

COIN COLLECTORS INSTALLATION

1.00 INTRODUCTION

1.01 This section covers location, wiring, mounting, and tests for coin collector installation. It also covers use and method of mounting backboards, relay shields, card holders, and out-of-service notices.

1.02 Connections for each type coin collector are given in related C Sections covering connections.

1.03 Directories are covered in the C Section entitled Directory Installations.

2.00 LOCATION

2.01 Selection of a satisfactory location is important, as coin stations are designed and placed for public use and will contain deposited coins which require safeguarding.

2.02 The location of a coin collector and any associated booth or shelf should be specified by the service order. Consult your supervisor and obtain instruction before proceeding if a location is not specified, or does not meet requirements.

2.03 Location requirements for booths and shelves are covered in the C Sections entitled Booths and Shelves, Indoor, Installation; and Booths, Outdoor, Installation.

2.04 Height and clearance for open-type installations shall be as shown in Fig. 1.

2.05 Whenever possible and consistent with other considerations listed in this section, coin collector should be located in viewing range

of the agent or other persons normally in the vicinity.

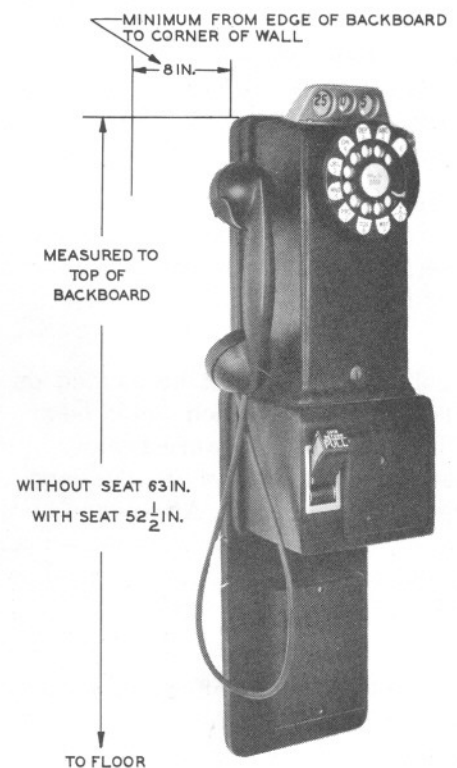


Fig. 1 — Required Mounting Height and Clearance

2.06 Full consideration shall be given to the user's convenience in such items as:

- Ease of finding.
- Sufficient light.
- Privacy of conversation.
- Freedom from noise and vibration.

SECTION C39.025

- Clearance from oily or dirty objects.
- Sufficient clearance from heaters or stoves.
- Clearance from moving machinery, piled merchandise, or narrow aisles.

2.07 To prevent unauthorized removal, backboard and coin collector must be securely mounted. Avoid locations where:

- Coin collector can be dislodged by hard use.
- Fasteners cannot be placed in solid backing.
- Coin collector could be pried loose, such as round columns, uneven surfaces, etc.

Never mount a coin collector on a window or door facing. Avoid horizontal surfaces such as shelves, counters, etc, when vertical surfaces are available.

2.08 Avoid locations over or adjacent to glass counters, show cases, fragile objects, or other property which may be damaged by dropped handsets or receivers.

2.09 If coin collector must be located on finely finished surfaces which would be expensive to repair if coin collector were removed, consult your supervisor and obtain instructions before proceeding with installation. Arrangements should be made to have customer or building owner drill mounting and wire entrance holes through glazed tile, marble, and other such surfaces.

2.10 To avoid inductive effects, the location of coin collector apparatus and associated wiring shall be no closer to neon lights, fluorescent lights, transformers, and other similar equipment than the separations specified in the C Sections covering wiring, clearances, and station sets, location.

3.00 WIRING

3.01 Select wire and place it in accordance with the C Sections covering wiring. Coin collector shall be wired with triple station wire in order to provide an individual ground conductor for each station. The ground connection for this

conductor shall be the same as for signaling grounds.

3.02 Conceal wiring near coin collector. Where this is not practicable, use an approved molding, tubing, or woven conduit to cover wiring. If molding is not considered necessary, tape GS wiring with friction tape. JKT wire need not be taped.

3.03 Locate connecting block, protector, or other terminating apparatus where it will not be accessible to a person using the coin collector. If necessary, locate protector outside of building.

4.00 BACKBOARDS, SELECTION AND MOUNTING

4.01 To prevent unauthorized removal, it is extremely important to use approved methods and full number and type of fasteners specified.

4.02 Backboard shall be mounted in an upright, plumb position in order that the mounted coin collector will be plumb. This is necessary to ensure proper passage of coins through coin chute.

4.03 Backboard should be plumbed by use of a level, using shims if required, to obtain correct alignment. Any gap between backboard and its mounting surface shall be no more than 1/16 inch.

139A Backboard

4.04 The 139A backboard is designed for mounting coin collectors on counters and similar horizontal surfaces. Mounting surface should be secure and not subject to tilting or removal.

4.05 Select and prepare entrance hole before fastening backboard. Feed wire through entrance hole as backboard is placed in position. Fasten backboard so wiring is not crushed or pinched.

4.06 Type and size of fasteners to be used for principal types of surfaces are shown in Table A. Four fasteners shall be used to secure 139A backboard to supporting surfaces.

144D and 174A Backboards

4.07 The 144D and 174A backboards are designed for mounting coin collectors on vertical surfaces. Backboard mounting holes identified by letters are shown in Fig. 2 and 3.

4.08 The 174A backboard provides substantially greater security of mounting than is possible with wood-type backboards and should be used at locations where this added security is needed.

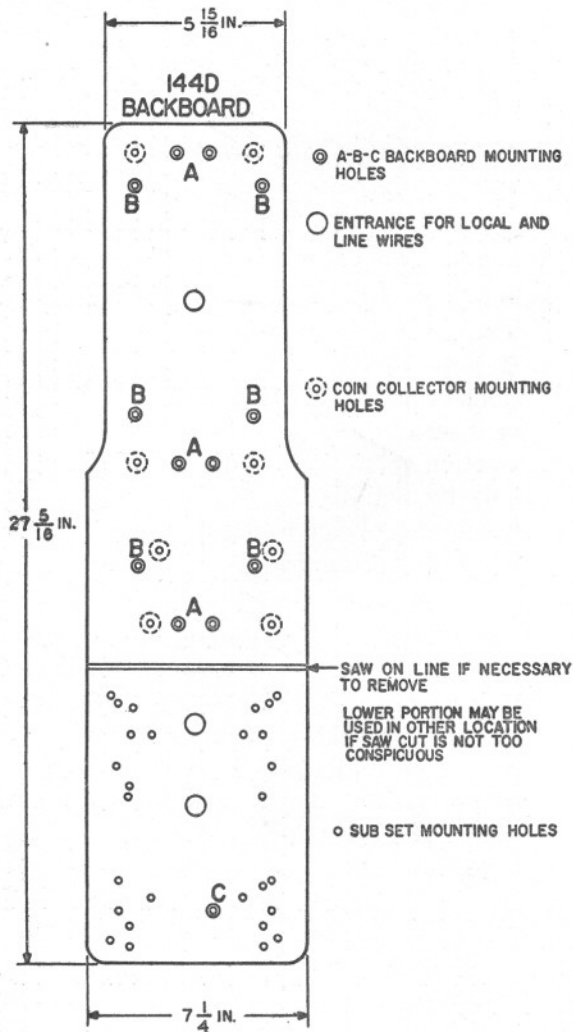


Fig. 2 — 144D Backboard

TABLE A

139A BACKBOARD ON HORIZONTAL SURFACE

Surface	Fasteners (four each)
Soft Wood	1-3/4 inch, No. 14 FH Wood Screws
Hard Wood	1-1/4 inch, No. 14 FH Wood Screws
Marble or Other Masonry (Review 2.09)	1/4-20 x 1-1/2 inch FH Machine Screws in 1/4-inch Machine Screw Anchors, or locally approved equivalent.
All Surfaces, if more secure attachment is desired.	1/4-inch Carriage or Step Bolts. Place heads of bolts on underside of support. Cut off excess length.

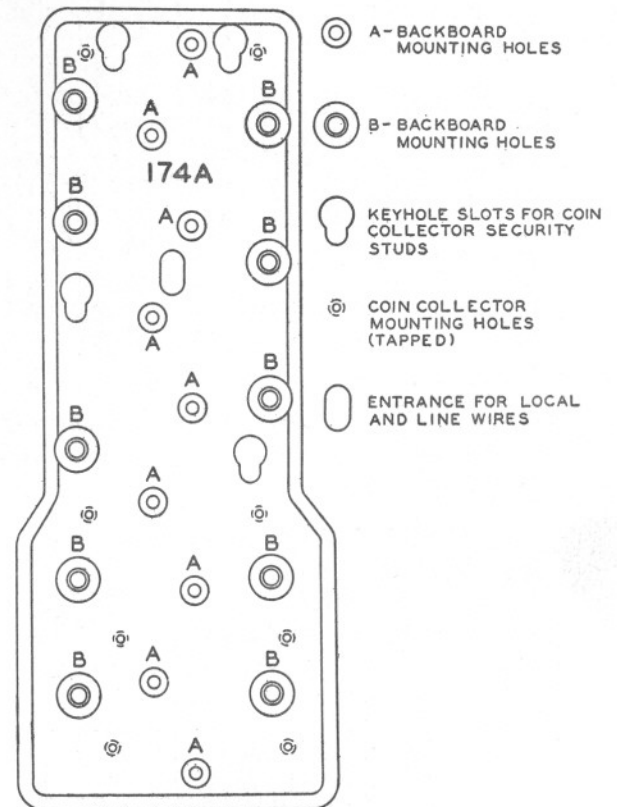


Fig. 3 — 174A Backboard

4.09 Mounting holes and type and size of fasteners to be used for principal types of wall construction are shown in Table B.

4.10 To mount 144D backboard, a recommended fastener shall be secured through each of the seven holes designated in Table B. If insecure fastener location is encountered, relocate mounting hole in backboard. Use 11/32-inch twist drill, and countersink hole so that head of fastener will be flush with backboard.

4.11 More mounting holes are provided in 174A backboards than in 144D backboards. Eight holes are designated A. Ten holes are designated B. When either of these groups of holes, as designated in Table B, is used for mounting backboard, place fasteners in at least six of the holes. Use two holes at top, two at bottom, and two near center of backboard. Alternate or additional fasteners may be used, but at least three fasteners on each side shall be absolutely secure.

4.12 To mount backboard on surface over studding or furring:

1. Find approximate location of stud or furring by sounding or by observing nail marks on baseboard. If necessary, loosen section of baseboard molding, drill test hole, and insert fish wire to locate stud or furring. Replace molding.
2. Definitely locate edges of stud or furring by drilling small test holes as shown in Fig. 4.
3. Center backboard over studding or furring, obtaining height and clearance as shown in Fig. 1. Plumb backboard.
4. Using backboard as a template, drill starting holes in mounting surface. Hole for bringing line wires from wall may be anywhere within channel area in rear of backboard.

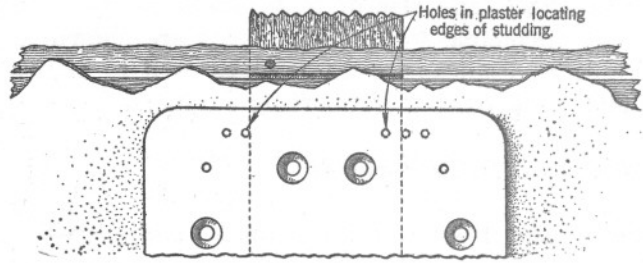


Fig. 4—Locating Studding or Furring

5. As backboard is mounted, arrange wires in channel and dress through proper holes. Make certain that wire is not crushed or pinched between backboard and mounting surface.

4.13 To mount backboard on brick, hollow tile, etc:

1. Locate and plumb backboard for desired height and clearance. Using backboard as template, mark location of fastener holes. If joint between hollow tile or brick sections or other areas where fasteners would be insecure is encountered, shift backboard location or, if necessary, relocate mounting hole by drilling new hole in 144D backboard or by using alternate mounting holes in 174A backboard.
2. Many wall surfaces, especially masonry, are not perfectly flat. The backboard may bow if fasteners are tightened unevenly or without proper backing. If backboard is bowed, it may be difficult to attach coin collector properly. All fasteners should be placed and then tightened alternately until backboard is secure.

TABLE B

144D AND 174A BACKBOARDS ON VERTICAL SURFACES

Wall Construction (Review 2.09)	Fasteners	Mounting Holes
Solid Wood—7/8 inch or thicker	No. 14 x 1-1/2 inch FH Wood Screws	B and C
Lath and Plaster, or Plasterboard, etc, on studding	No. 14 x 3-inch FH Wood Screws. Slant screws inward toward stud.	A and C
Lath and Plaster, or Plasterboard, etc, on 7/8-inch or thicker furring	No. 14 x 2-inch FH Wood Screws. For thin- ner furring use fasteners and mounting holes prescribed for basic wall construction.	A and C
Solid Masonry— Brick, Concrete, etc	No. 14 x 2-1/4 inch (plus thickness of wall covering) FH Wood Screws in No. 16 Plastic Anchors or locally approved equivalent	B and C
Porous Masonry— Cinder Block, Plaster Block, etc	Double backboard method if feasible, other- wise select different location. See Note.	B and C
Hollow Backing—Tile, Metal Lath on metal studding, etc	1/4 x 4-inch Toggle Bolts	B and C

Note: Where weakness of wall is evident, place a backboard on each side of wall and fasten together with 1/4- x 8-inch carriage or step bolts through holes B and C. Backplate on rear wall may be a 144-type backboard, a plywood board (1/2 inch), or metal plate. Bolts shall be placed from rear side with square shank below head recessed in backplate to prevent unauthorized removal. Excess length of bolt shall be cut off to allow mounting of coin collector.

5.00 MOUNTING COIN COLLECTOR

Caution 1: Remove receiver or handset from switchhook before removing or reassembling upper housing from or to backplate of coin collector equipped for 10-cent operation. This reduces possibility of damage to gate-operating arm.

Caution 2: Do not reassemble upper housing on prepay coin collectors without a P-349486, P-16A336, or KS-7994 shield over relay. Shield protects relay from being damaged by upper housing.

Caution 3: Do not reassemble upper housing on backplate equipped with an induction coil without P-16A833 neoprene cover in place over coil. Avoid striking electromagnet against induction coil.

Note: When neoprene cover is assembled, avoid placing cover over gate-operating arm which is directly below coil. This may be avoided by hanging handset on switchhook before placing cover. Remove handset before reassembling upper housing.

5.01 Coin collectors equipped with aluminum backplates provide four tapped holes to accommodate P-10E070 security studs which are designed to engage in keyhole slots of 174A and 167-type backboards and coin collector mounting panel of KS-14611 booths, thus keying backplate to backboard. This keying is in addition to eight normal mounting fasteners. Security studs are not furnished with coin collector and shall be ordered separately. See Fig. 5.

Note: Earlier type aluminum backplate coin collectors provide for two upper security studs only.

5.02 Mount coin collector by placing screw fasteners in the four upper mounting holes of backplate and four in coin compartment if open; if not open, the four fasteners in the coin compartment will be added later by collector. Use fasteners designated in Table C.

1. Bring wires through opening in backplate, making sure wire is not pinched or crushed between coin collector and backboard.
2. To avoid bowing backplate, partially tighten each screw fastener alternately until coin collector is secure.

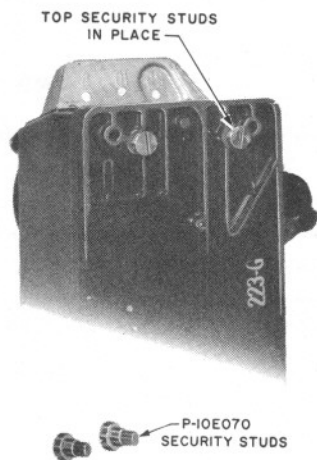


Fig. 5 — P-10E070 Security Studs

3. Locate and mount associated subscriber set as shown in C Sections covering booths and shelves; or station sets, installation. Subscriber sets equipped with S36 (long loop) relay may be mounted under booth shelf or in booth ceiling. Normally relay should not require adjustment at time of installation. However, when so mounted, if relay fails to operate satisfactorily, it should be replaced or readjusted as covered in C Section entitled, Subscriber Sets, Maintenance.

TABLE C

FASTENERS FOR COIN COLLECTORS

Mounting Surface	Fasteners
Wooden Booths, no backboard	1-1/4 inch, No. 14 FH Wood Screws
Open-type Metal Booths	P-210250, 1/4-20 x 3/4-inch FH Machine Screws furnished with booth
19A Shelf	P-49C296, 1/4-20 x 1-inch FH Machine Screws furnished with shelf
139A Backboard	P-210249, 1/4-20 x 5/8-inch FH Machine Screws furnished with backboard
144D Backboard 174A Backboard	P-49C296, 1/4-20 x 1-inch FH Machine Screws not furnished with backboard
KS-14611 Booths or 167-type Backboard in booths	P-49C296, 1/4-20 x 1-inch FH Machine Screws furnished with booth or backboard

6.00 GROUNDING COIN COLLECTOR HOUSING ASSEMBLY

Assembly shall be grounded as follows:

- On prepay open-type installation, coin collector backplate assembly shall be grounded by connecting a single conductor of JKT or GS insulated wire between coin relay ground termination and mounting screw on left side of mechanism base (see Fig. 6). Lockwasher under mounting screw shall be removed. Dress wire so that it will not interfere with placing of coin relay shield.
- On postpay open-type installation, coin collector backplate assembly shall be grounded by connecting station wiring ground conductor directly to mechanism base mounting screw.

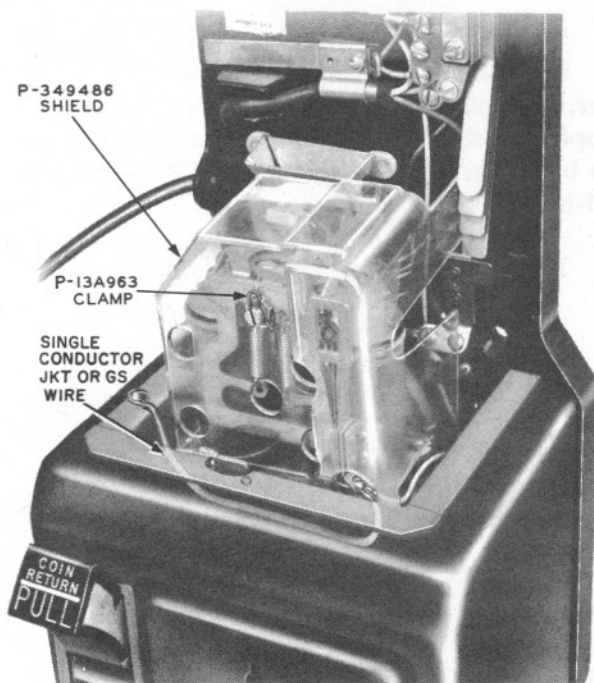


Fig. 6 – Method of Grounding Backplate Assembly, Open-type Installation

- In indoor booth, a No. 14-gauge insulated ground wire (P-12C414 ground wire assembly) is provided as covered in the C Section entitled Booths and Shelves, Indoor, Installation. Connect and dress wire as shown in Fig. 7. At prepay station, dress wire so that it will not interfere with operation of coin relay or placing of coin relay shield.
- In all-metal outdoor booth, coin collector backplate assembly is grounded through mounting screws.
- In 9-type outdoor booth, coin collector backplate assembly shall be grounded in same manner as open-type installation.
- A U-shaped spring clip is provided on left edge of upper housing. Clip is so located as to contact equalizer spring on left side of backplate. This is to ensure an adequate

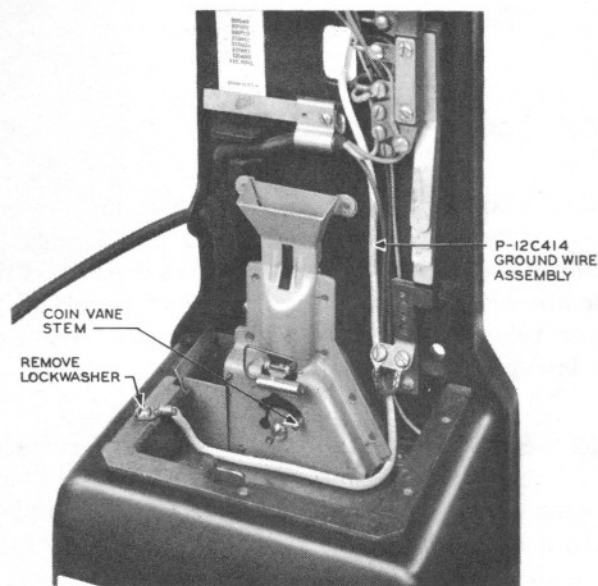


Fig. 7 – Method of Grounding Backplate Assembly, Indoor Booth

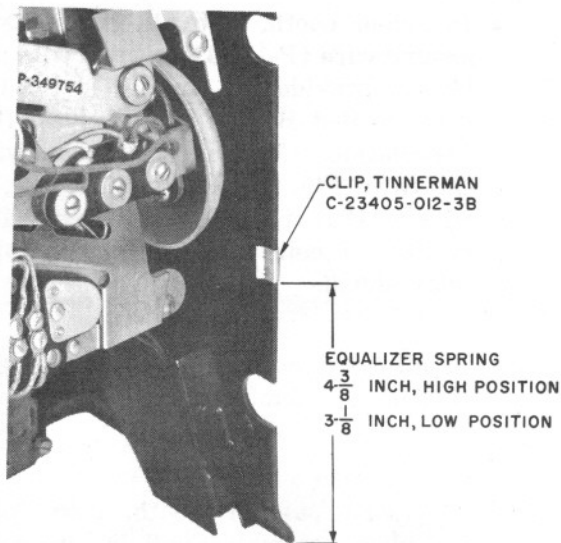


Fig. 8 — Method of Grounding Upper Housing to Backplate

electrical contact between upper housing and grounded backplate. Clip shall be added to upper housing if not already equipped. (See Fig. 8.)

7.00 COIN RELAY SHIELD

7.01 Coin relay is protected against damage and fraudulent operation by a molded plastic or fiber shield. It is necessary to remove shield for certain connections and tests. Shield shall always be on relay at any time upper housing is mounted on backplate assembly.

7.02 Shield P-349486 (clear plastic) replaces earlier type shield KS-7994 (fiber). These shields are used unless coin collector is equipped with a D-95365 contact device in the coin return in which case shield P-16A336 (clear plastic) is used to provide required clearance.

7.03 Plastic shield is held in place with a P-13A963 clamp (furnished with shield). Clamp is slipped down over front pivot screw of coin relay as shown in Fig. 6. Clamp is not used on fiber shield.

8.00 CARDHOLDERS

8.01 To mount 8B cardholder on dial coin collector, proceed as follows:

1. Remove and save three slotless screws located through top of upper housing at rear of coin gauge. If present, do not remove fourth screw which is positioned over electromagnet.
2. Attach cardholder to upper housing with screws and nuts previously removed or new P-242317 RH slotless machine screws, P-92383 hexagon nuts, and No. 4 (0.112) x 3/64 x 1/32 nontangling steel lockwashers with Parkerized finish. Place washers under nuts inside upper housing.

8.02 The P-16A788 apparatus blank assembly may be used in conjunction with the cardholder. Two plugged mounting holes are provided in upper housing below dial for mounting apparatus blank assembly with two P-122977, .112-36 x 1/4-inch RH machine screws.

8.03 Place instruction cards as directed locally.

9.00 AUXILIARY HANDSET DEVICES

Transmitter and Receiver Locks

9.01 Use and method of mounting transmitter and receiver locking devices are covered in the components C Section entitled Handsets, Connections and Maintenance. Locks are intended for use at locations where vandalism has been encountered or is likely. Locations for use shall be designated locally.

Antifrost Transmitter Cover

9.02 The 118A cover is intended for use on F- and G-type handsets associated with coin stations located in outdoor booths where subfreezing temperatures are encountered. Cover prevents condensed moisture from freezing in grid holes of transmitter cap. (See Fig. 9.) Its use shall be designated locally.

Antifraud Transmitter Unit

9.03 The T2 transmitter unit is equipped with a protective grid to prevent fraudulent use of coin stations. Its use in place of T1 transmitter units shall be designated locally.

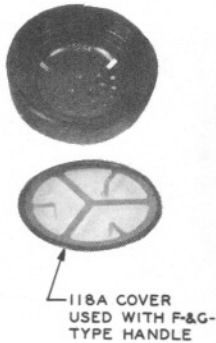


Fig. 9 — 118A Transmitter Cover

Armored Cords

9.04 The H4CG-3 cord for use with G-type handsets and the H3AP-3 cord for use with F-type handsets are neoprene-jacketed armored cords intended for use at locations where vandalism has been encountered or is likely. The G1G-3 and F1K-3 handsets equipped with these cords are available. The G1G-3 handset also is equipped with a T2 transmitter unit. Locations for use shall be designated locally.

10.00 OUT-OF-SERVICE NOTICES

10.01 If coin collector is not ready for service when installation work is completed, place a SORRY—TEMPORARILY OUT OF SERVICE sign, KS-7991, so that customers will not deposit coins (see Fig. 10). When coin collector is placed

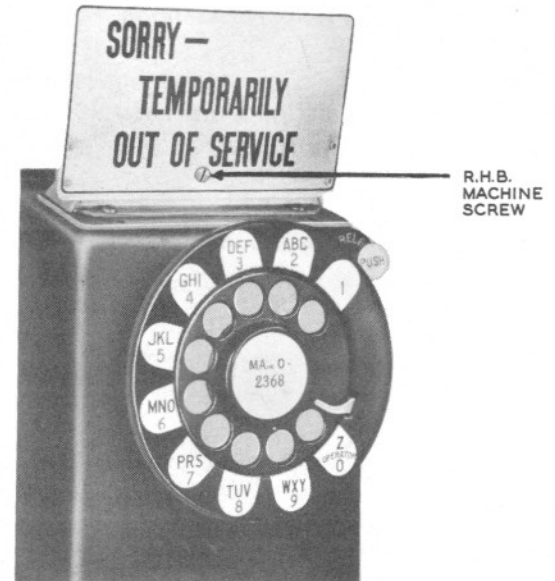


Fig. 10 — KS-7991 Sign in Place Over Coin Gauge

in service, leave a KS-7991 sign with public telephone agent or responsible person and give instructions for its use when coin collector is out of service.

10.02 The KS-7991 sign includes a fastening arrangement consisting of a No. 8-32 x 3/4-inch RH machine screw and a self-retained Tinnerman speed nut C-6724-832-373 (see Fig. 11).



Fig. 11 — Rear View of KS-7991 Sign

11.00 FINAL TESTS

Detailed information on the following tests is given in C Sections entitled Coin Collectors, Maintenance, General; Coin Collectors, Postpay, Maintenance; and Coin Collectors, Prepay, Maintenance.

Coin Handling Features:

- Trap and Vane Release Test Prepay
- Bias Margin Test Prepay
- Coin Chute Operation and Refund Test Prepay—
Postpay
- Coin Signal Test Prepay—
Postpay
- Hopper Contact Operation Postpay
- Push Button Mechanism General

Station Operation:

- Dial Shorting Contact Springs Prepay
- Varistor Effectiveness Postpay
- Noise or Cutout General
- Dial and Ringer Test Local
Practice

Check that number plate, instruction card, and directory are in place.