

## POLARITY GUARDS IDENTIFICATION

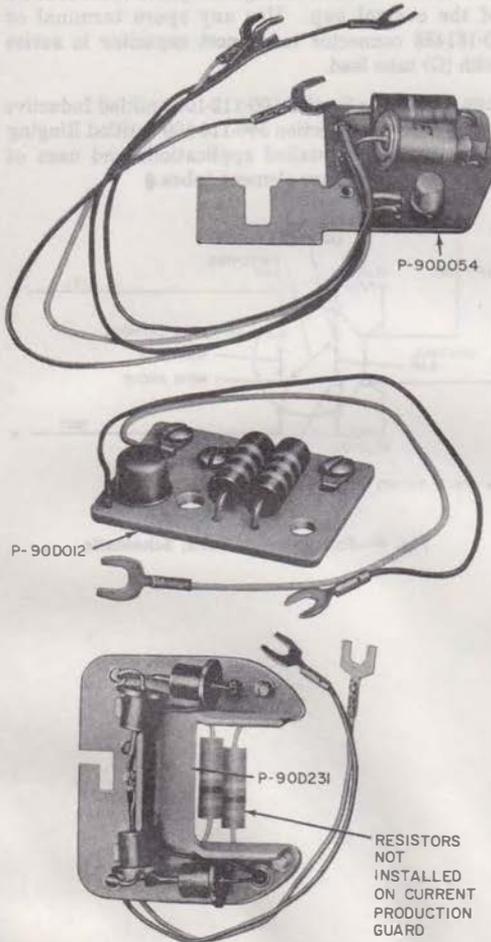


Fig. 1—Guard Assemblies

### 1. GENERAL

1.01 This section is reissued to:

- Add information on the P-90D231 polarity guard
- Add note to Fig. 1, P-90D231 polarity guard
- Revise Fig. 2, P-90D231 polarity guard
- Include additional set usages

### 2. PURPOSE

2.01 Used in conjunction with TOUCH-TONE® dials to maintain correct dial polarity for end-to-end signaling.

### 3. DESIGN FEATURES

3.01 Available in three physical arrangements shown in Fig. 1.

3.02 In general, the polarity guard is composed of a diode assembly, resistors, and a surge protector mounted on a printed circuit board and connected in the telephone set by screw terminals and/or spade-tipped leads.

*Note:* P-90D231 guard assembly contains four diodes and two resistors (resistors not installed on current production guard) but does not have any surge protection.

3.03 Polarity guards for station sets are mounted with brackets or screws as designated in Table A.

3.04 Fig. 2 provides circuit diagrams for polarity guards.

### 4. APPLICATION

4.01 Speakerphone systems and telephone sets having G6 or G8 handsets will require current

production 25- or 35-type dials when a polarity guard is added.



*The possibility of the voltage on the ring side of the line being applied to the dial transistor without passing through the polarity guard first exists when the speakerphone and telephone set are used in an on hook dialing mode. The polarity guard connections shall be made at a point where the ring and tip must first pass through the polarity guard regardless of on or off hook dialing.*

4.02 Refer to appropriate telephone set connection section before installing a polarity guard to prevent damage to the polarity guard components.

5. ORDERING GUIDE

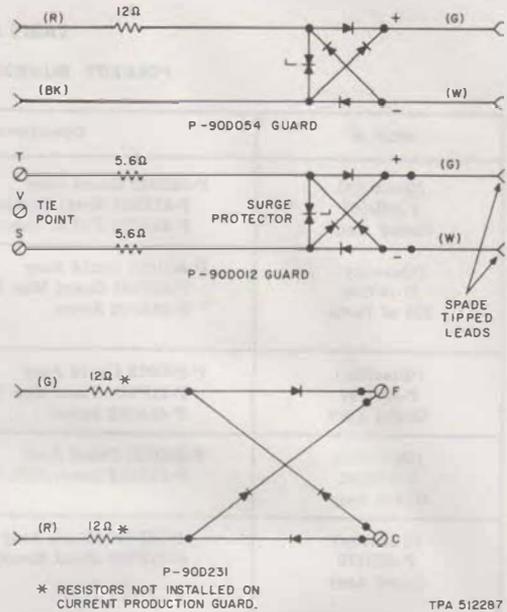


Fig. 2—Polarity Guards For TOUCH-TONE Dials

TABLE A

POLARITY GUARDS FOR STATION SETS

ORDER BY	CONSISTING OF	INTENDED USE
(Quantity) P-90D052 Guard Assy	P-90D012 Guard Assy P-43A392 Screw P-481904 Washer P-20F900 Bracket	1500 and 2500 series telephone sets
(Quantity) P-90D053 Guard Assy	P-90D012 Guard Assy P-180906 F. H. M. Screws (2) P-218828 Hex. Nuts (2)	1554, 1555, 1558, 2551, 2554, 2555, and 2558 wall sets
(Quantity) P-90D012 Guard Assy	P-90D012 Guard Assy	1660B and 2660A series telephone sets
(Quantity) D-180229 Kit of Parts	P-90D054 Guard Assy P-26E164 Retainer P-43A392 Screw P-21F675 Terminal Board Assy	1700 and 2700 series telephone sets
(Quantity) P-90D060 Guard Assy	P-90D012 Guard Assy P-90D060 Metal Bracket	1750, 1751, and 1753 2750, 2751, and 2753 series telephone sets

**TABLE A (Cont)**  
**POLARITY GUARDS FOR STATION SETS**

ORDER BY	CONSISTING OF	INTENDED USE
(Quantity) P-90D061 Guard Assy	P-90D012 Guard Assy P-21F989 Metal Bracket P-43A392 F.H.M. Screw	1752, 2752, 2526B, and 2754 series telephone sets
(Quantity) D-180250 Kit of Parts	P-90D012 Guard Assy P-22F193 Guard Mtg. Strip P-43A392 Screw	1660A Series Telephone Sets, 1690 and 2690 series subscriber sets
(Quantity) P-90D197 Guard Assy	P-90D012 Guard Assy P-21F558 Guard Mtg. Strip P-43A392 Screw	1630 and 2630 series telephone sets
(Quantity) P-90D231 Guard Assy	P-90D231 Guard Assy P-43A612 Screw, SPL F.H.M. (2)	AC1 and AD1 Telephone Bases used with TRIMLINE® hand telephone sets
(Quantity) P-90D170 Guard Assy	P-90D012 Guard Assy P-22F703 Metal Bracket	2830A1M, 2831A1M series telephone sets 2851 series wall telephone sets
(Quantity) P-90D055 Guard Assy	P-90D012 Guard Assy P-43A392 Screw (2) P-21F699 Bracket P-481904 Washer (2)	2504B telephone sets