

## COIN TELEPHONE STATIONS BACKBOARDS

### 1. GENERAL

1.01 This section provides identification and installation information for coin telephone set backboards and through-wall fasteners.

1.02 This section is reissued to:

- Delete information on all special purpose backboards
- Add information on KS-21676, List 2 backboard and KS-21676, List 3 security plate
- Show 178A backboard as being available in Moss Green (-51)
- Include information on through wall fasteners and universal mounting plate
- Add 269A adapter
- Add Table to provide proper mounting height specifications

1.03 Information on special purpose backboards, previously contained in this section, can be found in the respective booth or shelf sections in Division 508.

### 2. MULTIUSE BACKBOARDS

2.01 For design features, refer to (Fig. 1 through 7).

2.02 For mounting height specifications refer to Table A.

2.03 Refer to Table B for proper fastening device and quantity to be used for each backboard dependent upon:

- Type of surface

- Strength and rigidity of base material



**♦Backboards must be mounted securely using the number and type of fasteners specified. Avoid mounting backboards on uneven surface to prevent distortion or fracture when fasteners are securely tightened. Distribute fasteners as evenly as possible to ensure the most secure mounting.♦**

2.04 Refer to Division 080 for method of installing fasteners.

2.05 Backboards located outdoors should be secured with rustproof fasteners, such as galvanized screws or bolts.

2.06 Consult supervisor and obtain instructions before proceeding to mount a backboard on a finely finished surface, such as glazed tile or marble, that would be expensive to repair.

### 3. THROUGH WALL FASTENERS

3.01 Through wall fasteners are intended to be used for additional security when securing a backboard to a wall in "High-Risk" locations such as laundromats, garages, rooming house hallways, construction shanties, amusement parks, and other places where the phone is not under the scrutiny of the proprietor or cannot be seen easily by the general public.



**Before installing a through-wall fastener, inform the subscriber of the requirement to drill through the wall. If the subscriber objects, and the set requires the security, refer the matter to your supervisor. DO NOT INSTALL A SET WHERE SECURITY IS IN QUESTION.♦**

### NOTICE

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**3.02** ♦ Two types of through wall fasteners are available and either type may be used depending on local requirements.

(1) **Twin-Bolt Fastener (Fig. 8):**

(a) This fastener will accommodate a mounting surface which can vary in thickness from 4 inches to 7-5/8 inches. Due to the design of the bolt and threaded shaft, it is not necessary to cut the bolts to different lengths for varying thicknesses of walls. Where thicker walls are encountered, longer bolts should be obtained.

(b) EL No. 4325, dated December 8, 1975, provided a representative listing of commercial vendors who produce these materials.

(c) Install twin-bolt fastener as follows:

(1) Install the backboard in the normal manner except reserve the two center mounting holes (Fig. 9).

**Note:** Where possible, straddle a stud or other wall supporting structure with the fasteners so that maximum strength is obtained (Fig. 10).

(2) Drill two 3/8-inch diameter holes through the wall or other supporting surface using the backboard as a template.

**Note:** Extreme care must be exercised to drill the holes perpendicular to the wall, otherwise, it may not be possible to insert the fastener into the holes from other side of wall.

(3) From back side of wall, enlarge the holes to 3/4-inch diameter to a depth of 4-1/2 inches.

(4) Install the shaft nut assembly by placing it into wall from back side. A small hole is provided in center of plate so it can be secured with a nail until bolts are installed.

(5) Install the two slotted hex-head bolts through backboard into the shaft nuts

and tighten securely. Use a large screwdriver or an appropriate size wrench.

(2) **Long-Bolt Fastener (Fig. 11) and Universal Mounting Plate (Fig. 12):**

(a) The long bolt will accommodate a wall surface up to 17 inches thick.

(b) This bolt can be used with or without the universal mounting plate (Fig. 12). When the universal mounting plate is used with two long bolts the same effect is obtained as using the twin-bolt fastener (Fig. 8).

(c) For ordering information on the long-bolt type fastener, refer to EL No. 4325. The universal mounting plate may have to be fabricated locally while a source of supply is established.

(d) Install long-bolt fastener as follows:

(1) Install the 174A backboard in the normal manner except reserve the mounting holes (Fig. 9) which are to be used for the long-bolt fasteners.

**Note:** Where possible, install bolts on each side of a stud or other wall supporting structure, making use of universal mounting plate, so that maximum security is obtained.

(2) For each long bolt, drill a 3/8-inch diameter hole through the wall or other supporting surface using the backboard as a template.

**Note:** The drill should be lined up carefully while drilling to avoid uneven pressure on the cup head of the bolts when they are installed.

(3) Install the bolts from back side of wall, through the universal mounting plate, if applicable, and secure backboard on front side with the hex nuts provided.

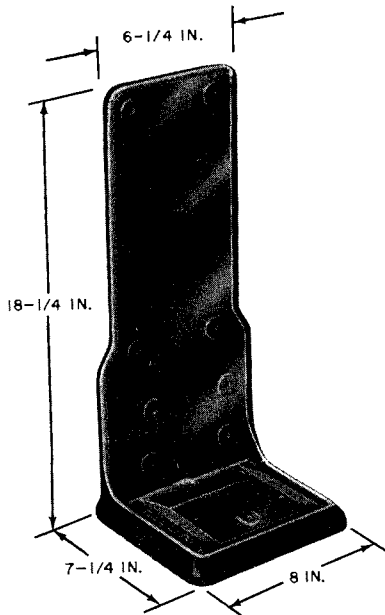
**Note:** If a universal mounting plate is used, it can be secured with a nail until bolts are secured.

(4) When an outside wall is involved, apply a plastic duct seal to the cup portion

of bolt heads. After backboard is secure, remove excess duct seal from around bolt heads.

(5) Cut off excess length of bolt flush with hex nut using a hacksaw with the blade turned 90 degrees.

(6) Using a cold chisel or center punch, score the bolt threads at hex nut to prevent nut from backing loose. ♦



- METAL BLACK
- FOR MOUNTING ALL 200-TYPE COIN COLLECTORS (EXCEPT PANEL TYPE) ON HORIZONTAL SURFACES
- SCREWS PROVIDED FOR MOUNTING COIN COLLECTOR

Fig. 1—139A-03 (MD) Backboard

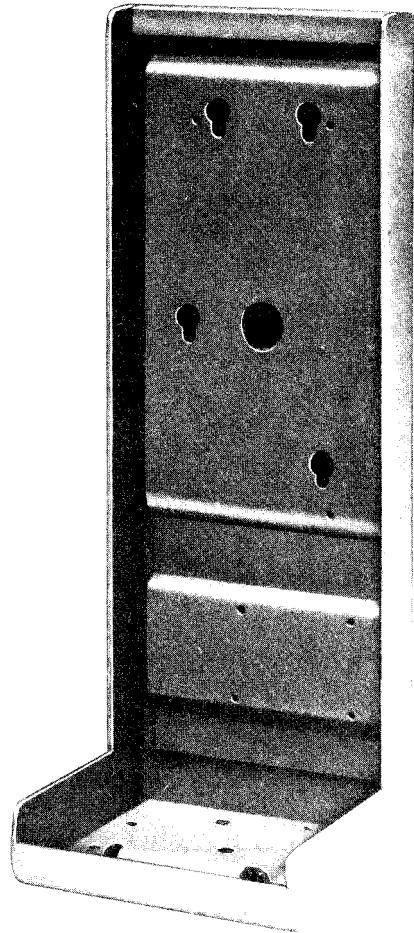
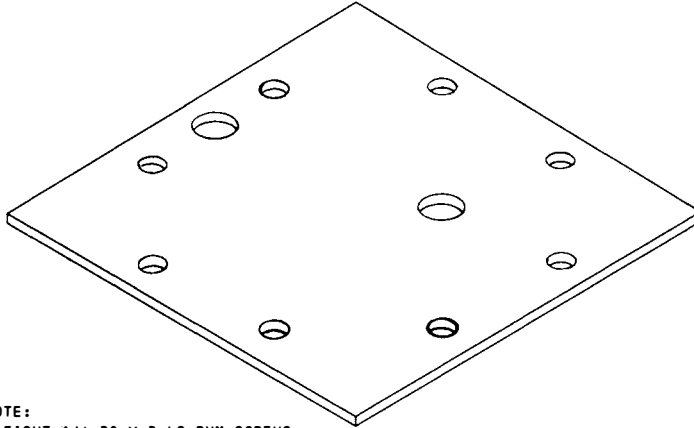


Fig. 2—KS-21676, List 2 Backboard ♦



NOTE:  
 EIGHT 1/4-20 X 2 LG RHM SCREWS  
 AND EIGHT 1/4-IN LOCK WASHERS  
 FURNISHED WITH PLATE.

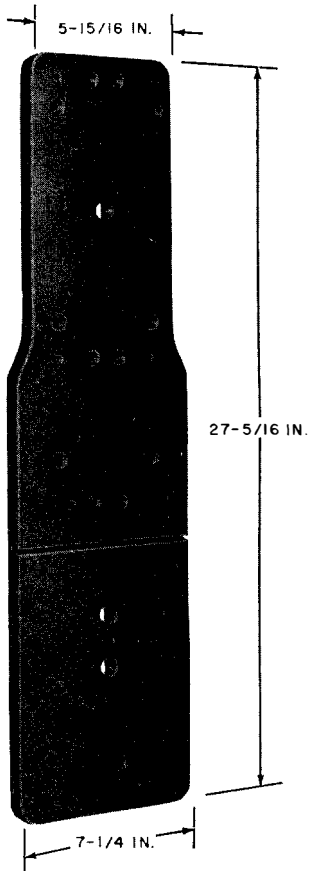
Fig. 3—KS-21676, List 3 Security Plate

TABLE A

HEIGHT REQUIREMENTS

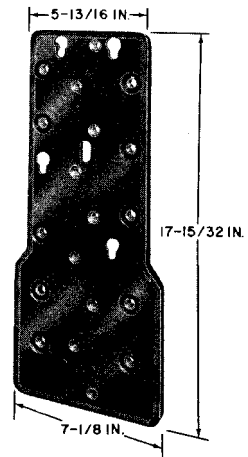
BACK-BOARD	COIN TEL SET	DISTANCE FROM TOP OF BACKBOARD TO FLOOR TO FLOOR	
		COIN SLOT HEIGHT AT 66 INCHES (STANDARD HEIGHT)	COIN SLOT HEIGHT AT 54 INCHES (UNIVERSAL HEIGHT)
178A	Single Slot	67-1/4 inches	55-1/4 inches
174A (MD)	Single* Slot	65 inches	53 inches
	Multi-Slot	65-1/2 inches	53-1/2 inches
144D	Multi-Slot	65-1/2 inches	53-1/2 inches

\* It is not recommended that a 174A backboard be used for a new single slot set installation. When installing a single slot set on an existing 174A backboard, use a 269A adapter (Fig. 7) plus short thread security studs with 3/8-inch long shoulders 834080616 (P-40Y061).



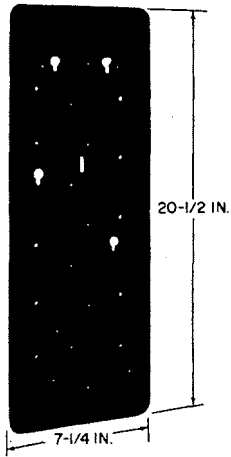
- WOOD, BLACK
- FOR MOUNTING ALL 200-TYPE COIN COLLECTORS (EXCEPT PANEL TYPE) AND A SUBSCRIBER SET ON A WALL AS ONE UNIT
- PROVIDED WITH A SAW SLOT SO BOTTOM PORTION CAN BE CUT OFF WHEN SUBSCRIBER SET IS NOT REQUIRED
- HOLES FOR MOUNTING COIN COLLECTORS ARE PROVIDED WITH 1/4-20 THREADED INSERTS
- REPLACES 144C BACKBOARD

Fig. 4—144D Backboard



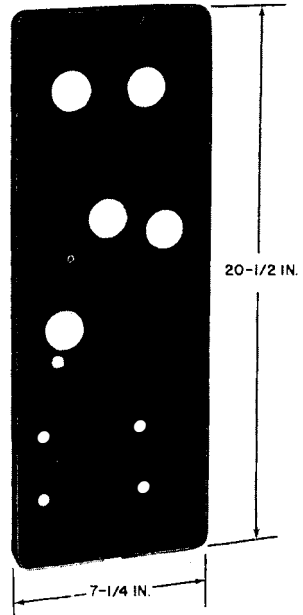
- ALUMINUM ALLOY, BLACK
- FOR MOUNTING ALL 200-TYPE COIN COLLECTORS (EXCEPT PANEL TYPE) ON A WALL
- WILL MOUNT A 1-TYPE SET WHEN 269A BEZEL ADAPTER IS USED

Fig. 5—174A (MD) Backboard



- ALUMINUM ALLOY
- FOR MOUNTING 1-TYPE COIN TELEPHONE SET ON A WALL
- AVAILABLE IN BLACK (-03) AND MOSS GREEN (-51)

Fig. 6—178A Backboard



- STEEL
- FOR MOUNTING OVER A 174A BACKBOARD WHEN 1-TYPE SET IS USED TO REPLACE A MULTISLOT SET
- SECURITY STUDS WITH 3/8-IN LONG SHOULDER AND SHORT THREADS ARE REQUIRED
- AVAILABLE IN BLACK (-03) AND MOSS GREEN (-51)

Fig. 7—269A Bezel Adapter

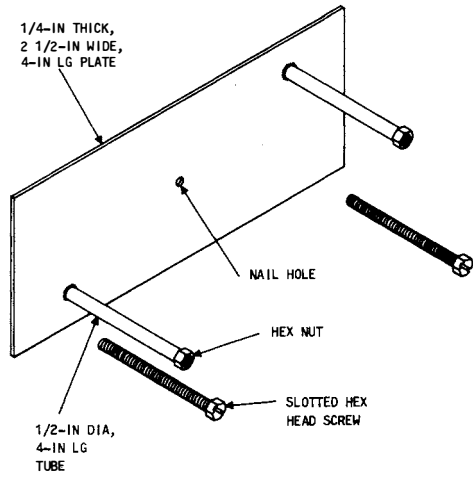
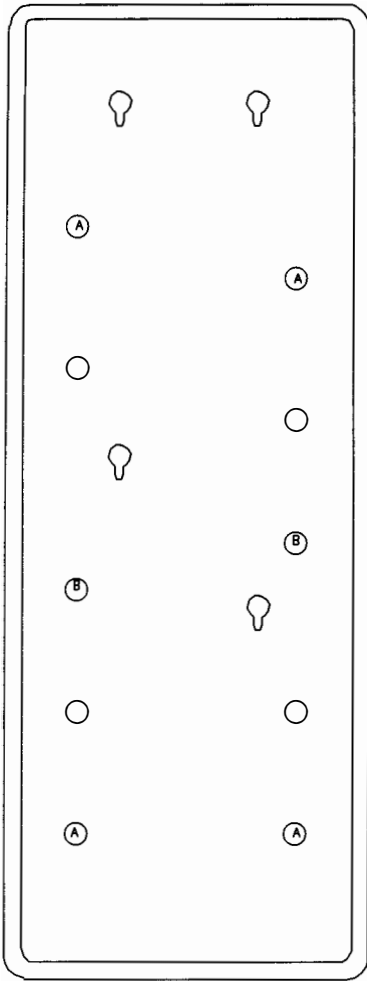
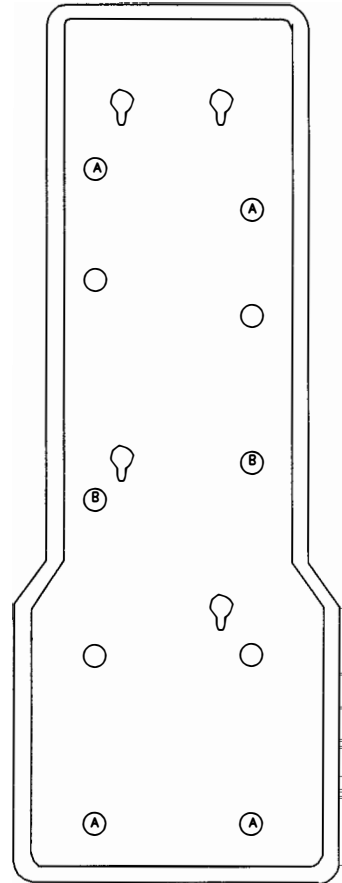


Fig. 8—Twin-Bolt Fastener



NO. 178A BACKBOARD

NOTE:  
USE HOLES "A" WHEN  
4 THROUGH BOLT  
FASTENERS ARE  
REQUIRED. USE HOLES  
"B" WHEN TWIN BOLT  
FASTENER OR 2 LONG  
BOLT FASTENERS ARE  
REQUIRED



NO. 174A BACKBOARD

Fig. 9—Backboards Showing Mounting Holes



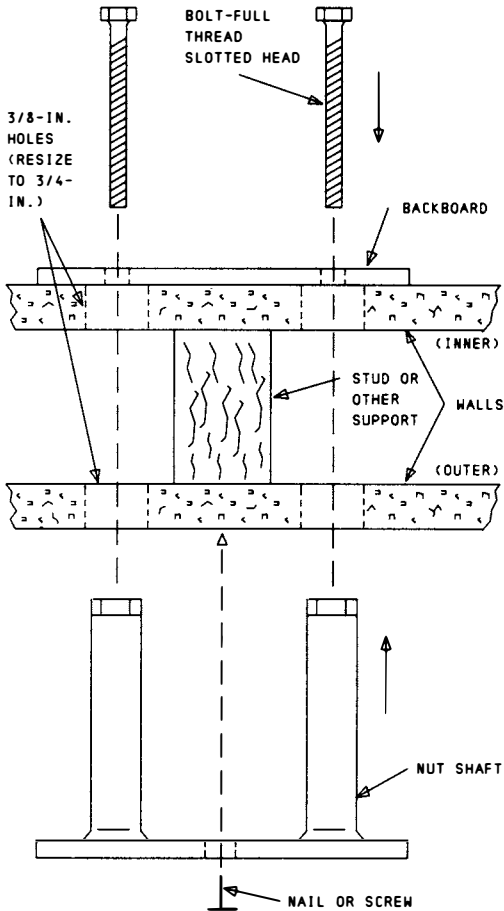


Fig. 10—Twin Bolt Fastener Installation

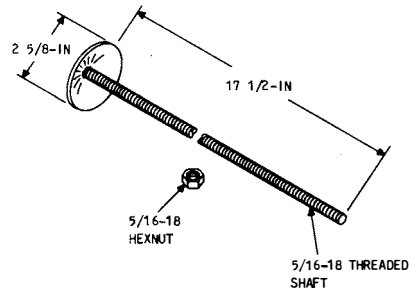


Fig. 11—Long-Bolt Fastener

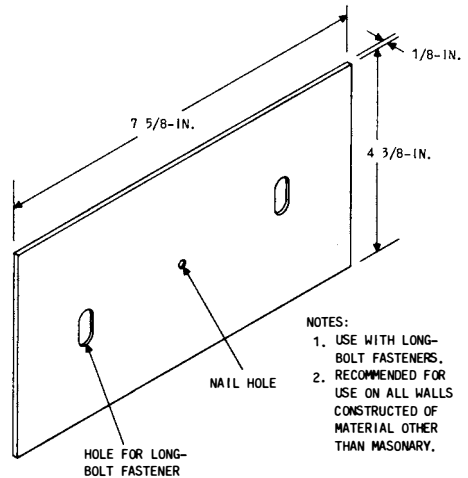


Fig. 12—Universal Mounting Plate

♦TABLE B♦  
FASTENERS USED IN MOUNTING BACKBOARDS

BACKBOARD		MOUNTING SURFACES				HOLE SIZE REQUIRED	FASTENERS	
TYPE	SOFT-WOOD	HARD-WOOD	MASONRY (CONCRETE, BRICK) (NOTE 1)	PLASTER BOARD AND PLASTER ON LATH (NOTE 2)	PLASTER ON CINDER BLOCK, HOLLOW TILE, METAL LATH		SIZE AND TYPE	QUANTITY (NOTE 3)
139A and KS-21676, List 2 (Note 4)	•					1/8 or No. 30	1-3/4 inch No. 14 FH tapping screw	139A uses 4. KS-21676, L1 can use up to 8.
		•					1-1/4 inch No. 14 FH tapping screw	
				•		1/2	1/4-20 by 1-1/2-inch FH machine screw in 1/4 by 1-1/4-inch expansion shield	
144D, 174A, and 178A	•					1/8 or No. 30	1-3/4 inch No. 14 FH tapping screw	7
		•					1-1/4 inch No. 14 FH tapping screw	
				•		1/2	1/4-20 by 1-1/2-inch FH machine screw in 1/4 by 1-1/4-inch expansion shield	
					•	1/8 or No. 30	1-3/4 inch No. 14 FH tapping screw, secure in stud a minimum of 1 inch	6
					•	3/4	1/4- by 4-inch RH toggle bolt (Note 5)	

Notes:

1. When mounting on plastered masonry, install expansion shield below plastered surface by amount equal to thickness of plaster and use 1/2-inch longer machine screw than specified in table.
2. When mounting on plasterboard, plaster on lath, etc, fasteners must be embedded in stud at least 1 inch.
3. When additional security is required for wall backboards, use through wall fasteners.
4. When additional security is required for the KS-21676, List 2, use a KS-21676, List 3 security plate and the hardware furnished with the plate.
5. When using toggle bolts, cut off excess length.