

# DON'T BE A SHORT CIRCUIT ALARMIST

**KNOW YOUR**

**SPECIAL SAFEGUARDING MEASURES (SSM)  
And SPECIAL SERVICE PROTECTION (SSP)**

## 1. INTRODUCTION

1.01 This section covers Special Service Protection, Special Safeguarding Measures and includes description and use of protective devices.

## 2. SPECIAL SERVICE PROTECTION (SSP)

Consists of the following measures:

2.01 Physical protection and identification at all appearances (including multiple and bridged appearances) in central office, outside plant and station wiring.

2.02 Identification as SSP in all records and orders affecting these services, e.g., assignment records, Engineering records, transfer orders, circuit orders, special service order, layout cards, test centre records, etc.

2.03 The obtaining of a clearance from the appropriate serving test centre or serving plant service centre before performing any work involving the service.

## 3. SPECIAL SAFEGUARDING MEASURES (SSM)

Consists of all the measures prescribed for SSP plus the following:

3.01 No bridged taps or multiple appearances of cable pairs.

3.02 Physical protection of service entrance by placing the service in cable — not in exposed service wiring from unlocked terminals. (Optional)

3.03 Inside wiring in conduit. (Optional)

3.04 Identification as SSM in all records and orders affecting these services, e.g., assignment records, Engineering records, transfer orders, circuit orders, special service orders, layout cards, test centre records, etc.

3.05 The obtaining of clearance from the serving test centre or serving plant service centre at least 24 hours prior to the actual time the release is required. This is essential to permit the customer to dispatch personnel or to make other arrangements to protect service during the release or reroute period.

**Note:** The extent of the application of these optional features to minimize the possibility of interference or unauthorized access, will be governed by customer requirements, the additional cost involved and the feasibility of providing such protection.

## 4. PROTECTIVE DEVICES

4.01 Common protective devices used on special service circuits are shown in Fig. 1 through Fig. 15.

4.02 Red Identification Ring #7 is a red cellulose-acetate spiral ring,  $\frac{3}{8}$  inch in diameter. This indicator is also used to identify circuits. The split-ring feature of this indicator permits placing or removing indicator on terminated wires. (See Fig. 1.)



Fig. 1 — Red Identification Ring #7

4.03 Binding post caps, Fig. 2 through 8, are neoprene caps for use on cable and wire terminals as protection against accidental contacts on special service lines, and as a means of minimizing faceplate leakage in distribution cable terminals. Binding post caps are supplied in red and black. Red caps are intended for use on special service lines, and the black caps are for general use, such as faceplate leakage, battery and generator pairs.

- The B binding post caps, Fig. 2, are for use on nonworking posts of T type cable terminals, and wire terminals.



Fig. 2 — Binding Post Cap B

- The C binding post caps, Fig. 3, are for use on working posts of T type cable terminals, and wire terminals.



**Fig. 3 — Binding Post Cap C**

- The D binding post caps, Fig. 4, are for use on 7A fuses installed in L-type fuse chambers.



**Fig. 4 — Binding Post Cap D**

- The E binding post caps, Fig. 5, are for use on NC, NF, MD3208, MD3209 and the QTC type cable terminals.



**Fig. 5 — Binding Post Cap E**

- The F binding post caps, Fig. 6, are for use on terminals equipped with insulation crushing washers such as 30-2, 57B, and 59A-type connecting blocks and the QTD1A cross-connecting terminals.



**Fig. 6 — Binding Post Cap F**

- The G binding post caps, Fig. 7, are for use on 30-type connecting blocks and QTD7B cable terminals.



**Fig. 7 — Binding Post Cap G**

- The H binding post caps, Fig. 8, are for use on 31-type connecting blocks, and QTD3A cable terminals.



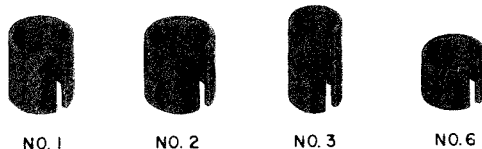
**Fig. 8 — Binding Post Cap H**

- 4.04** The KS-14539 guard protector, Fig. 9, is a red plastic hood designed to cover the heat coils and springs on protected-type PBX frames.



**Fig. 9 — Guard Protector KS-14539**

- 4.05** Binding post insulators are open-ended fibre insulators for use on binding posts to prevent accidental contacts. These insulators are designated No. 1, 2, 3, and 6, and are shown in Fig. 10. Binding post insulators have a red enamel finish, for use on SSM and SSP circuits and natural for other uses.

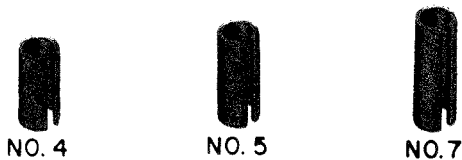


**Fig. 10 — Binding Post Insulators**

- No. 1 insulators, Fig. 10, are for use on binding posts having  $\frac{3}{8}$ -inch hexagonal nuts, and on 7T fuses.

- No. 2 insulators, Fig. 10, are for use on binding posts having 7/16-inch hexagonal nuts, and on 7A fuses.
- No. 3 insulators, Fig. 10, fit the screw binding posts of BD, BE and BF cable terminals.
- No. 6 insulators, Fig. 10, are for use on terminations of the alarm and contactor circuits in T pressure contactor-terminals and 3-pair gas-tight terminals.

**4.06** Terminal punching insulators are open-ended fiber insulators for use on terminal punchings to prevent accidental contacts. These insulators are designated No. 4, 5, and 7 and are shown in Fig. 11. Terminal punching insulators have a red enamel finish for use on SSM and SSP circuits and natural for other uses.



**Fig. 11 — Terminal Punching Insulators**

- No. 4 insulators, Fig. 11, are  $\frac{1}{2}$  inch in length and are used on terminal strips.
- No. 5 insulators, Fig. 11, are  $\frac{5}{8}$  inch in length and are also used on terminal strips.
- No. 7 insulators, Fig. 11, are for use on cable conductor terminating lugs of the C- and E-type protector mountings.

**4.07** The QGF1A guard consists of six red plastic terminal insulators joined together, Fig. 12, designed to protect one row of two beam terminals on the 66-type connecting block. This multiple guard may be cut with diagonal pliers to fit the number of terminals required.



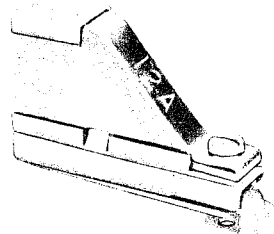
**Fig. 12 — QGF1A Guard**

**4.08** The QGF1B guard consists of a single red plastic insulator Fig. 13 designed to protect one, three beam terminal on a 66-type connecting block.



**Fig. 13 — QGF1B Guard**

**4.09** The 12A guard, Fig. 14 is a metal framework covered top and bottom with insulating material, and provided with a latch spring, which must be deflected to remove guard. It is designed for use on 444 type jacks and is now Manufactured Discontinued. (Superseded by NS20353 L1 Fig. 16)



**Fig. 14 — 12A Guard**

**4.10** The 12B guard, Fig. 15 is the same as the 12A guard except it has a locking screw for maximum security. It is also Manufactured Discontinued. (Superseded by NS20353 L1 Fig. 16).

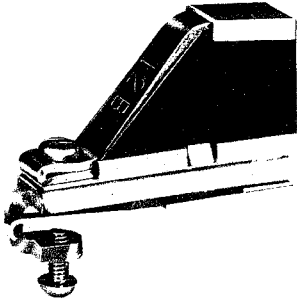


Fig. 15 — 12B Guard

4.11 The NS20353 L1 guard consists of a red plastic insulator detail, Fig. 16, provided with a snap lock fit for security. This guard is designed for use on 444 type jacks, and supersedes the 12A and 12B guards.

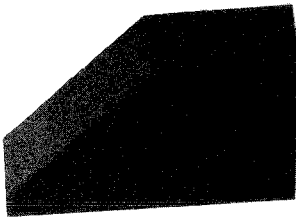


Fig. 16 — NS20353 L1

4.12 The NS16576 L5 Plate Designation consists of a red plastic insulator detail, Fig. 17, designed to protect the jumper cross-connecting terminals on 300 connectors



Fig. 17 — NS16576 L5 Plate Designation

4.13 The NS16576 L6 Plate Designation consists of a red plastic insulator detail, Fig. 18, designed to protect test contacts on 300 connectors.



Fig. 18 — NS16576 L6 Plate Designation

4.14 The QGF2A guard, Fig. 19, consists of a red plastic insulator detail designed to protect single conductor connections per pair of terminals on the 302BQ9 Connector cross-connection terminal strip.



Fig. 19 — QGF2A Guard Single

4.15 The QGF2B guard, Fig. 20 is the same as above, except designed to protect double conductor connections per pair of terminals. (e.g. B.M.F.).



Fig. 20 — QGF2B Guard Double

4.16 The NS19478 L1 guard, Fig. 21 consists of a red plastic insulator detail designed to protect a pair of conductors in the test field of a 302 Connector.

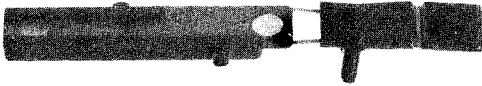


Fig. 21 — NS19478 L1

**SECTION 460-110-100CA**

**4.17** The Cap, Post, Binding Number 4104,

Fig. 22 consists of a red plastic insulator detail designed to protect a pair of terminals on the Jumper Wire Interface (JWI) Connector Module for use with Serving Area Concept (SAC).



**Fig. 22 — Cap Post Binding Number 4104**

**4.18** The B wire marker, Fig. 23, is an all temperature pressure, sensitive, red plastic strip used on B connector at access points in dedicated plant.



**Fig. 23 — Marker Warning — Form E-5190**

**5. WHICH CIRCUITS REQUIRE SSP OR SSM?**

Typical circuits requiring SSP or SSM are:

Air Raid Warning Systems

Data Transmission — Telephone and Telegraph

Program Transmission

Facsimile or Telephotograph

Teletypewriter

Channels for signal transmission

Emergency Reporting Systems

PBX Battery and Generator Supply for emergency service — Hospitals, Police, Fire, Power and Government Security Locations.

**6. WHY ARE SSM AND SSP IMPORTANT?**

To avoid energizing special equipment or interrupting messages accidentally. (It is essential that special service lines be maintained in full operative condition at all times.) Remember—some special service lines operate on shunted circuits, while others operate on a grounded or an open circuit.

**7. HOW DO YOU AVOID DIFFICULTIES?**

By:

- Obtaining authorization before working on a special circuit.
- Using SSP or SSM when required.
- Not running down a terminal with a shunt when trying to locate a pair.
- Exercising care to avoid accidental contact with other lines.
- Obtaining authorization before removing any SSP.

**7A. WHAT OTHER BELL SYSTEM PRACTICES DEAL WITH S.S.M. AND S.S.P.?**

- 069-120-801 — Central Office
- 660-200-301 — Test Centre
- 680-520-010 — Plant Assignment

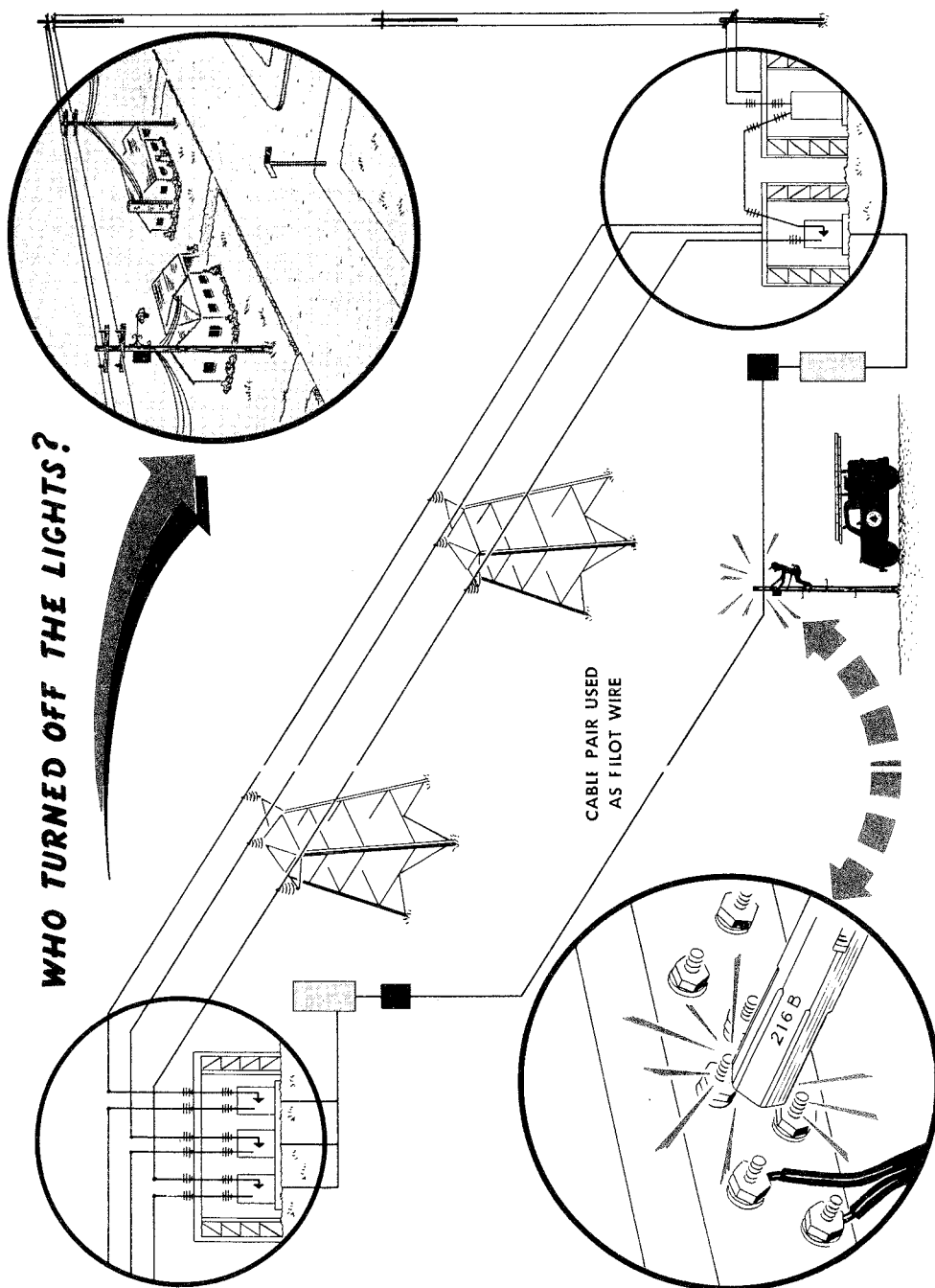


Fig. 24



E-4106  
(10-62)

### BINDING POST INSULATORS TERMINALS

## PROTECTOR GUARD DEVICES DISTRIBUTING FRAMES

CENTRAL OFFICE AVENUE DUE DATE AUG. 12/64 SERVICE ORD. NO. 3276  
DATE AUG. 10 BY FB WORK ORD. NO. ✓ TRANS. NO. ✓  
COPY FOR FIELD FOR INFORMATION CALL 870-1112

[Home](#)
[About Us](#)
[Contact Us](#)
[Privacy Policy](#)
[Terms of Service](#)
[FAQ](#)
[Sitemap](#)

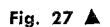
PLACE AND OR REMOVE SPECIAL SERVICE PROTECTION AT LOCATIONS LISTED.

[illegible]

WORK  
COMPLETED BY \_\_\_\_\_ DATE \_\_\_\_\_ O.K. NO. \_\_\_\_\_



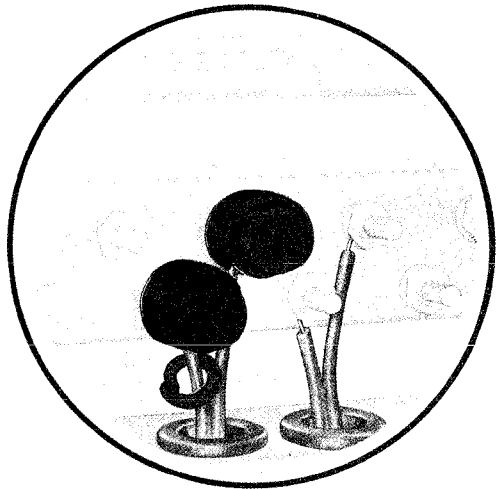
1. Clean faceplate.
2. Run down the nut of the binding post finger tight.
3. Place cap over binding post and push until seated against faceplate.
4. When a wire is terminated on a binding post which is to be protected, ensure that the wire is positioned inside the binding post wire entrance hole.



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Fig. 28 ►

SSP used in fixed count binding post type cable terminals, wiring terminals, or fuseless protected terminal blocks.



◄ Fig. 29

SSP used with 42A connecting block.

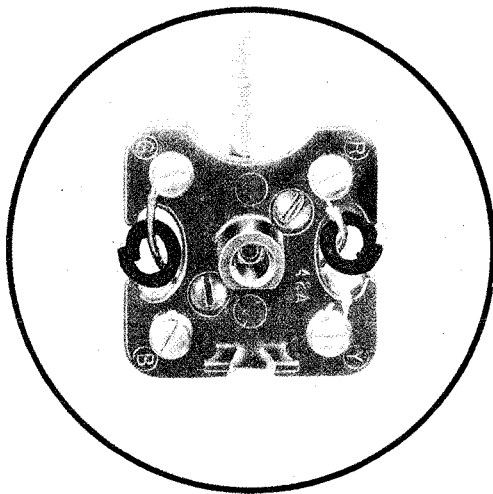
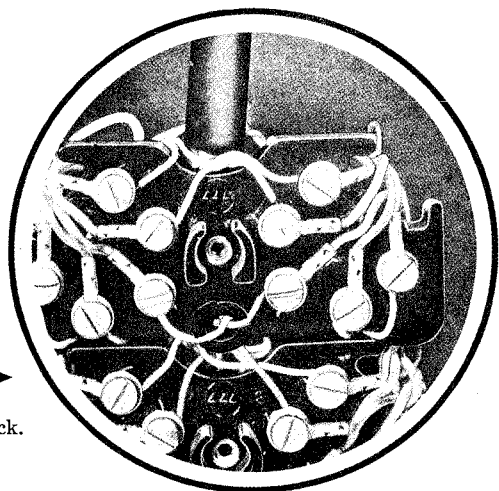
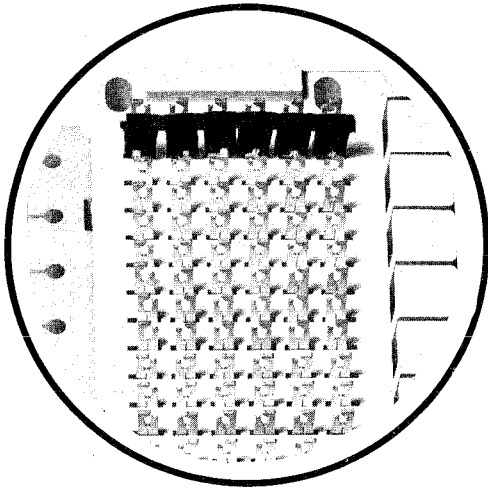


Fig. 30 ►

SSP used with 44A connecting block.



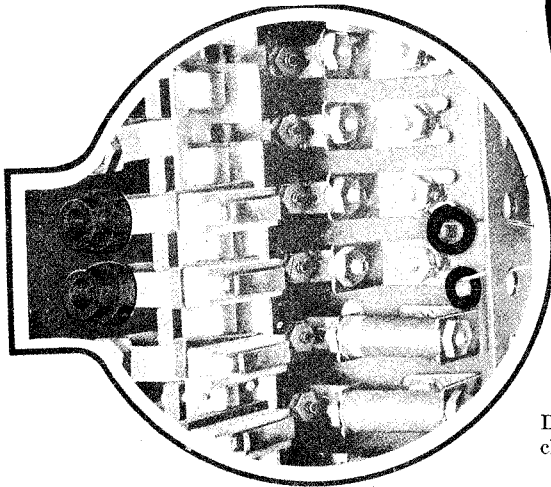
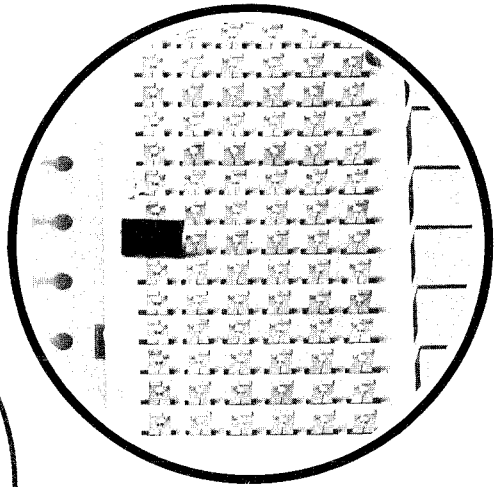


◀ Fig. 31

QGF1A Guard installed on 66-type connecting block.

Fig. 32 ▶

QGF1B Guard installed on 66-type connecting block.

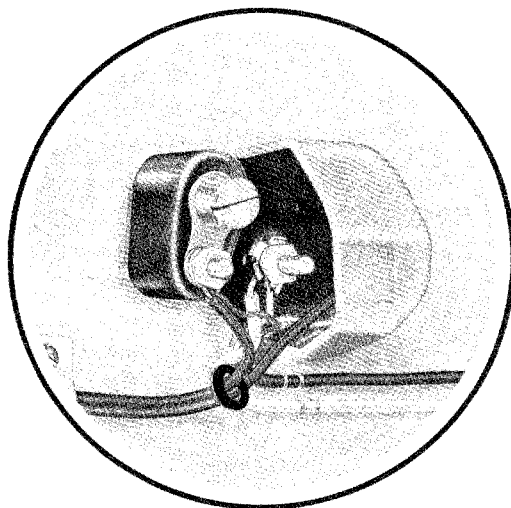
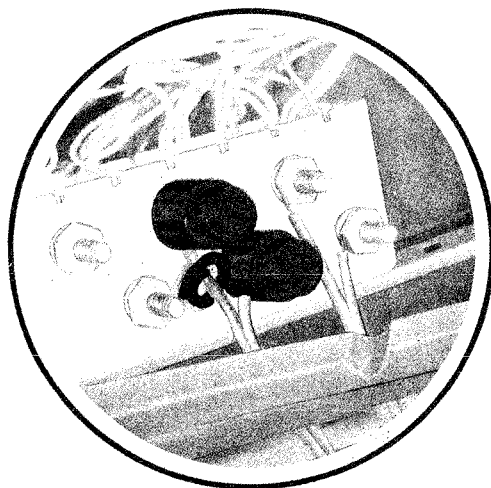


◀ Fig. 33

D binding post caps installed in L-type fuse chamber.

Fig. 34 ►

E binding post caps and indicator used with MD3208, MD3209, 49-type, and QTC type cable terminals.



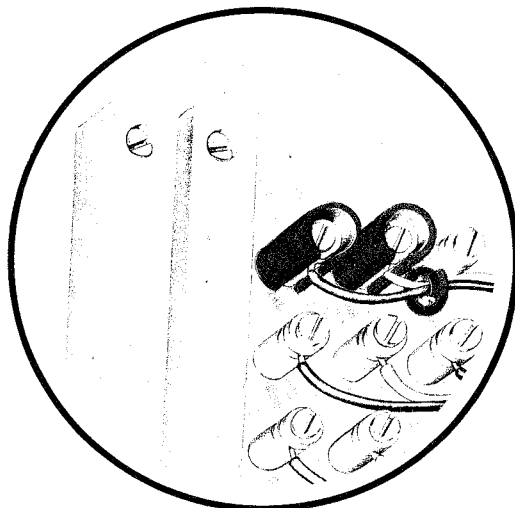
◄ Fig. 35

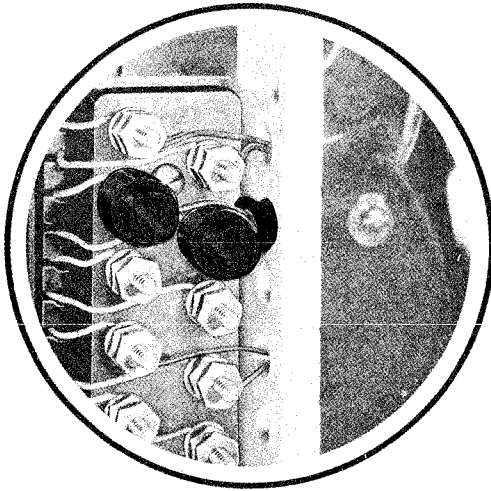
Indicator used with station protector 123A1A. The 150A cover (shown cut away) gives added security.

Fig. 36 ►

No. 3 binding post insulators installed in BD-type cable terminal. Remember—SSP is required at both ends of cross-connecting wires.

Where the insulator fits loosely, place a piece of tape around the binding post inside the insulator.



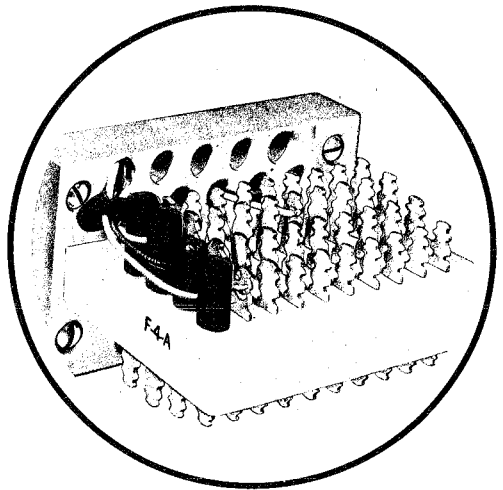


◀ Fig. 37

A 30-type connecting block with SSP.

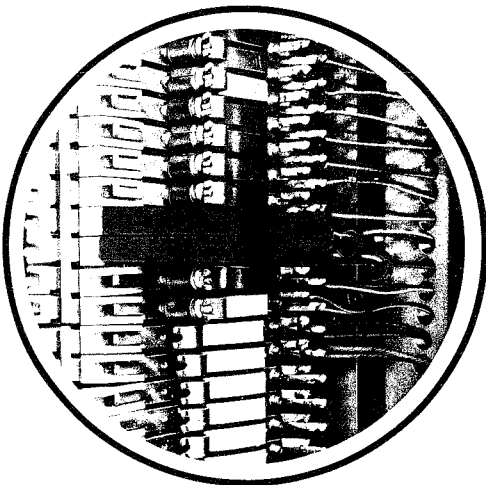
Fig. 38 ▶

Typical terminal strip with SSP. Terminal punching insulators shown here are No. 4 (short) and No. 5.



◀ Fig. 39

Protected PBX frame with KS-14539 Guard, terminal punching insulators on cable and jumper terminals and #7 identification ring. *All frame appearances on each special circuit must be protected. SSP must be placed at each end of the jumper wire.*



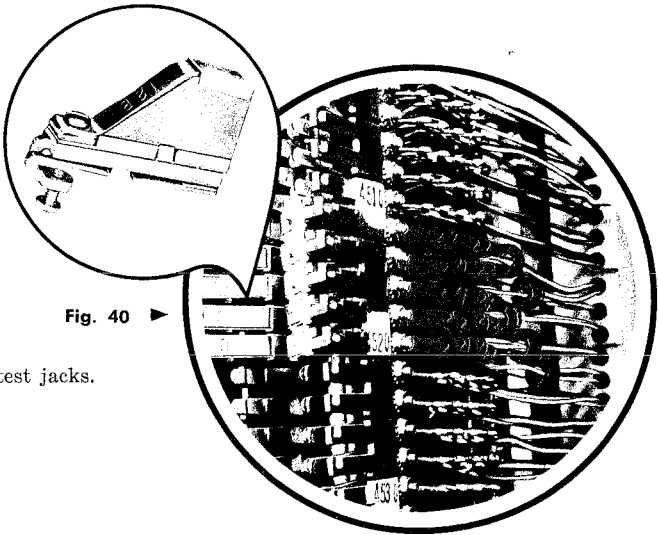


Fig. 40 ▶

SSP on frame equipped with 444A test jacks.

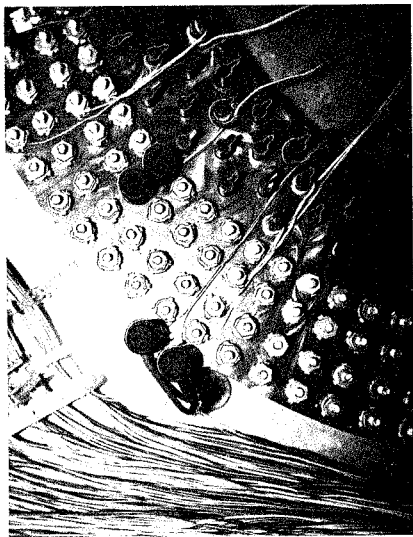


Fig. 41 — SSP on QTD1A Cross Connecting Terminal



Fig. 42 — Identification Rings and E-5190 Warning Marker used at Access Point of Dedicated Plant

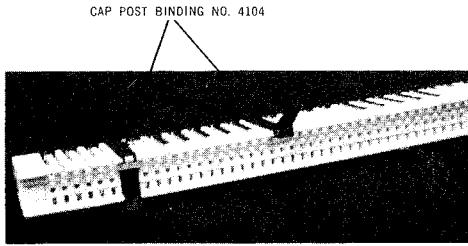


Fig. 43 — Cap Post Binding Installed on Connector Module in JWI Cabinet

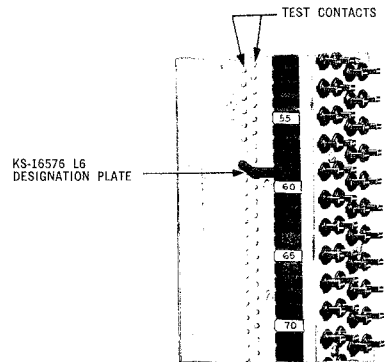


Fig. 44 — Designation Plate Installed Over Test Contact Terminals

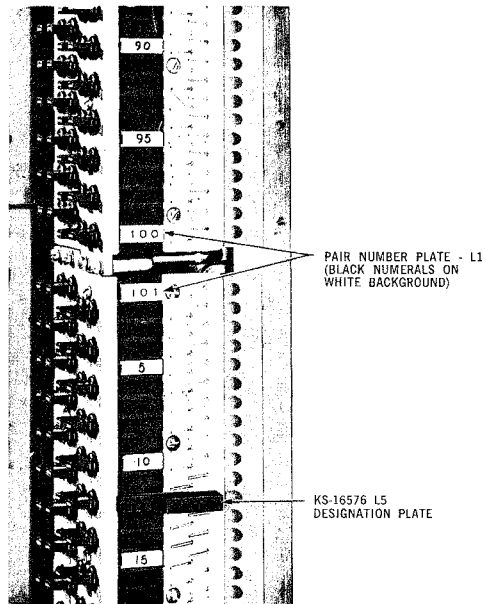


Fig. 45 — KS-16576, L5 Coloured Designation Plate (Red) Installed on 300 Type Connector