

TRUNK TRANSMISSION MAINTENANCE INDEX MANUAL SUMMARY PROCEDURES

1. GENERAL

1.01 This section describes the manual procedures for computation of the Trunk Transmission Maintenance Index (TTMI). These computations provide for the combination of the results of the components of the index. A general description of the index plan may be found in Section 301-120-100.

1.02 The instructions provide for combining the results of the loss, noise, and balance component plans. Loss maintenance performance is manually summarized in accordance with Section 301-121-500. Noise maintenance is summarized manually in accordance with Section 301-122-500. Balance maintenance performance is summarized manually in accordance with 301-123-500.

1.03 This section is reissued to include changes to the TTMI manual quarterly data report.

2. SUMMARY PROCEDURES

2.01 The balance maintenance component does not apply below area or division level. Also, the noise maintenance component results will fluctuate somewhat for smaller entities because measurements cannot be scheduled to provide a random sample each quarter. It is, therefore, recommended that the index calculations be used only at division, area, or company level, as appropriate. Smaller organizational units should concentrate their attention on component results.

2.02 If balance is not required, the loss and noise components are weighted equally. The following example may be used at any level:

MTCE COMP.	(A) COMP. INDEX	(B) WTG.	(A X B) COMP. POINTS
Loss	97.6	.50	48.8
Noise	95.8	.50	47.9
Trunk Transmission Maintenance Index			96.7

2.03 When all three components are to be combined, the calculations should be made as shown in Fig. 1. The data sources for these calculations are as follows:

Maintenance COMPONENT	FORM	ITEM FOR	
		COMP INDEX	NUMBER OF CONTROLLED TRUNKS
Loss	E-4277D	47 M	16 B + 32 B
Noise	E-5441E	21 Q	16 B + 16 J
Balance	E-5688	Column Q*	Column F*

* Foot of column.

2.04 Make the calculations for each area or company on Form E-5830, as follows:

Column D—Add the three items and put the sum on line 5.

Column E—On each line multiply the number in *Column D* by the number in *Column C* and divide by the *total of Column D*; $\frac{C \times D}{5D}$.

Round to obtain one decimal place.

Column F—Add the three items in *Column E*. Enter the total on *Line 5, Column F*. This is the Trunk Transmission Maintenance Index.

3. REPORTS

3.01 In order for AT&TCo to mechanize the preparation of System Summaries, all companies using the manual TTMI summary procedures are required to submit quarterly trunk transmission maintenance data on a common form. The form, an example of which is shown completed in Fig. 2, is specifically designed for this purpose. Details pertaining to the use of this form will be given in Part 4 of this section. A blank form is also attached which should be reproduced as required.

SECTION 301-120-500

3.02 The manual quarterly data report form *shall be delivered by the 25th day of the month* following the end of each quarter to:

Plant Operations Manager—Statistics

American Telephone and Telegraph Company

195 Broadway

New York, New York 10007

4. USE OF THE MANUAL QUARTERLY DATA REPORT FORM

4.01 An example of a completed Manual Quarterly Data Report Form is presented in Fig. 2. The form contains room for results from 12 operating areas within a company. The bottom line in each of the upper two sections of the form is used to record company results. Notice that these lines have a preprinted 00 for its area number. The

correct input numbers are also preprinted on the first and last lines of the upper two sections and on all five lines of the bottom section of the form. The correct input number must be filled in for any additional lines used. All decimals are preprinted in the required location.

4.02 Columns allowed for various instructions are separated by darkened lines. All numbers are to be right justified in their assigned spaces; ie, the last digit of each number entered is placed in the far right column of that entry's assigned space on the form. Shaded areas of the form are never used. Any unused lines are to be left blank. Any lines on the form which are used require "0" filling; that is, a zero is entered into any column that does not contain a number. Lines which have no data *are not* required to be "0" filled.

4.03 The following tables list the information required by the Manual Quarterly Data Report Form and where this data may be found:

LOSS REPORT

ITEM	OBTAIN FROM COMPANY OR AREA SUMMARY FORM E-4277D
No. Trunks — E REPT.	Column B, Line 16
No. Trunks — CARRIER	Column B, Line 32
% Dev. above 0.7 — E REPT.	Column M, Line 33
% Dev. above 3.7 — E REPT.	Column M, Line 34
% Meas. — E REPT.	Column M, Line 35
% Dev. above 0.7 — CARRIER	Column M, Line 39
% Dev. above 1.7 — CARRIER	Column M, Line 40
% Dev. above 3.7 — CARRIER	Column M, Line 41
% Meas. — CARRIER	Column M, Line 42
E-REPT. Index	Column M, Line 38
CARRIER Index	Column M, Line 46
Combined LOSS INDEX	Column M, Line 47

TTMI REPORT

ITEM

OBTAIN FROM FORM E-5830 PREPARED AT
COMPANY LEVEL

TTMI

Areas: Column F, Line 5 (Each Area)
Company: Column F, Line 5 (Company)

NOISE REPORT

INSTRUCTION

OBTAIN FROM FORM E-5441E FOR AREA OR
COMPANY LEVEL AS REQUIRED

No. of Controlled Trunks
% Over Mtce Limit
% Meas Made
% Over Mtce Limit Index
% Meas Index
Noise Index

Column B, Line 16 + Column J, Line 16
Column Q, Line 18
Column Q, Line 17
Column F, Line 20
Column F, Line 19
Column Q, Line 21

BALANCE REPORT

INSTRUCTION

OBTAIN FROM FORM E-5688 FOR AREA OR
COMPANY LEVEL AS REQUIRED

No. of Bal Trunks
% ERL Med
% ERL Min
% SP Med
% SP Min
Balance Index
No. of Offices Req Balance
No. of Offices Cert as Balanced
No. of Trunks Req Balance Refd to Engineering

Column F, Line 16
Column M, Line 16
Column N, Line 16
Column P, Line 16
Column Q, Line 16
Column Q, Line 20
Column D, Line 16
Column E, Line 16
Column G, Line 16

TRUNKS ABOVE MAINTENANCE LIMIT

INSTRUCTION

OBTAIN FROM FORM E-5441F FOR AREA OR
COMPANY LEVEL AS REQUIRED

Total Number
Above Limit One Year
Engineering Assistance Requested

Line 13
Line 14
Line 15

SECTION 301-120-500

ADDITIONAL NOISE REPORT

Record from E-5441-F. Notice that this report sorts information into 10 different mileage ranges which are identified in the far left- and right-hand sides of the form and are separated between Columns 42 and 43. All data entered in this section of the form should be right justified. This section requires ZERO filling for only those lines on which data has been submitted.

OTHER:

Company and area numbers are filled in as required. They are listed in Section 660-403-011.

The quarter number and year are filled in as required.

4.04 For a company which has no operating areas, all data should be entered on the last (Company Summary) line of each of the upper two sections of the form with the area number entered as 00. Areas reporting no data or incomplete data should not be included on the company line

summary but they should be entered on the form in their allotted space. That is, for each particular column in which a summary is applicable the company line should summarize only those areas reporting data in that column.

4.05 Accuracy in filling out the system report form is important. Companies submitting the form should provide for spot checking the forms before sending them to AT&TCO for processing.

5. ORDERING INFORMATION FOR FORMS

5.01 Form E-5830 can be obtained from Western Electric Company in pads of 50, two pads per package. They may be requisitioned in multiples of 100 forms on orders worded as follows:

(Quantity) Form E-5830

5.02 The Manual Quarterly Data Report form will not be stocked by Western Electric Company. Instead, the blank copy included with this section may be reproduced as required.

TRUNK TRANSMISSION MAINTENANCE INDEX
WORKSHEET FOR COMBINING COMPONENTS

QUARTER _____ YEAR _____ DATE PREPARED _____

DIVISION, AREA OR COMPANY		MTCE. COMP.	COMP. INDEX	NUMBER OF CONTROLLED TRUNKS	WEIGHTED COMPONENT POINTS <u>C X D</u> 5D TO NEAREST TENTH	TRK. TRANS. MTCE. INDEX
(A)		(B)	(C)	(D)	(E)	(F)
NORTH AREA	1	LOSS	97.6	34381	41.5	
	2	NOISE	94.5	34381	40.2	
	3	BALANCE	96.7	12123	14.5	
	4	INSTR.		ADD COL.	ADD COL.	
	5	SUMMARY		80885		
SOUTH AREA	1	LOSS	96.2	40024	37.5	
	2	NOISE	95.2	40024	37.1	
	3	BALANCE	89.0	22676	19.6	
	4	INSTR.		ADD COL.	ADD COL.	
	5	SUMMARY		102724		
EAST AREA	1	LOSS	95.4	25114	39.7	
	2	NOISE	91.2	25114	38.0	
	3	BALANCE	75.0	10078	12.5	
	4	INSTR.		ADD COL.	ADD COL.	
	5	SUMMARY		60306		
WEST AREA	1	LOSS	98.2	29864	39.6	
	2	NOISE	96.0	29864	28.8	
	3	BALANCE	93.0	14249	17.9	
	4	INSTR.		ADD COL.	ADD COL.	
	5	SUMMARY		73977		
COMPANY	1	LOSS	96.9	129383	39.4	
	2	NOISE	92.9	129383	37.8	
	3	BALANCE	89.2	59126	16.6	
	4	INSTR.		ADD COL.	ADD COL.	
	5	SUMMARY		317892		
	1	LOSS				
	2	NOISE				
	3	BALANCE				
	4	INSTR.		ADD COL.	ADD COL.	
	5	SUMMARY				
	1	LOSS				
	2	NOISE				
	3	BALANCE				
	4	INSTR.		ADD COL.	ADD COL.	
	5	SUMMARY				
SOURCE OF DATA						
COMPONENT		FORM		NO. OF CONTR. TRKS.		COMP. INDEX
LOSS		E4277 D		COL. 16B + COL. 32B		COL. 47M
NOISE		E5441 E		COL. 16B + COL. 16J		COL. 21Q
BALANCE		E5688		COL. F (TOTAL)		COL. 20Q

Fig. 1—Trunk Transmission Maintenance Index Worksheet for Combining Components

