Please note:
Alff
Dornisch
Gray
Perry
Tessler
Thomas
Wolfertz
File
Destroy

SWITCHING CABINET
IDENTIFICATION, INSTALLATION, AND CONNECTIONS
761B PBX

CONTENTS PAGE

1. GENERAL 1
2. PBX ORDER BLANK 2
3. IDENTIFICATION 2
4. TOOLS 2
5. PLANNING 5
6. UNCRATING 6
7. INSTALLATION 6
Installation of Equipment 6
Soundproofing Cabinet Front and End Panels 6
8. GROUNDING 9
9. CONNECTIONS 9

Figures

1. Envelope Holder Installed 5
2. 761B PBX Switching Cabinet 5
3. Switching Cabinet Equipment Arrangement 7
4. Floor Space Requirements for 761B PBX . 9
5. Slide Stop Assembly in Place 9
6. Installation of Soundproofing on Panels . 13

CONTENTS PAGE

7. 761B PBX Crown—Location of Screw for Ground 13
8. 761B PBX Crown—Vertical Quick-Connect Terminal Field 13
9. 761B PBX Crown—Terminal Fields Raised 14
10. Method of Mounting Cable Clamps . . 16

Tables

A. 761B PBX Switching Equipment . 3
B. 761B PBX Capacity 9
C. Equipment Connections to Slide Connectors 10
D. Trunk Connections from House and Feeder to PBX 15

1. GENERAL

1.01 This section provides information for the identification, installation, and connections for a 20- to 40-station line 761B PBX switching equipment cabinet arranged for either rotary or TOUCH-TONE® dialing operation.

1.02 This section is reissued to:

- Add mechanized ordering information
- Add reference to service options section

NOTICE
Not for use or disclosure outside the
Bell System except under written agreement

TCI Library https://www.telephonecollectors.info/

- Add notes to Table A to clarify equipment requirements
- Add cabinet soundproofing
- Make minor changes.

Since this reissue is a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 For identification, installation, and connections of attendant and station equipment, refer to Section 551-722-210.

1.04 For method of providing service options, refer to Section 551-722-210.

1.05 For a general description of the 761B PBX, refer to Section 981-669-100.

1.06 The 761B PBX is a common control PBX system employing crossbar switching and consists of one switching cabinet, one attendant console, and a maximum of 40 station telephone sets. The system is primarily used to provide dial telephone service at small hotels and motels and contains its own batteryless power plant.

1.07 A set of schematic drawings and circuit description sheets are furnished with the switching equipment. An envelope holder assembly (ED-1E037-70, group 7) is available for storing these drawings in the front panel (Fig. 1).

1.08 This issue of the section is based on the following drawing:

SD-1E060-01, Iss 25

If this section is to be used with equipment or apparatus reflecting later issues of the drawing, reference should be made to the SD to determine the extent of the changes and the manner in which the section may be affected.

2. PBX ORDER BLANK

2.01 When ordering a 761B PBX, Form E-8077 should be prepared. The form provides the data necessary for the mechanized ordering system for a new pre-assembled 761B PBX system.

2.02 Form E-8077 can only be used for ordering one new pre-assembled 761B PBX (including, if desired, attendant call, answer and switching console, and A125A connector cable). Any additions to existing systems must be ordered separately.

2.03 The form establishes the rotary or TOUCH-TONE operation with or without digit absorbing service features along with the identity and quantity of required units for the ordered system.

2.04 So that appropriate strapping may be factory installed, the following are identified:

(a) The PBX stations tens digits assignment.

(b) Three-digit unrestricted codes for the code check unit.

(c) A PBX served by a step-by-step central office arranged for digit absorbing in a "0" and "1" access area, the following information about the central office must be provided:

- Office codes served
- Service codes served
- Digit absorbing selector switch arrangements.

(d) Referenced papers, general notes, and installer notes may be included on the form.

3. IDENTIFICATION

3.01 The basic 761B PBX switching equipment for both rotary and TOUCH-TONE dial operation is listed by J numbers in Table A. All of the equipment is installed in the switching cabinet (Fig. 2) on three slides. The possible slide arrangements are shown in Fig. 3.

3.02 The capacity of the 761B PBX is shown in Table B.

4. TOOLS

4.01 In addition to standard PBX installation tools, the following tools or their equivalent are required:

(a) 714-type tool for making connections to quick-connect blocks

TCI Library https://www.telephonecollectors.info/

TABLE A

761B PBX SWITCHING EQUIPMENT

EQUIPMENT CODE	DESCRIPTION AND FUNCTION
J58862A List 1	Switching cabinet equipped with three slides and containing equipment for 20 station lines, one common control unit, two intra-PBX trunks, one power supply, and one fuse panel.
J58862AA List 1	Fuse panel unit.
J58862AB List 1	Crossbar switch and relay unit for 10 station lines.
J58862AC List 1	Common control unit.
J58862AD List 1	Intra-PBX trunk unit required to connect room-to-room or room-to-desk calls via the attendant.
J58862AE List 1	2-Way CO ground ring start trunk with station message registration via sleeve.
J58862AF List 1	Rotary dial remote answer unit, providing trunk answer from any station.
J58862AG List 1	TOUCH-TONE dialing remote answer unit, providing trunk answer from any station.
J58862AH List 1	Toll operator trunk unit required for each toll central office trunk.
J58862AJ List 1	Rotary dial pulse counting and register unit.
J58862AK List 1	Rotary dial 0 and 1 first digit nondigit absorbing call controller and tone unit. (See Notes 1 and 2).
J58862AL List 1	Rotary dial nondigit absorbing call controller 2nd and 3rd digit and tone unit. (See Note 2.)
J58862AM List 1	Code check unit required when system is arranged for 3-digit nondigit absorbing call controller. (See Notes 2 and 3.)
J58862AM List 2	Diode circuit pack for eighteen 3-digit codes to be passed (maximum 6). (See Notes 2 and 3.)
J58862AN List 1	2-Way CO ground ring start trunk with station message registration via sleeve and toll diversion by CO reversal of battery.
J58862AP List 1	2-Way CO ground ring start trunk with station message registration via battery reversal from the CO.

TCI Library https://www.telephonecollectors.info/

TABLE A (Contd)

761B PBX SWITCHING EQUIPMENT

EQUIPMENT CODE	DESCRIPTION AND FUNCTION
J58862AR List 1	TOUCH-TONE dial 0 and 1 first digit nondigit and digit absorbing call controller and tone unit. (See Notes 1, 3, and 5.)
J58862AS List 1	TOUCH-TONE dial nondigit absorbing call controller register unit. (See Note 3.)
J58862AT List 1	Rotary dial digit absorbing call controller. (See Note 4.)
J58862AU List 1	TOUCH-TONE dial digit absorbing call controller. (See Note 5.)
J58844A List 1 (MD) J58844B List 1	TOUCH-TONE receiver unit — two required when system is arranged for TOUCH-TONE call controller operation — one required for TOUCH-TONE operation without call controller.
J86831A List 1 (MD) J86878A List 1 (MD) List 2	Power supply and ringing tone unit.

Note 1: When single digit call controller without digit absorbing is provided, one 1st digit register and tone unit is required per central office trunk.

Note 2: When 3-digit call controller without digit absorbing for rotary dial operation is provided, one 1st digit register and tone unit and one 2nd and 3rd digit register and tone unit are required per trunk; one code check unit is required per system. In addition, one diode board (CPU) is required per 18 codes to be passed.

Note 3: When 3-digit call controller without digit absorbing for TOUCH-TONE operation is provided, one TOUCH-TONE "0" & "1" 1st digit call controller and tone unit is required per central office trunk; one TOUCH-TONE 3-digit call controller register unit and one code check unit is required per system. In addition, one diode board (CPU) is required per 18 codes to be passed.

Note 4: When digit absorbing call controller with rotary dial operation is provided, one digit absorbing dial pulse call control unit is required per CO trunk.

Note 5: When digit absorbing call controller with TOUCH-TONE operation is provided, one 1st digit register and tone unit is required per CO trunk; one digit absorbing TOUCH-TONE call control unit is required per system.

TCI Library https://www.telephonecollectors.info/

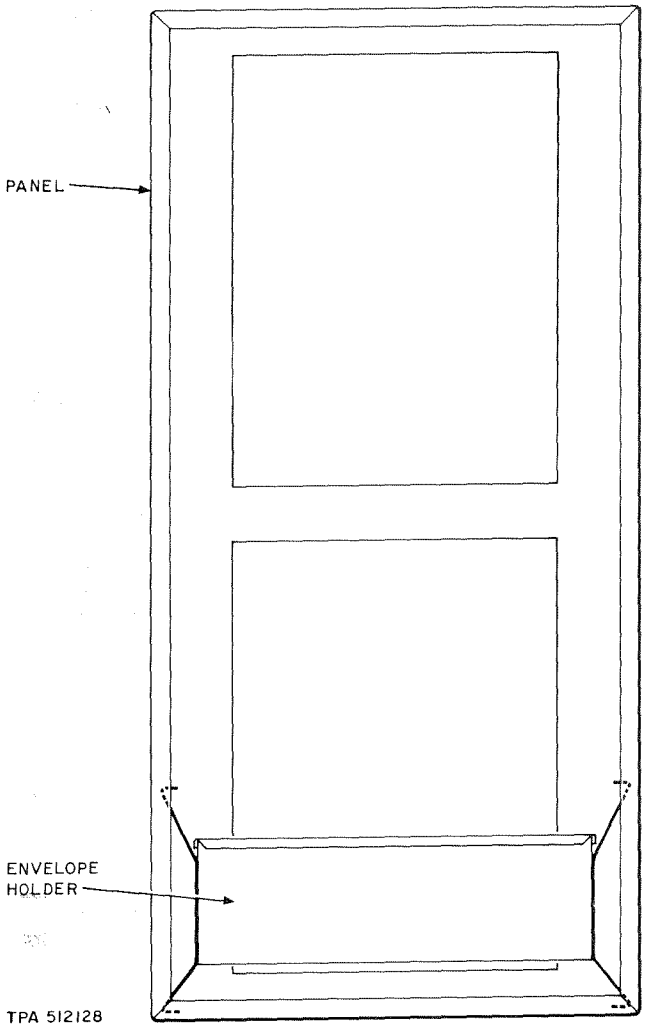


Fig. 1—Envelope Holder Installed

(b) R-1257 bench level

(c) R-2384 pinch bar (30-inch)

(d) 19/32 wrench for removing slide stop assembly hex-nut

(e) Nail puller.

5. PLANNING

5.01 The floor space requirement for the 761B PBX and the required maintenance space are shown in Fig. 4. Space shown at the front of the cabinet may be aisle space.

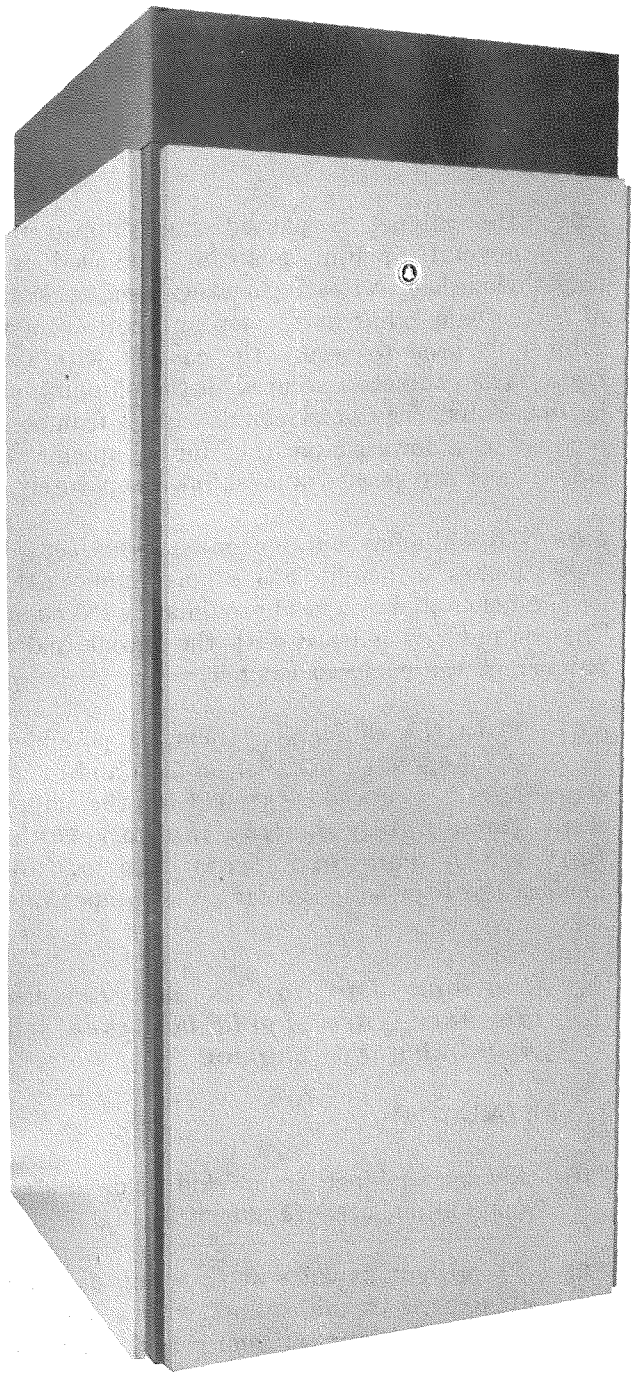


Fig. 2—761B PBX Switching Cabinet

5.02 A fully equipped cabinet weighs approximately 800 pounds. However, the cabinet weight will vary according to the equipment installed.

Caution: Prior to installation of the 761B PBX equipment, it must be

TCI Library https://www.telephonecollectors.info/

determined that the load carrying capacity of the floor is adequate.

5.03 For selection of location of the switching cabinet, refer to Section 809-002-100.

6. UNCRATING

6.01 The cabinet is packed and shipped in a normal upright position, enclosed in a polyethylene bag. A floating arrangement, consisting of a polyfoam collar at the top and bottom of the cabinet, is used to secure the cabinet within the crate. The cabinet is secured to the shipping skid by four bolts. The quick-connect block frames are secured in a lowered position for shipping. The side panels are packed and shipped separately.

6.02 The shipping container measures 6 feet 3-1/8 inches in height, has a maximum width of 29-1/2 inches, and weighs approximately 135 pounds. The container is marked with the J code and list number of the enclosed cabinet.

6.03 Place the cabinets as near as possible to the designated installation area and uncrate according to the procedure attached to the shipping crate. ***Immediately destroy the polyethylene bag when removed from the cabinet.*** Remove the four bolts securing the cabinet to the skid.

Caution: The top is not fastened; therefore, care should be taken when positioning the cabinet.

7. INSTALLATION

7.01 Remove cabinet from skid and locate in installation area as shown in Fig. 4.

7.02 To prevent damage in shipping, each slide is secured in the cabinet with a slide stop bolt assembly consisting of one P-160126 hex-head cap screw, two P-284160 flat washers, and one P-154248 hex nut. ***These assemblies must be removed before the slides can be withdrawn from the cabinet.*** Retain these items for future use when it is necessary to relocate or replace the cabinet. (See Fig. 5.)

7.03 Level the cabinet. If necessary, shim the base of the cabinet with small strips of hardwood, or equivalent. A sufficient number of shims should be used to equalize the weight distribution along the base area.

7.04 Four holes are located in the bottom of the PBX cabinet for use when it is necessary to fasten the cabinet to the floor. Secure the cabinet according to local instructions and job requirements. If a rigid mounting is not required, insert P-40G472 plug buttons into the four holes.

Installation of Equipment

7.05 When equipment other than that furnished with the cabinet is required, mount the additional equipment on slides 1, 2, or 3 in positions shown in Fig. 3. Plug the equipment plugs into the slide connectors (Table C), as required.

Optional features and provision for lead continuity are required for proper system operation. See Section 551-728-210 for method of application.

7.06 Ensure that all plugs being used are secure in their respective jacks.

Soundproofing Cabinet Front and End Panels

7.07 If the switching cabinet is to be placed in a location where equipment noise will be a problem, proceed as indicated in paragraphs 7.08 through 7.10.

7.08 Soundproofing kits are available on an optional basis for soundproofing the front and end panels of the cabinet. One kit is required for each panel to be soundproofed. The kit consists of two adhesive-backed polyurethane foam tape panels 24-1/2 inches long by 18-1/2 inches wide by 1/2 inch thick.

7.09 Install the soundproofing material as follows:

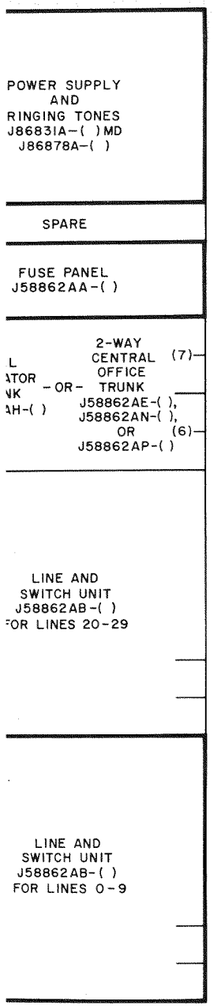
(a) Remove front and end panels from the cabinet and place in a horizontal position with the inside up.

(b) Clean inside of panel (dust free).

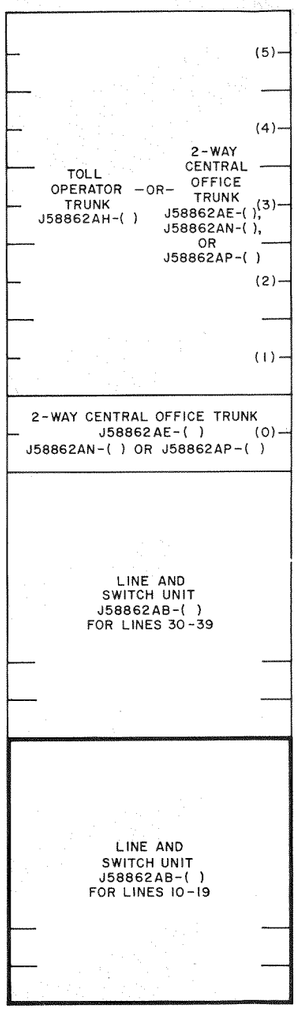
(c) Place the exposed adhesive of two polyurethane foam tape panels on the center of each cabinet panel and press firmly. (See Fig. 6.)

(d) Replace panels on the cabinet.

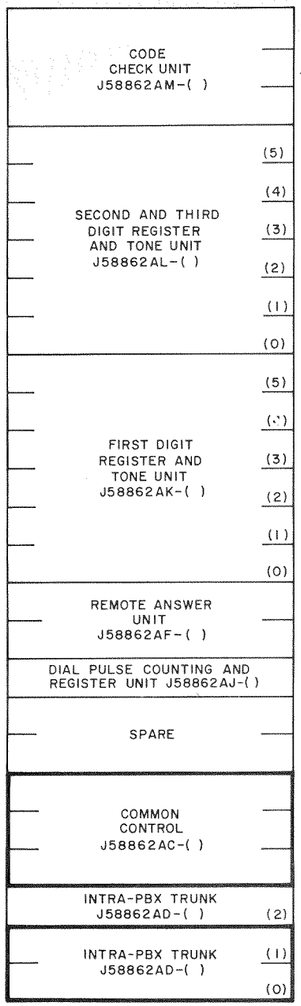
TCI Library https://www.telephonecollectors.info/



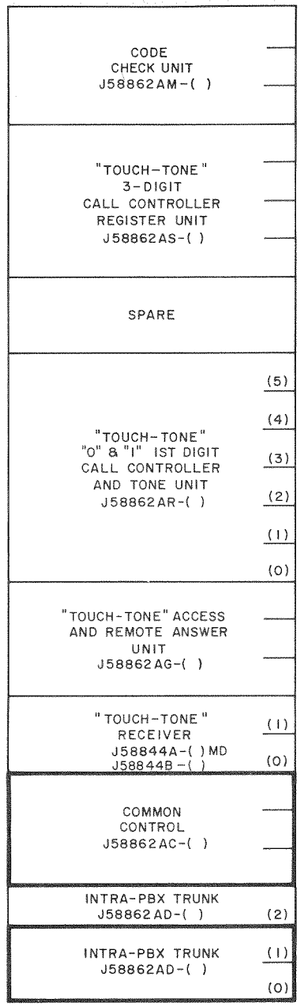
SLIDE NO. 1



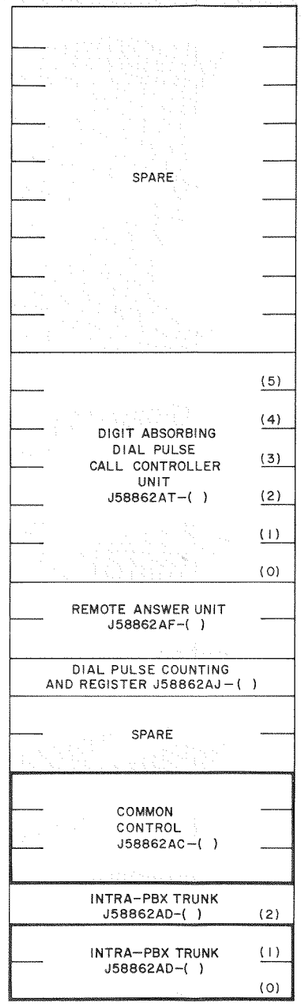
SLIDE NO. 2



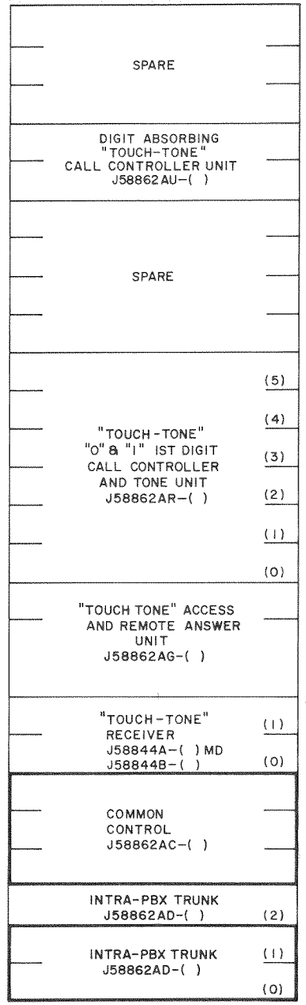
SLIDE NO. 3
ARRANGED FOR
ROTARY DIAL PULSING
WITHOUT DIGIT
ABSORBING
CALL CONTROLLER



SLIDE NO. 3
ARRANGED FOR
TOUCH-TONE CALLING
WITHOUT DIGIT
ABSORBING
CALL CONTROLLER



SLIDE NO. 3
ARRANGED FOR
ROTARY DIAL PULSING
WITH DIGIT ABSORBING
CALL CONTROLLER



SLIDE NO. 3
ARRANGED FOR TOUCH-TONE
CALLING WITH DIGIT
ABSORBING CALL
CONTROLLER

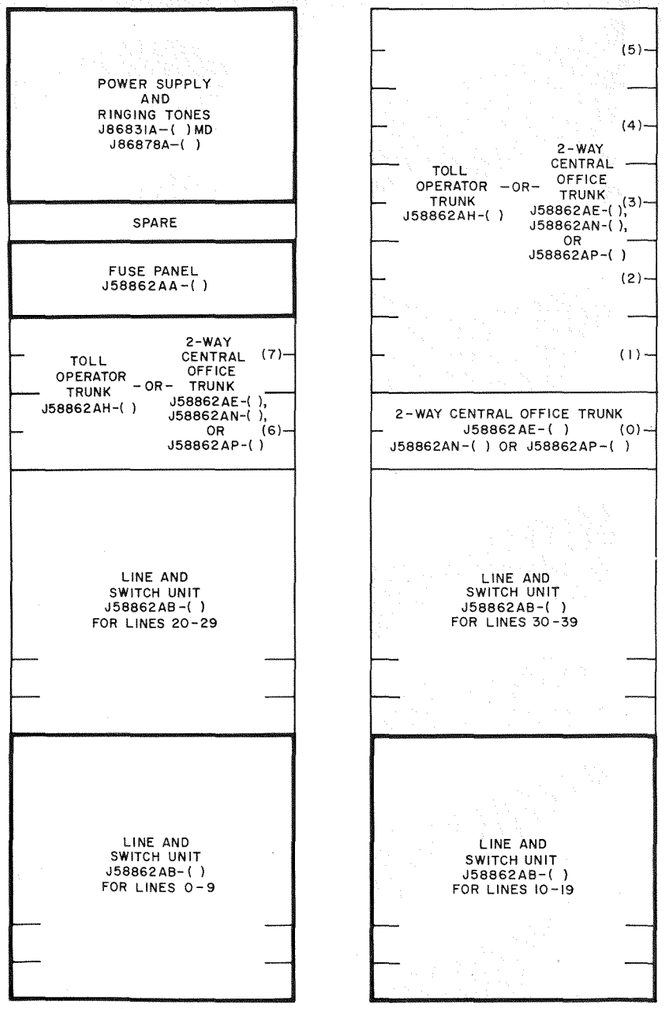
PLATE NO.
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1

NOTES:

1. EQUIPMENT SUPPLIED WITH THE SWITCHING CABINET IS SHOWN ENCLOSED BY HEAVY LINES AND WILL BE USED FOR 20-STATION OPERATION.
2. EQUIPMENT NOT SHOWN ENCLOSED BY HEAVY LINES MUST BE ORDERED SEPARATELY AND INSTALLED. HOWEVER, EQUIPMENT ORDERED USING MECHANIZED ORDER BLANK FORM E-8077 FOR NEW PREASSEMBLED 761B PBX SYSTEM WILL HAVE THIS EQUIPMENT INSTALLED AND WIRED IN ACCORDANCE WITH DATA PROVIDED ON THE FORM.
3. EACH CROSSBAR SWITCH ACCOMMODATES 10 STATIONS.
4. ALL UNITS ARE PLUG-IN UNITS.
5. NUMBERS IN ( ) INDICATE EQUIPMENT POSITIONS FOR UNITS WHERE MORE THAN ONE OF SAME TYPE MAY BE EQUIPPED.
6. CENTRAL OFFICE TRUNKS MUST BE EQUIPPED STARTING WITH LOWEST NUMBERED POSITION. FIRST TRUNK WILL BE IN POSITION 0.
7. TOLL OPERATOR TRUNKS MUST BE EQUIPPED STARTING WITH HIGHEST NUMBERED POSITION. HOWEVER, FIRST TRUNK WILL BE THAT WHICH IS LOCATED IN THE LOWEST NUMBERED POSITION.
8. WHEN "TOUCH-TONE" OPERATION IS REQUIRED AND THE PBX CALL CONTROLLER IS NOT REQUIRED, ONLY ONE "TOUCH-TONE" RECEIVER IS USED.
9. ONLY THE FIRST SIX TRUNK POSITIONS ARE ARRANGED FOR CONNECTION TO FIRST DIGIT, SECOND DIGIT AND THIRD DIGIT REGISTER AND TONE CIRCUITS.
10. CALL CONTROLLER POSITIONS 0 THROUGH 5 IN SLIDE 3 ARE RELATED TO TRUNK POSITIONS 0 THROUGH 5 RESPECTIVELY IN SLIDE 2.

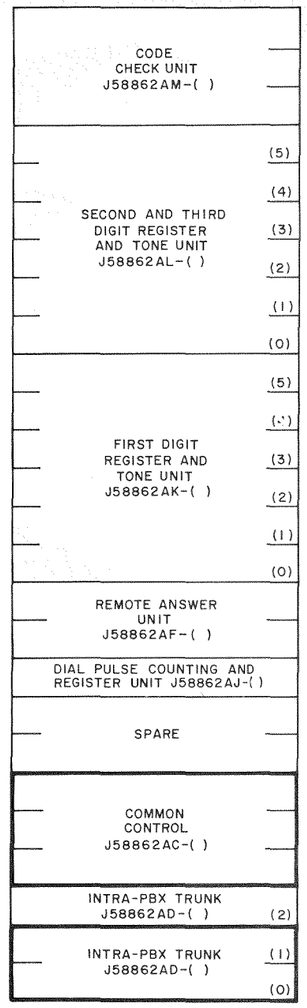
Fig. 3—Switching Cabinet Equipment Arrangement

TCI Library https://www.telephonecollectors.info/

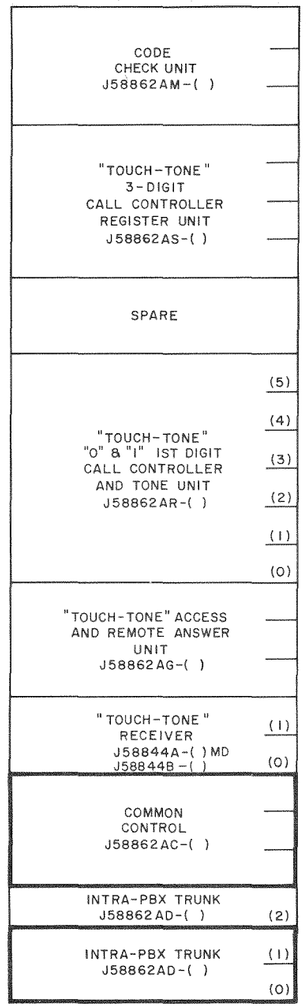


SLIDE NO. 1

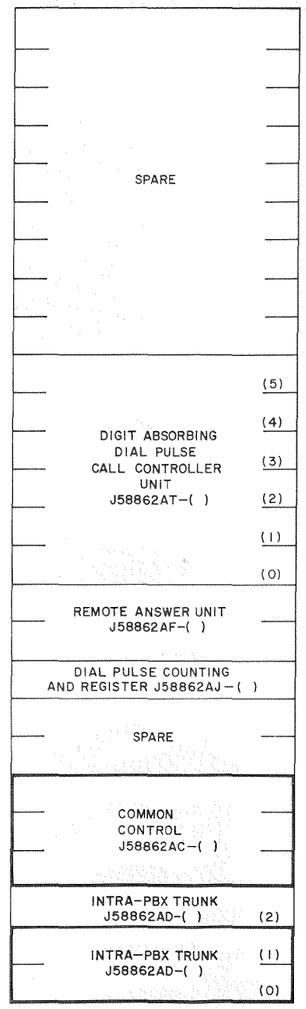
SLIDE NO. 2



SLIDE NO. 3
ARRANGED FOR
ROTARY DIAL PULSING
WITHOUT DIGIT
ABSORBING
CALL CONTROLLER



SLIDE NO. 3
ARRANGED FOR
TOUCH-TONE CALLING
WITHOUT DIGIT
ABSORBING
CALL CONTROLLER



SLIDE NO. 3
ARRANGED FOR
ROTARY DIAL PULSING
WITH DIGIT ABSORBING
CALL CONTROLLER

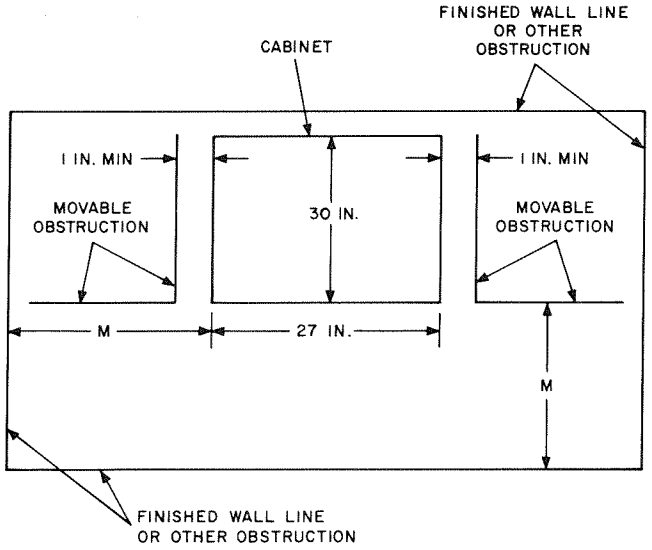
TCI Library https://www.telephonecollectors.info/

TABLE B

761B PBX CAPACITY

EQUIPMENT	MIN	MAX
Central office trunks	0*	8*
Toll operator trunks	0*	8*
Intra-PBX trunks	2	3
Remote answer trunk	1	1
PBX station lines	20	40
Call controllers	0	6
Attendant console	1	1

* The 761B PBX is equipped with eight universal trunk positions. Any combination of central office and toll trunks may be used in these positions.



NOTES:

1. DIMENSION M IS SPACE REQUIRED DURING MAINTENANCE AND SHOULD NOT BE LESS THAN 2 FEET 6 INCHES.
2. HEIGHT IS 68 INCHES WITH TOP IN PLACE; 74 INCHES WITH TOP REMOVED AND THE HINGED FRAME IN A VERTICAL POSITION.

Fig. 4—Floor Space Requirements for 761B PBX

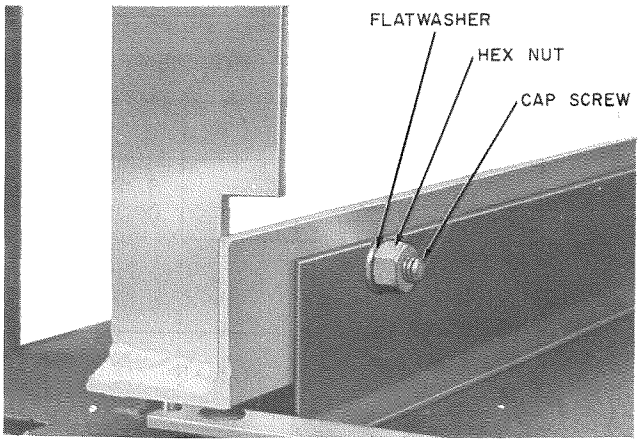


Fig. 5—Slide Stop Assembly in Place

7.10 To receive the soundproofing kit, order as follows:

One soundproofing installation kit—ED-1E037-70 Group 10.

8. GROUNDING

8.01 Ground for the cabinet is normally furnished by the third wire in the power cord. To ensure that the cabinet remains grounded when the power cord is removed, an approved local ground must be provided.

8.02 Remove the sliding top of the switching cabinet and store in a safe place. Remove a screw at the left rear of the crown and clean the surface beneath the screw head to bright metal. (See Fig. 7.) Using locally furnished wire (18-gauge minimum) and a suitable terminal lug, connect a ground lead from the PBX ground screw to an approved ground. Refer to Section 802-001-180 for method of providing an approved ground.

9. CONNECTIONS

9.01 Quick-connect terminal blocks are provided in the crown of the switching cabinet for connecting the PBX stations, attendant console, trunks, and remote answer bell. The quick-connect field faces the front of the PBX cabinet as shown in Fig. 8 and 9.

TCI Library https://www.telephonecollectors.info/

TABLE C

EQUIPMENT CONNECTIONS TO SLIDE CONNECTORS

SLIDE	CONNECT		TO		NOTES
	EQUIPMENT	PLUG	SLIDE CONN	MTG PLT LOCATION	
1	CO trunk unit	Note	N M	17-18	Each type of CO trunk has 2 plugs as follows: J58862AE N0 MC0 J58862AN N1 MC1 J58862AP N2 MC2 Plug the N- and M- plug of the required trunk into the respective N and M connector of each trunk position as required.
		Note	N M	15-16	
2	CO trunk unit	Note	N M	25-26	
		Note	N M	23-24	
		Note	N M	21-22	
		Note	N M	19-20	
		Note	N M	17-18	
		Note	N M	15-16	
1	Toll operator trunk unit	MT MT	M M	17-18 15-16	Slide connector N requires no plug when toll operator trunks are used.
2	Toll operator trunk unit	MT MT MT MT MT MT	M M M M M M	25-26 23-24 21-22 19-20 17-18 15-16	

TCI Library https://www.telephonecollectors.info/

TABLE C (Contd)

EQUIPMENT CONNECTIONS TO SLIDE CONNECTORS

SLIDE	CONNECT		TO		NOTES
	EQUIPMENT	PLUG	SLIDE CONN	MTG PLT LOCATION	
1	Line switch and relay unit	C D E	C D E	8-14	Required for PBX station lines 20-29.
2	Line switch and relay unit	C D E	C D E	8-14	Required for PBX stations 30-39.
3	Code check unit	T	T	24-26	Required for 3-digit nondigit absorbing call control with rotary dial pulsing.
	2nd and 3rd digit register and tone unit	S(5) S(4) S(3) S(2) S(1) S(0)	5 - S 4 3 - S 2 1 - S 0	23 22 21 20 19 18	Required for 3-digit nondigit absorbing with rotary dial pulsing for each central office trunk position.
	1st digit register and tone circuit	R(5) R(4) R(3) R(2) R(1) R(0)	5 - R 4 3 - R 2 1 - R 0	17 16 15 14 13 12	Required for single digit nondigit absorbing call control with rotary dial pulsing for each central office trunk position.
	Dial pulse remote answer unit	J	J	10-11	Required for remote answer feature.
	Dial pulse counting and register unit	K	K	9	Required for rotary dial operation.
	Intra-PBX trunk unit	L	L	3	3rd intra-PBX trunk.
	TOUCH-TONE 3-digit call controller and register unit	WT ST	W (5)S	20-23	Required for 3-digit nondigit absorbing call control with TOUCH-TONE calling.
	TOUCH-TONE access and remote answer unit	JT KT VT	J K V	9-11	Required for remote answer with TOUCH-TONE calling. Connect plugs NT0 and NT1 as required to connectors on TOUCH-TONE calling receivers 0 and 1 respectively.

TCI Library https://www.telephonecollectors.info/

TABLE C (Contd)

EQUIPMENT CONNECTIONS TO SLIDE CONNECTORS

SLIDE	CONNECT		TO		NOTES
		PLUG	SLIDE CONN	MTG PLT LOCATION	
3	TOUCH-TONE 0 and 1 call controller and tone unit	RT RT RT RT RT RT	5 4 - R 3 2 - R 1 0 - R	17 16 15 14 13 12	Required for single digit nondigit absorbing and digit absorbing call control with TOUCH-TONE calling.
	TOUCH-TONE calling receiver			7, 8	One TOUCH-TONE calling receiver is required to be mounted in position 0 (mtg plt 7) when the PBX is arranged for TOUCH-TONE calling. An additional TOUCH-TONE calling receiver is required to be mounted in position 1 (mtg plt 8) when the PBX is arranged for single or 3-digit PBX call control.
	Digit absorbing dial pulse call controller unit	RV RV RV RV RV RV	5 4 - R 3 2 - R 1 0 - R	17 16 15 14 13 12	Required for digit absorbing call control with rotary dial pulsing.
	Digit absorbing TOUCH-TONE call controller unit	WV	W	22-23	Required for digit absorbing call control with TOUCH-TONE calling.

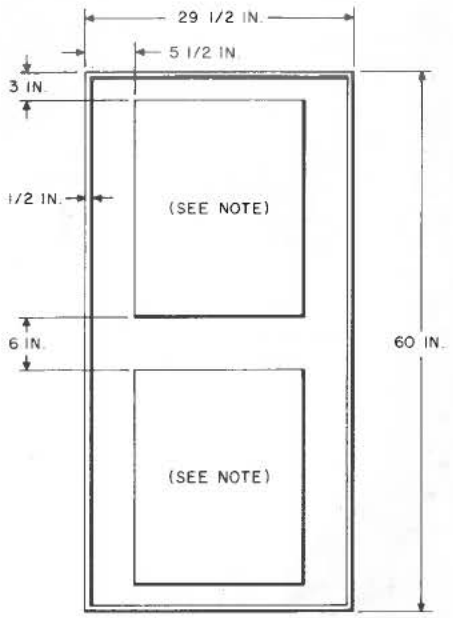
9.02 The station and attendant console terminate directly on terminals. Refer to Section 551-722-210 for method of connecting the attendant and station equipment.

9.03 Cable pairs for trunks to the central office also terminate directly on the vertical quick-connect terminals as shown in Table D. These connections are made by extending locally furnished house and feeder cable from the trunk terminal box to the PBX. Knock-outs at the right or left rear of the crown allow the cable to enter the PBX crown. The cable must be extended to the vertical cross-connection field at the front of the crown. Allow sufficient cable slack to permit the field to be raised or lowered without binding.

9.04 Secure the cable to the terminal field framework with plastic clamps furnished in the loose parts bag. Four holes are provided on the front of the terminal field frame assembly for bolting the clamps to the frame. (See Fig. 10.)

9.05 Connect the T5 and R5 leads for the remote answer bell, when required, to terminals 09 and 19 on quick-connect block G.

TCI Library https://www.telephonecollectors.info/



FRONT OR END PANEL ASSEMBLY
OF ED-1E037-70 GP-1 CABINET

NOTE:
POLYURETHANE FOAM TAPE 24 1/2 IN. X 18 1/2 IN. X 1/2 IN. ED-1E037-70, GROUP 10.

Fig. 6—Installation of Soundproofing on Panels

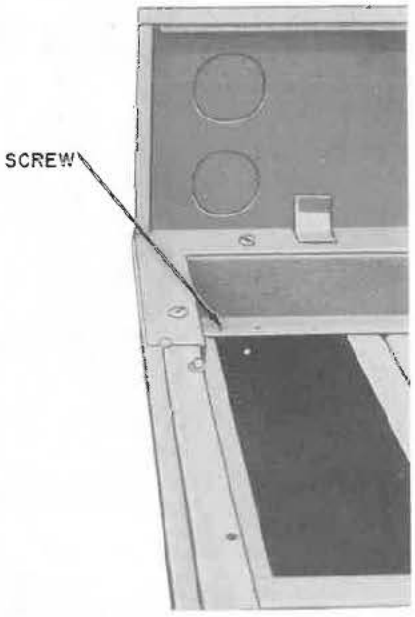


Fig. 7—761B PBX Crown—Location of Screw for Ground

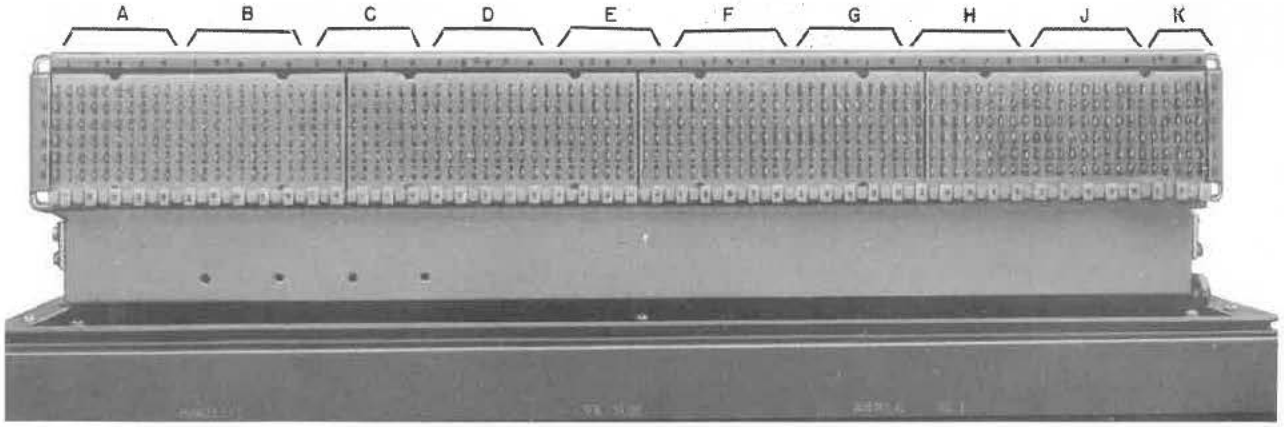


Fig. 8—761B PBX Crown—Vertical Quick-Connect Terminal Field

TCI Library https://www.telephonecollectors.info/

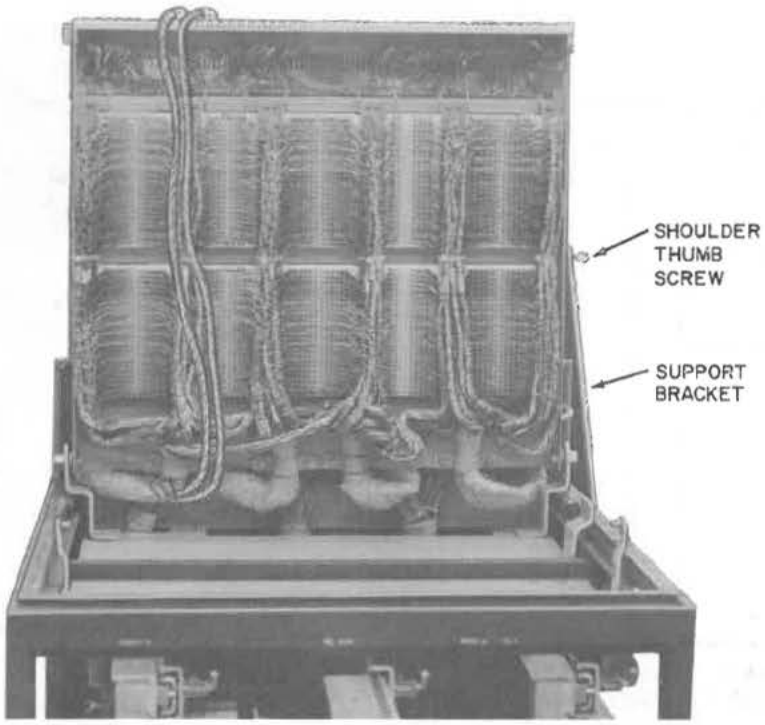


Fig. 9—761B PBX Crown—Terminal Fields Raised

TCI Library https://www.telephonecollectors.info/

TABLE D

TRUNK CONNECTIONS FROM HOUSE AND FEEDER TO PBX

IF CO OR TOLL OPERATOR TRUNK IS IN POSITION	ON QUICK-CONNECT BLOCK G CONNECT HOUSE AND FEEDER LEADS TO TERMINALS
0	00 (T) 10 (R) 20 (S)
1	01 (T) 11 (R) 21 (S)
2	02 (T) 12 (R) 22 (S)
3	03 (T) 13 (R) 23 (S)
4	04 (T) 14 (R) 24 (S)
5	05 (T) 15 (R) 25 (S)
6	06 (T) 16 (R) 26 (S)
7	07 (T) 17 (R) 27 (S)

TCI Library https://www.telephonecollectors.info/

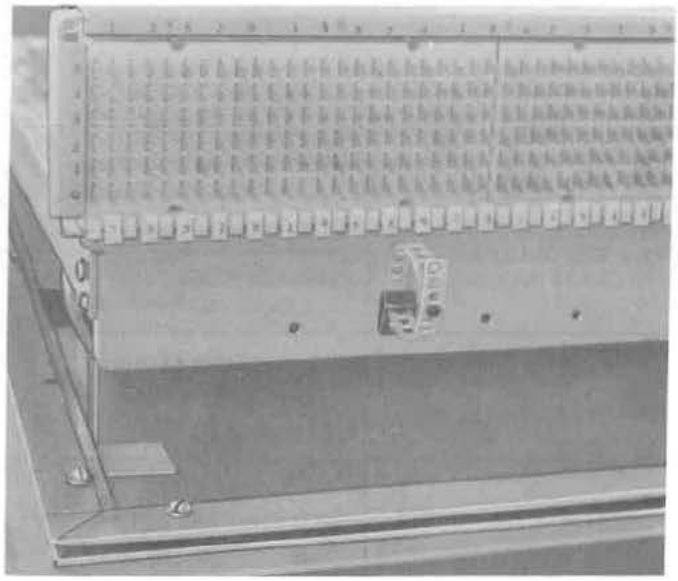


Fig. 10—Method of Mounting Cable Clamps

TCI Library https://www.telephonecollectors.info/