TROUBLE INDICATOR FRAME
3-DIGIT OFFICE CODE
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 trouble indicator frame for use with decoder equipment in panel offices.

1.02 This specification is reissued to incorporate previous appendix changes.

Capacity

1.03 The trouble indicator frame is arranged to serve two decoder groups of six decoders each. The decoder groups may consist of either seventeen 3-capacity connector frames for decoder senders or eight 5-capacity connector frames and one partially equipped 5-capacity decoder connector frame of three connectors for pulse machine type senders that have been modified for decoder operation, or a combination of the two types of decoder connectors.

Description

1.04 The trouble indicator frame is used in conjunction with decoder equipment for the purpose of aiding in the location of wiring troubles in the decoders, decoder connectors, and senders by giving lamp indication of the particular sender, sender frame, connector, and decoder involved, together with the office code dialed and other information, when a decoder fails to function within its allowable time.

1.05 The framework is a steel structure of a type generally known as a single-sided frame and is closely associated with the decoder test frame, decoder, and decoder-connector frames.

1.06 As the trouble indicator frame will always be mounted adjacent to the decoder test frame, the connecting blocks and frame jack equipment for the decoder test frame are mounted on the trouble indicator frame.

2. SUPPLEMENTARY INFORMATION

815-000-000 — Panel Systems Index
AA128.002 — List of Equipment Design Requirements Sections
AA128.006 — List of General Equipment Requirements Sections
Floor Plan Data — Section 4.3, Sheet 24

3. DRAWINGS

WECo J drawings listed should be ordered by referring to the prefix and base number and requesting the highest suffix dash (—) number.

Keysheets — Panel Systems

SD-21300-01 — Battery on C.O. Relay Offices
SD-21680-01 — Ground on C.O. Relay Offices
ES-262532 — 3-digit Sender Selector Type Offices
ES-262829 — 3-digit Rotary Link — Ground on C.O. Relay Offices

Framework

ED-20087-01 — Relay Casing Assembly
ED-20259-12 — Frame Assembly
ED-20509-55 — Fuse Panel Assembly

Equipment

J23202A-( ) — Frame Equipment

Wiring and Cabling

ED-20146-01 — Cabling Schematic for Decoder Equipment (3-Cap. Conn. Fr)

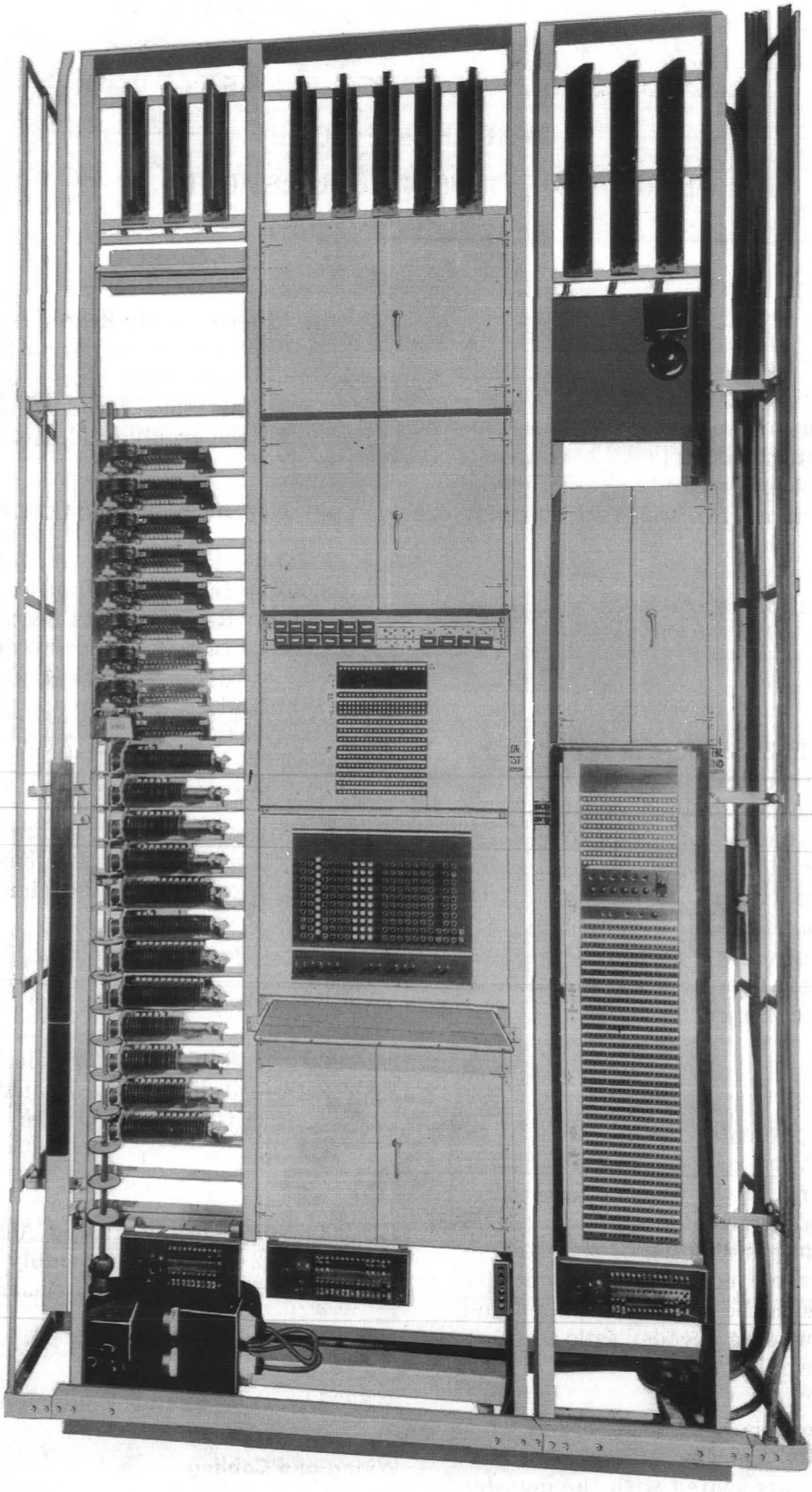

Fig. 1 – Trouble Indicator Frame With Decoder Test Frame Adjacent

ED-20262-01 — Local Cable
ED-20263-01 — Switchboard Cabling Plan
ED-20622-01 — Method of Running and Supporting Frame Battery and Ground Leads
ED-20857-01 — Cabling Schematic for Decoder Equipment (5-Cap. Conn. Fr)

4. EQUIPMENT

J23202A (A&M Only) — Trouble Indicator Frame

Equipment — J23202A-( )
Local Cable — ED-20262-01

List 1 — Framework, assembly, wiring, and equipment to serve one group of six decoders, less variable equipment.

	WIRE	EQUIP	SEE NOTES
Framework, ED-20259-12, G2		1	
Relay Casing, ED-20087-01, Item 6R		1	
Fuse Panel, ED-20509-55, G2		1	
Trouble Indicator Ckt, SD-21197-01 (Common Eqpt):	1	1	
Conn. Fr Relays and Lamps, G-0, Fig. C	17	2	5.04
Conn. Relays and Lamps, Fig. D	5	3	A
Sdr Relays and Lamps, Fig. E	10	0	B
Decoder Conn. Ckt, SD-21187-01 or SD-21187-02:			
CB Jacks, Fig. 7, 8, or 9	306	0	C
DB Jacks, Fig. 10	6	3	C
Decoder Ckt, SD-21277-01, TI Jacks	6	3	D
Misc Ckt, SD-21251-01:			
Fuse Alarm, Fig. 1	1	1	
Fr Test Bat., Fig. 2	1	1	
Tel Jacks, Fig. 3	1	1	
Tbl Ind Alarms, Fig. 4	1	1	
Spare Jacks, Fig. 5	1	1	

List 2 — Framework, assembly, wiring, and equipment to serve one group of six decoders with wiring for a second group, less variable equipment.

	WIRE	EQUIP	SEE NOTES
Framework, ED-20259-12, G2		1	
Relay Casing, ED-20087-01, Item 6R		1	
Fuse Panel, ED-20509-55, G2		1	
Trouble Indicator Ckt, SD-21197-01 (Common Eqpt):	1	1	
Conn. Fr Relays and Lamps, G-0 and G-100, Fig. C	17	2	5.04
Conn. Relays and Lamps, Fig. D	5	3	A
Sdr Relays and Lamps, Fig. E	10	0	B
Tbl Release Relay, Fig. F	1	0	
Dr Group Lamps, Fig. G	1	0	
Decoder Conn. Ckt, SD-21187-01 or SD-21187-02:			
CB Jacks, Fig. 7, 8, or 9	612	0	C
DB Jacks, Fig. 10	12	3	C
Decoder Ckt, SD-21277-01, TI Jacks	12	3	D
Misc Ckt, SD-21251-01:			
Fuse Alarm, Fig. 1	1	1	
Fr Test Bat., Fig. 2	1	1	
Tel Jack, Fig. 3	1	1	
Tbl Ind Alarms, Fig. 4	1	1	
Spare Jack, Fig. 5	1	1	

List 3 — Framework, assembly, wiring, and equipment to serve two groups of six decoders each, less variable equipment.

	WIRE	EQUIP	SEE NOTES
Framework, ED-20259-12, G2		1	
Relay Casing, ED-20087-01, Item 6R		1	
Fuse Panel, ED-20509-55, G2		1	
Trouble Indicator Ckt, SD-21197-01 (Common Eqpt):	1	1	
Conn. Fr Relays and Lamp, G-0 and G-100, Fig. C	17	2	5.04
Conn. Relays and Lamp, Fig. D	5	3	A
Sdr Relays and Lamp, Fig. E	10	0	B
Tbl Release Relay, Fig. F	1	1	
Dr Group Lamps, Fig. G	1	1	

	WIRE	EQUIP	SEE NOTES
Decoder Conn. Ckt, SD-21187-01 or SD-21187-02:			
CB Jacks, Fig. 7, 8, or 9	612	0	C
DB Jacks, Fig. 10	10	6	C
Decoder Ckt, SD-21277-01, TI Jacks	12	6	D
Misc Ckt, SD-21251-01:			
Fuse Alarm, Fig. 1	1	1	
Frame Test Bat., Fig. 2	1	1	
Tel Jacks, Fig. 3	1	1	
Tbl Ind Alarms, Fig. 4	1	1	
Spare Jack, Fig. 5	1	1	

List 4 — Wiring and equipment per SD-21197-01, Fig. L, required in addition to list 1, 2, or 3 to arrange the trouble indicator circuit to work with decoders that are arranged to translate extended area codes with prefix "11."

List 5 — Wiring and equipment per SD-21197-01, Fig. M required in addition to list 1, 2, or 3 to arrange the trouble indicator circuit to work with decoders that are arranged to divert restricted PBX traffic for extra charge calls.

List 6 — Wiring and equipment per SD-25063-01, Fig. 9 required in addition to list 1 when the trouble indicator circuit serves an office arranged for intersender timing. One of these lists is required for each common group of subscribers senders. (See note F.)

List 7 — Wiring and equipment per SD-25063-01, Fig. 10 required in addition to list 1 to provide an announcement control feature for use with intersender timing. (See note F.)

List 8 — Wiring and equipment required in addition to list 1 or 2 when all decoder-busy timing control is furnished.

	WIRE	EQUIP
Misc Ckt, SD-21251-01:		
Dr By Alm Release Key, Fig. 11	1	1
Dr By LP Cont Key, Fig. 15	1	1

List 9 — Wiring and equipment required in addition to list 8 for one decoder group when all decoder-busy timing control is furnished.

	WIRE	EQUIP
Misc Ckt, SD-21251-01:		
All Dr By Alm LP, Fig. 12	1	1
All Dr By LP, Fig. 13	1	1
Dr By LP, Fig. 14	6	6

List 10 — Wiring and equipment per SD-21197-01, Fig. P required in addition to list 1, 2, or 3, if any associated decoder circuits are arranged for operation with 3-digit translations.

List 11 — Wiring and equipment per SD-21197-01, Fig. Q required in addition to list 10 when list 4 is not provided.

List 12 — Wiring and equipment per SD-21197-01, Fig. O required in addition to list 10 for each 3-digit translator in the largest translator group.

List 13 — Wiring and equipment per SD-21197-01, Fig. R and "G" wiring, required in addition to list 1, 2, or 3, to arrange for a cross ground test of the register relays.

List 14 — Wiring and equipment per SD-21197-01, Fig. S required in addition to list 1, 2, or 3 when the associated decoders are arranged for prefix 0 and prefix 1 screening.

List 15 — Wiring and equipment per SD-21251-01, Fig. 9, "G" and "J" options, required in addition to list 6 to provide for a multiple appearance of the (IT) lamp when the DSA switchboard is equipped with 2G lamps.

List 16 — Wiring and equipment per SD-21251-01, Fig. 9, "H" and "J" options, required in addition to list 6 to provide for a multiple appearance of the (IT) lamp when the DSA switchboard is equipped with A1 lamps.

Notes

A. Equipment shall be furnished on the trouble indicator frame for connectors A, B, and C when associated with only 3-capacity connector frames. When 5-capacity connector frames are used in the same decoder group, provide the equipment for the D and E connectors.

B. Equipment for senders A to E, A to F, or A to K shall be furnished as required to meet the maximum capacity of any sender frame associated with the decoder group.

C. Jack equipment and associated designation strips shall be furnished for the first, second, third, and fifth jack mountings of decoder G-0 or G-0 and G-100. The CB jacks for connector frames 1 and 2 and decoders 1 to 3 and the DB jacks for these decoders shall be connected for decoder G-0 or G-0 and G-100. The remaining CB and DB jacks shall be equipped in accordance with job requirements.

D. The TI jacks shown on the decoder circuit and mounted on the trouble indicator frame shall be equipped for decoders 1 to 3. The TI jacks for decoders 4 to 6 shall be furnished as required.

E. The TI and TI-1 multicontact relays, shown on the trouble indicator circuit, are mounted on the decoder frames.

F. This equipment is located on the trouble indicator frame because of lack of space on the sender make-busy frame and to be consistent with the arrangement in No. 1 crossbar offices where the intersender timing and announcement control equipment is located on the originating trouble indicator frame.

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5. GENERAL NOTES

5.01 The trouble indicator frame shall be located adjacent to and at the right of the decoder test frame. These frames are closely associated with the decoder and decoder connector frames and should be located as near them as practicable.

5.02 The trouble indicator frame is arranged to serve two decoder groups each consisting of a maximum of six decoders and a maximum of 51 decoder connectors. The designations G-0 and G-100 are used to distinguish between the equipment that is associated with the two decoder groups or two sender groups in the case of intersender timing control.

5.03 The CB jacks shown on the connector circuit for making the decoders busy to individual or all connectors are mounted on the trouble indicator frame. The jacks are arranged in three groups of six each per jack mounting for connectors A, B, and C of each 3-capacity decoder connector frame. Two jack mountings are required for the CB jacks associated with each 5-capacity decoder connector frame. The three groups on the first jack mounting and the first two groups on the second shall be used for connectors A to E, respectively, with the last group of jacks left spare.

5.04 There shall be a minimum of two connector frames per office with a minimum of four connectors and three decoders.

5.05 The trouble indicator frame should be wired for one or two groups of decoders depending upon the ultimate job requirements.

5.06 The 24-volt test battery and high resistance ground shall be provided once per office for the trouble indicator frame. The associated equipment shall be located on the fuseboard.