

**DIGITAL DATA SYSTEM**  
**MULTIPLEXER JACK AND CONNECTOR PANEL AND**  
**SUBRATE DATA MULTIPLEXER JACK AND CONNECTOR PANEL**  
**DESCRIPTION**

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**1. GENERAL**

**1.01** This section describes the multiplexer jack and connector panel (M-JCP) and the subrate data multiplexer jack and connector panel (SM-JCP), and illustrates their relationships with associated equipment in the Digital Data System (DDS). A general knowledge of the DDS is required for a complete understanding of this section.

**1.02** This section is reissued to reflect changes in DDS office arrangements and to delete information on the T1WB5 data-voice multiplexer (T1WB5). Since this issue is a general revision, arrows ordinarily used to indicate changes have been omitted.

**1.03** The SM-JCP and the M-JCP were initially designed to be used in local office arrangements; in the future, however, quad terminal panels (QTPs) or the DSX-0 will be used in most local office arrangements. The only local office equipment arrangement that will use the M-JCP is the T1WB4 data-voice multiplexer (T1WB4) bay (J70177N and J70177P).

**1.04** Jack modules on the front of the JCPs allow for test and monitor access to individual 64-kb/s (DS-0) data channels. Unlike other DDS DS-level jack appearances (for example, the DSX-0 and the DSX-1), these jack modules are for test

and monitor access only, *not* for patching or cross-connecting. Connections from the JCPs to DDS equipment are made through 24- and 50-pin connectors at the rear of the JCPs. Since multiple conductor cables are used for the connections, cross-connect or rearrangement capability is not provided for individual channels.

**1.05** The M-JCP (Fig. 1) provides jacks for test and monitor access to 24 individual 64-kb/s (DS-0) data channels. Electrically the M-JCP is located between a T1 data multiplexer (T1DM) or one or two T1WB4s and office channel units (OCUs), 5- or 10-channel integral subrate multiplexers (ISMxs), or subrate data multiplexers (SRDMs), as shown in Fig. 2 and 3. The T1DM or T1WB4s (referred to as the FAR equipment) are connected to the M-JCP by means of two 50-pin connectors located on the rear of the M-JCP. The OCUs, ISMxs, or SRDMs are connected to the M-JCP by means of six 24-pin connectors (four DS-0 channels for each connector) located on the rear of the M-JCP. The equipment connected to these connectors is referred to as the NEAR equipment.

**1.06** The SM-JCP (Fig. 4) provides jacks for test and monitor access to 20 individual 64-kb/s (DS-0) data channels. Electrically the SM-JCP is located between the OCUs and SRDMs in the local office. The OCUs and the SRDMs are referred to as the NEAR and FAR equipment, respectively. Connections from the equipment through the SM-JCP are made at the rear of the panel by means of four 50-pin connectors.

**2. EQUIPMENT ARRANGEMENTS**

**2.01** The M-JCP and the SM-JCP each occupy 2 inches of vertical mounting space on a 23-inch wide mounting center within the associated

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equipment bay (see Table A). A KS-21042, L1 jack panel containing two groups of ten jack modules is mounted on the front of the SM-JCP (Fig. 4). Each jack module is numbered from 1 to 20 consecutively. At the rear of the SM-JCP are two 50-pin connectors, J3 and J4, for SRDM connection and two 50-pin connectors, J1 and J2, for OCU connection. A KS-21042, L2 jack panel containing two groups of 12 jack modules is mounted on the front of the M-JCP (Fig. 1). Each jack module is numbered from 1 to 24 consecutively. At the rear of the M-JCP are two 50-pin connectors, J1 and J2, for T1DM or T1WB4 connection and six 24-pin connectors, J3 through J8, for connection of the OCU, ISMX, SRDM, or other M-JCP, depending on the bay configuration. In both the SM-JCP and the M-JCP, the internal wiring is complete except for the KS-13385, stranded, 16 AWG, signal ground bus at the rear of the unit, which must be connected to the bay signal ground bus.

**2.02** For ease in identifying the information rate of the channel each jack module is serving, a receptacle in the plastic faceplate of the module holds a color-coded designation pin. These pins are installed as the circuits are put into service. Table B gives the color code. When subrate multiplexed DS-0 channels appear at the M-JCP, the pin in the jack module indicates the data rate of the multiplexing circuit (ISMX or SRDM). In addition, a black signal plug (see Table C) is required for multiplexed circuits. This plug is inserted into the NEAR and FAR, TO and FROM jack array of the jack module to indicate that these jacks are *not* to be used for test access under normal circumstances. The M-JCP serving a distant local office should be equipped with red signal plugs (see Table C) in the NEAR and FAR, TO and FROM jack arrays associated with the distant office to indicate that these jack modules are *not* to be used for test access. The jack modules equipped with red signal plugs are not equipped with data rate designation pins.

**2.03** The plug used to transmit, to receive, or to monitor at the jack and connector panels is a KS-20999, L1 plug from the portable test set transmitter (KS-20909) or receiver (KS-20908).

**3. REFERENCES**

107-600-100 Digital Data System—KS-20909 Test Set Transmitter—Description and Operation

107-601-100 Digital Data System—KS-20908 Test Set Receiver—Description and Operation

314-901-500 Digital Data System—Serving Test Center Private Line Circuit—Maintenance Procedures

314-914-100 Digital Data System—DSX-0 Cross-Connect—Description

CD- & SD-73088-01 Digital Data System—Multiplexer Jack and Connector Panel and Subrate Data Multiplexer Jack and Connector Panel

**TABLE A**

**M-JCP AND SM-JCP LOCAL OFFICE REQUIREMENTS**

TYPE OF JCP	NUMBER REQUIRED
M-JCP	1 for each T1DM; 1 for every two T1WB4s
SM-JCP	1 for every two shelves of OCUs associated with an SRDM

**TABLE B**

**DATA RATE DESIGNATION PINS**

INFORMATION RATE	CODE	COLOR
2.4 kb/s	KS-14174, L2	Orange
4.8 kb/s	KS-14174, L5	Yellow
9.6 kb/s	KS-14174, L4	Green
56 kb/s	KS-14174, L3	Blue

TABLE C

DESIGNATION SIGNAL PLUGS

PURPOSE	CODE*	COLOR
Multiplexed Circuits	TT-514-2	Black
Distant Local Office M-JCP	TT-514-1	Red

\* Switchcraft, Incorporated, Chicago, Illinois

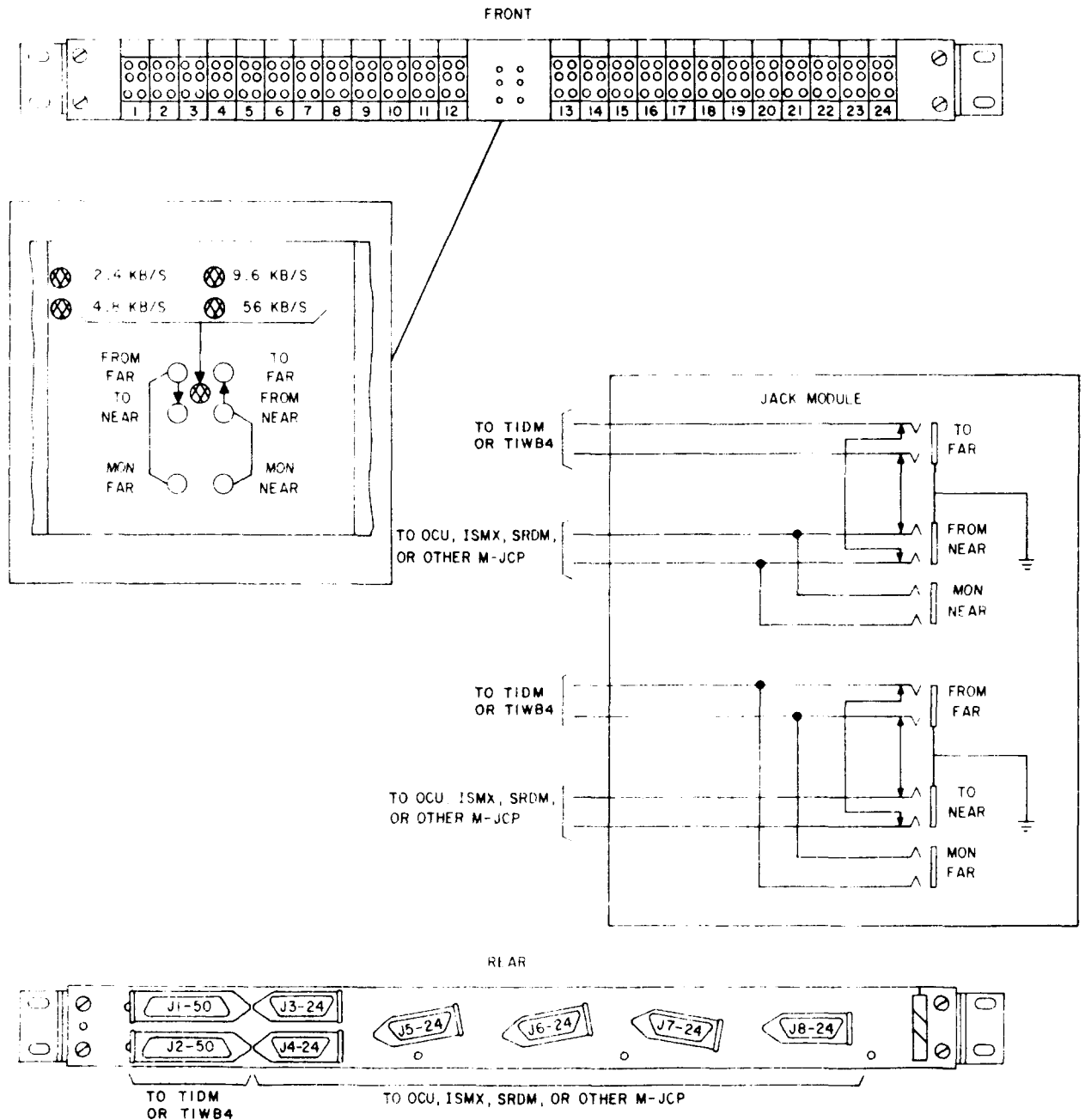


Fig. 1—Multiplexer Jack and Connector Panel

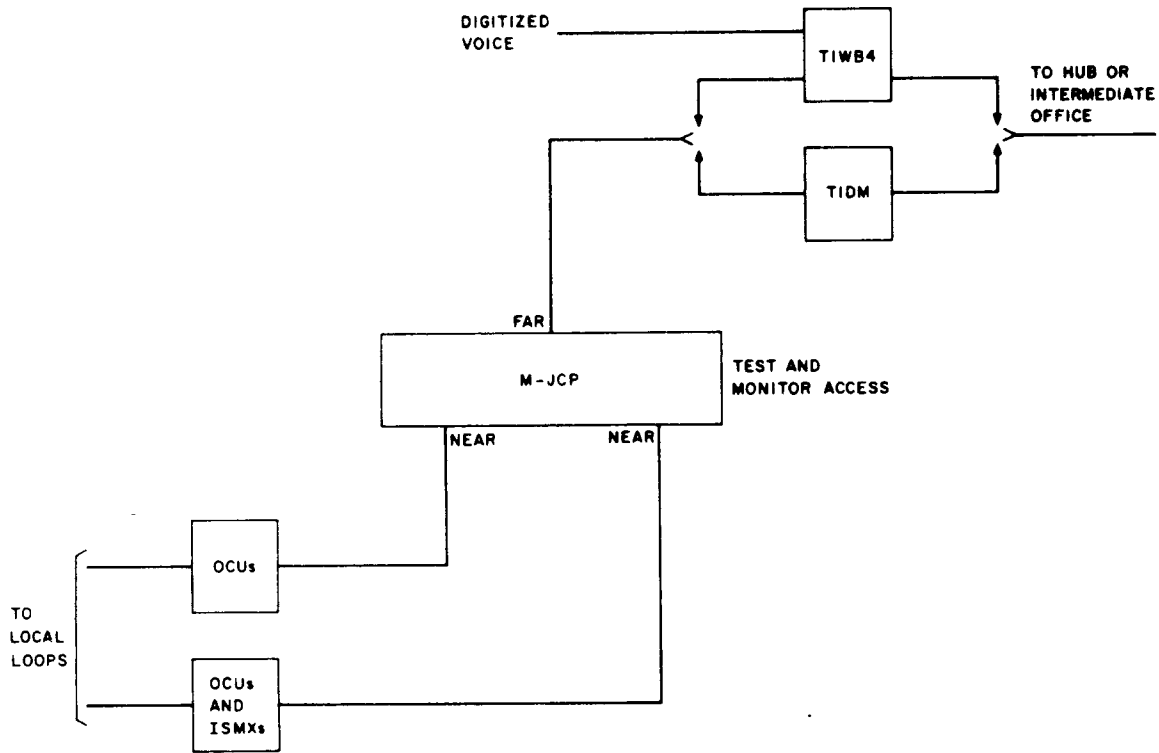


Fig. 2—Example of Local Office Arrangement Using M-JCP

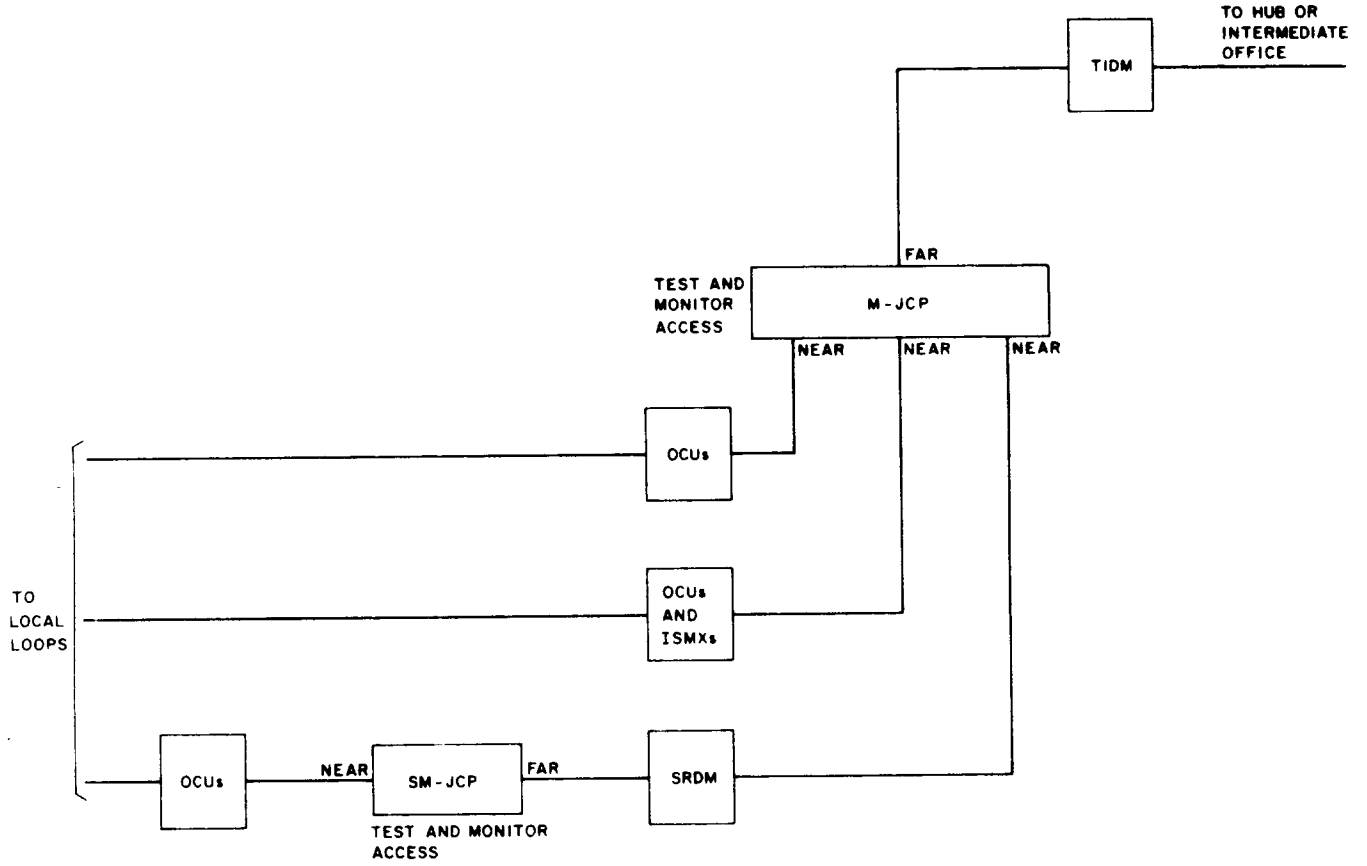


Fig. 3—Example of Local Office Arrangement Using JCPs

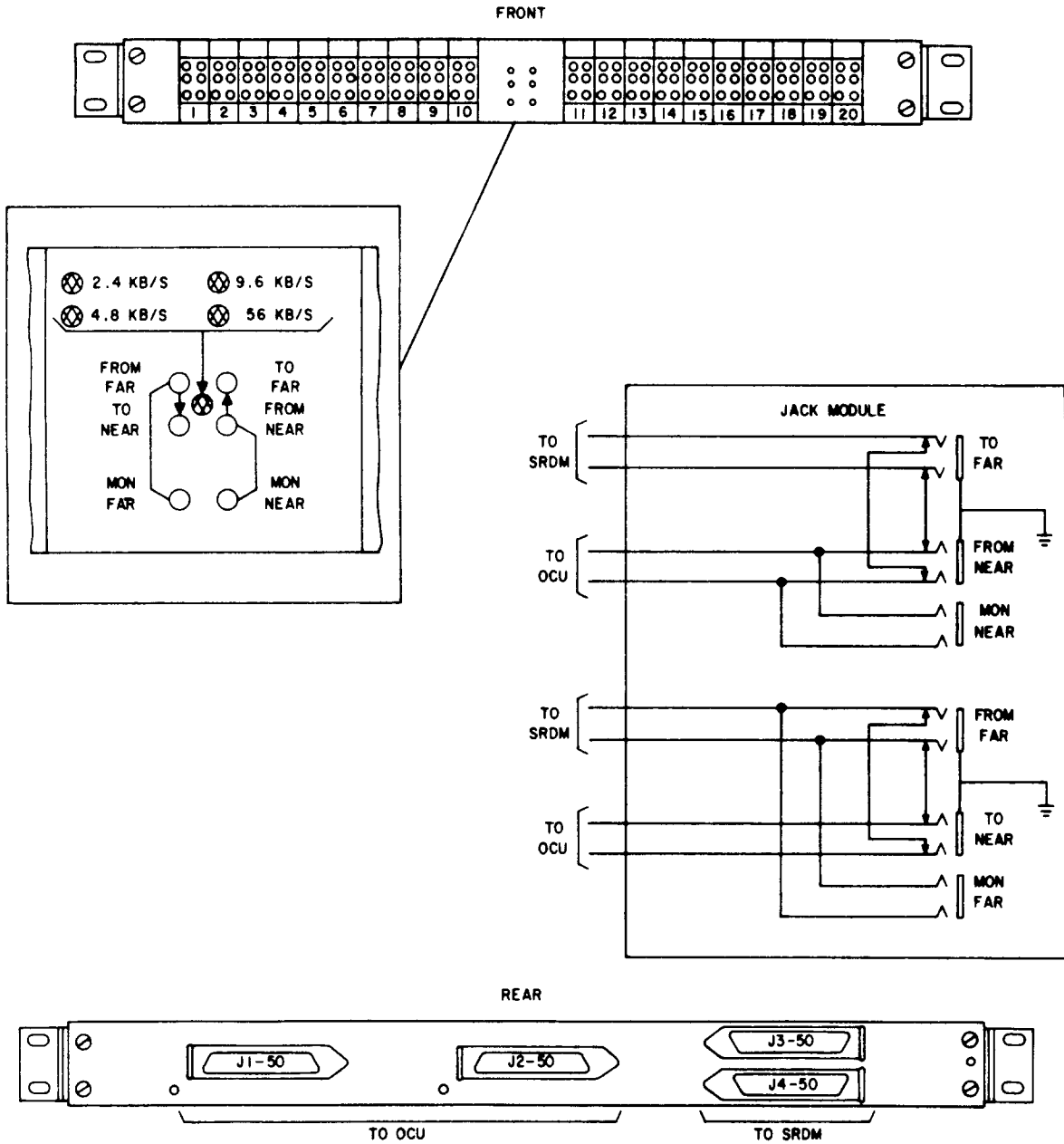


Fig. 4—Substrate Data Multiplexer Jack and Connector Panel