MISCELLANEOUS FRAME EQUIPMENT
EQUIPMENT DESIGN REQUIREMENTS
NO. 1 CROSSBAR SYSTEM

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 engineering, manufacture, and installation of miscellaneous frame equipment in No. 1 crossbar offices.

1.02 This section is reissued to remove reference to number checking equipment and to add reference to coin supervisory and line link controller release equipment.

CAPACITY

1.03 The miscellaneous frame has a maximum capacity of sixty-three 2-inch by 20-1/2 inch mounting plates. When equipped with a fuse panel, its capacity is sixty-one 2-inch plates.

DESCRIPTION

1.04 The miscellaneous frame is a single-bay bulb-angle structure 1 foot 10-1/8 inches long and 11 feet 6 inches high. It is used to accommodate the no-test connector switches, sender selector units, coin supervisory units, number checking, and other equipment as listed below. Typical equipment arrangements of the unit on the frame are shown on ED-26746-10.

FLOOR PLAN ARRANGEMENT

1.05 Miscellaneous frames should preferably be located singly on main aisle near the associated major frames. Two frames may be assigned to a lineup, either in adjacent positions on a main aisle or at opposite ends of the lineup, providing the frames contain unlike circuits, such as coin supervisory and sender selector units. On this basis, there will be one or more frames near the line link frames for the no-test connector switches and the line link emergency controller, a minimum of three frames near the district and sender frames for the sender selector units, and a minimum of two frames near the coin supervisory link frames for the coin supervisory and related units. Likewise, the checking units should be located near the terminating marker connectors, the district junctor checking units near the district frames, and the power supply units near the terminating markers and district frames.

SUBDIVISIONS OF EQUIPMENT

EQUIPMENT UNITS (See corresponding J-Spec for detailed index)

J21551B—Keypulsing Sender Selector Unit or Coin Supervisory Selector Unit (4)
J21551C—Coin Supervisory Unit (10)
J21551D—Coin Supervisory Time Alarm Unit (1)
J21551E—Coin Supervisory Release Unit (5)
J21551G—Coin Supervisory Unit (Overtime Coin Collection—Central "A" Switchboard) (15)
J21551H—Coin Supervisory Alarm Release Unit (Without Overtime) (1)
J21551J—Coin Supervisory Alarm Release Unit (With Overtime) (1)
J21551K—Coin Supervisory Improvement Unit (1)
J21557—Coin Supervisory Concentrator and Trunk Unit (22 to 31)
J22453C—Transverter Trouble Indicator Auxiliary Preference Chain Control Unit (AMA) (12)
J27450J—Line Link Emergency Controller Unit (11)
J27550G—Subscriber Sender Link Emergency Controller Unit (14)
J27550H—Subscriber Sender Selector Unit (6)
J27550J—Subscriber Sender link Traffic Release Control Unit (1)
J27550K—Line Link Controller Release Unit (1)
J27551M—Interrupter Checking Unit for District Junctors (3)
J27750E—Terminating Sender Link Emergency Controller Unit (11)

J27750F—Terminating Sender Selector Unit (8)
J27952C—Auxiliary Originating Sender Test Connector Unit (AMA) (6)
J28050L—Terminating Sender Timing Control Unit (3)
J28050M—Terminating Sender Timing Control Unit—Arranged for Distant Office Overload Control (4)
J28550E—Terminating Sender Test Selection Unit (11)
J28650AC—Incoming Trunk Unit for Line Verification Test (AMA) (12)
J28853B—PBX Auxiliary Line Unit (2)
J28853C—PBX Block Allotter Unit (9 to 12)
J28853D—PBX Block Register Unit (10 to 14)
J86589C—Positive 24-Volt Supply Unit (12)
J86724B—12-Volt ac Supply Unit (2)
J86724C—22-Volt ac Supply Units (3-1/2)

Note: The number of 2-inch mounting plates occupied by each unit is given in parenthesis.

2. SUPPLEMENTARY INFORMATION

816-000-000—No. 1 Crossbar System Index
Floor Plan Data—Section 9.2, Sheet 6

3. DRAWINGS

Keysheet

SD-25000-01—Crossbar System No. 1.

Framework

ED-25025-59—Assembly of Fuse Panels
ED-25065-30—Assembly of Framework
ED-25278-30—Assembly of Jack, Key, and Lamp Panels
ED-90426-70—Assembly of Fuse Panels—Double Row
ED-91221-50—Fuse Panel Adapter

Equipment

ED-26746-10—Miscellaneous Frame Equipment

Wiring and Cabling

ED-25150-01—General Switchboard Cabling Plan
ED-25265-10—Switchboard Cabling Details
ED-25265-11—Sdr Sel, CSR, NTC, & MISC.
ED-25302-10—Switchboard Cabling Details—Number Checking Equipment
ED-25346-14—Method of Running Power Feeders
ED-25346-15—
ED-25346-16—
ED-27114-01—Table of Wire Gauges and Type of Insulation

4. EQUIPMENT

Framework

ED-25025-59—Assembly of Fuse Panels

Group 1—Assembly of panel having 15-fuse capacity
Group 2—Assembly of panel having 34-fuse capacity

ED-25065-30—Frame Assembly for Miscellaneous Frame Equipment

Group 3—Framework for one 1-foot 10-1/8 inch bay

ED-25278-30—Assembly of Jack, Key, and Lamp Panel

Group 1—Assembly for one 20-1/2 inch panel

ED-90426-70—Assembly of Fuse Panel

Group 14—Assembly of panel having 40-fuse capacity

ED-91221-50—Fuse Panel Adapter

Group 4—Adapter for mounting 40-capacity fuse panel on 22-1/8 inch crossbar frame (two required).

Equipment Units

For list of equipment units arranged to mount on the miscellaneous frame, see Subdivision of Equipment under Part 1.

5. GENERAL NOTES

Equipment

5.01 Each miscellaneous frame shall have one key, lamp, and jack panel drilled per ED-26746-10, Fig. C, and equipped for miscellaneous frame circuit SD-25281-01, Fig. 2, 3, and 5. In

addition, the panel shall be equipped with the following, as required:

(a) One make-busy jack per SD-25459-01, Fig. 6, when the bay is equipped with a terminating sender link emergency controller unit.

(b) One make-busy jack per SD-25553-01, Fig. 12, when the frame is equipped with a line link emergency controller unit.

(c) One set of keys, jacks, and lamps, per SD-25554-01, Fig. 8, when the frame is equipped with a subscriber sender link emergency controller circuit.

(d) One frame line jack per SD-25281-01, Fig. 7, per terminating marker group, when the frame is arranged for number checking or no-test equipment.

(e) One remote control jack per SD-25920-01 when the frame is equipped with PBX block allotter equipment.

(f) One ORC originating remote control jack per SD-25281-01, Fig. 9, per originating sender test frame when this frame is equipped with subscriber sender selector units.

(g) Ont TRC terminating remote control jack per SD-25281-01, Fig. 10, per terminating sender test frame when this frame is equipped with terminating sender units or terminating sender selector emergency controller units.

5.02 Each frame shall be equipped with a fuse panel of 15 or 34 fuse capacity for the 48-volt supply to the various units within the bay. Each panel shall be equipped with a fuse alarm circuit per SD-25281-01, Fig. 8.

5.03 The grouping of the various units on the frames is determined by the floor plan arrangement and the locations assigned thereon for the miscellaneous frames; the requirement that the units be near their associated major frames; the amount of equipment to be accomodated, both initially and in the ultimate; and the different factors covered is subsequent paragraphs. Typical layouts are shown on ED-26746-10.

5.04 To minimize service reactions, the following units should be distributed over more than one frame.

MINIMUM OF TWO FRAMES

Keypulsing Sender Selector Units
Coin Supervisory Selector Units
Coin Supervisory Units

MINIMUM OF THREE FRAMES

Subscriber Sender Selector Units
Terminating Sender Selector Units

5.05 For maintenance reasons the emergency controllers should be located at the bottom of the frame. One subscriber sender link emergency controller is required for each originating marker group. The line link and terminating sender link controllers work on a mate basis, so that an emergency controller of either type is required only where there are an odd number of the associated frames. One such emergency controller (LL or TSL) shall appear on each floor containing an odd number of line link or terminating sender link frames.

5.06 One no-test connector switch is required for each four line link frames in the same line choice. These switches are mounted on one or more frames located near the line link frames. Because these switches have their horizontals multipled together, it is desirable that they be grouped on a minimum number of frames so that local cable forms can be used for this purpose. Between frames, switchboard cable is required for this multiple. See SD-25251-01 and ED-26746-10.

5.07 The incoming trunk unit for line verification test shall be mounted on a miscellaneous frame located on or near a main aisle and near the associated line link, block relay, and translator frames, preferably on the same frame with the associated no-test connector switches. The unit shall be mounted approximately 4 feet 6 inches above the floor for convenient operation and observation of the keys and lamps on the unit.

5.08 For cabling reasons at the "A" switchboard, the coin supervisory circuits should, where possible, be confined to two bays. One coin supervisory time alarm circuit shall be located on each bay containing coin supervisory circuits and

associated with the supervisory circuits in that bay.

5.09 The terminating sender test selection unit is furnished in offices not supplied with a terminating sender test frame. The preferred location of the unit is with the terminating sender selector units and near the terminating sender frames.

5.10 Due to the presence of ac wiring, the 22V ac, 12V ac, and +24V supply units should be located near the top of the frame. The double row fuse panels for the 22V ac supply shall be adjacent to the supply unit with space allotted for the ultimate job requirements. The associated no-voltage and fuse alarm equipment per SD-80929-01, Fig. 3 is assembled on a 2-inch by 20-1/2 inch mounting plate located below the supply unit.

5.11 The PBX block allotter equipment is covered under the terminating marker in J28853. It shall be mounted on the miscellaneous frame in accordance with requirements given therein and shown on ED-26470-01.

Wiring and Cabling

5.12 No local cable is furnished with the miscellaneous frame other than the short multiple cables used on the no-test connector switches. Instead, loose wiring run vertically with the switchboard cables, is used for the leads from the frame fuse panel and between units. Unused wire ends from switchboard cable may be used for this purpose. Use No. 24 type BU wire for any interunit wiring required, and No. 22 type BU wire for the battery and ground leads from the fuse panel.

5.13 The code numbers of the switchboard cables ordinarily used in cabling the various circuits are shown on the switchboard cabling detail drawings. The circuits should, however, be checked to insure that the proper codes are specified to meet the latest circuit requirements. The switchboard cabling drawings indicate what groups of leads may be combined in the same cables.

5.14 The switchboard cable brackets shall be located as required to suit the equipment located on each bay.

5.15 No switchboard power cabling is required with the miscellaneous frame, since all leads from the various units to points beyond the frame are run directly in switchboard cable.

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