# SPECIFIC REQUIREMENTS FOR <br> APPARATUS AND EQUIPMENT — J TO Q (JACKS TO PROTECTORS) <br> NUMBERING AND LETTERING GENERAL EQUIPMENT REQUIREMENTS 

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## 1. GENERAL

## Scope

1.01 This section covers the specific requirements for numbering and lettering telephone apparatus and equipment classified alphabetically from $J$ to $Q$, exclusive of apparatus used only in the power plant in Section 800-613-160, and supplements the common requirements covered in Section 800-613-150.
1.02 This section is reissued to make changes which are listed under reasons for reissue at the end of this section.

## 2. SPECIFIC REQUIREMENTS FOR APPARATUS AND EQUIPMENT - J TO O

A. Jacks
2.01 General: Except as otherwise covered for specific applications, individually mounted jacks on plates, panels, mountings, etc, shall be stamped on the front and rear as shown in Fig. 1.
2.02 For jacks associated with relay equipment, the frequency of stamping and the location of designations for sets of jacks shall conform to the general requirements for relay equipment (see Fig. 2 and 3) with the following exceptions.


Fig. 1 - Jacks - Individually Mounted on Plates, Panels, Mountings, Etc
(a) When there are two or more sets of jacks in a row and all jacks in a set are identified by the same group or functional designations, stamp the group or functional designations once above the middle of the set and, when applicable to two or more jacks, use brackets to indicate the extent of the set.
(b) Numerical designations for two jacks per circuit shall be stamped below and midway between the two associated jacks for each circuit requiring numerical designations. (See Fig. 4.)
2.03 For jacks in jack fields, when designation strips are not provided, stamp the front of the mounting as covered below. When designation strips are provided, they may be used for supplementary job assignment information or when the applicable equipment drawing so specifies, for some or all of the designations that would otherwise be stamped on the face of the mounting. Due to the lack of space, wiring side stamping for jacks in jack fields is generally impracticable unless separate designation strips are provided between consecutive jack mountings. (See Fig. 7.) When required, wiring side stamping (on mounting or associated separate designation strip) shall be specified on the associated equipment drawing.
(a) Group or functional designations for sets of jacks may be stamped at the end of the mounting or above or below the jacks to which they apply, as shown in Fig. 5, depending upon the arrangement and assignment of the jacks involved and the location of space available for stamping.


Fig. 2 - Jacks Associated With Relay Equipment - One Jack per Circuit


Fig. 3 - Jacks Associated With Relay Equipment - Three or More Jacks per Circuit


Fig. 4 - Jacks Associated With Relay Equipment - Two Jacks per Circuit


STAMPING AT END OF MOUNTING USE $\frac{1}{8}$ IN. CHARACTERS UNLESS OTHERWISE SPECIFIED ON APPLICAELE EQUIPMENT DRAWING

STAMPING in miodle of set USE $\frac{1}{8}$ IN. CHARACTERS UNLESS OTHERWISE SPECIFIED ON APPLICABLE EQUIPMENT DRAWING

FRONT VIEW

Fig. 5 - Individually Mounted Jacks in Jack Fields - Group or Functional Designations
(1) When applicable to an entire row on a single-row mounting, stamp (a) at the left end of the row or (b) in the middle above the row.
(2) When applicable to only one row on a double-row mounting, stamp (a) at the left end of the row or (b) in the middle of the row above it if top row, or below it if bottom row.
(3) When applicable to both rows on a double-row mounting, stamp (a) at the left end centered between the rows or (b) in the middle above the top and below the bottom rows except where omission of stamping for bottom row is indicated in Fig. 5.
(4) When applicable to three or more rows, stamp for the top and bottom rows only per (1), (2), or (3) above as applicable.
(5) When applicable to part of a row on a single-row mounting and the row is divided into two parts, scamp (a) at left end if left part, or right end if right part, and use a limit line between the parts or (b) above the middle of the part and use brackets to indicate the extent.
(6) When applicable to part of a row on a double-row mounting and the row is divided into two parts, stamp (a) at left end if left part, or right end if right, and use a limit line between the parts or (b) in the middle of the part above it if in top row, or below if in bottom row and use brackets to indicate the extent.
(7) When applicable to part of a row on a single-row mounting and the row is divided into three or more parts, stamp in the middle above the part and use brackets to indicate the extent.
(8) When applicable to part of a row on a double-row mounting and the row is divided into three or more parts, stamp in the middle of the part above it if in top row or below if in bottom row and use brackets to indicate the extent.
(b) Numerical designations shall be stamped as shown in Fig. 6. Optional locations are shown for each of the various numbers of jacks per circuit that may be encountered.

The one used in any particular case will depend upon the location chosen for the group or functional designation and upon location of space available for stamping.
2.04 Strip-mounted Jacks, for example, 92type jacks in 113 jack mounting.
(a) In multiple pile-ups in the face of switchboards, etc, any designations required on the front are generally provided by engraving, steel stamping, or number plates, and designations shall not be stamped on the rear.
(b) In locations other than multiple pile-ups, designation strips are usually associated with the jacks (for example, crossbar originating trouble indicator frame and step-bystep sender and identifier test frame), and designations shall be stamped on the rear of the designation strips as shown in Fig. 7.
2.05 Jacks in jack boxes or in box-type jack mountings, such as service-observing jacks and plugging-up, test, and talking-trunk jacks on distributing frames, shall have the designations stamped only on the front as shown in Fig. 8 and 9 except as follows:
(a) Jacks in jack mountings which are mounted on mounting plates shall be designated both front and rear as shown in Fig. 10.
2.06 For jacks mounted individually on jack panels or panel-type jack mountings, the group, functional, and numerical designations shall be stamped on the front and terminal side of the panel as shown in Fig. 11 and 15. Where these jack panels are mounted on subpanels in such a manner that one side is inaccessible after assembly, the designations shall be stamped on the accessible side only. Telephone set jacks in lockrails of switchboards are not designated.

### 2.07 298- and similar-type patching jacks used

 in the panel system shall be designated as shown in Fig. 12.2.08 348-, 349-, 350-, 357-, 366-, 459-, 467-, and similar-type jacks on step-by-step frames shall be designated as shown in Fig. 16.
(a) When used for switchman talking lines and only one line is furnished, the associated jack is not designated. When two


SEE NOTE I AND 3
THREE JACKS - HORIZONTALLY ARRANGED - PER CIRCUIT SKETCH D


| SEE NOTE 2 |  |
| :---: | :---: |
| FOUR JACKS - TWO IN TOP | AND TWO IN BOTTOM ROW - PER CIRCUIT SKETCH E |
| STAMPING OUTSIDE OF | STAMPING WITHIN |
| AREA EMBRACED BY JACKS | AREA EMBRACED BY JACKS |
| USE $\frac{1}{8}$ IN CHARACTERS | USE $\frac{1}{8}$ IN. CHARACTERS |
|  | FRONT VIEW |

Fig. 6 (Part 1)-Individually Mounted Jacks in Jack Fields Numerical Designations


SEE NOTES I AND 3
SIX, EIGHT, ETC. JACKS - EQUAL NUMBER IN TOP AND BOTTOM ROWS - PER CIRCUIT SKETCH F


SEE NOTES 2 AND 5
THREE, FIVE, ETC. JACKS - IN TWO ROWS - PER CIRCUIT SKETCH G

$$
\begin{aligned}
& \text { STAMPING OUTSIDE OF } \\
& \text { AREA EMBRACED BY JACKS } \\
& \text { USE } \frac{1}{8} \text { IN. CHARACTERS }
\end{aligned}
$$

STAMPING WITHIN
AREA EMBRACED BY JACKS USE $\frac{1}{8}$ IN. CHARACTERS

FRONT VIEW

NOTES

1. STAMP NUMERICAL DESIGNATION FOR FIRST,LAST, AND EACH INTERMEDIATE SET OF JACKS WHOSE CIRCUIT NUMBER IS MULTIPLE OF FIVE, IN EACH ROW.
2. STAMP NUMERICAL DESIGNATION FOR EVERY SET OF JACKS.
3. STAMP BRACKETS FOR EVERY SET OF JACKS.

4 STAMP LIMIT LINES ( $\frac{3}{8}$ LETTER I) between ADJACENT SETS OF JACKS.
5. STAMP EACH SET WITH LIMIT LINE ( $\frac{3}{8}$ LETTER I) AT THE END HAVING A VERTICAL paIR OF JACKS and bracket at the end with a single jack.

Fig. 6 (Part 21 - Individually Mounted Jacks in Jack Fields Numerical Designations


Fig. 7 - Strip-mounted Jacks and Lamp Sockets With Designation Strips


JACK BOX-VERTICALLY MOUNTED
Fig. 8 - Jacks in Jack Boxes


2OIA JACK MOUNTING
Fig. 9 - Jacks in Jack Mountings


Fig. 10-Jacks in Jack Mountings Mounted on Mounting Plates


Fig. 11 - Jacks in 215- and Similar-type Jack Mountings


Fig. 12 - Jacks - 298 and Similar Types


Fig. 13 - Jacks - 354, 395, 447, and Similar Types


Fig. 14 - Jacks - 448 and Similar Types
switchman talking lines are furnished, the respective jacks shall be designated 1 and 2 or with respective floor numbers as specified by the telephone company. When a toll talking line is furnished, the associated jack shall be designated 6 .
2.09 354-, 395-, 447-, and similar-type jacks shall be designated as shown in Fig. 13.
2.10 444-and similar-type jacks used for lines at distributing frames shall be designated as covered in Section 800-613-158.
2.11 448- and similar-type test jacks shall be designated as shown in Fig. 14.
2.12 506A and similar-type jacks shall be des-ゅ ignated as shown in Fig. 17.
2.13 On combined jacks and signals, stamp the circuit number of the first, last, and each intermediate set whose number is a multiple of five on the rear only as shown in Fig. 18.
2.14 Jack and test terminal panel designations shall be stamped as shown in Fig. 19.


Fig. 15 -Jacks Individually Mounted on Panels


357 A JACK


Fig. 16 - Jacks - 348, 349, 350, 357, 366, 459, 467, and Similar Types


Fig. 17 - Jacks - 506A and Similar Types


Fig. 18 - Combined Jacks and Signals - 23, 52, 55, and Similar Types


Fig. 19 - Jack and Test Terminal Panels
B. Keys
2.15 General: Designations required for the fronts of keys shall be stamped when they are not furmished as part of the key, on associated number plates, designation strips, etc, or included in engraving, silk screening, etc, of the panel. Designations for the wiring side shall be stamped on the panel, keyshelf, associated designation strip, etc. Designate the wiring side of keys which mount by means of screws on the front ( 479 type for example) only when the applicable equipment drawing so specifies. (See Fig. 20 through 26.)
(a) In providing designations on the wiring side, it is necessary for some types of keys (for example C1-type lever-operated keys), to stamp the designations adjacent to or in the same relative location as the respective spring pile-ups to which they apply. In such cases, designations on the terminal side will be on the opposite side of center from their positions on the lever side. (See Fig. 21.)

### 2.16 Keys in Keyshelves Associated With Numbered Cords - One Circuit per Key:

 The designations shall be stamped for the first, last, and each intermediate key whose associated cord number is a multiple of five, as shown in Fig. 22.
### 2.17 Keys in Keyshelves Associated With Numbered Cords - Two Circuits per Key or

Two Units per Mounting: Stamp the circuit numbers applicable to the first, fifth, tenth, etc, and last key in each row on the underside of the keyshelf nosing, as shown in Fig. 23 and 24.
2.18 Keys on Frames and Racks: The frequency of stamping keys on frames and ractes shall be in accordance with the requiremens: for relay equipment. Where keys are mounted on 831-or similar-type mounting plates, stamp the group, functional, and numerical designations, as required, on the common cover (terminal side) in a manner similar to stripmounted relays under a common can cover.

### 2.19 Functional or operational designations required for positions of twist-or lever-type

 keys shall be stamped in proximity to the respective positions of the button or lever as shown in Fig. 20 and 26.

VARIOUS KEY FRAME CONSTRUCTIONS REAR



Fig. 21 - Keys Associated With Miscellaneous Circuits


Fig. 22 - Keys — Single Row in Keyshelf - One Circuit per Key


Fig. 23 - Keys - Single Row in Keyshelf - Two Circuits per Key


Fig. 24 - Keys - Single Row in Keyshelf - Two Units per Mounting - Units Numbered Consecutively


Fig. 25 - Keys in Key Panel Associated With Miscellaneous Circuits


Fig. 26 - Keys - 479 and Similar Types With Key Levers

## C. Lamp Sockets

2.20 General: Designations required for the fronts of lamp sockets shall be stamped when they are not furnished on associated number plates, designation strips, etc, or included in engraving, silk screening, etc, of the panel. Designations for the wiring side shall be stamped on the panel, keyshelf, associated designation strip, etc. (See Fig. 27 to 29.)
(a) Designations for sockets for resistance and ballast lamps shall be stamped in accordance with requirements under "Resistance Lamps and Ballast Lamps" in Section 800-613-154.
2.21 Lamp sockets in keyshelves shall be designated on the underside of the keyshelf, adjacent to the lamp sockets, with designations corresponding to those used for the associated plugs on the top of the keyshelf. Where keys and lamps for each cord circuit are mounted in line, no designations are required for the lamp sockets since the key designations will serve for both.
(a) Where lamp sockets are arranged in a double row with five or more sockets per row and are associated with a double row of plugs each serving a separate circuit, designate the first, fifth, tenth, etc, and last pair of lamp sockets with the numbers of the asso-
ciated circuits, such as $1-2,9-10,19-20$, etc, as shown in Fig. 27.
(b) Where lamp sockets are arranged in a single row, one socket per circuit, or in two or more rows, two or more sockets per circuit, designate the first, last, and each intermediate socket or vertical row of sockets whose number is a multiple of five, with its associated circuit number as shown in Fig. 28.
2.22 Strip-mounted lamp sockets associated with designation strips, other than in multiple pile-ups, shall be designated on the rear of the designation strips as shown in Fig. 7. Examples of such lamp strips are the miscellaneous alarm lamps mounted in the upper portion of a switchboard panel, crossbar originating trouble indicator frame, and step-by-step sender and identifier test frame. Use $3 / 16$-inch characters for the group designations and 1,8-inch charac-


Fig. 27 - Lamp Sockets - Double Row in Keyshelf - One Socket per Circuit


Fig. 28 - Lamp Sockets - One or More Rows in Keyshelf - One or More Sockets per Circuit


Fig. 29 - Lamp Sockets - Individually Mounted


Fig. 30 - Lamp Mountings - Aisle and Exit Pilot Lamps
ters for the functional and numerical designations.
2.23 Aisle pilot and exit pilot lamp mountings shall be stamped on the front, and exit pilot lamp mountings shall also be stamped on both sides as shown in Fig. 30.

## D. Loading Coil Cases

2.24 Loading coil cases shall be designated in the same manner as repeating coils (see Section 800-613-154) having the same construction and mounting.

## E. Magnetic Counters

2.25 Magnetic counters per KS-7495 shall be designated as shown in Fig. 31.
2.26 Magnetic counters per KS-14359 shall be designated as shown in Fig. 3. These counters are furnished with leads of sufficient length to connect to a terminal strip mounted at the end of the plate. On the terminal side, designations for all counters on the plate shall be stamped adjacent to the terminal strip.
2.27 Magnetic counters per KS-16493 shall be $\leftarrow$ designated as shown in Fig. 33.
F. Message Registers
2.28 14- and similar-type message registers shall be designated as shown in Fig. 34.


Fig. 31 - Magnetic Counter per KS-7495


Fig. 32 - Magnetic Counter per K5-14359


Fig. 33 - Magnetic Counter per KS-16493


Fig. 34 - Message Registers - 14 and Similar Types
2.29 Line message registers permanently wired to subscriber line multiple terminal strips shall be stamped on the front of each register cap to indicate the number of its associated subscriber line as shown in Fig. 35. The full four digits shall always be stamped regardless of the number of digits in the line number, as for example, 0000, 0070, 0269, 3221, etc.

### 2.30 Line message registers wired to separate

 terminals, in order to provide flexibility in cross-connecting to subscriber line multiple terminal strips, are numbered serially and shall be stamped on the front of each register cap with its associated serial number as shown in Fig. 36. Only the number of digits in the actualserial number shall be stamped, as for example, 1, 2, 71, 269, 3221, etc.
2.31 Message registers to be recorded photographically shall, in addition to stamping per 2.29 or 2.30 , be designated on the register caps to indicate the extent of the block of registers covered by each camera exposure. A quadrant stamped with white ink on the corner of the register cap, as shown in Fig. 37, shall be used for this purpose. It is not necessary to stamp the quadrant on the first and last registers on the plate. The number of registers included within the quadrants ( 2 wide by 5 high or 5 wide by 5 high) is determined by the type of camera used by the telephone company for photographing the registers.
2.32 Rear of line message registers, 10 per plate, shall be stamped at the first and last register of each plate with the last digits of their numbers and with the hundred number at the center of the plate in accordance with Fig. 35 and 36 and the following:
(a) When numbered to correspond with subscriber numbers, the first and last register of each plate shall be stamped with the
last two digits of the subscriber line number, as for example, 00-09, 10-19, etc, to $90-99$. In addition, the full hundred number ( 0000,0200 , 2300 , etc) shall be stamped at the center of each plate as shown in Fig. 35.
(b) When serially numbered, the first and last register of each plate shall be stamped $1 \& 10,11 \& 20$, etc, to $91 \& 100$ respectively. In addition, for numbers over 100 , stamp the hundred number (100, 200, 1000, 1100 , etc) at the center of each plate. Omit the hundred number for registers 1 to 100 . (See Fig. 36.)

Note: The complete number of any register is obtained by adding the hundred number and the number identifying the register, as for example, $800+5=805,100+100=$ 200 , etc.

### 2.33 Rear of Line Message Registers, 20 per

Plate: For additions to old style racks having 20 registers per plate, designate in a similar manner to that covered in 2.32, except that each intermediate register whose number is a multiple of five shall be stamped as well as the first and last register of each plate.


Fig. 35 - Line Message Registers Permanently Wired to Multiple Terminal Strips


TERMINAL SIDE
Fig. 36 - Line Message Registers Wired to Separate Terminals for Flexibility in Cross-connecting


Fig. 37 - Message Registers Arranged for Photographic Recording


Fig. 38 - Message Registers Used As Traffic Registers and Permanently Connecfed or Cross-connected to Circuits

rear stamping not required when mounted in cabinet where wiring side is inaccessible
REAR
Fig. 39 - Message Registers Used As Traffic Registers and Having Associated Jacks for Patching to Circuits


Fig. 40 - Message Registers Mounted on Test Frames and Similar Equipment
2.34 Message registers used as traffic registers in connection with peg count, position register or group register, and similar circuits to obtain traffic data and mounted in a common location such as a cable turning section, traffic register rack, or traffic register cabinet, shall be stamped as follows:
(a) Registers permanently connected or crossconnected to the required circuits are numbered serially on register racks or carry numbers of the associated switchboard positions when in cable turning sections. Stamp numerical designation of each register on the front but of only the first and last register on each plate on the rear. Group designations, when specified, shall be stamped front and rear for the first and last registers of groups that do not occupy an entire plate, for the middle register of a group occupying one plate, and for the middle register of the top and bottom plates of a multiplate group. (See Fig. 38.)
(b) Registers associated with jacks for patching to required circuits are numbered serially. Stamp the complete number on the front of each register cap and the last digit only for the front of each patching jack. On the rear, when mounted on the traffic register rack, stamp complete register number for the first and last registers on the plate, as shown in Fig. 39. When mounted in a cabinet where the wiring side is not accessible, stamping on the rear is not required.


Fig. 41 - Networks - 152, 153, 155, 156, 160 to 164, 166, 168, 170, 171, 172, 188, 200, and Similar Types


Fig. 42 - Networks - 178, 179, and Similar Types


Fig. 43 - Networks - 165, 177, and Similar Types


Fig. 46 - Networks - 115 and Similar Types
2.35 Message registers mounted on test frames and similar equipment shall be stamped on the front and rear as shown in Fig. 40.

## G. Networks

2.36 The 115- and similar-type networks mounted on mounting bars shall be stamped on the front of the cover and also below the terminal groups when the cover is removed. On the rear, the designations shall be
stamped on the lower mounting bar. See Fig. 46.
2.37 Panel-mounted networks of the 152, 153, 156,160 to 164, 166, 168, 170, 171, 172, 188, 200, and similar types shall be stamped on the terminal side below the cutout for the terminals as shown in Fig. 41.
2.38 165-, 177-, and similar-type stud-mounted networks shall be stamped on the terminal side as shown in Fig. 43 except when mounted
on removable mounting plates for step-by-step switches, in which case they shall be stamped on the apparatus side as shown in Fig. 44.

### 2.39 Strap-mounted networks of the 178, 179,

 and similar types shall be stamped on the end opposite the terminals as shown in Fig. 42. For single-element apparatus, center the designation on the apparatus. For 2 -element apparatus, stamp designations toward the same side of the apparatus as the terminals of the respective elements. Stamp horizontally except where the length of the designation makes vertical stamping desirable for minimum interference with the steel-stamped apparatus markings.2.40 Foot-mounted balancing networks of the 402, 403, and similar types shall have the designations stamped as shown in Fig. 45.
H. Pads
2.41 Pads of the 1, 6, 7, and similar types shall be designated as shown in Fig. 47.
$\rightarrow 2.42$ Pads - 1 type mounted in a double row
$\rightarrow \quad$ shall be designated as shown in Fig. 48.

## 1. Pneumatic Ticket Distributing Systems

2.43 Roller receiving valve designations together with the vacuum, measured in inches of mercury, shall be stamped on the front


Fig. 47 - Pads - 1, 6, 7, and Similar Types
face of the valve body or on the exhaust chamber as shown in Fig. 51.
2.44 Hand receiving valves shall be designated on the mounting panel designation strip with the designation of the associated ticket tube and the vacuum, measured in inches of mercury.
2.45 Ticket tubes of the common return system shall have the tube designations stamped at the receiving valve end as shown in Fig. 51.

### 2.46 Ticket tubes in vertical and horizontal

 runs outside of switchboard sections shall have the tube designation stamped on the narrow edge of the tube as shown in Fig. 49. These designations shall be stamped, at the frequency shown, on the top edge of horizontal runs or on most readily visible edge when run is near ceiling or view of the top edge is otherwise obstructed and on whichever edge is more readily visible on vertical runs.

Fig. 48 - Pads - 1 Type Mounted in a Double Row


Fig. 49 - Ticket Tubes in Vertical and Horizontal Runs

receiving valve at top of jack field

receiving valve at bottom of jack field
Fig. 50 - Ticket Tubes Terminating in Switchboard Sections
2.47 Ticket tubes terminating in switchboard sections shall have the designation stamped near the valve as shown in Fig. 50.

## J. Potentiometers

2.48 KS-8680, KS-9335, and similar-type potentiometers shall be designated as shown in Fig. 52 and 53. When the potentiometer does not mount directly on the panel and the mounting does not provide a stamping surface adjacent to the potentiometer, designations for the terminal side shall be placed on the back of the potentiometer.

## K. Protector Mountings

2.49 Designations for 62- and similar-type protector mountings which mount fuses are covered in Section 800-613-152 under Fuses.


Fig. 51 - Roller Receiving Valves


Fig. 52 - Potentiometers - KS-8680, KS-9335, and Similar Types


Fig. 53 - Potentiometers - Stacked Arrangement

## L. Protectors

2.50 Designations for protectors are covered in Section 800-613-158.

## REASONS FOR REISSUE

1. 2.12 and Fig. 17 were added.
2. 2.27 and Fig. 33 were added.
3. 2.42 and Fig. 48 were added.
4. In 2.48 , Fig. 53 was added.
5. Fig. 10 was changed to show numerical designations, to relocate, and to add various functional designations.
6. Fig. 21 through 25,27 , and 28 were changed to show $3 / 16$-inch characters on terminal side.
7. Fig. 34 was changed to delete the 12-type message registers, since they are rated "Mfr Disc."
8. Fig. 44, title was changed to delete 181-type networks, since they are rated "Mfr Disc."
9. Fig. 47 was changed to delete the code stamping.
