DATA SET 205C2

TRANSMITTER-RECEIVER

INSTALLATION INSTRUCTIONS

1. GENERAL

1.01 This section contains instructions for connecting and installing the Data Set 205C2. 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 expand the coverage.◀

1.03 The Data Set 205C2 is a 23-inch wide rack mounted set that requires 18-inches of vertical mounting space by 8-inches deep. When working space is limited, a screwholder type screwdriver will be required to start the mounting screws.

1.04 The Data Set 205C-type replaces Data Set 205A-type which is rated manufacture discontinued. The 205C can directly replace the 205A providing interface pin 11 is connected either to a negative voltage or ground.

2. INSTALLATION

2.01 Data Set 205C2 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 205C2 in the desired location using the necessary hardware and following appropriate codes and practices applicable to this type of equipment.

Caution: The weight of the Data Set 205C2 is 56 pounds.

2.03 ▶Connect the 25-pin business machine plug to CUSTOMER B jack (J61) on the data set. Connect the 15-pin ancillary equipment plug (if used) to CUSTOMER A jack (J62) on the data set. Plug the connector cord from the 4A1 Data Unit into either the 2-WIRE or 4-WIRE connector, as specified on the service order.◀

Caution: A hazardous voltage may be present if the CUSTOMER A plug is removed and a strap has not been placed between E1 and E2. To avoid the possibility of a shock, disconnect the ac power cord of the data set and place the strap between E1 and E2 before removing the CUSTOMER A plug. When CUSTOMER A plug is reconnected, remove strap before connecting the ac power cord of the data set.

2.04 The LINE-TEST key must be locked in LINE position during data transmission.

2.05 ▶Plug the telephone line facility connector cord into the TEL LINE interface connector on the 4A1 Data Unit.

3. CONNECTIONS

3.01 Table A provides the terminal strap information necessary to fill the service order option requirements. Table B provides the lead designations and pin positions used between the TEL LINE connector, used to interface the telephone line facility through the 4A1 Data Unit, and the plug on the 4A1 connector cord.

3.02 Table C provides the lead designation and pin position used with both CUSTOMER A and CUSTOMER B interface connectors.◀

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TABLE A

OPTIONS AVAILABLE FOR 4-WIRE OPERATION

OPTIONS	LEVEL (DBM)	LOSS (DB)	STRAP TERMINALS	BOARD REFERENCE
(1) Internal XMTR Timing (2) Customer Supplied XMTR Timing			3 to 4* No Strap	019
(1) Carrier Controlled by RS Lead (2) Continuous Carrier			No Strap* 1 to 2	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 Wiring

TABLE B

CONNECTIONS INTERFACED BY 4A1 DATA UNIT

TEL LINE	4A1 DATA UNIT DESIGNATION	CONNECTOR PIN
T-9 R-10 T1-7 R1-8	Receive Line (T) — Slate-White Receive Line (R) — White-Slate Transmit Line (T1) — Brown-White Transmit Line (R1) — White-Brown Signal Ground — Green-Black Interlock — Red-Orange	9 10 7 8 23 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

DESIGNATION OF FUNCTIONS THROUGH CUSTOMER CONNECTORS

	PIN POSITION		DESIGNATION
C U S T O M E R A	1		Frame Ground (FG)
	2	Twisted	Send Data (SD)
	9	Pair	Signal Ground (SG)
	3	Twisted	Receive Data (RD)
	10	Pair	Signal Ground (SG)
	13	Twisted	Serial Clock Receive (SCR)
	6	Pair	Signal Ground (SG)
	15	Twisted	Serial Clock Transmit (SCT)
	8	Pair	Signal Ground (SG)
	7	(See Note)	Signal Ground (SG)
	14		Clock Rate Select (SCX2)
	12	Must be strapped through	Data Set Ready (DSR)
	5	CUSTOMER A plug	Data Set Ready X2 (DSRX2)

Note: Normally terminals 7 and 14 are unused. If the cutsomer requests double speed clocks, then terminals 7 and 14 must be strapped.

	PIN POSITION		DESIGNATION
C U S T O M E R B	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		+18 (681-Ohm Series Resistance)
	10		−18 (681-Ohm Series Resistance)
	11		Regeneration (RGRN)
	12		Prepare Receiver (PR)
	13		Data Set Ready X2 (DSRX2)
	14		Clock Rate Select (SCX2)
	15		Serial Clock Transmit (SCT)
	16	(For Testing purposes only)	Dibit Clock Transmit (DIT)
	17		Serial Clock Receive (SCR)

TABLE C (Cont)

	PIN POSITION	DESIGNATION
	18	Confirm (CON)
	23	Data Speed Select (SS)
	24	Serial Clock Transmit External (SCTE)
	25	Remote Test (RMT)

3.03 When required, the Data Set 205C2 can be interconnected with a second Data Set 205C2 to make a regenerative repeater. Interconnections between the two data sets are established through CUSTOMER B interface connections as shown in Fig. 1.

3.04 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.

3.05 ▶Visually check that terminal E1 is strapped to terminal E2. A strap should exist between the two terminals unless the service order specifies strap removal.

3.06 Connect the ac power cord from the power supply to a commercial 117 volts, 60($\pm$0.8) Hz source.◀

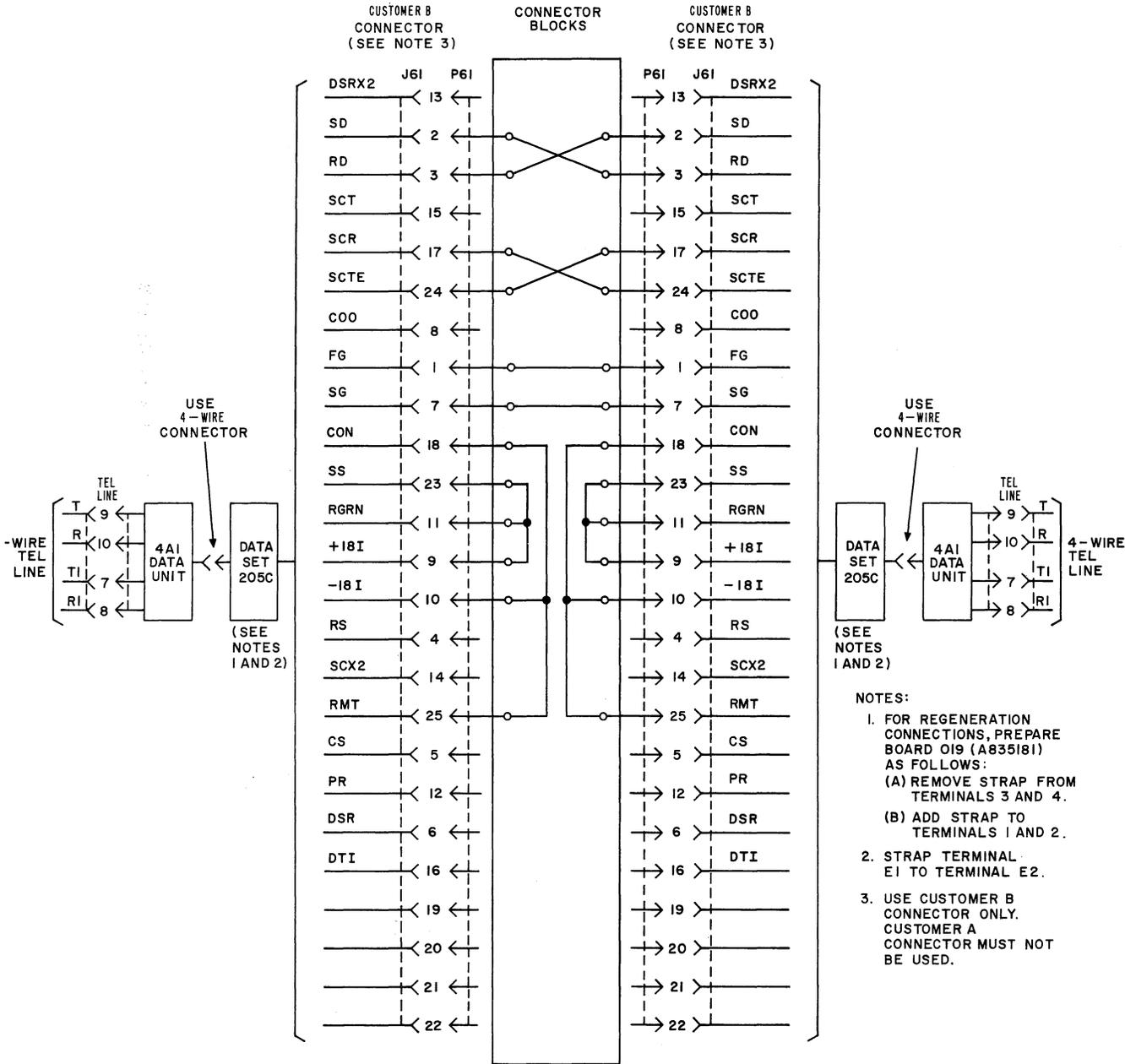**3.07** Test the Data Set 205C2 as prescribed in Data Set 205C2, Transmitter-Receiver, Test Procedures (Section 592-017-502).

Fig. 1—Regeneration Connections at Connector Block

NOTES:
1. FOR REGENERATION CONNECTIONS, PREPARE BOARD 019 (A835181) AS FOLLOWS:
   (A) REMOVE STRAP FROM TERMINALS 3 AND 4.
   (B) ADD STRAP TO TERMINALS 1 AND 2.

2. STRAP TERMINAL E1 TO TERMINAL E2.

3. USE CUSTOMER B CONNECTOR ONLY. CUSTOMER A CONNECTOR MUST NOT BE USED.