

CENTRALIZED AUTOMATIC REPORTING ON TRUNKS (CAROT)

CAROT 1

CAROT CENTER OPERATION AND ADMINISTRATION

TEST FRAME TAPES GENERATION AND UPDATING

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1. GENERAL																				
1.01 This section provides instructions and procedures for employing the CAROT 1 controller to generate and update test frame control tapes. These tapes are used to control the process of making transmission and operational trunk tests via the No. 5 crossbar automatic progression trunk test frame (5XB APTT), the No. 4 crossbar automatic outgoing trunk test frame (4XB AOTT), and step-by-step (SXS) AOTTs.		<p>1.02 Related information concerning centralized tape administration can be obtained by referring to Section 800-102-100. Detailed information pertaining to control tape data requirements is contained in the associated practices for the applicable test frames. Other practices referenced in this section are as follows:</p> <table border="0" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th style="text-align: left; width: 20%;">SECTION</th> <th style="text-align: left; width: 80%;">SUBJECT</th> </tr> </thead> <tbody> <tr> <td>010-410-312</td> <td>CAROT Center Operation and Administration—TMF Data Base Requirements</td> </tr> <tr> <td>010-410-313</td> <td>CAROT Center Operation and Administration—TMF Generation and Updating</td> </tr> <tr> <td>212-512-301</td> <td>Compiling Data for Control Tapes—AOTT</td> </tr> <tr> <td>218-220-301</td> <td>Compiling Data for Control Tapes—Operational Trunk Tests—5XB APTT</td> </tr> <tr> <td>218-220-302</td> <td>Control Tape Preparation—Operational Trunk Tests—5XB APTT</td> </tr> <tr> <td>218-220-303</td> <td>Compiling Data for Control Tapes—Transmission Testing of Trunks—APTT and ATMS—5XB</td> </tr> <tr> <td>226-591-101</td> <td>SXS AOTT—Description</td> </tr> <tr> <td>226-591-300</td> <td>Compiling Data for Control Tapes—SXS AOTT</td> </tr> </tbody> </table> <p>1.03 Part 2 of this section describes the requirements and contains instructions for completing each of the CAROT test frame worksheets associated with the referenced test frames.</p>	SECTION	SUBJECT	010-410-312	CAROT Center Operation and Administration—TMF Data Base Requirements	010-410-313	CAROT Center Operation and Administration—TMF Generation and Updating	212-512-301	Compiling Data for Control Tapes—AOTT	218-220-301	Compiling Data for Control Tapes—Operational Trunk Tests—5XB APTT	218-220-302	Control Tape Preparation—Operational Trunk Tests—5XB APTT	218-220-303	Compiling Data for Control Tapes—Transmission Testing of Trunks—APTT and ATMS—5XB	226-591-101	SXS AOTT—Description	226-591-300	Compiling Data for Control Tapes—SXS AOTT
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SECTION 010-410-330

1.04 Chart 1 in Part 3 of this section contains CAROT Center procedures for preparing test frame TMFs on magnetic tape cassettes. Charts 2 through 4 provide procedures for producing control paper tapes for each of the specified test frames, using the data base established in the TMFs.

1.05 In the following procedures all operator-initiated messages to be typed on the teletypewriter (TTY) will be prompted by the appropriate program statement as printed by the TTY. All operator initiated-messages are to be terminated by a carriage return and line feed action when indicated by the symbols **CR** and **LF**, respectively, in the procedures.

1.06 Before performing any procedure, verify that all associated CAROT controller equipment is turned on and operative with the exception of the paper tape reader and line printer.

2. TEST FRAME DATA BASE—REQUIREMENTS AND PREPARATION

A. General

2.01 CAROT Test Frame TMF Worksheets E6304A and E6304B are shown in Fig. 1 and 2. These worksheets are used by the CAROT Center in preparing control tapes to make operational and transmission tests using 5XB APTT, 4XB AOTT, and SXS AOTT test frames. Procedures for control tape preparation are outlined as follows.

- (a) Test frame data is compiled by preparing CAROT Test Frame TMF Worksheets E6304A and E6304B. Worksheet E6304A pertains to 5XB APTT test frames, and worksheet E6304B to 4XB/SXS AOTT test frames.
- (b) The information entered on the worksheets is transferred to perforated 8-level paper tape via an off-line TTY.
- (c) The CAROT controller Update Program is then used to transfer the data from the perforated tape to a magnetic tape cassette according to Chart 1 of this section.
- (d) After a test frame TMF cassette has been originated, this same cassette can be used to produce test frame control tapes. See Charts 2 through 4 of this section.

(e) Test frame control tapes are produced by employing the appropriate 5XB, 4XB, or SXS CAROT program to extract test data from a current test frame TMF stored on cassette and to arrange the test data according to the format required for the associated test frame.

(f) The resulting 5-level or 8-level control tape is then forwarded to the requesting central office.

(g) Updated control tapes can be produced at the CAROT Center by employing the Update Program to incorporate changes to the test frame TMFs stored on cassette, and then producing a new test frame control tape as described in (e) above.

2.02 Each TMF worksheet covers a data base action on a single trunk group and has been designed to require as few entries as practical. Trunks may be listed in whatever sequence is most convenient. The processor arranges the data in the sequence specified by the TMF type. (See 2.12.) For each trunk group, when preparing a TMF worksheet, a trunk group identification field must be entered, followed by one or more F, G, or H fields. If an error is made in typing a field entry, the error must be canceled by striking the RUBOUT, RETURN (carriage return), and LINE FEED keys, in that sequence, one time each. The particular field will then be deleted and the entire field must be re-entered.

2.03 The standard input medium for updating or generating changes to a TMF is 8-level opaque paper tape. The leader and trailer on the tape are identified by feed hole punchings. "End-of-tape" is defined as ten successive feed holes (CNTRL-SHIFT-P) with no other punches. ASCII code is used.

2.04 The procedures described in Section 010-410-312 concerning action codes, trunk group identification, and facility group identification to be used on CAROT ROTL TMF Worksheet E6303 apply to CAROT Test Frame Worksheets E6304A and E6304B. Detailed listings of data items as referenced to character positions in the trunk group and facility group identification fields are shown in Fig. 3 and 4, respectively.

B. No. 5 Crossbar APTT

2.05 Detailed information on compiling data for APTT control tapes for transmission testing and operational trunk tests is contained in Sections 218-220-301 and 218-220-303. Additional information for compiling transmission testing parameters, trunk priming, and marker priming data entries, as related specifically to CAROT Test Frame TMF Worksheet E6304A used for 5XB APTT, is given in 2.06 through 2.12.

TMF Worksheet E6304A

2.06 Transmission Testing Parameters: The transmission testing parameters are entered in the G field portion of the TMF worksheet. Figure 5 shows this portion of the worksheet and lists the related data items and their respective character positions in the G field.

2.07 Trunk Priming: Trunk priming information is entered in the H field portion of the TMF worksheet. Figure 6 shows this portion of the worksheet and lists the related data items and their respective character positions in the field. Trunk priming information is entered on a per-trunk basis. Refer to Section 218-220-301 for related information.

2.08 Marker Priming: Marker priming information is entered in the K field portion of the TMF worksheet. Entries for marker priming depend on the issue of the test frame and the composite tapes desired by the central office. The marker priming data requirements are described in Section 218-220-301 for operational tests, and in Section 218-220-303 for transmission tests. Types of composite tapes are covered in Section 218-220-302. Figure 7 illustrates the K field contained on worksheet E6304A.

2.09 If it is desired that a character not be punched on the resulting control tape due to options not available on a particular test frame, the corresponding entry in the K or H field should be left blank. When producing 5XB tapes, the program does not punch blank characters on the control tape.

2.10 The MKG/RET digit in the K field serves dual functions. For 5XB APTT test frames issued prior to Issue 23 and for Issues 23 through 29, only the RETEST digit is used. Therefore,

the punching on the tape corresponds to the designated value of the K2 digit indicated in Table A. For Issue 30 and later, the assigned value of the number 2 digit in the K field causes the program to punch on the tape the values corresponding to the MARKER and RETEST digits indicated in Table A.

TABLE A**VALUE OF MKG/RET DIGIT IN K FIELD
PER ISSUE NO. OF APTT TEST FRAME**

TEST FRAME ISSUE NO.	VALUE OF K2	RETEST DIGIT	MARKER DIGIT
Prior to Issue 23	BLANK	BLANK	DNA
	Ø	Ø	DNA
Issues 23 through 29	Ø	Ø	DNA
Issue 30 and later	BLANK	NONE	SPACE
	Ø	NONE	Ø
	1	NONE	1
	2	NONE	2
	3	Ø	Ø
	4	Ø	1
5	Ø	2	

2.11 Questions arising as to whether a digit is required by a frame should be referred directly to the central office personnel responsible for the operation of the test frame.

2.12 Two TMFs should be kept for 5XB APTT test frames if both (a) intraoffice and CAMA trunk composite test tapes and (b) outgoing trunk composite test tapes are to be prepared. The type of TMF, IAO (intraoffice and CAMA) or OGT (outgoing trunks), should be entered for information on the TMF label in character positions 16, 17, and 18. Refer to Section 010-410-313 for further explanation of the TMF label format.

C. No. 4 Crossbar AOTT

2.13 Detailed information on compiling data for 4XB AOTT control tapes for automatic transmission measurements and operational tests for trunks is contained in Sections 212-512-301 and 800-102-100. Additional information for compiling transmission testing parameters and trunk priming data entries relating to the use of CAROT Test

Frame TMF Worksheet E6304B for 4XB AOTT tests frames is given in 2.14 through 2.16.

TMF Worksheet E6304B—For 4XB AOTT

2.14 As mentioned in Part 2A, worksheet E6304B, illustrated in Fig. 2, is used for both 4XB AOTT and SXS AOTT test frames. When completing the worksheet for 4XB AOTT applications, the K field does not apply.

2.15 *Transmission Testing Parameters:* The transmission testing parameters are entered in the G field portion of the TMF worksheet. Figure 8 shows this portion of the worksheet and lists the related data items and their respective character positions in the G field.

2.16 *Trunk Priming:* Trunk priming information is entered in the H field portion of the TMF worksheet. Figure 9 shows this portion of the worksheet and lists the related data items and their respective character positions in the H field. Information is entered on a per-trunk basis. The trunk location address consists of a train identifier and a 4- or 5-digit test connector number for frames equipped with 10,000 and 20,000 trunks, respectively. Refer to Section 212-512-301.

D. Step-by-Step AOTT

2.17 Detailed information on compiling data for SXS AOTT control tapes for automatic transmission measurements and operational tests for trunks is contained in Sections 226-591-101 and 226-591-300. Additional information for compiling transmission testing parameters, trunk priming, and test priming data entries relating specifically to the use of CAROT Test Frame TMF Worksheet E6304B for SXS AOTT test frames is given in 2.18 through 2.21.

TMF Worksheet E6304B—For SXS AOTT

2.18 Worksheet E6304B (Fig. 2) is used for both SXS AOTT and 4XB AOTT test frames.

2.19 *Transmission Testing Parameters:* The transmission testing parameters are entered in the G field portion of the TMF worksheet. Figure 8 shows this portion of the worksheet and lists the related data items and their respective character positions in the G field.

2.20 *Trunk Priming:* Trunk priming information is entered in the H field portion of the TMF worksheet. Figure 9 shows this portion of the worksheet and lists the related data items and their respective character positions in the H field. Information is entered on a per-trunk basis. The trunk location address ordinarily consists of a 4-character test connector number. However, when a SXS AOTT is used to control either a small SXS or a small 5XB ROTL, the information entered in the trunk location address is the ROTL trunk location address. See Section 010-410-312.

2.21 *Test Priming:* Test priming information is entered in the K field portion of the TMF worksheet. The K field applies only to SXS AOTT applications. Figure 10 shows this portion of the worksheet and lists the related data items and their respective character positions in the field. Some entries in this field are for use when the AOTT is controlling a ROTL. Although it is unlikely that an operating CAROT Center will make tapes to test ROTLs, the field entries are identified for information.

3. GENERATING AND UPDATING TEST FRAME TMFs AND TEST FRAME TAPES

3.01 As described earlier (2.01), the test frame tape preparation procedures first involve creating, from punched paper tape, a related TMF on magnetic tape cassette. The resulting cassette is then used to generate the desired test frame tapes.

3.02 To update an existing test frame control tape, a paper tape change tape is used to make changes to the data stored on the existing TMF cassette. The resulting updated TMF cassette is then used to produce the desired test frame control tapes.

3.03 The procedure in Chart 1 should be followed to generate and update a test frame TMF on magnetic tape cassettes. The initial generation of a test frame TMF is the same process as updating an existing TMF. This consists primarily of performing a large number of additions to a dummy TMF that was produced according to the procedure in Chart 6 of Section 010-410-313.

3.04 During the procedure in Chart 1, special diagnostics as given in Table B can occur. Refer to Table C for corrective actions to be taken

when there is a cassette unit error reported by the TTY.

3.05 Charts 2, 3, and 4 provide procedures for using the TMF on cassette to generate test frame tapes for 5XB APTT, 4XB AOTT, and SXS AOTT, respectively.

3.06 Refer to Table D for the corrective action to be taken when a tape punch error is reported by the TTY while performing the procedures in Charts 2, 3, and 4.

3.07 When generating transmission test tapes for No. 5XB APTTs or SXS AOTTs and

transmission and operational test tapes for the 4XB AOTTs, the testing interval (daily-DA, weekly-WE, biweekly-BI, or monthly-MO) must be specified. A test tape for a complete office (test group facility) will contain a block header identifying the originating office, the type of test, and the date of TMF origination, followed by the test data. A short leader is provided between trunk group records. When preparing test tapes according to trunk groups, the tape will contain a block header identifying the originating and terminating offices of the trunk group, the type of test, and the date of TMF origination, followed by the test data. A short leader is provided between trunk group records.

FACILITY GROUP IDENTIFICATION																																			
CODE	FACILITY						FAR END LOCATION						NEAR END LOCATION																						
	NUMBER			TYPE			TOWN	STATE	BLDG.	UNIT	TOWN	STATE	BLDG.	UNIT																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
F																																			
F																																			

CHARACTER POSITION

DATA ITEM

- 1 F (SEE NOTE.)
- 2-6 FACILITY NUMBER OF FIRST FACILITY LEAVING ORIGINATING OFFICE - MAY BE ALPHA, NUMERIC, OR BLANK.
- 7-12 FACILITY TYPE LEAVING ORIGINATING OFFICE - MAY BE ALPHA, NUMERIC, OR BLANK.
- 13-23 COMMON LANGUAGE NAME OF FAR-END TERMINAL BUILDING OF FACILITY - 13-18 MUST BE ALPHA OR BLANK; 19-23 MAY BE ALPHA, NUMERIC, OR BLANK.
- 24-34 COMMON LANGUAGE NAME OF NEAR-END TERMINAL BUILDING OF FACILITY - MAY BE ALPHA, NUMERIC, OR BLANK.
- CARRIAGE RETURN.
- LINE FEED.

NOTE: IF NO FACILITY DESIGNATION IS TO BE ENTERED, ENTER "NONE" IN CHARACTER POSITIONS 3-6.

- CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

Fig. 4—Facility Group Identification

TRANSMISSION TESTING PARAMETERS																	
CODE	TEST GROUP FACILITY					CONTROLLED	ATMS PRIMING										
	1	2	3	4	5		T.P.L.	E.M.L.	LOSS DEV.	NOISE M.L.	NOISE I.A.L.	FETL					
G																	
G																	
G																	

CHARACTER POSITION

DATA ITEM

1	G
2-5	SPECIFIES THE TEST INTERVAL OF THOSE TRUNK GROUPS SELECTED FOR TESTING. MAY BE ALPHA, NUMERIC, OR BLANK. ALL TRUNK GROUPS SELECTED FOR TESTING MUST BE OF SAME TEST INTERVAL CODE IF THEY ARE TO BE INCLUDED ON THE SAME COMPOSITE TAPE. REFER TO SECTION 010-410-312 FOR TEST INTERVAL CODES.
6	1 IF ORIGINATING OFFICE CONTROLS; 0 OTHERWISE. THE DIGIT 1 SHOULD BE ENTERED IF DEVIATION REGISTERS ARE TO BE SCORED FOR INDEX PURPOSES.
7	0 IF NO 2-dB TEST PAD IS NEEDED; 2 IF 2-dB TEST PAD IS NEEDED.
8-10	EXPECTED MEASURED LOSS IN TENTHS OF DECIBELS WITH PRECEDING ZEROS IF NEEDED (3.5 dB = 035).
11-12	Q1 LOSS MAINTENANCE LIMIT IN TENTHS OF DECIBELS WITH PRECEDING ZEROS IF NEEDED.
13-14	Q1 NOISE MAINTENANCE LIMIT WITH PRECEDING ZEROS.
15-16	Q2 NOISE IMMEDIATE-ACTION LIMIT WITH PRECEDING ZEROS.
17	BLANK
18	FAR-END TEST LINE TYPE: 0 - FOR COMBINED 100 2 - FOR 102 4 - FOR 104 5 - FOR 105.
*	CARRIAGE RETURN
*	LINE FEED

* CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

Fig. 5—Transmission Testing Parameters—5XB APTT

TYPE AFTER E FOR E/C ACTION																						
TRUNK PRIMING																						
CODE	TRUNK NUMBER					CHANNEL NUMBER					FT/FTCD	FU	TT	TU/SSN	IHT	IUT	ITH	ASN	ASH			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
H																						
H																						

USE THESE H FIELD COLUMNS FOR A, B, C, AND D ACTIONS AND AFTER E FOR E/C ACTION.

TYPE AFTER C FOR E/C ACTION																						
TRUNK PRIMING																						
CODE	TRUNK NUMBER					CHANNEL NUMBER					FT/FTCD	FU	TT	TU/SSN	IHT	IUT	ITH	ASN	ASH			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
H																						
H																						

USE THESE H FIELD COLUMNS AFTER C FOR E/C ACTION AND, IF NEEDED, IN ADDING, DELETING, OR CHANGING A LARGE NUMBER OF TRUNKS.

CHARACTER POSITION

DATA ITEM

1	H	
2-5	TRUNK NUMBER - MAY BE ALPHA, NUMERIC, OR BLANK.	
6-10	CHANNEL NUMBER OF FIRST FACILITY LEAVING ORIGINATING OFFICE - MUST BE NUMERIC OR BLANK.	
11-22	TRUNK LOCATION ADDRESS - MAY BE ALPHA, NUMERIC, OR BLANK. (SEE BELOW).	
11	BLANK.	
12	BLANK.	
13	FT/FTCD] SEE SECTION 218-220-301
14	FU	
15	TT	
16	TU/SSN	
17	IHT	
18	ITT	
19	IUT	
20	ITH	
21	ASN	
22	ASH	
*	CARRIAGE RETURN.	
*	LINE FEED	

* CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

Fig. 6—Trunk Priming—5XB APTT

TRANSMISSION TESTING PARAMETERS																	
CODE	TEST GROUP FACILITY					CONTROLLED	T.P.L.	ATMS PRIMING									
	1	2	3	4	5			8	9	10	11	12	13	14	15	16	17
G																	
G																	

CHARACTER POSITION

DATA ITEM

1	G	
2-5	SPECIFIES THE TEST INTERVAL OF THOSE TRUNK GROUPS SELECTED FOR TESTING. MAY BE ALPHA, NUMERIC, OR BLANK. ALL TRUNK GROUPS SELECTED FOR TESTING MUST BE OF SAME TEST INTERVAL CODE IF THEY ARE TO BE INCLUDED ON THE SAME COMPOSITE TAPE. REFER TO SECTION 010-410-312 FOR TEST INTERVAL CODES.	
6	1 IF ORIGINATING OFFICE CONTROLS; 0 OTHERWISE. THE DIGIT 1 SHOULD BE ENTERED IF DEVIATION REGISTERS ARE TO BE SCORED FOR INDEX PURPOSES.	
7	0 IF NO 2-dB TEST PAD IS NEEDED; 2 IF 2-dB TEST PAD IS NEEDED.	
8-10	EXPECTED MEASURED LOSS IN TENTHS OF DECIBELS WITH PRECEDING ZEROS IF NEEDED (3.5 dB = 035).	
11-12	Q1 LOSS MAINTENANCE LIMIT IN TENTHS OF DECIBELS WITH PRECEDING ZEROS IF NEEDED.	
13-14	Q1 NOISE MAINTENANCE LIMIT WITH PRECEDING ZEROS.	
15-16	Q2 NOISE IMMEDIATE-ACTION LIMIT WITH PRECEDING ZEROS.	
17	BLANK	
18	<u>4XB AOTT</u>	<u>SXS AOTT</u>
	FAR-END TEST LINE TYPE: 0 - FOR COMBINED 100 2 - FOR 102 4 - FOR 104 5 - FOR 105.	IMPEDANCE: 6 IF 600 OHMS 9 IF 900 OHMS.
*	CARRIAGE RETURN.	CARRIAGE RETURN.
*	LINE FEED.	LINE FEED.

* CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NON-BLANK CHARACTER POSITION.

Fig. 8—Transmission Testing Parameters—4XB AOTT and SXS AOTT

TYPE AFTER E FOR E/C ACTION															
TRUNK PRIMING															
CODE	TRUNK NUMBER					CHANNEL NUMBER					TRUNK LOCATION ADDRESS				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
H															
H															

USE THESE H FIELD COLUMNS FOR A, B, C, AND D ACTIONS AND AFTER E FOR E/C ACTION.

TYPE AFTER C FOR E/C ACTION															
TRUNK PRIMING															
CODE	TRUNK NUMBER					CHANNEL NUMBER					TRUNK LOCATION ADDRESS				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
H															
H															

USE THESE H FIELD COLUMNS AFTER C FOR E/C ACTION AND, IF NEEDED, IN ADDING, DELETING, OR CHANGING A LARGE NUMBER OF TRUNKS.

CHARACTER POSITION

DATA ITEM

1	H
2-5	TRUNK NUMBER - ALPHA, NUMERIC, OR BLANK.
6-10	CHANNEL NUMBER OF FIRST FACILITY - NUMERIC OR BLANK.
11-16	TRUNK LOCATION ADDRESS - ALPHA, NUMERIC, OR BLANK (SEE BELOW).

	<u>4XB AOTT</u> (SECTION 212-512-301)	<u>SXS AOTT</u> (SECTION 226-591-300)	<u>SXS AOTT</u> <u>SXS ROTL</u> (SECTION 226-591-300)	<u>SXS AOTT</u> <u>5XB ROTL</u> (SECTION 226-591-300)
11	TRAIN.	BLANK.	BLANK.	ROUTE TRANSLATION TENS.
12	TEN THOUSANDS OR BLANK FOR FRAMES EQUIPPED FOR 10,000 TRUNKS ONLY.	BLANK.	BLANK.	ROUTE TRANSLATION UNITS.
13	TEST CONNECTOR NUMBER	THOUSANDS.	THOUSANDS.	FRAME TENS (FT).
14		HUNDREDS.	HUNDREDS.	FRAME UNITS (FU).
15		TENS.	TENS.	BUSY TEST TENS (TT).
16		UNITS.	UNITS.	BUSY TEST UNITS (TU).
*	CARRIAGE RETURN.	CARRIAGE RETURN.	CARRIAGE RETURN.	CARRIAGE RETURN.
*	LINE FEED.	LINE FEED.	LINE FEED.	LINE FEED.

* CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

Fig. 9—Trunk Priming Field—4XB AOTT and SXS AOTT

TEST PRIMING - SXS AOTT ONLY

CODE	ROTL	PRE	COM	MF	SX	TR PRIMING							TL PRIMING							BL PRIMING													
						FE	AS	BS	CS	DS	ES	FS	GS	HS	LINE	CTX	AS	BS	CS	DS	ES	FS	GS	HS	AS	BS	CS	DS	ES	FS	GS	HS	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34

CHARACTER POSITION

DATA ITEM

1	K
2	0 - FOR SXS AOTT TRUNK TESTS 1 - FOR TEST OF SXS ROTL 2 - FOR TEST OF 5XB ROTL.
3	IF ROTL TEST: IS DIGIT "1" PREFIX REQUIRED TO BE OUTPULSED? 0 IF NO, 1 IF YES.
4	FAR-END OFFICE HAS COMMON CONTROL EQPT: 0 IF NO, 1 IF YES.
5	TRUNK REQUIRES MF PULSING: 0 IF NO, 1 IF YES.
6	TRUNK USES SIMPLEX SUPERVISION: 0 IF NO, 1 IF YES.
7	BLANK.
<u>TR PRIMING</u>	<u>TRANSMISSION</u>
8	FAR-END TEST LINE TYPE: 0 - FOR COMBINED 100 2 - FOR 102 4 - FOR 104 5 - FOR 105.
9-15	1- TO 7-DIGIT FAR-END TEST LINE NUMBER, LEFT JUSTIFIED.
16	BLANK.

NOTE: REFER TO SECTION 226-591-300.

* CARRIAGE RETURN AND LINE FEED INDICATE END OF FIELD AND SHOULD BE ENTERED AFTER LAST NONBLANK CHARACTER POSITION.

CHARACTER POSITION

DATA ITEM

<u>TL PRIMING</u>	<u>OPERATIONAL</u>
17	FAR-END TEST LINE TYPE: 1 - FOR SYNCHRONOUS 2 - FOR NONSYNCHRONOUS 3 - FOR 103 BLANK IF NONE OF ABOVE.
18	CENTREX TRUNK TEST: 0 IF NO, 1 IF YES.
19-25	1- TO 7-DIGIT FAR-END TEST LINE NUMBER, LEFT JUSTIFIED.
26	BLANK.
<u>BL PRIMING</u>	<u>BUSY LINE TEST</u>
27-33	1- TO 7-DIGIT FAR-END BUSY LINE NUMBER.
34	BLANK.
*	CARRIAGE RETURN.
*	LINE FEED.

Fig. 10—Test Priming—SXS AOTT

CHART 1

GENERATING OR UPDATING TEST FRAME TMFs

STEP	PROGRAM MESSAGE	OPERATOR REPLY	COMMENTS AND ACTION
1.			If generating an initial test frame TMF, create a dummy TMF according to the procedure in Chart 6 of Section 010-410-313.
2.	MONITOR RUNNING! PROGRAM NAME (OR "LIST"):	UPDATE (CR) (LF)	This message is printed out on the TTY while the Monitor Program is in control. To select the TMF tape preparation program, type "UPDATE" on the TTY. The symbols (CR) and (LF) indicate carriage return and line feed TTY key operations. These are operator-reply, message-completing actions and must be performed when indicated.
3.	TYPE IN DATE, 00/00/00:	05/15/74 (CR) (LF)	In response to this message, type in the current date in the month/day/year format.
4.	LOAD TMF IN 1, SCRATCH TAPES IN 2, 3: TYPE GO	GO (CR) (LF)	Load the old TMF if performing an update, or the dummy TMF if generating an initial TMF, into deck 1 (the one on the left) and scratch tapes into decks 2 and 3 of the cassette unit. <i>Note:</i> On the cassette unit, deck positions are numbered 1, 2, and 3 from left to right. Upon completing the loading of the tapes, type "GO" on the TTY.
5.	T DLMRNYDM439 145 02/27/74 SCRATCH TAPE SCRATCH TAPE LABELS OK?	YES (CR) (LF)	Upon receiving the above "GO" command, the program causes the cassettes to be rewound and the labels of the three cassettes to be read. The labels are then printed out for verification by the operator as indicated by this message. If the correct TMF or cassettes have not been loaded, load the desired cassettes and type "NO". This will cause the labels to be read and printed out again. Once the proper cassettes have been loaded and the corresponding labels printed out, type "YES" on the TTY
6.	LOAD CHANGE TAPE: TYPE GO	GO (CR) (LF)	Respond to this message by loading the change tape and then depressing the READ button on the paper tape reader. Type "GO" on the TTY. Upon receipt of the "GO" command, the program causes the paper tape to be read, and when the reading is completed, the TTY types the following message.
7.	END OF TAPE! MORE SEGMENTS?	YES (CR) (LF)	If there are more change tapes for the same originating office, load the next change tape and type "YES". The program again causes the paper tape to be read, and when the reading is complete, the TTY, types out the next message. <i>Note:</i> If a diagnostic message is printed on the TTY, refer to Table A and take the appropriate action.
8.	END OF TAPE: MORE SEGMENTS?	NO (CR) (LF)	After all the change tapes have been read for the same originating office, type "NO".
9.	AD DLMRNYDM439 145 05/15/74 T DLMRNYDM439 145 02/26/74 T DLMRNYDM439 145 05/15/74 DAILY 1 WEEKLY 74 BIWEEKLY 237 MONTHLY 0 ADD 35 DELETE 1		Upon completion of the updating process, the program causes the labels (including the dates) of all three cassettes to be printed on the TTY in the order of decks 2, 1, and 3. The printout also indicates the number of trunks contained on the TMF, subgrouped according to the required testing interval, and the number of trunks added and/or deleted during the current run of the Update Program.
10a.	REMOVE NEW TMF FROM D3 LOAD NEXT TMF IN D1, SCRATCH TAPE IN D3: TYPE GO	STOP (CR) (LF)	Remove the new TMF from deck 3 and the old or dummy TMF from deck 1. If TMF preparation is complete, type "STOP" and proceed to Step 13. Otherwise, if there is another type of TMF order (T, F, or TF) being kept for the same originating office, proceed to Step 12.
10b.	REMOVE OLD TMF FROM D1: LOAD SCRATCH TAPE AND TYPE GO	GO (CR) (LF)	All of the add-delete information will not fit in the processor memory at one time. Therefore, remove the old or dummy TMF from deck 1, load a scratch tape in deck 1, and type "GO". Proceed to Step 11.
11.	SC DLMRNYDM439 145 05/15/74 ----- SC DLMRNYDM439 145 05/15/74 T DLMRNYDM439 145 05/15/74 DAILY 1 WEEKLY 74 BIWEEKLY 237 MONTHLY 0 ADD 54 DELETE 0		The remainder of the updates are then processed. The TTY then prints the TMF labels, followed by the number of trunks involved, subgrouped according to the required testing interval. The printout also includes the number of trunks added and/or deleted during the current run of the Update Program. The program then types the following message.
12.	REMOVE NEW TMF FROM DX* LOAD NEXT TMF IN D1, SCRACH TAPE IN D3: TYPE GO	GO (CR) (LF) or STOP (CR) (LF)	If there is another type of TMF order (T, F, or TF) being kept for the same originating office, proceed according to the instructions in this program message. Return to Step 11. X denotes the cassette number (either 1 or 3) where the new TMF is located. If TMF preparation is complete, type "STOP".
13.	MONITOR RUNNING! PROGRAM NAME or ("LIST"):		This message indicates that Update Program has been terminated by the "STOP" command.

CHART 2

GENERATING NO. 5 CROSSBAR APTT TEST FRAME TAPES

STEP	PROGRAM MESSAGE	OPERATOR REPLY	COMMENTS AND ACTION
1.	_____	_____	Prepare the paper tape punch for operation by loading a sufficient quantity of 5-level tape and apply power to the unit by setting the POWER ON switch to the "on" position. The symbols CR and LF indicate carriage return and line feed TTY key operations. These are operator-reply, message-completing actions and must be performed when indicated.
2.	MONITOR RUNNING! PROGRAM NAME (OR "LIST"):	5XB CR LF	This message is printed out on the TTY while the Monitor Program is in control. To select the tape preparation program for the 5XB APTT test frame, type "5XB" on the TTY.
3.	DECK?	2 CR LF	A choice of using either deck 1, 2, or 3 is given to provide optimum use of the cassette unit. Deck 2 was selected in this example.
4.	LOAD TMF TAPE IN D2: TYPE GO WHEN READY	GO CR LF	This message instructs the operator to load the cassette containing the related TMF into the deck specified in Step 3.
5.	T RCMDCA OGT 03/19/74	_____	The program responds by typing messages 5 and 6 sequentially. If the TMF label printed in message 5 is identical to that of the cassette loaded, proceed with the response to the message of Step 6. If the TMF label printed out does not correspond with the TMF intended, interrupt the program by striking any key on the TTY keyboard. Type "BEGIN" in response to the message "STATE REQUEST." This will recycle the program, allowing the desired TMF to be loaded. Refer to Section 010-410-313 for a description of TMF labels.
6.	APTT TAPE TYPE? 2/5, OLD5, OR NEW5	NEW5 CR LF	This message relates to the issue series of the APTT test frame. "2/5" denotes APTT prior to Issue 23, "OLD5" denotes APTT Issues 23 through 29, and "NEW5" denotes APTT Issue 30 and later. The operator must specify the desired tape type by typing the appropriate reply. The NEW5 APTT was selected in this case. This information must be supplied by the central office requesting the test tapes.
7.	CAMA INCOMING TRUNKS	YES or NO CR LF	This message is only printed out if an OLD5 APTT is specified as a response in Step 6. The appropriate reply is either "YES" or "NO".
8.	TYPE OF TEST? TL, BL, OGT, OR TR	TR CR LF	This message provides the operator with the choice of test line (TL), busy line (BL), outgoing trunk (OGT), or transmission (TR) tests. The type of test selected should be specified by the central office requesting the test tape. If a transmission test was selected, as in this example, proceed to Step 9. If a test line (TL), busy line (BL), or outgoing trunk (OGT) test was selected, proceed to Step 11. <i>Note 1:</i> "OGT" or "IAO" in the TMF label indicates which composite tapes can be prepared from data on the TMF in deck 1. Refer to 2.08 through 2.12. <i>Note 2:</i> Figure 7 identifies the type of composite tape that will be produced according to the type of TMF and type of test selected.
9.	TEST INTERVAL? DAILY, WEEKLY, BIWEEKLY, OR MONTHLY	BI CR LF	When a transmission test tape is requested, the TTY prints the question asking which of the various test intervals recognized by the program is applicable. The corresponding operator reply must specify the one test interval consistent with that assigned to the TMF as entered in positions 2-5 of the G field of the associated TMF worksheet. See Fig. 5.
10.	INDEXED?	YES CR LF	This question asks whether or not the test results are to be included in the deviation register readings as previously specified in the TMF. The acceptable operator reply will be either "YES" or "NO", as specified by the requesting central office. After completing the operator reply of this step, the program causes the TMF to be read by the cassette unit and related data to be transferred to the test frame tape produced on the paper tape punch.
11.	TRUNK GROUPS? ALL OR TERMINATING OFFICE I.D. (/E TO END LIST)	ALL CR LF or SYRCNYDDSG1 CR LF SYRCNYJSSG10 CR LF /E CR LF	Operator reply is in accordance with central office requesting tapes. If the operator replies with "ALL", the test frame tape produced will contain data on all trunk groups listed in the TMF. The block header appearing on the tape will represent only the originating office. Typing in the terminating office ID, as indicated by the two IDs given in this reply, provides for the selection of specific trunk groups in the TMF. Selection is based on the number of terminating office ID characters (1 to 24) typed in by the operator, followed by a carriage return and line feed. "/E" is typed by the operator when the listing of terminating office IDs is completed. The program will then proceed to produce the test frame tape. Proceed to Step 12. <i>Note 1:</i> It is not necessary to reply with the complete terminating office ID. However, if only the first few characters of an ID are typed in reply and there exists a redundancy in relation to other IDs contained in the TMF, the tape punched will contain data for all terminating offices whose initial characters are identical to the ID typed in reply. <i>Note 2:</i> If 11 or less terminating office ID characters are typed in reply, the block printing on the tape will contain exactly 11 characters for each terminating office represented on tape. <i>Note 3:</i> If more than 11 terminating office ID characters are typed in reply, the block printing on the tape will contain the same number of characters as typed by the operator for each terminating office represented on the tape.
12.	LOAD TMF TAPE IN D2: TYPE GO WHEN READY	_____	Upon completion of the test frame tape, the program automatically recycles and is ready to prepare another 5XB APTT test frame tape. If more 5XB APTT tapes are to be prepared, repeat Steps 4 through 11; otherwise, proceed to Step 13.
13.	_____	STOP CR LF	To conclude 5XB APTT tape preparation procedures, type "STOP". This action places the processor back under control of the Monitor Program, as shown in Step 14.
14.	MONITOR RUNNING! PROGRAM NAME (OR "LIST"):	_____	This message indicates that the Monitor Program has been recalled and that the processor is ready to resume normal CAROT operations. If no more 5-level test frame tapes are to be prepared, remove the remaining 5-level paper tape from the punch unit and insert 8-level blank paper tape for normal CAROT operation. Remove the TMF from D2.

CHART 3

GENERATING NO. 4 CROSSBAR AOTT TEST FRAME TAPES

STEP	PROGRAM MESSAGE	OPERATOR REPLY	COMMENTS AND ACTION
1.	_____	_____	<p>Prepare the paper tape punch for operation by loading a sufficient quantity of 8-level paper tape and apply power to the unit by setting the POWER ON switch to the "on" position.</p> <p>The symbols CR and LF indicate carriage return and line feed TTY key operations. These are operator-reply, message-completing actions and must be performed when indicated.</p>
2.	MONITOR RUNNING! PROGRAM NAME (OR "LIST"):	4XB CR LF	This message is printed out on the TTY while the Monitor Program is in control. To select the tape preparation program for the 4XB AOTT test frame, type "4XB" on the TTY.
3.	DECK?	2 CR LF	A choice of using either deck 1, 2, or 3 is given to provide optimum use of the cassette unit. Deck 2 was selected in this example.
4.	LOAD TMF TAPE IN D2: TYPE GO WHEN READY	GO CR LF	This message instructs the operator to load the cassette containing the related TMF into the deck specified in Step 3.
5.	T SYRCNYSU04T 283B 04/30/74	_____	The program responds by typing messages 5 and 6 sequentially. If the TMF label printed in message 5 is identical to that of the cassette loaded, proceed with the response to the message of Step 6. If the TMF label printed out does not correspond with the TMF intended, interrupt the program by striking any key on the TTY keyboard. Type "BEGIN" in response to the message "STATE REQUEST". This will recycle the program, allowing the desired TMF to be loaded. Refer to Section 010-410-313 for a description of TMF labels.
6.	TEST INTERVAL? DAILY, WEEKLY, BIWEEKLY, OR MONTHLY	DA CR LF	This question asks the operator which of the various test intervals recognized by the program is applicable. The corresponding operator reply must specify the one test interval consistent with that assigned to the TMF as entered in positions 2-5 of the G field of the associated TMF worksheet. See Fig. 8.
7.	INDEXED?	YES or NO CR LF	This question asks whether or not the test results are to be included in the deviation register readings as previously specified in the TMF. The acceptable operator reply is either "YES" or "NO" as specified by the requesting central office. See Fig. 5.
8.	TRUNK GROUPS? ALL OR TERMINATING OFFICE I.D. (/E TO END LIST)	ALL CR LF or SYRCNYGSMG0 CR LF CICRNYCJ699 CR LF CTNGNYCH687 CR LF /E CR LF	<p>Operator reply is in accordance with central office requesting tapes.</p> <p>If the operator replies with "ALL", the test frame tape produced will contain data on all trunk groups listed in the TMF. The block header appearing on the tape will represent only the originating office.</p> <p>Typing in the terminating office ID, as indicated by the three IDs given in this reply, provides for the selection of specific trunk groups in the TMF. Selection is based on the number of terminating office ID characters (1 to 24) typed in by the operator, followed by a carriage return and line feed.</p> <p>"/E" is typed by the operator when the listing of terminating office IDs is completed. The program will then proceed to produce the test frame tape. Proceed to Step 9.</p> <p><i>Note 1:</i> It is not necessary to reply with the complete terminating office ID. However, if only the first few characters of an ID are typed in reply and there exists a redundancy in relation to other IDs contained in the TMF, the tape punched will contain data for all terminating offices whose initial characters are identical to the ID typed in reply.</p> <p><i>Note 2:</i> If 11 or less terminating office ID characters are typed in reply, the block printing on the tape will contain exactly eleven characters for each terminating office represented on tape.</p> <p><i>Note 3:</i> If more than 11 terminating office ID characters are typed in reply, the block printing on the tape will contain the same number of characters as typed by the operator for each terminating office represented on tape.</p>
9.	LOAD TMF TAPE IN D2: TYPE GO WHEN READY	_____	<p>Upon completion of the test frame tape, the program automatically recycles and is ready to prepare another 4XB AOTT test frame tape.</p> <p>If more 4XB AOTT tapes are to be prepared, remove the TMF tape from D2 and repeat Steps 4 through 8; otherwise, proceed to Step 10.</p>
10.	_____	STOP CR LF	To conclude 4XB AOTT tape preparation procedures, type "STOP". This action places the processor under control of the Monitor Program, as shown in Step 11.
11.	MONITOR RUNNING PROGRAM NAME (OR "LIST"):	_____	This message indicates that the Monitor Program has been recalled and that the processor is ready to resume normal CAROT operations. Remove the TMF from D2.

CHART 4

GENERATING STEP-BY-STEP AOTT TEST FRAME TAPES

STEP	PROGRAM MESSAGE	OPERATOR REPLY	COMMENTS AND ACTION
1.	_____	_____	Prepare the paper tape punch for operation by loading it with a sufficient quantity of 5-level paper tape and apply power to the unit by setting the POWER ON switch to the "on" position. The symbols (CR) and (LF) indicate carriage return and line feed TTY key operations. These are operator-reply, message-completing actions and must be performed when indicated.
2.	MONITOR RUNNING! PROGRAM NAME (OR "LIST"):	SXS (CR) (LF)	This message is printed out on the TTY while the Monitor Program is in control. To select the tape preparation program for the SXS AOTT test frame, type "SXS" on the TTY.
3.	DECK?	2 (CR) (LF)	A choice of using either deck 1, 2, or 3 is given to provide optimum use of the cassette unit. Deck 2 was selected in this example.
4.	LOAD TMF TAPE IN D2: TYPE GO WHEN READY	GO (CR) (LF)	This message instructs the operator to load the cassette containing the related TMF into the deck specified in Step 3.
5.	T GLFLNYGF01T 328 03/01/74	_____	The program responds by typing messages 5 and 6 sequentially. If the TMF label printed in message 5 is identical to that of the cassette loaded, proceed with the response to the message of Step 6. If the TMF label printed out does not correspond with the TMF intended, interrupt the program by striking any key on the TTY keyboard. Type "BEGIN" in response to the message "STATE REQUEST". This will recycle the program, allowing the desired TMF to be loaded. Refer to Section 010-410-313 for a description of TMF labels.
6.	TYPE OF TEST? TL, BL, OR TR	TR (CR) (LF)	This message provides the operator with the choice of test line (TL), busy line (BL), or transmission (TR) tests. The type of test selected should be specified by the central office requesting the test tape. If a transmission test was selected, as in this example, proceed to Step 7. If a test line (TL) or busy line (BL) test was selected, proceed to Step 9.
7.	TEST INTERVAL? DAILY, WEEKLY, BIWEEKLY, OR MONTHLY	DA (CR) (LF)	This question asks which of the various test interval designations recognized by the program is applicable. The corresponding operator reply must specify the one test interval consistent with that assigned to the TMF as entered in positions 2-5 of the G field of the associated TMF worksheet. See Fig. 8.
8.	INDEXED?	YES or NO (CR) (LF)	This question asks whether or not the test results are to be included in the deviation register readings as previously specified in the TMF. The acceptable operator reply is either "YES" or "NO" as specified by the requesting central office. After completing the operator reply of this step, the program causes the TMF to be read by the cassette unit and related data to be transferred to the test frame tape produced on the paper tape punch.
9.	TRUNK GROUPS? ALL OR TERMINATING OFFICE I.D. (/E TO END LIST)	ALL (CR) (LF) or JCBHFLMA24 (CR) (LF) /E (CR) (LF)	Operator reply is in accordance with central office requesting tapes. If the operator replies with "ALL," the test frame tape produced will contain data on all trunk groups listed in the TMF. The block header appearing on the tape will represent only the originating office. Typing in the terminating office ID, as indicated by the one ID given in this reply, provides for the selection of specific trunk groups in the TMF. Selection is based on the number of terminating office ID characters (1 to 24) typed in by the operator, followed by a carriage return and line feed. "/E" is typed by the operator when the listing of terminating office IDs is completed. The program will then proceed to produce the test frame tape. Proceed to Step 10. <i>Note 1:</i> It is not necessary to reply with the complete terminating office ID. However, if only the first few characters of an ID are typed in reply and there exists a redundancy in relation to other IDs contained in the TMF, the tape punched will contain data for all terminating offices whose initial characters are identical to the ID typed in reply. <i>Note 2:</i> If 11 or less terminating office ID characters are typed in reply, the block printing on the tape will contain exactly eleven characters for each terminating office represented on tape. <i>Note 3:</i> If more than 11 terminating office ID characters are typed in reply, the block printing on the tape will contain the same number of characters as typed by the operator for each terminating office represented on tape.
10.	LOAD TMF TAPE IN D2: TYPE GO WHEN READY	_____	Upon completion of the test frame tape, the program automatically recycles and is ready to prepare another SXS AOTT test frame tape. If more SXS AOTT tapes are to be prepared, repeat Steps 4 through 9; otherwise, proceed to Step 11.
11.	_____	STOP (CR) (LF)	To conclude SXS AOTT tape preparation procedures, type "STOP". This action places the processor back under control of the Monitor Program, as shown in Step 12.
12.	MONITOR RUNNING! PROGRAM NAME (OR "LIST"):	_____	This message indicates that the Monitor Program has been recalled and that the processor is ready to resume normal CAROT operations. Prepare the paper tape punch for normal operations by replacing the 5-level paper tape. Remove the TMF from D2.

TABLE B

TTY ERROR STATEMENT*	MEANING OF TTY ERROR STATEMENT	CORRECTIVE ACTION (SEE NOTE)
DX ERR 1	No such drive.	This is a program error. Try loading and executing the Cassette Program again.
DX ERR 2	Cassette unit is not ready.	Ensure that the cassette unit is turned on and on-line and that the cassette is properly loaded.
DX ERR 3	Cassette unit is off-line.	Place the cassette unit in on-line state and continue.
DX ERR 4	Write-lockout tab removed.	The cassette loaded in deck No. X has had the write-lockout tabs removed and can no longer be used for writing data. Another cassette should be substituted.
DX ERR 5	Short record. (Less than normal 200-character block of data has been read.)	If this message occurs while reading the label of the cassette, the cassette has not been properly scratched. If this message occurs while reading data from the cassette, some data has been lost. In either case, try reading the cassette again; if the error still persists, use the back-up cassette.
DX ERR 6	End-of-file mark encountered where it should not be.	Check to see that the proper cassette is loaded. Try reading the cassette again; if the error still persists, use the back-up cassette.
DX ERR 7	Read error encountered.	If the TTY types the record involved, type the correct character followed by CR LF .
DX ERR 8	End of cassette.	If this error occurs while updating or generating a TMF, the TMF information will not all fit on one cassette. The TMF data must be divided between two cassettes.
DX ERR 9	Cassette not rewound.	Type "GO" to cause a rewind command to be issued to the deck involved.

Note: If the error still persists after the corrective action, refer to Section 103-251-500 and run the cassette unit diagnostic.

* X denotes the cassette deck No. (1, 2, or 3).

TABLE C

TTY ERROR STATEMENT*	MEANING OF TTY ERROR STATEMENT	CORRECTIVE ACTION
FIELD FAILED FORMAT CHECK! TYPE IN THE CORRECT FIELD:	Last field printed out from the change tape failed format checks.	Type the correct field, followed by CR LF .
TMF FIELD TYPE INCORRECT! TYPE IN THE CORRECT FIELD:	First character of TMF field was not A, F, G, H, or K.	Type the correct field, followed by CR LF .
UNKNOWN FIELD TYPE! TYPE IN THE CORRECT FIELD:	Last field printed out from the change tape did not begin with A, F, G, H, or K.	Type the correct field, followed by CR LF .
RECORD NOT USED	A "C" action code was specified for a trunk that did not exist in the old TMF.	Check records and use the proper action code on the next update.
CANNOT READ LABEL OF CASSETTE IN DX: RELOAD AND TYPE GO	The cassette in DX (deck 1, 2, or 3) is improperly loaded or has an invalid label; or there is a read error.	Reload the appropriate cassette and type "GO".
PROGRAM ERROR! JOB ABORTED	This is a program error.	Reload the Update Program and try again.
A ACTION ADDITION TO AN EXISTING GROUP ADDITON NOT PERFORMED	An "A" action code was specified for an addition of a trunk that already existed in the TMF.	Check records and use the correct action code in the next update.
NO H RECORD FOR: TRUNK GROUP ID RECORD NOT USED.	There was no trunk record (H) for the given action code field in the change tape.	Check records and use the correct trunk record (H) in the next update.

* X denotes the cassette deck No. (1, 2, or 3).

TABLE D

TTY ERROR STATEMENT	MEANING OF TTY ERROR STATEMENT	CORRECTIVE ACTION
CHECK PUNCH ERROR: STATE REQUEST:	Turn on punch; or clear punch error.	Verify that punch is on and determine that tape feed mechanism is operating properly; type "GO" CR LF .