

## 557B PBX

### IDENTIFICATION, INSTALLATION, AND CONNECTIONS

### TELEPHONE SECRETARIAL SERVICE

#### 1. INTRODUCTION

**1.01** This section provides information for the identification, installation, and connections for the 557B PBX when used as a manual single-position switchboard to answer incoming central office and secretarial calls and to make outgoing central office calls at a telephone answering bureau.

**1.02** This section is reissued to:

- (a) Add information on the treatment of central office lines under the Federal Communications Commission (FCC) Registration Program
- (b) Show the electromechanical secretarial line equipment (J59024C-2) manufacture discontinued (MD)
- (c) Add information on the new solid-state secretarial line equipment YW1 circuit pack (J59024C-3)
- (d) Add information on the +5 volt power supply required for the YW1 solid-state secretarial line unit.

Revision arrows are used to emphasize the more significant changes. The Equipment Test List (ETL) is not affected.

**1.03** ♦Incoming central office lines to be installed in compliance with the FCC Registration Program must be routed through a standard network interface. Information on approved interfaces is contained in Sections 463-400-100 through 463-400-150.

**1.04** After January 1, 1980, the YW1 circuit pack solid-state secretarial line unit must be used on new installations. Previously connected or Class C electromechanical secretarial line units may be used for additions and maintenance at grandfathered

installations for the life of the equipment, provided they are not modified.♦

**1.05** This issue of the section is based on the following drawings:

- SD-65729-01, Issue 18B (Secretarial Line and Central Office Trunk Circuits)
- SD-65731-01, Issue 25AC (Position and Station Circuit)
- SD-66916-01, Issue 9D (TOUCH-TONE® Calling Dial Auxiliary Circuit)

If this section is to be used with equipment or apparatus reflecting later issue(s) of the drawing(s), reference should be made to the SDs and CDs to determine the extent of the changes and the manner in which the section may be affected.

**1.06** ♦Refer to Section 473-602-210 for the test and inspections at time of installation. Section 981-531-100 is the general description of the 557B PBX and Section 809-720-151 should be referred to for ordering information.♦

#### 2. IDENTIFICATION

##### GENERAL

**2.01** The 557B PBX, Fig. 1, is a manual single-position switchboard designed to serve primarily as an intercept-only-type secretarial switchboard at bureaus furnishing answering service to telephone subscribers. Provision is also made to complete intercepted calls to administrative stations, to answer incoming calls and make outgoing calls to a central office, and to establish a conference connection between any two administrative stations. A rotary or TOUCH-TONE calling dial, ordered separately and installed locally, is required for

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completing calls to a central office or other dial system PBXs from the 557B PBX attendant.

**2.02** All secretarial lines and central office trunks have single jack and lamp appearances in the

face of the switchboard. The jack and lamp appearances can be wired to a secretarial line bridged to a subscriber line at the central office MDF, to a secretarial line having a directory number appearance at the central office MDF, or to a bridged subscriber

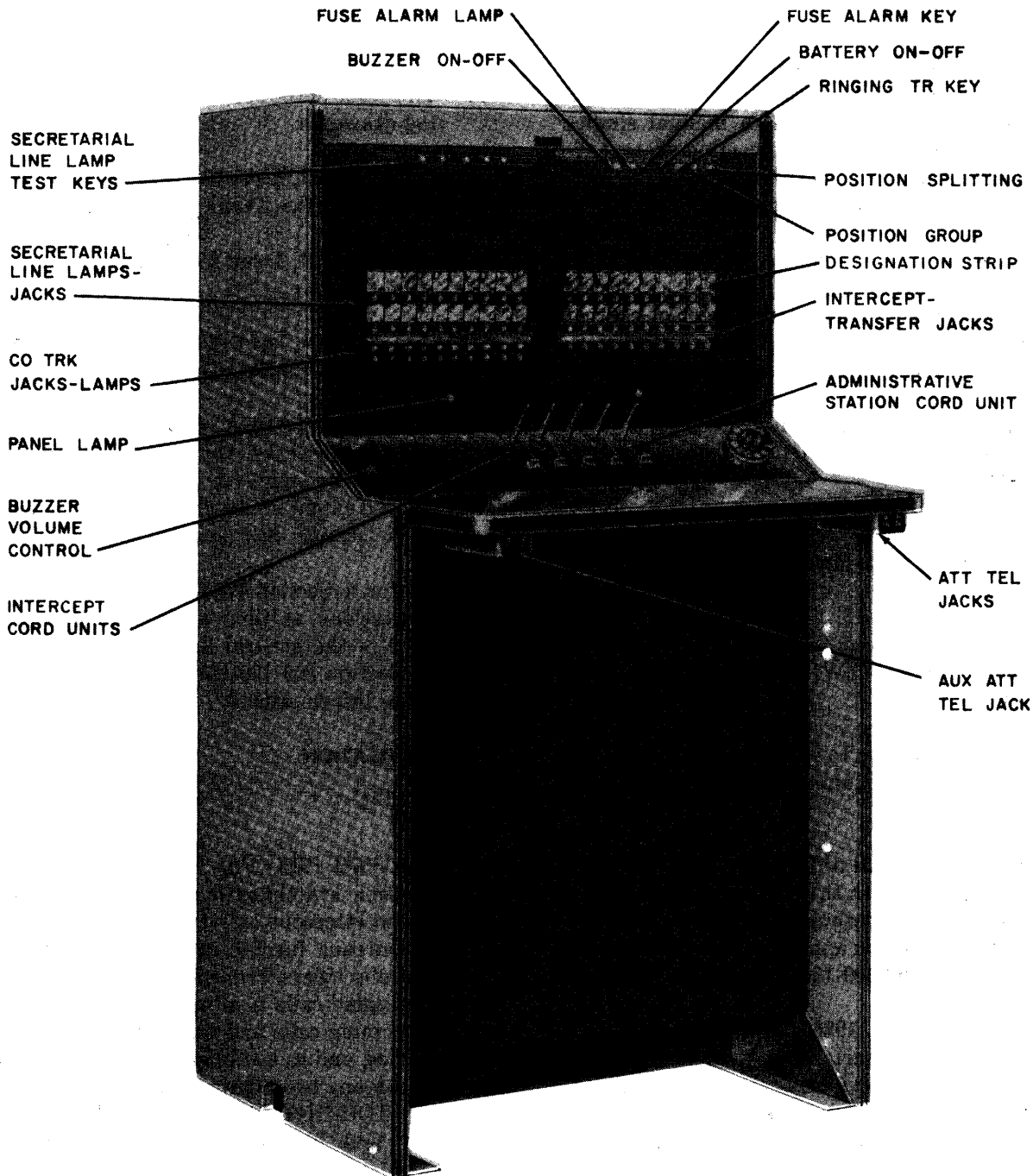


Fig. 1—557B PBX Switchboard—Front View

line via concentrator-identifier equipment. The administrative station (stations intended for use by the answering bureau administrative personnel) terminates in station line cord units equipped with a combined line and supervisory lamp.

**2.03** The common relay equipment for the switchboard and the ten secretarial line units (ten subscriber lines per unit) are mounted on vertical mounting plates supported at the bottom with hinged details. The top of each mounting plate is fastened to a rigid detail by a one-quarter turn spring lock fastener. All of the switchboard mounted units terminate in jacks located at the bottom of the switchboard. Two 30- or 60-foot line cable stubs equipped with KS-13875 plugs are provided to make connections to external terminations.

#### CAPACITY

**2.04** The capacity of the single-position 557B PBX, used for telephone secretarial answering service, is shown in Table A.

**TABLE A**

**CAPACITY OF SINGLE-POSITION 557B PBX  
SECRETARIAL LINES CONNECTED ON FULLY  
BRIDGED BASIS AT CENTRAL OFFICE**

|   |     |
|---|-----|
| Secretarial (subscriber) lines          | 100 |
| Central office trunks                   | 5   |
| Intercept and dial cords                | 8   |
| Cord-ended administrative station lines | 3   |
| Intercept transfer jacks                | 8   |
| Two-station conference circuit          | 1   |

#### OPERATING RANGES

**2.05** The secretarial line loop (or CO trunk loop) plus the administration station loop shall not exceed the maximum subscriber loop range of the office to which the circuit is connected. When a 557B PBX is not powered by a locally regulated power plant, further transmission and supervision considerations must be given, eg, maximum PBX range

(station loop plus secretarial loop or CO trunk loop) varies with the minimum PBX voltage. Consult SD-65729-01 and SD-65731-01 for working limits and transmission requirements.

#### POWER

**2.06** ♦The switchboard may be powered either from a -48 volt dc central office battery via cable conductors or from a local -24 volt dc power supply. When the YW1 secretarial line circuit pack is provided, a +5 dc power supply is also required. The +5 volt direct current can be obtained by one of the following methods:

- (a) If a -24 volt dc standby power source is available, two 120C converters wired per Fig. 25 should be provided.
- (b) If a -24 volt dc standby power source is not available, a +5 dc PS Lambda No. LNS-W-5-OV power supply or equivalent wired per Fig. 25 should be provided.

**Note:** In both cases, the voltage drop on the +5 volt dc switchboard feeder cable between the power source and the YW1 circuit pack shall not exceed 0.25 volts. Current drain for each YW1 circuit pack is 100 mA maximum at +5 volt direct current. A +5 volt dc fuse alarm lamp must be locally engineered and installed.♦

#### EQUIPMENT SUMMARY

**2.07** Table B summarizes the equipment by manufacturing codes for the 557B PBX. The J numbers of all assemblies referred to in this section are to assist the field personnel in the installation and maintenance. The illustrations and subject material are not meant to be an equipment specification.



**Do not use this practice for ordering information. See Section 809-720-151.**

#### BASIC UNIT J59024A, LIST 1

**2.08** The basic 557B PBX comes equipped with the common unit, 4 intercept and dial cords, 1 administrative station cord and key unit, 5 central office trunk jacks, and 40 secretarial line jacks. The wooden casing to enclose the switchboard is not

TABLE B4  
EQUIPMENT SUMMARIZATION—557B PBX

| DESCRIPTION  | EQPT CODE                          | FUNCTION  | SCHEMATIC   | REMARKS   |
|--|------------------------------------|---|---|---|
| Assembly, wiring, and equipment for one 557B basic unit, including common equipment; 4 intercept and dial cord circuits, 1 cord-ended station cord circuit, 5 central office trunk units, and 40 secretarial line units less wood casing.  | J59024A-1,<br>List 1               | Basic switchboard   | SD-65731-01<br>SD-65729-01                            | None  |
| Equipment and wiring required in addition to List 1 if 10-PPS dial is required.  | J59024A-1,<br>List 2               | Rotary dial   | SD-65731-01,<br>Fig. C                                | None  |
| Equipment and wiring required in addition to List 1 if 20-PPS dial is required.  | J59024A-1,<br>List 3               | Rotary dial   | SD-65731-01,<br>Fig. C                                | None  |
| Equipment and wiring required in addition to List 1 to connect the grouping circuit to the adjacent position   | J59024A-1,<br>List 4               | Position grouping   | SD-65731-01,<br>Fig. 16                               | Provide when additional positions are added and grouping required.  |
| Equipment and cable required in addition to List 1 for line connecting, to secretarial lines, trunks, stations, and miscellaneous (battery, generator, etc).   | J59024A-1,<br>List 5 and<br>List C | Cable to interconnect PBX to lines, trunks, stations, etc | SD-65731-01,<br>Fig. 17 and<br>SD-65729-01,<br>Fig. 6 | List 5 and C—30-foot "O" inside wire cable (two cables).  |
|  | J59024A-1,<br>List 7               |   |   | List 7—60-foot "D" inside wire cable (two cables).  |
| Equipment and wiring required in addition to List 1 when lamp test feature is required.  | J59024A-1,<br>List 8               | Secretarial line test lamp circuit                        | SD-65729-01,<br>Fig. 13                               | Two cables:<br>One with three KS-13875 plugs designated E, SCC, and PS used for station lines and miscellaneous<br>One with ten KS-13875 plugs designated G or D.       |
| Equipment and wiring always required in addition to List 1 or required for field modification for improved tone.   | J59024A-1,<br>List 11              | Zip tone  | SD-65731-01,<br>Fig. 26                               | External tone supply is required.   |
| Equipment and wiring required in addition to List 1 to provide a rotary card dialer (to be added by installer).  | J59024A-1,<br>List 12              | Rotary card dialer  | SD-65731-01,<br>Fig. 22                               | The 18-volt ac is required for card dialer. Provide 2012B transformer or equivalent. If a List 2 or 3 was provided, a 6A-3 (10 PPS) or 6G-3 (20 PPS) dial is necessary. |
| Equipment and wiring required in addition to List 11 to provide a 500 ms timed flash on the tip and ring to allow the switchboard to initiate a call waiting transfer signal to a No. 1 ESS office. This feature is used only when switchboard is connected to a line concentrator identifier. | J59024A-1,<br>List 13              | 500 ms timed flash  | SD-65731-01,<br>Fig. 30                               | The 500 ms flash for call waiting transfer in No. 1 ESS central office.   |
| Equipment and wiring required to provide for eight intercept jacks.  | J59024B-3,<br>List 3               | Intercept and transfer jacks                              | SD-65731-01,<br>Fig. B                                | Used to transfer intercepted calls on secretarial or central office lines. Remove Fig. A SD-65731-01.   |

TABLE B4 (Contd)

## EQUIPMENT SUMMARIZATION—557B PBX

| DESCRIPTION   | EQPT CODE                 | FUNCTION   | SCHEMATIC                     | REMARKS  |
|---|---------------------------|--|-------------------------------|--|
| Equipment and wiring required to provide for one cord-ended station unit.   | J59024B-3,<br>List 7 (MD) | Administrative station cord and key unit                       | SD-65731-01,<br>Fig. 4        | None   |
| Equipment and wiring required to provide for one intercept and dial cord unit.  | J59024B-3,<br>List 8 (MD) | Intercept cord unit  | SD-65731-01,<br>Fig. 27       | Equipped with holding bridge.  |
| Wiring required in addition to List 13 when TOUCH-TONE dialing is provided without intercept jacks (List 3 and WA).         | J59024B-3,<br>List 10     | TOUCH-TONE telephone dial wiring                               | SD-65731-01,<br>Fig. 4        | TOUCH-TONE dialing application — ZE option.  |
| Wiring required in addition to List 13 when rotary dial is provided without intercept jacks (List 3).                       | J59024B-3,<br>List 11     | Rotary dial wiring   | SD-65731-01,<br>Fig. 4        | Rotary dialing application — ZD option.  |
| Wiring required in addition to List 13 for TOUCH-TONE dialing.  | J59024B-3,<br>WA          | TOUCH-TONE telephone dial wiring                               | SD-65731-01,<br>Fig. 27 and B | TOUCH-TONE dialing application.  |
| Assembly, equipment, and wiring for one cord-ended station cord unit for FCC Registration Requirements.                     | J59024B-3,<br>List 12     | Station cord   | SD-65731-01,<br>Fig. 4        | Required for FCC Registration.   |
| Assembly, equipment, and wiring for one intercept and dial cord unit with holding bridge for FCC Registration Requirements. | J59024B-3,<br>List 13     | Intercept cord   | SD-65731-01,<br>Fig. 27       | Required for FCC Registration.   |
| Equipment and wiring required to provide for ten secretarial lines and jacks for left panel.                                | J59024C-3,<br>List 2      | Secretarial line, lamp, and jack units                         | SD-65729-01,<br>Fig. 2        | Jacks, lamps, lamp caps, and designation strip for left side of switchboard (facing front).  |
| Equipment and wiring required to provide for ten secretarial lines and jacks for right panel.                               | J59024C-3,<br>List 3      | Secretarial line, lamp, and jack units                         | SD-65729-01,<br>Fig. 2        | Jacks, lamps, lamp caps, and designation strip for right side of switchboard (facing front). |
| Equipment and wiring required to provide for ten concentrator-identifier secretarial lines and jacks for left panel.        | J59024C-3,<br>List 4      | Concentrator-identifier secretarial line, lamp, and jack units | SD-65729-01,<br>Fig. 5        | Jacks, lamps, lamp caps, and designation strip for left side of switchboard (facing front).  |
| Equipment and wiring required to provide for ten concentrator-identifier secretarial lines and jacks for right panel.       | J59024C-3,<br>List 5      | Concentrator-identifier secretarial line, lamp, and jack units | SD-65729-01,<br>Fig. 5        | Jacks, lamps, lamp caps, and designation strip for right side of switchboard (facing front). |
| Ten universal secretarial line circuits arranged for secrecy or nonsecrecy and nonlocking line lamps (YW1 circuit pack).    | J59024E-3,<br>List 6      | Provides YW1 circuit pack and mounting units                   | SD-65729-01,<br>Fig. 15       | Solid-state secretarial line unit.   |
| Assembly, wiring, and equipment for tone modification unit.   | J59024D-1,<br>List 1      | Provides zip tone equipment                                    | —                             | Requires external zip tone source.   |

♦TABLE B4 (Contd)  
EQUIPMENT SUMMARIZATION—557B PBX

| DESCRIPTION  | EQPT CODE               | FUNCTION   | SCHEMATIC               | REMARKS  |
|--|-------------------------|--|-------------------------|--|
| Equipment and wiring required to provide for TOUCH-TONE calling enabler unit.                      | J59024E,<br>List 1      | Prevents TOUCH-TONE dialing on secretarial lines | SD-65731-01,<br>Fig. 28 | One unit is required for each position equipped with TOUCH-TONE dialing or TOUCH-TONE calling card dialer. |
| Equipment and wiring required to provide a TOUCH-TONE calling card dialer and dial auxiliary unit. | J59024F,<br>List 3      | TOUCH-TONE calling card dialer                   | SD-65731-01,<br>Fig. 24 | None   |
| Framework, insulating, and dust sealing details.   | ED-65722-70,<br>Group 1 | Insulating and dust sealing                      | —                       | Required when PBX located on metal and other type floors.  |
| Section assembly.  | ED-65859-70,<br>Group 2 | Casing   | —                       | Mahogany-finished parts for outer casing.  |
| One platform, initial section.   | ED-65864-70,<br>Group 1 | Platform assembly                                | —                       | Use for initial position.  |
| One platform, supplementary section for right-to-left growth.                                      | ED-65864-70,<br>Group 3 | Platform assembly                                | —                       | None   |
| One platform, supplementary section for left-to-right growth.                                      | ED-65864-70,<br>Group 4 | Platform assembly                                | —                       | None   |

included and must be ordered separately and installed locally.

### **COMMON UNIT**

**2.09** The common unit, ordered as part of the basic switchboard, contains the apparatus associated with the attendant telephone and dial circuit, the auxiliary telephone circuit, the position splitting circuit, the position grouping circuit, and the auxiliary signaling circuit. The common unit also includes the three administrative station relay circuits and five central office trunk relay circuits. The attendant telephone set (hand or head) must be ordered and provided locally. See Fig. 2.

### **SECRETARIAL LINE EQUIPMENT J59024C-2 (ELECTROMECHANICAL [MD])**

**2.10** One electromechanical secretarial line unit contains all the equipment normally required for ten secretarial line circuits, except the jacks, lamps, and designation strip. ♦This electromechanical line equipment is rated (MD) and is replaced by the solid-state secretarial line circuit pack (YW1).♦ The unit is designed to mount vertically in the rear of the switchboard and terminates in a cable and plug for connection to the connectors located in the lower rear section of the switchboard. Secretarial lines with locked-in line signals with or without secrecy may be provided on an optional basis. Units for signals with secrecy require an applique unit and a wiring change. Electromechanical secretarial line units with locked in line signals without secrecy require only a wiring change. Electromechanical secretarial line units with locked in line signals with secrecy should be ordered and installed per ED-65866-01.

### **♦SECRETARIAL LINE EQUIPMENT J59024C-3 (SOLID-STATE YW1 CIRCUIT PACK)**

**2.11** The solid-state secretarial line equipment (Fig. 3) is furnished in units of ten line circuits per unit. These units are equipped with the solid-state YW1 circuit pack (Fig. 4) line units plugged into 912A connectors mounted on the unit. The unit is designed to mount vertically in the rear of the switchboard and to terminate in a cable and plug for connection to the connectors located in the lower rear section of the switchboard. The YW1 secretarial line unit provides nonlocking line signals with secrecy or nonsecrecy. Secrecy feature prevents the bureau attendant from gaining access to an established

subscriber conversation and from making outgoing calls on a secretarial line. To provide the secrecy option, the SW1 screw switch on the YW1 circuit pack should be turned down to a closed position. A plug at the bottom of each unit provides the +5 volt direct current required for the YW1 circuit pack. Refer to Fig. 25 for +5 volt dc connections.♦

**2.12** The jacks, lamps, lamp caps, and designation strip for ten lines (left side of switchboard facing front) are provided under J59024C-3, List 2. The corresponding equipment for ten lines (right side of switchboard facing front) is provided under J59024C-3, List 3. The jack and lamps are wired for a plug-in basis. The new 80A lamp cap (Fig. 5) is to be inserted around the lamp to improve the brightness and definition of the light spot. The new 127A transparent designation strip (Fig. 6) provides ten pockets for designation labels and mounts over the line lamps. The designation strip fastens to the PBX panel by the use of springs which engage the fingers on the rear of the strip.

**2.13** A secretarial line circuit unit consisting of jacks, lamps, designation strip, cable, and connector is available as a separate list for use with the concentrator-identifier.

### **CENTRAL OFFICE TRUNK UNIT**

**2.14** A central office trunk unit, wired and equipped for five ringdown trunks, together with the associated jacks, lamps, and designation strip, is furnished as part of the basic equipment of the PBX.

### **CORD UNIT J59024B**

**2.15** Each cord unit (Fig. 7) is a single circuit-type employing cord reels, and is enclosed in a sheet metal box 5-3/8 inches high, 1 inch wide, and 8-1/2 inches long. Each cord unit contains all required apparatus: cord reel, a cord approximately 8-foot long with plug, a key unit, inductor or lamp socket, and jacks and plugs as required. The cord units are set into the space between the lamp rail and the writing shelf at a 35° angle and are wired in series. Each cord unit is separated from the adjacent unit by a 3/4-inch spacer. The administrative station line cord units are equipped with a combined line and supervisory lamp.

### **ADMINISTRATIVE STATION EQUIPMENT**

**2.16** Three administrative stations are included as part of the basic switchboard. The equipment

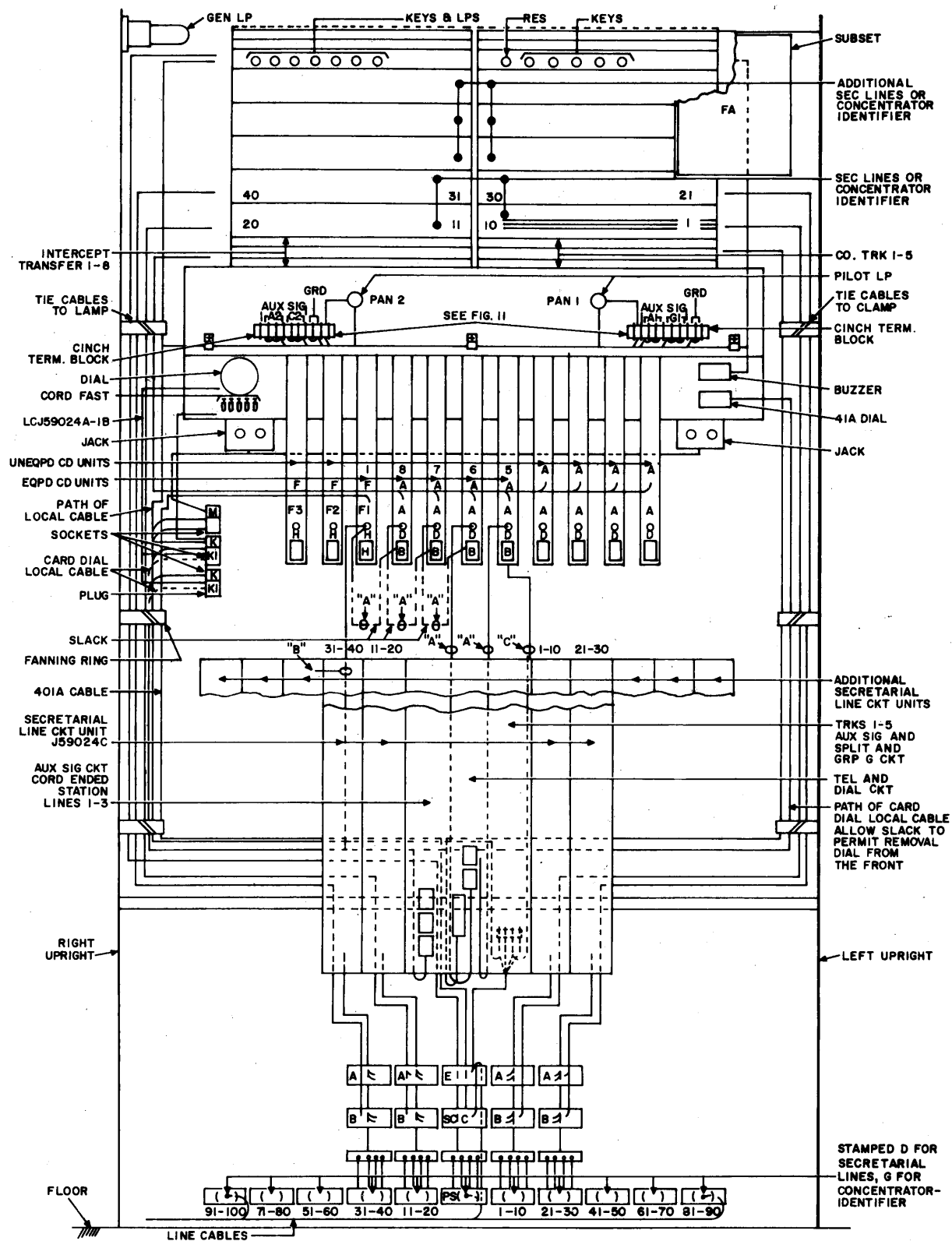
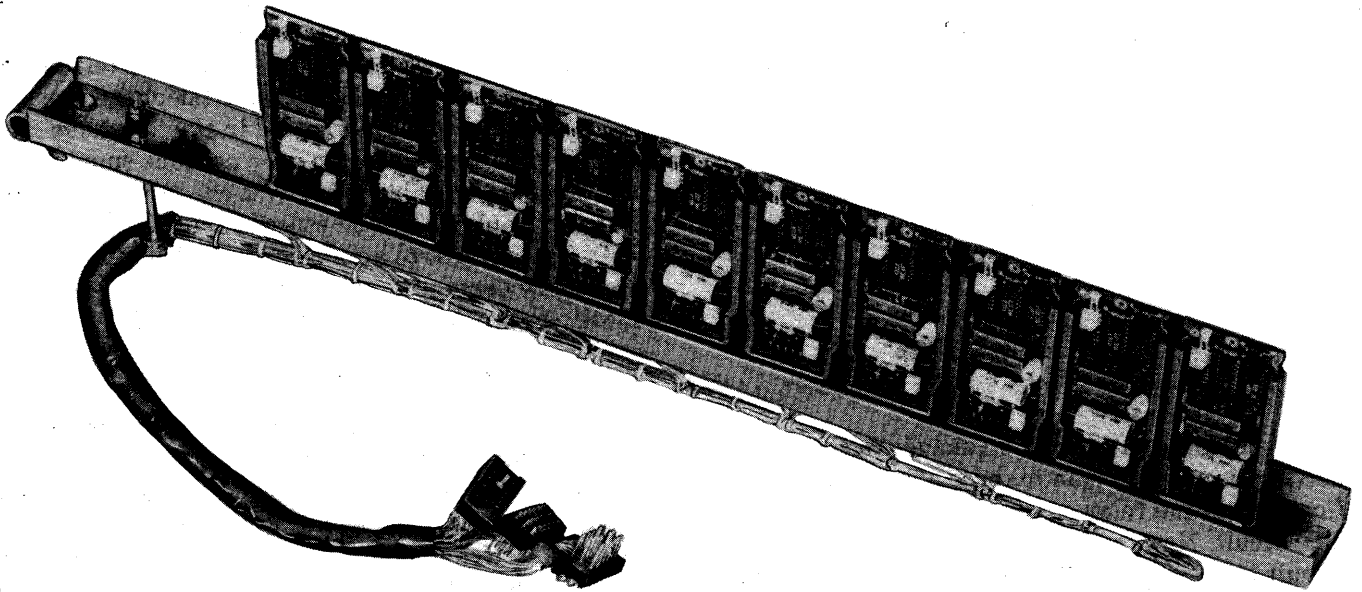
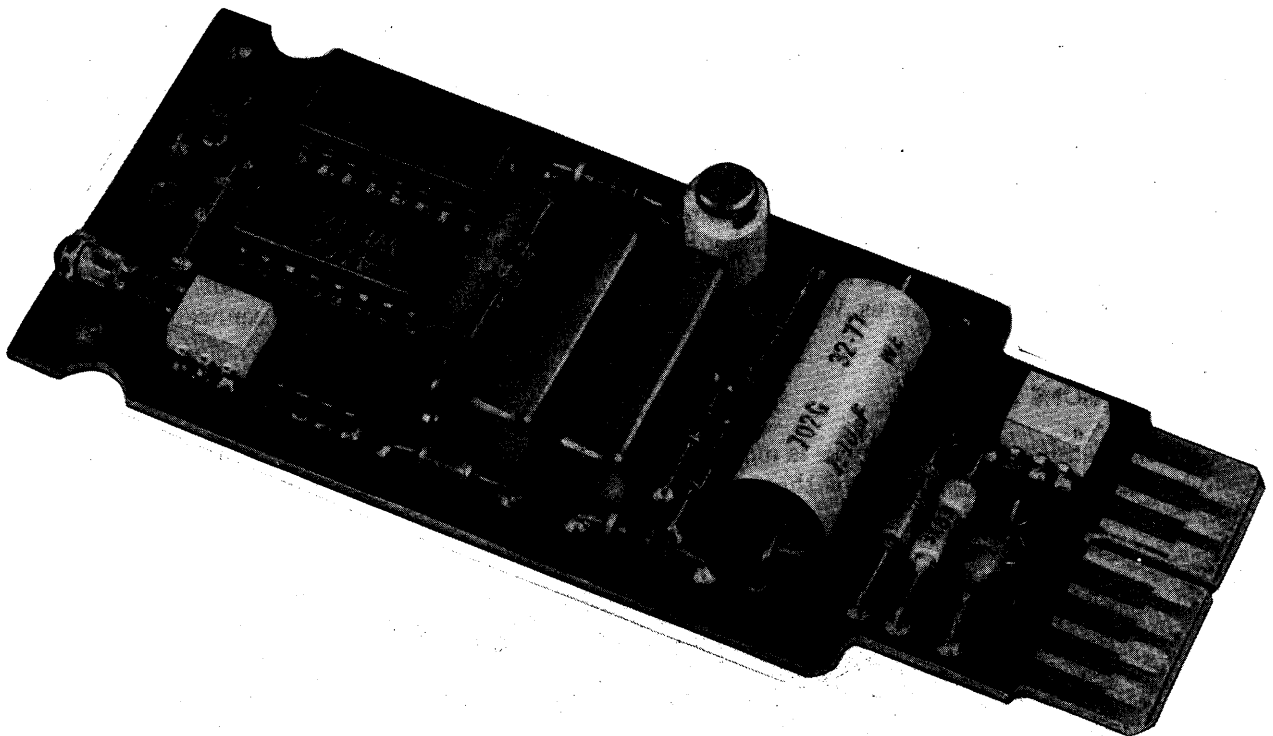


Fig. 2—557B PBX Switchboard Cabling Diagram and Schematic





**Fig. 3—J59024C-3 Solid-State Secretarial Line Unit**



**Fig. 4—YW1 Solid-State Circuit Pack**

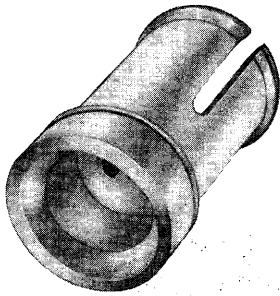


Fig. 5—80A Lamp Cap

for one administrative station includes a station connecting circuit (common to three administrative stations), a station relay circuit, and a station cord and key circuit. However, only one station cord and key circuit is provided as part of the basic switchboard. Two additional station cord and key units J59024B must be ordered separately and installed locally to complete the equipment for three administrative circuits.

#### MANUAL CONFERENCE CIRCUIT J59024A

**2.17** A manual conference circuit may be provided to connect two administrative stations together, using two station cords. The equipment and apparatus for this circuit are ordered separately and installed locally per T65731-31, Fig. 1. Space is provided on the front of the framework behind the front panel for mounting the coils and capacitors. Spare jacks in the trunk strip or intercept transfer strips are available for the jack appearances. Wiring for the circuit is performed locally.

#### ATTENDANT TELEPHONE CIRCUIT

**2.18** A set of attendant telephone jacks is mounted under the left and right ends of the writing

shelf. These jacks are connected to a telephone unit employing one set of relays to operate with any cord unit. A handset, 52-, 53-, or 60-type head telephone set may be used with the operator telephone jack. A signal circuit has been provided in the telephone circuit. When connected to an external tone supply, the attendant will be able to verify if the talking connection is complete. This is especially useful when the PBX is connected to a concentrator-identifier. A 102 frequency generator, or equivalent, may be installed locally to provide the external tone supply.

#### AUXILIARY TELEPHONE CIRCUIT

**2.19** An auxiliary telephone circuit (without dial) is furnished for use by a second attendant during peak load periods. Equipment for this circuit is mounted on the same mounting plate as the regular telephone circuit equipment and is furnished as part of the basic switchboard. The auxiliary telephone circuit connects to the telephone jacks mounted beneath the left end of the writing shelf under the control of the position splitting key.

#### POSITION SPLITTING KEY

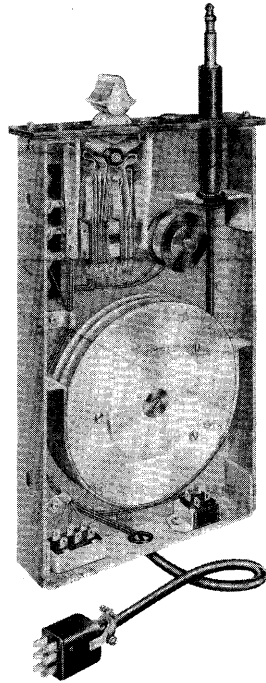
**2.20** The position splitting key is located at the top of the jack panel opening. When the key is in the unoperated (NO) position, both sets of attendant jacks are connected to the regular telephone circuit. When the key is in the operated (YES) position, the cords are split into two groups. The number of cords in each group is determined by local requirements. The cord or cords to the left of the split are connected to the auxiliary telephone circuit. The cord or cords to the right of the split are connected to the regular attendant telephone circuit.

#### POSITION GROUPING CIRCUIT

**2.21** A position grouping circuit is furnished in the switchboard to group the cords of one position



Fig. 6—127A Designation Strip



**Fig. 7—J59024B—Intercept and Dial Cord Unit**

to the telephone circuit of an adjacent position. This operation is under control of the position grouping key located at the top of the jack openings. When the key is in the operated (YES) position, it permits, with the use of a plug-ended cable, the cords of two positions to be connected in series.

#### **DIALS AND DIAL MOUNTINGS**

**2.22** The dial and dial mounting are not furnished as part of the basic switchboard, but are ordered separately and installed locally when required. The dial, when required, is mounted on a panel to the right of the cord units. A rotary dial (10- or 20-pulse per second), TOUCH-TONE calling dial or a rotary or TOUCH-TONE calling card dialer may be used with the switchboard. Refer to Table B for ordering information of dials.

#### **BULLETIN HOLDER**

**2.23** A transparent bulletin holder, providing an unobstructed writing space of approximately 2 feet 3-7/8 inches by 13-9/16 inches, is provided as part of the writing shelf. The bulletin holder is held in position by two studs in the rear of the writing

shelf. The studs extend through matching holes in the holder, thus permitting the attendant to change bulletins without the use of tools.

#### **RINGING TRANSFER KEY**

**2.24** The ringing transfer key (GEN REG-EM), located at the top of the jack panel opening, is provided to control the ringing sources. Ringing current is normally furnished over cable pairs from the central office. A local ringing supply (KS-5585 frequency converter) or an emergency ringing supply (J59019C hand generator unit) may also be used with the PBX.

#### **PANEL PILOT LAMP**

**2.25** Two panel pilot lamps are provided, one for the left panel (facing the front of the) and one for the right panel. The panel pilot lamp lights when any secretarial line lamp or central office trunk lamp in the respective panel lights. The feature is provided to assist attendants when the splitting feature is activated.

#### **SECRETARIAL LINE LAMP TEST KEY**

**2.26** The secretarial line lamp test circuit when provided, is operated by depressing one of five line lamp test keys (Fig. 1). Each key will light 20 secretarial line lamps at a reduced brightness. Lamps which do not light should be replaced as an open line lamp will make the circuit inoperative.

#### **FUSE ALARM CIRCUIT**

**2.27** A fuse alarm circuit is furnished as part of the basic section. The alarm lamp and alarm cut-off key are mounted at the top of the jack panel openings.

#### **AUXILIARY SIGNAL BUZZER**

**2.28** An auxiliary signal buzzer is provided as part of the basic switchboard. The buzzer is mounted under the panel to the left of the cord units. A volume adjustment knob mounted in line with the cords is provided so that the attendant may vary the loudness of the buzzer signal.

#### **BUZZER CUTOFF KEY**

**2.29** A buzzer cutoff key is provided as part of the basic switchboard. This key is mounted with

the other control keys at the top of the jack opening. Provision is also made for extending the buzzer leads to an extension ringer in a remote location, such as the attendant lounge, when this feature is desired for night service.

### 3. INSTALLATION

#### UNPACKING

**3.01** The 557B PBX should be unpacked and assembled as near as possible to the selected location to prevent damage to the equipment during unpacking and installation. When moving or carrying the PBX, precautions should be taken to guard against personal injury.

#### LOCATION

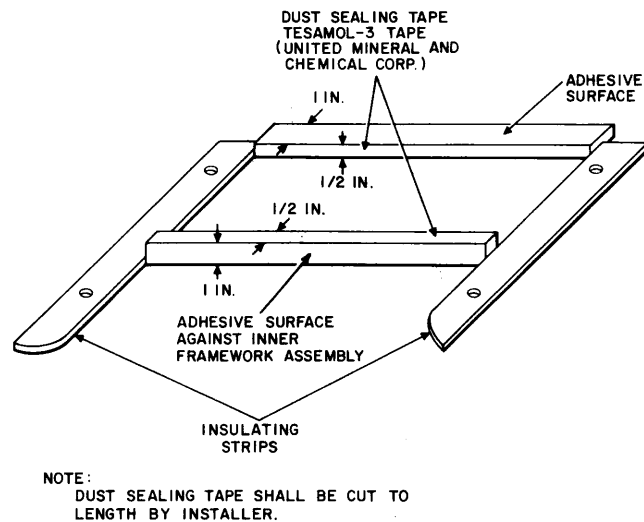
**3.02** Place the PBX in the location designated by the job instructions and customer approval. The location should be free from excess dust, corrosive fumes, excessive vibration due to machinery, etc. The back of the PBX shall not be less than 30 inches from the wall or any other obstruction. There should be a minimum clearance of approximately 40 inches in front of the writing shelf for operating purposes.

**3.03** The switchboard should be located so natural or artificial light will not make it difficult for the attendant to see the lamp signals. If a desirable location is not available, the customer should be advised that the light will affect the visibility of the lamp signals and that steps should be taken to reduce the light by shades or other suitable means. The location selected for the PBX should have an electrical outlet reasonably nearby.

**3.04** When the PBX is to be installed on a metal surface, such as inserts used for terrazzo floors, insulate the framework with the details furnished in ED-65722-70, Group 1 (Fig. 8). On other type floors, the details are mainly used to prevent dust from seeping into the PBX.

**3.05** When the PBX is to be installed on a floor covered with an insulating material, such as rubber tile, although metal may be concealed under the insulating material, no insulating strips are required. The fiber floor insulator washers furnished locally will provide the necessary insulation for the PBX framework.

**3.06** The PBX should be fastened to the floor, as shown in Fig. 9, and should stand approxi-



**Fig. 8—Placement of Insulating Strips and Dust Sealing Tape**

mately level. The screws, washers, and expansion shield should be furnished locally.

**Caution:** Do not drill cement floors containing radiant heat. For installations of this type, place the PBX on a rubber mat or some other nonskid or adhesive material to prevent the PBX from sliding.

#### MULTIPOSITION INSTALLATION

**3.07** When installing the 557B PBX as a multiposition, perform the following steps:

- Perform the work operations outlined in paragraphs 3.01 through 3.06.
- Modify one side panel, as shown in Fig. 10, and use it to separate the adjacent positions.
- Before aligning the positions, remove the casting mounting clips from the side of the position which is to be butted against the finished side of the modified panel being used as the separator. Align the positions and bolt them together, using the hardware shown in Fig. 10, or equivalent.
- Connect local ground wire as shown in Fig. 11.

#### LAMP CAPS AND DESIGNATION STRIPS

**3.08** The new 80A lamp cap is inserted around the line lamp to improve the brightness and defi-

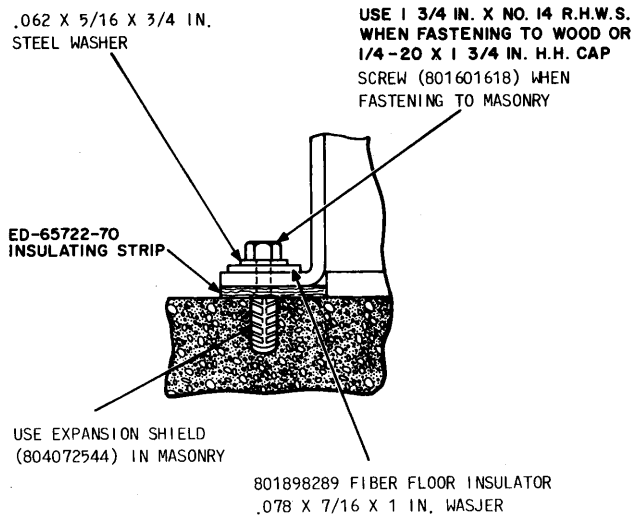


Fig. 9—Fastening the PBX to the Floor

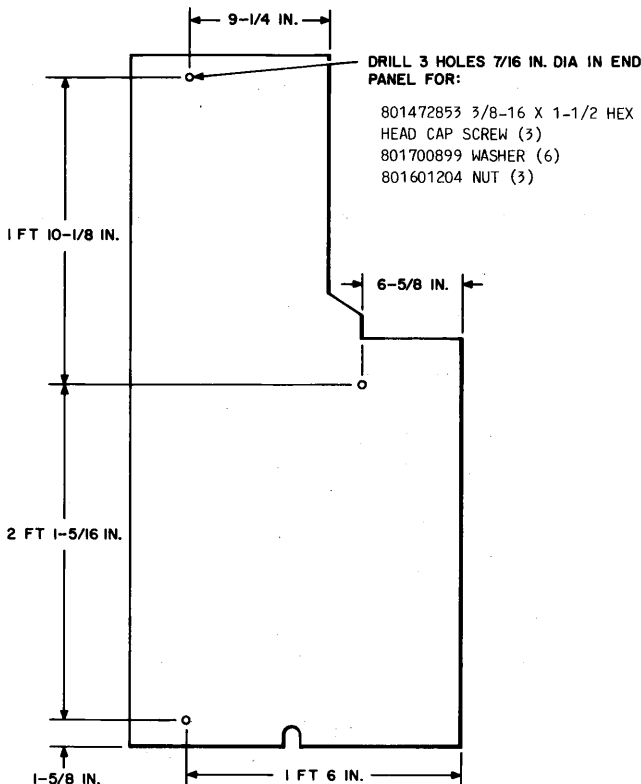


Fig. 10—Separation Panel Modification Detail

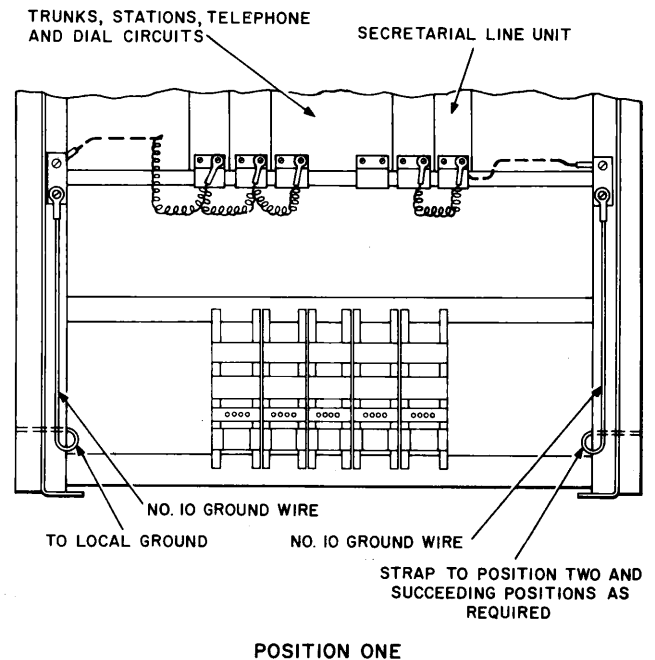


Fig. 11—Local Ground Connections to PBX

inition of the lamp spot. The caps must be inserted in the cavity around the bulbs after the bulbs are placed in the panel. The caps must be removed by a lamp extracting tool (319B) before the bulbs can be changed. The new 127A designation strip is placed into the switchboard panel after the line lamps and lamp caps are installed. The fingers on the clear 127A designation strip are inserted under the springs on the 105A designation strip (Fig. 12). In some cases, the 105A designation strip may be installed in an inverted position and the fingers must then be placed above the springs (Fig. 12). It is suggested that a label be placed on the 105A designation strip to indicate an inverted position and the insertion of the strip above the springs. Unmarked labels for use with the 127A designation strip are available in white, canary, blue, pink, and green. Each 8-1/2 by 11 inch sheet is perforated to provide 99 squares. Order as E-6265 Designation Strip Labels and specify color.

#### CONCENTRATOR-IDENTIFIER TERMINATION

**3.09** When the 557B PBX is equipped for concentrator-identifier termination, the installer must remove the secretarial line lamp and jack circuit and connecting cable and install cable and lamp and jack assembly. The jack and lamp sockets mount

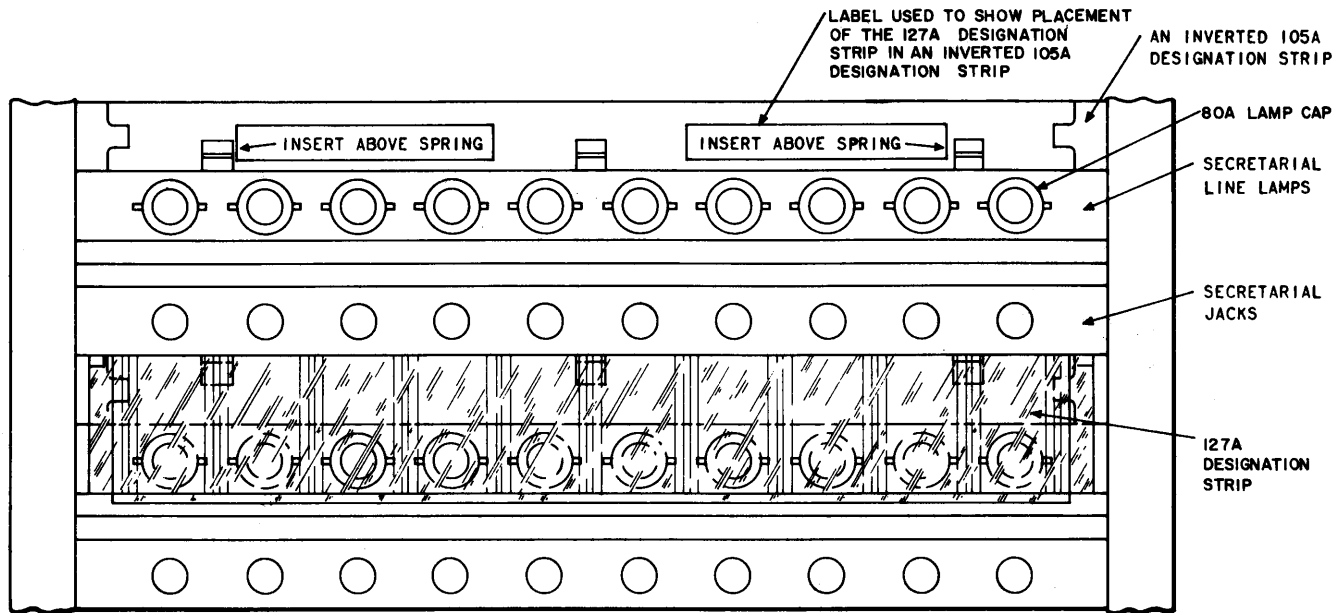


Fig. 12—Installation of the 127A Designation Strip

in the same locations as the secretarial line lamps and jacks and the connecting cables terminate in the bottom of the switchboard. The black auxiliary signaling leads (C1 or C2), run on the lowest number lamp per strip of the concentrator-identifier lamp and jack circuit, shall be connected to terminals C1 or C2 of the cinch terminal block on the respective side of the switchboard (Fig. 2 and 13). The black ground leads (G1 or G2) run on the lowest number lamp strip shall be connected to central office ground terminals of the cinch terminal block.

#### SECRETARIAL LINE UNITS

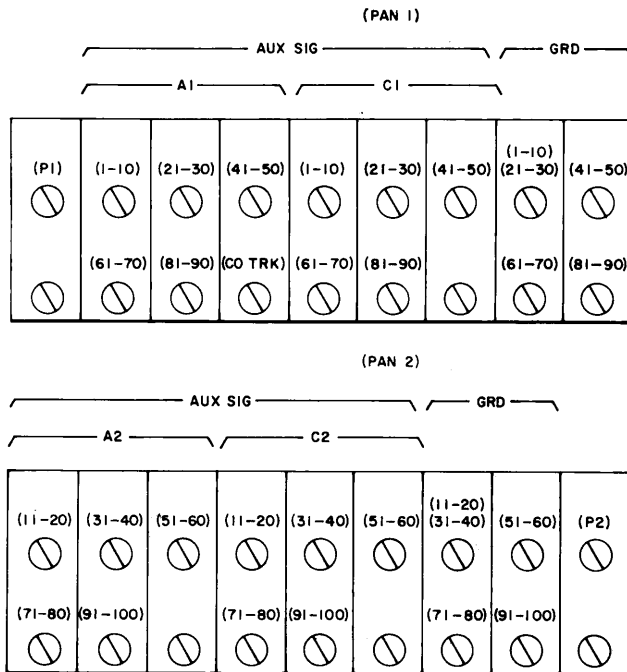
**3.10** The 557B PBX is initially equipped with 40 secretarial lines. Additional secretarial lines (maximum 60 lines — 6 line units and 6 jack and lamp assemblies) shall be installed locally. The 159U jack spacer must be removed from the switchboard panel and disposed of locally. The secretarial line units and jack assemblies are mounted in the positions as indicated in Fig. 2. The units and jack and lamp assemblies are equipped for a plug-in basis and should be cabled according to Fig. 2. The black ground lead on the secretarial line unit should be run to the binding post on the adjacent plate. Leave 10 inches slack (Fig. 11). The black auxiliary signaling lead (A1 or A2) shall be connected to terminals A1 or A2 of the cinch terminal block on the respective side of the switchboard (Fig. 2 and 13).

#### SECRETARIAL LINE UNITS WITH LOCKED-IN LINE SIGNALS

**3.11** When locked-in line signals with secrecy are required on secretarial lines, the mounting details and line units per ED-65866-01 should be ordered and installed locally. Mount detail 1 on the right upright of the switchboard under the writing shelf, using the four mounting holes; drill and tap the upright as required. Similarly, mount detail 2 on the left upright. Install the unit for the designated lines in the relative location indicated in Fig. 3, ED-65866-01. Terminate the free end of the local form cable (Fig. 4, ED-65866-01) on the secretarial line unit per Fig. 12, SD-65729-01; rewire Fig. 10 to agree with Fig. 12, SD-65729-01 and mount the connector on detail 1 per Fig. 3 of ED-65866-01. Insert the plug of the unit into the connector for the assigned lines. Install a ground lead per SD-65729-01, Fig. 9. Secretarial lines with locked-in signals without secrecy may be provided by rewiring the nonlocked-in line units per SD-65729-01, Fig. 11 on a local job basis (electromechanical units only).

#### INTERCEPT TRANSFER JACKS

**3.12** Intercept transfer jacks may be installed to transfer intercepted calls to administrative stations. The straps across the KS-8586, L5 socket terminals of the intercept and dial cord units and the



**Fig. 13—Cinch Terminal Blocks Used as a Cross-Connect for Auxiliary Signaling and Ground**

159H jack space must be removed. The intercept transfer jack assembly shall be installed locally in the switchboard panel as shown in Fig. 2. A 159A jack space shall be installed below the jack mountings and a 105A designation strip shall be installed above the jack mountings. The intercept transfer cable connects on a plug-in basis (Fig. 2).

#### MANUAL CONFERENCE CIRCUIT

**3.13** A manual conference circuit may be provided to connect two administrative stations together using two station cords. The equipment should be ordered and installed per T65731-31, Fig. 1. Space is provided in back of the front panel on the angle plate to mount the coils and capacitors. Spare jacks in the central office trunk or intercept transfer strips are used in the manual conference circuit.

#### INSTALLATION OF "TOUCH-TONE" CALLING DIAL AND "TOUCH-TONE" CALLING CARD DIALER (MD)

**3.14** Packaged drawings describing the modifications necessary for installation of the TOUCH-TONE calling dial and TOUCH-TONE calling card dialer (MD) are included in J58850 (Table B).

A TOUCH-TONE calling enabler unit J59024E shall be ordered and installed locally per Fig. 14. Connect (KK) plug of TOUCH-TONE calling dial to (KK) socket of TOUCH-TONE calling enabler. Connect the (K) plug of the TOUCH-TONE calling enabler to the (K) socket to complete the installation (Fig. 2 and 14).

#### INSTALLATION OF ROTARY DIAL

**3.15** The dial and dial mounting shall be installed locally. The blank plate must be removed and disposed of locally. The dial mounting assembly shall be fastened to the switchboard by the included screws. Straps between terminals 1 and 2 and terminals 4 and 6 of the (K) socket must be removed. Connect (K) plug of the dial local cable to the (K) socket to complete the installation.

#### INSTALLATION OF ROTARY CARD DIALER (MD)

**3.16** The necessary modifications to the existing writing shelf and bulletin holder in order to install the rotary card dialer (MD) are shown in Fig. 15 and 16. An 18-volt 60-Hz supply transformer (2012B) which plugs into a 110-volt ac convenience outlet is also required. Mount the rotary card holder with the hardware included. Connect the (K1) plug of the card dialer cable to the (K) socket and the (K) plug of the dial cable to the (K1) socket on the card dialer cable.

#### PLATFORM

**3.17** Platforms are not normally needed, even in multiposition installations. However, where additional space is required to accommodate excess cables or where the 557B PBXs are to be placed in line with switchboards having keyshelves 36 inches from the floor, a 6-inch high platform may be installed, as shown in Fig. 17 and 18.

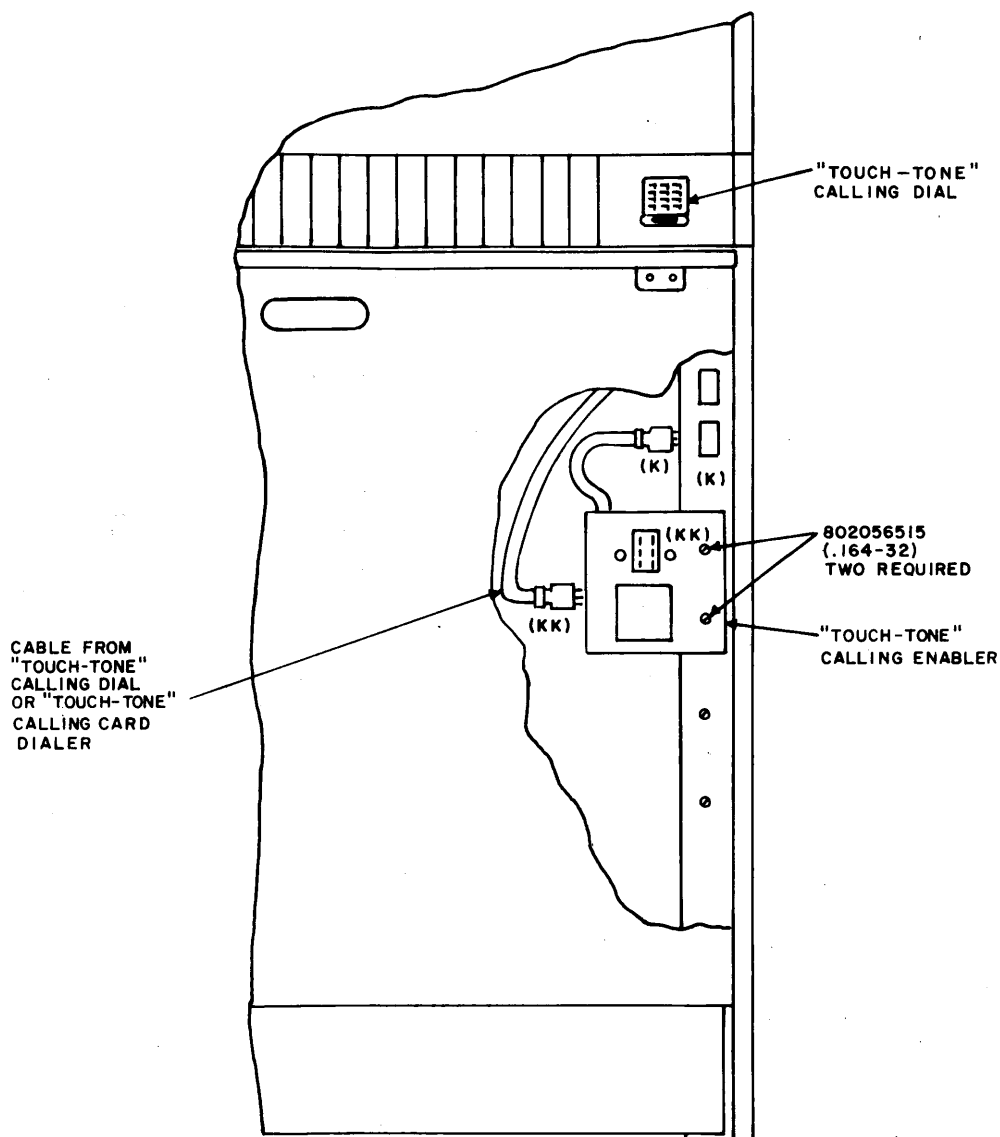
#### ELECTRIC CLOCK

**3.18** When an electric clock is required, remove the buzzer panel and remount the buzzer on the clock panel. Mount the clock and fasten the panel assembly in place (Fig. 19 and 20).

#### 4. CONNECTIONS

##### CROSS-CONNECTING BLOCKS — LINE CABLES

**4.01** The size and number of cross-connecting blocks will vary with the capacity of the PBX



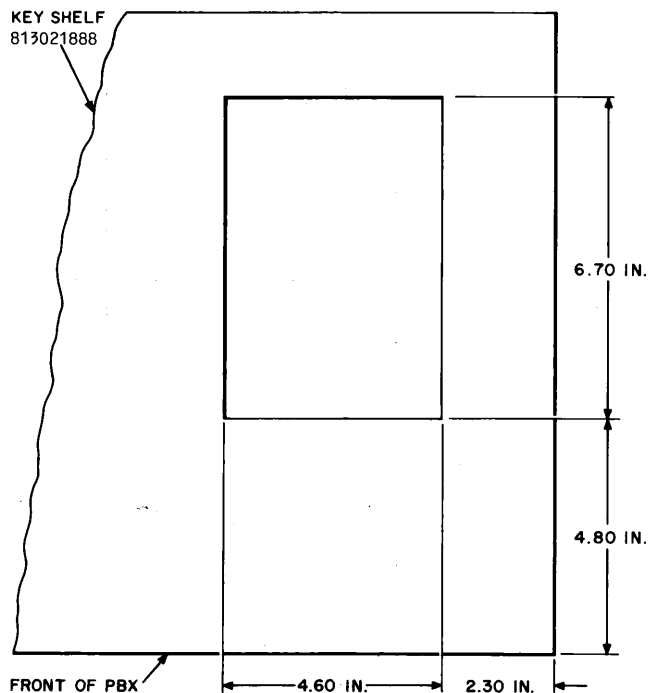
**Fig. 14—Installation of TOUCH-TONE Calling Enabler Unit for use With TOUCH-TONE Calling Dial and TOUCH-TONE Calling Card Dialer**

positions being installed. Each PBX is provided with one 30- or 60-foot 100-pair D inside wiring line cable terminated with ten KS-13875 plugs and one 25-pair D inside wiring line cable terminated with three KS-13875 plugs. The 100-pair line cable is used for connecting to secretarial lines. The 25-pair line cable is used for connecting to central office trunks, administrative stations, battery-ground feeders, and miscellaneous. Table C shows the assignment of cable pairs between the cross-connecting terminal blocks and the PBX line cables. This table may be repro-

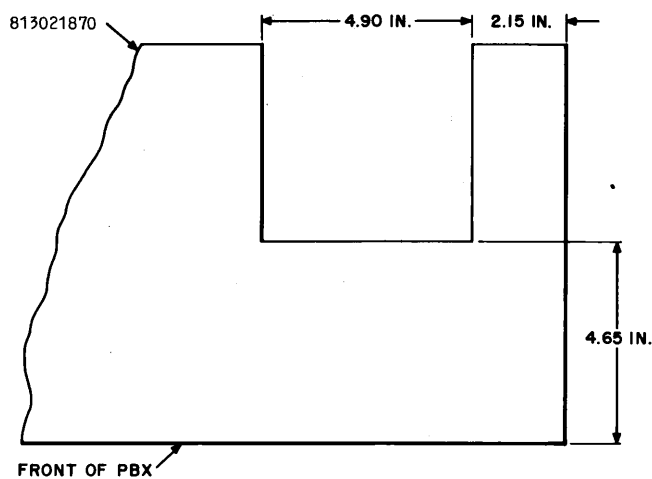
duced and used either as an assignment or permanent record of the PBX cabling and cross-connections. A typical arrangement of cross-connecting blocks for secretarial lines is shown in Fig. 22. A typical arrangement of a cross-connecting block for battery-ground feeders, trunks, stations, and miscellaneous is shown in Fig. 21.

**Note:** If ringing is received over the tip conductor of the secretarial line loop from the cen-

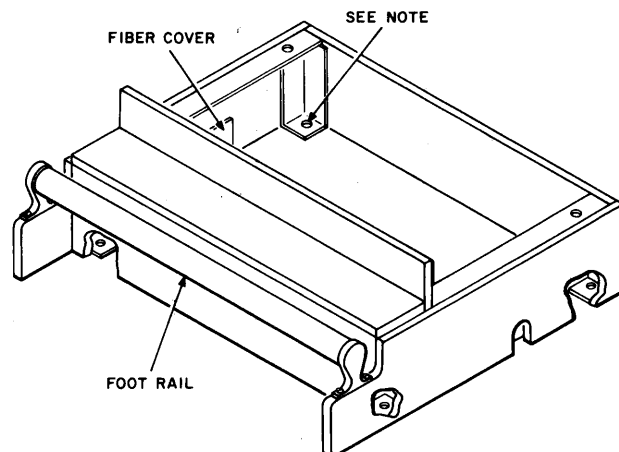




**Fig. 15—Modification of Writing Shelf for Rotary Card Dialer**

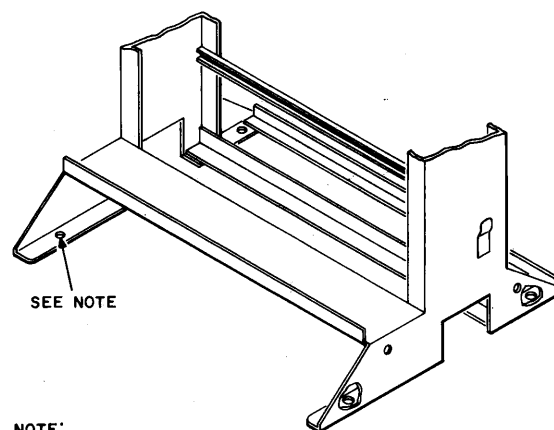


**Fig. 16—Modification of Bulletin Holder for Rotary Card Dialer**



**NOTE:**  
3/8 IN. HOLES DRILLED FOR FASTENING PLATFORM TO FLOOR.  
WOOD FLOORS: FOUR 1 IN. NO. 14 ROUND HEAD WOOD SCREWS.  
MASONRY FLOORS: FOUR 1 IN. NO. 14 ROUND HEAD WOOD SCREWS  
AND ANCHORS.

**Fig. 17—Location of Holes for Fastening Platform to Floor**



**NOTE:**  
HOLES AND HARDWARE USED FOR FASTENING PBX FRAME TO PLATFORM:  
3/8-16 X 7/8 RHM SCREW (4)  
3/8 FLAT WASHER (4)  
3/8 SPRING LOCKWASHER (4)  
3/8-16 HEXNUT (4)

**Fig. 18—Location of Holes for Fastening PBX to Platform**

tral office, the tip and ring conductors shall be reversed at the cross-connect block.

**4.02** With the front and rear panels removed, run the line cable stubs through the front of the PBX and out the cable entrance hole provided at the sides of the PBX or through the floor, as required, until the desired amount of slack is left in the PBX.

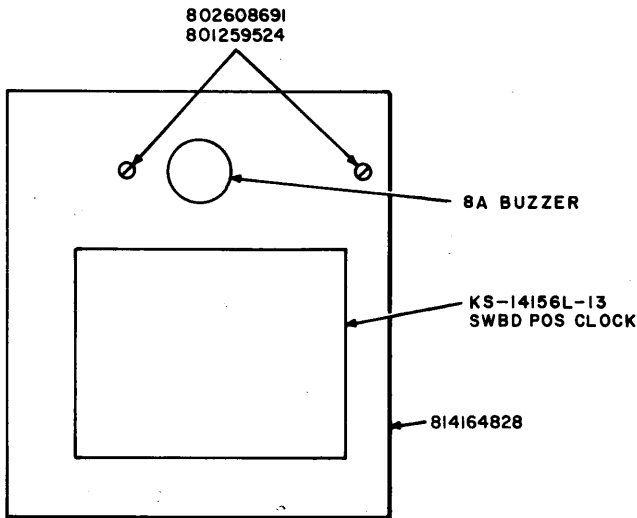
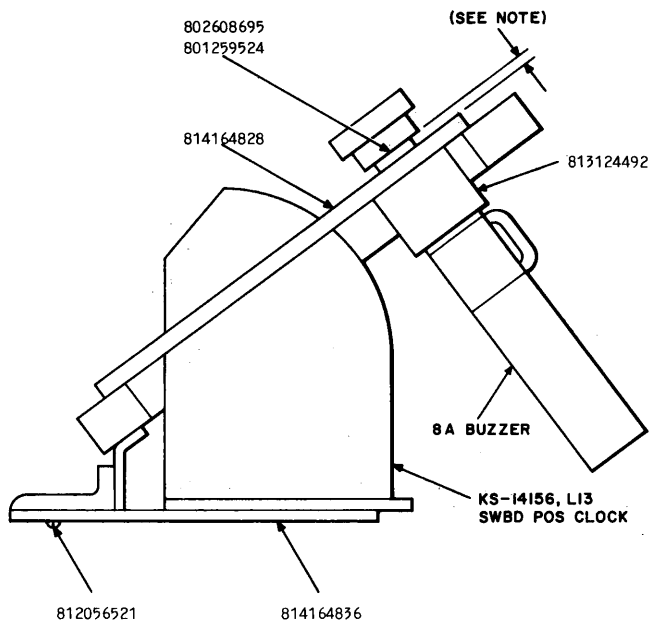


Fig. 19—Arrangement of Buzzer on Clock Panel



NOTE:  
THERE SHALL BE A MINIMUM 1/64 INCH  
CLEARANCE BETWEEN BUZZER KNOB  
AND MOUNTING ASSEMBLY SURFACE,  
WHEN BUZZER KNOB IS TURNED TO  
CUT-OFF POSITION.

Fig. 20—Installation of Clock on Clock Panel

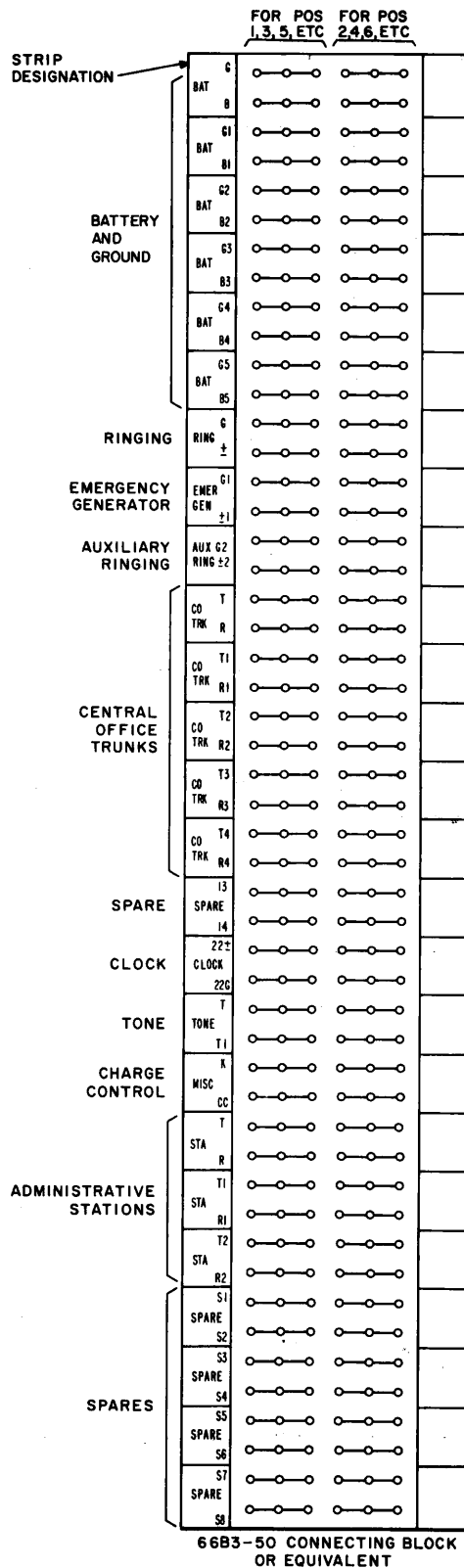
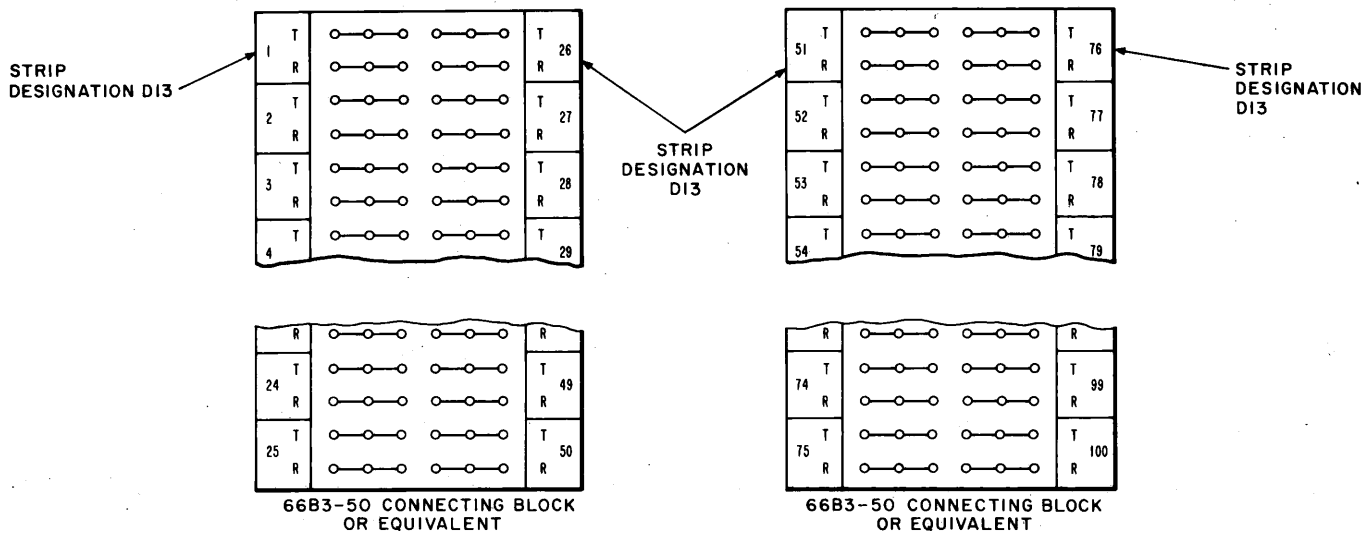


Fig. 21—Typical Cross-Connecting Block Arrangement for 25-Pair Trunks and Miscellaneous Cable



**Fig. 22—Typical Cross-Connecting Block Arrangement for 100-Pair Line Cable**

**4.03** Insert the line cable plugs into the associated mating connectors, as required. When the PBX is not equipped to capacity, leave the unused cable plugs in the base of the PBX.

**4.04** After the line cables have been properly placed in the base of the PBX, cut the fiber cover to fit snugly around the line cables and reinstall the cover to seal the remaining opening around the cables. All unused cable holes should be sealed with fiber covers. When the line cables enter through the floor, seal the opening around the cables with Plastic Duct Seal, or equivalent.

#### LOCAL GROUND

**4.05** Provide a local ground connection to the PBX framework by running a No. 10 ground wire to a suitable grounding medium, as covered by local job instructions. The local ground wire is normally connected to the initial (first) position. When multiple positions are installed, the positions are strapped together by a No. 10 ground wire, as shown in Fig. 11.

#### BATTERY-GROUND FEEDERS

**4.06** Before connecting the battery-ground feeders through to the PBX cross-connecting block, test for proper conditions as follows:

- (a) Check that the battery-ground feeders from the central office or building battery have

been properly terminated up to the PBX cross-connecting blocks. When building battery is provided, check for proper fusing at the fuse panel adjacent to the building battery.

- (b) At the cross-connecting block, connect a voltmeter to the cable pair(s) connected to the battery supply and verify that battery is within the proper voltage range and the polarity is correct.

- (c) When more than one cable pair is required for the battery supply, verify each pair; then strap all the tip sides of the same group together for ground and all the ring sides of the same group together for battery.

**4.07** ♦The installations of the solid-state YW1 secretarial line circuit pack requires a +5 volt dc power source. Refer to paragraph 2.06 and Fig. 25 for +5 volt power supply installation requirements. The power source is wired to a KS-13875, L1 plug (female terminal) which in turn plugs into a KS-14160, L1 receptacle (male terminal) at the bottom of the PBX.♦

#### ELECTRIC CLOCK KS-14156

**4.08** When an electric clock is required, it is ordered and installed locally. Because of the regulation characteristics of the clock transformer (Catalog No. 9T51Y2141), only five clocks may be con-

nected to one clock transformer. Connect the clock wiring as shown in Fig. 23. Refer to Section 030-114-811 for positioning and setting of the clock.

#### CORD REEL UNITS

**4.09** Additional cord reel units should be connected as shown in Fig. 24 and in accordance with local job instructions.

#### RINGING SUPPLY

**4.10** If the ringing supply is not furnished over central office conductors, a frequency convertor located at the customer premises and wired locally to the ringing leads at the connecting block shall be provided.

#### EMERGENCY RINGING SUPPLY

**4.11** When an emergency ringing supply is required, a hand generator unit is wired locally to the emergency generator leads at the cross-connecting block. When a hand generator is not required, the emergency generator pair (Table C, Block 3) shall be strapped to the central office ringing pair at the connecting block.

#### SECRETARIAL LINE UNIT — RINGING CURRENT (ELECTROMECHANICAL ONLY)

**4.12** The secretarial line unit is wired with S, V, and X wiring and apparatus. Check type of ringing current provided by the central office for each secretarial line to be connected, and make wiring changes as shown in Table D and per Fig. 10, SD-65729-01. If the X wiring and apparatus is not required, it should be removed from the circuit.

#### POSITION GROUPING

**4.13** When position grouping is required, furnish a plug-ended cable per J59024A. Insert the E plug of the cable into the E socket of the grouped position and the G plug of the cable into the D or H socket of the last cord unit of the preceding position in accordance with SD-65731-01.

**4.14** Administrative stations can be equipped with either rotary or TOUCH-TONE dialing. Polarity guards should not be used for stations with TOUCH-TONE dialing sets.

#### 5. INSTALLATION TESTS

**5.01** Perform the test and inspections as covered in Section 473-602-210.

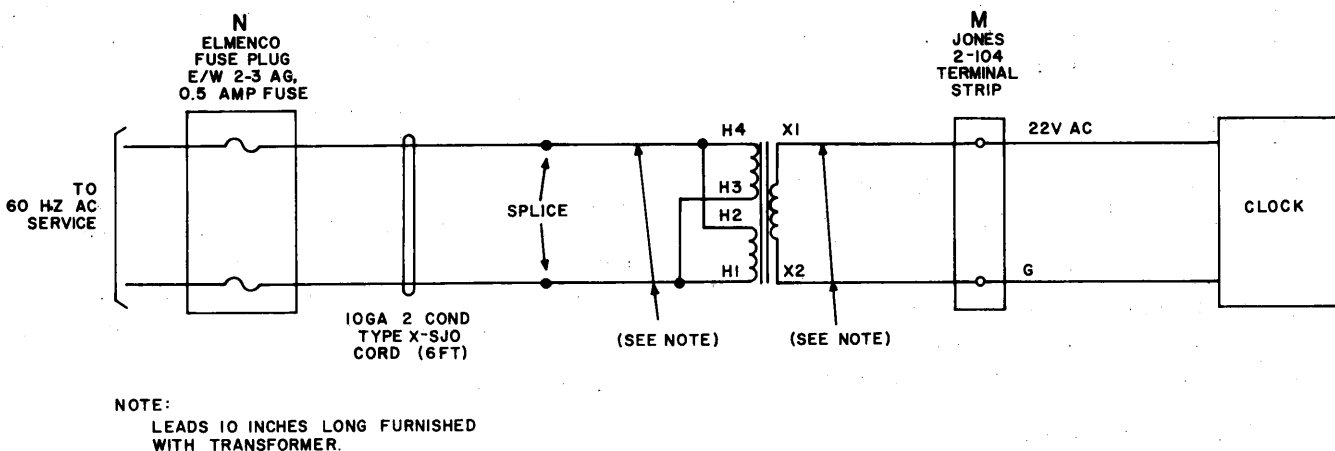
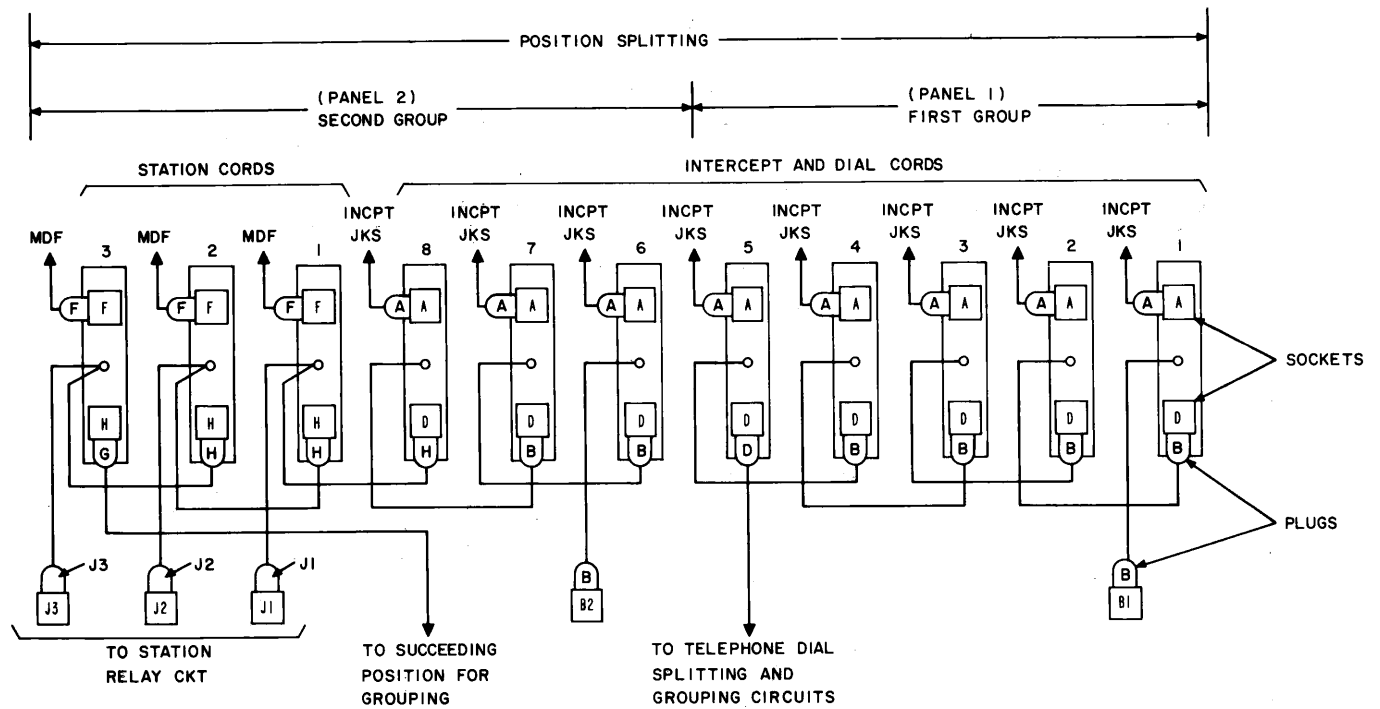


Fig. 23—Connections for Electric Clock



**Fig. 24—Typical Connecting Arrangement of Cord Reel Units**

**TABLE C**  
**CONNECTIONS**

| FROM 557B PBX<br>SECRETARIAL LINE UNIT |       |          |            |                | TO CROSS-CONNECT<br>BLOCK NO. 1 |        | CROSS-CONNECT<br>TO |        |
|--|-------|----------|------------|----------------|---------------------------------|--------|---------------------|--------|
| BINDER                                 | PLUG  | TERMINAL | LEAD       | COLOR          | SECRETARIAL LINE                |        | CABLE PAIR          | NUMBER |
| Blue                                   | 01-10 | 0<br>3   | 1T<br>1R   | W-BL<br>BL-W   | 1                               | T<br>R |                     |        |
|  |       | 1<br>4   | 2T<br>2R   | W-O<br>O-W     | 2                               | T<br>R |                     |        |
|  |       | 2<br>5   | 3T<br>3R   | W-G<br>G-W     | 3                               | T<br>R |                     |        |
|  |       | 6<br>9   | 4T<br>4R   | W-BR<br>BR-W   | 4                               | T<br>R |                     |        |
|  |       | 7<br>10  | 5T<br>5R   | W-S<br>S-W     | 5                               | T<br>R |                     |        |
|  |       | 8<br>11  | 6T<br>6R   | R-BL<br>BL-R   | 6                               | T<br>R |                     |        |
|  |       | 12<br>13 | 7T<br>7R   | R-O<br>O-R     | 7                               | T<br>R |                     |        |
|  |       | 14<br>17 | 8T<br>8R   | R-G<br>G-R     | 8                               | T<br>R |                     |        |
|  |       | 15<br>18 | 9T<br>9R   | R-BR<br>BR-R   | 9                               | T<br>R |                     |        |
|  |       | 16<br>19 | 10T<br>10R | R-S<br>S-R     | 10                              | T<br>R |                     |        |
|  | 11-20 | 0<br>3   | 11T<br>11R | BK-BL<br>BL-BK | 11                              | T<br>R |                     |        |
|  |       | 1<br>4   | 12T<br>12R | BK-O<br>O-BK   | 12                              | T<br>R |                     |        |
|  |       | 2<br>5   | 13T<br>13R | BK-G<br>G-BK   | 13                              | T<br>R |                     |        |
|  |       | 6<br>9   | 14T<br>14R | BK-BR<br>BR-BK | 14                              | T<br>R |                     |        |
|  |       | 7<br>10  | 15T<br>15R | BK-S<br>S-BK   | 15                              | T<br>R |                     |        |
|  |       | 8<br>11  | 16T<br>16R | Y-BL<br>BL-Y   | 16                              | T<br>R |                     |        |
|  |       | 12<br>13 | 17T<br>17R | Y-O<br>O-Y     | 17                              | T<br>R |                     |        |
|  |       | 14<br>17 | 18T<br>18R | Y-G<br>G-Y     | 18                              | T<br>R |                     |        |

TABLE C (Contd)

## CONNECTIONS

| FROM 557B PBX<br>SECRETARIAL LINE UNIT |                  |            |                |              | TO CROSS-CONNECT<br>BLOCK NO. 1 |        | CROSS-CONNECT<br>TO |        |  |
|--|------------------|------------|----------------|--------------|---------------------------------|--------|---------------------|--------|--|
| BINDER                                 | PLUG             | TERMINAL   | LEAD           | COLOR        | SECRETARIAL LINE                |        | CABLE PAIR          | NUMBER |  |
| Blue<br>(Contd)                        | 11-20<br>(Contd) | 15<br>18   | 19T<br>19R     | Y-BR<br>BR-Y | 19                              | T<br>R |                     |        |  |
|  |                  | 16<br>19   | 20T<br>20R     | Y-S<br>S-Y   | 20                              | T<br>R |                     |        |  |
|  | 21-30            | 0<br>3     | 21T<br>21R     | V-BL<br>BL-V | 21                              | T<br>R |                     |        |  |
|  |                  | 1<br>4     | 22T<br>22R     | V-O<br>O-V   | 22                              | T<br>R |                     |        |  |
|  |                  | 2<br>5     | 23T<br>23R     | V-G<br>G-V   | 23                              | T<br>R |                     |        |  |
|  |                  | 6<br>9     | 24T<br>24R     | V-BR<br>BR-V | 24                              | T<br>R |                     |        |  |
|  |                  | 7<br>10    | 25T<br>25R     | V-S<br>S-V   | 25                              | T<br>R |                     |        |  |
|  |                  | Orange     | 8<br>11        | 26T<br>26R   | W-BL<br>BL-W                    | 26     | T<br>R              |        |  |
|  |                  |            | 12<br>13       | 27T<br>27R   | W-O<br>O-W                      | 27     | T<br>R              |        |  |
|  |                  |            | 14<br>17       | 28T<br>28R   | W-G<br>G-W                      | 28     | T<br>R              |        |  |
| 15<br>18                               |                  |            | 29T<br>29R     | W-BR<br>BR-W | 29                              | T<br>R |                     |        |  |
| 16<br>19                               |                  |            | 30T<br>30R     | W-S<br>S-W   | 30                              | T<br>R |                     |        |  |
| 31-40                                  | 0<br>3           |            | 31T<br>31R     | R-BL<br>BL-R | 31                              | T<br>R |                     |        |  |
|  | 1<br>4           |            | 32T<br>32R     | R-O<br>O-R   | 32                              | T<br>R |                     |        |  |
|  | 2<br>5           |            | 33T<br>33R     | R-G<br>G-R   | 33                              | T<br>R |                     |        |  |
|  | 6<br>9           |            | 34T<br>34R     | R-BR<br>BR-R | 34                              | T<br>R |                     |        |  |
|  | 7<br>10          |            | 35T<br>35R     | R-S<br>S-R   | 35                              | T<br>R |                     |        |  |
|  | 8<br>11          | 36T<br>36R | BK-BL<br>BL-BK | 36           | T<br>R                          |        |                     |        |  |

TABLE C (Contd)

## CONNECTIONS

| FROM 557B PBX<br>SECRETARIAL LINE UNIT |                  |          |      |       | TO CROSS-CONNECT<br>BLOCK NO. 1 |   | CROSS-CONNECT<br>TO |        |
|--|------------------|----------|------|-------|---------------------------------|---|---------------------|--------|
| BINDER                                 | PLUG             | TERMINAL | LEAD | COLOR | SECRETARIAL LINE                |   | CABLE PAIR          | NUMBER |
| Orange<br>(Contd)                      | 31-40<br>(Contd) | 12       | 37T  | BK-O  | 37                              | T |                     |        |
|  |                  | 13       | 37R  | O-BK  |                                 | R |                     |        |
|  |                  | 14       | 38T  | BK-G  | 38                              | T |                     |        |
|  |                  | 17       | 38R  | G-BK  |                                 | R |                     |        |
|  |                  | 15       | 39T  | BK-BR | 39                              | T |                     |        |
|  |                  | 18       | 39R  | BR-BK |                                 | R |                     |        |
|  |                  | 16       | 40T  | BK-S  | 40                              | T |                     |        |
|  |                  | 19       | 40R  | S-BK  |                                 | R |                     |        |
|  | 41-50            | 0        | 41T  | Y-BL  | 41                              | T |                     |        |
|  |                  | 3        | 41R  | BL-Y  |                                 | R |                     |        |
|  |                  | 1        | 42T  | Y-O   | 42                              | T |                     |        |
|  |                  | 4        | 42R  | O-Y   |                                 | R |                     |        |
|  |                  | 2        | 43T  | Y-G   | 43                              | T |                     |        |
|  |                  | 5        | 43R  | G-Y   |                                 | R |                     |        |
|  |                  | 6        | 44T  | Y-BR  | 44                              | T |                     |        |
|  |                  | 9        | 44R  | BR-Y  |                                 | R |                     |        |
|  |                  | 7        | 45T  | Y-S   | 45                              | T |                     |        |
|  |                  | 10       | 45R  | S-Y   |                                 | R |                     |        |
|  |                  | 8        | 46T  | V-BL  | 46                              | T |                     |        |
|  |                  | 11       | 46R  | BL-V  |                                 | R |                     |        |
|  |                  | 12       | 47T  | V-O   | 47                              | T |                     |        |
|  |                  | 13       | 47R  | O-V   |                                 | R |                     |        |
|  |                  | 14       | 48T  | V-G   | 48                              | T |                     |        |
|  |                  | 17       | 48R  | G-V   |                                 | R |                     |        |
|  |                  | 15       | 49T  | V-BR  | 49                              | T |                     |        |
|  |                  | 18       | 49R  | BR-V  |                                 | R |                     |        |
|  |                  | 16       | 50T  | V-S   | 50                              | T |                     |        |
|  |                  | 19       | 50R  | S-V   |                                 | R |                     |        |
| Green                                  | 51-60            | 0        | 51T  | W-BL  | 51                              | T |                     |        |
|  |                  | 3        | 51R  | BL-W  |                                 | R |                     |        |
|  |                  | 1        | 52T  | W-O   | 52                              | T |                     |        |
|  |                  | 4        | 52R  | O-W   |                                 | R |                     |        |
|  |                  | 2        | 53T  | W-G   | 53                              | T |                     |        |
|  |                  | 5        | 53R  | G-W   |                                 | R |                     |        |
|  |                  | 6        | 54T  | W-BR  | 54                              | T |                     |        |
|  |                  | 9        | 54R  | BR-W  |                                 | R |                     |        |



TABLE C (Contd)

## CONNECTIONS

| FROM 557B PBX<br>SECRETARIAL LINE UNIT |       |          |      |       | TO CROSS-CONNECT<br>BLOCK NO. 2 |   | CROSS-CONNECT<br>TO |        |
|--|-------|----------|------|-------|---------------------------------|---|---------------------|--------|
| BINDER                                 | PLUG  | TERMINAL | LEAD | COLOR | SECRETARIAL LINE                |   | CABLE PAIR          | NUMBER |
| Green                                  | 51-60 | 7        | 55T  | W-S   | 55                              | T |                     |        |
|  |       | 10       | 55R  | S-W   |                                 | R |                     |        |
|  |       | 8        | 56T  | R-BL  | 56                              | T |                     |        |
|  |       | 11       | 56R  | BL-R  |                                 | R |                     |        |
|  |       | 12       | 57T  | R-O   | 57                              | T |                     |        |
|  |       | 13       | 57R  | O-R   |                                 | R |                     |        |
|  |       | 14       | 58T  | R-G   | 58                              | T |                     |        |
|  |       | 17       | 58R  | G-R   |                                 | R |                     |        |
|  |       | 15       | 59T  | R-BR  | 59                              | T |                     |        |
|  |       | 18       | 59R  | BR-R  |                                 | R |                     |        |
|  |       | 16       | 60T  | R-S   | 60                              | T |                     |        |
|  |       | 19       | 60R  | S-R   |                                 | R |                     |        |
|  | 61-70 | 0        | 61T  | BK-BL | 61                              | T |                     |        |
|  |       | 3        | 61R  | BL-BK |                                 | R |                     |        |
|  |       | 1        | 62T  | BK-O  | 62                              | T |                     |        |
|  |       | 4        | 62R  | O-BK  |                                 | R |                     |        |
|  |       | 2        | 63T  | BK-G  | 63                              | T |                     |        |
|  |       | 5        | 63R  | G-BK  |                                 | R |                     |        |
|  |       | 6        | 64T  | BK-BR | 64                              | T |                     |        |
|  |       | 9        | 64R  | BR-BK |                                 | R |                     |        |
|  |       | 7        | 65T  | BK-S  | 65                              | T |                     |        |
|  |       | 10       | 65R  | S-BK  |                                 | R |                     |        |
|  |       | 8        | 66T  | Y-BL  | 66                              | T |                     |        |
|  |       | 11       | 66R  | BL-Y  |                                 | R |                     |        |
|  |       | 12       | 67T  | Y-O   | 67                              | T |                     |        |
|  |       | 13       | 67R  | O-Y   |                                 | R |                     |        |
|  |       | 14       | 68T  | Y-G   | 68                              | T |                     |        |
|  |       | 17       | 68R  | G-Y   |                                 | R |                     |        |
|  |       | 15       | 69T  | Y-BR  | 69                              | T |                     |        |
|  |       | 18       | 69R  | BR-Y  |                                 | R |                     |        |
|  |       | 16       | 70T  | Y-S   | 70                              | T |                     |        |
|  |       | 19       | 70R  | S-Y   |                                 | R |                     |        |
|  | 71-80 | 0        | 71T  | V-BL  | 71                              | T |                     |        |
|  |       | 3        | 71R  | BL-V  |                                 | R |                     |        |
|  |       | 1        | 72T  | V-O   | 72                              | T |                     |        |
|  |       | 4        | 72R  | O-V   |                                 | R |                     |        |

TABLE C (Contd)

## CONNECTIONS

| FROM 557B PBX<br>SECRETARIAL LINE UNIT |                  |            |              |                | TO CROSS-CONNECT<br>BLOCK NO. 2 |        | CROSS-CONNECT<br>TO |        |  |
|--|------------------|------------|--------------|----------------|---------------------------------|--------|---------------------|--------|--|
| BINDER                                 | PLUG             | TERMINAL   | LEAD         | COLOR          | SECRETARIAL LINE                |        | CABLE PAIR          | NUMBER |  |
| Green<br>(Contd)                       | 71-80<br>(Contd) | 2<br>5     | 73T<br>73R   | V-G<br>G-V     | 73                              | T<br>R |                     |        |  |
|  |                  | 6<br>9     | 74T<br>74R   | V-BR<br>BR-V   | 74                              | T<br>R |                     |        |  |
|  |                  | 7<br>10    | 75T<br>75R   | V-S<br>S-V     | 75                              | T<br>R |                     |        |  |
| 8<br>11                                |                  | 76T<br>76R | W-BL<br>BL-W | 76             | T<br>R                          |        |                     |        |  |
| 12<br>13                               |                  | 77T<br>77R | W-O<br>O-W   | 77             | T<br>R                          |        |                     |        |  |
| 14<br>17                               |                  | 78T<br>78R | W-G<br>G-W   | 78             | T<br>R                          |        |                     |        |  |
| 15<br>18                               |                  | 79T<br>79R | W-BR<br>BR-W | 79             | T<br>R                          |        |                     |        |  |
| 16<br>19                               |                  | 80T<br>80R | W-S<br>S-W   | 80             | T<br>R                          |        |                     |        |  |
| Brown                                  |                  | 81-90      | 0<br>3       | 81T<br>81R     | R-BL<br>BL-R                    | 81     | T<br>R              |        |  |
|  |                  |            | 1<br>4       | 82T<br>82R     | R-O<br>O-R                      | 82     | T<br>R              |        |  |
|  | 2<br>5           |            | 83T<br>83R   | R-G<br>G-R     | 83                              | T<br>R |                     |        |  |
|  | 6<br>9           |            | 84T<br>84R   | R-BR<br>BR-R   | 84                              | T<br>R |                     |        |  |
|  | 7<br>10          |            | 85T<br>85R   | R-S<br>S-R     | 85                              | T<br>R |                     |        |  |
|  | 8<br>11          |            | 86T<br>86R   | BK-BL<br>BL-BK | 86                              | T<br>R |                     |        |  |
|  | 12<br>13         |            | 87T<br>87R   | BK-O<br>O-BK   | 87                              | T<br>R |                     |        |  |
|  | 14<br>17         |            | 88T<br>88R   | BK-G<br>G-BK   | 88                              | T<br>R |                     |        |  |
|  | 15<br>18         |            | 89T<br>89R   | BK-BR<br>BR-BK | 89                              | T<br>R |                     |        |  |
|  | 16<br>19         |            | 90T<br>90R   | BK-S<br>S-BK   | 90                              | T<br>R |                     |        |  |

TABLE C (Contd)

## CONNECTIONS

| FROM 557B PBX<br>SECRETARIAL LINE UNIT |        |          |              |              | TO CROSS-CONNECT<br>BLOCK NO. 2 |        | CROSS-CONNECT<br>TO |        |
|--|--------|----------|--------------|--------------|---------------------------------|--------|---------------------|--------|
| BINDER                                 | PLUG   | TERMINAL | LEAD         | COLOR        | SECRETARIAL LINE                |        | CABLE PAIR          | NUMBER |
| Brown<br>(Contd)                       | 91-100 | 0<br>3   | 91T<br>91R   | Y-BL<br>BL-Y | 91                              | T<br>R |                     |        |
|  |        | 1<br>4   | 92T<br>92R   | Y-O<br>O-Y   | 92                              | T<br>R |                     |        |
|  |        | 2<br>5   | 93T<br>93R   | Y-G<br>G-Y   | 93                              | T<br>R |                     |        |
|  |        | 6<br>9   | 94T<br>94R   | Y-BR<br>BR-Y | 94                              | T<br>R |                     |        |
|  |        | 7<br>10  | 95T<br>95R   | Y-S<br>S-Y   | 95                              | T<br>R |                     |        |
|  |        | 8<br>11  | 96T<br>96R   | V-BL<br>BL-V | 96                              | T<br>R |                     |        |
|  |        | 12<br>13 | 97T<br>97R   | V-O<br>O-V   | 97                              | T<br>R |                     |        |
|  |        | 14<br>17 | 98T<br>98R   | V-G<br>G-V   | 98                              | T<br>R |                     |        |
|  |        | 15<br>18 | 99T<br>99R   | V-BR<br>BR-V | 99                              | T<br>R |                     |        |
|  |        | 16<br>19 | 100T<br>100R | V-S<br>S-V   | 100                             | T<br>R |                     |        |

TABLE C (Contd)

## CONNECTIONS

| FROM 557B PBX<br>TRUNK-STATION-MISCELLANEOUS |      |                  |                            |                | TO CROSS-CONNECT<br>BLOCK NO. 3 |   |        | CROSS-CONNECT<br>TO |        |
|--|------|------------------|----------------------------|----------------|---------------------------------|---|--------|---------------------|--------|
| BINDER                                       | PLUG | TERMINAL         | LEAD                       | COLOR          | CIRCUIT                         |   |        | CABLE PAIR          | NUMBER |
| Blue   | PS   | 3<br>0           | GRD G<br>BAT B             | W-BL<br>BL-W   | Battery-provided                | — | T<br>R |                     |        |
|  |      | 4<br>1           | GRD G1<br>BAT B1           | W-O<br>O-W     |                                 | — | T<br>R |                     |        |
|  |      | 5<br>2           | GRD G2<br>BAT B2           | W-G<br>G-W     |                                 | — | T<br>R |                     |        |
|  |      | 9<br>6           | GRD G3<br>BAT B3           | W-BR<br>BR-W   |                                 | — | T<br>R |                     |        |
|  |      | 10<br>7          | GRD G4<br>BAT B4           | W-S<br>S-W     |                                 | — | T<br>R |                     |        |
|  |      | 11<br>8          | GRD G5<br>BAT B5           | R-BL<br>BL-R   |                                 | — | T<br>R |                     |        |
|  |      | 13<br>12         | RING G<br>RING ±           | R-O<br>O-R     | Ringing                         | — | T<br>R |                     |        |
|  |      | 17<br>14         | EMER G1<br>EMER ±1         | R-G<br>G-R     |                                 | — | T<br>R |                     |        |
|  |      | 18<br>15         | AUX RING G2<br>AUX RING ±2 | R-BR<br>BR-R   |                                 | — | T<br>R |                     |        |
|  | E    | 0<br>3           | COTRK T<br>COTRK R         | R-S<br>S-R     | Central office<br>trunks        | 1 | T<br>R |                     |        |
|  |      | 1<br>4           | COTRK T1<br>COTRK R1       | BK-BL<br>BL-BK |                                 | 2 | T<br>R |                     |        |
|  |      | 2<br>5           | COTRK T2<br>COTRK R2       | BK-O<br>O-BK   |                                 | 3 | T<br>R |                     |        |
|  |      | 6<br>9           | COTRK T3<br>COTRK R3       | BK-G<br>G-BK   |                                 | 4 | T<br>R |                     |        |
|  |      | 7<br>10          | COTRK T4<br>COTRK R4       | BK-BR<br>BR-BK |                                 | 5 | T<br>R |                     |        |
|  |      | 8<br>11          | SPARE 13<br>SPARE 14       | BK-S<br>S-BK   | Spare                           | — | T<br>R |                     |        |
|  |      | 12, 13<br>14, 17 | CLOCK 22±<br>CLOCK 22G     | Y-BL<br>BL-Y   | Clock                           | — | T<br>R |                     |        |
|  |      | 15<br>18         | TONE T<br>TONE T1          | Y-O<br>O-Y     | Tone                            | — | T<br>R |                     |        |
|  |      | 16<br>19         | MISC K<br>MISC CC          | Y-G<br>G-Y     | Miscellaneous                   | — | T<br>R |                     |        |

TABLE C (Contd)

## CONNECTIONS

| FROM 557B PBX<br>TRUNK-STATION-MISCELLANEOUS |      |          |                      |              | TO CROSS-CONNECT<br>BLOCK NO. 3 |   |        | CROSS-CONNECT<br>TO |        |
|--|------|----------|----------------------|--------------|---------------------------------|---|--------|---------------------|--------|
| BINDER                                       | PLUG | TERMINAL | LEAD                 | COLOR        | CIRCUIT                         |   |        | CABLE PAIR          | NUMBER |
| Blue<br>(Contd)                              | SCC  | 0<br>3   | STA T<br>STA R       | Y-BR<br>BR-Y | Stations                        | 1 | T<br>R |                     |        |
|  |      | 1<br>4   | STA T1<br>STA R1     | Y-S<br>S-Y   |                                 | 2 | T<br>R |                     |        |
|  |      | 2<br>5   | STA T2<br>STA R2     | V-BL<br>BL-V |                                 | 3 | T<br>R |                     |        |
|  |      | 6<br>9   | SPARE S1<br>SPARE S2 | V-O<br>O-V   | Spares                          | — | T<br>R |                     |        |
|  |      | 7<br>10  | SPARE S3<br>SPARE S4 | V-G<br>G-V   |                                 | — | T<br>R |                     |        |
|  |      | 8<br>11  | SPARE S5<br>SPARE S6 | V-BR<br>BR-V |                                 | — | T<br>R |                     |        |
|  |      | 12<br>13 | SPARE S7<br>SPARE S8 | V-S<br>S-V   |                                 | — | T<br>R |                     |        |

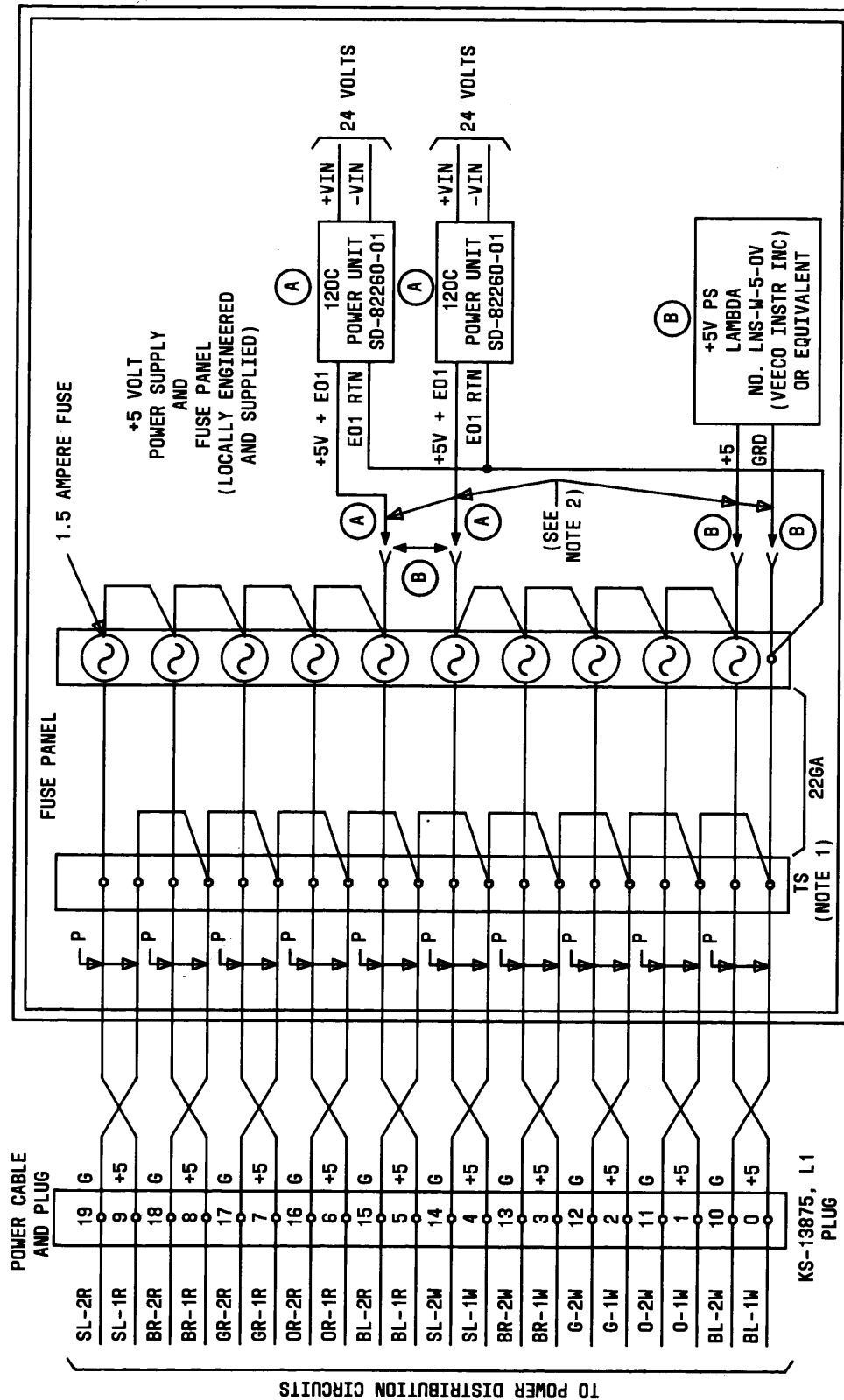
TABLE D

## SECRETARIAL LINE UNIT OPTIONS (NOTE)

| TYPE RINGING  | PROVIDE OPTION |
|---|----------------|
| Positive superimposed ringing<br>with silent interval battery (60-75V)  | U, X, T        |
| Positive superimposed ringing<br>with silent interval battery (45-52V)  | U, T           |
| Negative superimposed ringing<br>with silent interval battery (60-75V)  | V, X, T*       |
| Ac-dc or negative superimposed<br>with silent interval battery (45-52V) | V, T*          |

**Note:** Table D applies to electromechanical secretarial line units only.

\* When secretarial line circuit is connected for ac-dc ring current or negative superimposed and is subject to 2-party flat rate tests using negative coin battery, provide (S) option instead of (T) option per SD-65729-01.



## NOTES:

1. THE TERMINAL STRIP CONSISTS OF A 66-TYPE CONNECTING BLOCK.
2. THE +5 VOLT POWER MUST BE SUPPLIED AND ENGINEERED LOCALLY. EITHER TWO 120C (A) POWER UNITS (5 AMPERES EACH) MAY BE USED TO DERIVE THE +5 VOLTS FROM -24 VOLTS DIRECT CURRENT OR A LAMBDA MODEL LNS-W-5-0V (B) (14 AMPERES) OR EQUIVALENT WHICH PROVIDES +5 VOLTS FROM 115-VOLTS ALTERNATING CURRENT IN BOTH CASES, THE VOLTAGE DROP ON THE +5 VOLT SWITCHBOARD FEEDER CABLE BETWEEN THE POWER SOURCE (+5V) AND THE YW1 CP SHALL NOT EXCEED 0.25 VOLTS. EACH YW1 CP CURRENT DRAIN IS 100 MA MAXIMUM AT +5 VOLTS, AN ADDITIONAL +5V FUSE ALARM LAMP MUST BE LOCALLY ENGINEERED AND PROVIDED.

Fig. 25 — +5 Volt DC Power Supply Connections for Solid-State Secretarial Line Units

