

APPENDIX 4. CONTROL CABLE COLOR CODINGFigure 1. MULTICONDUCTOR CABLE COLOR CODING

1. Multiconductor cables of various types make up the bulk of most FAA cable requirements. The types to be used on each system are specifically indicated in the engineering plan or drawings. Multiconductor cables are constructed and color coded to ensure that individual wire pairs are easily identified at each end. In control and audio cables, the color and sequences have been standardized and coded. The single wires and paired wires have been given separate sets of color combinations, and in each case, the combinations have been assigned a definite color sequence.
2. All paired wires and pairs within cables are color coded and will usually follow a color scheme in this Appendix. Different cable manufacturers may use color codes other than those listed in this Appendix. In these cases, the manufacturer's catalog is to be used to determine the proper code.

Figure 2. STANDARD CABLE COLOR CODE

The 20 basic RING colors used in making up the color combinations for regular wires are as follows.

<u>Pair No.</u>	<u>Ring Color</u>
1	Blue
2	Orange
3	Green
4	Brown
5	Slate
6	Bl/Wh
7	Bl/Or
8	Bl/Gr
9	Bl/Br
10	Bl/Sl
11	Or/Wh
12	Or/Gr
13	Or/Br
14	Or/Sl
15	Gr/Wh
16	Gr/Br
17	Gr/Sl
18	Br/Wh
19	Br/Sl
20	Sl/Wh

The above code repeats with each 20 pairs. Numbers are pair numbers. On sequence numbered terminal blocks, ring wire of pair connects to next higher numbered terminal (unless otherwise specified on drawings). A pair consists of a TIP wire and a RING wire twisted together. The following are the TIP colors.

Pairs 1-20  
with Solid White

Pairs 21-40  
with Solid Red

Pairs 41-60  
with Solid Black

EXAMPLE: The 57th pair would consist of a RING wire having alternate green and slate strips paired with a black TIP wire. Normally, the TIP wire and the RING wire would be connected to the 113th and 114th terminals of a block respectively.

Figure 3. PAIRED WIRE COLOR COMBINATIONS

1. There are 180 such paired wire color combinations. Of these, 120 are provided by pairing each of the 20 basic colors in turn with solid colors white, red, black, red-white, black-white, and red-black. An additional 40 pairs are obtained by pairing single-wire colors 1-20 with solid colors white and red. The next 20 pairs are obtained by pairing single-wire colors 21-40 with solid color red. In any pair, the solid color is commonly called the TIP wire. The solid color of a pair is also known in shop parlance as the mate or tracer. The solid-color combinations are as follows.

<u>Combination No.</u>	<u>Tip Colors</u>	<u>Ring Colors</u>
1-20	White	Basic Colors 1-20 (Blue, Orange, Green, etc.)
21-40	Red	Basic Colors 1-20
41-60	Black	Basic Colors 1-20
61-80	Red-White	Basic Colors 1-20
81-100	Black-White	Basic Colors 1-20
101-120	Red-Black	Basic Colors 1-20
121-140	White	Single-Wire Colors 1-20 (Red-Blue, Red-Orange)
141-160	Red	Single-Wire Colors 1-20
161-180	Red	Single-Wire Colors 21-40 (Black-Blue, Black-Orange, etc.)

Figure 4. COLOR CODE CHART -- 10-PAIR INDIVIDUAL SHIELDED CABLE,  
NO. 22 AWG STRANDED (NSN 6145-00-866-8994)

<u>Pair No.</u>	<u>Color</u>	<u>Tracer</u>
1	Blue (Bl)	White (Wh)
2	Orange (Or)	White
3	Green (Gr)	White
4	Brown (Br)	White
5	Slate (Sl)	White
6	Blue	Red (rd)
7	Orange	Red
8	Green	Red
9	Brown	Red
10	Slate	Red

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Figure 5. COLOR CODE CHART -- 11-PAIR SHIELDED CABLE

<u>Pair No.</u>	<u>Common</u>	<u>Mate</u>
1	Black	Brown
2	Black	Red
3	Black	Orange
4	Black	Yellow
5	Black	Green
6	Black	Blue
7	Black	White
8	Red	Yellow
9	Red	Green
10	Red	Blue
11	Red	White

Figure 6. COLOR CODE CHART -- 15-PAIR INDIVIDUAL SHIELDED CABLE.  
NO. 22 AWG STRANDED

<u>Pair No.</u>	<u>Series "A" Cable</u>		<u>Series "B" Cable</u>	
	<u>Color</u>	<u>Tracer</u>	<u>Color</u>	<u>Tracer</u>
1	Blue	White/White	Red	White
2	Orange	White	Green	White
3	Green	White	Orange	White
4	Brown	White	Blue	White
5	Slate	White	Brown	White
6	Blue	Red	Slate	White
7	Orange	Red	Yellow	White
8	Green	Red	Purple	White
9	Brown	Red	Black	White
10	Slate	Red	Red/Green	White
11	Blue	Black	Red/Orange	White
12	Orange	Black	Red/Blue	White
13	Green	Black	Red/Brown	White
14	Brown	Black	Red/Slate	White
15	Slate	Black	Red/Yellow	White

Figure 7. COLOR CODE CHART -- 25- OR 26-PAIR SHIELDED CABLE.  
NO. 22 AWG STRANDED (NSN 6145-00-767-7893)

<u>Pair No.</u>	<u>Color</u>	<u>Tracer</u>
1	Blue	White
2	Orange	White
3	Green	White
4	Brown	White
5	Slate	White
6	Black/White	White
7	Black/Orange	White
8	Black/Green	White
9	Black/Brown	White
10	Black/Slate	White
11	Orange/White	White
12	Orange/Green	White
13	Orange/Brown	White
14	Orange/Slate	White
15	Green/White	White
16	Green/Brown	White
17	Green/Slate	White
18	Brown/White	White
19	Brown/Slate	White
20	Slate/White	White
21	Blue	Red
22	Orange	Red
23	Green	Red
24	Brown	Red
25	Slate	Red
26	Black/White	Red (spare)

Figure 8. COLOR CODE CHART -- 1- TO 35-PAIR, NO. 18 TO 24 AWG CONDUCTOR CABLE

<u>Pair No.</u>	<u>Color Code</u>	<u>Paired With</u>
1	Blue	White
2	Orange	White
3	Green	White
4	Brown	White
5	Slate	White
6	Blue	Red
7	Orange	Red
8	Green	Red
9	Brown	Red
10	Slate	Red
11	Blue	Black
12	Orange	Black
13	Green	Black
14	Brown	Black
15	Slate	Black
16	Blue	Yellow
17	Orange	Yellow
18	Green	Yellow
19	Brown	Yellow
20	Slate	Yellow
21	Blue	Violet
22	Orange	Violet
23	Green	Violet
24	Brown	Violet
25	Slate	Violet
26	Orange	Blue
27	Green	Blue
28	Brown	Blue
29	Slate	Blue
30	Green	Orange
31	Brown	Orange
32	Slate	Orange
33	Brown	Green
34	Slate	Green
35	Slate	Brown