

## 200K-TYPE KEY TELEPHONE UNITS

### 1.00 GENERAL

1.01 This section covers the identification, connections, and maintenance for 200K-type key telephone units. It is reissued to:

- Add information for the new 202D, 230B, and 232B key telephone units.
- Add information covering the designation strip used with the 64A1-50 cable terminal.

- Change Table A and the connection drawings to conform with the latest manufacturing specifications.

1.02 Due to extensive changes, marginal arrows have been omitted.

1.03 The 202C, 230A, and 232A key telephone units are rated Manufacture Discontinued. As manufacturing facilities permit, key telephone units will be equipped with 202D, 230B, and 232B units although the package code will not be changed to reflect this fact.

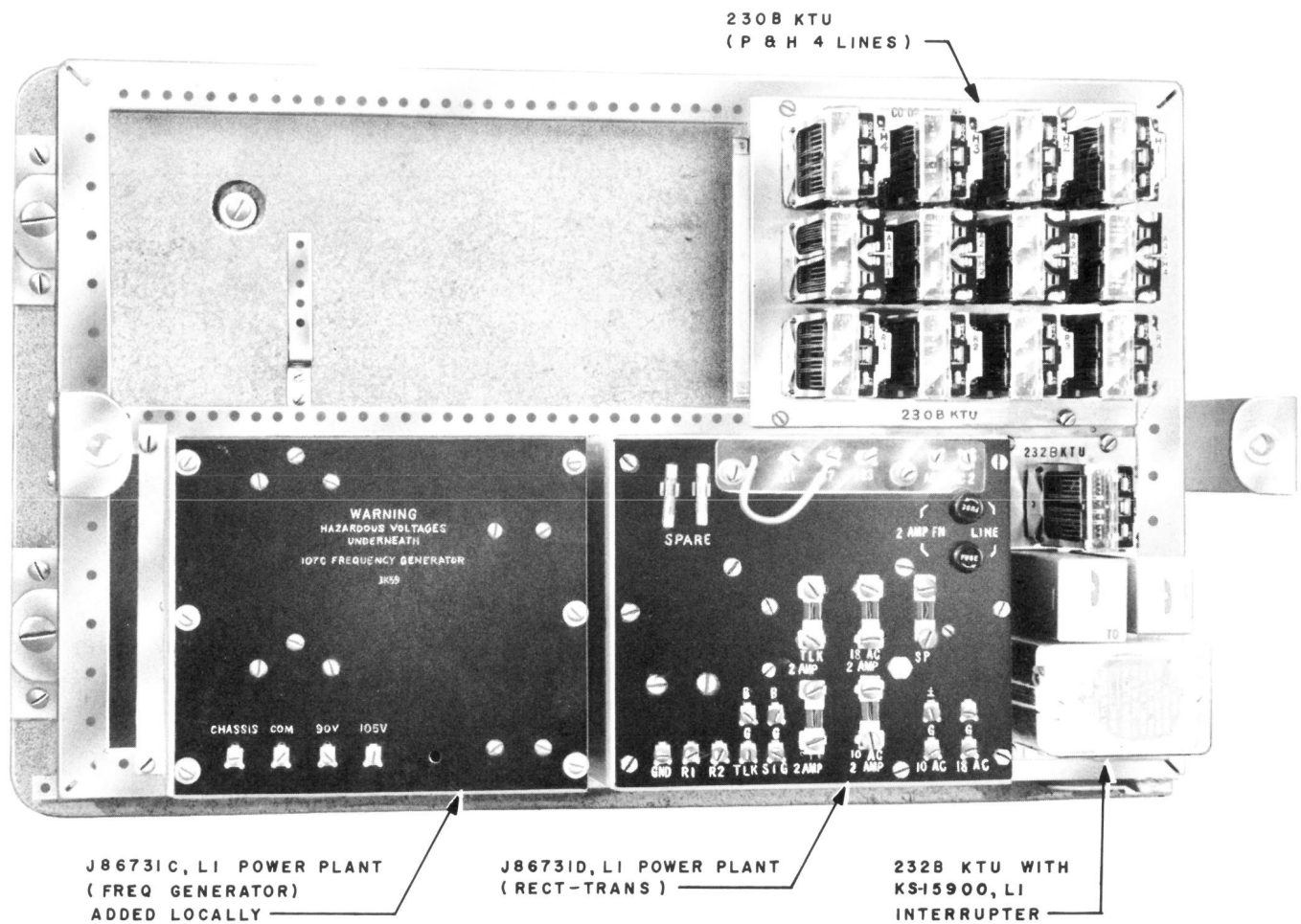


Fig. 1 — 200K4 Key Telephone Unit (Without Cover) with J86731C, List 1 Power Plant

**SECTION C71.511.05**

**2.00 IDENTIFICATION**

**2.01** The 200K-type key telephone units are packaged units of the 1A1 and 6A selector only key telephone systems. These packages provide for:

- Pickup and hold on four to seven central office or PBX lines with or without a 9-station dial selective intercommunicating circuit.
- Electromechanical interrupter, flashing and winking lamps, interrupted audible signal, manual intercommunicating, and time-out.
- Rectifier-transformer power plant.

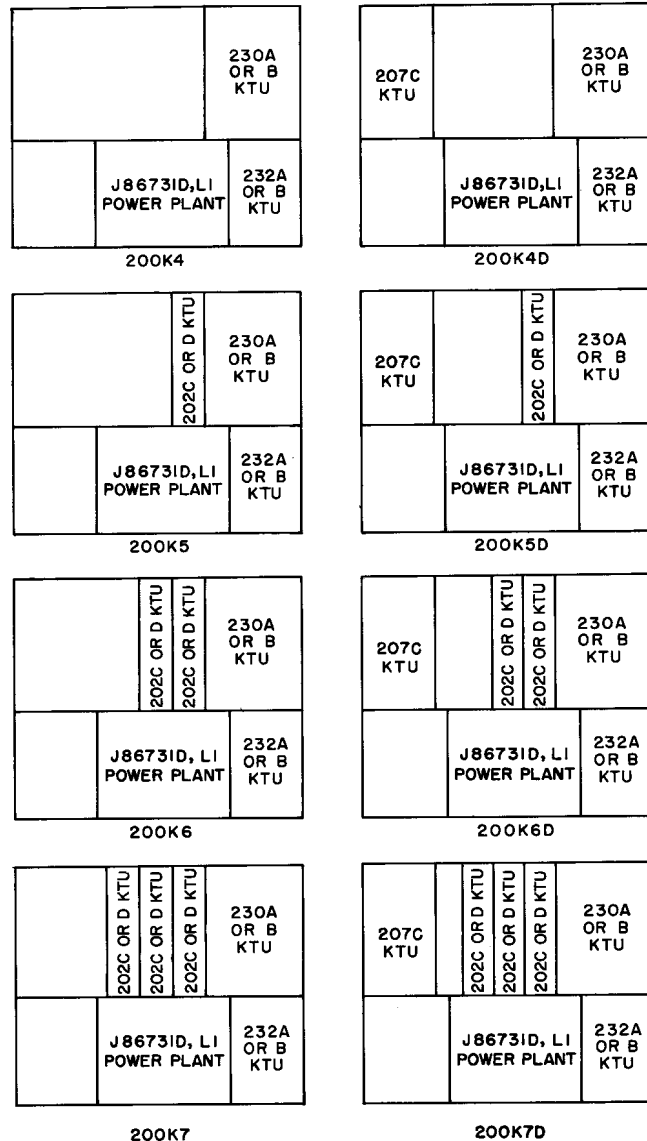
**2.02** The 200K-type key telephone units consist of panel-type key telephone units and a J86731D, List 1 (rectifier-transformer) power plant, mounted and factory-wired on a 16A apparatus mounting. The 16A apparatus mounting is enclosed in a 117A cover.

**2.03** Fig. 1 shows a 200K4 KTU with a J86731C, List 1 (frequency-generator) power plant. This power plant may be installed locally to supply 20-cycle ringing voltage when necessary.

**2.04** Additional numbers and letters added to the basic code designate the 16 arrangements of the 200K-type KTU. For example, 200K 5 D C is a unit as follows:

**200K-Type**

- 5—Five central office or PBX line circuits
- D—9-station dial selective intercommunicating line circuit
- C—64A1-50 cable terminal



**Fig. 2 - Block Diagram**

**2.05** Fig. 2 shows the arrangement, coding (without cable terminal), and key telephone units used in the 200K-type KTU.

**2.06** The 200K-type key telephone units can be ordered with or without a 64A1-50 cable terminal factory-wired to the key telephone units and power plant. The 64A1-50 cable terminal, when ordered as a subcode C, is a 50-pair inside wiring-cable terminated on two 31D connecting blocks at one end and terminated on the back of the key telephone units at the other end. The

connecting blocks are mounted on 102D adapters in a GC52 terminal box. Fanning strips on the 102D adapters are marked with a pressure-sensitive tape furnished with each cable terminal to show binding post designations. Standard length of running cable is 8 feet, point of entry to point of entry.

**2.07** The 64A1-50 cable terminal equipped with a 15-foot cable tail can be ordered separately. Designation strips preprinted to conform with the feature layout for both 200F-type and 200K-type key telephone units are furnished. Two additional blank strips are furnished for field changes.

**2.08** Pressure-sensitive tapes can be ordered separately as necessary.

- Form E-4843 consists of two dual strips (each pair marked "A" and "B") preprinted to conform to the feature layout of the 200K-type KTU.
- Form E-4848 consists of four blank strips which may be designated as necessary to fit the need.

### **3.00 CONNECTIONS**

**3.01** The 10-volt ac source on the J86731D, List 1 power plant as provided in this package furnishes power for the KS-15900, List 1 interrupter and the station lamps. The interrupter

motor load is approximately 300 milliamperes. This is equivalent to about eight 51A lamps.

**3.02** Table A shows the connections for the running or key cables at either the terminal plate or the key telephone units.

**3.03** Fig. 3 gives an arrangement for manual signaling for five pushbuttons and five buzzers when the dial selective intercommunicating line circuit is not provided.

**3.04** Fig. 4 shows strapping between 202C, 230A, 232A, and 207C key telephone units and the power plant and key cable connections.

**3.05** Fig. 5 shows strapping between 202D, 230B, 232B, and 207C key telephone units and the power plant and key cable connections.

### **4.00 MAINTENANCE**

**4.01** Circuit drawings (Fig. 6A, 6B, and 6C) are included as aids for making connections and clearing trouble.

**4.02** For additional maintenance information, refer to the C Section covering the key telephone units involved.

**TABLE A**  
**200K-TYPE KTU – CONNECTIONS**

Feature	Lead Designation	64A1-50 Cable Terminal		Terminal on 232A or B KTU*	Terminal on 230A or B KTU†	Terminal on 202C or D KTU		Terminal on 207C KTU
		30-Type Conn Block Terminal	Inside Wiring Cable					
Line 1	T R	1T 1R	W BL		1A-11A 2A-12A			
	A A1	2T 2R	W O		3A-13A 4A-14A			
	LG L	3T 3R	W G		6A-16A 5A-15A			
Line 2	T R	4T 4R	W BR		1B-11B 2B-12B			
	A A1	5T 5R	W S		3B-13B 4B-14B			
	LG L	6T 6R	R BL		6B-16B 5B-15B			
Line 3	T R	7T 7R	R O		1C-11C 2C-12C			
	A A1	8T 8R	R G		3C-13C 4C-14C			
	LG L	9T 9R	R BR		6C-16C 5C-15C			
Line 4	T R	10T 10R	R S		1D-11D 2D-12D			
	A A1	11T 11R	BK BL		3D-13D 4D-14D			
	LG L	12T 12R	BK O		6D-16D 5D-15D			
Line 5	T R	13T 13R	BK G			1-11 2-12	1st	
	A A1	14T 14R	BK BR			3-13 4-14		
	LG L	15T 15R	BK S			6-16 5-15		
Line 6	T R	16T 16R	Y BL			1-11 2-12	2nd	
	A A1	17T 17R	Y O			3-13 4-14		
	LG L	18T 18R	Y G			6-16 5-15		
Line 7	T R	19T 19R	Y BR			1-11 2-12	3rd	
	A A1	20T 20R	Y S			3-13 4-14		
	LG L	21T 21R	V BL			6-16 5-15		
Manual Intercom Line	T R	22T 22R	V O	30 40				
	LG L	23T 23R	V G	27 28				
Dial Selective Intercom Line	T R	24T 24R	V BR					1B-11B-21B 2B-12B-22B
	LG L	25T 25R	V S					32B 3B

\* 232B KTU is arranged internally to disable time-out feature when BF relay is operated (see Fig. 6B).

† 230B KTU is arranged for individual fusing of Circuits 1 and 2 and Circuits 3 and 4 lamp input power (see Fig. 6B).

TABLE A (Cont)  
200K-TYPE KTU – CONNECTIONS

Feature	Lead Designation	64A1-50 Cable Terminal		Terminal on 232A or B KTU	Terminal on KTU		Terminal on 202C or D KTU	Terminal on 207C KTU	
		30-Type Conn Block Terminal	Inside Wiring Cable		230A	230B			
Dial Selective Intercom Line	B (2) R (2)	26T 26R	W BL					36B 12A	
	B (3) R (3)	27T 27R	W O					36B 13A	
	B (4) R (4)	28T 28R	W G					37B 14A	
	B (5) R (5)	29T 29R	W BR					37B 15A	
	B (6) R (6)	30T 30R	W S					38B 16A	
	B (7) R (7)	31T 31R	R BL					38B 17A	
	B (8) R (8)	32T 32R	R O					40B 18A	
	B (9) R (9)	33T 33R	R G					40B 19A	
	B (0) R (0)	34T 34R	R BR					31B 20A	
Line 1	B1 or BZ1 R1 or BZ	35T 35R	R S		25A 10A	30A 10A			
Line 2	B1 or BZ1 R1 or BZ	36T 36R	BK BL		25A 10B				
Line 3	B1 or BZ1 R1 or BZ	37T 37R	BK O		25A 10C				
Line 4	B1 or BZ1 R1 or BZ	38T 38R	BK G		28A 10D	30A 10D			
Line 5	B1 or BZ1 R1 or BZ	39T 39R	BK BR				25 10	1st	
Line 6	B1 or BZ1 R1 or BZ	40T 40R	BK S				25 10	2nd	
Line 7	B1 or BZ1 R1 or BZ	41T 41R	Y BL				25 10	3rd	
CO or PBX	Line 1	T R	42T 42R	Y O		7A 8A			
	Line 2	T R	43T 43R	Y G		7B 8B			
	Line 3	T R	44T 44R	Y BR		7C 8C			
	Line 4	T R	45T 45R	Y S		7D 8D			
	Line 5	T R	46T 46R	V BL				7 8	1st
	Line 6	T R	47T 47R	V O				7 8	2nd
	Line 7	T R	48T 48R	V G				7 8	3rd
Ringing Supply	GRD 105V±	49T 49R*	V BR	29	28A	30A			
Local Ground	GRD GRD	50T 50R	V† S†						

Orange Binder

\* If J86731C, List 1 (frequency-generator) power plant is installed locally, disconnect and tape V and BR cable pair.  
† Connect to GRD terminal on J86731D, List 1 power plant.

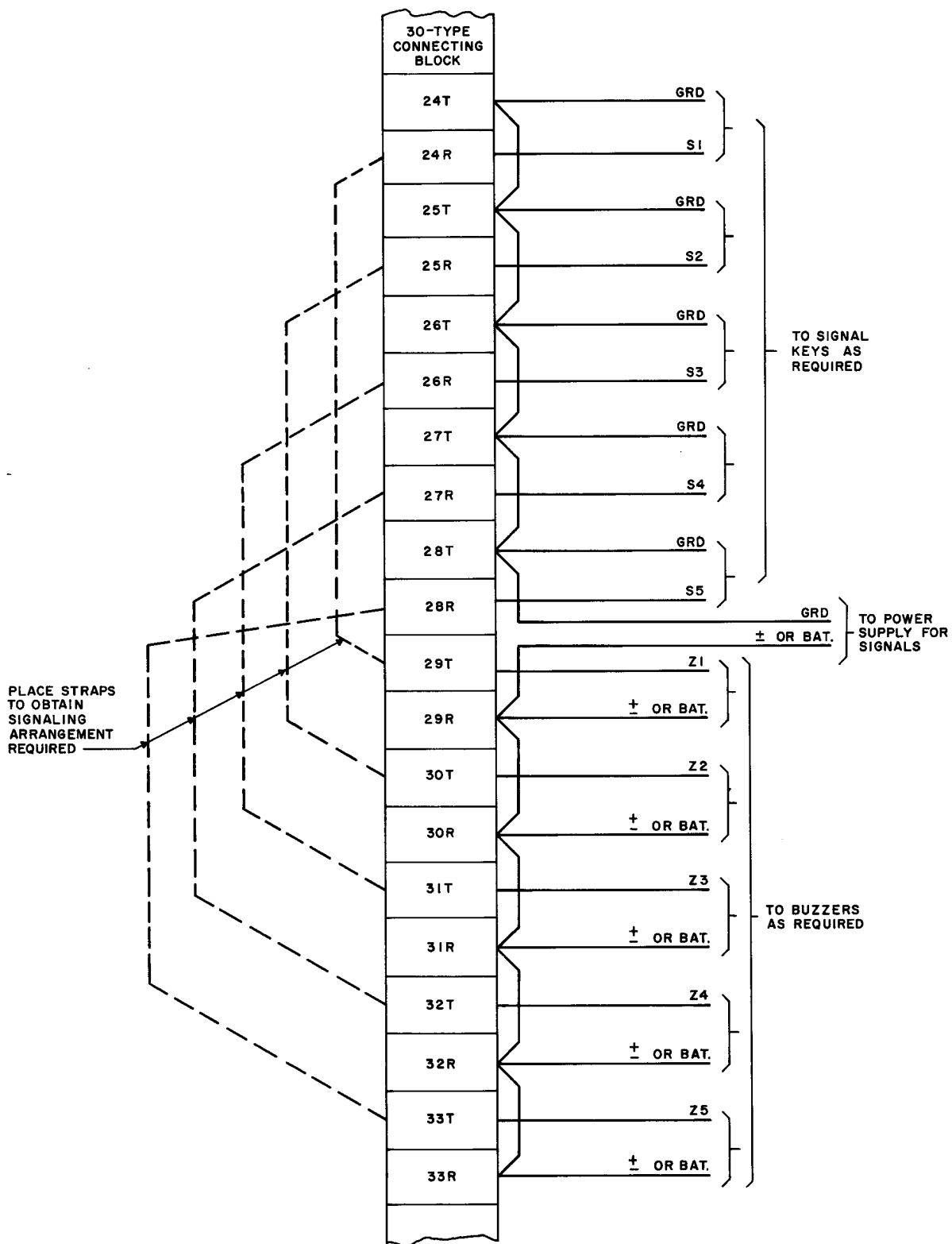
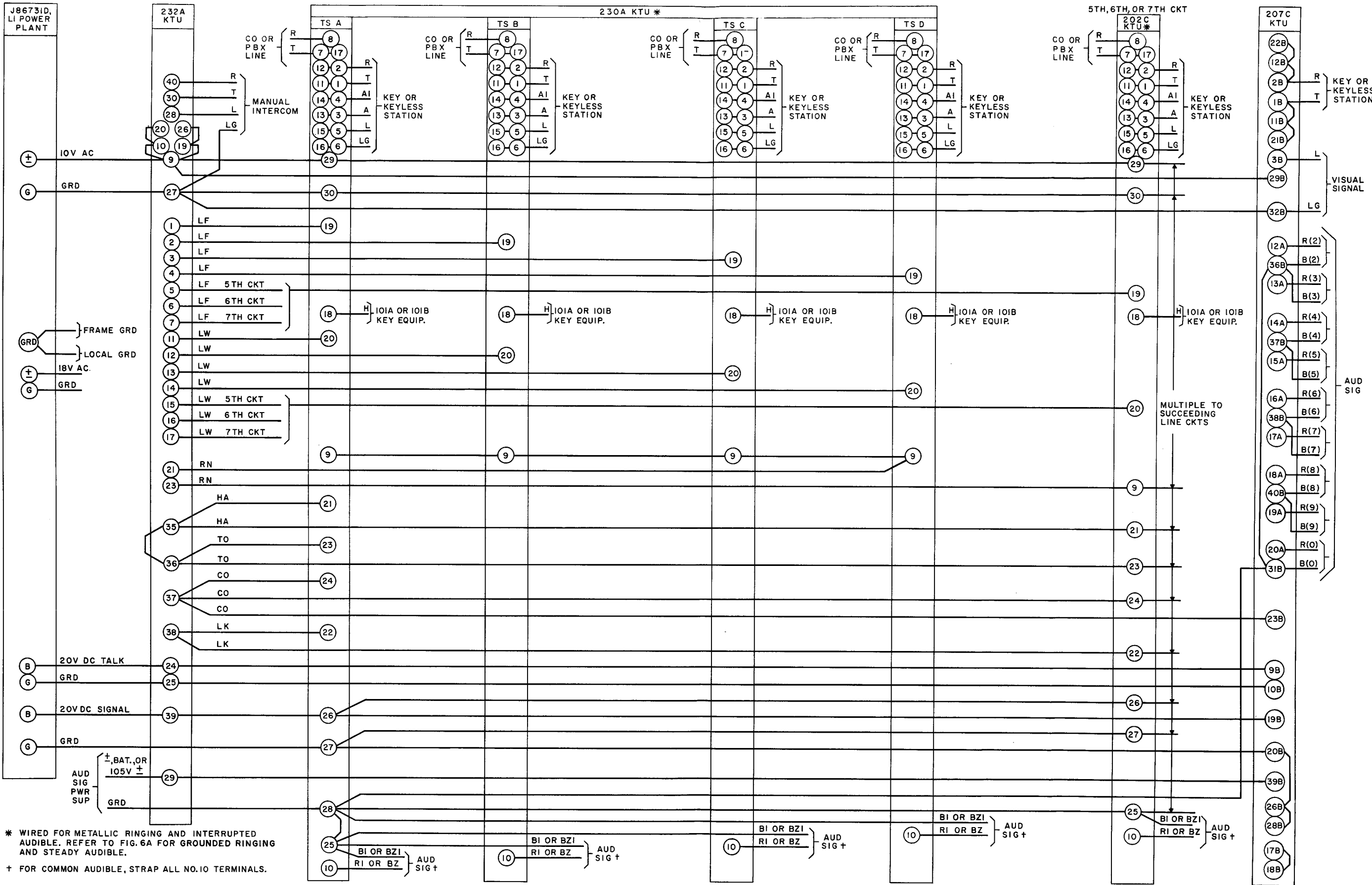
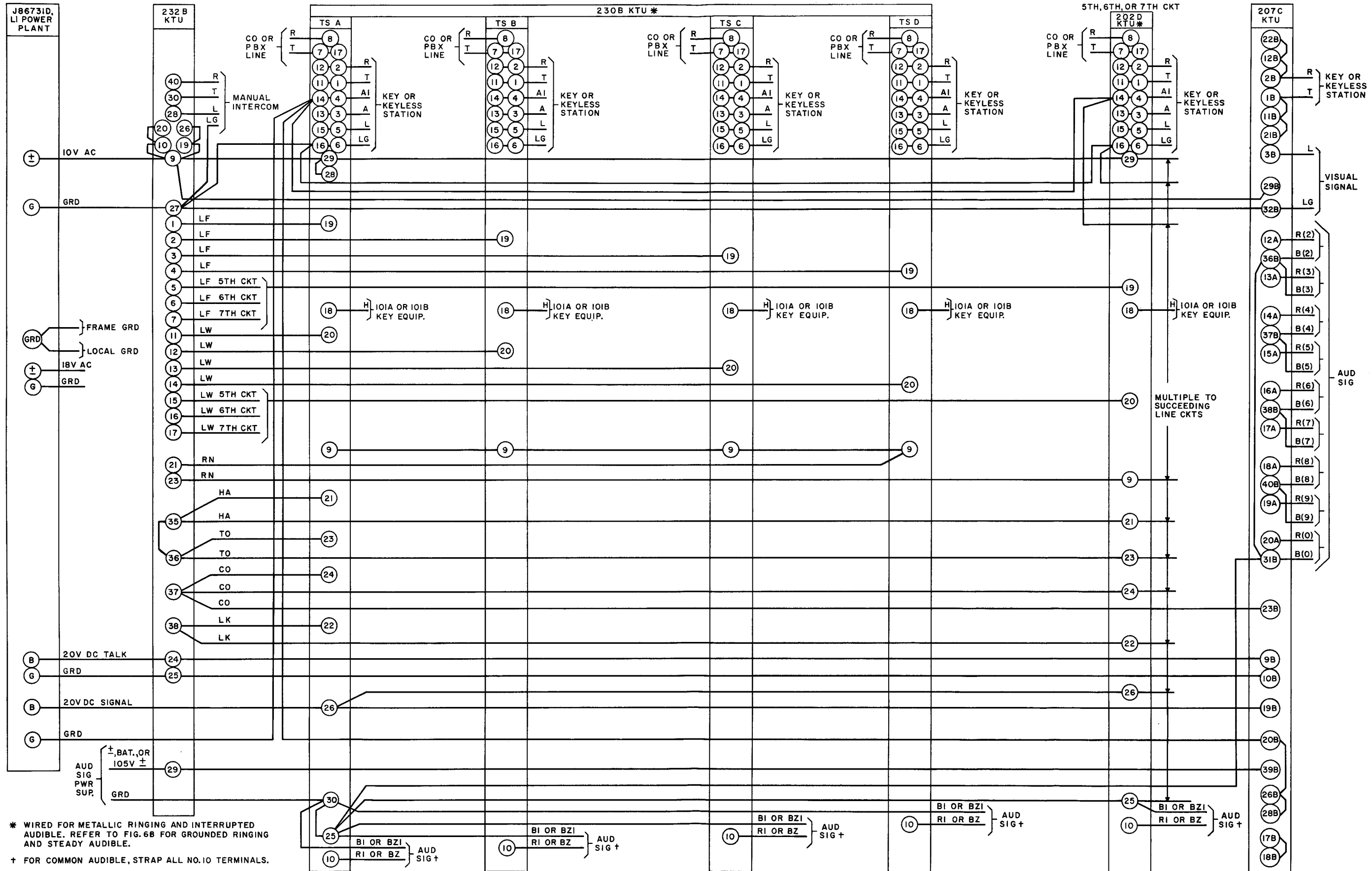


Fig. 3 — Connections for Manual Signaling When Dial Selective Intercommunicating Circuit Is Not Used



\* WIRED FOR METALLIC RINGING AND INTERRUPTED AUDIBLE. REFER TO FIG. 6A FOR GROUNDED RINGING AND STEADY AUDIBLE.  
 † FOR COMMON AUDIBLE, STRAP ALL NO.10 TERMINALS.

Fig. 4 - 200K-Type KTU (202C, 230A, 232A, and 207C) - Connections and Strappings



\* WIRED FOR METALLIC RINGING AND INTERRUPTED AUDIBLE. REFER TO FIG. 6B FOR GROUNDED RINGING AND STEADY AUDIBLE.  
 † FOR COMMON AUDIBLE, STRAP ALL NO. 10 TERMINALS.

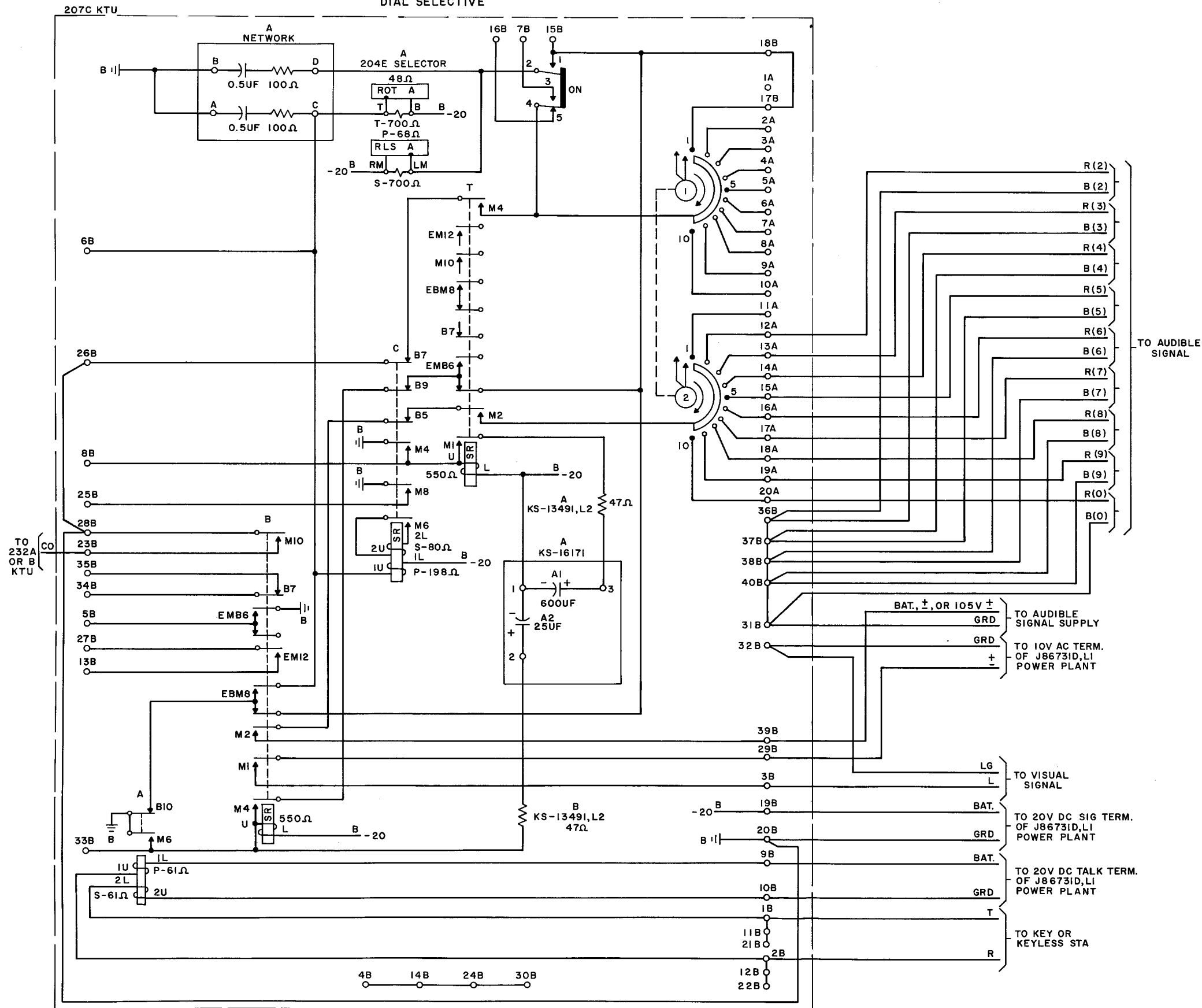
Fig. 5 - 200K-Type KTU (202D, 230B, 232B, and 207C) - Connections and Strappings







INTERCOMMUNICATING LINE CIRCUIT  
DIAL SELECTIVE



WIRING FOR CO OR PBX LINES		OPTION
METALLIC RINGING (FURNISHED)		Z
GROUNDED RINGING		Y
INTERRUPTED AUDIBLE SIG (FURNISHED)		X
STEADY AUDIBLE SIGNAL		W
LAMP MAX	MAX 40 LAMPS (FURNISHED)	S
	MAX 80 LAMPS	R

FACTORY STRAPPING OF TERMINAL STRIPS FOR THE 230A KEY TEL UNIT			
DOTTED LINE - INTERNAL STRAPPING			
SOLID LINE - SURFACE STRAPPING			
TS A	TS B	TS C	TS D
1 11	21	1 11	1 11
0	0	0	0
0	0	0	0
5 15	0	5 15	5 15
0	0	0	0
0	0	0	0
0	0	0	0
10 20	30	10 20	10 20
0	0	0	0

NOTE 1: FOR THE 230A OR B KTU, THE FOLLOWING APPLIES FOR PUNCHINGS 1 THROUGH 20:  
 LINE 1 TERMINATES ON TERMINAL STRIP A  
 LINE 2 TERMINATES ON TERMINAL STRIP B  
 LINE 3 TERMINATES ON TERMINAL STRIP C  
 LINE 4 TERMINATES ON TERMINAL STRIP D  
 BATTERY AND GROUND TERMINATED ON TERMINAL STRIP A AND STRAPPED INTERNALLY,  
 NOTE 2: MAXIMUM 20 LAMPS PER L LEAD.  
 NOTE 3: WHEN STEADY HOLD LAMP IS REQUIRED INSTEAD OF LAMP WINK, PROVIDE STRAPS AS FOLLOWS:  
 202C & 202D KTU - TERM. 20 AND 29.  
 230A KTU - TERM. 20A, B, C, D, AND 29A.  
 230B KTU - TERM. 20A, B, AND 29A  
 TERM. 20C, D, AND 28A

CAUTION: IF PACKAGE INTERRUPTER IS USED TO FURNISH LAMP WINK FOR OTHER SYSTEMS, DISCONNECT AND TAPE LW LEADS AT TERMINAL 20 OF EACH LINE CIRCUIT NOT USING THE WINK FEATURE.

Fig. 6C - 200K-Type KTU (207C) - Schematic Drawing, Wiring Options, and Circuit Notes