

**CODES — TEST LINE CIRCUITS AND
COMMUNICATION TRUNKS
NATIONWIDE DISTANCE DIALING PLAN**

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1. GENERAL

1.01 This section and its associated point sections describe the operation and use of code test line circuits. The codes have been assigned on a Systemwide basis. They fit in with the general switching plan for nationwide distance dialing.

1.02 Code test lines have been standardized to expedite signaling and transmission tests on trunks used in the Distance Dialing Network. In general these test lines will permit "one-man" tests to be made from testboards, switchboards, maintenance centers and test frames without assistance from the far end.

1.03 The use of test lines by the forces responsible for trunk maintenance will enable them to keep a closer watch on individual trunk performance, and assist them in keeping systems and circuits in correct adjustment.

1.04 It is important that the equipments associated with the test line codes be well maintained. Regular checks should be made of their performance as covered in other practices.

1.05 This dually numbered section and its associated point sections replace Section E26.001, Issue 1.

1.06 The following is a list of the sections covering descriptions of the test line circuits. Section E26.001.06 lists locations equipped with the code 104 test lines. This section will be revised from time to time to add the locations which will be equipped in the future.

A702.680.01, — Code 100—Noise and Balance
E26.001.01 Test Termination.

A702.680.02, — Code 101 — Secondary Toll
E26.001.02 Testboard Communication and Test Trunk.

A702.680.03, — Code 102 — 1-Milliwatt,
E26.001.03 1000-Cycle Testing Power with Timed Disconnect.

A702.680.04, — Code 103 — Supervisory and
E26.001.04 Signaling Test Termination.

A702.680.05, — Code 104 — Far-End Trans-
E26.001.05 mission Measuring and Noise Checking Circuit.

A702.680.06, — Codes — 104 Test Line
E26.001.06 Locations.

A702.680.19, — Code 161-X Trouble Reporting
E26.001.19 Code for Use by Traffic in Multitestboard Cities.

A702.680.20, — Code 958 — Switching System
E26.001.20 Maintenance Center Communication Trunk.

A702.680.21, — Code 959 — 1-Milliwatt,
E26.001.21 1000-Cycle Testing Power with Timed Disconnect for a Check Test to the Toll Completing Train of a 2-Train No. 4-Type Toll Switching System.

A702.680.22, — Code 970-XXXX — Directing
E26.001.22 Code Used for Reaching OGT Test Frames in Crossbar Tandem Toll Switching Offices.

2. CODE TEST LINES

2.01 The terms "Test Line" and "Test Termination" are sometimes used interchangeably to designate a testing equipment, circuit, or communication trunk. Test lines may be reached by dialing over the trunk to be tested.

2.02 Code test lines include fixed terminations and relatively complex testing circuits. Some are capable of recognizing, testing, and replying to specific signals. The more complicated test lines can be used to make two-way net loss measurements and noise tests without assistance from the far-end office.

2.03 Each test line circuit is connected automatically by the far-end switching equipment upon receipt of the proper code number. It is disconnected, either on a timed interval basis or when released at the originating end.

2.04 The impedance of test line circuits must match the impedance of the intermediate trunks at the switches. This impedance is 600 ohms for all toll switching systems except cross-bar tandem where it is 900 ohms. As shown on the test line circuit drawings, impedance options of 600 and 900 ohms are available.

2.05 Transmission measuring test line circuits (codes 102, 104, and 959) should not be used in testing trunks containing type "M" carrier channels. Any testing power at a level higher than -20 dbm at the input of the "M" channel will cause the limiting action of the terminal equipment to become effective. This will result in erroneous measurements on these channels.

3. NATIONWIDE NUMBERING PLAN

3.01 In order to permit nationwide distance dialing, a numbering plan has been set up in which each telephone in the United States and Canada has a unique telephone number. Each consists of ten digits arranged in three parts:

- (1) A 3-digit area code
- (2) A 3-digit central office code
- (3) A 4-digit station number

The 3-digit office code plus the 4-digit station number make up the 2-letter, 5-numerical (2L-5N) customer's number.

4. NUMBERING PLAN AREA CODES

4.01 The United States and Canada have been divided geographically into numbering plan areas. Each is assigned a distinctive 3-digit designation called the area code. Calls between different numbering plan areas (foreign area calls) will, in general, require dialing the code of the area in which the called station is located, as well as the called station number. Calls which originate and terminate within the same area usually require dialing only the 7-digit called number.

5. TERMINATING TOLL CENTER (TTC) CODES

5.01 A distinctive 3-digit code has been assigned to each Terminating Toll Center (TTC). This code enables operators in different cities to reach inward, information, delayed call and similar operators in each toll center. Calls to operators and code test lines are routed in the same manner as calls to subscriber lines except that a TTC code is used instead of the central office code, and a 3-digit operator or code test line number is used instead of the station number.

5.02 The TTC codes assigned together with numbering plan area codes are part of the routing information prepared by the Traffic Department.

5.03 In order to economize operator and machine work time, the TTC code for one major city in most numbering plan areas will not be required. For example, there will be no TTC code for Denver in the Colorado numbering plan area. To reach the Denver testboard from a foreign area, it will merely be necessary to dial the area code plus 101, i.e., 303 + 101. To reach the testboard at this major city from other offices in the same numbering plan area where the intermediate trunks appear in the testboard multiple, it is necessary to dial only the 101 code.

6. INFORMATION REQUIRED TO ESTABLISH CONNECTIONS USING TANDEM TRUNKS

6.01 When tandem trunks to switching systems are used by Plant forces to establish communication with distant offices, they can use the

switchboard directory to obtain the proper numbering plan area and/or TTC codes. Such codes should be prefixed to an operator or code test line circuit to insure correct routing on these calls.

6.02 In some large toll centers, usually the major city, there is more than one toll switching system. All inward, information, and other operator functions may be routed to one switching system location. In this case the Traffic Department has no need to differentiate between systems, and no TTC code for the different switching system is listed in the Traffic routing bulletin.

6.03 An office may have trunks to two or more switching systems in the same toll center. If a call to the toll center is over a tandem trunk, the Plant Department requires a TTC code to route the call to the desired office. In some of these larger toll centers, TTC codes have been assigned to these switching systems for Plant purposes. This permits a tester to direct test calls to a particular office. Since TTC codes have been assigned on an interim basis, (until a new series becomes available), they are not included in this section. They can be obtained from the testboard by dialing the desired area code and code 101. When the testboard answers, request the TTC number of the required toll center.