WIRING AT RISER AND DISTRIBUTION TERMINALS USING 88-TYPE QUICK-CONNECT HARDWARE

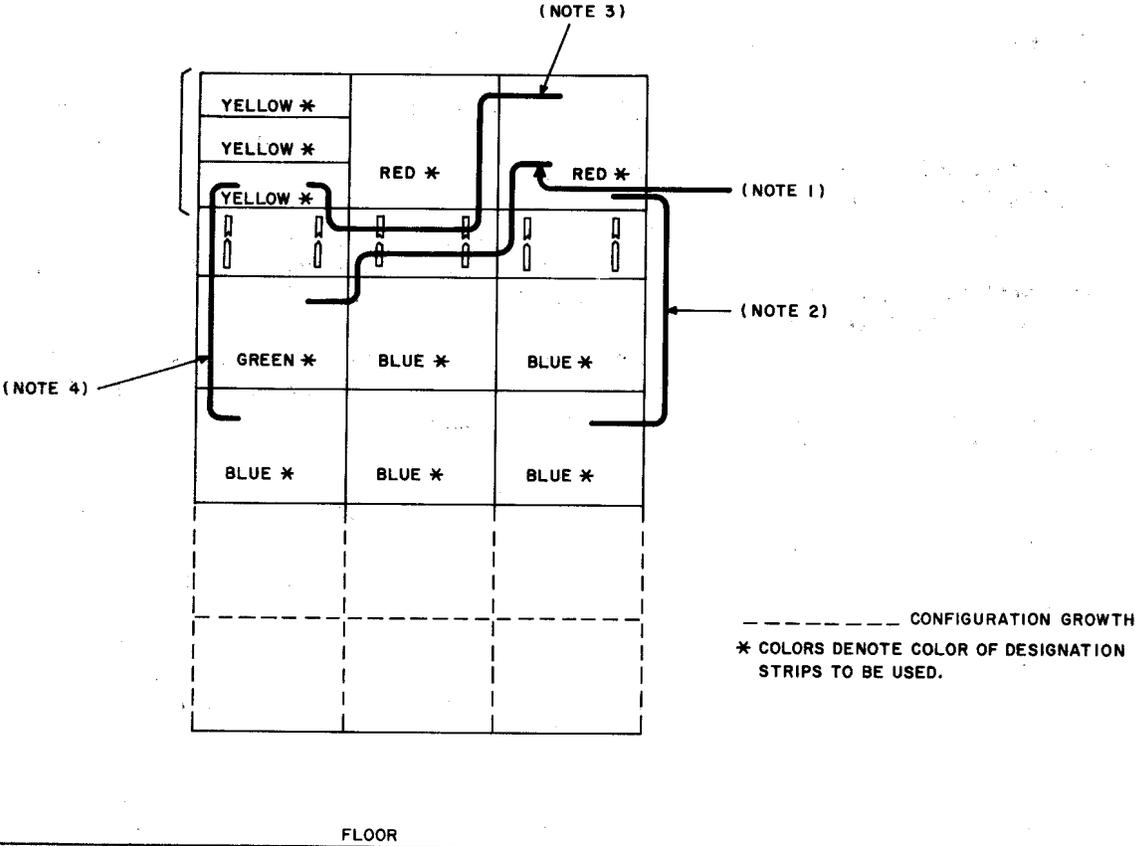## 1. GENERAL

1.01 This section covers the procedures for running cross-connecting wire in building riser and distribution terminals.

1.02 This section is reissued to update text and illustrations to correct tool and apparatus references. The procedures for running cross-connecting wire have not changed. Since this is a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 A *riser terminal (apparatus closet)* provides a location for terminating riser and building cables for further distribution within a building. These terminals are constructed as outlined in Section 631-460-202.

1.04 A *distribution terminal (satellite closet)* provides terminating facilities for both distribution cable and station cable wiring. These terminals are constructed as outlined in Section 631-470-202.

1.05 All cable pairs and station wiring must be permanently terminated. All interconnections are made with cross connections.

1.06 The method of terminating the cross-connecting wire on 88-type connecting blocks is outlined in Section 631-050-120.

2. RUNNING CROSS-CONNECTING WIRE IN RISER TERMINAL WHICH DIRECTLY SERVES STATIONS

2.01 When running cross-connecting wire in a riser terminal which directly serves stations (Fig. 1), the cross-connecting wire is run from GREEN field to RED field to BLUE field. The other connections illustrated in Fig. 1 are for reference only.

(a) Using a single pair insertion tool (see Note), terminate the 2-conductor cross-connecting wire to the tip and ring terminal on which the assigned CO/PBX pair is connected (GREEN field).

> *Note:* Single pair insertion tool may be 788D-type tool or D impact tool. When using 788D-type tool, remember that black side of tool head is the cutting side.

(b) Route the cross-connecting wire through the fanning slot and up the side of the feeder wiring block to the horizontal row of distribution rings on the 188B1 backboard. Run wire through the distributing rings and up to the assigned line service termination on the wiring block for key telephone equipment (RED field).

(c) Run wire (3 pairs) from line service termination (RED field) to key telephone set termination (BLUE field).

(d) Leave 3 inches of slack at each termination to facilitate future tracing and repair.

(e) Repeat steps (a) through (c) for each assignment which directly serves stations.

(NOTE 3)

YELLOW *

YELLOW *

RED *   RED *   (NOTE 1)

YELLOW *

(NOTE 2)

GREEN *   BLUE *   BLUE *

(NOTE 4)

BLUE *   BLUE *   BLUE *

_ _ _ _ _ _ _ CONFIGURATION GROWTH

* COLORS DENOTE COLOR OF DESIGNATION
STRIPS TO BE USED.

FLOOR

NOTE	LINE PURPOSE	F CROSS CONNECTING WIRE
1	CO/PBX	2-conductor: from GREEN field (line pickup) to RED field (key equipment termination)
2	Key telephone button with basic line service	6-conductor: from RED field (line service termination) to BLUE field (key telephone set termination)
3	Key telephone button with basic line service	2-conductor (for ringing): from YELLOW field (auxiliary apparatus) to RED field (key equipment termination)
4	Auxiliary and dial intercommunication service	2-conductor: from YELLOW field (auxiliary apparatus) to BLUE field (key telephone set terminations)

Fig. 1—Pattern for Running Cross-Connecting Wire in Terminal Which Directly Serves Stations

3. RUNNING CROSS-CONNECTING WIRE IN RISER TERMINAL SERVING DISTRIBUTION TERMINAL

3.01 Basic line service from a riser terminal to a distribution terminal requires a building tie cable between the two terminals. This cable will be terminated on the distribution wiring blocks (BLUE field) located on the bottom in the riser terminal illustrated in Fig. 2.

3.02 The patterns for running cross-connecting wires in a riser terminal serving distribution terminal are shown in Fig. 2.

3.03 Terminate and run a 2-conductor (1 pair) cross-connecting wire from the CO or PBX wiring blocks (GREEN field) to the wiring blocks for key equipment terminations (RED field) and 6 conductors to key telephone set termination (BLUE field) as outlined in paragraph 2.01(a) through (c).

3.04 Direct line service can be obtained by running a 2-conductor cross-connecting wire from the CO wiring block to the distribution wiring block (tie cable termination) as follows:

(a) Using a single pair insertion tool (see Note), terminate the 2-conductor cross-connecting wire to the tip and ring terminal on which the assigned CO/PBX pair is connected (GREEN field).

Note: Single pair insertion tool may be 788D-type tool or D impact tool. When using 788D-type tool, remember that black side of tool head is the cutting side.

(b) Place the cross-connecting wire in the fanning slot; run down the side of the wiring blocks to the assigned terminal on the distribution wiring block (BLUE field). Leave 3 inches of slack at each termination so that cross-connecting wire can be formed to back of wiring block.

4. RUNNING CROSS-CONNECTING WIRE IN DISTRIBUTION TERMINAL SERVED BY RISER TERMINAL

4.01 The pattern for running cross-connecting wire from line termination wiring blocks (RED field) to station set termination wiring blocks (BLUE field) in distribution terminal served by riser terminal is shown in Fig. 3.

4.02 Using a single pair insertion tool, terminate the cross-connecting wire on the assigned terminal of the wiring block for line termination (RED field) on the 88-type connecting block. Feed the wire through the fanning slot and route down along the back side of the wiring block, through the distribution ring to the assigned terminal of the wiring block for station set termination (BLUE field).
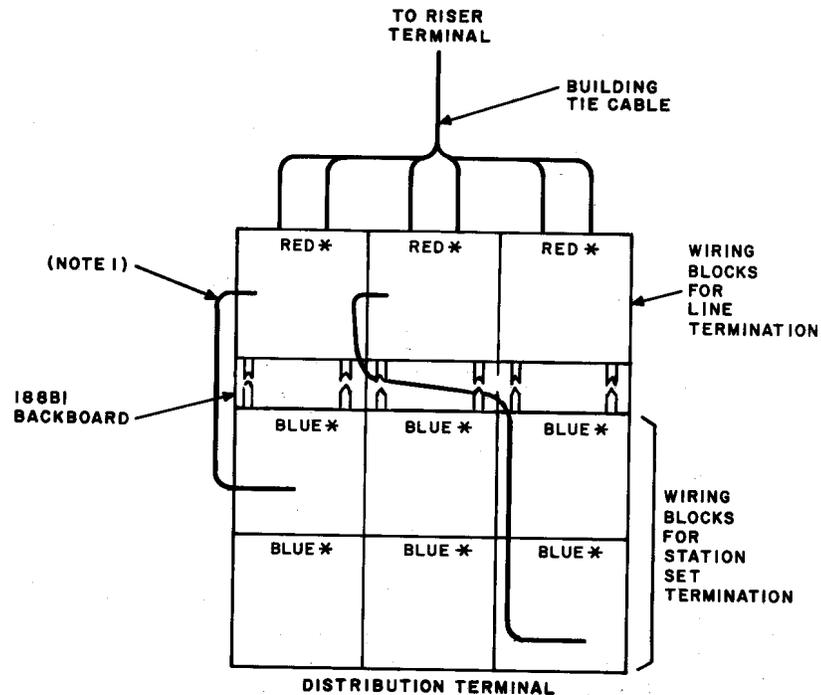
4.03 Leave 3 inches of slack at each termination to facilitate future tracing and repairing.
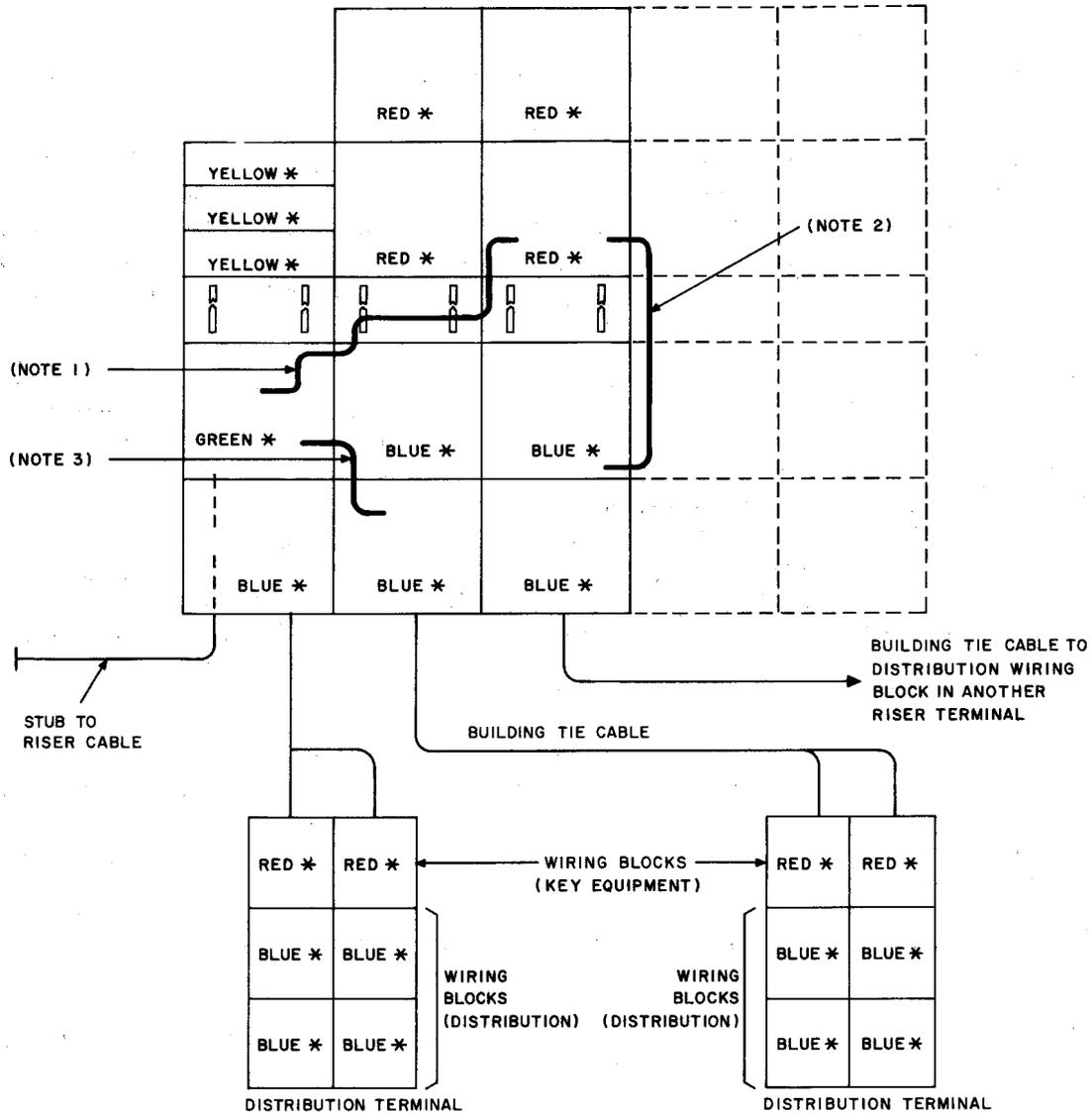
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CONFIGURATION GROWTH
* COLORS DENOTE COLOR OF DESIGNATION STRIPS TO BE USED.
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NOTE	LINE PURPOSE	F CROSS CONNECTING WIRE
1	CO/PBX	2-conductor: from GREEN field (line pickup) to RED field (key equipment termination)
2	Key telephone button with basic line service	6-conductor: from RED field (line service termination) to BLUE field (tie cable termination)
		2-conductor (for ringing): from RED field (line service termination) to BLUE field (tie cable termination) or from RED field (line service termination) to YELLOW field (auxiliary services) to BLUE field (tie cable termination)
3	Direct Line	2-conductor: from GREEN field (CO/PBX) to BLUE field (tie cable termination)

Fig. 2—Pattern for Running Cross-Connecting Wire in Riser Terminal Serving Distribution Terminal

TO RISER
TERMINAL

BUILDING
TIE CABLE

(NOTE I)

| RED✳ | RED✳ | RED✳ |

WIRING
BLOCKS
FOR
LINE
TERMINATION

I88BI
BACKBOARD

| BLUE✳ | BLUE✳ | BLUE✳ |

| BLUE✳ | BLUE✳ | BLUE✳ |

WIRING
BLOCKS
FOR
STATION
SET
TERMINATION

DISTRIBUTION TERMINAL

✳COLORS DENOTE COLOR OF DESIGNATION STRIP
TO BE USED

NOTE	LINE PURPOSE	F CROSS CONNECTING WIRE
1	Key telephone button with basic line service	6-conductor: from RED field (line service termination) to BLUE field (station set termination). 2-conductor: from RED field (line service termination) to BLUE field (station set termination)

Fig. 3—Pattern for Running Cross-Connecting Wire in Distribution Terminal

5. RUNNING CROSS-CONNECTING WIRE IN INSIDE DISTRIBUTION TERMINAL FOR APARTMENT BUILDINGS

5.01 The pattern for running cross-connecting wire in an inside distribution terminal for apartment buildings is illustrated in Fig. 4.

5.02 Using a single pair insertion tool, terminate the cross-connecting wire to the assigned feeder pair located on the feeder wiring block (GREEN field). Route the cross-connecting wire along the indicated paths to the distribution wiring blocks (BLUE field) (Fig. 4), then terminate to the assigned apartment unit. Leave 3 inches of slack at each termination to facilitate future tracing and repairing.
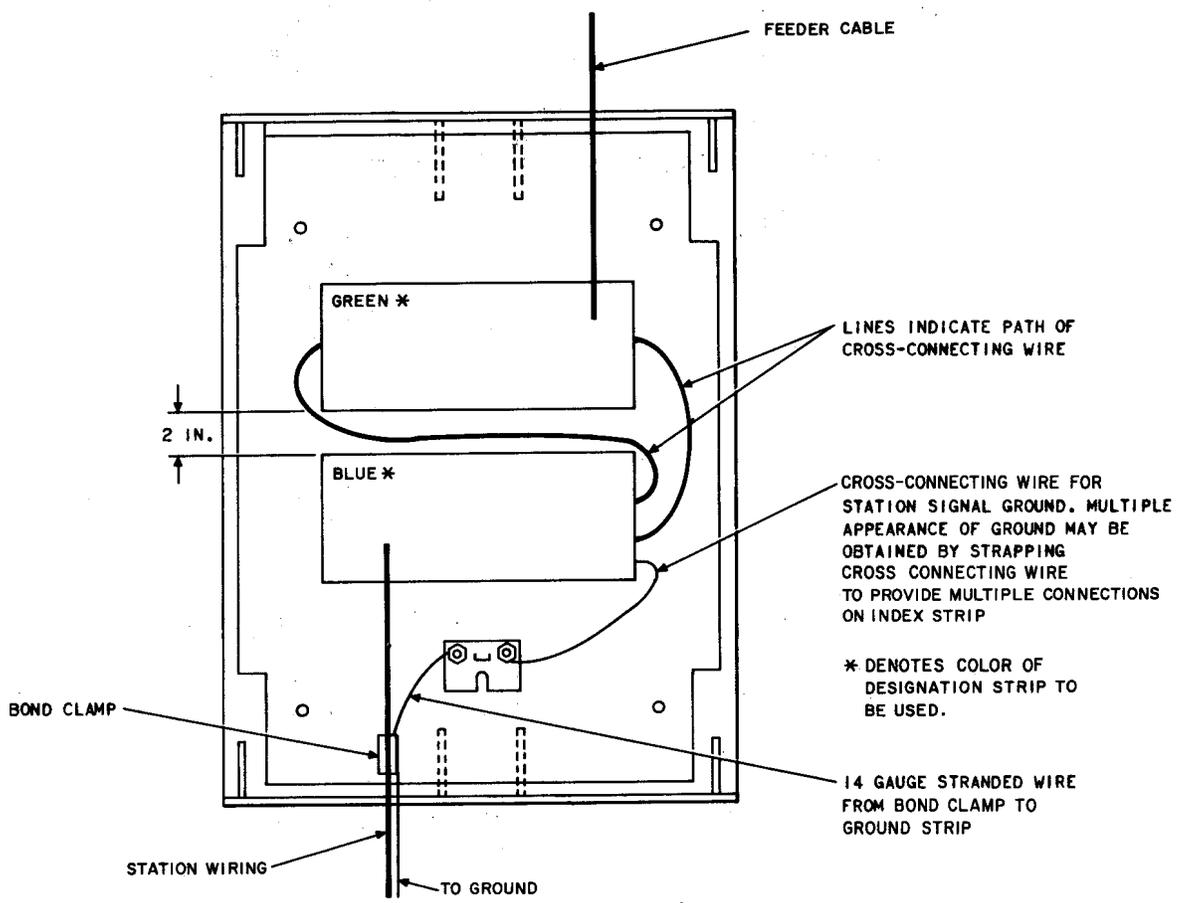
FEEDER CABLE

GREEN ✱

2 IN.

BLUE ✱

BOND CLAMP

STATION WIRING

TO GROUND

LINES INDICATE PATH OF
CROSS-CONNECTING WIRE

CROSS-CONNECTING WIRE FOR
STATION SIGNAL GROUND. MULTIPLE
APPEARANCE OF GROUND MAY BE
OBTAINED BY STRAPPING
CROSS CONNECTING WIRE
TO PROVIDE MULTIPLE CONNECTIONS
ON INDEX STRIP

✱ DENOTES COLOR OF
DESIGNATION STRIP TO
BE USED.

14 GAUGE STRANDED WIRE
FROM BOND CLAMP TO
GROUND STRIP

Fig. 4—Pattern for Running Cross-Connecting Wire—Inside Distribution Terminal

6. REMOVING CROSS-CONNECTING WIRE

6.01 When it is necessary to remove a cross-connecting wire from a connecting block, use long-nose pliers as illustrated in Fig. 5.

6.02 Remove any small pieces of insulation remaining around the connecting block with an insulated tool such as a KS-6320 tool (orange stick).

6.03 To reterminate a wire which has been removed for rearrangement, cut off the old contact portion and terminate as outlined in paragraph 2.01(a) through (e).

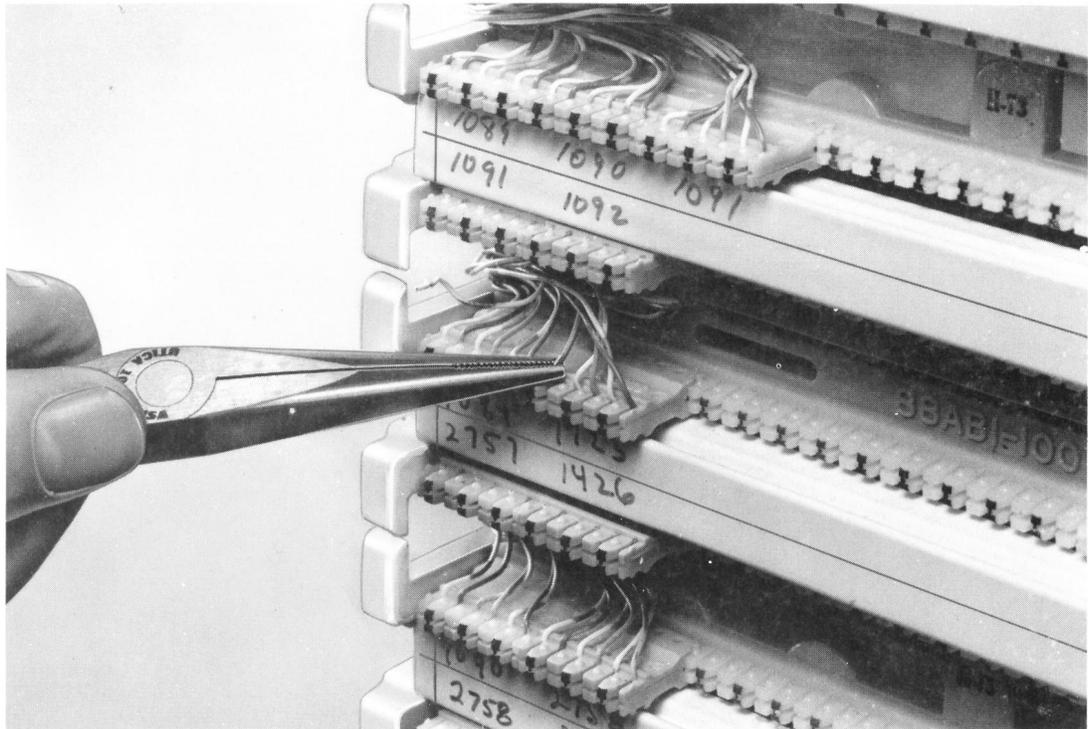**6.04** In event the connecting block is damaged *do not attempt to repair it. Replace* the connecting block as outlined in Section 631-050-120.

Fig. 5—Removing Cross-Connecting Wire