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MIL-C-13777/3A
1 September 1966
SUPERSEDING
MIL-C-13777/3
25 March 1963

MILITARY SPECIFICATION SHEET

**CABLE, SPECIAL PURPOSE, ELECTRICAL
16, 17, 18, 19, AND 20 CONDUCTORS**

The complete requirements for procuring the cable described herein shall consist of this document and the latest issue of Specification MIL-C-13777.

REQUIREMENTS:

Dimensions and configuration: See applicable figure and design data for the following cable types:

160636	81613758	180675	81909658	200935
81608788	170752	180848	1911108	
1610658	170874	8190875	191140	

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DESIGN DATA				
Type Designation	160636	S160878S	161065S	
Figure No.-----	1	2	3	
Total Wires-----	16	16	16	
No. of Conductors & AWG #	16/#20	8/#18	8/#18S 12/#18	4/#18*
Insulation				
Min average thickness----	0.012"	0.015"	0.015"	
Spark Test Voltage-----	3000	3000	3000	
Inspection Test Voltage--	1500	1500	1500	
Coax. Jacket Insulation				
(a) Min average thk.---			0.025"	
Cabling				
Layer No. 1-----	Filler	Filler	Filler	
Layer No. 2-----				
(a) Number of wires----	5	6	4	
(b) AWG #-----	#20	#18	#18S	
(c) Maximum Lay-----	2.0"	2.50"	3.75"	
Layer No. 3-----				
(a) Number of wires----	11	2	8	12
(b) AWG #-----	#20	#18	#18S	#18
(c) Maximum Lay-----	4.5"	5.00"		6.00"
Sheath				
No. of Layers-----	2	1	2	
Total thickness Min-----	0.109"	0.080"	0.100"	
Minimum OD Cable-----	0.616"	0.863"	1.050"	
Maximum OD Cable-----	0.656"	0.893"	1.080"	

Note: * Jacketed Coaxial Wires

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DESIGN DATA					
Type Designation		81613758		170752	170874
Figure No.-----		4		5	5
Total Wires-----		16		17	17
No. of Conductors & AWG #	2/#188	10/#188	4/#6	17/#18	17/#16
Insulation					
Min average thickness----		0.015"	0.060"	0.015"	0.015"
Spark Test Voltage-----		3000	7500	3000	3000
Inspection Test Voltage--		1500	2500	1500	1500
Cabling-----					
Layer No. 1-----				Filler	Filler
(a) Number of wires----		2			
(b) AWG #-----		#18*			
(c) Maximum Lay-----		3.00"			
Layer No. 2-----					
(a) Number of wires----	5	5	4	6	6
(b) AWG #-----	#18**	#188	#6	#18	#16
(c) Maximum Lay-----		8.00"			
Layer No. 3-----					
(a) Number of wires----				(1)	(2)
(b) AWG #-----				#18	#16
(c) Maximum Lay-----				5.00"	6.00"
Sheath					
No. of Layers-----		2		2	2
Total thickness Min-----		0.100"		0.110"	0.109"
Minimum OD Cable-----		1.360"		0.737"	0.849"
Maximum OD Cable-----		1.390"		0.767"	0.899"

Note: *Shield applied over twisted pair of AWG #18 -- Max Twist Lay
3.00"

**Assembly with max lay of 3.00"

(1) 11 & 1 Filler

(2) 11 W/Fillers

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DESIGN DATA

Type Designation	180675		180848	S190875
Figure No.-----	6		7	8
Total Wires-----	18		18	19
No. of Conductors & AWG #	18/#20	14/#18	4/#16	19/#18
Insulation				
Min average thickness----	0.015"		0.015"	0.015"
Spark Test Voltage-----	3000		3000	3000
Inspection Test Voltage--	1500		1500	1500
Cabling				
Layer No. 1-----	Filler		Filler	Filler
Layer No. 2-----				
(a) Number of wires----	6	2	4	7
(b) AWG #-----	#20	#18	#16	#18
(c) Maximum Lay-----				
Layer No. 3-----				
(a) Number of wires----	12		12	(1)
(b) AWG #-----	#20		#18	#18
(c) Maximum Lay-----				5.00"
Sheath				
No. of Layers-----	1		2	1
Total thickness Min-----	0.080"		0.098"	0.094"
Minimum OD Cable-----	0.650"		0.823"	0.850"
Maximum OD Cable-----	0.700"		0.873"	0.900"

(1) 12 W/Filler

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DESIGN DATA				
Type Designation	S1909658			1911108
Figure No.-----	9			8
Total Wires-----	19			19
No. of Conductors & AWG #	8/#18S	11/#18	7/#20	12/#20S
Insulation				
Min average thickness----	0.015"			0.012"
Spark Test Voltage-----	3000			3000
Inspection Test Voltage--	1500			1500
Cabling				
Layer No. 1-----	Filler			Filler
Layer No. 2-----				
(a) Number of wires----	8			7
(b) AWG #-----	#18			#20
(c) Maximum Lay-----	2.50"			4.0"
Layer No. 3-----				
(a) Number of wires----	8	3		12
(b) AWG #-----	#18S	#18		#20S
(c) Maximum Lay-----	5.00"			8.0"
Sheath				
No. of Layers-----	1			2
Total thickness Min-----	0.080"			0.140"
Minimum OD Cable-----	0.950"			1.080"
Maximum OD Cable-----	0.980"			1.140"

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DESIGN DATA

Type Designation	191140	200935
Figure No.-----	8	10
Total Wires-----	19	20
No. of Conductors & AWG ϕ	19/ ϕ 12	13/ ϕ 18 7/ ϕ 15
Insulation		
Min average thickness----	0.020"	0.015"
Spark Test Voltage-----	4000	3000
Inspection Test Voltage--	2000	1500
Cabling		
Layer No. 1-----	Filler	Filler
Layer No. 2-----		
(a) Number of Wires----	7	7
(b) AWG ϕ -----	ϕ 12	ϕ 15
(c) Maximum Lay-----		3.25"
Layer No. 3-----		
(a) Number of wires----	12	13
(b) AWG ϕ -----	ϕ 12	ϕ 18
(c) Maximum Lay-----		4.25"
Sheath		
No. of Layers-----	2	2
Total thickness Min-----	0.098"	0.125"
Minimum OD Cable-----	1.115"	0.920"
Maximum OD Cable-----	1.165"	0.950"

Custodians:

Army - MU
Navy - SH
Air Force - 17

Preparing activity:

Army - MU

(Project 6145-0420)

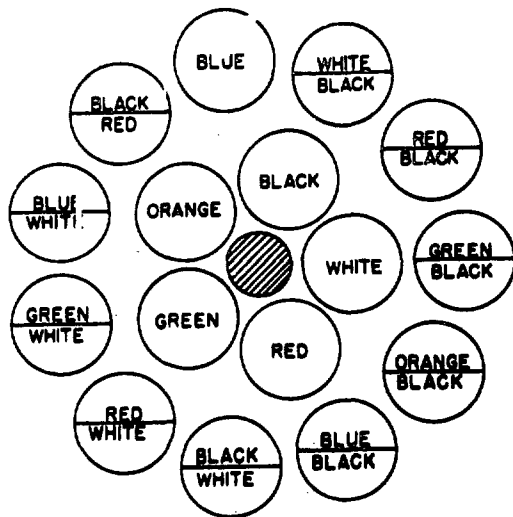
Reviewer:

Army - MI, EL, MO
Navy - SH
Air Force - 15

Users:

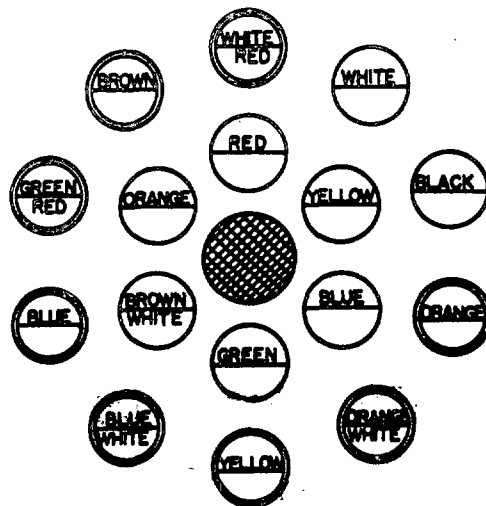
Army - CE
Navy - MC
Air Force - 11

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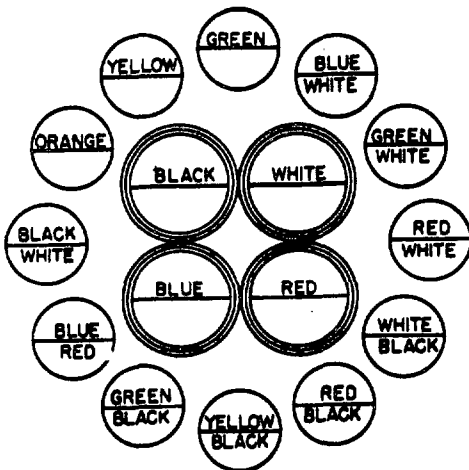
CABLE TYPE: 160636

FIGURE 1



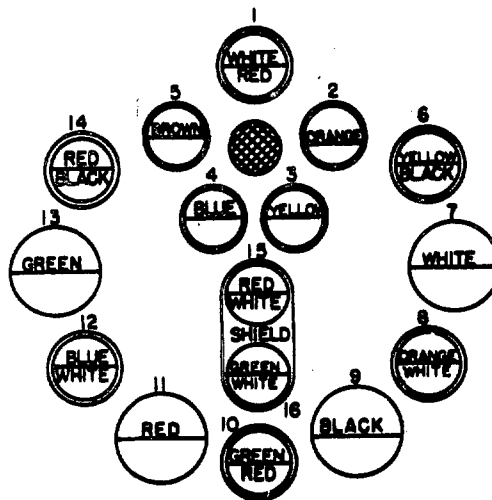
CABLE TYPE: S160878S
 NOTE: DOUBLE CIRCLE INDICATES
 SHIELDED CONDUCTORS

FIGURE 2



CABLE TYPE: 161065S
 NOTE: TRIPLE CIRCLE INDICATES
 COAXIALS WITH DRIVEN
 SHIELDS

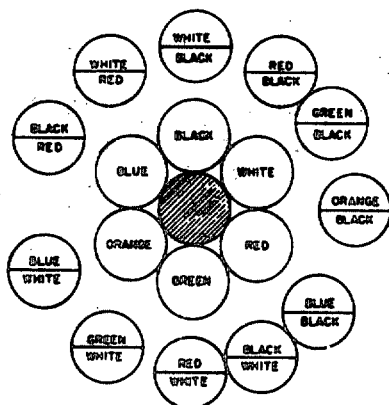
FIGURE 3



CABLE TYPE: S161375S

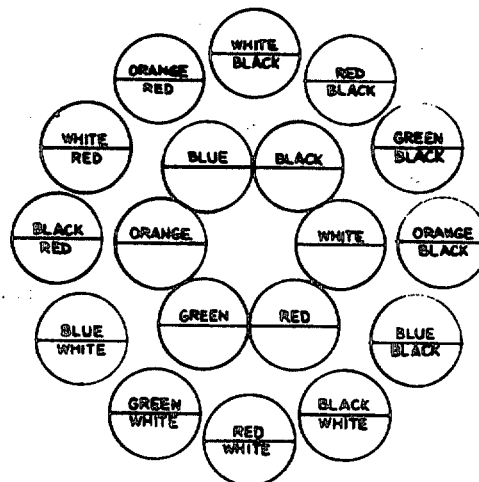
FIGURE 4

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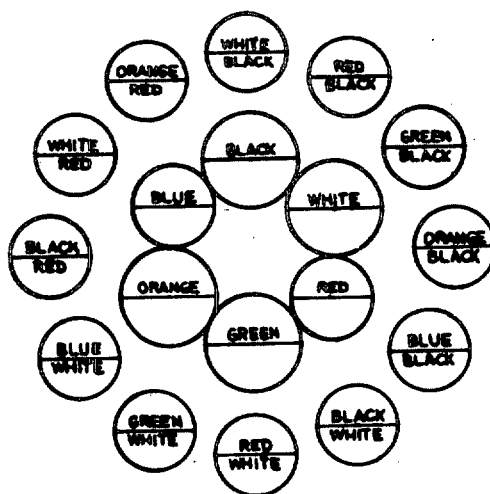
CABLE TYPES: 170752 170874

FIGURE 5



CABLE TYPE: 180675

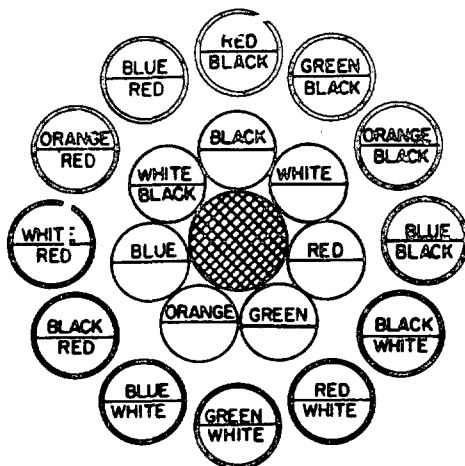
FIGURE 6



CABLE TYPE: 180848

FIGURE 7

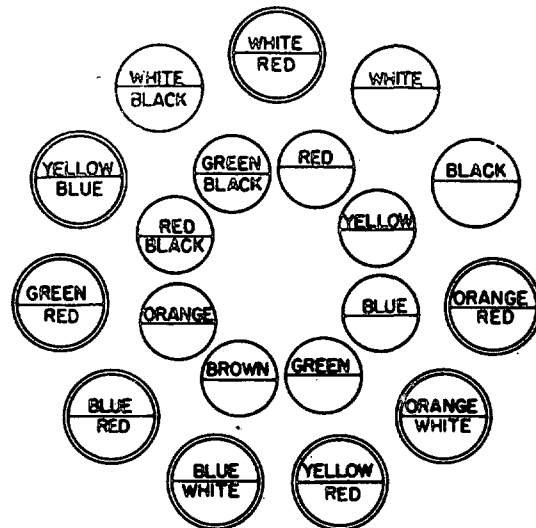
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CABLE TYPES:
S190875 191110S* 191140

*NOTE: DOUBLE CIRCLE INDICATES
SHIELDED CONDUCTORS

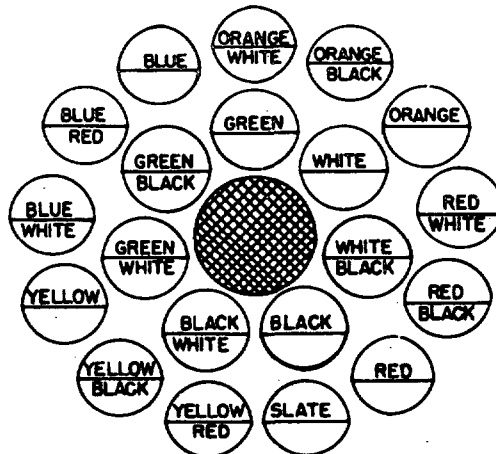
FIGURE 8



CABLE TYPE: S190965S

NOTE: DOUBLE CIRCLE INDICATES
SHIELDED CONDUCTORS

FIGURE 9



CABLE TYPE: 200935

FIGURE 10