TM 11-5805-662-14&P

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT,

AND GENERAL SUPPORT MAINTENANCE MANUAL

INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS

FOR

NORTHERN RADIO FUSE AND ALARM PANEL

TYPE 1036 MODEL 6

HEADQUARTERS, DEPARTMENT OF THE ARMY

MAY 1975

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TECHNICAL MANUAL

No. 11-5805-662-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 20 May 1975

Operator's, Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Tools Lists for NORTHERN RADIO FUSE AND ALARM PANEL TYPE 1036 MODEL 6

Current as of 18 March 1975

This manual is an authentication of the manufacturer's commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This manual does, however, contain available information that is essential to the operation and maintenance of the equipment.

CHAPTER 1

INTRODUCTION

1-1. Scope

This manual describes the Northern Radio Fuse and Alarm Panel Type 1036 Model 6 and covers its operation, and organizational, direct and general support maintenance. Appendix A contains a list of applicable references, appendix B contains the repair parts and special tools list, and appendix C contains the maintenance allocation.

1-2. Indexes of Publications

a. Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to this equipment.

b. Refer to DA Pam 310-7 to determine if there are modification work orders (MWO's) pertaining to this equipment.

1-3. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

b. Reporting of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 700-58/NAVSUPINST 4030.29/AFR 71-13/MCO P4030.29A, and DSAR 4145.8.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33A/AFR 75-18/MCO P4610.19B, and DSAR 4500.15.

1-4. Reporting of Errors

The reporting of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded direct to Commander, US Army Electronics Command, ATTN: AMSEL-MA-QT, Fort Monmouth, NJ 07703.

1-5. Purpose

Fuse and Alarm Panel Type 1036 Model 6, hereafter referred to as the fuse panel, is used in conjunction with voice frequency communications systems to provide fuse protection in the power circuits of the equipment and to prevent excessive damage caused by internal overloads of short circuits. The panel contains a visual indicator and closes an external alarm circuit to signal a blown fuse.

1-6. Description

The fuse panel is a rack mounting assembly with a front panel containing 60 fuses and 1 red indicator lamp. The fuses are telephone-type *grasshopper* fuses and are mounted in four groups of 15 fuses each. All circuits terminate on a telephone-type terminal block containing 208 terminals. The terminal block is mounted on the rear of the assembly.

1-7. Technical Characteristics

Number of fuseholders . . . . . 60.
Number of fuses . . . . . 60. .180 amp GMT.
Indicator DS1, alarm lamp . . 48 volt 2.5 watts.
Lampholder with lens . . . . . 1.
Input/output connector . . . . . Signal distribution block on rear of assembly.
Power requirements . . . . . 48 volts, ± 10%, dc.
Mounting . . . . . Mounts on a standard 19-in. rack or cabinet.
Cabling requirements . . . . . All external wiring to be made to the telephone-type signal distribution block on the rear of the assembly.
Operating temperature . . . . . O° C. to +70° C.
Storage temperature . . . . . -55° C. to +70° C.

1-8. Items Comprising an Operable Equipment

NSN	Item	Qty	Dimensions (in.)			Weight (lb)
			Height	Width	Depth	
	Northern Radio Fuse and Alarm Panel Type 1036 Model 6	1	3½	17	19	5.5

CHAPTER 2

INSTALLATION

2-1. Primary Power and Grounding Requirements

The fuse panel requires an input power of 48 volts dc ±10 percent. The rack in which the fuse panel is mounted should be connected to the station ground system by an AWG No. 6 (or larger) cable.

2-2. Cable Requirements

The fuse panel has a rear mounted, telephone-type terminal block containing 208 terminals. All connections to associated equipment are made through this terminal block. The terminals are identified on figures 4-3 and 4-4.

2-3. Tools Required for Installation

No tools are supplied with the fuse panel. No special tools are required for its installation. The installation instructions assume that the standard 19-inch rack or equipment cabinet has been previously installed.

2-4. Test Equipment Required for Poet Installation Tests

The only test equipment required for post installation tests is Multimeter AN/USM-210 (NSN 6625-00-019-0815) or suitable equivalent.

2-5. Initial Checking

The initial checking of the fuse panel consists of inspecting the unit for mechanical damage caused by rough handling in shipment. When shipped, the fuse panel is completely wired internally and ready to receive the external circuits and dc operating power.

2-6. Electrical Connections

All electrical connections to the fuse panel are made through the telephone-type terminal block at the rear of the assembly. The terminals for external connections are identified in figures 4-1, 4-3, and 4-4.

2-7. Installation Instructions

Handle the fuse panel carefully to avoid any mechanical damage to it or its components. To install the fuse panel, insert the assembly in a standard 19-inch rack or equipment cabinet and secure it in position with four special panel screws equipped with plastic washers. These are stainless steel screws, size 10, with 32 threads per inch. Connect all external circuitry to receive power through the fuse panel, to the terminals identified in figures 4-1, 4-3, and 4-4.

CHAPTER 3

OPERATION

3-1. General

The fuse and alarm panel provides a fused interface between the 48 volts dc power and the equipment it supplies. 'The panel contains a single-poke, double-throw (spdt) relay to close an external alarm circuit and an incandescent lamp as a visual indicator that a fuse has blown.

3-2. Controls and Indicators

a. Controls. The fuse panel contains no operating controls.

b. Indicators. The fuse panel contains a *red* lens indicator lamp assembly as a visual signal of a fuse failure. The indicator remains illuminated until the failed fuse has been replaced. When a failed fuse is removed from the mounting, leaving the fuse position blank, the indicator lamp is extinguished.

CHAPTER 4

CIRCUIT FUNCTIONING

4-1. General

The fuse panel provides protection to 60 dc powerlines. It contains a red indicator lamp for visual indication and a relay to close an external alarm circuit to signal that a fuse has failed.

4-2. Detailed Functioning (fig. 4-1)

The fuseholder has three terminals. The bottom terminal feeds the power to the equipment, the center terminal feeds the power to the spring member (armature) of the fuse, and the top terminal is the alarm contact. The fuse is a plug-in unit with the fuse link between the spring member (armature) and the bottom terminal. The fuse link holds the armature under tension, When the fuse is installed in the holder, the power passes through the armature and fuse link to the equipment. The fuse acts as a switch. At fuseholder XF1, the 3 indicates the bottom or equipment terminal, the 2 indicates the armature terminal, and the 1 indicates the alarm terminal. When a fuse fails, the tension is removed from armature 2 and it engages alarm terminal 1, closing the circuit from −48 volts to visual indicator DS1 and through resistor R1, and the coil of relay K1 to common. This action illuminates indicator DS1 and operates the relay to close an external alarm circuit. When a blown fuse is replaced or a blank space exists in the fuse bolder, the -48 volts supplied through that position to indicator DS1 and through resistor R1 to relay K1, is removed. This action extinguishes the indicator and releases the relay to open the external alarm circuit, thus restoring the panel to the no failure alarm state.

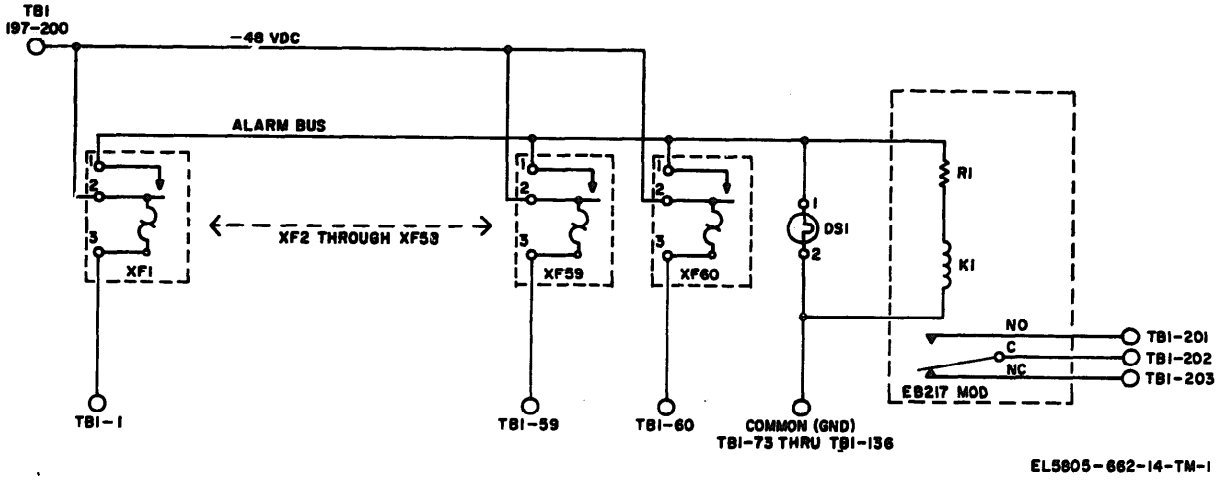


Figure 4-1. Fuse and Alarm Panel Type 1036 Model 6, schematic diagram.

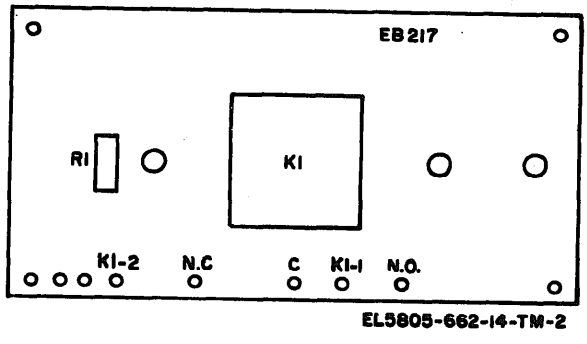


Figure 4-2. Fuse and Alarm Panel Type 1036 Model 6, component layout.

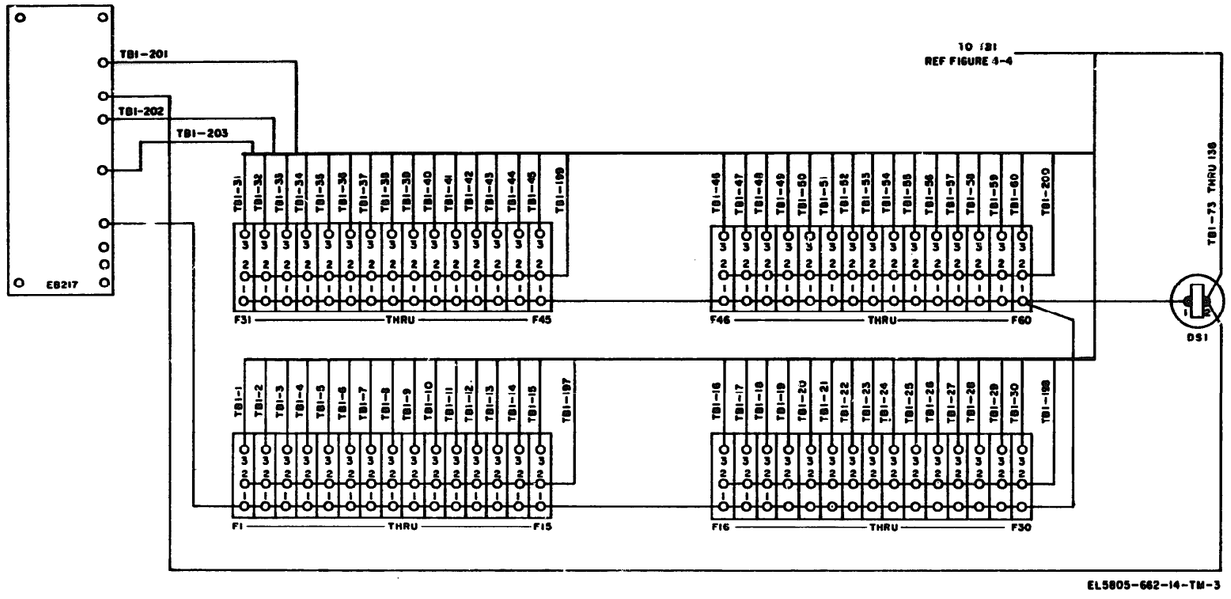


Figure 4-3. Fuse and Alarm Panel Type 1036 Model 6, wiring diagram.

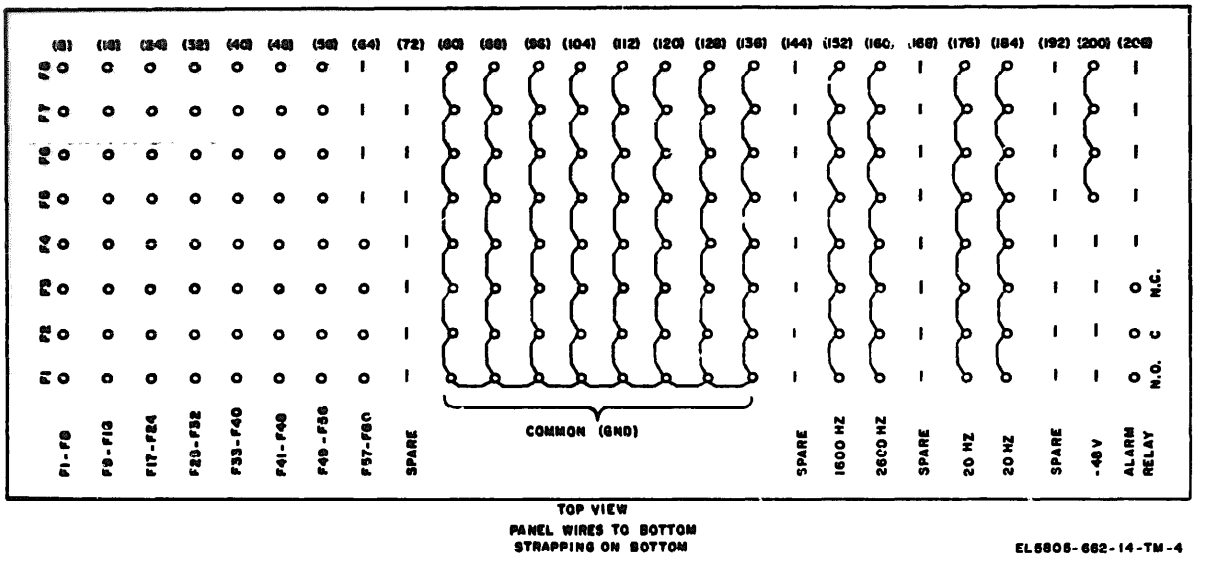


Figure 4-4. Fuse and Alarm Panel Type 1036 Model 6, terminal block layout.

CHAPTER 5

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE

5-1. Scope of Direct Support and General Support Maintenance

The scope of direct and general support maintenance consists of inspecting the panel for mechanical damage, broken fuseholders, blown fuses, broken wires, replacement of components, and testing the assembly for satisfactory performance.

5-2. Tools and Test Equipment Required

a. Tools. The required tools are contained in Tool Kit, Electronic Repairman TK-105/G.

b. Test Equipment. The following test equipment or suitable equivalents will be used in testing the panel:

Equipment item	*NSN*	*Qty*	*Applicable literature*
Multimeter AN/USM-210	6625-00-019-0815	1	
DC Power Supply PP-4399/FCC		1	

5-3. Troubleshooting

Follow standard dc troubleshooting procedures when troubleshooting the fuse panel. These procedures consist of point-to-point continuity checks. Refer to figures 4-1, 4-3, and 4-4.

5-4. Performance Standards

When the fuse panel repair work has been completed, it must be tested to insure visual indicator DS1 becomes illuminated when a fuse is blown and that the relay operates to close an external audible alarm circuit.

5-5. Test Procedures

The following test procedures are to insure that the fuse panel will perform its intended functions. The test preparations are for bench testing when the fuse panel has been removed from the rack. However, the tests may be performed at an operational site where the rack-mounted panel is supplied -48 volts dc.

a. Test Preparation.

(1) Use test clip leads to connect the multimeter to terminals 201 and 202 of terminal block TB1 on the rear of the panel and set the meter to the 50-volt dc scale.

(2) Use test clip leads to connect -48 volts dc to terminal 197 of TB1 and the +48 volts dc to terminal 129 of TB1.

b. Test Procedures.

(1) Remove a good fuse from one of the fuseholders on the front panel and insert a blown fuse in its place.

(2) Indicator lamp DS1 should illuminate and the multimeter should indicate -48 volts.

(3) Repeat (1) and (2) above for all fuses.

(4) Return the fuse and alarm panel to the operational position or to stock.

APPENDIX A

REFERENCES

DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals, (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders.
DA Pam 310-7	US Army Equipment Index of Modification Work Orders.
SB 38-100	Preservation, Packaging, Packing and Marking Materials, Supplies, and Equipment Used by the Army.
TB SIG 355-1	Depot Inspection Standard for Repaired Signal Equipment.
TB SIG 355-2	Depot Inspection Standard for Refinishing Repaired Signal Equipment.
TB SIG 355-3	Depot Inspection Standard for Moisture and Fungus Resistant Treatment.
TB 746-10	Field Instructions for Painting and Preserving Electronics Command Equipment.
TM 38-750	The Army Maintenance Management System (TAMMS).

APPENDIX B

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS)

Section I. INTRODUCTION

B-1. Scope

This appendix lists repair parts required for the performance of direct support, general support, and depot maintenance of Fuse and Alarm Panel Assembly Type 1036, Model 6.

NOTE

No repair parts authorized for stockage at organizational maintenance.

B-2. General

This repair parts list is divided into the following sections:

a. Basic Issue Items List-Section II. Not applicable.

b. Items Troop installed or Authorized List-Section III. Not applicable.

c. Repair Parts for Organizational Maintenance - Section IV. Not applicable.

d. Special Tools, Test and Support Equipment for Organizational Maintenance--Section V. Not applicable.

e. Repair Parts for Direct Support, General Support, and Depot Maintenance-Section VI. A list of repair parts authorized for performance of maintenance at the direct support, general support, and depot levels. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending numerical sequence.

f. Special Tools, Test and Support Equipment for Direct Support, General Support, and Depot Maintenance-Section VII. Not applicable.

g. Index-Federal Stock Number and Reference Number Cross-Reference to Figure Number and Reference Designation-Section VIII. A list, in ascending numerical sequence, of all Federal stock numbers appearing in the listings, followed by a list in alphanumeric sequence, of all reference numbers appearing in the listings. Federal stock numbers and reference numbers are cross-referenced to each illustration figure number and reference designation.

h. Index-Reference Designation Cross-Reference to Page Number-Section IX. A list of reference designations cross-referenced to page numbers.

B-3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings.

a. Source, Maintenance, and Recoverability Codes (SMR).

(1) *Source code.* Indicates the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are:

Code	*Explanation*
P A -	Item procured and stocked for anticipated or known usage.
P D -	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.
X A -	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
X B -	Item is not procured or stocked. If not available through salvage requisition.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded XA, XD, and aircraft support items as restricted by AR 700-42.

(2) *Maintenance code.* Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third

and fourth positions of the Uniform SMR Code format as follows:

(a) *Use (third position).* The maintenance code entered in the third position indicates the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position indicates the following level of maintenance:

Code	*Application/Explanation*
F—	Support item is removed, replaced, used at the direct support maintenance level.

(b) *Repair (fourth position).* The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain the following maintenance code:

Code	*Application/Explanation*
Z -	Nonrepairable. No repair is authorized

(3) Recoverability code. Recoverability codes are assigned to support items to indicate the disposition action or unserviceable item. Recoverability code is entered in the fifth position of the Uniform SMR Code Format as follows:

Code	*Definition*
Z -	Nonrepairable item. When unserviceable, condemn and dispose at the level indicated in the first digit of the maintenance code.

b. Federal Stock Number. Indicates the Federal stock number assigned to the item.

NOTE

For requisitioning purposes, the Federal stock number must be converted to the National stock number by adding "-00-" after the Federal stock classification (FSC) code (first four digits). For example, FSN 6625-553-0142 converts to NSN 6625-00-553-0142.

c. Description. Indicates the federal item and a minimum description required to identify the item. The last line indicates the reference number followed by the applicable Federal Supply Code for Manufacturer (FSCM) in parentheses. The FSCM is used as an element in item identification to designate manufacturer or distributor or Government agency, etc., and is identified in SB 708-42.

d. Unit of Measure (U/M). Indicates the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, e.g., ea, in, pr, etc. When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

e Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly.

f. 30-Day DS/GS Maintenance Allowances. The repair parts indicated by asterisk entries in separate allowance columns for DS and GS represent those authorized for use at that category of maintenance and will be requisitioned on an "as required" basis.

g. 1-Year Allowances Per 100 Equipments/Contingency Planning Purposes. Column intentionally left blank.

h. Depot Maintenance Allowances Per 100 Equipments. This column indicates that the items identified with an asterisk are authorized to be requisitioned as required.

i. Illustrations. This column is divided as follows:

(1) *Figure number.* Indicates the figure number of the illustration on which the item is shown.

(2) Item number or reference designation. Indicates the reference designation used to identify the item on the illustration.

B-4. Special Information

(Not applicable).

B-5. How to Locate Repair Parts

a. This appendix contains two cross-reference indexes (sec VIII and sec IX) to be used to locate a repair part when either the Federal stock number, reference number (manufacturer's part number), or reference designation is known. The first column in each index is prepared in numerical or alphanumeric sequence in ascending order. Where a Federal stock number is not listed, refer to the reference number (manufacturer's part number) immediately following the Federal stock number.

b. When the Federal stock number or reference number is known, follow the procedures given in (1) and (2) below.

(1) Refer to the index of Federal stock numbers (sec VIII) and locate the Federal stock number or reference number. The FSN or

reference number is cross-referenced to the applicable figure number and reference designation.

(2) When the reference designation is determined, refer to the reference designation index (sec IX). The reference designations are listed in alphanumeric ascending order and are cross-referenced to the page number on which they appear in the repair parts list (sec VI). Refer to the page number noted in the index and locate the reference designation in the repair parts list.

c. When the reference designation is known, follow the procedure given in *b* (2) above.

d. When neither the FSN, reference number, nor reference designation is known, identify the part in the illustration and follow directions given in *c* given: or scrutinize column 3 of the repair parts list.

B-6. Abbreviations

(Not applicable.)

(Next printed page is B-5)

SECTION VI. REPAIR PARTS FOR DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION — REFERENCE NUMBER & MFR CODE — USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(7) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 1 YR ALW PER EQUIP CUTOFF	(9) DEPOT MAINT ALW PER 100	(10) ILLUSTRATIONS (a) FIG NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
		GROUP: 00 FUSE AND ALARM PANEL ASSEMBLY 1036-6											B-1	
XBFZZ		BAR,FUSE MOUNTING 5-0946-04 (88183)	EA	6									B-1	MP1
PAFZZ	5305-054-5649	SCREW,MACHINE MS51957-15 (96906)	EA	12	*	*	*	*	*	*		*	B-1	H1
XBFZZ		BAR,TERMINAL BLOCK MOUNTING 5-0948 (88183)	EA	1									B-1	MP2
PAFZZ	5310-934-9759	NUT,PLAIN,HEXAGON MS35649-284 (96906)	EA	8	*	*	*	*	*	*		*	B-1	H2
PAFZZ	5305-054-6671	SCREW,MACHINE MS51957-46 (96906)	EA	6	*	*	*	*	*	*		*	B-1	H3
PAFZZ	5310-965-1806	WASHER,FLAT MS15795-807 (96906)	EA	2	*	*	*	*	*	*		*	B-1	H4
PAFZZ	5310-543-2739	WASHER,LOCK MS35333-72 (96906)	EA	8	*	*	*	*	*	*		*	B-1	H5
PAFZZ	5920-023-2926	FUSE,INDICATOR GMT18-100 (71400)	EA	60	*	*	*	*	*	*		*	B-1	F1-F60
PAFZZ	5920-028-4337	FUSEHOLDER HLT (71400)	EA	60	*	*	*	*	*	*		*	B-1	XF1-60
PAFZZ		INDICATOR,LIGHT 1700-01-000 (18788)	EA	1	*	*	*	*	*	*		*	B-1	XDS1
PAFZZ		LAMP,INCANDESCENT 35106-0 (82219)	EA	1	*	*	*	*	*	*		*	B-1	DS1
XBFZZ		PANEL,FRONT 1036-6-10 (88183)	EA	1									B-1	MP3
PAFZZ	5310-934-9759	NUT,PLAIN,HEXAGON MS35649-284 (96906)	EA	4	*	*	*	*	*	*		*	B-1	H6
PAFZZ	5305-054-6671	SCREW,MACHINE MS51957-46 (96906)	EA	4	*	*	*	*	*	*		*	B-1	H7
PAFZZ	5310-543-2739	WASHER,LOCK MS35333-72 (96906)	EA	4	*	*	*	*	*	*		*	B-1	H8
XBFZZ		PANEL,SIDE 5-0947 (88183)	EA	2									B-1	MP4
XBFZZ		ROD,CABLE SUPPORT 5-0940-04 (88183)	EA	1									B-1	MP5
PAFZZ	5305-764-0068	SCREW,MACHINE MS51959-45 (96906)	EA	6	*	*	*	*	*	*		*	B-1	H9
PAFZZ		PRINTED CIRCUIT ASSEMBLY 1036-6-21 (88183)	EA	1	*	*	*	*	*	*		*	B-1	E1
XAFZZ	5305-764-0071	SCREW,MACHINE MS51959-47 (96906)	EA	2									B-1	H10
XAFZZ		SPACER 5-0276 (88183)	EA	2									B-1	H11
PAFZZ	5310-543-2739	WASHER,LOCK MS35333-72 (96906)	EA	2	*	*	*	*	*	*		*	B-1	H12
PAFZZ		RELAY,ARMATURE 65FP1A120C (78277)	EA	1	*	*	*	*	*	*		*	B-1	E1K1
PAFZZ	5905-279-3837	RESISTOR,FIXED COMPOSITION RC32GF272J (81349)	EA	1	*	*	*	*	*	*		*	B-1	E1R1
XAFZZ		PRINTED WIRING BOARD 1036-6-22 (88183)	EA	1									B-1	E1E1
PAFZZ	5940-177-6505	TERMINAL BLOCK PJ660-8 (70678)	EA	1	*	*	*	*	*	*		*	B-1	TB1
PAFZZ	5305-050-9229	SCREW,MACHINE MS51957-63 (96906)	EA	3	*	*	*	*	*	*		*	B-1	H13
PAFZZ	5310-543-5933	WASHER,LOCK MS35333-73 (96906)	EA	3	*	*	*	*	*	*		*	B-1	H14

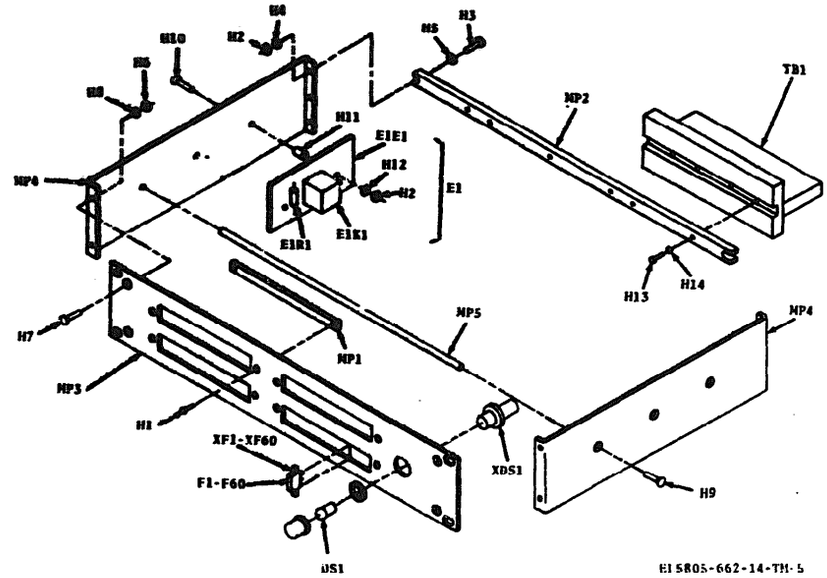


Figure B-1. Fuse and alarm panel assembly.

SECTION VIII. INDEX-FEDERAL STOCK NUMBER AND REFERENCE NUMBER CROSS-REFERENCE TO FIGURE NUMBER AND REFERENCE DESIGNATION

STOCK NUMBER	FIG NO.	REF. DES.
5305-050-9229	B-1	H13
5305-054-5649	B-1	H1
5305-054-6671	B-1	H3
	B-1	H7
5305-764-0068	B-1	H9
5305-764-0071	B-1	H10
5310-543-2739	B-1	H5
	B-1	H8
	B-1	H12

STOCK NUMBER	FIG NO.	REF. DES.
5310-543-5933	B-1	H14
5310-934-9759	B-1	H2
	B-1	H6
5310-965-1806	B-1	H4
5905-279-3837	B-1	E1R1
5920-023-2926	B-1	F1-F60
5920-028-4337	B-1	XF1-60
5940-177-6505	B-1	TB1

REFERENCE NO.	MFR CODE	FIG NO.	REF. DES.
GMT18-100	71400	B-1	F1-F60
HLT	71400	B-1	XF1-60
MS15795-807	96906	B-1	H4
MS35333-72	96906	B-1	H5
		B-1	H8
		B-1	H12
MS353333-73	96906	B-1	H14
MS35649-284	96906	B-1	H2
		B-1	H6
MS51957-15	96906	B-1	H1
MS51957-46	96906	B-1	H3
		B-1	H7
MS51957-63	96906	B-1	H13
MS51959-45	96906	B-1	H9
MS51959-47	96906	B-1	H10
PJ660-8	70678	B-1	TB1

REFERENCE NO.	MFR CODE	FIG NO.	REF. DES.
RC32GF272J	81349	B-1	E1R1
1036-6	88183	B-1	
1036-6-10	88183	B-1	MP3
1036-6-21	88183	B-1	E1
1036-6-22	88183	B-1	E1E1
1700-01-000	18788	B-1	XDS1
35106-0	82219	B-1	DS1
5-0276	88183	B-1	H11
5-0940-04	88183	B-1	MP5
5-0946-04	88183	B-1	MP1
5-0947	88183	B-1	MP4
5-0948	88183	B-1	MP2
65FP1A120C	78277	B-1	E1K1

SECTION IX. INDEX-REFERENCE DESIGNATION CROSS-REFERENCE TO PAGE NUMBER

APPENDIX C

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

C-1. General

This appendix provides a summary of the maintenance operations covered in the equipment literature for Northern Radio Fuse and Alarm Panel Type 1036 Model 6. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function This appendix may be used as an aid in planning maintenance operations.

C-2. Maintenance Functions

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

b. Test. To verify serviceability and to detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean, preserve, drain, paint, or to replenish fuel/lubricants/hydraulic fluids or compressed air supplies.

d. Adjust. Maintain within prescribed limits by ringing into proper or exact position, or by letting the operating characteristics to the specified parameters.

e. *Align.* To adjust specified variable elements of an item to about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipment used a precision measurement. Consists of the comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of emplacing, seating, or placing into position an item, part, module component or assembly) in a manner to allow the proper functioning of the equipment/system.

h. Replace. The act of substituting a serviceable like-type part, subassembly, module (component or assembly) in a manner to allow the proper functioning of an equipment/system.

i. Repair. The application of maintenance services (inspect, test, service, adjust, align. calibrate, replace) or other maintenance actions (welding, grinding, riveting, straightening. facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module/component/assembly end item or system.

j. *Overhaul.* That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (e.g., DMWR) in pertinent technical manuals. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered in classifying Army equipment/components.

l. Symbols. The uppercase letter placed in the appropriate column indicates the lowest level at which that particular maintenance function is to be performed.

C-3. Explanation of Format

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to match components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Functional Group. Column 2 lists the next higher assembly group and the item names of components, assemblies, subassemblies, and modules within the group for which maintenance is authorized.

c. Column 3, Maintenance Function. Column 3 lists the maintenance category at which performance of the specific maintenance function is authorized. Authorization to perform a function at any category also includes authorization to perform, that function at higher categories. The codes used represent the various maintenance categories as follows:

(1) *Use of symbols.* The following symbols are used to prescribe work function responsibility:

Code	Maintenance category
C	Operator/crew
O	Organizational
F	Direct Support
H	General Support
D	Depot

(2) *Work measurement time.* The active repair time required to perform the maintenance function is included directly below the symbol identifying the category of maintenance. The skill levels used to obtain the measurement times approximate those found in typical TOE units. Active repair time is the average aggregate time required to restore an item (subassembly, assembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, fault isolation/diagnostic time, and QA/QC time in addition to the time required to perform specific maintenance functions identified for the tasks authorized in the maintenance allocation chart. This time is expressed in man-hours and carried to one decimal place (tenths of hours).

d. Column 4, Tools and Equipment. Column 4 specifies, by code, those tools and equipment required to perform the designated function. The numbers appearing in this column refer to specific tools and test equipment which are identified in table I.

e. Column 5, Remarks. Self-explanatory.

C-4. Explanation of Format of Table I (Tool and Test Equipment Requirements)

The columns in table I are as follows:

a. Tools and Equipment. The numbers in this column coincide with the numbers used in the tools and equipment column of the Maintenance Allocation Chart. The numbers indicate the applicable tool for the maintenance function.

b. Maintenance Category. The codes in this column indicate the maintenance category normally allocated the facility.

c. Nomenclature. This column lists tools, test, and maintenance equipment required to perform the maintenance functions.

d. Federal Stock Number. This column lists the Federal stock number of the specific tool or test equipment.

e. Tool Number. Not used.

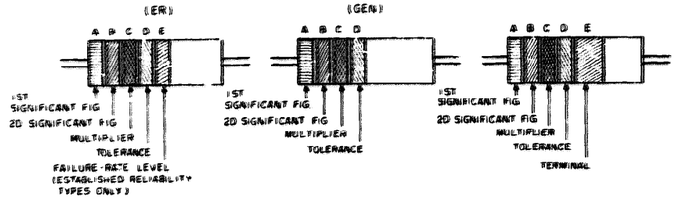
(Next printed page is C-3)

SECTION II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) FUNCTIONAL GROUP COMPONENT ASSEMBLY NOMENCLATURE	(3) MAINTENANCE FUNCTIONS											(4) TOOLS AND EQUIPMENT	(5) REMARKS
		INSPECT	TEST	SERVICE	ADJUST	ALIGN	CALIBRATE	INSTALL	REPLACE	REPAIR	OVERHAUL	REBUILD		
00	Fuse and Alarm Panel Assembly HRC 1036 MODEL 6	O 0.1								O 0.3 F 1.0			1 1,2,3	Lamps and Fuses See note NOTE Direct Support (F) maintenance operations for fixed plant equipment located OCONUS, will be performed by OFF-SITE (Area Maintenance and Supply Facility, AMSF) personnel.

TABLE I. TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOLS AND EQUIPMENT	MAINTENANCE CATEGORY	NOMENCLATURE		FEDERAL STOCK NUMBER	TOOL NUMBER
1	O,F	Multimeter	AN/USM-210	6625-019-0815	
2	F	DC Power Supply	PP-4399/FCC		
3	F	Tool Kit	TK-105/G	5180-610-8177	



COLOR CODE MARKING FOR COMPOSITION TYPE RESISTORS

COLOR-CODE MARKING FOR FILM-TYPE RESISTORS

TABLE I
COLOR CODE FOR COMPOSITION TYPE AND FILM TYPE RESISTORS.

BAND A		BAND B		BAND C		BAND D		BAND E		
COLOR	FIRST SIGNIFICANT FIGURE	COLOR	SECOND SIGNIFICANT FIGURE	COLOR	MULTIPLIER	COLOR	RESISTANCE TOLERANCE (PERCENT)	COLOR	FAILURE RATE LEVEL	TERM
BLACK	0	BLACK	0	BLACK	1			BROWN	M=1.0	
BROWN	1	BROWN	1	BROWN	10			RED	P=0.1	
RED	2	RED	2	RED	100			ORANGE	R=0.01	
ORANGE	3	ORANGE	3	ORANGE	1,000			YELLOW	S=0.001	
YELLOW	4	YELLOW	4	YELLOW	10,000	SILVER	±10 (COMP TYPE ONLY)	WHITE		*SOLDERABLE
GREEN	5	GREEN	5	GREEN	100,000	GOLD	±5			
BLUE	6	BLUE	6	BLUE	1,000,000	NED	±2 (NOT APPLICABLE TO ESTABLISHED RELIABILITY)			
PURPLE (VIOLET)	7	PURPLE (VIOLET)	7							
GRAY	8	GRAY	8	SILVER	0.01					
WHITE	9	WHITE	9	GOLD	0.1					

BAND A — THE FIRST SIGNIFICANT FIGURE OF THE RESISTANCE VALUE (BANDS A THRU D SHALL BE OF EQUAL WIDTH)

BAND B — THE SECOND SIGNIFICANT FIGURE OF THE RESISTANCE VALUE.

BAND C — THE MULTIPLIER (THE MULTIPLIER IS THE FACTOR BY WHICH THE TWO SIGNIFICANT FIGURES ARE MULTIPLIED TO YIELD THE NOMINAL RESISTANCE VALUE.)

BAND D — THE RESISTANCE TOLERANCE.

BAND E — WHEN USED ON COMPOSITION RESISTORS, BAND E INDICATES ESTABLISHED RELIABILITY FAILURE-RATE LEVEL (PERCENT FAILURE PER 1,000 HOURS) ON FILM RESISTORS, THIS BAND SHALL BE APPROXIMATELY 1-1/2 TIMES THE WIDTH OF OTHER BANDS, AND INDICATES TYPE OF TERMINAL

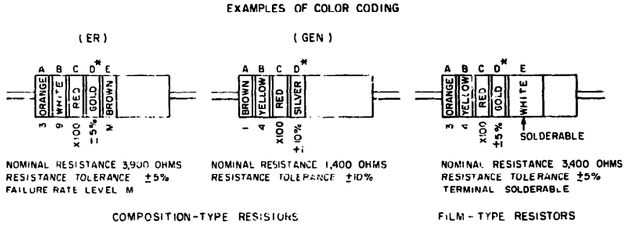
RESISTANCES IDENTIFIED BY NUMBERS AND LETTERS
(THESE ARE NOT COLOR CODED)

SOME RESISTORS ARE IDENTIFIED BY THREE OR FOUR DIGIT ALPHA NUMERIC DESIGNATORS. THE LETTER R IS USED IN PLACE OF A DECIMAL POINT WHEN FRACTIONAL VALUES OF AN OHM ARE EXPRESSED. FOR EXAMPLE:

2R7 = 2.7 OHMS 10R0 = 10.0 OHMS

FOR WIRE-WOUND-TYPE RESISTORS COLOR CODING IS NOT USED, IDENTIFICATION MARKING IS SPECIFIED IN EACH OF THE APPLICABLE SPECIFICATIONS

EXAMPLES OF COLOR CODING



NOMINAL RESISTANCE 3,900 OHMS
RESISTANCE TOLERANCE ±5%
FAILURE RATE LEVEL M

NOMINAL RESISTANCE 1,400 OHMS
RESISTANCE TOLERANCE ±10%

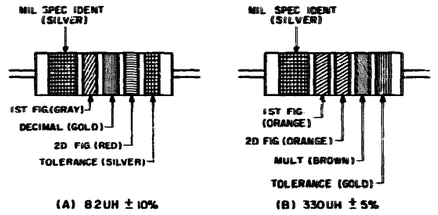
NOMINAL RESISTANCE 3,400 OHMS
RESISTANCE TOLERANCE ±5%
TERMINAL SOLDERABLE

COMPOSITION-TYPE RESISTORS

FILM-TYPE RESISTORS

* IF BAND D IS OMITTED, THE RESISTOR TOLERANCE IS ± 20% AND THE RESISTOR IS NOT MIL-STD

A COLOR CODE MARKING FOR MILITARY STANDARD RESISTORS



(A) 82UH ± 10%

(B) 330UH ± 5%

COLOR CODING FOR TUBULAR ENCAPSULATED R.F. CHOKES. AT A, AN EXAMPLE OF THE CODING FOR AN 8.2UH CHOKE IS GIVEN. AT B, THE COLOR BANDS FOR A 330UH INDUCTOR ARE ILLUSTRATED.

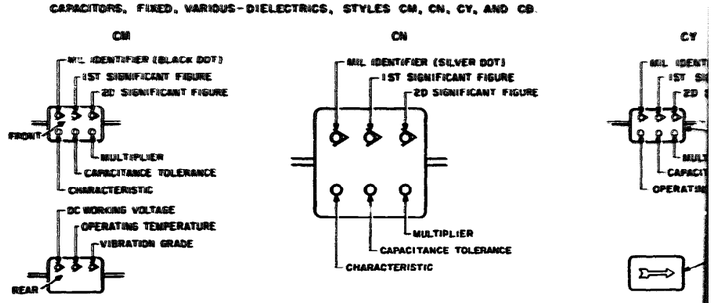
TABLE 2
COLOR CODING FOR TUBULAR ENCAPSULATED R.F. CHOKES.

COLOR	SIGNIFICANT FIGURE	MULTIPLIER	INDUCTANCE TOLERANCE (PERCENT)
BLACK	0	1	
BROWN	1	10	1
RED	2	100	2
ORANGE	3	1,000	3
YELLOW	4		
GREEN	5		
BLUE	6		
VIOLET	7		
GRAY	8		
WHITE	9		
NONE			20
SILVER			10
GOLD	DECIMAL POINT		5

MULTIPLIER IS THE FACTOR BY WHICH THE TWO COLOR FIGURES ARE MULTIPLIED TO OBTAIN THE INDUCTANCE VALUE OF THE CHOKE COIL.

B. COLOR CODE MARKING FOR MILITARY STANDARD INDUCTORS.

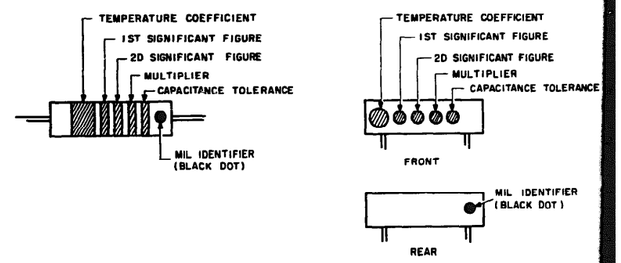
CAPACITORS, FIXED, VARIOUS-DIELECTRICS, STYLES CM, CN, CY, AND CB.



MICA-DIELECTRIC

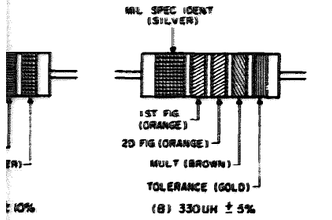
PAPER-DIELECTRIC

GLASS-DIELECT



AXIAL LEAD

RADIAL LEAD



UBULAR ENCAPSULATED R F CHOKES. AT A, AN EXAMPLE OF AN 8.2UH CHOKE IS GIVEN AT B, THE COLOR BANDS FOR ARE ILLUSTRATED

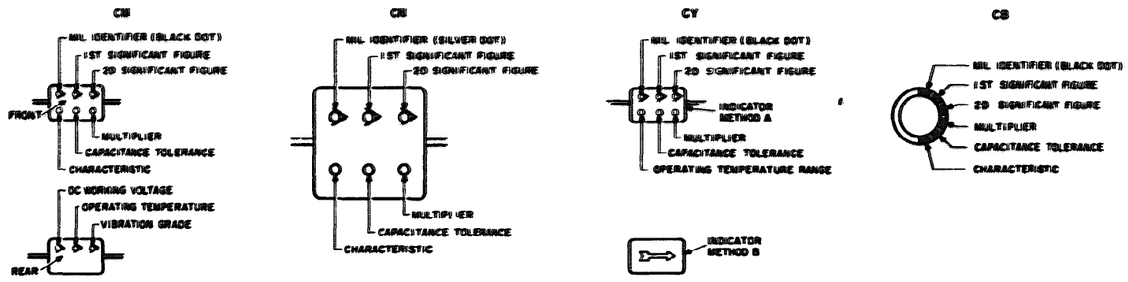
TABLE 2
DING FOR TUBULAR ENCAPSULATED R F CHOKES

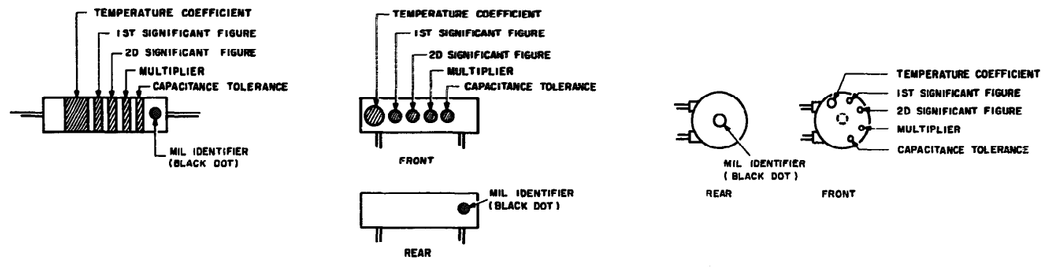
	SIGNI-FICANT FIGURE	MULTIPLIER	INDUCTANCE TOLERANCE (PERCENT)
	0	1	
	1	10	1
	2	100	2
	3	1,000	3
	4		
	5		
	6		
	7		
	8		
	9		
			20
			10
	DECIMAL POINT		5

R IS THE FACTOR BY WHICH THE TWO COLOR FIGURES PLIED TO OBTAIN THE INDUCTANCE VALUE OF THE L.

E MARKING FOR MILITARY STANDARD INDUCTORS.

CAPACITORS, FIXED, VARIOUS-DIELECTRICS, STYLES CM, CN, CY, AND CB.





C. COLOR CODE MARKING FOR MILITARY STANDARD CAPACITORS.

TABLE 3 — FOR USE WITH STYLES CM, CN, CY AND CB.

COLOR	MIL ID	1ST SIG FIG.	2D SIG FIG	MULTIPLIER	CAPACITANCE TOLERANCE				CHARACTERISTIC			DC WORKING VOLTAGE	OPERATING TEMP RANGE	VIBRATION GRADE
					CM	CN	CY	CB	CM	CN	CB	CM	CY, CM	CB
BLACK	DOT CY CB	0	0	1			±20%	±20%		A			-55°TO+70°C	10-55HZ
BROWN		1	1	10					B	E	B			
RED		2	2	100	±2%		±2%	±2%	C				-55°TO+85°C	
ORANGE		3	3	1,000		±30%			D		D	300		
YELLOW		4	4	10,000					E				-55°TO+125°C	10-2,000HZ
GREEN		5	5		±5%				F			500		
BLUE		6	6										-55°TO+150°C	
PURPLE (VIOLET)		7	7											
GRAY		8	8											
WHITE		9	9											
GOLD				0.1			±5%	±5%						
SILVER	CN			0.01	±10%	±30%	±10%	±10%						

TABLE 4 — TEMPERATURE COMPENSATING, STYLE CC.

COLOR	TEMPERATURE COEFFICIENT[4]	1ST SIG FIG.	2D SIG FIG.	MULTIPLIER[1]	CAPACITANCE TOLERANCE		MIL ID
					CAPACITANCES OVER 10 UUF	CAPACITANCES 10 UUF OR LESS	
BLACK	0	0	0	1		±2.0 UUF	CC
BROWN	-30	1	1	10	±1%		
RED	-80	2	2	100	±2%	±0.25 UUF	
ORANGE	-150	3	3	1,000			
YELLOW	-220	4	4				
GREEN	-330	5	5		±5%	±0.5 UUF	
BLUE	-470	6	6				
PURPLE (VIOLET)	-750	7	7				
GRAY		8	8	0.01*			
WHITE		9	9	0.1*	±10%		
GOLD	+100			0.1		±1.0 UUF	
SILVER				0.01			

1. THE MULTIPLIER IS THE NUMBER BY WHICH THE TWO SIGNIFICANT (SIG) FIGURES ARE MULTIPLIED TO OBTAIN THE CAPACITANCE IN UUF.
2. LETTERS INDICATE THE CHARACTERISTICS DESIGNATED IN APPLICABLE SPECIFICATIONS MIL-C-5, MIL-C-25D, MIL-C-11272B, AND MIL-C-10950C RESPECTIVELY.
3. LETTERS INDICATE THE TEMPERATURE RANGE AND VOLTAGE-TEMPERATURE LIMITS DESIGNATED IN MIL-C-11015D.
4. TEMPERATURE COEFFICIENT IN PARTS PER MILLION PER DEGREE CENTIGRADE.

* OPTIONAL CODING WHERE METALLIC PIGMENTS ARE UNDESIRABLE.

Figure FO-1. Color code marking for MIL-STD resistors, inductors, and capacitors.

By Order of the Secretary of the Army:

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General, United States Army,
Chief of Staff.

Official:
VERNE L. BOWERS
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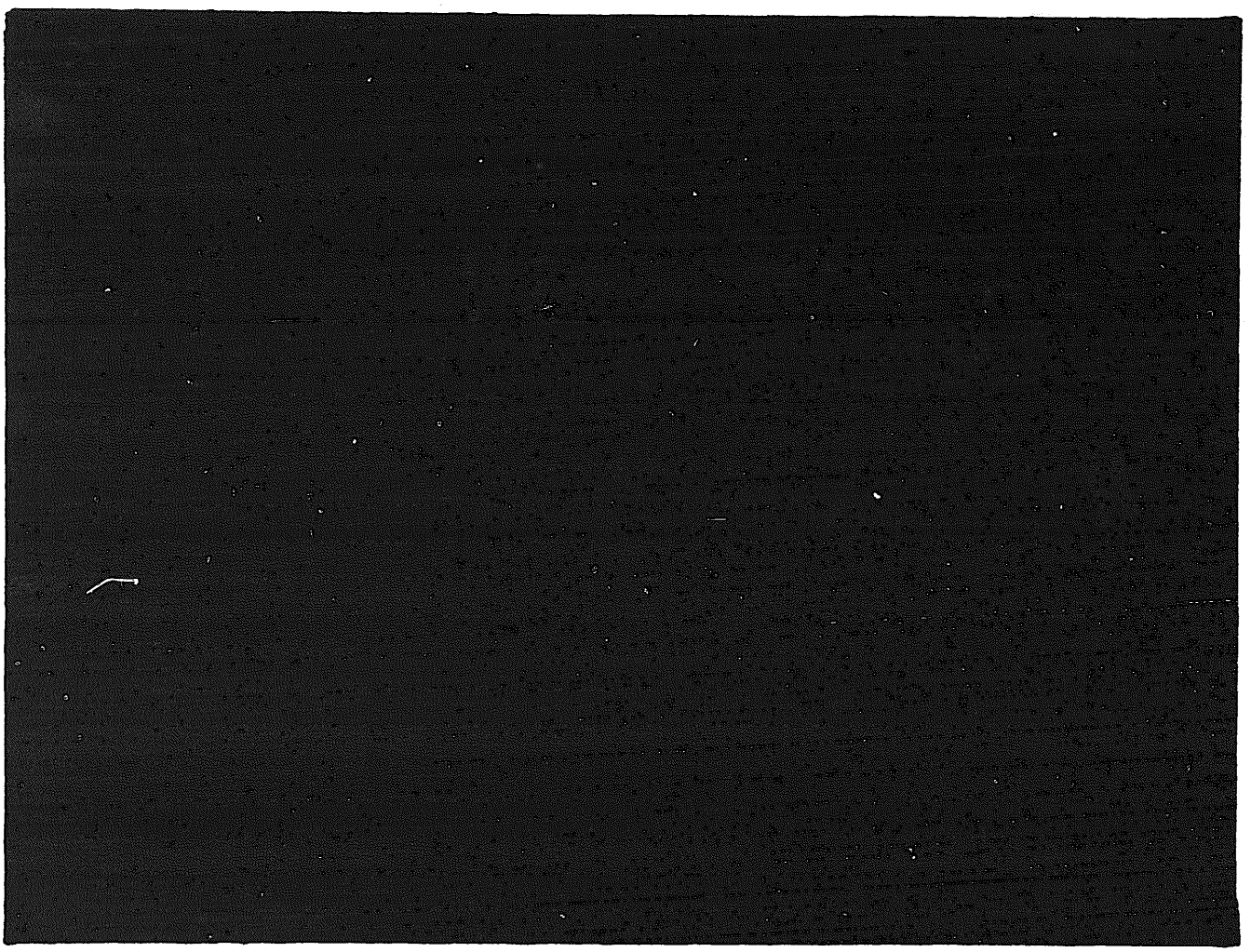

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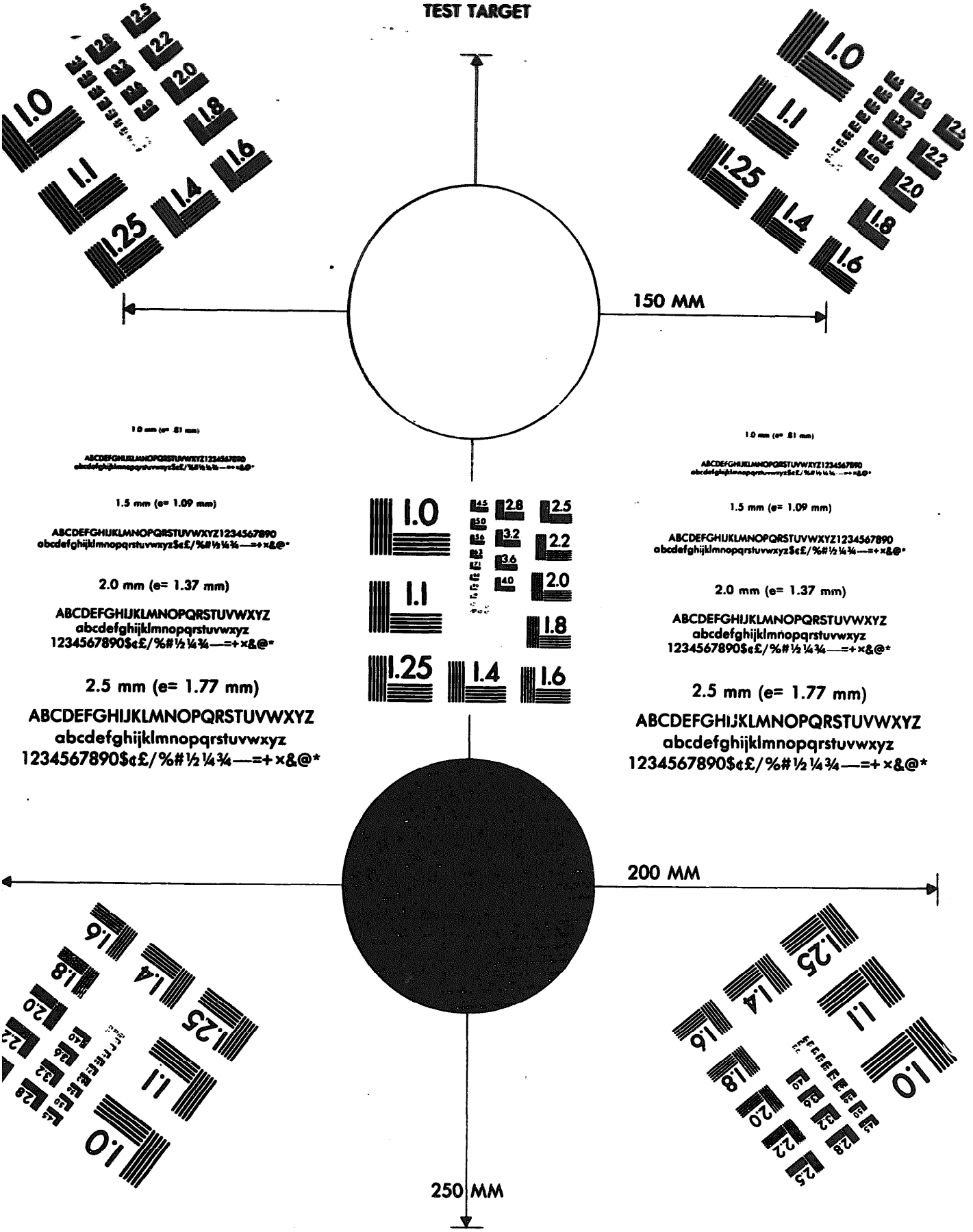

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