

**SENDER AND POSITION FINDER FRAME
FOR USE WITH A CENTRAL "B" SWITCHBOARD
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 manufacture and installation of a sender and position finder frame for use in a No. 1 crossbar system office with a central "B" switchboard arranged to terminate calls to crossbar subscribers in a distant building. Equipment included in this specification may be ordered by specifying the code and list number covered in Part 4.

1.02 This section is reissued to incorporate previous appendix changes.

Capacity

1.03 The capacity of the sender and position finder frame is as follows:

Central "B" Sender Unit	4
Position Finders	4
"B" Position Multiple (Non Graded)	20

Description

1.04 The sender and position finder frame along with the associated "B" switchboard equipment in the central office function with the central "B" sender and incoming trunk equipment in the terminating crossbar office to establish a connection between a manual local, toll or tandem operator and a called subscriber in a crossbar office without a "B" switchboard. It is also used with DSA operator calls that require the assistance of the central "B" operator.

1.05 The central "B" sender unit contains the apparatus individual to one central "B" sender circuit. This equipment stores a call from the toll, tandem, manual, or DSA operator until the central "B" operator is ready to service the call.

1.06 One position finder switch is associated with each central "B" sender unit. These switches are located above the central "B" sender units on the sender and position finder frame. The position finder selects an idle central "B" operator.

1.07 The central "B" position multiple appears on the banks of the position finder switches. A maximum of 20 "B" positions appear on the banks of one position

finder switch and where there are 20 or less "B" positions in a group they are multiplied to all of the position finder banks. Night service positions shall be arranged for both 4 and 5 key operations when both classes of calls are serviced from the same "B" switchboard.

1.08 The associated central "B" positions may be used in common with crossbar local traffic. When the central "B" positions are to be used with both panel and crossbar traffic, sender and position finder frame J28003 shall be provided.

1.09 The insertion of the manual local, toll, tandem or DSA operator's plug in the outgoing trunk jack causes the incoming trunk in the terminating crossbar office to select an idle central "B" sender which in connection with the other terminating equipment completes the call after it has received the necessary information from the sender in the office with the "B" switchboard.

1.10 Each central "B" sender in the terminating crossbar office is directly connected to a sender and position finder in the office with the "B" switchboard. The position finder finds an idle "B" operator and an order tone is then sent back to the originating operator. The order is then given, and set up on the central "B" operator's keyset. As soon as the last numerical key has been depressed, the central "B" operator is automatically released and is ready to receive another call. The attached sender registers the called number and sends out reverberative pulses corresponding to the digits keyed, and in that way sets the central "B" sender in the terminating crossbar office. The central "B" sender in the terminating crossbar office and the sender and position finder in the switchboard office are released after the called line is selected.

1.11 The sender and position finder frame is a single sided single bay steel structure 11'-6" high and 2'-4" long. The frame is arranged for four position finder switches located at the top of the frame with four central "B" sender units mounted below.

Subdivision of Equipment

J28052A (AT&TCo Std.) - Sender & Position Finder Frame
J28052B (AT&TCo Std.) - Central "B" Sender Unit

2. SUPPLEMENTARY INFORMATION

816-000-000 - No. 1 Crossbar System Index
 J25551 - End Guards & Aisle Pilot Lamps
 J25552 - Frame Lighting & Appliance Outlets
 J28003 - Central "B" Sender & Position Finder Frame (Panel System)
 J28050 - Central "B" Sender (Terminating Office Part)
 Floor Plan Data - Section 9.1, Sheet 27

Framework

ED-25020-01 - Cable Brackets
 ED-25021-01 - Jack, Key, & Lamp Panels
 ED-25023-01 - Frame Details
 ED-25025-01 - Fuse Panels
 ED-25547-01 - Frame Assembly
 ED-25548-01 - Unit Assembly
 ED-90978-01 - Relay Casing Assembly
 ED-91172-01 - Bulb Angle

3. DRAWINGSKeysheet

SD-25000-01 - No. 1 Crossbar System

Equipment

ED-25212-01 - Designation Card (Fig. 5A)
 ED-25549-01 - Frame
 ED-25550-01 - Unit

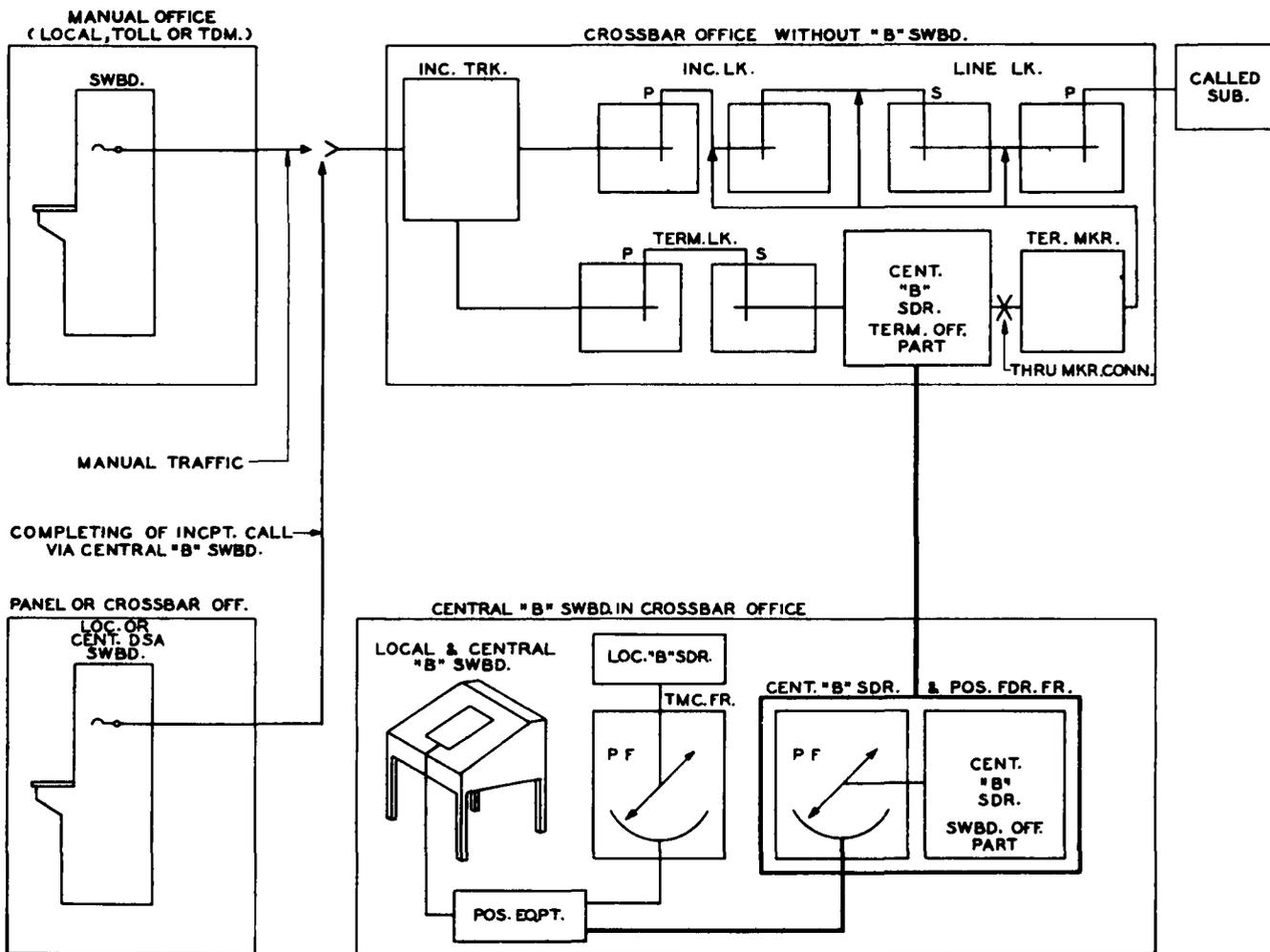


Fig. 1 - Diagram of Central "B" Switchboard Traffic Serving a Terminating Crossbar Office

Wiring and Cabling

ED-25211-01 - Grading of Multiple - "B" Position Finders
 ED-25346-01 - Method of Running Power Feeders
 ED-25551-01 - Frame Local Cabling Plan
 ED-25557-01 - Switchboard Cabling Details

4. EQUIPMENT

J28052A (AT&TCo Std.) - Sender and Position Finder Frame

Equipment - ED-25549-01, Figs. 1, A, B, C, D, E, & F
 Local Cable - ED-25551-01, Fig. 1

List 1 - Framework, assembly, wiring, and common equipment for one sender and position finder frame wired for 4 central "B" sender units and 4 position finder switches (less the central "B" sender units and position finder equipment)

	<u>Wire</u>	<u>Equip</u>	<u>See Note</u>
Framework ED-25547-01, G1	-	1	
ED-25547-01, G2	-	As Req	B
Fuse Panel Assembly			
ED-25025-01, Item 2	-	1	
Jack Panels, ED-25021-01			
Items 2 & 10 Each	-	1	
Sender & Position Finder			A
Ckt. SD-96285-01, Figs. 1			5.06
(Bay Wiring Only) & 2	4	0	5.07
			5.08
			5.09
Misc. Frame Ckt. SD-25476-01:			
Fuse Alarm Fig. 1	1	1	
Test Battery Supply			
Fig. 2	1	1	
Spare Jack Fig. 3	1	1	
Talking Jacks Fig. 4	1	1	
Frame Line Jack Fig. 5	1	1	5.03

List 2 - Equipment per SD-96285-01, Fig. 2, required in addition to list 1 for one position finder switch for use with a central "B" sender unit (See notes A, 5.07 and 5.08)

Note

- A. The bank and associated wiring shall be furnished as part of list 1. The selectors shall be furnished as required per list 2.
- B. Furnish one group 2 for each unequipped sender unit position on frame.

J28052B (AT&TCo Std.) - Central "B" Sender Unit

Equipment - ED-25550-01, Fig. 1

List 1 - Framework, assembly, wiring, and equipment for one central "B" sender unit (less variable apparatus) (See note 5.10)

See
Wire Equip Note

Framework ED-25548-01, G1	-	1	
Central "B" Sender Ckt.			
SD-96285-01, Fig. 1 & "G" & "Y" Wiring	1	1	A
Position Disconnect Ckt.			
SD-96285-01, Fig. 3	1	0	
Pos. Disconnect & Multi-office Selector Ckt.			
SD-96285-01, Fig. 4	1	0	

List 2 - Equipment per SD-96285-01, Fig. 3, required in addition to list 1 in a non-multioffice terminating unit or in multioffice terminating units when all incoming trunk groups are individual to each unit

List 3 - Equipment per SD-96285-01, Fig. 4, required in addition to list 1 in multioffice terminating units where some or all of the incoming trunk groups are common to more than one office (See note B)

List 5 - 120C repeating coil per SD-96285-01, "T" apparatus only, required in addition to list 1 for use with loops of 1100 ohms or less

List 6 - 120D repeating coil per SD-96285-01, "V" apparatus only, required in addition to list 1 for use with loops of more than 1100 ohms

List 7 - Equipment per SD-96285-01, "G" apparatus only, required in addition to lists 1 and 3 in multioffice terminating units where some or all of the incoming trunk groups are common to more than one office and others are individual.

Notes

- A. Trunk resistance straps per SD-96285-01, "X" and "W" wiring will be added by the installer as required to compensate the trunk loop to a minimum of 900 ohms.
- B. "Y" wiring shall be connected when list 3 is equipped and all incoming trunk groups are common to more than one office.

5. GENERAL NOTES

Equipment

5.01 On partially equipped frames the equipment shall begin at the bottom of the frame or with the central "B" sender unit

designated zero and be equipped in numerical order.

5.02 A designation card per ED-25212-01, Fig. 5A shall be filled in with the central "B" position numbers and their location on the position finder banks in accordance with ED-25211-01.

5.03 One or more 653A subscriber sets equipped with 5HB-3 dials shall be furnished and mounted on the walls or columns as specified by the Telephone Company.

5.04 The sender and position finder frame will in general be located with the other sender frames serving the "B" switchboard.

5.05 For protection against interruption of service, a minimum of two sender units shall be provided.

Wiring

5.06 The frame local cable for the sender and position finder frame consists of the wiring between the central "B" sender units, the jack and fuse panels, the position finder switches, and the frame misc. & sdr. terminal strip.

5.07 A separate local cable shall be provided for the position finder banks and the associated terminal strip.

5.08 The wiring for the central "B" position multiple on the position finder banks shall be a straight horizontal multiple thru all the position finders on one frame and to the associated terminal strip and slipped per ED-25211-01 between frames.

5.09 The unequipped position finder bank terminals shall be multiplied to equipped terminals at the terminal strip on the first central "B" sender and position finder frame by means of a separate form as shown on the switchboard cable detail plan

and position multiple drawings listed herein.

5.10 The central "B" sender unit local cable consists of the wiring individual to one central "B" sender circuit.

5.11 20 gauge ESCB wire shall be used in the frame end unit local cables for battery and ground leads.

5.12 To permit the use of the same piece part local cable on the sender units J28003B and J28052B, 22 gauge DCL wire shall be used in the unit local cable except as covered by note 5.11.

5.13 24 gauge DCL wire shall be used in the frame local cable except as covered by note 5.11.

5.14 24 gauge DCL wire shall be used for the position finder bank multiple wiring.

Switchboard Cabling

5.15 The code numbers of the switchboard cables ordinarily used in cabling to the various frames are shown on the switchboard cabling detail drawing listed herein. The circuits should, however, be checked to insure that the proper codes are specified to meet the latest circuit requirements.

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

Equipment

5.16 The following equipment has been replaced as indicated:

<u>Equipment</u>	<u>Rating</u>	<u>Covered in Iss.</u>	<u>Replacing Equipment</u>
J28052B, L4	Mfr. Disc.	1	J28052B, L7

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