

### 3A COMMUNICATION SYSTEM (HOSPITAL INTERPHONE) CONTROL CONSOLE INSTALLATION, CONNECTIONS, AND MAINTENANCE

#### 1. GENERAL

(a) This section is reissued to:

- Move speakerphone connections from Table A to Fig. 3. Connections for the BL lead are added to Fig. 3.
- Change designations of components of the D-180006 Kit of Parts (Fig. 4) to agree with manufacturing information.
- Add reference to the 35C3A dial which replaces the 25Y3 and the 25B3 (MD) dial in the TOUCH-TONE® control console.
- Add information on the 645C and 645D keys. These keys replace the 645A and 645B keys which are rated MD.

Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

(b) For detailed equipment cabinet identification and ordering information, refer to Section 512-535-100.

#### 2. INSTALLATION

(a) The basic console is supplied with 20 station signaling keys. When additional keys are ordered separately, install keys in console before adding faceplate and housing. Any keys added or replaced should be of the same code as those already in place. The 645A and 645B keys are not compatible in appearance with the 645C and 645D and should not be intermixed. It may be necessary to replace all the keys in the console to 645C and 645D in the event the 645A and 645B (MD) become unavailable.

(b) Keys are installed by carefully inserting connector on key into proper plug on apparatus frame and tightening captive screws (Fig. 1).

(c) Remove corresponding apparatus blank from faceplate by pushing up on apparatus blank until bottom edge is clear. Lift out on bottom of blank to remove. Any unused key spaces should be filled with an apparatus blank in the faceplate (Fig. 2).

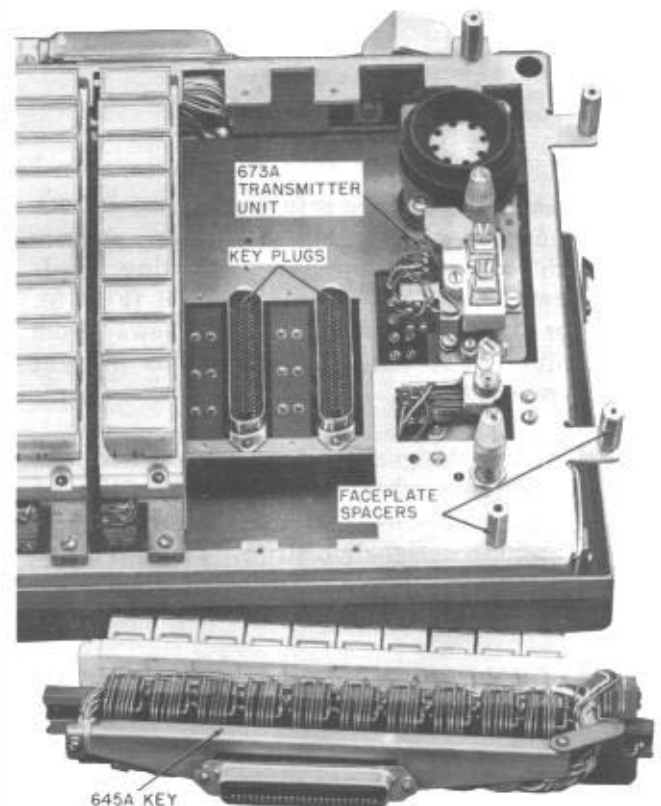


Fig. 1—Station Signaling Keys

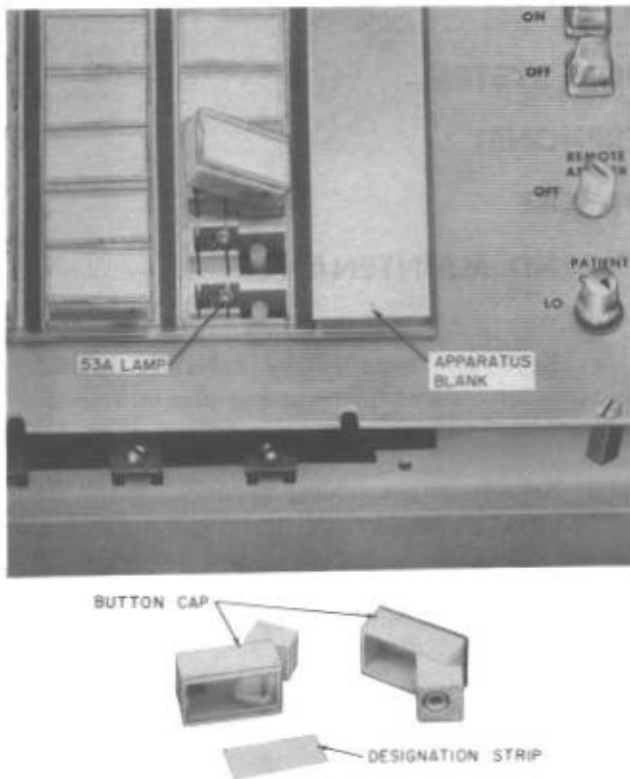


Fig. 2—Button Assembly

(d) When speakerphone is furnished, install 760A loudspeaker, bringing cord into console through same entrance as mounting cord. Terminate loudspeaker leads on TS9 (Fig. 3). Speaker should be kept at least 3 feet away from transmitter unit during operation to prevent interference.

(e) P-49K048 designation strips are supplied with the console when equipped with 645A or 645B keys. Each 645C or 645D key is shipped with P-23F056 designation strips. The two strips are not interchangeable. To install designation strips in the 645A or 645B keys (Fig. 2):

- (1) Tilt hinged button cap by pressing on right side of button while lifting up on left side.
- (2) Insert strip into slot from left side of button.
- (3) Restore cap by pressing down on left side of cap.

For the 645C or 645D keys:

- (1) Depress the button, to the left of that in which the designation strip is being installed, to expose the slot on the left side of button.
  - (2) Slide strip into place.
- (f) Four plugs (J1 to J4) are furnished on the rear of the console which accept either the console mounting cord or an A100F connector cable. All console connections are made through the four plugs.
- (g) Install G3AR handset of appropriate color by inserting cord through rubber grommet in front of switch hook assembly and fastening the cord stayband to the hook provided. Connect handset leads to TS9 (Table A).
- (h) The console faceplate is fastened to the spacers on the apparatus frame using eight screws furnished with the console.
- (i) The console housing is held in place without screws. To install, engage slots on front of housing with edge of base assembly, lower housing over console, and press gently on both sides of housing at highest point until hooks on base assembly engage tabs on housing.
- (j) The control console is factory-wired for speakerphone as a standard option. However, if speakerphone is desired, a modified 55-type control unit and a 2012B transformer or equivalent must be installed external to the equipment cabinet (Fig. 3). The 55-type control unit may be wired either to the equipment cabinet or the console using a separate length of inside wiring cable. When wired to the equipment cabinet, provision is made for terminating the cable on the distribution terminal (Block S). Control unit must be located within 100 feet of the console. When wired into the console the 1W cable is brought into the console through the same opening as the mounting cord and is wired directly to the screw terminals shown in Fig. 3.
- (k) The 55-type control unit must be modified by the addition of the D-180006 Kit of Parts. The kit of parts prevents clipping of voice signals transmitted from the unit by limiting its output. Wire as shown in Fig. 4. The printed wiring

board is mounted on the control unit by removing the upper left terminal board mounting screw. Mount printed wiring board using the longer screw included in the kit of parts.

(l) Console must be installed within 1000 feet or 50 ohms loop resistance of equipment cabinet. Connection to the equipment cabinet can be made by using a D200L mounting cord (8-foot long) in proper color with an A100C connector cable; or by placing an A100F connector cable directly from the console to the equipment cabinet.

(m) When a D200L mounting cord is used, remove the cable clamp provided in the console and replace it with a C-3050A-12-108 cable clamp (Pinnerman).

(n) Any standard key or nonkey telephone set having a lead control and wired for speakerphone can be used as a remote answering station, when provided. The type of set used will depend on whether or not CO or PBX lines appearing in the control console are to be extended to the remote station. Typical connections for a remote answering station are shown in Fig. 5.

(o) If a remote answering station is to have speakerphone, a separate control unit must be installed. Control unit must be modified as described in 2(k). Provision is made in the equipment cabinet for connecting one remote answer control unit directly to the distribution terminal. Control units for additional remote stations equipped with speakerphone must be wired into the station.

### 3. CONNECTIONS

(a) Connections from the control console to the equipment cabinet are made by plugging the D200L mounting cord or A100F connector cable into plugs J1 to J4 at rear of console.

(b) Connection Index

Table A—Handset Connections

Fig. 3—Speakerphone Connections

Fig. 4—D-180006 Kit of Parts, Modification of 55-Type Control Unit

Fig. 5—Remote Answering Station.

**TABLE A**  
**HANDSET CONNECTIONS**

H4CJ CORD	T59
W	5
W	6
BK	7
R	8

### 4. MAINTENANCE

(a) Maintenance on the control console consists of the replacement of the following:

- G3AR handset
- H4CJ handset cord
- 35C3A, 25Y3, or 25B3 (MD) TOUCH-TONE dial
- 8C rotary dial
- 645-type, and 584B keys
- 53A lamps
- D200L mounting cord or A100F connector cable
- KS-16881, List 1 loudspeaker

(b) To remove housing:

(1) Press gently on both sides of housing at highest point with heels of hands. At same time pull out on lower edges of housing with fingers until tabs on housing clear hooks on base assembly.

(2) Lift rear of housing upward until housing clears keys, then lift straight off.

(c) To replace housing:

(1) Engage slots on front of housing with edge of base assembly.

(2) Lower rear of housing over keys.

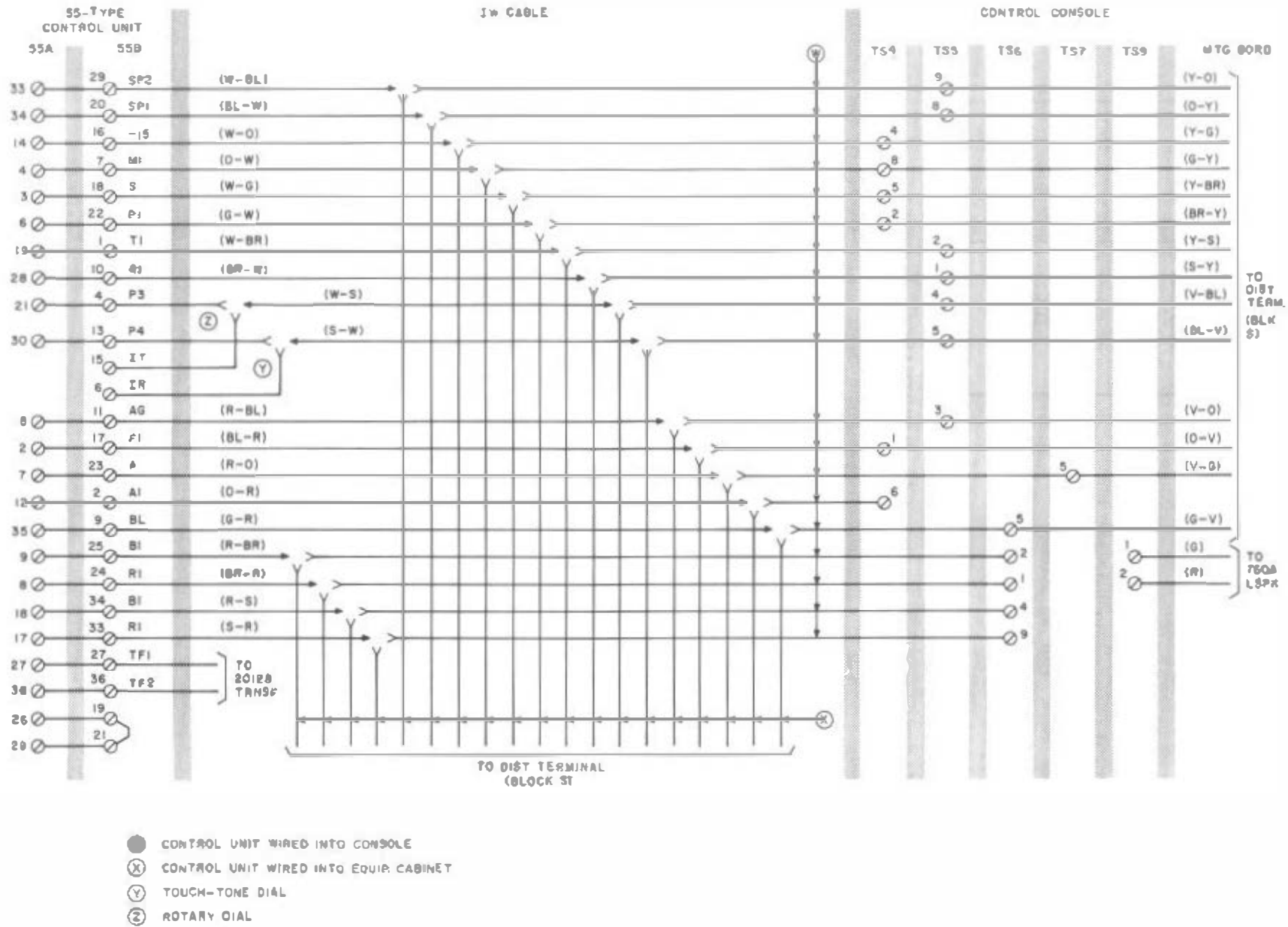
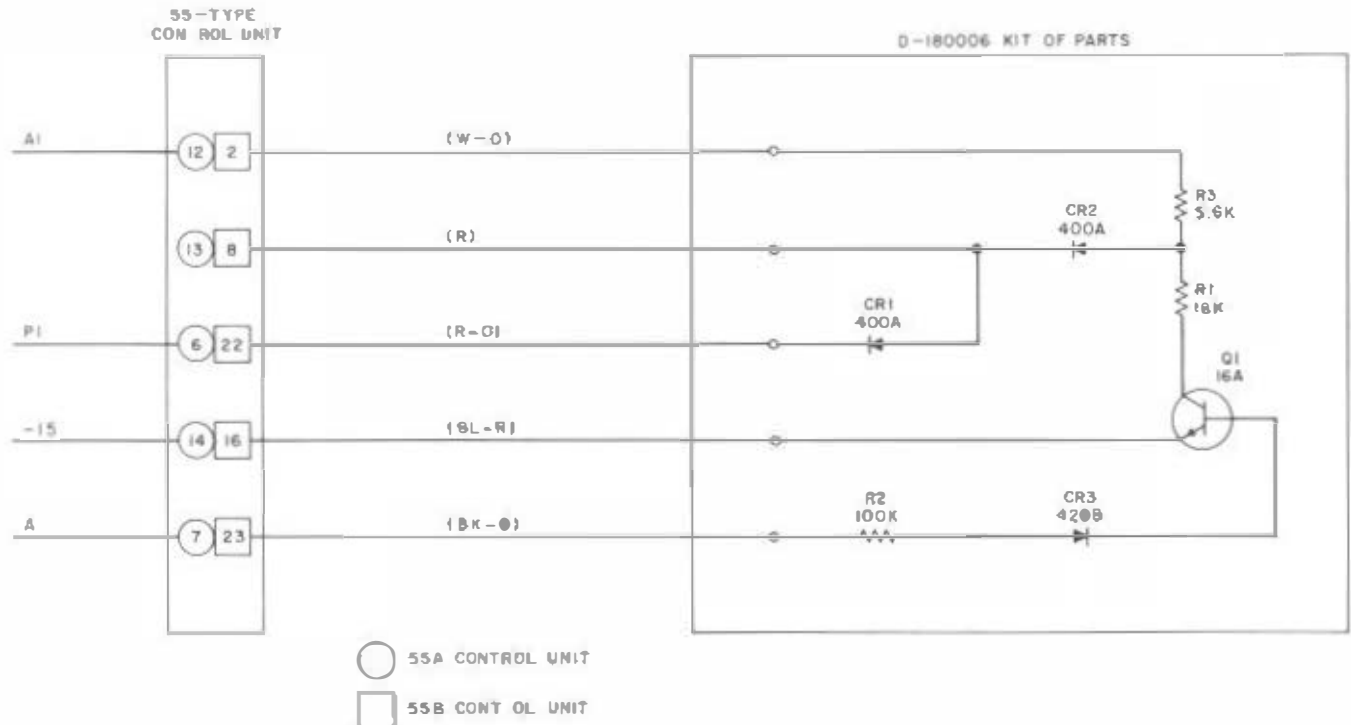


Fig. 3.—Speakerphone Connections



## NOTES:

1. INSTALL SEPARATE MODIFIED CONTROLS UNITS FOR CONSOLE AND REMOTE STATION, IF PROVIDED
2. TO INSTALL KIT OF PARTS REMOVE UPPER LEFT TERMINAL BOARD MOUNTING SCREW. MOUNT PRINTED WIRING BOARD USING LONGER SCREW FURNISHED.
3. IF 55B CONTROL UNIT IS USED, PLACE STRAP FROM 19 TO 21 OF TERMINAL STRIP, (V) OPTION, PER SD-49403-01.

Fig. 4—D-180006 Kit of Parts—Modification of 55-Type Control Unit

- (3) Press on both sides of housing at highest point until tabs on housing engage hooks on base.
- (4) For access to network terminals, terminal strips, and KS-16881, list 1 loudspeaker:
  - (1) Remove housing.
  - (2) Loosen cord clamp.
  - (3) Loosen apparatus frame captive screws through access holes (Fig. 6).
  - (4) Apparatus frame pivots on pins riding in slots at front corners of console. Tilt frame toward front of console. Frame can be lifted out of slots and laid carefully on faceplate. Slack must be provided in mounting cord.
- (5) When replacing apparatus frame, carefully lift frame and engage pins in slots on base.
- (6) Lower frame toward rear of console. Guide brackets with pins are provided to engage slots on the frame to position frame properly.
- (7) Tighten captive screws through access holes.
- (e) To replace handset cord:
  - (1) Remove housing.
  - (2) Loosen apparatus frame screws and pivot frame forward.
  - (3) Disconnect handset cord leads from TS9.

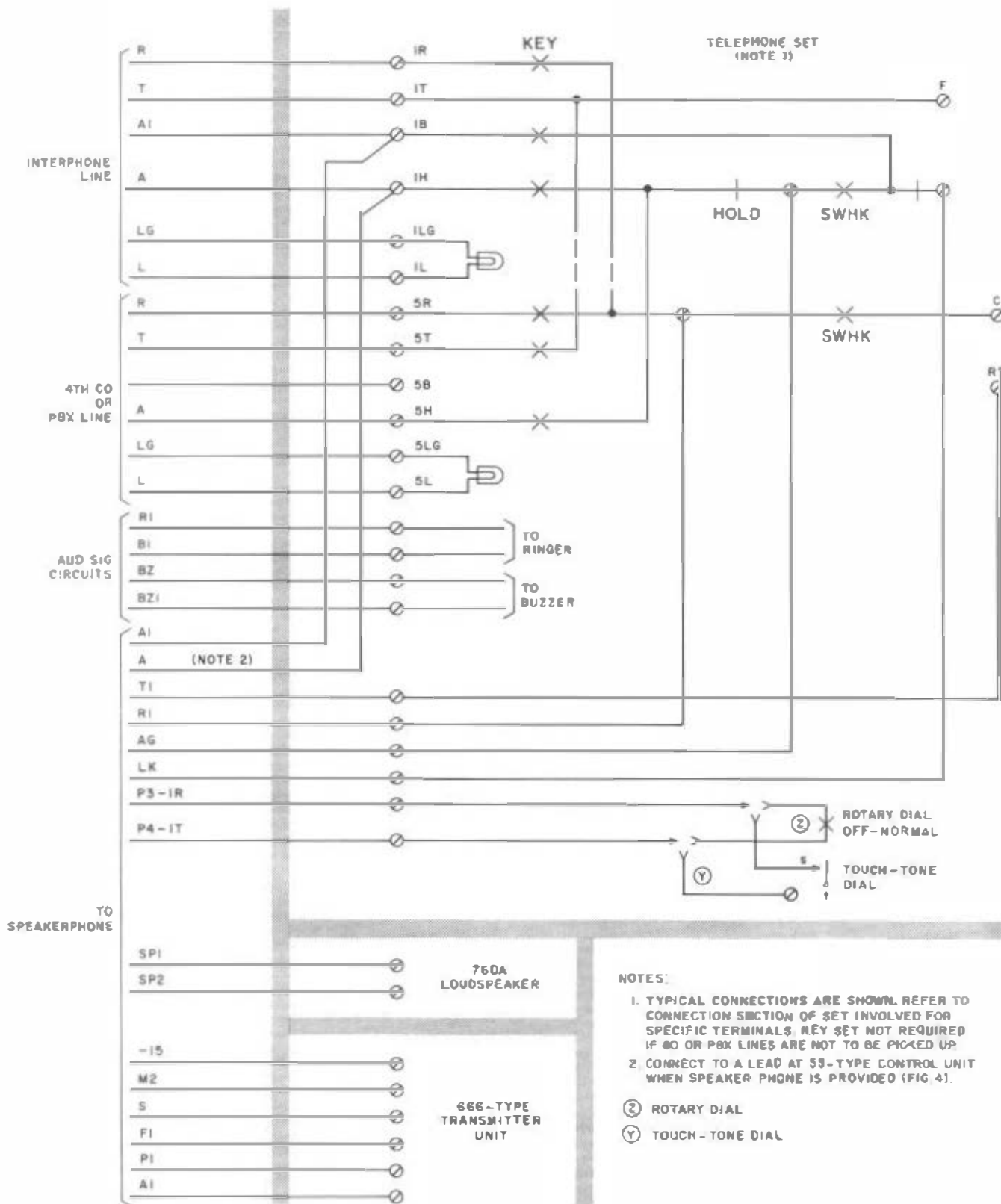


Fig. 5—Remote Answering Station

- (4) Unhook cord stayband and pull cord out through rubber grommet in base.
- (5) To place cord, reverse procedure.
- (f) To remove dial
- (1) Remove housing and faceplate.
  - (2) Remove and retain four screws holding dial assembly to apparatus frame. Lower dial through opening toward base.
  - (3) Remove apparatus frame from base 4(d).
  - (4) Disconnect dial leads from TS8 and remove dial.
  - (5) Remove and retain "L" shaped brackets from dial.
- (g) To replace dial:
- (1) Fasten brackets to dial.
  - (2) Connect spade-tipped leads to TS8.
  - (3) With dial assembly temporarily resting on base, lower apparatus frame in place on base and fasten screws 4(d).
  - (4) Raise dial through opening and fasten in place with four screws.
- (h) To add or replace key (645-type):
- (1) Remove housing 4(b).
  - (2) Remove eight screws holding faceplate to spacers and lift faceplate off.
  - (3) Loosen captive screws at top and bottom of key. Grasp ends of key and lift out with a slight rocking motion to release connector from plug.
  - (4) Add new key by reversing steps (1), (2), and (3). New key must be same code as key in place. See 2(a).
  - (5) Replace housing 4(c). If an additional key was added, apparatus blank must be removed from faceplate.

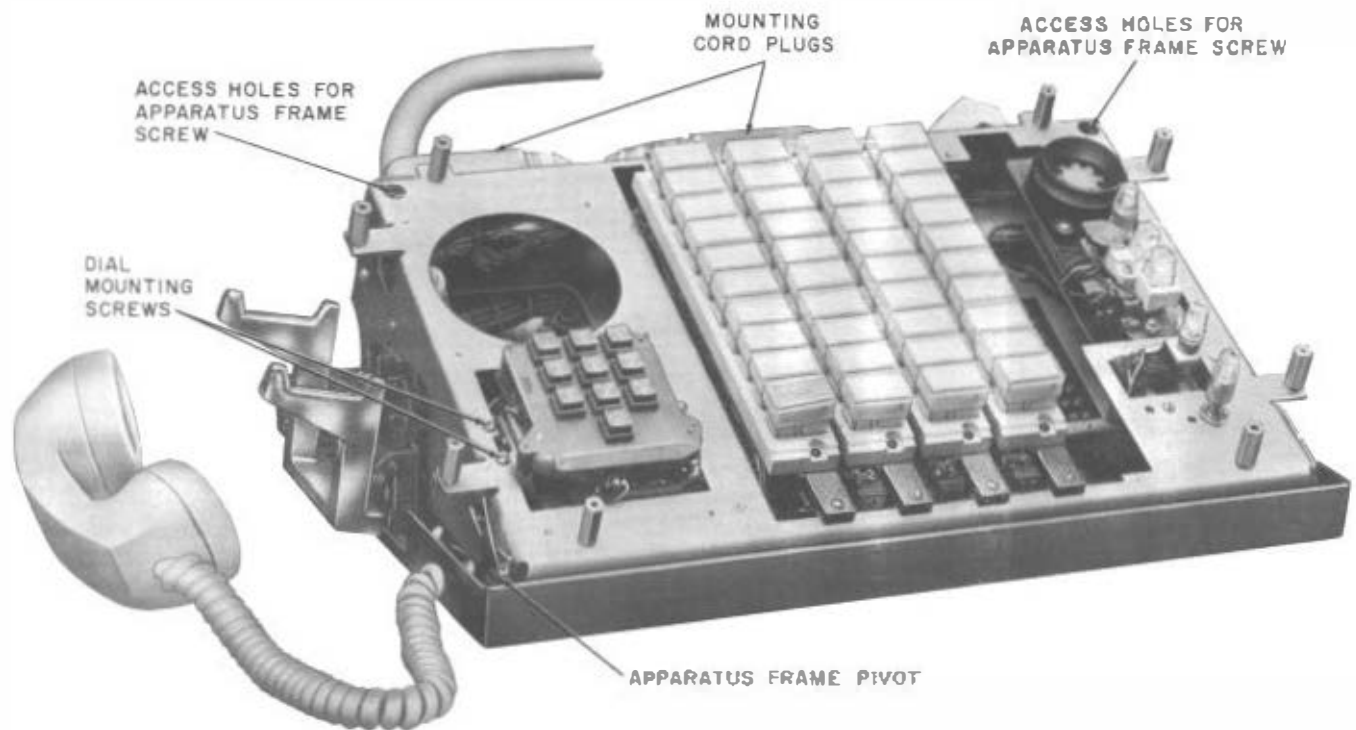


Fig. 6—Nurse Console, Assembly

(i) To replace lamp in key:

(1) Tilt button cap on 645A or 645B keys by pushing down on right side of key while lifting on left side (Fig. 2).

(2) On all keys, grasp white sides of button cap between thumb and forefinger directly over button plunger (right half of button). It may be necessary to partially depress buttons above and below one being removed.

**Caution:** *Button cap fits tightly on button plunger. DO NOT grasp button cap by clear plastic window.*

Pull cap straight up until disengaged.

(3) Remove lamp using 553A tool.

(4) Replace lamp.

(5) Replace cap over pin in key.

(6) Push left side of key into place on 645A or 645B keys.

(j) To replace D200L mounting cord or A100F connector cable:

(1) Remove housing.

(2) Loosen cord clamp.

(3) Loosen cord plug clamping screws and remove four cord plugs.

(4) To place new cord, reverse procedure.

(k) For detailed information on the control console refer to CD- and SD-69533-01.