

BELL SYSTEM PRACTICES
Station Installation and Maintenance

SECTION C36.245
Issue 1, 2-1-32
Standard

JACKS AND PLUGS

TYPES FOR INSIDE LOCATIONS INSTALLATION

1. GENERAL

1.01 This section covers the installation of jacks and plugs of the types used with portable telephones at inside locations which are not exposed to the weather, excessive dampness, etc., and where service conditions are not expected to be unusual. It does not, however, cover the termination of wiring at station jacks. For such information see the section covering "Terminating Wiring at Jacks."

2. MATERIAL

Screws: 1/2 in. No. 8 F.H. Bright Wood Screw
3/4 in. No. 6 F.H. Bright Wood Screw
3/4 in. No. 8 F.H. Blued Wood Screw

3. REQUIREMENTS

3.01 At least one ringer shall be permanently bridged at a station which has one or more jacks. This requirement may be waived in connection with P.B.X. extension stations where it is necessary to meet special conditions; for example, in the case of hospitals where permission to complete an incoming call for a patient must first be obtained from the nurse in charge, over another station.

3.02 With anti-sidetone sets the arrangement of apparatus as applied to sidetone sets cannot be followed for the reason that the transmitters at the main station and at the portable telephone (when plugged into a jack) would be permanently bridged to each other. It is necessary, therefore, to use a separate subscriber set for each telephone that may be connected to the line or otherwise to proceed as outlined in paragraph 3.03.

3.03 Where a main station is permanently connected to the line, the jacks for a portable telephone must be wired from a second subscriber set connected to the line. Where more than one portable telephone is desired the use of each portable telephone should be restricted to a specified series of jacks. Each series of jacks shall be wired to a separate subscriber set, or a subscriber set may be provided for each jack, or sidetone sets used if anti-sidetone sets are not required for transmission reasons.

3.04 The considerations governing the number of ringers per line are the same as for a fixed hand telephone set or desk stand installation.

4. LOCATING

4.01 In locating jacks be guided by the subscriber's wishes and the considerations outlined herein. If the subscriber's wishes cannot be followed, explain the reason therefor. If satisfactory arrangements cannot be made, consult your supervisor before proceeding with the work.

4.02 Where only one portable station (without a permanently connected main station) is installed, confine jacks to the same or adjoining rooms.

Explanatory Note: For the purpose of this section, adjoining rooms are defined as rooms having either a common doorway or a common wall with exits to the same hallway.

4.03 Jacks for use with P.B.X. or extension stations may be located at any point on the subscriber's premises, provided they are within hearing distance of the main station or extension ringer permanently bridged to the line.

4.04 Always locate jacks in dry locations. Avoid a location close to a radiator, or a window which may be left open, thereby exposing the portable telephone (especially the cords) to rain or moisture.

4.05 Locate non-flush type jacks where secure attachment can be made, such as on wooden baseboards, chair rails, desks, tables or substantial wood panels. Such jacks should not be installed directly on plaster or lath walls nor on the covers of subscriber sets.

4.06 Flush type jacks should generally be located in outlet boxes similar to those used with electric light convenience outlets. However, if such a box is not provided and the subscriber objects to the installation of a non-flush jack, a flush type jack may be located on a wooden baseboard or chair rail,

etc., provided wiring to jack can be concealed. In such a case, first secure the necessary permission to bore hole for recessing the jack, after making a very careful check to determine that the station wiring can be concealed.

4.07 Where a flush type jack is to be installed on a base-board it is desirable from an appearance standpoint to locate jack, where practicable, at approximately the same height from floor so that it will be in keeping with any base outlets already installed in the same room. However, do not locate such a jack where the jack, cord or plug would be exposed to moisture from mopping or damage from vacuum cleaners, etc.

5. INSTALLING

General

5.01 Mount four and eight-contact flush and non-flush type jacks so that when plug is inserted in jack the cord will enter from the underside of plug. This may be waived, however, if for lack of space or other considerations it is necessary to mount such jacks lengthwise.

Non-Flush Type Jacks

5.02 In the case of three-contact non-flush type jacks face wiring slots so that wiring will enter from the side.

5.03 In the case of four or eight-contact non-flush type jacks, face wiring slots so that wiring will enter directly. To do this it may be necessary to reverse the cover with respect to the jack unit.

5.04 Attach non-flush type jacks to wooden mounting surfaces as shown in the following typical illustrations, Fig. 1.

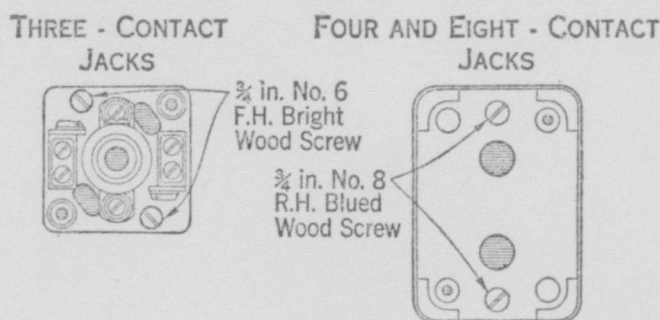


Fig. 1.

5.05 Run wiring from subscriber set to jack and then terminate conductors on terminals of jack.

5.06 Attach cover or cover assembly to base, using screws furnished with jack.

Flush Type Jacks

5.07 **Installing in Outlet Boxes:** In modern commercial buildings and hotels where a conduit system of wire distribution is provided, outlet boxes form part of the conduit system. In residential type buildings, such as apartment houses or private residences, outlet boxes may or may not be connected to conduit.

5.08 Before attaching a jack on lugs of an outlet box, fish wiring from subscriber set through conduit or wall to outlet box. Leave six to eight inches of slack for terminating, and then terminate conductors on terminals of jack.

5.09 Attach jack on lugs of outlet box, using the screws which are furnished with jack. When installed, the jack should be in alignment with the supporting surface, and should be brought forward a sufficient distance so that cover plate will not interfere with insertion of plug. If necessary, in order to secure a flush fit, place washers under yoke, as shown in Fig. 2.

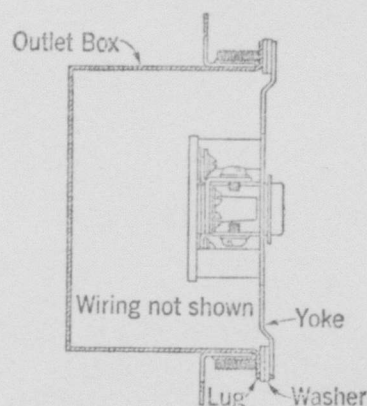


Fig. 2.

5.10 Attach cover plate to yoke of jack, using screws furnished with jack.

5.11 **Installing on Wooden Baseboards and Chair Rails:** Before commencing to make hole in baseboard or chair rail for recessing of jack, locate position of studs in wall or partition to insure that location of jack, when installed, will be clear of studs. Then, after consideration has been given to paragraphs 4.06 and 4.07, proceed to make hole for jack.

5.12 Two convenient methods for making the recess hole are outlined herein, each method differing principally in respect to the tools required.

5.13 A method which employs a 5/8 in. or 3/4 in. auger bit or twist drill and a keyhole or compass saw is as follows:

- (a) Remove cover plate from jack and hold it in position on baseboard or chair rail, so that its top edge is parallel to top edge of such supporting surface.
- (b) While holding cover plate as above, insert point of pencil through cover plate screw holes and mark centers of such holes on supporting surface. (Points X and Y of Fig. 3.)
- (c) Use cover plate as a straight edge and draw a straight line through points X and Y, forming line XY of Fig. 3.
- (d) Draw line DC at right angles to line XY, and lines BC and AD at right angles to line DC. Then draw line AB. The cover plate may also be used as a right angle. Dimensions of all lines should be in accordance with Fig. 3.
- (e) Bore holes within the rectangle ABCD at points A, B, C and D and then saw out the wood which remains in rectangle with a keyhole or compass saw. To insure a flush fit it may be necessary to bevel edges of hole as indicated by Fig. 3.
- (f) Proceed in the same general manner as outlined in paragraphs 5.08 to 5.10 except that 1/2 in. No. 8 F. H. Bright Wood Screws should be used for attaching jack to supporting surface.

RECESS HOLE FOR
THREE, EIGHT OR FOUR-CONTACT JACKS

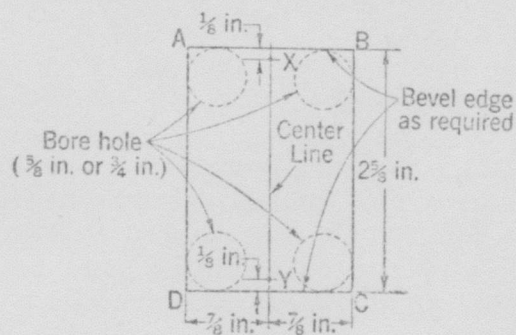


Fig. 3.

5.14 A method which employs an expansive bit, wood chisel and keyhole or compass saw is as follows:

- (a) Proceed as outlined in (a), (b) and (c) of paragraph 5.13.
- (b) Mark center of line XY and mark the 1-3/8 in. dimensions for yoke as indicated in Fig. 4.
- (c) Using the center of line XY as the center, bore hole through baseboard or chair rail with expansive bit set to the diameter indicated in Fig. 4 for the type of jack to be installed.
- (d) Make cutouts for yoke with wood chisel as indicated in Fig. 4. If an eight-contact jack is to be installed, cut sides of the larger cutout with a keyhole or compass saw. Also, if a three-contact jack is to be installed, bore two 1/8 in. holes as indicated in Fig. 4.
- (e) Proceed in the same general manner as outlined in paragraphs 5.08 to 5.10 except that 1/2 in. No. 8 F. H. Bright Wood Screws should be used for attaching jack to supporting surface.

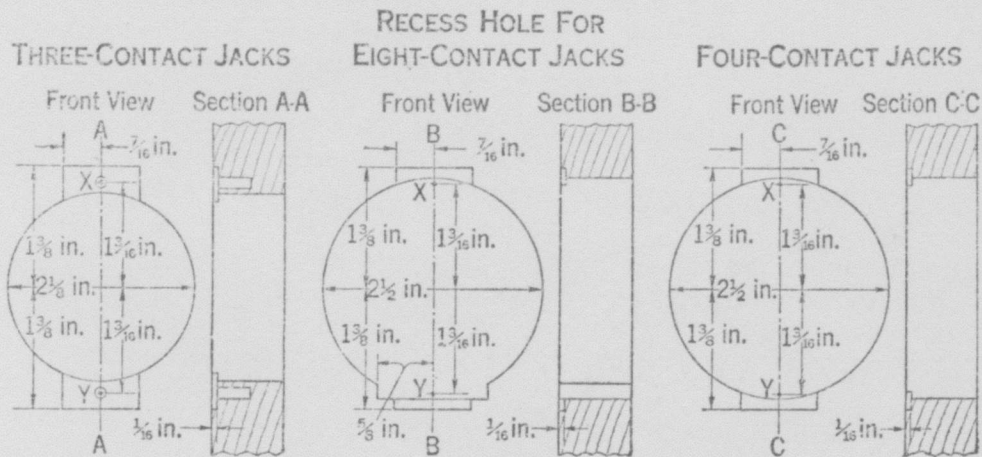


Fig. 4.