

1A AND 1A1 KEY TELEPHONE SYSTEMS

SIGNAL-KEY AND BUZZER CIRCUITS

TERMINATIONS IN APPARATUS CABINET

1.00 GENERAL

1.01 This section covers connections at the apparatus cabinet for code and/or selective signal-key and buzzer circuits for a maximum of 12 stations. This includes key and running-cable connections.

1.02 Connections at the station for signal-key and buzzer circuits are covered in the following sections:

C71.431—Signal keys and buzzers located in 440- and 460-series key telephone sets.

C71.433—Signal keys and buzzers located in 540- and 560-series key telephone sets.

C71.435—Signal keys located outside key telephone sets or external switching keys.

C71.437—Ringers or buzzers located outside key telephone sets.

C71.439—Signal keys located in external switching keys.

1.03 Connections for power leads and power strapping for combinations of these key telephone units are covered in Section C71.383, 1A1 Key Telephone System, Power Wiring.

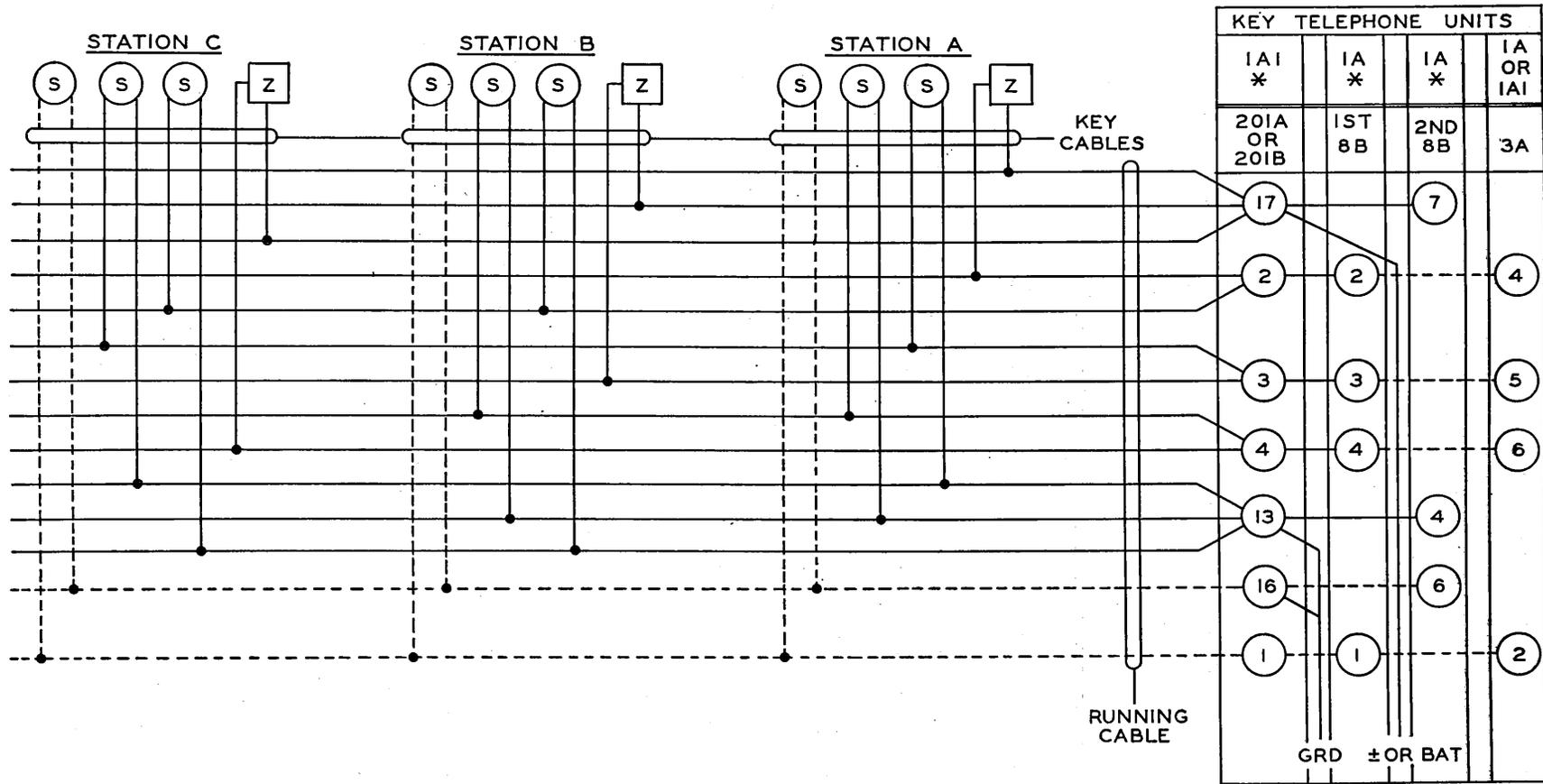
2.00 KEY AND RUNNING CABLE ASSIGNMENTS

When key or running cable pairs are used for signal-key and buzzer circuits, the conductors are assigned as follows (see Fig. 1):

- One pair is assigned for each signal-key circuit.
 1. One conductor is to be used to supply ground to signal key.
 2. One conductor is to be used to connect signal key (*S* lead) to bridging block.
- One pair is assigned for each buzzer circuit.
 1. One conductor is to be used to supply power to buzzer.
 2. One conductor is to be used to connect buzzer (*B1* lead) to bridging block.
- The *S* leads from the signal keys are to be bridged to the *B1* leads from their associated buzzers at the bridging block.

3.00 REFERENCES

Reference information for this section is given in Section C71.355, 1A1 Key Telephone System, Connection Data, Description and Use.



LEGEND

SELECTIVE SIGNALING ONLY—USE SOLID LINES.

CODE SIGNALING ONLY—STRAP DESIRED BUZZER TERMINALS, 1 THRU 12, ON 201A OR 201B KTU OR TERMINALS 1 TO 8 AND 1 TO 3 ON THE 1ST AND 2ND 8B KTU—USE SOLID BUZZER LINES AND DOTTED SIGNAL KEY LINES—3B KTU NOT USED

CODE AND SELECTIVE SIGNALING—USE DOTTED (CODE) AND SOLID (SELECTIVE) LINES

WHOLE PAIRS USED FOR SI AND GRD LEADS TO SIGNAL KEYS AND ALSO FOR BI AND RI LEADS TO BUZZERS

* USE 201A OR 201B KTU FOR 1A1 KEY TELEPHONE SYSTEM AND 8B KTU'S FOR 1A KEY TELEPHONE SYSTEMS.

FIG. 1—TYPICAL DIAGRAM ILLUSTRATING CODE AND/OR SELECTIVE SIGNALING FOR 1A OR 1A1 KEY TELEPHONE SYSTEMS

201A or B Buzzer Bridging Unit
Code Signaling Only

TABLE 79.01

Buzzer No.	Buzzer Bridging Unit			Grouping
	1A1	1A		
	201A or 201B	1st 8B	2nd 8B	
	Terminal			
A	2	2		Group all buzzers to be signaled on a code basis by strapping the associated terminals of the buzzers being grouped.
B	3	3		
C	4	4		
D	5	5		
E	6	6		
F	7	7		
G	8	8		
H	9	9		
J	10		1	
K	11		2	
L	12		3	

201A or B Buzzer Bridging Unit
Using 3A Key Telephone Unit for
Code AND Selective Signaling

TABLE 79.02

Code OR Selective Signaling	Code AND Selective Signaling	Lead Desig	Buzzer Bridging Unit			Code Signaling Unit	
			1A1	1A		1A or 1A1	
			201A or B	1st 8B	2nd 8B	1st 3A	2nd 3A
			Terminal			Terminal	
Buzzer Unit No.							
1	1 2	S* S1	1 2	1 2		2† 4	2†
2 3	3 4	S1 S1	3 4	3 4		5 6	
4 5	5 6	S1 S1	5 6	5 6		7 8	
6 7	7 8	S1 S1	7 8	7 8		9	4
8 9	9 10	S1 S1	9 10	9	1		5 6
10 11	11 12	S1 S1	11 12		2 3		7 8

* Lead for operating code signaling unit.

† Strap terminal 2 of all 3A key telephone units.

SECTION C71.379

TABLE 79.03

Key Cable To Buzzer Bridging Unit—All Key Telephone Sets With Internal Signaling Keys, except One-button Sets—Code and/or Selective Signaling (For Buzzer Connections See Table 71.03.)

1. To determine key cable, select type of set and number of signal key in set from left-hand table.
2. To determine terminals in bridging unit, select

horizontal block in right-hand table with same number as buzzer being signaled.

3. Connect key cable pair selected in 1. to buzzer terminals selected in 2.

Key Cable

Key Telephone Type	Button In Set	Lead Desig	Key Cable		
			Pair No.	C Type	D Type
				Color	
DC } 440 441 445	*	GRD*	6	BL-W	BL
	3	S		W	R
BC } 460 EC } 461 FC } 465	*	GRD*	10	BL-S	S
	5	S		W	R
JC } 460 461 465	6	S	23	G	G
	4	S		R	V
	6	GRD* 2S		4	BR W
BC } 440 441 445	6	GRD* 3S	6	BL-W W	BL R
	6	GRD* 4S	8	BL-G W	G R
	4	GRD* S	8	BL-G W	G R
DC } 460 461 465	5	GRD* S	10	BL-S W	S R
565A 565G	6	GRD* S	23	G R	G V
All Other 440, 460, 540, and 560 Sets	4	GRD* S	6	BL-W W	BL R
	5	GRD* S	8	BL-G W	G R
	6	GRD* S	10	BL-S W	S R

Buzzer Bridging Unit

To Sig Key For Buzzer	Lead Desig	Buzzer Bridging Unit		
		1A1	1A	
		201A or B	1st 8B	2nd 8B
Terminal				
†	GRD S	16 1	1	6
A	GRD S	13 2	2	4
B	GRD S	13 3	3	4
C	GRD S	13 4	4	4
D	GRD S	14 5	5	4
E	GRD S	14 6	6	5
F	GRD S	14 7	7	5
G	GRD S	15 8	8	5
H	GRD S	15 9	9	5
J	GRD S	15 10		6 1
K	GRD S	16 11		6 2
L	GRD S	16 12		6 3

* Strap to terminal 1 of connecting block 3.

† Connect signal key here for code signaling.

Key Cable to Running Cable or to Buzzer Bridging Unit—Code and/or Selective Buzzer Circuit Using External Signal Keys

Running Cable and Buzzer Bridging Unit

To Buzzer	To Sig Keys For Buzzer	Lead Desig	Running Cable			Bridging Unit		
			Pair No.	C Type	D Type	1A1	1A	
						201A or B	1st 8B	2nd 8B
			Color		Terminal			
	*	GRD S	25	S R	S V	16 1		6
	A	GRD S	26	BL-W R	BL-W W	13 2	2	4
A		B1 R1	27	BL-O R	O-W W	2 17	2	7
	B	GRD S	28	BL-G R	G-W W	13 3	3	4
B		B1 R1	29	BL-BR R	BR-W W	3 17	3	7
	C	GRD S	30	BL-S R	S-W W	13 4	4	4
C		B1 R1	31	O-W R	BL-W R	4 17	4	7
	D	GRD S	32	O-G R	O-W R	14 5	5	4
D		B1 R1	33	O-BR R	G-W R	5 18	5	7
	E	GRD S	34	O-S R	BR-W R	14 6	6	5
E		B1 R1	35	G-W R	S-W R	6 18	6	8
	F	GRD S	36	G-BR R	BL-W BK	14 7	7	5
F		B1 R1	37	G-S R	O-W BK	7 18	7	8
	G	GRD S	38	BR-W R	G-W BK	15 8	8	5
G		B1 R1	39	BR-S R	BR-W BK	8 19	8	8
	H	GRD S	40	S-W R	S-W BK	15 9	9	5
H		B1 R1	41	BL BK	BL-W Y	9 19	9	8
	J	GRD S	42	O BK	O-W Y	15 10		6 1
J		B1 R1	43	G BK	G-W Y	10 19		1 9
	K	GRD S	44	BR BK	BR-W Y	16 11		6 2
K		B1 R1	45	S BK	S-W Y	11 20		2 9
	L	GRD S	46	BL-W BK	BL-W V	16 12		6 3
L		B1 R1	47	BL-O BK	O-W V	12 20		3 9

* Pair 25 is used for code and selective signaling.

Buzzer

Buzzer Location	Lead Desig	Pair No.	Key Cable	
			C Type	D Type
			Color	
In Key Tel Set	B1 R1	12	O-G W	O BK
Outside Key Tel Set	B1 R1	21	BL R	BL Y
Signal Key				
Code or Sel Sig	Code and Sel Sig			
Sig Key No.				
	1*	GRD S	25	S R
1	2	GRD S	26	BL-W R
2	3	GRD S	27	BL-O R
3	4	GRD S	28	BL-G R
4	5	GRD S	29	BL-BR R
5	6	GRD S	30	BL-S R
6	7	GRD S	31	O-W R
7	8	GRD S	32	O-G R
8	9	GRD S	33	O-BR R
9	10	GRD S	34	O-S R
10	11	GRD S	35	G-W R
11	12	GRD S	36	G-BR R
12		GRD S	37	G-S R

Example: For connecting one station of a selective buzzer circuit.

Station B has:

- Buzzer located on outside of set.
 - Signal key 1, which operates buzzer at station F.
 - Signal key 2, which operates buzzer at station J.
1. Connect key cable pair 21 in the buzzer table either directly or through running cable pair 29 to terminals 3 and 17 of the 201-type key telephone unit bridging unit for 1A1, or to terminals 3 of the first 8B key telephone unit and 7 of the second 8B key telephone unit bridging units for 1A.
 2. Connect key cable pair 26 in the signal-key cable either directly or through running cable pair 36 to terminals 14 and 7 of the 201-type key telephone unit bridging unit for 1A1, or to terminals 7 of the first 8B and 5 of the second 8B key telephone unit bridging units for 1A.
 3. Connect key cable pair 27 in Table 79.03 either directly or through running cable pair 42 to terminals 15 and 10 of the 201-type key telephone unit bridging unit for 1A1, or to terminals 6 and 1 of the second 8B key telephone unit bridging units for 1A.