DATA SET 103C
TRANSMITTER-RECEIVER
FOR PRIVATE LINE SERVICE
IDENTIFICATION AND OPERATION

1.00 INTRODUCTION

1.01 This section contains the identification and operation information for data set 103C. It does not include information concerning the business machine used with the data set.

1.02 Early production data sets 103C were coded 103A-X1 or 103A-X12. These sets are electrically identical to data set 103C. Data set 103A-X1 was enclosed in a different type cabinet.

2.00 GENERAL

2.01 Data set 103C is designed for low-speed transmission and reception of serial data over a point-to-point private line facility.

2.02 No provision is made for alternate voice communication.

3.00 IDENTIFICATION

3.01 Data set 103C is enclosed in a dark gray cabinet having a hinged cover (Fig. 1).

3.02 The data set is made up of a modulator, a demodulator, and control, timing, and data circuits. These circuits permit simultaneous flow of data in both directions over the line (full duplex operation). Electronic circuits are arranged on removable printed wiring boards, as shown in Fig. 2.

3.03 Fig. 3 shows a simplified block diagram of the data system.

3.04 A KS-14532, List 15 cord assembly is used to connect the data set to 117-volt ac 3-wire receptacle (two parallel blades and U-shaped grounding pin).

3.05 The interface cord is a 5-foot-long D16E-51 cord assembly. This cord is equipped with a KS-16426, List 2 plug for connection to the data set and a KS-19087, List 2 connector for connection to the cord from the business machine.

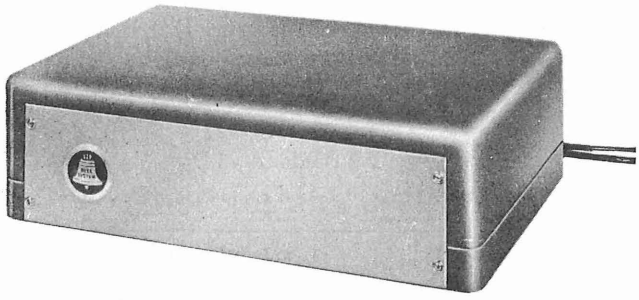

Fig. 1 - Data Set 103C

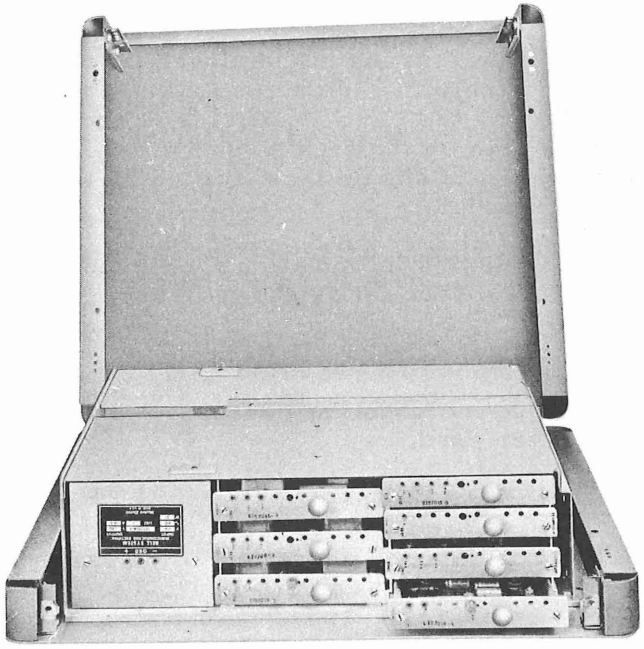

Fig. 2 - Data Set 103C,
Front View (Cover Up)

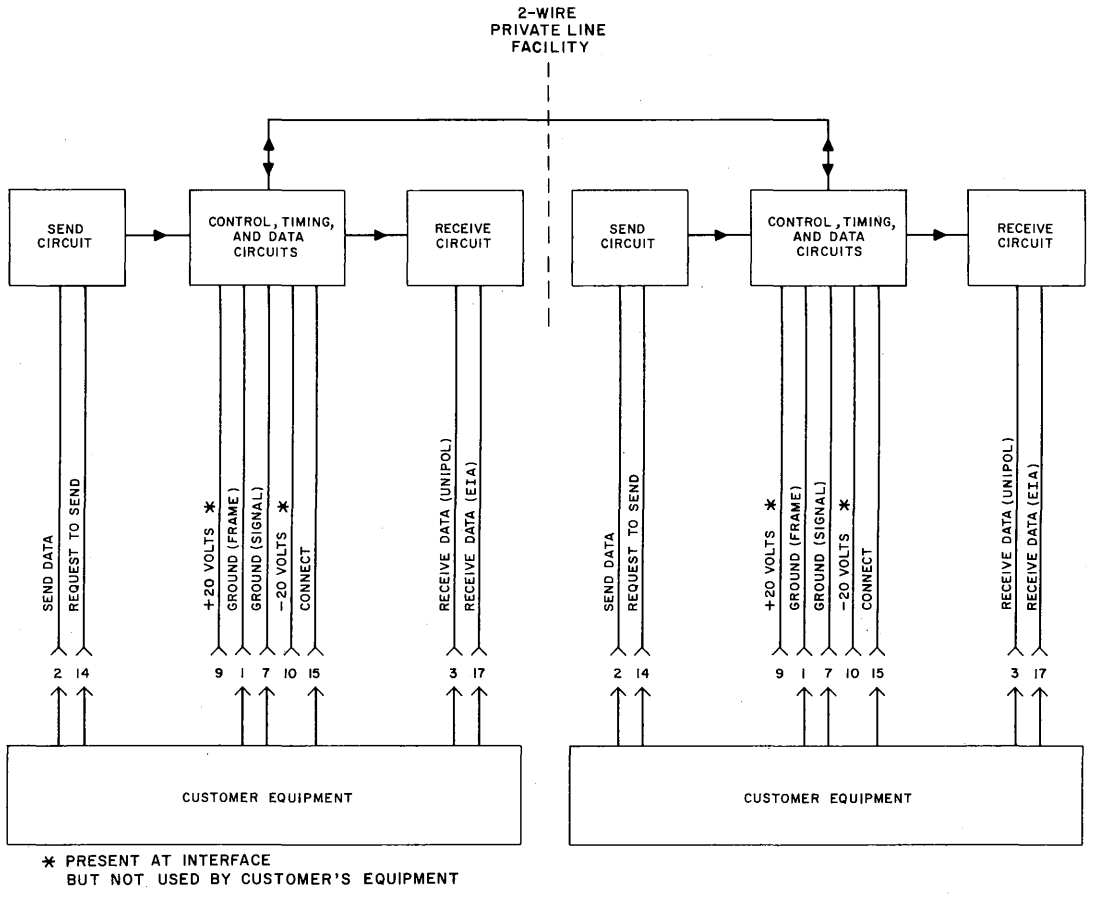

Fig. 3 - Block Diagram

3.06 Channel transmitting levels are adjustable in 2-db steps from 0 to -14 dbm on the low frequencies and from 0 to -8 dbm on the high frequencies. Level requirements should be specified on the service order.

3.07 Ordering information for the complete data set is shown below:

(Quantity) J1D103C Data Set

This code includes the interface cord and the power cord.

4.00 OPERATION

4.01 For detailed operation of the data set see CD- and SD-1D026-01.

4.02 All functions of the data set are controlled by the business machine.

4.03 Data is received from the business machine in the form of dc pulses. The data set converts these pulses into voice frequency tones. These frequencies are transmitted over the private line to the distant station. The receive data set converts the frequencies back into dc pulses and delivers them to the business machine as received data.

4.04 Data transmission is carried on over two frequency-shift channels. One channel is used for data transmission in one direction on the line, and the other channel is used for transmission in the opposite direction. Channel frequencies are shown in Table A.

TABLE A

CHANNEL FREQUENCIES

Channel		Frequency cps
Low	Mark	1070
	Space	1270
High	Mark	2025
	Space	2225

4.05 One station of the system must be wired as an originating station and the other must be wired as a terminating station. Either station can begin data transmission.

4.06 The station wired as an originating station transmits over the low channel and receives on the high channel. The terminating station transmits over the high channel and receives on the low channel.