

DATA SET 603B-TYPE REFERENCE GUIDE

1. GENERAL

1.01 Data Set 603B-type is a frequency-modulated voiceband analog receiver primarily used for receiving electrocardiographic or similar information over 2-wire telephone facilities, such as that transmitted by Data Sets 603A-type and 603D.

1.02 This section is reissued to add new coding information and to incorporate additions to Table A and Table C. Conversion information is provided by the addition of Table D. Since a general revision has been made, arrows generally used to indicate changes have been omitted.

1.03 Data Sets 603B1 and 603B2 are similar, except for having a rotary dial and a TOUCH-TONE® dial, respectively. The integral telephone set is used in establishing data calls and also may be used as a conventional telephone.

1.04 Data Sets 603B3 and 603B4 have been coded as later models of Data Sets 603B1 and 603B2, which are rated Manufacture Discontinued. Data Sets 603B3 and 603B4 are identical to the 603B1 and 603B2, respectively, with the exception that the later models have 3A2 data units instead of 3A1 data units. The 3A2 data unit is used for line control and is similar to the 3A1 data unit, but it provides compatibility for the data sets with ESS offices and Unigauge lines.



Data Set 603B2

SECTION 590-006-103

1.05 The data set is designed for either attended or unattended operation while receiving data. The data set generates both an answer-back tone and a reverse-channel tone. The answer-back tone disables echo suppressors used on the telephone circuit and also indicates that the data set has answered an incoming call. The reverse-channel tone is sent continuously while receiving data, and provides circuit assurance and a means for signaling the transmitting data set during data transmission.

1.06 Remote tests of a data set can be made by a data test center with the assistance of either the customer or a telephone employee at the data station.

2. PHYSICAL AND ELECTRICAL CHARACTERISTICS

2.01 Data Set 603B-type requires 25 watts of 117-volt 60-Hz power supplied by the customer.

2.02 The data sets have a 2-tone gray finish and measure 11 inches wide, 14-5/8 inches deep, and 5-1/2 inches high; they weigh 18 pounds each.

3. OPERATION

3.01 The transmitting station attendant calls the receiving station attendant in the normal telephone manner by using Data Set 603A-type or by acoustically coupling a telephone set to Data Set 603D. The receiving station attendant depresses the TALK button and uses the telephone handset in the usual telephone manner. After agreeing to switch to data mode, the receiving station attendant depresses the DATA key and replaces the handset on the cradle.

3.02 If Data Set 603B-type is wired for automatic answering (option Z), the AUTO ANS key must be depressed by the receiving station attendant. If AUTO ANS (option Y) is used, the receiver will answer incoming calls without operation of the AUTO ANS key. Options Y and Z will function only if the business machine is properly conditioned. When a call from the transmitting station causes a ringing voltage on the line and the business machine is properly conditioned, the receiver automatically switches to data mode.

3.03 Data Set 603B-type can be switched from data mode to talk mode by lifting the handset and depressing the TALK button.

3.04 If trouble is reported, an attendant is required at the receiver. Instructions are given to the attendant by the data test center, via the data set telephone. The attendant must depress the TEST button upon hearing a tone and replace the handset on the cradle. The data test center then performs required tests to isolate the trouble.

4. SERVICE ORDER INFORMATION

4.01 Service orders for data services should describe the desired service by USOC. The encoding procedure to determine the appropriate USOC is described in Section 590-000-100. Customer option decisions which must be made to determine the USOC are listed in 4.04. An explanation of features and options common to most data sets is given in Section 590-000-101. A rapid cross-reference between USOC, data sets, and reference guides is presented in Section 590-000-102. Intercity Service Manual (ISM) Section 87 gives customer billing nomenclature, shows tariff listings for data services, and provides general reference information.

4.02 Service orders *should not* specify data set codes. USOC decoding procedures are described in Section 590-000-100. Engineering or Plant Department personnel responsible for selecting data sets are not compelled to use any particular data set codes specified or suggested on the service order. When the current data set model is not available from telephone company stocks (field or class C), the use of an available substitute is preferred over the purchase of a new current model.

4.03 Service offerings and substitute data sets are outlined in Table A. Customer options are given in Table B. The ITEM column in Table B provides a reference to descriptive information contained in Section 590-000-101.

4.04 The following paragraphs provide detailed information on customer options for USOC determination.

(a) ***Decision A—Automatic or Manual Answer:***

- (1) ***1. Automatic Answer:*** With this option, the data set automatically answers incoming calls and transfers to data mode. (Select type of automatic answer in decision B.)

TABLE A
SERVICE OFFERINGS—CURRENT AND SUBSTITUTE MODELS

USOC	FEATURE	MODEL	REMARKS
DCQ	Rotary dial analog data receiver	603B3 (Current Standard) 603B1 (Substitute)	May be substituted in all cases except where ESS offices or Unigauge lines are used.
DFC	TOUCH-TONE dial analog data receiver*	603B4 (Current Standard) 603B2 (Substitute)	

*When TOUCH-TONE (DFC) units are not available, service can be provided by using rotary dial (DCQ) units. *Caution: Rates may be different in some companies.*

TABLE B
CUSTOMER OPTION DECISION TABLE

DECISION	OPTION	DESIGNATION	ITEM
A (See Note)	1. With Automatic Answer 2. With Manual Answer		B3
B	3. Automatic Answer — Permanently Wired	Y*	B3
	4. Automatic Answer — Key Controlled	Z	

* Factory wired

Note: If A decision is 2, USOC suffix is 02 and no B decision is required.
If A decision is 1, B decision is required.

- (2) **2. Manual Answer:** With this option, incoming calls must be answered manually. (No B decision required.)

b) **Decision B—Automatic Answer Permanently Wired or Key-Controlled:**

- (1) **3. Permanently Wired:** With this option, the data set automatically answers all incoming calls.

- (2) **4. Key-Controlled:** With this option, incoming calls are automatically answered when AUTO ANS key is depressed. Calls must be answered manually when AUTO ANS key is not depressed.

Additional Engineering Information

4.05 Data Set 603B-type may be used in conjunction with key telephone units to provide "A" lead control when option ZB is installed. Refer to the section entitled Data Set 603B-Type—Installation Instructions (596-013-200) for additional information.

4.06 Telephone company engineering options are listed in Table C.

5. SUBSTITUTE DATA SETS

5.01 The data sets listed as substitutes in Table A can be used to supply the services previously described in this section.

TABLE C
TELCO ENGINEERING OPTIONS

OPTION		DESIGNATION	ITEM
Termination: 600 ohms 900 ohms		N Q*	C1
Reverse-Channel Level:			
0 dBm	-3 dBm†	R	C3
-3 dBm	-6 dBm†	S	
-6 dBm	-9 dBm†	T*	
-9 dBm	-12 dBm†	U	

* Factory wired

† Options on Data Sets 603B1 Series 3 and higher, 603B2 Series 2 and higher, and all 603B3, 603B4.

6. CONVERSION INFORMATION (Table D)

6.01 Data sets 603B1 and 603B2 should be used for all services not involving ESS offices or Unigauge lines until existing stocks are consumed. In addition, the existing stocks of Data Sets 603B1 and 603B2 should be used to satisfy needs for Data sets 603B3 and 603B4 by converting the older data sets into current models. Conversion can be accomplished by having Western Electric Company replace the 3A1 data unit with a 3A2 data unit and recoding the data set. Every effort should be made to completely utilize existing stocks of Data Sets 603B1 and 603B2 before obtaining new data sets.

6.02 The data set coding scheme was changed from equipment coding (JID) to apparatus

coding before Data Set 603-type was introduced, therefore codes for Data Sets 603-type which carry a JID prefix are invalid.

7. REFERENCES

7.01 The following references provide additional information on Data Set 603B-type and associated equipment:

- (a) Sections 596-013-100, -200, -300, -500
- (b) PEL 7474, EM 1475
- (c) SD- and CD-1D071-01
- (d) Data Sets 603A, 603B, and 603D Interface Specification.

TABLE D
CONVERSION INFORMATION

OLD CODE	NEW CODE	REMARKS
JID603B1	None	Invalid code
JID603B2	None	Invalid code
603B1	603B3	Replace 3A1 Data Unit with 3A2.
603B2	603B4	Replace 3A1 Data Unit with 3A2.