

5A TYPE DATA MOUNTING IDENTIFICATION

1. GENERAL

1.01 This section contains a physical and functional description of the 5A Type Data Mounting shown in Fig. 1.

1.02 The 5A Type Data Mounting is designed for use in a multiple data set installation. The 5A mounting provides line control circuitry for up to six 4-wire switched data sets for DATA-PHONE* service. The 5A mounting provides for two AR196 circuit packs and six AR195 circuit packs.

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1.03 The 5A Type Data Mounting is initially intended for use with the Data Auxiliary Set 804L Type and the 4A Type Data Mounting.

2. PHYSICAL DESCRIPTION

2.01 For Identification of the 5A Type Data Mounting refer to Fig. 1. Table A lists the major components called out on Fig. 1.

2.02 The 5A Type Data Mounting is designed for mounting in a KS-20093 L1 cabinet. The 5A mounting is installed in the cabinet by the use of four No. 12-24 mounting screws (one screw in each corner of the mounting).

2.03 Figure 2 shows a typical multiple data set installation that uses a 5A1 Data Mounting. When the 5A is installed in the front of the KS-20093 L1 cabinet the use of KS-20130 L7-type Adapter Plates will be required to reduce the 25-inch frame to the required 23-inch mounting space. The adapter plates are shown in Fig. 2. Each 5A Data Mounting requires an 8-inch length of adapter plate. Table B summarizes the

Fig. 1 — 5A Type Data Mounting Equipped With AR195 and AR196 Circuit Packs

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Page 1

TABLE A

| KEY NUMBER | COMPONENT | DESIGNATION | NO. REQ |
|------------|---------------------|-------------|---------|
| 1 | Connector (J1-J4) | KS-16786 L4 | 4 |
| 2 | Jack (J11-J14) | 361C | 2 |
| 3 | Circuit Pack | AR195 | 6 |
| 4 | Circuit Pack | AR196 | 2 |
| 5 | Connector (J15-J20) | KS-19087 L1 | 6 |
| 6 | Connector (J5-J10) | KS-19087 L2 | 6 |

available lengths of the KS-20130 L7-type adapter plates.

2.04 The KS-20093 L1 Cabinet should be installed on the customer's premises in accordance with the Section entitled Data Sets, Multiple Installation Information (590-010-201).

2.05 The installation procedure contained in the Section entitled Data Auxiliary Set 804L Type, Installation and Connections (598-056-200) should be used when installing the 5A Data Mounting.

3. FUNCTIONAL DESCRIPTION

3.01 The 5A Type Data Mounting provides control of up to six 4-wire switched data sets. The 5A contains six 4-wire line control units i.e., AR195 circuit packs and two transfer relay units i.e., AR196 circuit packs.

3.02 The AR195 circuit pack provides:

- Telephone line supervision control
- Automatic answering
- Talk-to-data transfer
- Data-to-talk transfer
- Transfer to and from the test mode.

One AR195 circuit pack is required for each data set associated with the 5A Data Mounting.

3.03 The AR196 circuit pack is a relay transfer unit. Each AR196 provides for transferring three lines to either of two telephone units.

3.04 Figure 3 is a block diagram of the 5A Data Mounting. The diagram shows the units that make up a 5A mounting and the relationship of these units.

3.05 Each line control unit of the 5A provides a 25-pin interface connector (designated J5 to J10) to the data set. A 15-pin connector (designated J15 to J20) is provided to associate the data terminal with an applicable 4-wire automatic calling unit. A 4-wire telephone line with A lead control is connected by J2 to each line control unit.

3.06 The DATA-PHONE control leads connect through the AR196 circuit packs to either of two telephone positions through a 4A1 Data Mounting. The lamp power, battery for the AR196 relays, and associated service telephone lines are provided by connector J1.

TABLE B

| KS-20130 LIST | LENGTH IN INCHES |
|---------------|------------------|
| 7A | 68 |
| 7B | 30 |
| 7C | 18 |
| 7D | 12 |
| 7E | 10 |
| 7F | 9 |
| 7G | 8 |
| 7H | 6 |
| 7J | 3 |

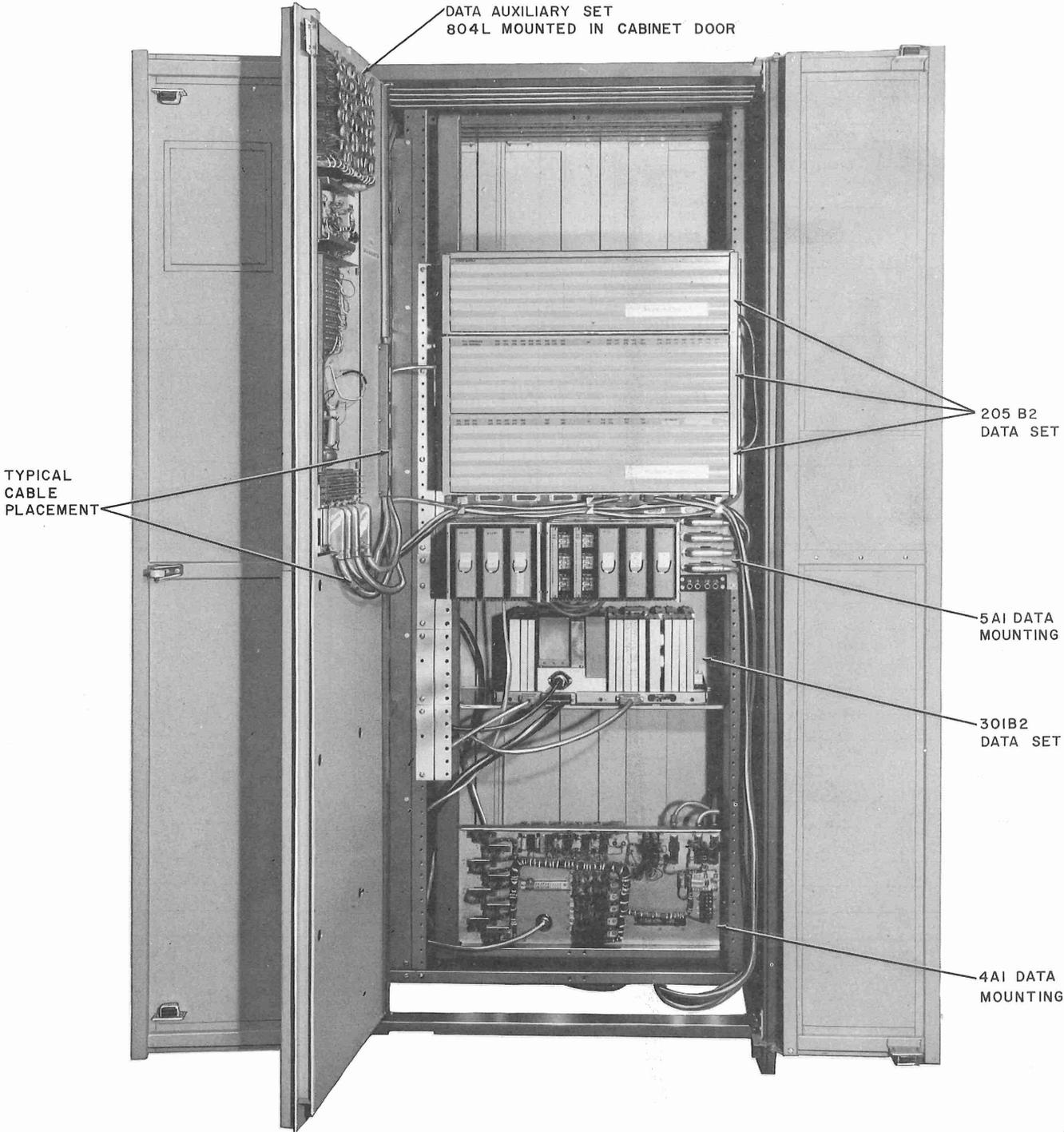


Fig. 2 — Typical Multiple Data Set Installation Showing the 5A1 Data Mounting in a KS-20093 L1 Cabinet Using KS-20130 L7-Type Adapter Plates

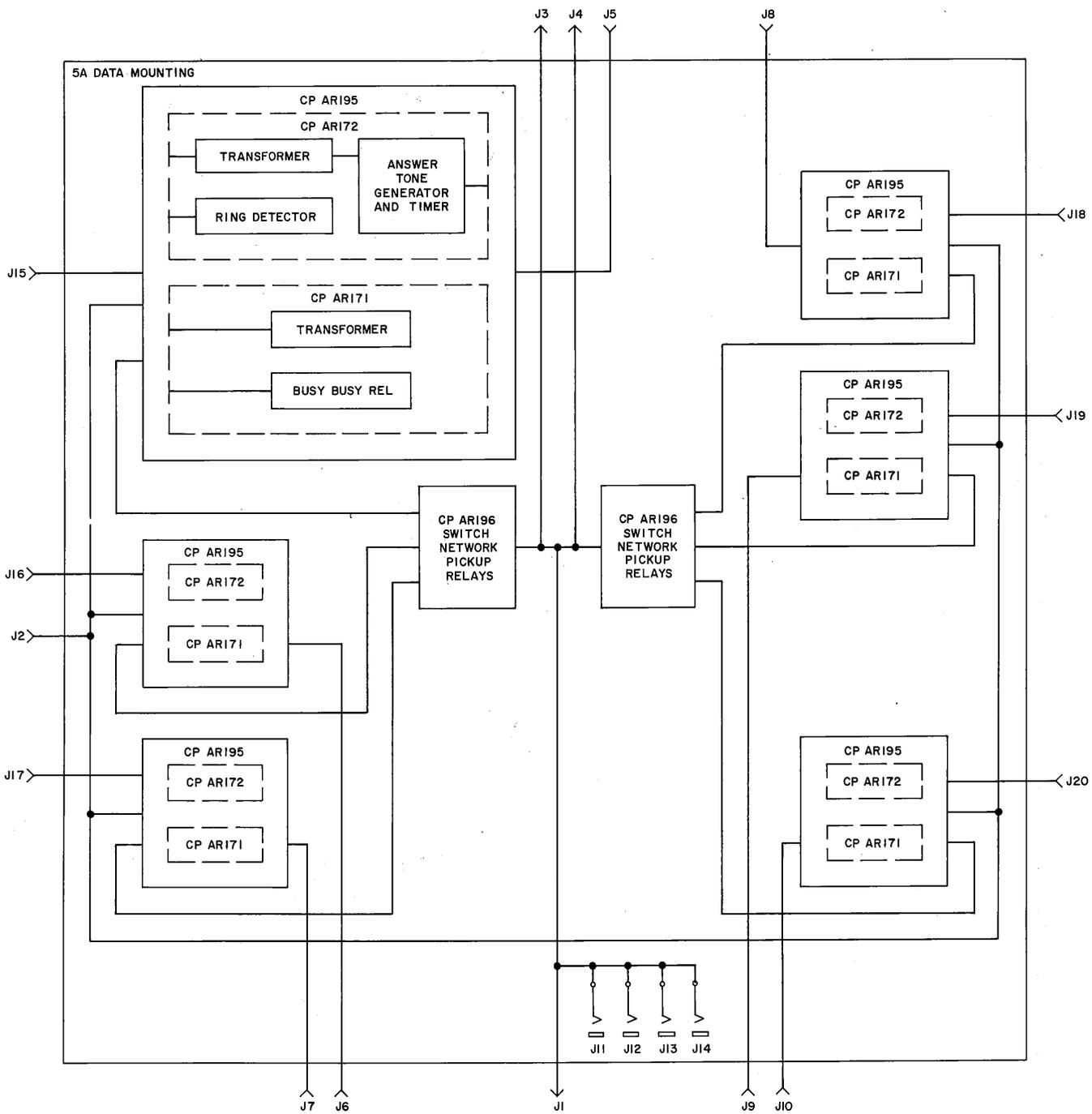


Fig. 3 — 5A Type Data Mounting, Block Diagram

3.07 The selection leads for associating a data terminal with a particular telephone unit are provided by connectors J3 and J4. These leads control the operation of the AR196 circuit pack relays. Figure 4 shows the connections that

are made to the 5A Type Data Mounting.

3.08 Table C lists the interface leads supplied by the AR195 to the data set. The function of each lead is given by the table.

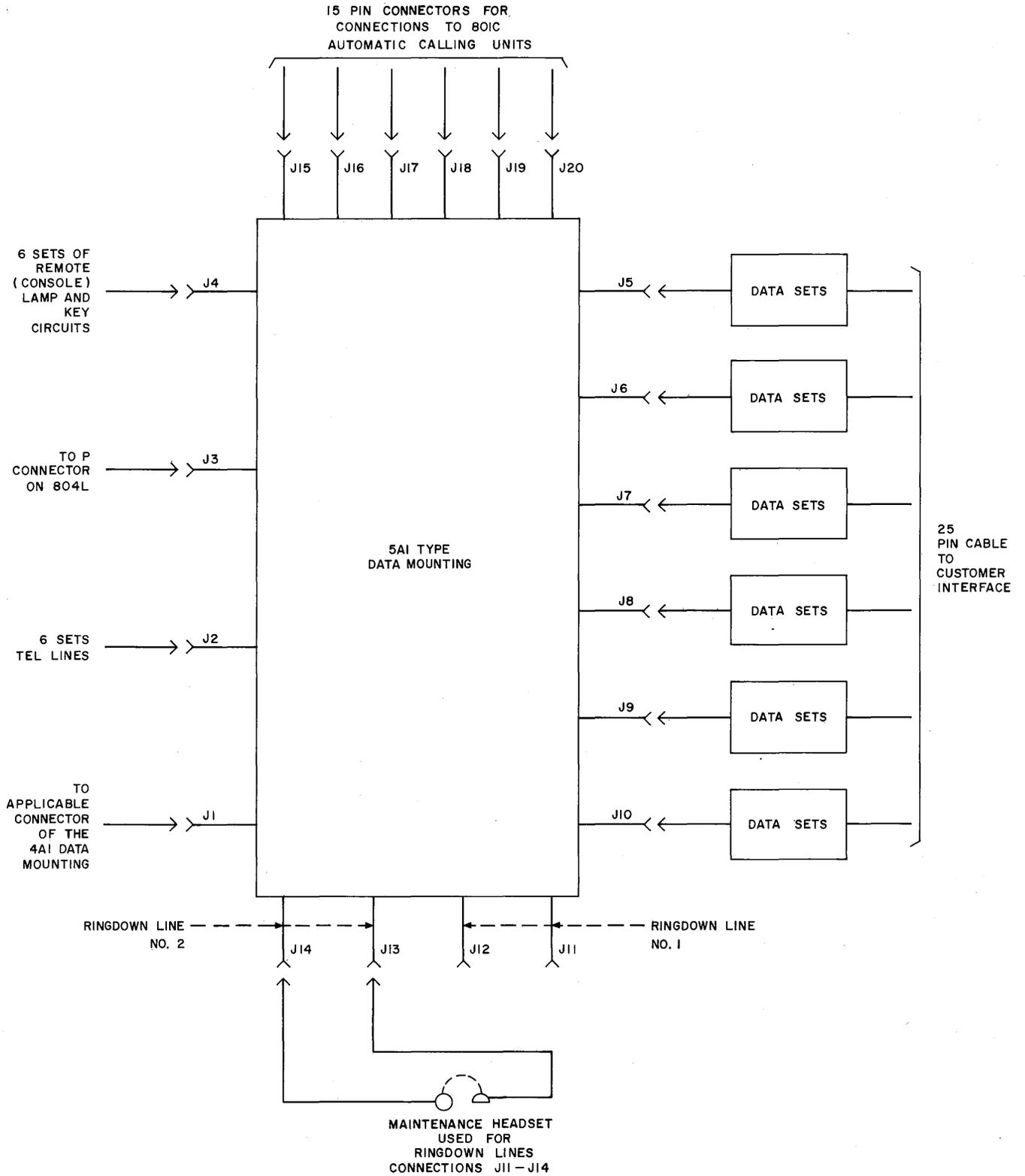


Fig. 4 — 5A Type Data Mounting, Connections

TABLE C
DATA SET INTERFACE

| INTERFACE CONNECTOR | NAME | FUNCTION |
|---------------------|------------------|---|
| 1 | Reserved | |
| 2 | -P | -18 volts at 100 ma from data set. |
| 3 | Test } } | With the W option, closure causes AR195 to transfer to test mode, open releases test mode. With the X option, this lead does nothing. |
| 4 | | |
| 5 | LSB1 | Opens from ground when line is cut through to data set. |
| 6 | Reserved | |
| 7 | DST1 } DSR1 } | Transmit pair, dry, 600 ohms, cut through when line is transferred to data set. |
| 8 | | |
| 9 | DST } DSR } | Receive pair, dry, 600 ohms, cut through when line is transferred to data set. |
| 10 | | |
| 11 | TM1 | Talk mode indication. Closure to GRD Y or +P Z when line is transferred to telephone set. |
| 12 | TEKB | 100 msec closure to -P when test indication is released. (For 202D release of TE relay in data set.) |
| 13 | TEKA | Closure to GRD Y or +B Z when test condition is initiated. Must have same option as RI. |
| 14 | Reserved | |
| 15 | LSM | Make contact to GRD Y or +B Z when line is cut through to data set. Same option as LSB. |
| 16 | GRD | Power ground. |
| 17 | LSB | Break contact to GRD Y or +B Z when line is cut through to data set. Same option as LSM. <i>Note:</i> Interface connectors 15 and 17 are same transfer contact with option on swinger. |
| 18 | CMI | Make contact to ground on control relay. Closed during answer-tone transmission and data condition. |

TABLE C (Cont)

| INTERFACE CONNECTOR | NAME | FUNCTION |
|---------------------|----------|--|
| 19 | DTRY | Data terminal ready from customer. Should be EIA interface signal. Condition of this lead is ignored in the test condition and automatic answering is enabled internal to AR195. |
| 20 | +P | +18 volts at 100 ma from data set. |
| 21 | DSRY | Control relay contact closure. |
| 22 | DSRC | Same condition as 18. |
| 23 | Reserved | |
| 24 | RI | Ring indicator closure to GRD Y or +B Z. Inhibited in test condition by AR195. Must be same option as TEKA. |
| 25 | Reserved | |

3.09 Eight leads are required between the telephone unit and the AR195 for DATA-PHONE control. These leads are switched through the AR196 circuit packs. Table D lists the control leads and functions of these leads.

4. REFERENCES

4.01 For more detailed information on the 4A Type Data Mounting refer to SD & CD-1D112-01.

TABLE D
TELEPHONE CONTROL INTERFACE

| DESIGNATION | FUNCTION |
|------------------|---|
| XMTT } XMTR } | Wet, 600 ohms talking transmit pair. |
| RECT } RECR } | Dry, 150 ohms talking receive pair. |
| DL | Data lamp indicator to telephone unit. This lead is a contact closure to ground when the set is in the data mode. |
| TK | The TALK key grounds this lead to transfer the line to the talk condition. |
| DK | Ground closure on this lead transfers the line to the data set for data transmission. |
| BR | Ground on this lead initiates the BUSY-TEST condition. The TEST key on the telephone unit is used to initiate this condition. |