

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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WARNING FLASHER

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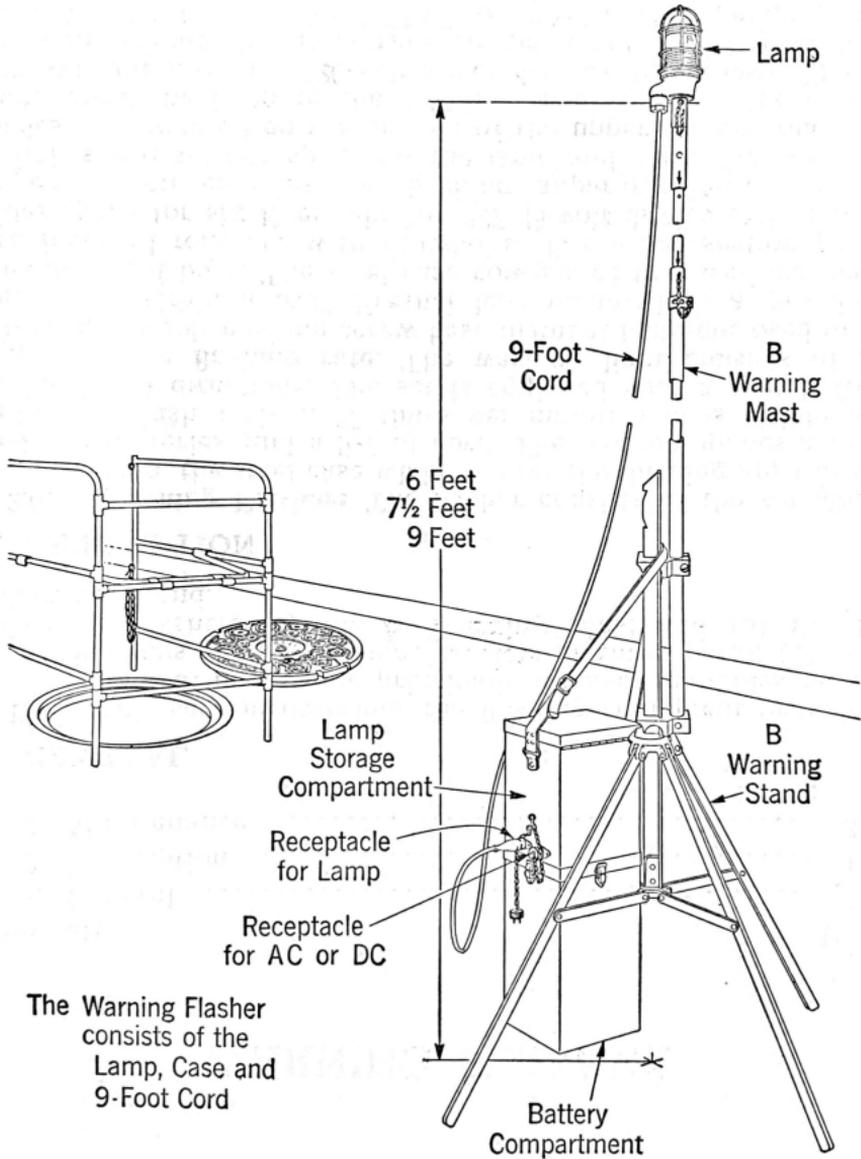
1. GENERAL

1.01 This section describes the flashing equipment provided for warning traffic principally at open manholes on or near highways. The equipment consists of three parts, (1) the Warning Flasher, (2) the B Warning Mast and (3) the B Warning Stand.

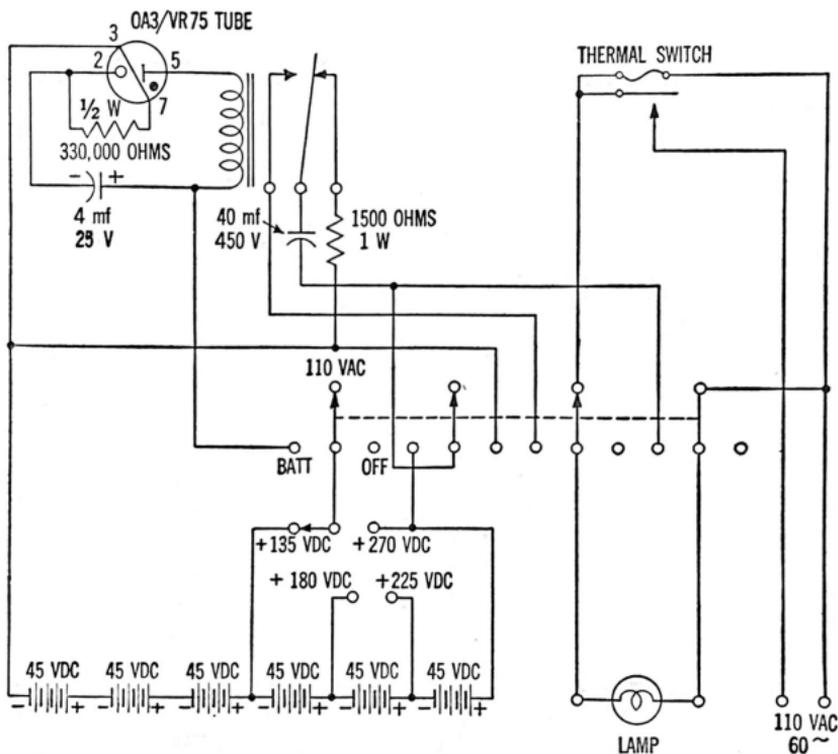
2. DESCRIPTION

2.01 **Warning Flasher:** The flasher consists of the warning lamp, the steel case which houses the flashing apparatus and dry batteries, and a 9-foot cord. The device supplies a red light that flashes about 75 times per minute and is visible to traffic in all directions. The set is equipped with a switch for adjusting the flashing rate. The warning light consists of a 10-watt, 110-volt medium screw base filament lamp enclosed in a red filter within a 360° Fresnel lens mounted in a guarded weatherproof base. The steel case consists of two sections that are fastened together with drawbolts. The lower section provides space for six Eveready No. 487 45-volt dry batteries; the upper section contains the flashing apparatus, two control switches and storage space for the lamp and cord. Two receptacles are mounted on the outside of the upper section, one for connecting the lamp to the flashing apparatus and the other for connecting to 110—120-volt a-c or d-c auxiliary power. There are two switches in the storage compartment. The key switch should be set at "BATTERY" or "AC-DC" depending on whether the lamp is to be operated by the batteries in the case or by auxiliary power. The step switch located at the bottom of the upper section and reached by detaching the

lower section, controls the flashing rate. The dry batteries must be ordered separately.



2.02 The circuit diagram of the flasher is shown below.



2.03 **B Warning Mast:** The mast consists of two sections of telescoping aluminum tubing. It is designed for use on the B Warning Stand or the Manhole Guard. It can support warning flags as well as the flasher light. The mast, when used with the B Warning Stand, supports the light 6, 7-1/2 or 9 feet above the ground.

2.04 **B Warning Stand:** This is a four-legged collapsible metal stand and in conjunction with the warning mast is used as a support for the warning light or without the mast as a base for the Demountable Warning Sign. A spring actuated stop locks the stand in the open and closed positions.

3. MAINTENANCE

3.01 The flasher under normal conditions should operate continuously for about 500 hours on one set of No. 487 Eveready batteries. During this time the flashing rate will

gradually decrease and must be adjusted from time to time. The batteries should be changed when a flashing rate of at least 50 flashes per minute can not be obtained. The flashing rate should be adjusted after the batteries have been changed. The rate should be between 50 and 100 times per minute.

3.02 The light will gradually dim as the batteries wear down. Battery operation will, however, provide a brighter light than operation by auxiliary power.

3.03 A loose connection, broken lamp filament or defect in the flasher apparatus will cause stoppage of the light; otherwise the light will operate continuously throughout the normal life of the batteries.

3.04 **Parts for Field Replacement:** The standard listing for replacement parts is given below and should be used for ordering purposes.

Battery, Dry, Eveready No. 487 (Six required)

Lamp, medium screw base, 110-volt, 10-watt

Lens, Fresnel for Warning Flasher.



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