# 48-TYPE DATA UNITS
# IDENTIFICATION

## 1. GENERAL

**1.01** This section provides the identification of the 48-type (48A1, 48B1, 48C1, and 48D1) data units. These data units are used in conjunction with data auxiliary set (DAS) 829-type to terminate 4-wire private line voiceband data channels in various station arrangements.

**1.02** The 48A1, 48B1, and 48C1 data units are plug-in circuit packs. All required connections for these data units are provided using prewired data mountings or through interconnections, on a plug-in basis, of data mountings.

**1.03** The 48D1 data unit is a Call Director® interface adapter used to connect a Call Director to a 46B1 and/or a 46C1 data mounting.

## 2. DESCRIPTION

### A. 48A1 Data Unit

**2.01** The 48A1 data unit, shown in Fig. 1, is used to provide alternate voice service over the 4-wire private line channel when used in conjunction with DAS 829-type.

**2.02** The data unit is used with an appropriate 2-wire key telephone set and mounts in either a 45A1 or 46B1 data mounting.

**2.03** The following functions are provided:

- Telco provided 4-wire private line alternate voice service through the interface of DAS 829-type.
- 4-wire to 2-wire conversion to interface with a 2-wire key telephone set.
- 2600-Hz manual ringdown signaling
- Control of station equipment through use of a key telephone set.
- 2600-Hz ring detection, lamp indication, and key telephone buzzer.
- Locked-in ringing
- Ring-back indication
- Control of "not-in-data" signal to modem.

**2.04** The dimensions of the 48A1 data unit are 1-1/4 inches high, 5-1/2 inches wide, and 9-11/16 inches deep. The data unit weighs approximately 1-1/4 pounds.

### B. 48B1 Data Unit

**2.05** The 48B1 data unit, shown in Fig. 2 provides the circuitry required for dial backup service to the DAS 829-type over the switched telecommunications network.

**2.06** Dial backup service provides the capability for switching a modem from a 4-wire private line facility to a 4-wire line derived from the switched network.

> ***Note:*** As in the case of the present DAS 828C, the new dial backup arrangements are intended for use with telephone company (telco) provided data sets only. In the case of a customer-provided modem, the customer is required to access the switched network through data access arrangements (DAAs) and should assume responsibility for providing the switching arrangements to transfer the modem from the private line to the switched network as well as any level adjustments that may be required.

**2.07** This data unit is also used with an appropriate 2-wire key telephone set and mounts in either a 45A1 or 46C1 data mounting.

**2.08** The following functions are provided:

- Relay *logic, under control of a key telephone* set, to control the mode of the data unit.

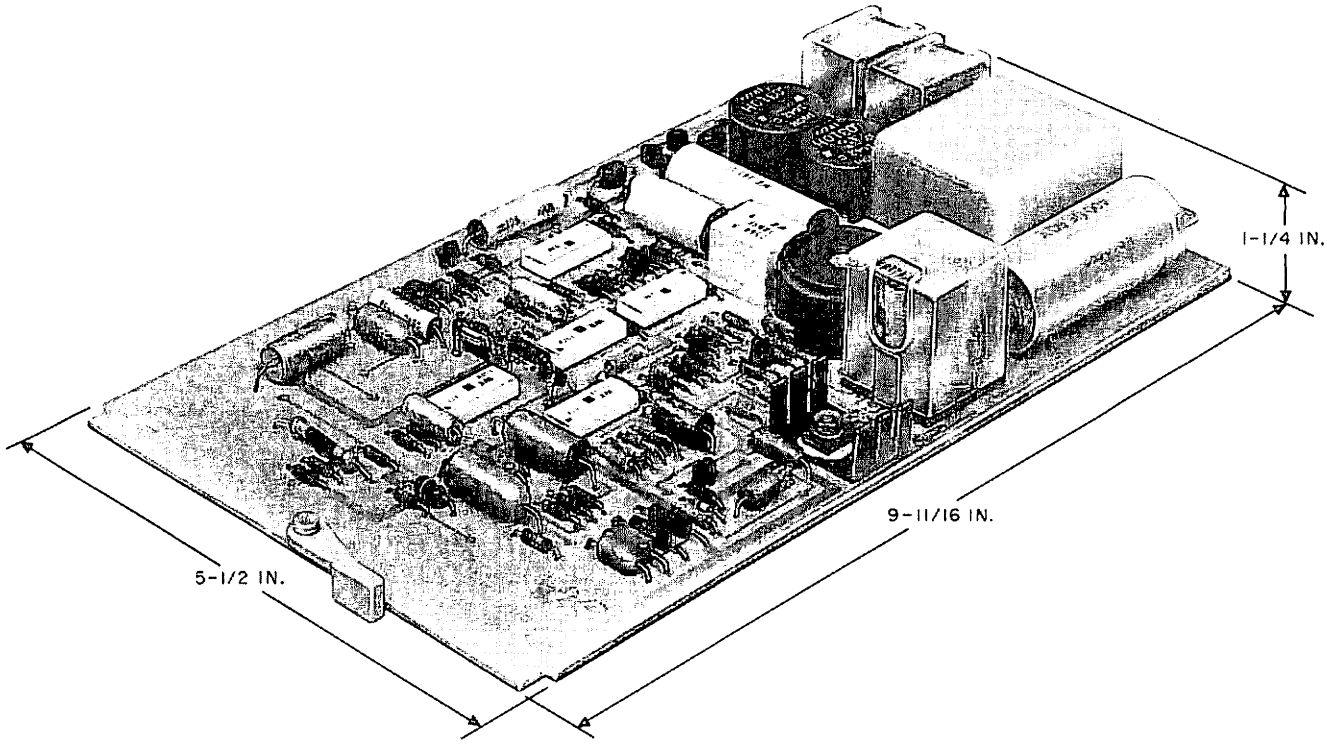


**Fig. 1—48A1 Data Unit**

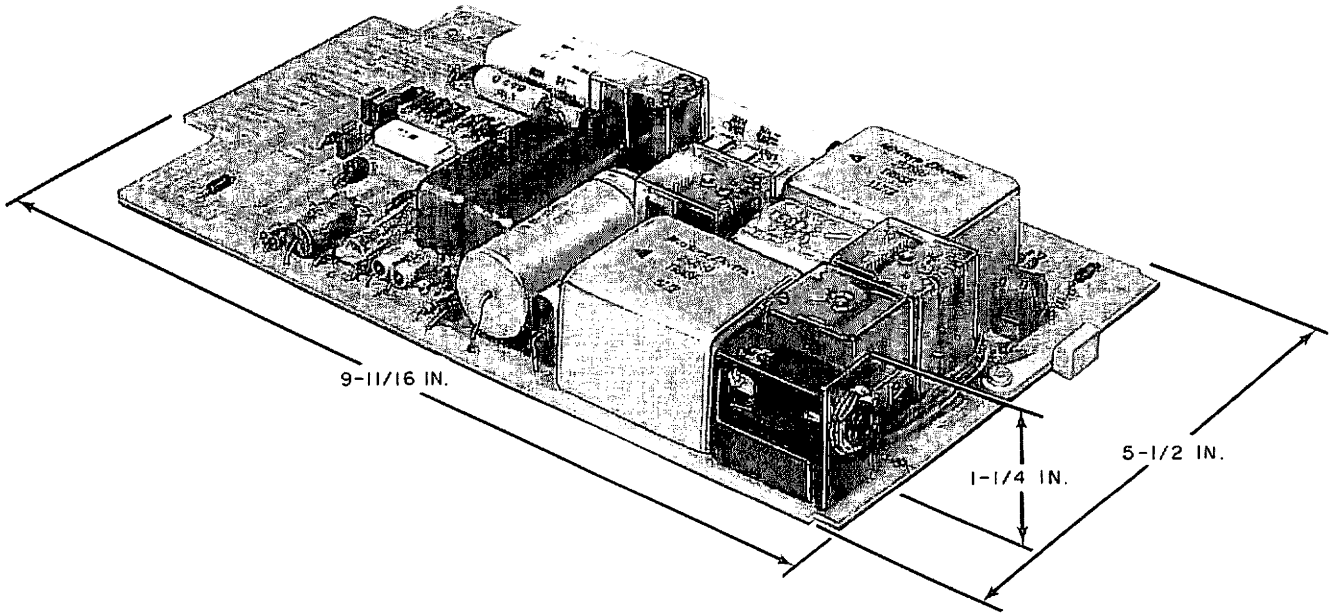


**Fig. 2—48B1 Data Unit**

- Termination of two switched network telephone lines. Each line (wire pair) is bridged by a 20-Hz ring detector. Each line pair may be switched to a line holding transformer.

- An attenuator in the line to be used as the transmit path.

- An amplifier and optional 4-dB slope equalizer in the line to be used as the receive path.

- Circuitry to flash key telephone lamps and energize a buzzer. The lamps and buzzer operation is in sequence with the 20-Hz ring cycle (usually 2 seconds on, 4 seconds off).

**2.09** The dimensions of the 48B1 data unit are 1-1/4 inches high, 5-1/2 inches wide, and 9-11/16 inches deep. The data unit weighs approximately 2 pounds.

### C. 48C1 Data Unit

**2.10** The 48C1 data unit, shown in Fig. 3, provides a (2-by-4) switching matrix to switch a dial backup line to one of four modems.

**2.11** The data unit is used with an appropriate 2-wire key telephone set and mounts in the 46C1 data mounting.

**2.12** The following functions are provided:

- A switchable dial backup service when used in conjunction with the 48B1 data unit mounted in the 46C1 data mounting and the 48D1 data unit connected to the appropriate Call Director.

- A 2-by-4 switching matrix for switching any one of four modems to either one of two dial backup channels.

- Direct interconnection to the 48D1 data unit via the attached cable and connector jack, J1.

**2.13** The dimensions of the 48C1 data unit are 1-1/4 inches high, 5-1/2 inches wide, and 9-11/16 inches deep. The data unit weighs approximately 1-3/4 pounds.

### D. 48D1 Data Unit

**2.14** The 48D1 data unit, shown in Fig. 4, is a Call Director interface adapter used to connect a Call Director to a 46B1 and/or a 46C1 data mounting.

**2.15** Direct interconnection of an 18-button Call Director (such as a 630DA-type or 2630DA-type) or a 30-button Call Director (such as a 631DA-type or 2631DA-type) to a multiple installation of a maximum of 23 modems is provided by connectors J1 through J5. The Call Director provides means of placing a particular modem in the dial backup mode, when dial backup is required, and/or in the case of alternate voice/data service, placing a particular 4-wire private line in the alternate voice mode.

**2.16** The 48D1 data unit (interface adapter) provides the following functions:

- Direct interconnection to three 46B1 data mountings containing a maximum of twenty-three 48A1 data units via connector plugs P1 to P3.

- Direct interconnection to a maximum of six 48C1 data units mounted in a 46C1 data mounting via connector plugs P4 to P9.

- Direct interconnection to the 46C1 data mounting via connector jack J6 when dial backup service is required.

- Concentrated interconnection to a maximum of 23 modems via connectors P11 and P12 in order to provide dial backup status indication to modems, such as data set 209A, that require such an indication.

**2.17** The dimensions of the 48D1 data unit are 7 inches high, 19 inches wide, and 13-1/4 inches deep. The data unit weighs approximately 24 pounds.

**2.18** The 48D1 data unit can be mounted in either a 19-inch or 23-inch cabinet.

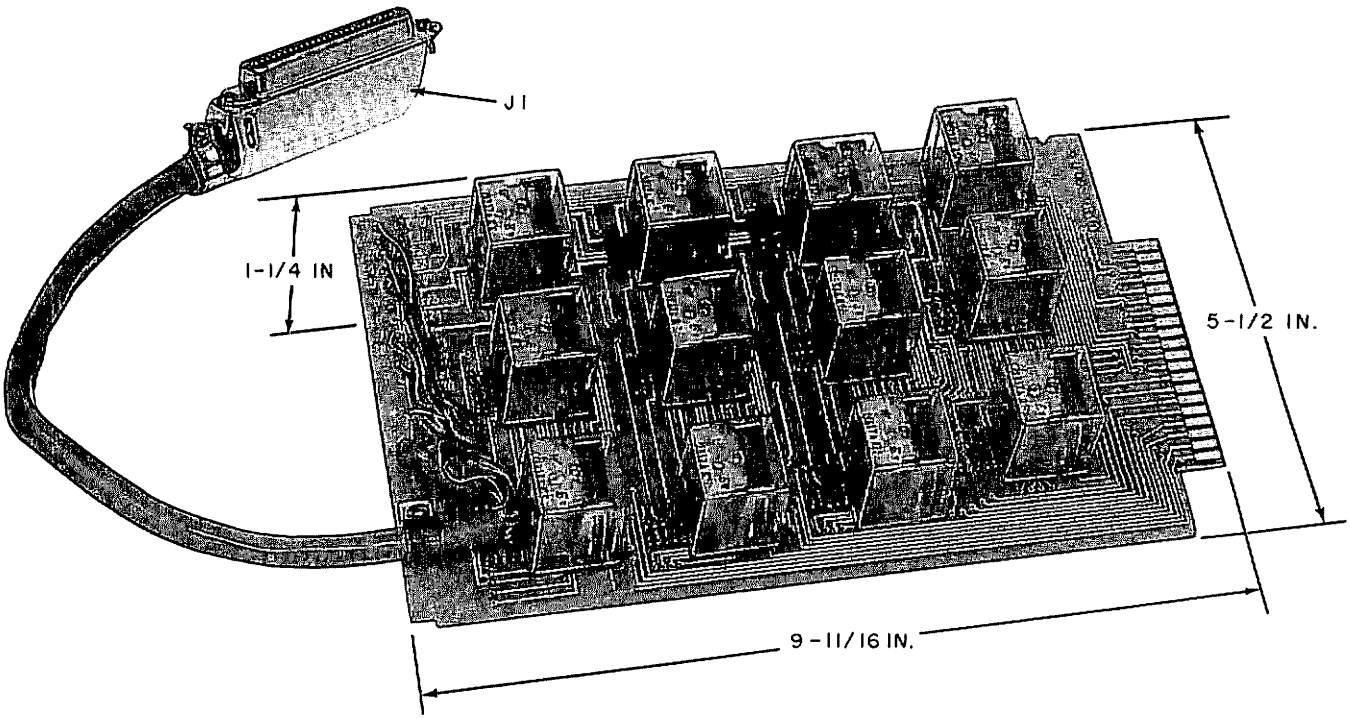


**Fig. 3—48C1 Data Unit**

| 3. REFERENCES | SECTION | TITLE |
|---|---|---|
| **3.01** More descriptive information on the 48-type data units may be found in the following Bell System Practice: | 598-082-101 | Data Auxiliary Set 829-Type—Supplementary Functions for Voiceband Private Line Channels (Alternate Voice and Dial Backup)—Description. |

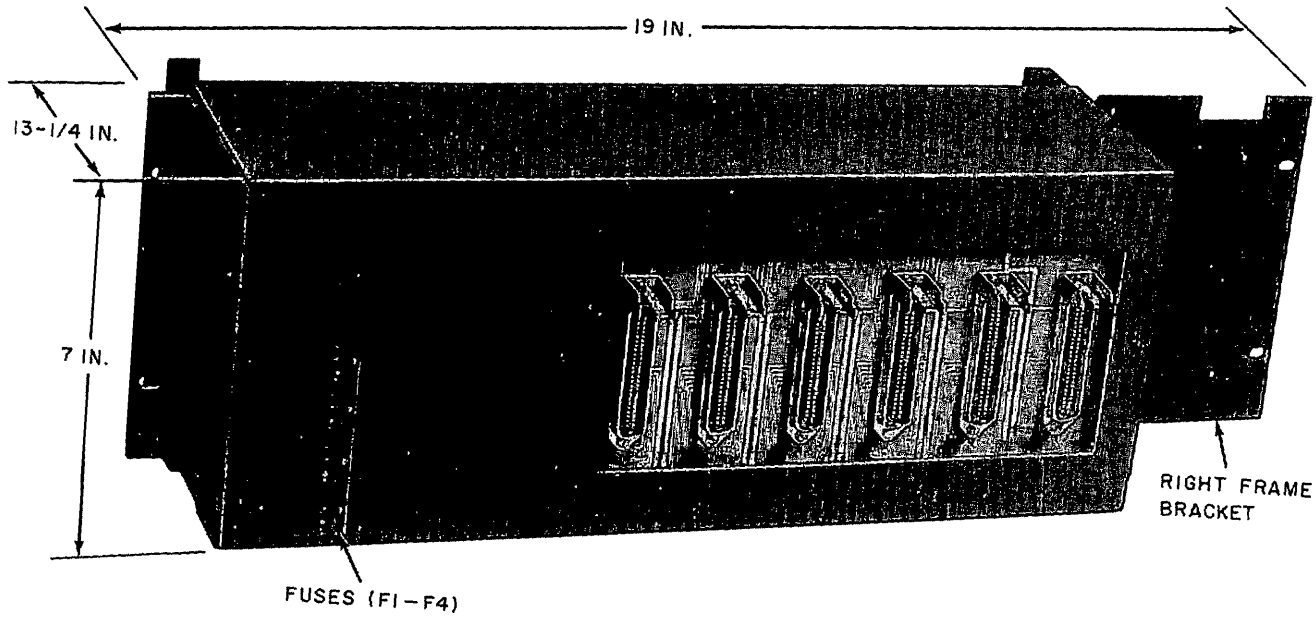


**Fig. 4—48D1 Data Unit**