

## DATA AUXILIARY SET 816-TYPE INSTALLATION AND CONNECTION

### 1. GENERAL

**1.01** This section describes the procedures to be followed when a Data Auxiliary Set 816A-type or Data Auxiliary Set 816B-type is installed at a customer's premises.

**1.02** This section is reissued to add information covering the KS-20018-type cabinet and to update the section to agree with the latest modifications to the 130-type subscriber set. Since this reissue constitutes a general revision, arrows ordinarily used to indicate changes have been omitted.

### 2. INSTALLATION

**2.01** Data Auxiliary Set 816A-type and Data Auxiliary Set 816B-type will be referred to in this section as DAS 816A and DAS 816B, respectively.



*When installing the DAS 816A, it is imperative that strict attention be given to the proper positioning or mounting of the DAS. This is to insure that mercury relay CF is positioned as required for proper operation.*

**2.02** Locate DAS within range of the terminal equipment interface connector cord. This cord, supplied by the customer, should not exceed 50 feet in length.

**2.03** Verify that the overall facilities have been tested and meet transmission requirements specified in the section entitled Private Line Data Circuits, Voice Bandwidth Circuits for Miscellaneous Data, Overall Tests and Requirements (314-410-500).

**2.04** To minimize interference to other signals from the SL and RL leads, they should not be carried in the same run as leads connected to other types of services. It is desirable to keep these leads as short as possible to avoid interference with ac services. If this condition cannot be met,

it will be necessary to run the SL and RL leads in type SK (shielded) station wire between the DAS and 130-type TTY subscriber set.



*Ground shield at one end only, preferably the end at the 130-type TTY subscriber set.*

**2.05** The customer shall furnish a 3-wire 117-volt ac receptacle (to accept a plug with two parallel blades and a U-shape grounding pin). *The receptacle should not be under control of a switch.*

**2.06** To avoid the possibility of data errors due to a potential difference between the DAS ground and the terminal equipment ground, the outlet for the DAS power cord should be served from the same ac power distribution panel as the terminal equipment. If they are not served from the same panel, a test using the 6A Impulse Counter should be made to detect the presence of noise potentials on the ground connection. This test procedure is described in 598-041-500. If test requirements are not met, DAS ground and the terminal equipment ground must be bonded together.



*The method of providing this bond should be in accordance with local instructions.*

**2.07** At time of installation, a complete test of the DAS should be made as outlined in section entitled Data Auxiliary Set 816-Type, Test Procedures (598-041-500).

### *130-Type TTY Subscriber Set*



*Do not connect the power cords of 130-type TTY subscriber set or DAS 816-type until all installation work has been completed.*

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**2.08** Installation of the 130-type TTY subscriber set shall be in accordance with section entitled 130-Type Teletypewriter Subscriber Set, Installation (570-303-203).

**2.09** Table A summarizes the strapping required for the proper operation of the 130-type TTY subscriber set with DAS 816-type.

**2.10** For further information on the 130-type TTY subscriber set, refer to SD-70847-01.

**Note:** Verify that T option has been installed on the 130-type TTY subscriber set. Before starting adjustments or connecting power to the 130-type TTY subscriber set, block relay SU operated using a 136B tool, or equivalent. Adjust the REC LP potentiometer to the midpoint of its range, and operate C1 switch to the MH position. This procedure is required to prevent operation of fuses in DAS 816-type

during the adjustment of the 130-type TTY subscriber set.

**DAS 816A**

**2.11** DAS 816A shall be installed in conformance with existing practices covering installation of station sets.

**2.12** Install DAS 816A on a vertical surface using the 180A Backboard if required. The light grey faceplate should be on top with the cables on the bottom.

**2.13** To comply with the proper positioning of mercury relay CF, the DAS 816A must not be mounted at an angle greater than 30 degrees from the vertical. Any greater angle will cause improper operation of mercury relay CF.

**TABLE A  
130-TYPE TTY SUBSCRIBER SET**

	LEAD		130B2		130C1	
			FROM	TO	FROM	TO
POWER (KS-5663, L8 or L10)	+130V DC			28		28
	DC GRD			14		14
	20V AC			15		15
	AC GRD			29		29
2-WIRE OPERATION	T			1		1
	R			16		16
4-WIRE OPERATION	SEND	T		1		1
		R		16		16
	REC	T		2		2
		R		17		17
STRAP			9	24	3	18
			10	11 to 12	6	7
					9	24
					10	11 to 12
					14	22
					21	22
					26	27
				8	23	

**2.14** DAS 816A cover removal and replacement procedures are found in section entitled Data Auxiliary Set 816-Type, Maintenance (598-041-300).

### **DAS 816B**

**2.15** DAS 816B is a completely wired unit designed to mount on a 23-inch relay rack or in an equivalent suitable cabinet. As noted in 2.02, the cable to the customer's terminal equipment should not exceed 50 feet.

**2.16** Two types of cabinets are available for floor mounting DAS 816B (KS-20018-type and KS-19643-type).

**Note:** Although the KS-19643 L1 cabinet has been rated manufacture discontinued, information on this cabinet is retained in this section for those cabinets still in stock.

**2.17** A KS-20018 L2 cabinet will accept one DAS 816B unit. This cabinet is a 2-tone grey textured vinyl finish, aluminum cabinet 24-inches wide, 17-inches high, and 12-inches deep. The cabinet provides an inside vertical mounting of 14 inches on 23-inch mounting plates. It is recommended that a 590A Panel be installed (must be ordered separately) to remove the necessity of the customer providing a **duplex** power receptacle to accommodate the two power cords. The mounting details are shown in Fig. 1(a).

**2.18** A KS-20018 L4 cabinet will accept two DAS 816B units. This cabinet is a 2-tone grey textured vinyl finish, aluminum cabinet 24-inches wide, 30-inches high, and 12-inches deep. The cabinet provides an inside vertical mounting of 26 inches on 23-inch mounting plates. It is recommended that a 590A Panel be installed (must be ordered separately) to remove the necessity of the customer providing **two** duplex power receptacles to accommodate the four power cords. The mounting details are shown in Fig. 1(b).

**2.19** A KS-19643 L1 cabinet will accept two DAS 816B units. This cabinet is a 2-tone grey textured vinyl finish, steel cabinet 28-inches wide, 30-inches high, and 19-inches deep. It must be equipped with four List 4 (horizontal bar), two List 12 (vertical bar), and one List 11 (power cord and receptacle), see Fig. 2(a).

**2.20** A KS-19643 L2 cabinet will accept six DAS 816B units. This cabinet is a 2-tone grey textured vinyl finish, steel cabinet 28-inches wide, 66-inches high, and 19-inches deep. It must be equipped with eight List 4 (horizontal bar), two List 13 (vertical bar), and one List 11 (power cord and receptacle), see Fig. 2(b).

**2.21** Installations that require the 130-type TTY subscriber sets **and** DAS 816B to be mounted in the same cabinet will have to be locally engineered. Due to the various customer requirements and equipment configurations that are possible at each customer location, this information will not be covered in this section. Refer to the section entitled Data Sets, Multiple Installation Information (590-010-201) for information relating to cabinets available for such installations.

### **3. CONNECTIONS**



**Do not connect the power cords of 130-type TTY subscriber sets or DAS 816-type until all connections have been completed.**

**3.01** The connections required for DAS 816A are shown in Fig. 3.

**3.02** The connections required for DAS 816B are shown in Fig. 4.

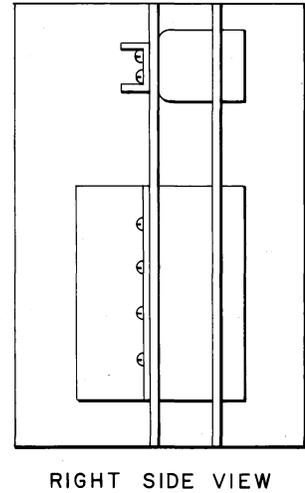
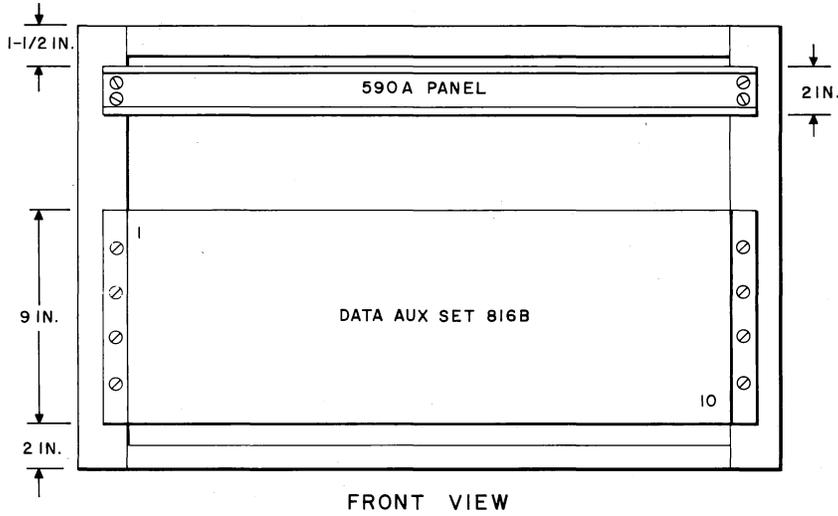
**Note:** When DAS 816B is equipped with five or less data coupling units in slots 1 through 5, the power cord to the P2 rectifier will not be required. For installations with six or more data coupling units, both P1 and P2 rectifiers will be required.

### **4. DATA COUPLING UNIT**

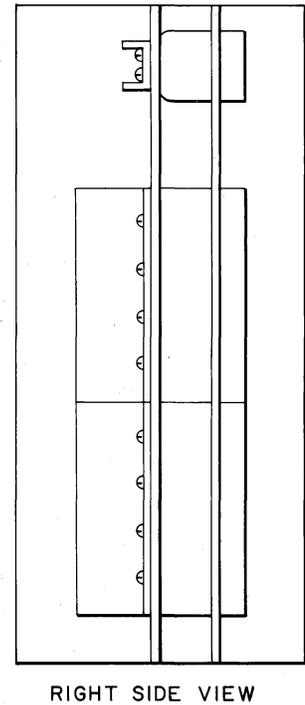
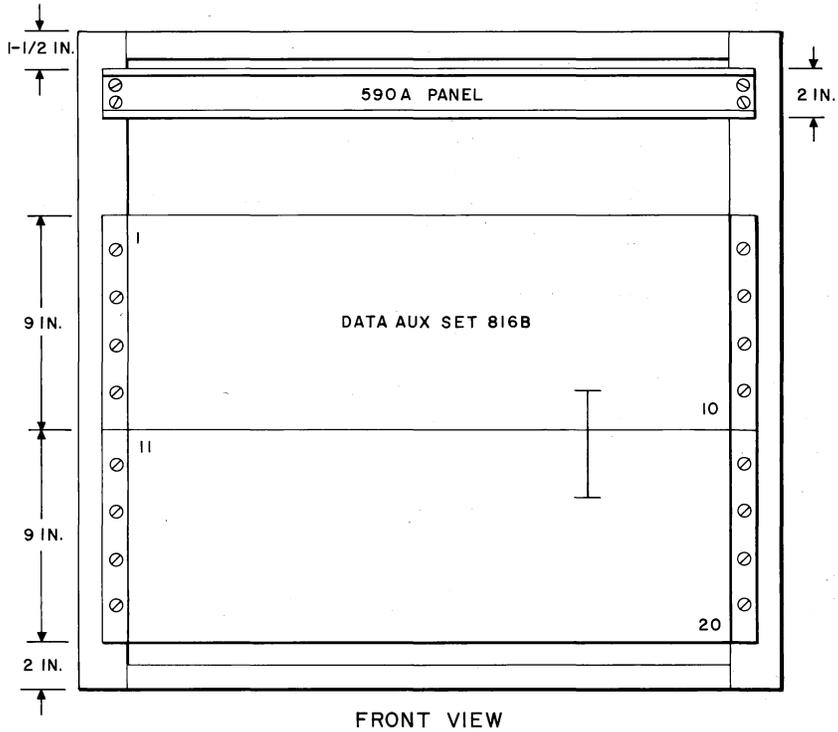
**4.01** When all installation and connection work is completed, verify that each data coupling unit (associated with DAS 816A or DAS 816B) is properly seated in its connector.

**4.02** Options on the data coupling unit consist of the two switches on the faceplate. The HDX/FDX switch should be operated to the proper position to agree with the type of service. The NOR/TST switch should be operated to the NOR position.

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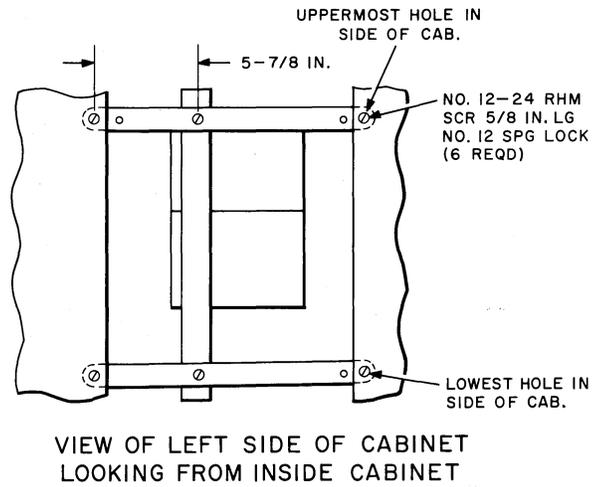
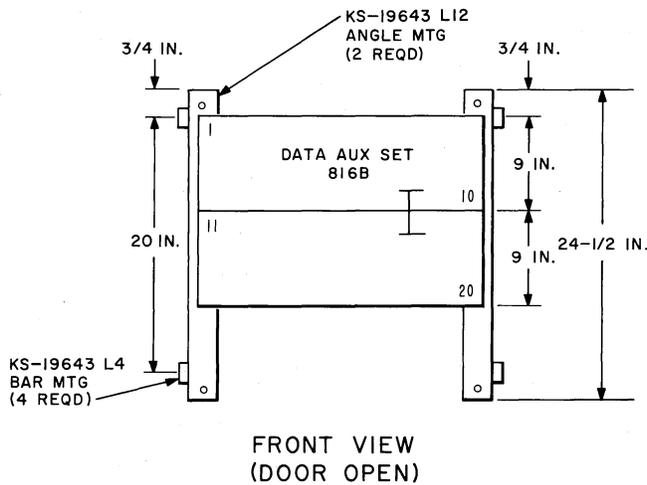


(A) METHOD OF MOUNTING ONE DAS 816B IN KS-20018, L2 CABINET

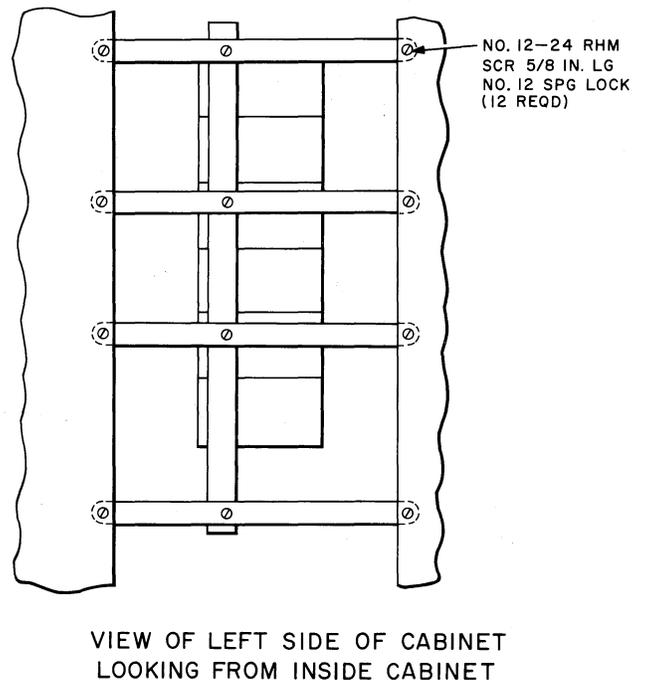
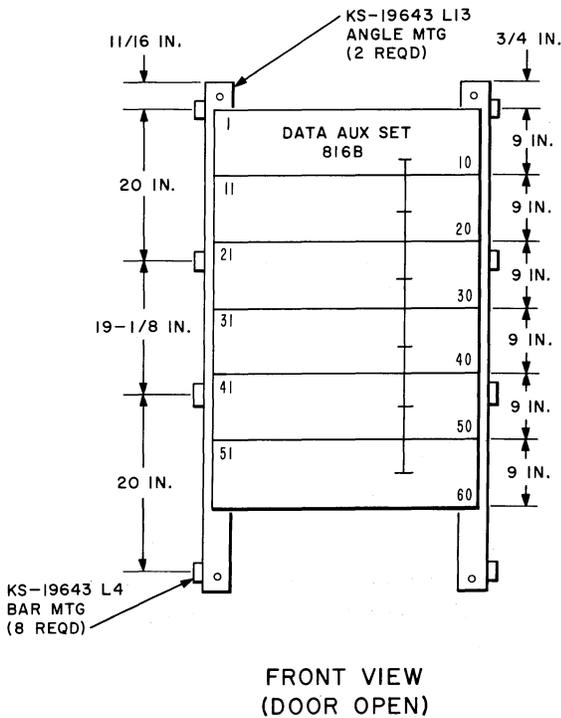


(B) METHOD OF MOUNTING TWO DAS 816B IN KS-20018, L4 CABINET

Fig. 1—Mounting Details for KS-20018-Type Cabinets



(A) METHOD OF MOUNTING DATA AUX SET 816B IN KS-19643 L1 CABINET



(B) METHOD OF MOUNTING DATA AUX SET 816B IN KS-19643 L2 CABINET

Fig. 2—Mounting Details for KS-19643-Type Cabinets

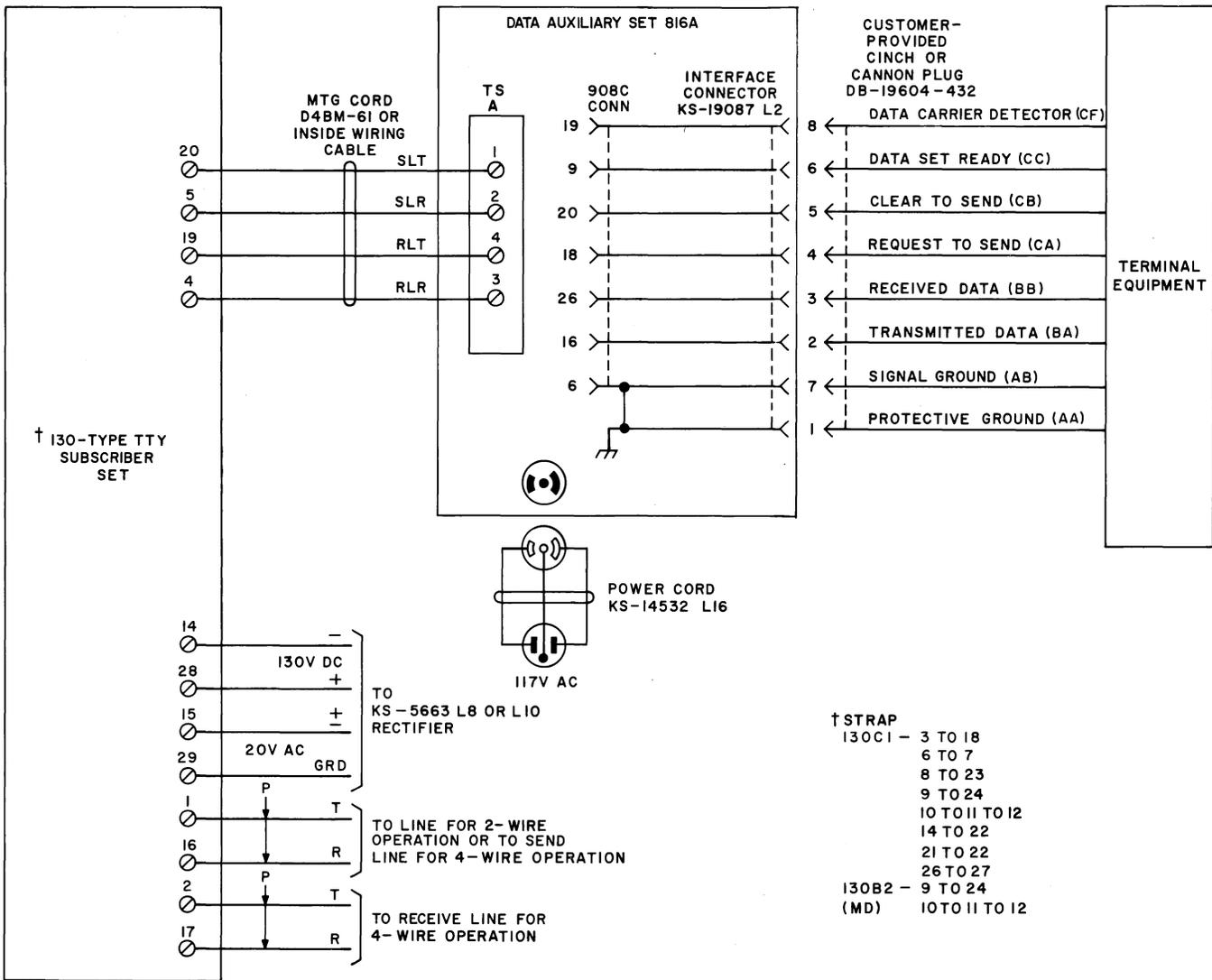


Fig. 3—Connections, Single Unit Installation, DAS 816A

**Note:** The type of service should be specified on the service order and/or circuit layout record card.

**5.02** Proceed with the installation test as covered in the section entitled Data Auxiliary Set 816-Type, Test Procedures (598-041-500).

**5. INSTALLATION TEST**

**5.01** Connect the power cords of 130-type TTY subscriber set(s) and DAS 816A (or 816B) to the customer-provided ac power receptacle.

