

DATA SET 603A-TYPE

FOR TRANSMISSION OF MEDICAL ANALOG DATA

INSTALLATION

1. GENERAL

1.01 This section covers the installation and option connections for data sets 603A1 and 603A2.

1.02 This section is reissued for the following reasons:

- The yellow and black wires of the D4BJ-61 cord were reconnected to give added protection against installation or rearrangement wiring errors. On terminal block TB1, the yellow and black wires were removed from TB1-13 and connected to TB1-20. On the 42A or 47B connecting block, the yellow and black wires should be removed from the Y and B terminals and taped and stored. Figure 2 was changed to show these new connections.
- A 3-wire grounding-type receptacle is not required for this installation, therefore Fig. 4 has been deleted.

1.03 This section does not include specific installation information for equipment that might be used with the data set, nor does it include information on the operation of the business machine.

1.04 Cover removal and replacement procedures for the data set are described in the section entitled Data Set 603A-Type for Transmission of Medical Analog Data—Maintenance (596-012-300).

Note: Verify that the line is arranged for TOUCH-TONE® service before installing data set 603A2. If the line is not arranged for TOUCH-TONE service, data set 603A1 should be used.

1.05 Verify that the overall facilities have been tested and meet the transmission requirements specified in the section entitled Data Systems DATA-PHONE® Service, Direct Distance Dialing Network—Test Requirements for Subscriber, Foreign Exchange, and Remote Exchange Lines (314-205-501).

1.06 No special tools are required for installation of data set 603A-type.

1.07 To avoid interference during data transmission, observe the following restrictions which apply to the data line, where practicable.

- Use only on individual lines.
- Do not connect extension telephones.

1.08 To minimize inductive interference to the data signal on the telephone (data) line, the line should *not* be placed in the same run or raceway with the interface cable between the data set and business machine, or lines carrying teletypewriter services. If this requirement cannot be met, it will be necessary to run the telephone line in SK-type (shielded) station wire between the data set and cable distribution terminal or building entrance. The shield should be grounded at the distribution terminal only.

Note: To minimize noise and interference, the business machine and the data set should be served from the same ac distribution panel. A test using the 6-type impulse counter should be made to detect any noise. The required test procedure is given in the section entitled Data Set 603A-Type for Transmission of Medical Analog Data—Test Procedures (596-012-500). If the test requirements are *not* met, a bond must be provided to improve the grounding condition for the business machine and the data set. The method of providing this bond should be in accordance with local instructions.

2. OPTION CONNECTIONS



To eliminate possible damage to electronic components in the data set, do not make power connections until all other connections have been completed.

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2.01 Options for the data set must be specified on the service order. Connect the options as shown in Table A. The connections are made on terminal board TB1. The location of TB1 is shown in Fig. 1, which illustrates data set 603A1; however, it is also applicable to data set 603A2.

set, a grounding-type receptacle is not required for this installation.

3.03 Locate the data set within range of the business machine interface connecting cord. This cord, which is supplied by the customer, should not exceed 50 feet in length.

3. INSTALLATION PROCEDURES

3.01 The data set should be installed in conformance with existing BSPs which cover installation of station sets. For detailed information, refer to the section entitled Data Sets—General Installation Information (590-010-200).

3.04 Make connections from the data set to the connecting block as shown in Fig. 2.

3.02 The customer must furnish a source of 117-volt 60-Hz power. The receptacle must not be on a circuit that is controlled by a switch. Since no provision is made for grounding the data

3.05 Data sets 603A-type marked series 3 and lower have 0-dBm output with option Z strapping. Measure loop loss in dB at 1 kHz. Determine the required attenuation from Table B. If the measured loop loss is less than 3 dB, option W and external padding will be required to comply with FCC Tariff No. 263.

TABLE A
OPTION CONNECTIONS

FEATURE OR OPTION		DESIG	AVAILABLE ON		CONNECTIONS ON TB1		QUANTITY
			603A1	603A2	FROM TERM.	TO TERM.	
Termination	600 Ω	N			17	18	One Per Circuit
	900 Ω	Q	*	*	17	16	
Reverse Channel Indication	Lamp-Tone	T	*	*	1 7	2 14	As Required
	Contact	V			2 14	4 15	
Output Level	-12 dBm†	Z			8	9	One Per Circuit
	-3 dBm	Y			8	10	
	-6 dBm	X	*	*	8	11	
	-9 dBm	W			8	12	
Dial	Rotary	S	*	‡	—	—	One Per Circuit
	TOUCH-TONE	R	‡	*	—	—	

* Factory furnished.

† 0 dBm for series 3 and lower; -12 dBm for series 4 and higher.

‡ Cannot be converted in field.

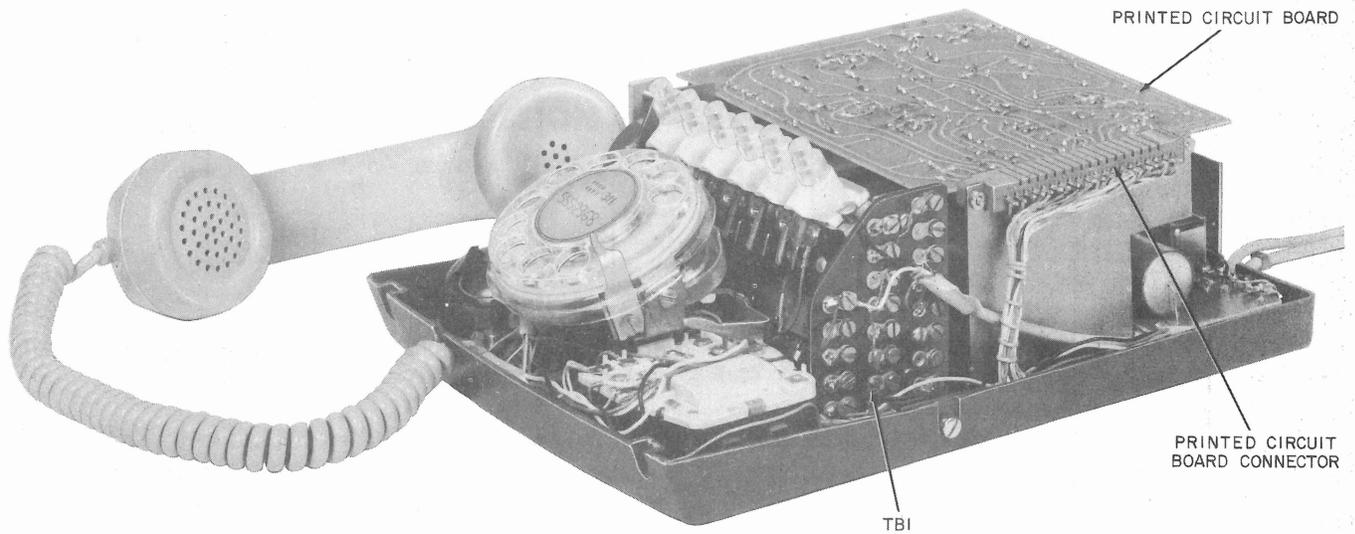


Fig. 1—Data Set 603A1—Covers Removed

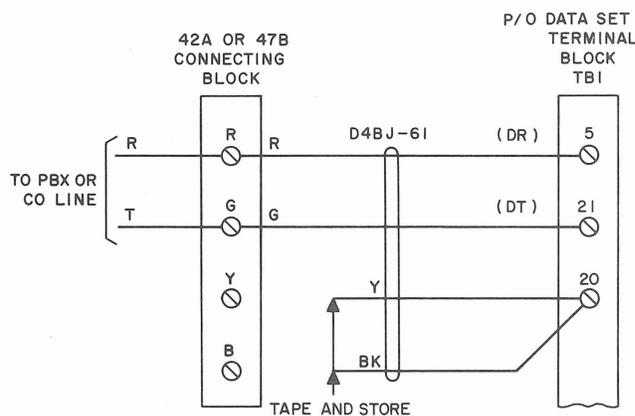


Fig. 2—Data Set 603A-Type—Connections

Note: Data sets 603A-type, series 4 and higher, have -12 dBm output with option Z strapping and do not require external padding.

3.06 The required pad may be ordered or made in the field and installed in accordance with Fig. 3.

3.07 After installation of the pad, measure loop loss again to verify installation. Record addition of the pad and the new power level on the associated circuit record card.

3.08 Apply power to data set by plugging the M2EP power cord transformer assembly into the power receptacle.

4. TEST

4.01 Upon completion of installation of the data set, it should be tested in accordance with the test found in the section entitled Data Set 603A-Type for Transmission of Medical Analog Data—Test Procedures (596-012-500). These tests are required when a data set is being installed or when clearing a trouble condition.

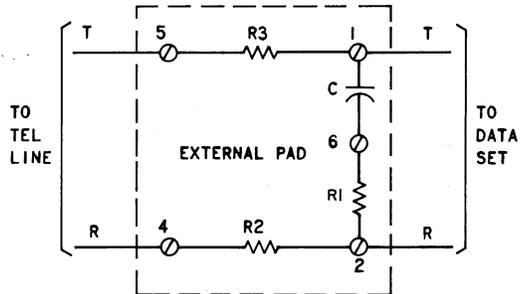
TABLE B

ATTENUATION REQUIRED

PAD ATTENUATION REQUIRED (dB)	MEASURED LOOP LOSS IN dB @ 1 kHz	
	0-3	3-12
	3	None Required

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LOSS (DB)	RESISTOR VALUE (OHMS)			ORDERING INFORMATION
	R1	R2	R3	
1	8200	47	47	F-58101
2	3900	110	110	F-58102
3	2700	160	160	F-58103
4	2000	220	220	F-58104
5	1500	240	240	F-58105
6	1100	270	270	F-58106



NOTES:

1. ALL RESISTORS ARE ALLEN BRADLEY 1 WATT $\pm 5\%$ (KS-19151, L1). CAPACITOR IS WE 542 D-TYPE, 1 UF, 200 VDC.
2. MOUNT COMPONENTS ON 44A CONNECTING BLOCK, WHICH IS MOUNTED ON 168E BACKBOARD.
3. USE A 101C-49 COVER TO PROTECT PAD. STENCIL PAD VALUE ON COVER FOR FUTURE REFERENCE.

Fig. 3—Construction of External Pad