

TRUNK TRANSMISSION MAINTENANCE INDEX GENERAL DESCRIPTION

1. GENERAL

1.01 This section describes the Trunk Transmission Maintenance Index (TTMI). This index provides a measure of the quality of performance in maintaining trunk loss and noise deviations within specified limits and a proper condition of balance in toll offices where balance is required. It applies to the message network and does not cover special or private line services. This section is reissued to include comments on the mechanized procedure of computing the TTMI and to alter references to associated BSP Sections. The changes are indicated by marginal arrows.

1.02 The TTMI may be prepared using either manual or mechanized procedures. Both procedures use the same arithmetic calculations, apply the index tables given in BSP Sections 301-121-300, 301-122-300, and 301-123-300, and yield

the same component and combined TTMI results. Instructions for computing the index using manual procedures are given in BSP Sections 301-120-500, 301-121-500, 301-122-500, and 301-123-500. The mechanized procedure utilizes a computer to perform the required operations and output the results. The TTMI Mechanized Summary Procedure is covered in BSP Sections 301-124-100 and 301-124-110.

1.03 The index is based on three components indicating the performance in meeting maintenance requirements for loss, message circuit noise, and balance as illustrated in Fig. 1. The procedures for manually combining component results to produce the TTMI are described in Section 301-120-500. The mechanized procedure provides for this combining process to be performed by a computer and yields the result as a Combined Index Report Output described in BSP Section 301-124-110. ◀

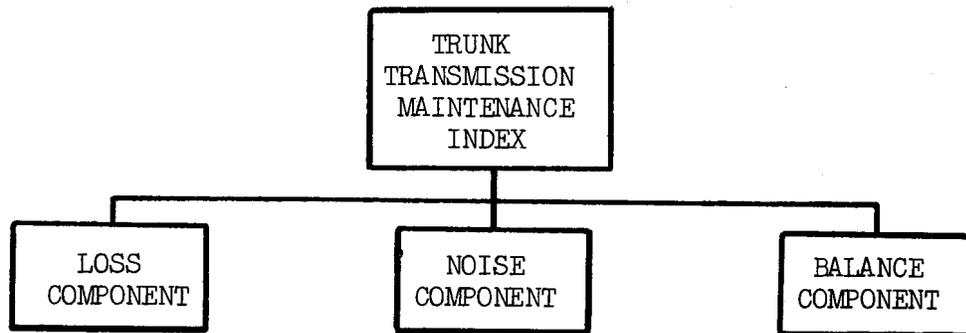


Fig. 1—Index Components

SECTION 301-120-100

1.04 Sections providing further descriptions of the component plans are:

COMPONENT PLAN	SECTION
Loss Component General Description	301-121-100
Noise Component General Description	301-122-100
Balance Component General Description	301-123-100

2. SCOPE OF THE INDEX

2.01 ~~The TTMI covers all message trunks, both local and toll, which have gain devices and/or make use of outside plant facilities. Local trunks of all types are weighted equally with toll connecting and intertoll trunks in the component plans. Intercept, Information, and Repair Service trunks are also included. Only intrabuilding trunks without gain devices are excluded.~~

2.02 The index is characteristic-oriented, since each component is designed to measure the performance in meeting maintenance requirements for a specific transmission characteristic. Component plans for three characteristics are presently available. Others may be added as maintenance requirements are established.

3. INDEX OBJECTIVES

3.01 The index is designed to provide the following ratings:

99-100	Excellent
96-98	Fully satisfactory
90-95	Fair to mediocre
Below 90	Unsatisfactory

The component plans are also designed on this basis. Thus, if all components are at the 97 level, the index will be 97.

3.02 Each component plan is arranged to reflect the maintenance effort in controlling a specific characteristic. The special nature of each maintenance program is reflected directly in each component plan. The index, by combining the results of these

plans, becomes an overall measure of the trunk transmission maintenance program.

4. ACCURACY OF THE INDEX

4.01 The accuracy of the index depends on the accuracy of its components. Since all the components are based on samples and are therefore subject to statistical error, the index is also subject to statistical error.

4.02 The component plans are designed to produce results at the area level that will generally have 90 percent confidence intervals well within ± 1.0 index point. Therefore, the index should also have this range of accuracy. At the company level, it may be even more accurate.

4.03 In those areas where division organizations exist, division indices may be computed if the components are also derived on a division basis. The statistical accuracy of these results will again depend on the accuracy of the components. At lower organizational levels statistical errors increase and all components are not available. The index should therefore not be computed and more attention should be given to the component plans and their basic data.

5. APPLICATION

5.01 The TTMI is designed to be applied on an *area* basis. It may be used where division organizations exist, but will not be effective at lower organizational levels.

5.02 The index level is of great concern, but the trend of the index will generally be more significant. Results may vary ± 0.5 point from quarter to quarter due to statistical variation. Continuing trends in the satisfactory range and results below the satisfactory range which are trending upward may need no further attention. Results in the satisfactory range which are trending downward and results below the satisfactory range which are not trending upward should receive further attention.

5.03 If the results indicate that further investigation is appropriate, the components of the index should be studied. The component results should determine what further action is to be taken. This data may be found in the manual summaries prepared in accordance with Section 301-120-500 or,

in the case of the mechanized process, in the Combined Index Report Output described in Section 301-124-110.

◆ These summaries provide the basic data necessary for analysis and identification of weak spots. ◆

5.04 If investigation of component results is in order, reference should be made to summaries provided by the appropriate section:

MANUAL PROCEDURES

Loss Component	
Manual Summary Procedures	301-121-500
Noise Component	
Manual Summary Procedures	301-122-500
Balance Component	
Manual Summary Procedures	301-123-500

◆ **MECHANIZED PROCEDURES**

General Description	301-124-100
Description of Outputs	301-124-110
Description of Inputs	660-403-011◆