

DATA SET 203 TYPE
TRANSMITTER/RECEIVER
SUMMARIZING SPECIFICATION
DATA SYSTEMS
STATION

1. GENERAL

Scope

1.01 This specification, together with the supplementary information listed herein, summarizes for ordering purposes the product design requirements for the framework, assembly, and circuits covering data set 203 type primarily for use in DATA-PHONE® data service.

1.02 This specification is reissued to update the data set codes and other information resulting in design changes from Issue 1.

Capacity

1.03 Data set 203 type can be operated over the switched network and 2- or 4-wire private line facilities, and has a speed capability, with various optional arrangements, ranging from 1800 to 10,800 BPS. An auxiliary channel, with a speed up to 150 BPS, is also available for operation with the main channel. Details of specific application are given in 4.

Description

1.04 The data set 203A, B, or C type can be ordered in a KS-20018,L3 cabinet or without the cabinet for mounting on 23-inch frames. The protrusion beyond the frame mounting surface can be selected as either 5.0 or 8.1 inches by using proper holes in the mounting brackets.

1.05 The basic data set 203 type is an arrangement of the 22A, 23A, and 24A type data units which provide the transmitter, receiver, and common control functions, respectively, for the data set. Also available at a later date will be the 25-type data unit, which will provide error control functions. Provision is already made to add this unit to the set when it becomes available. The

various functional operations, such as speed and auxiliary channel, are provided by adding the proper plug-in circuit packs and networks into the data units.

1.06 There are three types of data sets available.

The 203A type is a transmitter-receiver, the 203B type is a transmitter only, and the 203C type is a receiver only. Each can be equipped with one of five speed options. The auxiliary channel can be provided on an optional basis for the 203A but is always provided with the 203B and C. Further details are given in the ordering information in 4.

1.07 The weights of the data sets, in KS-20018,L3 cabinets, are as follows:

DATA SET	WEIGHT (LB)	FOR FRAME MTG (LB)
203A Type	110	90
203B Type	73	53
203C Type	89	69

2. SUPPLEMENTARY INFORMATION

X-17453—Manufacturing Testing Requirements—
24A1 Data Unit

X-17495—Manufacturing Testing Requirements—
Data Set 203 Type

X-77360—Manufacturing Testing Requirements—
Circuit Packs

590-100-115—22A1 Description

590-100-116—23A1 Description

590-100-117—24A1 Description

592-019-100—Data Set 203—Identification and
Operation

592-019-200—Data Set 203—Installation Instruc-
tions

592-019-300—Data Set 203—Maintenance

592-019-500—Data Set 203—Testing

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3. DRAWINGS

SD-1D060-01—Printed Wiring Boards—

J SHEET	AR NO.	J SHEET	AR NO.
523	321	547	345
524	322	548	346
525	323	549	347
526	324	550	348
527	325	551	349
637	473	552	350
529	327	688	474
530	328	554	352
537	335	555	353
539	337	556	354
540	338	560	359
696	502	561	360
697	503	583	386
695	501	584	387
544	342	604	411
545	343	605	412
546	344	693	496
		694	497

SD-1D151-01—Data Set 203 Type

SD-1D152-01—22A Type Data Unit

SD-1D153-01—23A Type Data Unit

SD-1D154-01—24A Type Data Unit

4. PRODUCT

4.01 The coding of the data sets, 203A, B, and C type identifies the basic and functional options as list numbers. Note that list 1 contains common apparatus, assembly, wiring, and hardware. Variations in the basic list 1 are identified by an additional letter such as L1, L1A, L1B, etc. The functional options are identified as separate list numbers such as L2, L3, etc.

4.02 The speed options listed are intended for specific applications. These are summarized in Table A. The speeds shown within each of the L2 through L6 options can be selected with a selector switch at the time of installation. The speeds are marked on the panel. The top position selects a speed equal to the baud rate, the second position selects a speed equal to two times the baud rate, and the third position selects a speed equal to three times the baud rate. The fourth position, labeled CC, allows the customer to con-

trol the speed selection between the two higher speeds through control leads in the interface.

Data Set 203A Type Transmitter/Receiver

List 1C—Common apparatus, assembly, wiring, and hardware for one data set 203A type transmitter/receiver with provision for bit rate, auxiliary channel, and error control options, in a KS-20018,L3 cabinet which is 2 feet wide, 2 feet high, and 1 foot deep.

List 1D—Common apparatus, assembly, wiring, and hardware for one data set 203A type transmitter/receiver with provision for bit rate, auxiliary channel, and error control options, for mounting on a 23-inch frame using 20 inches of mounting height.

List 2—4-wire private line operation at a bit rate of 2.4, 4.8, or 7.2 KBPS. Simultaneous operation of main and auxiliary channel is only possible using opposite wire pairs.

List 3—Switched network, 2- or 4-wire private line operation at a bit rate of 1.8, 3.6, or 5.4 KBPS. Simultaneous operation of main and auxiliary channel is possible on any wire pair (auxiliary channel required on DDD and 2-wire private line).

List 4—Switched network, 2- or 4-wire private line operation at a bit rate of 2.4, 4.8, or 7.2 KBPS. Simultaneous operation of main and auxiliary channel is possible on any wire pair (auxiliary channel required on DDD and 2-wire private line).

List 5—4-wire private line operation at a bit rate of 3.2, 6.4, or 9.6 KBPS. Simultaneous operation of main and auxiliary channel is only possible using opposite wire pairs.

List 6—4-wire private line operation at a bit rate of 3.6, 7.2, or 10.8 KBPS. Simultaneous operation of main and auxiliary channel is only possible using opposite wire pairs.

List 7—A 0- to 150-BPS auxiliary channel.

List 8—Apparatus required in addition to L1C through L7 to provide EIA standard interface circuits.

List 9—Apparatus required in addition to L1C through L7 to provide MIL-standard interface circuits.

**TABLE OF AUTHORIZED
ORDERABLE CODES
FOR DATA SET 203A TYPE**

DATA SET	RATING	REPLACED BY
203A-L1/2	AT&TCo Std	203A-L1C/2/8 or 203A-L1C/2/9
203A-L1/2/7	AT&TCo Std	203A-L1C/2/7/8 or 203A-L1C/2/7/9
203A-L1/3*	AT&TCo Std	203A-L1C/3/8* or 203A-L1C/3/9*
203A-L1/3/7	AT&TCo Std	203A-L1C/3/7/8 or 203A-L1C/3/7/9
203A-L1/4*	AT&TCo Std	203A-L1C/4/8* or 203A-L1C/4/9*
203A-L1/4/7	AT&TCo Std	203A-L1C/4/7/8 or 203A-L1C/4/7/9
203A-L1/5	AT&TCo Std	203A-L1C/5/8 or 203A-L1C/5/9
203A-L1/5/7	AT&TCo Std	203A-L1C/5/7/8 or 203A-L1C/5/7/9
203A-L1/6	AT&TCo Std	203A-L1C/6/8 or 203A-L1C/6/9
203A-L1/6/7	AT&TCo Std	203A-L1C/6/7/8 or 203A-L1C/6/7/9
203A-L1A/2	AT&TCo Std	203A-L1D/2/8 or 203A-L1D/2/9
203A-L1A/2/7	AT&TCo Std	203A-L1D/2/7/8 or 203A-L1D/2/7/9
203A-L1A/3*	AT&TCo Std	203A-L1D/3/8* or 203A-L1D/3/9*
203A-L1A/3/7	AT&TCo Std	203A-L1D/3/7/8 or 203A-L1D/3/7/9
203A-L1A/4*	AT&TCo Std	203A-L1D/4/8* or 203A-L1D/4/9*
203A-L1A/4/7	AT&TCo Std	203A-L1D/4/7/8 or 203A-L1D/4/7/9
203A-L1A/5	AT&TCo Std	203A-L1D/5/8 or 203A-L1D/5/9
203A-L1A/5/7	AT&TCo Std	203A-L1D/5/7/8 or 203A-L1D/5/7/9
203A-L1A/6	AT&TCo Std	203A-L1D/6/8 or 203A-L1D/6/9
203A-L1A/6/7	AT&TCo Std	203A-L1D/6/7/8 or 203A-L1D/6/7/9

*4-wire line operation only.

Example: 203A-L1C/4/7/8

This is a data set 203 type transmitter/receiver (A) with a 150-BPS auxiliary channel (7) for operation on the switched network, 2- or 4-wire private line at a bit rate of 4.8 or 7.2 KBPS (4) with an EIA interface (8), in a KS-20018, L3 cabinet (L1C).

Data Set 203B Type Transmitter With an Auxiliary Channel

List 1C—Common apparatus, assembly, wiring, and hardware for one data set 203B type transmitter with a 0- to 150-BPS auxiliary channel and provision for bit rate and error control options, in a KS-20018, L3 cabinet which is 2 feet wide, 2 feet high, and 1 foot deep.

List 1D—Common apparatus, assembly, wiring, and hardware for one data set 203B type transmitter with a 0- to 150-BPS auxiliary channel and provision for bit rate and error control options, for mounting on a 23-inch frame using 1.4 inches of mounting height.

List 2—4-wire private line operation at a bit rate of 2.4, 4.8, or 7.2 KBPS. Simultaneous operation of main and auxiliary channel is only possible using opposite wire pairs.

List 3—Switched network, 2- or 4-wire private line operation at a bit rate of 1.8, 3.6, or 5.4 KBPS. Simultaneous operation of main and auxiliary channel is possible on any wire pair.

List 4—Switched network, 2- or 4-wire private line operation at a bit rate of 2.4, 4.8, or 7.2 KBPS. Simultaneous operation of main and auxiliary channel is possible on any wire pair.

List 5—A 4-wire private line operation at a bit rate of 3.2, 6.4, or 9.6 KBPS. Simultaneous operation of main and auxiliary channel is only possible using opposite wire pairs.

List 6—A 4-wire private line operation at a bit rate of 3.6, 7.2, or 10.8 KBPS. Simultaneous operation of main and auxiliary channel is only possible using opposite wire pairs.

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List 8—Apparatus required in addition to L1C through L6 to provide EIA standard interface circuits.

List 9—Apparatus required in addition to L1C through L6 to provide MIL-standard interface circuits.

TABLE OF AUTHORIZED ORDERABLE CODES FOR DATA SET 203B TYPE

DATA SET	RATING	REPLACED BY
203B-L1/2	AT&TCo Std	203B-L1C/2/8 or 203B-L1C/2/9
203B-L1/3	AT&TCo Std	203B-L1C/3/8 or 203B-L1C/3/9
203B-L1/4	AT&TCo Std	203B-L1C/4/8 or 203B-L1C/4/9
203B-L1/5	AT&TCo Std	203B-L1C/5/8 or 203B-L1C/5/9
203B-L1/6	AT&TCo Std	203B-L1C/6/8 or 203B-L1C/6/9
203B-L1A/2	AT&TCo Std	203B-L1D/2/8 or 203B-L1D/2/9
203B-L1A/3	AT&TCo Std	203B-L1D/3/8 or 203B-L1D/3/9
203B-L1A/4	AT&TCo Std	203B-L1D/4/8 or 203B-L1D/4/9
203B-L1A/5	AT&TCo Std	203B-L1D/5/8 or 203B-L1D/5/9
203B-L1A/6	AT&TCo Std	203B-L1D/6/8 or 203B-L1D/6/9

Example: 203B-L1C/6/8

This is a data set 203 type transmitter with a 150-BPS auxiliary channel (B) for operation on 4-wire private line at a bit rate of 3.6, 7.2, or 10.8 KBPS (6) with an EIA interface (8), in a KS-20018,L3 cabinet (L1C).

Data Set 203C Type Receiver With an Auxiliary Channel

List 1C—Common apparatus, assembly, wiring, and hardware for one data set 203C type receiver with a 0- to 150-BPS auxiliary channel and provision for bit rate and

error control options, in a KS-20018,L3 cabinet which is 2 feet wide, 2 feet high, and 1 foot deep.

List 1D—Common apparatus, assembly, wiring, and hardware for one data set 203C type receiver with a 0- to 150-BPS auxiliary channel and provision for bit rate and error control options, for mounting on a 28-inch frame using 20 inches of mounting height.

List 1E—Common apparatus, assembly, wiring, and hardware for one data set 203C type receiver with a 0- to 150-BPS auxiliary channel and provision for bit rate options but without provision for error control, for mounting on a 23-inch frame using 14 inches of mounting height.

List 2—4-wire private line operation at a bit rate of 2.4, 4.8, or 7.2 KBPS. Simultaneous operation of main and auxiliary channel is only possible using opposite wire pairs.

List 3—Switched network, 2- or 4-wire private line operation at a bit rate of 1.8, 3.6, or 5.4 KBPS. Simultaneous operation of main and auxiliary channel is possible on any wire pair.

List 4—Switched network, 2- or 4-wire private line operation at a bit rate of 2.4, 4.8, or 7.2 KBPS. Simultaneous operation of main and auxiliary channel is possible on any wire pair.

List 5—4-wire private line operation at a bit rate of 3.2, 6.4, or 9.6 KBPS. Simultaneous operation of main and auxiliary channel is only possible using opposite wire pairs.

List 6—4-wire private line operation at a bit rate of 3.6, 7.2, or 10.8 KBPS. Simultaneous operation of main and auxiliary channel is only possible using opposite wire pairs.

List 8—Apparatus required in addition to L1C through L6 to provide EIA standard interface circuits.

List 9—Apparatus required in addition to L1C through L6 to provide MIL-standard interface circuits.

**TABLE OF AUTHORIZED
ORDERABLE CODES
FOR DATA SET 203C TYPE**

DATA SET	RATING	REPLACED BY
203C-L1/2	AT&TCo Std	203C-L1C/2/8 or 203C-L1C/2/9
203C-L1/3	AT&TCo Std	203C-L1C/3/8 or 203C-L1C/3/9
203C-L1/4	AT&TCo Std	203C-L1C/4/8 or 203C-L1C/4/9
203C-L1/5	AT&TCo Std	203C-L1C/5/8 or 203C-L1C/5/9
203C-L1/6	AT&TCo Std	203C-L1C/6/8 or 203C-L1C/6/9
203C-L1A/2	AT&TCo Std	203C-L1D/2/8 or 203C-L1D/2/9
203C-L1A/3	AT&TCo Std	203C-L1D/3/8 or 203C-L1D/3/9
203C-L1A/4	AT&TCo Std	203C-L1D/4/8 or 203C-L1D/4/9
203C-L1A/5	AT&TCo Std	203C-L1D/5/8 or 203C-L1D/5/9

DATA SET	RATING	REPLACED BY
203C-L1A/6	AT&TCo Std	203C-L1D/6/8 or 203C-L1D/6/9
203C-L1B/2	AT&TCo Std	203C-L1E/2/8 or 203C-L1E/2/9
203C-L1B/3	AT&TCo Std	203C-L1E/3/8 or 203C-L1E/3/9
203C-L1B/4	AT&TCo Std	203C-L1E/4/8 or 203C-L1E/4/9
203C-L1B/5	AT&TCo Std	203C-L1E/5/8 or 203C-L1E/5/9
203C-L1B/6	AT&TCo Std	203C-L1E/6/8 or 203C-L1E/6/9

Example: 203C-L1E/5/9

This is a data set 203 type receiver with a 150-BPS auxiliary channel (C) for operation on 4-wire private line at a bit rate of 3.2, 6.4, or 9.6 KBPS (5) with a military-standard interface (9) for mounting on a 23-inch frame without provision for adding error control (L1E).

5. GENERAL NOTES

List of A&M Only and Mfr Disc. Products

List of A&M Only and Mfr Disc. Data Sets

The following data sets have been replaced as indicated. Where A&M Only items appear, the issue numbers are those of the issue in which the rating was first applied.

CODE NO.	RATING	DETAILS LAST SHOWN IN ISSUE	REPLACED BY
203A-L1/2	AT&TCo Std	1	203A-L1C/2/8 or 203A-L1C/2/9
203A-L1/2/7	AT&TCo Std	1	203A-L1C/2/7/8 or 203A-L1C/2/7/9
203A-L1/3*	AT&TCo Std	1	203A-L1C/3/8* or 203A-L1C/3/9*
203A-L1/3/7	AT&TCo Std	1	203A-L1C/3/7/8 or 203A-L1C/3/7/9
203A-L1/4*	AT&TCo Std	1	203A-L1C/4/8* or 203A-L1C/4/9*
203A-L1/4/7	AT&TCo Std	1	203A-L1C/4/7/8 or 203A-L1C/4/7/9
203A-L1/5	AT&TCo Std	1	203A-L1C/5/8 or 203A-L1C/5/9
203A-L1/5/7	AT&TCo Std	1	203A-L1C/5/7/8 or 203A-L1C/5/7/9
203A-L1/6	AT&TCo Std	1	203A-L1C/6/8 or 203A-L1C/6/9
203A-L1/6/7	AT&TCo Std	1	203A-L1C/6/7/8 or 203A-L1C/6/7/9
203A-L1A/2	AT&TCo Std	1	203A-L1D/2/8 or 203A-L1D/2/9
203A-L1A/2/7	AT&TCo Std	1	203A-L1D/2/7/8 or 203A-L1D/2/7/9
203A-L1A/3*	AT&TCo Std	1	203A-L1D/3/8* or 203A-L1D/3/9*
203A-L1A/3/7	AT&TCo Std	1	203A-L1D/3/7/8 or 203A-L1D/3/7/9
203A-L1A/4*	AT&TCo Std	1	203A-L1D/4/8* or 203A-L1D/4/9*
203A-L1A/4/7	AT&TCo Std	1	203A-L1D/4/7/8 or 203A-L1D/4/7/9
203A-L1A/5	AT&TCo Std	1	203A-L1D/5/8 or 203A-L1D/5/9
203A-L1A/5/7	AT&TCo Std	1	203A-L1D/5/7/8 or 203A-L1D/5/7/9
203A-L1A/6	AT&TCo Std	1	203A-L1D/6/8 or 203A-L1D/6/9
203A-L1A/6/7	AT&TCo Std	1	203A-L1D/6/7/8 or 203A-L1D/6/7/9
203B-L1/2	AT&TCo Std	1	203B-L1C/2/8 or 203B-L1C/2/9
203B-L1/3	AT&TCo Std	1	203B-L1C/3/8 or 203B-L1C/3/9
203B-L1/4	AT&TCo Std	1	203B-L1C/4/8 or 203B-L1C/4/9
203B-L1/5	AT&TCo Std	1	203B-L1C/5/8 or 203B-L1C/5/9
203B-L1/6	AT&TCo Std	1	203B-L1C/6/8 or 203B-L1C/6/9
203B-L1A/2	AT&TCo Std	1	203B-L1D/2/8 or 203B-L1D/2/9
203B-L1A/3	AT&TCo Std	1	203B-L1D/3/8 or 203B-L1D/3/9
203B-L1A/4	AT&TCo Std	1	203B-L1D/4/8 or 203B-L1D/4/9
203B-L1A/5	AT&TCo Std	1	203B-L1D/5/8 or 203B-L1D/5/9
203B-L1A/6	AT&TCo Std	1	203B-L1D/6/8 or 203B-L1D/6/9
203C-L1/2	AT&TCo Std	1	203C-L1C/2/8 or 203C-L1C/2/9
203C-L1/3	AT&TCo Std	1	203C-L1C/3/8 or 203C-L1C/3/9
203C-L1/4	AT&TCo Std	1	203C-L1C/4/8 or 203C-L1C/4/9
203C-L1/5	AT&TCo Std	1	203C-L1C/5/8 or 203C-L1C/5/9
203C-L1/6	AT&TCo Std	1	203C-L1C/6/8 or 203C-L1C/6/9
203C-L1A/2	AT&TCo Std	1	203C-L1D/2/8 or 203C-L1D/2/9
203C-L1A/3	AT&TCo Std	1	203C-L1D/3/8 or 203C-L1D/3/9
203C-L1A/4	AT&TCo Std	1	203C-L1D/4/8 or 203C-L1D/4/9
203C-L1A/5	AT&TCo Std	1	203C-L1D/5/8 or 203C-L1D/5/9
203C-L1A/6	AT&TCo Std	1	203C-L1D/6/8 or 203C-L1D/6/9
203C-L1B/2	AT&TCo Std	1	203C-L1E/2/8 or 203C-L1E/2/9
203C-L1B/3	AT&TCo Std	1	203C-L1E/3/8 or 203C-L1E/3/9
203C-L1B/4	AT&TCo Std	1	203C-L1E/4/8 or 203C-L1E/4/9
203C-L1B/5	AT&TCo Std	1	203C-L1E/5/8 or 203C-L1E/5/9
203C-L1B/6	AT&TCo Std	1	203C-L1E/6/8 or 203C-L1E/6/9

TABLE A
DETAILS OF DATA SET 203 TYPE SPEED OPTIONS

FUNCTIONAL OPTION LIST	L2	L3			L4			L5	L6
Transmission Facility	4-W PL*	Switched Network	2-W PL	4-W PL	Switched Network	2-W PL	4-W PL	4-W PL	4-W PL
Baud Rate	2400	1800	1800	1800	2400	2400	2400	3200	3600
Recommended Data Speed (KBPS)	4.8 (7.2)	3.6	3.6 (5.4)	3.6 (5.4)	4.8	4.8 (7.2)	4.8 (7.2)	3.2, 6.4 (9.6)	3.6, 7.2 (10.8)
0-150 BPS Auxiliary Channel	Optional	Always Reqd	Always Reqd	Optional	Always Reqd	Always Reqd	Optional	Optional	Optional
Simultaneous Trans- mission of Main and Auxiliary Channel	Using Opposite Pairs Only	Yes	Yes	On Any Wire Pair	Yes	Yes	On Any Wire Pair	Using Opposite Pairs Only	Using Opposite Pairs Only

*Private line is intended to mean schedule C2 private line, formerly known as 4B.

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