

# **A1 DIGITAL DATA TRANSMISSION SYSTEM**

## **FOUR-PHASE TRANSMITTER-RECEIVER**

### **IDENTIFICATION**

#### **1. GENERAL**

**1.01** This section provides identification information for the 4-phase digital data sets used with the A1 Digital Data Transmission System. The 4-phase digital data sets consist of a 4-phase digital data transmitter (Fig. 1) and a 4-phase digital data receiver (Fig. 2).

**1.02** The 4-phase digital data transmitter is designed to receive information from a customer data source at a 1300 bit per second (bps) rate, phase modulate a carrier, and feed the information over a toll trunk circuit to the 4-phase digital data receiver. This transmitter is compatible only with the 4-phase digital data receiver.

**1.03** The 4-phase digital data receiver is only compatible with the digital data transmitter. This receiver is designed to convert the phase-modulated data to a serial form and send it to the customer at a 1300-bps rate. This system operates synchronously, that is, timing information must be sent with the phase-modulated data and this timing is used to control the data receiver and customer equipment.

#### **2. DESCRIPTION**

**2.01** The 4-phase digital data transmitter weighs 23.8 pounds; the 4-phase digital data receiver weighs 28.8 pounds. Both the transmitter and receiver are the same size: 10-1/2 inches wide, 12-1/2 inches high, and 12 inches deep.

**2.02** The 4-phase digital data sets (transmitter and receiver) are to be used with the A1 Digital Data Transmission System. This system has been developed for use in the SAGE air defense system for transmission of data at a 1300-bps rate from data-generating equipment at radar sites or other locations to data processing equipment at computer centers. This system is also to be used for transmitting processed data from these computer centers to other data-using locations.

#### **3. REFERENCES**

**3.01** The following Bell System Practices contain additional information pertaining to the A1 Digital Data System and the 4-phase digital data transmitter and receiver:

<b>SECTION</b>	<b>TITLE</b>
AB27.401.3	A1 DDS-Four-Phase Sets, General Engineering Considerations
314-410-500	Private line Data-Over-all Test Circuits and Requirements
314-500-105	A1 Digital Data System Using Four-Phase Data Sets, General Description
314-501-105	A1 Digital Data Transmission System, Description, Four-Phase Transmitter
314-501-305	Maintenance Tests for Four-Phase Digital Data Transmitter
314-502-105	A1 Digital Data Transmission System, Description, Four-Phase Receiver
314-502-305	Maintenance Tests for Four-Phase Digital Data Receiver
314-500-505	A1 Digital Data Transmission System Using 4-Phase Data Sets, Trouble Testing and Location.
811-013-150	A1 Digital Data Patching and Testboard Equipment
811-010-188	Performance Requirements for Four-Phase Digital Data Transmitter
811-010-189	Performance Requirements for Four-Phase Digital Data Receiver

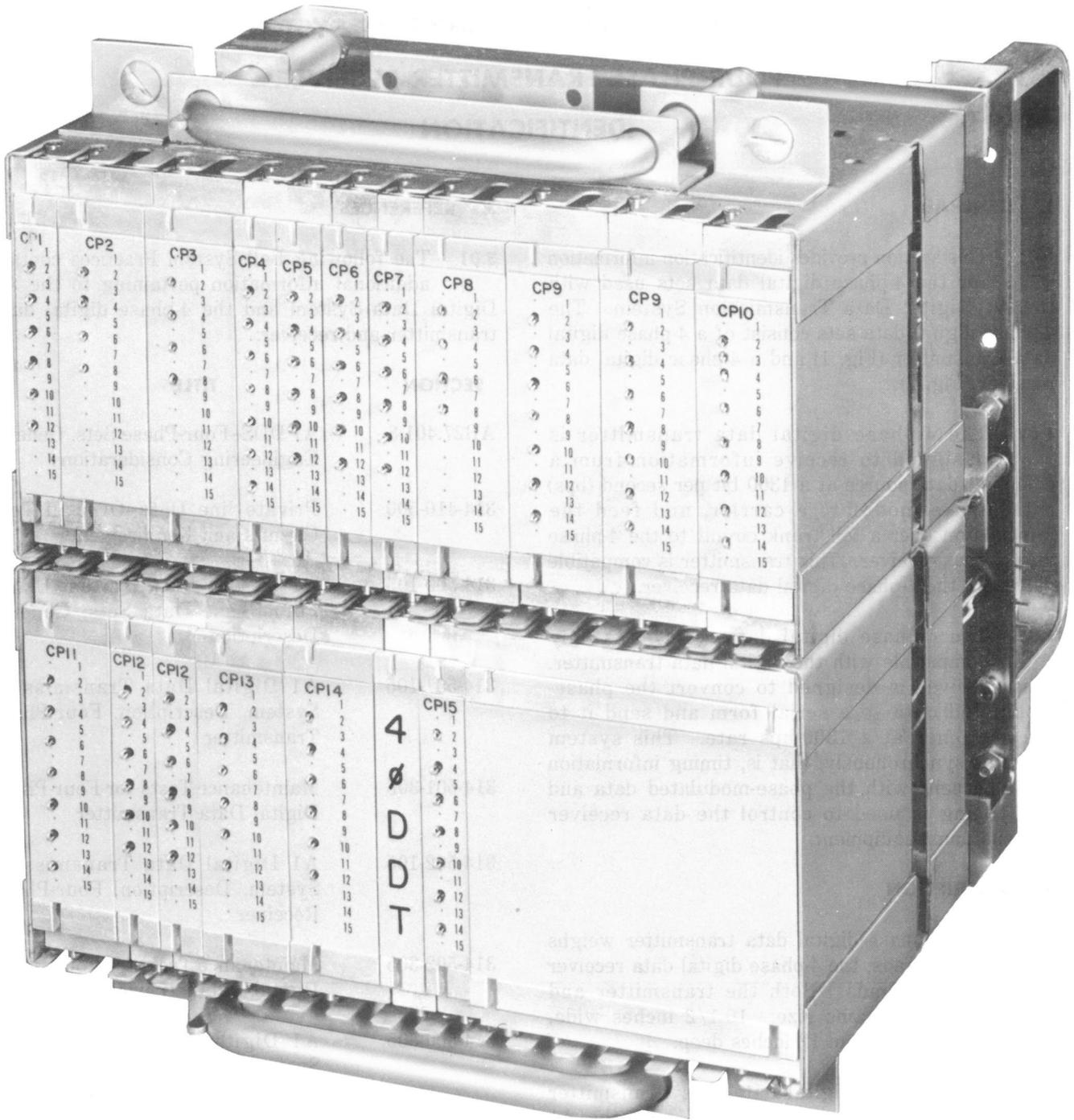


Fig. 1—Four-Phase Digital Data Transmitter

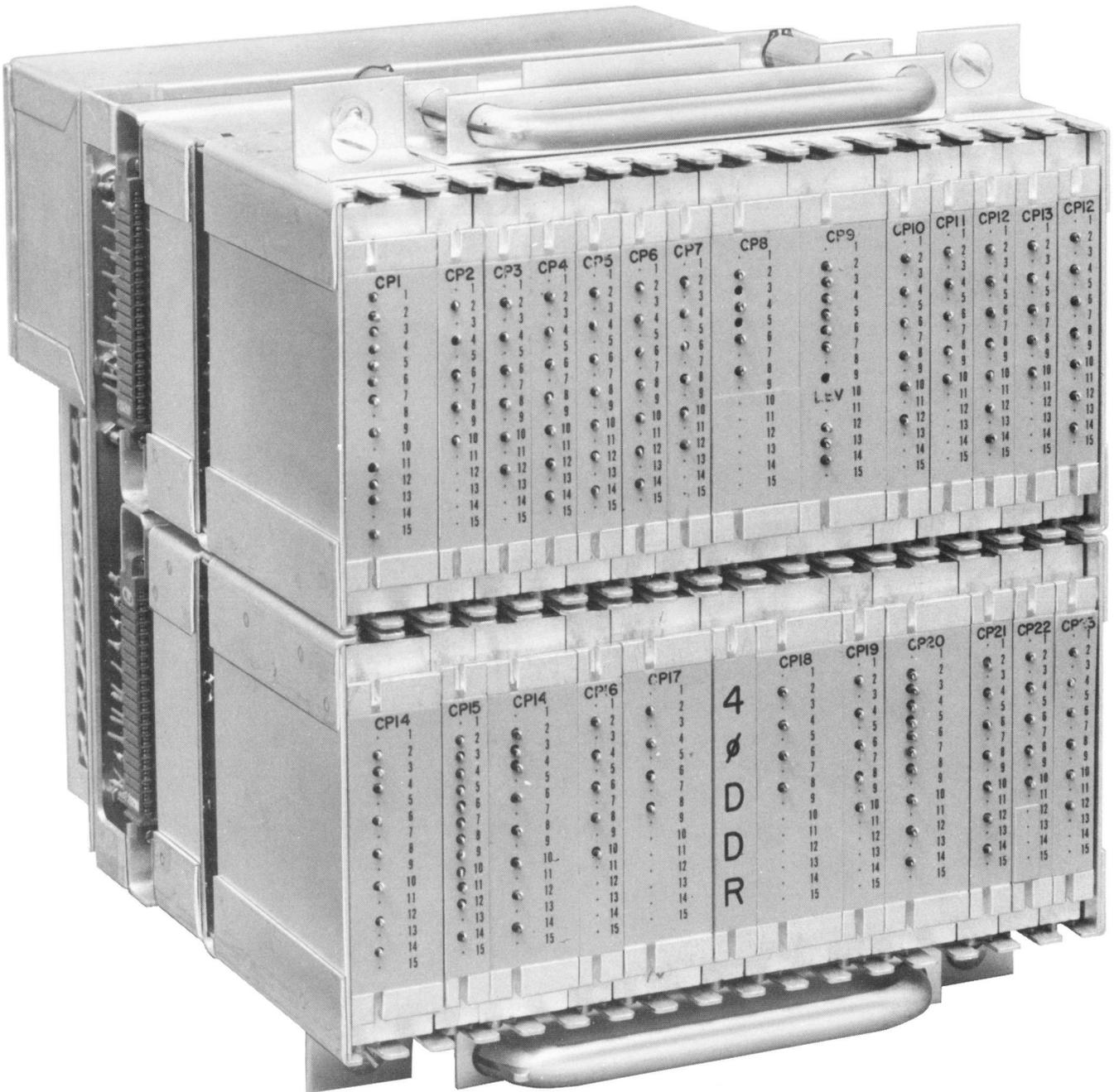


Fig. 2—Four-Phase Digital Data Receiver