

## CIVIL DEFENSE WARNING SYSTEM (CDW) STATION EQUIPMENT-IDENTIFICATION

### 1. GENERAL

**1.01** The Bell and Lights is a Civil Defense Warning (CDW) System which is used to rapidly disseminate attack warning and peace-time emergency signals. The signals are transmitted by dialing on private line signaling networks, and are indicated by bells and lights at the warning stations or by the operation of sirens.

**1.02** This section is reissued for the following reasons:

- (a) To revise equipment information pertaining to the type of subscriber set.
- (b) To change the lettering on the subscriber set decal.
- (c) To add piece part ordering information for the dial decal.

**1.03** In large communities where 8-line or 50- to 200-line capacity units are employed at the central office, superimposed coded ringing is transmitted to the line on a 4-party full selective basis. This transmission activates both the station bell and the cold cathode tubes throughout a given warning period. The station bell rings and an associated lamp is lighted according to a distinctive code for each signal.

**1.04** In small communities where warning stations are connected to single line or 5-line capacity units at the central office, the audible-only signal should not be used since only steady (noncoded) ringing is supplied. Steady ringing in such cases would convey no useful information.

**1.05** At certain locations, public audible signals (sirens) are installed by the customer and are controlled at the central office by a public signal control unit.

**1.06** Vital stations may be associated with central office equipment for automatic self-test of individual lines.

**1.07** This issue of the section is based on the following drawings:

ED-69231-01 Issue 7D

ED-69245-01 Issue 5D

If this section is to be used with equipment or apparatus reflecting later issues of the drawings, reference should be made to the EDs to determine the extent of the changes and the manner in which the section may be affected.

### 2. ORDERING GUIDE

**2.01** Indicator, Signal, Station J-99237D, List 1 Set per ED-69231-01 (see Fig. 1)

- Installed at control points and receiving stations.
- Provides coded visual signals and coded or non-coded audible signals.
- Consists of a 687A-49 subscriber set equipped with four 359A cold cathode tubes.
- Fig. 3 shows the recommended receiving station instruction card.
- **Local Alert** (2) is for the general public and Bell and Lights subscribers.
- Code 4 will be designated or left blank by local option. There is no nationwide standard for this code. If designated, it should be designated uniformly for an entire state.
- Decals for subscriber set are provided as a part of the modification per ED-69231-01.

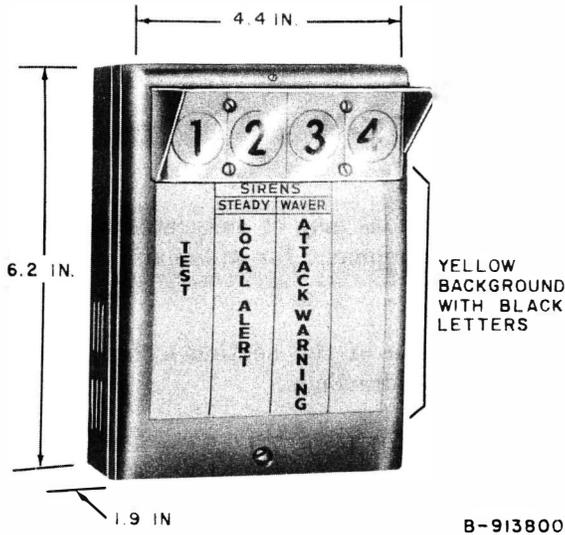


Fig. 1—CDW Receiving Station Indicator Showing Suggested Decal (J99237D, List 1)

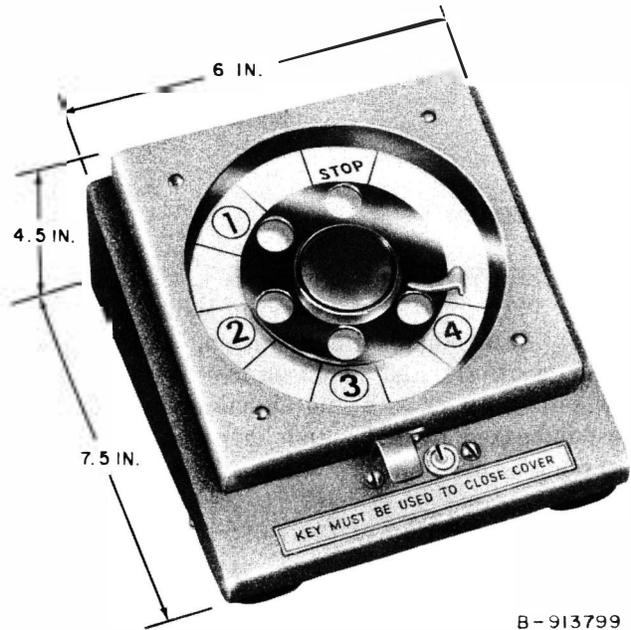


Fig. 2—CDW Dial with Cover Closed (ED-69245-01, Group 1)

2.02 ED-69245-01, Group 1, Station Dial Assembly (desk-mounted) (see Fig. 2)

- Installed at control points.
- Dial cover designed so it can be forced open, if required.
- Dial is a 7F-3 dial equipped with a 840-288-732 Dial Face. The dial face may be ordered from:

*Duralith Corp  
525 Orange St.  
Millville, N.J. 08332*

- Gray-green wrinkle-finish metal housing must be fabricated locally.⚡

2.03 ED-69245-01, Group 1 and 2, Station Dial Assembly (wall-mounted)

(a) **Replaceable Components**

- Tube, Electron, 359A (for station signal indicator)
- P-37A556 Shield (for station signal indicator).

(b) **Replaceable Optional Components**

- Set, Subscriber, 687A-49
- Key, 6017C
- Relay, Power, KS-16626, List 13 (for siren locations)
- Locally printed instruction cards (Fig. 3, 4, and 5).⚡

3. DESIGN FEATURES

- (a) Reception of selective visual and coded audible signals at vital warning stations in Civil Defense Warning systems.
- (b) Reception of coded audible signals only.
- (c) Silencing of audible signals under control of a nonlocking ringer cutoff key.
- (d) Reception of visual and audible signals on either 2- or 4-wire lines.
- (e) Connection of one signal indicator extension station, or connection of one or two extension ringers.

# BELL AND LIGHTS WARNING SYSTEM

## RECEIVING STATION INFORMATION

Optional For Each State

DESIGNATIONS

CODES—BELL RINGS AND LAMP LIGHTS

DURATION OF SIGNALS

PUBLIC SIREN OPERATION

MEANING OF SIGNALS

ACTION

DAILY TEST:  
EXCEPT SAT. & SUN.

MONTHLY TEST:  
day time

SPECIAL TEST OR EXERCISE

\* Either 3 or 5 minutes as appropriate

This is Receiving Station No.      Report trouble or failure to receive scheduled test to  
Southern Bell Telephone and Telegraph Co. Telephone No.

### SIGNAL NUMBERS

1	2	3	4
Test	Local Alert	Attack Warning	
Two Short Signals—Repeated	Three Short Signals—Repeated	Continuous Short Signals	Alternating 16-Second Signal and 16-Second Pause

### ACTUAL WARNING SIGNALS

1 Minute	* Minutes	* Minutes	3 Minutes
NONE	STEADY BLAST	WAVERING TONE	NONE
Test of Capability of Extending Warnings	Imminent Local Emergency	Actual Attack Has Been Detected	Imminent Local Emergency
Extend Test As Planned	Tune Radio or TV to Local Station	Take Protective Action Immediately	Proceed According to Local Instructions

### TESTS

About 10 Seconds	NOT OPERATED	About 16 Seconds
Not Operated	1 Minute Interval Between	Not Operated
1 Minute	NOT OPERATED	

BLACK LETTERING

RED LETTERING

BLACK LETTERING

SUBSTITUTE NAME OF APPROPRIATE COMPANY

10-7/8 IN.

8-1/2 IN.

Fig. 3—Suggested Format for Receiving Stations Instruction Card

#### 4. OPERATING FEATURES

4.01 Central office equipment activates both the station bell and the cold cathode tube throughout a warning period. The bell rings and

the associated lamp is lighted according to a distinctive code for each signal.

(a) ①—TEST: Two short rings (1/2 second each); pause (2-1/2 seconds); repeat.

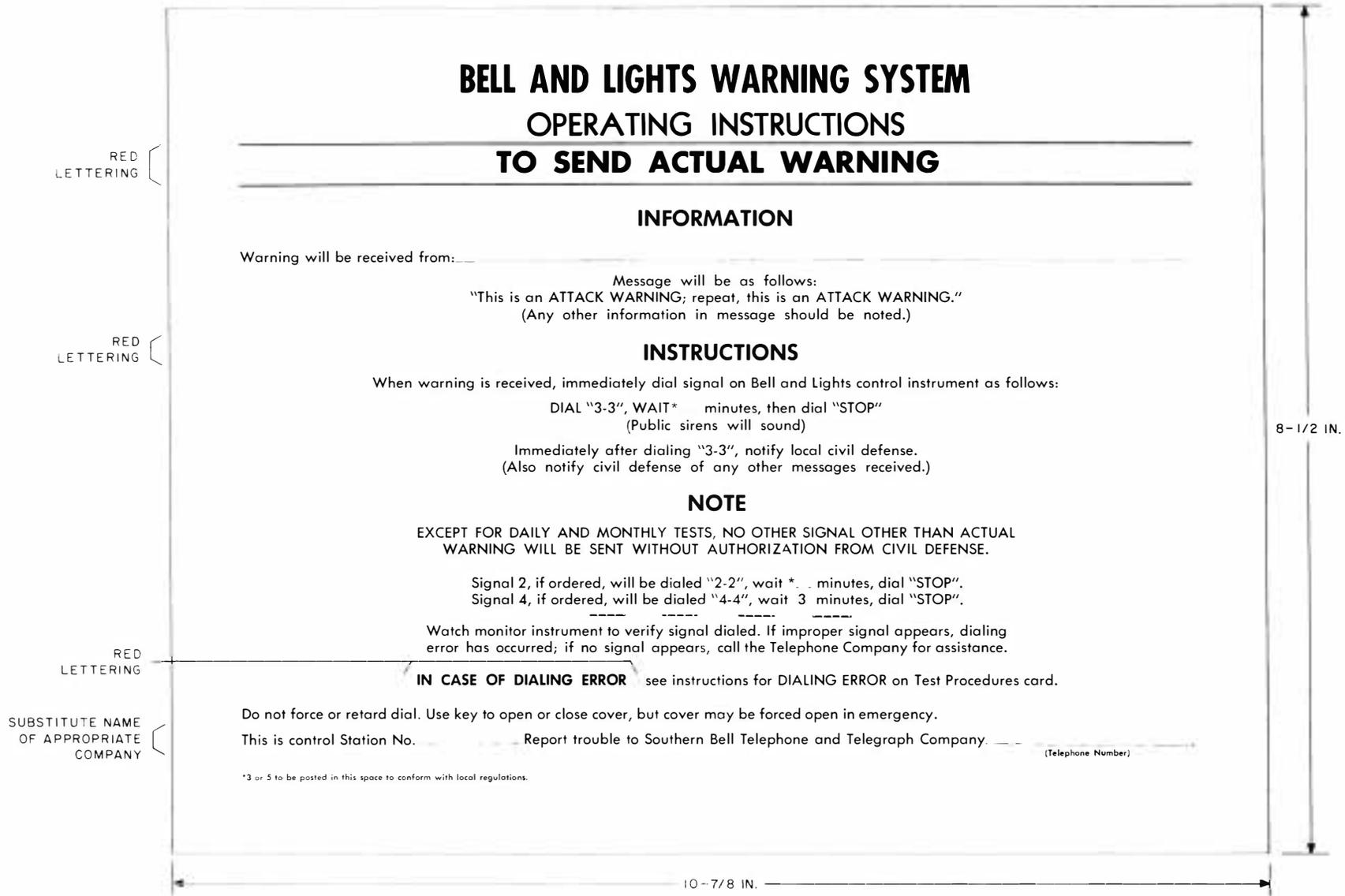


Fig. 4—Suggested Instruction Card to be Posted at Dial Control Points

# BELL AND LIGHTS WARNING SYSTEM TEST PROCEDURES

## DAILY TEST

BELL AND LIGHTS STATIONS ONLY

SEND THIS TEST AT \_\_\_\_\_ EVERY DAY, EXCEPT SATURDAY AND SUNDAY

SINCE SIRENS SHOULD NOT BE SOUNDED, NEVER DIAL "2-2" or "3-3" ON THIS TEST AND BE SURE TO DIAL IN THE FOLLOWING ORDER:

1. DIAL "1-1", after 10 seconds dial "STOP" once.
2. DIAL "4-4", after 30 seconds dial "STOP" once.

## MONTHLY TEST

SIRENS AND BELL AND LIGHTS STATIONS

SEND THIS TEST ON THE \_\_\_\_\_ DIAL IN THE FOLLOWING ORDER:

1. DIAL "2-2", after one minute dial "STOP" once.
2. Wait one minute.
3. DIAL "3-3", after one minute dial "STOP" once.

## SPECIAL TEST OR EXERCISE

THIS SIGNAL WILL BE SENT ONLY UPON ORDERS OF THE LOCAL CIVIL DEFENSE DIRECTOR

1. DIAL "1-1".
2. Wait one minute, then dial "STOP" once.

## IN CASE OF DIALING ERROR DURING TEST

1. DIAL "STOP" once, then resume test procedure.
2. If error has caused sirens to operate for 30 seconds or more, notify broadcast stations and request public announcement of erroneous warning.

BROADCAST STATIONS \_\_\_\_\_

TELEPHONE NUMBERS \_\_\_\_\_

8-1/2 IN.

10-7/8 IN.

Fig. 5—Suggested Format for Sending Stations (Tests)

**SECTION 480-210-100**

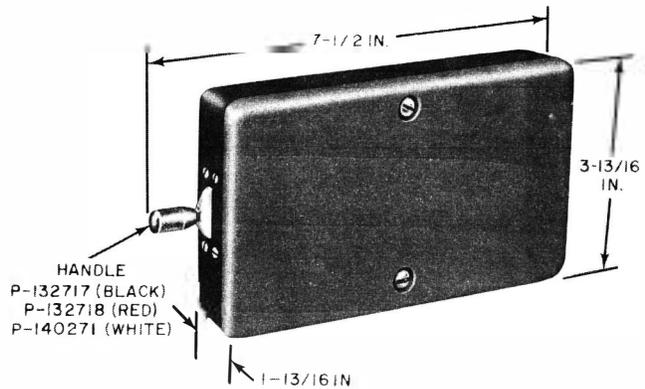
- (b) ②—LOCAL ALERT: Three short rings (1/2 second each); pause (1-1/2 seconds); repeat.
- (c) ③—ATTACK WARNING: Continuous short rings (1/2 second each).
- (d) ④—(Optional): Steady ring (16 seconds).

**4.02** All signals must be dialed twice to operate associated central office equipment. STOP requires only one dialing. In the event of incorrect dialing, dial STOP to release the central office equipment, then redial.

**4.03** Each dialed signal will last for approximately 3 minutes, unless a different signal is dialed before the 3-minute period expires.

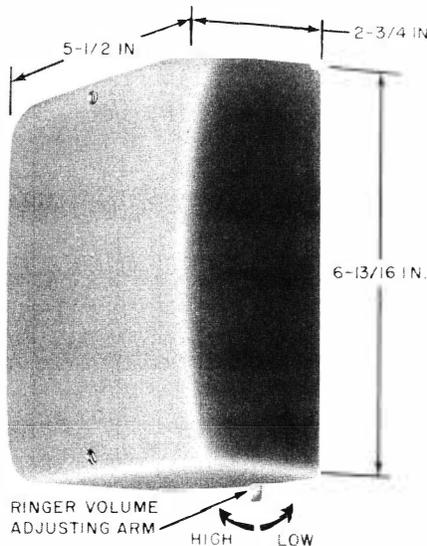
**5. ASSOCIATED APPARATUS**

**5.01** Associated apparatus is shown in Figures 6, 7, and 8.



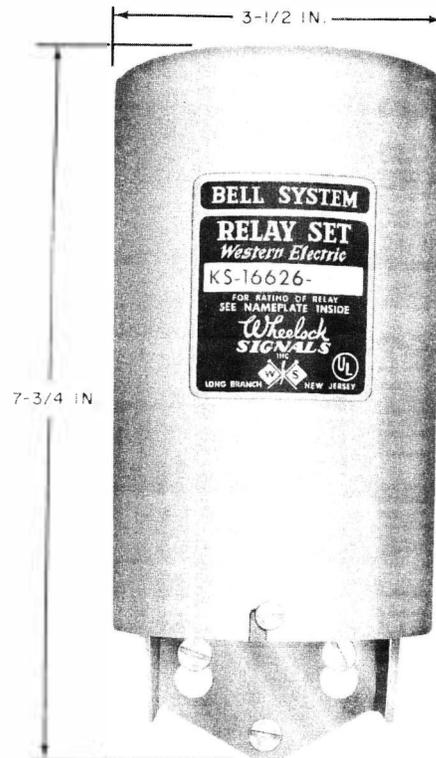
- USE TO SILENCE RINGER
- NON LOCKING

**Fig. 7—6017C Key**



- USE FOR  
AUDIBLE-ONLY SIGNALS AT WARNING STATIONS  
EXTERNAL RINGER  
EXTENSION RINGER(S)

**Fig. 6—687A-49 Subscriber Set**



- USE TO APPLY POWER TO PUBLIC SIREN WITH 90 VOLTS 20 HZ RINGING CURRENT.
- CONTAINS 526A CAPACITOR FOR HIGH VOLTAGE AND TEMPERATURE TO PREVENT FALSE OPERATION

**Fig. 8—KS-16626, List 13 Power Relay**