

STATION LINE CONCENTRATORS 235- AND 236-TYPE KEY TELEPHONE UNITS IDENTIFICATION AND CONNECTIONS

1. GENERAL

1.01 This section is reissued to:

- Revise option information in Fig. 3, 4, 5, and 6
- Add Table A

1.02 When a 446F diode and 185A network are added to the 235A (MD) or 236A (MD) KTU they become identical to the 235B and 236B KTUs, respectively (Fig. 1 and 2).

2. IDENTIFICATION

PURPOSE

- To reduce the number of conductors required to connect key system line circuit units and CALL DIRECTOR[®] concentrator telephone sets or large capacity 400-type key mountings

APPLICATION

- Used with 1A1, 1A2, or 6A Key Telephone Systems.
- A 235B KTU can be used as a station line concentrator for a maximum of 18 line circuits in conjunction with 634-, 638-, or their equivalent TOUCH-TONE type CALL DIRECTOR telephone sets. A 236B KTU can be used for a maximum of 30 lines with 635-, 639-, or their equivalent TOUCH-TONE type sets or 400-type key mountings. More than one 236B KTU may be required with larger 400-type key mountings where the number of lines exceed 30, with a maximum of 120 lines. Station line concentrator units must be supplied on a per station basis.

ORDERING GUIDE

Unit, Telephone, Key, 235B

Unit, Telephone, Key, 236B

(a) *Optional Components (ordered and installed separately)*

- P-90D033 Printed Wiring Board Assembly
- Diode, 446F for 235A (MD) and 236A (MD) KTU
- Diode, 400(*) for 235A (MD) and 236A (MD) KTU
- Network, 185A for 235A (MD) and 236A (MD) KTU

* Add type suffix

DESIGN FEATURES

- Circuitry for connecting a common transmission pair and control lead through a combination of two switching relays to the selected line circuit. Refer to Table A for relay operating combinations.
- Option of common audible or individual line ringer.
- Power failure option when common audible is not required.
- Common audible with power failure.

3. CONNECTIONS

3.01 All lamp control, speakerphone, and A1 leads from CALL DIRECTOR set or 400-type key mountings bypass station concentrator units and are wired directly to the station line unit.

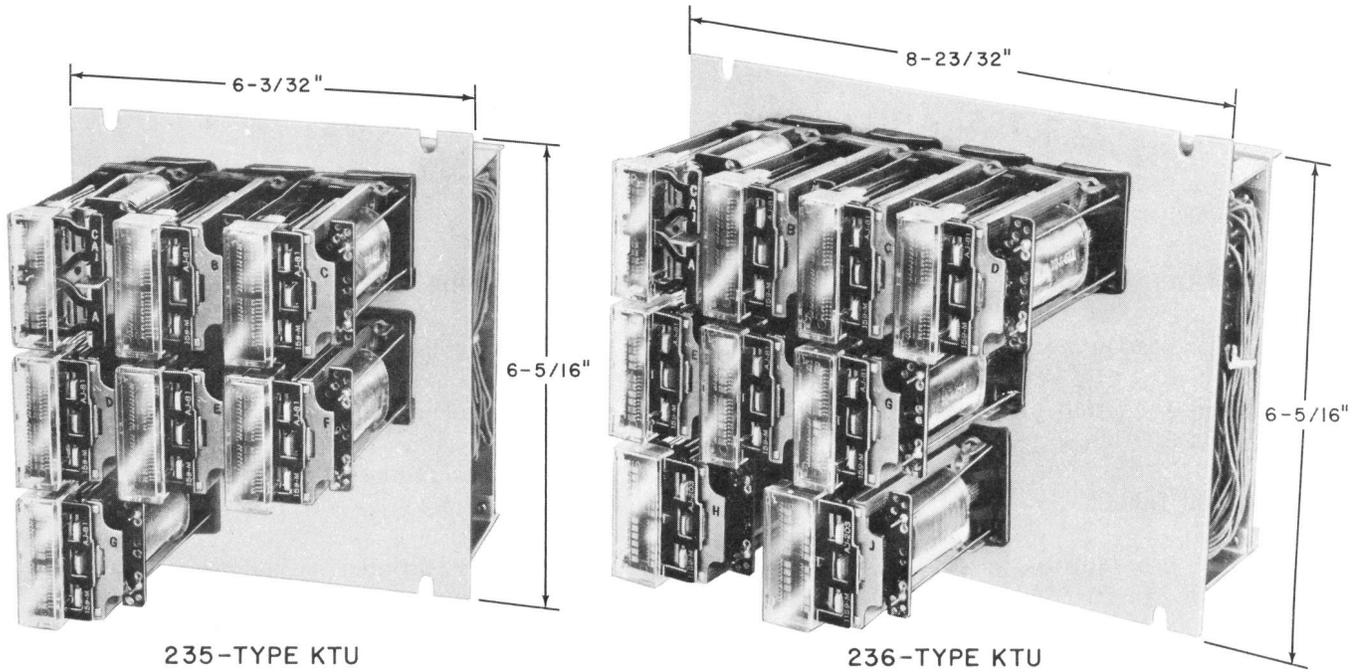


Fig. 1—Station Line Concentrator KTUs, Front View

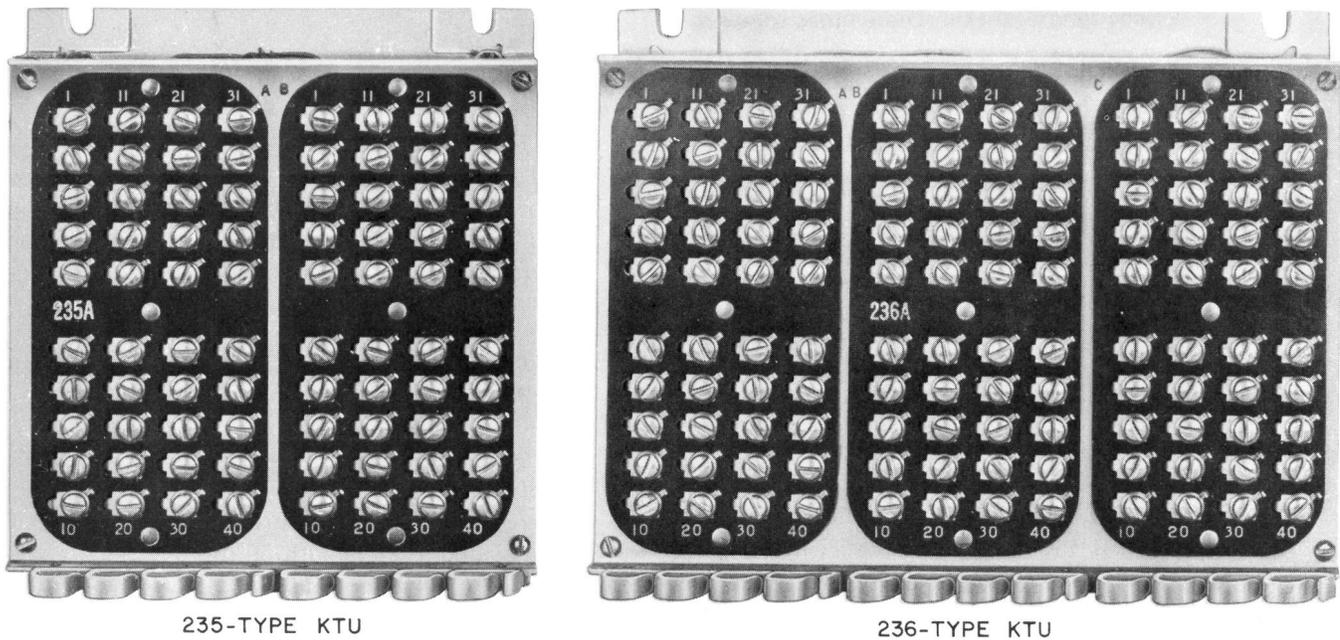


Fig. 2—Station Line Concentrator KTUs Rear View

▶TABLE A◀

COMBINATIONS OF RELAYS OPERATED IN STATION
LINE CONCENTRATOR WHEN ASSOCIATED KEY POSITION IS OPERATED

KEY POS (NOTE)	RELAYS																
	236A OR B KTU										235A OR B KTU						
	A	B	C	CA1	D	E	F	G	H	J	A	B	C	D	E	F	G
1	•	•									•	•					
2	•		•								•		•				
3		•	•									•	•		•		
4	•				•						•			•			
5		•			•							•		•			
6				•						•			•	•			
7			•		•						•				•		
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10					•	•							•	•			
11			•				•				•					•	
12					•		•					•				•	
13						•	•						•			•	
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15						•		•			•						•
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19			•						•								
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25		•								•							
26			•							•							
27					•					•							
28						•				•							
29							•			•							
30								•		•							

Note: Key Mountings with more than 30 pick-up key positions would require additional 236-type KTUs and relay combinations would be identical for each 30 succeeding key positions.

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3.02 When the busy lamp feature is furnished in CALL DIRECTOR telephone sets equipped with headset jacks (638-, 639-, and equivalent TOUCH-TONE types), a P-90D033 Printed Wiring Board Assembly must be added to the 235- or 236-type KTU as shown in Fig. 4 or 6.

3.03 Modification of 235A and 236A KTUs are required when used with 400D KTUs. The modification prevents a false-hold condition or damage to the Q3 transistor in the 400D KTU caused by large transient voltages occurring when the associated concentrator type CALL DIRECTOR set goes on-hook. Modification of concentrator units is not required when used with 1A1 KTS, or 400B or C KTUs in 1A2 KTS.

CONNECTION INDEX

Table B—Options

Fig. 3—Connections for 235-Type KTU When Used With 634-, 635-, and Their Equivalent TOUCH-TONE Telephone Sets

Fig. 4—Connections for 235-Type KTU When Used With 638-, 639-, and Their Equivalent TOUCH-TONE Telephone Sets and P-90D033 Printed Wiring Board Assembly.

Fig. 5—Connections for 236-Type KTU When Used With 634-, 635-, and Their Equivalent TOUCH-TONE Telephone Sets

Fig. 6—Connections for 236-Type KTU When Used With 638-, 639-, and Their Equivalent TOUCH-TONE Telephone Sets

For other information, refer to:

DRAWING	TITLE
SD and CD-69498-01	(Key Telephone System No. 6A, 1A1, and 1A2, Station Line Concentrator, 634-, 635-, 1634-, and 1635-Type Telephone Set Circuits)
SD and CD-69499-01	(Key Telephone System No. 1A1, 1A2, and 6A Station Line Concentrator Key and Telephone Circuit, 638-, 1638-, 639-, and 1639-Type Telephone Sets)
SD and CD-69513-01	(Key Telephone System No. 1A2, CO, or PBX Line Circuits)
SD and CD-69580-01	(Key Telephone System No. 1A1 or 1A2, Station Busy Lamp Circuit)

TABLE B
OPTIONS

FEATURE	KTU							
	235				236			
	A		B		A		B	
	634-, 635-, AND TOUCH-TONE EQUIVALENT TYPE TELEPHONE SET	638-, 639-, AND TOUCH-TONE EQUIVALENT TYPE TELEPHONE SET	634-, 635-, AND TOUCH-TONE EQUIVALENT TYPE TELEPHONE SET	638-, 639-, AND TOUCH-TONE EQUIVALENT TYPE TELEPHONE SET	634-, 635-, AND TOUCH-TONE EQUIVALENT TYPE TELEPHONE SET	638-, 639-, AND TOUCH-TONE EQUIVALENT TYPE TELEPHONE SET	634-, 635-, AND TOUCH-TONE EQUIVALENT TYPE TELEPHONE SET	638-, 639-, AND TOUCH-TONE EQUIVALENT TYPE TELEPHONE SET
Common Audible	X	X	X	X	Y	Y	Y	Y
Power Failure	W	W	W	W	Z	Z	Z	Z
Common Audible With Power Failure	J	H	J	H	K	J	K	J
With Station Busy Lamp Circuit	M	G	M	G	M	G	M	G
Without Station Busy Lamp Circuit	E	F	-	-	E	F	-	-
Individual Line Signaling	V	V	V	V	T	T	T	T
Not Associated With 400D KTU	F	B	-	-	F	B	-	-
Associated With 400D KTU in No. 1A2 KTS	G	E	-	-	G	E	-	-
29 Lines With Hold	-	-	-	-	R	K	R	K
30 Lines Without Hold	-	-	-	-	N	M	N	M

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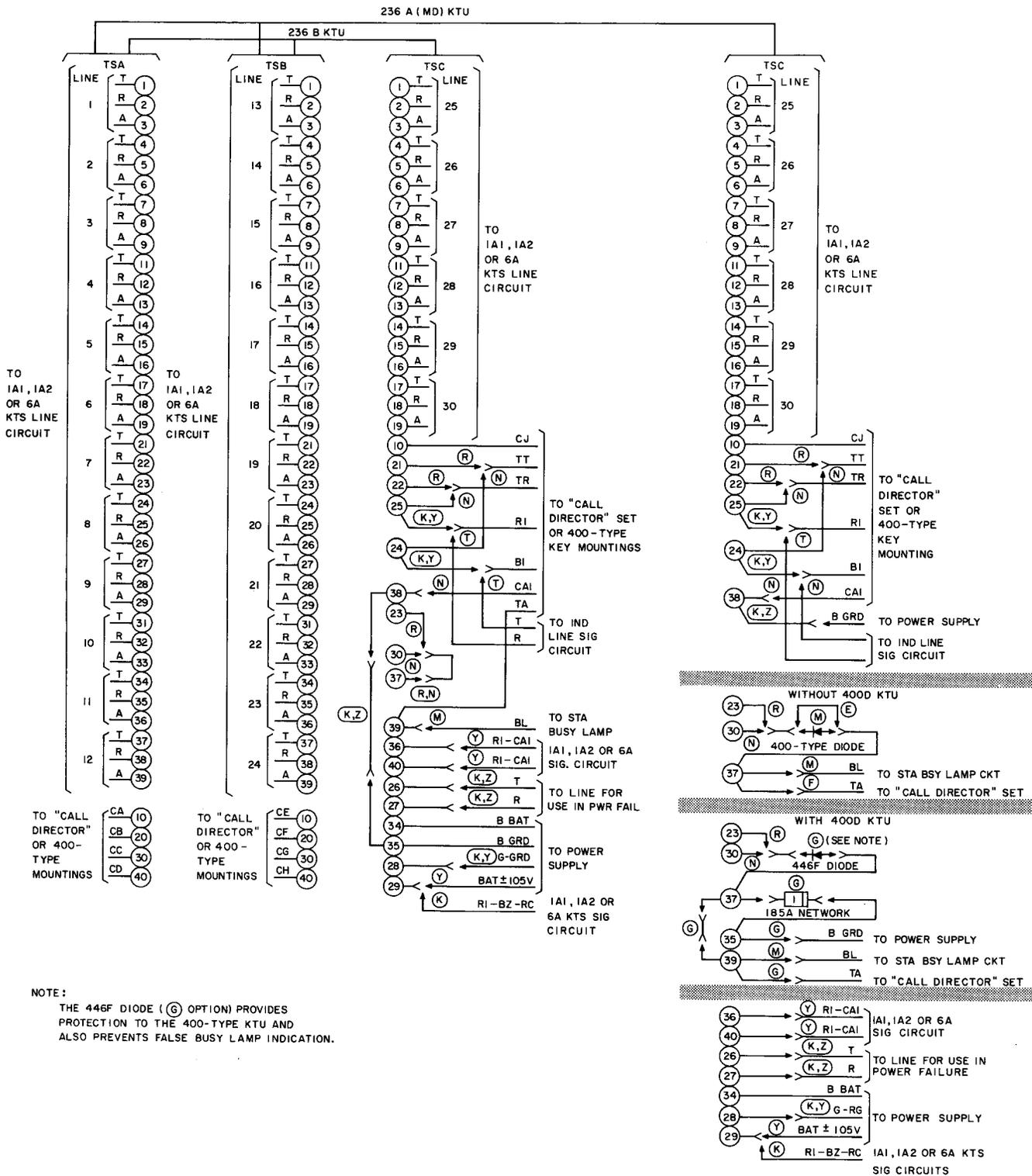


Fig. 5—Connections for 236-Type KTU When Used With 634-, 635- and Their Equivalent TOUCH-TONE Telephone Sets

