

**MODIFICATION REQUIREMENTS  
FOR TIMED RELEASE OF DISTRICT SELECTORS  
EQUIPMENT DESIGN REQUIREMENTS  
PANEL SYSTEMS**

**1. GENERAL**

**Scope**

**1.01** This specification, together with the supplementary information listed herein, covers the engineering requirements for the modification of existing panel offices for timed release of the district selectors.

**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 capacity of the district frames is not affected by the modification. The additional equipment required is mounted in unused space at the top of the district frames.

**Description**

**1.04** The district release equipment functions to free a called subscriber line in case the calling subscriber fails to disconnect when the call is completed and thus prevents holding the called subscriber line out of service.

**1.05** The district release equipment consists of eleven relays and sixteen resistances per side of district selector frame.

**1.06** District time out registers, located on the district test frame on the basis of one per line of district frames or as specified, record the number of times the district release equipment has functioned.

**2. SUPPLEMENTARY INFORMATION**

815-000-000 — Panel Systems Index  
AA128.006 — List of General Equipment  
Requirements Sections

X-61200 — List of Engineering Requirements Specifications for Offices Having Ground on the Cut-off Relays  
X-61400 — List of Engineering Requirement Specifications for Offices Having Battery on the Cut-off Relays

**3. DRAWINGS**

**Keysheets (Panel Systems)**

SD-21300-01 — Battery Cut-off Relay Offices  
SD-21680-01 — Ground Cut-off Panel Link Offices  
ES-262532 — Sender Selector Equipment — 3-Digit Areas  
ES-262647 — Sender Selector Equipment — 2 and 2-3-Digit Areas  
ES-262829 — Rotary Link Equipment — 3-Digit Areas  
ES-262849 — Rotary Link Equipment — 2 and 2-3-Digit Areas

**Framework**

ED-20177-01 — District Frame — Panel Link — Ground or Battery Cut-off  
ED-20581-01 — District Test Frame  
ES-225311 — District Frame — Sender Selector — 300 Point Line Finder — F.R., M.R.I. and Coin  
ES-225378 — District Frame — Sender Selector — 300 Point Line Finder — Two-Party  
ES-299579 — District Frame — Sender Selector — 400 Point Line Finder — F.R., M.R.I. and Coin-Rotary Link — F.R. & M.R.I.  
ES-299599 — District Frame — Sender Selector — 400 Point Line Finder — Two-Party  
ES-299767 — District Frame — Line — Two-Party — Sequence Switches on 3-1/4" Centers

ES-299775 — District Frame — Link — Coin Sequence Switches on 3-1/4" Centers  
 ES-373659 — District Frame — Link — F.R. & M.R.I. — Sequence Switches on 3.4" Centers  
 ES-373737 — District Frame — Link — Two-Party — Sequence Switches on 3.4" Centers  
 ES-373740 — District Frame — Link — Coin Sequence Switches on 3.4" Centers  
 H-572-259 — Details for Mounting Additional Mounting Plates Above Commutators  
 T-430603 — Line Switch District Frame

**Equipment**

ED-20178-01 — Selector Frame — Bat. & Grd. Cut-off  
 ED-20178-02 — Equip. Details for District Frame — Bat. Cut-off  
 ED-20267-01 — Equip. Details for District Frame — Grd. Cut-off  
 ED-20579-01 — District Test Frame — Mounting Plates  
 ED-20583-01 — District Test Frame  
 ED-20864-01 — Modifications of District Selector Frames for Timed Release  
 ES-225598 — District Frame — Sender Selector — 300 Point Line Finder — Mounting Plates  
 ES-225604 — District Frame — Sender Selector — 300 Point Line Finder — F.R., M.R.I. & Coin  
 ES-225605 — District Frame — Sender Selector — 300 Point Line Finder — Two-Party  
 ES-299578 — District Frame — Sender Selector — 400 Point Line Finder — F.R., M.R.I. & Coin  
 ES-299585 — District Frame — Sender Selector — 400 Point Line Finder — Mounting Plates — F.R., M.R.I. & Coin  
 ES-299600 — District Frame — Sender Selector — 400 Point Line Finder — Two-Party  
 ES-299603 — District Frame — Sender Selector — 400 Point Line Finder — Mounting Plates — Two-Party  
 ES-299733 — District Frame — F.R. & M.R.I. Seq. Sw. on 3-1/4" Centers

ES-299734 — District Frame Mtg. Plates — Seq. Sw. on 3-1/4" Centers  
 ES-299766 — District Frame — Mtg. Plates Seq. Sw. on 3-1/4" and 3.4" Centers  
 ES-299768 — District Frame — Two-Party — Seq. Sw. on 3-1/4" Centers  
 ES-299769 — District Frame — Mtg. Plates — Seq. Sw. on 3-1/4" Centers  
 ES-299771 — District Frame — Coin — Seq. Sw. on 3-1/4" Centers  
 ES-373406 — District Frame — Mtg. Plates — Seq. Sw. on 3.4" Centers  
 ES-373732 — District Frame — Two-Party — Seq. Sw. on 3.4" Centers  
 ES-373739 — District Frame — Coin — Seq. Sw. on 3.4" Centers  
 ES-373654 — District Frame — F. & M.R.I. Seq. Sw. on 3.4" Centers  
 ES-373658 — District Frame — Mtg. Plates — Seq. Sw. on 3.4" Centers  
 T-430434 — Line Switch — Mounting Plates

**4. NOTES**

**4.01** In modifying existing district selector frames in the various types of offices for timed release, the relay equipment per SD-21824-01, Figs. 1, 2, and 3, shall be furnished as required and mounted on the district frames in accordance with the following table. The district selectors shall be modified to connect to SD-21824-01. The modification of the district selectors consist of wiring or wiring and sequence switch cam changes.

**4.02** When, because of particular job conditions, the equipment per SD-21824-01, Figs. 1, 2, and 3, cannot be located in the relay and sequence switch bays in accordance with the following table, the equipment shall be mounted either on the relay rack or when increased dial range is not contemplated above the district selector commutators by means of mounting details per H-572-259.

**4.03** The sequence switch bay mounting plate shall be mounted on the rear of the uprights to avoid interference with the talking battery filter unit which is furnished when the office is arranged for maximum subscriber loop of 1500 ohms.

**4.04** A spare 48-volt signal battery fuse on the fuse panel on the front of the frame shall be assigned for fusing SD-21824-01, Figs. 1, 2,

Drawing ED-20864-01

MOUNTING PLATES	14-1/2"	16-1/2"	16-3/4"	18"	23-5/8"	24"	25"
Line Switch			Fig. 1				
300-Point Sdr. Sel.			Fig. 2		Fig. 3		
400-Point Sdr. Sel.		Fig. 4				Fig. 5	
Rotary & Panel Link							
1'-5-11/16" Seq. Sw.							
Bay	Fig. 6	Fig. 6		Fig. 6			Fig. 5

  

MOUNTING PLATES	16-1/2"	19"	23"	DRAWING
Panel Lk.	G.CO. Fig. 1	Fig. 1	Fig. 1	ED-20178-01
1'-5" Seq.	Fig. 81, 81A	Fig. 81A, 82	Fig. 81A, 83	ED-20267-01
Sw. Bay	B.CO. Fig. 1	Fig. 1	Fig. 1	ED-20178-01
	Fig. 40, 40A	Fig. 40A, 41	Fig. 40A, 42	ED-20178-02

and 3, on the district frames. When a spare 48-volt signal battery fuse is not available on the fuse panel on the front of the frame, SD-21824-01, Figs. 1, 2, and 3, shall be fused with the time alarm circuit.

**4.05** Twelve spare punchings shall be assigned on the miscellaneous terminal strips on the district frames for cabling the equipment on the front and rear of the frames.

**4.06** The (TA) and (TA1) interrupters shall be located on the miscellaneous interrupter frame or, if desired by the telephone company, in an unequipped interrupter position on a district frame and cabled to the relay equipment on the district frames thru the DPTS. When the miscellaneous interrupter frame is of the type that mounts 165 and similar type interrupters, a 166U, (TA) interrupter shall be used when a two to four minute release interval is specified and a 166AG, (TA) interrupter when a one to two minute interval is specified. A 165BA, (TA1) interrupter shall be used in addition to the above mentioned (TA) interrupter for individual message rate link type districts without zone and overtime registration. When the miscellaneous interrupter frame is of the older type that mounts 149, 160 or similar type interrupters, a 161P, (TA) interrupter shall be used when a two to four minute release interval is specified and a 161AG, (TA) interrupter when a one to two minute interval is specified. A 160 type (TA1) interrupter will be coded for use

with message rate link type districts without zone and overtime registration when an interrupter of this type is requested by a customer. When districts that are now arranged to release on two to four minute intervals are to be converted to release on one to two minute intervals, the 166U or 161P interrupters shall be modified to conform with the 166AG or 161AG interrupters, respectively, by replacing the cam, cam shaft gear and small countershaft gear.

**4.07** The (L) relay and (DT) register per SD-21824-01, Fig. 4, shall be provided one per line of frames or as specified and located on the district test frame as shown on ED-20579-01. The district test frame shall be modified in accordance with SD-20240-01, Issue 34-D, or SD-20240-02, Issue 24-D, as required, and equipment drawings ED-20579-01, Issue 21-D and ED-20583-01, Issue 21-D to test the district release feature.

**4.08** In modifying earlier types of district selector test frames and circuits the additional equipment required shall be mounted on the test frames as convenient similarly to the arrangements shown on ED-20579-01 and ED-20583-01. If any difficulties are experienced in this connection, the job shall be referred to the Bell Telephone Laboratories in accordance with the usual routine.

**4.09** The additional wiring required for the district selector timed release feature shall be superimposed on the existing cable forms.