

BELL SYSTEM PRACTICES
Station Installation and Maintenance

SECTION C31.145
SECTION C63.202
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AT&T Co Standard

SUBSCRIBER AND TELEPHONE SETS FOR INDOOR LOCATIONS INSTALLATION

1. GENERAL

1.01 This section is reissued to revise and bring up to date information covering the installation of subscriber and telephone sets for indoor locations. Because of extensive changes, the marginal arrows are omitted.

1.02 **Power Stations:** Subscriber and telephone sets should not be installed in electric power stations, unless the service order or local instructions definitely indicate that special protection is to be either installed or omitted.

1.03 **Explosive Atmospheres:** Special telephone apparatus is required for hazardous locations. Wherever it is suspected that an explosive atmosphere is present, consult your supervisor before proceeding. Ordinarily, the local authorities require that suitable notices be posted in locations where special precautions are necessary.

2. LOCATING

2.01 In selecting a location for subscriber and telephone sets, consider the subscriber's wishes, size and type of building, and physical requirements which might affect service. Where unusual or hazardous installation situations are encountered, consult your supervisor.

Physical Requirements

2.02 Install subscriber and telephone sets considering the following requirements:

- (a) Do not install a subscriber set in the basement with the associated hand telephone set located upstairs.
- (b) Ringing signals should be satisfactory to the subscriber.
- (c) Use available approved bell cabinets and niches.
- (d) Avoid closets and other enclosed places.

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(e) Avoid damp and hazardous locations, such as, near radiators, registers, sinks, bath tubs, steam risers, electrical outlets, or fixed electrical appliances. Fig. 1 illustrates methods for shortening telephone set cords where these locations cannot be avoided.

(f) Avoid finely finished surfaces, such as, marble, counters or walls.

Note: If a set must be placed on such surfaces, first obtain the owner's permission before attachment is made. Request that the subscriber have expensive surfaces prepared for installation by his own contractor.

(g) Avoid locations where the set is likely to be damaged or will be an accident hazard.

(h) Select a location where there is always sufficient light available to see the dial on dial sets.

(i) Place adjacent sets so that the centers will be at least 12-1/2 inches apart to avoid inductive interference and reduction of ringer efficiency.

(j) Avoid walls or partitions subjected to excessive vibration.

(k) Place subscriber sets where they will be accessible for inspections and repairs.

(l) To avoid inductive noise from neon or fluorescent lights, locate subscriber and telephone sets (combined) not less than 12 inches from 20-watt units and not less than 24 inches from 40-watt units.

(m) Place sets having hand generator handles where they may be conveniently used by the subscriber.

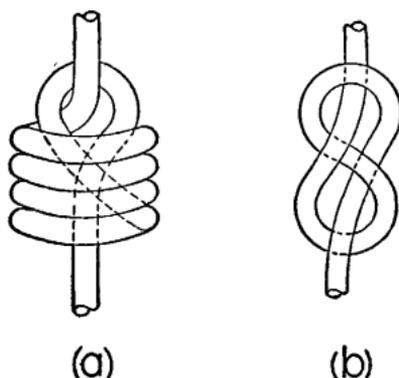


Fig. 1—Knots for Shortening Cords

Note: Use (a) and (b) for considerable take-up.

On Desks and Tables

2.03 When locating subscriber sets on desks, inspect the desk for special facilities which may be provided by the manufacturer. On metal desks, a bracket is often provided under the desk top behind the center drawer upon which a plastic subscriber set may be mounted. If there are no special provisions for mounting the subscriber sets, select one of the following positions listed in order of preference:

- (a) On the side of the pedestal inside the kneewell, away from legs or feet.
- (b) On the left or right outer side of the desk.

2.04 When it is appropriate to mount subscriber sets on tables, select a position on the underside of the table top near the proposed location of the associated telephone set. Subscriber sets also may be placed on the sides of large tables, such as conference tables.

At Coin Collector Installations

2.05 At coin collector installations in booths, locate the subscriber sets according to Fig. 2 or Fig. 3.

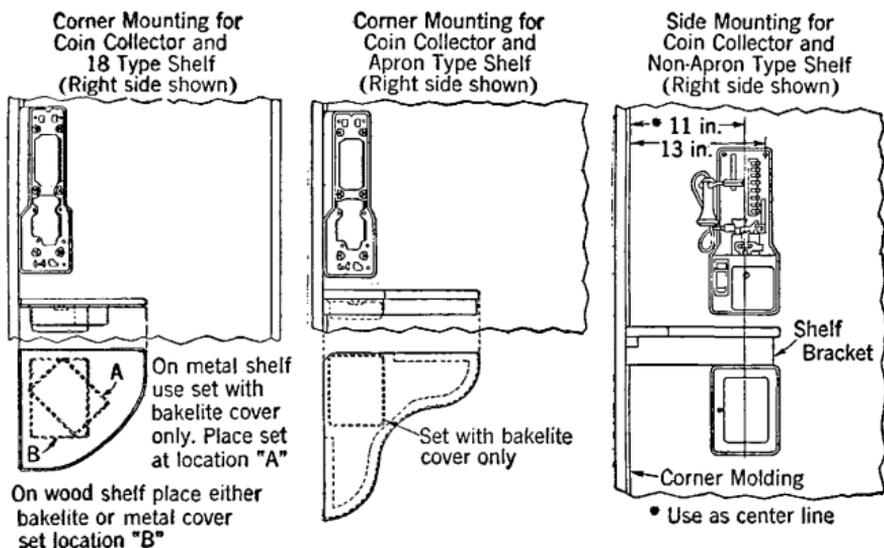


Fig. 2—Enclosed Booths

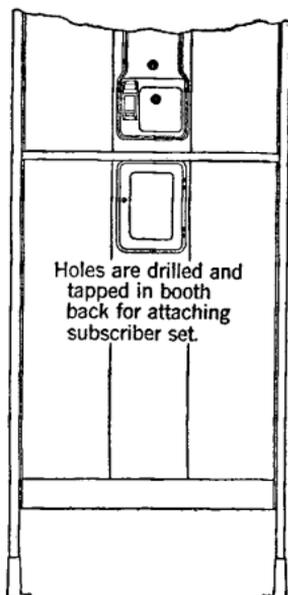


Fig. 3—Open Type Telephone Booths

2.06 At coin collector installations not in booths, locate subscriber sets as shown in Fig. 4.

WITHOUT BACKBOARD

WITH BACKBOARD

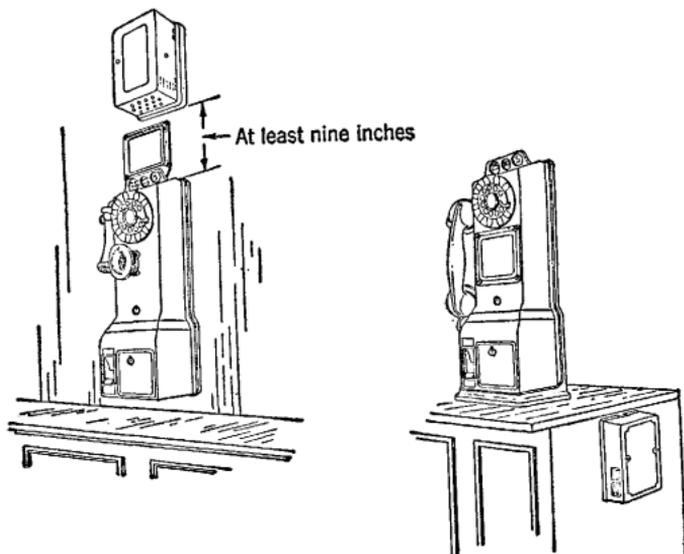
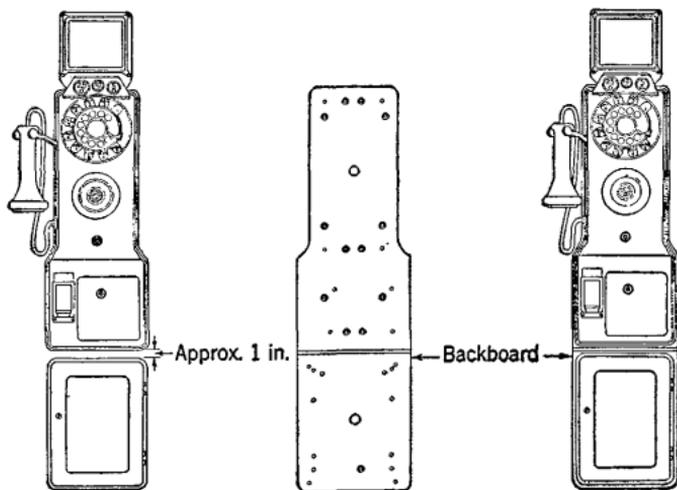


Fig. 4—Typical Locations for Subscriber Sets with Coin Collectors

Position of Gongs

- 2.07 Never place subscriber sets with the ringers positioned sideways on a vertical surface.
- 2.08 Place subscriber sets with gongs down, except where:
- (a) There would be interference when opening the cover.
 - (b) Subscriber sets are placed horizontally under desks or tables.
 - (c) Subscriber sets with relays for selective service require other positioning to operate properly. Always mount these on a vertical surface.
- 2.09 Subscriber sets containing ringers other than B-type should not be mounted one above the other, as this tends to reduce the ringing efficiency.

Wall Sets

- 2.10 Wall sets shall be placed at heights convenient to the subscriber for use.

3. USE OF BACKBOARDS

General

- 3.01 Backboards should be used only where necessary. There are two types of backboards available, wooden and metal, for use in the following conditions:

Wooden Backboards

- 3.02 Use wooden backboards where sets are to be mounted on masonry, solid metal, metal lathed, or metal sheathed walls, except in metal lined standard booths. Also, backboards are to be used on metal desks, in subscriber set cabinets with metal backs, or where a writing shelf is involved and the set is to be mounted on plaster on wood lath walls.

- 3.03 If the sets are to be located on a wall which is uneven, shim the backboard to obtain a firm mounting. Use screws which are 1/2 inch longer than specified for mounting.

Metal Backboards

- 3.04 Mounting on surfaces, such as masonry and metal lathed walls may be avoided by mounting sets with metal backboards on the baseboard. Use metal backboards in all cases except where the wall is metal sheathed. In such cases, a wooden backboard should be used and can be mounted on the baseboard.

4. MOUNTING

General

- 4.01 Fasten subscriber sets securely so that there will be no chance of their becoming loose.
- 4.02 The fasteners for subscriber sets are :

| Type of Set | Mounting Surface | Fasteners |
|-------------|------------------------------|--|
| Metal | Wooden Backboard or Hardwood | 2—1-1/4" No. 8 R.H. Blued Wood Screws |
| | Wood Desk or Under Table | 3—1-1/4" No. 8 R.H. Blued Wood Screws |
| | Softwood | 4—1-1/2" No. 8 R.H. Blued Wood Screws |
| | Plaster on Wood Lath | 4—2" No. 8 R.H. Blued Wood Screws |
| | Metal Desks | 2—1" No. 8 Self Tapping Screws |
| | Metal Backboard | 4—5/8" x 8-32 Electro- Galv. Machine Screws |
| Bakelite | Wooden Backboard or Hardwood | 2—3/4" No. 8 R.H. Blued Wood Screws |
| | Wood Desk or Under Table | 3—3/4" No. 8 R.H. Blued Wood Screws |
| | Softwood | 4—1" No. 8 R.H. Blued Wood Screws |
| | Plaster on Wood Lath | 4—1-1/2" No. 8 R.H. Blued Wood Screws |
| | Metal Backboard | 4—1/4" x 8-32 Electro- Galv. Machine Screws |

Note 1: Where two fasteners are specified, place screws diagonally opposite each other with one fastener near cord entrance hole.

Note 2: Where three fasteners are used on desks, place screws in framing around panels.

4.03 The fasteners for the associated backboards are:

| Type of Backboard | Mounting Surface | Fasteners |
|----------------------------|---|---|
| Wooden | Wooden Baseboard | 4—1-1/2" No. 8 R.H. Blued Wood Screws |
| | Metal Desk | 2—1" No. 8 R.H. Self Tapping Screws |
| | Plaster on Masonry or Plaster Block, Glazed Tiling | 4—2-1/2" No. 8 R.H. Blued Wood Screws in 6-8 x 1-1/2" Screw Anchors |
| | Masonry, Marble | 4—1-1/2" No. 8 R.H. Blued Wood Screws in 6-8 x 3/4" Screw Anchors |
| | Plaster on Hollow Tile | 2—1/8" x 4" B.H. Toggles |
| | Metal Sheath on Solid Wood | 4—1-1/2" No. 8 R.H. Blued Wood Screws |
| | Metal Sheath over Furring on Brick | 4—1-1/4" No. 8 R.H. Blued Wood Screws |
| | Metal Sheath over Furring on Plaster on Lath | 4—1-1/2" or 2" No. 8 R.H. Blued Wood Screws |
| | Plaster on Metal Lath, Plaster on Plaster Board, Glazed Tiling over Plaster on Metal Lath | 2—1/8" x 4" B.H. Toggles |
| | Solid Metal | 2—1" x 10-24 F.H. Bright Machine Screws |
| | Heavy Corrugated Metal | 2—1" No. 8 R.H. Self Tapping Screws |
| | Sheetrock, Beaver or Similar Composition Board | 4—2" or 2-1/2" No. 8 R.H. Blued Wood Screws |
| Over Electrical Outlet Box | 2—6-32 x 1-1/4" R.H. Machine Screws | |
| Metal | Wooden Baseboard | 2—3/4" No. 8 R.H. Blued Wood Screws |

Note: Where two fasteners are indicated, place them diagonally opposite each other.

4.04 All screws must enter laths or studding where sets or backboard are mounted on plaster on wood lath. Where screws strike space between laths, move set if first hole can be covered; otherwise slant the screws.

4.05 Locate metal backboard against wall, making sure that it clears the top of the baseboard by at least $\frac{1}{8}$ inch. Mark locations for fasteners on baseboard and make starting holes with awl or drill. Place backboard in position and fasten with two $\frac{3}{4}$ inch No. 8 R.H. Blued Wood Screws. Fasten set to backboard with four machine screws which are furnished with the backboards.

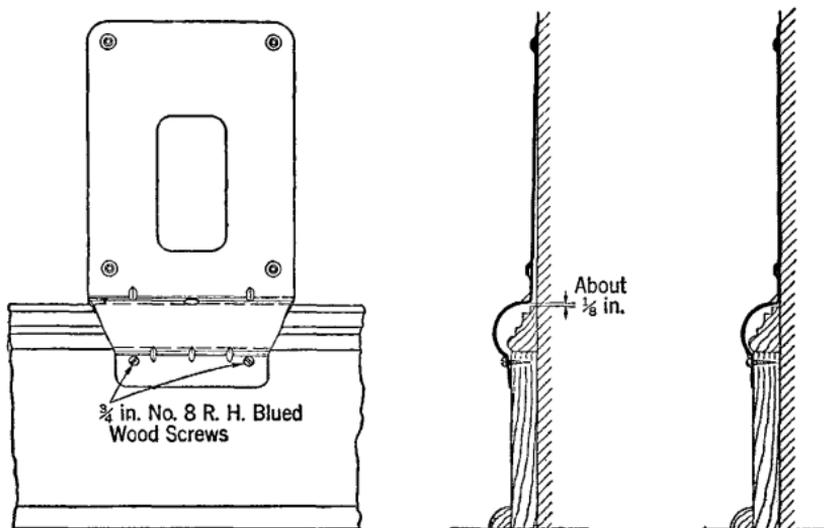
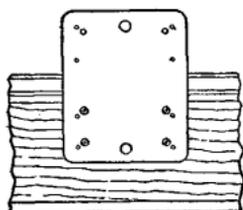


Fig. 5—Metal Backboard

4.06 Use four screws for fastening wooden backboards to baseboards. Place screws in mounting screw holes in backboard so that screws will enter baseboard as shown in Fig. 6.



1½ in. No. 8 R.H. Blued Wood Screws.
Where washers or inside wiring cleats
are used to "build out" backboard
increase length of screws accordingly.

Fig. 6—Wooden Backboard Where Wall Is Metal Sheathed

4.07 To mount wood backboards over electrical outlet boxes, use two screws as shown in Fig. 7. If the backboard is not secure, other screws through the backboard may be used, placing them into studding, when possible.

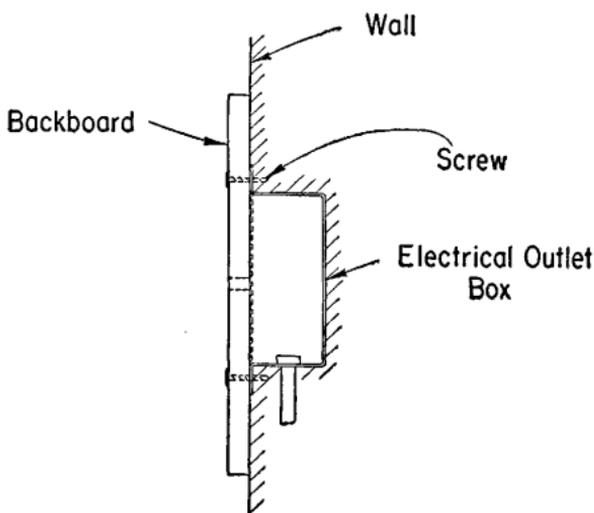


Fig. 7—Mounting Backboard on Electrical Outlet Box