

DATA AUXILIARY SET 811F-L1 INSTALLATION AND CONNECTION

1. GENERAL

1.01 This section contains information concerning the installation and connection of Data Auxiliary Set 811F-L1.

1.02 Data Auxiliary Set 811F-L1 (Fig. 1) is a 23-inch wide, rack-mounted set which requires 6 inches of vertical mounting space. It is approximately 9 inches deep and weighs 23 pounds. This set is designed to operate in a temperature range of +30 to +122°F with a relative humidity between 20 and 95 percent.

2. INSTALLATION

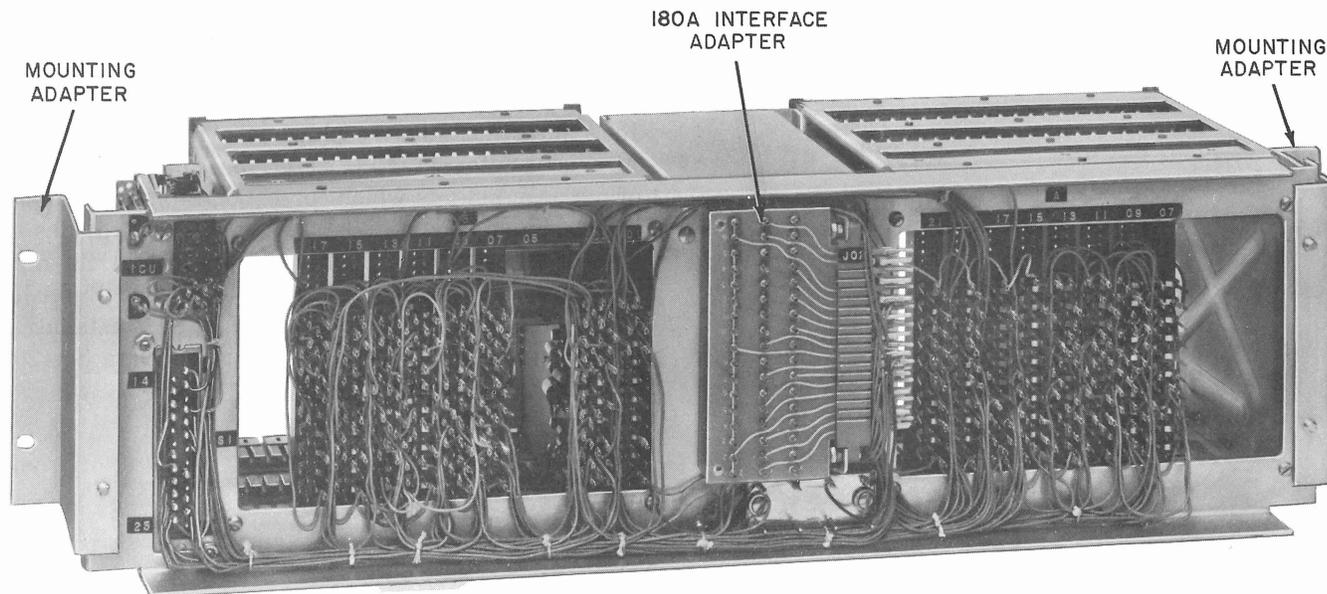
2.01 Data Auxiliary Set 811F-L1 uses rack-mounting adapters which are held in place by four screws. When working space is limited, a

screw-holder type screwdriver will be required to start the mounting screws.

2.02 Data Auxiliary Set 811F-L1 obtains its power from both Data Sets 207. The current drains are as follows:

- Data Set 207 No. 1—500ma (+18v), 150ma (-18v)
- Data Set 207 No. 2—500ma (+18v), 130ma (-18v)

The data auxiliary set should be mounted close enough to the data set so that the voltage drop will not exceed 0.4 volts. This requirement will be met if 18-gauge wire is used for leads -18A, -18B, +18A, +18B, PGA, and PGB, and if the 811F-L1 is within 100 feet of its associated Data



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Fig. 1—Data Auxiliary Set 811F-L1, Rear View

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Set 207-type. If 22-gauge wire is used, the maximum permissible distance is 30 feet.



Data Auxiliary Set 811F-L1 does not have lightning protection; therefore, it should be mounted in the same building with the associated data sets and security equipment, or external lightning protection should be provided.

3. CONNECTION

3.01 Figure 2 shows the interconnection of leads between Data Auxiliary Set 811F-L1 and Data Sets 207-type. This arrangement provides a 4-wire regenerative repeater with keychange capability. The Data Set 207 on the right will interface with all external control circuits.

3.02 Refer to the section entitled Data Set 207-Type, Transmitter-Receiver, Installation (592-020-200) for information pertaining to Data Set 207-type interface leads.

3.03 The following codes of Data Set 207-type regenerators require modification to operate with Data Auxiliary Set 811F-L1.

- (a) 207A4
- (b) 207B4
- (c) 207C4

3.04 To use these codes of Data Set 207-type with the 811F-L1, the following three wires must be added to both Data Sets 207-type:

- (a) From terminal 4 of connector C21 to terminal 9 of connector C17

- (b) From terminal 10 of connector C17 to terminal 24 of the interface connector A1

Note: Connector A1 referred to here is on the Data Set 207 and is the upper connector into which the 180A interface adapter is plugged. Do not confuse with card nest connector A01.

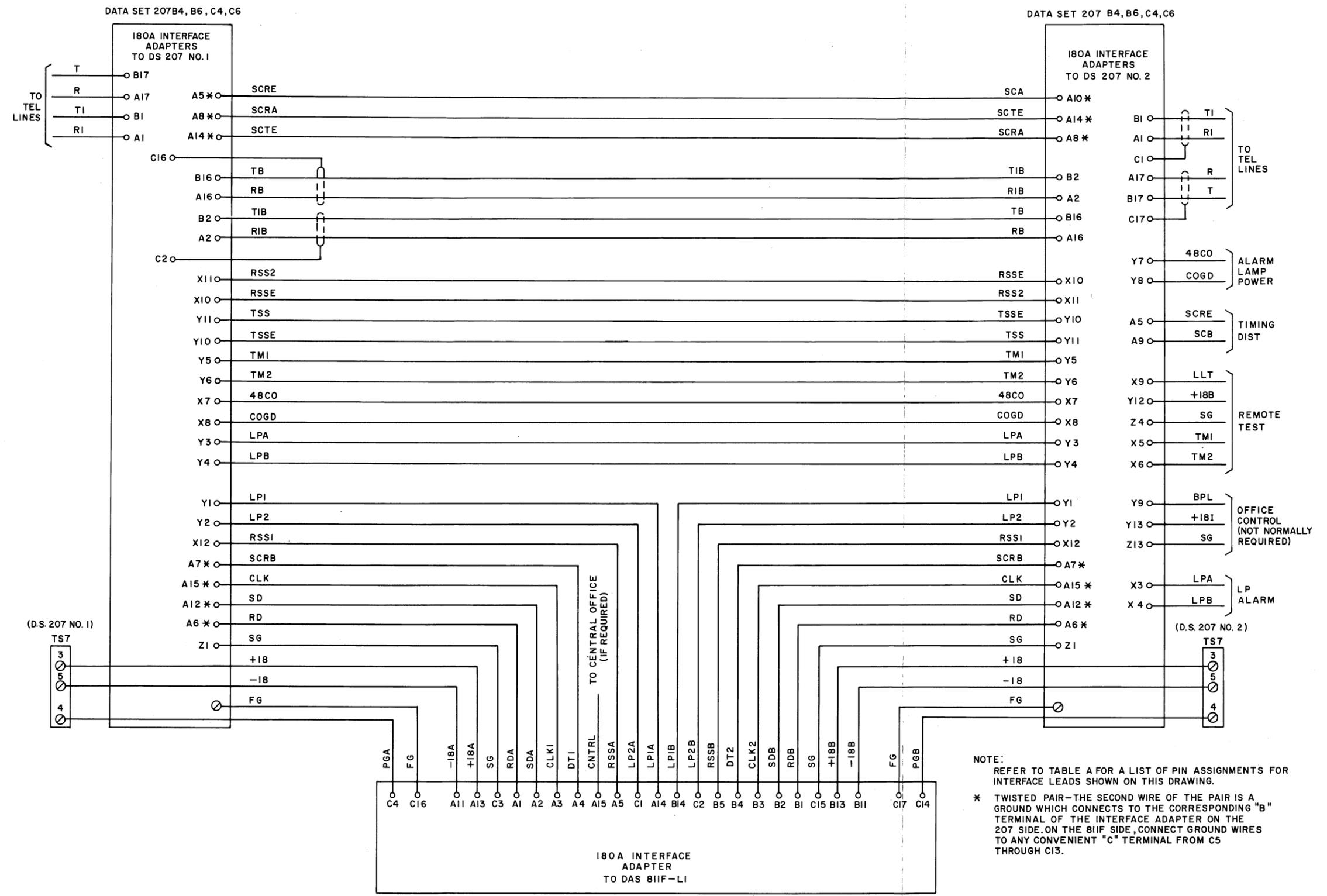
- (c) From terminal 25 of interface connector A1 to terminal 17 (ground) of A1

3.05 Data Auxiliary Set 811F-L1 is provided with an option which is used to compensate for a one-half bit delay in the data from the customer equipment. Card AR 424 in slot B03 is provided with strapping pins.

- (a) When the data from the customer is delayed, strap pins A2 to A3, B2 to B3, C2 to C3 and D2 to D3.

- (b) When the data is not delayed, strap pins A1 to A2, B1 to B2, C1 to C2, and D1 to D2.

3.06 Electrical connections between the data auxiliary set and the two data sets are made on 180A-type interface adapter boards (Fig. 3). The 180A interface adapter plugs into the rear of Data Auxiliary Set 811F-L1. Refer to Table A for a list of pin assignments which correspond to the interface leads shown on Fig. 2. This table provides a reference for all leads between the two Data Sets 207 and the Data Auxiliary Set 811F-L1. Refer to the section entitled Data Set 207-Type, Installation (592-020-200) for connections between Data Set 207 No. 2 and the central office.



NOTE:
 REFER TO TABLE A FOR A LIST OF PIN ASSIGNMENTS FOR INTERFACE LEADS SHOWN ON THIS DRAWING.
 * TWISTED PAIR-THE SECOND WIRE OF THE PAIR IS A GROUND WHICH CONNECTS TO THE CORRESPONDING "B" TERMINAL OF THE INTERFACE ADAPTER ON THE 207 SIDE. ON THE 8IIF SIDE, CONNECT GROUND WIRES TO ANY CONVENIENT "C" TERMINAL FROM C5 THROUGH C13.

Fig. 2—Connections for a Regenerative Repeater with Key Change Capability

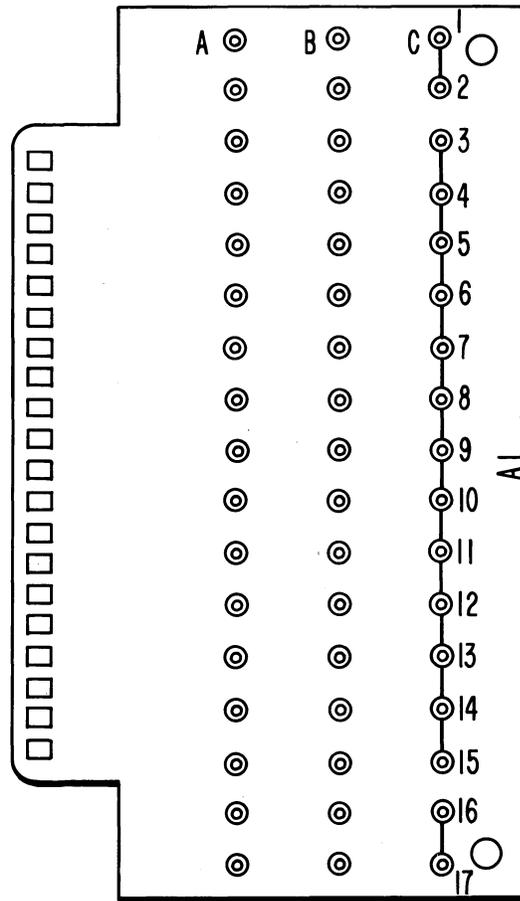


Fig. 3—180A-Type Interface Adapter

TABLE A
INTERCONNECTION OF INTERFACE LEADS

FROM					TO				
LEADS	MNEMONIC SYMBOL	207 NO. 1	207 NO. 2	811F	LEADS	MNEMONIC SYMBOL	207 NO. 1	207 NO. 2	811F
Serial Clock Receive A	SCRA	A8			Serial Clock Transmit External	SCTE		A14	
Serial Clock Transmit External	SCTE	A14			Serial Clock Receive A	SCRA		A8	
Bypass Receive Telephone Pair	TB RB	B16 A16			Bypass Transmit Telephone Pair	T1B R1B		B2 A2	
Bypass Transmit Telephone Pair	T1B R1B	B2 A2			Bypass Receive Telephone Pair	TB RB		B16 A16	
Serial Clock Receive External	SCRE	A5			Serial Clock A	SCA		A10	
Receive Signal Sensor 2	RSS2	X11			Receive Signal Sensor External	RSSE		X10	
Receive Signal Sensor External	RSSE	X10			Receive Signal Sensor 2	RSS2		X11	
Transmit Signal Sensor	TSS	Y11			Transmit Signal Sensor External	TSSE		Y10	
Transmit Signal Sensor External	TSSE	Y10			Transmit Signal Sensor	TSS		Y11	
Test Mode 1	TM1	Y5			Test Mode 1	TM1		Y5	
Test Mode 2	TM2	Y6			Test Mode 2	TM2		Y6	
48 VDC Central Office	48CO	X7			48 VDC Central Office	48CO		X7	
Central Office Ground	COGD	X8			Central Office Ground	COGD		X8	
Loss of Power A	LPA	Y3			Loss of Power A	LPA		Y3	
Loss of Power B	LPB	Y4			Loss of Power B	LPB		Y4	
Loss of Power 1	LP1	Y1			Loss of Power 1A	LP1A			A14
Loss of Power 2	LP2	Y2			Loss of Power 2A	LP2A			C1
Loss of Power 1B	LP1B			B14	Loss of Power 1	LP1		Y1	
Loss of Power 2B	LP2B			C2	Loss of Power 2	LP2		Y2	
Receive Signal Sensor 1	RSS1	X12			Receive Signal Sensor A	RSSA			A5
Serial Clock Receive B	SCRB	A7			Dibit Timing 1	DT1			A4
Clock	CLK	A15			Clock 1	CLK1			A3
Send Data	SD	A12			Send Data A	SDA			A2
Received Data	RD	A6			Received Data A	RDA			A1
Signal Ground	SG	Z1			Signal Ground	SG			C3
Dibit Timing 2	DT2			B4	Serial Clock Receive B	SCRB		A7	
Clock 2	CLK2			B3	Clock	CLK		A15	
Send Data B	SDB			B2	Send Data	SD		A12	
Received Data B	RDB			B1	Received Data	RD		A6	
Signal Ground	SG			C15	Signal Ground	SG		Z1	
Receive Telephone Pair	T R		B17 A17		CENTRAL OFFICE				
Transmit Telephone Pair	T1 R1		B1 A1						
Control	CNTRL			A15					

Note: Refer to Figure 2 for power connections, power supply grounds, and frame grounds