DATA STATION 201C

INSTALLATION AND CONNECTIONS

CONTENTS PAGE

1. GENERAL

1.01 This section provides installation and connection procedures to be followed when installing the 201C-type multiple data station. Information concerning customer-provided equipment (CPE) or related services is not included.

1.02 The multiple data station consists of data sets 201C, 42A-type data mountings (six data sets per data mounting), KS-21253-type adapters, SP100-12 power strip, and an appropriate cabinet or rack framework. The 42A1 and 42A2 data mountings are identical except that the 42A1 comes equipped with a 2-foot power cord and the 42A2 with a 12-foot power cord.

1.03 The recommended housing for the 201C multiple data station consists of KS-20018-L11A, -L12A, and -L15A cabinets. Any mounting rack arrangement that will accept the 23-inch 42A-type data mounting can also be used. Each KS-20018-type cabinet listed above will house the following number of 42A-type data mountings and data sets 201C.

- KS-20018-L11A cabinet can house two 42A-type data mountings with a maximum of 12 data sets.
- KS-20018-L12A cabinet can house one 42A-type data mounting with a maximum of six data sets.
- KS-20018-L15A cabinet can house four 42A-type data mountings with a maximum of 24 data sets.

1.04 Plugs and cables for connecting the CPE to the data sets are provided by the customer and should not exceed 50 feet in length. To minimize inductive interference to data signals on the telephone (data) line, the line should not be carried in the same run as cable between the data set and business machine or lines connected to teletypewriter services. If this condition cannot be met, it will be necessary to run the telephone (data) line in type-SK (shielded) station wire between the data set and the cable distribution terminal or building entrance. Ground the shield at one end only, preferably at the distribution terminal end.

1.05 To minimize the possibility of data errors due to potential differences between the data sets and data terminal grounds, the data mounting power outlet should be served from the same power distribution panel as the receptacle for the data terminal. If this is not possible, a test should be made (using the 6H impulse counter) to determine if excessive noise is present. This test procedure is described in the section entitled Data Set 201C Transmitter-Receiver—Test Procedures (592-029-500). If the test requirements are not met, the data station and data terminal grounds must be bonded together in accordance with local regulations.

1.06 The multiple data station arrangement may be installed in any location that is convenient for the customer (within 50 feet of the CPE). Verify that the location (selected by the customer) for the installation is adequate for maintenance and that the customer-provided standard 3-wire, grounded, 117-volt ac power outlet is ***not*** controlled by a switch. The ac power outlet and cable must

be arranged to adequately reach the equipment cabinet or mounting rack arrangement.

1.07 For switched network service, ensure that the local (data) loops have been tested and meet requirements outlined in the section entitled Data Systems—Dataphone® Service on Direct Distance Dialing Network—Test Requirements for Subscriber, Foreign Exchange, and Remote Exchange Lines (314-205-501). For private line (PL) service, ensure that the channels installed meet requirements specified in the section entitled Voice Bandwidth Private Line Data Circuits—Tests and Requirements (314-410-500).

2. SPECIAL TOOLS AND APPARATUS

2.01 In addition to the standard installation tools, installation of the data mountings and data sets will require the following special tools:

- KS-19053-L1 screwdriver, or equivalent
- Screw starter, Kedman Co. No. 1736, or equivalent.

3. DATA SET OPTIONS

3.01 Data set 201C is provided with a number of options which must be installed ***prior*** to the installation of data sets. The options to be installed in the data set will be specified on the service order. Refer to Section 592-029-200 for complete information on the installation of options for data set 201C.

4. INSTALLATION AND CONNECTIONS

4.01 Do ***not*** apply power to the cabinet or any of the related components of the data station until the complete station has been installed.

4.02 Prepare the KS-20018-type cabinet in accordance with the section entitled Data Set—Multiple Installation Information (590-010-201).

4.03 Position the cabinet near the customer-provided power outlet and the business machine interface cords. A minimum distance of two inches is required between the cabinet rear and the wall for proper ventilation. Vertical stacking of two KS-20018-L12A cabinets is permitted in room temperatures from 40°F to 120°F. Vertical stacking of a KS-20018-L12A on top of a KS-20018-L11A is permitted in room temperatures from 40°F to 100°F. No other stacking combinations are permitted. The KS-20018-L15A cabinet can be used in room temperatures from 40°F to 100°F. Operation in room temperatures up to 120°F using the KS-20018-L15A cabinet can be accomplished with the use of an orderable 150 CFM blower.

4.04 For ease of installation of the 42A-type data mountings, the KS-20018-L11A and -L12A cabinets may be placed ***face up*** or ***face down*** during installation. The screw starter and KS-19053-L1 screwdriver may be helpful in installing the 42A-type data mounting because the mounting brackets are recessed. The 42A-type data mountings, as received, can be installed through the rear of the cabinet. Data mountings can be installed through the front of the cabinet by rotating the L-shaped brackets of the data mounting.

> ***Note:*** Cabinets can be ordered with data mountings installed.

4.05 Data mountings can be recessed 3-3/4 inches into the cabinet by removing the L-shaped brackets of the data mounting and bolting them closer to the front of the data mounting in the four holes provided.

4.06 Install the SP100-12 power strip in the KS-20018-L11A and -L12A cabinets, if required. The SP100-12 power strip can be installed directly below the bottom of the data mountings. The KS-20018-L15A cabinet comes equipped with its own power strip. Separate powering of each data mounting in a cabinet is accomplished by using the 12-foot power cord included with the 42A2 data mounting.

4.07 Install the KS-21253-type adapters as required. One KS-21253-type adapter may be installed on the rear panel of the KS-20018-L12A cabinet. Up to three KS-21253-type adapters may be installed near the bottom of the mounting racks of the KS-20018-L15A cabinets. If using the KS-20018-L15A cabinet, install the 150 CFM blower, if required. Return cabinets to the upright position.

4.08 Verify that all applicable data set options are properly installed. Insert the data sets into the 42A-type data mountings. Ensure that all data sets are slid into place and are secured by the flip-up retaining bar on the data mounting.

4.09 Connect cables and route as shown in Fig. 1 and 2. Secure cables to customer equipment with cable ties on the data mounting and route downward and out of the cabinet. Route the M8K or M13F telephone interface cables to the top of the data mounting and fasten them with the neoprene cable clips. Then route the telephone cables to the right and left, as shown in Fig. 1 and 2, and out of the cabinet. Connect the power cord to the twist-lock connector on the data sets.

SWITCHED NETWORK

4.10 Connections for the switched network installation using five 201C data sets are shown in Fig. 3. The 565HK telephone set can handle up to five data sets. If more data sets are required, then another KS-21253-L3 adapter and 565HK telephone set are needed in this same configuration. The KS-21253-L3 adapter is shown in Fig. 4 and its internal connections are shown in Fig. 5. Connections for the switched network installation with the 801-type automatic calling unit (ACU) using P6 of the KS-21253-L3 adapter for access are shown in Fig. 6.

PRIVATE LINE

4.11 Connections for the PL installation are shown in Fig. 7 and 8. Six data sets 201C and six data auxiliary sets (DASs) 829-type channel interface units (CIUs) are shown in a KS-20018-L11A cabinet. The 46A-type data mounting will hold a maximum of eight CIUs but the 42A-type data mounting will hold only six data sets 201C. Therefore, only the first six positions of the 46A-type data mounting must be used. Connections from the central office to the 66E3 connecting block are shown in Table A.

4.12 A PL installation using 24 data sets 201C and 24 DASs 828A or 829-type CIUs is shown in Fig. 8. A physical layout of 24 data sets 201C in a KS-20018-L15A cabinet is shown in

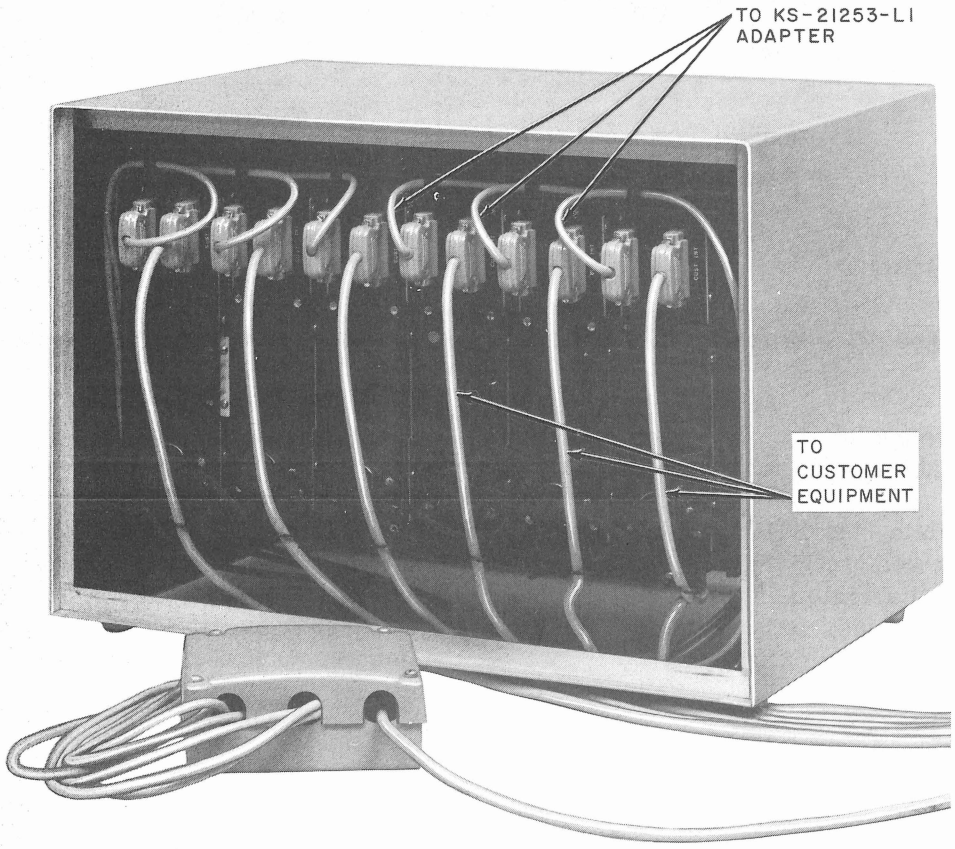


Fig. 1—Rear View of Six Data Sets 201C in a KS-20018-L12A Cabinet Showing Cable Routing

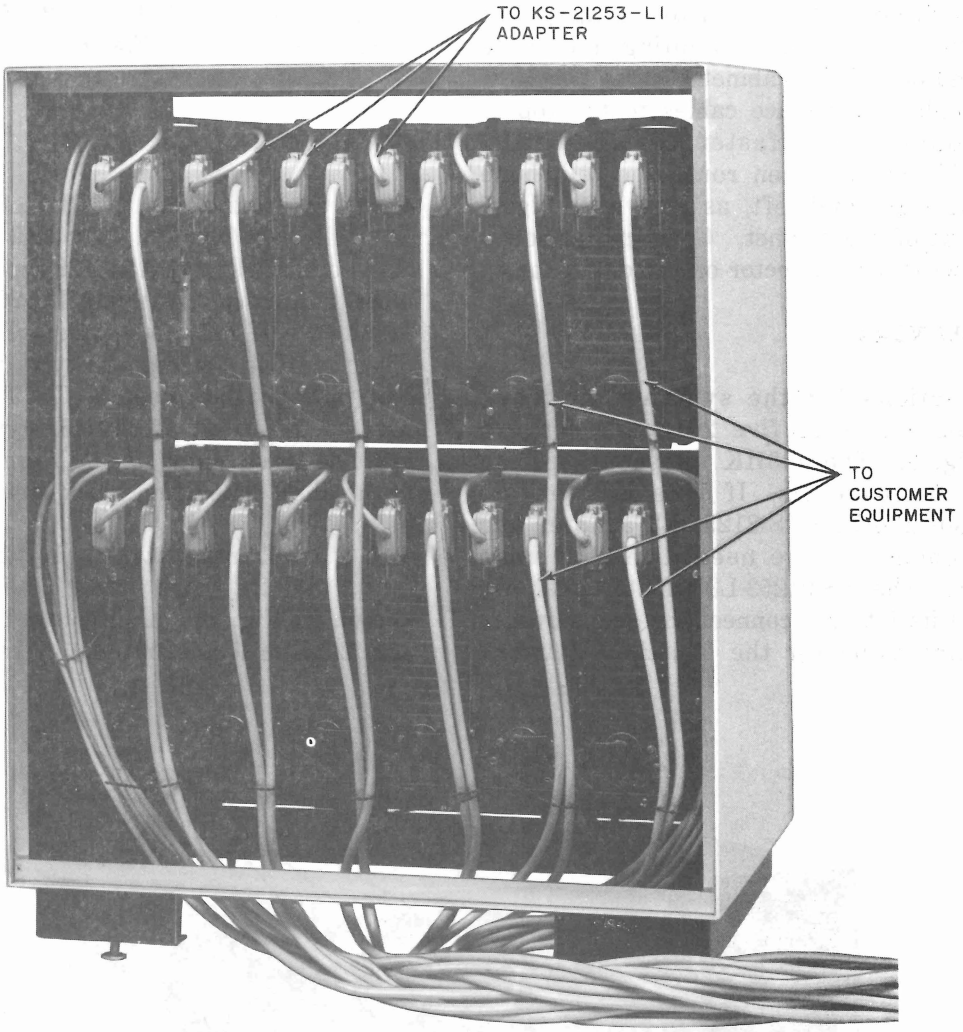


Fig. 2—Rear View of Twelve Data Sets 201C in a KS-20018-L11A Cabinet Showing Cable Routing

Fig. 9. Placement of the KS-21253-L1 adapters and efficient cable routing is also shown.

4.13 Many data sets 201C and KS-20018-type cabinet combinations are possible. The combinations illustrated in this BSP are basic examples of the many possibilities available for required needs.

5. INSTALLATION TEST

5.01 After the data sets have been installed, it should be tested to determine if it is operating properly. Perform the appropriate installation test as specified in the test section entitled Data Set 201C Transmitter-Receiver—Installation and Connections (592-029-500).

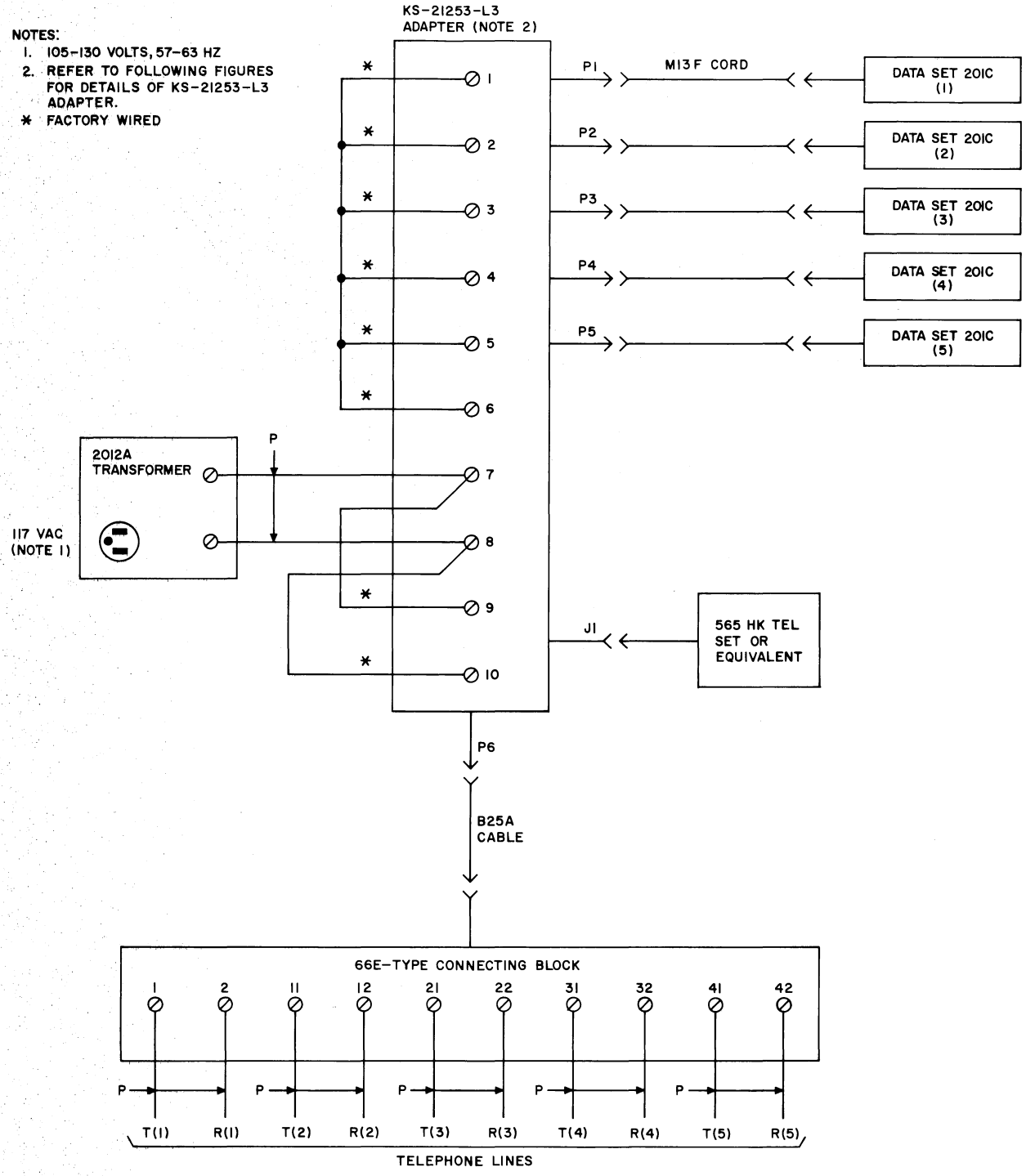


Fig. 3—Connections for Switched Network Multiple Installation of Data Set 201C

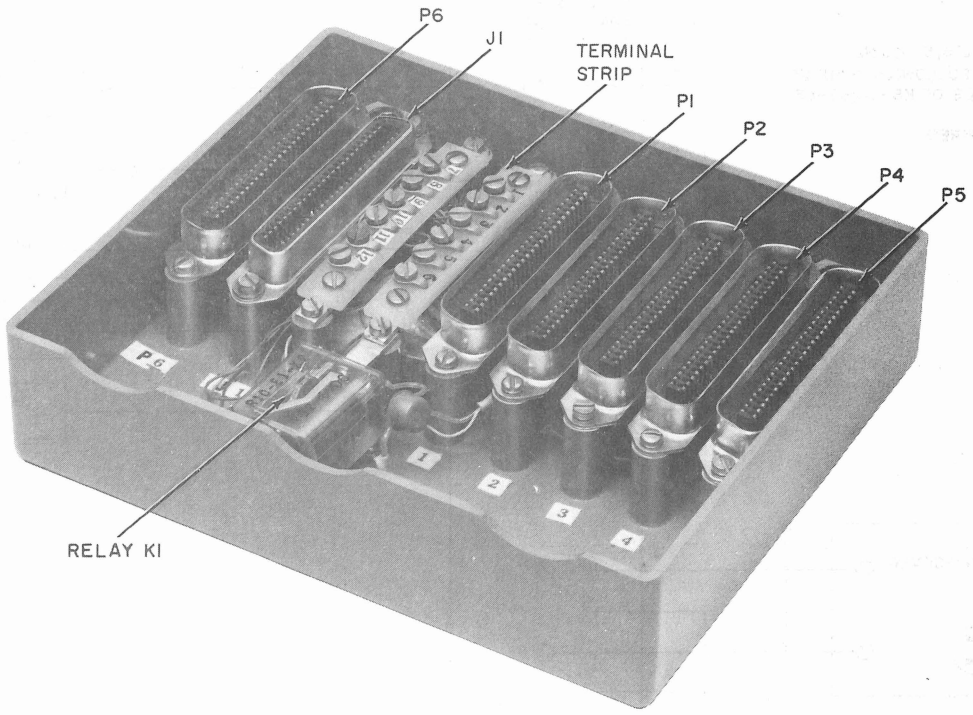
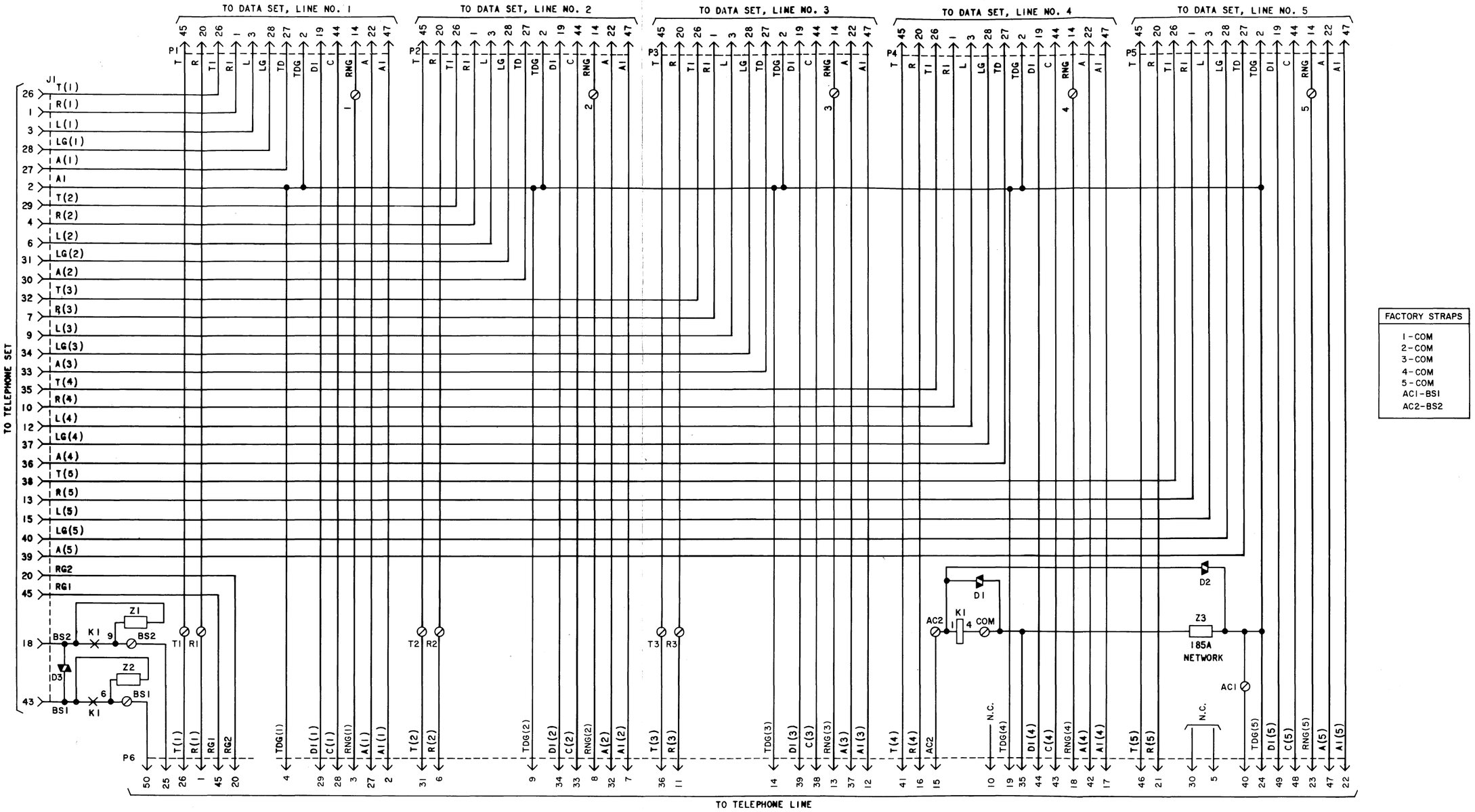


Fig. 4—KS-21253-L3 Adapter With Cover Removed



FACTORY STRAPS
1-COM
2-COM
3-COM
4-COM
5-COM
AC1-BS1
AC2-BS2

Fig. 5—Internal Connections of KS-21253-L3 Adapter

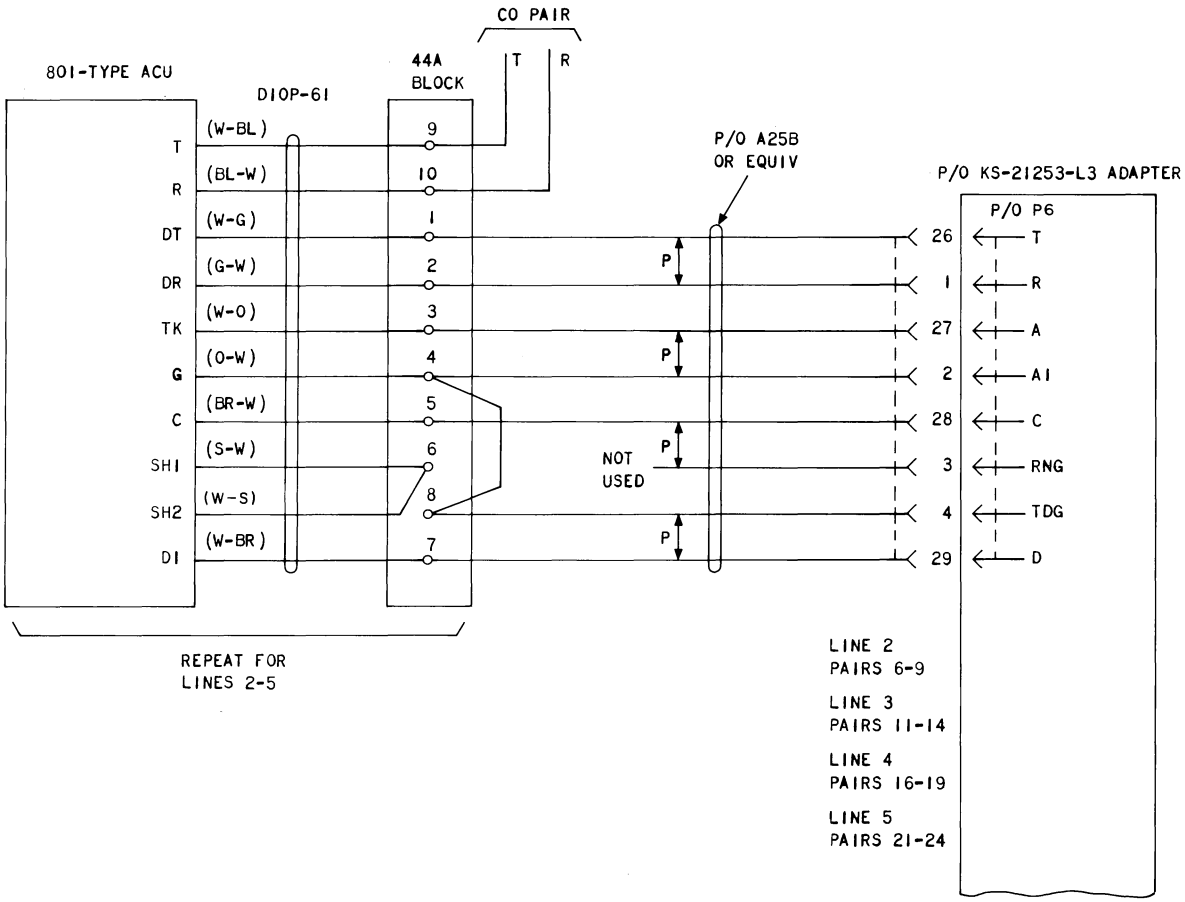
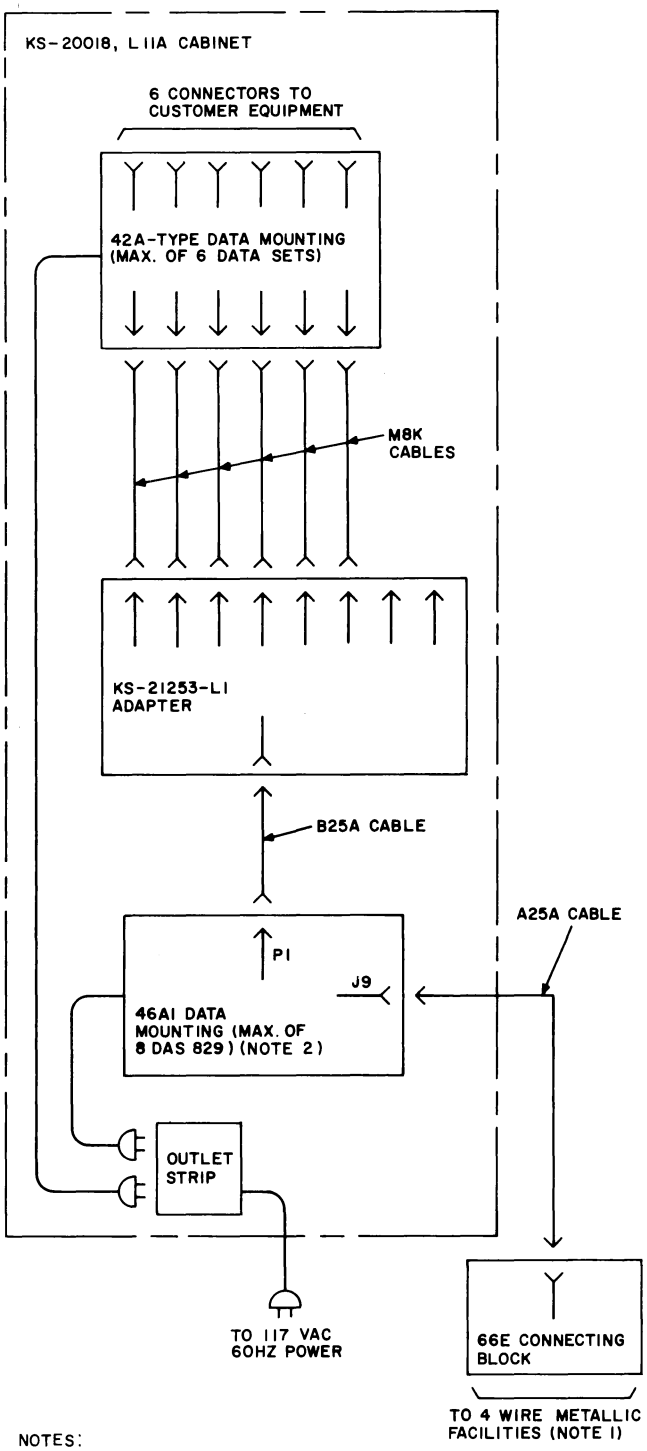


Fig. 6—ACU Wiring Using P6 of the KS-21253-L3 Adapter for ACU Access



NOTES:
1. PIN AND LEAD ASSIGNMENTS IN TABLE ENTITLED CONNECTIONS FROM CENTRAL OFFICE TO 66E3 CONNECTING BLOCK.
2. SEE TEXT FOR PLACEMENT OF DATA AUXILIARY SETS IN DATA MOUNTING.

Fig. 7—Block Diagram of a PL 201C Data Station Equipped With Six Data Sets and Six Data Auxiliary Sets

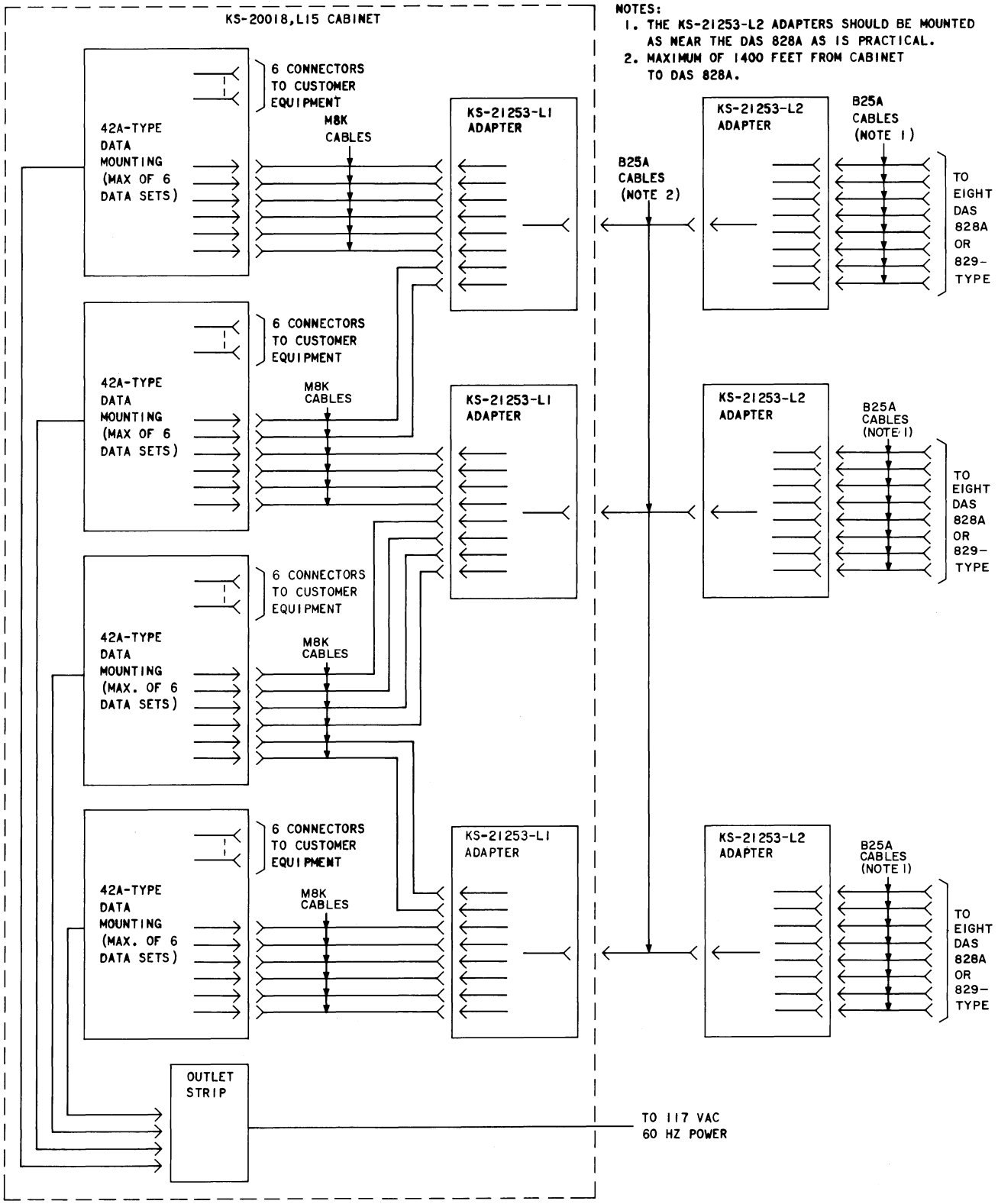


Fig. 8—Block Diagram of a PL 201C Data Station Equipped With a Maximum of 24 Data Sets

TABLE A

CONNECTIONS FROM CENTRAL OFFICE TO 66E3 CONNECTOR BLOCK

PIN NUMBER ON A25A CABLE FROM DATA MOUNTING	TERMINAL ON 66E3 CONN BLOCK	DATA SET POSITION NUMBER	LEAD DESIG	PIN NUMBER ON A25A CABLE FROM DATA MOUNTING	TERMINAL ON 66E3 CONN BLOCK	DATA SET POSITION NUMBER	LEAD DESIG
1	26	1	DT	25	38	5	DT
2	1	1	DR	26	13	5	DR
3	27	1	DT1	27	39	5	DT1
4	2	1	DR1	28	14	5	DR1
5	28	1	TEK5	29	40	5	TEK5
6	3	1	TEK6	30	15	5	TEK6
				31	41	6	DT
7	29	2	DT	32	16	6	DR
8	4	2	DR	33	42	6	DT1
9	30	2	DT1	17	17	6	DR1
10	5	2	DR1	35	43	6	TEK5
11	31	2	TEK5	36	18	6	TEK6
12	6	2	TEK6	37	44	7	DT
				38	19	7	DR
13	32	3	DT	39	45	7	DT1
14	7	3	DR	40	20	7	DR1
15	33	3	DT1	41	46	7	TEK5
16	8	3	DR1	42	21	7	TEK6
17	34	3	TEK5	43	47	8	DT
18	9	3	TEK6	44	22	8	DR
				45	48	8	DT1
19	35	4	DT	46	23	8	DR1
20	10	4	DR	47	49	8	TEK5
21	36	4	DT1	48	24	8	TEK6
22	11	4	DR1				
23	37	4	TEK5	49	50	—	—
24	12	4	TEK6	50	25	—	—

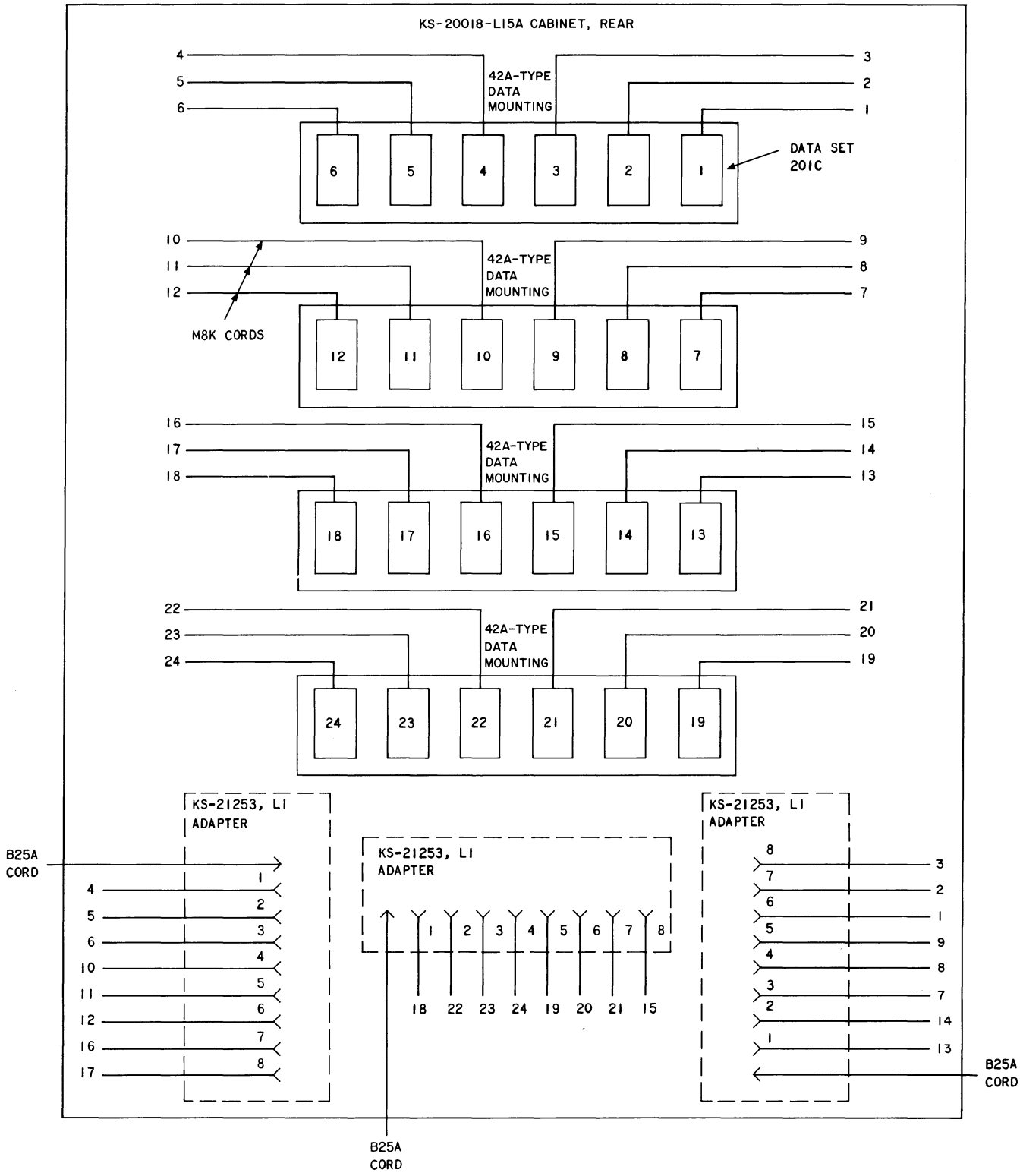


Fig. 9—Arrangement Showing Data Set Placement and Cable Routing to KS-21253-L1 Adapter in a KS-20018-L15A Cabinet