

DATA SET 205B-TYPE TRANSMITTER-RECEIVER INSTALLATION INSTRUCTIONS

1. GENERAL

1.01 This section contains instruction for connecting and installing the Data Set 205B. This section does not include specific installation methods or operating information for the associated business machine and related equipment.

1.02 This section is reissued to include information for the Data Set 205B2 and the multiple connections available.

1.03 The Data Set 205B is a 23-inch rack mounted set that requires 12 inches of vertical rack mounting space by 8 inches deep. When working space is limited, a screwdriver type screwdriver will be required to start the mounting screws.

Caution: *The weight of the Data Set 205B is 31 pounds.*

2. INSTALLATION

2.01 Data Set 205B is designed to be operated at ambient temperatures between +50 and +120°F with relative humidity between 20 and 95 percent.

2.02 Install Data Set 205B in the desired location using the necessary hardware and following appropriate codes and practices applicable to this type of equipment. Connect the business machine plug (a 25-pin KS-19087, L2 or equivalent) to CUSTOMER jack (J61). For a 205B1; plug the connector cord from the 4B1 Data Unit into either the SWITCHED CARRIER jack (P1) or CONTINUOUS CARRIER jack (P2), as specified on the service order. For a 205B2; Turn the rotary switch to the position (SC, SCA, CC, or CCA) as specified on the service order. The LINE-LOCAL TEST key must be in the LINE position and shall be locked in this position during data transmission.

3. CONNECTIONS

3.01 205B1: Table A gives the options available to fill the requirements of the service order. Table B gives designations and pin positions for connections between TS1 terminal strip (mounted on the 4B1 Data Unit) which terminates the telephone line, through the 4B1 Data Unit, to the 4B1 connector plug.

3.02 205B2: Table C gives the designation and pin numbers for the CONTROL connector.

3.03 Table D gives the pin position and lead designation for the CUSTOMER interface connector.

3.04 When required, the Data Set 205B can be interconnected with a second Data Set 205B to make a regenerative repeater. Interconnections between the two data sets are established through CUSTOMER interface connections as shown in Fig. 1.

3.05 During regeneration, the frequency of the receiver clock signal appearing on SCR is 1200 Hz (receiver dibit clock). Receive Data is connected to the Send Data input of the transmitters. Serial Clock Receive (SCR) is connected to the Serial Clock Transmit External (SCTE) of the transmitter to keep the transmitter clock in phase with the receiver clock. This maintains the identity of the A and B data bits and guarantees that the repeated line signal is identical to the received line signal at a regenerative repeater.

3.06 Multiple connections for installing Data Set 205B2 are listed in Table E and illustrated in Fig. 2.

3.07 Test the Data Set 205B as prescribed in Data Set 205B-Type Transmitter-Receiver Test Procedures, (Section 592-017-501).

TABLE A
DATA SET 205 OPTIONS

OPTIONS	LEVEL (DBM)	LOSS (DB)	STRAP TERMINALS	CARD REFERENCE
Transmitter Timing, Internal Transmitter Timing; from Customer			3 to 4* No Strap	019
No customer provision for Remote Test Customer provides Remote Test			1 to 2 No Strap*	019
Transmitter Output Level	0 -3 -6 -9		1 to 4* 1 to 3 1 to 2 No Strap	044
Receiver Input Level	-23 to +5 -28 to 0 -33 to -5 -38 to -10	15 10 5 0	4 to 5* 3 to 5 2 to 5 1 to 5	017

*Factory Wired

TABLE B
**205B1: CONNECTIONS BETWEEN TELEPHONE LINE AND
4B1 DATA UNIT CONNECTION PLUG**

TELEPHONE LINE	DESIGNATION IN 4B1 DATA UNIT	PIN ON 4B1 CONNECTOR PLUG
T	Receive Line (DT)	9
R	Receive Line (DR)	10
T1	Transmit Line (DT1)	7
R1	Transmit Line (DR1)	8
	Signal Ground (SG)	23
	Remote Test (RMT'1)	11
	Interlock (IT)	25
		1-14 (strap)
		2-15 (strap)
		3-16 (strap)
		4-17 (strap)
		5-18 (strap)
		6-19 (strap)
		12-13 (strap)
		20-21 (strap)
		22-24 (strap)

TABLE C
205B2: CONTROL CONNECTOR

PIN POSITION	DESIGNATION	FUNCTION
1	K3	Provides closure to ground in remote test mode.
2	-18	-18 vdc power to Data Auxiliary Set 804M-type.
3	MB1	Connected together when data set is in either local or remote test.
4	MB2	
5		Strapped
6		
7	DT1	Transmit Line pair
8	DR1	
9	DT	Receive Line pair
10	DR	
13	B	Ground applied to this lead places data set in remote test mode (except when line and test key is in LOCAL TEST position).
15	LSM	Enable transmitter on-off circuits. When data set is in auto answer mode, the transmitter cannot be turned on unless this lead is grounded. Operating the line and test key to LOCAL TEST position disables this lead.
16	SG	Signal Ground. Used as reference for all data, clock, control, and power leads.
19	DTRY	Except for a protective resistor, this is the customer's Data Terminal Ready signal lead.
20	+18	+18 vdc power to Data Auxiliary Set 804M-type.
21		Strapped
22		
23	FG	Frame Ground. Connected to data set frame and ac power third wire ground. FG is not connected to SG unless data set terminals E1 and E2 are strapped.
24	RI'	Ring Indicator. Accepts a ring indication (ground) from Data Auxiliary Set 804M-type and provides an EIA interface signal to pin 22 on CUSTOMER connector.

TABLE D
CONNECTIONS FOR CUSTOMER INTERFACE LEADS

PIN POSITION	DESIGNATION
1	Frame Ground (FG)
2	Send Data (SD)
3	Receive Data (RD)
4	Request-to-Send (RS)
5	Clear-to-Send (CS)
6	Data Set Ready (DSR)
7	Signal Ground (SG)
8	Carrier ON-OFF (COO)
9	+18I (681-ohm Series Resistance)
10	-18I (681-ohm Series Resistance)
13	Speed Select A — Transmit (SAT)
14	Speed Select B — Transmit (SBT)
15	Serial Clock Transmit (SCT)
16 (For test purposes only)	Dibit Clock Transmit (DTI)
17	Serial Clock Receive (SCR)
18	Speed Select A — Receive (SAR)
20	Data Terminal Ready (DTR) (Data Set 205B2 only)
22	Ring Indicator (RI) (Data Set 205B2 only)
23	Speed Select B — Receive (SBR)
24	Serial Clock Transmit External (SCTE)
25	Remote Test (RMT)

TABLE E
MULTIPLE CONNECTIONS AVAILABLE
FOR INSTALLING DATA SET 205B2

TYPE OF INSTALLATION	SERVICE THROUGH CONTROL CONNECTOR	
	4-WIRE SWITCHED SERVICE	PRIVATE LINE SERVICE
Station	M25A cord connects to Data Auxiliary Set 804M-type arranged for Y and W options	N/A
Multiple Data Set	M25A cord connects to one of six connectors in a 5A1 Data Mounting (*) (Circuit Pack AR 195 arranged for Y and W options)	M25A cord connects to one of six connectors in a 6A1 Data Mounting (*)

*The connector must match the CUSTOMER connector selected on a CUSTOMER Interface Connector mounting plate KS-20130, L1A.

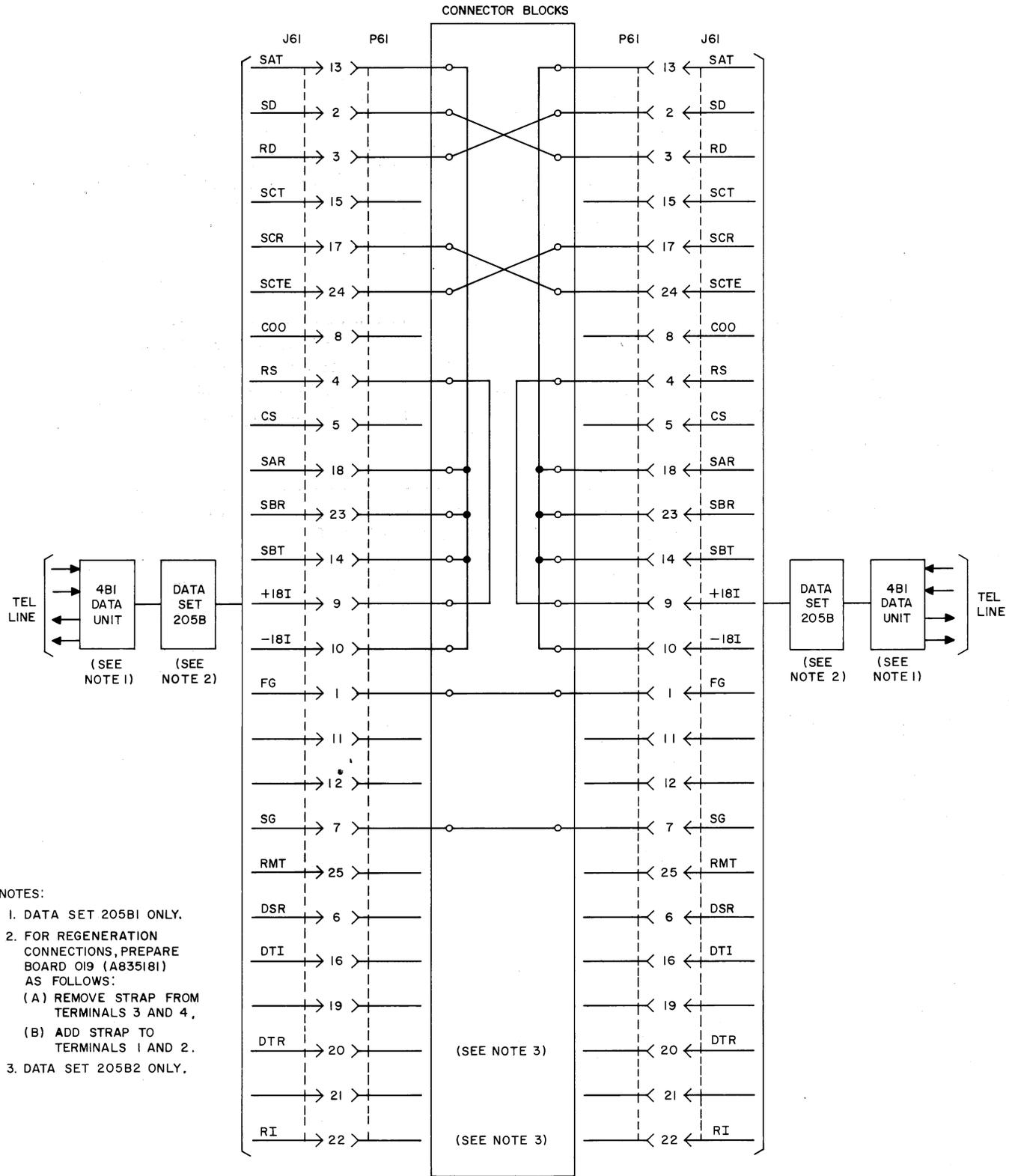
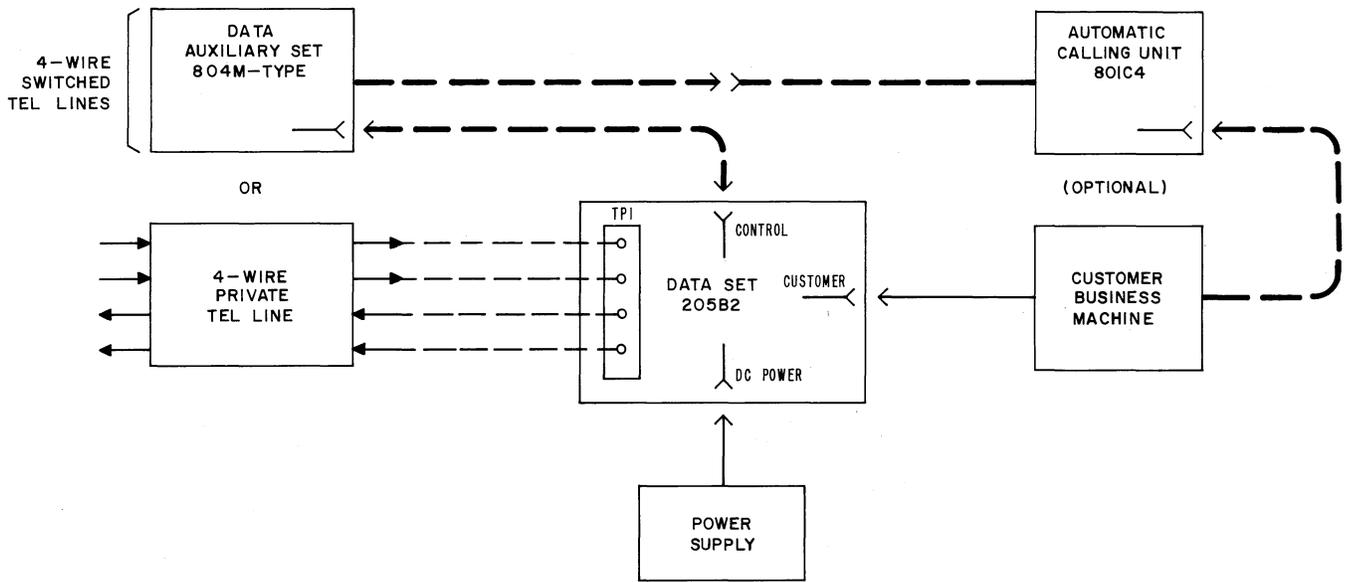
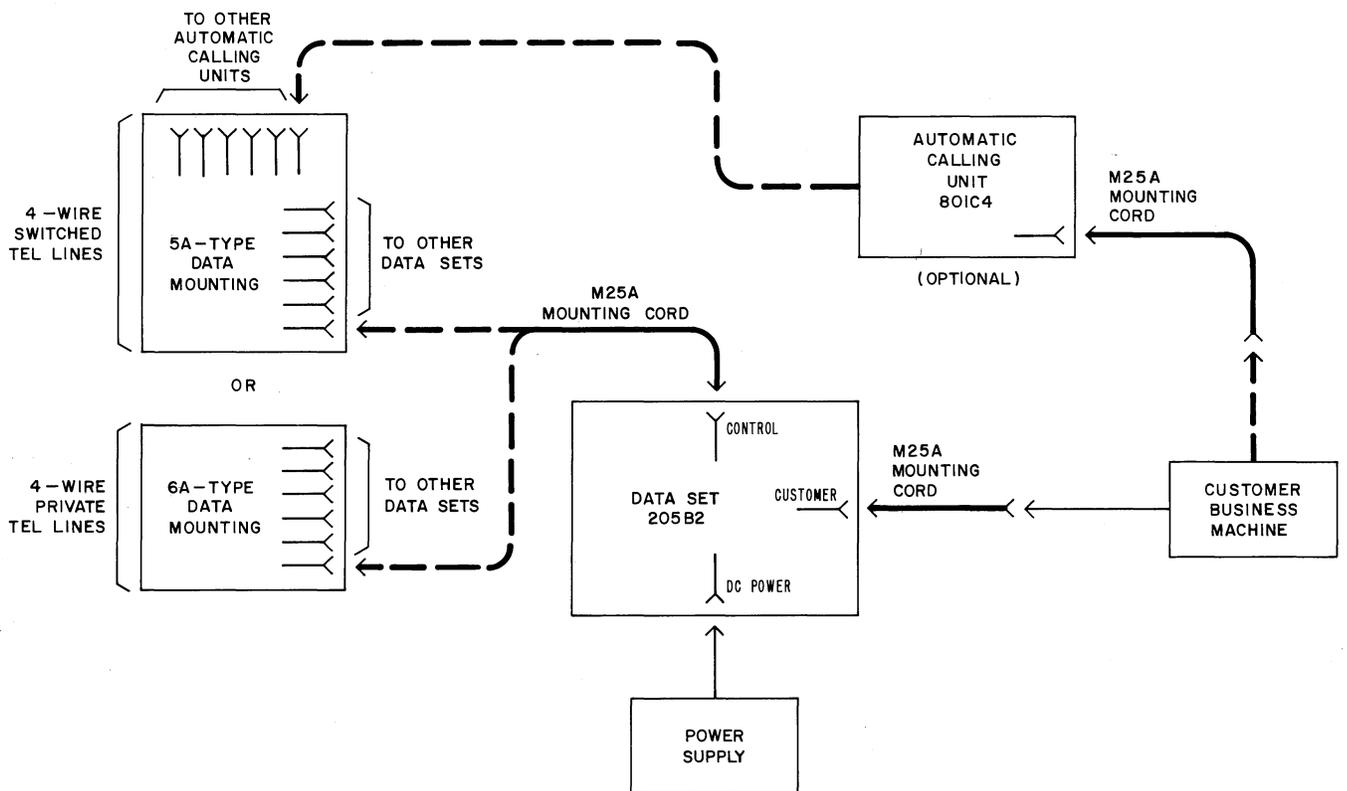


Fig. 1—Data Set 205B-Type, Regeneration Connections



STATION INSTALLATION CONNECTIONS FOR DATA SET 205B-TYPE



MULTIPLE DATA SET INSTALLATION CONNECTIONS FOR DATA SET 205B-TYPE

Fig. 2—Various Connections for Installing Data Set 205B2