

PROCEDURE FOR SPLICING  
CROSS CONNECTIONS • DISTRIBUTING FRAMES

CONTENTS	PAGE
1. GENERAL . . . . .	1
2. OVERVIEW . . . . .	1
3. PROCEDURE . . . . .	1
Preparing to Splice . . . . .	1
Splicing . . . . .	2
4. INSPECTION . . . . .	3
5. TESTING . . . . .	3

1. GENERAL

1.01 This practice presents the recommended methods and procedures for splicing distributing frame jumpers on the horizontal side of the distributing frame.

2. OVERVIEW

2.01 The information in this practice applies only to jumpers located on the horizontal side of the distributing frame.

2.02 This practice supplements the information found in Practice 256-150-200, Procedures for Cross-Connecting (Jumpering), Central Office Distributing Frames.

2.03 This splicing technique has been approved for use with 22 AWG jumper wire only.

2.04 The specifications for the solder sleeve for 22 AWG jumper wire are:

Description	Solder Sleeve
Part Number	c-110-0057
Material Code	746400
Identification	Black dot on one end

2.05 This procedure has been approved for:

- Consolidating lines from a 2 x 25 or 4 x 25 terminal block to an 8 x 25 connectorized terminal block.
- Relocating lines from a non-connectorized terminal block to a connectorized terminal block in preparation for the digital switch cutover.
- Extensive distributing frame jumper rearrangement activity if it is the most economical procedure.

2.06 This splicing technique does not replace the established procedure for splicing switchboard cable as outlined in other practices.

3. PROCEDURE

Preparing to Splice

3.01 All work involving jumpers carrying working circuits should be done during the light traffic hours (i.e., 11 p.m through 6 a.m).

3.02 Prepare to splice as follows:

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STEP PREPARING TO SPLICE

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**CAUTION:** Remove and discard the instruction sheet supplied with each box of solder sleeves. This sheet does not describe the procedure for "hooking-he wires as follows in this practice. All splices will be straight splices.

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1 Notify the Office Switching Services Superintendent so that he or she knows what to expect whenever the jumper has to be pulled out.

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2 Prepare the work location with sufficient protection to prevent wire ends (clippings) from coming into contact with other circuits. Use a connecting bag and installer's mat to catch the falling particles and scrap wire ends.

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3 Determine which jumpers require splicing (i.e., the jumper will not "swing" to the new location).

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(continued)

STEP	PREPARING TO SPLICE
4	Run in the new jumper and tie it in the wood. See Exhibit 1.
5	Disconnect the old jumper by cutting it at the terminals.
6	Pull it back to provide good visual access and enough working area to do the splicing.  NOTE: Avoid weaving jumpers through existing jumpers or between the individual conductors of an existing jumper.
7	Untie the new jumper from the wood.

**Splicing**

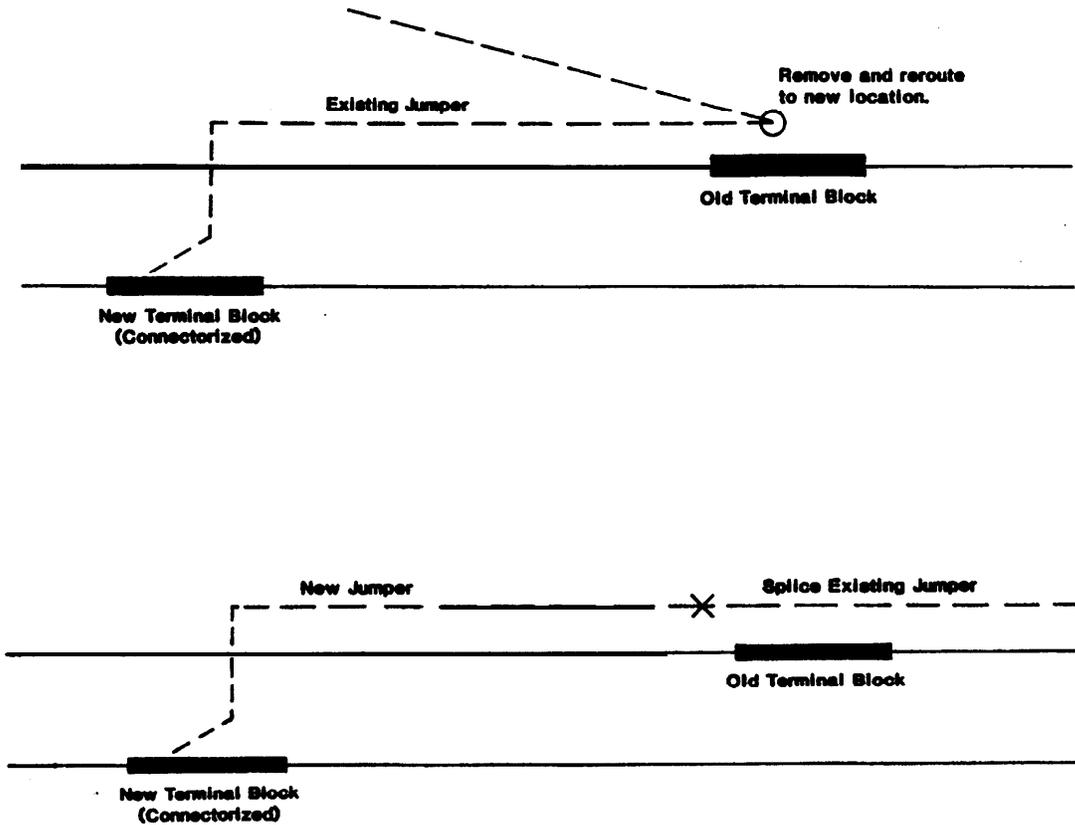
3.03 When splicing, keep the following in mind:

- The new connecting location will pull out the excess slack by leaving the proper amount of slack behind the terminal block (5 inches of slack).
- To avoid errors, verify the color code each time a splice is performed. Splice the jumper with the same type wire.

3.04 Use the following tools when splicing:

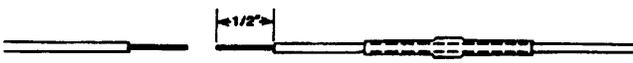
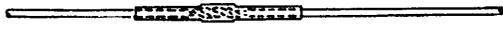
- Master-Mite heat gun, Model 10008, or equivalent.
- Master-Mite element, Model 20013 (500 watts), or equivalent.
- Master-Mite deflector, Model 30201, or equivalent.

**Running and Tying the Jumper**



**Exhibit 1**

3.05 To perform the splice, first prepare to solder as follows:

- | STEP | PREPARING TO SOLDER  |
|------|--|
| 1    | Slide the solder splice over one wire before stripping the wire.   |
| 2    | Strip each wire 1/2 inch.  |
|      |   |
| 3    | Twist the bare wire ends together. Make at least two full twists keeping the wire ends as tight as possible against the splice.  |
|      |   |
| 4    | Center the solder sleeve over the twisted wires, overlapping the insulation 1/8 inch (minimum) at both ends.   |
|      |   |
| 5    | Using the IR-550 heating tool, place the wire assembly to be soldered in the RG-5 reflector so the wire will rest on the plastic stops mounted on each end of the reflector. |

3.06 Soldering the assembly only takes three to four seconds. Proceed as follows:

- | STEP | SOLDERING THE SPLICE  |
|------|---|
| 1    | Squeeze the handle trigger until the solder ring starts to melt and form around the wire. |

- 2 Move the heating tool to both sides of the solder ring momentarily to shrink the tubing.

CAUTION: Do not overheat the tubing. Overheating shrinks the tubing and displaces the wire insulation.



#### 4. INSPECTION

- 4.01 Visually inspect the splice for the following conditions:

IF THE SPLICE IS. .. THEN THE. ..

Properly heated	Solder has flowed and disappeared. A good covering of solder is between the wires.
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Underheated	Solder has collapsed and started to melt. However, the hooked wire is still visible.
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Overheated	Excess has caused the transparent tubing to blacken so you can no longer see through it.
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#### 5. TESTING

- 5.01 Test:

- All distributing frame work upon completion.
- The integrity of the splice in the appropriate manner.

- 5.02 Testing procedures will vary in Non-SATT and SATT offices.