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SECTION 501-140-100

Issue 3, March 1969

AT&T Co Standard

TELEPHONE STATION CORDS

GENERAL

1. GENERAL

1.01 This section provides descriptive information on handset cords and mounting cords, and also covers the design features for attaching cords and electrically terminating conductors.

1.02 This section is reissued to:

- Revise information on cords
- Include current cords and their design features

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

2. IDENTIFICATION

Cord Code Numbers

2.01 Letter—number—letter codes, as applied to cords, have the following significance:

- (a) **The First Character** of the code, a letter, designates the principal use as follows:

D—Telephone Set Mounting and Dial Cord

H—Handset Cord

L—Operator's Telephone Set Cord

M—Miscellaneous Cord

R—Receiver Cord

T—Transmitter Cord

W—Test Cord

- (b) **Second Character** of the code, a number, designates the number of conductors.

(c) **Third Character** of the code, a letter or letters, has no special significance and is assigned to indicate variations in physical structure, such as insulation, cord tips, etc.

(d) **A Dash Number** is added where a cord is furnished in various colors. The dash number designates the color; for example: H4CJ-58 indicates a **white** handset cord.

2.02 Mounting set cords have the code number stamped into the metal band on the set end of the cord. Push-in-lock type plug ended cords have the code number stamped on the spring clip which locks the plug into the telephone base.

2.03 Handset cords have the code number stamped on the metal band at the set end of the cord. Push-in-lock type plug ended cords have the code number stamped on the spring clip which locks the plug into the telephone base.

Physical Structure

2.04 Vinyl-jacketed and vinyl-insulated conductors are used for most cords being manufactured. Conductor insulation is either a solid or striped color. The jacket of these cords stiffens when exposed to temperatures below 32 degrees F. This is especially noticeable with spring cords. The stiffening of the jacket affects the retractility, which consequently becomes more sluggish as the temperature decreases.

2.05 Neoprene-jacketed and rubber-insulated conductors are available in some black cords and may be used on equipment that is exposed to low temperatures.

2.06 Textile-covered and rubber-insulated conductor cords have been replaced to a great extent by neoprene and vinyl-jacketed cords. Textile-covered cords currently being manufactured have very limited or special application.

Cord Lengths

2.07 Telephone set mounting cords have standard lengths of 5-1/2 and 8 feet. Some mounting cords are also available in 9-, 13-, and 25-foot lengths. Before installing a cord longer than the normal length, encourage customer to install an extension telephone or to move existing telephone to a more desirable location. The use of long cords may create a hazard if installed in the vicinity of an aisle, passageway, etc. Avoid installation of long cords near or on stairways, near swimming pools, bath tubs, etc.



Advise customer, at time of installing extra length cords, that continued twisting of the cord in one direction eventually leads to kinking, shorter usable length, and possible impaired service.

2.08 Extra length cords increase resistance in the lamp circuit and reduce the night-light illumination on telephone sets with dial-light night-light feature. Do not use 25 foot mounting cords with PRINCESS® telephone sets when night-light feature is provided. **Replace the 53B lamp with a 53A lamp on TRIMLINE® sets, if the lamp power is supplied by a 2012A transformer and the combined lengths of mounting and handset cords exceed 15 feet.**

2.09 The standard handset cords are 4 feet in length. TRIMLINE sets have 5 feet, 6-inch standard length handset cords. Some handset cords are available in 9- and 13-foot lengths. Cords for specific uses such as coin telephone sets, outdoor sets, elevator sets, etc., are standardized in lengths of less than 4 feet.

Cord Fasteners

2.10 All cords have a stayband and hook assembly or some means of securing the cord for physical strength at the set, handset, and connecting block or connector.

2.11 The early D3BU or D4BP mounting cord is equipped with a P-18E457 adapter which is intended for use as a universal fastener. Fig. 1 through 7 show some of the suggested uses of these fasteners. The current D3BU or D4BP cord is equipped with a flat eyelet stayband at the connecting block end (Fig. 2).

2.12 For information on securing armored cords used in coin telephone sets refer to Section 506-110-103.

2.13 Mounting cords used on key sets and other station equipment requiring a large number of conductors are equipped with KS-type plugs (Fig. 8, 9, and 10). These cords provide a quick means of electrically connecting conductors to a connector cable or terminals equipped with a connector to receive these plugs. Screws secure these plugs to the connector. For shipment these plugs are covered with a nonreturnable dust cover.

2.14 Mounting and handset cords are also available with a push-in-lock type plug (Fig. 11 and 12). The TRIMLINE telephone set and G-12 handset are some of the current uses for these cords. The cord plug is retained in a telephone set or handset by a spring clip which locks the plug into its connection receptacle. A KS-16750L2 tool is needed to release this spring clip.



When using these push-in-lock type plugs make sure the contacts are in proper position to make electrical connection with the mating contacts, and that the plug is placed in the proper receptacle. Either error will cause circuitry problems and extreme difficulty in removing the plug.

Cord Terminations

2.15 Since most cords have tinsel or stranded wire conductors, the conductor ends are equipped with spade tip connectors or terminal strips (wafer strips Fig. 13, 14, and 15). Sets equipped with 635-type keys require cords equipped with 508- and 509A-type plugs (Fig. 16). These plugs have certain conductors factory terminated in blade type cord tips which are arranged in a molded plastic terminal plug. Multiconductor cords have quick connection KS-type plugs at the cable or terminal end (Fig. 8, 9, and 10). The quick connect KS-type plugs have factory-wired connectors. Rearrangement of the conductor sequence is not recommended.

2.16 To use conductors which have their spade tips factory insulated, either cut off the insulation with a pair of diagonal pliers or in some cases these insulators can be removed by squeezing the insulator with a pair of pliers causing it to open and release the spade tip. Removal of

insulators by pulling can cause damage to the conductors.

2.17 Spade tips placed on cord conductors are sized for use on No. 4-, 5-, or 6-type screws and can also be terminated on quick connector terminals by using a 161A adapter.

2.18 Refer to sections on connecting blocks and plugs for portable telephone sets for more information on terminating cords and also proper arrangement of conductors at these termination points.

3. MAINTENANCE

3.01 Customers using spring cords may reverse all or part of the turns, causing the cord to remain stretched farther than normal and lose its retractile qualities to a varying degree. Restore such cords to original condition by rewinding all reversed coils.

3.02 If a cord loses its retractile qualities or is damaged through excessive twisting and stretching, replace the cord.

3.03 KS-type plugs should be placed in the proper outlet box or cover and installed at a location that will protect it from physical damage. Do not place plugs where they will be exposed to dampness.

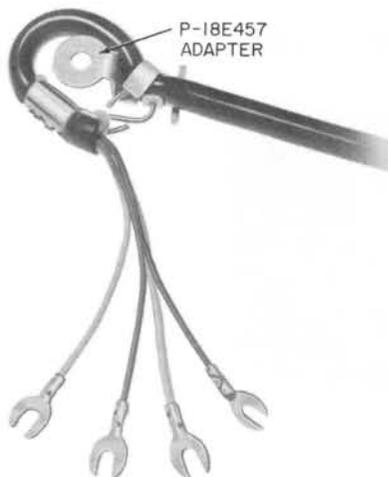


Fig. 1—D4BP Cord With Adapter

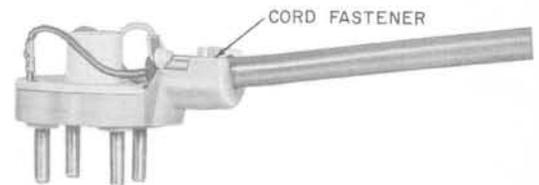
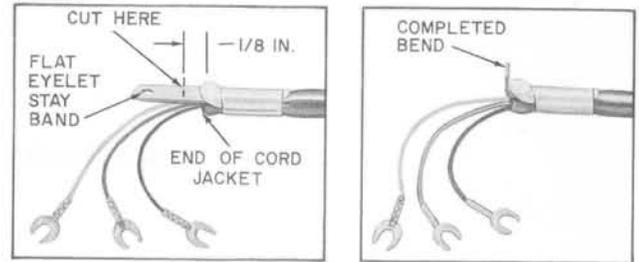


Fig. 2—Connecting Current Model D3BU or D4BP Cord To Early Model 505A Plug

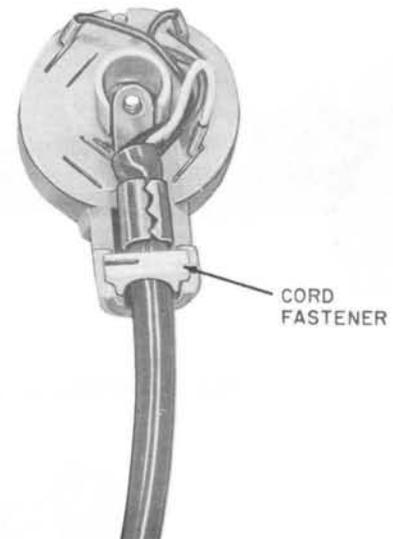


Fig. 3—Current Model D3BU Cord Connected To Current Model 505A Plug

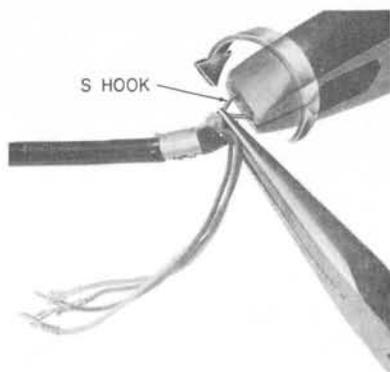


Fig. 4—Bending S Hook

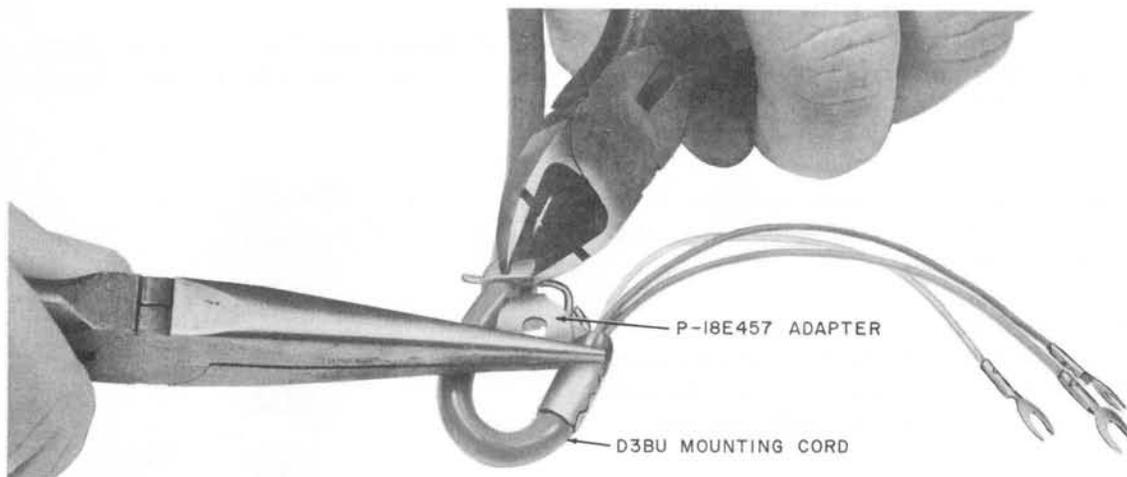


Fig. 5—Removing Adapter From D3BU or D4BP Mounting Cord

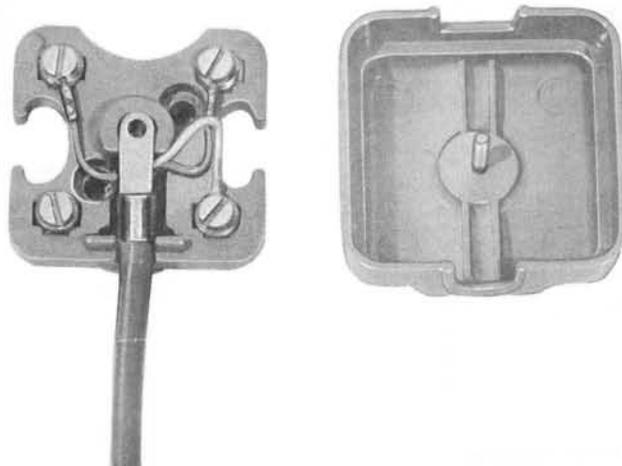


Fig. 6—42A Connecting Block and Current Model D3BU Mounting Cord

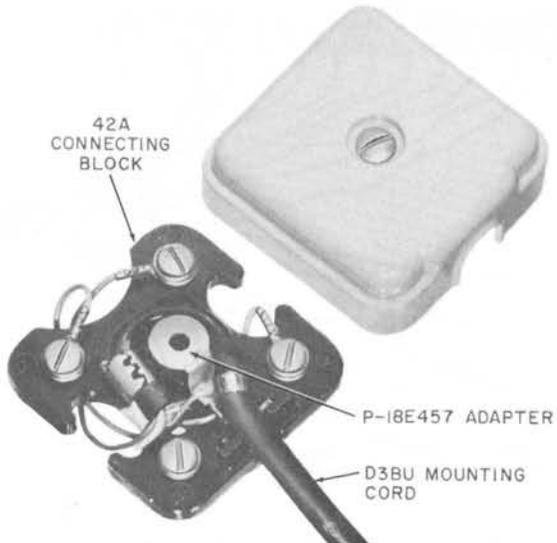


Fig. 7—42A Connecting Block With D3BU Mounting Cord

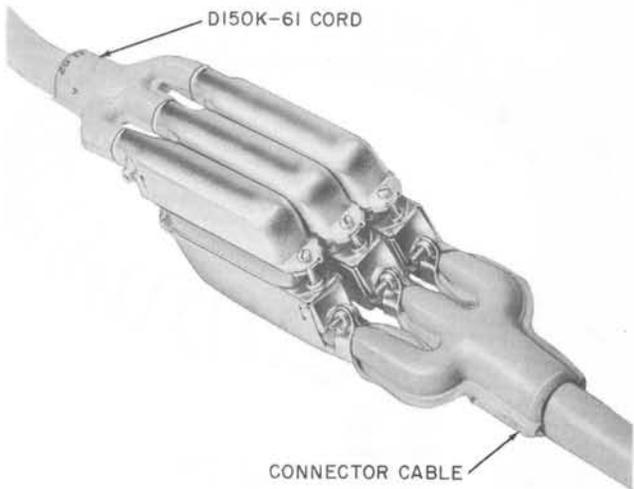


Fig. 9—Mounting Cord and Connector Cable

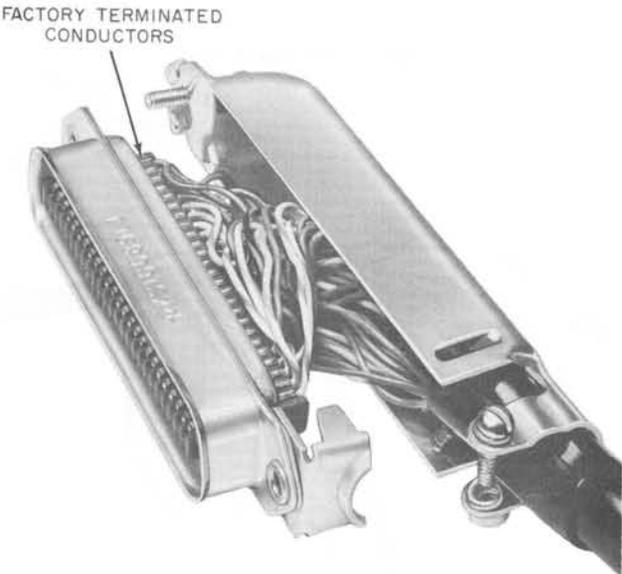


Fig. 8—KS-16689L1 Plug

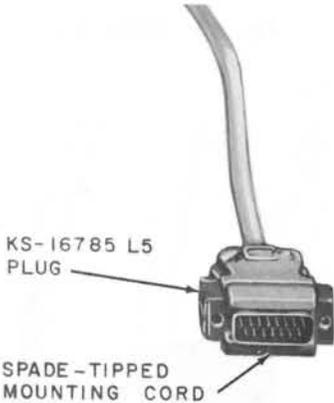


Fig. 10—KS-16785L5 Plug

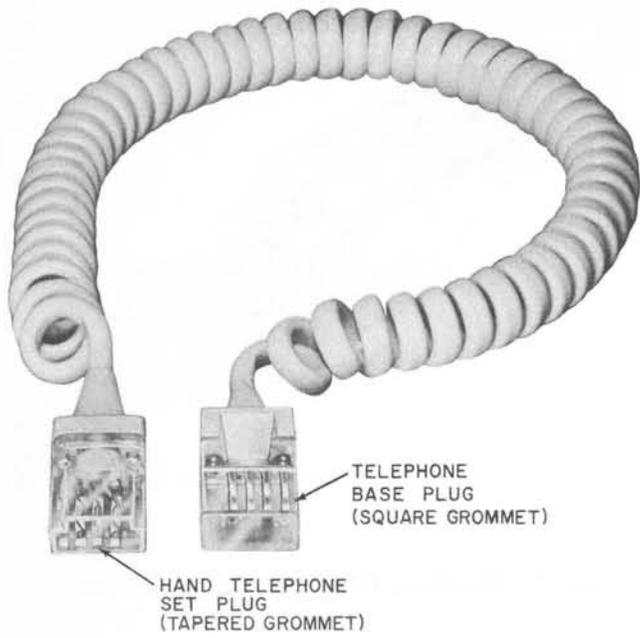


Fig. 11—H4DB Cord

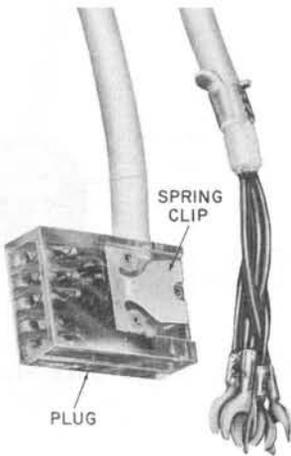


Fig. 12—D5AL Mounting Cord

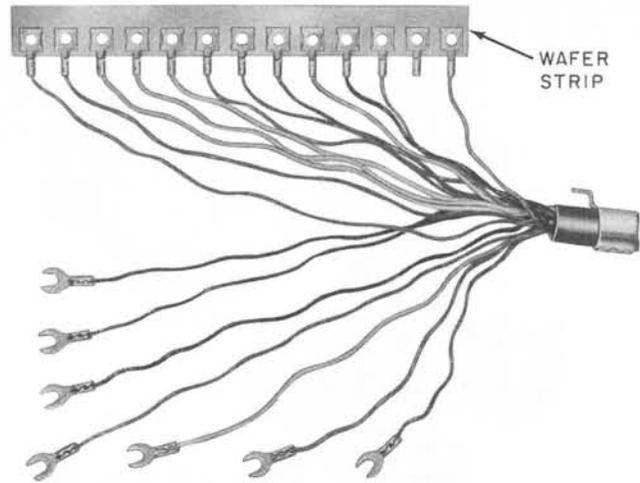


Fig. 13—Nonslotted Wafer Strip End of Mounting Cord, Early Type

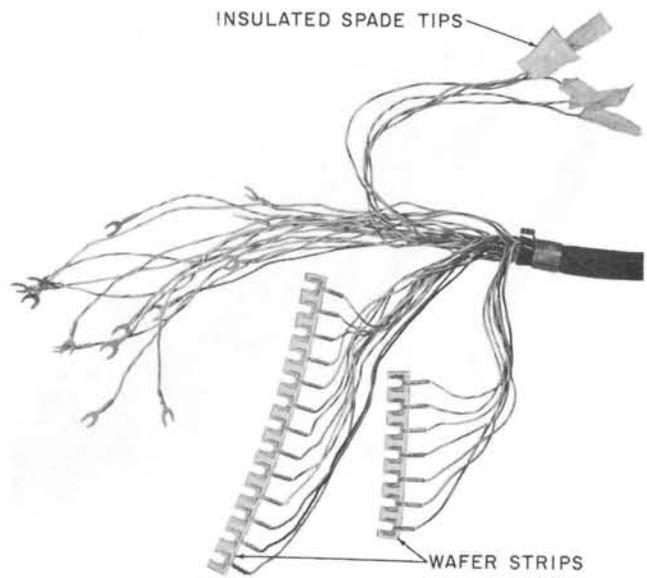


Fig. 14—Set End of Mounting Cord Used With 589-Type Keys

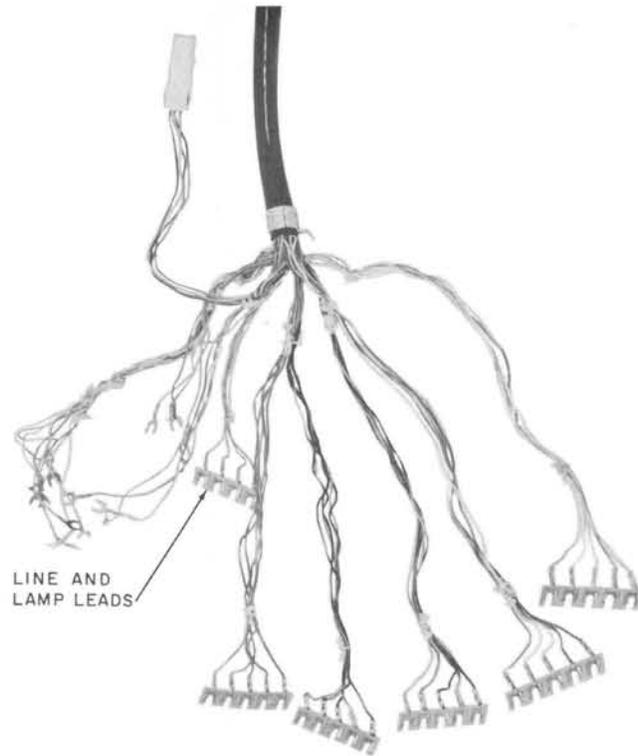


Fig. 15—Set End of Mounting Cord Used With 636A Key

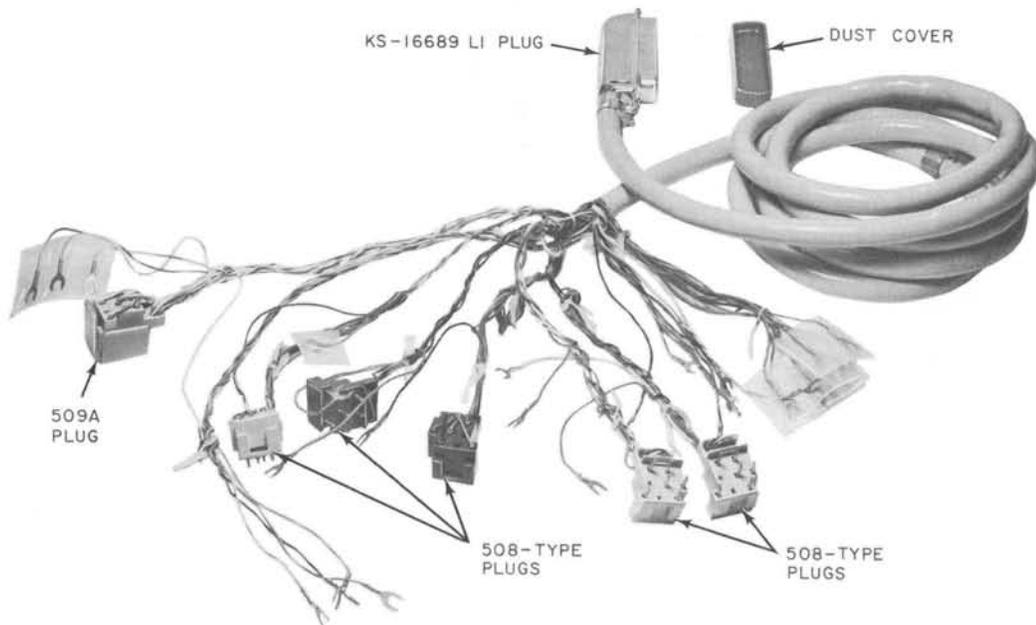


Fig. 16—Mounting Cord Equipped With 508- and 509A-Type Plugs