

BELL SYSTEM PRACTICES
Station Installation
and Maintenance

SECTION C56.102
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T. P. T. & T. Co.
Preliminary

CIVIL AIR RAID WARNING
BELL AND LAMP SYSTEM
STATION SIGNAL INDICATOR
AND
KEY POINT DIAL EQUIPMENT

1. GENERAL

1.01 This section covers the station equipment ordering, installation and connecting of Bell and Lamp Civil Air Raid Warning apparatus.

1.02 This section is issued in lieu of a forthcoming B.S.P. being prepared by the American Company.

1.03 Customer service is on a limited basis and the receiving of the "Yellow" alert is obtainable only on approval of the California State Civil Defense Authorities. Bell and Lamp signal service inquiries should be referred to Telephone Company commercial representatives.

1.04 A main station service is also limited to only ONE extension bell. The use of a single cable facility for two stations is governed by the maximum conductor loop as shown on drawing SD-69211-01 Note 202 referred to as an extension set.

2. STATION EQUIPMENT LOCATION

2.01 Locate the station signal indicator set on a vertical surface, at about eye level, in an unobstructed view location and not in direct sunlight or other brilliant illumination. Fasten the indicator

in the same manner as covered in the B.S.P. for a subscriber set.

2.02 The Key Point or Alternate Key Point Dial equipment is a special dial, designated in color, with the various degrees of air raid warning signals and a special dial housing adaptable for either desk or wall mounting. When mounted on a vertical surface the following applies: remove the four feet, relocate the dial 180 degrees on its mounting, fasten the dial housing to the backboard so that the cover will hinge downward and out of the way when dialing. The backboard should not be over 60 inches above floor level.

3. CONNECTIONS

3.01 For connections to Main station indicator refer to SD-69211-01 Fig. 1.

3.02 For extension bell only with cut-off key see figure A below:

(Note: Extension bell does not require ground lead.)

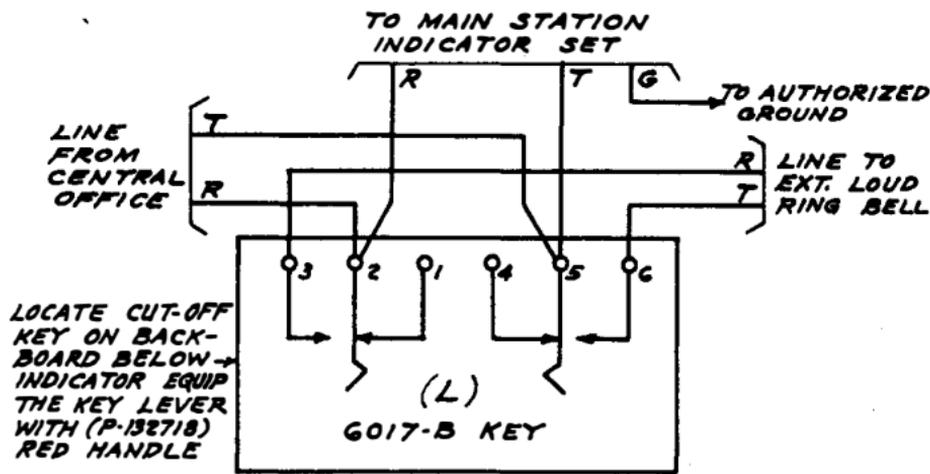


FIGURE A
EXTENSION CUT OFF KEY

3.03 **Extension Bell - loud ringing (592-A):** The extension bell (592-A) shall be modified to permit its use in connection with the ringer circuit of the Main station indicator set. Add a 3600 ohm resistor, radio type, per KS-13490, L-1 (or equivalent) connected in series with the extension ringer and condenser as shown in figure B below:

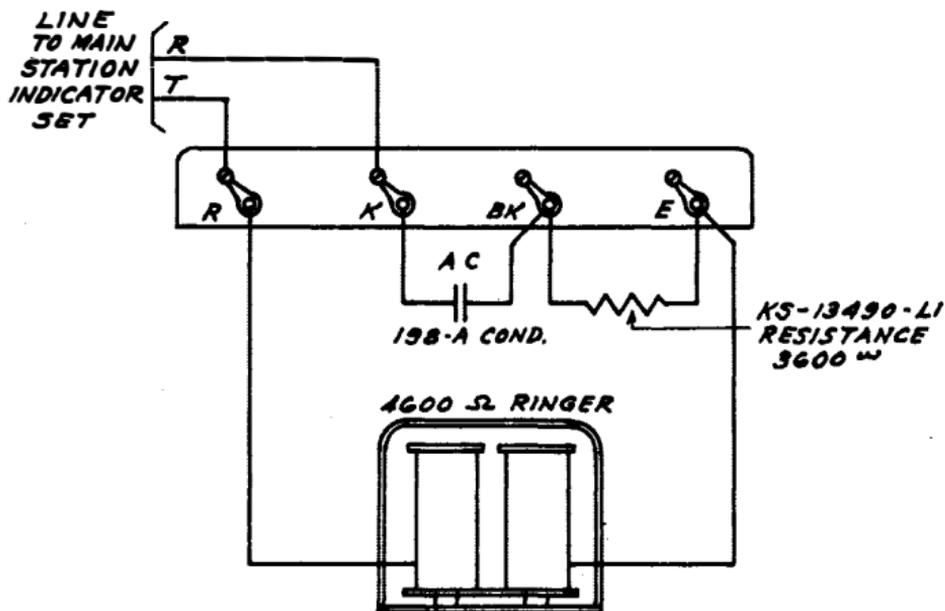


FIGURE B

EXTENSION BELL For

Bell and Lamp Air Raid Warning System
(modified 592-A bell)

3.04 **Local Extension Bell - Loud Ringing - in lieu of main station (modified 531A-3 set) ringer:**

At some locations it may be desirable to have a loud ringing bell located on a hall wall adjacent to the main station indicator set (must be within hearing distance of the main station set) in place of the main station

ringer. This may be accomplished by disconnecting the main station ringer leads (red and black wires) and substituting the local extension 592-A ringer leads to the 'BK' and 'R' terminals of the main station indicator set.

3.05 For connections to the Key Point or Alternate Key Point signal sending equipment (Sunflower Dial) SD-69211-01 figure 4:

- (A) Desk mounted - ED-69245-01, G-1 Connect the Central Office line to the dial apparatus terminal strip by means of a 42A4 or 9 connecting block, on desk or wall, using a D3AY cord. The green and yellow conductors of the cord shall be fastened at each end under the same screw. At the dial mounting the red conductor and the stay hook shall be fastened under the same screw.
- (B) Wall mounted - ED-69245-01, G-1 and 2 Connect the Central Office line directly to the terminal strip as shown on drawing SD-69211-01 figure 4.

4. SUPPLIES

4.01 A Station Signal Indicator should be ordered as follows:

Amt

- 1 - Unit indicator signal station J99237D, L-1 per ED-69231-01 figures 1 & 3.

4.02 Key point dial equipment should be ordered as follows:

Amt

- 1 - Assembly, dial station ED69245-01, G-1 desk mounting.

- 1 - Assembly, dial station ED69245-01,
G-1 and G-2 wall mounting.

5. DRAWINGS

5.01 The following drawings are associated with the
Bell and Lamp Civil Air Raid Warning System.

Circuit Drawings:

SD-69211-01 Station Signal Indicator and
Dial (attached)

Equipment Drawings:

ED-69231-01 Station Signal Indicator
ED-69245-01 Dial and Dial Housing

STATION SIGNAL INDICATOR CIRCUIT

FIG. 3
RINGER
CUT-OFF KEY

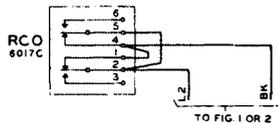


FIG. 1
VISUAL AND AUDIBLE
SIGNAL CKT.

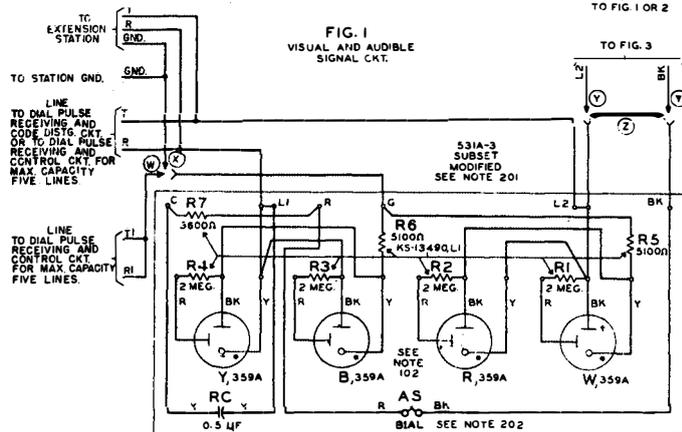
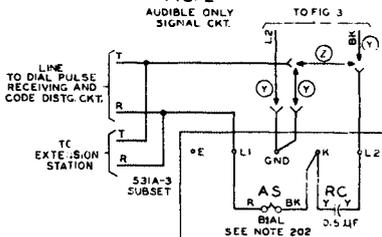


FIG. 2
AUDIBLE ONLY
SIGNAL CKT.



2D	I	DWG. ISS.
2D	I	C.D. ISS.

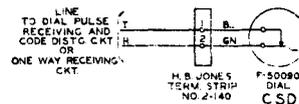
CIRCUIT NOTES:

FEATURE OR OPTION	FIG. NO.	APPROX. QTY.	PROVIDE	
			REQ.	NOT REQ.
VISUAL AND AUDIBLE SIGNAL CKT.	1	1	PER STATION	
AUDIBLE ONLY SIGNAL CKT.	2	1	PER STATION	
RINGER CUT-OFF KEY	3	1	PER STATION	
RINGER CUT-OFF FEATURE			REQ.	Y
			NOT REQ.	Z
CONTROL STATION DIAL	4	1	PER CONTROL STATION	
CONNECTING CIRCUIT			X	
			DIAL PULSE RECEIVING AND CODE DISTG. CKT. (2-WIRE OPERATION)	
			DIAL PULSE RECEIVING CONTROL CKT. FOR MAX. CAPACITY FIVE LINES (4-WIRE OPERATION)	
			H	

SIGNAL (VISUAL)	2-WIRE OPERATION		4-WIRE OPERATION	
	RINGING SUPPLY	RINGING	2-WIRE	RINGING
YELLOW	2-ON R	3-ON	2-ON	RINGING
BLUE	2-ON R	3-ON	2-ON	RINGING
RED	2-ON T	3-ON	2-ON	RINGING
WHITE	2-ON T	3-ON	2-ON	RINGING

RECORD OF FIDLES, WIRING, AND PARTS CHANGES				
CHANGED	IF JOB	THIS	SEE	USE IN CIRCUIT
DATE	ISSUED	WAS	NOTE	STD
				A
				M
				D
2D	X	OR	X	10
				X

FIG. 4
CONTROL STATION DIAL



EQUIPMENT NOTES:

- THE 531A-3 SUBSET FIG. 1 SHALL BE MODIFIED IN ACCORDANCE WITH ED-69231-D1.
- DIAL RINGERS SHALL BE EQUIPPED WITH 2-418 GONGS AND 101A GONG ATTACHMENTS WITH KNOCK-OUTS REMOVED.

WORKING LIMITS

LINE TO CONN. CKT.	MIN. VOLTS AC	MIN. VOLTS DC	MAX. EARTH POTENTIAL	MIN. INS. RES.		MAX. GOND. LOOP
				INS. RES.	INS. RES.	
2-WIRE	70V	45V	0	150,000	150,000	400.0
	70V	45V	+0R-5V	150,000	800.0	400.0
	75V	45V	+0R-5V	150,000	1,000.0	400.0
	70V	45V	+0R-10V	150,000	3,000.0	-
4-WIRE	75V	45V	+0R-10V	150,000	8,000.0	200.0
	80V	45V	+0R-10V	150,000	13,000.0	400.0
	70V	45V	+0R-10V	15,000.0	100.0	-

THE ABOVE LIMITS ARE BASED ON THE USE OF A 13C OR EQUIVALENT RES. LAMP IN SERIES WITH THE RINGING SUPPLY RANGES SHOWN FOR 2-WIRE OPERATION WITH ONE EXTENSION APPLY TO THE FARTHEST STATION.