

**REFERENCE**  
**1A1 KEY TELEPHONE SYSTEM**  
**KEY SERVICE UNITS**

**1. GENERAL**

**1.01** This section contains identification information for the 300 and 2300 series KSUs.

**1.02** Information in this section was formerly contained in Sections 518-240-100, 518-245-101, and 518-245-102 which are hereby canceled.

**2. IDENTIFICATION**

**PURPOSE**

- The 300- and 2300-series KSUs provide the basic requirements for 1A1 and 6A (selector only) Key Telephone Systems. They consist of various combinations of 202D, 230B, 232B, 238A, 207C, and 216A KTUs. They may be obtained as a complete unit. (See Ordering Guide)

**APPLICATION**

- 1A1 and 6A (Selector only) Key Telephone Systems

**ORDERING GUIDE**

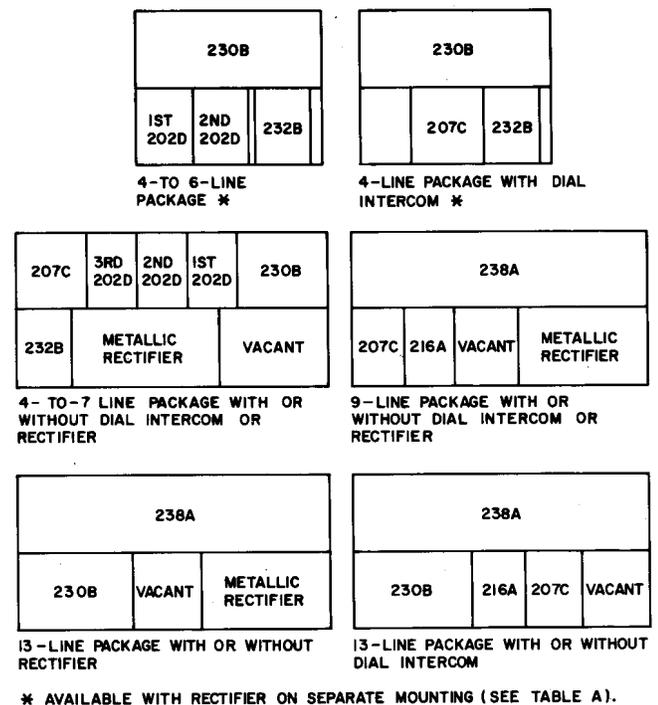
- The 300- and 2300-series KSUs may be ordered by using the appropriate code as shown in Tables A and B.

**DESIGN FEATURES**

**2.01** The 300- and 2300 series KSUs provide for:

- Pickup and hold on 4 to 13 CO or PBX lines with or without a 9- or 18- station dial selective intercommunicating circuit
- Electromechanical interrupter, flashing and winking lamps, interrupted audible signal, manual intercommunicating, and time-out.

**2.02** Fig. 1 shows the arrangement of KTUs used in the various 300- and 2300- KSUs.



**Fig. 1—KSU Block Diagram**

**2.03** Refer to Tables A and B for the various features that can be derived.

**2.04** The *300, 301, and 2301 type KSUs* may be wall mounted, or enclosed in a wall or floor-mounted ED-69462-01 cabinet assembly. The 116A cover is optional.

**2.05** The *310, 311, and 2311 type KSUs* are designed for wall mounting, but may be associated with the ED-95023-01 metal stand.

TABLE A

## ORDERING GUIDE

## 300, 301, AND 2301-TYPE KSU'S MOUNTED ON 31B APPARATUS MOUNTING AND 177A BACKBOARD

SERVICES SUPPLIED BY INDIVIDUAL KEY SERVICE UNITS	LINES & COMMON EQUIPMENT		INTERCOM	COVER	FLOOR STAND WITH UNIT COVER	TRANS/RECT POWER PLANT 101G	UNITS, KEY, SERVICE		
	232B & KS-INTERRUPTER		207C KTU	116A			INTERWIRED KTU WITHOUT 66-TYPE CONN BLOCKS	INTERWIRED KTU WITH 66-TYPE CONN BLOCKS	INTERWIRED KTU WITH 66-TYPE CONN BLOCKS AND A75A CONN CABLE
	230B KTU	202D KTU							
4 Lines, Manual Intercom, Wall Mounted, Without Cover	1						300A1	301A1(MD)	
4 Lines, Manual Intercom, Wall Mounted, With Cover	1			1			300A2	301A2(MD) or 2301A2	
4 Lines, Manual Intercom, Floor Stand, Without Power	1				1		300A3	301A3(MD)	
4 Lines, Manual Intercom, Floor Stand, With Power	1				1	1	300A4	301A4(MD)	
4 Lines, Manual & Dial Intercom, Wall Mounted, Without Cover	1		1				300A1D	301A1D(MD)	
4 Lines, Manual & Dial Intercom, Wall Mounted, With Cover	1		1	1			300A2D	301A2D(MD) or 2301A2D	
4 Lines, Manual & Dial Intercom, Floor Stand, Without Power	1		1		1		300A3D	301A3D(MD)	302A3D(MD)
4 Lines, Manual & Dial Intercom, Floor Stand, With Power	1		1		1	1	300A4D	301A4D(MD)	302A4D(MD)
5 Lines, Manual Intercom, Wall Mounted, Without Cover	1	1					300A5	301A5(MD)	

TABLE A (Cont)

300, 301, AND 2301-TYPE KSU'S MOUNTED ON 31B APPARATUS MOUNTING AND 177A BACKBOARD

SERVICES SUPPLIED BY INDIVIDUAL KEY SERVICE UNITS	LINES & COMMON EQUIPMENT		INTERCOM	COVER	FLOOR STAND WITH UNIT COVER	TRANS/RECT POWER PLANT 101G	UNITS, KEY, SERVICE		
	232B & KS-INTERRUPTER		207C KTU	116A			INTERWIRED KTU WITHOUT 66-TYPE CONN BLOCKS	INTERWIRED KTU WITH 66-TYPE CONN BLOCKS	INTERWIRED KTU WITH 66-TYPE CONN BLOCKS AND A75A CONN CABLE
	230B KTU	202D KTU							
5 Lines, Manual Intercom, Wall Mounted, With Cover	1	1		1			300A6	301A6(MD) or 2301A6	
5 Lines, Manual Intercom, Floor Stand, Without Power	1	1			1		300A7	301A7(MD)	
5 Lines, Manual Intercom, Floor Stand, With Power	1	1			1	1	300A8	301A8(MD)	
6 Lines, Manual Intercom, Wall Mounted, Without Cover	1	2					300A9	301A9(MD)	
6 Lines, Manual Intercom, Wall Mounted, With Cover	1	2		1			300A10	301A10(MD) or 2301A10	
6 Lines, Manual Intercom, Floor Stand, Without Power	1	2			1		300A11	301A11(MD)	
6 Lines, Manual Intercom, Floor Stand, With Power	1	2			1	1	300A12	301A12(MD)	

**TABLE B**  
**ORDERING GUIDE**  
**310, 311, AND 2311-TYPE KSU'S MOUNTED ON 16C APPARATUS MOUNTING WITH 117A COVER**

SERVICES SUPPLIED BY INDIVIDUAL KEY SERVICE UNITS	LINES & COMMON EQUIPMENT			POWER	UNITS, KEY, SERVICE						
	230B KTU	KS INTERRUPTER		202D KTU	J86731D LIST 1	INTERWIRED KTU WITHOUT 66-TYPE CONN BLOCKS	INTERWIRED KTU WITH 66-TYPE CONN BLOCKS	DIAL INTERCOM KEY SERVICE UNITS			
		232B KTU	238A KTU					INTERWIRED KTU WITHOUT 66-TYPE CONN BLOCKS	207C (FIRST 9 CODES)	216A (SECOND 9 CODES)	INTERWIRED KTU WITH 66-TYPE CONN BLOCKS
4 Lines, Manual Intercom, Without Power	1	1				310A1	311A1	310A1D	•		—311A1D
4 Lines, Manual Intercom, With Power	1	1			•	310A2	311A2 or 2311A2	310A2D	•		311A2D or 2311A2D
5 Lines, Manual Intercom, Without Power	1	1		1		310A3	311A3	310A3D	•		—311A3D
5 Lines, Manual Intercom, With Power	1	1		1	•	310A4	311A4 or 2311A4	310A4D	•		311A4D or 2311A4D
6 Lines, Manual Intercom, Without Power	1	1		2		310A5	311A5	310A5D	•		—311A5D
6 Lines, Manual Intercom, With Power	1	1		2	•	310A6	311A6 or 2311A6	310A6D	•		311A6D or 2311A6D
7 Lines, Manual Intercom, Without Power	1	1		3		310A7	311A7	310A7D	•		—311A7D
7 Lines, Manual Intercom, With Power	1	1		3	•	310A8	311A8 or 2311A8	310A8D	•		311A8D or 2311A8D
8 Lines, Manual Intercom, Without Power	1	1		4		310A9	311A9 (MD)				

TABLE B (Cont)

ORDERING GUIDE

310, 311, AND 2311-TYPE KSU'S MOUNTED ON 16C APPARATUS MOUNTING WITH 117A COVER

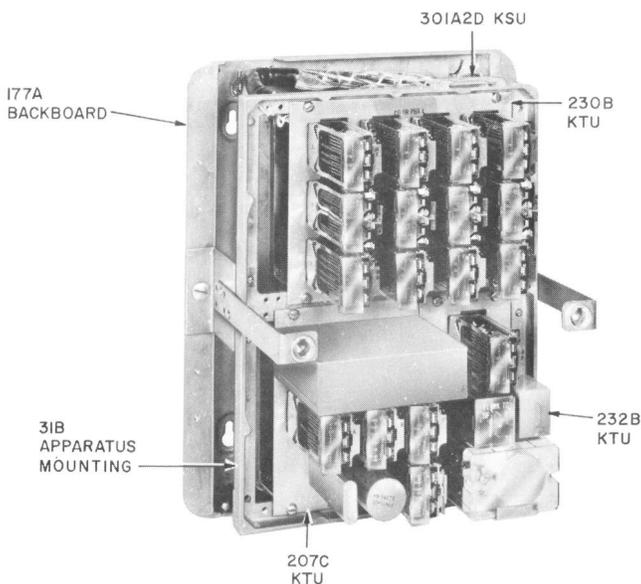
SERVICES SUPPLIED BY INDIVIDUAL KEY SERVICE UNITS	LINES & COMMON EQUIPMENT			POWER J86731D LIST 1	UNITS, KEY, SERVICE						
	230B KTU	KS INTERRUPTER			202D KTU	INTERWIRED KTU WITHOUT 66-TYPE CONN BLOCKS	INTERWIRED KTU WITH 66-TYPE CONN BLOCKS	DIAL INTERCOM KEY SERVICE UNITS			
		232B KTU	238A KTU					INTERWIRED KTU WITHOUT 66-TYPE CONN BLOCKS	207C (FIRST 9 CODES)	216A (SECOND 9 CODES)	INTERWIRED KTU WITH 66-TYPE CONN BLOCKS
8 Lines, Manual Intercom, With Power	1	1		4	•	310A10	311A10 (MD)				
9 Lines, No Manual Intercom, Without Power			1			310A11	311A11	310A11D	•	•	-311A11D
9 Lines, No Manual Intercom, With Power			1		•	310A12	311A12	310A12D	•	•	-311A12D
13 Lines, No Manual Intercom, Without Power	1		1			310A13	311A13	310A13D	•	•	-311A13D
13 Lines, No Manual Intercom, With Power	1		1		•	310A14	311A14				

**SECTION 518-114-120**

**2.06** A KS-15900, List 1 electromechanical interrupter is furnished with each KSU and is plugged into either the 232B or the 238A KTU.

**2.07 300-, 301-, and 2301-Type KSUs (4 to 6 Lines):** These KSUs provide four to six CO or PBX Line circuits. They are premounted interwired and consist of the apparatus shown in Table A. The 2301-type KSU is a recoded 200F KTU modified by the Western Electric Service Center, to approximate in appearance and performance the 301-type KSU.

**2.08** Fig. 2 shows a 301A2D KSU arranged for wall mounting.

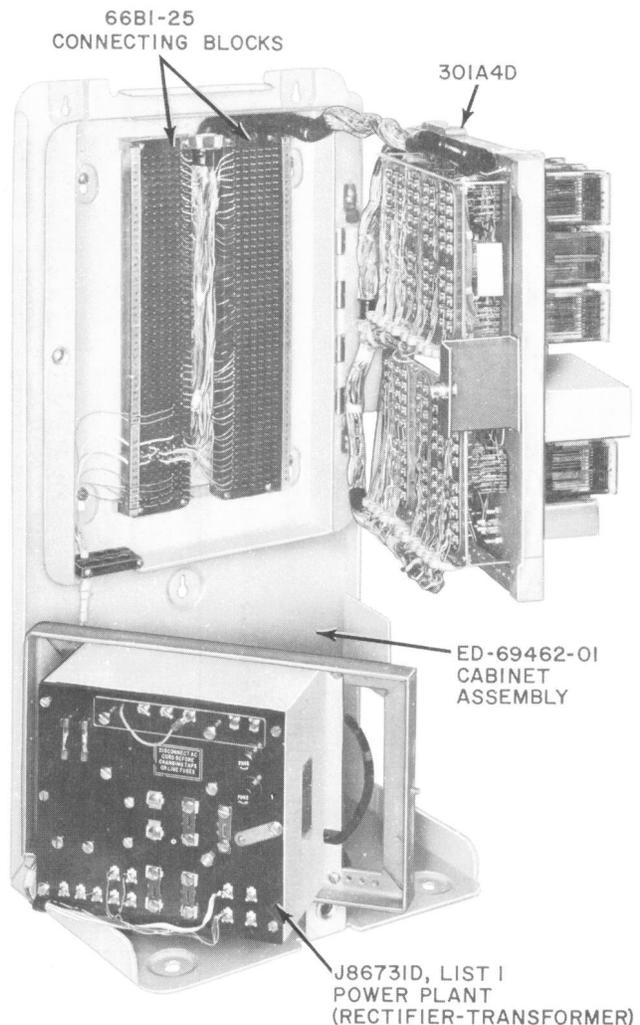


**Fig. 2—301A2D KSU, Cover Removed**

**2.09** Fig. 3 shows a 301A4D KSU with 177A backboard and 66-type connecting blocks.

**2.10 302-Type KSU:** The 302-type KSUs are comprised of the 302A3D and 302A4D KSUs. An ED-69462-01 cabinet assembly is supplied as part of the unit. A length of A75A connector cable terminated on 66-type connecting blocks is furnished as part of the 302-type KSUs.

**2.11** The two 302-type KSUs are designed for plug-ended concept. Telephone sets may be



**Fig. 3—301A4D KSU, Cover Removed**

plugged in directly or extended by use of connector cables and/or adapters.

**2.12** The 302-type units are the same as their equivalent 301-type counterparts, with the exception of the A75A connector cable.

**2.13** Fig. 4 is a 302A4D KSU in an open position to show the A75A cable.

**2.14 The 310-, 311-, and 2311-Type KSUs (4 to 7 Lines):** Provide 4 to 7 CO or PBX line packages, are factory mounted on 16C apparatus mountings, and consist of the apparatus shown in Table B.

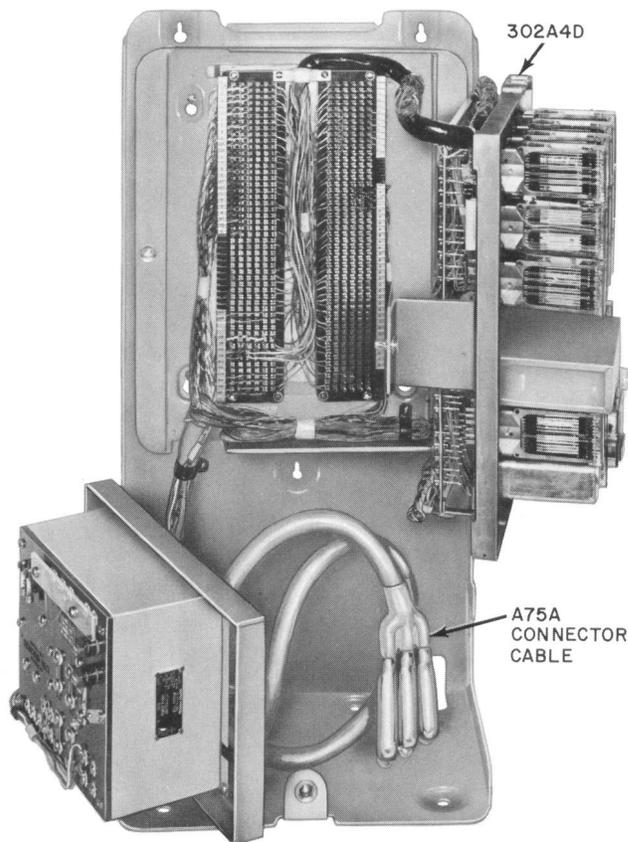


Fig. 4—302A4D KSU, Cover Removed

2.15 The *2311-type KSU* is a recoded 200K KTU modified by the Western Electric Service Center, to approximate in appearance and performance the 311-type KSUs.

2.16 Fig. 5 shows the 311A8D KSU with the gate closed and Fig. 6 shows the 311A8D KSU with the 66-type connecting blocks.

2.17 *The 310- and 311-type KSUs (9 to 13 Lines):* Provide 9 to 13 CO or PBX line circuits, are factory mounted on 16C apparatus mountings, and consist of the apparatus shown in Table B.

2.18 Fig. 7 shows the 311A12D KSU with the gate closed and Fig. 8 shows the 311A12D KSU with the 66-type connecting blocks.

2.19 Refer to Division 463, section entitled, Equipment Cabinets and Apparatus Mountings, Identification for identification of the following:

- 117A Backboard
- 31B Apparatus Mounting
- 16C Apparatus Mounting
- ED-69462-01, Group 1 Cabinet Assembly (floor stand only)
- ED-69462-01, Group 2 Cabinet Assembly (cover assembly only)
- ED-69462-01, Group 3 Cabinet Assembly (wood base only)

2.20 Refer to the 461 Division for information on 66-type connecting blocks.

2.21 Aluminum foil pressure-sensitive tapes, preprinted with the feature layout, are supplied on all 66-type connecting blocks associated with KSUs.

### 3. HANDLING

3.01 Wire spring relays are used almost exclusively in the 300- and 2300 series KSUs. These relays require careful handling, and adequate packing protection.

3.02 The following rules should apply when transporting and handling packaged units.

- Follow directions printed on cartons
- Do not drop cartons
- Ship in suitable cartons, adequately packed.

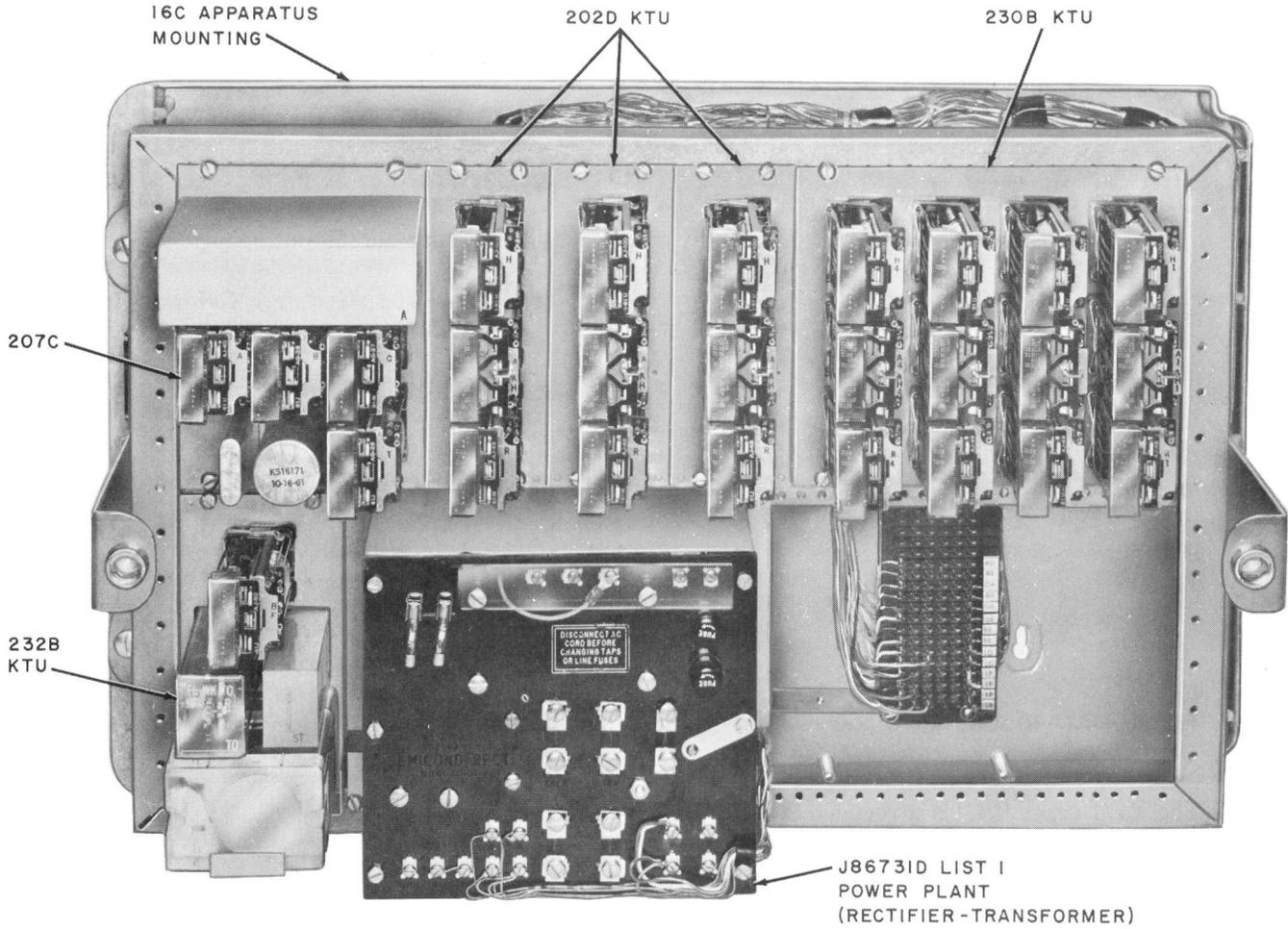


Fig. 5—311A8D KSU, Gate Closed

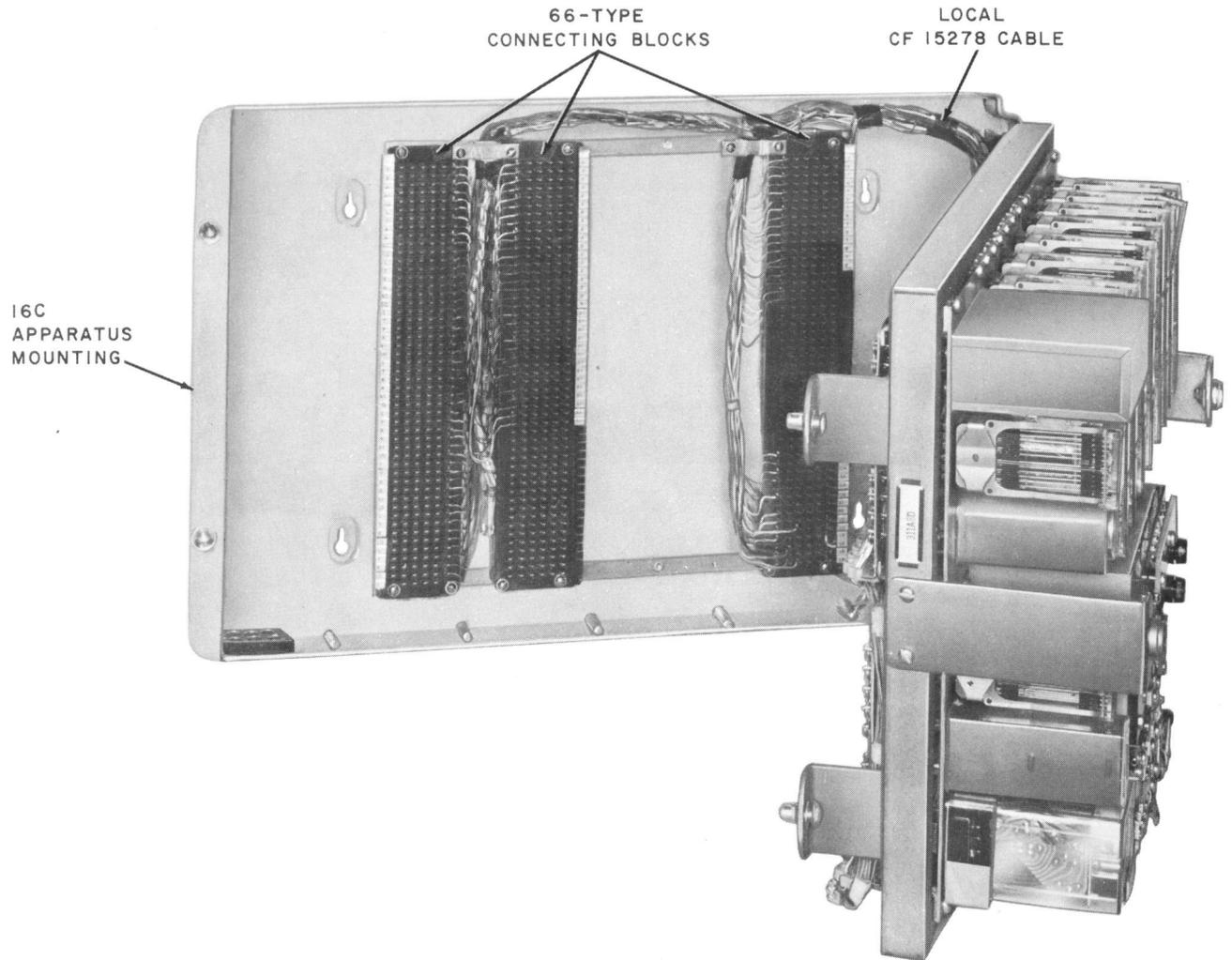


Fig. 6—311A8D KSU, Gate Open

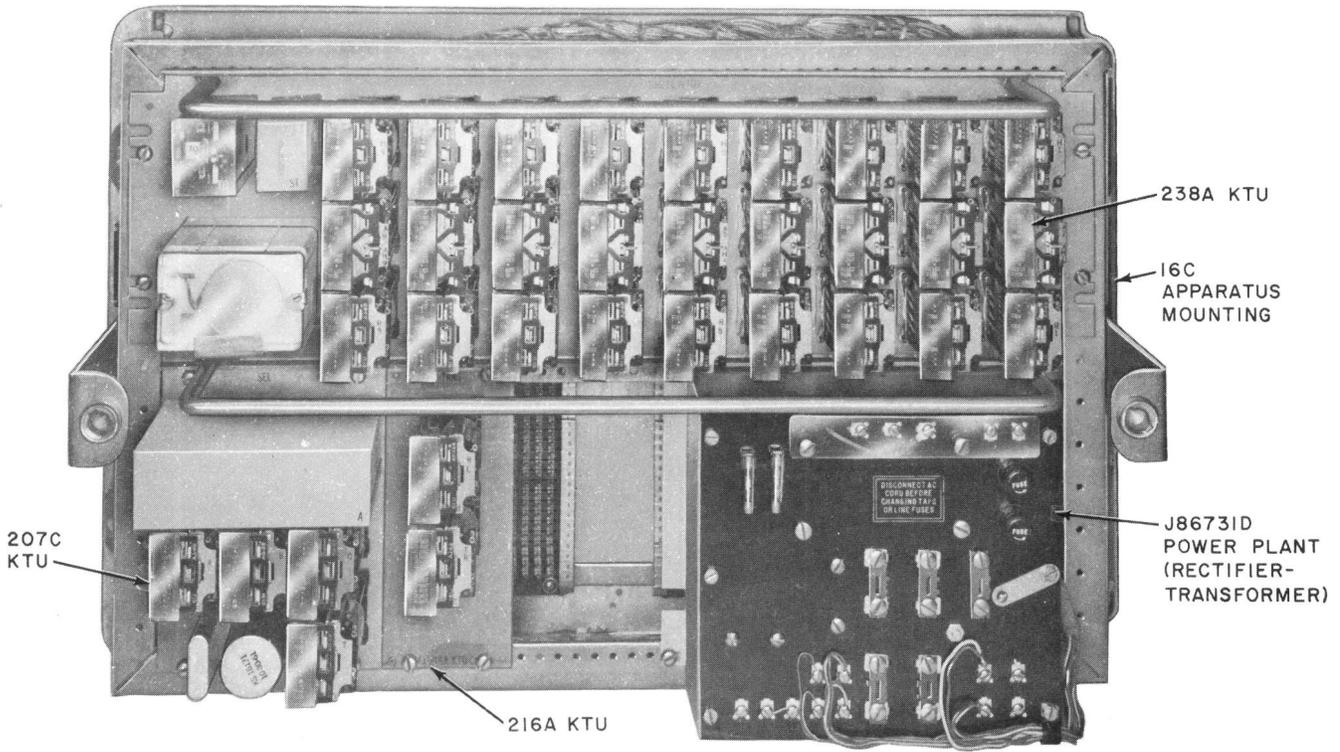


Fig. 7—311A12D KSU, Gate Closed

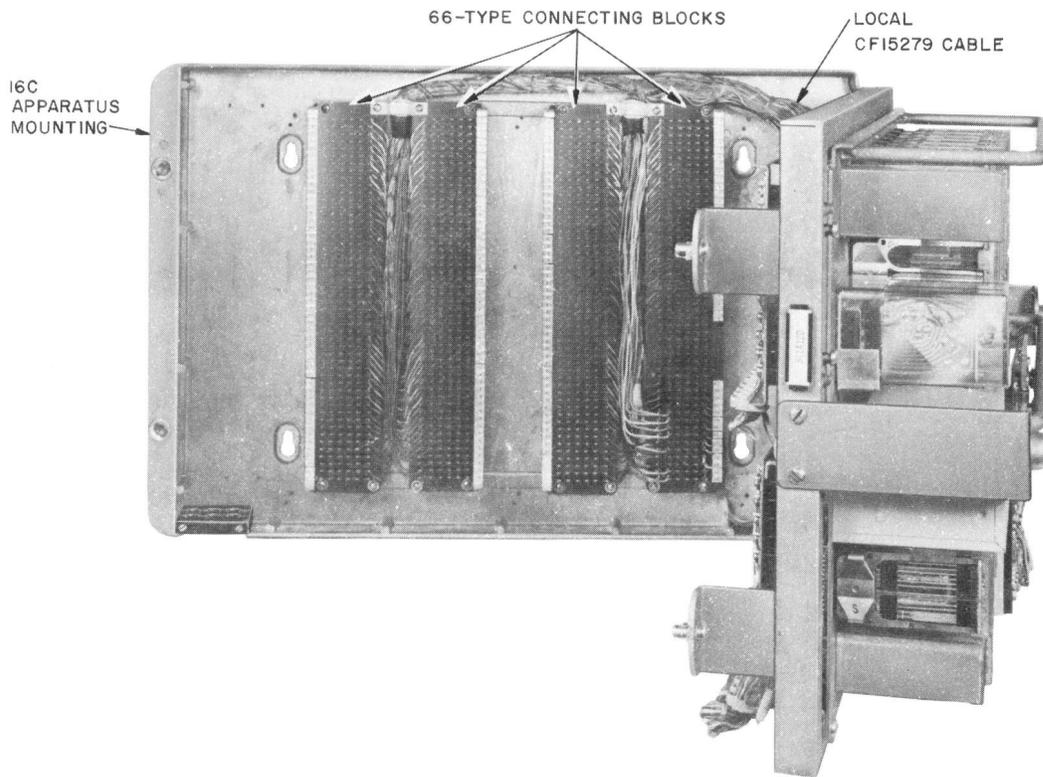


Fig. 8—311A12D KSU, Gate Open