101A AND 101B KEY EQUIPMENTS

INSTALLATION

1.00 GENERAL

This section covers the installation of the 101-type key equipment relay units, key units, and associated equipment.

2.00 LOCATION OF 101A KEY EQUIPMENT

2.01 Locate key boxes or apparatus cases within easy reach of attendant.

2.02 Avoid locating key boxes or apparatus cases in a strong light that will make the lamps difficult to observe.

3.00 LOCATION OF 101B KEY EQUIPMENT

3.01 A suitable desk, table, or countertop, cut as shown in Fig. 1, shall be *furnished by the customer* for installing the framework and flush-mounted key units at 101B key equipment installations.

3.02 As in 2.02, when locating flush-mounted units consideration should be given to the amount of light which may interfere with lamp observation.

3.03 Allow adequate working space for access to the terminal panels.

4.00 LOCATION OF ATTENDANT TELEPHONE SET, TELEPHONE JACKS, AND DIAL

4.01 Locate attendant telephone set within convenient reach of the attendant.

4.02 When a head telephone set is specified, select a location for the jack mounting which is convenient to the customer. Avoid knee-well installations or other locations where damage might occur.

4.03 When installing the jack mounting on the side of the desk or table, it shall be mounted flush with the front edge of the desk or table leg.

4.04 If a dial is specified, various types of dial mountings may be located either at the sides or on top of a desk or table.

5.00 LOCATION OF COMMON AUDIBLE SIGNAL

Refer to the C Sections entitled Buzzers and Bells, Installation and Maintenance; and Station Sets, Installation, when installing the common audible signal.

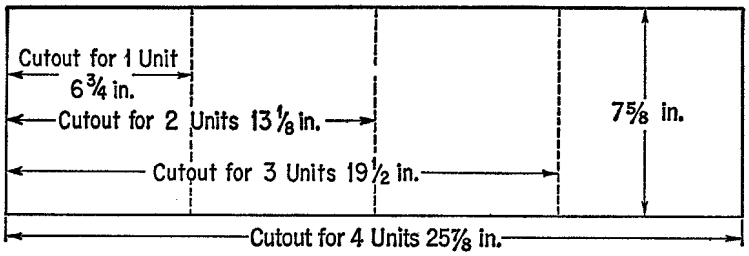


Fig. 1 — Size of Cutout for 101B Key Equipment

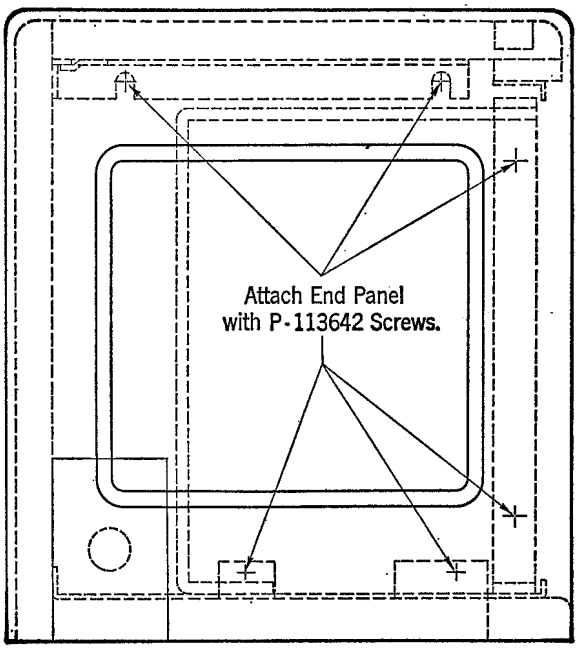


Fig. 2—Method of Attaching End Panels (Single-sided Key Boxes)

6.00 LOCATION OF RELAY EQUIPMENT

Install apparatus cabinets and accessories as covered in the C Section entitled Station Systems Cabinets, Installation.

7.00 ASSEMBLY OF 101A KEY BOXES

7.01 The wooden key boxes are assembled as shown in Fig. 2, 3, 4, and 5.

7.02 To install key unit in wooden key box, proceed as follows:

1. Loosen top panel retaining screw and remove top panel.
2. Place key unit in key box with offset between faceplate and frame of key unit over the flange at the front of key box baseplate.

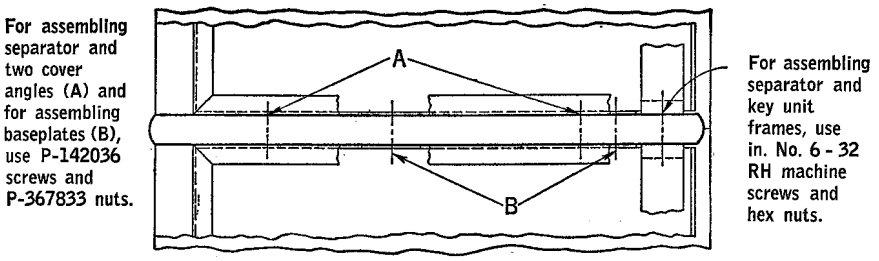
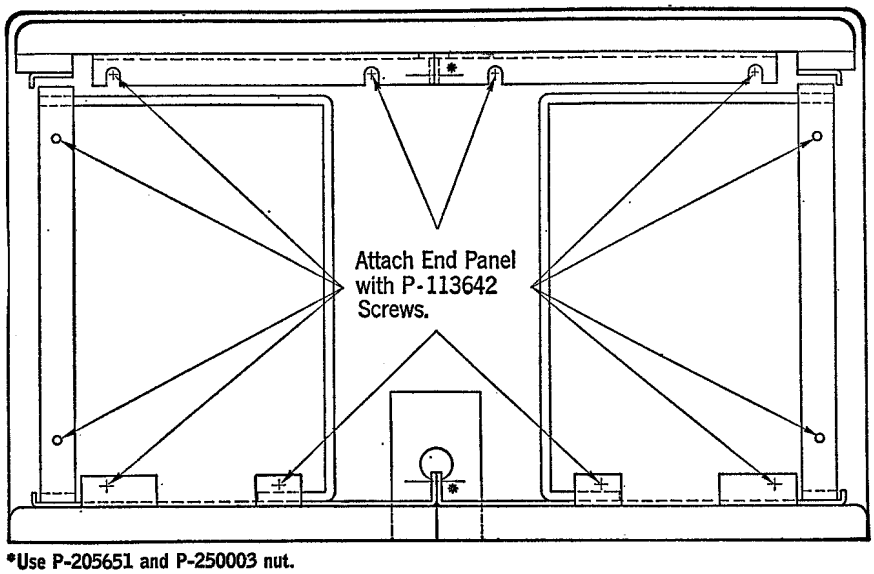
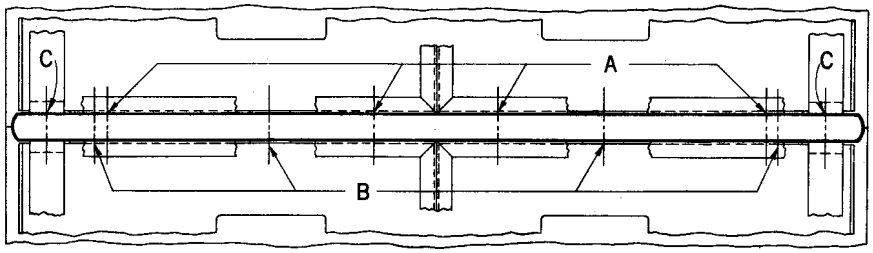


Fig. 3—Fastening Key Boxes Together (Single-sided Key Boxes)



*Use P-205651 and P-250003 nut.

Fig. 4—Method of Attaching End Panels (Double-sided Key Boxes)



For assembling separator and two cover angles (A) and for assembling baseplates (B), use P-142036 screws and P-367833 nuts.
For assembling separator and key unit frames (C), use P-146811 screws and P-367833 nuts.

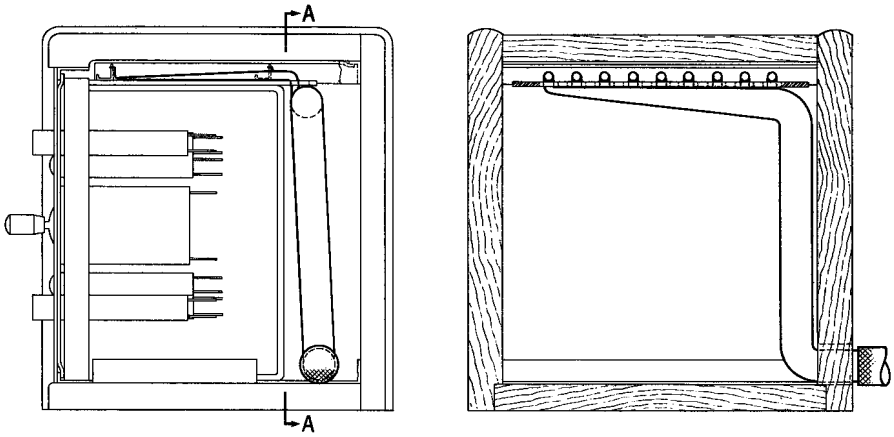
Fig. 5 — Fastening Key Boxes Together (Double-sided Key Boxes)

3. Place cable as shown in Fig. 6. Drill larger hole if necessary.
4. Attach cable terminal panel to key box framework with four machine screws furnished with key box (fanning strip holes toward rear).
5. Place top panel over the key unit with offset between faceplate and frame of key unit, engaging the flange on front of top panel.
6. Engage rear of top panel into flange on the rear of key box.
7. Tighten retaining screw in top panel securely.

7.03 Aluminum apparatus cases are assembled in the following manner:

1. Aluminum apparatus cases are assembled for single key units as shown in Fig. 7.

2. Fig. 8 and 9 show the 58A connecting block installed on the left-hand end panel. However, the following procedure also applies to right-hand installations. To install, remove the bracket holding the grommet, and discard. Place the 58A connecting block in a position to give access to all terminals. Longer machine screws are used to secure the 58A connecting block through the grommet. Place the cord clamp as shown in Fig. 8. The bolts holding the terminal block are long enough to rest against the side case for support.



End View—End Panel Removed

Section A - A

Fig. 6 — Cable Arrangement

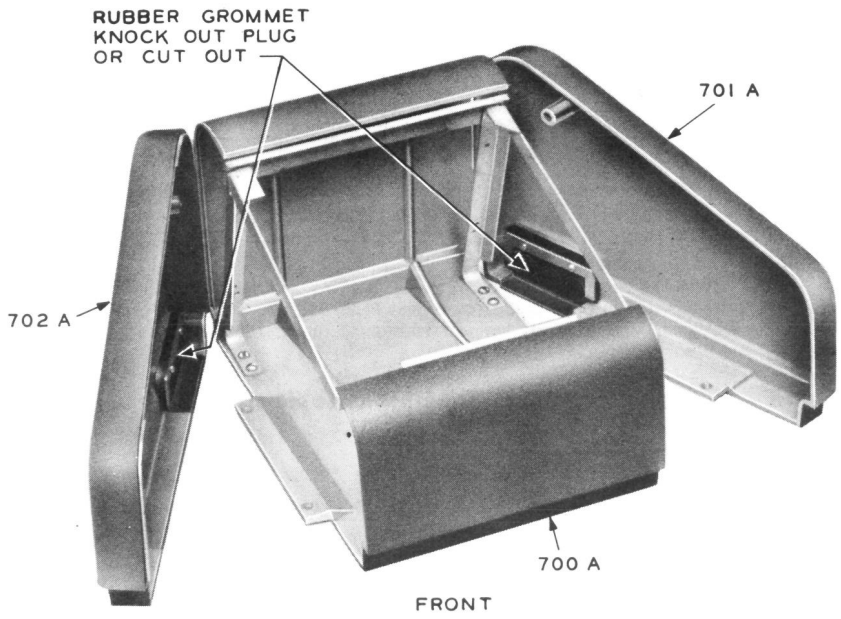


Fig. 7 — Assembly of Aluminum Apparatus Case

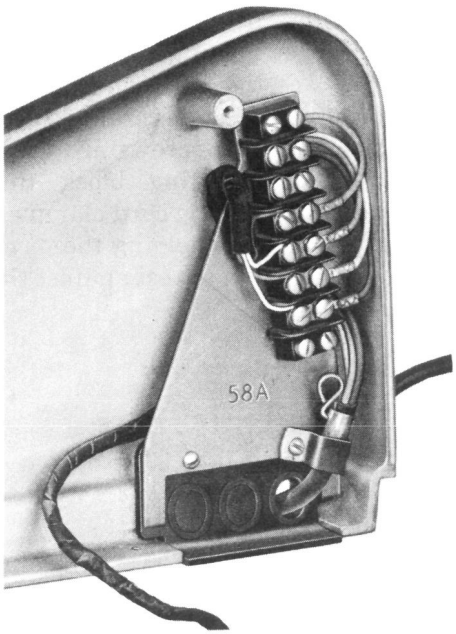


Fig. 8 — 58A Connecting Block

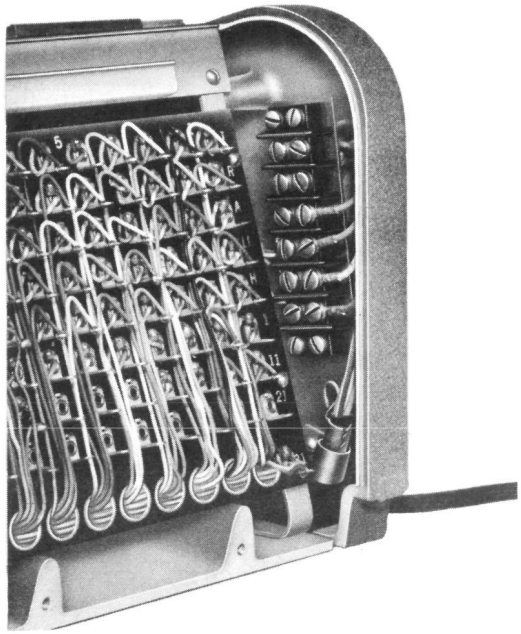


Fig. 9 — Rear View Aluminum Apparatus Case Showing 58A Connecting Block

3. Fig. 10 shows holes in base for left and right cases or for additional 700A cases side by side.
4. Bushings and washers are furnished for alignment of terminal support brackets on apparatus case assemblies.
5. On side-by-side installations the 62A bracket used for mounting a relay in the aluminum case shall be associated with the originating key unit.

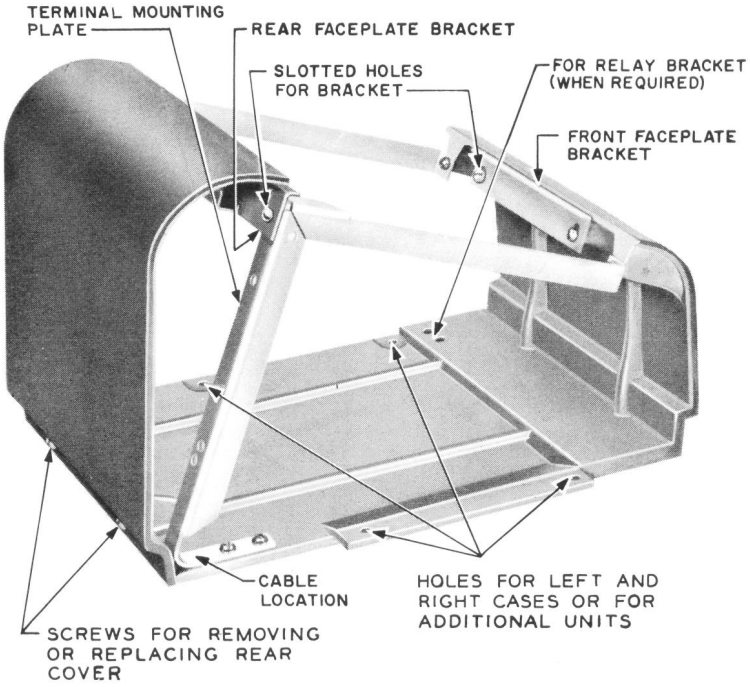


Fig. 10—700A Apparatus Case

7.04 To install key unit in aluminum apparatus case, proceed as follows:

1. Remove rear cover of 700A apparatus case by removing two screws at base of apparatus case (Fig. 10).

2. Remove rear faceplate bracket (Fig. 10).

3. Fasten terminal to rear of 700A apparatus case (Fig. 11).

On key unit terminal plates stenciled with the suffixes —J1 to —J3, precaution should be taken that terminal 31 does not touch frame of terminal plate mounting or rear cover.

4. Select side where cable is to enter apparatus case and remove rubber plug corresponding to size of cable (Fig. 7).

5. Insert cable through grommet and remove sufficient cable sheath to reach farthest terminal. Fan conductors through fanning strip as shown in Fig. 11. If required, tie cable to terminal mounting plate near cable entrance.

6. Fasten side apparatus cases at this time, if not already fastened.

7. If relay is to be mounted in apparatus case, install the 62A bracket and relay. Place straps on relay, as covered in the C Section entitled 101A and 101B Key Equipments, Connections, making certain that length is sufficient to reach farthest terminal.

8. Adjust front faceplate bracket to provide a faceplate level flush with housing.

9. Insert front flange of key unit into front adjustable bracket of 700A apparatus case.

10. Replace and adjust rear faceplate bracket to provide a faceplate level flush with housing.

11. Replace and fasten rear cover.

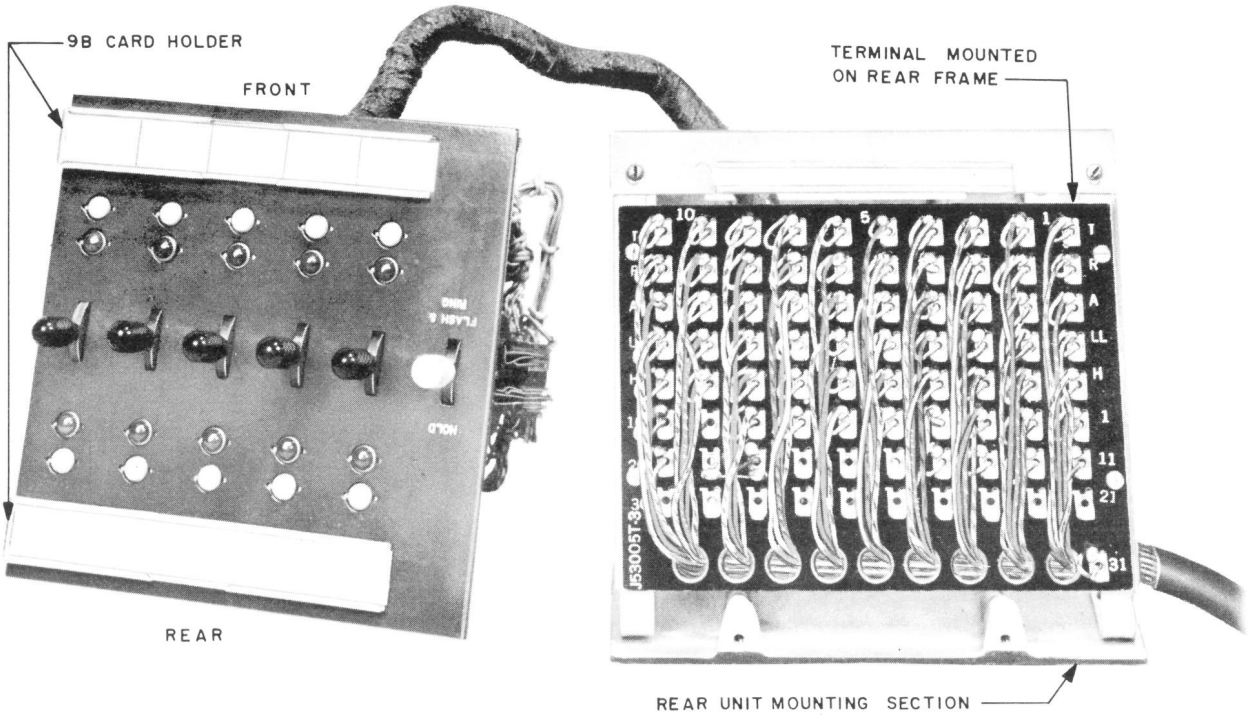


Fig. 11 — Terminal Mounted on Rear of 700A Apparatus Case

8.00 CHANGING WORKING KEY UNIT TO ALUMINUM APPARATUS CASE

8.01 The method of changing a working key unit from a wooden key box to an aluminum apparatus case is as follows:

1. Remove key unit and terminal from wooden key box.
2. Saw metal frame bar as shown in Fig. 12.
3. Dismantle associated wooden panels and retain screws.
4. Remove rear cover of 700A apparatus case.
5. Remove side apparatus cases if attached.
6. Remove rear faceplate bracket (Fig. 10).
7. Remove two screws and raise one end of the rear terminal frame. Place cable in corner of frame and replace screws (Fig. 13).
8. Fasten terminal to rear framework of 700A apparatus case (Fig. 11).
9. Remove rubber plug corresponding to size of cable from side apparatus case selected for cable entrace. Cut along mark on underside of grommet to cable hole. Insert cable in grommet. If required, tie cable to terminal mounting plate near cable entrance.
10. Replace side apparatus cases.
11. Adjust front faceplate bracket to provide a faceplate level flush with housing.
12. Insert front flange of key unit into front bracket.
13. Replace and adjust rear faceplate bracket to provide a faceplate level flush with housing.
14. Replace and fasten rear cover with two screws.

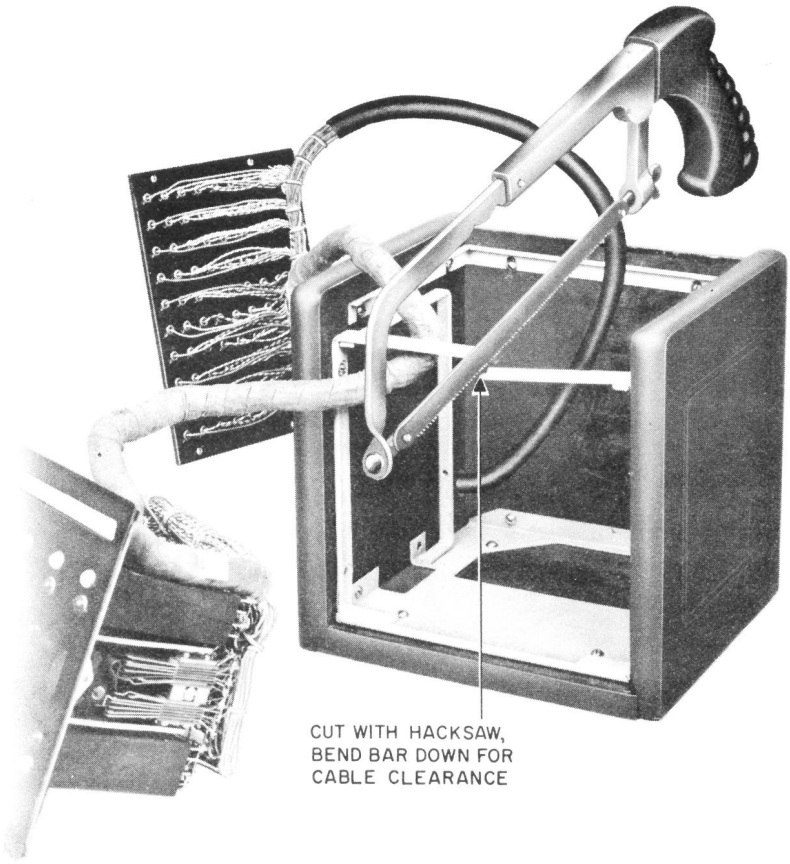


Fig. 12 — Preparing Wooden Key Box for Removal of Key Unit

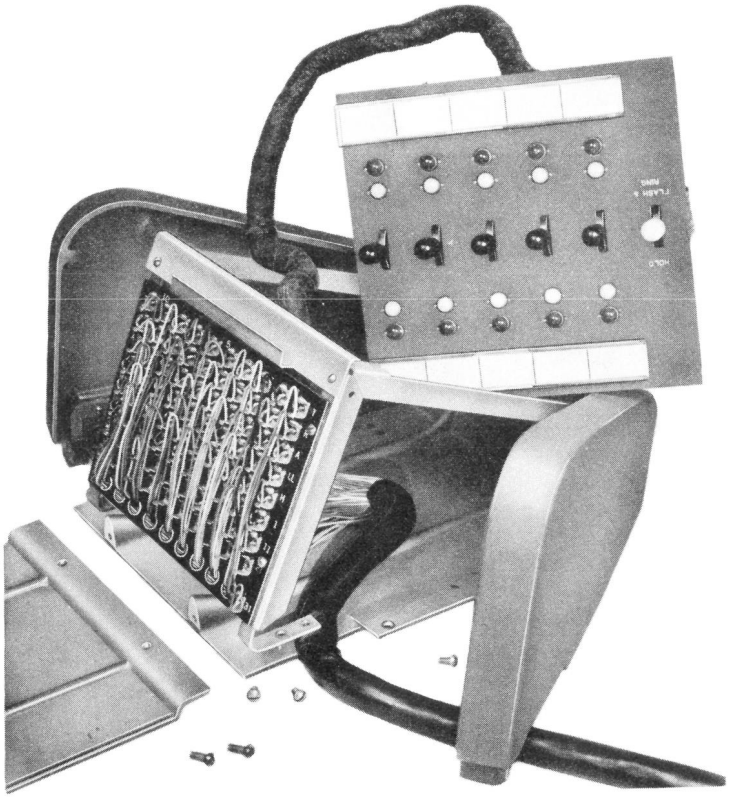


Fig. 13 — Assembling Key Unit in 700-type Apparatus Case

8.02 When more than one key unit is mounted side by side, follow the general procedure outlined in 8.01 except for the following:

1. Attach all 700A apparatus cases together.
2. Remove screws holding rear of terminal frames on all 700A apparatus cases. Raise frames, place cable in corner, and refasten terminal frames.
3. If required, tie cable to terminal mounting plate at each key unit.

9.00 MOUNTING 101B KEY EQUIPMENT ASSEMBLY

9.01 Fig. 14 illustrates a typical assembly of 101B key equipment.

1. Attach framework to top of desk, table, or counter top with two 7/8-inch FH wood screws on each end.
2. It may be necessary to drill clearance holes in the underside of the table to provide clearance for the cover mounting screws. Using the cover as a template, mark and drill 1/4-inch clearance holes 1/4 inch deep.
3. Mount the four cover supporting angles shown in Fig. 14 to the framework with RH machine screws.
4. Place key units in framework by sliding key unit faceplate over projecting metal detail on rear of framework. Rotate the metal clips on the front side over key unit frame and tighten securely.
5. Place stile strips between key units. Place molding over key units and stile strips and fasten to framework with screws furnished.
6. Attach terminal panels to brackets with four machine screws each.
7. Place cable as shown in Fig. 15.
8. After connections to terminals have been completed, install the cover using 8-32 by 3/8-inch machine screws.

9.02 Fig. 16 shows the changes required to mount 101B key equipment on an angle.

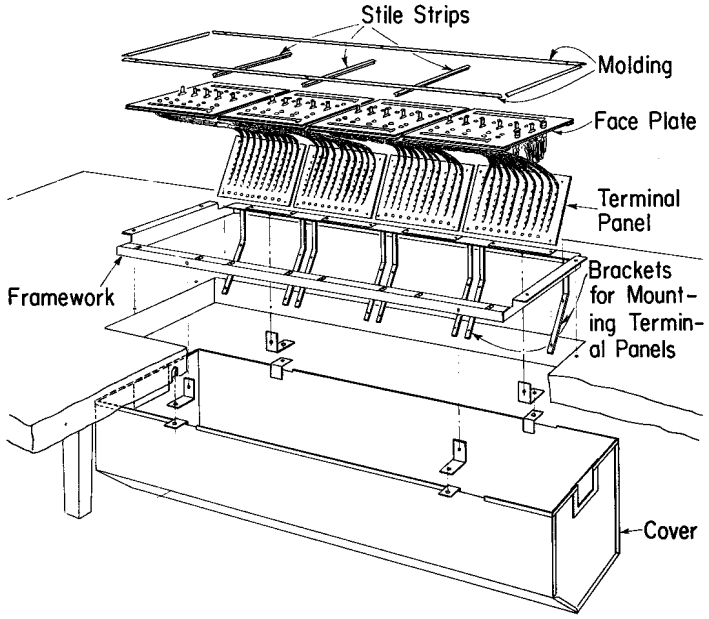


Fig. 14 — Assembly of 101B Key Equipment

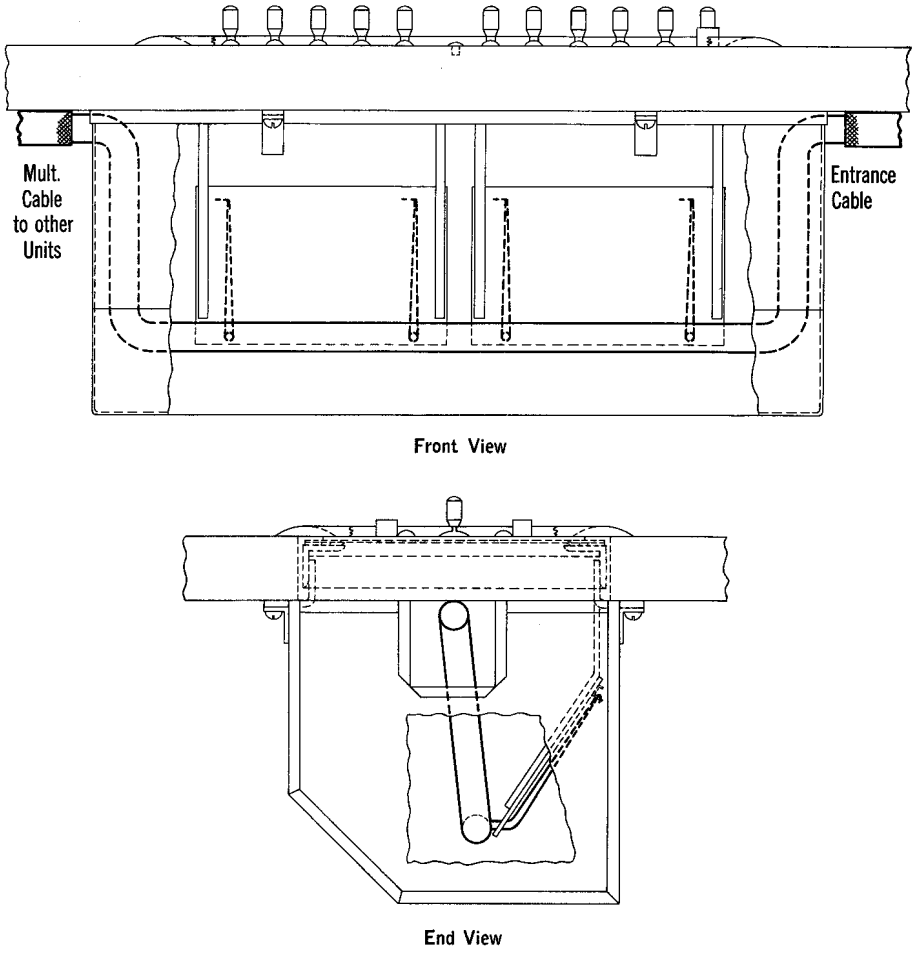


Fig. 15 — Cabling 101B Key Equipment

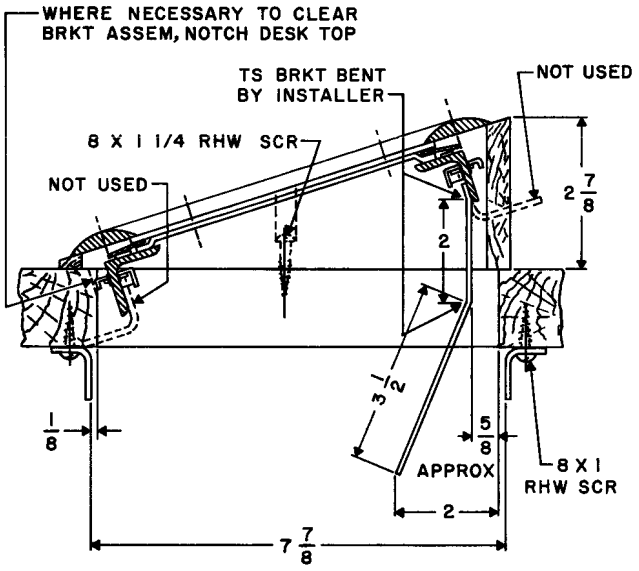


Fig. 16 — Installation of Framework for Tilting 101B Key Equipment

10.00 INSTALLATION OF DESIGNATION STRIPS AND FACEPLATES

10.01 Insert designation strips and associated celluloid strips from the right end of the designation strip holder. On 9A and 9B card holders, slide designation strip below lucite cover.

10.02 Faceplates are fastened with two bolts through the key unit frame. To replace, remove the key unit for access to locking nuts.

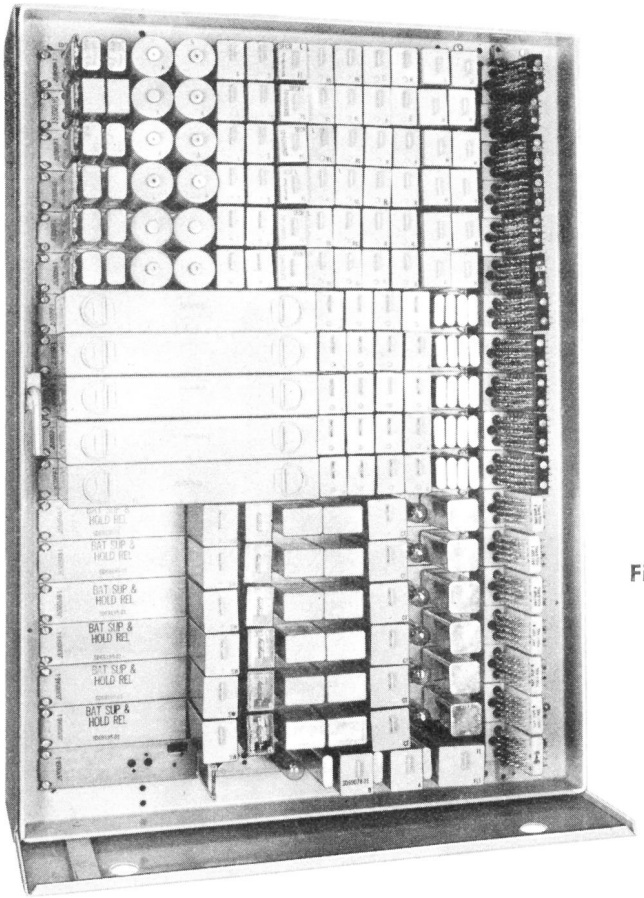


Fig. 17 — Front View of 101-type Relay Equipment in an 18-plate Cabinet

11.00 INSTALLATION OF RELAY EQUIPMENT

Fig. 17 shows a typical arrangement of relay units mounted in an 18-plate cabinet. Fig. 18 shows a method of cabling 101-type key equipment relay units when incoming cables run directly to terminal strips on the relay units.

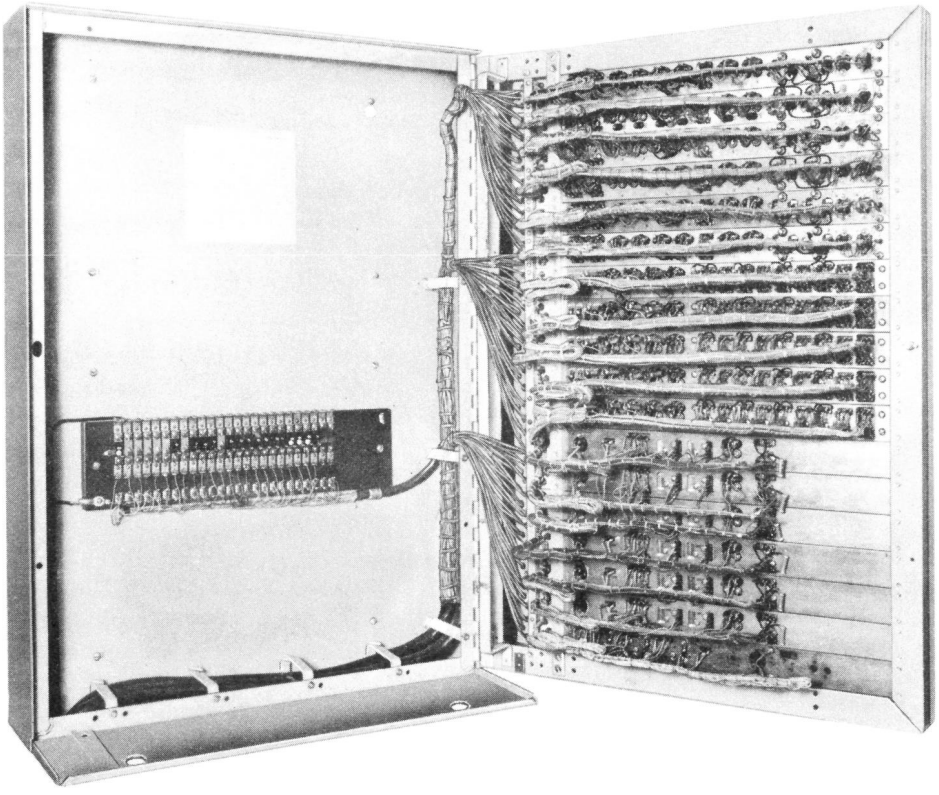


Fig. 18 — Rear View of 101-type Relay Equipment Showing a Direct Method of Cabling to Relay Units