

## DISTRICT SELECTOR TEST FRAME EQUIPMENT DESIGN REQUIREMENTS PANEL SYSTEMS

### 1. GENERAL

#### Scope

1.01 This specification, together with the supplementary information listed herein, covers the equipment design requirements for the framework, equipment, and circuits to be used in the manufacture and installation of the automatic district selector test frame in panel offices having subscriber links with either ground or battery on the cutoff relays and the district selectors with or without (a) local control zone registration, (b) nonzone overtime, or (c) remote control zone registration.

1.02 This specification is reissued to:

- (a) Change List 6 of J24003D.
- (b) Add Note D to J24003D.
- (c) Bring it into conformity with the general Plant Series numbering plan.

1.03 The district selector test frame has a capacity of one district selector test circuit and eight group circuit units, each of which serves 400 district selectors. The test frame, therefore, provides for testing a maximum of 3200 district selectors which in general, is sufficient. As a matter of fact, this capacity has only been exceeded in one instance. However, the circuit has a maximum capacity of 800 district selectors which would require 20 test group units. Therefore, when more than 3200 district selectors are to be tested by the same test frame, additional test group units may be added, as required, and mounted on the relay rack by means of adapters which are shown on frame assembly ED-20581-01.

1.04 The frame also has a capacity of 52 line finder groups for line finder exercise test circuits for two units.

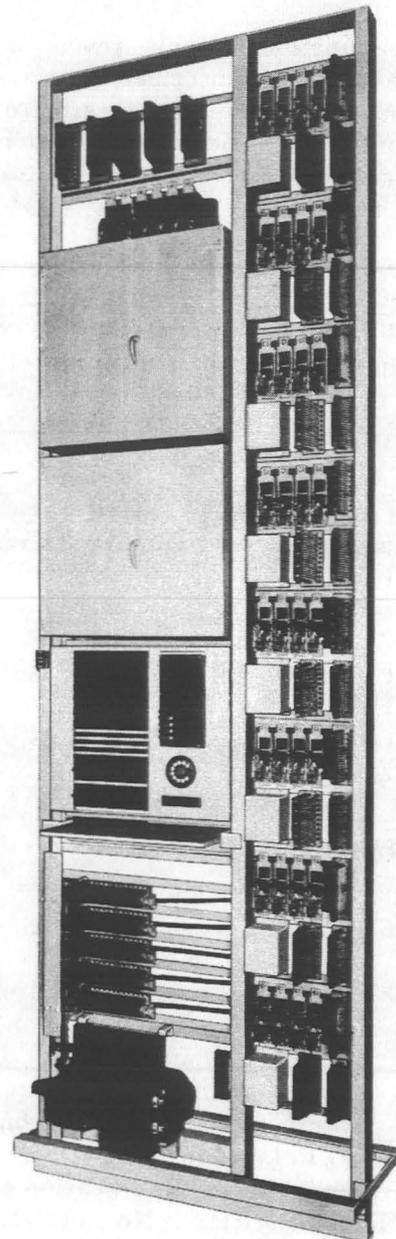


Fig. 1 - District Selector Test Frame

**Description**

**1.05** The district selector test frame is a steel structure designed for supporting the testing equipment required for the automatic testing of district selectors in link-type offices having either battery or ground on the cut-off relays. The connector switches and associated relays, condensers, and resistances which form a part of the test circuit are located for cabling reasons, on the subscriber link frames. When two district test frames are furnished, both frames may have access to all the district selectors in the office.

**1.06** The function of this frame is to gain access to the subscriber district selectors and to test all of these selectors in rotation as a matter of periodic routine or to reach any one selector or any group of selectors for making individual tests.

**1.07** Equipment for the line finder group exercise test circuit is also located on this frame, although the equipment has no connection with the district selector test circuit. The equipment is arranged for two office units.

**Subdivisions of Equipment**

- J24003D (A&M Only) — District Selector Test Frame Arranged With or Without Local Control Zone Registration, Non-zone Overtime, and Remote Control Zone Registration
- J24003E (A&M Only) — District Test Group Unit
- J24003F (A&M Only) — Sleeve Test Unit — ANI

**2. SUPPLEMENTARY INFORMATION**

- 815-000-000 — Panel Systems Index
- AA128.006 — List of General Equipment Requirements Sections
- X-61200 — List of Engineering Requirement Specifications — Ground on the CO Relay Offices
- X-61400 — List of Engineering Requirement Specifications — Battery on the CO Relay Offices
- J29209 (815-006-154) — Modification of FR, MRI, and MRP for Nonzone Overtime and Remote Control Zone Registration
- Floor Plan Data — Section 4.3, Sheet 33

**3. DRAWINGS****Key Sheets — Panel Systems**

- SD-21300-01 — Battery on the CO Relay
- SD-21680-01 — Panel Link — Ground on the CO Relay
- ES-262829 — Rotary Link — Ground on the CO Relay — 3 Digit
- ES-262849 — Rotary Link — Ground on the CO Relay 2 and 2-3 Digit

**Framework**

- ED-20081-01 — Sequence Switch Framework Details
- ED-20087-01 — Assembly of Relay Casing
- ED-20150-01 — Framework Limits
- ED-20446-01 — Length of Connecting Shafts
- ED-20509-01 — Assembly of Fuse Panel
- ED-20581-01 — Assembly of Frame
- ED-20584-01 — Assembly of Key and Lamp Panel
- ED-20587-01 — Assembly of Key Panel Casing
- ED-20660-01 — Assembly of Writing Shelf

**Equipment and Numbering**

- ED-20357-01 — Charts
- ED-20579-02 — Equipment of Mounting Plates
- ED-20583-01 — Equipment of Frame
- ED-21902-01 — Test Battery Supply Equipment

**Wiring and Cabling**

- ED-20580-01 — Switchboard Cabling Plan
- ED-20582-01 — Local Cabling Plan
- ED-20622-01 — Method of Running and Supporting Frame Battery and Ground Leads

**4. EQUIPMENT**

*J24003D (A&M Only) — District Selector Test Frame Arranged With or Without Local Control Zone Registration, Non-zone Overtime, and Remote Control Zone Registration*

- Equipment of Frame — ED-20583-01, Fig. 1
- Equipment of Mounting Plates — ED-20579-02
- Local Cable — ED-20582-01, Fig. 1

**List 2** — Supplementary wiring and equipment per SD-20240-03, Figs. B, K, L, & M, required in addition to list 1 to arrange one district selector test frame for testing local control zone registration equipment. (See notes A and B.)

**List 3** — Supplementary wiring and equipment per SD-20240-03, Fig. C, required in addition to list 1 to arrange one district selector test frame for testing (a) local control zone registration, (b) nonzone overtime, and (c) remote control zone registration, less variable apparatus. (See notes A, B, and 5.11.)

**List 4** — Supplementary wiring and equipment per SD-20240-03, Fig. 10, required in addition to list 1 to provide ground pulses to advance the (MC) switch when the district timing circuit is not furnished. (See notes A and B.)

**List 5** — Wiring and equipment per SD-20240-03, "BV" option, required in addition to list 1 to provide for connection to the recorder test frame. (See note C.)

**List 6** — Equipment and wiring per SD-20240-03, Fig. S required in addition to list 1 to provide a no charge call test on coin district selectors arranged for timed release. (See note D.)

**Notes**

- A. The variable apparatus shall be wired for in all cases but equipped as required for each particular job.
- B. The frame local cable shall be wired per list 1. Supplementary local cables shall be wired per list 2, 3, or 4 when required.
- C. This list requires changing the district, brush, tens, and units lamps from No. 2G to 2Y and the codes of certain keys.
- D. When list 6 is furnished remove SD-20240-03, Fig. R.

**J24003E (A&M Only) — District Test Group Unit**

Equipment — ED-20583-01, Fig. 2  
Local Cable — ED-20582-01, Fig. 2

**List 1** — Framework, assembly, common wiring, and equipment of one district selector test group unit for the first group less the unit multiple cable between units

|   | WIRE | EQUIP | SEE<br>NOTE |
|---|------|-------|-------------|
| Framework ED-20581-01<br>Fig. 2                     |      | 1     |             |
| District Sel. Test Ckt.<br>SD-20240-03, Figs. 2 & 4 | 1    | 1     | 5.07        |

**List 2** — Framework, assembly, common wiring, and equipment of one district selector test group unit including the unit multiple cable

|   | WIRE | EQUIP | SEE<br>NOTE |
|---|------|-------|-------------|
| Framework ED-20581-01,<br>Fig. 2                    |      | 1     |             |
| District Sel. Test Ckt.<br>SD-20240-03, Figs. 2 & 4 | 1    | 1     | 5.07        |

**J24003F (A&M Only) — Sleeve Test Unit — Automatic Number Identification**

Equipment — ED-20583-01, Fig. 18

**List 1** — Framework, assembly, common wiring, and equipment to arrange one district selector test frame for testing the automatic number identification circuit through the district selector circuit, SD-20240-03, Fig. Q.

**5. GENERAL NOTES**

- 5.01** The drive and motor equipment shall not be furnished as a part of this specification but shall be furnished separately as required.
- 5.02** When two test frames are located adjacent, they may be driven by one motor.
- 5.03** The connector switches per SD-20240-03, Fig. 1, which are located on the link frame shall not be furnished as part of this specification.
- 5.04** One 699 cord 10-1/4" long shall be furnished for connecting the dial to the connecting blocks on the key and lamp panel.
- 5.05** The frame local cable shall be wired for eight test group units.
- 5.06** Wiring shall be furnished for two (ET) and 11 (TA) relays to provide for an ultimate of 52 line finder groups for two central office units.
- 5.07** The banks of the master and group switches shall be wired with No. 24 gauge wire to avoid congestion.
- 5.08** The interrupters for the district selector test circuit shall be mounted on the miscellaneous interrupter frame.

5.09 The registers for the district release circuit are wired through the IDF so that they may be cross-connected as required. In general, one register shall be furnished for each row of district frames.

5.10 Engineering requirements for the modification of existing district selector test frames J24003A for local control zone registration are contained in specification J29202 and for overtime coin collection in J29203. The requirements for modifying J24003A and B for nonzone overtime and remote control zone registration are contained in specification J29209.

5.11 In addition to the equipment required on the district test frame itself, a circuit, SD-21902-01, to provide test battery for a maximum of six district test circuits shall be furnished. Its function is to provide battery pulses for firing the 346A vacuum tubes in each district when the remote control zone registration feature is under test. The equipment for this circuit shall be mounted on the miscellaneous relay rack as shown on ED-21902-01. The leads be-

tween this equipment and the district selector test frame shall be run in code 1450 switchboard cable.

5.12 It will be noted that a 12-type resistance lamp is specified in the ringing supply lead shown in Fig. 2 of SD-21902-01. The 12-type lamp is used in preference to a 13 type, because it may be mounted in a 46A lamp socket, which permits it to be easily removed when the 45-volt battery in this lead is being measured. This protects the maintenance force against possible injury and the meter against possible damage in case an accidental ground should be placed in the measuring circuit.

#### List of "A&M Only" and "Mfr Disc." Equipment

5.13 The following equipment has been replaced as indicated:

| EQUIPMENT | RATING     | COVERED<br>IN ISSUE | REPLACING<br>EQUIPMENT |
|-----------|------------|---------------------|------------------------|
| J24003A   | Mfr Disc.  | 3                   | J24003D                |
| J24003B   | Mfr Disc.  | 3                   | J24003D                |
| J24003C   | Mfr Disc.  | 3                   | J24003E                |
| J24003D   | A & M Only | 7                   | -                      |
| L1        | Mfr Disc.  | 7                   | -                      |

Bell Telephone Laboratories, Inc.

Dept 5653