

**SPECIFIC REQUIREMENTS FOR
WIRING AND CABLING
ELECTRONIC TYPE EQUIPMENT
GENERAL EQUIPMENT REQUIREMENTS**

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1. GENERAL

1.01 This section covers specific equipment requirements for wiring electronic-type switching apparatus or equipment in any system in which it is used.

1.02 The requirements covered in this and other sections in this series of practices shall be followed, except as modified by applicable specifications and drawings. These requirements supplement the standard requirements for wiring as covered in other sections in this series. The standard requirements apply unless otherwise specified herein.

1.03 ◆In electronic switching systems, the placement and distribution of wires must be the same regardless of the point of manufacture or modification. In order to achieve this like distribution, surface and loose wiring path rules as covered by this BSP shall apply. Also, it is sometimes necessary for electrical reasons to◆ keep certain leads separated from each other or to keep them in certain locations with respect to other leads. Where not specified herein or where the wiring or wiring paths are undeterminable due to unusual or unique arrangements of apparatus, it is the responsibility of the Bell Telephone Laboratories engineer to define and specify this information.

2. COMMON REQUIREMENTS

2.01 Twisted Leads: Where 1/2-inch twisted leads are specified, the first twist shall start within 3/4 inch from the ◆controlling terminal (or control lead).◆ Where the controlling terminal is

not specified, this shall be the nearest terminal that will result in the shortest length of untwisted wire (see Fig. 1).

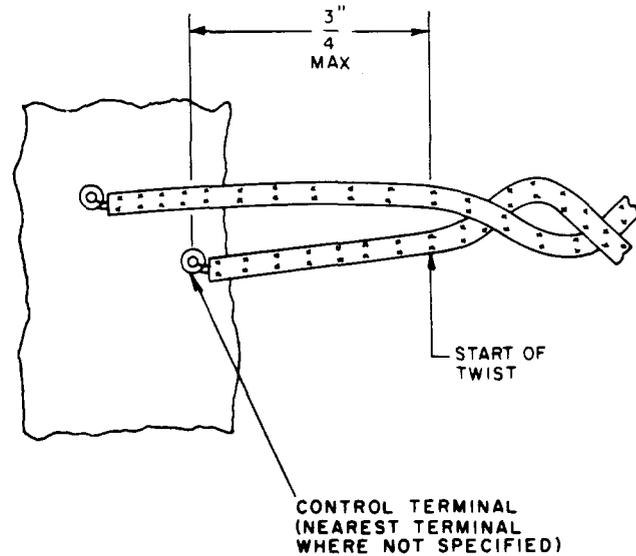


Fig. 1—1/2-Inch Twisted Leads Connecting to Terminals

2.02 All pairing specified on communication bus cables shall maintain their twist length requirement from the cable butt up to within 1/2 inch of the connecting terminal on the cable receiver transformer or cable driver terminal strip or connector (see Fig. 2).

2.03 Solderless-wrapped connections to apparatus terminals shall be placed in far enough on the terminal to permit the maximum number of solderless-wrapped connections as specified on ED-94818-01.

2.04 When dressing wire to a rectangular array of terminals such as the 297A TS or a straight row of terminals such as the 290-type TS, and the wire path is not designated, the leads shall be dressed on that side of the row that will not cause reverse bends (see Fig. 3).

2.05 ◆Where apparatus terminals are designed, approved, and authorized for solderless-wrapped connections, the connections to these terminals shall be made by the solderless-wrap technique. Repair of solderless-wrap connections by soldering does not meet design intent.◆

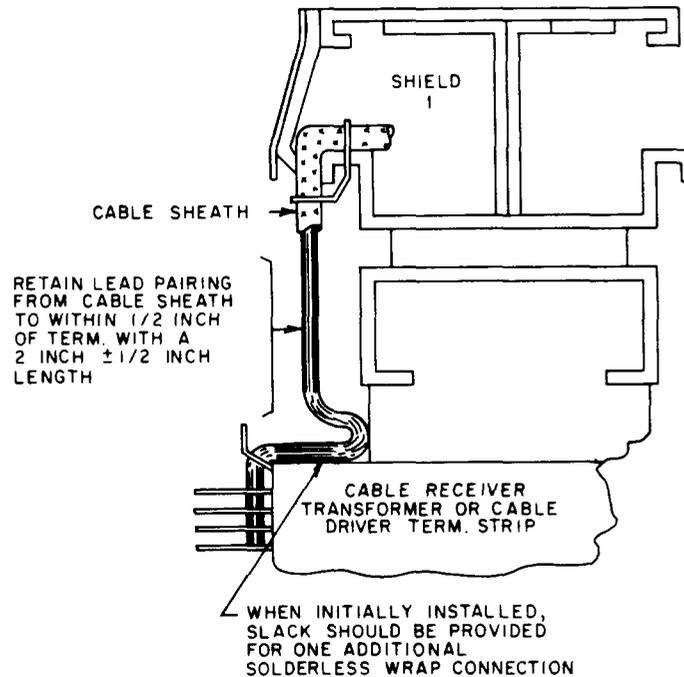


Fig. 2—Communication Bus Leads

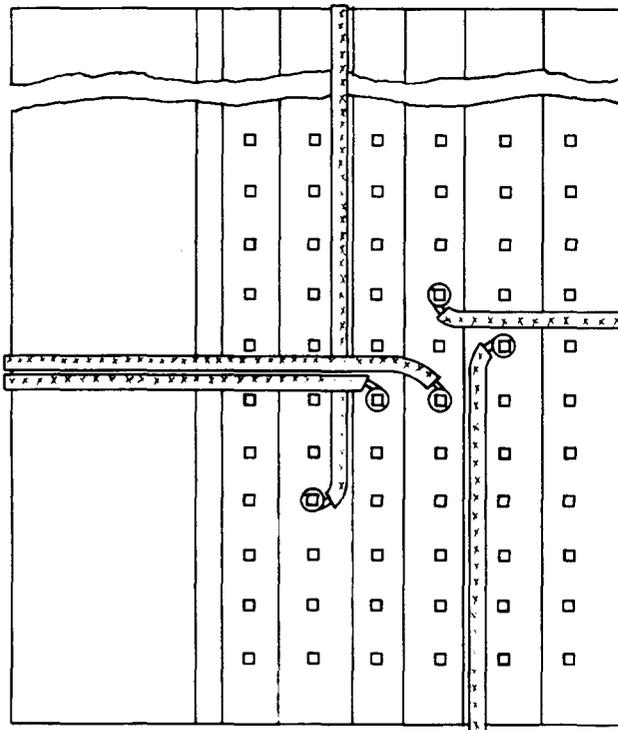


Fig. 3—Lead Dress to Rows of Terminals

3. PLACING, SECURING, AND SUPPORTING CABLE FORMS

3.01 In general, the practices outlined in Section 800-612-156 shall be followed for placing, securing, and supporting cable forms in electronic-type equipment.

3.02 Cable arms consisting of 26-gauge wire that are less than 1/2 inch in diameter shall be supported with standard cable supports. Cable arms less than 1/2 inch in diameter but consisting of a sufficient number of heavier gauge wires to make the arm more rigid may not need supports in all cases. In those cases where it is questionable whether a support should or should not be provided, the support should be provided.

3.03 Piece part supports such as P44H951 through P44H954, P46P983, P48L262, P48L263, and approved equivalent have been designed and are available as cable supports on certain frameworks. These supports shall be firmly secured to the frame uprights, and ground continuity shall exist. The cable arm shall be properly secured to the support 1 inch from the first point of contact, at the last stitch, and at equal intermediate points not to exceed 8 inches between ties.

3.04 *Supplementary Cable Form Reinforcement and Bracing.* Since ungrounded or improperly grounded cable reinforcements or braces may result in undesirable inductive effects between cable arms, additional or supplementary cable reinforcement or bracing not specified on drawings or specifications shall not be used without the approval of the Bell Laboratories design engineer.

4. SURFACE WIRING

GENERAL

4.01 Surface wiring as defined in Sections 001-150-101 and 800-612-153 shall be applied to all electronic-type systems. The wiring shall be run in definite paths parallel and perpendicular to the edges of the mounting plate, panel, or designated wiring paths. It will be necessary to make right angle bends for a change in wire direction but only at the intersection of two designated paths. It is not necessary to make right angle bends in other cases, but the appearance of the wiring shall be neat, and sufficient slack should be available so that the wire will not be taut. ♦The wiring may rest against metalwork or apparatus terminals, but in no case should the wires be drawn taut around the terminals. Surface wire slack shall not exceed 1-1/2 inches.♦

SPECIFIC

A. 288 TS, 2598 TRNSF, 1641 INDR, and Similar Ladder-Type Apparatus

4.02 ♦*On the wiring side of the frame,* all surface wire connections from the above apparatus shall be run vertically through the terminal field. Where this ladder-type apparatus is at the top of the frame, the leads from the terminals shall be dressed down through the terminal field of each item of apparatus. Pairing of leads (except 1/2 inch in 2.01) may be disregarded at the point of entry in adjacent or nonadjacent rows of single ladder-type apparatus. Where this apparatus is not at the top of the frame, dress up from terminals in the top half of ladder apparatus and dress down from terminals in the bottom half of ladder apparatus (see Fig. 4).♦

4.03 ♦*On the apparatus side of the frame,* dress all leads vertically through the terminal field using the fanning strip for connections to terminals in other rows. Leads to similar apparatus

in rows above or below shall be run horizontally along the fanning strip to either end of the group of apparatus and then vertically as shown in Fig. 5.♦

B. 905 Connectors and Similar Type Apparatus

4.04 Surface wiring rules for 905 connectors are based on the runs proceeding from left to right and from top to bottom in designated wiring paths as viewed from the wiring side (see Fig. 6 and Table A). Left to right takes preference over top to bottom in determining the originating terminal of a run. The numerical assignment of the originating terminal (odd or even) shall determine the path of the run as described in 4.05 through 4.17. ♦The upper terminal shall be considered as originating on wire runs within the same connector.♦

4.05 Surface wiring between 905-type connectors and apparatus other than connectors shall follow the requirements specified herein with the connector considered as the originating point ♦for wiring rule purposes.♦ This applies to paired leads as well as single leads.

4.06 The vertical wiring paths are designated between connector positions or to the side of the connector when it is mounted in the end position (see Fig. 6).

4.07 All vertical runs (with or without path changes) connecting to an even-numbered terminal shall be run to the right of the terminal, and those connecting to an odd terminal shall be run to the left of the terminal. In no case shall leads be dressed between terminals of a connector.

4.08 Where terminal assignments can be made for strapping between connector terminals on a particular connector and the terminal assignment is not a requirement, the preferred terminals for this purpose are even-number terminals. Bare straps are permitted only on adjacent even- or adjacent odd- and even-numbered terminals providing they do not obstruct wiring or wiring paths and they meet clearance requirements (see Fig. 6).

4.09 ♦Nonconnector wiring passing horizontally through a connector field shall not use horizontal path B, C, or D.♦

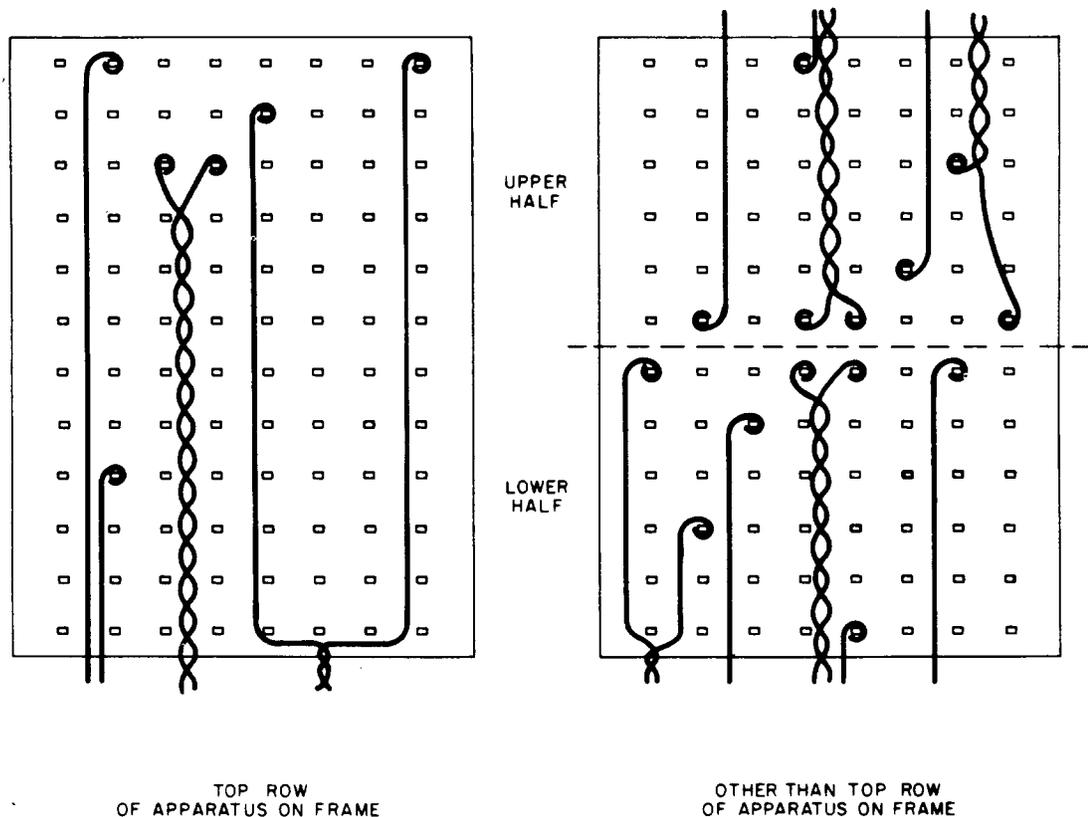


Fig. 4—Surface Wiring to the Rear of 288 TS, 2598 TRNSF, 1641 INDR, and Similar Ladder-Type Apparatus

Single Leads Between Two Connectors or Between Two Terminals of the Same Connector

4.10 The wire shall make no more than two path changes between terminations except where the path is considered blocked (see 4.14).

4.11 Wires originating at an even-numbered terminal shall start in their assigned horizontal path to the vertical path of termination.

4.12 Wires originating at an odd-numbered terminal shall start in their assigned vertical path to the horizontal path of termination.

Paired Leads

4.13 In general, paired surface wire leads between connectors or between terminals of the same connector shall follow the path of the designated control lead (usually green) and shall be treated as if the pair is a single lead. The noncontrol wire (usually blue) of the surface wire pair shall follow

the path of its associated control wire to within 2 inches of the control wire connection (except for 1/2-inch twist as noted in 2.01). When the noncontrol wire extends beyond the control wire, the extension shall be treated as if the noncontrol wire originated at the terminal to which the control lead connects. The noncontrol lead shall then follow the requirements for a single lead.

Blocked Surface Wire Paths

4.14 The following requirements shall apply in those cases where the surface wiring path between 905-type connectors or between a 905-type connector and other terminating apparatus is blocked by nonconnector-type apparatus such as relays, transformers, inductors, etc. The path may also be considered blocked in those cases where the mounting plate is drilled for but not equipped for this future nonconnector apparatus and the surface wiring would otherwise pass over this drilled area.

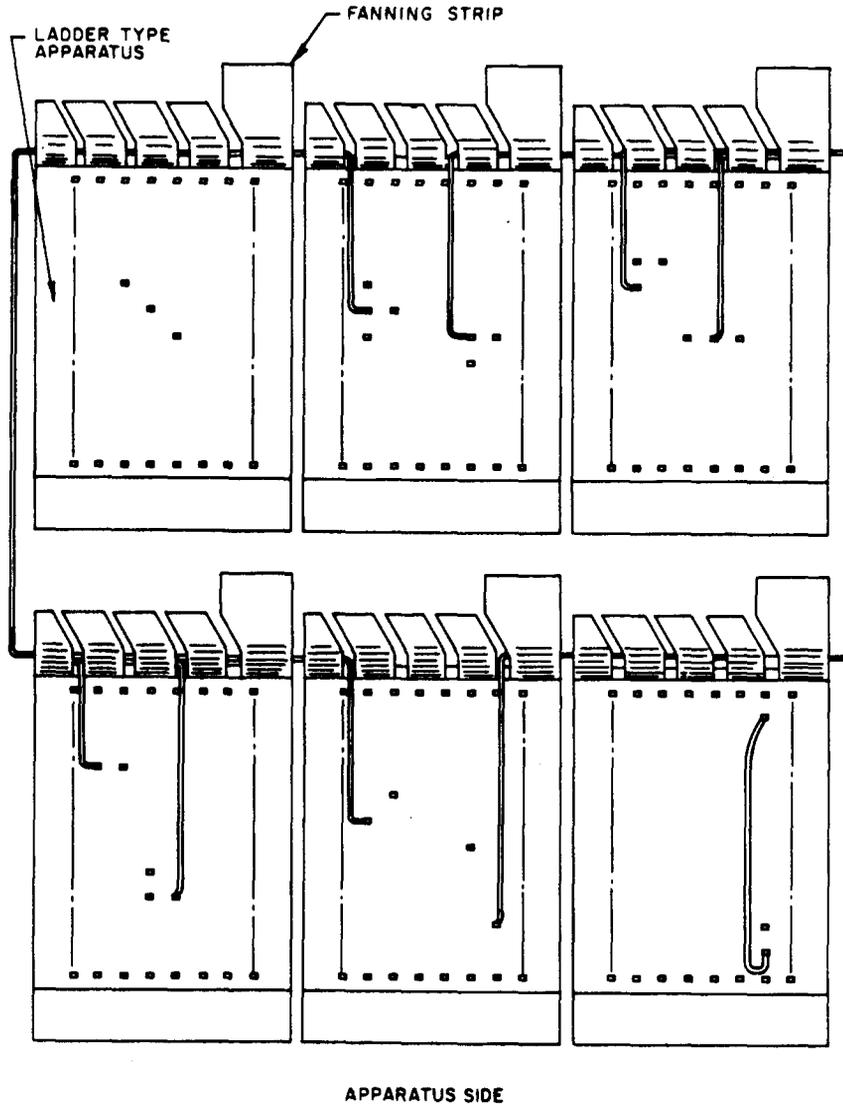


Fig. 5—Surface Wire Dress to the Front of Ladder-Type Apparatus

4.15 Blocked horizontal wiring paths shall be run as follows:

- (a) See Fig. 7(a). When the horizontal path (1) of a wire is blocked, the wire shall change direction at the vertical path (2) nearest the blocking apparatus and travel in a vertical direction to, and via, the horizontal path (3) associated with the terminating terminal.
- (b) See Fig. 7(b). If the vertical path (2) does not intersect with the horizontal path [3 of Fig. 7(a)] associated with the terminating terminal, then the wire in vertical path (2) shall run to a

horizontal path (4) closest to the terminating terminal and then change direction at the intersection of horizontal path (4) and the vertical path (5) associated with the terminating terminal.

4.16 Blocked vertical wiring paths shall be run as follows:

- (a) See Fig. 8(a). When the vertical path (1) of a wire is blocked, the wire shall change direction to the horizontal path (2) nearest the blocking apparatus and travel in a horizontal direction to, and via, the vertical path (3) associated with the terminating terminal.

TABLE A
HORIZONTAL WIRE PATHS

HORIZONTAL WIRE PATH	APPARATUS TERMINALS	
	905-TYPE CONN	297* TS
A	0-5	0-2
B	6-11	3-6
C	12-15	7,8
D	16-21	9-12
E	22-27	13-15

* These paths do not exist in the terminal field of the 297 TS. They are defined to provide wire distribution for leads between a connector and the 297 TS.

(b) See Fig. 8(b). If the horizontal path (2) does not intersect with the vertical path [3 of Fig. 8(a)] associated with the terminating terminal, then the wire in horizontal path (2) shall run to the vertical path (4) closest to the terminating terminal and then change direction at the intersection of vertical path (4) and the horizontal path (5) associated with the terminating terminal.

4.17 It is permissible to run the surface wiring directly across the 4129-type networks in the paths provided between two apparatus mountings.

C. 908- and Similar Type Connectors

4.18 Surface wiring rules for 908-type connectors are based on the runs proceeding from left to right and from top to bottom in designated wiring paths as viewed from the wiring side (see Fig. 9). Left to right takes preference over top to bottom in determining the originating terminal of a run. The numerical assignment of the originating terminal (odd or even) shall determine the path of the run as described in 4.19 through 4.25.

4.19 The vertical wiring paths are designated between connector positions or to the side of the connector when it is mounted in the end position. All vertical runs (with or without path changes) connecting to terminal numbers 1 through 20 shall be run to the right of the terminals and those connecting to terminals 21 through 40 shall be run to the left of the terminals. In no case

shall leads be dressed between terminals of a connector (see Fig. 10).

4.20 The horizontal paths are specified as above and below the connector (see Fig. 10). Leads connecting to the top half of the connector shall use horizontal path B, and leads connecting to the bottom half of the connector shall use horizontal path A.

4.21 The wire shall make no more than two path changes between terminations.

4.22 Bare strapping is not permitted in any case.

4.23 Wires originating at an even-numbered terminal shall start in their assigned horizontal path to the vertical path of termination.

4.24 Wires originating at an odd-numbered terminal shall start in their assigned vertical path to the horizontal path of termination.

4.25 Leads from the right side of one connector to the left side of a horizontally adjacent connector (or vice versa) shall not use the horizontal paths but shall be run as shown in examples A, B, or C of Fig. 10.

D. 924-, 925- and 926-Type Connectors

4.26 Surface wiring rules for 924-, 925- and 926-type connectors are based on the runs proceeding from left to right and from top to bottom in designated wiring paths as viewed from the wiring side (see Fig. 11).

4.27 The numerical assignment of the originating terminal (odd or even) shall determine the path of the run as described in 4.26 through 4.33. Left to right takes preference over top to bottom in determining the originating terminal of a run.

4.28 The vertical wiring paths are designated between connector positions or to the side of the connector when it is mounted in the end position. In no case shall vertical leads be dressed between terminals of a connector (see Fig. 11).

4.29 All vertical runs connecting to an even-numbered terminal shall be run to the left of the terminal, and those connecting to an odd terminal shall be run to the right of the terminal.

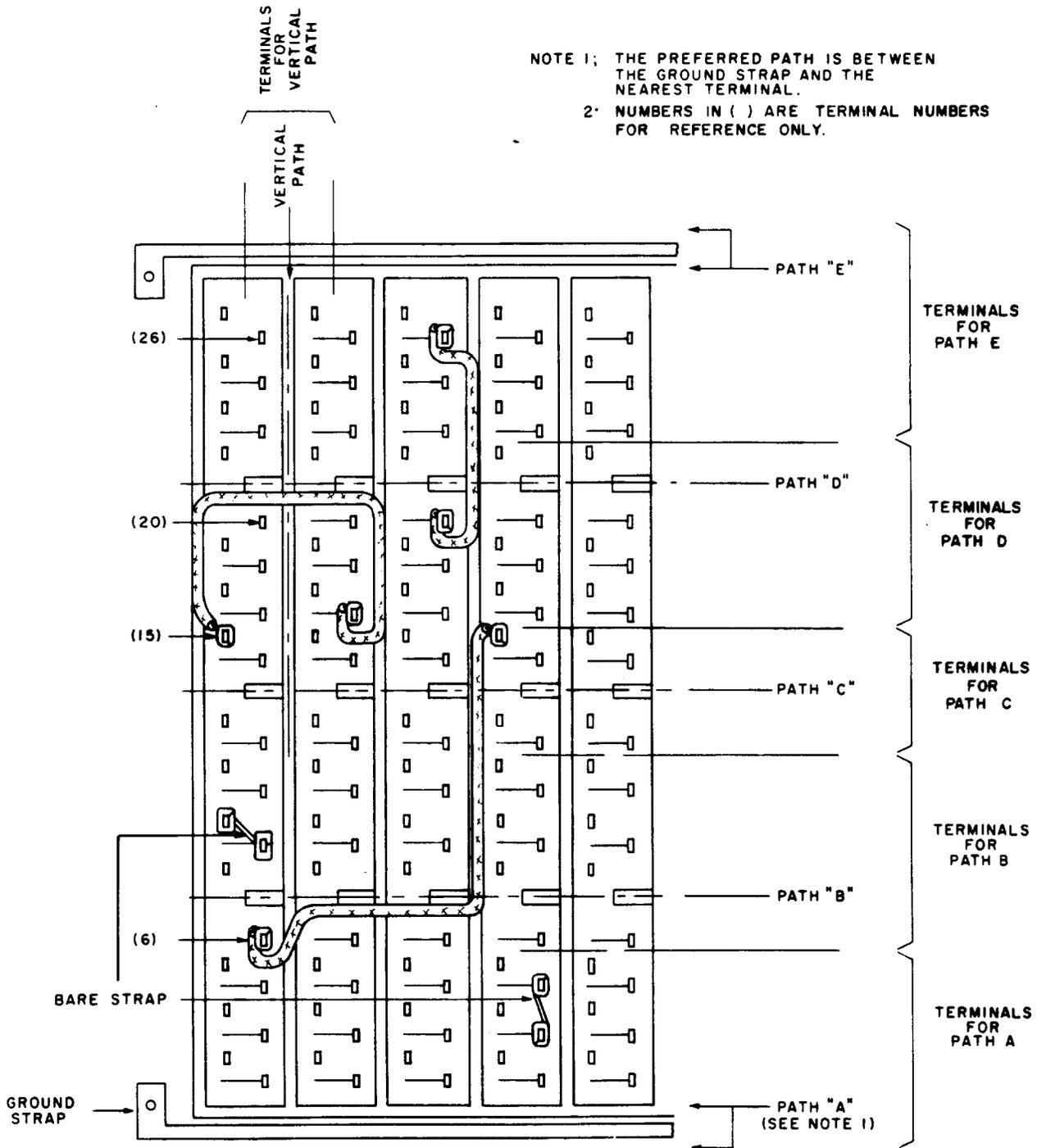
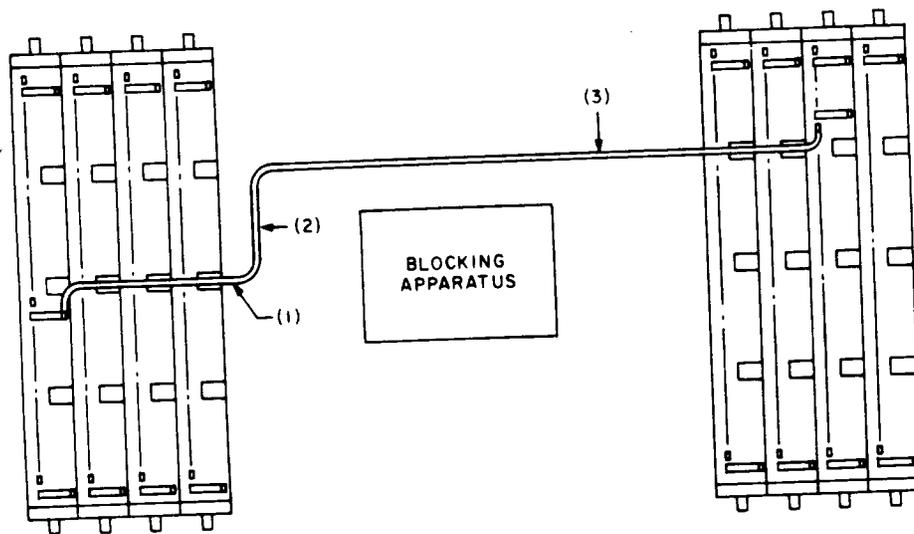


Fig. 6—Surface Wire Paths for 905-Type Connections

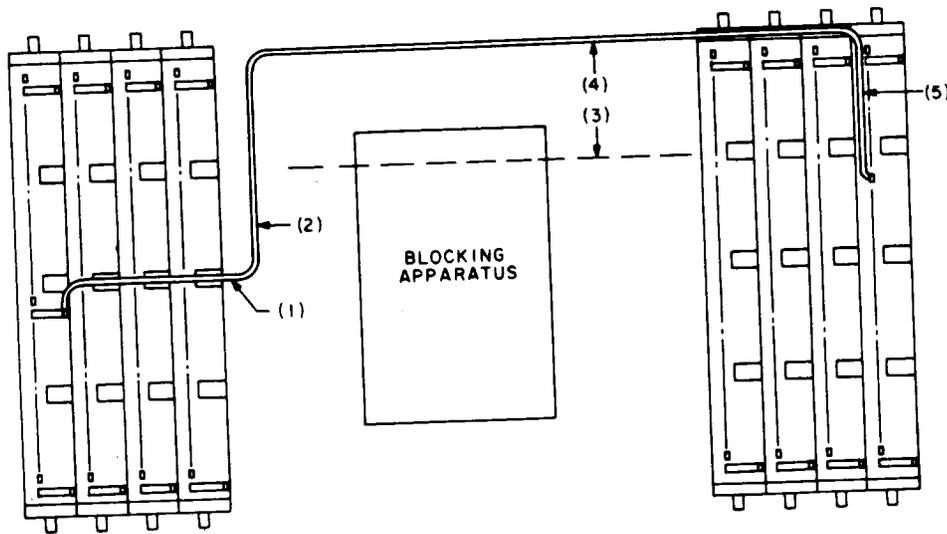
4.30 The horizontal wiring paths are designated between adjacent terminals in a horizontal row as shown in Fig. 11. Horizontal wires may be placed either above or below the connecting terminal.

Single Leads Between Two Connectors or Between Two Terminals of the Same Connector

4.31 The wire shall make no more than one path change between terminations.



(a) DIVERTING TYPE BLOCK



(b) ENCIRCLING TYPE BLOCK

Fig. 7—Blocked Horizontal Surface Wire Paths

4.32 Wires originating at an even-numbered terminal shall start in their assigned horizontal path to the vertical path of the termination.

4.33 Wires originating at an odd-numbered terminal shall start in their assigned vertical path to the horizontal path of termination.

E. Ferreed Switches

4.34 On 241, 242, and 252 ferreed switches, the surface wire dress to the front of these

switches for various apparatus arrangements shall be as shown in Fig. 12.

4.35 On the 244B ferreed switch, dress the surface wire between the two groups of terminals as shown in Fig. 13.

F. Ferrod Sensors

4.36 On the 1-type ferrod sensor, dress the surface wire on the rear outside the sensor terminal area (see Fig. 14).

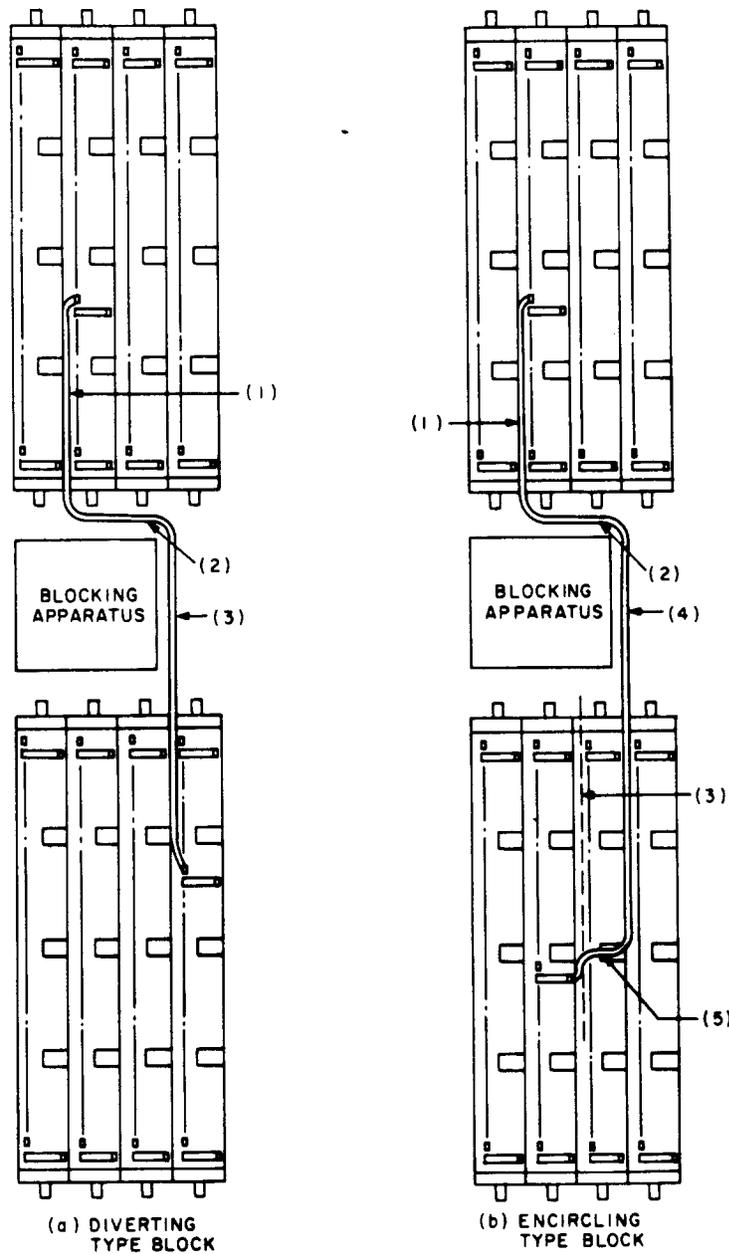


Fig. 8—Blocked Vertical Surface Wire Paths

G. Relays

4.37 313A-type relay surface wire should be dressed outside the terminal area similar to the surface wire dress for ferrod sensors.

H. Terminal Strips

4.38 297 Type: Dress the surface wire horizontally along the surface as shown in Fig. 15.

4.39 327A Type: Dress the surface wire horizontally as shown in Fig. 16.

5. DRESSING OF SKINNERS

5.01 Dress skimmers to various kinds of electronic-type switching apparatus as shown herein. The dress to any particular piece of electronic apparatus not illustrated should agree as nearly as possible

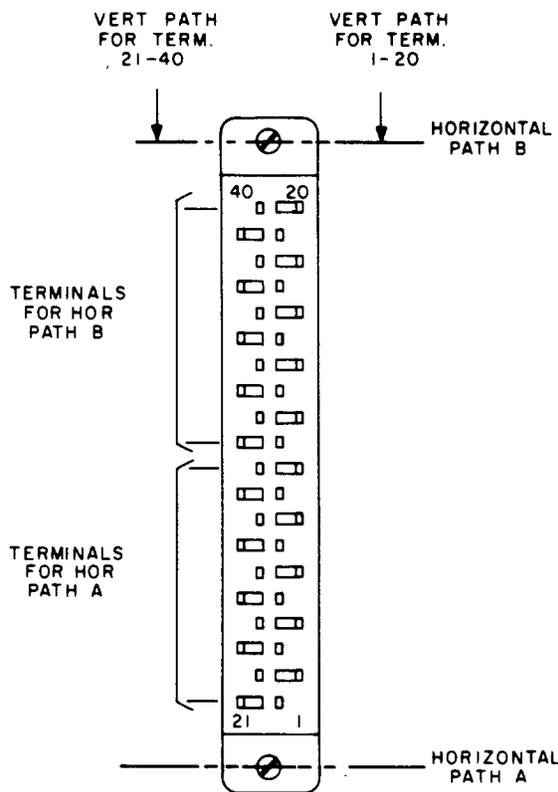


Fig. 9—Surface Wire Paths for 908-Type Connectors

with the dress shown in the illustrations of apparatus it most closely resembles.

5.02 Dress all skimmers so as to present a neat appearance and, as far as possible, to permit access to all connections.

5.03 The dress of skimmers, where specified, should be as shown in Fig. 17 through 28.

6. LOOSE WIRING

GENERAL

6.01 Some electronic equipment or frameworks are provided with fanning rings, wire guides (rosettes), or other wire retaining devices for running loose wire in specific paths in a horizontal or vertical direction. The loose wire should be run through the retaining devices without slack but not taut. Ties are not necessary except where there is a possibility of the wire pulling out of the rings.

6.02 In order to reduce undesirable inductive effects and to achieve an identical distribution of wires over these paths, requirements specified herein have been set up and shall apply.

SPECIFIC

A. 905-Type Connectors

6.03 All loose wiring run vertically or horizontally in the designated paths provided in the grid pattern shall be run through the wire guides (rosettes) provided. The horizontal portion of the wires are run along the top of the wire support assembly and break out vertically to serve the bottom half of the upper connector and the top half of the lower connector as shown in Fig. 28. All 905 connectors in the right half of the connector housing shall use its right vertical path when run vertically. All 905 connectors on the left half of the connector housing shall use its left vertical path when run vertically.

6.04 The originating terminal shall be defined as the upper or left connector terminal of the connector positions. Left to right takes preference over top to bottom in determining the originating terminal of a run. When the loose wire is run between a connector and other apparatus, the connector shall be considered originating.

6.05 Wires originating at an even-numbered terminal shall start in their assigned horizontal path to the vertical path of termination.

6.06 Wires originating at an odd-numbered terminal shall start in their assigned vertical path to the horizontal path of termination.

6.07 There shall be no more than two path changes per wire at the wire path intersections.

6.08 In general, paired loose wire leads between connectors or between terminals of the same connector shall follow the path of the designated control lead and shall be treated as if the pair is a single lead. The noncontrol wire of a loose wire pair shall follow the path of its associated control wire (except for 1/2-inch twist as noted in 2.01). When the noncontrol wire extends beyond the control wire, the extension shall be treated as if the noncontrol wire originated at the terminal to which the control lead connects.

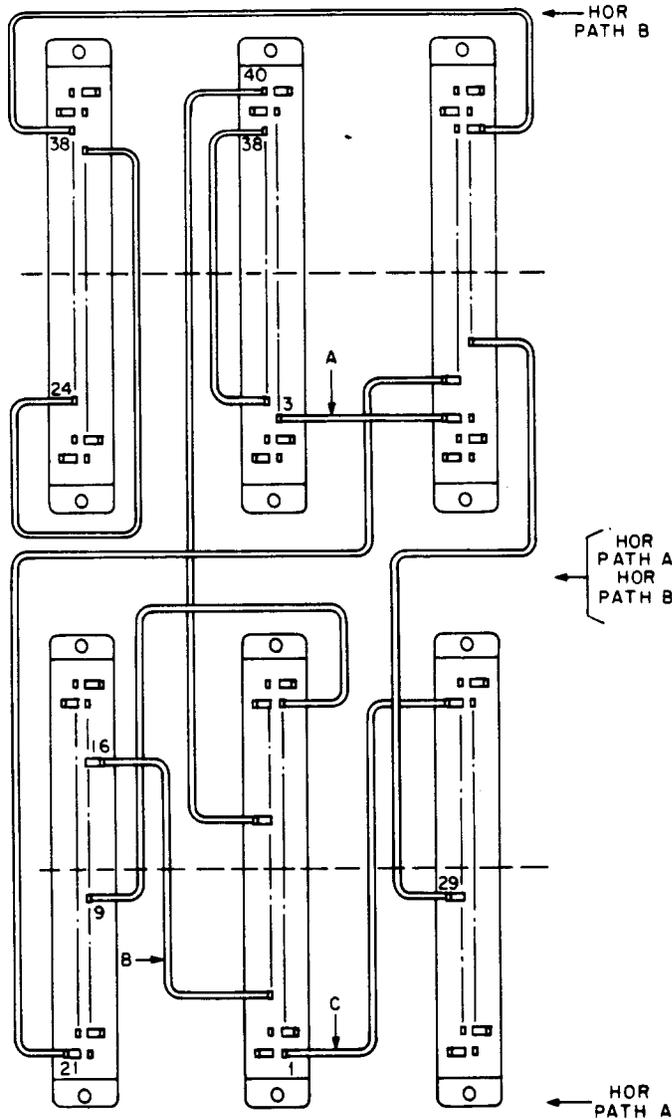


Fig. 10—908-Type Connectors — Surface Wiring Between Connectors

The noncontrol lead shall then follow the requirements for a single lead.

6.09 It is permissible to run local cable arms horizontally along the wire guides as shown in Fig. 28. The horizontal portion of the cable arm shall run below the wire guide assembly and break out similar to loose wiring. In those cases where the horizontal local cable arm exceeds 12 leads, the arm shall be run below and not through the wire guides (rosettes) at the path intersections. The vertical portion of the cable arm is run beneath the center upright wire guide as shown in Fig. 29.

B. 924-, 925-, and 926-Type Connectors

6.10 All loose wiring run vertically or horizontally shall be run in the designated paths through the fanning ring assemblies.

6.11 To determine the appropriate vertical or horizontal loose wire path, the following guidelines shall apply. Each tray assembly is divided into four equal quarters from right to left as viewed from the rear of the frame. The first quarter is referred to as the A wiring section and is usually dark gray (see Fig. 30). The second quarter is referred to as the B wiring section and is usually

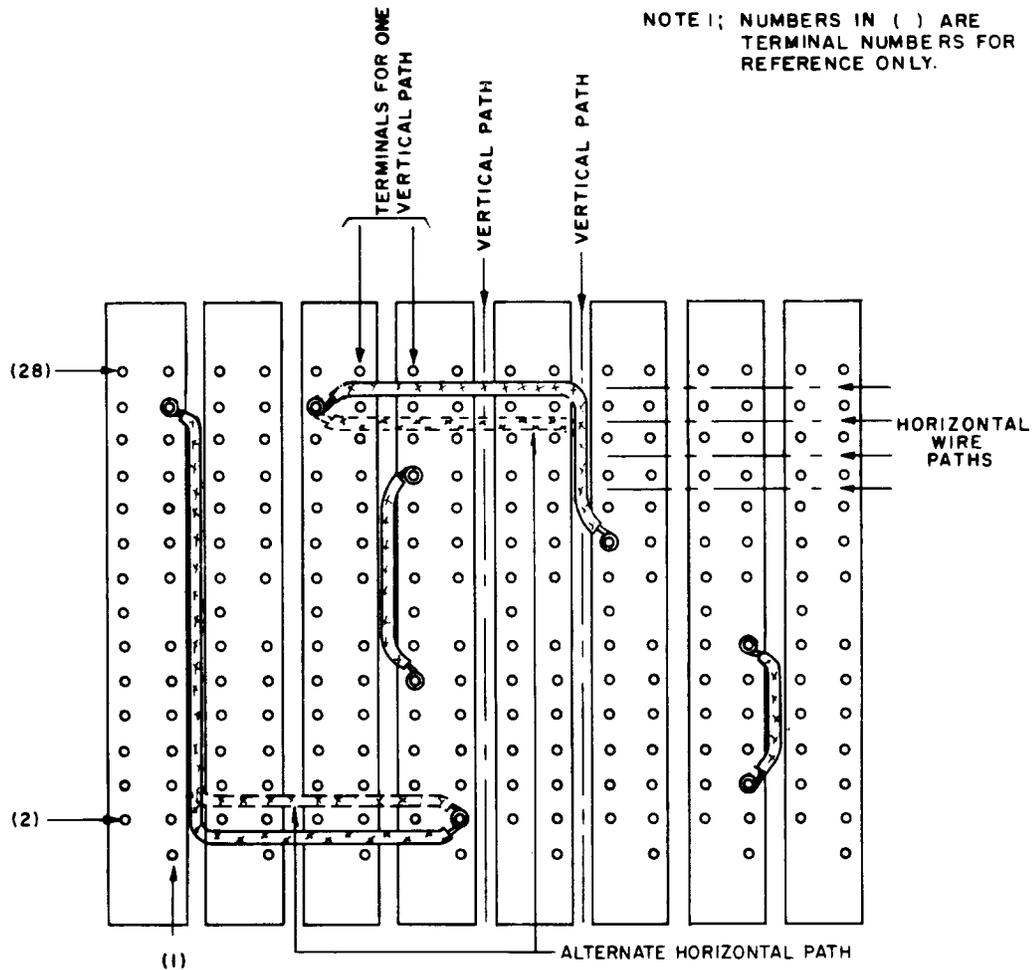


Fig. 11—Surface Wire Path for 924-, 925-, 926-, and Similar Type Connectors (924-Type Shown)

light gray. This sequence is repeated for the third and fourth quarters which are referred to as the C and D wiring sections, respectively. Other apparatus mounted to the right of the A wiring section shall be treated as the A wiring section; likewise, apparatus mounted to the left of the D wiring section shall be treated as the D wiring section.

Horizontal Paths

6.12 The horizontal loose wire paths are defined as between the tray assemblies or between the tray assembly and the fuse panel equipped with a horizontal wiring trough. Loose wires from connectors or other apparatus terminals shall be dressed vertically to the nearest horizontal path as shown in Fig. 31 to the appropriate vertical path as defined below.

Vertical Paths

6.13 In general, single-bay frames are provided with left and right frame vertical paths and a center bay path. Multibay frames are provided with an additional vertical path between each bay. Typical vertical paths for a 2-bay frame are as shown in Fig. 30.

6.14 Leads between two A or two D wiring sections in the same bay shall be run in the nearest frame vertical path (see Fig. 30). Leads between other wiring sections on the same bay shall be run via the bay vertical path.

6.15 Leads between bays on the same frame shall be run via the center frame vertical path.

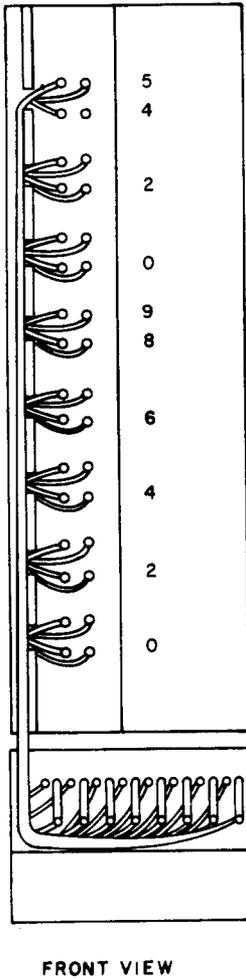


Fig. 12—241, 242, and 252 Ferreed Switches — Surface Wire Dress on the Front of a Typical Arrangement (241 and 242 Switches Shown)

6.16 Leads between the tray assembly connectors and the frame connectors such as the KS-19163 at the side of the frame shall use the right or left frame vertical path, whichever is applicable.

6.17 Power wiring shall be run in the appropriate frame vertical path that would result in the shortest run.

C. KS-19163 Connectors

6.18 Loose wire dress to the KS-19163 connectors at the rear side of the frame shall be dressed as shown in Fig. 32.

REASONS FOR REISSUE

1. 1.03 covering placement and distribution of wiring was revised for clarification. Part of this was formerly covered in 4.02.
2. 2.01 was revised to add the control terminal.
3. Fig. 2 covering communication bus leads was added.
4. 2.05 covering solderless-wrap connections was added.
5. 4.01 covering general surface wiring requirements was revised to add a 1-1/2 inch slack maximum between connectors.

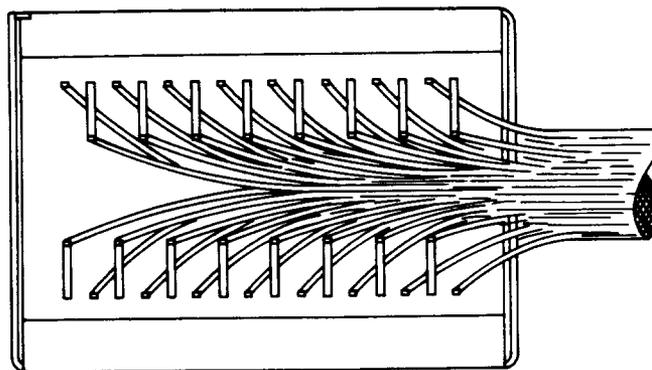


Fig. 13—244B Ferreed Switch — Surface Wire Dress at the Front of Switch

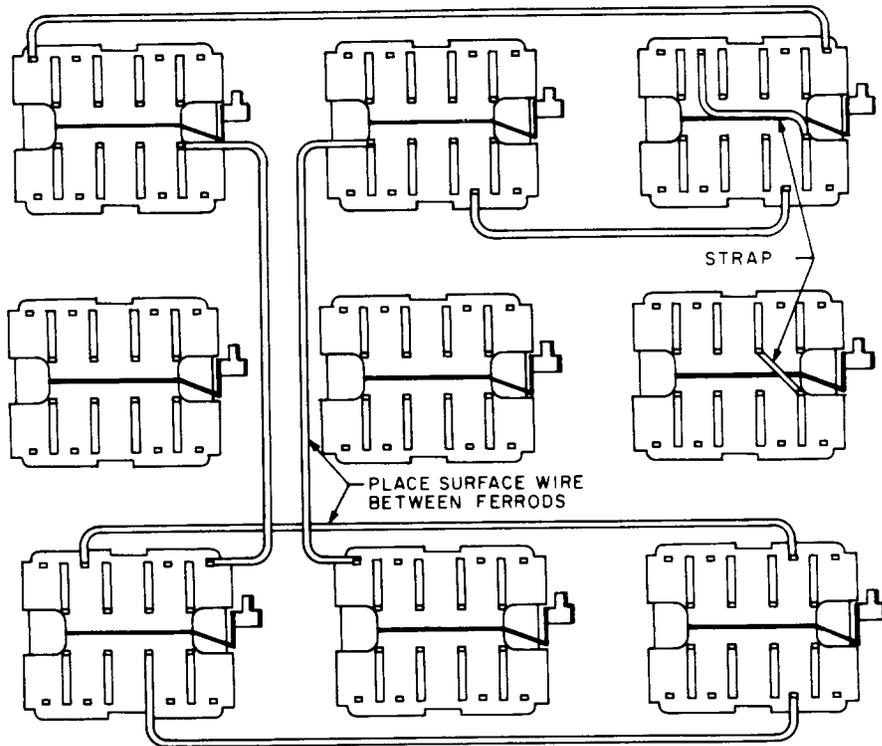


Fig. 14—Ferrod Sensors — 1-Type Surface Wire at the Rear

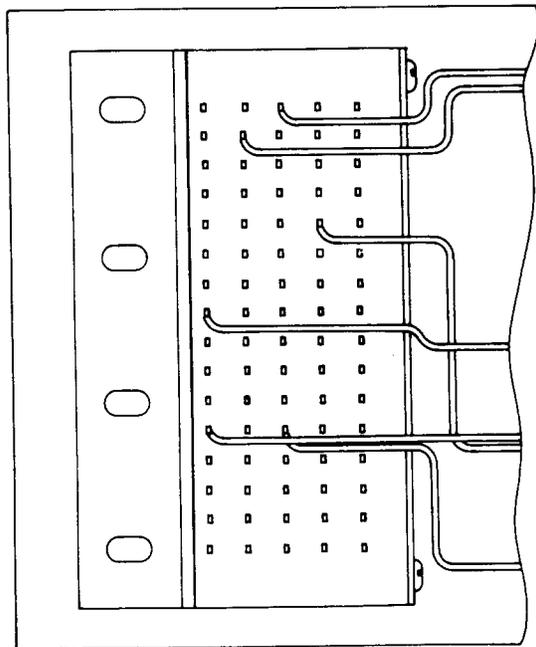


Fig. 15—Surface Wire Dress for 297-Type Terminal Strips

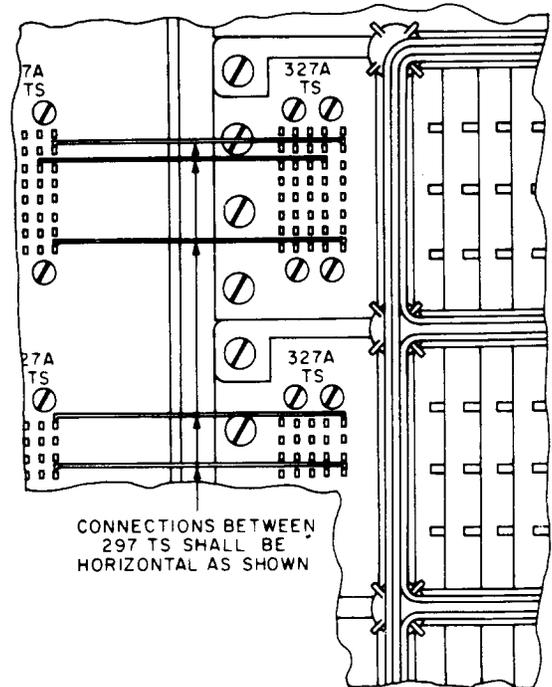


Fig. 16—327A-Type Terminal Strip — Surface Wire Connections Between Bays

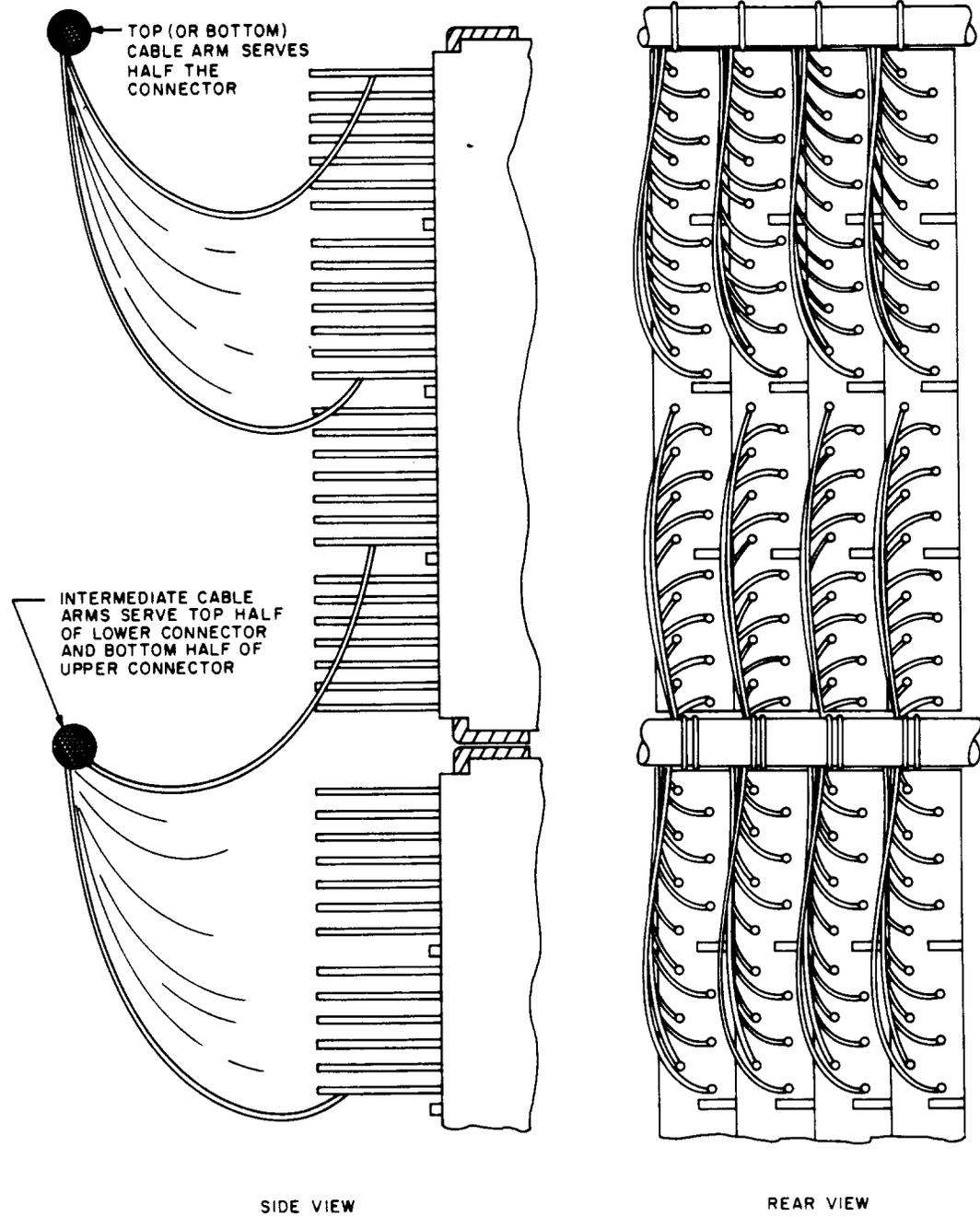
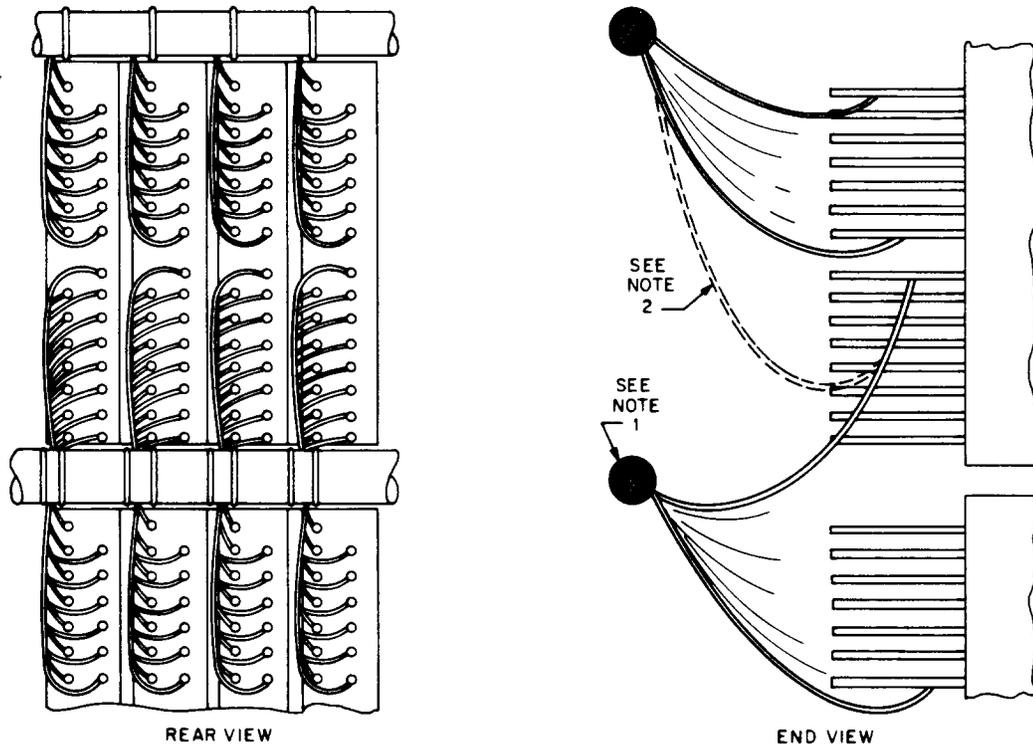


Fig. 17—905- and Similar Type Connector Cable Dress (For Combined Cable and Loose Wire Dress, See Fig. 28)⚡



NOTES:

1. CABLE ARM SERVES BOTTOM HALF OF UPPER CONNECTOR AND TOP HALF OF LOWER CONNECTOR
2. IT IS PERMISSIBLE FOR THE NON-CONTROL LEAD OF A PAIR TO EXTEND AND CONNECT TO ANY TERMINAL ON THE CONNECTOR IMMEDIATELY ABOVE OR BELOW

Fig. 18—924-, 925-, or 926-Type Connectors (924 Type Shown)†

6. 4.02 covering wiring to the shop side of ladder apparatus was revised for clarification and to change the wire dress on apparatus other than the top of the frame.
7. Fig. 4 covering surface wiring to the rear of ladder apparatus was added.
8. 4.03 and Fig. 5 covering surface wiring to the front of ladder apparatus were added.
9. 4.04 covering 905 connectors was revised to add the upper terminal as originating in the same connector.
10. 4.05 covering wiring between connectors and other apparatus was revised for clarification.
11. 4.09 covering nonconnector wiring in a connector field was added.

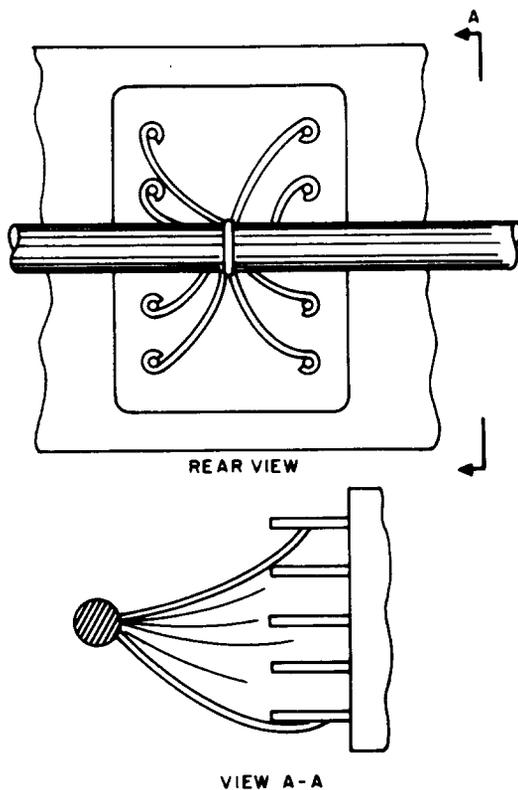


Fig. 19—313A Relay

12. 4.13 covering paired wires in a connector field was revised to add the 2-inch pairing requirement.
13. Former 4.09(a) covering paired wiring to TSPS, AIS, and ETS systems was deleted.
14. Fig. 7 and 8 covering blocked surface wire paths were revised for clarification.
15. Part C (4.18 through 4.25) and Fig. 9 and 10 covering wiring rules to 908-type connectors were added.
16. 4.30 and Fig. 11 covering surface wire paths to 924- through 926-type connectors were revised to add an alternate horizontal path.
17. 4.35 and Fig. 13 covering surface wire to the 244B ferreed switch were added.
18. 4.36 and Fig. 14 covering wiring to ferrod sensors were added.
19. 4.37 covering surface wire to 313A-type relay was added.
20. 4.38 and Fig. 15 covering wiring to 297-type terminal strips were added.
21. 4.39 and Fig. 16 covering wiring to 327A terminal strips were added.
22. Fig. 17, 18, 19, 22, 23, and 26 covering wiring to various apparatus were revised to change the lead dress.
23. 6.03 covering loose wiring paths for 905-type connectors was revised to clarify the terminals associated with each vertical path.
24. 6.04 covering the definition of the originating terminal for loose wiring was revised to clarify the requirement.
25. Fig. 28 covering wiring to 905-type connectors was revised to add Note 1 and to add a switchboard cable.
26. 6.08 covering paired leads to 905 connectors was added.
27. Fig. 32 covering KS-19163 connectors was revised to change the lead dress and to add surface wire.

ONE ARM PER TWO HORIZONTAL ROWS OF SENSORS.
ONE STITCH PER SENSOR WITH THE LEFT STITCH
FEEDING THE TOP ROW OF SENSORS.

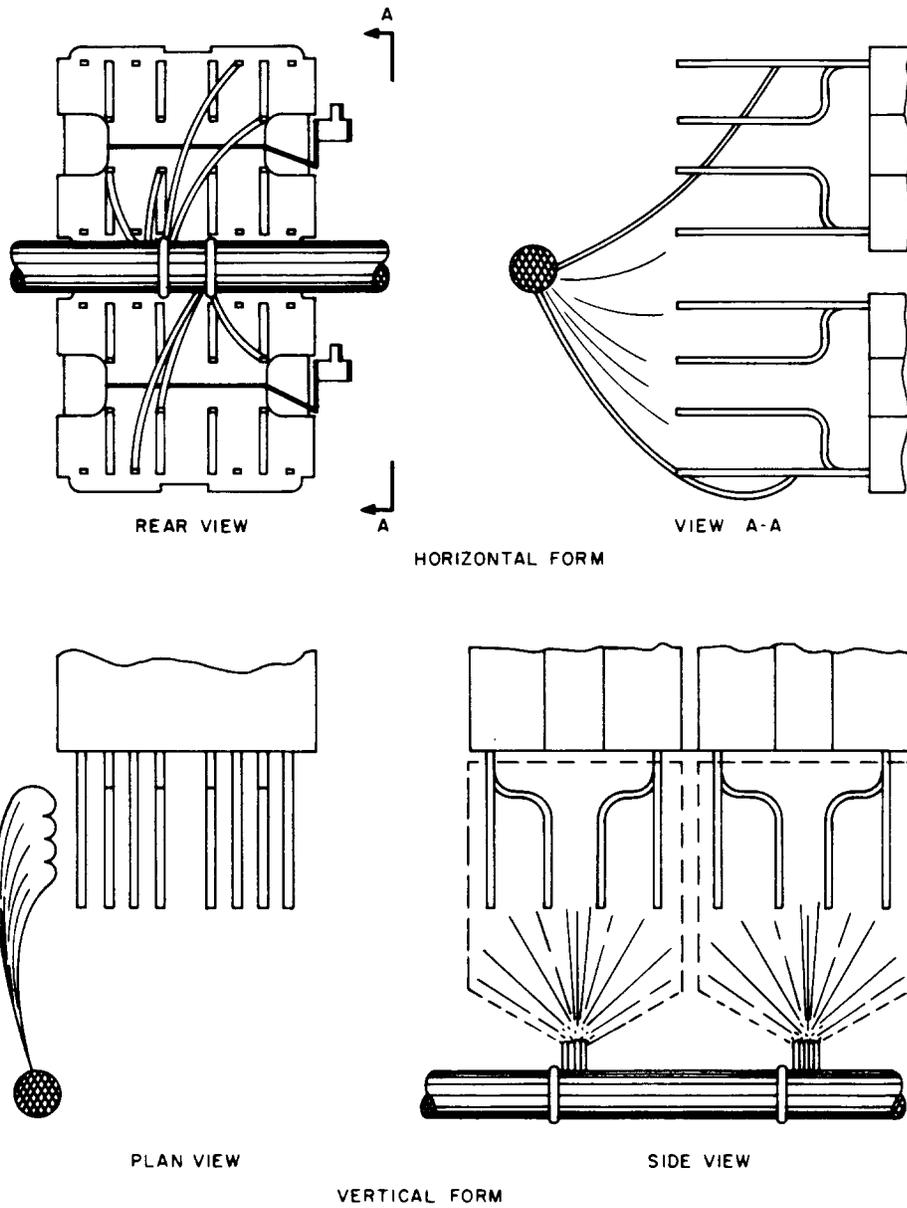


Fig. 20—Ferrod Sensor

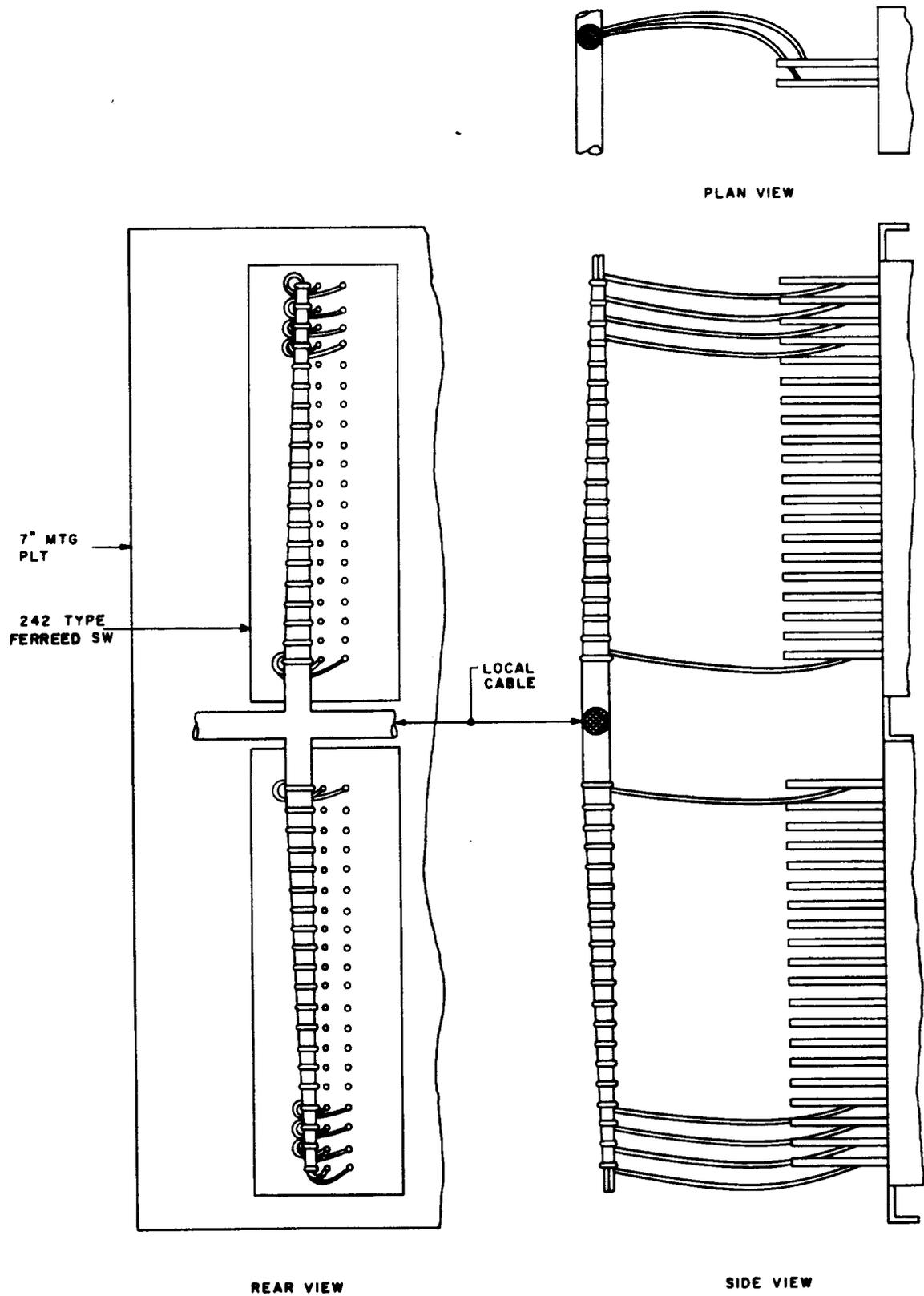
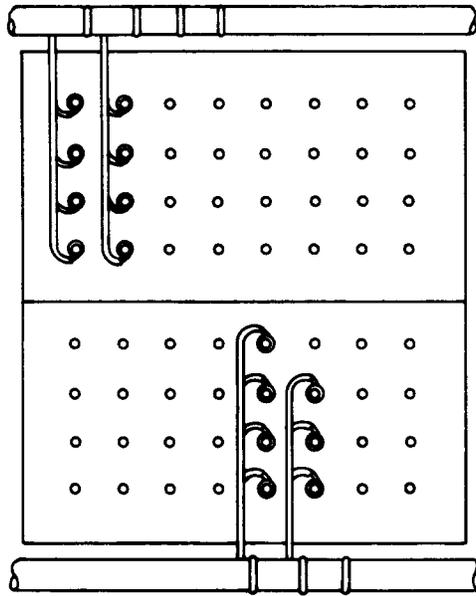
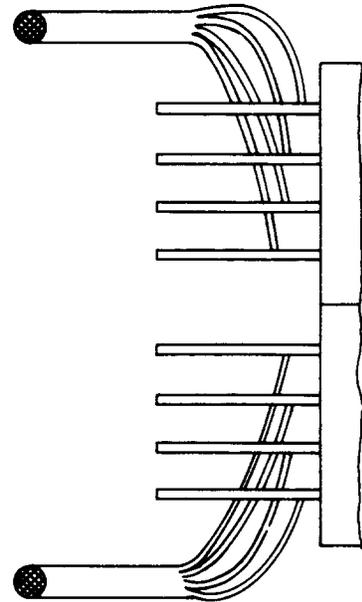


Fig. 21—Ferreed Switches, 242 and 252 Type — Single Horizontal Main Arm Serving Upper and Lower Switches

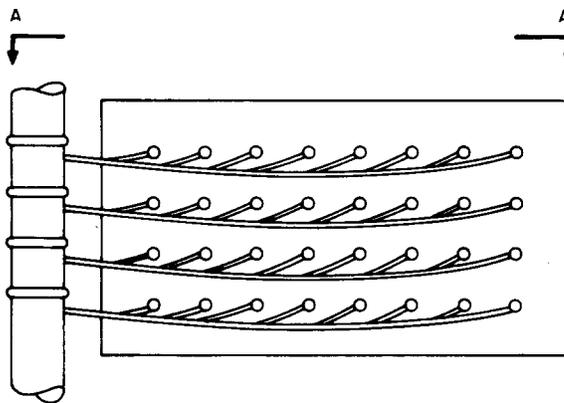


REAR VIEW

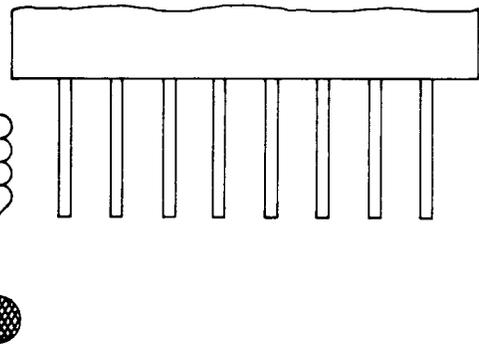


SIDE VIEW

Fig. 22—241A Ferreed Switch — Horizontal Cable Arm

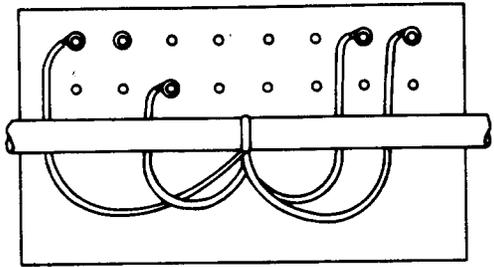


REAR VIEW

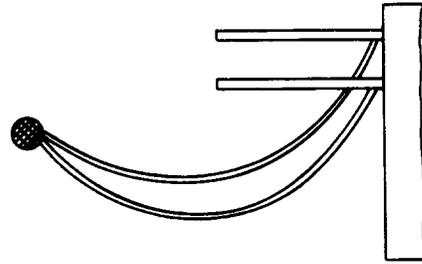


VIEW A-A

Fig. 23—241A Ferreed Switch — Vertical Cable Arm

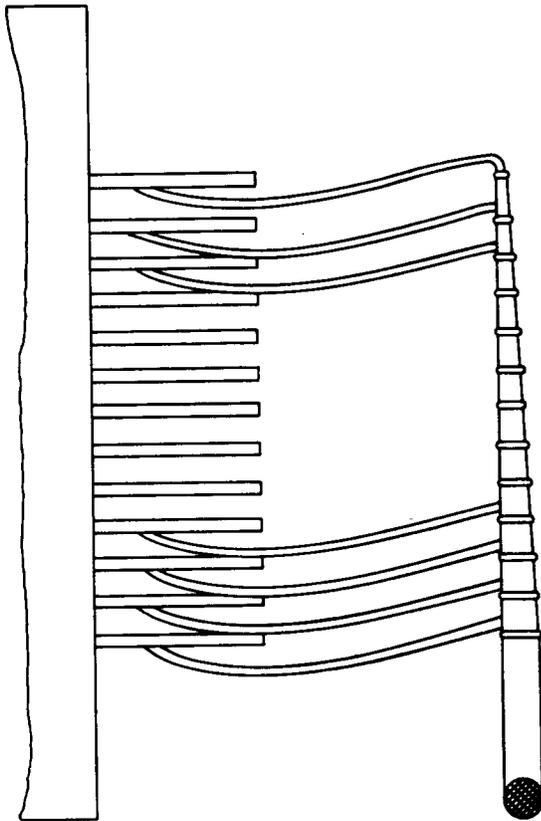


REAR VIEW

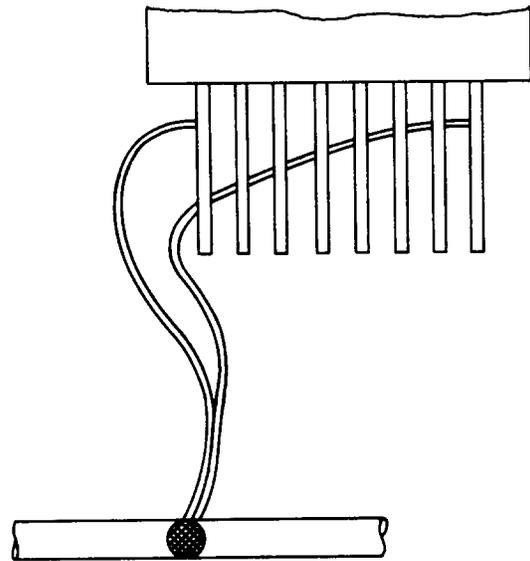


SIDE VIEW

Fig. 24—241B Ferreed Switch — Horizontal Cable Arm

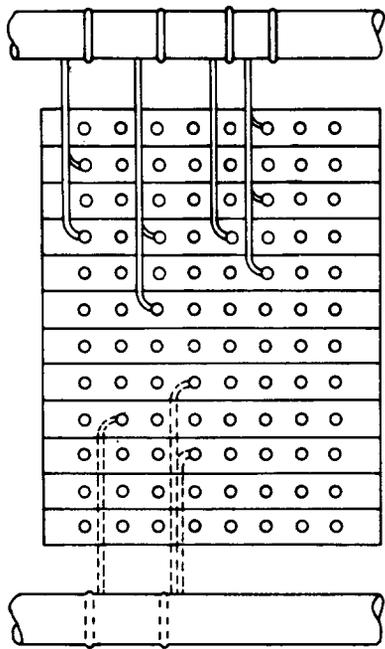


SIDE VIEW

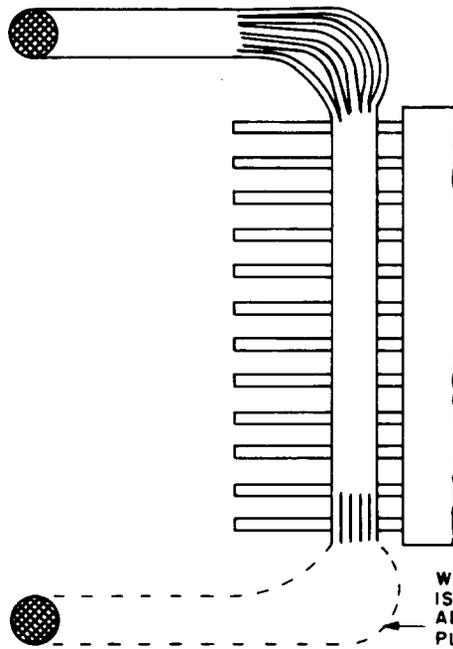


PLAN VIEW

Fig. 25—288-Type Terminal Strips, 2598-Type Transformers, and Similar Ladder-Type Apparatus — Vertical Cable Arm



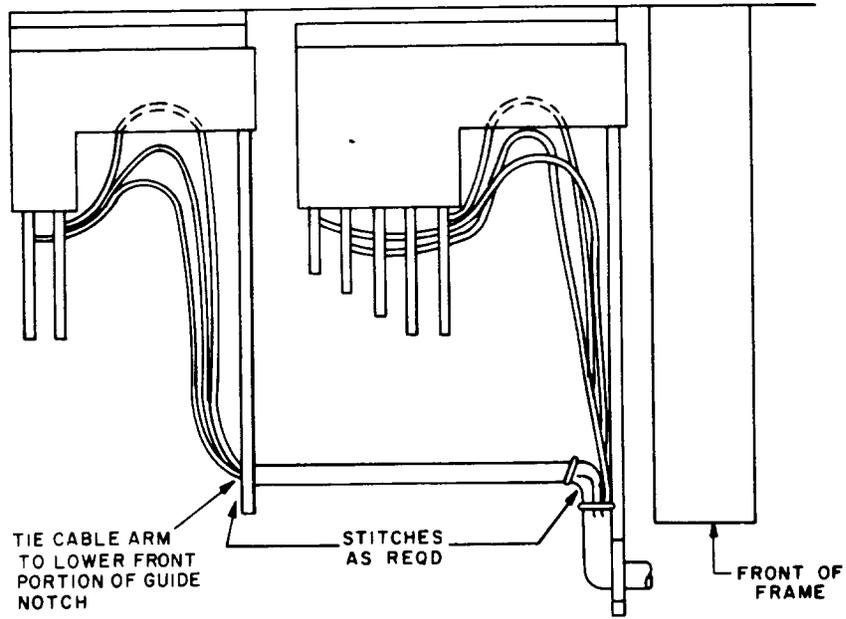
REAR VIEW



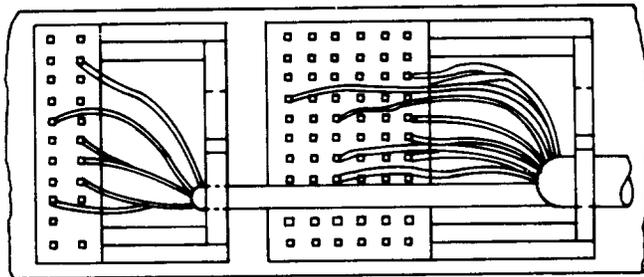
SIDE VIEW

WHEN A LOWER ARM IS REQUIRED IN ADDITION TO, OR IN PLACE OF THE UPPER ARM, PLACE IN THIS POSITION.

Fig. 26—288-Type Terminal Strips, 2598-Type Transformers, and Similar Ladder-Type Apparatus — Horizontal Cable Arm

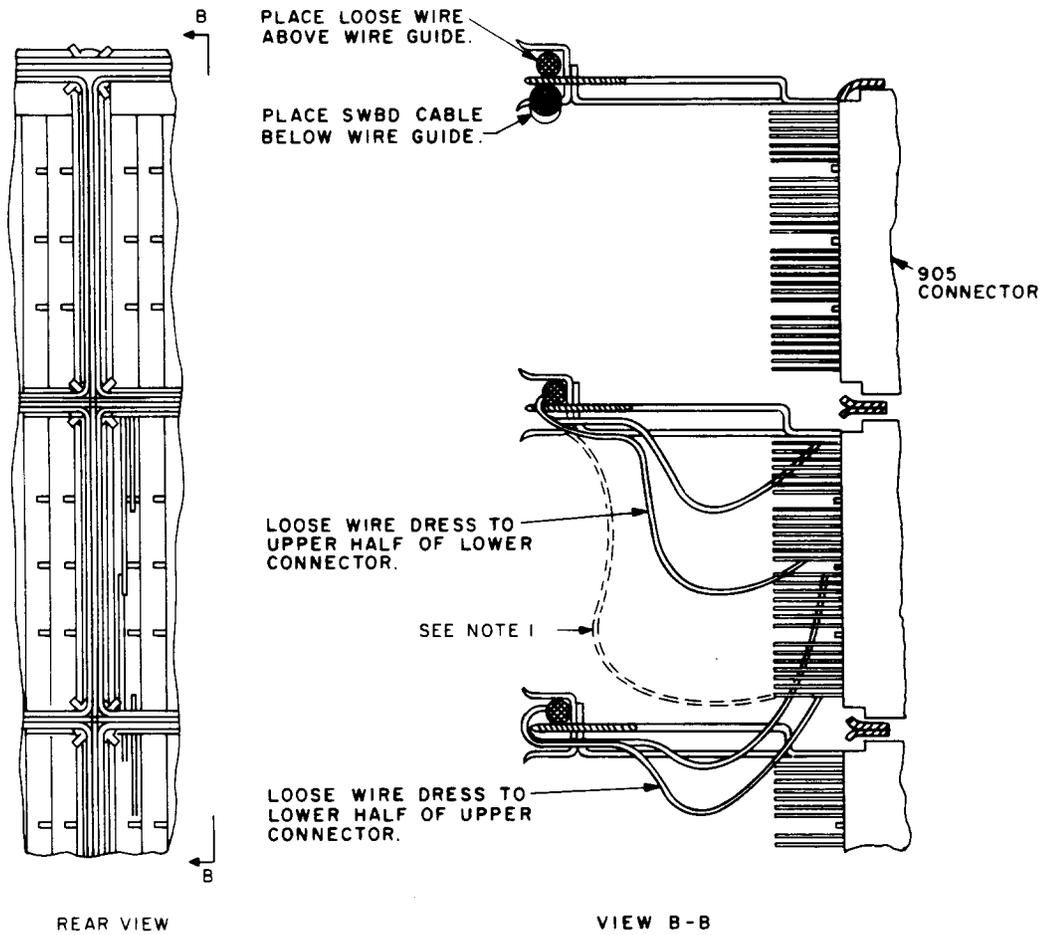


PLAN VIEW



FRONT VIEW

Fig. 27—D-Type Terminal Strips — Dress of Skinners at Front of Frame (No. 1 and No. 2 ESS Only)



NOTE:
 1. IT IS PERMISSIBLE FOR THE NON-CONTROL LEAD OF A PAIR TO EXTEND AND CONNECT TO ANY TERMINAL ON THE CONNECTOR IMMEDIATELY ABOVE OR BELOW.

Fig. 28—905 Connectors — Loose Wire Dress

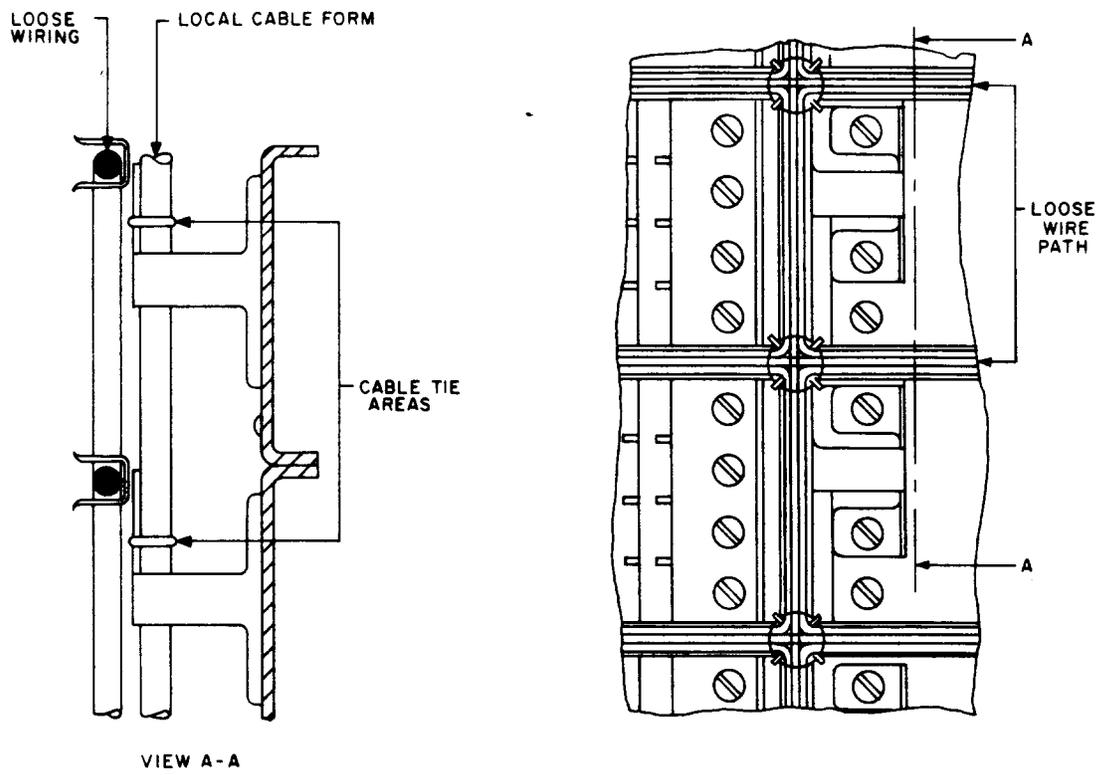


Fig. 29—905 Connectors — Loose Wiring

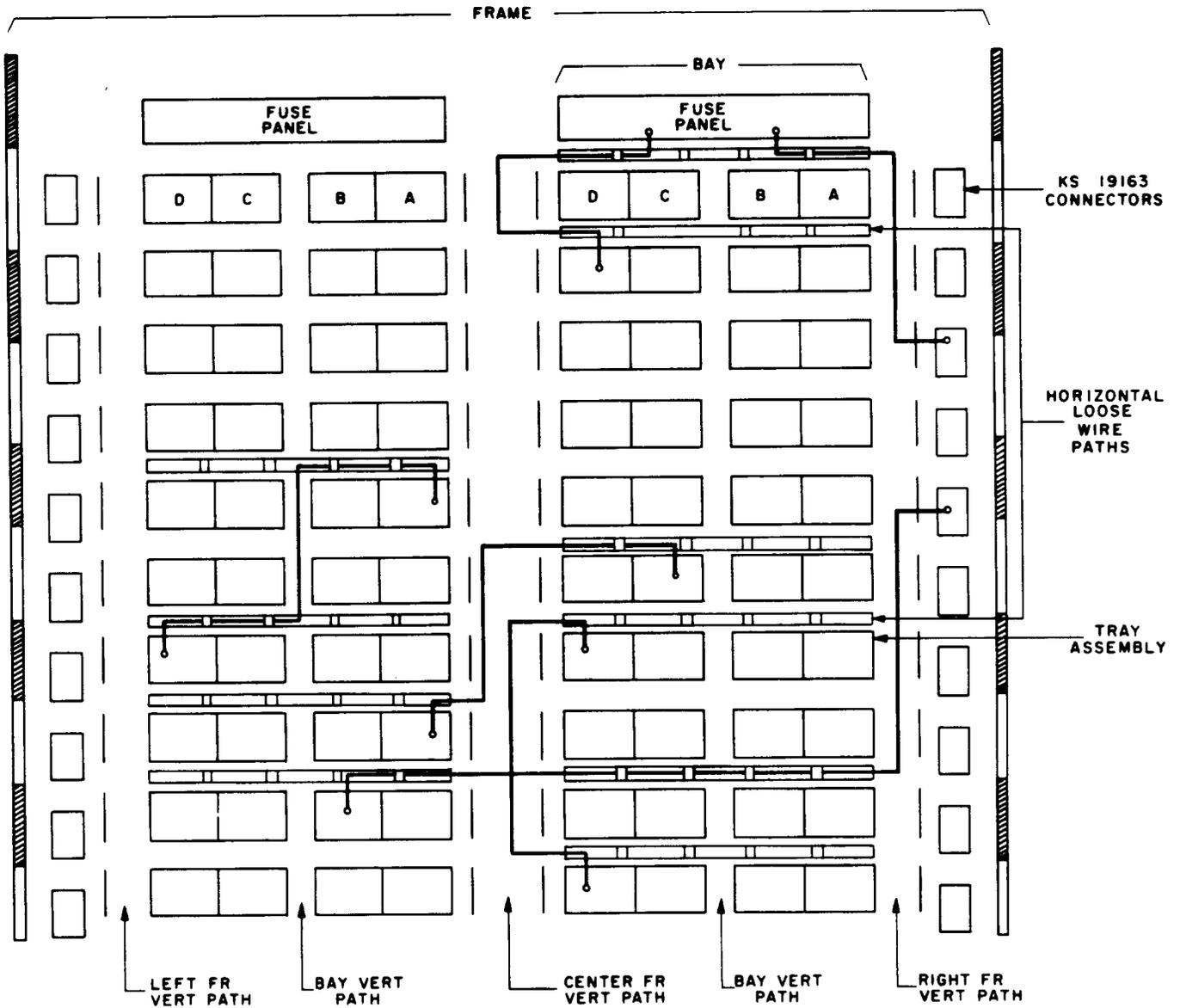
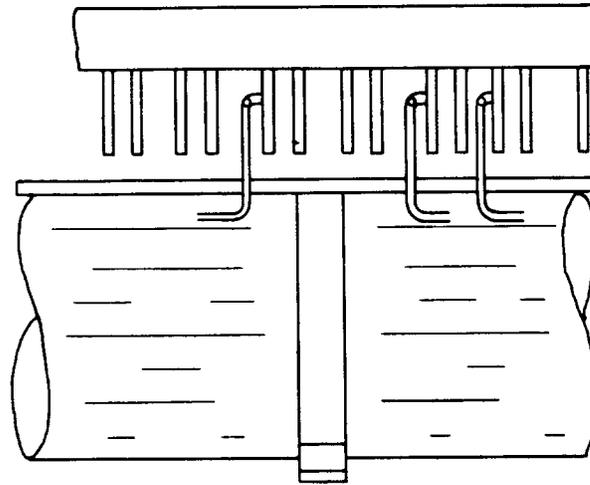
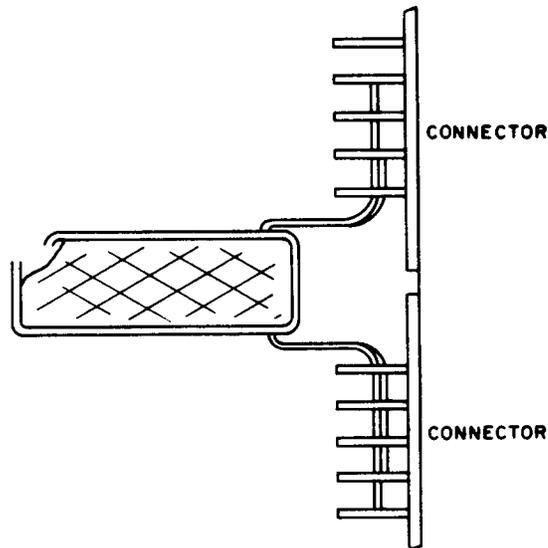


Fig. 30—924-, 925-, and 926-Type Connectors — Typical Rear View of Frame Showing Loose Wire Paths — Multibay Frame



PLAN VIEW



SIDE VIEW

Fig. 31—924-, 925-, and 926-Type Connectors —
Loose Wire Dress to Terminals

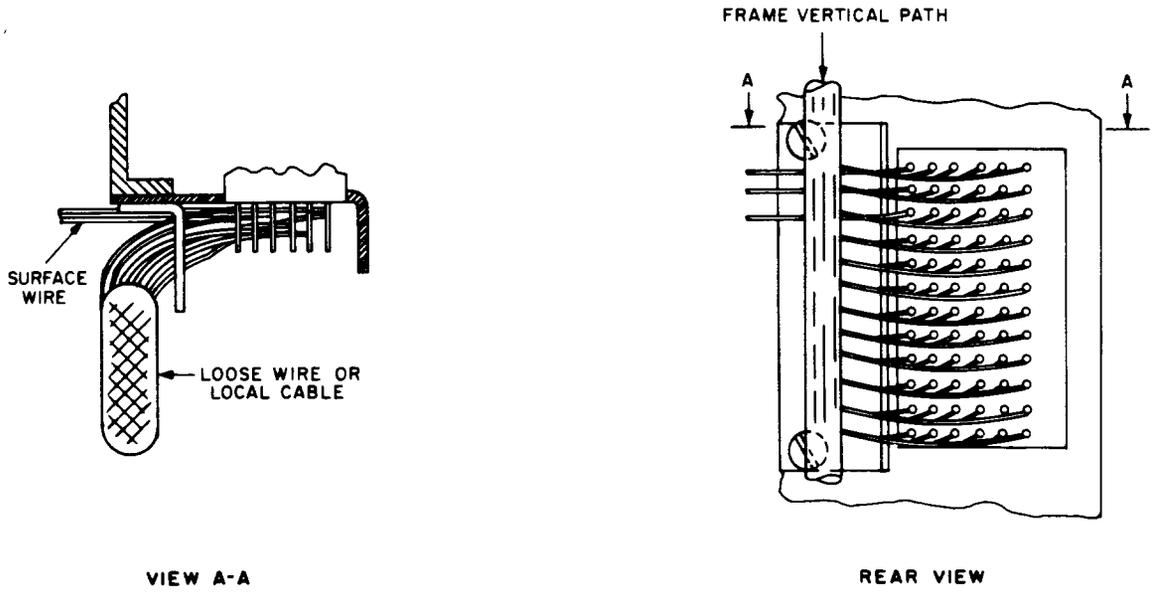


Fig. 32—KS-19163 Connectors — Loose Wire Dress at Rear Side of Frame