

## RECORDING OF MANUAL TRANSMISSION MEASUREMENTS AND MEASUREMENT SCHEDULES

### 1. GENERAL

**1.01** This section describes the preparation and use of the Routine Transmission Test Record (Form E-1132), and the Trouble History (Form E-3893) forms.

**1.02** Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted. This issue is a result of combining Sections 660-402-010 and 660-403-010. Section 660-403-010 has been cancelled.

**1.03** The Routine Transmission Test Record (Form E-1132) covers the recording of both transmission loss and noise measurements made manually. The form provides space for recording measurements on up to 20 trunks for a period of one year for carrier trunks and two years for all other types of trunks. In addition, Form E-1132 also allows for scheduling of both loss and noise measurements and summarizing the measurement results for computing the Trunk Transmission Maintenance Index (TTMI).

**1.04** The Routine Transmission Test Record for the current and prior years should be retained in order to have a record of the past measurements for at least a one-year period. The Trouble History Card (Form E-3893) will provide additional information on troubles and their disposition. Both Forms (E-1132 and E-3893) together should provide a history of the past performance of the trunk so adequate trouble analysis can be made.

**1.05** Both E-1132 and E-3893 forms will be available in packages of 100 forms each.

### 2. DESCRIPTION AND USE OF FORM E-1132, ROUTINE TRANSMISSION TEST RECORD

**2.01** Form E-1132, Routine Transmission Test Record (Fig. 1) is 11 by 17 inches and printed on one side. The form provides space for recording loss and noise measurements for up to 20 trunks covering a period of one year for trunks tested quarterly and two years for all others.

**2.02** Figure 2 shows a partially completed E-1132 form. Explanation of the entries in the form are as follows:

#### *Heading*

**Office A**—The common language location identification (CLLI) code of the originating office for a one-way trunk or the control office for a 2-way trunk should be entered here.

**Office Z**—The CLLI code of the terminating office for a one-way trunk or the noncontrol office for a 2-way trunk should be entered here.

**Non-Gain, MFT or E Rept, Other Rept, or Carrier**—An X is entered in the appropriate space for the type of facility.

**CLCI**—This entry corresponds to the characters 5 through 10 of the Common Language Circuit Identification (CLCI) code as defined in Section 795-400-100. Characters 5 and 6 define the traffic class, characters 7 and 8 define the office class, and characters 9 and 10 indicate the traffic use. The completion of this entry is optional.

#### *Loss Measurements*

**Date-Tkt.**—Enter the date when the measurement is made on the top line. If trouble was found,

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write the Trouble Ticket number in the line below the date.

**By**—The initials of the operating personnel doing the measurement should be entered here.

**AML**—The Actual Measured Loss (AML) for the corresponding direction of transmission (A-Z or Z-A) should be entered in this column.

**Deviations**—This portion of the form assigned for recording the difference between the EML and the AML in each direction of transmission is divided in three columns. The columns are labeled >1, >2, and >3 and each represents a TTMI limit.

>1—In this column, a check mark or similar notation should be made if the deviation exceeds 0.7 dB.

>2—This column should be marked if the deviation from EML exceeds 1.7 dB.

>3—If the deviation exceeds 3.7 dB, this column should be marked.

If the deviation is greater than 3.7 dB, all three columns should be marked. If it only exceeds 1.7 dB, both the >1 and >2 columns should be marked.

### **Noise Measurements**

**Noise Limits—Mtce. and Immediate Act.**—The noise maintenance and immediate action limits should be entered here. Section 660-403-500 provides these limits.

**Date**—The date when the noise measurement is made should be entered here.

**dBrc**—The actual noise reading for each direction of transmission should be entered here.

**DEV—M and I**—These columns are provided to indicate when a noise measurement exceeds the maintenance or immediate action limits. If the noise reading exceeded the maintenance limit, the M column should be checked. If the measured noise exceeds the immediate action limit, both the M and I columns should be checked.

### **SUMMARY LINES (Bottom of the Form)**

These spaces at the bottom of the form are intended to provide quick summaries of the measurement results. The results are formatted so they can be utilized for TTMI reporting. The summary also provides a good indication of the trunk performance.

Entries should be completed as follows:

**No. of Trunks—1 Meas., 2 Meas., 3 Meas., 4 Meas.** *At the beginning of the measurement period, the number of controlled trunk in each period should be entered in these spaces.*

#### **Loss Measurements**

**No. of Meas.**—For each quarter the number of measurements made should be entered in this space. A trunk measured in both directions of transmission (A-Z and Z-A) should be counted as two measurements.

**No. of Deviations**—For each quarter the number of check marks in each of the >1, >2, and >3 columns should be counted and the total entered in these spaces.

#### **Noise Measurements**

**No. of Measurements**—At the end of each quarter the measurements made during the quarter must be counted and entered in the corresponding space.

**No. of Dev.**—The number of deviations beyond the maintenance and immediate action limits should be totaled for each quarter and listed in the corresponding block.

### **3. SCHEDULING OF MEASUREMENTS (FORM E-1132)**

**3.01** Loss measurements can be scheduled to be measured each quarter or in particular quarters by labeling the QTR and YEAR columns with the quarter and year in which the measurements are to be made. Portions of the form that are not to be filled in should be crossed off.

**3.02** Figure 3 shows a Form E-1132 partially completed for E-Repeatered trunks scheduled to be measured every 6 months. The figure shows a way of scheduling the measurements.

**4. DESCRIPTION AND USE OF FORM E-3893 TROUBLE HISTORY CARD**

**4.01** The Trouble History card is a 5 × 8 inch card printed on both sides which should be filed along with the Circuit Layout Record Card to provide a history of the troubles found in the past for a particular trunk. Information in the card provides a record of past troubles and the action taken to correct them. Analysis of this information can help in identifying recurring troubles, and suggest that corrective action taken in the past may have not completely solved the trouble.

**4.02** The information to be entered in Form E-3893 is self explanatory, and consists only of entering the date when the trouble was corrected, the trouble ticket number, and two short statements indicating the trouble found and the action taken to correct the trouble. Figure 4 shows a blank Form E-3893.

**4.03** Entries to Form E-3893 should be made after the Trouble Ticket (Form E-5840 or equivalent) has been completed. The information required to complete the entry in Form E-3893 can be obtained from the Trouble Ticket.



ROUTINE TRANSMISSION TEST RECORD

Trunk Or Circuit Designation	Direction Of Meas.	EML	Office A				Office Z				Non-Gain				MFT or E Rept.				Carrier X				CLCI									
			Qtr.		Year		Qtr.		Year		Qtr.		Year		Qtr.		Year		Qtr.		Year		Noise Limits		Noise Measurement		Noise Measurement					
			1		77		2		77		3		77		4		77		77		77		Immediate Act.		Year 77		Dev.		Year		Dev.	
			Date	By	AML	Deviations	Date	By	AML	Deviations	Date	By	AML	Deviations	Date	By	AML	Deviations	Date	By	AML	Deviations	Mtce	Date	dBrc	M	I	Date	dBrc	M	I	
Tkt.			>1 >2 >3	Tkt.			>1 >2 >3	Tkt.			>1 >2 >3	Tkt.			>1 >2 >3	Tkt.			>1 >2 >3													
1	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	401	CES	7.5																27	34	2/3	25								
2	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	402	CES	5.2	X	X														27	34	2/3	28		X						
3	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	403	CES	7.9																27	34	2/3	26								
4	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	404	CES	8.1	X															27	34	2/3	24		X	X					
5	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	405	CES	7.1	X															27	34	2/3	32		X						
6	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	406	CES	2.6																27	34	2/3	23								
7	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	407	CES	8.4																27	34										
8	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	408	CES	8.1	X	X	X													27	34										
9	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	409	CES	6.2	X	X														27	34										
10	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	410	CES	7.4																27	34										
11	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	411	CES	8.0																27	34										
12	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	412	CES	7.9																27	34										
13	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	413	CES	7.7																27	34										
14	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	414	CES	7.8																27	34										
15	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	415	CES	9.3																27	34										
16	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	416	CES	8.9	X															27	34										
17	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	417	CES	9.3	X															27	34										
18	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	418	CES	5.2	X	X														27	34										
19	A-Z	8.0	2/3																		27	34										
	Z-A	8.0	419	CES	4.3	X	X	X													27	34										
20	A-Z																															
	Z-A																															

Fig. 2—Form E-1132, Recording Measurements Taken on Carrier Facilities

ROUTINE TRANSMISSION TEST RECORD

Office A: A A A B B B C C C C M G O | Z Z Z X X Y Y Y S W I I  
 Office Z: (blank)

Non-Gain: \_\_\_\_\_ MFT or E Rept.   
 Other Rept: \_\_\_\_\_ Carrier: \_\_\_\_\_  
 CLCI: 5 | 6 | 7 | 8 | 9 | 10

Trunk Or Circuit Designation	Direction Of Meas.	EML	Office A		Office Z		Noise Limits Immediate Act. Mtce	Noise Measurement																		
			Qtr.	Year	Qtr.	Year		Year 77		Year 78																
			Date Tkt.	By	AML	Deviations >1 >2 >3	Date Tkt.	By	AML	Deviations >1 >2 >3	Date Tkt.	By	AML	Deviations >1 >2 >3	Date Tkt.	By	AML	Deviations >1 >2 >3		Date	dBrc	M	I	Date	dBrc	M
1	1234	A-Z	8.0																27	34						
2	1235	Z-A	8.0																27	34						
3	1236	A-Z	8.0																27	34						
4	1237	Z-A	8.0																27	34						
5	1238	A-Z	8.0																27	34						
6	1239	Z-A	8.0																27	34						
7	1240	A-Z	8.0																27	34						
8	1241	Z-A	8.0																27	34						
9	1242	A-Z	8.0																27	34						
10	1243	Z-A	8.0																27	34						
11	1244	A-Z	8.0																27	34						
12	1245	Z-A	8.0																27	34						
13	1246	A-Z	8.0																27	34						
14	1247	Z-A	8.0																27	34						
15	1248	A-Z	8.0																27	34						
16	1249	Z-A	8.0																27	34						
17	1250	A-Z	8.0																27	34						
18	1251	Z-A	8.0																27	34						
19	1252	A-Z	8.0																27	34						
20	1253	Z-A	8.0																27	34						

No. of Trunks	1st Meas	
	2nd Meas	
	3rd Meas	
	4th Meas	

No. Of Meas.	No. Of Deviations	1Q	2Q	3Q	4Q	No. Of Meas.	No. Of Dev.	1Q	2Q	3Q	4Q	No. Of Meas.	No. Of Dev.						

Fig. 3—Form E-1132, Recording Measurements Taken on MFT or E-Repeated Facilities (Partially Completed)

**TROUBLE HISTORY CARD**

Form E-3893  
(12-77)

OFFICE A \_\_\_\_\_ OFFICE Z \_\_\_\_\_

TRUNK NO. \_\_\_\_\_ TRUNK TYPE \_\_\_\_\_ CONTROL OFFICE \_\_\_\_\_

DATE	TROUBLE TICKET NO.	TROUBLE FOUND	CORRECTIVE ACTION TAKEN

Fig. 4—Form E-3893—Trouble History Card (Sheet 1 of 2)

DATE	TROUBLE TICKET NO.	TROUBLE FOUND	CORRECTIVE ACTION TAKEN

Fig. 4—Form E-3893—Trouble History Card (Sheet 2 of 2)