TRUNK TRANSMISSION MAINTENANCE INDEX

LOSS COMPONENT

MANUAL SUMMARY PROCEDURES

CONTENTS PAGE

1. GENERAL

1.01 This section describes the procedures for manually summarizing and indexing the results of all routine loss measurements of trunks. The data sources for these summaries are Forms E-3834 and E-5152 prepared by reporting offices in accordance with Section 660-430-010 and associated sections ▶and E-6439 prepared from the CAROT TTMI Report. (See Section 010-410-300.)◀

1.02 This section is reissued to add the loss summary procedures used to include the information pertaining to trunks reported on by CAROT for the TTMI. Marginal arrows are used to denote changes.

1.03 A general description of the loss component of the Trunk Transmission Maintenance Index (TTMI) may be found in Section 301-121-100. Index tables to be used in the summary work are found in Section 301-121-300.

1.04 The TTMI Mechanized Summary Procedure performs the same loss component calculations as those described in this section but uses a computer to do so. For information concerning the mechanized procedure, see Sections 301-124-100, 301-124-110, and 660-403-011.

2. SUMMARY REQUIREMENTS

2.01 Results are summarized and indexed at district or division level, as appropriate, to fit the organization in each operating area. Where both district and division level organizations exist, summaries are prepared at both levels.

2.02 Summaries may be prepared at intervals as necessary for analysis and control of performance. They may also be prepared by routes or trunk groups, if desired, for analytical purposes.

They will, in all cases, be prepared at the end of each quarter. When small amounts of data are summarized, the statistical accuracy should be considered as discussed in Section 301-121-300.

2.03 When summaries are prepared by a reporting office, they must be done in several parts. A summary must be prepared for each group of measurements having different index objectives. Thus, measurements on trunks with E repeaters or no gain devices are summarized separately from those with carrier or other repeaters. Further, measurements must be grouped and summarized in accordance with the measuring interval. In a large office, some facilities may be automatically measured on a daily basis, while other similar facilities are measured manually on a monthly or quarterly schedule. If this is the case, the measurements are summarized and indexed in three or more groups.

2.04 When the performance has been determined for each group of measurements, they are then combined on a weighted basis to determine the office performance. The office results are then combined with other reports on a weighted basis to prepare district, division, area, and company reports.

3. ADMINISTRATION OF THE MEASUREMENT PROGRAM

A. General

3.01 The measurement program produces indexes which indicate how closely the loss of trunks is held within System maintenance requirements. More importantly, it ensures that users encounter a uniformly good quality of service. To accomplish these objectives, it is necessary that ***all*** trunks in the message network available to the user be measured within specified intervals. Therefore, all message trunks, local and toll, are included in the measurement program. The ***only exceptions*** are those trunks which have no gain devices and no outside plant facilities.

3.02 All controlled trunks ***must*** be included in the summaries as prepared on Form E-4277C or E-4277D. It is not acceptable to omit any controlled trunks because they are unstable, terminate in a non-Bell System office known to be in trouble, or made busy for maintenance reasons. Where manual measurements are required and trunks are not measured for any reason, they ***must*** be included in the summaries and counted as unmeasured. It is also necessary that all controlled trunks be included even though sufficient craftsmen or suitable testing facilities are not available. These situations are usually not remedied until their existence is indicated by the results.

3.03 Where automatic measurements are made using ATTC, ATMS, or CAROT/ROTL equipment, all trunks can be considered measured if the following conditions are met:

(1) The automatic equipment is operated regularly during light load periods.

(2) Trunks not accessed regularly are investigated for possible trouble conditions.

(3) For trunks measured daily, weekly, or semimonthly, the number of measurements made in a quarter are equal to or greater than $6 \times N \times T$. For trunks measured monthly, the number of measurements made in a quarter is equal to or greater than $3 \times N \times T$. Where $T =$ number of trunks and $N = 1$ for a 2-wire trunk without a hybrid and $N = 2$ for any 4-wire trunk and 2-wire trunk with hybrid.

3.04 Anytime a test line, test frame, or ROTL is found in trouble, this fact should be recorded and the trouble referred to the responsible office. Trunks which were not measured automatically during the report period because of test equipment troubles should be measured manually and reported with other manual measurements made.

3.05 Trunk measurements should be distributed over the measuring period and the results should be recorded and summarized ***as found,*** regardless of corrective action taken. It is unacceptable to always schedule measurements following carrier system lineup. If routine loss measurements are scheduled on the same day as the carrier or repeater routines, the measurements should be made before the carrier or repeater routines. Otherwise, the results are distorted, and it is impossible to determine where additional maintenance effort is needed.

3.06 Temperature corrections are made in some cases before deciding whether work is required on a trunk. This plan uses the actual

measured loss before any temperature corrections are made.

B. Manual Measurements

3.07 Section 301-121-100 specifies maximum intervals for manual routine loss measurements. All trunks measured manually must be scheduled for measurement at least once in each interval, but they may be measured at shorter intervals if the results indicate the need for greater maintenance effort. Different intervals may be applied to different trunk groups or routes at the same test center if the stability histories are different, as discussed in Section 660-430-013. When different measurement intervals are applied to facilities in the same office, the results must be recorded on Form E-3834 and summarized separately as provided for in Form E-4277C.

3.08 For determining the percent of measurements made for index purposes, it is not acceptable to measure some trunks twice and others not at all.

3.09 Trunks measured manually must include all trunks not accessed by automatic test equipment and any trunks which are accessed by automatic test equipment but which are not measured automatically at least once during the report period for any reason. ▶Measurements made because of trouble reports are not to be included.◀

C. Automatic Measurements

3.10 When automatic test frames are available, the routine loss measurements should be made at the recommended frequencies shown in Section 660-402-300. ***All*** automatic measurements ***must*** be included in the summaries, except when using the Automatic Transmission Measuring System to make both weekly and daily measurements. This is discussed more completely in Section 660-420-010 under "Test Intervals."

3.11 When automatic test frames are run regularly, it is not acceptable to summarize the results of one run per week, runs on particular days, or any other similar arrangement. ***All*** runs must be used to compute the results, and the runs must be made at regular intervals, if not every day. These measurements are recorded on Form E-5152 or E-6439. Companies using the TTMI Mechanized Summary Procedure will record automatic loss measurement register readings on Form E-5911 or E-6501 which is covered in Section 660-430-011.

3.12 ▶Trunks tested by the CAROT system should be "flagged" for index based on test frequency as outlined in Section 010-410-300. Daily and weekly trunks should be "flagged" once per week. Form E-6439, described in Section 010-410-300, can be used to summarize the CAROT TTMI Report for manual calculation of the office index on Form E-4277C. Trunks not testable for index by the CAROT system should be tested manually at intervals that apply to manual tests and results provided on Form E-3834.◀

3.13 Sometimes an automatic test frame may record a wrong measurement due to a test line or test frame trouble. This becomes evident when the trunk is ***immediately remeasured*** and is found to differ by 3 dB or more from the first measurement. If the remeasurement is delayed by an hour or more, the original measurement should be used in reporting results.

D. Measurement Schedules

3.14 Routine measurement schedules in some offices present problems in use of the OFFICE SUMMARY, Form E-4277C. This part provides additional instructions for preparation of the summary when these situations occur.

3.15 Trunks equipped with E repeaters are required to be measured at least once every six months if measured manually. In some offices, it may be desirable to test all E-repeatered trunks in one quarter and none in the next quarter. When Form E-4277C is prepared for the quarter in which measurements are made, the line entries for the E-repeatered trunk data should be prepared in accordance with the instructions. When Form E-4277C is prepared for the succeeding quarter, new line entries cannot be made. They should be filled out to read the same as in the previous quarter.

3.16 Trunks with outside plant facilities, but not equipped with gain devices, should be measured once a year if measured manually. It is expected that about 25 percent will be tested in each quarter. In some cases it may be desirable to schedule all measurements in one, two, or three of the four quarters. If no tests are made in any quarter, all entries should be as shown in the

previous quarter, except in column F. The entry in column F must always be the accumulative percent tested for the required manual measurement interval or, in the case of automatic measurements, for the current period.

4. SOURCES OF DATA

4.01 The source of data for measurements made on a manual basis is Form E-3834, prepared in accordance with Section 660-430-011. A typical example is shown in Fig. 1. The source of data for measurements made on automatic test frames is Form E-5152 also prepared in accordance with Section 660-430-011. An example of Form E-5152 is shown in Fig. 2. ▶The source of data for measurements made automatically by the CAROT system is Form E-6439 derived from the CAROT TTMI Report prepared in accordance with Section 010-410-300. An example of Form E-6439 is shown in Fig. 3.◀

4.02 When trunks are measured on an automatic basis, Forms E-5152 and E-6439 contain the results for all trunks that were actually measured. Since some trunks may never be tested by the automatic equipment, these trunks are measured manually, and the results are included on Form E-3834 with other manual measurements of the same type.

5. SUMMARY PROCEDURES

5.01 Forms E-4277C and E-4277D are used to summarize and index all results. Index tables are found in Section 301-121-300.

5.02 Results are summarized and indexed for each reporting office. These reports then become the sources of data for preparation of district, division, area, and company results. When attended or unattended satellite offices control only a few trunks, their results should be combined and summarized with the results of larger reporting offices.

5.03 An example of a reporting office summary is shown in Fig. 4. In this example most of the carrier and other repeatered trunks were measured automatically. Several groups not on the test frame were measured monthly, and a few carrier trunks were measured only once during the quarter. Some E-repeatered and nongain trunks were also measured during the quarter. It is therefore necessary to index and combine the results for the separate groups of measurements on carrier trunks before the data can be combined to obtain the office index.

5.04 An example of Form E-4277D is shown in Fig. 5. This form is used to prepare summaries and reports at district or higher levels. When the form is used for district summaries, the source of data is the Form E-4277C for all reporting offices. When the form is used for summaries at higher organizational levels, the source of data is the Form E-4277D prepared by subordinate organizations.

6. PREPARATION OF OFFICE SUMMARY FORM E-4277C

A. General

6.01 Form E-4277C is prepared for each reporting office at the end of each quarter.

6.02 Different entries must be made on Form E-4277C for trunks with different measurement intervals. E-repeatered and nongain trunks are recorded on the top half of the form and other repeatered and carrier trunks are recorded on the bottom half.

6.03 Sources of information for Form E-4277C are Forms E-3834 and E-5152 both of which are covered in Section 660-430-011 ▶and Form E-6439 covered in Section 010-410-300.◀

6.04 For each completed E-4277C form, the organizational information and the period should be entered in the block in the bottom left corner of the form.

6.05 Asterisks indicate those results on Form E-4277C which will be used in the next higher level summary on a Form E-4277D.

6.06 An example of a completed Form E-4277C is provided in Fig. 4.

FORM E 3834 (9/70)
BSP 660-430-011

TRUNK LOSS MAINTENANCE
STROKE SHEET FOR MANUAL MEASUREMENTS

DATE _____

TYPE OF FACILITY: ☐ CARRIER ☐ OTHER REP ☐ NON-GAIN ☐ EREP ☐ NO HYBRID ☐ HYBRID

INTERVAL OF MEASUREMENTS: ☐ WEEKLY ☐ 2 X MONTH ☐ MONTHLY ☐ 3 MONTHS ☐ 6 MONTHS ☐ ANNUAL

NO. OF STROKES	NOT ENOUGH LOSS				TOO MUCH LOSS			
	-3.8 & MORE	-1.8 THRU -3.7	-.8 THRU -1.7	0 ± .7	+.8 THRU +1.7	+1.8 THRU +3.7	+3.8 & MORE	
5		1	IIII	IIII	IIII	II	1	
10				IIII	III			
15				IIII				
20				IIII				
25				IIII				
30				IIII				
35				IIII				
40				IIII				
45				IIII				
50				IIII				
55				IIII				
60				IIII				
65				IIII				
70				IIII				
75				IIII				
80				IIII				
85				IIII				
90				IIII				
95				IIII				
100				IIII				
105				IIII				
110				IIII				
115				IIII				
120				II				
125								
130								
135								
140								
145								
150								TOTAL MEAS.
COLUMN TOTALS	—	1	5	117	8	2	1	T = LINE TOTAL 134
% OF TOTAL	A —	B 0.8	C 3.7	D	E 6.0	F 1.5	G 0.8	% LINE TOTAL 100%
ACCUMULATION		H = (A + B) 0.8	J = (A+B+C) 4.5		K = (E + F + G) 8.3	L = (F + G) 2.3		U = PREV. MEAS.* 133

% DEVIATIONS EXCEEDING ± 0.7 db	M = (J + K) 12.8	NO TRKS. CONT.–THIS TYPE	X 276
% DEVIATIONS EXCEEDING ± 1.7 db	N = (H + L) 3.1	MEASUREMENTS MADE	Y = T + U 267
% DEVIATIONS EXCEEDING ± 3.7 db	P = (A + G) 0.8	% REQUIRED MEAS. MADE	Z = SEE NOTE 1 96.8

OFFICE _____ PERIOD COVERED _____

* PREVIOUS MEASUREMENTS: (1) FOR ANNUAL MEASUREMENTS, SHOW LAST 3 QUARTER'S MEAS.
(2) FOR 6 MONTHS MEASUREMENTS, SHOW LAST QUARTER'S MEAS.
(3) FOR 3 MONTHS & MONTHLY MEASUREMENTS, SHOW 0 IN BLOCK U.

NOTE 1: UNDER TYPE OF FACILITY, WHEN CARRIER OR OTHER REPEATER IS CHECKED, FORMULA FOR Z = (Y + 2X) x 100. WHEN E REP OR NON-GAIN, AND NO HYBRID, FORMULA FOR Z = (Y ÷ X) X 100.

Fig. 1—Trunk Loss Maintenance Stroke Sheet for Manual Measurements

FORM E 5152 (9/70)
BSP 660-430-011

TRUNK LOSS MAINTENANCE
RECORD OF AUTOMATIC MEASUREMENTS

PERIOD COVERED _____ FRAME NO. _____ LOCATION _____

TYPE OF FACILITY

CARRIER ☐ NON-GAIN ☐ NO HYBRID ☐
OTHER REP ☐ EREP ☐ HYBRID ☐

INTERVAL OF MEASUREMENTS

DAILY ☐ WEEKLY ☐ 3 MONTHS ☐
2 X MONTH ☐ MONTHLY ☐

LINE NO.	A	B							C	D	E
		DEVIATION REGISTER READINGS							LINE TOTALS	SUMMATIONS	PERCENT OF TOTAL
	DATE →	1-1	1-2	1-3	1-4	1-5	1-6	1-7			
1	+8.0										
2	+7.5										
3	+7.0										
4	+6.5										
5	+6.0										
6	+5.5										
7	+5.0		1			1			2		
8	+4.5									LINES 1-9	(D9 ÷ T) x 100
9	+4.0				1	1			2	4	1.2
10	+3.5							1	1		
11	+3.0	1		1					2		
12	+2.5				1				1	LINES 10-13	(D13 ÷ T) x 100
13	+2.0							1	1	5	1.5
14	+1.5	2	3	1	1	1	2	1	11	LINES 14-15	(D15 ÷ T) x 100
15	+1.0	1	2	2	1		2	1	9	20	6.2
16	+0.5	20	15	10	13	14	8	12	92	DO NOT SUMMARIZE THESE LINES	
17	0.0	5	15	12	17	14	10	2	75		
18	-0.5	5	10	18	10	12	22	26	103		
19	-1.0	2	1		3		1	2	9	LINES 19-20	(D20 ÷ T) x 100
20	-1.5	2		1	2		2	1	8	17	5.2
21	-2.0										
22	-2.5	1			1				2		
23	-3.0		1						1	LINES 21-24	(D24 ÷ T) x 100
24	-3.5						1		1	4	1.2
25	-4.0										
26	-4.5		1						1		
27	-5.0										
28	-5.5				1	1			2		
29	-6.0										
30	-6.5										
31	-7.0						1		1		
32	-7.5									LINES 25-33	(D33 ÷ T) x 100
33	-8.0									4	1.2
34	TOTAL	39	49	45	51	44	49	47	T 324		% Noisy $\frac{N}{TN} \times 100$ 2.5
35	N's	1	0	2	0	1	3	–	N 7	TN 277	

% DEVIATIONS EXCEEDING ± 0.7 db (SUM OF COL. E)	F 16.5	NO. OF CONTROLLED TRUNKS BEING MEASURED	J 26
% DEVIATIONS EXCEEDING ± 1.7 db (SUM OF COL. E, LINES 9, 13, 24 & 33)	G 5.1	BASE FOR COMPUTING * % MEASURED	K 312
% DEVIATIONS EXCEEDING ± 3.7 db (SUM OF COL. E, LINES 9 & 33)	H 2.4	% OF MEASUREMENTS MADE (T/K x 100)	L 100.0

* SEE TEXT PARAGRAPH 4.21

Fig. 2—Trunk Loss Maintenance Record of Automatic Measurements

FORM E6439 (3/75)
BSP 010-410-300

TRUNK TRANSMISSION MAINTENANCE INDEX
MANUAL SUMMARY – CAROT

Cullman, Alabama
Office Name

January 1, 1974 - March 31, 1974
Start Date to End Date

Line	Number of Trunks	Type	Fac	Freq	Loss Deviations .7	1.7	3.7	L Meas	Noise Deviations Q1 N	Q2 N	N Meas	No. of Trunks Noise (Typ 9)
	A	B			C	D	E	F	G	H	I	N
1	50	9	06	30	3	1	0	600	4	1	600	50
2	200	9	06	30	5	0	0	1200	10	0	1200	200
3	200	9	10	10	515	5	0	5200	100	4	5200	200
4	100	9	10	20	106	2	0	1200	120	1	1200	100
Total	550							8200				550

Type	Fac	Freq	% Exceeding .7 C+D+E ÷ F x 100	% Exceeding 1.7 D+E ÷ F x 100	% Exceeding 3.7 E ÷ F x 100	% Measurements Made *
B			J	K	L	M
9	06	20	.5	NA	0	100
9	06	30	.4	NA	0	100
9	10	10	10.0	.1	0	100
9	10	20	9.0	.2	0	100

* % MEASUREMENTS MADE

TYPE	FAC	FREQ	FORMULA
8	05	30	(F ÷ 3A) X 100
8	05	10	(F ÷ 6A) X 100
8	05	20	
9	06	30	
9	10	30	
9	06	10	(F ÷ 12A) X 100
9	06	20	
9	10	10	
9	10	20	

GREATER THAN 100% = 100%
Section 301-121-500
Section 301-122-500

Fig. 3—Trunk Transmission Maintenance Index—Manual Summary—CAROT

B. Summary of Data

6.07 Form E-4277C is completed in accordance with the following instructions:

Lines 1-15, 17-31:

Column A—Enter the type of facility and the frequency of measurement.

Column B—Record the number of controlled trunks for each entry listed in column A from E-3834—column X, E-5152—column J, E-6439—column A.

Column C—Record the percent deviations greater than ±0.7 dB from E-3834—column M, E-5152—column F, E-6439—column J.

Column D—Record the percent deviations greater than ±1.7 dB from E-3834—column N, E-5152—column G, E-6439—column K (lines 17-31 only).

Column E—Record the percent of deviations greater than ±3.7 dB from E-3834—column P, E-5152—column H, E-6439—column L.

Column F—Record the percent of measurements made from E-3834—column Z, E-5152—column L, E-6439—column N.

Column G—Multiply the entry in column B by the entry in column C on the same line; round to the nearest whole number, and record.

Column H—Multiply the entry in column B by the entry in column D on the same line; round to the nearest whole number, and record (lines 17-31 only).

Column I—Multiply the entry in column B by the entry in column E on the same line; round to the nearest whole number, and record.

Column J—Multiply the entry in column B by the entry in column F on the same line; round to the nearest whole number, and record.

Line 16: Add the entries on lines 1-15 in columns B, G, I, and J and record on line 16.

Line 32: Add the entries on lines 17-31 in columns B, G, H, I, and J and record on line 32.

Line 33: Compute 16G/16B, round to the nearest tenth, and record.

Line 34: Compute 16I/16B, round to the nearest tenth, and record.

Line 35: Compute 16J/16B, round to the nearest tenth, and record.

Line 36: Apply the proper index table provided in Section 301-121-300 to the result of line 33 and record the component points indicated.

Line 37: Apply the proper index table provided in Section 301-121-300 to the result of line 35 and record the component points indicated.

Line 38: Add the entries on lines 36 and 37 and record.

Line 39: Compute 32G/32B, round to the nearest tenth, and record.

Line 40: Compute 32H/32B, round to the nearest tenth, and record.

Line 41: Compute 32I/32B, round to the nearest tenth, and record.

Line 42: Compute 32J/32B, round to the nearest tenth, and record.

Line 43: Apply the proper index table provided in Section 301-121-300 to the result of line 39 and record the component points indicated.

Line 44: Apply the proper index table provided in Section 301-121-300 to the result of line 40 and record the component points indicated.

Line 45: Apply the proper index table provided in Section 301-121-300 to the result of line 42 and record the component points indicated.

Line 46: Add the entries on lines 43, 44, and 45 and record.

TRUNK LOSS MAINTENANCE – TTMI MEASUREMENTS
OFFICE SUMMARY

FORM E-4277C (9/70)
BSP 301-121-500

LINE	A TYPE OF FACILITY AND FREQUENCY OF MEAS.	B NUMBER OF CONTROLLED TRUNKS E-3834 COL. X E-5152 COL. J	C % > ±0.7db E-3834 COL. M E-5152 COL. E	D % > ±1.7db E-3834 COL. N E-5152 COL. G	E % > ±3.7db E-3834 COL. P E-5152 COL. H	F % OF MEAS. MADE E-3834 COL. Z E-5152 COL. L	G RECORD TO NEAREST WHOLE NUMBER BXC	H BXD	I BXE	J BXF
	TRUNKS WITH E – REPEATERS OR NO GAIN DEVICES									
1	E-Rept - 6 mos.	50	1.8		1.0	100	90		50	5000
2										
3	No-Gain-Annual	200	1.0		0.5	90	200		100	18000
4										
5	CAROT 0620	50	.5		0	100	25		0	5000
6										
7	CAROT 0630	200	.4		0	100	80		0	20000
8										
9										
10										
11										
12										
13										
14										
15										
16	SUMMARY (ADD COLS.)	*500					395		150	48000
17	TRUNKS WITH OTHER REPEATERS OR CARRIER									
17	CXR-Daily	100	11.6	1.2	0.4	100	1160	120	40	10000
18										
19	CXR-Mo	100	15.2	0.8	0.9	100	1520	80	70	10000
20										
21	CAROT 1010	200	10.0	.1	0	100	2000	20	0	20000
22										
23	CAROT 1020	100	9.0	.2	0	100	900	20	0	10000
24										
25										
26										
27										
28										
29										
30										
31										
32	SUMMARY (ADD COLS.)	*500					5580	240	110	50000

	K ITEM	L INSTRUCTION	M RESULT
	COMPUTATION OF LOSS COMPONENT INDEX		
	E – REPEATERS & NO GAIN		
33	% > ± 0.7db	16G / 16B	* 0.8
34	% > ± 3.7db	16I / 16B	* 0.3
35	% OF MEAS. MADE	16J / 16B	* 96.0
36	COMP. POINTS FOR 33M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	89.8
37	COMP. POINTS FOR 35M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	9.6
38	COMBINED E-REPT + NO GAIN LOSS INDEX	ADD 36M + 37M	99.4
	OTHER REPEATERS & CARRIER		
39	% > ± 0.7db	32G / 32B	* 11.1
40	% > ± 1.7db	32H / 32B	* 0.5
41	% > ± 3.7db	32I / 32B	* 0.2
42	% OF MEAS. MADE	32J / 32B	* 100
43	COMP. POINTS FOR 39M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	44.7
44	COMP. POINTS FOR 40M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	44.9
45	COMP. POINTS FOR 42M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	10
46	COMBINED OTHER REPT + CARRIER LOSS INDEX	ADD: 43M + 44M + 45M	99.6

COMPANY & AREA	SCB ALA
DIVISION	North
DISTRICT	Decatur
OFFICE	Cullman
PERIOD	1Q 1974

47	OFFICE LOSS COMPONENT INDEX	38M X 16B + 46M X 32B / 16B + 32B	99.5

* THESE RESULTS ARE USED ON SUMMARY FORM E-4277D

Fig. 4—Trunk Loss Maintenance—TTMI Measurements—Office Summary

FORM E-4277D (9/70)
BSP 301-121-500

TRUNK LOSS MAINTENANCE -- TTMI MEASUREMENTS
COMBINED SUMMARY

LINE	A OFFICE, SUBDISTRICT, DISTRICT, DIVISION, OR AREA	B NUMBER OF CONTROLLED TRUNKS	C % > ± 0.7 dB	D % > ± 1.7 dB	E % > ± 3.7 dB	F % OF MEAS. MADE	G B X C	H B X D	I B X E	J B X F
	TRUNKS WITH E-REPEATERS OR NO GAIN DEVICES									
*	OBTAIN FROM E-4277C OR E-4277D	16B	33M		34M	35M				
1	NORTH ALA DIV	3396	1.0		0.6	100.0	3396		2038	339600
2	SOUTH ALA DIV	6376	3.8		0.1	98.1	24229		638	625486
3	BIRMINGHAM DIV	11829	4.8		0.3	93.4	56779		3549	1104829
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16	SUMMARY (ADD COLS.)	** 21601					84904		6225	2069915
	TRUNKS WITH OTHER REPEATERS OR CARRIER									
*	OBTAIN FROM FORM E-4277C OR E-4277D	32B	39M	40M	41M	42M				
17	NORTH ALA DIV	3769	15.0	4.4	2.7	99.9	56535	16584	10176	376523
18	SOUTH ALA DIV	3494	12.4	1.8	0.7	99.9	43326	6289	2496	349051
19	BIRMINGHAM DIV	4517	15.5	4.7	4.0	89.4	70014	21230	18068	403820
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
32	SUMMARY (ADD COLS.)	** 11780					169875	44103	30690	1129394

* OBTAIN FROM THE INDICATED LINE AND COLUMN OF THE FORMS E-4277C OR E-4277D BEING SUMMARIZED.

COMPANY	SCB
AREA	ALA
DIVISION	ALL
DISTRICT	ALL
PERIOD	2Q 70

	K ITEM	L INSTRUCTION	M RESULT
	COMPUTATION OF LOSS COMPONENT INDEX		
	E-REPEATERS AND NO GAIN		
33	% > ± 0.7 dB	16G / 16B	** 3.9
34	% > ± 3.7 dB	16I / 16B	** 0.3
35	% OF MEAS. MADE	16J / 16B	** 95.8
36	COMP. POINTS FOR 33M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	89.1
37	COMP. POINTS FOR 35M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	9.6
38	COMBINED E-REPT + NO GAIN LOSS INDEX	ADD 36M + 37M	98.7
	OTHER REPEATERS AND CARRIER		
39	% > ± 0.7 dB	32G / 32B	** 14.4
40	% > ± 1.7 dB	32H / 32B	** 3.7
41	% > ± 3.7 dB	32I / 32B	** 2.6
42	% OF MEAS. MADE	32J / 32B	** 95.9
43	COMP. POINTS FOR 39M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	44.6
44	COMP. POINTS FOR 40M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	43.8
45	COMP. POINTS FOR 42 M	SEE INDEX TABLE PROVIDED IN BSP 301-121-300	9.6
46	COMBINED OTHER REPT + CARRIER LOSS INDEX	ADD 43M + 44M + 45M	98.0
47	COMBINED LOSS COMPONENT INDEX	38M X 16B + 46M X 32B / 16B + 32B	98.5

** THESE RESULTS ARE USED FOR HIGHER SUMMARIES ON ANOTHER FORM E-4277D.

Fig. 5—Trunk Loss Maintenance—TTMI Measurements—Combined Summary

Line 47: Compute (38M × 16B + 46M × 32B)/(16B + 32B), round to the nearest tenth, and record.

This completes the computations required on Form E-4277C.

7. PREPARATION OF COMBINED SUMMARY FORM E-4277D

A. General

7.01 Form E-4277D is used to combine loss results at subdistrict or higher levels of organization.

7.02 The source of information for Form E-4277D is the Form E-4277C or E-4277D being summarized.

7.03 As with Form E-4277C, E-repeatered and nongain trunks are summarized in the top half of Form E-4277D; other repeatered and carrier trunks are summarized in the bottom half of the form.

7.04 For each completed Form E-4277D, the organizational information and the period should be entered in the block in the bottom left corner of the form.

7.05 Asterisks indicate those results on Form E-4277D which will be used in the next higher level summary, if any, on another Form E-4277D.

7.06 An example of a completed Form E-4277D is provided in Fig. 5.

B. Summary of Data

7.07 Form E-4277D is completed exactly as directed for Form E-4277C in Part 6 of this section with the following exceptions:

Column A—Enter the name of the organization being summarized.

Columns B, C, D, E, and F—Record the results from the indicated line and column of the Form E-4277C or E-4277D being summarized. Do not refer to Forms E-3834, E-5152, and E-6439 for data when preparing Form E-4277D.

Column 47M—This is the combined loss component index instead of the office loss component index.

All other headings and instructions are the same for both forms.

8. SPECIAL SITUATIONS INVOLVING LOSS SUMMARIES

8.01 If no Form E-3834 is available during the ***maximum*** test interval for a group of trunks or if an E-3834 is submitted showing that no measurements were made on the trunks during this interval, then the following instructions should be used:

Column C—Enter 100.0%

Column D—Enter 100.0% (if the bottom portion of the form is required)

Column E—Enter the figure from the previous summary

Column F—Enter 0.0%

Column B—Enter the total number of controlled trunks involved; then complete computations as directed in Part 6.

9. SYSTEM REPORTS

9.01 Loss component data is required, along with other quarterly trunk transmission data, to be submitted by all companies using the manual TTMI summary procedures on the specially designed form provided and explained in Section 301-120-500.

9.02 This Manual Quarterly Data Report form must be delivered to:

American Telephone & Telegraph Company
Plant Operations Manager—Statistics
195 Broadway
New York, New York 10007

no later than the 25th of the month following the end of each quarter.

10. ORDERING INFORMATION FOR FORMS

10.01 Forms E-4277C and E-4277D can be obtained from Western Electric Company in pads of 50, two pads per package. They may be requisitioned in multiples of 100 forms or orders worded as follows:

(Quantity) Form E-4277C
(Quantity) Form E-4277D