.3	-5	>0.3 to 0.6	-10	>0.6	-20
Thermal noise	20	0 to 1.5	-5	>1.5 to 3.0	-10	>3.0	-20
Tones	20	0 to 3.0	-5	>3.0 to 9.0	-10	>9.0	-20
EDD ripple*		0 to 3.0	-10	>3.0 to 6.0	-10	>6NS	-40
or	40						
Noise load		0 to 1.5	-10	>1.5 to 3.0	-20	>3.0	-40
Total channel index	100						

* Since EDD slope is equalizer adjustable, Range D weighting must be applied where requirements are not met.

EDD — Envelope Delay Distortion
NS — Nanoseconds

TABLE D

REQUIRED TEST INTERVALS

RADIO SYSTEM	RADIO TYPE CODE	TEST INTERVAL
TD-2	0	6 months
TH-1	1	6
TD-3	2	12
TH-3	3	12
TN-1	4	12
TD-3	5	6
AR-6A	6	6
FR-6	7	12
(not used)	8	(not used)
OTHER	9	12