

DATA SET 109H TYPE
SUMMARIZING SPECIFICATION
DATA SYSTEMS
STATION

1. GENERAL

Scope

1.01 This specification, together with the supplementary information listed herein, summarizes the design requirements and information to be used for the application and ordering of Data Set 109H type for use in DATREX*, Remote DATREX, and Private Line services.

Capacity

1.02 Data Set 109H-L1 is a low-cost, low-speed full duplex (FDX) 150 baud [300 baud in half duplex (HDX)] serial transmission data set for use over a 2-wire metallic loop of 2000 ohms and 1 μ F or less. Power is derived from a wall-mounted step-down transformer that is plugged into 117 Vac.

1.03 The data set has an interface which conforms to Electronics Industries Association (EIA) RS-232-B standard.

1.04 The set can operate half duplex (HDX) with any other HDX Data Set 109 type or full duplex (FDX) with any other FDX Data Set 109 type.

Description

1.05 Data Set 109H-L1 consists of a GA1 circuit pack, a 635T2 key, a spade-ended cord, a baseplate, and brackets mounted in a desk top type housing similar to Data Auxiliary Set 804A. It is intended for use in conjunction with customer-provided terminals (CPT). The following features describe the basic set.

*Service mark of the Bell System.

(a) Compatibility with any other FDX Data Set 109 type. Communication with HDX data sets must be in HDX mode.

(b) Operation over an ungrounded 2-wire loop having a maximum resistance of 2000 ohms (2500 ohms using reduced current in the HDX mode) and 1- μ F capacity using trilevel current in FDX and 3 mA polar in HDX. The loops are built out by means of screw switches and resistors which are part of the data set.

(c) Optional DATREX, Remote DATREX, or Private Line arrangement.

(d) The set is 3-5/8 inches high, 8-7/8 inches wide, and 9 inches deep. It weighs 3-1/4 pounds.

(e) Power is obtained from a 117-Vac, 60-Hz receptacle through a 2245A wall-mounted step-down transformer. Power consumption is 3 watts.

(f) Low voltage ac and tip and ring of the line are brought into the set via a 44A connecting block and a D10R-61 mounting cord. The cord is part of the set.

(g) Connection to the customer terminal is made via Electronics Industries Association (EIA) connector on the rear of the set.

(h) Internal wiring arrangements are made using screw terminals on the circuit pack and spade-ended leads from the key cord.

1.06 Data Set 109H-L1/2 consists of Data Set 109H-L1 with the addition of a rotary dial, mounting brackets, a receiver, and a faceplate. It provides a means of dialing a call via the DDD network and monitoring call progress tones.

1.07 Data Set 109H-L1/3 consists of Data Set 109H-L1 with the addition of a TOUCH-TONE® dial, mounting brackets, a receiver, a faceplate, and an ET2 circuit pack. It provides means of dialing a call via the DDD network and monitoring call progress tones.

1.08 Data Set 109H-L1/4 consists of Data Set 109H-L1 with the addition of an ET3 circuit pack. It provides a current squelch (CSQ) indication and optional control functions among the data set, customer-provided equipment, and the 10A data line concentrator.

1.09 Data Set 109H-L1/5 consists of Data Set 109H-L1 with the addition of a GR1 circuit pack. It provides a means of detecting the presence or absence of normal line currents and presents a signal on the CC interface lead. It also provides a signal on the CF lead in the Remote DATREX or Private Line arrangement.

1.10 The GA1 circuit pack, measuring 7 by 6.45 inches, provides the circuit for transmitting and receiving signals for the basic data set. It interfaces with customer-provided terminals (CPT) having EIA voltages and contains a rectifier and a camp-on circuit.

1.11 The ET3 circuit pack, measuring 1.7 by 4 inches, fastens to the GA1 circuit pack (basic data set) or to the GR1 circuit pack (depending on the code used) by means of four snap-on spacer bushings. Connection is made by means of spade-ended leads and screw terminals.

1.12 The GR1 circuit pack, measuring 2.7 by 4 inches, fastens to the GA1 circuit pack by means of four snap-on spacer bushings. Connection is made by means of spade-ended leads and screw terminals.

2. SUPPLEMENTARY INFORMATION

A-157100—Common Features Drawing for Printed Wiring Boards

A-836330—Terminal Area Configurations for Printed

Wiring Boards

591-037-100—Description (Private Line)

591-037-101—Description (DATREX)

591-037-200—Installation (Private Line)

591-037-201—Installation (DATREX)

591-037-300—Maintenance (Private Line)

591-037-301—Maintenance (DATREX)

591-037-500—Tests (Private Line)

591-037-501—Tests (DATREX)

800-610-158—Packaged Electronic Products—Wiring, Cabling, Numbering, and Lettering

800-610-159—Printed Wiring Assemblies—General Equipment Requirements

X-17428—Plated-Through Holes on Printed Wiring Boards

X-17650—Manufacturing Testing Requirements

3. DRAWINGS

SD-1D220-01—Data Set 109H type

4. PRODUCT

Data Set 109H Type Transmitter/Receiver

List 1—Common equipment, assembly, and wiring for basic full duplex data set per SD-1D220-01, App Fig. 1.

List 2—The basic data set (L1) plus a rotary dial, mounting brackets, listen-only receiver, and a faceplate per SD-1D220-01, App Fig. 2.

List 3—The basic data set (L1) plus a TOUCH-TONE dial, mounting brackets, a listen-only receiver, a faceplate, and an ET2 circuit pack per SD-1D220-01, App Fig. 3.

List 4—The basic data set (L1) plus an ET3 circuit pack per SD-1D220-01, App Fig. 4.

List 5—The basic data set (L1) plus a GR1 circuit pack per SD-1D220-01, App Fig. 5.

5. GENERAL NOTES

5.01 When ordering data set, show full code.

Example: Data Set 109H-L1/2

**TABLE OF AUTHORIZED
ORDERABLE CODE NUMBERS**

DATA SET	RATING	REPLACED BY	SERVICE
109H-L1	AT&TCo Std	—	DATREX Remote DATREX Private Line
109H-L1/2	AT&TCo Std	—	DATREX
109H-L1/3	AT&TCo Std	—	DATREX
109H-L1/4	AT&TCo Std	—	DATREX Remote DATREX
109H-L1/5	AT&TCo Std	—	DATREX Remote DATREX Private Line
109H-L1/2/4	AT&TCo Std	—	DATREX
109H-L1/2/5	AT&TCo Std	—	DATREX
109H-L1/3/4	AT&TCo Std	—	DATREX
109H-L1/3/5	AT&TCo Std	—	DATREX
109H-L1/4/5	AT&TCo Std	—	DATREX Remote DATREX
109H-L1/2/4/5	AT&TCo Std	—	DATREX Remote DATREX
109H-L1/3/4/5	AT&TCo Std	—	DATREX

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