SHIELDED CABLES AND WIRES
COMMON REQUIREMENTS FOR THE PREPARATION OF SHIELDED WIRE FOR TERMINATION

CONTENTS

1. GENERAL

1.1 Scope of Section

1.11 This section covers the common requirements and method for locating and insulating the shields of shielded wires and when to make crimp type shield connections.

1.12 The requirements covered in this section shall be followed except as modified by applicable specifications and drawings.

1.2 Arrangement of Tools, Precautions and Verification

1.21 Refer to Section 700 of Handbook 9 for information pertaining to these items.

2. INSTALLING EQUIPMENT

2.1 In addition to the tools and supplies ordinarily required for connecting operations, the following are required for the operations covered by this section:

R-3131 Sleeving,KS-7851,No. 6 Black
RM-628413 Sleeving,KS-7851,No. 18 Black
R-3359 Tape,Gray Plastic Adhesive,1/2"

3. REQUIREMENTS AND METHODS

3.1 Location of Shield Terminations

3.11 The shields of shielded wires shall be terminated in accordance with the bay cabling plan drawings.

3.111 If the bay cabling plan drawings do not specify the point of termination, in general, terminate the shield of shielded wires and cables 1-1/2 inches from the terminals of apparatus whether the ends of the shield are to be grounded or not.

3.112 In Local cables, when the general 1-1/2 inch dimension cannot be maintained, terminate the shield as close as practicable to the break cut point.

3.113 At terminal strips with fanning strips, terminate the shield as close as practicable to the back of the associated hole in the fanning strip.

3.114 At 224 (well) type terminal strips, when the shielded wire is to be connected to the front (apparatus side) of the terminal strip, terminate the shield just in back of the associated grommet in the mounting place.

3.115 At D-type terminal strips when the shielded wire is to be connected to the front (apparatus side) of the terminal strip, terminate the shiel just in back of the throat of the terminal strip.

3.2 Insulation of Exposed Shields and Bare Shield Ground Wires

3.21 Protect the exposed shields and bare ground wires of shielded wiring from framework other than that framework where shields are grounded, othe potentials, apparatus terminals, or insulated wires having other than braided, EDACL, Pe, or PVC insulation, when the clearance from the shield or bare ground wire is less than 1/8 inch.

NOTE 1: An exception to the above general requirement is the case of shielded pairs of 750-type or 479M cables in the ducts of duct-type bays. In this case, the bare shields need not be protected from touching the inside of ducts, unless otherwise specified on drawings.

3.211 Insulate the exposed shields of shielded cable pairs, when required, with No. 6 black sleeving (R-3131) held in place by R-3359 tape.

3.212 Insulate the bare shield ground wires when required with No. 18 black sleeving (RM 628437).

3.3 When to Make Crimp Type Connections

3.31 When the wiring diagram indicates that the shield of a shielded wire is to be connected to a terminal, another shield, or a No. 6 ground wire, proceed as follows:

3.311 BF and BS Type Wire

(a) When the inner and outer sleeves are ordered in the job specification, make all shield connections by means of a solderless crimped connection. Refer to Section 730 for the method of removing the shields and for crimping instructions.

3.4 Skinning Pe and Textile Insulated Wires

3.41 Skin textile insulated wires using the wire skinning tool (R-3088) for soldered connections or the wire cutting and skinning pliers (R-3305) for wire wrapped connections.

➔ Arrowed lines indicate new or changed information.

Vertical lines at side of paragraphs indicate requirements.

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REASON FOR REISSUE:
To replace reference to R-3300 with R-3305.

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Installation Engineering Handbook 9 U.I.S. Section 730
Western Electric Company, Incorporated 8-1-79
Merrimack Valley Works

URGENT INSTRUCTION OR INFORMATION SUPPLEMENT
SHIELDED CABLES AND WIRES
PREPARATION OF SHIELDED CABLE FOR TERMINATION

1. GENERAL

1.1 To provide additional information in the use of Tool, R-3457 for processing 750, 761 and 763 type twisted pair shielded cables.

1.2 To change the information concerning permissible conductor dielectric damage in Para. 4.94, Note 1; delete "A slight nicking of the conductor's dielectric.....not exceed 1/64" in depth."

1.3 To delete reference to the specific common tools for removing outer covers on 762A, 764A, 763A, etc., cables.

2. INSTRUCTIONS

2.1 In Para. 4.94, Note 1, change to read as follows:

A. Prior to performing the above operation, flatten the cable as much as possible by bending it back and forth, several times, over the forefinger of one hand. This is necessary to insure the proper orientation as shown in Figure 10 (there should be sufficient flattened length between the cutting point and the front high point of twist to allow the blade to complete its travel on the correct cable orientation). In order to insure a clean shield cut, follow the sequence in Figure 9. Bring the blade down to just touch the cable shield (750) or cable jacket (761, 763) and then make the cut with a quick snap of the tool handle.

B. Care should be taken in preparing cable ends for terminating and grounding to avoid any circumferential groove in the insulation from cutting the shielding. It is desirable that no damage be done to the inner conductor dielectric, but a very slight scoring of the dielectric is permissible (BSP800-612-164, Para. 3.04).

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2. INSTRUCTIONS (Continued)

C. Make Practice butts and strips as outlined in Para. 4.93.

2.2 In Para. 4.94, Note 2; delete "use an R-1682.....of the 762A cable.

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