

## DMS-1 DIGITAL MULTIPLEX SYSTEM

### DIGITAL LINE, ORDER-WIRE, AND FAULT-LOCATE INITIAL OPERATING TESTS

#### 1. GENERAL

1.01 The digital line facilities for the DMS-1 system include:

- repeatered lines
- office repeaters
- order-wire facilities
- facilities for locating faulty line or office repeaters.

#### System Types

1.02 Three types of digital line facilities may be used in the DMS-1 system.

- (a) An LD-1 system with terminal repeaters, and order-wire, and fault-locate circuit packs mounted in the DMS-1 terminal bays. The DMS-1 equipment is optimized for this mode of operation.
- (b) An LD-1 system with terminal repeaters, and order-wire, and fault-locate circuit packs mounted in the standard LD-1 span rack remote from the DMS-1 facilities. In this case, no LD-1 equipment is mounted in the DMS-1 bays. Transmission to and from the LD-1 facilities is through the digroup or protection switching circuit packs

- (c) A T1 system with terminal repeaters, and order-wire, and fault-locate circuit packs mounted remote from the DMS-1 bays.

#### Engineering

1.03 Information pertaining to DS1 line engineering for the DMS-1 system is described in Section 363-2011-151.

#### System Line Up and Tests

1.04 Tests must be performed to ensure the DS1 line meets the requirements generally accepted for T-carrier systems (i.e., the error rate per span must be less than  $0.9 \times 10^{-7}$  per section).

1.05 In general, the DS1 line facilities are tested independently in accordance with the applicable lineup and test procedures for the type of line used. Charts 1 through 3 in this section assume the use of LD-1 digital repeatered lines, and refer to the applicable LD-1 practices for the procedures to use. If a different system is used, then the equivalent line-up and test procedures from the manufacturer of the line must be used.

**CHART 1**  
**LD-1 CARRIER SYSTEM MOUNTED ON DMS-1 TERMINAL BAYS**

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**General Reference**

Section 368-2101-200 is a general reference to the LD-1 installation, lineup, and test procedures.

**Digital Line**

Reference Section 368-2101-501.

Perform the out-of-service transmission tests described in Section 368-2101-501 between each terminal repeater; that is,

- (a) between the CCT and RCT
- (b) between each RCT
- (c) between terminal repeaters if an intermediate powering point is necessary.

**Note:** The designations shown on the LD-1 terminal repeater faceplate in Section 368-2101-501 also apply to the DMS-1 repeaters used in the DMS-1 system. The DMS-1 repeaters are direct equivalents of the LD-1 office repeaters as follow:

DMS-1	LD-1	TYPE
QPP436A	QRY7A	Non powering
QPP437A	QRY6A	Powering

**Order-Wire Facility Tests**

Reference Section 368-2101-307.

The LD-1 order-wire facilities are mounted on the order-wire and fault-locate shelf in all CCT and RCT bays.

Verify the LD-1 order-wire operation by originating calls between all CCT and RCT bays, and between each apparatus case and the CCT bay. Section 368-2101-307 gives details of this procedure.

**Fault-Locate Facility Tests**

Reference Section 363-2101-503.

The LD-1 fault locate facilities are mounted on the order-wire and fault-locate shelf in all CCT and RCT bays.

Verify that each LD-1 line repeater gives the correct tone when the line is tested with a fault-locate signal as described in Section 368-2101-503. Establish an office fault-locating record for new systems as described in Section 368-2101-503.

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**CHART 2**  
**LD-1 CARRIER SYSTEM MOUNTED OUTSIDE THE DMS-1 TERMINAL BAYS**

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Perform the appropriate LD-1 line-up and installation tests outlined in Section 368-2101-200.

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**CHART 3**  
**T-CARRIER SYSTEM MOUNTED OUTSIDE THE DMS-1 TERMINAL BAYS**

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Perform the appropriate T-Carrier line-up and installation tests provided in the applicable manufacturer's lineup and test manuals.

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