

## 200-POINT LINE FINDER AND TRUNK FINDER EQUIPMENT

### GENERAL DESCRIPTIVE INFORMATION

### STEP-BY-STEP OFFICES

#### 1. GENERAL

1.01 This section describes the 200-point line finder and trunk finder for use in step-by-step and community dial offices.

1.02 The function of this equipment, when used as a line finder, is to establish a connection between a calling line and a first selector in preparation for dialing. This is accomplished by actuating a step-by-step switch to hunt for the calling line and connect to its T, R, and S leads which terminate on banks associated with the switch.

1.03 The equipment may also be used as a trunk finder to establish a connection between intercepting trunks and an announcement machine or switchboard position.

1.04 In both uses, the equipment functions as a concentrating device, serving 198 lines or trunks through a maximum of 20 switches (or 30 switches in the case of the 30-capacity line finder unit).

#### 2. LINE FINDER UNIT

2.01 *Principal Elements:* A fully equipped 200-point line finder unit consists of 20 or 30 line finder switches, with their associated multiple banks, the line relay equipment for the 198 lines served, control equipment, and fuses. The present standard units mount on a universal switch frame.

2.02 *Types:* The following types of line finder units are available for standard applications.

- (a) 20-switch capacity, three wire.
- (b) 20-switch capacity, four wire.
- (c) 30-switch capacity, three wire.
- (d) 20-switch capacity, three wire, with provision for permanent signal lockout on 5 to 100 per cent of the subscriber lines.

The 30-switch capacity line finder unit provides extra call-carrying capacity for high calling rate lines and is intended for use only in No. 1 and 350A offices. The permanent signal lockout unit is for 355A and 35F97 offices. The other two units are used in all four types of offices.

#### 2.03 Features

(a) *Permanent Signal Lockout:* Lines served by the lockout line finder unit [2.02(d)] can be equipped, in blocks of ten lines, for permanent signal lockout. Lines so equipped, when in a permanent signal condition, will automatically release the line finder and first selector after a timed interval.

(b) *Bank Slip:* The T, R, and S leads of all lines served by a line finder unit are connected to terminals on the banks of each finder switch in the unit. In the case of the 4-wire unit, additional A or TR leads are connected to the fourth bank of all switches. Each of the ten levels handles 20 lines. Each group of 20 lines appears one level lower on each successive finder for the first ten finders and similarly on the second ten finders. This arrangement, known as the bank slip, insures that a different group of lines appears on the lowest, or first choice, level of each successive finder.

(c) *Alternating Feature:* While any line finder can find any line, an order of choice is provided by the circuit arrangements which causes a calling line to be served on the lowest level permitted by traffic at the moment. The order of choice is determined (1) by an alternating arrangement in the group relay circuit which alternates first choice for successive calls between two finders having the calling line on the lowest level, and (2) by progression of the start lead to other finders in a prescribed order, if the first choice finders are busy when a call is attempted. The alternating of first choice on successive calls prevents the complete blocking of a call under light traffic conditions in the event of certain trouble conditions in a first choice finder.

(d) *Line Load Control*: Line finder units can be arranged to function with line load control equipment. This equipment provides for preferential service for certain subscriber lines during an overload, by denying service temporarily to the other lines on the same line finder unit. Lines on which it is important to provide service at all times can thus be protected during an emergency.

### 3. TRUNK FINDER UNIT

3.01 The 200-point trunk finder unit is similar to the 200-point line finder unit, except that it is arranged to serve intercepting trunks. These trunks are mounted on the trunk finder unit in the same location as the line relay equipment on line finder units, or on an associated relay rack. Both regular and trouble intercepting trunks can be handled by a trunk finder unit.