MILITARY STANDARD

IDENTIFICATION OF CABLE USED FOR TRANSMISSION OF TELEPHONE, TELEGRAPH, AND TELETYPE SIGNALS

TO ALL HOLDERS OF MIL-STD-685:

1. THE FOLLOWING PAGES HAVE BEEN REVISED AND SUPERSEDE THE PAGES LISTED:

NEW PAGE	DATE	SUPERSEDED PAGE	DATE
iii	16 September 1983	i	7 December 1961
iv	16 September 1983	ii	7 December 1961
15	16 September 1983	15	7 December 1961
16	16 September 1983	16	7 December 1961
17	16 September 1983	17	7 December 1961

2. RETAIN THIS NOTICE AND INSERT BEFORE TABLE OF CONTENTS.

3. Holders of MIL-STD-685 will verify that page changes have been entered. This notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by stocking points until the Military Standard is completely revised or canceled.

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(Project 6145-0855)

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FIGURES

Figure

1. Example of concentric-layer construction for plastic, rubber-, and fabric-insulated pairs.
2. Example of unit construction for plastic-, rubber-, and fabric-insulated pairs.

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TABLES

TABLE

I. Color code for plastic-insulated pairs (excluding pairs covered by par. 5.2.4, 5.2.5, and 5.13).

II. Color code for woven, wrapped, or braided fabrics and natural or synthetic rubber-insulated pairs (excluding pairs covered by par. 5.2.4, 5.2.5, and 5.13).

IIIa. Color code for 19- and 22-gage (AWG) paper-insulated pairs (maximum of 51 pairs).

IIIb. Color code for 24- and 26-gage (AWG) paper-insulated pairs (maximum of 51 pairs).

IVa. Color code for 19- and 22-gage (AWG) paper-insulated pairs (more than 51 pairs).

IVb. Color code for 24- and 26-gage (AWG) paper-insulated pairs (more than 51 pairs).

IVc. Color code for binding string for paper-insulated pairs.

V. Color code for pairs used in switchboard cables.

VI. Color code for singles.

VII. Color code for triples.

VIII. Color code for plastic- and fabric-insulated quads.

IXa. Color code for 19-gage (AWG) paper-insulated quads.

IXb. Color code for 13-, 16-, and 22-gage (AWG) paper-insulated quads.

X. Identification code for unit binding tapes.

XI. Color code for pairs used in shipboard telephone cables (types TTSU, TTOP, and TSP, TSPA).

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TABLE IXb. Color code for 13-, 16-, and 22-gage (AWG) paper-insulated quads.

No. of quad	Pair no. 1 color of insulation	Pair no. 2 color of insulation
1	White	Blue
2	Red	Green
3	Red	Orange
4	White	Red
5	Red	Blue

5.9 COLORS.

5.9.1 Plastic, natural and synthetic rubber, and fabric insulation. Colors for plastic, natural and synthetic rubber, and fabric insulation (except tan and pink) shall fall within the limits of the standard color chips of Standard MIL-STD-104. Exceptions tan and pink shall be in accordance with FED-STD-595.

5.9.2 Paper insulation. Colors used for paper insulation shall be readily distinguishable from each other.

5.10 Binding tapes. The binding tapes shall be 3/16 to 1/4 inch wide. The unit number and color designation for each unit, as indicated in table X, shall be printed on the binding tape with durable ink in capital characters at least 1/8 inch high. The marking shall be repeated throughout the length of the binding tape and shall be separated by 1-inch spaces.

5.11 MARKING.

5.11.1 Methods of marking. The jacket of an individual pair, triple, or quad shall be marked by surface printing or stamping.

5.11.2 Color of marking. Characters shall be marked in either black or white to provide good contrast with the color of the surface to which they are applied.

5.11.3 Size of marking. The height of the marking shall not be less than 1/6 (0.0625) inch.

5.11.4 Legibility and permanence of marking. The marking shall be legible and durable and shall not rub off or become illegible on exposure to elements or contact incident to normal handling, shipment, and storage. The marking shall be accomplished in a manner which will not adversely effect the cable characteristics, and shall remain legible after being subjected to the applicable specification marking tests.

5.12 CIRCUMFERENTIAL BANDS. The wide and narrow bands specified in tables V, VI, VII, and VIII shall be applied to the individual conductors after application of the body colors specified in these tables. Bands shall be applied throughout the length of each conductor and shall be separated by 1/2-inch spaces.

5.12.1 Narrow bands. Single narrow bands shall be approximately 1/3 inch wide. Each narrow band of a double narrow band shall be approximately 1/8 inch wide and shall be separated from the other narrow band by approximately 1/16 inch. Each band shall cover approximately 70 percent of the circumference of the insulated conductor.

TABLE X. Identification code for unit binding tapes.

Unit no.	Color designation	Unit no.	Color designation	Unit no.	Color designation
1	Blue-White	9	Brown-Red	17	Orange-Yellow
2	Orange-White	10	Gray-Red	18	Green-Yellow
3	Green-White	11	Blue-Black	19	Brown-Yellow
4	Brown-White	12	Orange-Black	20	Gray-Yellow
5	Gray-White	13	Green-Black	21	Blue-Violet
6	Blue-Red	14	Brown-Black	22	Orange-Violet
7	Orange-Red	15	Gray-Black	23	Green-Violet
8	Green-Red	16	Blue-Yellow	24	Brown-Violet
				25	Gray-Violet

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5.12.2 Wide bands. Single wide bands shall be approximately 5/16 inch wide. Each wide band of a double wide band shall be approximately 5/16 inch wide and shall be separated from the other wide band by approximately 1/16 inch. Each band shall cover approximately 70 percent of the circumference of the insulated conductor.

5.13 SHIPBOARD TELEPHONE CABLES. Shipboard telephone cables shall be identified as follows:

5.13.1 Type TTTI-1. Type TTTI-1 (5-pair) shall be color coded in accordance with table I. Type TTTI-1 (single-conductor cable) shall be identified in accordance with MIL-STD-686.

5.13.2 Types TTSU, TTOP, and TSP, TSPA. Types TTSU (MIL-C-915/37), TTOP (MIL-C-915/24) and TSP, TSPA (MIL-C-915/22) shall be color coded in accordance with table XI.

5.14 INTERCOMMUNICATION CABLES. Intercommunication cables which consist of pairs or singles shall be identified in accordance with paragraphs 5.2.4 and 5.3, except for shipboard cables specified in paragraph 5.13.

5.15 ARMORED CABLES. When armor is used as an outer cable covering, the data specified in 4.1 shall be printed on a marker type with durable ink in capital characters at least 1/16 inch high. The marking shall be repeated throughout the length of the marker tape with separations of not more than 1 foot. The tape shall be located under the jacket or between the armor and the jacket.

TABLE XI. Color code for pairs used in shipboard telephone cable (types TTSU, TTOP and TSP, TSPA).

Pair no.	Wire	Mate	Pair no.	Wire	Mate
1	White	Black	31	Orange	Green
2	Red	Black	32	Blue	Green
3	Green	Black	33	Brown	Green
4	Orange	Black	34	Gray	Green
5	Blue	Black	35	Yellow	Green
6	Brown	Black	36	Purple	Green
7	Gray	Black	37	Tan	Green
8	Yellow	Black	38	Pink	Green
9	Purple	Black	39	Blue	Orange
10	Tan	Black	40	Brown	Orange
11	Pink	Black	41	Gray	Orange
12	Red	White	42	Yellow	Orange
13	Green	White	43	Purple	Orange
14	Orange	White	44	Tan	Orange
15	Blue	White	45	Pink	Orange
16	Brown	White	46	Brown	Blue
17	Gray	White	47	Gray	Blue
18	Yellow	White	48	Yellow	Blue
19	Purple	White	49	Purple	Blue
20	Tan	White	50	Tan	Blue
21	Pink	White	51	Pink	Blue
22	Green	Red	52	Gray	Brown
23	Orange	Red	53	Yellow	Brown
24	Blue	Red	54	Purple	Brown
25	Brown	Red	55	Tan	Brown
26	Gray	Red	56	Pink	Brown
27	Yellow	Red	57	Yellow	Gray
28	Purple	Red	58	Purple	Gray
29	Tan	Red	59	Tan	Gray
30	Pink	Red	60	Pink	Gray

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6. NOTES

6.1 Copies of this standard for military use may be obtained as indicated in the foreword to, or general provisions of, the Index of Military Specifications and Standards.

6.1.1 The title and identifying number or symbol should be stipulated when requesting copies of military standards.

NOTICE. When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data, is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

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