BELL SYSTEM PRACTICES
Station Operations Manual
Major Station Systems

SECTION C71.101.01
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AT&TCo Standard

100 KEY EQUIPMENT

INSTALLATION

1.00   INTRODUCTION

This section covers only equipment units and key boxes. For installation information relative to wiring and common station apparatus, reference should be made to respective C Section.

2.00   GENERAL

2.01   Location for apparatus should be selected with consideration to the following:

- Are there any safety hazards involved?

- Is the equipment convenient for customer?

- Will lighting conditions reduce lamp visibility?

- Will audible signals be distinguishable?

2.02   When customer requests flush-type key box mounting which requires cutting out of desk or table, obtain authorization before proceeding with particular key box installation.

3.00   WIRING

Inside wiring cable is used to interconnect key boxes and associated apparatus to relay units in cabinet. Central office and PBX line units provide for direct termination (solder connection) of 12 key box cables. Other arrangements include:

- Placing cabling from key box to key box.

- Multipling from intermediate connecting block.

- Distributing from central terminal box near cabinet with single interconnecting cable to cabinet.

4.00   RELAY UNITS

4.01   Equipment cabinet can usually be ordered already equipped with necessary relay units. Check local supply information.

4.02   Relay units are arranged in cabinets so as to provide for future growth in line circuits.
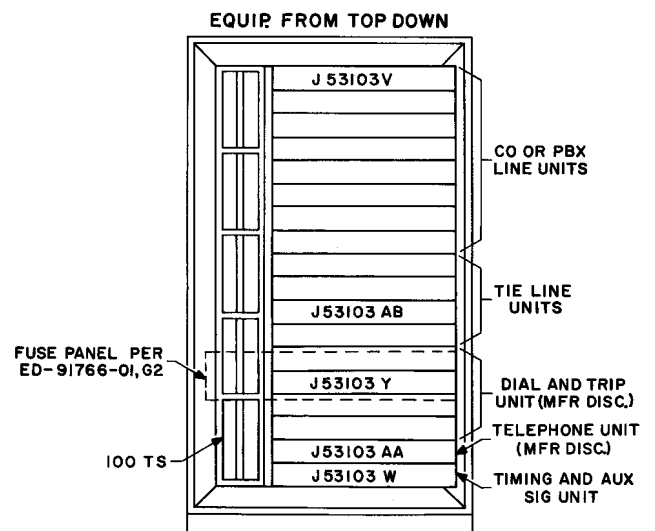
- Fig. 1 shows typical unit arrangement.
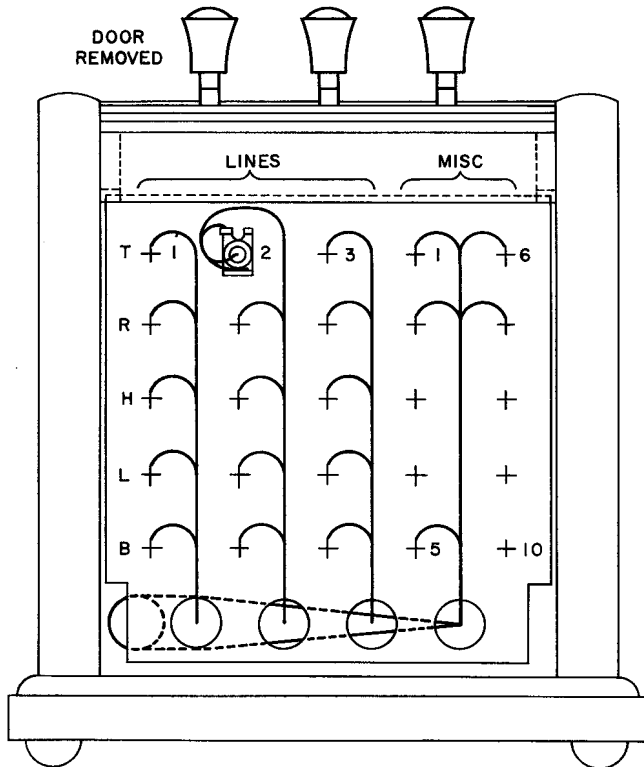

Fig. 1 — Typical Cabinet Arrangement

5.00 KEY BOXES

5.01 Fig. 2 and 3 show typical cabling. Mounting arrangements are shown in Fig. 4 through 8. When inclined mounting is used, the cable should be placed through mounting block before terminating in key box.
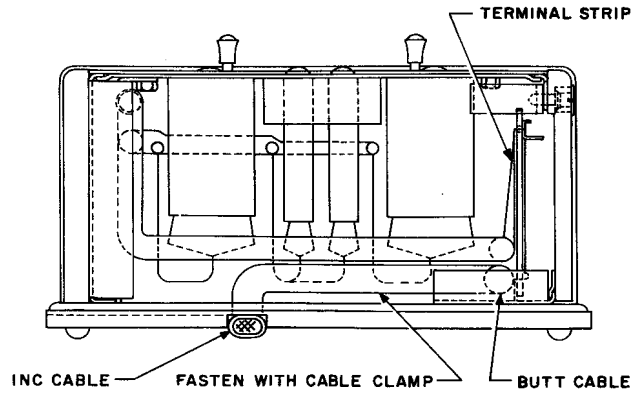
- Obtain customer's permission when drilling of desk top is required.

5.02 Access to terminal strip is obtained by removing front cover to key box.
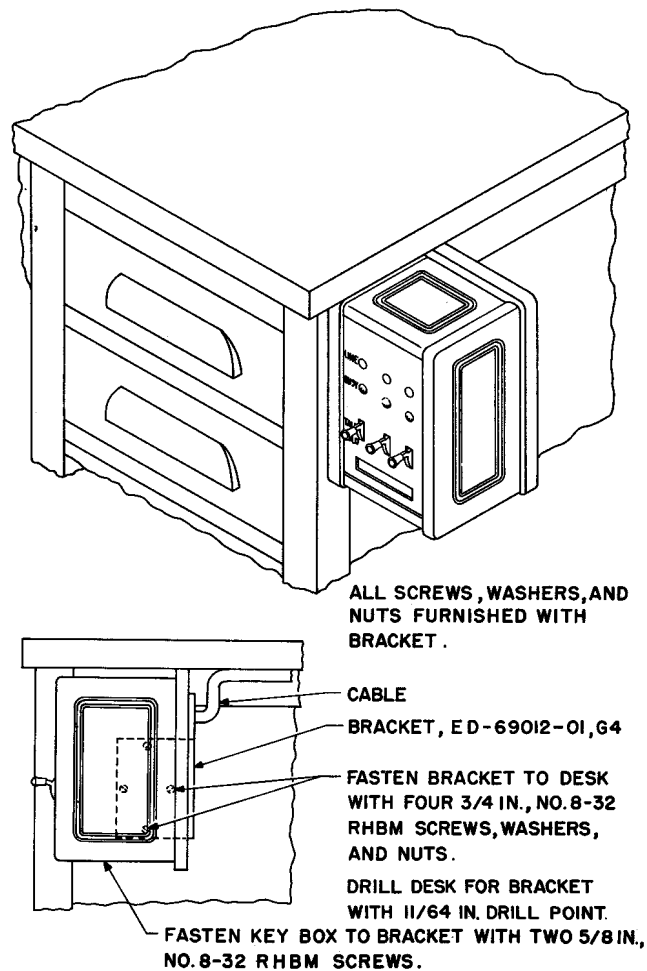
5.03 When key boxes are installed directly on a wall surface, a suitable backboard may be used to increase security of mounting.
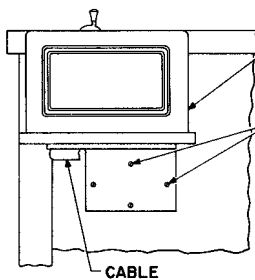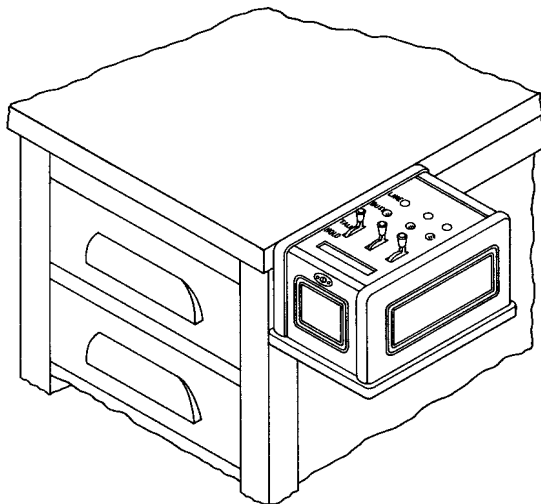

Fig. 3 — Cable Arrangement in Key Box

Fig. 2 — Terminal Strip Wiring

ALL SCREWS, WASHERS, AND NUTS FURNISHED WITH BRACKET.

CABLE

BRACKET, E D-69012-01,G4

FASTEN BRACKET TO DESK WITH FOUR 3/4 IN., NO.8-32 RHBM SCREWS, WASHERS, AND NUTS.

DRILL DESK FOR BRACKET WITH 11/64 IN. DRILL POINT.

FASTEN KEY BOX TO BRACKET WITH TWO 5/8 IN., NO.8-32 RHBM SCREWS.

Fig. 4 — Key Box on Side of Desk, Top of Key Box Flush with Desk Top

FASTEN KEY BOX TO MOUNTING BLOCK WITH TWO
3/4 IN., NO.8 RH BLUED WOOD SCREWS.
BASE OF KEY BOX REMOVED.

CABLE

FASTEN MOUNTING BLOCK TO WOODEN DESK WITH
TWO 1-1/4 IN., NO.8 RH BLUED WOOD SCREWS.

FASTEN MOUNTING BLOCK TO METAL DESK WITH
TWO 1 IN., NO.8 SELF-TAPPING SHEET METAL
SCREWS. DRILL FOR SCREWS WITH NO.30 DRILL.

KEY BOX MAY ALSO BE PLACED AT ANGLE TO SIDE
OF DESK TO FACE ATTENDANT.

Fig. 7 — Key Box Tilted on Top of Desk

FASTEN KEY BOX TO BRACKET
WITH TWO 5/8 IN.,NO. 8-32
RHBM SCREWS.

FASTEN BRACKET TO DESK
WITH FOUR 3/4 IN., NO.8-32
RHBM SCREWS,WASHERS,
AND NUTS.

DRILL DESK FOR BRACKET
WITH 11/64 IN. DRILL POINT.
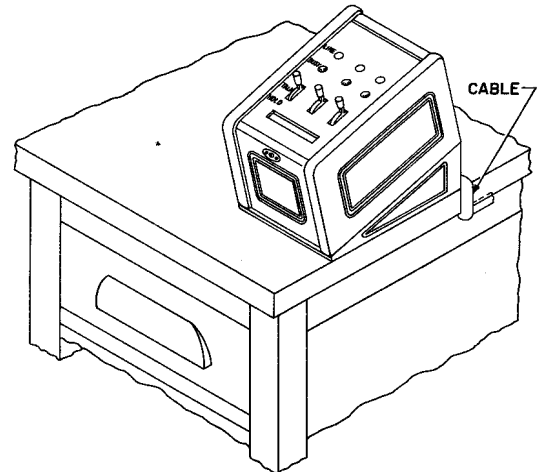
ALL SCREWS,WASHERS,AND
NUTS FURNISHED WITH
BRACKET.

CABLE

**Fig. 5 — Key Box on Side of Desk, Keys Flush
with Leg of Desk**
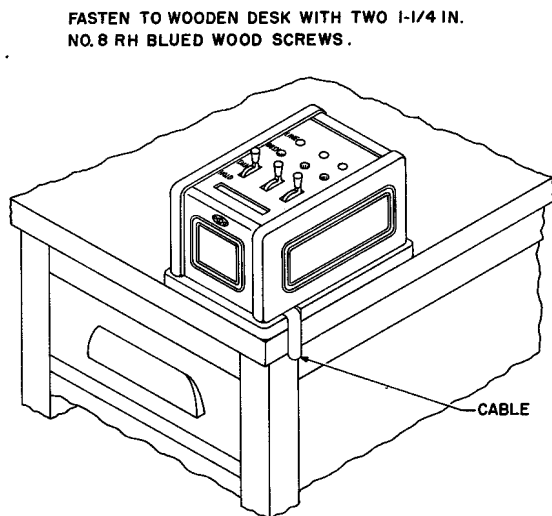
FASTEN TO WOODEN DESK WITH TWO 1-1/4 IN.
NO. 8 RH BLUED WOOD SCREWS.

CABLE

FASTEN TO METAL DESK WITH TWO 1 IN., NO.8
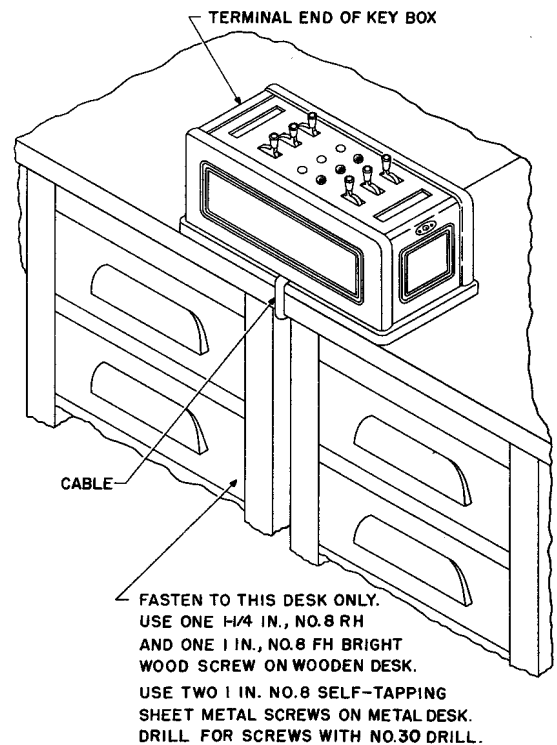SELF-TAPPING SHEET METAL SCREWS. DRILL
FOR SCREWS WITH NO.30 DRILL.

Fig. 6 — Key Box Flat on Top of Desk

TERMINAL END OF KEY BOX

CABLE

FASTEN TO THIS DESK ONLY.
USE ONE 1-1/4 IN., NO.8 RH
AND ONE 1 IN., NO.8 FH BRIGHT
WOOD SCREW ON WOODEN DESK.

USE TWO 1 IN. NO.8 SELF-TAPPING
SHEET METAL SCREWS ON METAL DESK.
DRILL FOR SCREWS WITH NO.30 DRILL.

**Fig. 8 — Key Box Flat on Top of Two
Adjoining Desks**

6.00 ATTENDANT TELEPHONE AND DIAL EQUIPMENT

6.01 Station wire is used to connect from key box terminal strip to telephone set. Tape station wire to cable at entrance point, then fasten to desk.

- When a 500-type telephone set is used, terminate station wire on 42A connecting block conveniently located on desk.

- When a head-type telephone set is used, terminate station wire on key telephone units associated with set.

6.02 Key telephone units for head-type telephone set are installed in 105 apparatus box on or near desk. Jack mounting is installed on desk at a location convenient to customer.

7.00 AUDIBLE SIGNALS

Inside wiring cable conductors for these signals are terminated on spare key box terminal punchings. Station wire is then brought out to signal. When buzzer cutoff key is specified, a 2-line telephone set may be used with key wired to cutoff buzzer.

8.00 INTERCOMMUNICATING

When spare line key is not available in key box, a 2-line telephone set or external key is used. The signaling circuit is installed separately.

9.00 GROUND CUTOFF

Mount surface-type tumbler switch on wood surface with two 1-inch No. 8 RH blued wood screws. On metal surfaces use two 5/8-inch No. 8 self-tapping screws.

10.00 EQUIPMENT DESIGNATION

10.01 Place transparent lettered window number card on dial to identify station with service order work sheet. When ground cutoff key is used and local instruction cards are used, install card holder near key.

10.02 Designation added on apparatus cabinet equipment should be in accordance with information found in the B Series of Bell System Practices.

10.03 Relay units are furnished with the type of unit stamped on face; numerals should be added to number circuits 1, 2, 3, etc. Where equipment for more than one circuit is included on a unit, individual coils, capacitors, etc should be designated in proper order with like numerals.

10.04 Intermediate appearances of cable such as in a terminal box should bear designations to identify the terminals and the circuits appearing thereon.

11.00 OPERATIONAL TESTS

11.01 These tests are made upon completion of installations. Checks are made of all features and associated equipment to assure customer satisfaction and proper operation.

LINE REVERSALS AT CABINET

11.02 Use a 1011B hand test set to check that following lines are not reversed:

- Central Office or PBX: Connect from ground punching to R1 of line. Click should be heard. S relay operates.

- Battery Supply: Connect from external ground and listen for clicks when other test set clip is touched to fuse panel bus and battery terminals of each equipment unit.

- Generator Feeder: Connect from battery supply ground to equipment side of ringing resistance lamp. Lamp should glow. Listen for ringing induction when clips are connected from ringing feeder ground to resistance lamp socket terminal.