

# **TTY STATION-INSTALLATION DRAWINGS**

## **GENERAL DESCRIPTION AND CONVENTIONS USED**

### **1. GENERAL**

1.01 This section describes the installation drawings provided for field use at teletypewriter stations, and the conventions used on the drawings.

1.02 This section is reissued to:

- (a) Describe the TTY station-installation drawings in the P90, P91, P95 and P96 series of Bell System Practices now used in place of the plan-type drawings for new and revised information on teletypewriter station arrangements.
- (b) Include information on the present color code of power supply cords.
- (c) Reorganize the material in simplified tabular form where possible.

The changes are so extensive that marginal arrows are not feasible.

1.03 The former method of showing station installation information was by means of plan-type drawings in the P30 series of Bell System Practices. Collection of the information for a particular station arrangement sometimes required reference to a number of sources scattered through several BSP sections. With the advent of the 26 teletypewriter a new and more convenient method was adopted. A separate drawing was provided for each distinctive station arrangement to show on one sheet all of the information needed for that station. This method is being used for the 28 teletypewriter. These drawings are designated as Bell System Practices and assigned numbers in the P90, P91, P95 and P96 series.

## 2. STATION-INSTALLATION DRAWINGS

2.01 Reference should be made to BSP Section P10.329, Numerical Index—TTY Station-Installation Drawings—for an index of the P90, P91, P95 and P96 series of drawings.

2.02 These drawings now cover station installation information on 26 TTY, 28 TTY, and recent 14 and 15 TTY apparatus.

2.03 These station-installation drawings are issued in 8-1/2 x 11-inch size, or in 11 x 17-inch size for the more complicated arrangements. They are arranged to be left at the station.

2.04 If a revision is required involving a major change in the connections, a new drawing with a new section number will be prepared rather than a reissue of an existing section. Existing drawings can be supplied as long as there is any use for them in the field.

2.05 Space is provided for entering the TWX number or other station identification so that the drawings will not be confused with the drawings covering other apparatus in the same office. In the older drawings there is also a space for entering the number of any auxiliary plans which may be used.

### Station-Assembly Drawings

2.06 Included in the P90 group are station-assembly drawings showing the methods of mounting the station equipment on the table.

### Station-Wiring Drawings

2.07 A separate complete station wiring drawing is provided for each distinctive service condition. The teletypewriter part of the wiring is indicated in a schematic form to permit the wiring to be traced through the machine.

## 3. TELETYPEWRITER APPARATUS WIRING

3.01 The detailed wiring of the teletypewriter units is given in various P sections, usually in the group associated with the particular type of apparatus. For example, the wiring of the 15 teletypewriter is given in Section P36.301. An index of the wiring sections is given under Wiring Diagrams in the alphabetical index, Section P10.200.

3.02 Information on internal wiring **variations** is given in the form of M-Plans in Section P30.411 for the 14 TTY and in Section P30.412 for the 15 TTY.

#### 4. PLAN-TYPE DRAWINGS

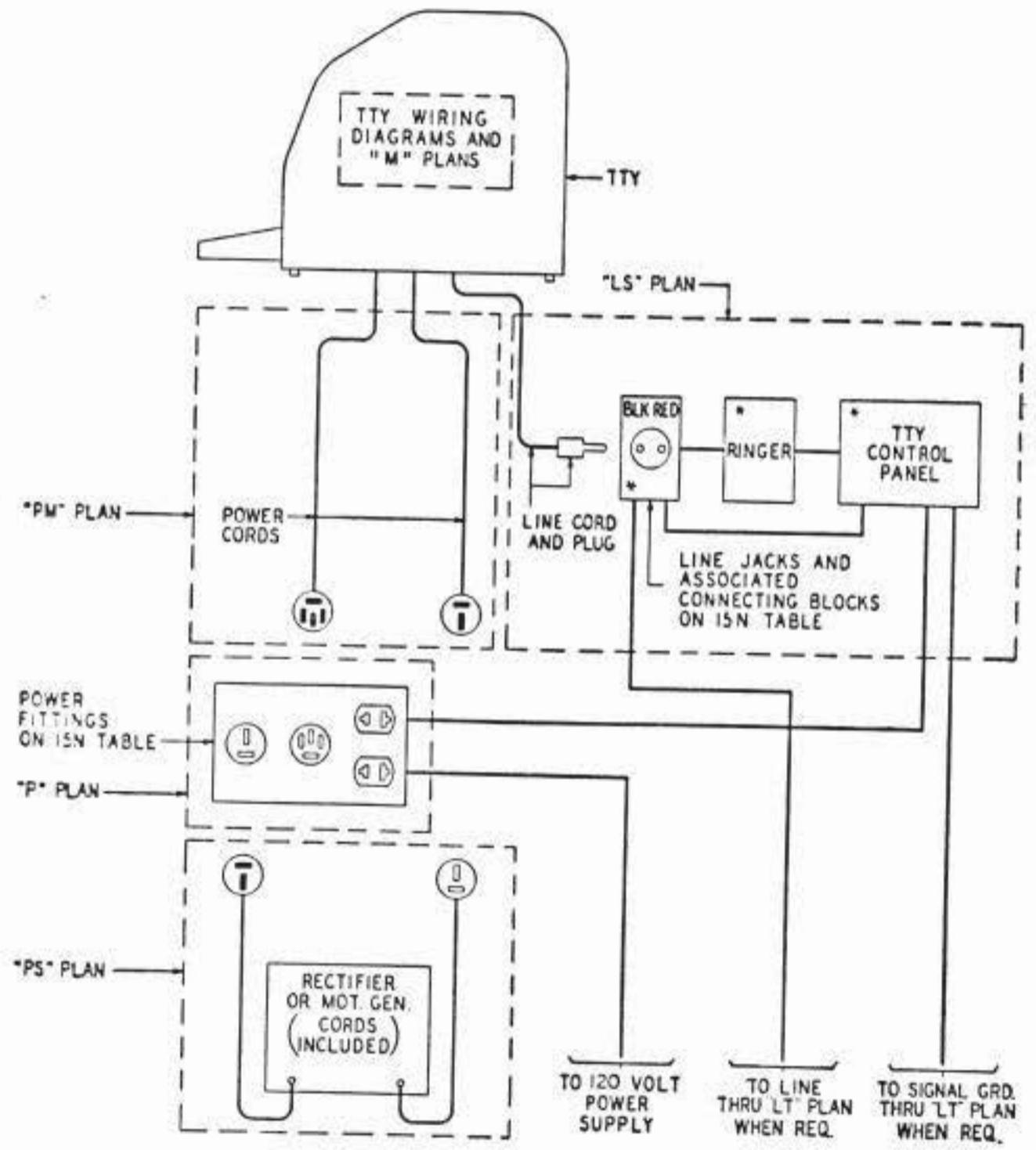
4.01 The older plan-type drawings are arranged on the basis of units of equipment and cover the subjects listed in the following table:

<u>SUBJECT</u>	<u>PLANS</u>
<b>Wiring Diagrams for TTY Units</b>	(See Alphabetical Index, P10.200)
<b>Internal Wiring Variations for TTY Units</b>	M
<b>Power Connections</b>	
To TTY Tables	P
To TTY Terminals	PM
Supplementary (Covering rectifiers and other power accessories used in connection with power wiring to tables)	PS
<b>Line Connections</b>	
Without Control Panels or Subscriber Sets	L
With Subscriber Sets	LS
<b>Line Termination—Terminating Subscriber Lines at Stations</b>	LT
<b>Station Assembly</b>	SA

4.02 Each of these plans is assigned an individual Plan Number for indexing and for reference purposes.

4.03 Fig. 1 is a diagram of a typical TTY station showing the application of various kinds of plan drawings and the relation between them.

**TYPICAL TTY STATION  
ARRANGED FOR TWX SERVICE  
WITH 15 TYPE TTY CONTROL PANEL  
SHOWING RELATION OF LS, M, P, PM & PS PLANS**



- NOTES:
1. CIRCUIT LABELS ARE FURNISHED WITH EQUIPMENT UNITS DESIGNATED (\*).
  2. AN "L" PLAN IS SUBSTITUTED FOR THE "LS" PLAN WHEN NO TTY CONTROL PANEL OR TTY SUBSCRIBER SET IS USED.
  3. "SA" PLANS COVER THE ASSEMBLY OF THE VARIOUS EQUIPMENT UNITS ON THE TTY TABLE.

**Fig. 1**

4.04 If a change in the internal wiring of the teletypewriter unit is required as compared with the wiring of the unit as manufactured, the title of a power-wiring plan or line-connection plan indicates the M-Plan number which is also to be used.

4.05 Changes involving the addition of sets of parts, such as a remote signal bell, are not covered in M plans but are covered in separate P sections or S specifications.

## 5. SUMMARY OF TTY STATION-INSTALLATION DRAWINGS

5.01 The following table summarizes for comparison the information covered by plan-type drawings and P90, P91 drawings.

<u>INTERNAL WIRING OF TTY</u>		<u>STATION INSTALLATION</u>
<b>OLD METHOD</b>	{Internal Wiring: See P10.200 {Wiring Variations: M Plans	Wiring: P, PM, PS, L, LS, LT Plans Assembly: SA Plans
<b>NEW METHOD</b>	{Internal Wiring: See P10.200 {Wiring Variations: M Plans	Wiring: P90, P91 Assembly: P90

5.02 The following is the skeleton numbering plan for BSP station-installation information:

### TTY STATION DRAWINGS

Station Wiring	P30.401 to P30.600
*Internal Wiring Variations	P30.411, P30.412
Station Assembly (SA Plans)	P30.650 to P30.700
Station Schematics	P30.701 to P30.800
Station Assembly	P90.001 to P90.100
Station Wiring	P90.300 to P91.100
Theory Schematics	P95
Special Services	P96.001 to P96.013
Customer Provided Table	P96.014 to P96.025
Special Services	P96.025 and up

\* The wiring diagrams of the teletypewriter units, as distinct from wiring **variations**, are given in other BSP sections. See Wiring Diagrams:

P35.301	— 14 TTY
P36.301	— 15 TTY
P38.321, 322	— 19 TTY
P40.301	— 26 TTY
P34.301, 302	— 28 TTY

### TTY STATION-INSTALLATION DRAWINGS GENERAL

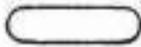
P30.401

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## 6. CONVENTIONS USED ON TTY STATION DRAWINGS

6.01 The following table gives drawing conventions used.

<u>CONVENTION</u>	<u>MEANING</u>	
	Cable	
P	Paired wires	} twisted, not parallel
T	Tripled wires	
Q	Quadrupled wires	
18 RF32	18-gauge wire with RF32 (N.E.C.) insulation	
14R	14-gauge wire with type R (N.E.C.) insulation	

### On Line and Power Plans:

Dotted  
Apparatus      Apparatus shown in detail  
on other plans

Dotted  
Wiring          Existing wiring or wiring  
shown on other plans or  
circuit labels

6.02 Wires outside the TTY and not otherwise specified are usually 22-Gauge Brown Inside Telephone Wire per AT&T Co's Spec. 7089.

6.03 All receptacles and connector bodies are shown as viewed from the slot side. All caps and bases are shown as viewed from the prong side.

6.04 Caps or connector bodies designated A, B, etc., are to be plugged into receptacles or bases with corresponding designations.

6.05 In BSP Sections or Plans, the number of leads shown to each apparatus or equipment unit terminal represents the exact number of external wires to that terminal. Any other existing leads should be removed.

6.06 Designations + and - shown on station wiring information at TTY terminals and on line leads indicate the polarity of the applied voltage for the marking condition.

6.07 Polar relays close their front contacts shown in the circuit schematics when current is applied as indicated by the polarity signs on the winding terminals. The front contact is the contact shown on the schematic nearest the core.

**Note:** Polar relays (except the 209 and some 280 type) operate as follows: Positive battery applied to the lower-numbered winding terminal will move the armature to the lower-numbered contact.

6.08 Wiring shown by heavy lines in the P90, P91, P95 and P96 series is wiring to be added or connections to be made, or changed as part of the station assembly. The teletypewriter part of the wiring is shown in schematic form. For the actual wiring of teletypewriter units, reference should be made to their respective wiring diagrams or circuit labels.

## 7. COLOR CODE OF POWER CORDS

7.01 Fig. 2 shows the color-code arrangement of 2-conductor, 3-conductor, and 4-conductor power-supply cords.

7.02 Fire Underwriters Board requirements necessitated changing the color-code arrangement of 3- and 4-conductor power-supply cords to use a green wire for the protective-ground connection. Fig. 2 shows the present arrangement.

7.03 The 3-wire grounding devices having U-shaped prongs and slots assure positive identification of the grounding circuit for the protective-ground connection. See Fig. 2.

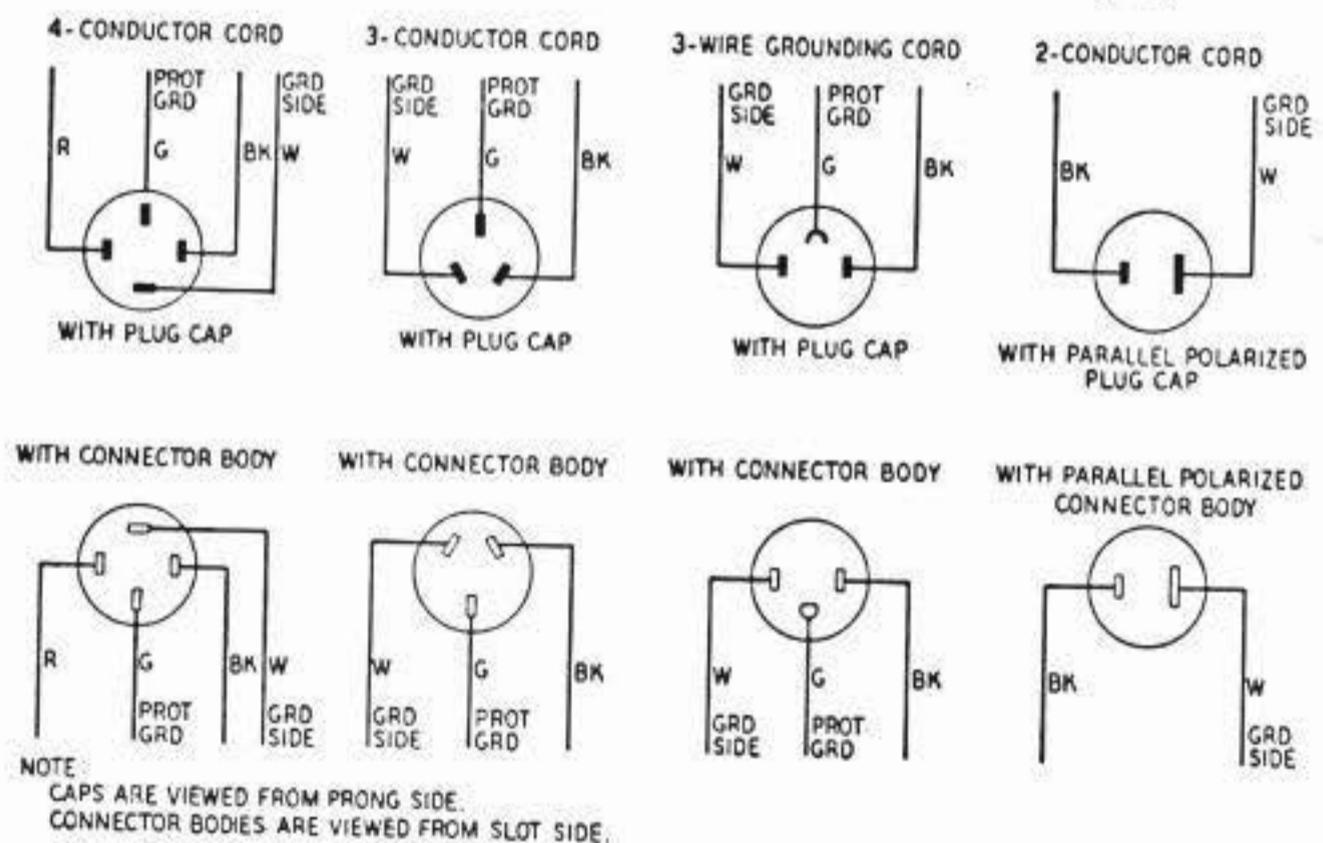


Fig. 2

TTY STATION-INSTALLATION  
P30.401

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