3-WIRE OFFICE FRAME
EQUIPMENT DESIGN REQUIREMENTS
PANEL SYSTEMS

1. GENERAL

Scope of Specification

1.01 This specification, together with the supplementary specifications, keysheets, drawings, equipment explanations and circuit descriptions listed herein, covers the equipment design requirements for the framework, equipment and circuits to be used in the manufacture and installation of the 3-wire office frame equipped with circuits arranged to complete two calls per revolution of the sequence switch in panel offices. This frame may be furnished for use in connection with 200 type sender selector or subscribers link type equipments equipped with line circuits having battery or ground on the cut-off relay.

1.02 This specification is reissued to incorporate previous appendix changes and to change the rating from "AT&TCo Standard" to "A&M Only."

Capacity

1.03 The 3-wire office frame has a capacity of 60 office selector circuits and 450 outgoing trunk circuits.

Description

1.04 The 3-wire office frame as used in panel central offices, is complementary to the district selector frames as a means for making connections to the outgoing trunks. It is required in offices located in areas where the capacity of the district multiple is insufficient to provide the required number of trunks and trunk groups to handle the traffic to the various central offices in the area.

1.05 The office frame is a steel structure of a type known as a "double sided" frame, designed for mounting panel type banks, selectors, sequence switches, etc. The frame is divided into three bays: a center bay for mounting the banks, friction roll drive, clutches, commutators, selector rods, etc. and two end bays for mounting the sequence switches and relays of the selector circuits. The relays are mounted on vertical type mounting plates at the right side of the sequence switch bays.

Subdivision of Equipment

J27602A (A&M Only) — 3-Wire Office Frame

2. SUPPLEMENTARY INFORMATION

815-000-000 — Panel Systems Index
AA128.006 — List of General Engineering Requirement Specifications
X-61200 — List of Engineering Requirement Specifications — Ground on the Cut-Off Relay
X-61400 — List of Engineering Requirement Specifications — Battery on the Cut-Off Relay
X-61500 — List of Engineering Requirement Specifications — Tandem Office
J20102 — Switchboard Power Cabling
Floor Plan Data — Section 4.12, Sheet 5

3. DRAWINGS

Keysheets — Panel Systems

SD-21301-01 — Tandem Offices
SD-21300-01 — Panel Link Equipments with Battery on the Cut-Off Relay
SD-21680-01 — Panel Link — Ground on the CO Relay

ES-262829 — 3 Digit Office Code ES-262849 — 2 & 2-3 Digit Office Code	Rotary Link Ground on the C.O. Relay
ES-262532 — 3 Digit Office Code ES-262647 — 2 & 2-3 Digit Office Code	200 Type Sender Selector — Ground on the C.O. Relay

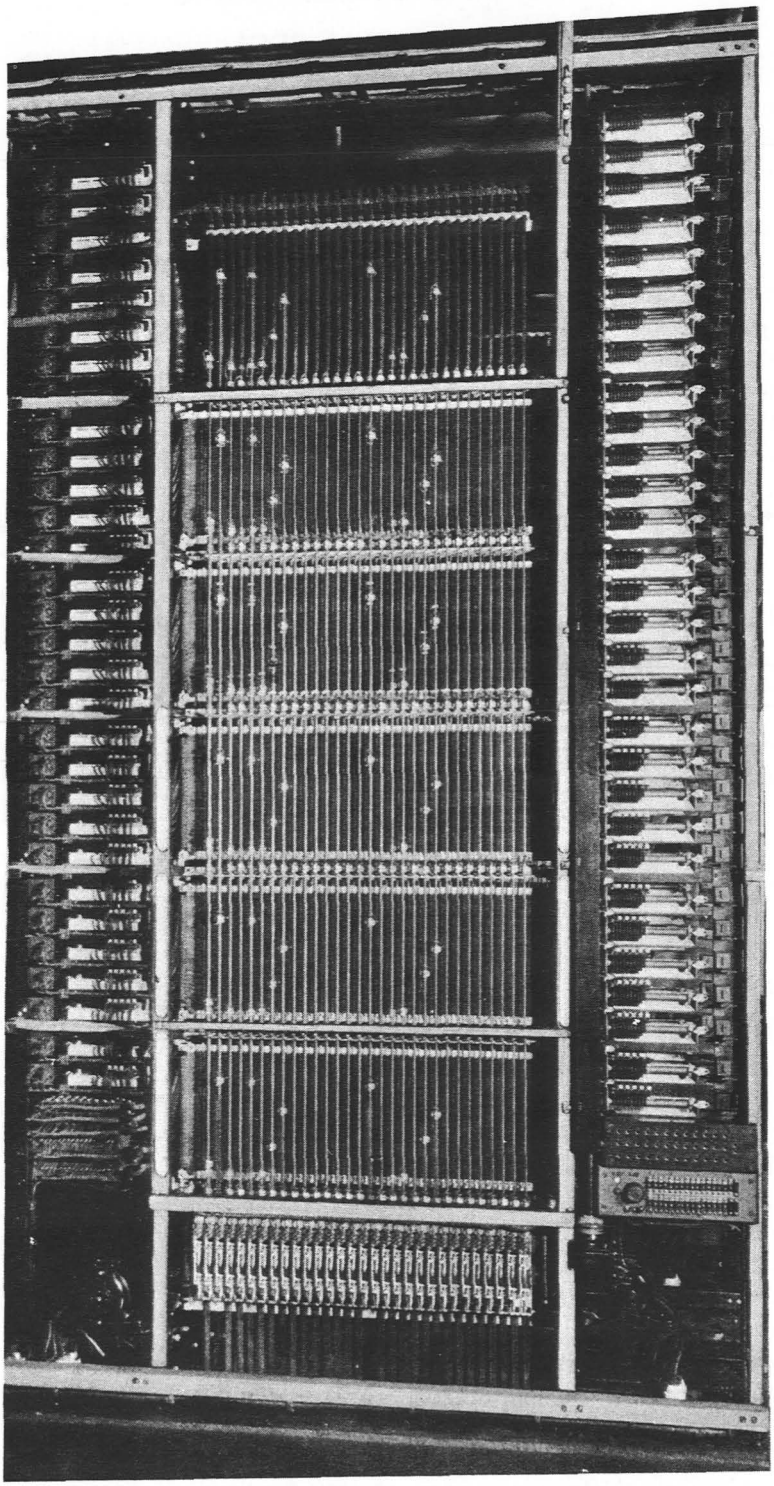

Fig. 1 – 3-Wire Office Frame

Framework

ED-20300-01 — Framework Assembly
ED-20509-01 — Fuse Panel Assembly
ED-20625-01 — Jack Panel Assembly
ED-20081-01 — Sequence Switch Framework Details
ED-20293-01 — Framework Limits
ED-20446-01 — Length of Connecting Shafts
ED-20672-01 — Guard Rail Supports

Equipment

ED-20302-01 — Office Selector Frame Equipment
ED-90411-01 — Designation Cards

Wiring and Cabling

ED-20328-01 — Schematic Layout (Tandem)
ED-20252-01 — Schematic Layout (Subs. Links Panel Type)
ES-299914 — Schematic Layout (Subs. Links Rotary Type)
ES-225550 — Schematic Layout (Sender Selectors)
ED-20303-01 — Local Cable
ED-20192-01 — Switchboard Cabling Plan
ED-20192-03 — Switchboard Cabling Details
ED-20206-01 — Diagram of Cabling — Slip Arrangement
ED-20287-01 — Wiring and Cabling for Traffic Registers
ED-20289-01 — Grounding Scheme for Making Trunks Busy
ED-20623-01 — Method of Running & Supporting Frame Battery and Ground Leads
ED-20811-01 — Switchboard Power Cabling

4. EQUIPMENT

J27602A (A&M Only) — 3-Wire Office Frame

Frame Equipment — ED-20302-01 (See Notes 5.01 & 5.02)
Local Cable ED-20303-01

List 1 — Covers the assembly, wiring and equipment of one 3-wire office frame.

	WIRE	EQUIP	SEE NOTE
Frame Assembly ED-20300-01		1	
Jack Panel Assembly ED-20625-01		2	5.04
Fuse Panel Assembly ED-20509-01, Item 32		2	
Office Selector Ckt ES-240252	60	As Spec	5.03
Misc. Ckts SD-21225-01	2	As Spec	5.05

5. GENERAL NOTES

General

5.01 Unless otherwise specified by the Telephone Company, the office frames shall be fully equipped with multiple banks.

5.02 Drive and Motor Equipment shall not be furnished as part of this subdivision, but should be furnished separately, as required.

5.03 The office selector circuits shall be furnished as required in accordance with the traffic layout.

5.04 The jack panel shall be fully equipped with TMB jacks for the office selector circuits even though wiring only is provided for the circuits.

5.05 Figures on the miscellaneous circuits shall be furnished as required.

Office Multiple

5.06 The office frame has a capacity of five banks, which constitute outgoing paths to other exchanges. The banks are divided into 10 groups each, 8 groups consisting of 11 sets of terminals and 2 groups consisting of 6 sets of terminals. (On some of the earlier installations the two groups of 6 terminals each were combined into one group of 12 terminals.) The top set of terminals in each group is reserved to give an overflow signal when all of the trunks in the group are busy.

5.07 When more than 10 trunks in a group are desired, the overflow terminal is arranged to test like a busy trunk and the office selector will, therefore, hunt into the next group. With this provision the office multiple may be arranged in any desired combination from 40 groups of ten trunks each and 10 groups of 5 trunks each, down to 5 groups of 90 trunks each.

5.08 The office frames shall be arranged in a single group or divided into several groups as required to accommodate the outgoing trunks specified. The corresponding banks of all frames in a group shall be multipled together and cabled to the distributing frame (MDF, TDF or ODF) as specified by the customer.

5.09 Beside the outgoing trunks to the exchanges, the following groups of trunks generally appear in the office multiple:

10 vacant code trunks, which terminate in the "A" switchboard
5 trunks to the repair clerk's desk
5 trunks to the office selector test frame
5 trunks to the district selector test frame

5.10 The test trunks are multipled throughout the entire group of frames. The vacant code trunks and the trunks to the repair clerk's desk may terminate in one or more groups as assigned by the customer.

WIRING

Local

Local Power Cable

5.11 A local power cable containing the miscellaneous leads running between the two sides of an office frame and from frame to frame or from frames to fuse panels, alarm boards, etc., shall be provided for each lineup of frames, terminating at one or more grouping points in order to obtain the maximum switchboard cable economies.

Test Selector

5.12 Office selector circuits 1 and 2 on each office frame shall in all cases be wired for use in connection with the routine testing equipment in addition to the regular selector wiring.

Cabling

General

5.13 The code numbers of the switchboard cables ordinarily used in cabling the various circuits are shown on the switchboard cabling drawing.

Office Selectors

5.14 The office selector circuits shall be cabled to the horizontal side of the distributing frame. This may be either an office or district distributing frame, trunk distributing frame, the intermediate or the main distributing frame, depending upon the arrangement specified by the customer.

Office Multiple

5.15 The various trunk groups of the office multiple shall be cabled to the distributing frame as specified by the Telephone Company. Cabling shall be provided for all bank terminals unless otherwise specified by the Telephone Company. The corresponding banks of all frames that constitute a sub-group of office frames shall be multipled together. A local cable shall be used between banks of frames that are located adjacent in the same row. Switchboard cable shall be used where this multiple is carrier over aisles. The multiple between banks of the office frame sub-groups shall be arranged in trunk sub-groups as specified by the customer. The multiple cables of the trunk sub-groups shall be wired in accordance with the slip multiple drawing.

5.16 The purpose of the slip arrangement of the multiple is to decrease the average hunting time of the office selectors and to provide a more uniform distribution of the load on the apparatus.

5.17 The test trunks shall be multipled through all frames without slip. However if there is more than one group or zone, the test lines in each group or zone may be multipled together at the distributing frame instead of between adjacent banks.

5.18 Spare office multiple and spare overflow shall be made busy at the distributing frame. If there is a complete multiple bank spare and not cabled the sleeve terminals shall not be grounded but left open. This is the same as if the bank had not been furnished.

Miscellaneous

5.19 Cables consisting of #20 BBE wires shall be used for the battery, ground and tone leads from the distributing power terminal strips and the miscellaneous fuse boards.

5.20 The cabling between the distributing power terminal strip and the points of termination of the various circuits shall be run in the largest switchboard cable consistent with the grouping of the leads and the points of termination. Cables shall be #22 gauge wire, except ringing, tone or battery leads requiring larger gauge wire.

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