

**SPECIFIC REQUIREMENTS FOR  
APPARATUS AND EQUIPMENT S THROUGH Z  
(SELECTORS TO VARISTORS)  
NUMBERING AND LETTERING  
GENERAL EQUIPMENT REQUIREMENTS**

CONTENTS	PAGE	CONTENTS	PAGE
1. GENERAL	3	G. KS-5563, KS-14121, and Similar-Type Switches	12
2. SPECIFIC REQUIREMENTS FOR APPARATUS AND EQUIPMENT—S THROUGH Z	3	H. KS-20738 Switch	12
SELECTORS	3	I. Switches for Frame and Aisle Lighting and for Appliance Outlets	12
A. 204- and Similar-Type Selectors	3	<b>SWITCHBOARD AND DESK SECTION ASSEMBLIES AND IRON FRAMEWORKS</b>	
B. 206- and Similar-Type Selectors	3	A. Curtain Casings, Rear Door Moldings, and Rear Doors	12
SELECTOR DESIGNATION BARS	3	B. Front Removable Panels and Panel Rails	18
SEQUENCE SWITCHES	3	C. Angle Sections	18
SHIELDS	3	D. Cable Turning Sections	18
SIGNALS	3	E. Appliance Outlets	18
SOUNDERS	3	F. Rear Framework, Apparatus Mounting Boards, and Fuse Panel Guards	18
SUBSCRIBER SETS	7	G. Designations for Switchboard Multiple	18
SWITCHES	7	H. Equipment Code (ED number)	18
A. 211-, 212-, and Similar-Type Switches	7	<b>TERMINAL LUGS, TERMINAL PUNCHINGS, AND 202-, 208-, AND 210-TYPE TERMINALS</b>	
B. 217- and Similar-Type Switches	7		18
C. 324-, 325-, 328-, and Similar-Type Switches	7	<b>TERMINAL STRIPS</b>	
D. CA-, CB-, CC-, CE-, CF-Type Switches	9	A. General	25
E. KS-13546 and Similar-Type Switches	12	B. Location of Stamping	65
F. KS-13674 and Similar-Type Switches	12		

**NOTICE**

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**SECTION 800-613-155**

<b>CONTENTS</b>	<b>PAGE</b>
<b>C. 137- and 163-Type Terminal Strips . . . . .</b>	<b>65</b>
<b>D. 165-, 180-, 270-, and 271-Type Terminal Strips . . . . .</b>	<b>65</b>
<b>E. 203- and 700-Type Terminal Strips . . . . .</b>	<b>65</b>
<b>F. 218- and 232-Type Terminal Strips . . . . .</b>	<b>65</b>
<b>G. 224-Type Terminal Strips . . . . .</b>	<b>65</b>
<b>H. 251 and Similar-Type Terminal Strips . . . . .</b>	<b>66</b>
<b>I. D-Type Terminal Strips . . . . .</b>	<b>66</b>
<b>J. Other Types of Terminal Strips . . . . .</b>	<b>67</b>

<b>CONTENTS</b>	<b>PAGE</b>
<b>THERMISTORS . . . . .</b>	<b>67</b>
<b>TIMERS . . . . .</b>	<b>67</b>
<b>TRANSFORMERS . . . . .</b>	<b>67</b>
<b>TRANSISTORS . . . . .</b>	<b>75</b>
<b>TUBES AND SOCKETS (ELECTRON) . . . . .</b>	<b>75</b>
<b>UNITS, CRYSTAL . . . . .</b>	<b>75</b>
<b>VARISTORS . . . . .</b>	<b>75</b>
<b>REASONS FOR REISSUE . . . . .</b>	<b>75</b>

**1. GENERAL**

**1.01** This section covers the specific requirements for numbering and lettering telephone apparatus and equipment classified alphabetically from S through Z, exclusive of apparatus and equipment used only in electronic-type equipment, in the power plant, and terminal strips used at distributing frames. It supplements the common requirements covered in Section 800-613-150. Stamping requirements for apparatus used in power plants and for terminal strips mounted on distributing frames are covered in Sections 800-613-160 and 800-613-158, respectively. Stamping requirements for electronic-type apparatus and equipment are covered in Section 800-613-161.

**1.02** This section is reissued to make changes that are listed under Reasons for Reissue at the end of this section.

**1.03** All dimensions shown in this section for locating designations shall be considered approximate unless otherwise indicated by tolerances.

**2. SPECIFIC REQUIREMENTS FOR APPARATUS AND EQUIPMENT—S THROUGH Z****SELECTORS****A. 204- and Similar-Type Selectors**

**2.01** Stamp 204- and similar-type selectors as shown in Fig. 1. Where these selectors are mounted under a cover, the functional designation shall also be stamped on the cover.

**B. 206- and Similar-Type Selectors**

**2.02** Stamp 206- and similar-type selectors as shown in Fig. 2. Numerical designations, when required, and functional designations shall be stamped on the wiring side and apparatus side of the bank. (For the frequency of stamping, see Section 800-613-159.)

**SELECTOR DESIGNATION BARS**

**2.03** Panel system selector group and numerical designations shall be stamped on the selector designation bars as shown in Fig. 3.

**SEQUENCE SWITCHES**

**2.04** Stamp sequence switches as shown in Fig. 4.

(a) Sequence switch cams with silver overlay are furnished with the identifying letters on the tabs stamped in red. When one or both bronze cams in a nest are replaced in the field by a silver overlay cam or cams, a diagonal red stripe (on front only) approximately 1/16 inch wide shall be stamped on the tab on the upper corner adjacent to the designation of the replaced cam. If both cams in the nest are replaced, the stripe shall be stamped on both upper corners. (See Fig. 4.) It will not be necessary to restamp the identifying letter in red.

(b) When a No. 1 metal tip is used, the associated contact spring assembly mounting bracket shall be marked with a white stripe approximately 1/16 inch wide to indicate that one or more of the spring tips is No. 1 metal. If the index tab is at the front of the mounting bracket, the white stripe shall extend across the bracket directly below the letters on the tab. If the index tab is at the rear of the bracket, the white stripe shall be located on the vertical surface at the front of the bracket directly above the contact spring assembly.

**SHIELDS**

**2.05** The 37-type shields used over terminal strips on distributing frames shall be stamped in accordance with Section 800-613-158.

**SIGNALS**

**2.06** Stamp as shown in Fig. 5.

**2.07 Front:** Each signal mounted in the face of a switchboard or desk shall be stamped on the front or on the woodwork of the section adjacent to it with characters to indicate the number of the circuit with which it is associated.

**2.08 Rear:** The first, last, and each intermediate signal whose number is a multiple of five on each strip of signals shall be stamped on the rear with the number of the circuit with which it is associated.

**SOUNDERS**

**2.09** Stamp as shown in Fig. 6.

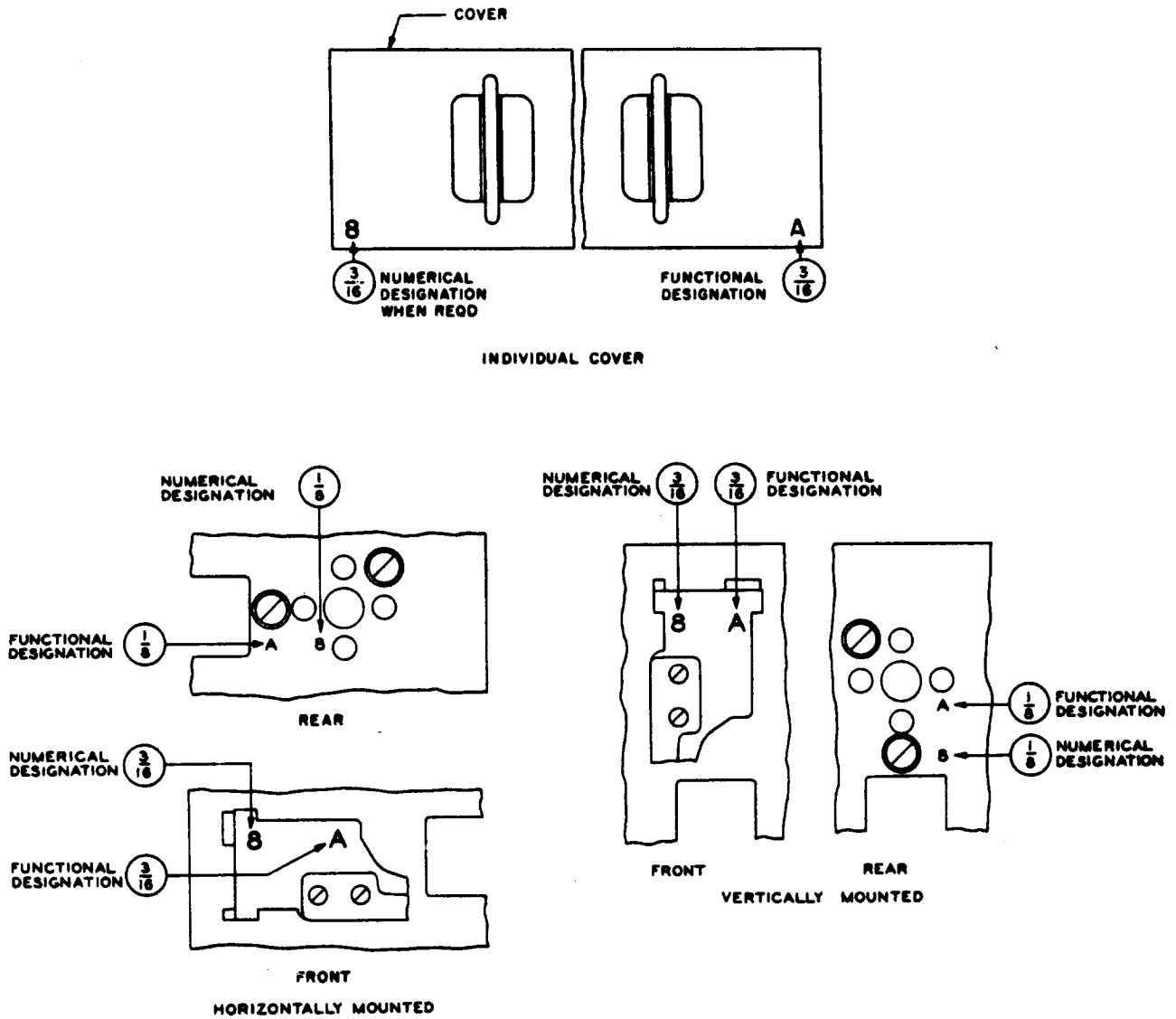


Fig. 1 — Selectors—204 and Similar Types

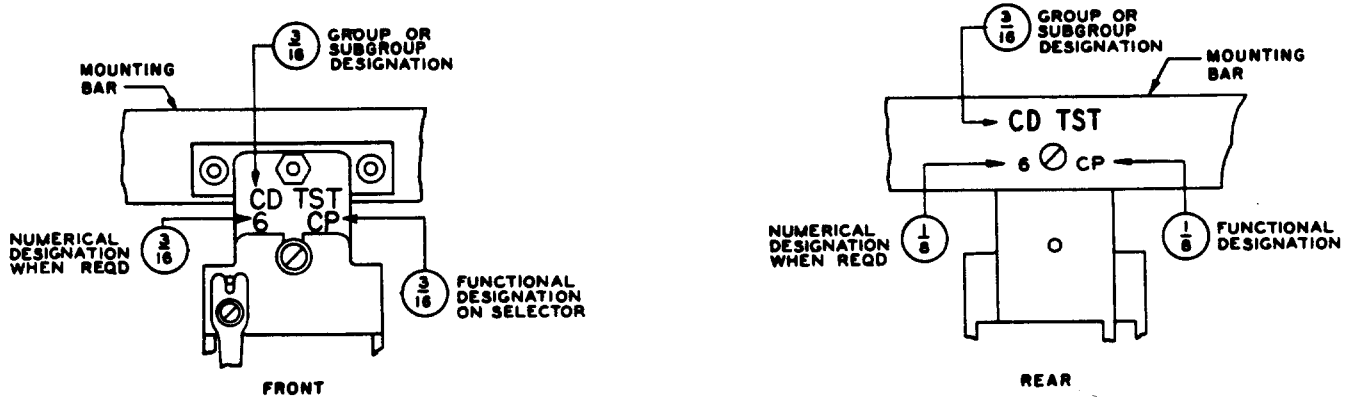


Fig. 2—Selectors—206 and Similar Types

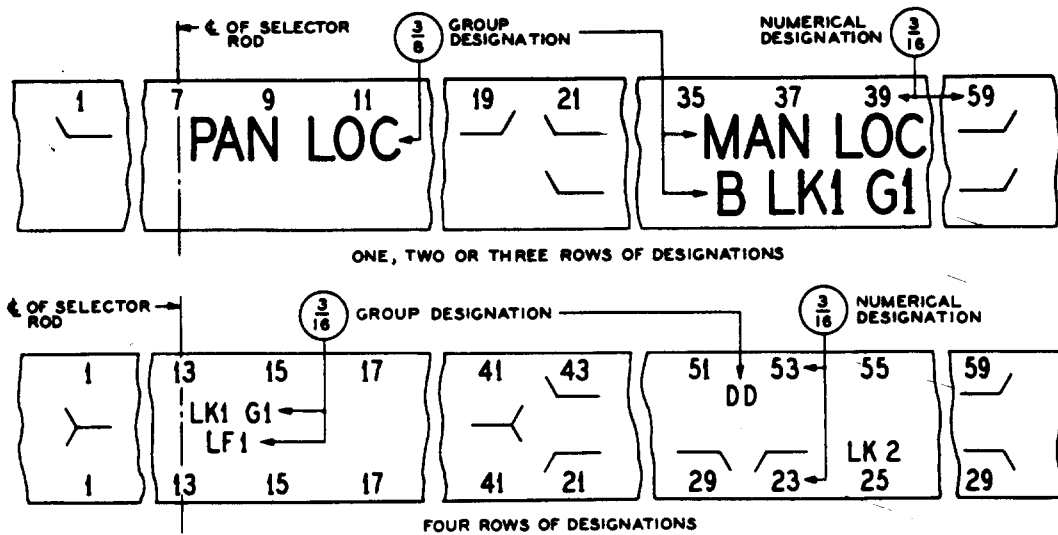


Fig. 3—Selector Designation Bars

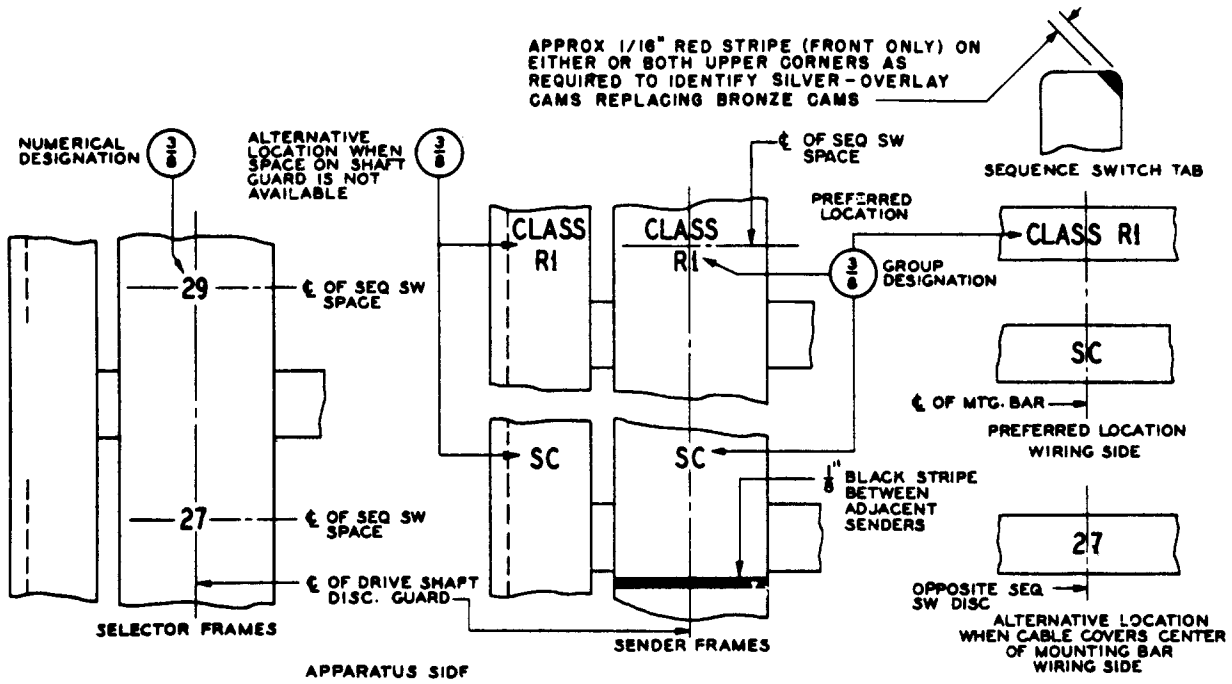


Fig. 4—Sequence Switches

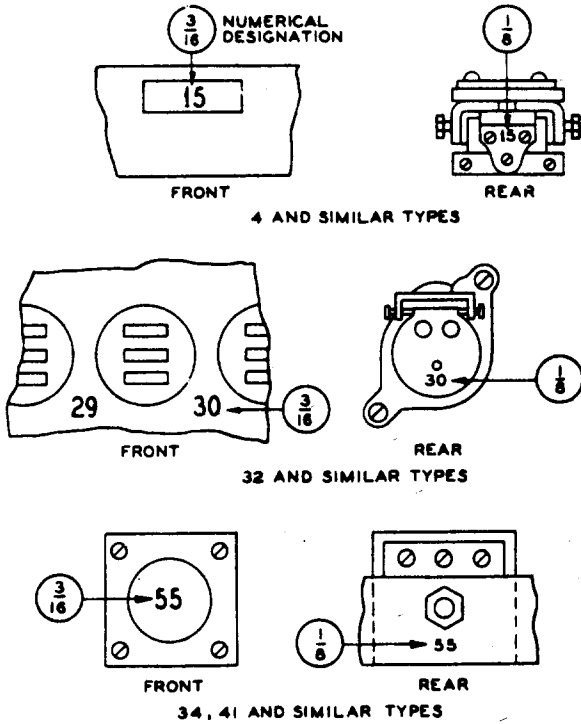


Fig. 5—Signals

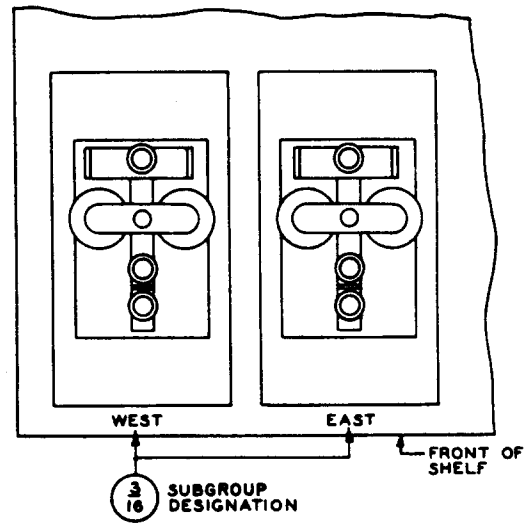


Fig. 6—Sounders

**SUBSCRIBER SETS**

2.10 Stamp as shown in Fig. 7 when functional designation is shown on the associated SD drawing.

**SWITCHES****A. 211-, 212-, and Similar-Type Switches**

2.11 *211-, 212-, and similar-type switches* shall be stamped as shown in Fig. 8.

**B. 217- and Similar-Type Switches**

2.12 *217- and similar-type switches* shall be stamped as shown in Fig. 9.

**C. 324-, 325-, 328-, and Similar-Type Switches**

2.13 *324-, 325-, 328-, and similar-type switches* shall be stamped as shown in Fig. 10, in accordance with the following.

(a) *Group designations*, as required to identify each switch, or position thereof, shall be stamped as follows.

(1) *On switches associated with one group*, stamp the group designation on both front and rear of the lower left portion of the switch framework.

(2) *On switches associated with two groups*, stamp the group designations on both front and rear of the lower left and right portions of the switch framework. In this case, the vertical units of the switch are numbered independently for each half.

(3) *On switches associated with more than two groups*, stamp the group designations on both front and rear of the top portion of the switch framework, using brackets as required to indicate the vertical switch units in each group. In this case, the vertical units are numbered independently for each group.

(b) *Subgroup designations*, when required, are assigned to vertical halves or horizontal halves of the switch as indicated in Fig. 10. Where these subgroup designations are the same for all switches in a bay, they shall be stamped only once

in the bay on the switch located nearest the 5-foot 6-inch level in the bay. Where subgroup designations are required for several portions of a switch, instead of for the two halves, they shall be located along the top portion of the switch.

(c) *Cabling Designations*: Where primary and secondary switches are located on the same frame, the method of linkage shall be indicated; that is, whether the linkage from primary to secondary switches is from horizontal levels on the primary to horizontal levels on the secondary, horizontal to vertical, vertical to horizontal, etc. This is done by stamping designations as required, on both front and rear of the top left portion of the switch framework. For example, on the incoming link frame when the connections are from the verticals of the primary switch to the horizontals of the secondary switch, the designation on the switch framework will be VH.

(d) *Vertical numbers* shall be stamped on both front and rear of the lower portion of the switch framework.

(1) *When the switch serves one group only*, stamp the first, last, and each intermediate vertical unit, whose number is a multiple of five, on the switch.

(2) *When the switch serves two groups*, stamp the first, last, and each intermediate vertical unit, whose number is a multiple of five, in each group.

(3) *When the switch serves more than two groups*, stamp each vertical unit.

(4) *Where functional designations are used* instead of vertical numbers, they shall be stamped for each vertical unit.

(e) *Level numbers* shall be stamped on the front of the armature of the left vertical unit of the switch for 100-point switches and on the left and right vertical unit armatures for 200-point switches. The selector magnets shall be stamped with the associated level numbers on the rear only, adjacent to the mounting screws of the magnets.

(f) *The numbers of circuits connected* to the respective levels of the switch shall be stamped, when specified, on each switch selecting bar. Even numbers shall be stamped between

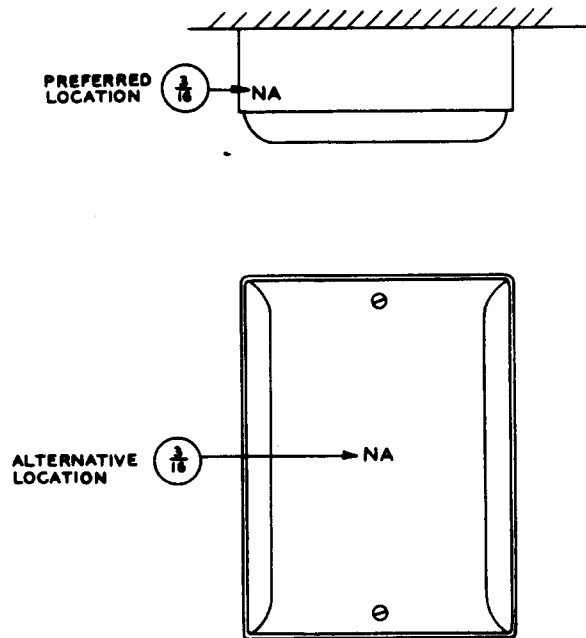
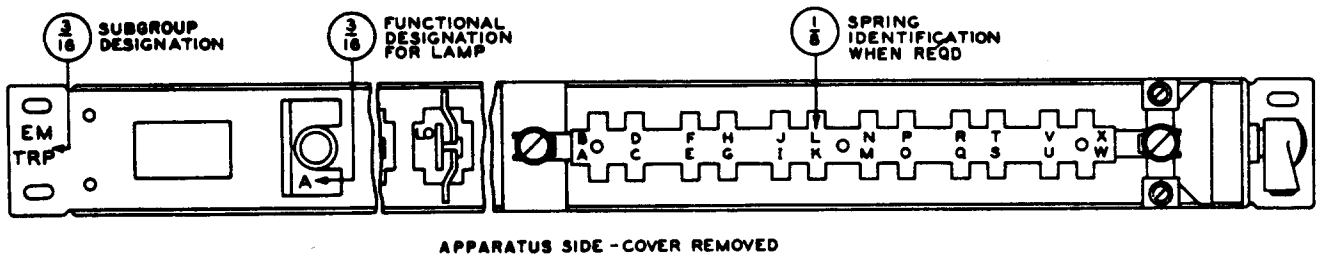
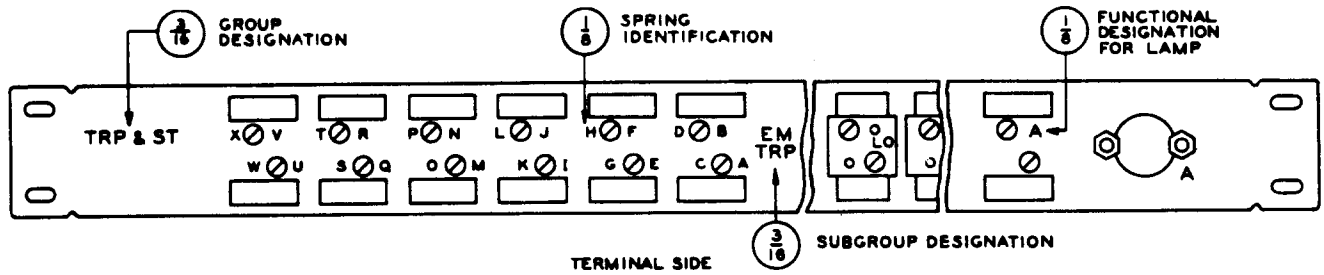
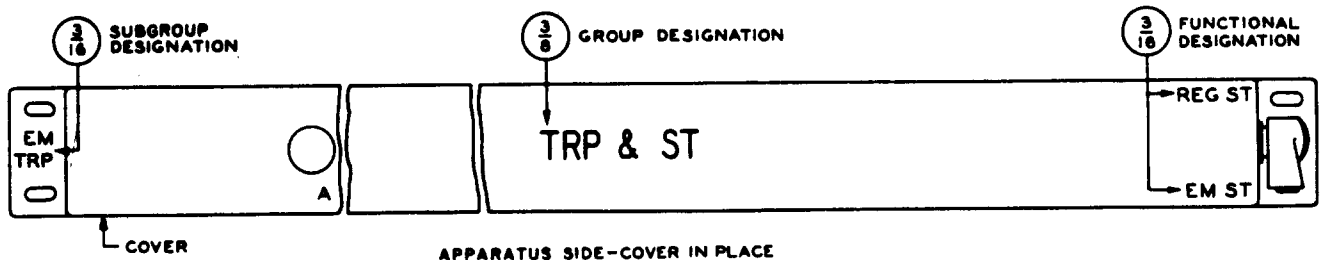


Fig. 7 - Subscriber Sets



APPARATUS SIDE - COVER REMOVED



APPARATUS SIDE - COVER IN PLACE

Fig. 8 - Switches - 211, 212, and Similar Types



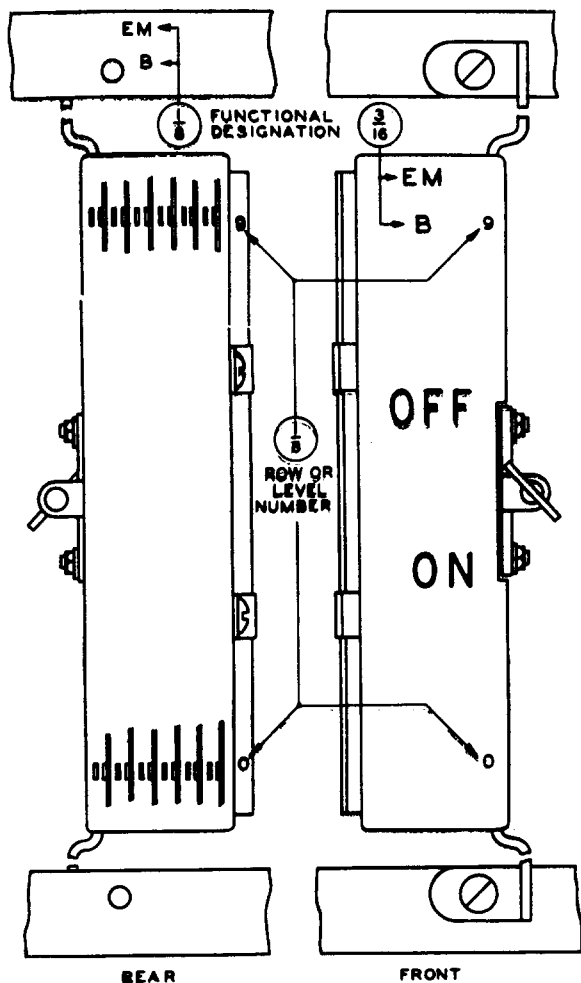


Fig. 9—Switches—217 and Similar Types

selecting fingers for verticals 3 and 4, odd numbers between fingers for verticals 4 and 5. When the switch horizontal straps are split, numbering shall be similarly provided for the right-half of the switch.

#### D. CA-, CB-, CC-, CE-, and CF-Type Switches

2.14 CA-, CB-, CC-, CE-, and CF-type switches shall be stamped as shown in Fig. 11 in accordance with the following.

- (a) **Group designations** as required to identify each switch or portion thereof shall be stamped as follows:

- (1) **On switches associated with one group**, stamp the group designation on both front and rear in the lower portion of the left-hand switch framework detail.
- (2) **On switches associated with two groups**, stamp the group designation associated with the left half of the switch on the lower front and lower rear portions of the left-hand switch framework detail. For the right half of the switch, stamp the associated designation on the upper front and lower rear portions of the right-hand switch framework detail.

- (b) **Subgroup designations**, when required, shall be stamped as shown in Fig. 11. When subgroup designations are identical for all switches in a bay, stamp only once in the bay on the switch located nearest the 5-foot 6-inch level in the bay.

- (c) **Vertical unit designations** shall be stamped as follows:

- (1) On the front, stamp the required designation on the armature stop bracket associated with the particular unit.
- (2) On the rear, stamp the designation on the end of the associated hold magnet core.
- (3) When the switch serves one group only, stamp the first, last, and each intermediate vertical unit whose number is a multiple of five.
- (4) When the switch serves two groups, stamp the first, last, and each intermediate vertical unit whose number is a multiple of five in each group.
- (5) When functional designations are used instead of numbers, stamp the designations for each vertical unit.

- (d) **Level identification** numbers or letters as required shall be stamped as shown in Fig. 11. For switches equipped with 10 vertical units, stamp on the inside face of the left-hand bearing plate. For switches equipped with 20 vertical units, stamp on the inside face of both left- and right-hand bearing plates.

- (e) **Select magnet designations** shall be stamped with the associated level designation on the rear only, adjacent to the magnet mounting screws.

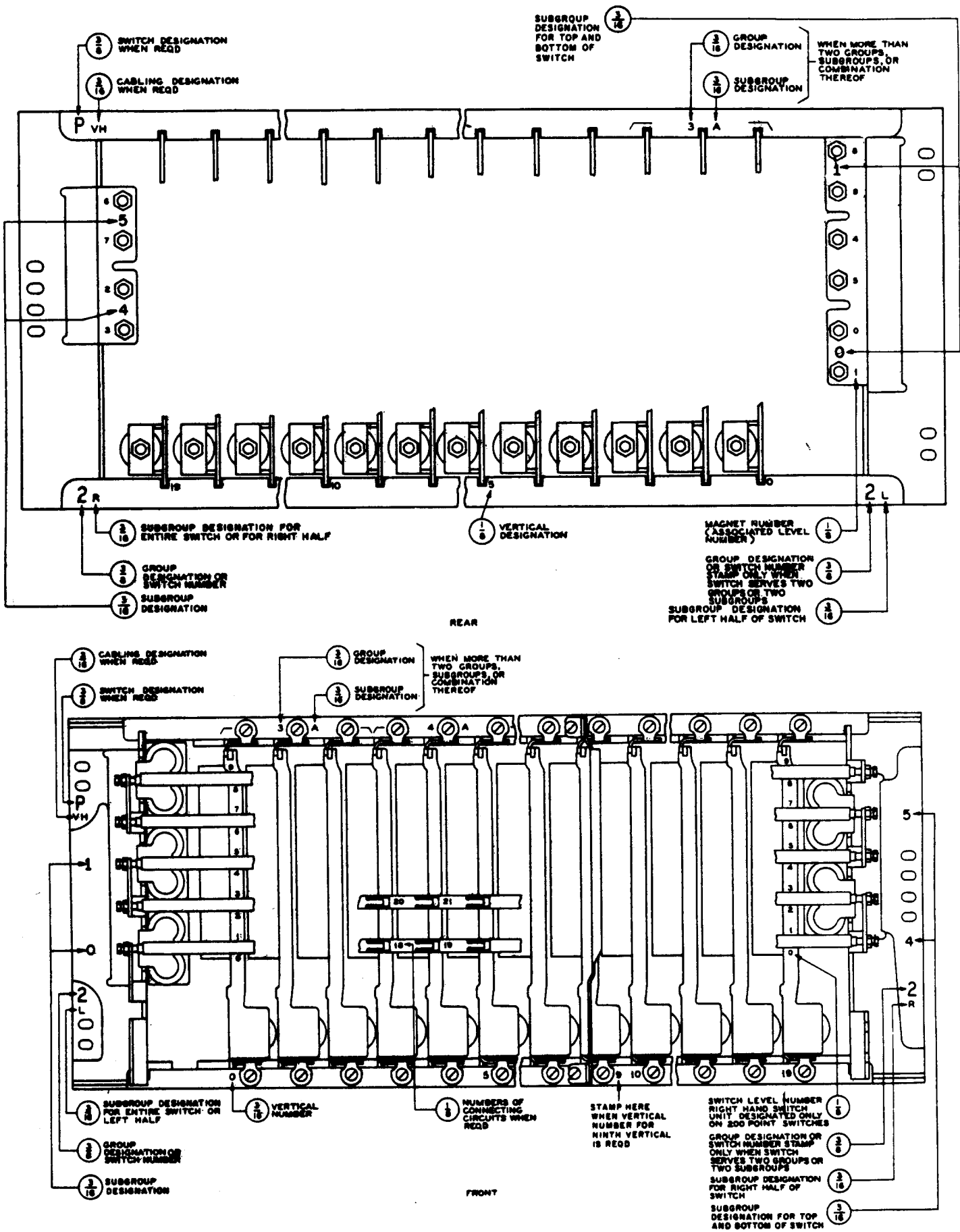


Fig. 10—Switches—324, 325, 328, and Similar Types

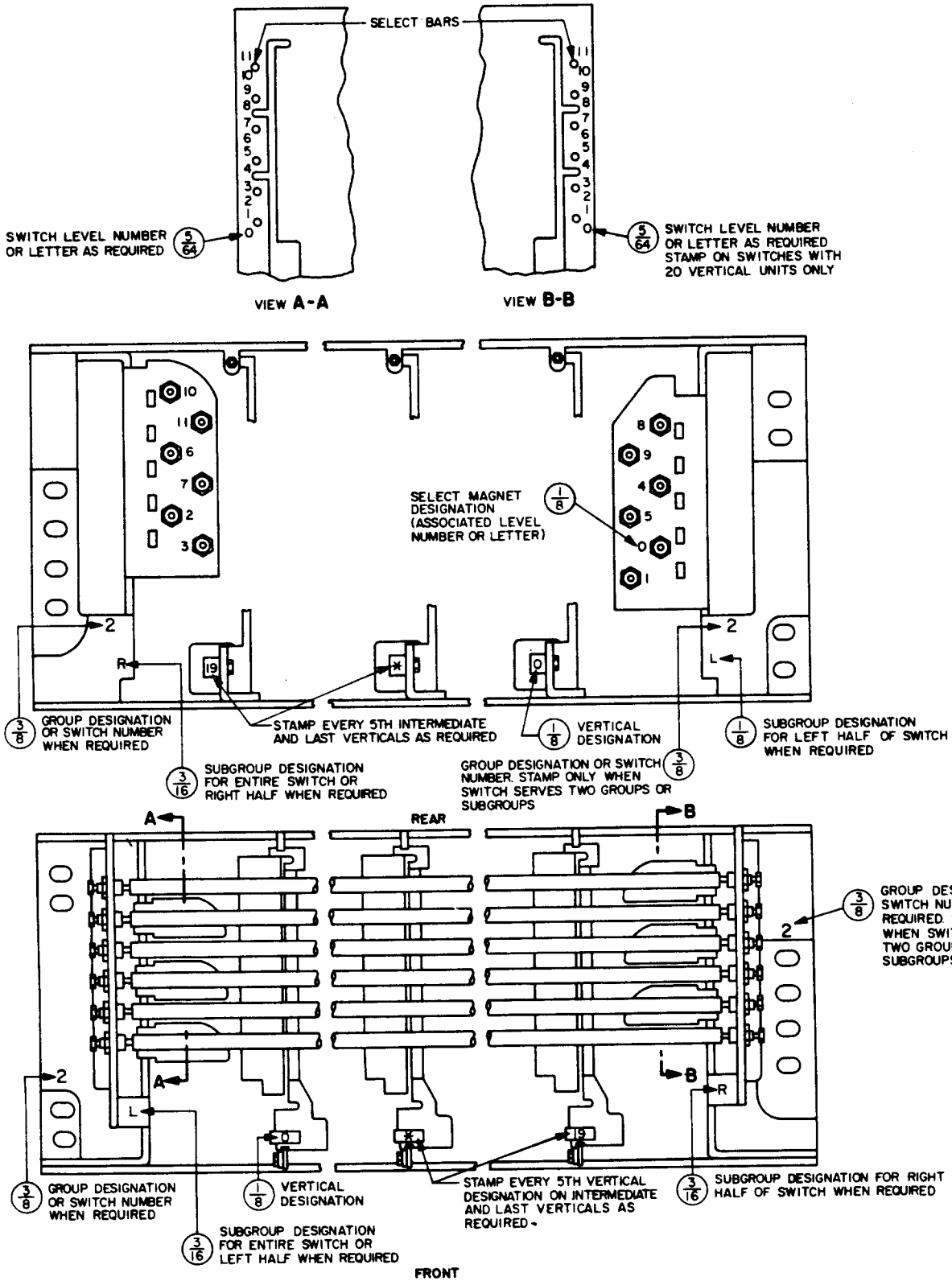


Fig. 11—Switches—CA, CB, CC, CE, CF, and Similar Types

**SECTION 800-613-155**

**E. KS-13546 and Similar-Type Switches**

**2.15** *KS-13546 and similar-type switches* shall be stamped as shown in Fig. 12.

**F. KS-13674 and Similar-Type Switches**

**2.16** *KS-13674 and similar-type switches* shall be stamped as shown in Fig. 13.

**G. KS-5563, KS-14121, and Similar-Type Switches**

**2.17** *KS-5563, KS-14121, and similar-type switches* shall be stamped as shown in Fig. 14.

**H. KS-20738 Switch**

**2.18** KS-20738 switch shall be stamped as shown in Fig. 15.

**I. Switches for Frame and Aisle Lighting and for Appliance Outlets**

**2.19** *Switches for frame and aisle lighting and for appliance outlets* shall have appropriate designations stamped on the switch coverplates when mounted on open-type end guards and on the end guard adjacent to the coverplate when mounted in cabinet-type end guards. (See Fig. 16 and 17.)

- (a) At switches for equipment aisle lights, stamp an arrow pointing toward the applicable aisle. At those for lights above and below a mezzanine platform, stamp an arrow pointing up or down, respectively.

- (b) At switches for main- or end-aisle lights and for low intensity lights, stamp CROSS AISLE and LOW INT, respectively.

- (c) At switches for general area (low intensity) lighting stamp LOW INT.

- (d) At switches for appliance outlets, stamp TROL OUTL or APPL OUTL, as required, together with an arrow pointing toward the applicable outlets.

- (e) Aisle lighting switches on end guards for cable-duct type frames shall be stamped in accordance with Section 800-613-156.

**SWITCHBOARD AND DESK SECTION ASSEMBLIES AND IRON FRAMEWORKS**

**A. Curtain Casings, Rear Door Moldings, and Rear Doors**

**2.20** *Switchboard curtain casings, rear door moldings, and rear doors* shall be stamped with their associated operator position and panel numbers as shown in Fig. 18. When rear door moldings are too narrow to have the position and panel numbers stamped one above the other at the position center line, the panel number may be omitted at this point.

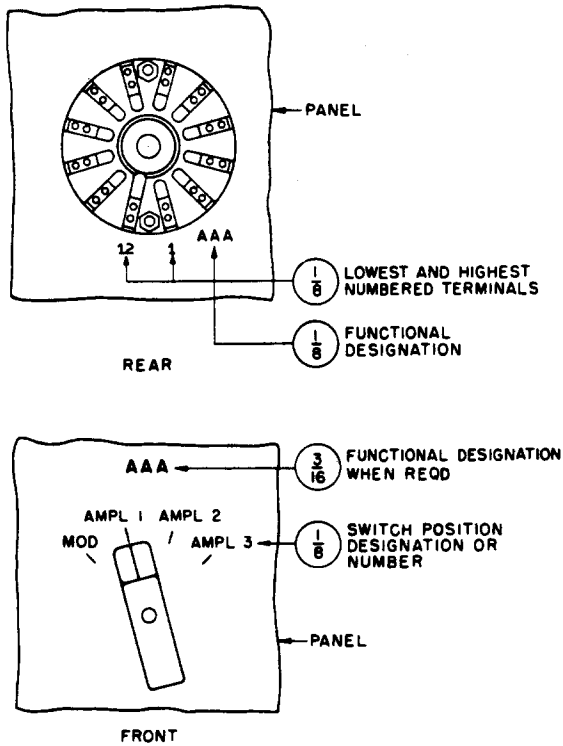


Fig. 12—Switches—KS-13546 and Similar Types

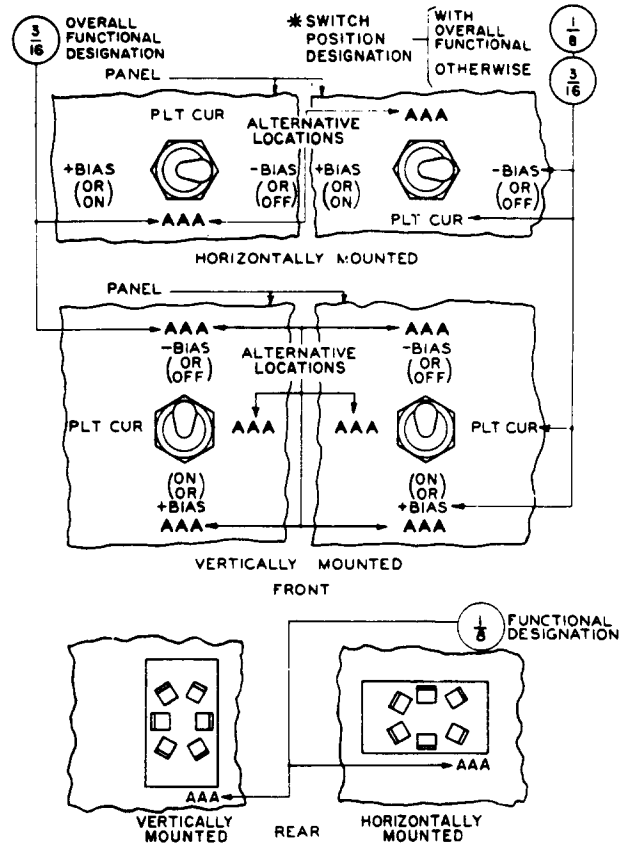


Fig. 13—Switches—KS-13674 and Similar Types

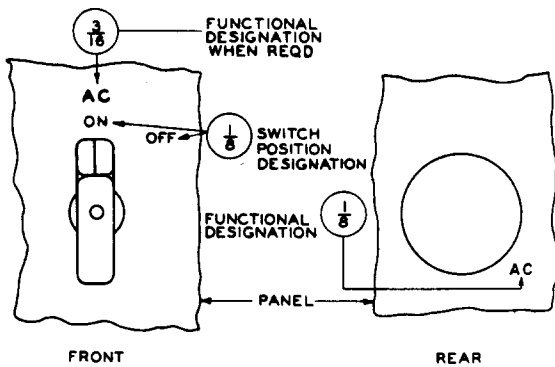


Fig. 14—Switches—KS-5563, KS-14121, and Similar Types

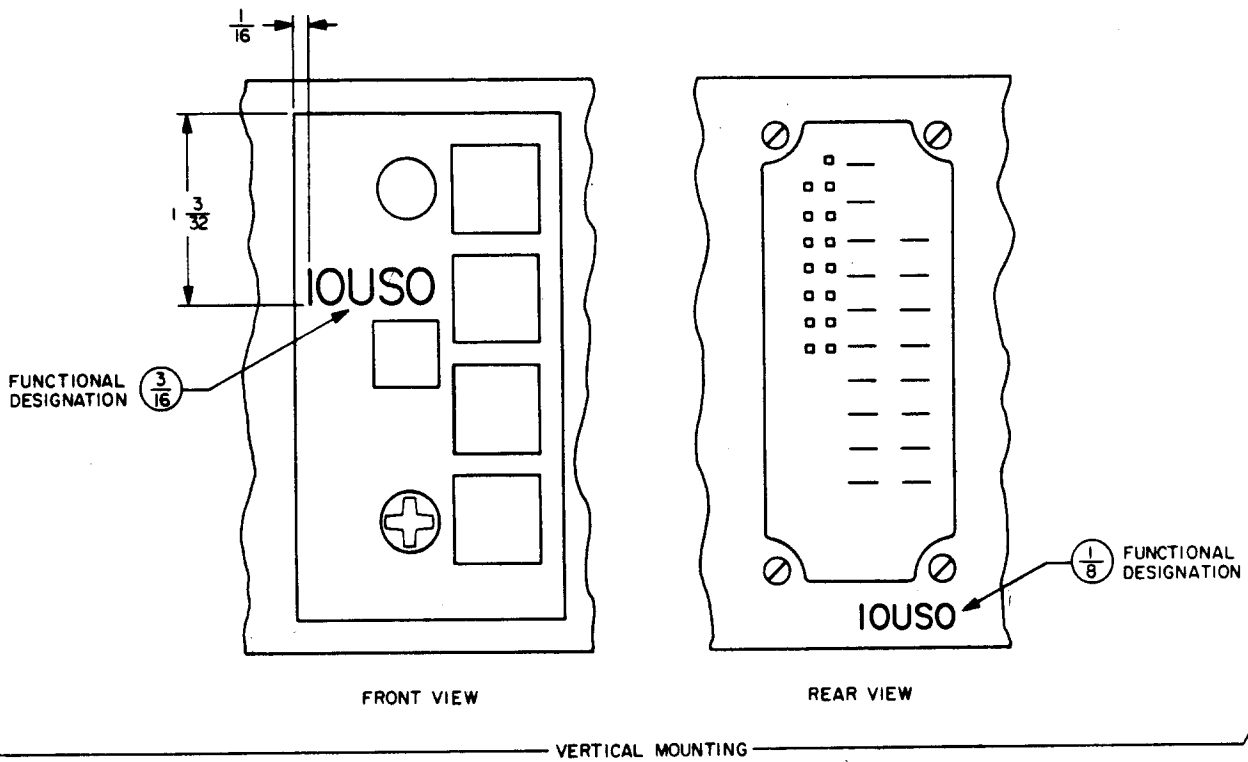
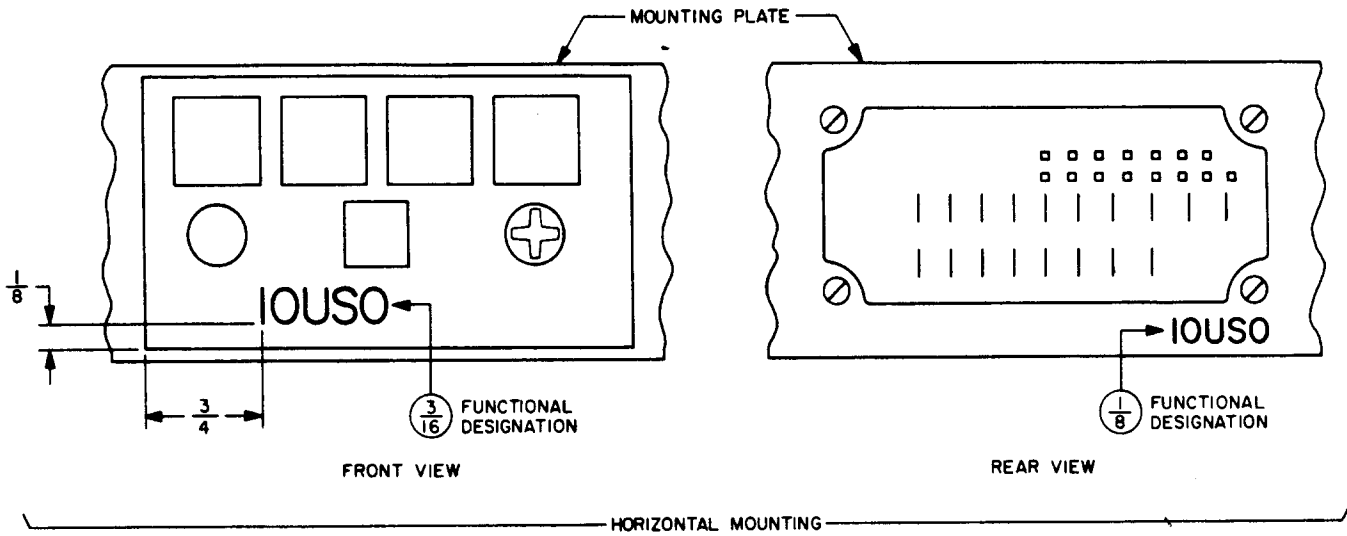


Fig. 15—KS-20738 Switch

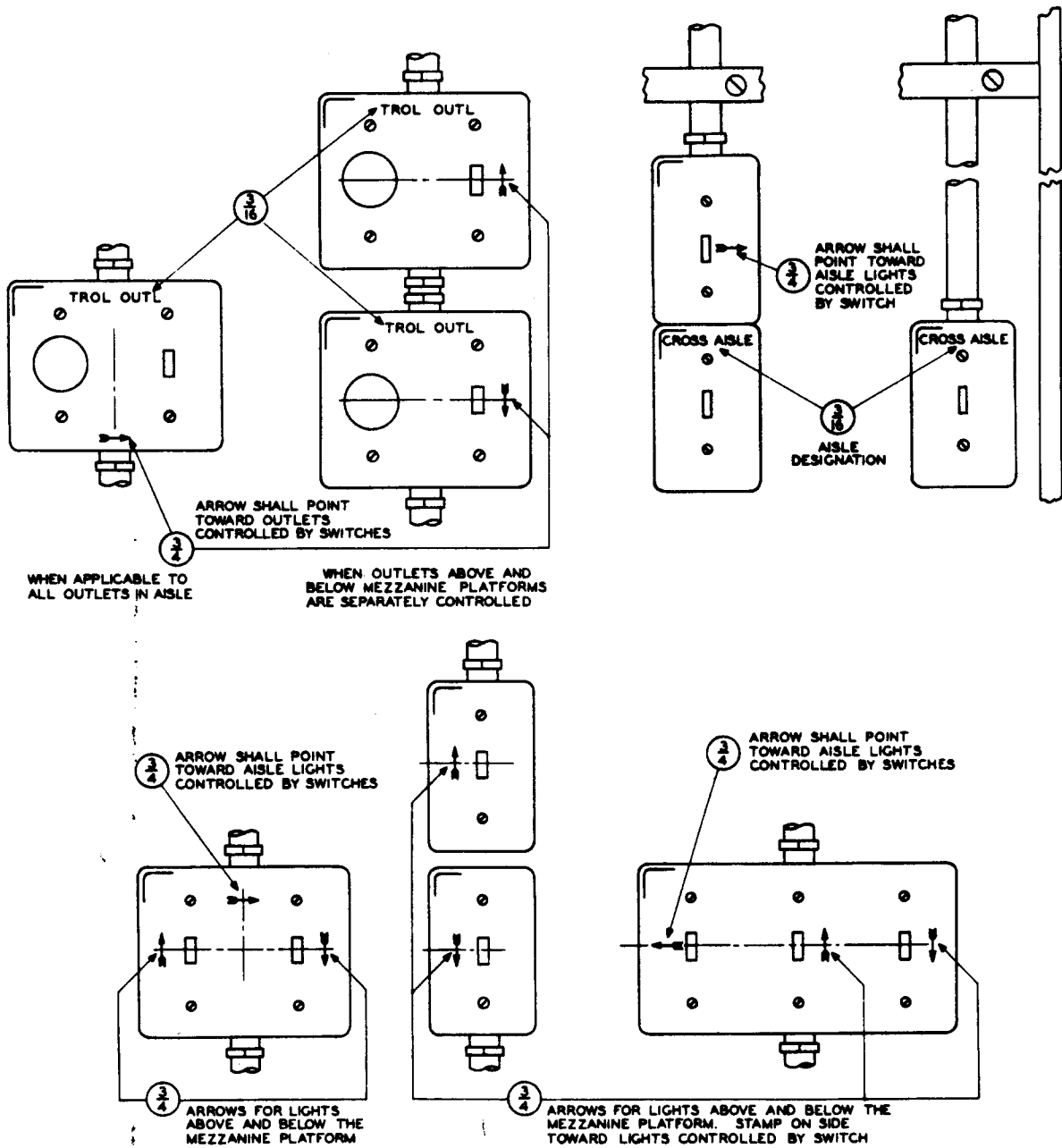


Fig. 16 — Switches—Lighting and Appliance Outlets—Open-Type End Guards

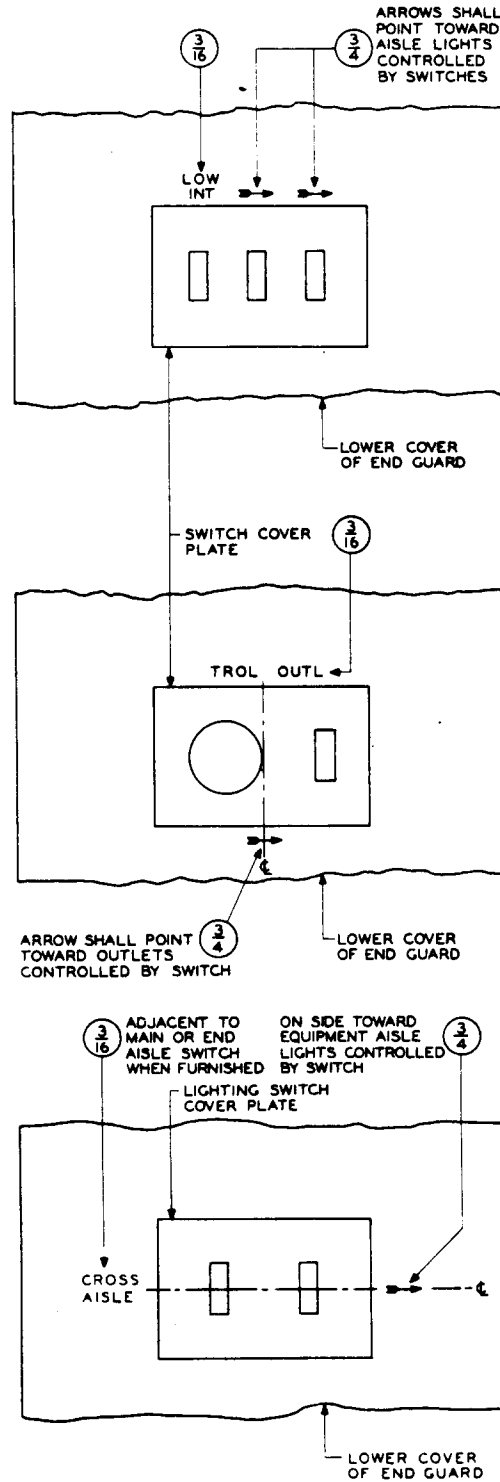
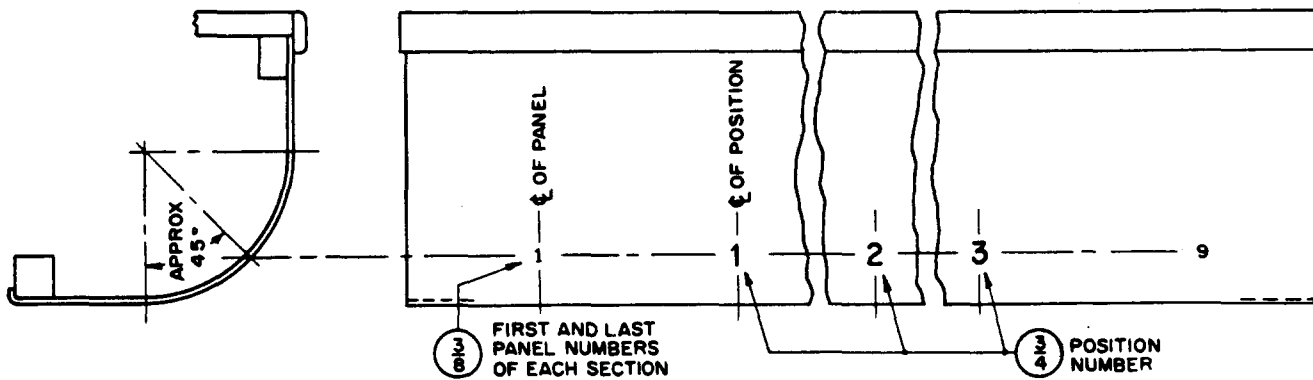
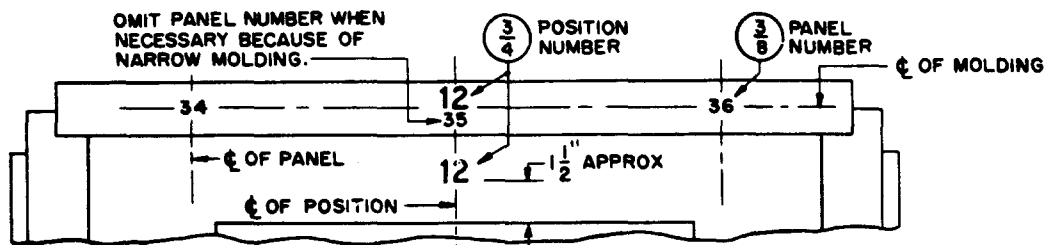


Fig. 17—Switches—Lighting and Appliance Outlets—Cabinet-Type End Guards

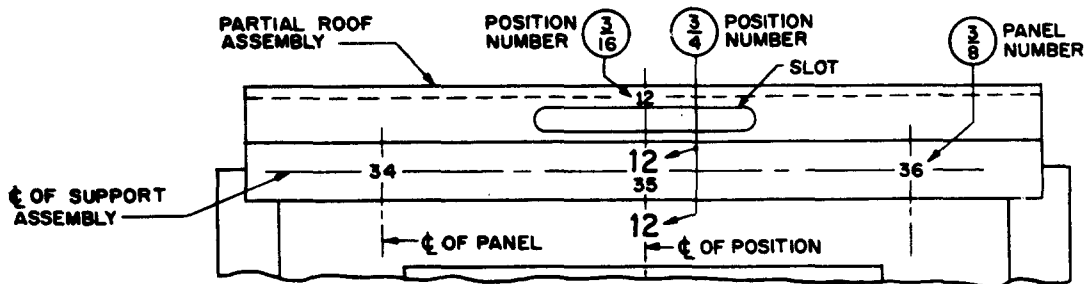




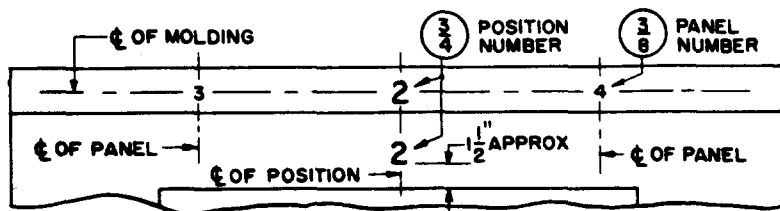
REAR OF SECTION EQUIPPED WITH ROLLER CURTAIN (MNE 8 1/2" PANELS-3 POSITION SECTION SHOWN)



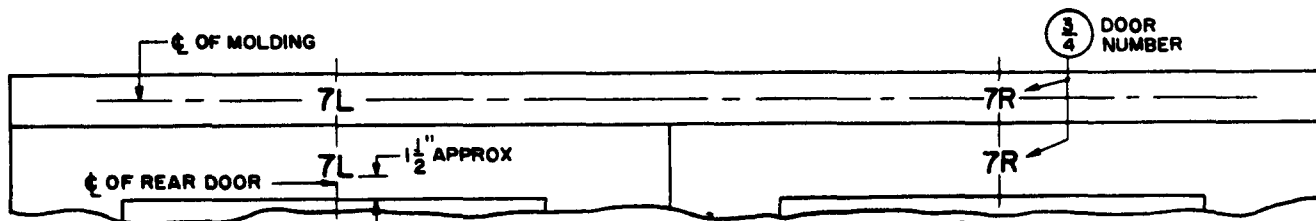
REAR OF SECTION EQUIPPED WITH REMOVABLE DOOR (THREE 8 1/2" PANELS-ONE POSITION SECTION SHOWN)



REAR OF SECTION EQUIPPED WITH REMOVABLE DOOR & PARTIAL ROOF ASSEMBLY (THREE 8 1/2" PANELS-ONE POSITION SECTION SHOWN)



REAR OF SECTION EQUIPPED WITH REMOVABLE DOOR (TWO 12" PANELS-ONE POSITION SECTION SHOWN)



REAR OF SECTION EQUIPPED WITH TWO REMOVABLE DOORS PER POSITION (FOUR 10 1/4" PANELS-ONE POSITION TEST DESK SHOWN)

Fig. 18 — Switchboards — Position and Panel Numbers — Curtain Casings and Rear Doors

**B. Front Removable Panels and Panel Rails**

**2.21 Switchboard front removable panels and panel rails** shall be stamped with their associated operator position numbers as shown in Fig. 19.

- (a) *Where glass reinforced front panels are used*, the stamping on the inside of the panel is not required.

**C. Angle Sections**

**2.22 On angle sections**, the doors shall be stamped with a number corresponding to that of the adjacent switchboard or desk position together with the suffix "A" to indicate "Angle Section" and similar designations placed on upper molding of the section as shown in Fig. 20.

- (a) *On angle sections with single doors*, the number shall correspond to that of the lower-numbered adjacent position.
- (b) *On angle sections with double doors*, the numbers shall correspond to those of the respective adjacent positions.

**D. Cable Turning Sections**

**2.23 On cable turning sections**, designate the section and removable doors, when furnished, by stamping CTS in place of the position number, using the same size characters and locations shown for the position number for the respective types of switchboard sections in Fig. 18.

**E. Appliance Outlets**

**2.24 Appliance outlets** located in the front or rear of switchboards shall be stamped as shown in Fig. 21.

**F. Rear Framework, Apparatus Mounting Boards, and Fuse Panel Guards**

**2.25 Rear Framework, Apparatus Mounting Boards, and Fuse Panel Guards:** The operator position numbers shall be stamped on the edge of apparatus mounting boards, fuse panel guards, or on the ironwork or woodwork in a switchboard or desk as required, and so located that the number can be readily seen with the curtain raised or the rear door removed as shown in Fig. 22.

**G. Designations for Switchboard Multiple**

**2.26 Designations for Switchboard Multiple:** Stamp the numbers of the regular panel and of the bottom outgoing trunk panel (when provided) at the rear of each switchboard panel as shown in Fig. 23 in accordance with the following.

- (a) *Switchboards With Multiple Cable Shelves:*  
Stamp on the edge of the multiple cable shelf.
- (b) *Switchboards Without Multiple Cable Shelves:*
- (1) When pneumatic tubes are not furnished, stamp on roof angle or on top of rear gate angle when roof angle is not provided.
  - (2) When pneumatic tubes are furnished, stamp on front tube support bar.

**H. Equipment Code (ED number)**

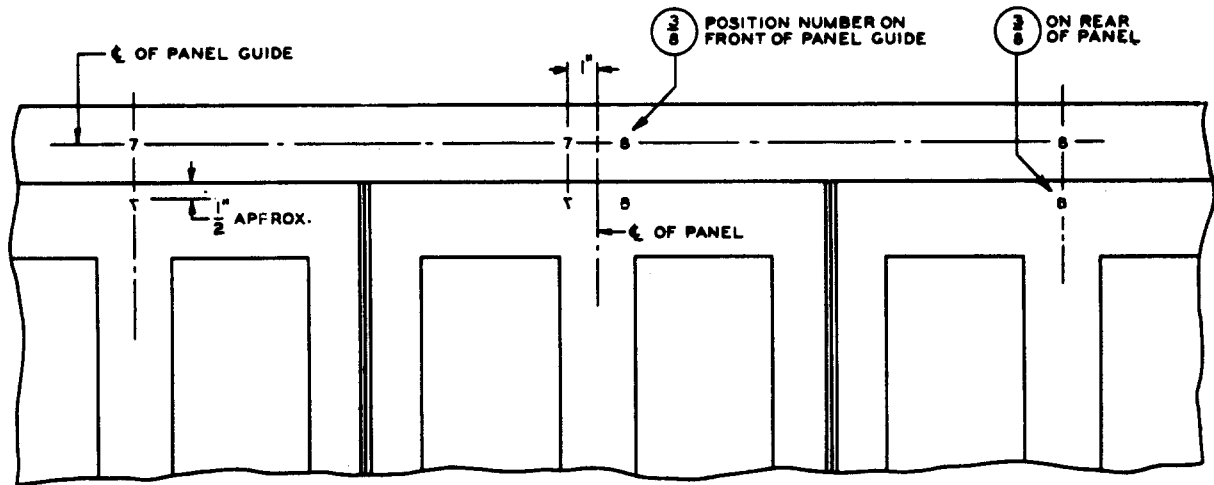
**2.27 The equipment code number** for switchboards shall be stamped in accordance with Fig. 24. This code number shall correspond with the ED number of the upper unit of the particular switchboard or CTS.

**TERMINAL LUGS, TERMINAL PUNCHINGS, AND 202-, 208-, AND 210-TYPE TERMINALS**

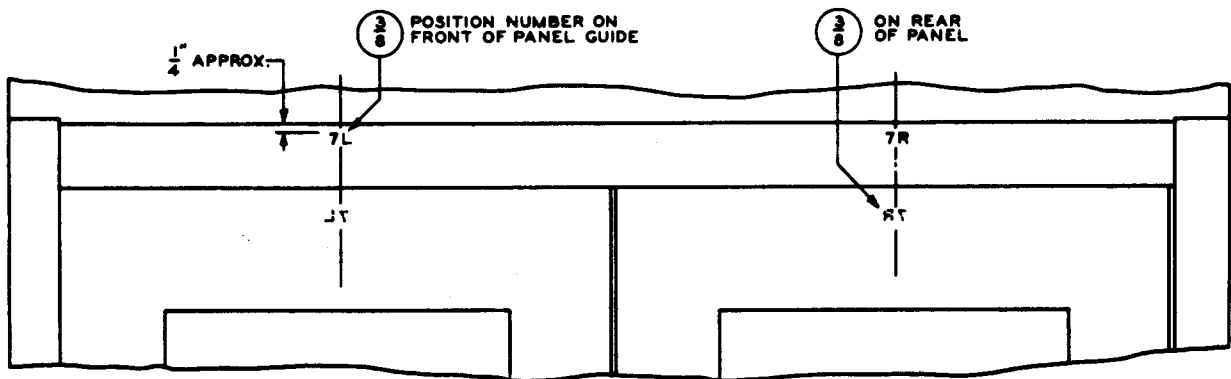
**2.28 Terminal lugs** for the various exchange grounds on the miscellaneous ground bar at the fuse bays are stamped on the rear of the panel to indicate the names of the switchboards, desks, or other equipment that they serve (Fig. 25).

**2.29 Terminal punchings that serve as doubling-up points** for the various tones at the miscellaneous fuse bay are stamped on the rear of the panel to indicate the name of the circuit, frame, desk, or switchboard they serve, or the kind of tone as shown in Fig. 25.

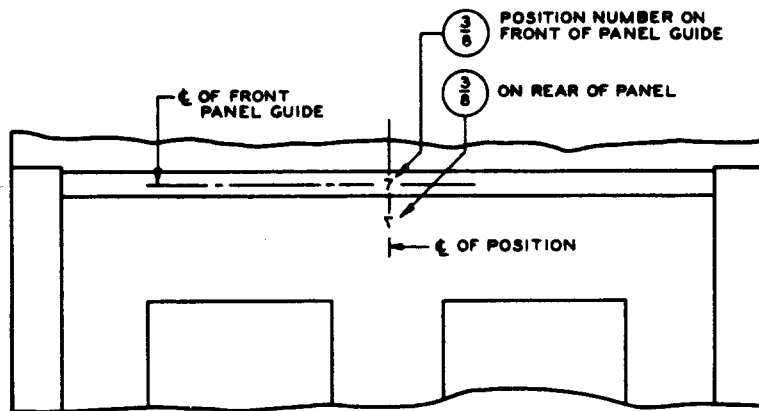
**2.30 Terminal punchings on connecting racks** are stamped as shown in Fig. 26.



THREE FRONT REMOVABLE PANELS PER TWO POSITIONS  
 ( SEVEN 10 1/4" PANELS PER TWO POSITION TANDEM SECTION SHOWN )  
 SEE PAR. 2.21(a)

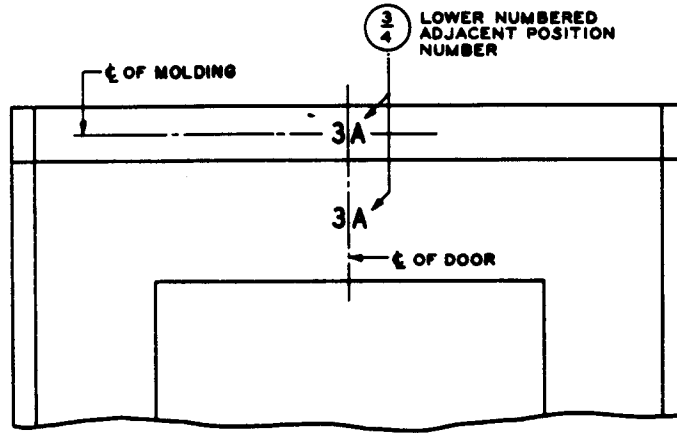


TWO FRONT REMOVABLE PANELS PER POSITION  
 ( FOUR 10 1/4" PANELS - ONE POSITION TEST DESK SHOWN )  
 SEE PAR. 2.21(a)



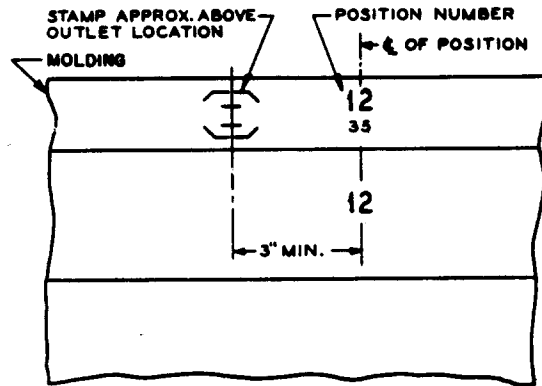
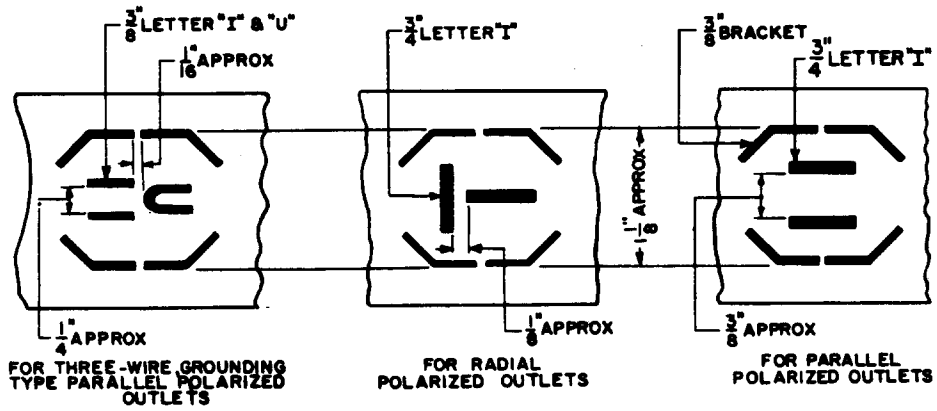
ONE FRONT REMOVABLE PANEL PER POSITION  
 ( THREE 8 1/2" PANELS PER POSITION - 3 POSITION SECTION SHOWN )  
 SEE PAR. 2.21(a)

Fig. 19—Switchboards—Position Numbers—Front Removable Panels



ANGLE SECTION—POSITION NUMBERS—SINGLE PANEL  
(  $8\frac{1}{2}$ " PANEL SWITCHBOARD — 30° ANGLE SECTION SHOWN )

Fig. 20—Angle Section—Position Numbers—Single Panel



METHOD OF DESIGNATING POSITIONS  
WITH OUTLETS LOCATED IN REAR

Fig. 21—Switchboards—Appliance Outlet Designations

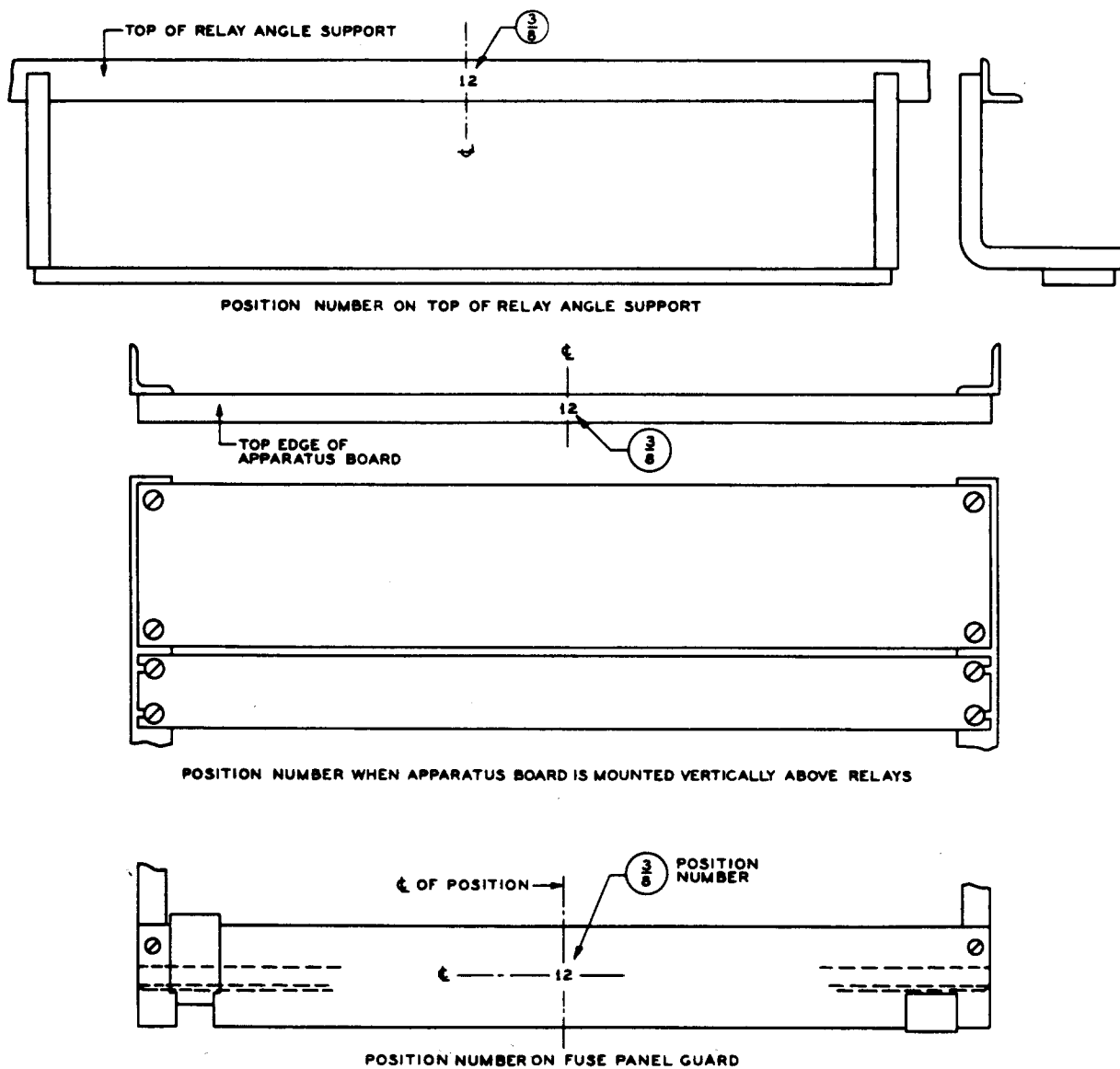


Fig. 22—Switchboard Framework Position Numbers

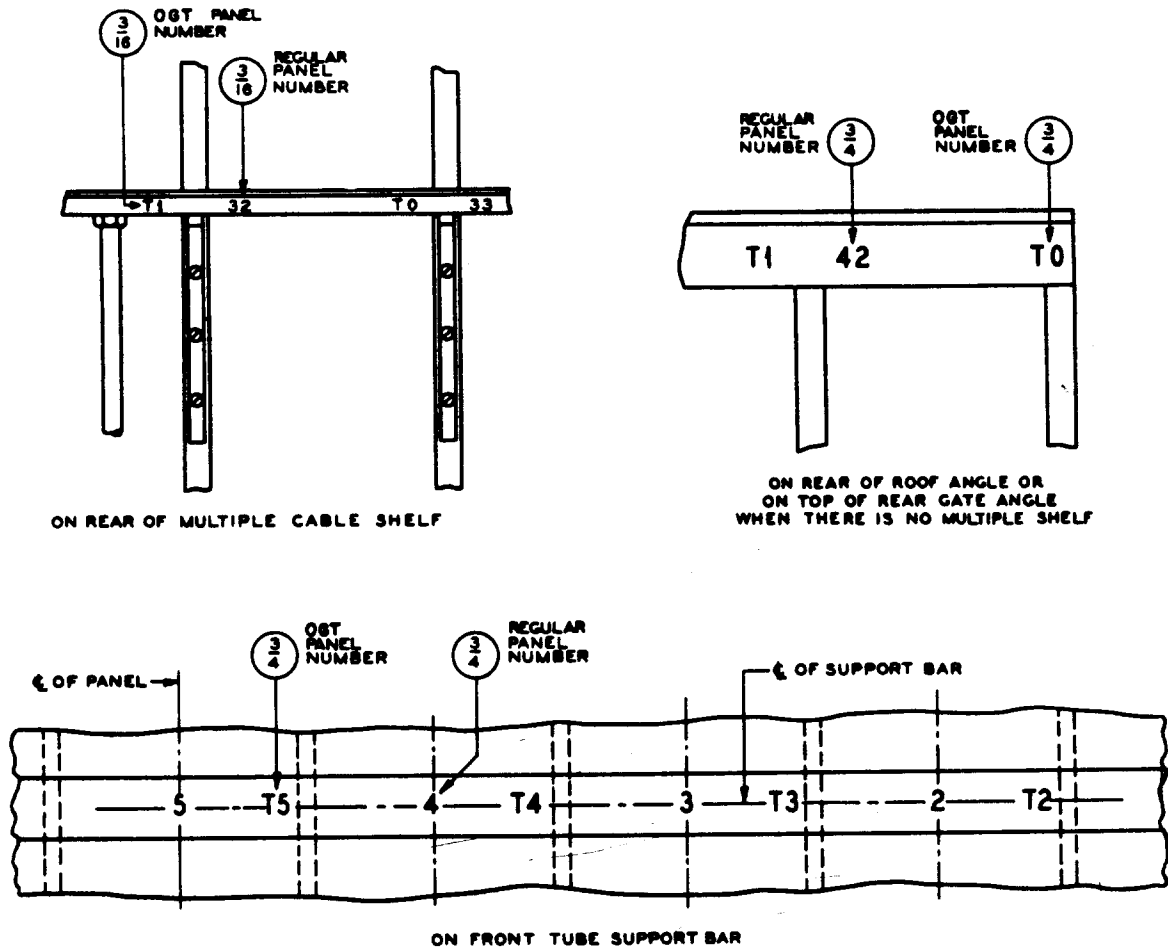
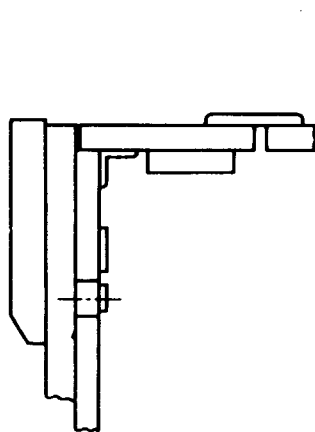
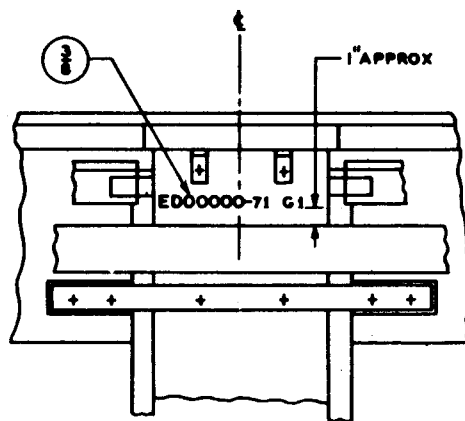


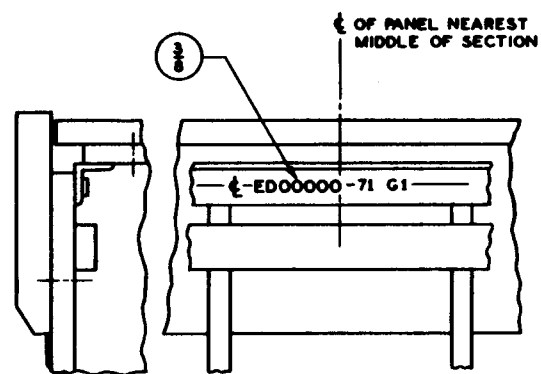
Fig. 23—Regular and Outgoing Trunk Panel Numbers in Rear of Switchboard



ANGLE SECTION ASSEMBLY



EQUIPMENT CODE NO. AT REAR OF CROWN MOLDING



SECTION ASSEMBLY - SWITCHBOARD UPPER UNIT

Fig. 24 - Switchboards - Code Numbers

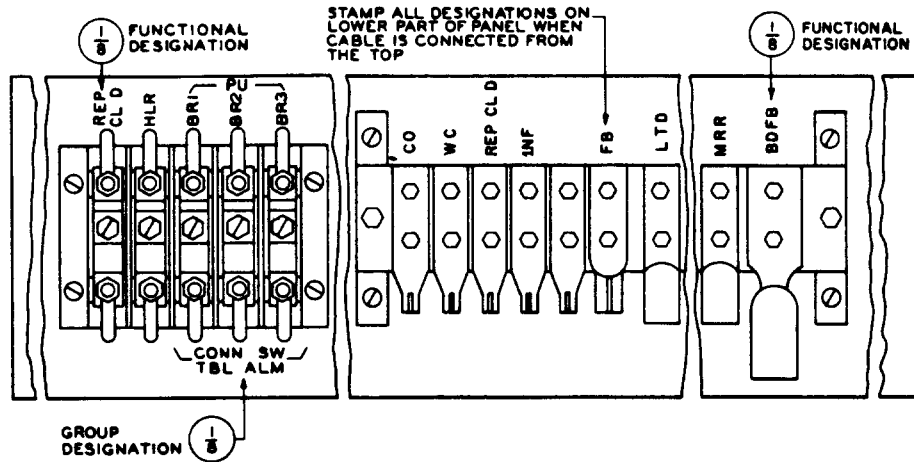


Fig. 25—Terminal Lugs and Punchings Associated With Various Tones or Exchange Grounds at Miscellaneous Fuse Bays

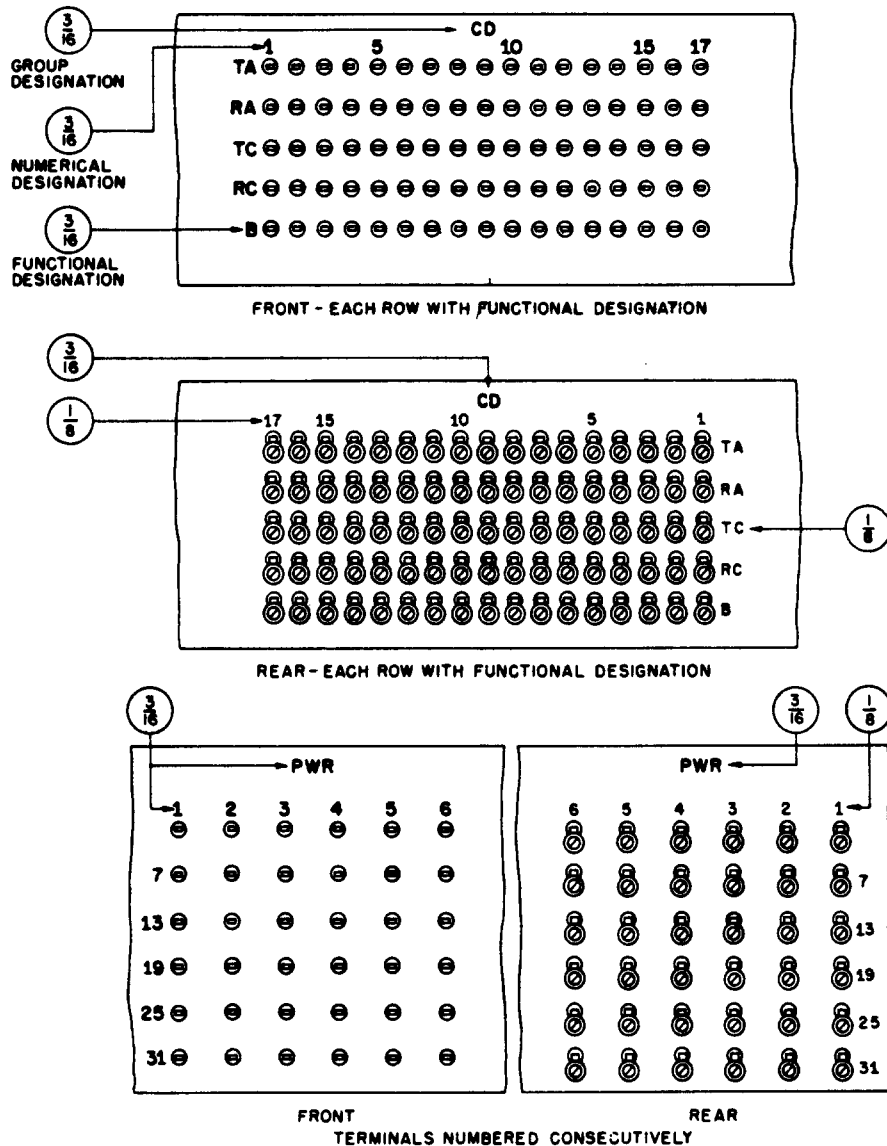


Fig. 26—Terminal Punchings on Connecting Racks



**2.31 Terminal punchings associated with resistance lamps** are stamped as shown in Fig. 27.

**2.32 202-, 208-, and 210-type terminals** shall be stamped in accordance with Fig. 28.

## TERMINAL STRIPS

### A. General

**2.33** The requirements in this section apply to terminal strips mounted in locations other than distributing frames. The requirements for those mounted on distributing frames are covered in Section 800-613-158. General stamping requirements for terminal strips are covered in the general figures (Fig. 29 through 39). Stamping requirements for specific types of terminal strips (such as where the code is specified in Fig. 40 through 75) shall be followed insofar as such information is given. When there is no figure for the specific type of terminal strip to be stamped or when the figure shown does not illustrate specifically the circuit conditions involved, the general figures shall be followed.

(a) Since the new cast resin type of terminal strips do not have clamping strips, it becomes necessary to change the nomenclature when referring to this surface. For example, that surface previously known as the "face of the clamping strip" will be referred to as the "face of the terminal strip."

(b) For terminal strips that have the *face of the terminal strip (formerly the face of the clamping strip) facing the front or rear of the equipment* use the following figures.

Fig. 29—Size, Location, and Orientation of Characters

Fig. 31—Group Designations and Use of Numerical Designations and Separation Stripes Therewith

Fig. 33, 34, 35, 36, or 37—Functional and Numerical Designations

or

Fig. 38—Numbered Terminals

Fig. 39—4-Digit Numbered Terminals

(c) For terminal strips that have the *ends of the terminals facing the front and rear of the equipment* use the following figures.

Fig. 30—Size, Location, and Orientation of Characters

Fig. 32—Group Designations and Use of Numerical Designations and Separation Stripes Therewith

Fig. 33, 34, 35, 36, or 37—Functional and Numerical Designations

or

Fig. 38—Numbered Terminals

Fig. 39—4-Digit Numbered Terminals

(d) Fig. 31 through 39 show terminal strips located with the face of the terminal strip vertical. To apply the rules depicted in this section to terminal strips with the face of the terminal strip horizontal, the top of the terminal strip shall be considered as the left ends of the horizontal strips except as in (1) below and characters oriented as shown in Fig. 29 or 30.

(1) Figures showing vertically mounted terminal strips with arrangements requiring designations for interior rows of terminals are not adaptable to terminal strips mounted horizontally. Such figures are identified by an asterisk (\*) in front of the subtitles. In them, unequipped rows of terminals are shown above each interior row requiring designations. If these rows were equipped, leads to them would enter on the lower side of the terminals (top soldering) and would hide the designations for the row below. On horizontally mounted strips, the leads enter at the left of the respective terminals (right-hand soldering), and designations for an interior row must be placed at the right of the row or they will be hidden by the leads connecting to the designated terminals. Furthermore, the adjacent right-hand row must be left unequipped so that leads to those terminals will not hide the designations.

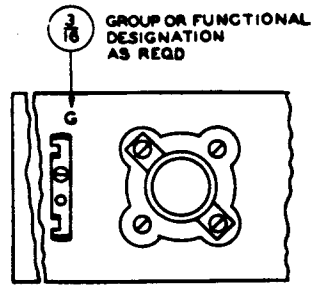


Fig. 27—Terminal Punching Associated With Resistance Lamps

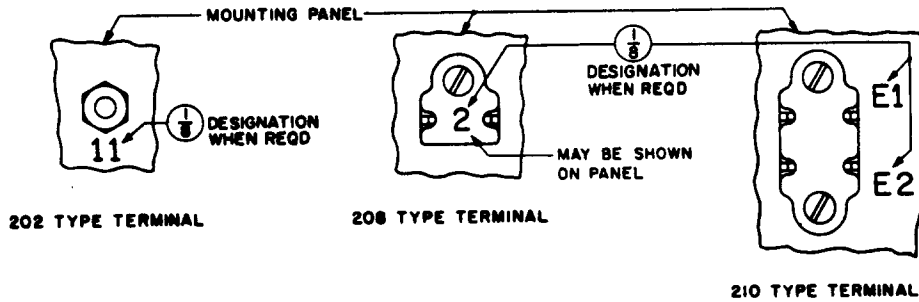


Fig. 28—Terminals—202, 208, and 210 Types

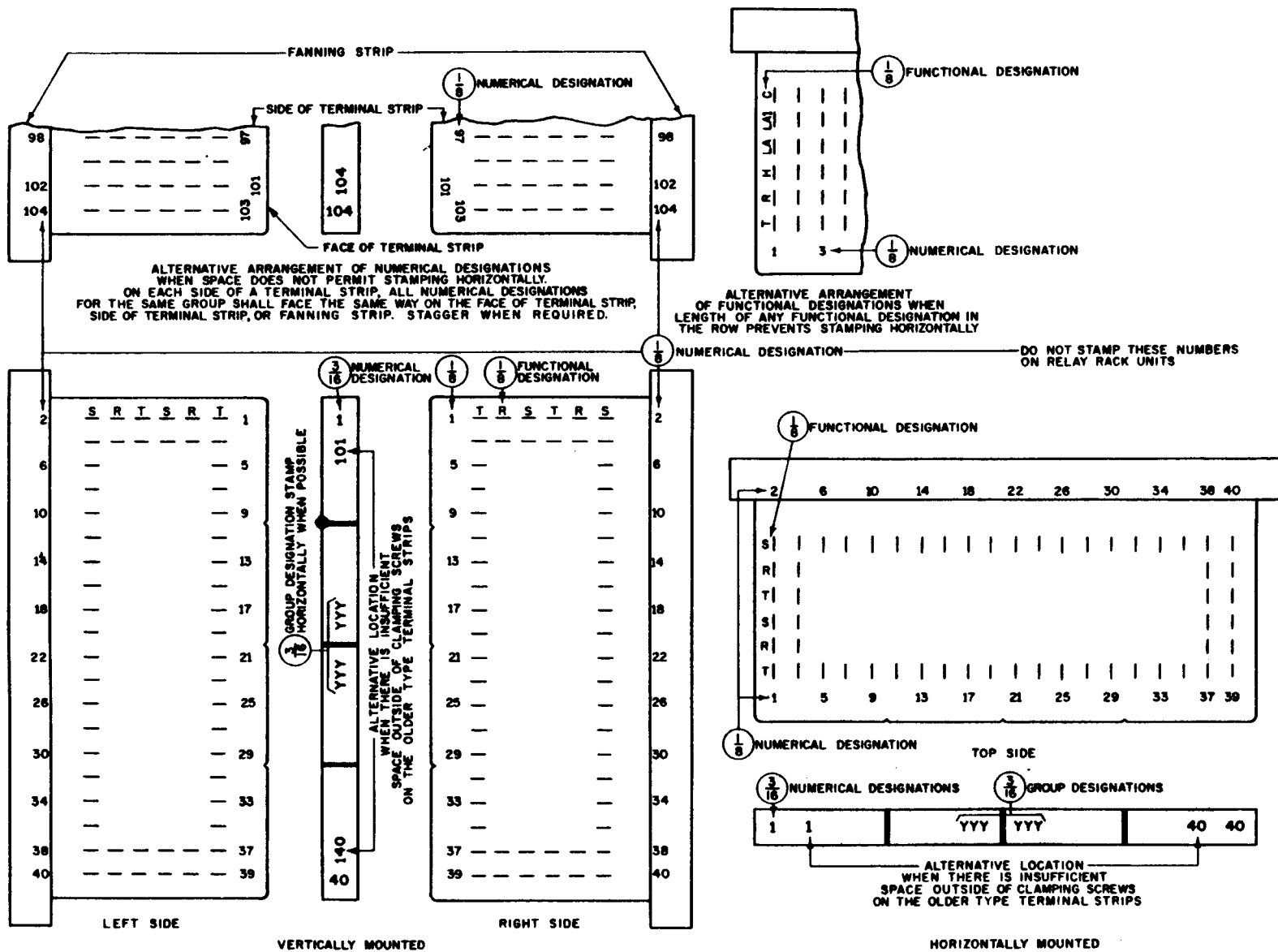


Fig. 29—Terminal Strips—Face of Terminal Strip Facing Front or Rear of Equipment—General Requirements for Size, Location, and Orientation of Characters

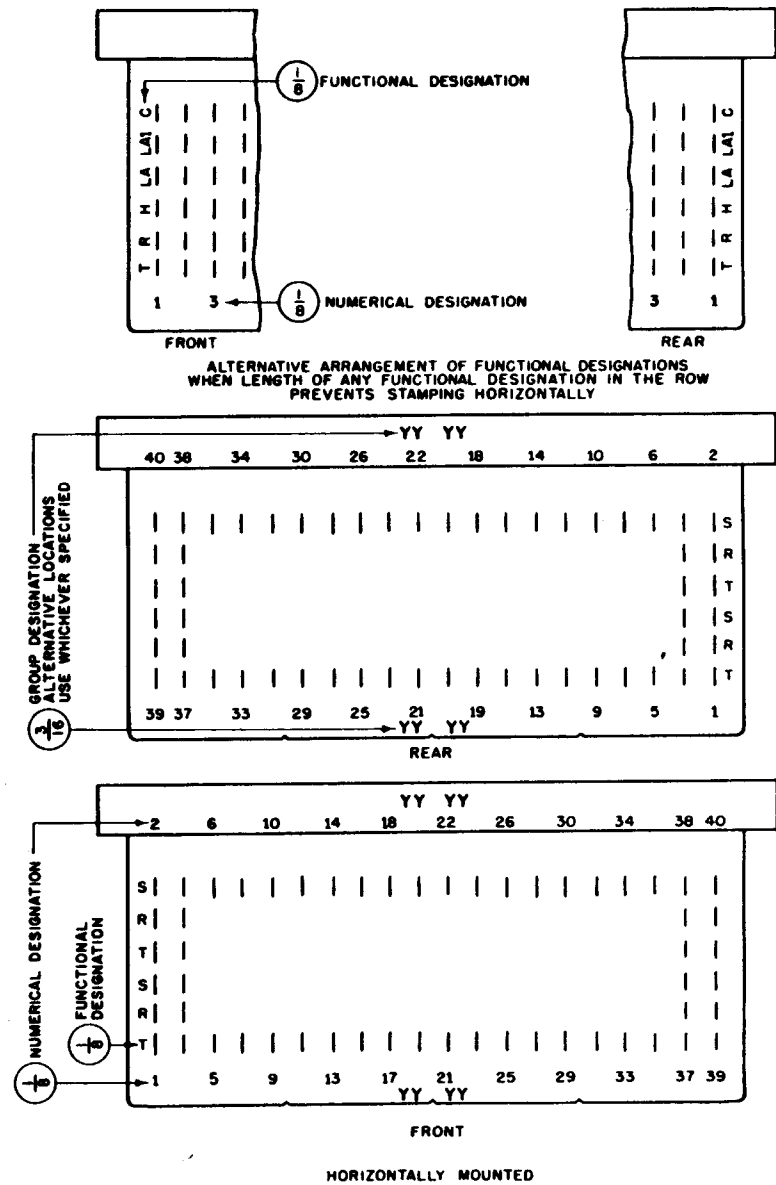
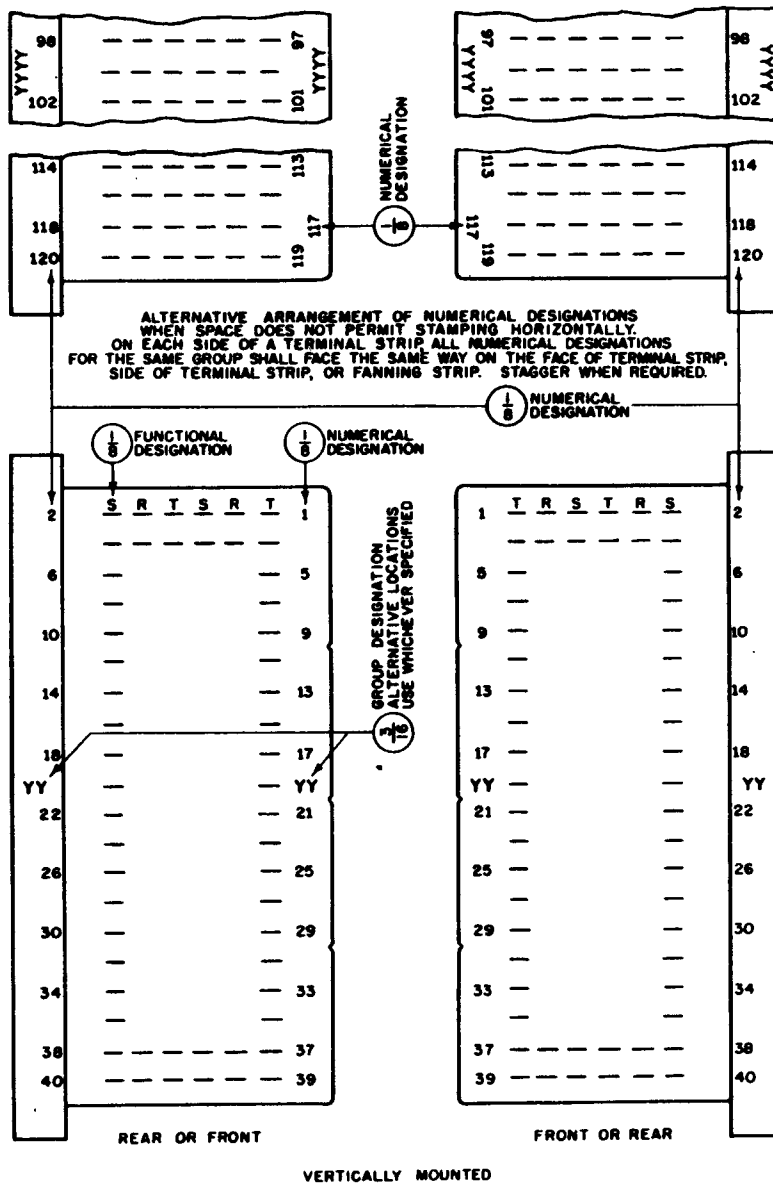


Fig. 30—Terminal Strips—Ends of Terminals Facing Front and Rear of Equipment—General Requirements for Size, Location, and Orientation of Characters

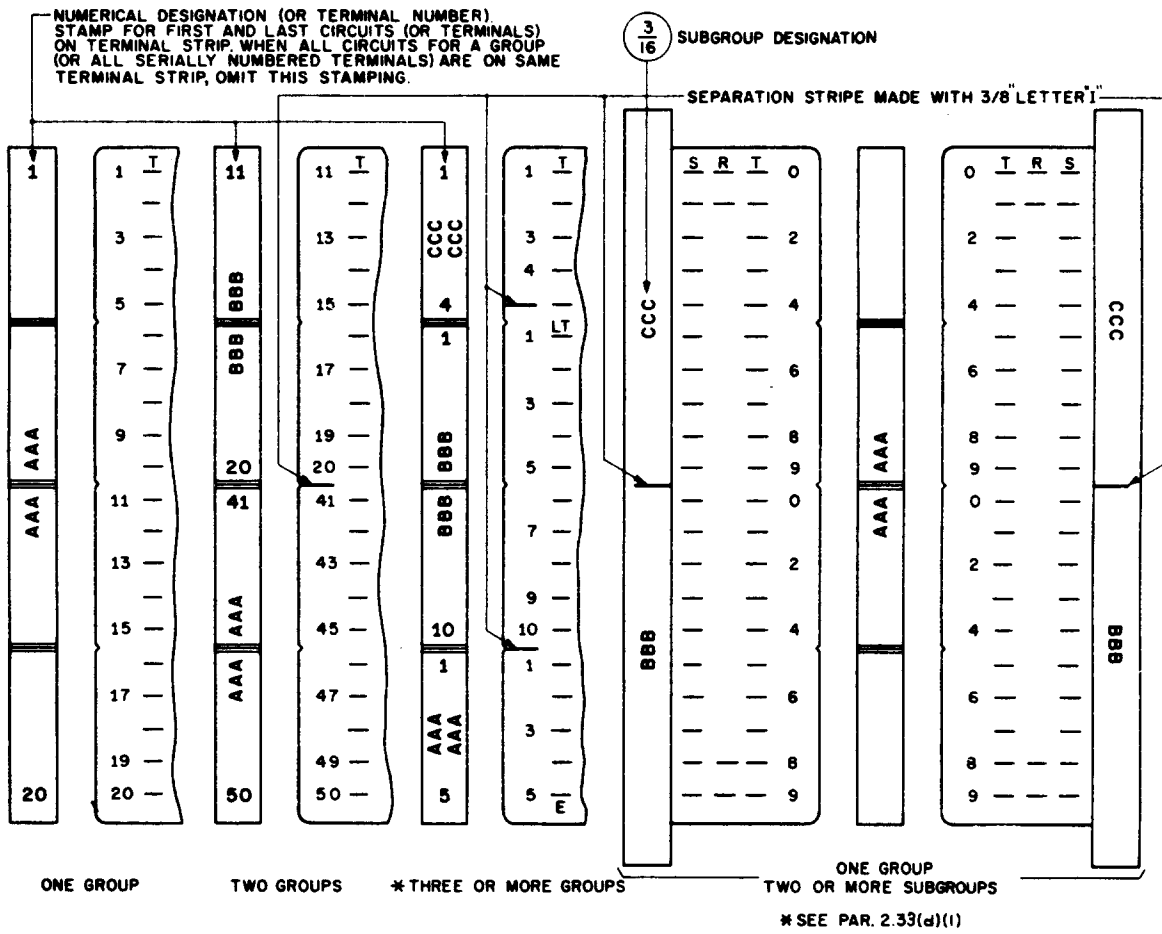


Fig. 31 — Terminal Strips—Face of Terminal Strip Facing Front or Rear of Equipment—  
Group Designations and Use of Numerical Designations and Separation Strips  
Therewith

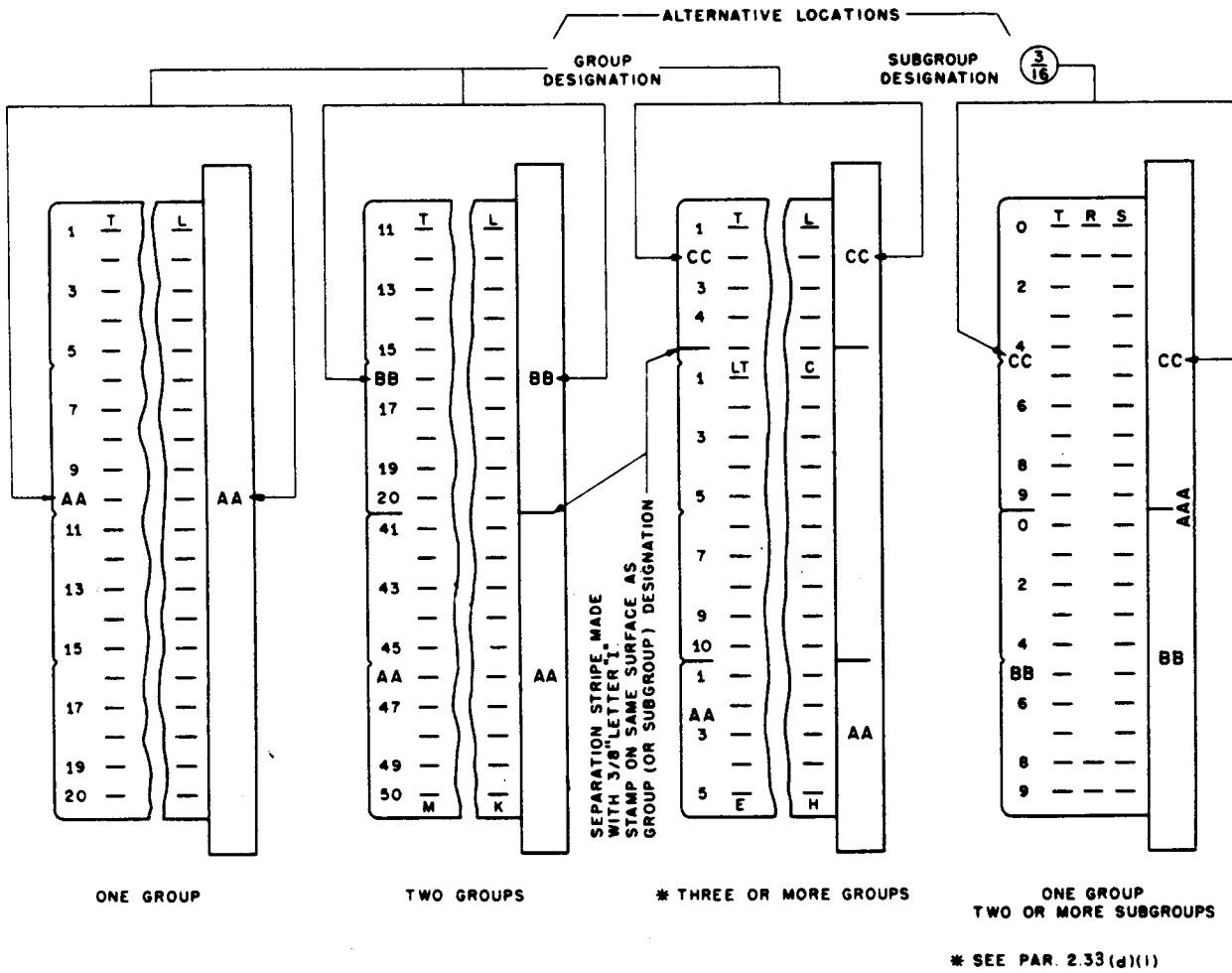


Fig. 32—Terminal Strips—Ends of Terminals Facing Front and Rear of Equipment—Group Designations and Use of Group Separation Strips Therewith

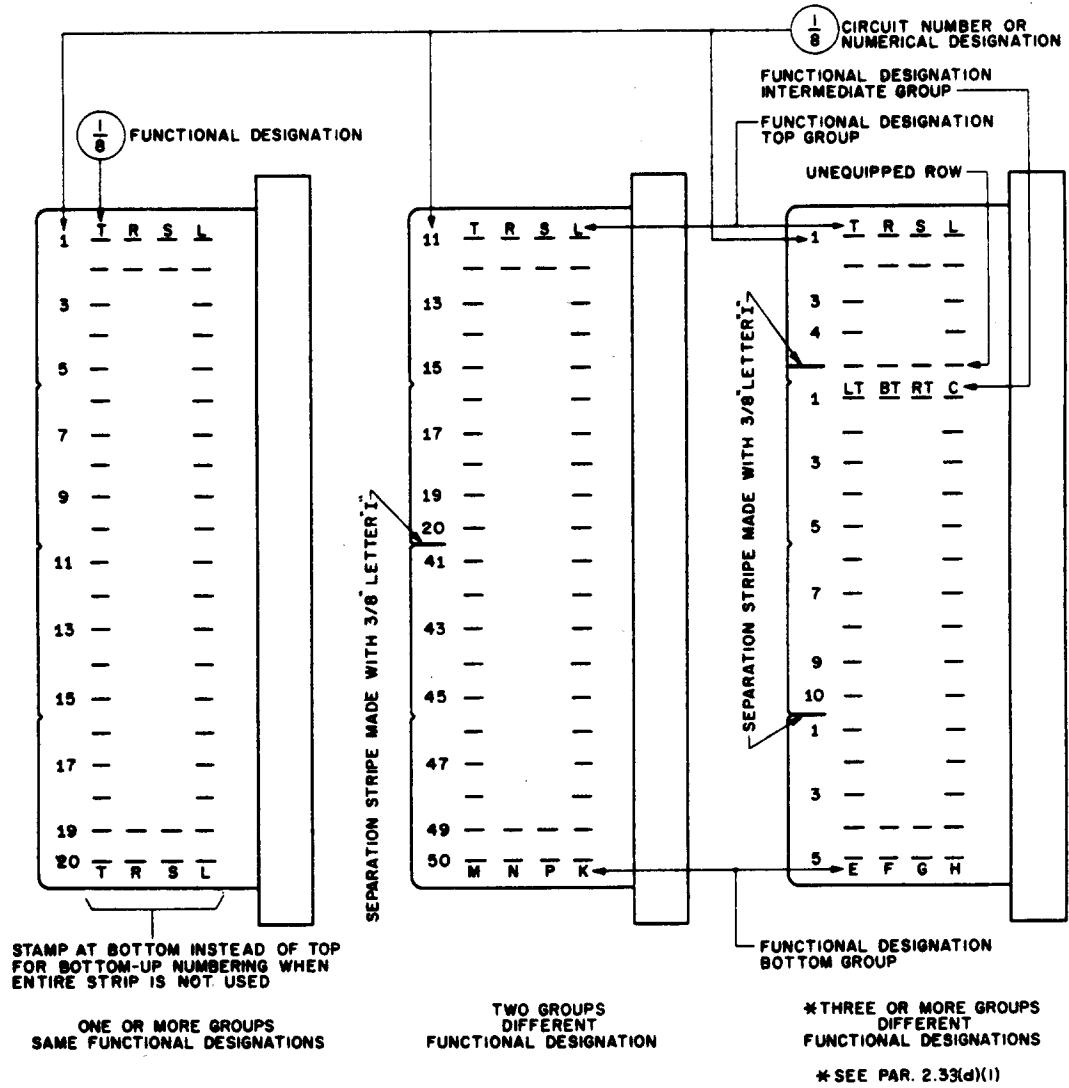


Fig. 33—Terminal Strips—Functional and Numerical Designations—One Circuit per Row

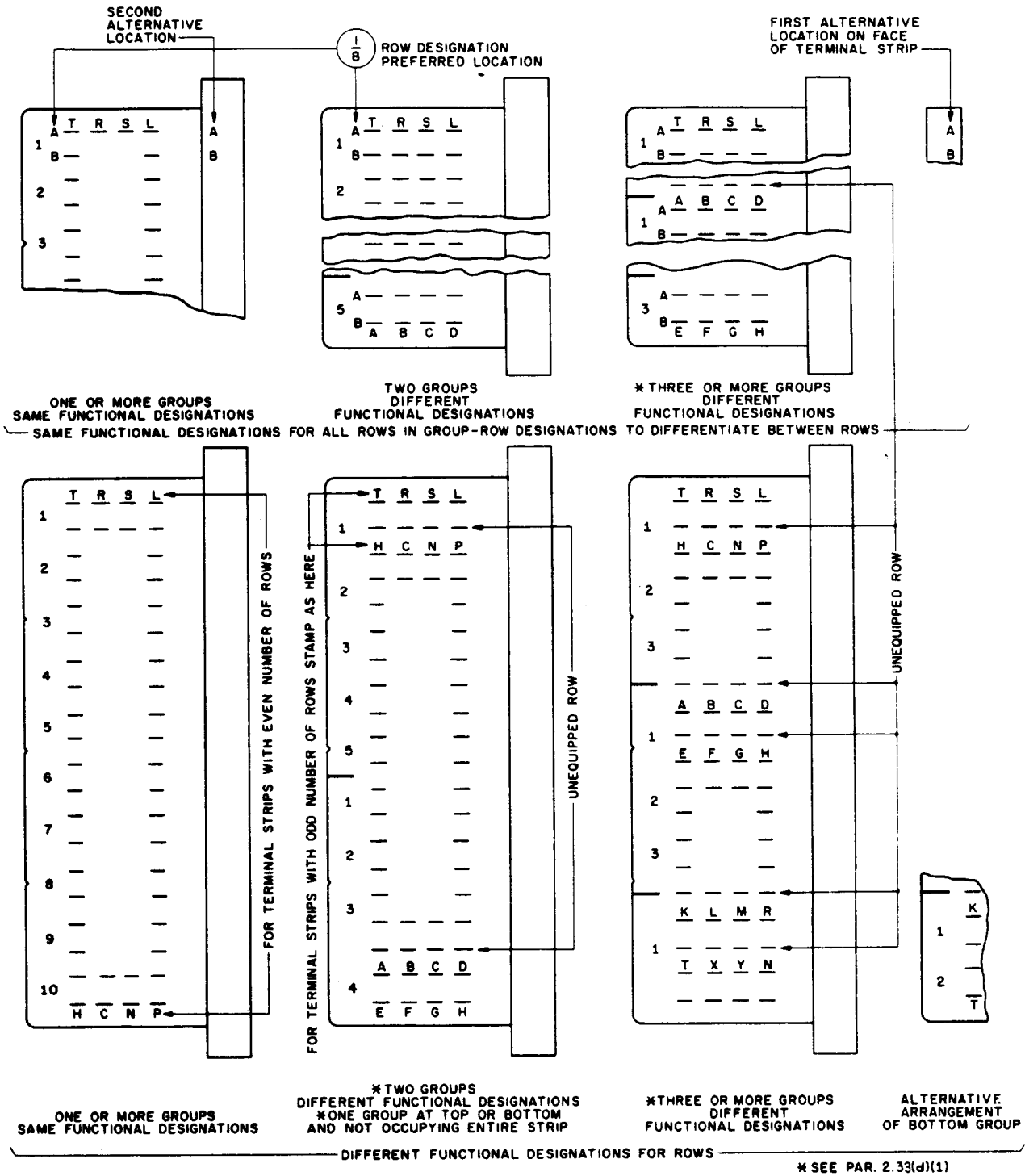
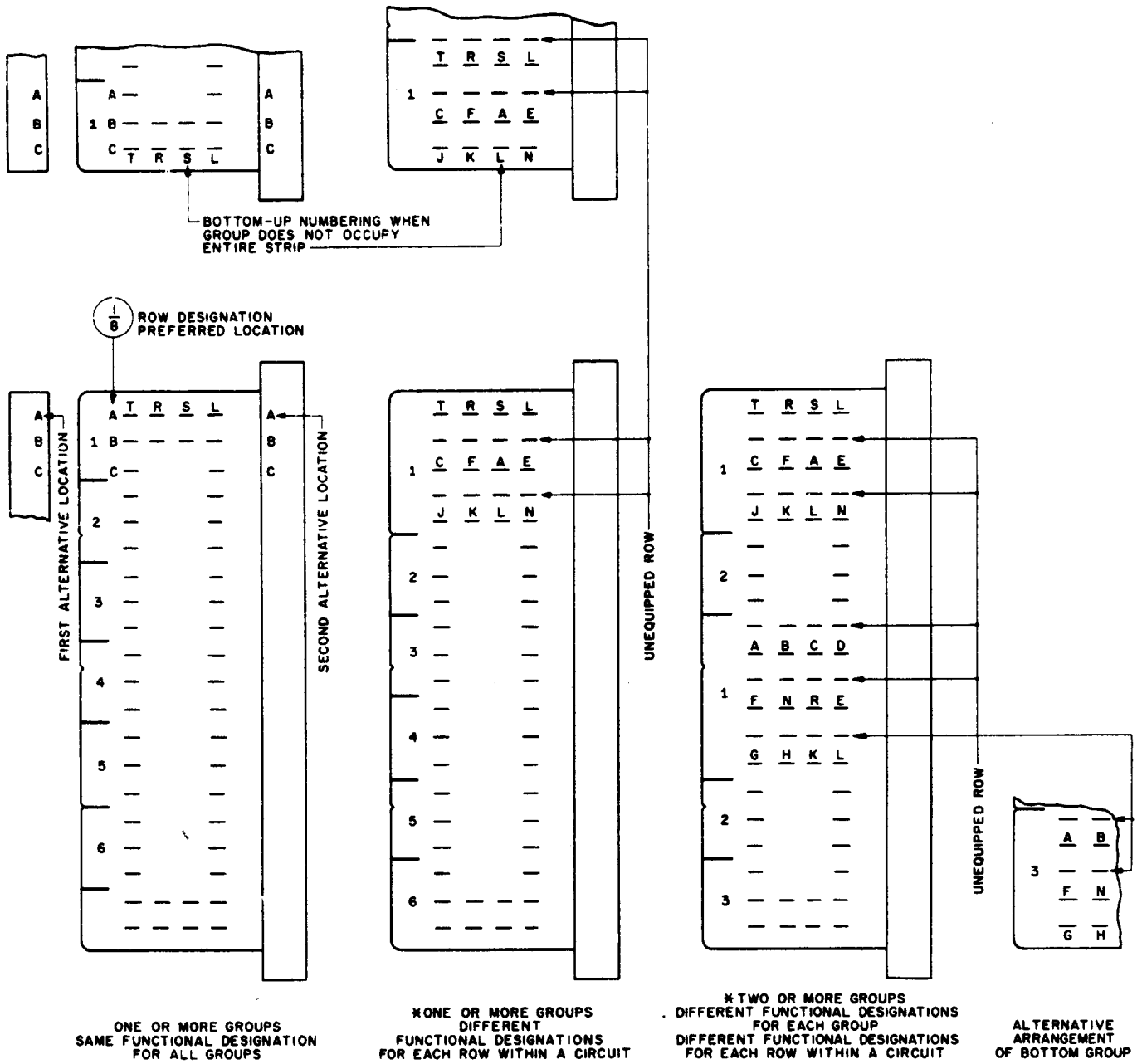


Fig. 34—Terminal Strips—Functional and Numerical Designations—Two Rows per Circuit





\* SEE PAR. 2.33(d)(1)

Fig. 35—Terminal Strips—Functional and Numerical Designations—Three or More Rows per Circuit

DO NOT STAMP THESE NUMBERS AT SWITCHBOARDS

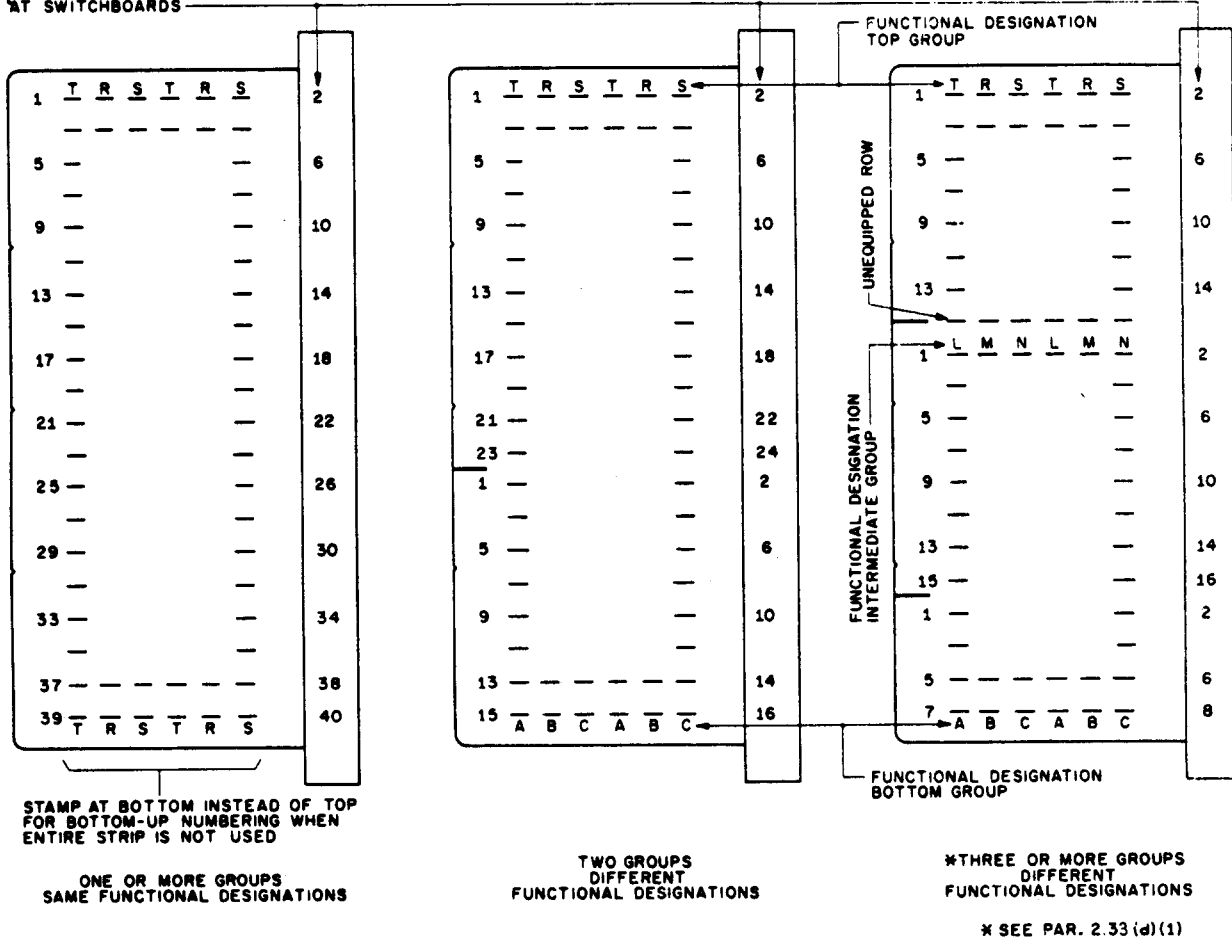


Fig. 36—Terminal Strips—Functional and Numerical Designations—Two or More Circuits per Row

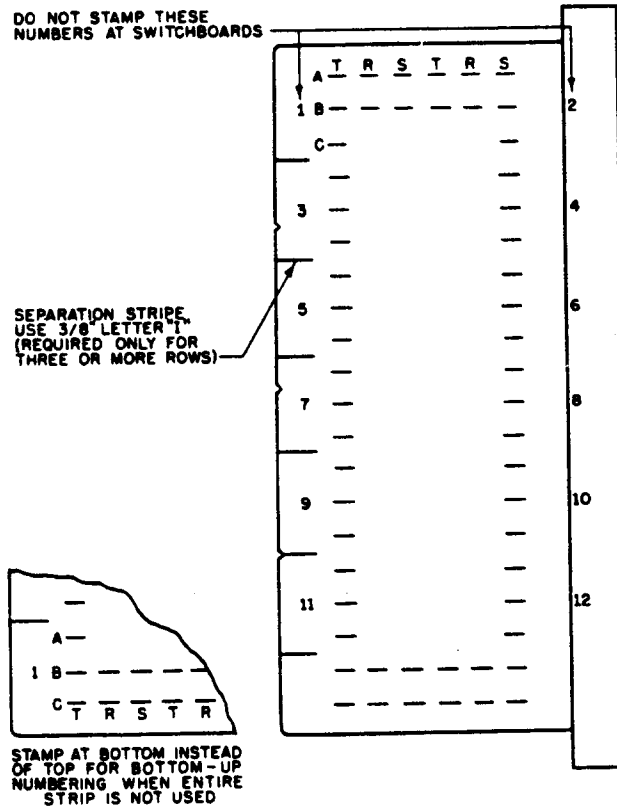


Fig. 37—Terminal Strips—Functional and Numerical Designations—Two or More Circuits per Two or More Rows

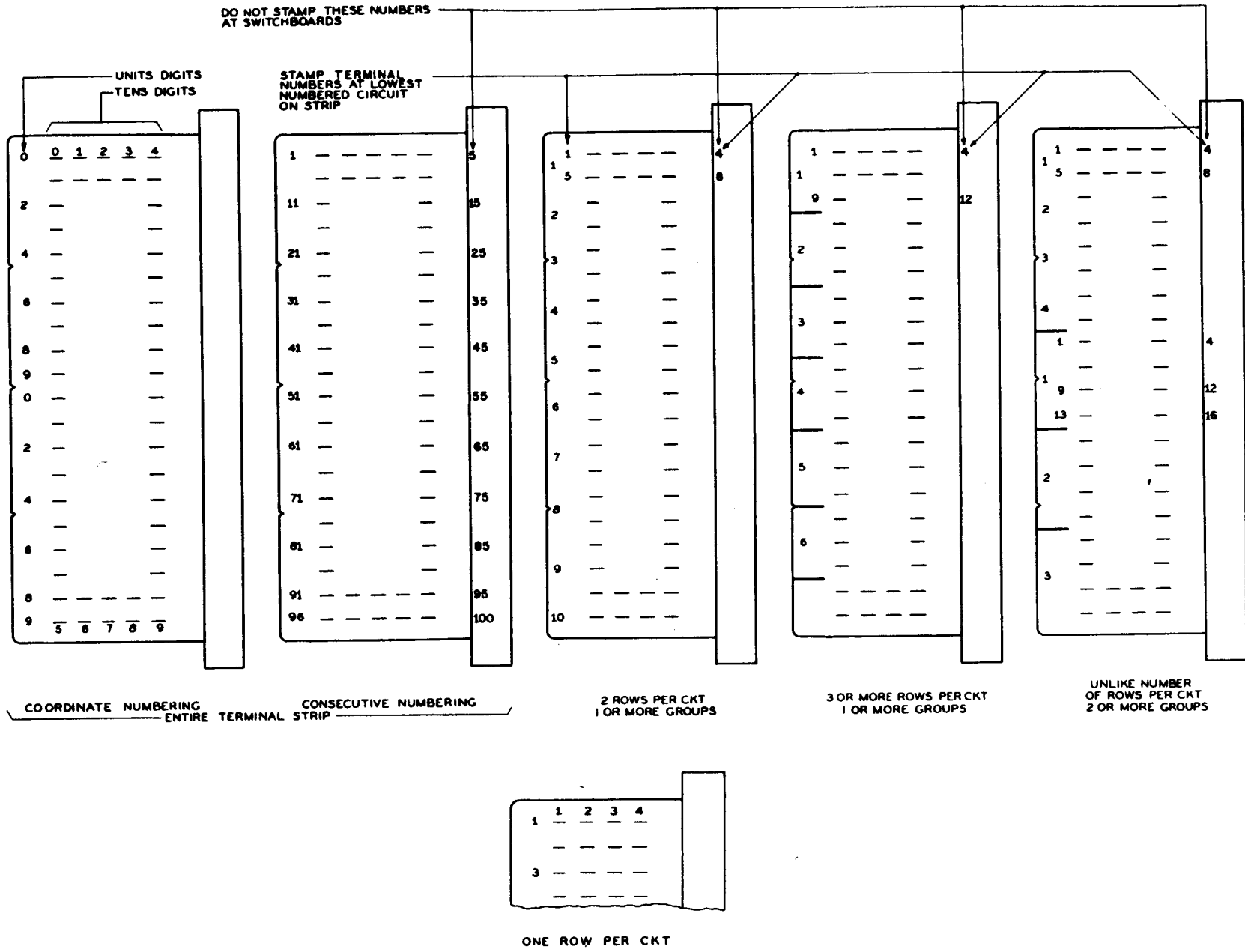


Fig. 38 — Terminal Strips — Numbered Terminals

2	C	T	991
6	---	---	5
990	---	---	9
2	---	---	991
6	---	---	5
1000	---	---	9
2	---	---	11
	---	---	01
6	---	---	5
1110	---	---	9
2	---	---	11
	---	---	11
6	---	---	5
1120	---	---	9

ALL DESIGNATIONS 1/8 INCH

Fig. 39—Terminal Strips—4-Digit Designations on Terminal Strips With Side of Terminal Strip 3/8 Inch

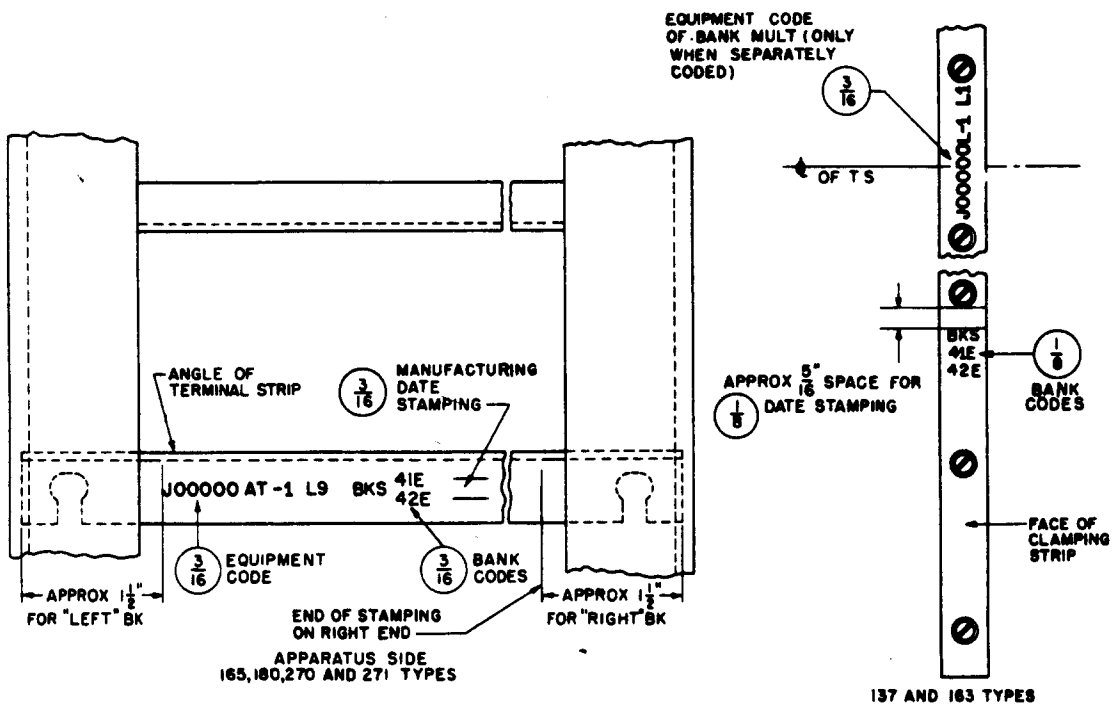


Fig. 40—Terminal Strips—137, 163, 165, 180, 270, 271, and Similar Types Used With Step-by-Step Selector Bank Multiple or Line Finder Unit

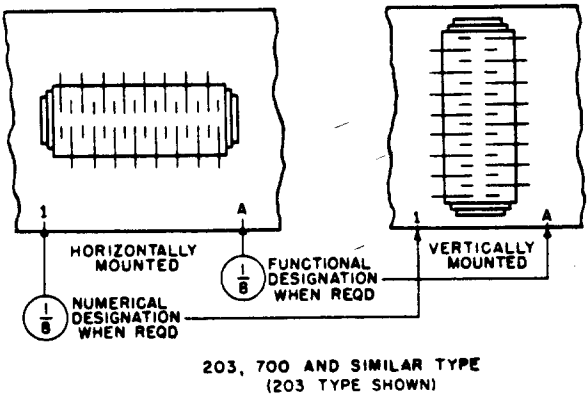
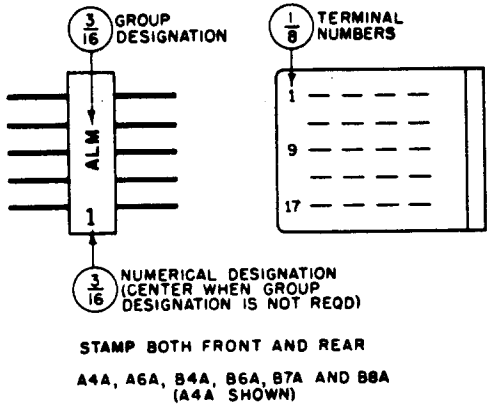
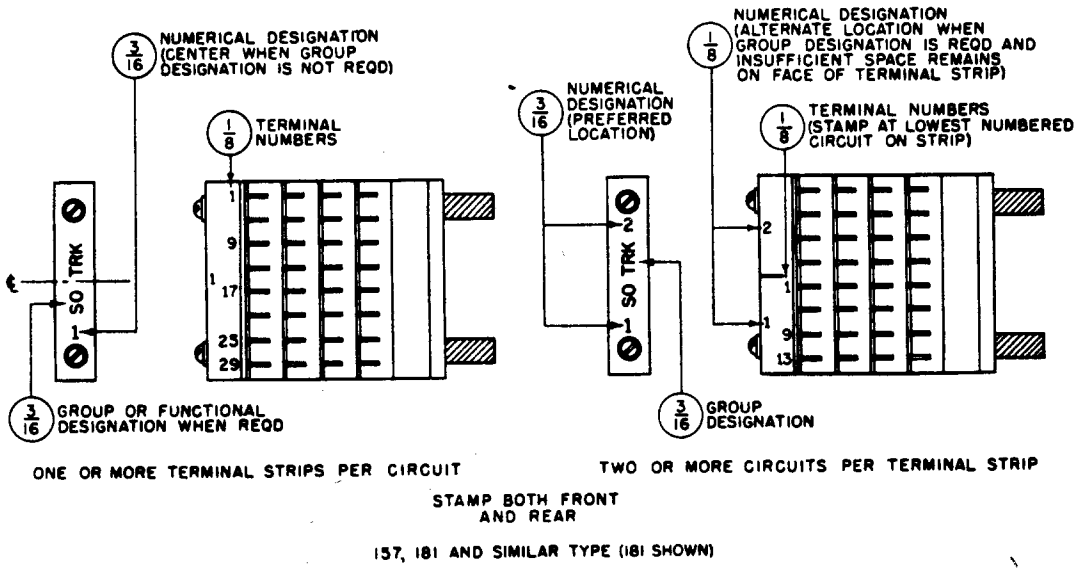
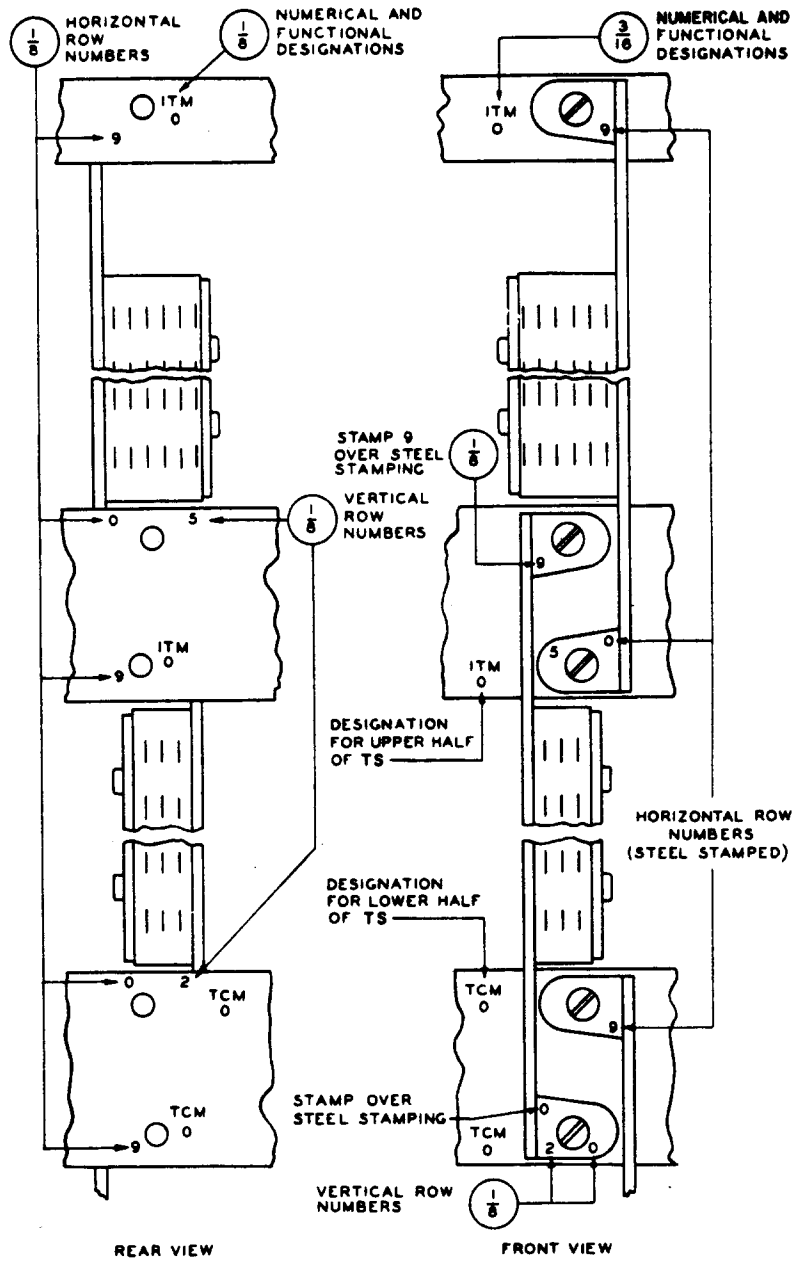


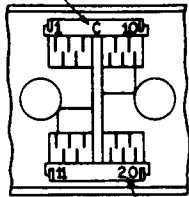
Fig. 41 — Terminal Strips—157, 159, 160, 170, 181, 203, 700, A4A, A6A, B4A, B6A, B7A, B8A, and Similar Types



METHOD OF STAMPING 218 TYPE TERMINAL STRIPS WHEN FEET OF VERTICALLY ADJACENT STRIPS OVERLAP

Fig. 42—Terminal Strips—218 and Similar Types

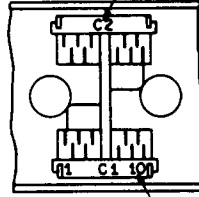
FUNCTIONAL DESIG.  
SEE 2.39 (a)



TERMINAL  
NUMBER

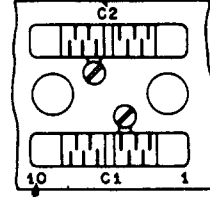
APPARATUS SIDE ONLY  
ONE FUNCTIONAL DESIGNATION

FUNCTIONAL DESIG.  
SEE 2.39 (b)



TERMINAL  
NUMBERS

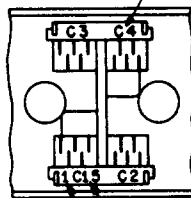
APPARATUS SIDE



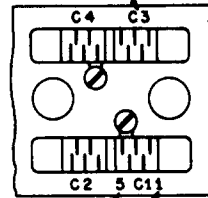
WIRING SIDE

TWO FUNCTIONAL DESIGNATIONS

FUNCTIONAL DESIG



APPARATUS SIDE

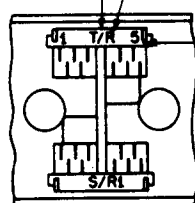


WIRING SIDE

FOUR FUNCTIONAL DESIGNATIONS

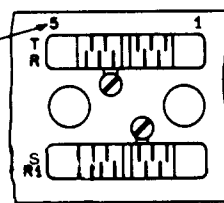
FUNCTIONAL DESIGNATIONS AND TERMINAL NUMBERS

<sup>3</sup>/<sub>16</sub>" LETTER "I" TERMINAL DESIG



APPARATUS SIDE

CIRCUIT  
NUMBERS



WIRING SIDE

FOUR TERMINAL DESIGNATIONS

LETTERED TERMINALS AND CIRCUIT NUMBERS

ALL DESIGNATIONS  $\frac{1}{8}$ "

Fig. 43—(Part 1)—Terminal Strips—224 Type



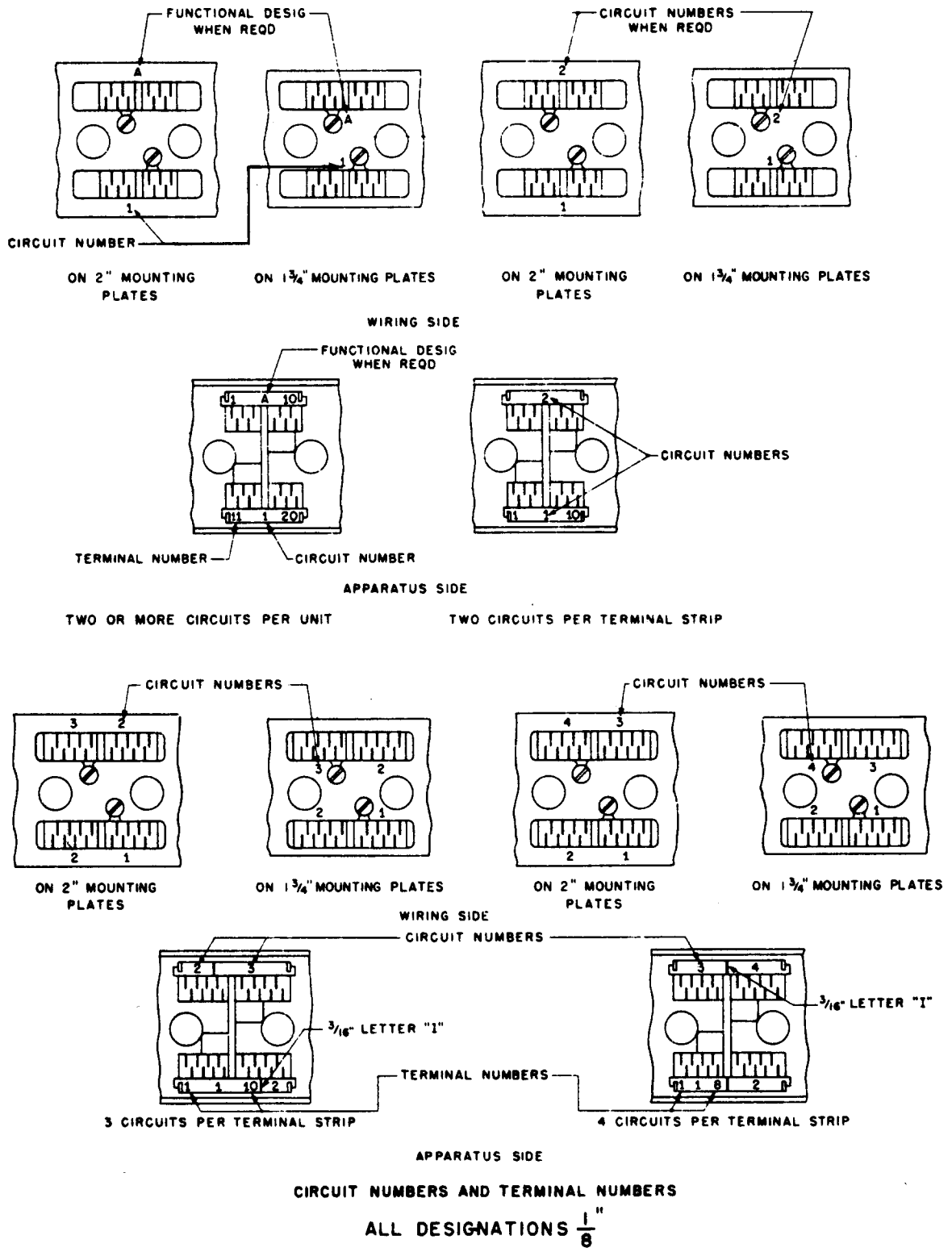


Fig. 43—(Part 2)—Terminal Strips—224 Type

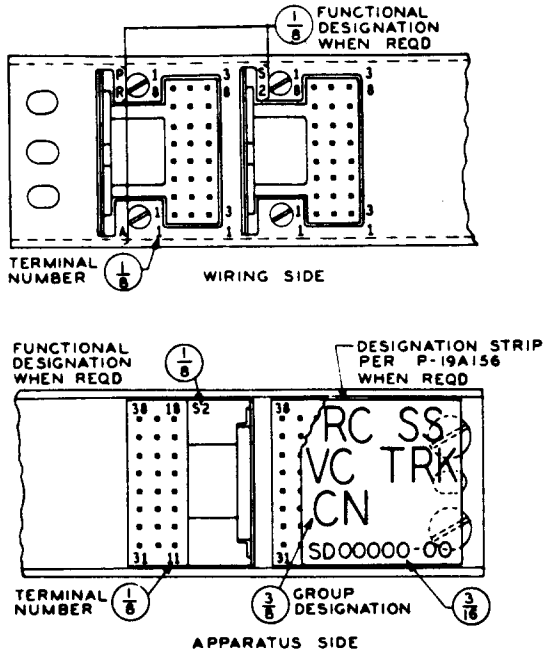


Fig. 44—Terminal Strips—D Type, Mounted on Right End of Mounting Plate (Coordinate Numbering)

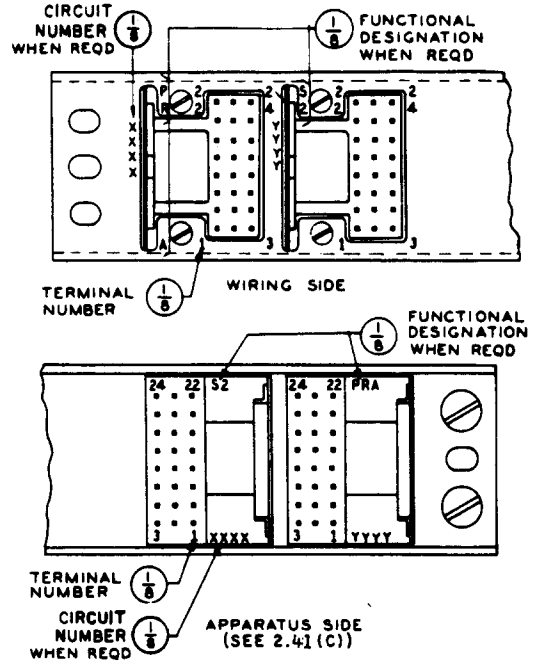


Fig. 46—Terminal Strips—D Type (Consecutive Numbering)

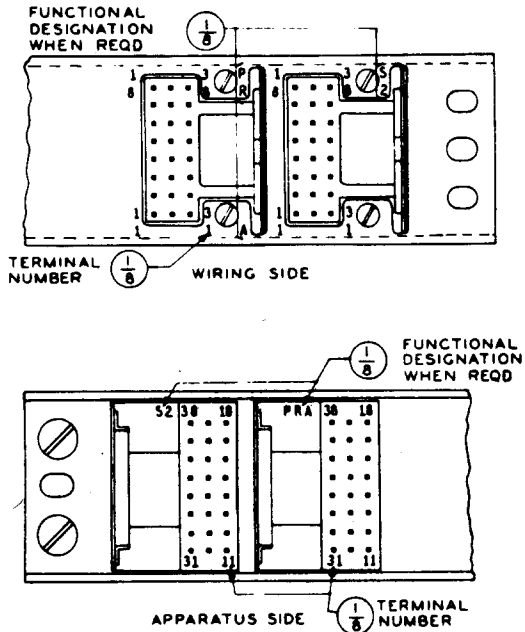


Fig. 45—Terminal Strips—D Type, Mounted on Left End of Mounting Plate (Coordinate Numbering)

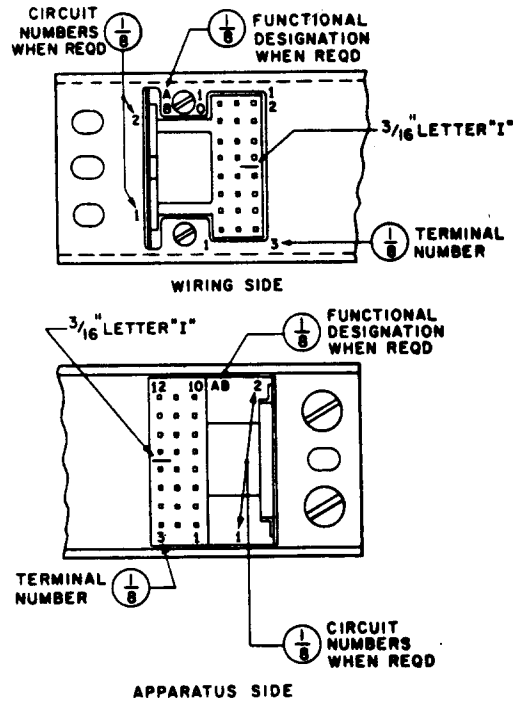
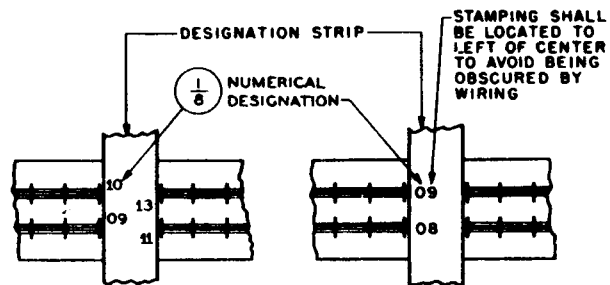


Fig. 47—Terminal Strips—D Type, Two Circuits per Strip (Consecutive Numbering)



WHEN DIFFERENT DESIGNATIONS ARE REQUIRED FOR OPPOSITE ROWS

WHEN ONE DESIGNATION APPLIES TO BOTH ROWS OF TERMINALS

221 & 242 TYPE TS WITH DESIGNATION STRIP

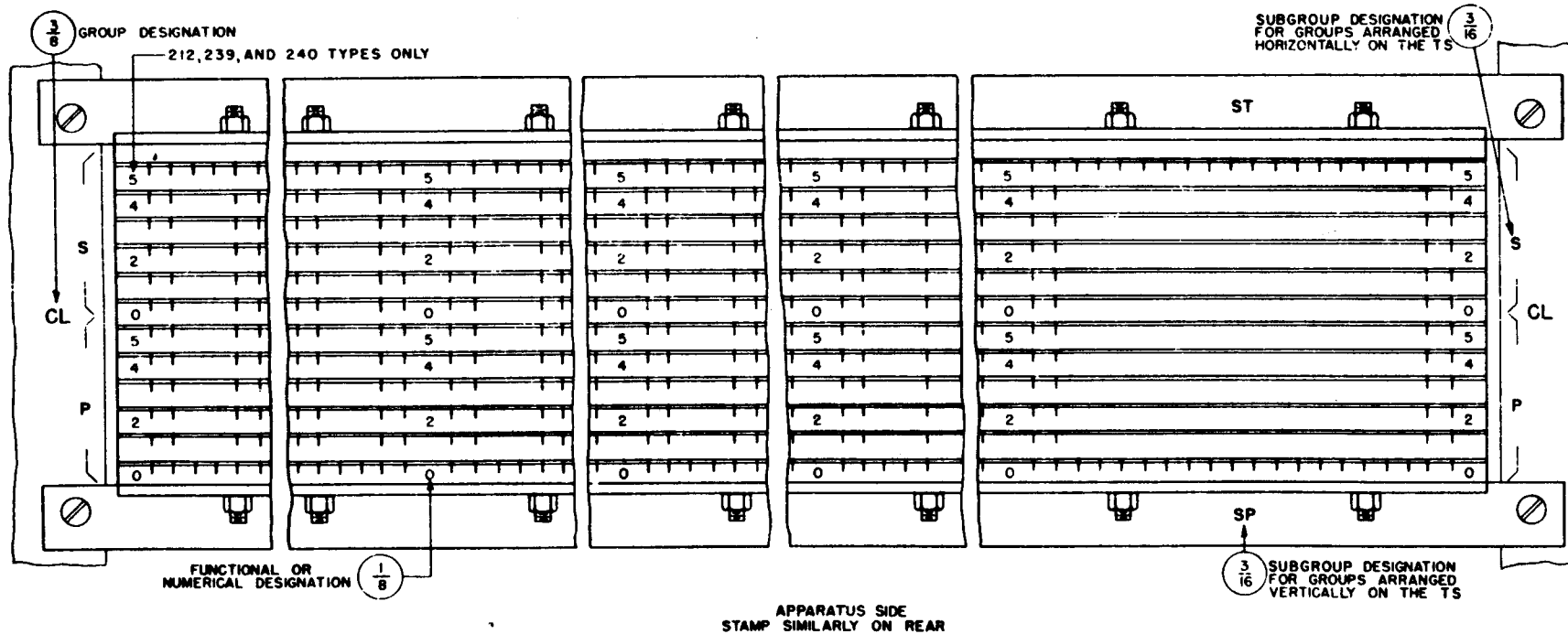


Fig. 48—Terminal Strips—212, 221, 240, 242, and Similar Types

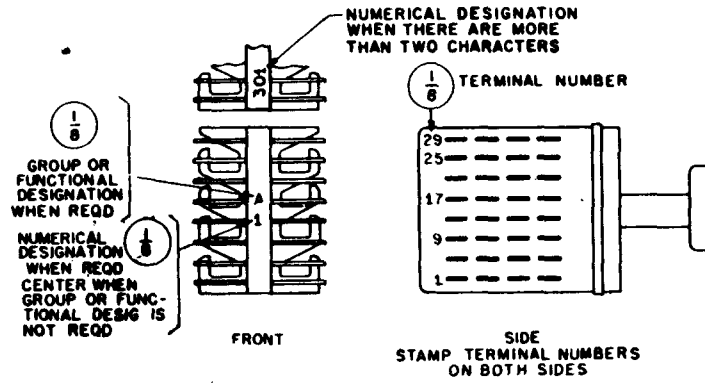


Fig. 49—Terminal Strips—227, C4A, H4A, and Similar Types

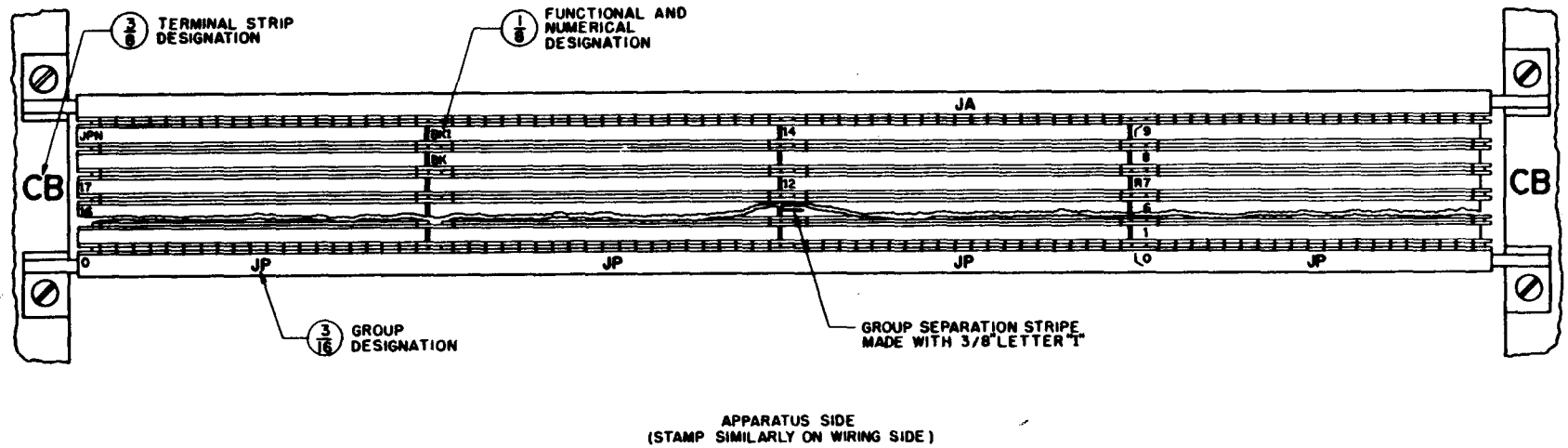


Fig. 50—Terminal Strips—190, 209, 236, 247, and Similar Types

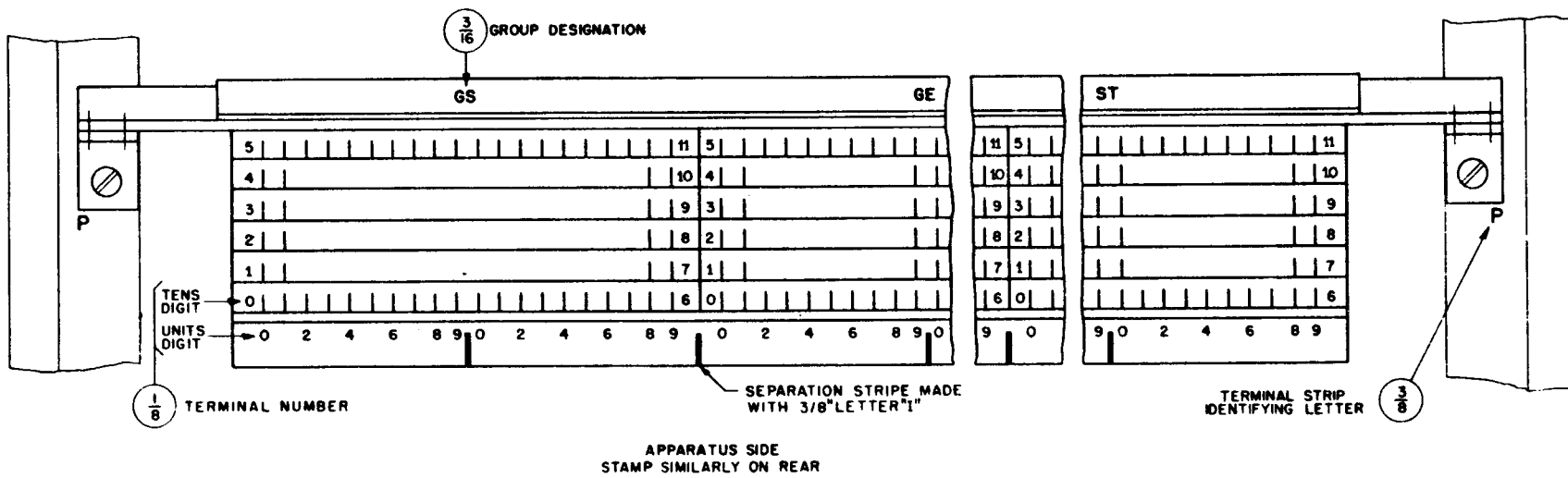


Fig. 51—Terminal Strips—191, BP(5)A, 206, 207, BM(2)A, 208, BN(2)A, BR5A, 215, BL(4)A, 226, BK(3)A, 234, 235, 243A, 244, 245A, 267A, BK6A, BK6B, BL7A, BM5A, BN3A, BN5A, BN6A, and Similar Types

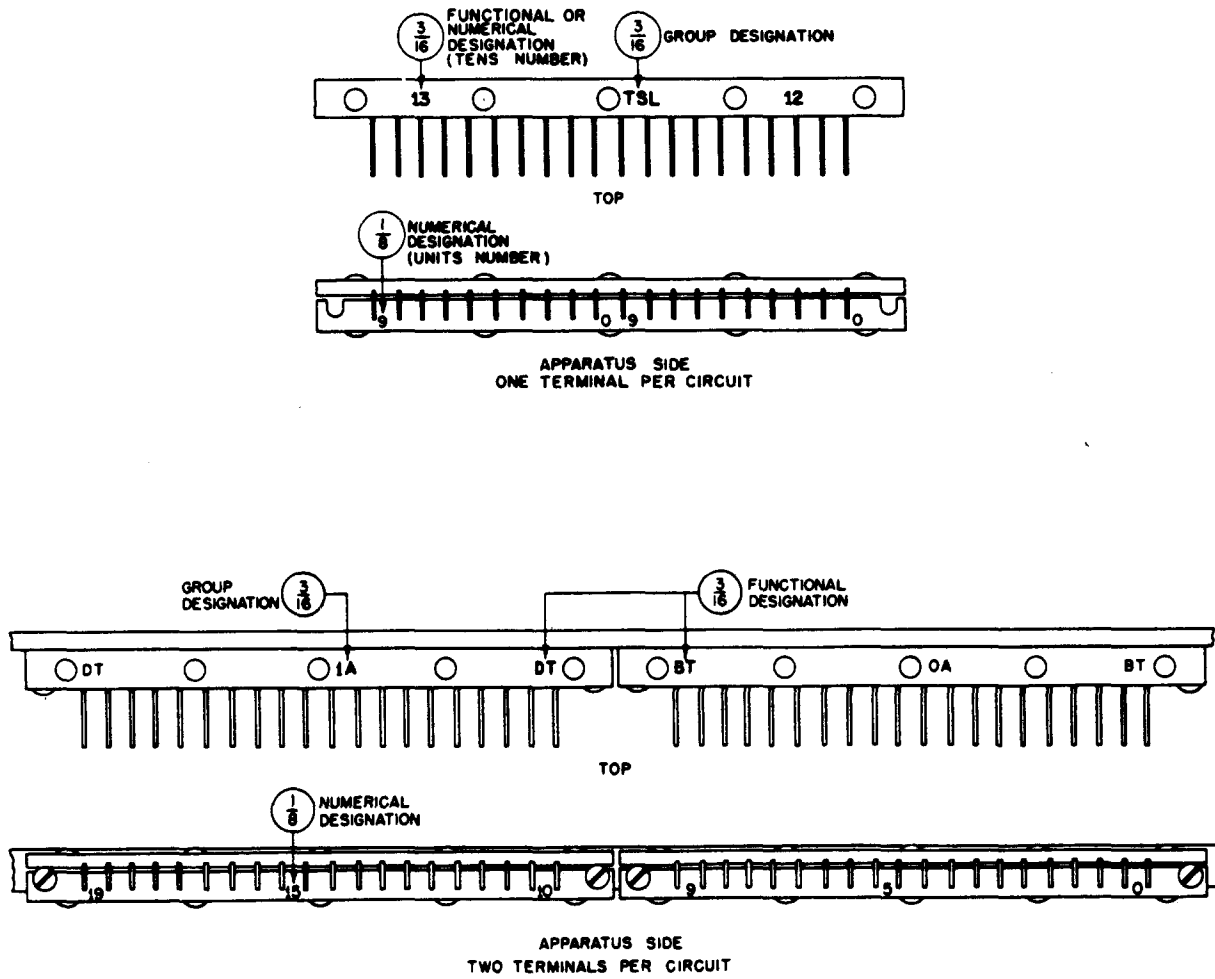


Fig. 52—Terminal Strips—216 and Similar Types

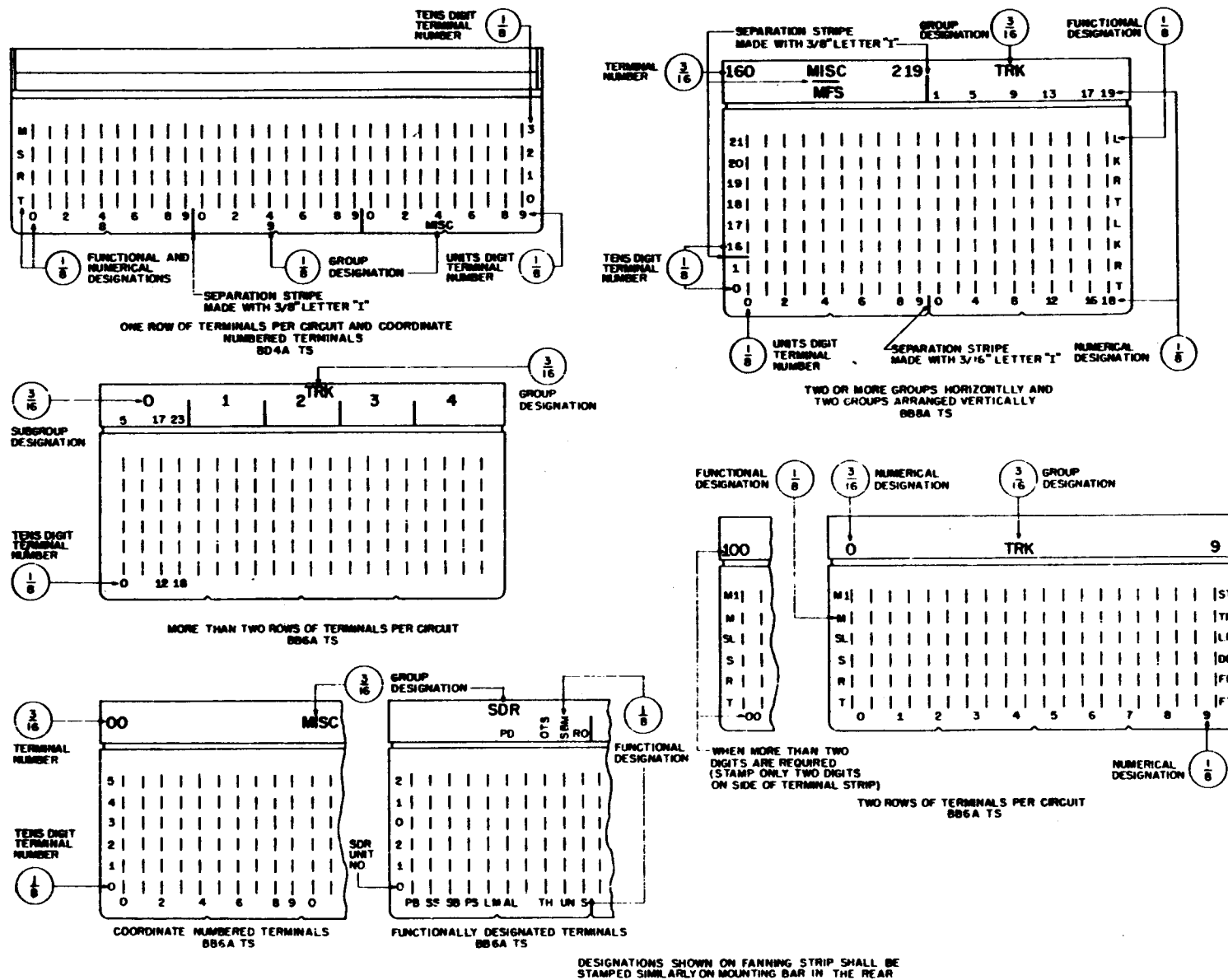


Fig. 53—Terminal Strips—217, BB(3)A, 223, BD4A, 248, BB4A, BB5A, BB6A, BB7A, BB8A, and Similar Types

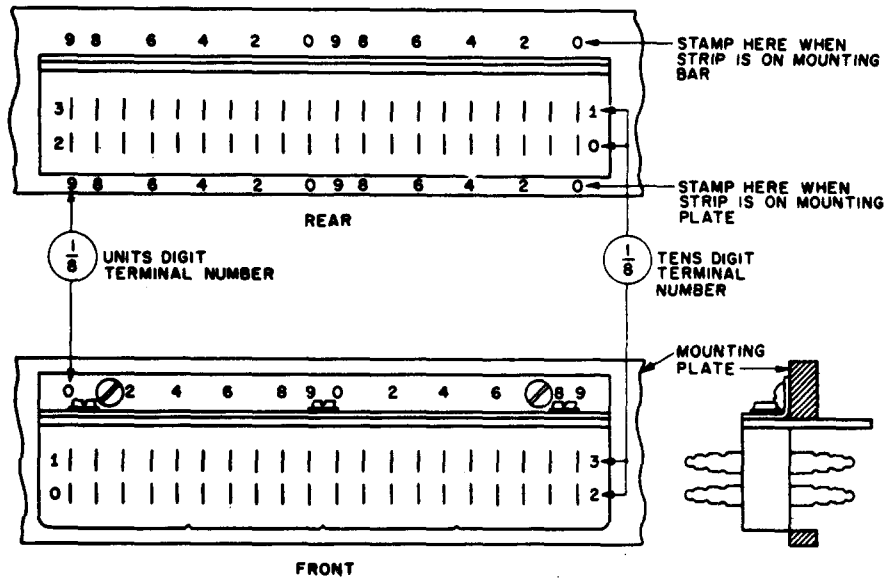


Fig. 54—Terminal Strips—BC2A and Similar Types

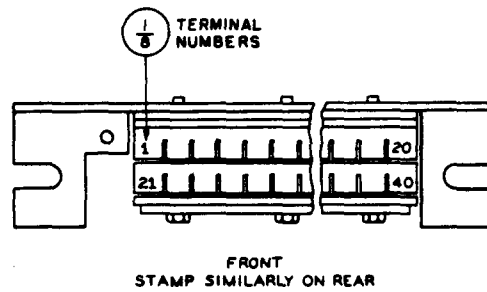


Fig. 55—Terminal Strips—229, 230, and Similar Types



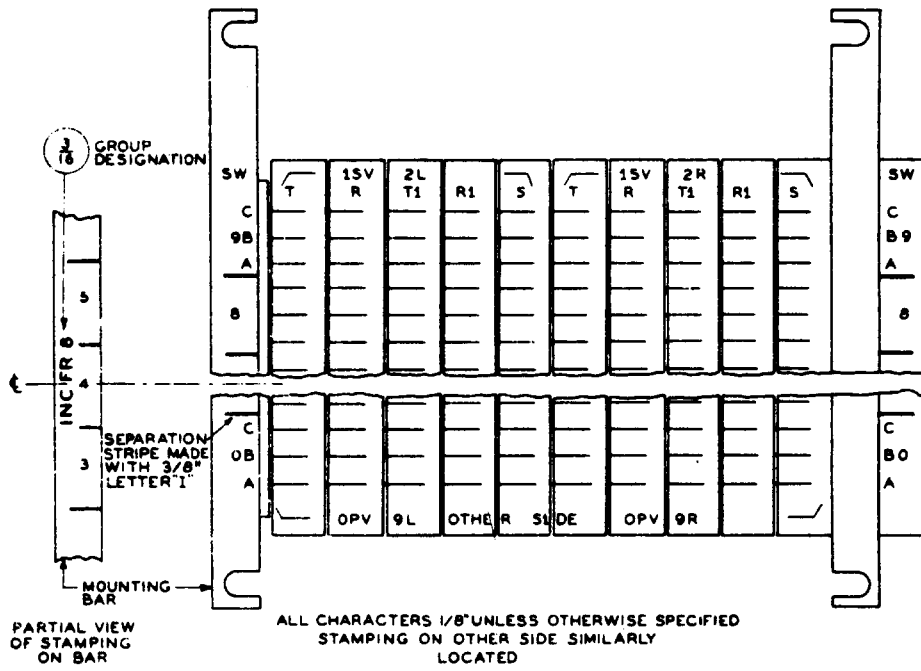


Fig. 56—Terminal Strips—237 and Similar Types

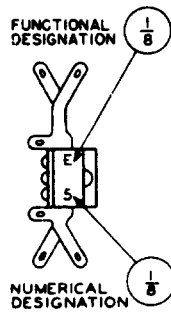


Fig. 57—Terminal Strips—238 and Similar Types

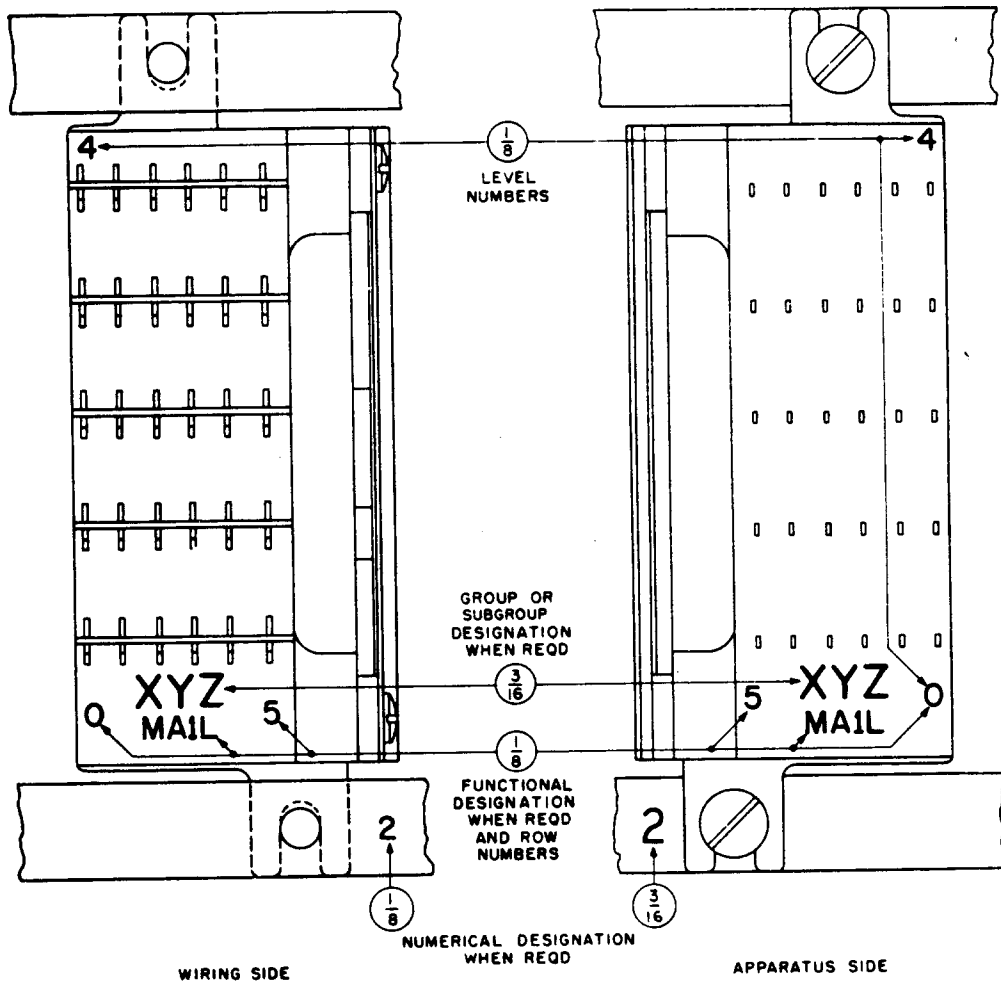


Fig. 58—Terminal Strips—BT6A Type

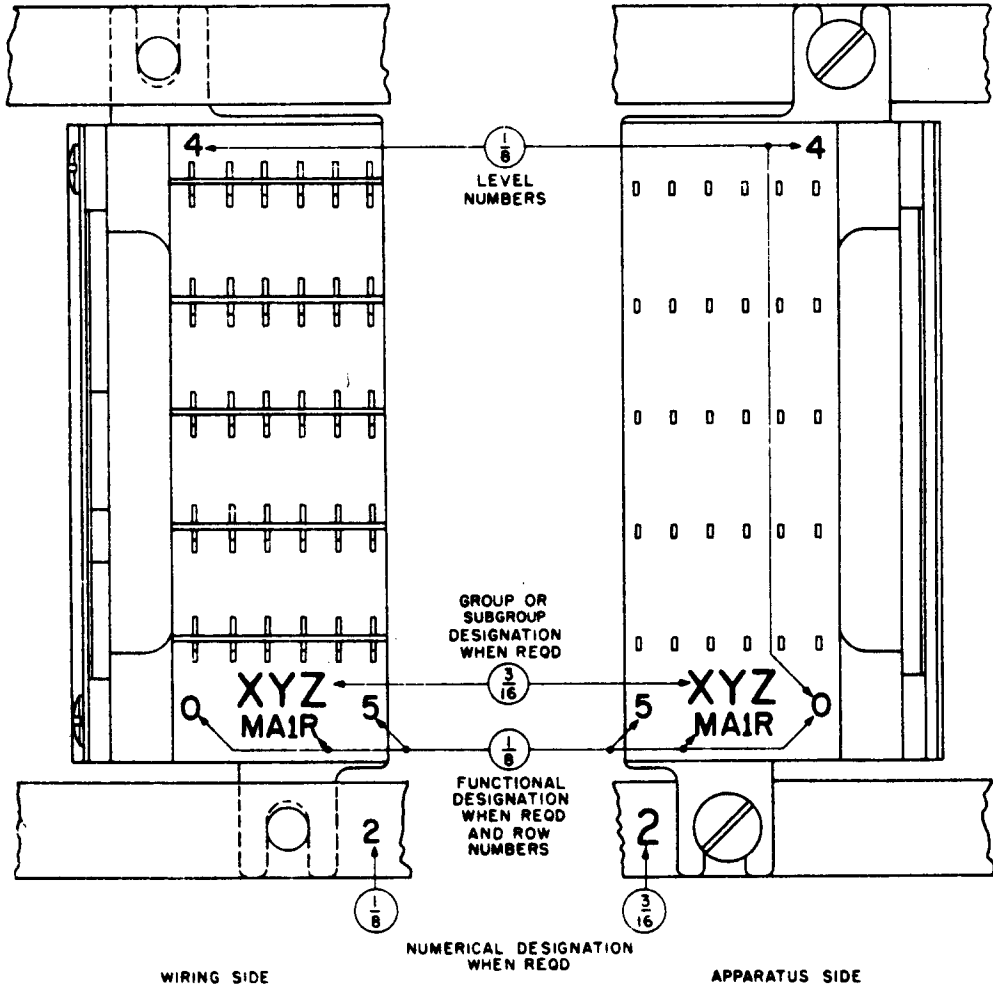


Fig. 59—Terminal Strips—BU6A Type

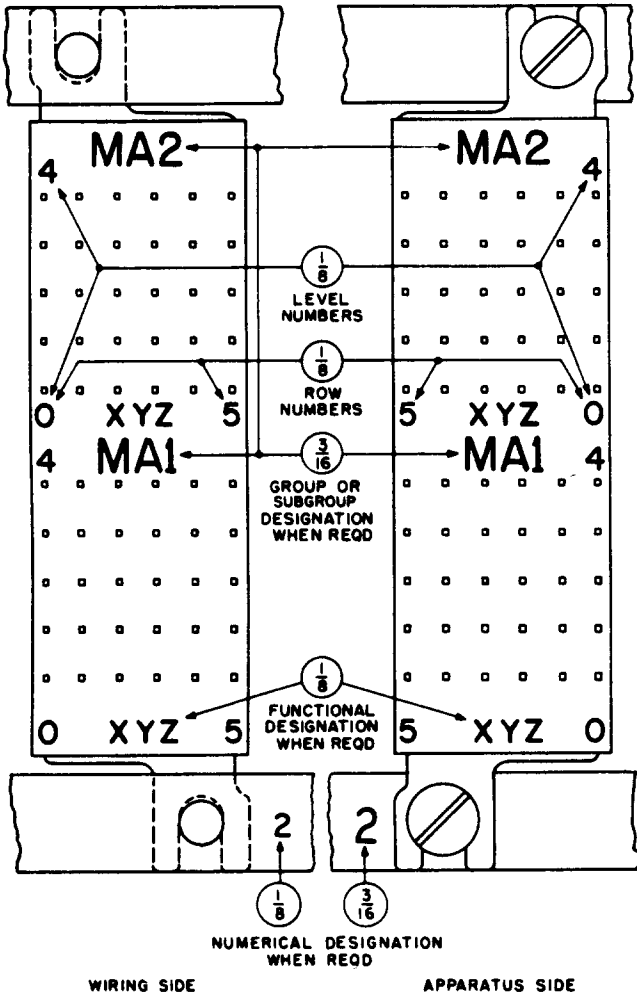


Fig. 60—Terminal Strips—BW6A Type (Showing Coordinate Numbering)

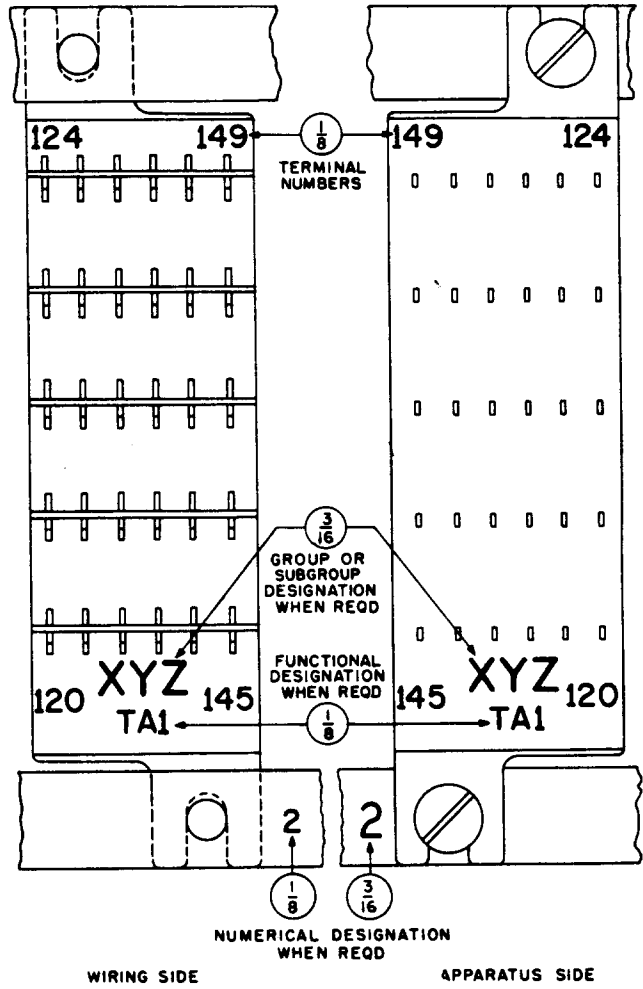


Fig. 61—Terminal Strips—BY6A Type (Showing Consecutive Numbering)

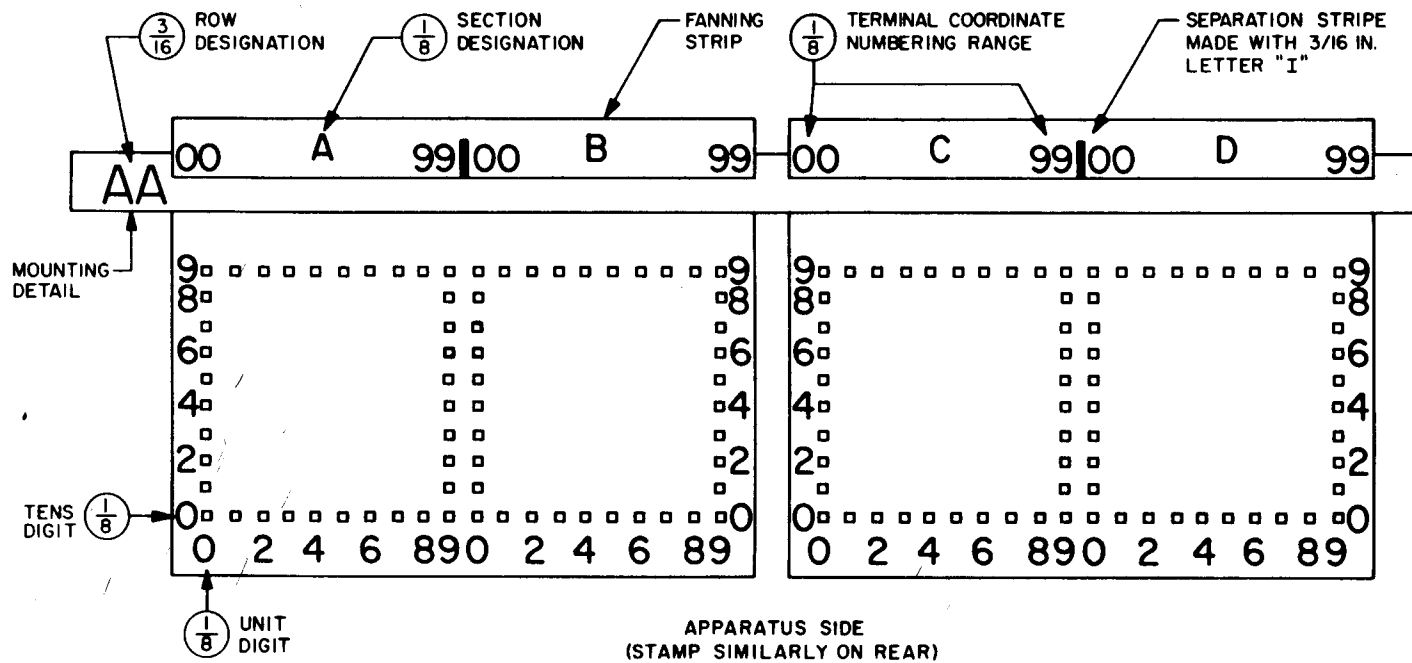


Fig. 62—Terminal Strips—251 Type Wired in Accordance With Tabular Wiring Diagram Information

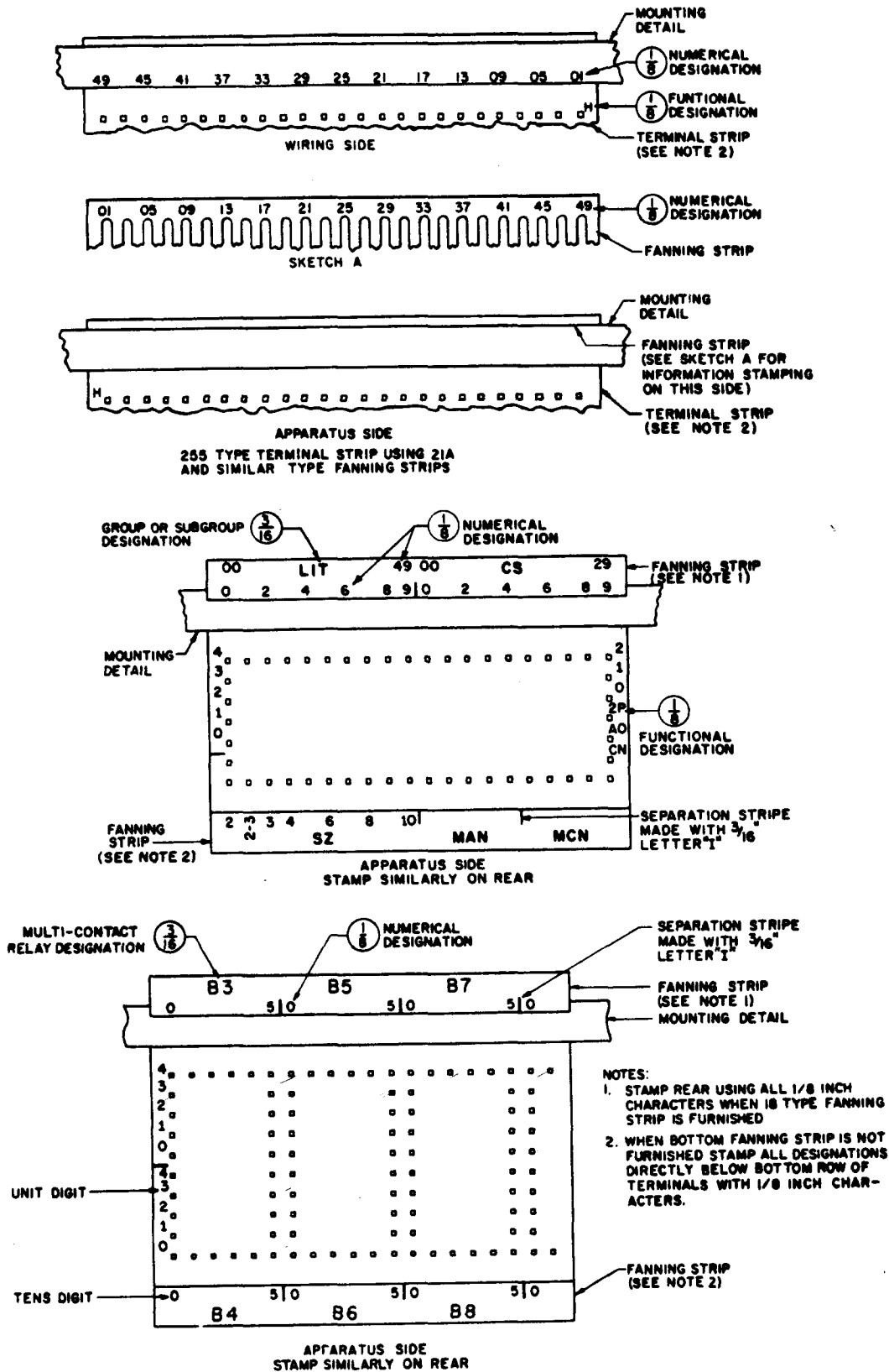


Fig. 63—Terminal Strips—251, 255, and Similar Types Using Other Than 24- or 27-Type Fanning Strips

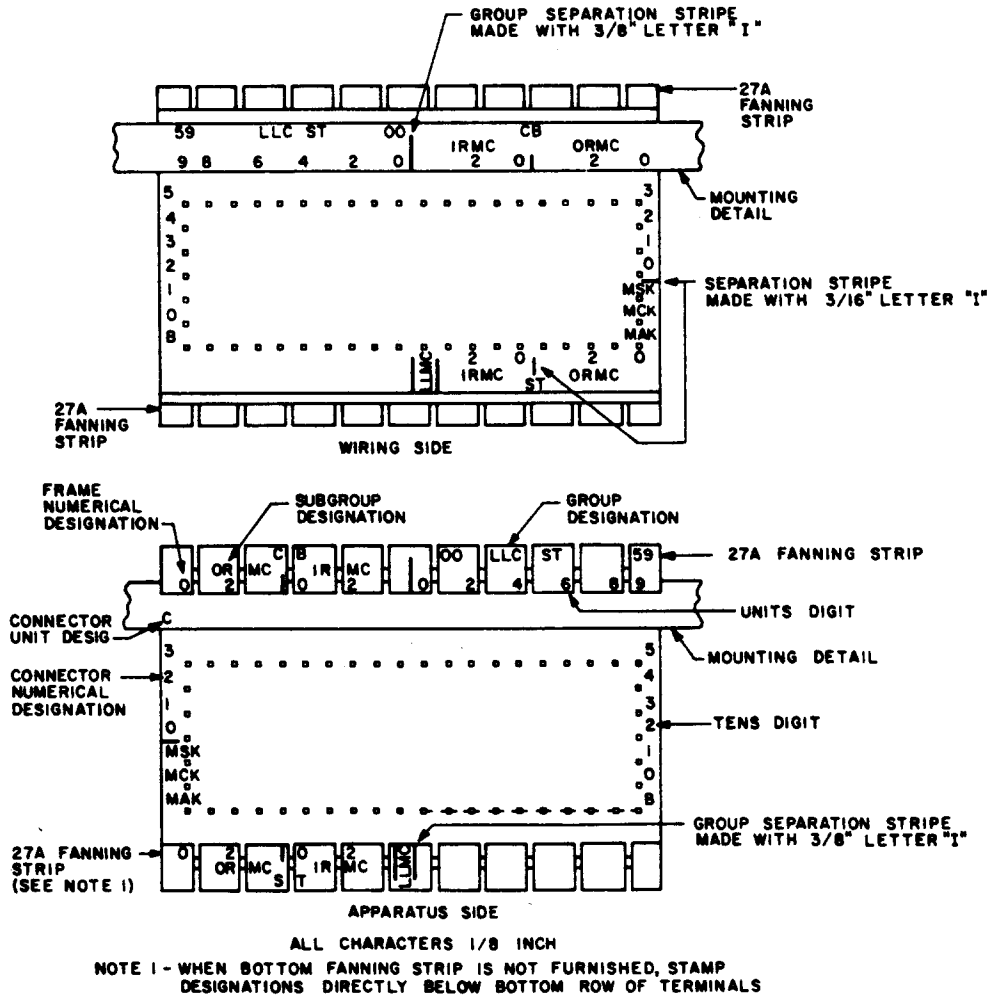


Fig. 64—Terminal Strips—251 and Similar Types With Mounting Detail Above the Terminal Strip and Provided With 27- and Similar-Type Fanning Strips

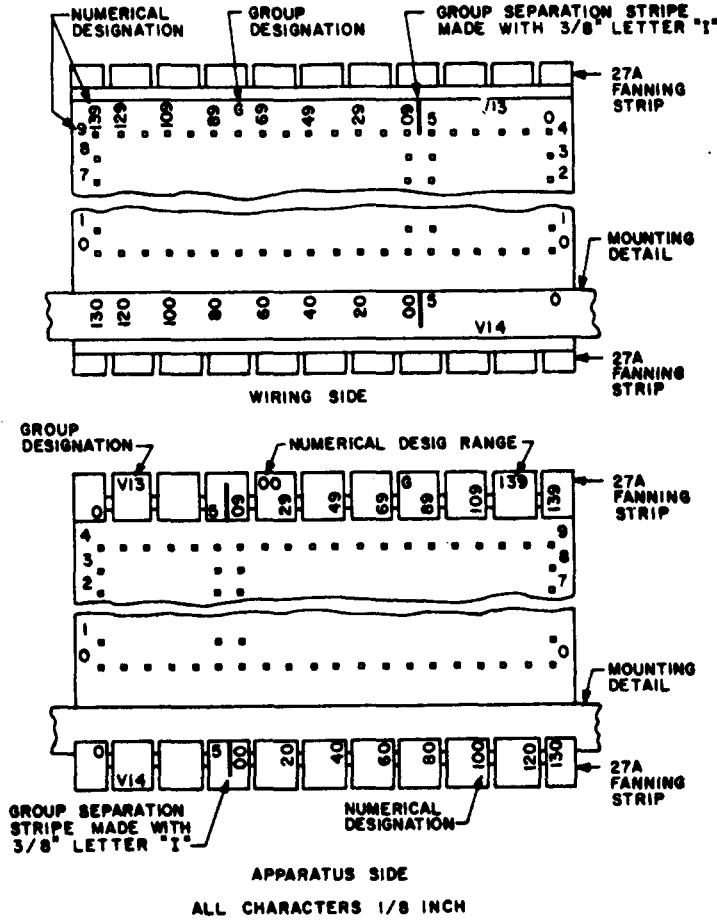


Fig. 65—Terminal Strips—251 and Similar Types With Mounting Detail Below the Terminal Strip and Provided With 27- and Similar-Type Fanning Strips



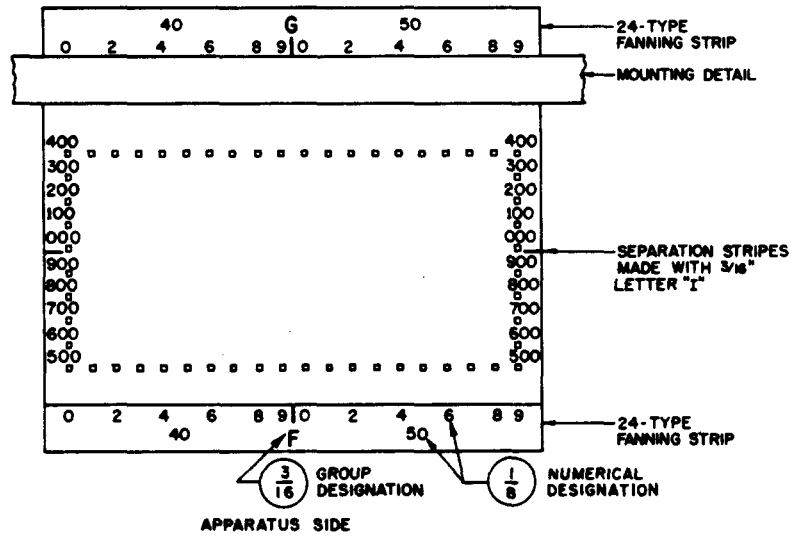
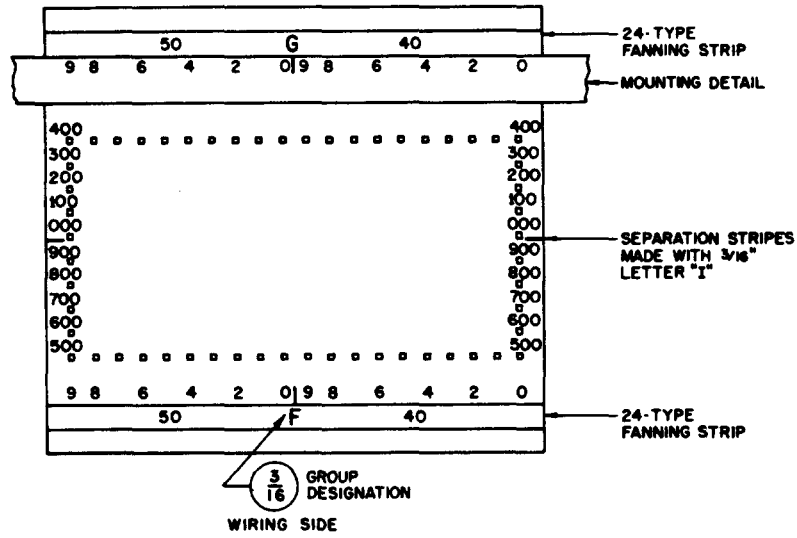


Fig. 66—Terminal Strips—251 and Similar Types Using 24-Type Fanning Strips

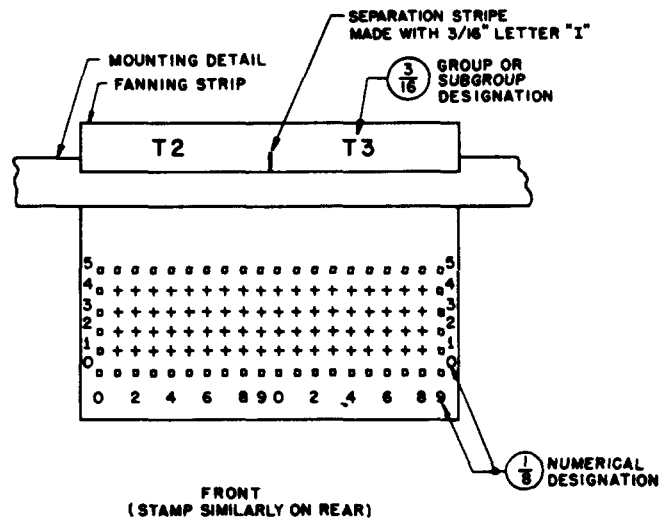
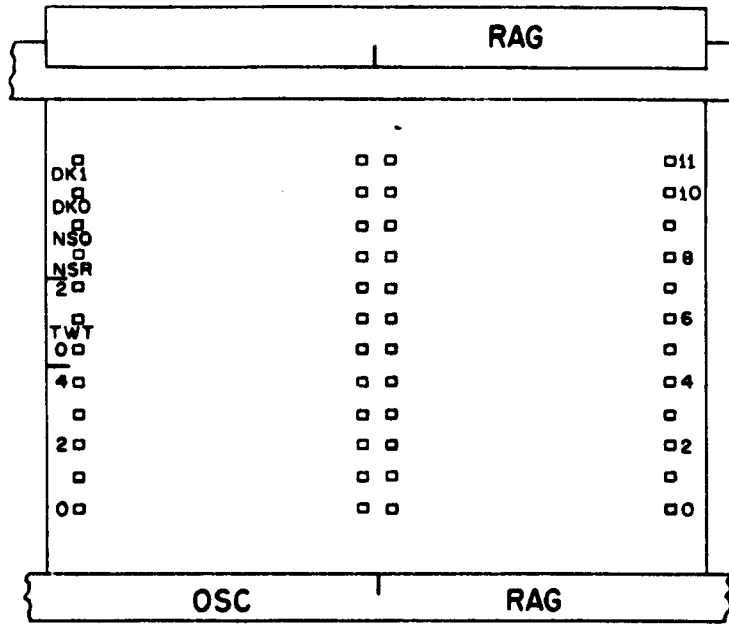


Fig. 67—Terminal Strips—252 and Similar Types



SIZE OF CHARACTERS SAME  
AS ON APPARATUS SIDE  
WIRING SIDE

GROUP DESIGNATION - STAMP  
ON FANNING STRIP IF FURNISHED,  
OTHERWISE ON MOUNTING DETAIL

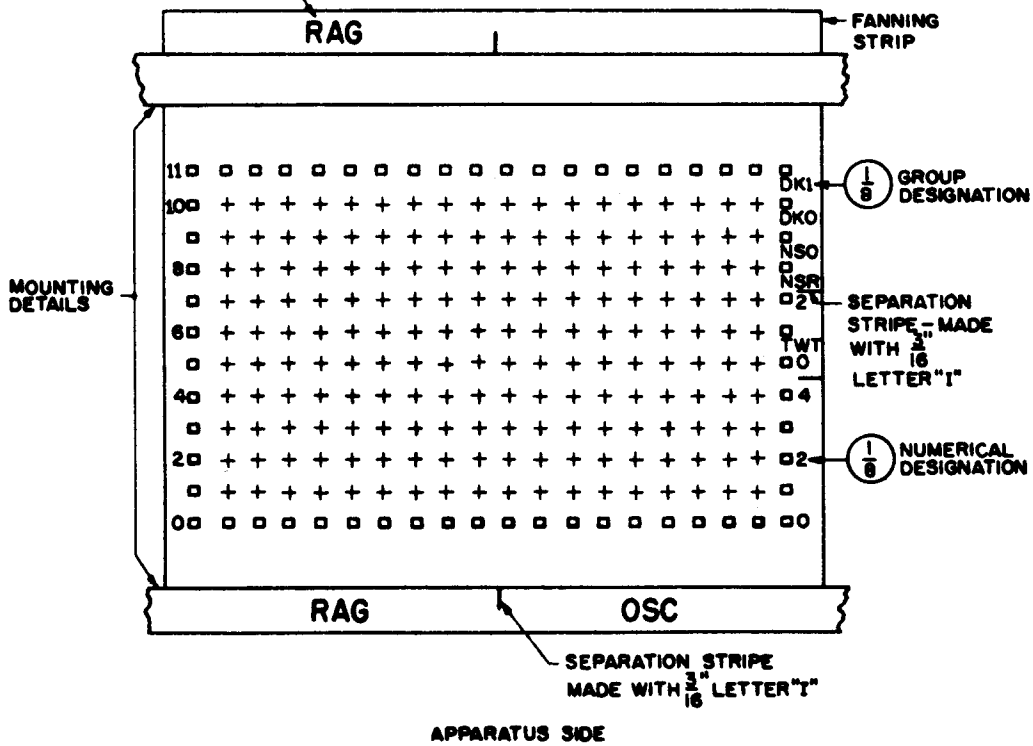


Fig. 68—Terminal Strips—256 Type

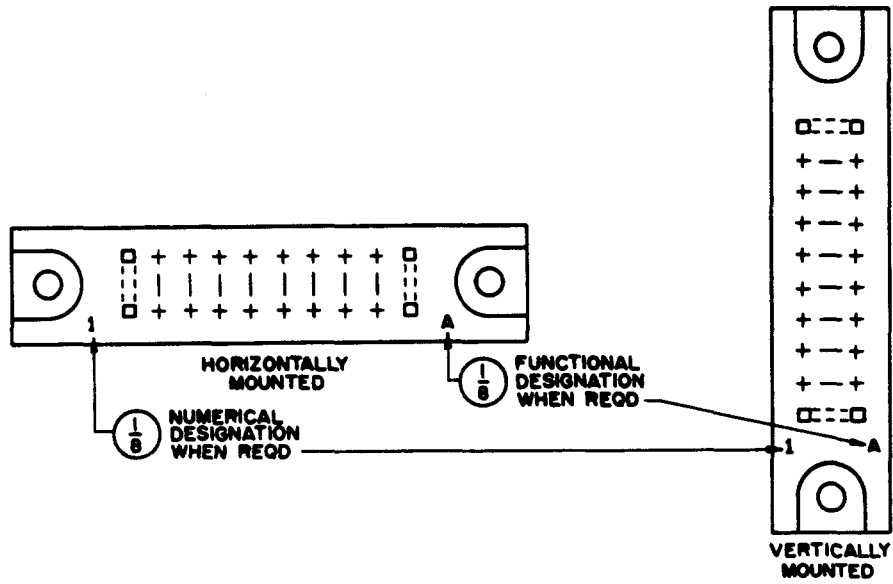


Fig. 69—Terminal Strips—259, 280, 276, 277, 284, 285, and Similar Types

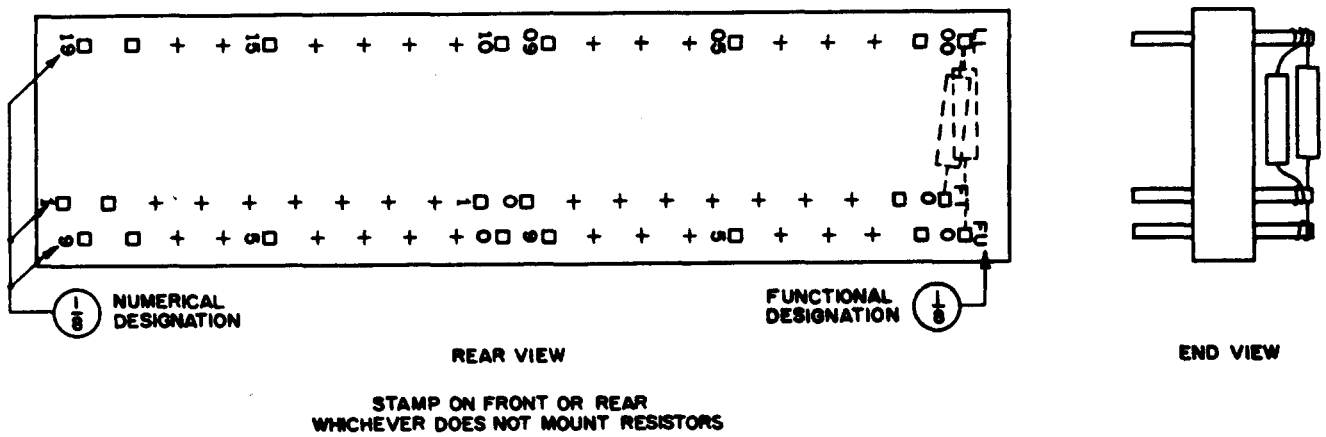


Fig. 70—Terminal Strips—260 Type for Mounting Pigtail Components

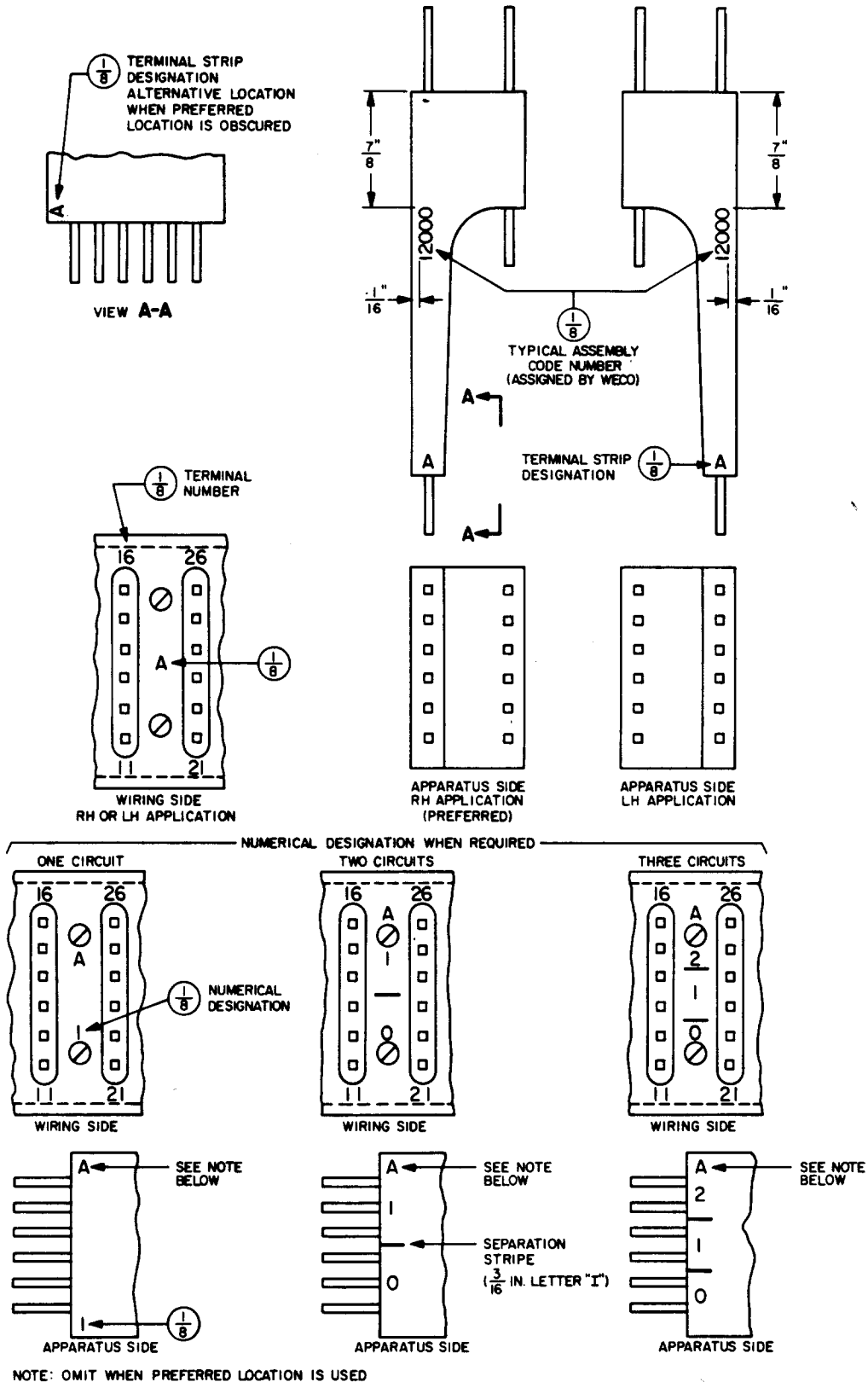


Fig. 71 — Terminal Strips — 278 Type for Mounting Pigtail Components

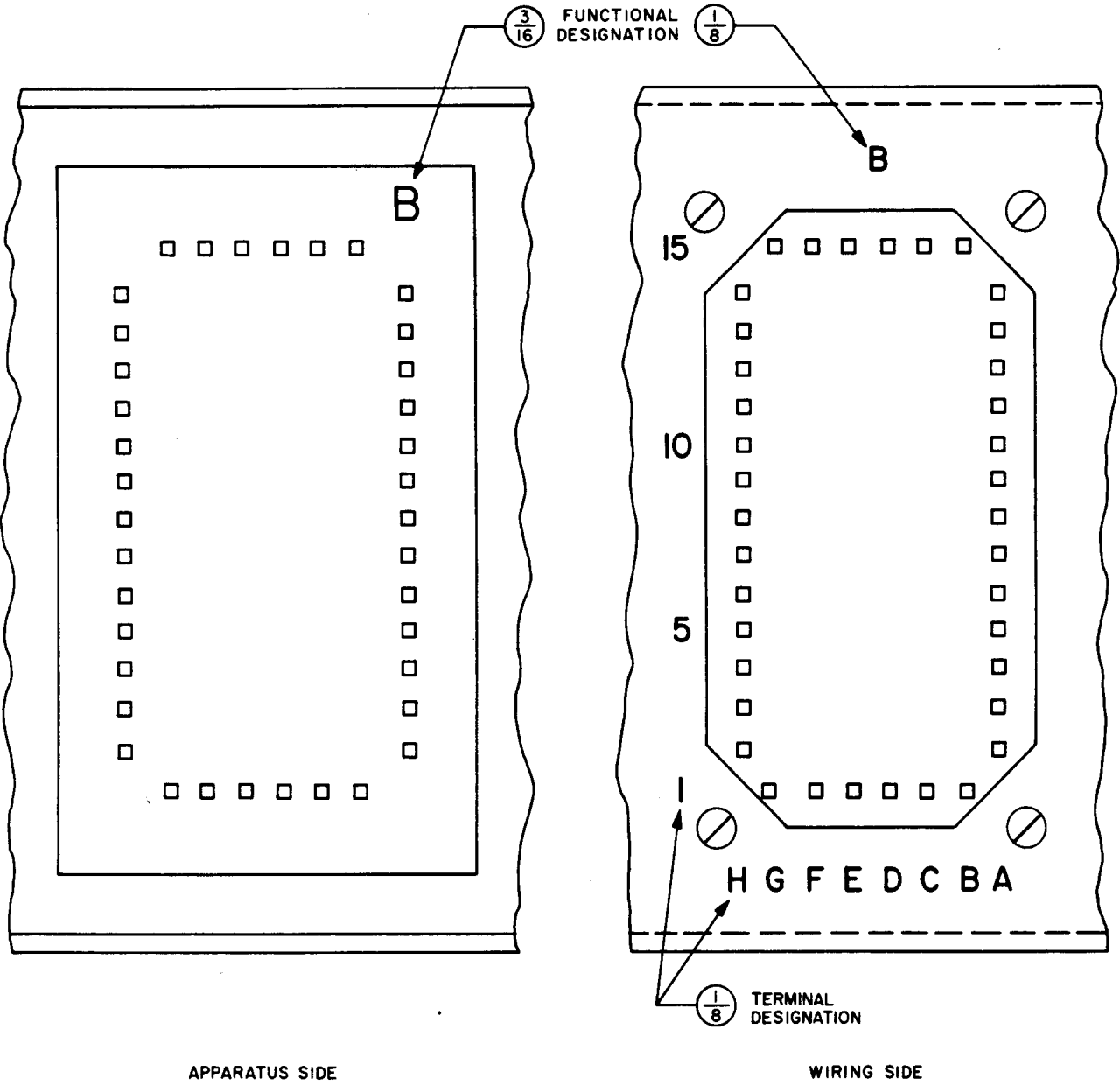


Fig. 72—Terminal Strips—296 and Similar Types

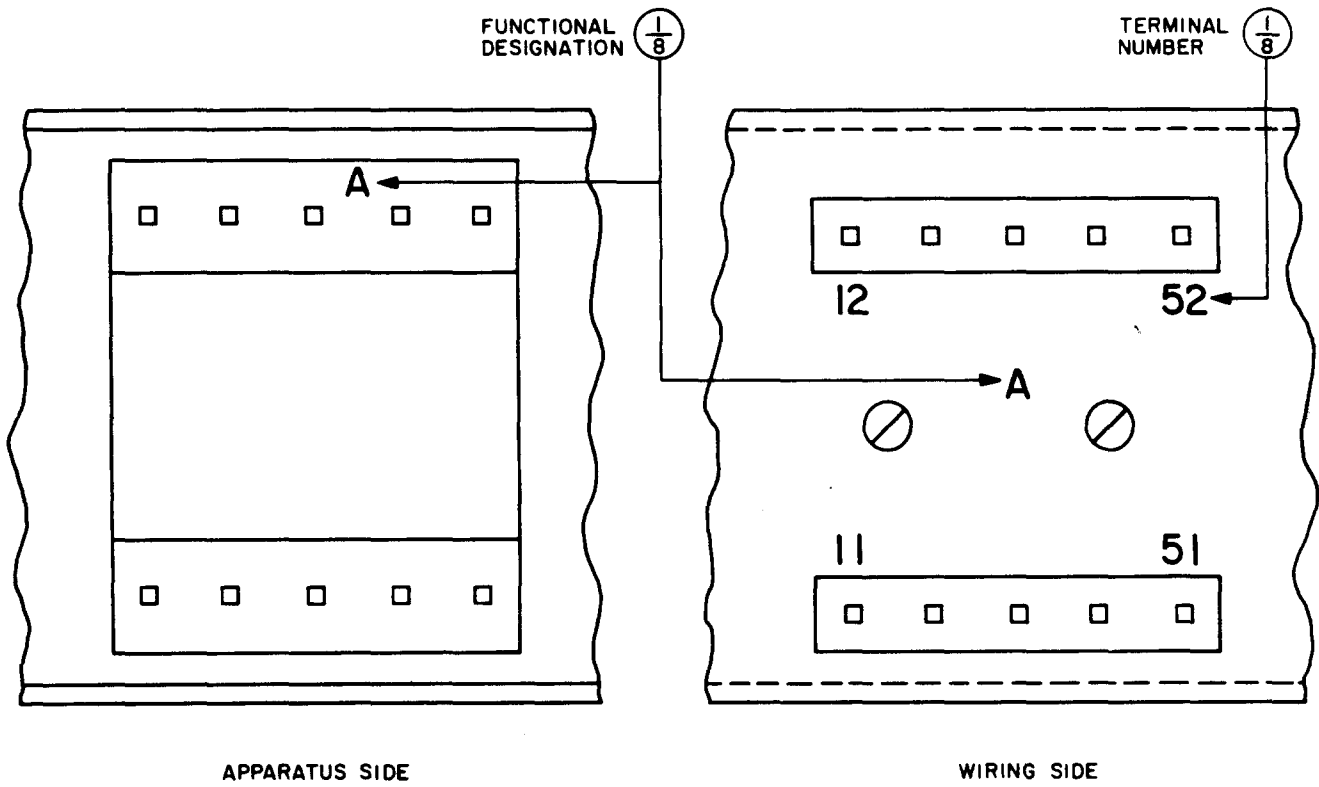


Fig. 73—Terminal Strips—304 Type for Mounting Pigtail Components

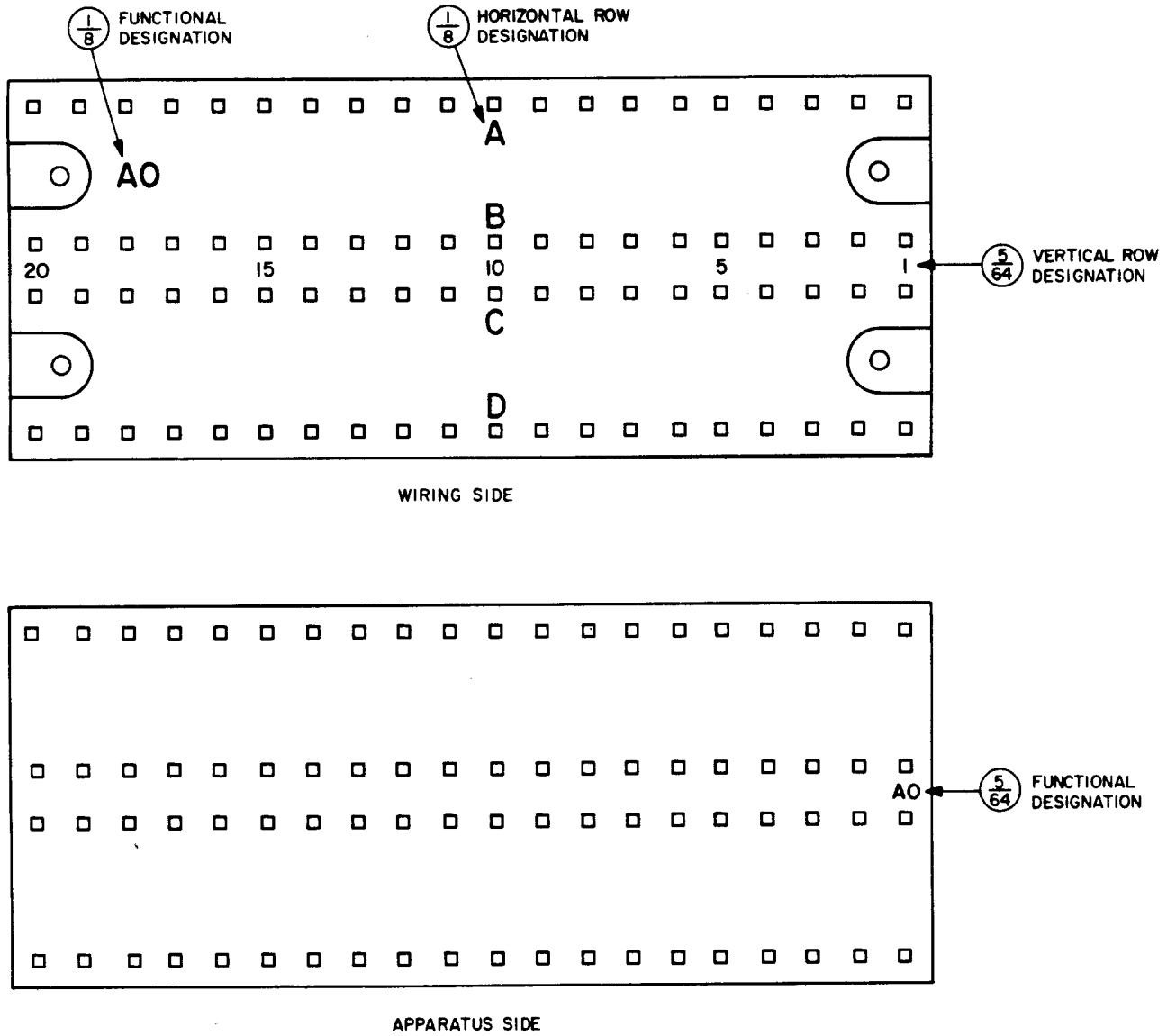


Fig. 74—Terminal Strips—307 Type for Mounting Pigtail Components

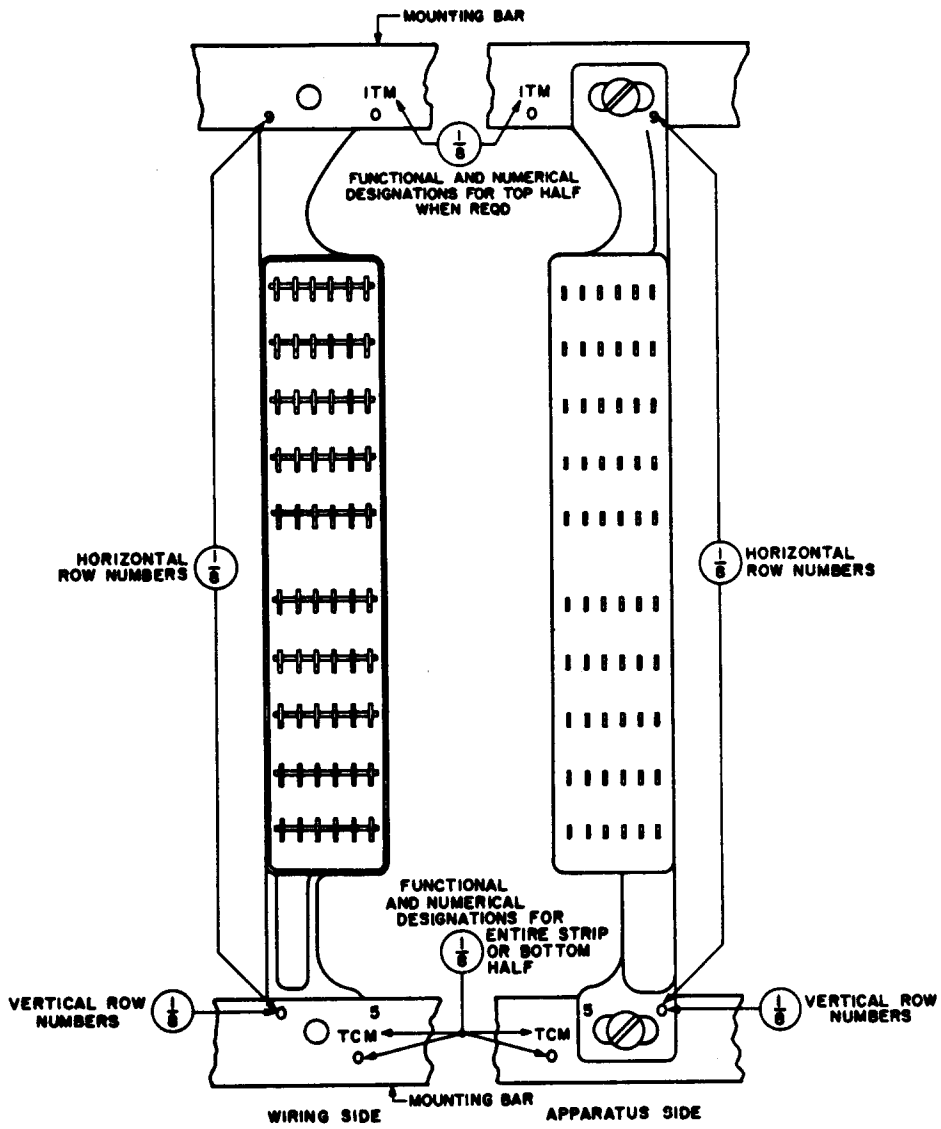


Fig. 75—Terminal Strips—CA6A and Similar Types



(2) No figures are shown that are applicable to horizontally mounted terminal strips with circuit arrangements requiring designations for interior rows of terminals. On horizontally mounted terminal strips with face of the terminal strip facing front or rear of the frame, functional designations are stamped on the top side only. On these strips, designations for an interior row should be stamped at the right of the row and the adjacent right-hand row left unequipped. On horizontally mounted strips with the ends of the terminals facing the front and the rear of frame, functional designations are stamped on both sides. Circuit arrangements requiring stamping for interior rows should be avoided on such strips since provision of an unequipped row of terminals will prevent hiding the designations on only one side of the strip. On the other side of the strip, the leads enter on the opposite side of the terminals.

(e) The stamping of *four* 1/8-inch characters across the side of the 3/8-inch clamping strip space shall be a staggered 2-line arrangement as shown in Fig. 39.

(f) The code mark area on cast resin-type terminal strips is not suitable for stamping, and no designations should appear in this area.

#### B. Location of Stamping

**2.34** The stamping is located as follows:

(a) *Strips with the face of the terminal strip facing the front or the rear of the equipment* shall be stamped, as shown in Fig. 29, on the face of the terminal strip. When these strips are mounted horizontally, they shall be stamped on the top side. When mounted vertically, they shall be stamped on both sides.

(b) *Strips with the ends of the terminals facing front and rear* shall be stamped on both sides (Fig. 30).

#### C. 137- and 163-Type Terminal Strips

**2.35** *On 137- and 163-type terminal strips*, stamp the designations applying to the circuits in accordance with the general figures. When these termi-

nal strips are part of step-by-step bank multiple equipment, stamp also the codes of the banks and the date of manufacture. Furthermore, when the bank multiple equipment is given a separate code, this code number shall be stamped (see Fig. 40). This does not apply to auxiliary terminal strips.

#### D. 165-, 180-, 270-, and 271-Type Terminal Strips

**2.36** *On 165-, 180-, 270-, and 271-type terminal strips*, which are part of step-by-step bank multiple equipment, stamp the codes of the banks, date of manufacture, and the equipment code of the bank multiple equipment as shown in Fig. 40.

#### E. 203- and 700-Type Terminal Strips

**2.37** Terminals on *203- and 700-type terminal strips* are considered as numbering from 1 up (1 through 8 or 1 through 16 depending upon the number of terminals) top to bottom when vertically mounted and left to right (facing the terminal strip) when horizontally mounted, but terminal numbers are not stamped. Functional and numerical designations, as required, shall be stamped for these strips as shown in Fig. 41. In equipment designs where the terminal strips are mounted so closely together that the designations cannot be stamped on the mounting plate, the designations may be omitted.

#### F. 218- and 232-Type Terminal Strips

**2.38** *On each 218- and 232-type terminal strip*, the horizontal rows of terminals are numbered 0 through 9 from bottom up and the vertical rows 0 up from right to left, facing the front as shown in Fig. 42, unless otherwise specified on the applicable equipment drawings.

#### G. 224-Type Terminal Strips

**2.39** *224-type terminal strips* shall be stamped as shown in Fig. 43, in accordance with the following.

(a) *When one functional designation* applies to all the terminals on a terminal strip, stamp the functional designation and terminal numbers on the apparatus side only (see Fig. 43, Part 1).

(b) *When two or more functional designations* are required on a terminal strip, stamp the functional designations on both apparatus and wiring sides. Stamp the terminal numbers for the first and last terminals, for the first set of terminals only, on both apparatus and wiring sides (see Fig. 43, Part 1).

(c) *When two or more terminal strips having different functional designations* are required on a unit, and each functional designation applies to all the terminals on the individual terminal strip, stamp the functional designation on both the apparatus and wiring sides. Stamp terminal numbers for the first and last terminals of the top and bottom sets of terminals on the apparatus side only of each terminal strip (see Fig. 43, Part 1).

(d) *When two or more terminal strips having the same or different functional designations* are required on a unit and consecutive numbering is used, stamp the functional designations and the terminal numbers on both the front and rear.

(e) *On equipments for which the drawings were prepared prior to January 1955*, where the terminal numbers are not shown, these numbers shall be considered as numbering from 1 up, left to right for both top and bottom sets of terminals as viewed from the apparatus side. In this case, no stamping of terminal numbers is required.

#### H. 251- and Similar-Type Terminal Strips

2.40 On 251- and similar-type terminal strips wired in accordance with tabular wiring diagram data, terminals are grouped into sections and coordinately numbered in each section on both front and rear (Fig. 62). But terminal strips used for maintenance cross-connections are coordinately numbered on the rear and functionally designated on the front.

#### I. D-Type Terminal Strips

2.41 *D-type terminal strips* (D1A, etc) shall be stamped as shown in Fig. 44 through 47 in accordance with the following.

(a) *Coordinate Numbering*: This pattern of numbering is the standard for D-type terminal strips. Terminals are numbered by vertical

rows, bottom up for each row of eight terminals beginning with numbers 11, 21, 31, etc. The rows (11 through 18, 21 through 28, 31 through 38, etc) are numbered from right to left as viewed from the apparatus side (see Fig. 44 and 45).

(1) When a single terminal strip is provided per circuit on a multicircuit unit and the terminal strips are located in a group or separated by components, terminal numbering for each terminal strip shall be stamped.

(b) *Growth of Terminal Strips (coordinate numbering)*: Where two or more terminal strips are required for a single circuit, the terminal numbering shall grow from the right-hand end of the mounting plate or unit facing the apparatus side. In this case, terminal strip designations are not required.

(1) Where two or more circuits, employing two or more terminal strips per circuit, appear on the same mounting plate or unit, terminal strip designations such as A,A,B,B, or circuit numbers 1,1,2,2, etc, shall be assigned. The terminal numbering shall read from right to left (facing the apparatus side) starting with row 11 through 18, for each circuit and progressing across all terminal strips bearing the same terminal strip designation.

(c) *Consecutive Numbering*: This pattern of numbering is considered the exception to the rule and should be used only where existing designs are converted to use D-type terminal strips and it is not required to revise the associated schematic cabling diagrams to reflect new terminal number assignments. Terminals for this arrangement are numbered from right to left and bottom up beginning with 1 as viewed from the apparatus side (see Fig. 46).

(d) *Growth of Terminal Strips (consecutive numbering)*: Where two or more terminal strips are required for a single circuit, the terminal numbering shall read from bottom up on each terminal strip (see Fig. 46) and progress across all terminal strips within the circuit. The lowest-numbered terminal on each terminal strip shall always appear at the lower right terminal facing the apparatus side. Terminal strip designations are not required with this arrangement.

(1) Where two or more circuits, employing two or more terminal strips per circuit appear on the same mounting plate or unit, terminal strip designations, such as A, B, B, or circuit numbers 1,1,2,2, etc, shall be assigned. The terminal numbering shall be as outlined in 2.41(d) and progress across all terminal strips bearing the same terminal strip designation.

(2) Stamping for two circuits on one terminal strip shall be as shown in Fig. 47.

#### J. Other Types of Terminal Strips

**2.42 Other types of terminal strips**, as well as those covered in 2.35 through 2.41 shall be stamped in accordance with the respective figures listed in Table A.

#### THERMISTORS

**2.43 When 1- and similar-type thermistors** are attached to the terminals of other apparatus, their close association with this apparatus identifies them, and they are not generally designated. The functional designations are shown on the associated equipment drawing for wiring information only.

**2.44 The 26- and similar-type thermistors** shall be stamped in accordance with Fig. 76.

#### TIMERS

**2.45 The 1- and similar-type timers** on 51-type drives shall be stamped, as shown in Fig. 77. Stamp designations for the drive and for the respective timers, as required. Numerical designations are not required on the can cover.

**2.46 The 2- and similar-type timers** shall be stamped as shown in Fig. 77.

#### TRANSFORMERS

**2.47 The various types of transformers** shall be stamped in accordance with the respective figures listed in Table B.

TABLE A

FIGURE REFERENCES FOR VARIOUS TYPES OF TERMINAL STRIPS

TYPE	FIG.	TYPE	FIG.	TYPE	FIG.
137	40	243A	51	D4A	44,45,46,47
157	41	244	51	D5A	44,45,46,47
159	41	245A	51	H4A	49
160	41	247	50	BB3A	53
163	40	248	53	BB4A	53
165	40	251	62 thru 66	BB5A	53
170	41	252	67	BB6A	53
180	40	255	63	BB7A	53
181	41	256	68	BB8A	53
190	50	259	69	BC2A	54
191	51	260	70	BD4A	53
203	41	267A	51	BK3A	51
206	51	270	40	BK6A	51
207	51	271	40	BK6B	51
208	51	276	69	BL4A	51
209	50	277	69	BL7A	51
212	48	278	71	BM2A	51
215	51	280	69	BM5A	51
216	52	284	69	BN2A	51
217	53	285	69	BN3A	51
218	42	296	72	BN5A	51
221	48	303	62 thru 66	BN6A	51
223	53	304	73	BP5A	51
224	43	307	74	BR5A	51
226	51	700	41	BT6A	58
227	49	A4A	41	BU6A	59
229	55	A6A	41	BW6A	60
230	55	B4A	41	BY6A	61
234	51	B6A	41	CA6A	75
235	51	B7A	41		
236	50	B8A	41		
237	56	C4A	49		
238	57	D1A	44,45,46,47		
240	48	D2A	44,45,46,47		
242	48	D3A	44,45,46,47		

TABLE B

## FIGURE REFERENCES FOR VARIOUS TRANSFORMERS

TYPE	* FIG. NO.	TYPE	* FIG. NO.	TYPE	* FIG. NO.	TYPE	* FIG. NO.				
5	A	79	295	I	80	513	O	80	670	I	82
6	A	79	298	I	80	514	O	80	671	I	80
14	A	80	299	I	80	516	O	82	673	I	82
15	A	80	319		80	517	O	82	674	I	80
16	A	80	321		80	518	O	82	675	I	80
17	A	80	338		80	521	O	80	676	I	80
18	A	80	340		83	526	O	82	677	I	80
21	A	80	344		80	527	O	80	678	I	82
22	A	80	349		83	529	O	83	2000		83
23	A	82	351		80	530	O	82	2003		79
104	O	79	352		80	531	O	82	2004		83
106	O	81	353		80	534	O	82	2005		80
109	O	79	354		83	535	O	80	2006		80
116	O	79	358		83	536	O	82	2008		80
122	O	79	359		80	537	O	82	2013		83
123	O	79	360		80	539	O	82	2014		80
125	O	79	361		83	540	O	80	2019		80
134	O	79	362		80	541	O	80	2024		80
135	O	79	363		84	542	O	80	2033		80
139	O	80	364		80	543	O	80	2036		83
144	O	80	365		80	600	I	80	2038		83
151	O	80	366		80	602	I	80	2041		80
154	O	80	367		80	603	I	80	2043		80
157	O	80	368		80	604	I	80	2044		80
161	O	80	369		83	605	I	80	2053		80
162	O	80	371		80	606	I	80	2059		83
163	O	80	372		80	607	I	80	2500		80
166	O	80	373		82	608	I	80	2502		85
168	O	82	374		83	609	I	80	2503		88
171	O	80	375		83	610	I	82	2505		82
173	O	80	376		83	618	I	88	2506		82
174	O	82	377		80	619	I	80	2507		82
177	O	80	379		80	620	I	80	2508		80
181	O	80	380		80	621	I	80	2509		85
184	O	80	381		84	623	I	80	2510		87
185	O	80	382		83	624	I	80	2511		87
186	O	80	383		83	625	I	80	2512		80
187	O	80	384		83	626	I	82	2516		83
189	O	80	385		83	627	I	80	2517		82
190	O	80	386		83	628	I	80	2518		82
193	O	80	388		80	631	I	80	2519		80
194	O	80	390		80	632	I	80	2520		80
195	O	80	392		80	633	I	82	2521		80
197	O	80	398		80	634	I	82	2523		82
199	O	80	399		84	635	I	80	2524		82
208	I	79	401		84	636	I	80	2525		83
213	I	79	402		80	637	I	80	2526		80
227	I	83	403		80	638	I	86	2529		82
231	I	79	404		83	639	I	87	2530		82
240	I	79	405		83	640	I	80	2531		82
241	I	79	406		80	642	I	80	2532		82
246	I	79	407		83	646	I	82	2536		82
255	I	80	408		80	647	I	80	2537		82
266	I	80	409		83	648	I	80	2538		82
270	I	80	410		83	649	I	80	2540		82
272	I	80	411		80	650	I	82	2541		80
274	I	80	412		83	651	I	84	2545		82
276	I	80	413		83	652	I	84	2546		88
277	I	80	414		83	653	I	84	2552		80
280	I	80	415		80	654	I	80	2563		80
281	I	80	418		82	656	I	88	2564		80
283	I	80	419		80	659	I	82	2589		82
285	I	82	420		80	660	I	83	2595		80
287	I	80	500	O	82	661	I	80			
288	I	82	503	O	82	663	I	84			
289	I	80	505	O	80	665	I	80			
291	I	80	506	O	80	666	I	80			
292	I	80	508	O	80	667	I	82			
293	I	80	509	O	80	668	I	80			
294	I	80	510	O	85	669	I	82			

\* - Key  
No Suffix - Trnsf  
A - Auto Trnsf  
I - Input Trnsf  
O - Output Trnsf

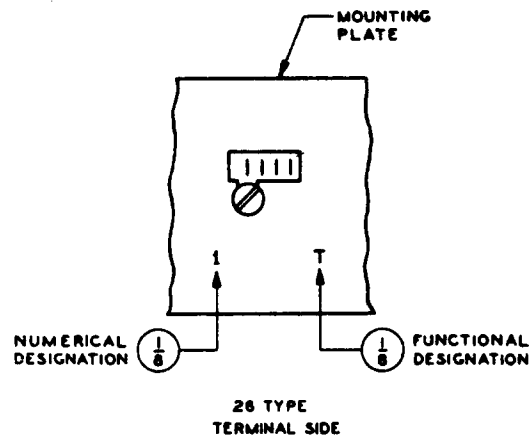


Fig. 76—Thermistors—26 and Similar Types

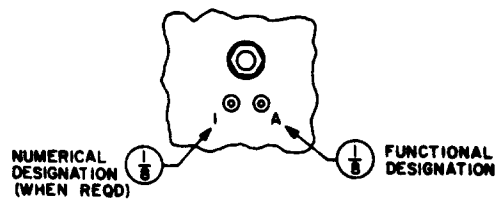


Fig. 77—Transistors—9 and Similar Types

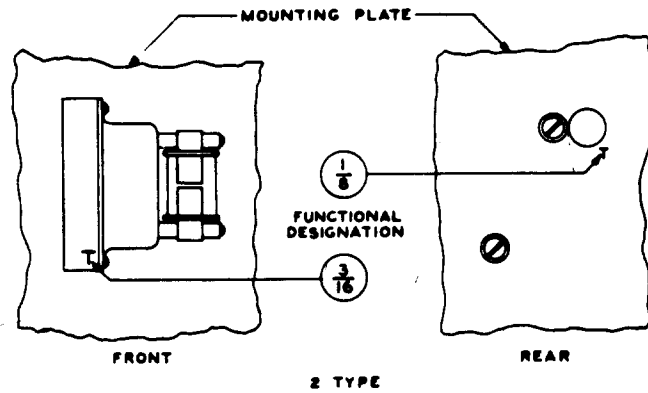
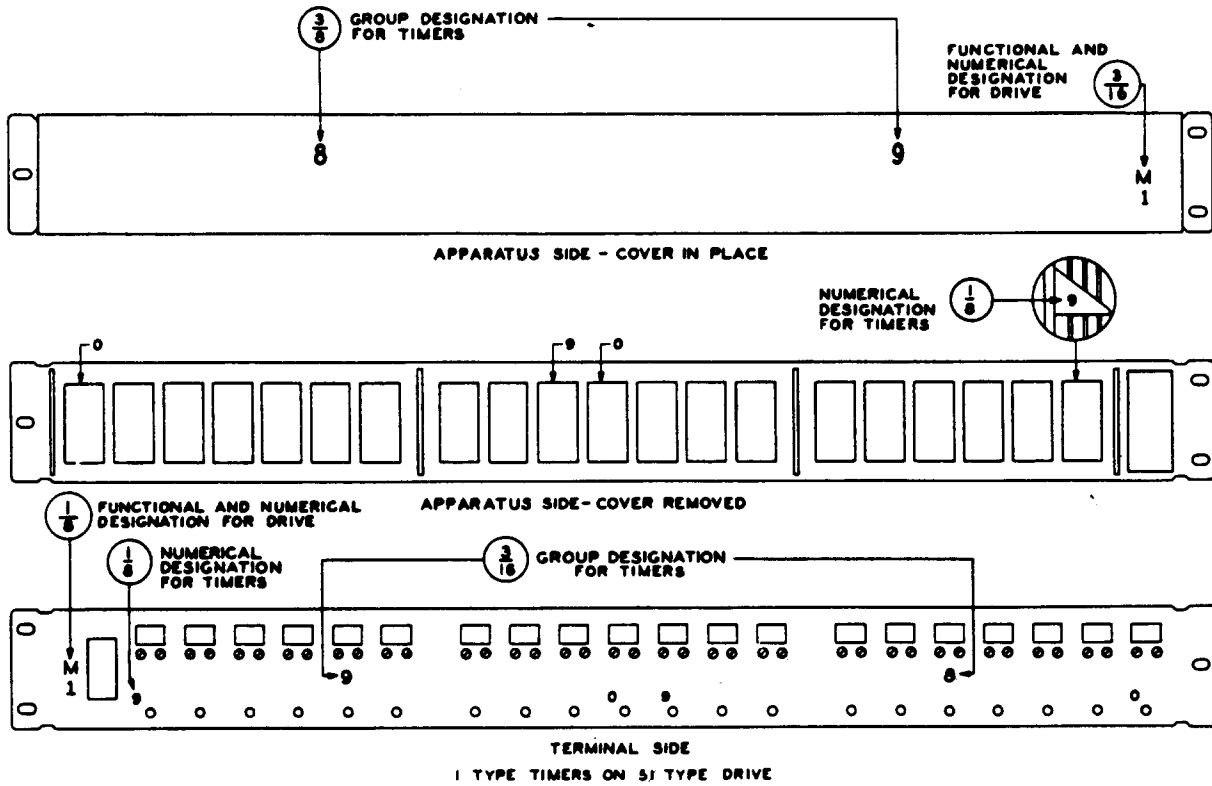


Fig. 78 - Timers—1, 2, and Similar Types

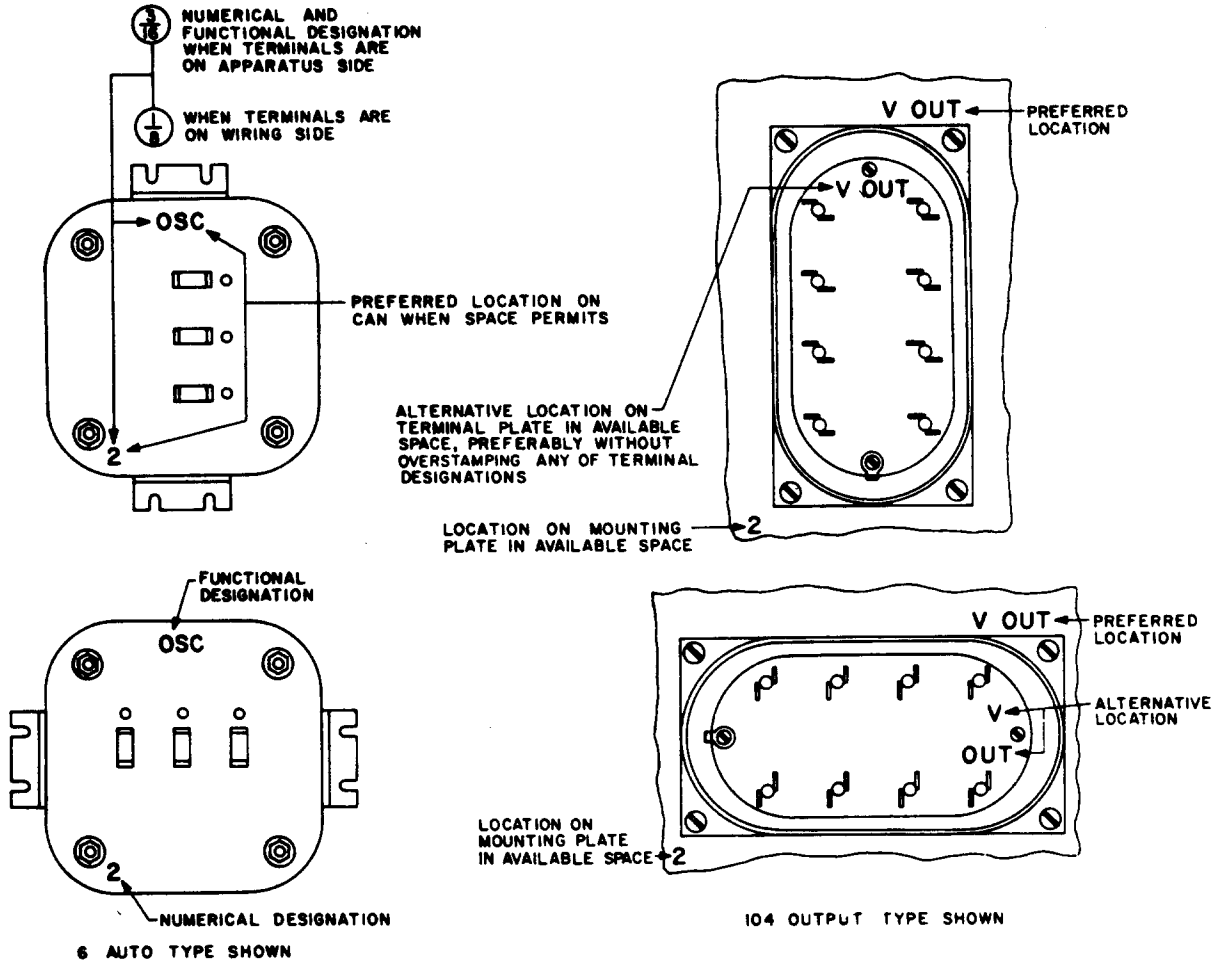


Fig. 79—Transformers—104 Output, 6 Auto, and Similar Types

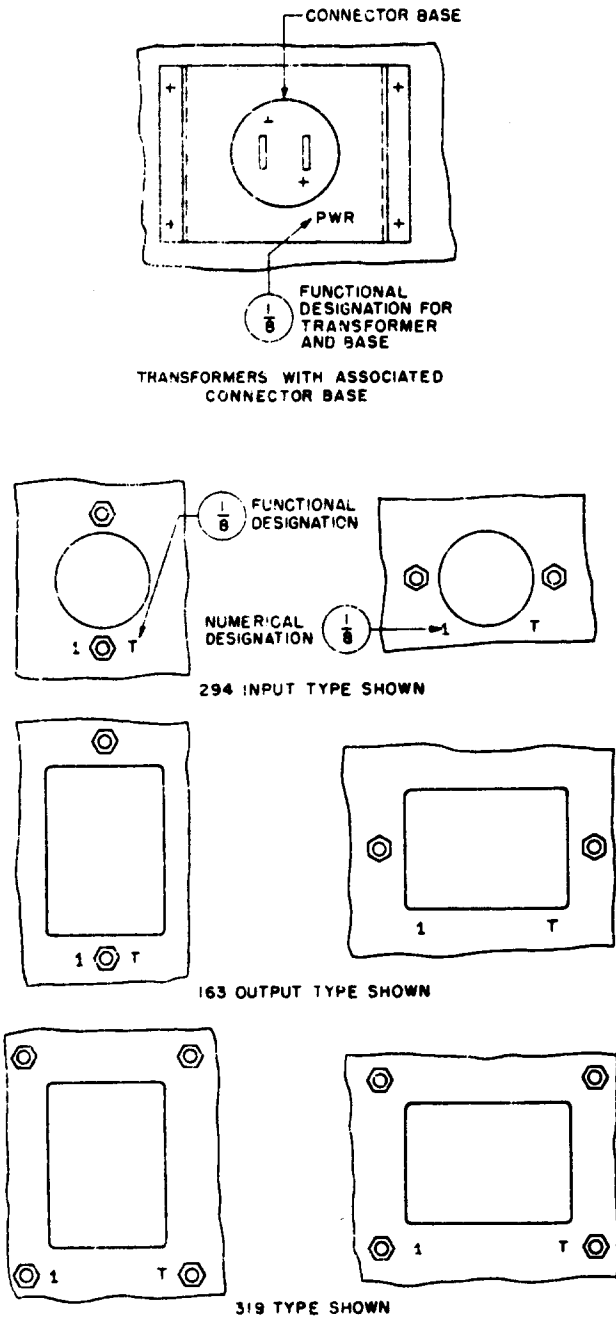


Fig. 80—Transformers—163 Output, 294 Input, 319, and Similar Types and Transformers With Associated Connector Base

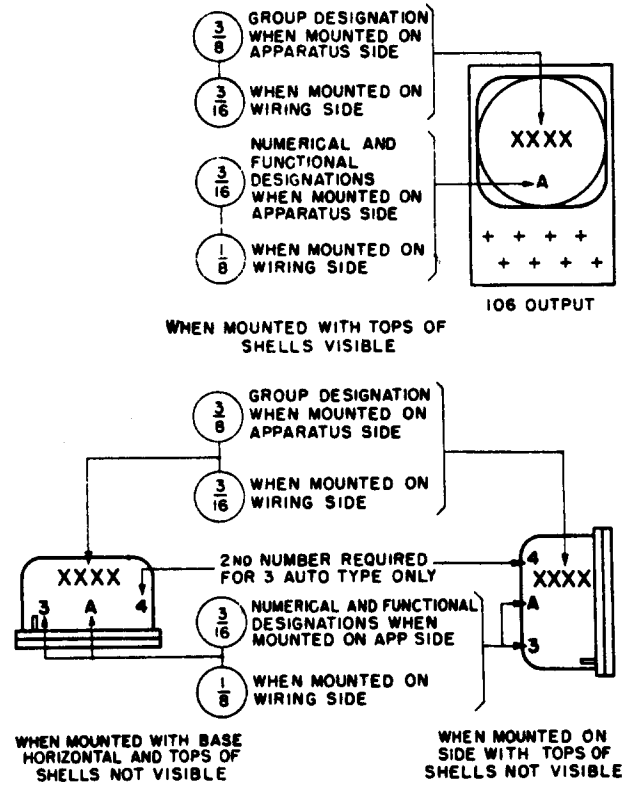


Fig. 81—Transformers—106 Output and Similar Types



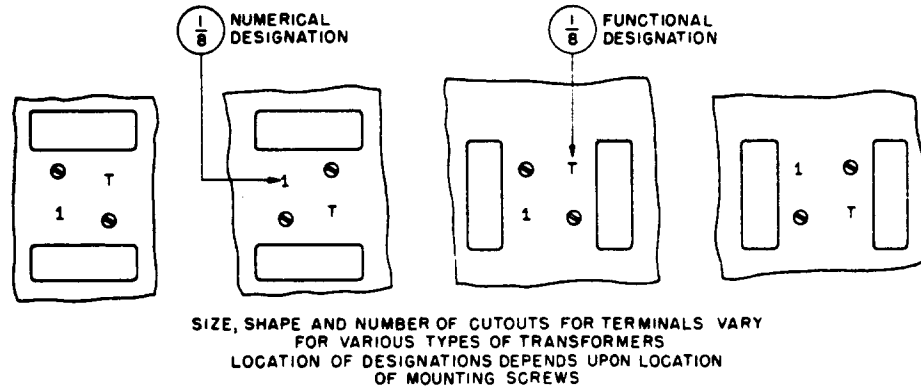
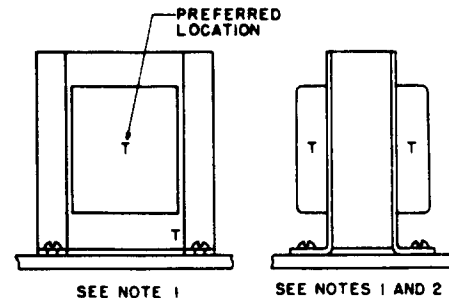
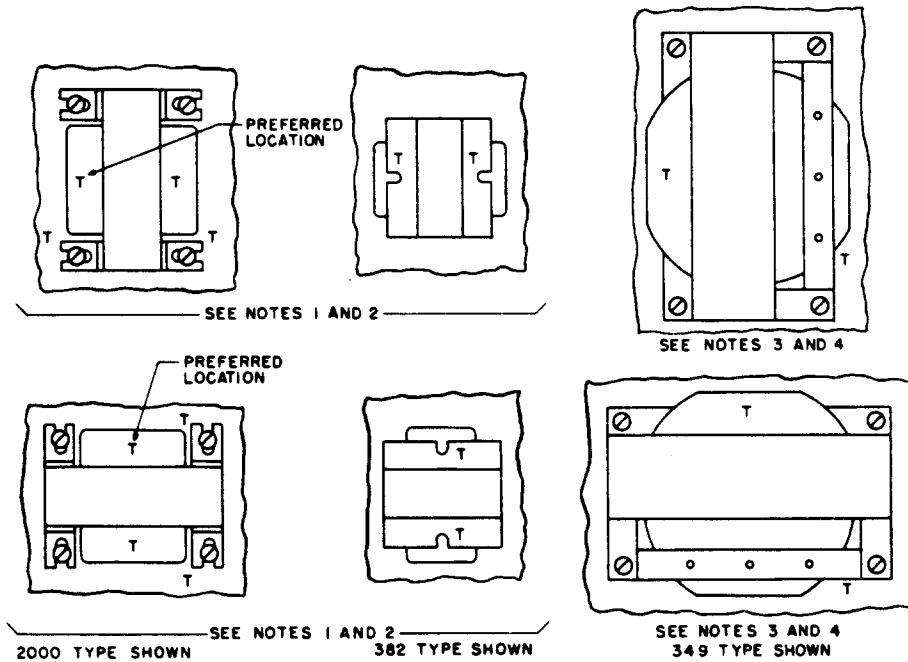


Fig. 82—Transformers—373 and Similar Types



- NOTES:
1. WHEN LEADS CONNECT TO ONLY ONE SIDE, STAMP PREFERABLY ON THAT SIDE.
  2. WHEN LEADS CONNECT TO BOTH SIDES, STAMP PREFERABLY IN TOP OR RIGHT-HAND LOCATION SHOWN IN RESPECTIVE VIEWS
  3. FOR TRANSFORMERS WITH SINGLE TERMINAL PLATE ON TOP, STAMP ON SIDE AWAY FROM PLATE, IF POSSIBLE, OTHERWISE ON PANEL ON SAME SIDE AS PLATE
  4. FOR TRANSFORMERS WITH TWO TERMINAL PLATES ON TOP, STAMP ON A TERMINAL PLATE, IF POSSIBLE, OTHERWISE ON PANEL ADJACENT TO TRANSFORMER.

WHEN MOUNTED ON WIRING SIDE STAMPING SHALL BE  $\frac{1}{8}$  INCH  
WHEN MOUNTED ON APPARATUS SIDE STAMPING SHALL BE  $\frac{3}{16}$  INCH

Fig. 83—Transformers—349, 382, 2000, and Similar Types

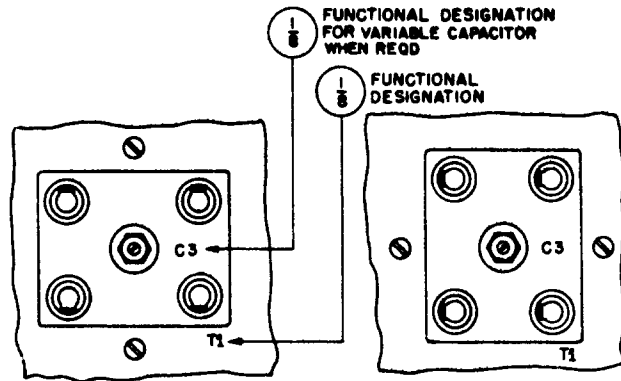
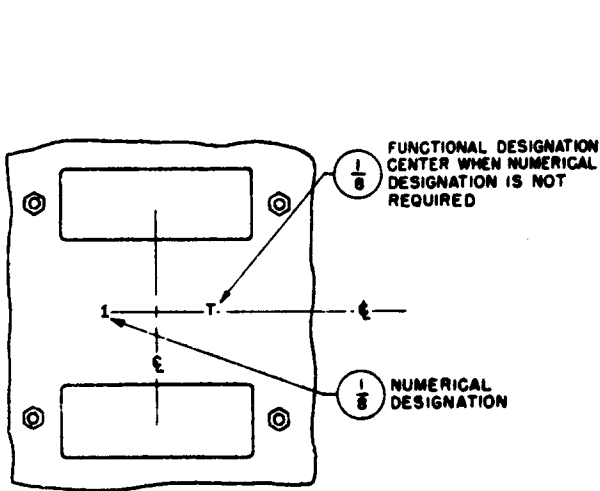


Fig. 86—Transformers—638 Input and Similar Types

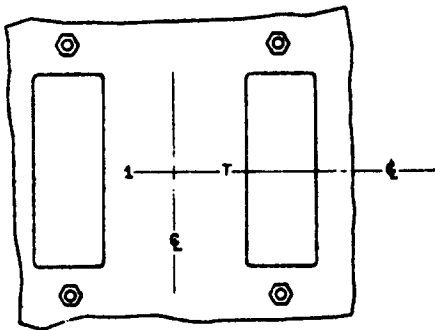


Fig. 84—Transformers—363 and Similar Types

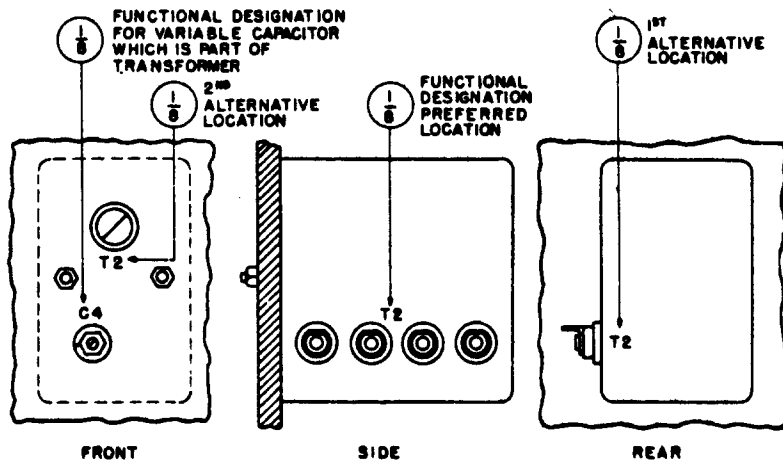


Fig. 87—Transformers—639 Input and Similar Types

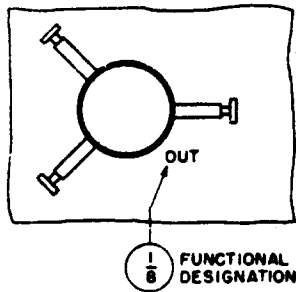


Fig. 85—Transformers—510 Output and Similar Types

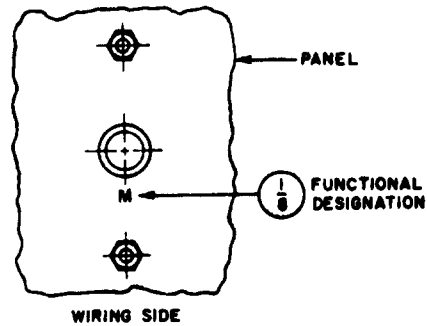


Fig. 88—Transformers—2503 and Similar Types

**TRANSISTORS**

**2.48** *When transistors are mounted by their wire terminals* attached to terminals of other components, their close association with these components identifies them, and they are not generally stamped. The functional designations are shown on the associated equipment drawing for wiring purposes only.

**2.49** *The 9- and similar-type transistors* shall be stamped on the wiring side only in accordance with Fig. 78.

**TUBES AND SOCKETS (ELECTRON)**

**2.50** *Electron tubes requiring sockets* shall be stamped as shown in Fig. 89. Where guards are provided around electron tubes, the code designation shall be stamped inside the guard and above the sockets. The functional designation shall be located outside and below the guard.

**2.51** *Electron tubes that do not require sockets* for mounting, such as 346 and similar types, shall be stamped on the wiring side only and code stamping not provided (see Fig. 89).

**UNITS, CRYSTAL**

**2.52** Crystal units shall be stamped in accordance with the requirements for electron tubes and sockets as set forth in this section when they resemble electron tubes. For crystal units that resemble capacitors, stamp in accordance with the requirements for capacitors as covered in Section 800-613-151.

**VARISTORS**

**2.53** Varistors are stamped as shown in Fig. 90.

When varistors are mounted by their wire terminals attached to terminals of other components, their close association with these components identifies them, and they are not generally stamped. The functional designations are shown on the associated equipment drawing for wiring purposes only.

**REASONS FOR REISSUE**

1. 1.01 is revised to exclude apparatus and equipment used exclusively with electronic type equipment.
2. 1.03, 2.14, 2.18, and 2.40 are added.
3. Fig. 10 is revised to show switch level numbers "9" in a lowered location on armature of first and last vertical switches.
4. Fig. 11, 15, and 62 are added.
5. 2.41 (formerly 2.38) is revised to add subparagraph (a)(1).
6. Tables A and B are brought up to date.
7. Fig. 71 is revised to show locations of multicircuit numerical designations.
8. Fig. 72, 73, and 74 are added.

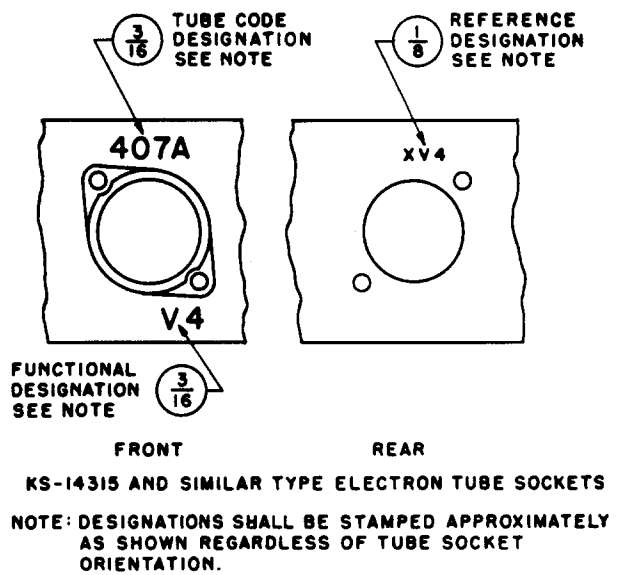
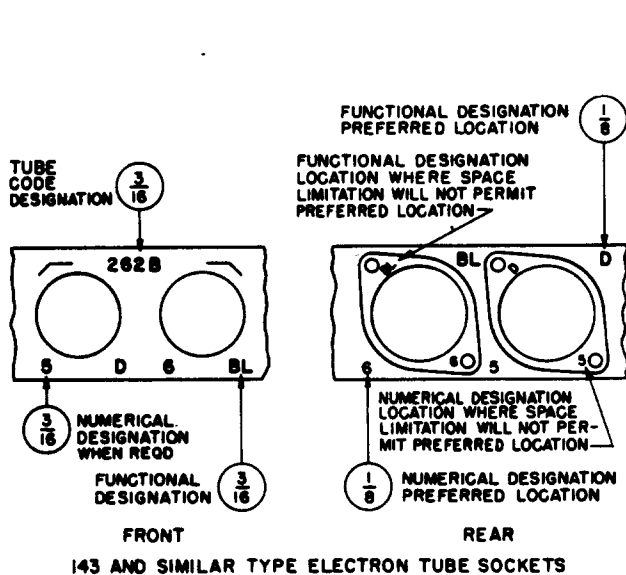
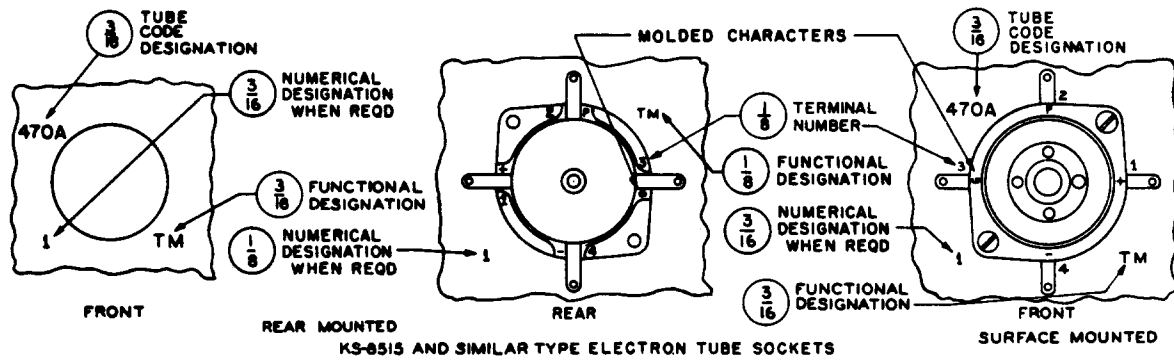
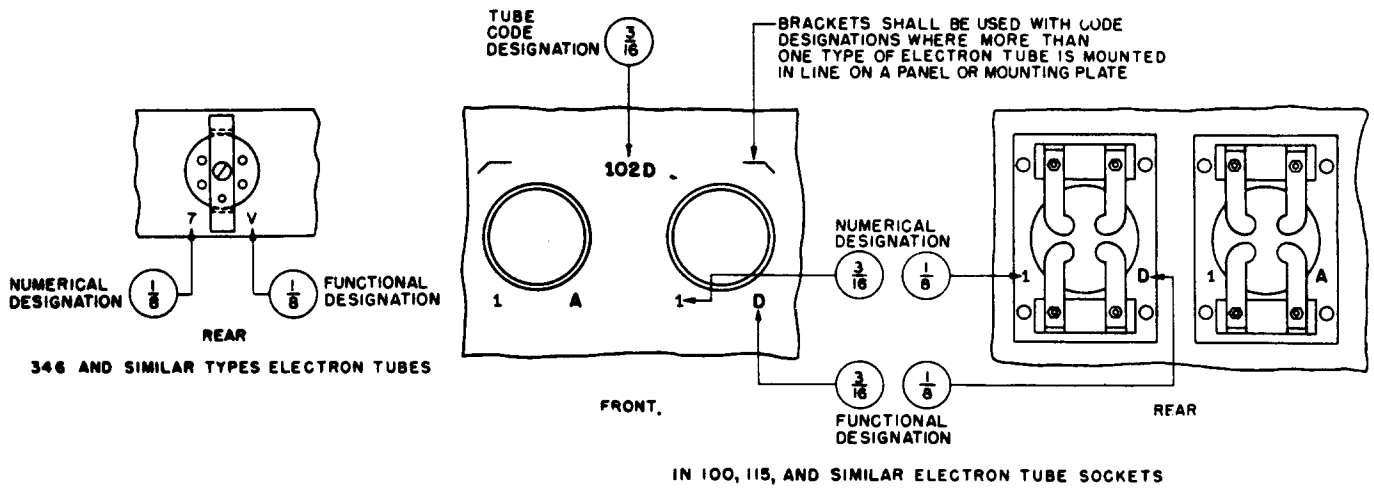


Fig. 89—Tubes (Electron)—346 and Similar Types—Tube Sockets (Electron)—100, 115, 141, 143, KS-8515, KS-14315, and Similar Types

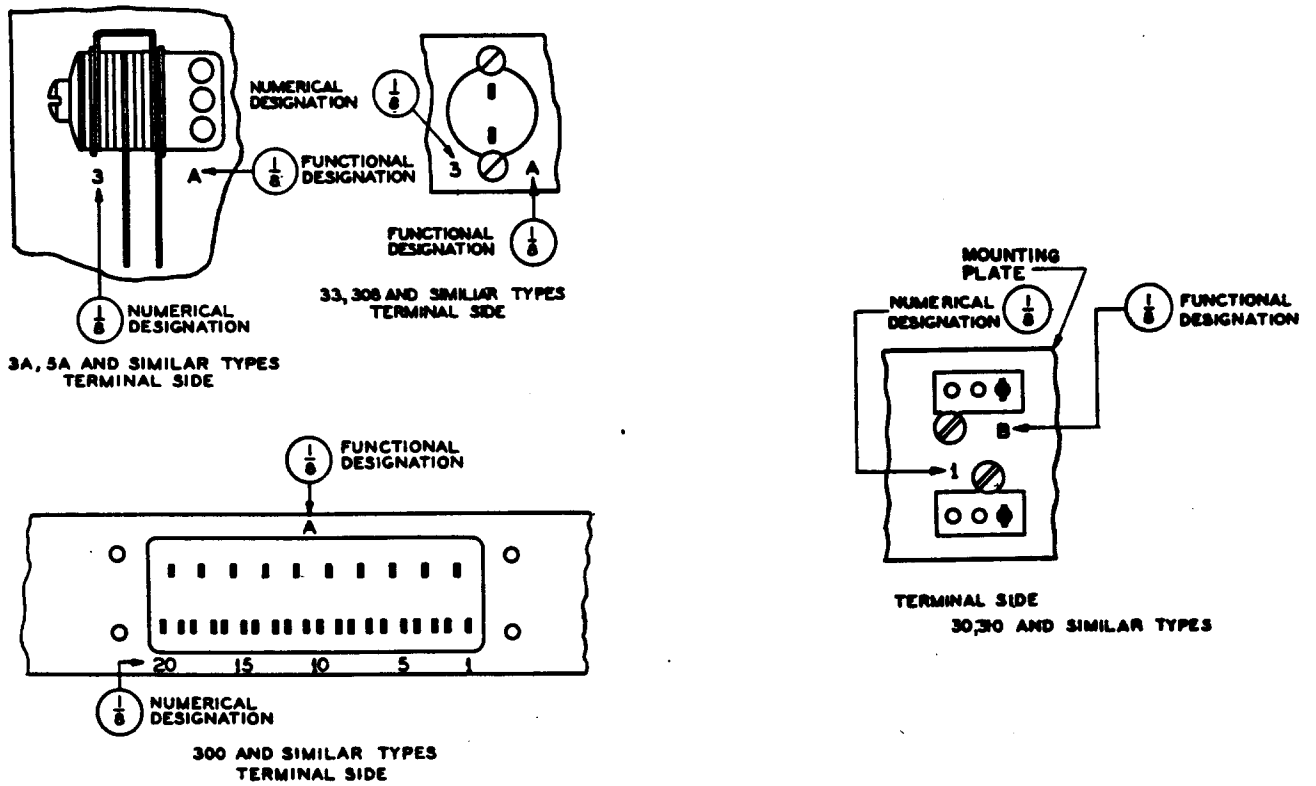


Fig. 90—Varistors—3A, 5A, 33, 300, 308, 310, and Similar Types