

DATA SET 401F RECEIVER INSTALLATION AND CONNECTIONS

1. GENERAL

1.01 This section provides installation and connection information for Data Set 401F.

1.02 This section is reissued to add information regarding data signal level requirements. Due to extensive revision, change arrows have been omitted.

2. INSTALLATION

2.01 The data set shall be installed in conformance with existing practices covering installation of station sets.

2.02 The set must be installed in a location compatible with the interface cord supplied by the customer for connecting the data set to the business machine (not to exceed 50 feet).

2.03 The customer must furnish a 3-wire outlet (two parallel blades and a U-shaped grounding pin) not under control of a switch. The data set must be served from the same ac service cabinet as the business machine so that the same ground bus is used. This prevents noise potentials that might otherwise develop and cause data errors. If separate grounds are used, a test using a 6A impulse counter should be made to detect any noise. This test procedure is described in Section 594-015-500. If test requirement is not met, the data set ground and business machine ground must be bonded together.



Local operating practices should specify the method of providing the bond.

2.04 Verify that the telephone loop facilities assigned have been tested and that they meet transmission requirements. The requirements are given in the section entitled Data

Systems—DATA-PHONE® Service on Direct Distance Dialing Network—Overall Transmission Test Requirements (314-205-500).



To avoid interruption during data transmission, extension stations or key telephone systems should not be connected to the data line.

2.05 All in-service data sets must meet signal level requirements which allow the data signal level to be no greater than -12 dBm at the serving central office. The answer-back tone in Data Set 401F must meet these requirements and to do so, external padding may be required.

2.06 No provision is made for A lead control.

3. CONNECTIONS

3.01 Plug the D10N-61 cord from the telephone set into its jack on the back of the data set.

3.02 Table A shows the pad loss required for different values of local loop loss to ensure that Data Set 401F conforms to the data signal level requirements. Figure 1 gives instructions for local pad construction and connections. The loss pads may also be ordered from Western Electric as follows:

LOSS	TYPE
1 dB	F58101
2 dB	F58102
3 dB	F58103
4 dB	F58104
5 dB	F58105
6 dB	F58106

TABLE A
PAD LOSS REQUIRED FOR GIVEN
LOOP LOSS

LOOP LOSS AT 1 kHz (dB)	PAD LOSS REQUIRED (dB)
0-1	Use Data Set 401J
1-2	6
2-3	5
3-4	4
4-5	3
5-6	2
6-7	1
7-12	None

3.03 Plug the D3BT-61 cord into its jack on the back of the receiver and tighten the locking

ring. Connect the spade tips at the free end of the cord as shown in Table B.

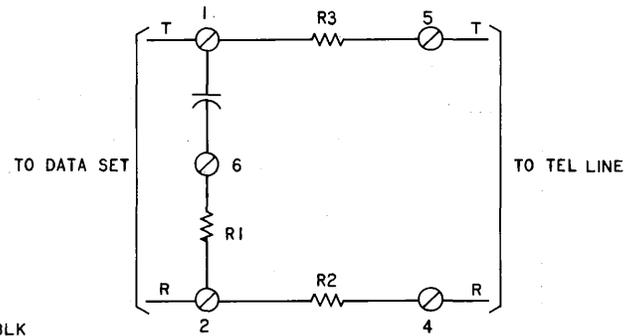
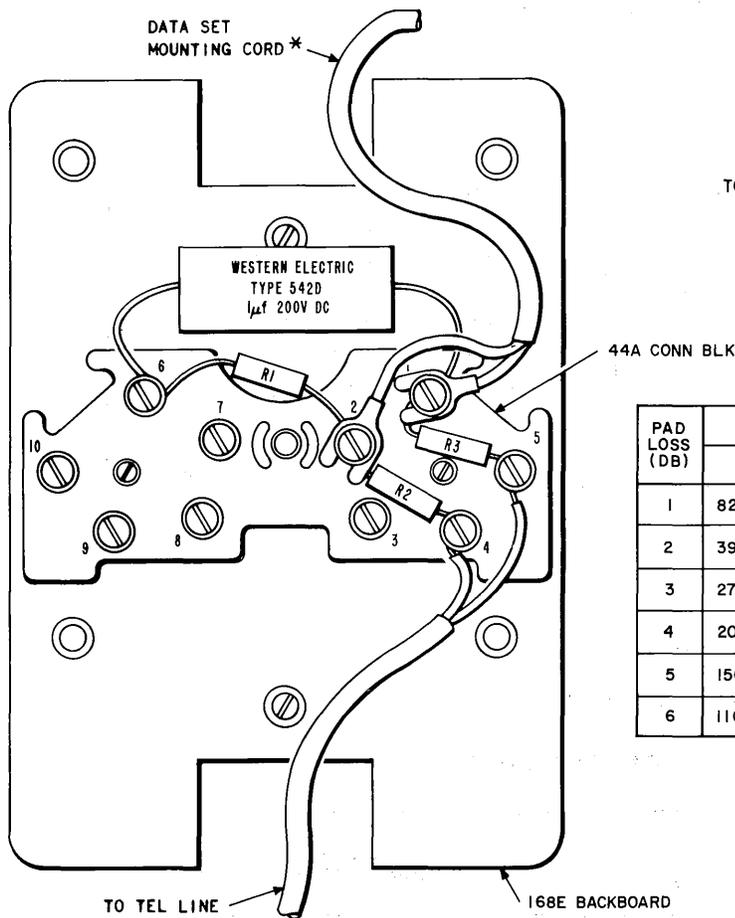
3.04 Plug the power cord into its jack on the back of the receiver. Plug the other end into a 117-volt ac 3-wire receptacle. Secure the plug to the receptacle with an approved-type clamp.

3.05 The telephone set is factory-wired for unattended operation. If attended operation is specified, move O-W lead from terminal E1 to 9.

3.06 When used on lines not arranged to trip ringing during ring cycle (some types of foreign exchange and some manual PBX lines), set must be modified as shown in Table C to provide automatic answer. This permits H relay to operate at end of ring cycle.

3.07 When connecting set to a local battery private line, block relays as shown in Table D.

3.08 Following installation, perform tests on the data set using procedures given in Section 594-015-500.



PAD LOSS (DB)	RESISTOR VALUE (OHMS)							
		R1		R2 AND R3				
1	8200	GRAY	RED	RED	47	YELLOW	VIOLET	BLACK
2	3900	ORANGE	WHITE	RED	110	BROWN	BROWN	BROWN
3	2700	RED	VIOLET	RED	160	BROWN	BLUE	BROWN
4	2000	RED	BLACK	RED	220	RED	RED	BROWN
5	1500	BROWN	GREEN	RED	240	RED	YELLOW	BROWN
6	1100	BROWN	BROWN	RED	270	RED	VIOLET	BROWN

NOTES:

1. RESISTORS ARE ALLEN BRADLEY, 1 WATT, 5% TOLERANCE (KS-19151 L1). CAPACITOR IS WESTERN ELECTRIC CO. 542D TYPE, 1UF, 200VDC.
2. A 101C TYPE COVER SHOULD BE USED TO PROTECT THE PAD.
3. THE PAD VALUE SHOULD BE STENCILED ON COVER FOR FUTURE REFERENCE.

* STORE UNUSED CONDUCTORS ON VACANT TERMINALS

Fig. 1—Pad Construction and Connections

TABLE B
DATA SET CONNECTIONS TO TELEPHONE LINE

CONNECT CORD CONDUCTOR	TO (IF NO PAD REQUIRED)	TO* (IF PAD REQUIRED)
R	Telephone Line RING	Connector block terminal 2. Telephone line RING to connector block terminal 4.
G	Telephone Line TIP	Connector block terminal 1. Telephone line TIP to connector block terminal 5.
Y	—	—

* Refer to Fig. 1 for details

TABLE C
MODIFICATION FOR OPERATION OF
H RELAY AT END OF RING CYCLE

MOVE WIRE		OTHER END CONNECTED TO
FROM	TO	
3M of <i>S</i> Relay 9M of <i>R</i> Relay	9B of <i>R</i> Relay Tape and Store	2L of <i>H</i> Relay 4M of <i>H</i> Relay

TABLE D
MODIFICATION FOR
PRIVATE LINE USE

RELAY	CONDITION	TOOL
H	Operated	627A
A	Operated	679A
S	Operated	679A