

BSM #792B

DATA SYSTEMS — COMMON CIRCUITS, EQUIPMENT AND PROCEDURES
STATION TEST LINES
2-WAY STATION TEST LINE USING SD-70926-01
CIRCUIT ORDER AND ROUTINE TESTS

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1. GENERAL

1.01 This section covers the circuit order, routine and trouble investigation tests required on the station test line that uses the 2-way Station Test Line Circuit per SD-70926-01.

1.02 A description of this station test line is included in Section 314-810-100. The manner of using it at test center telegraph testboards or serviceboards is included in Section 314-810-500. The maintenance tests required on the test line circuit (SD-70926-01), as a piece of central office equipment, are covered in Section A204.752.

1.03 This test line works as a subscriber line from a serving central office either in the regular message (DDD) network or in the dedicated data line switching (DLS) network. It terminates in a test position(s) of a test center telegraph testboard or serviceboard. When so provided, it furnishes the test center with means for communicating and making tests with certain data intercommunication subscribers. These subscribers must be ones that use "Data Set 101A" associated with TTY equipment for data intercommunicating purposes. Examples are Boeing and other wide area data service (WADS) subscribers in the DLS network and mechanized teletypewriter (TWX) subscribers in the DDD network.

2. NEED FOR SEPARATE DLS AND TWX TEST LINES

2.01 As presently visualized, when the test line is used to originate or to answer a call over the DLS network, the TTY operating speed will be 100 wpm. Such calls would be those to or from Boeing or WADS subscribers. When the test line is used to originate or answer a call over the DDD network, the operating speed will be 60 wpm. Such calls would be those to or from TWX subscribers or to or from Boeing subscribers when operating in the TWX (60 wpm) mode.

2.02 There is nothing about the test line circuit, per se, that is speed discriminative, at least in the 60 to 100 wpm range. However, when it comes to answering a call it is essential that the TTY used for such answering be arranged for the same speed as that used by the calling party. Otherwise, garbled copy and confused operating procedures would result. The test line circuit, however, is not arranged to indicate automatically the speed of the incoming call. Accordingly, separately listed test lines must be provided for 60 and 100 wpm speed. In specific cases, where traffic justifies it, additional lines of either type may be provided on a hunting basis.

3. TRANSMISSION DESIGN OF TEST LINES

3.01 Both the DLS and TWX test lines are designed to the same transmission standards. These standards are those used for the design of TWX and WADS-B subscriber lines. Carriers used for test line facilities should preferably be of the transmitted carrier type such as O, ON and N. If this is not feasible the test lines should be restricted to synchronized J, K and L systems. However, divided access

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line circuits (DALCs) and concentrator trunks, involved in the design of some TWX subscriber lines, will not be employed in test line layouts.

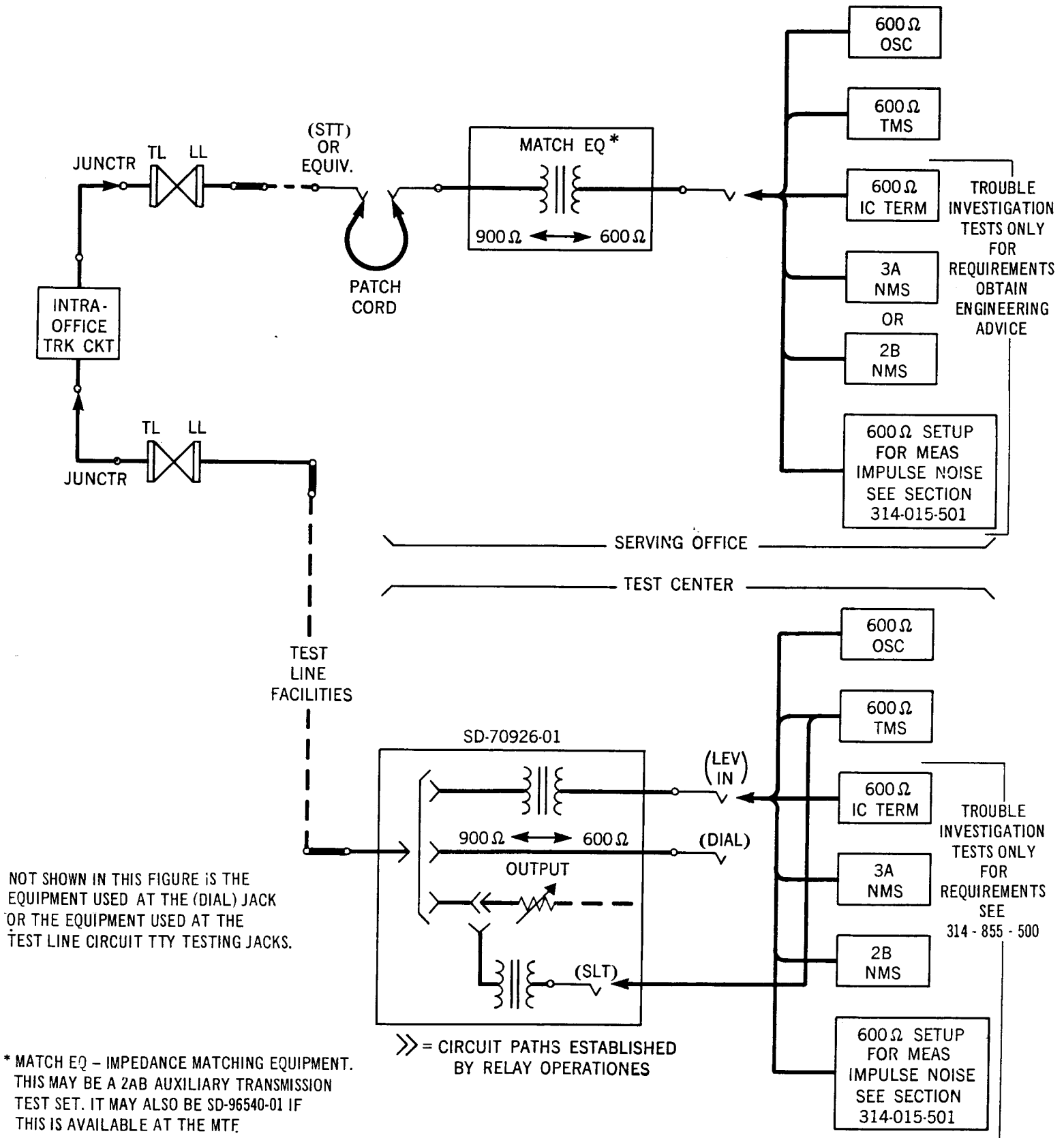
4. CIRCUIT ORDER AND ROUTINE TESTS

4.01 Both DLS and TWX test lines will be tested, lined up and maintained in the same manner and all test lines of a test center should have the same net loss. This is desirable from a plant operations standpoint. The procedures involved are those specified for testing, lining up and maintaining a WADS-B subscriber line as covered in Section 314-031-300. These procedures are somewhat more extensive than those specified for a TWX subscriber line. Thorough testing and maintenance procedures are not only warranted but are "a must" for the test lines. This is understandable as these

test lines are a trouble hunting tool. As such, they should be trouble free and kept "on the nose" transmissionwise.

4.02 Section 314-031-300, and its related "HOW-TO-DO-IT" sections in the -500 series of numbers, are aimed at the WADS-B station arrangement. The adaptation of their testing techniques to the testboard or service-board arrangement of equivalent station apparatus should present no problem. The block diagrams shown in Fig. 1 should assist.

4.03 The references in Section 314-031-300 to Section 314-031-504 for the methods of making the tests and adjustments applying to the data set should be disregarded. Instead, reference should be made to Section A204.752 for comparable procedures applying to the test line circuit.



NOT SHOWN IN THIS FIGURE IS THE EQUIPMENT USED AT THE (DIAL) JACK OR THE EQUIPMENT USED AT THE TEST LINE CIRCUIT TTY TESTING JACKS.

* MATCH EQ - IMPEDANCE MATCHING EQUIPMENT. THIS MAY BE A 2AB AUXILIARY TRANSMISSION TEST SET. IT MAY ALSO BE SD-96540-01 IF THIS IS AVAILABLE AT THE MTF

Fig. 1 - Block Diagram Testing Arrangements