

BELL SYSTEM PRACTICES
Outside Plant Construction
and Maintenance

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AT&TCo Standard

CABLE SPLICING—GENERAL

PIC CABLE—CA-1727 TYPE

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1. GENERAL

1.01 This section covers the core make-up and color code of polyethylene insulated conductor cables furnished under Drawing CA-1727.

1.02 This section covers CA-1727 cable supplied after November 1957. Early prototypes existing in the plant will not agree with the information contained herein and are not covered in existing G Sections.

1.03 The section also covers the matching cables furnished under Drawings CA-1811 and CA-1851. These cables are wire armored.

2. DESCRIPTION

2.01 These are low capacitance (19-gauge 066 MF) cables consisting of copper conductors with solid polyethylene insulation, paired and arranged in layers or units, depending on the total number of pairs in the cable.

2.02 The core of these cables has a rubber-mylar tape wrapper that is applied lengthwise with an overlap. The cables are furnished with alpeth or PAP sheath except for the single and double armored submarine types which have lepeth sheath. The alpeth or PAP sheath may have gopher tape, buried tape armor, or aerial tape armor protection. The light wire armored cables are furnished with PAP sheath only.

2.03 In the wire armored cables one or two extra pairs are provided to serve as replacements in case there are defects in the remaining pairs. The extra pairs are distinctively

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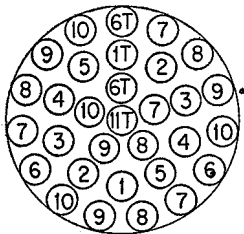
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colored to distinguish them from the other pairs in the cable. In unit-type cables the extra pairs are located outside of the unit binding strings in the space between the units. In layer-type cables the extra pairs are included in the layers.

2.04 Color Code: These cables are made up of thirteen distinctively colored pairs (three are tracers). Each layer in the layer-type cables and each unit in the unit-type cables contains as many as 5 different colored pairs, which repeat as required. Adjacent layers have different tracers and different sets of pairs. The center consists of a tracer or a tracer and two other pairs, depending on the size of the unit or cable.

2.05 Layer Design: The following sketch of a 31-pair cable illustrates a typical arrangement of pairs in these cables.

31 Pair Cable, CA-1727



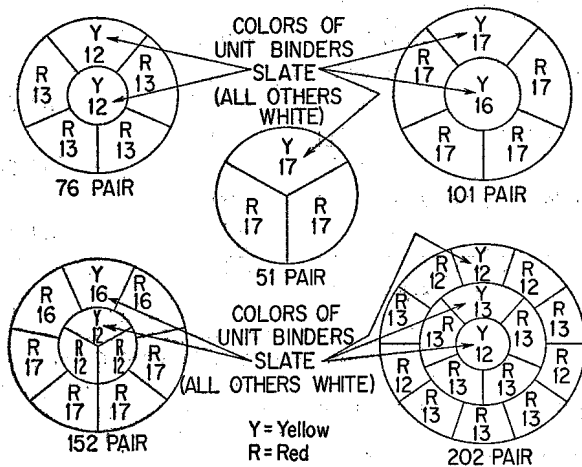
	Pair Reference	Color Code	
		Tip	Ring
	1	Red	- Green
	2	Red	- Blue
	3	Red	- White
	4	Red	- Brown
	5	Red	- Black
Tracer	1T	Green	- White
	6	Yellow	- Green
	7	Yellow	- Blue
	8	Yellow	- White
	9	Yellow	- Brown
	10	Yellow	- Black
Tracer	6T	Green	- Blue
Tracer	11T	Green	- Black

2.06 The pair layout and number of pairs in each layer of the various size layer cables are indicated below:

Cable Size	Number of Pairs in Layers								
	Center	1st Layer	2nd Layer	3rd Layer	4th Layer	5th Layer	6th Layer	7th Layer	8th Layer
16	1	5	10						
26	3	9	14						
31	1	5	10	15					
51	1	5	10	15	20				
76	1	5	10	15	20	25			
101	3	9	14	20	25	30			
152	1	5	8	13	15	20	25	30	35
202	3	9	15	20	25	30	30	35	35

The 16-, 26-, and 31-pair sizes are currently made in layer construction only. The remaining sizes, 51 thru 202 can be either layer or unit construction.

2.07 **Unit Design—51-, 76-, 101-, 152- and 202-Pair Sizes:**
The following illustrates the arrangement of units in these cables.



The numbers in the units denote total number of pairs in the unit. The letters in the units indicate color of insulation for one conductor of each pair, other than the tracer pair, in the outside layer of each unit.

2.08 **Pair Layup in Individual Units:** The following shows the pair layup in the various sizes of units.

<u>Pairs Per Unit</u>	<u>Layer</u>	<u>Pair Reference Number* and Layup</u>
12 (Y)	Center	1T, 2, 3
	1st	6T, 7, 8, 9, 10, 7, 8, 9, 10
12 (R)	Center	6T, 7, 8
	1st	1T, 2, 3, 4, 5, 1, 2, 3, 4
13 (Y)	Center	1T, 2, 3, 4
	1st	6T, 7, 8, 9, 10, 7, 8, 9, 10
13 (R)	Center	6T, 7, 9, 10
	1st	1T, 2, 3, 4, 5, 1, 2, 3, 4
16 (Y)	Center	11T
	1st	1T, 2, 3, 4, 5
	2nd	6T, 7, 8, 9, 10, 6, 7, 8, 9, 10
16 (R)	Center	11T
	1st	6T, 7, 8, 9, 10
	2nd	1T, 2, 3, 4, 5, 1, 2, 3, 4, 5
17 (Y)	Center	11T
	1st	1T, 2, 3, 4, 5
	2nd	6T, 7, 8, 9, 10, 6, 7, 8, 9, 10, 8
17 (R)	Center	11T
	1st	6T, 7, 8, 9, 10
	2nd	1T, 2, 3, 4, 5, 1, 2, 3, 4, 5, 3

*The reference number and associated color code of each pair is shown in the illustration following Paragraph 2.05.

2.09 In a unit-type cable, the marker unit (slate binder) in each layer of units is the starting unit for counting purposes. The unit count then progresses around the core **Counter-clockwise, Looking Toward the Central Office** and **Clockwise, Looking Away From the Central Office**. Layer cables are not suitable for pair identification without testing.