

ASSOCIATING VACANT FINAL TERMINALS WITH INTERCEPTING TRUNKS PANEL OFFICES

1. GENERAL

1.01 This section covers information regarding the connecting of vacant final terminals to intercepting trunks in panel offices of both the battery cutoff relay and the ground cutoff relay types.

1.02 This section is reissued to incorporate material from the addendum in its proper location. In this process marginal arrows have been omitted.

1.03 The methods for making connections to intercepting trunks are described in this section as follows:

(A) Common Intercepting Trunks - H.I.D.F. Terminal Strips Equipped with Three Rows of Additional Terminals for Intercepting Connections

(B) Common Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine - H.I.D.F. Terminal Strips Equipped with Three Rows of Additional Terminals for Intercepting Connections.

(C) Common Intercepting Trunks - H.I.D.F. Terminal Strips NOT Equipped with Three Rows of Additional Terminals for Intercepting Connections

(D) Common Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine - H.I.D.F. Terminal Strips NOT Equipped with Three Rows of Additional Terminals for Intercepting Connections

(E) Individual Intercepting Trunks

1.04 In battery cutoff relay offices, where vacant terminals are consecutive, only the highest numbered terminal need be connected to the intercepting trunk since the final selector will hunt over any sleeve terminals that are open. With this method, rearrangement of the intercepting connections required due to service order changes should be made when possible

before the service order change is made or immediately afterward.

1.05 Where the final multiple terminal strips are provided with three additional rows of terminals for making connections to the intercepting trunk, the intercepting terminals are permanently strapped and connected to the intercepting trunk.

1.06 Where the terminal strips are not provided with additional rows of terminals for making intercepting connections, two cross-connections are run from the intercepting trunk. One connects to the highest numbered vacant final terminal in the group of terminals assigned to the intercepting trunk, the other connects with the lowest numbered vacant terminals. Connections are run from these terminals to the other vacant terminals in the group of final terminals assigned to the intercepting trunk. The use of the two cross-connections enables the frameman to make a change within the group without interrupting service to the remaining vacant terminals in the group.

1.07 A vacant final terminal on which traffic is too heavy to permit cross-connecting to a trunk serving a group may be assigned to an individual intercepting trunk in which case an individual cross-connection is used.

1.08 All cross-connection work, should be so planned as to leave final terminals unguarded for a minimum length of time. This is particularly important in battery cutoff offices, since an open sleeve will cause terminal hunting of any final selector that may be directed to an unguarded terminal.

1.09 The general methods described in Sections 069-120-801 and 069-140-811 for the running of jumpers, removing insulation, amount of slack, and connecting and soldering the wires to the terminals shall be adhered to, unless exception is made in this section. The cautions given in Section 069-120-801 should also be observed.

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2. TOOLS AND MATERIALS

Methods (A), (B), (C), (D) and (E)

2.01 Tools as listed in Section 069-120-801.

2.02 No. 22 Gauge Triple Distributing Frame Wire.

Methods (A) and (B)

2.03 Sleeved straps per P-450295, P-30A389, and P-30A390.

Methods (C) and (D)

2.04 No. 22 Gauge Bare Tinned Copper Wire per P-314952 (in ground cutoff relay offices only).

3. METHOD

(A) Common Intercepting Trunks - H.I.D.F. Terminal Strips Equipped with Three Rows of Additional Terminals for Intercepting Connections.

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3.01 To connect a vacant final terminal to the intercepting trunk serving a group of final terminals, use three P-450295 sleeved straps between the regular terminals and the intercepting terminals, connecting sleeve to sleeve (S to S1), ring to ring (R to R1), and

tip to tip (T to T1) in the order named (see Paragraph 1.08 and Fig. 3). The ends of these straps should be tightly wrapped two complete turns around the terminals and omit soldering (see Fig. 2), exercising care not to break the wire by pulling too tight. These straps should be connected at the notches of the terminals. Fig. 1 illustrates the method of forming the sleeved straps.

3.02 Where a group of vacant terminals within the group of terminals served by one intercepting trunk is consecutive, connect only the highest numbered terminal of the consecutive group to the intercepting trunk terminals and leave the remaining terminals open (see Fig. 3). Vacant terminals occurring singly should each be connected to the intercepting trunk.

3.03 When a subscriber line is to be disconnected and the next higher numbered terminal is either vacant or connected to the intercepting trunk, no change of the intercepting connections is required. If the next higher numbered terminal is connected to a subscriber line, the connection of the vacated terminal to the intercepting trunk should be made as quickly as possible.

3.04 When a subscriber line is to be connected and the next lower numbered terminal is vacant, connect the lower terminal to the intercepting trunk before connecting the subscriber line. If the next lower numbered terminal is connected to a subscriber line, no change of the intercepting connections is required.

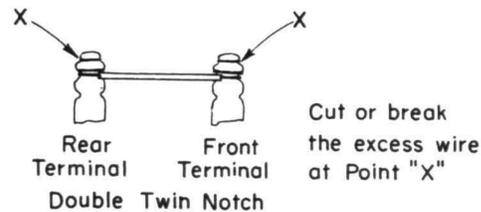
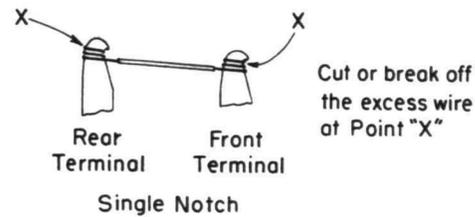
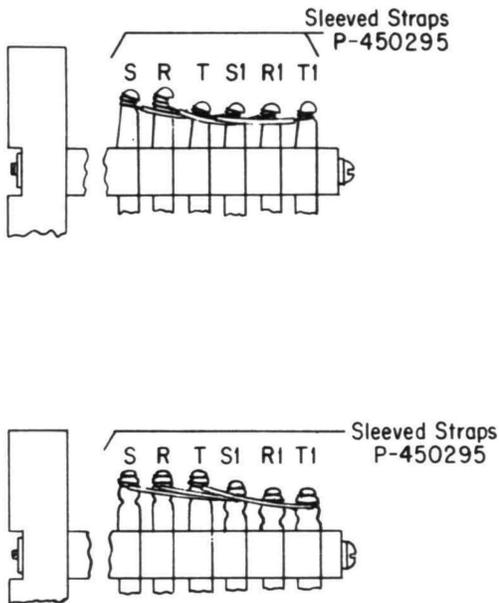


Fig. 1 - Straps between Vacant Terminals and Intercepting Terminals

Fig. 2 - Termination of Unsoldered P-450295, P-30A389 or P-30A390 Straps on Lugs of Terminal Strip.

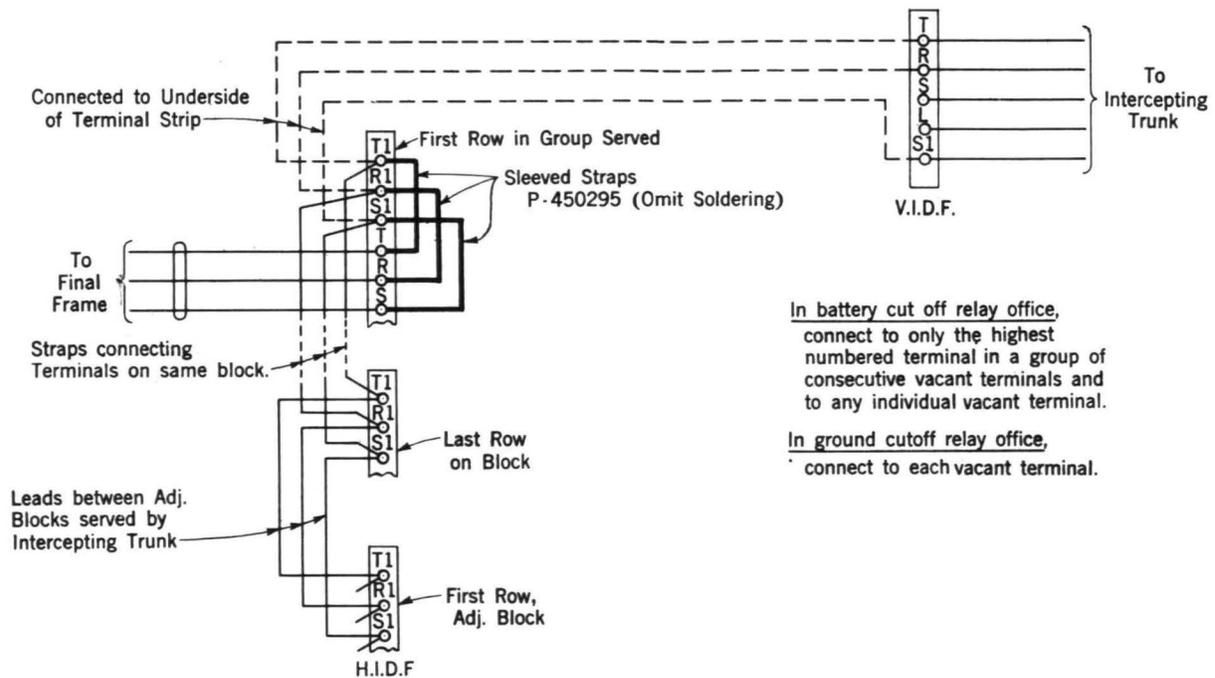


Fig. 3 - Common Intercepting Trunks - Terminal Strips with Three Rows of Terminals for Intercepting Connections

Ground Cutoff Relay Office

3.05 Each vacant final terminal should be connected to the intercepting trunk terminals as outlined in Paragraph 3.01 (see Figs. 1, 2, and 3).

(B) Common Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine - H.I.D.F. Terminal Strips Equipped with Three Rows of Additional Terminals for Intercepting Connections

Battery Cutoff Relay Offices

3.06 To connect a vacant final terminal to the intercepting trunk when the calls are to be routed to the operator connect as in Paragraph 3.01 (see Figs. 1, 2 and 4).

3.07 To connect a vacant final terminal to the intercepting trunk when the calls are to be routed to the announcement machine, use a P-450295 sleeved strap to connect the regular sleeve terminal to the intercepting sleeve terminal (S to S1), a P-30A390 sleeved strap to connect the regular ring terminal to the intercepting tip terminal (R to T1), and a P-30A389

sleeved strap to connect the regular tip terminal to the intercepting ring terminal (T to R1) in the order named (see Paragraph 1.08). The ends of all straps should be tightly wrapped two complete turns around the terminal and omit soldering. These straps should be connected at the notches of the terminals (see Figs. 1, 2, and 4).

3.08 Where a group of vacant terminals to the same class of intercepting (i.e., all calls to be routed to the operator or all calls to be routed to the announcement machine) within the group of terminals served by one intercepting trunk is consecutive, connect only the highest numbered terminal of the consecutive group to the intercepting trunk terminals and leave the remaining terminals open (see Fig. 4). Vacant terminals occurring singly should each be connected to the intercepting trunk.

3.09 When a subscriber line is to be disconnected and the next higher numbered terminal is either vacant or connected to the intercepting trunk and is of the same class of intercepting as the line being disconnected, no change of the intercepting connections is required. If the next higher numbered terminal is of a different class of intercepting or is

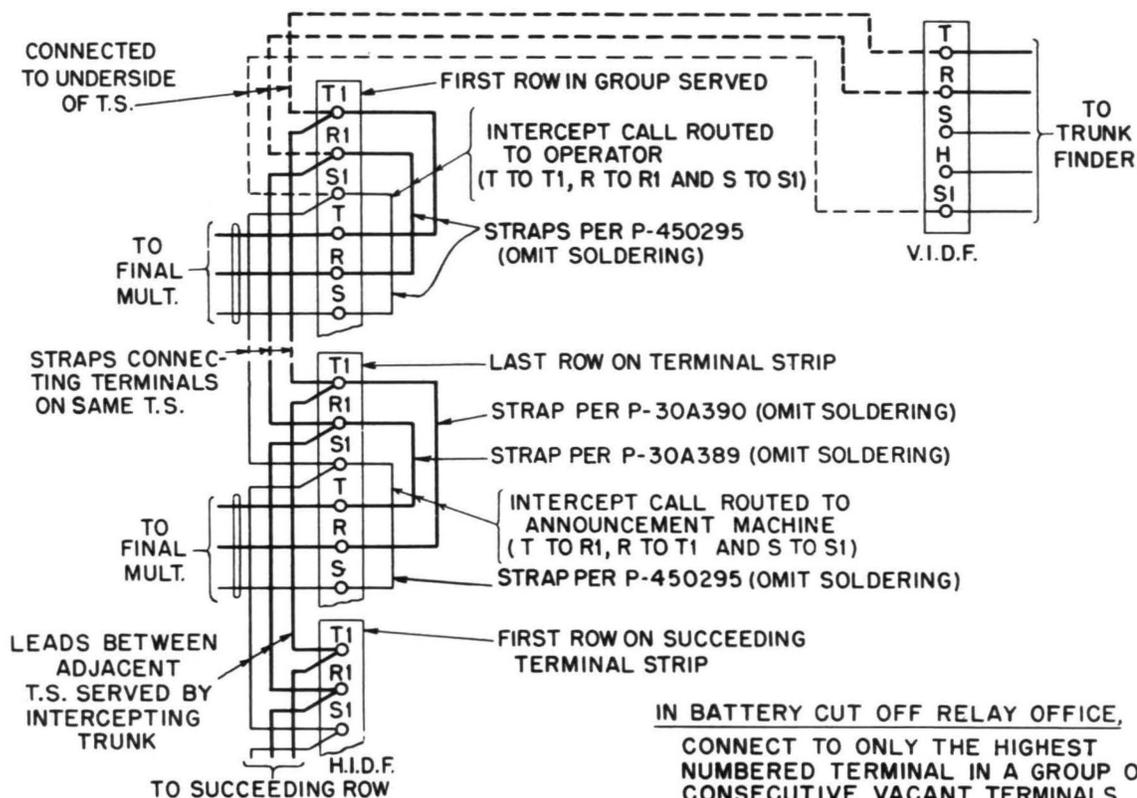


Fig. 4 - Common Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine - Terminal Strips with Three Rows of Terminals for Intercepting Connections

connected to a subscriber line the connection of the vacated terminal to the intercepting trunk should be made as quickly as possible.

3.10 When a subscriber line is to be connected and the next lower numbered terminal is vacant, connect the lower terminal to the intercepting trunk before connecting the subscriber line, being careful to make the connections for the proper class of intercepting. If the next lower numbered terminal is connected to a subscriber line no change of the intercepting connections are required, unless the vacant terminal to be used occurred singly in which case the intercepting connections should be removed.

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3.11 Each vacant final terminal on which the calls are to be routed to the operator over the intercepting trunk serving a group of final terminals should be connected as in Paragraph 3.01 (see Figs. 1, 2, and 4).

3.12 Each vacant final terminal on which the calls are to be routed to the announcement machine over the intercepting trunk serving a group of final terminals should be connected as in Paragraph 3.07.

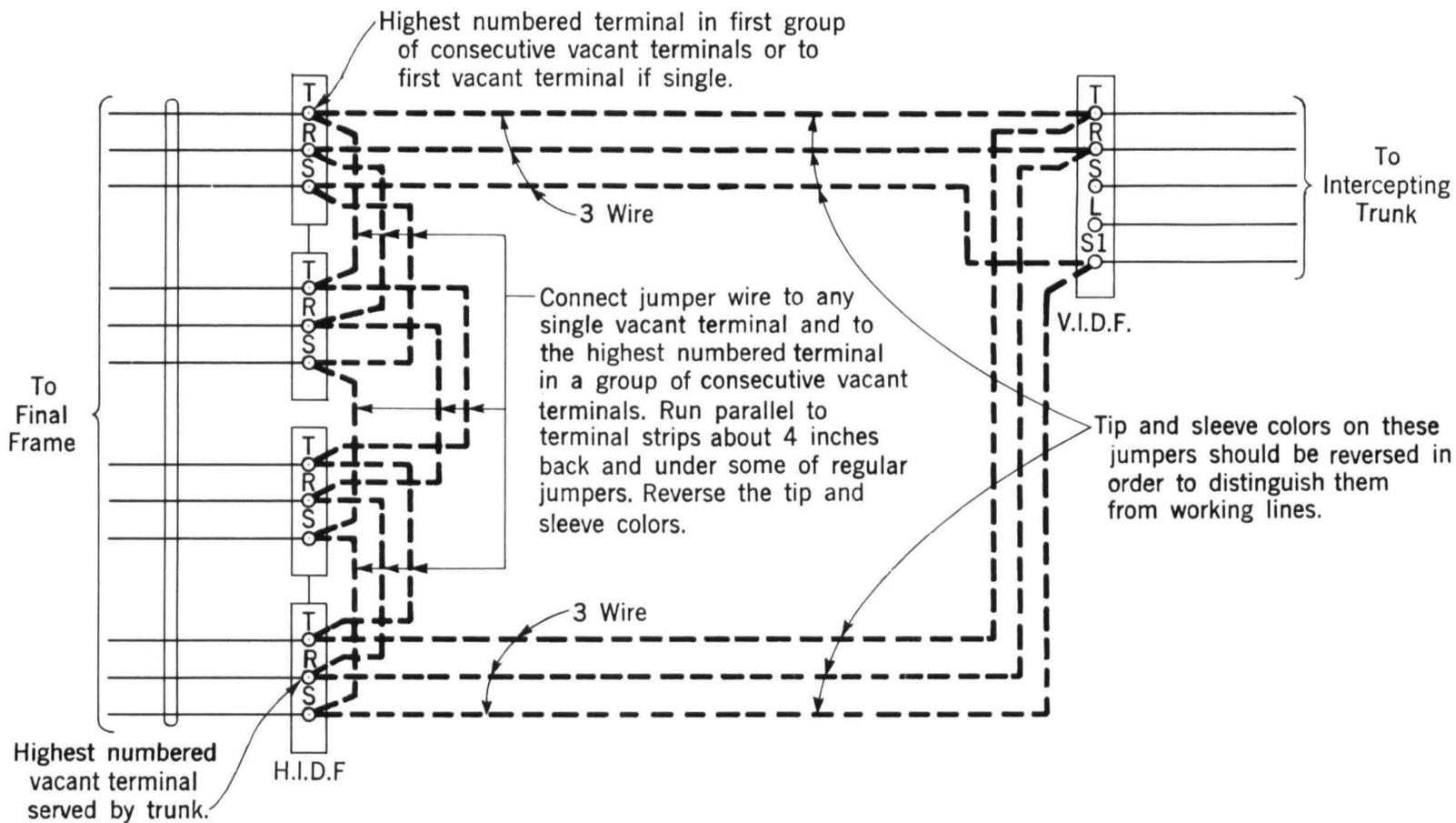


Fig. 5 - Common Intercepting Trunks - Terminal Strips Without Three Rows of Terminals for Intercepting Connections - Battery Cutoff Relay Offices.

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(C) Common Intercepting Trunks - H.I.D.F. Terminal Strips NOT Equipped with Three Rows of Additional Terminals for Intercepting Connections

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3.13 Two triple cross-connections should be run from the intercepting trunk terminals on the V.I.D.F. They should be long enough to reach any final terminal in the group which the trunk serves. These jumpers should not be shortened when rearrangements are made but any slack should be disposed of by running the jumpers through the distributing frame rings so that the normal amount of slack will be provided when the jumper is connected.

3.14 The two cross-connections should be connected, one to the highest numbered vacant terminal in the group of final terminals associated with the intercepting trunk, the other to the highest numbered terminal of the lowest

numbered group of consecutive vacant terminals. If the lowest numbered vacant terminal occurs alone, connect the second cross-connection to it. These jumpers should have the tip and sleeve colors reversed to distinguish them from working lines (see Figs. 5 and 6).

3.15 Non-adjacent terminals or groups of terminals should be connected as shown in Fig. 6 using triple distributing frame wire. Connect only the highest numbered terminal in each group of consecutive vacant terminals. Vacant terminals occurring singly should each be connected with the intercepting trunk. These jumpers should be run parallel to the terminal strips about four inches back of the strips and under some of the regular jumpers on the shelf. The tip and sleeve colors of these cross-connections should be reversed.

Note: When rearranging these connections the wire in place should be reused as long as the four-inch slack can be approximately obtained.

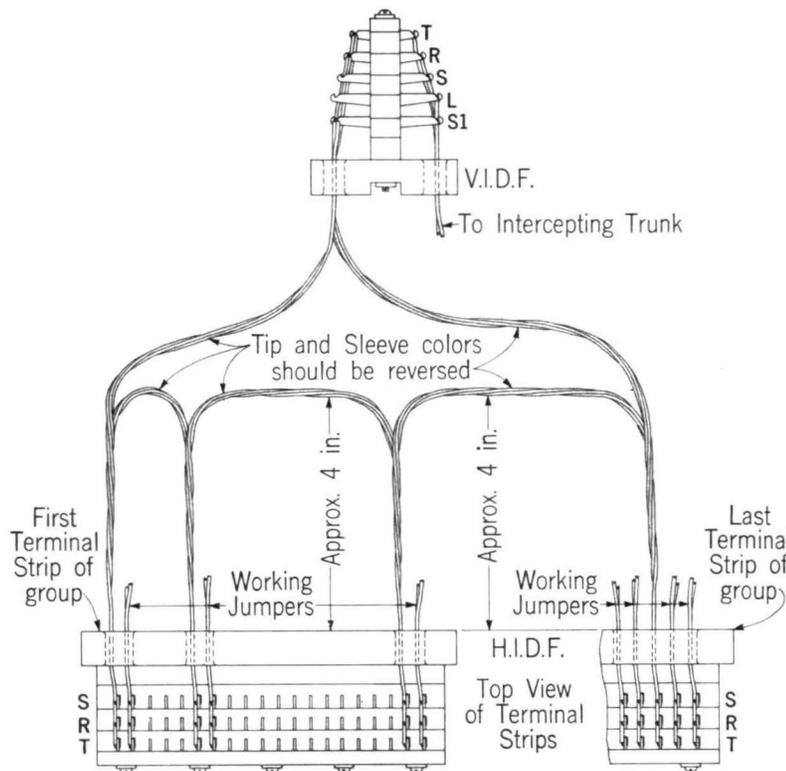


Fig. 6 - Common Intercepting Trunks - Typical Arrangement of Cross-Connections - Terminal Strips Without Three Rows of Terminals for Intercepting Connections - Battery Cutoff Relay Offices.

3.16 When a subscriber line is to be disconnected and the next higher numbered terminal is either vacant or connected to the intercepting trunk, no change of the intercepting connections is required. If the next higher numbered terminal is connected to a subscriber line, the connection of the vacated terminal to the intercepting trunk should be made as quickly as possible.

3.17 When a subscriber line is to be connected and the next lower numbered terminal is vacant, connect the lower terminal to the intercepting trunk before connecting the subscriber line. If the next lower numbered terminal is connected to a subscriber line, no change of the intercepting connections is required, unless the vacated terminal to be used occurred singly in which case the intercepting connections should be removed and rearranged if required.

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3.18 Two triple cross-connections should be run from the intercepting trunk terminals on the V.I.D.F. They should be long enough to reach any final terminal in the group which the trunk serves. These jumpers should not be shortened when rearrangements are made but any slack should be disposed of by running the jumpers through the distributing frame rings so that the normal amount of slack will be provided when the jumper is connected.

3.19 The two cross-connections should be connected, one to the first and one to the last vacant terminal of the group. The tip and sleeve colors of these cross-connections should be reversed in order to distinguish them from working lines (see Fig. 7).

3.20 Where vacant terminals within the group of terminals served by one intercepting trunk appear in consecutive order, the tip, ring and sleeve terminals should be strapped with No. 22 gauge bare tinned copper wire as shown in Figs. 7 and 8. This wire is placed around the first and last terminals in the consecutive group and laid in the notches of the intermediate terminals and soldered so that all consecutive vacant terminals in each row are connected together by a continuous piece of wire.

Note: When a vacant terminal is to be connected for service, cut the strap close to the terminal lug and solder the ends of the strap back around the adjoining vacant terminals. When a working terminal becomes vacant in a consecutive group of vacant terminals, add strap wire to connect it to the adjacent terminals.

3.21 Non-adjacent terminals or groups of terminals should be connected together using triple distributing frame wire (see Fig. 8). These jumpers should be run parallel to the terminal strips about four inches back of the strips and under some of the regular jumpers on the shelf. The tip and sleeve colors of these connections should be reversed.

Note: When rearranging these connections the wire in place should be reused as long as the four-inch slack can be approximately obtained.

(D) Common Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine - H.I.D.F. Terminal Strips NOT Equipped with Three Rows of Additional Terminals for Intercepting Connections

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3.22 Two triple cross-connections should be run from the intercepting trunk terminals on the V.I.D.F. They should be long enough to reach any final terminal in the group which the trunk serves. These jumpers should not be shortened when rearrangements are made but any slack should be disposed of by running the jumpers through the distributing frame rings so that the normal amount of slack will be provided when the jumper is connected.

3.23 The two cross-connections should be connected to vacant terminals that are to be routed to the operator, one should be connected to the highest vacant terminal and the other connected to the lowest vacant terminal. In the event that all vacant terminals in either half of the group served by one intercepting trunk are routed to the announcement machine the tip and ring of the jumper serving that part of the group should be reversed and if all vacant terminals in the group are routed to the announcement machine the tip and ring of both jumpers should be reversed. This reversal should be made at the final terminal block on the H.I.D.F. These jumpers should have the tip and sleeve colors reversed to distinguish them from working lines (see Figs. 9 and 10).

3.24 Non-adjacent terminals or groups of terminals of the same class of intercepting (i.e., all calls to be routed to the operator or all calls to be routed to the announcement machine) should be connected as shown in Fig. 10, using triple distributing frame wire. Terminals or groups of terminals that are to be routed to the operator should be connected so that the tip, ring and sleeve are connected to the tip,

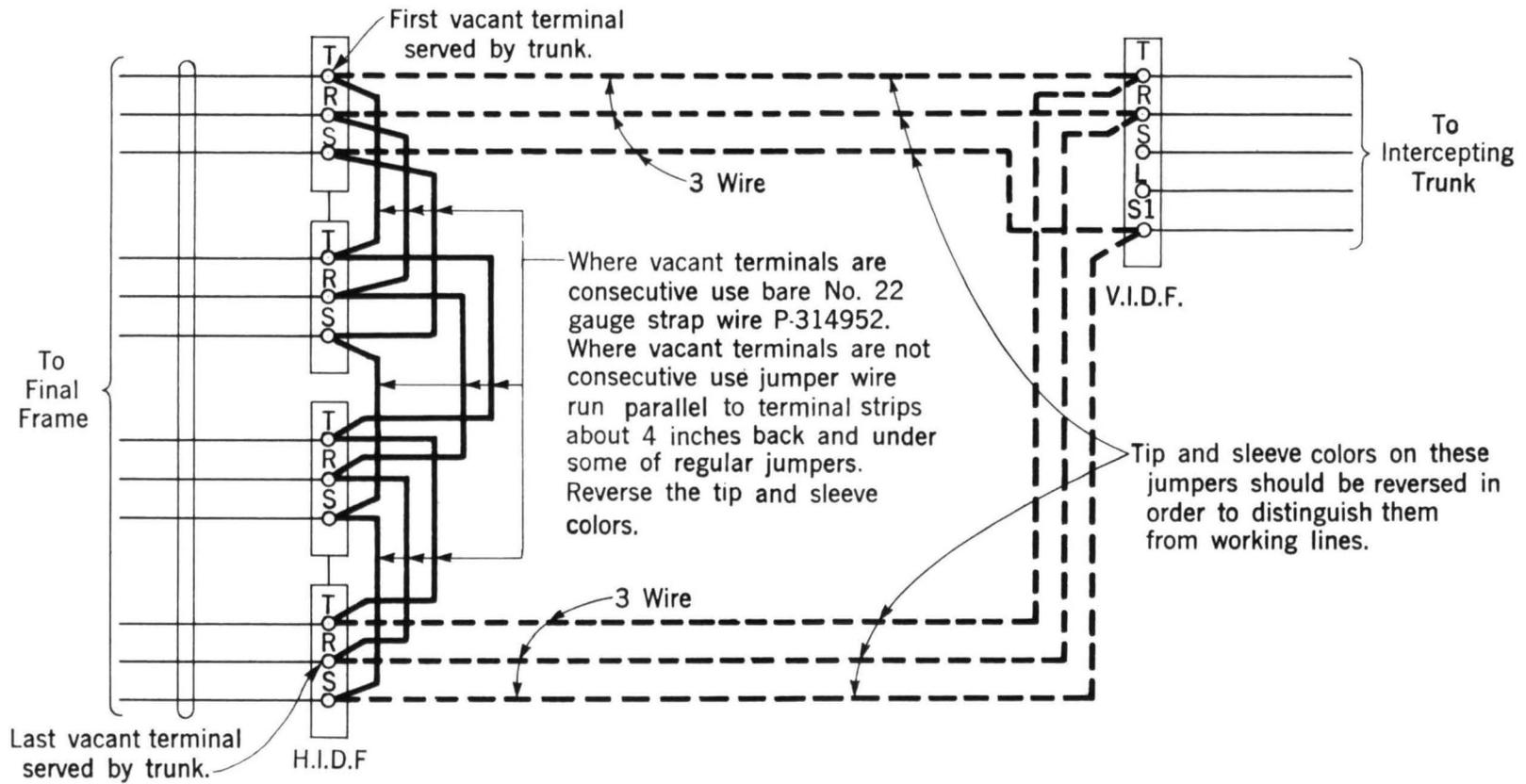


Fig. 7 - Common Intercepting Trunks - Terminal Strips Without Three Rows of Terminals for Intercepting Connections - Ground Cutoff Relay Offices.

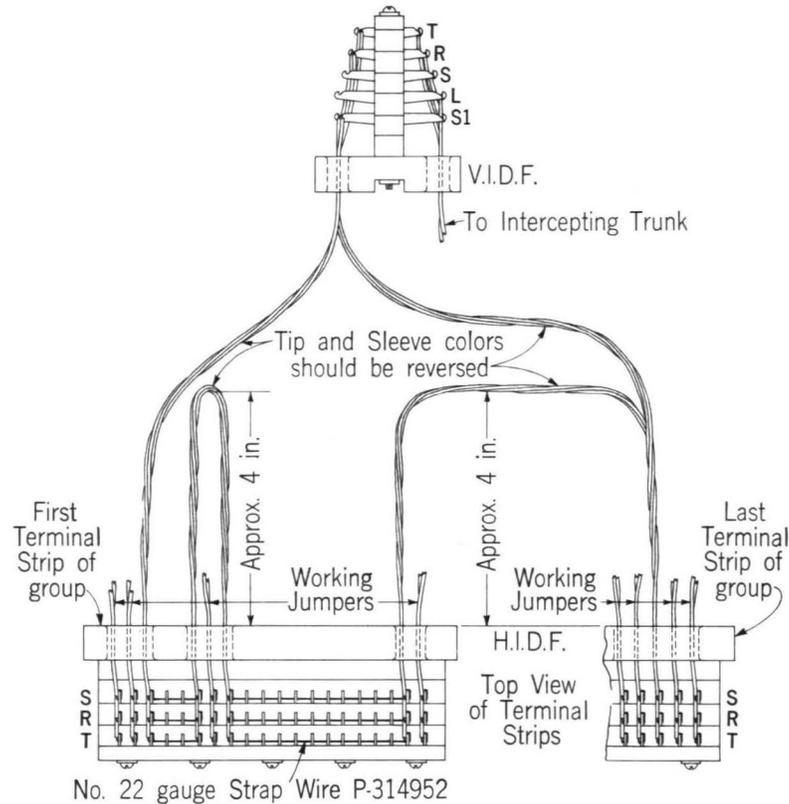


Fig. 8 - Common Intercepting Trunks - Typical Arrangement of Cross-Connections - Terminal Strips Without Three Rows of Terminals for Intercepting Connections - Ground Cutoff Relay Offices.

ring and sleeve respectively of the intercepting trunk. When routed to the announcement machine connect the regular tip terminal to the ring of the intercepting trunk, the regular ring terminal to the tip of the intercepting trunk and the regular sleeve terminal to the sleeve of the intercepting trunk.

3.25 Where a group of vacant terminals of the same class of intercepting within the group of terminals served by one intercepting trunk is consecutive, connect only the highest numbered terminal of the consecutive group to the intercepting trunk and leave the remaining terminals open (see Fig. 10). Vacant terminals occurring singly should each be connected with the intercepting trunk. These jumpers should be run parallel to the terminal strips about four inches back of the strips and under some of the regular jumpers on the shelf. The tip and sleeve

colors of these cross-connections should be reversed.

Note: When rearranging these connections the wire in place should be reused as long as the four-inch slack can be approximately obtained.

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3.26 Two triple cross-connections should be run from the intercepting trunk terminals on the V.I.D.F. They should be long enough to reach any final terminal in the group which the trunk serves. These jumpers should not be shortened when rearrangements are made but any slack should be disposed of by running the jumpers through the distributing frame rings so that the normal amount of slack will be provided when the jumper is connected.

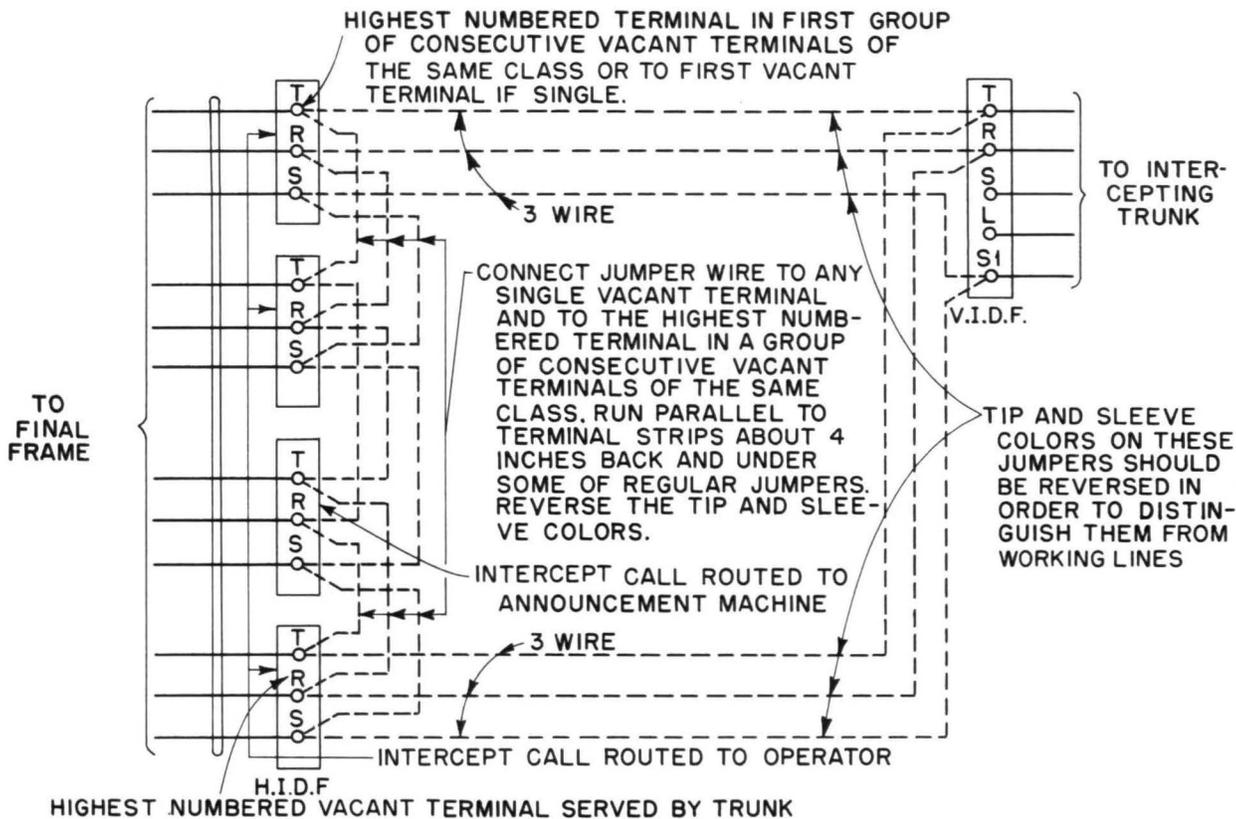


Fig. 9 - Common Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine - Terminal Strips Without Three Rows of Terminals for Intercepting Connections - Battery Cutoff Relay Offices.

3.27 The two cross-connections should be connected to vacant terminals that are routed to the operator, one should be connected to the highest vacant terminal and the other connected to the lowest vacant terminal (see Fig. 11). In the event that all vacant terminals in a group served by one intercepting trunk are routed to the announcement machine, the tip and ring of these two cross-connections should then be reversed. These jumpers should have the tip and sleeve colors reversed to distinguish them from working lines.

3.28 Where vacant terminals of the same class of intercepting (i.e., to be routed either to the operator or to the announcement machine) within the group of terminals served by one intercepting trunk appear in consecutive order, the tip, ring and sleeve terminals should be strapped with No. 22 gauge bare tinned copper wire

as shown in Figs. 11 and 12. This wire is placed around the first and last terminals in the consecutive group and laid in the notches of the intermediate terminals and soldered so that all consecutive vacant terminals in each row are connected together by a continuous piece of wire.

Note: When a vacant terminal is to be connected for service, cut the strap close to the terminal lug and solder the ends of the strap back around the adjoining vacant terminals. When a working terminal becomes vacant in a consecutive group of vacant terminals of the same class of intercepting, add strap wire to connect it to the adjacent terminal. If not of the same class connect the vacated terminal to the intercepting trunk in the regular manner for connecting individual vacant terminals.

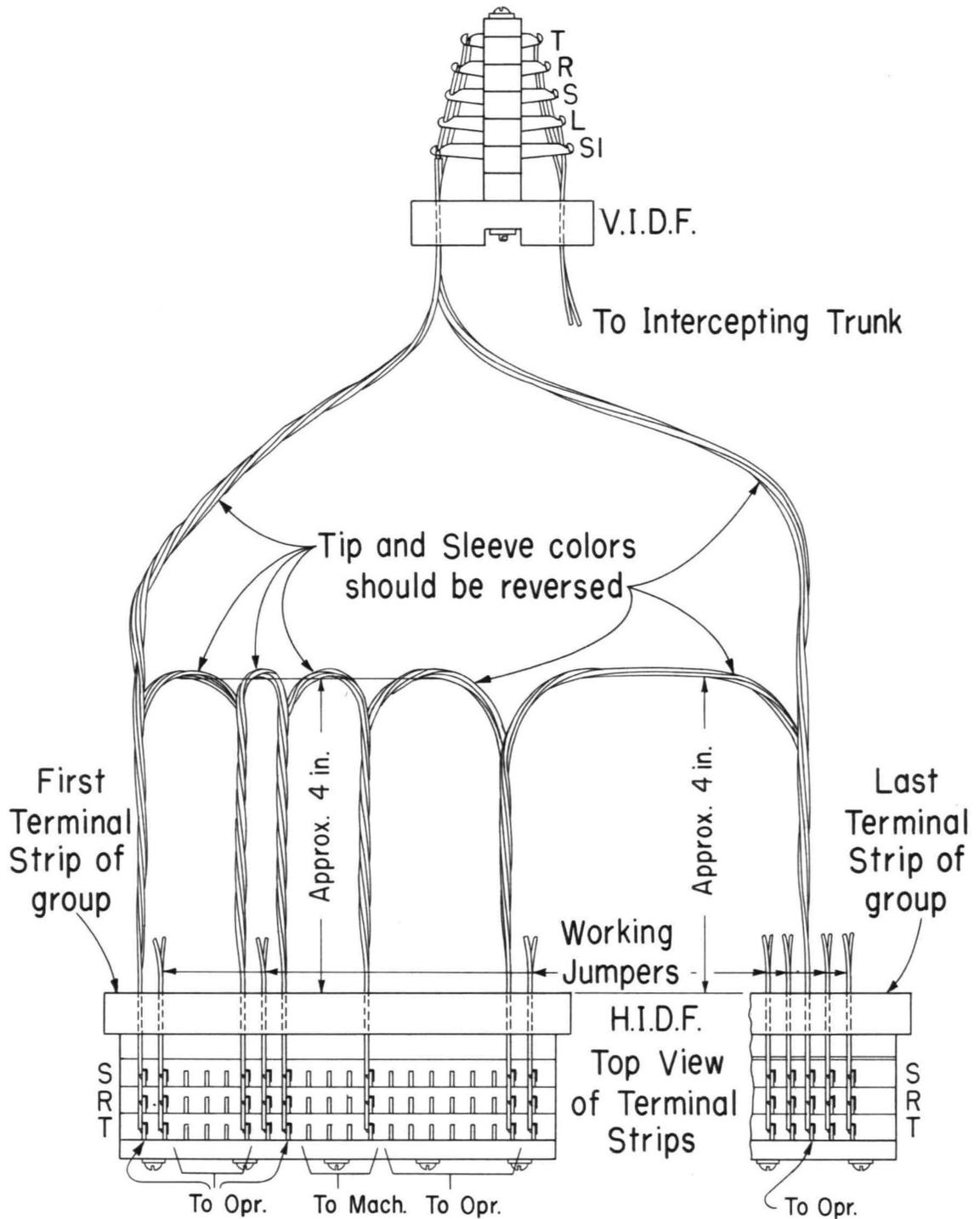


Fig. 10 - Common Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine - Typical Arrangement of Cross-Connections - Terminal Strips Without Three Rows of Terminals for Intercepting Connections - Battery Cutoff Relay Offices.

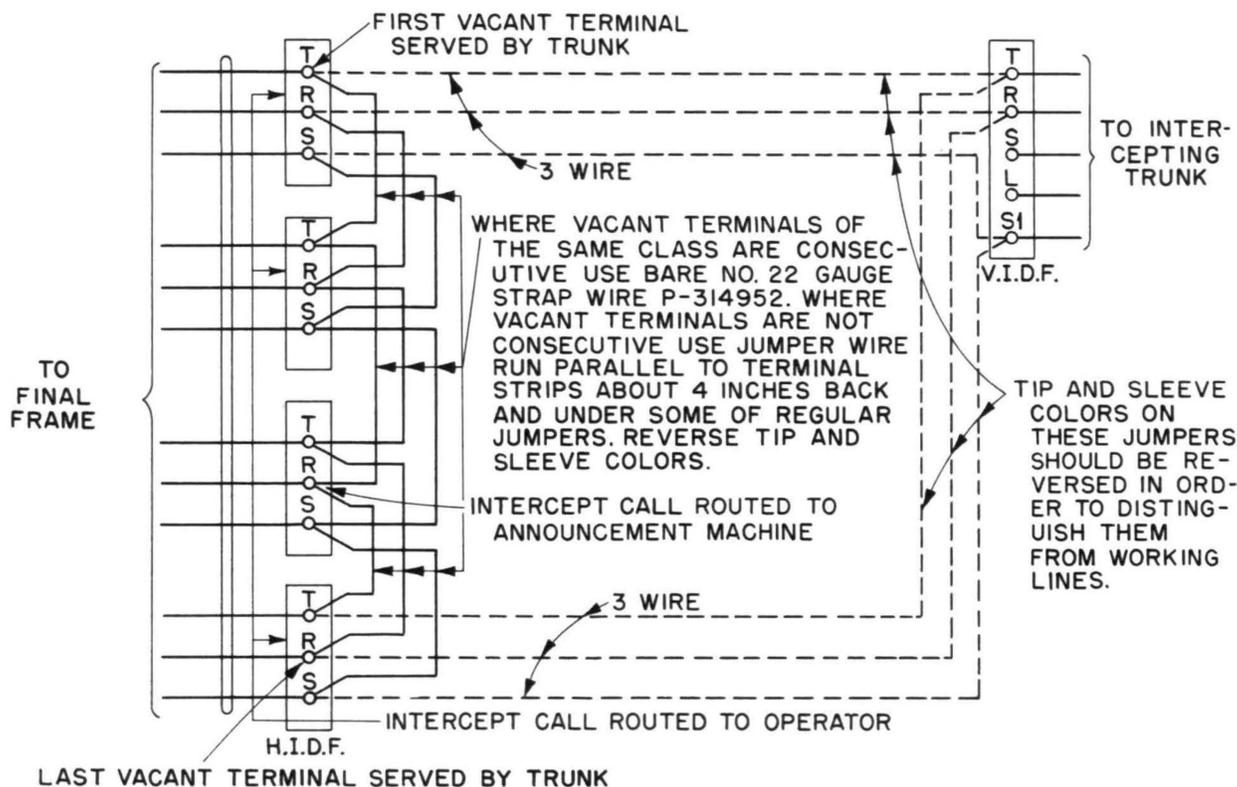


Fig. 11 - Common Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine - Terminal Strips Without Three Rows of Terminals for Intercepting Connections - Ground Cutoff Relay Offices.

3.29 Non-adjacent terminals or groups of terminals should be connected together using triple distributing frame wire (see Figs. 11 and 12). Terminals or groups of terminals that are to be routed to the operator should be connected so that the tip, ring and sleeve are connected to the tip, ring and sleeve, respectively of the intercepting trunk. When routed to the announcement machine connect the tip of the terminal to the ring of the intercepting trunk, the ring of the terminal to the tip of the intercepting trunk and the sleeve of the terminal to the sleeve of the intercepting trunk. These jumpers should be run parallel to the terminal strips about four inches back of the straps and under some of the regular jumpers on the shelf. The tip and sleeve colors of the jumpers should be reversed.

Note: When rearranging these connections the wire in place should be reused as long as the four-inch slack can be approximately obtained.

(E) Individual Intercepting Trunks

3.30 When a vacant final terminal is assigned to an individual intercepting trunk, the vacant T, R and S terminals should be cross-connected to the intercepting trunk terminals on the V.I.D.F., using triple distributing frame wire, with the tip and sleeve colors reversed to distinguish the cross-connection from working subscriber lines.

Note: In a battery cutoff office check that the next lower numbered terminal is connected to either a subscriber line or an intercepting trunk.

3.31 Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine: When a vacant final terminal is assigned to an individual intercepting trunk and calls are to be routed to the operator, cross-connect the vacant T, R and S terminals respectively to the intercepting trunk terminals on the

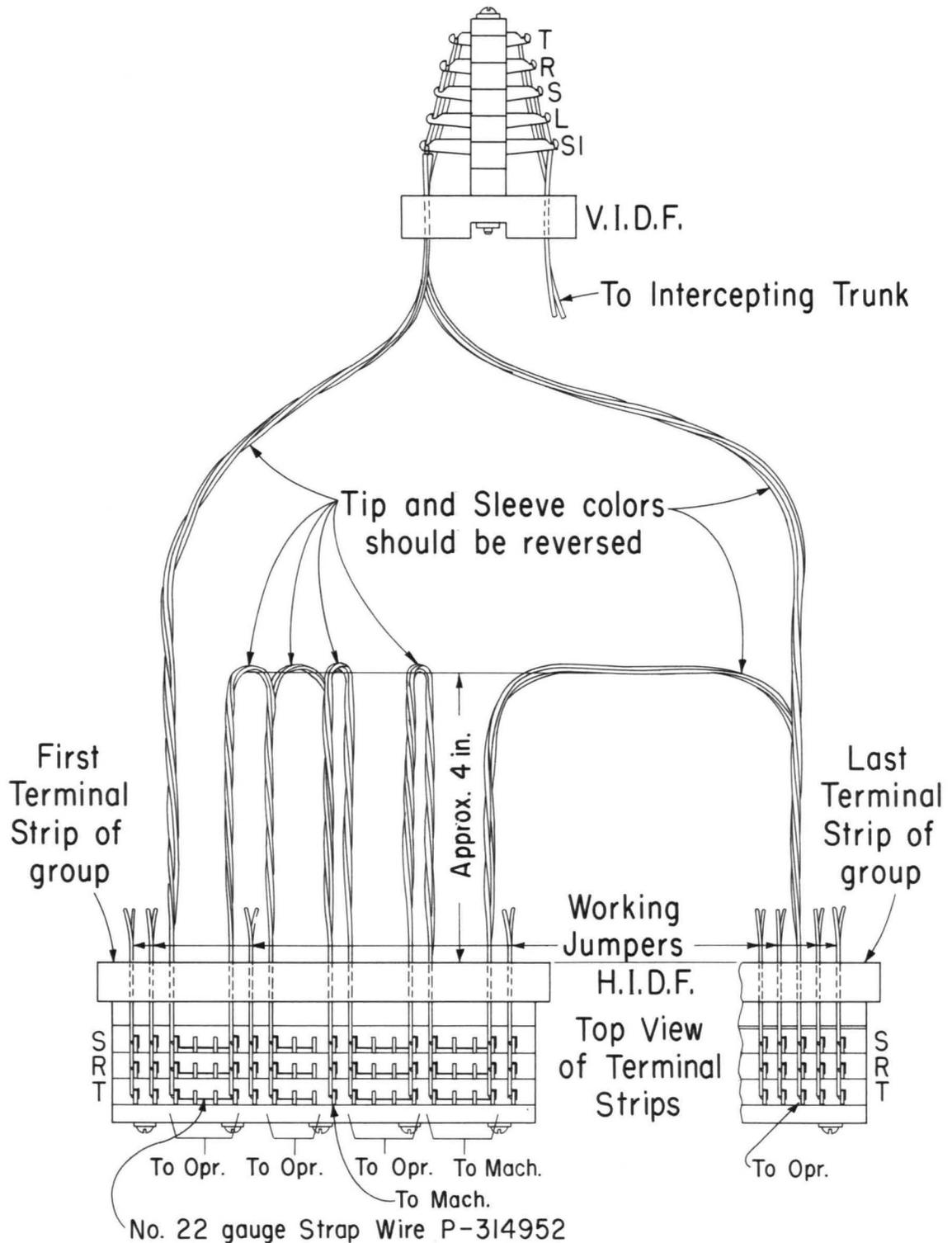


Fig. 12 - Common Intercepting Trunks Arranged to Route Calls Either to an Operator or to an Announcement Machine - Typical Arrangement of Cross-connections - Terminal Strips Without Three Rows of Terminals for Intercepting Connections - Ground Cutoff Relay Offices.

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V.I.D.F. using triple distributing frame wire and when calls are to be routed to the announcement machine connect the tip of the vacant final terminal to the ring of the intercepting trunk, the ring of the vacant final terminal to the tip of

the intercepting trunk and the sleeve of the vacant final terminal to the sleeve of the intercepting trunk. In either case reverse the tip and sleeve colors to distinguish them from working lines.