TECHNICAL MANUAL

OPERATOR AND ORGANIZATIONAL MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS

TEST SET TERRAIN-CALIBRATION INDICATOR AN/AAM-33

This copy is a reprint which includes current pages from Changes 1 through 3.

HEADQUARTERS, DEPARTMENT OF THE ARMY

CHANGE
No. 3

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *9 January 1978*

Operator and Organizational Maintenance Manual
INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS

TEST SET, TERRAIN-CALIBRATION INDICATOR AN/AAM-33
(NSN 6625-00-403-1070)

TM 11-6625-1826-12, 1 July 1970, is changed as follows:
1. Title of the manual is changed as shown above.
2. A vertical bar appears opposite changed material.
3. Remove and insert pages as indicated in the page list below.

Remove pages	*Insert pages*
i and ii	i and ii
v	v
1-1 and 1-2	1-1 and 1-2
2-1 and 2-2	2-1 and 2-2
3-3 and 3-4	3-3 and 3-4
4-3 and 4-4	4-3 and 4-4
5-1 and 52	5-1/(2 blank)

File this change sheet in front of the manual for reference purposes.

By Order of the Secretary of the Army:

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TM 11-6625-1826-12
C2

CHANGE
No. 2

HEADQUARTERS
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WASHINGTON, DC, *13 August 1974*

Operator and Organizational Maintenance Manual
INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS

TEST SET, TERRAIN-CALIBRATION INDICATOR AN/AAM-33

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Remove pages	*Inset pages*
i and ii	i and ii
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A-1	A-1
R-1 through B-4	B-1

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CHANGE
No. 1

HEADQUARTERS
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WASHINGTON, DC, *8 February 1972*

Operator and Organizational Maintenance Manual
INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS

TEST SET, TERRAIN-CALIBRATION INDICATOR AN/AAM-33

TM 11-6625-1826-12, 1 July 1970, is changed as follows:

1. Remove and insert pages as indicated in the page list below.

Remove pages--	*Insert pages--*
Warning page	Warning page
1-1 through 1-4	1-1 through 1-4
2-1 and 2-2.	2-1 and 2-2
B-1 through B-4	B-1 through B-4
C-3 through C-6	C-3 through C-6
D-1 through D-6	D-1 through D-6

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Distribution:

To be distributed in accordance with DA Form 12-31, Section I, (qty rqr block No. 225), Direct and General Support maintenance requirements for OV-1D aircraft.

WARNING

DEATH or SERIOUS INJURY may result from hazards in this equipment. READ and OBSERVE following warnings:

WARNING

DEATH or SERIOUS INJURY may result from contact with 115 VAC, 400-Hz, 3-phase power existing within this test set.

WARNING

The fumes of trichloroethane are toxic. Provide thorough ventilation whenever used. DO NOT use near an open flame. Trichlorethane is not flammable, but exposure of the fumes to an open flame converts the fumes to highly toxic, dangerous gases.

WARNING

Be extremely careful with explosives and incendiary devices. Use these items only when the need is urgent.

WARNING

Two men are required to lift the indicator test set.

Change 1

TECHNICAL MANUAL
NO. 11-6625-1826-12

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *1 July 1970*

OPERATOR AND ORGANIZATIONAL MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOL LISTS TEST SET, TERRAIN-CALIBRATION INDICATOR AN/AAM-33 (NSN 6625-00-403-1070)

LIST OF ILLUSTRATIONS

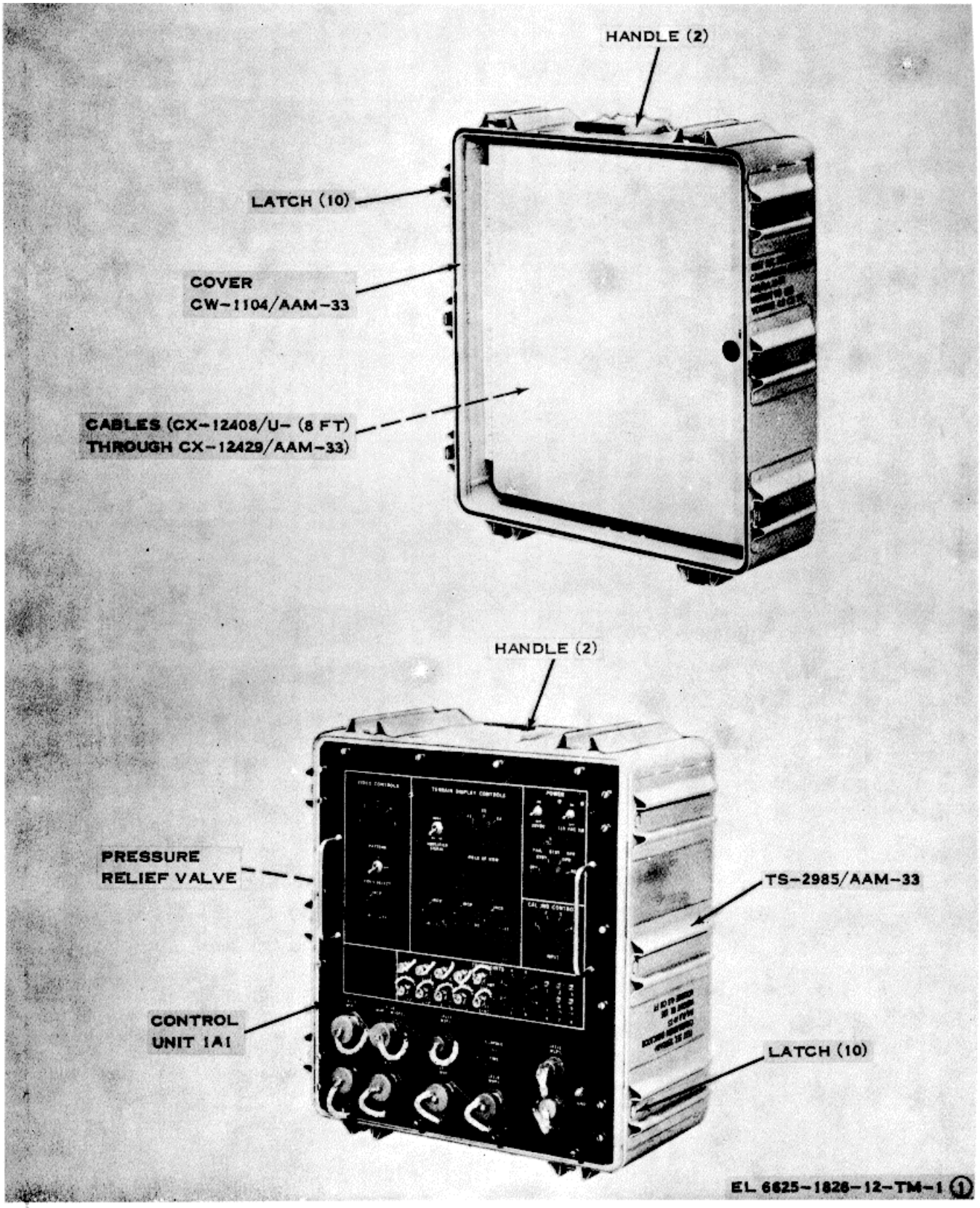


Figure 1-1(1). Test Set, Terrain-Calibration Indicator AN/AAM-33, components (part 1 of 2).

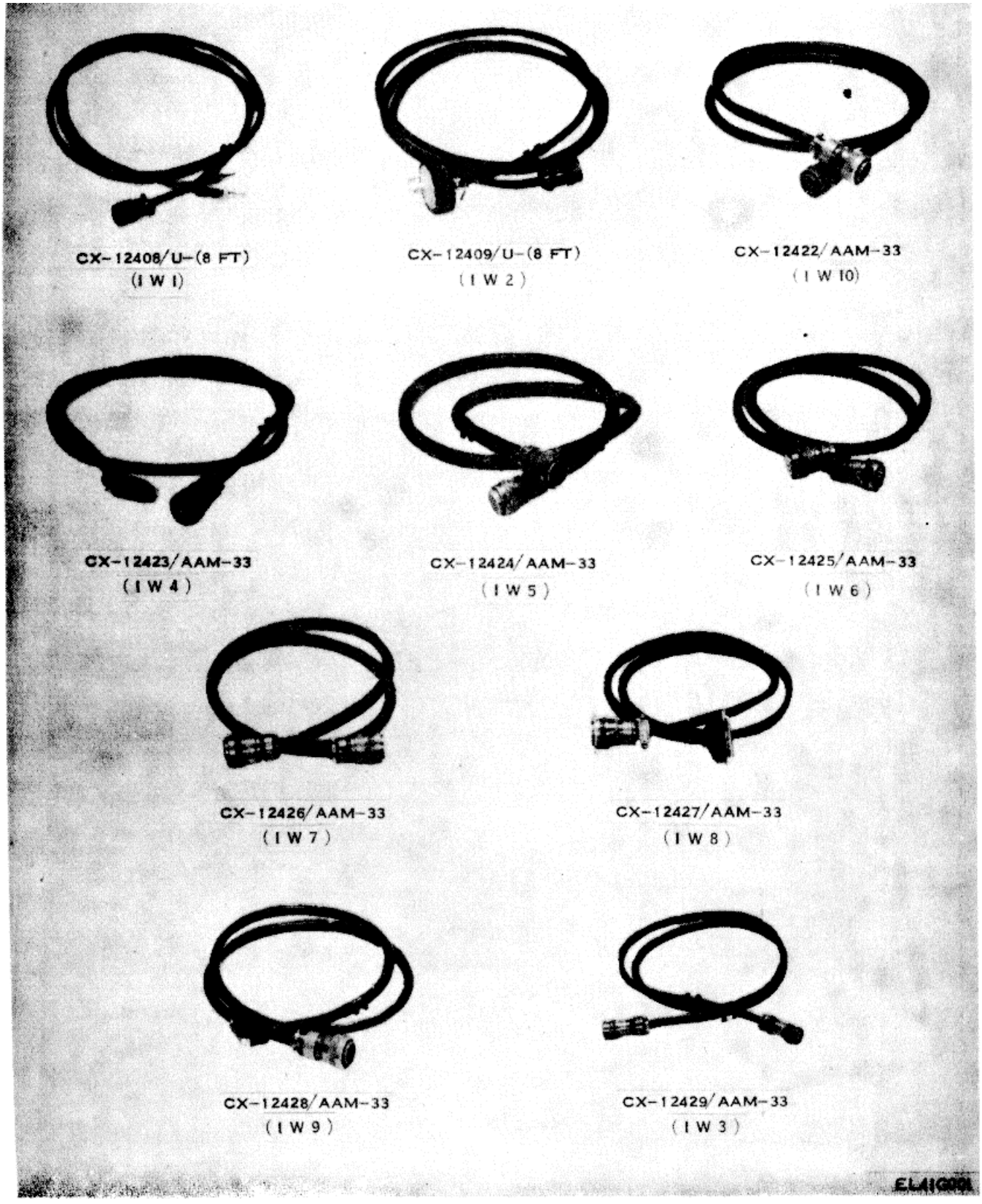


Figure 1-1(2). Test set, terrain-calibration indicator AN/AAM-33, components (part 2 of 2).

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope of Manual

a. This manual describes Test Set, Terrain Calibration Indicator AN/AAM-33 (indicator test set) and covers its installation, operation, and operator and organizational maintenance. It includes instructions for operation under usual and unusual conditions, preventive and periodic maintenance services, and replacement of parts available to the organizational repairman.

b. Instructions for using Test Set, Terrain Calibration Indicator AN/AAM-33 to test the components of Detecting Set, Infrared AN/AAS-24 are contained in TM 11-5850-241-34/1.

c. Appendix A contains references; appendix B contains the basic issue items list and items troop installed or authorized list; appendix C contains the maintenance allocation chart, and appendix D contains the organizational repair parts and special tools list.

NOTE

The AN/AAM-33 is unit 1A1. All reference designations should be prefixed with 1A1 for completeness.

1-2. Indexes of Publications

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

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO's) pertaining to the 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. Report of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 70058/NAVSUPINST 4030.29/AFR 71-13/MCO P4030.29A, and DLAR 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 4610.33B/AFR 75-18/MCO P4610.19C and DLAR 4500.15.

1-3.1. Reporting of Errors

The reporting of errors, omissions, and recommendations for improving this publication 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: DRSEL-MA-Q Fort Monmouth, NJ 07703.

1-3.2. Reporting Equipment

Improvement Recommendations EIR's will be prepared using DA Form 2407 (Maintenance Request). Instructions for preparing EIR's are provided in TM 38-750, The Army Maintenance Management System. EIR's should be mailed direct to Commander, US Army Electronics Command, ATTN: DRSEL-MA-Q, Fort Monmouth, NJ 07703. A reply will be furnished direct to you.

1-3.3. Administrative Storage

Administrative storage of equipment issued to and used by Army activities shall be in accordance with TM 740-90-1.

1-3.4. Destruction of Army Electronics Materiel

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

Section II. DESCRIPTION AND DATA

1-4. Purpose and use

a. Test Set, Terrain-Calibration Indicator AN/AAM-33 provides facilities for bench testing Indicator, Terrain Display IP-970/AAS-24 and Indicator, Calibration Display IP-969/AAS-24, components of Detecting Set, Infrared AN/AAS-24. When used with additional equipment (para 1-10), the indicator test set facilitates the following tests:

(1) *Indicator, Terrain Display IP-970/AAS-24.*
- *(a)* Centering test.
- *(b)* Brightness test.
- *(c)* Contrast test.
- *(d)* Resolution test.

(e) Interlacing test.
(f) Linearity test.
(2) Indicator, Calibration Display IP-9691 AAS-24.
(a) Centering test.
(b) Video gain test.
(c) Brightness test.

b. The indicator test set is used to satisfy special test requirements for the unit under test. These requirements include an electronically monitored power source, specialized test signals, control functions, and accessible test points. Control functions of the indicator test set select the test specified in a above. During tests, control functions are used to adjust signal parameters and select signal paths in the external equipment, the unit under test, and the indicator test set. In addition, the indicator test set provides external test points which facilitate monitoring input and output signals.

1-5. Technical Characteristics

a. Input Power.

(1) 115 t 11.5 volts alternating current (vac), 400 _20 Hertz (Hz), 3-phase, 4-wire, 1.6 ampere (amp) maximum (max.) per phase.

(2) 27.0 ± 2.0 volts direct current (vdc), 0.70 amp max.

b. Power Outputs.

(1) 115 ± 11.5 vac, 400 +20 Hz, 3-phase, 4-wire, 0.8 amp max, per phase.
(2) +27.0±2.0 vdc 0.40 amp max.
(3) + 150 ± 3.0 vdc regulated.
(4) + 15 ± 0.3 vdc regulated.
(5) - 15 ± 0.3 vdc regulated.
(6) + 5 ± 0.1 vdc regulated.

c. Signal Outputs.

(1) *Indicator test set signals to terrain display indicator.*
(a) Video to video amplifier.
(b) Two synchronizer signals.
(c) Reticle ramp signal.
(d) Display vertical step.
(e) Brightness signal.
(f) Contrast signal.
(2) *Indicator test set signals to calibration indicator.*
(a) Two synchronizer signals.
(b) Video to video preamplifier.

1-6. Items Comprising an Operable Equipment

FSN	Qty	Nomenclature	Wt (lb)	Dimensions (in) Height	Depth	Width	Fig No.
6625-403-1070		Test Set, Terrain-Calibration Indicate AN/AAM-33 (1)	82 6	27.2	23.8	22.2	1-1
		Consisting of:					
6625-196-2844	1	Cable Assembly, Power, Electrical CX-124081U (8 ft) (1Wi)	0.5	96 (lg)			1-1
6625-470-4315	1	Cable Assembly, Power, Electrical CX-12409/U (8 ft) (IW2)	1.0	96 (lg)			1-1
6625-489-0456	1	Cable Assembly, Special Purpose, Electrical CX-12422/AAM-33 (1Wli	1.6	60 (lg)			1-1
6625-489-0429	1	Cable Assembly, Special Purpose, Electrical CX-12423/AAM-33 (1W4)	1.1	60 (lg)			1-1
6625-489-0457	1	Cable Assembly, Special Purpose, Electrical CX-12424/AAM-33 (IW5)	2.2	60 (lg)			1-1
6625-196-2859	1	Cable Assembly, Special Purpose, Electrical CX-12425/AAM-33 (lW6)	2.2	60 (lg)			1-1
6625-489-2665	1	Cable Assembly, Special Purpose, Electrical CX-12426/AAM-33 (1W7)	1.6	60 (lg)			1-1
6625-489-2663	1	Cable Assembly, Special Purpose, Electrical CX-12427/AAM-33 (IW8)	1.2	60 (lg)			1-1
6625-489-2666	1	Cable Assembly, Special Purpose, Electrical CX-12428/AAM-33 (1W9)	1.3	60 (lg)			1-1
6625-242-5795	1	Cable Assembly, Special Purpose, Electrical CX-12429'.tAM-33 (IW3)	0.7	60 (lg)			1-1
6625-4085054	1	Test Set, Terrain Calibration Indicator TS2985/AAM-33 (lMP4)	67.6	19.7	23.8	22.2	1-1

1-6.1. Expendable Consumable Supplies and Materials

Expendable Consumable Supplies and Materials are listed in table 1-1

Table 1-1. Expendable Consumable Supplies and Materials

The supplies and materials listed in this table are required for operation of this equipment and are authorized to be requisitioned by SB 700-50. The FSN for the applicable unit of issue required can be found in appropriate supply catalogs. 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.

Item	Description	Ref. No. and FSCM	FSC
1	Cleaning Compound		6810
2	Lubricating Oil, General Purpose, Preservative (PI,-Special)		9150
3	Fine Sandpaper		5350
4	Insulation Tape, Electrical, (Pressure Sensitive Adhesive Plastic Tape)		5970

1-7. Common Names

Common names are listed in table 1-2.

1-8. Reference Designators

Reference designators are listed in table 1-3.

NOTE

Cover, Test Set CW-1104/AAM-33 that accompanies Test Set, Terrain-Calibration Indicator AN/AAM-33 is listed in appendix B.

Table 1-2. Common Names

Nomenclature	Common Name
Test Set, Terrain-Calibration Indicator AN/AAM-33	Indicator test set
Cover, Test Set CW-1102/ AAM-33.	Cover
Electronic control unit	Control unit
Indicator, Terrain Display 1P970/AAS-24.	Terrain display indicator
Indicator, Calibration Display 1P969/AAS-24.	Calibration indicator

1-9. Description of Test Set, Terrain-Calibration Indicator AN/AAM-33

(fig. 1-1)

The indicator test set is contained in a portable metal transit case. The transit case has a removable cover held in place by 10 clamp-type latches. Two pressure relief valves located on the transit case, when unscrewed, equalize pressure. Two handles on the transit case facilitate carrying the indicator test set. The 10 cable assemblies are stored in the cover of the transit case. The indicator test set provides all the operating controls, switches, connectors, and indicators required to interconnect, control, and observe the terrain display indicator and the calibration indicator of the Detecting Set, Infrared AN/AAS-24 under test. Control unit 1A1 connectors accept plugs from various power and test cables to connect power to the indicator test set and to connect the unit under test to the indicator test set. Control unit 1A1 test points permit various signals to be monitored during testing. An elapsed time meter is mounted on control unit 1A1.

Table 1-3. Reference Designators

Reference designators,	*Nomenclature*	*Manufacturer's part number*
1	Test Set Terrain-Calibration Indicator ANIAAM-33.	692516-1
1A1	Electronic control unit	692533-1
1A1A1	Video generator	692355-1
1A1A2	Video processor	692418-1
1A1A3	Miscellaneous display indicator circuits.	692358-1
1A1A4	Input power control	692367-1
1A1A5	+ 15 vdc power supply	725126-1
1A1A6	-15 vdc power supply	725081-1
1A1A7	Integrated circuits power supply.	725084-1
1A1A8	+150/+250 vdc power supply	692469-1
1A1A9	Heat sink	695891-1
1A1A10	Filter assembly	694753-3

1-10. Additional Equipment Required

Additional equipment listed in Table 1-4 is used with the indicator test set to test the Infrared Detecting Set AN/AAS-24 terrain display indicator and calibration indicator.

Table 1-4. Additional Equipment Required

Equipment	Applicable publications
Digital Voltmeter, Non-Linear Systems (model X-2) with dual function converter, part number 37-42, and ac converter, part number 37-45 (dvm).	
Oscilloscope AN/USM-281A (HP model 180A) (oscilloscope).	TM 11-6625-1703-15
Maintenance Kit, Electronic Equipment MK-1172/ AAS-24 (electronic maintenance kit).	TM-11-6625-1732-12

CHAPTER 2
INSTALLATION

2-1. General

This chapter contains instructions for unpacking, checking upon receipt, power connections and preoperational checks of Test Set, Terrain Display-Calibration Indicator AN/AAM-33.

2-2. Packaging Data

(fig. 2-1)

The indicator test set is shipped in a single cleated plywood shipping container with all interconnecting cables packed in the cover. The indicator test set (including the shipping container) measures 31 by 30 by 28 inches, weighs approximately 125 pounds, and occupies a volume of 15 cubic feet.

2-3. Unpacking the Equipment

To remove the indicator test set from the shipping container, proceed as follows:

a. Place the shipping container on a suitable, clean work area, making certain that the top is up.

b. Using a nail puller, carefully remove the top and one side of the shipping container, slide the indicator test set from the container.

WARNING

Two men are required to lift the indicator test set.

c. Place the test set on a workbench.

d. Unscrew both pressure relief valves two turns each to equalize pressure.

e. Open the indicator test set cover and remove all interconnecting cables from the cover. Place these items on the workbench (fig. 1-1).

f. Replace the top and one side of shipping container and retain the container for future use (ground storage or reshipment).

2-4. Checking Unpacked Equipment

a. Inspect the equipment for physical damage that may have occurred during shipment. If the equipment has been damaged, fill out and forward DD Form 6 (para 1-3b).

b. Check to see that the equipment is complete as listed on the packing slip. If a packing slip is not available, check the equipment against the basic issue items list (app. B). Report all discrepancies in accordance with paragraph 1-3c. The equipment should be placed in service even though a minor assembly or part that does not affect proper functioning is missing.

c. Check to see whether the equipment has been modified. If the equipment has been modified, the MWO number will appear on the front panel near the nomenclature plate. Check also to see whether all MWO's current at the time the equipment is placed in use have been applied (DA Pam 310-7).

d. Check the latest issue of DA Pam 310--4 and its latest changes to see if you have the latest editions of all applicable maintenance literature.

2-5. Installation Instructions

Initial installation of the indicator test set requires the connection of two power cables between the indicator test set and the proper input power sources.

a. Set the 28 VDC and the 115VAC30 circuit breakers on control unit 1A1 (fig. 3-1) to OFF.

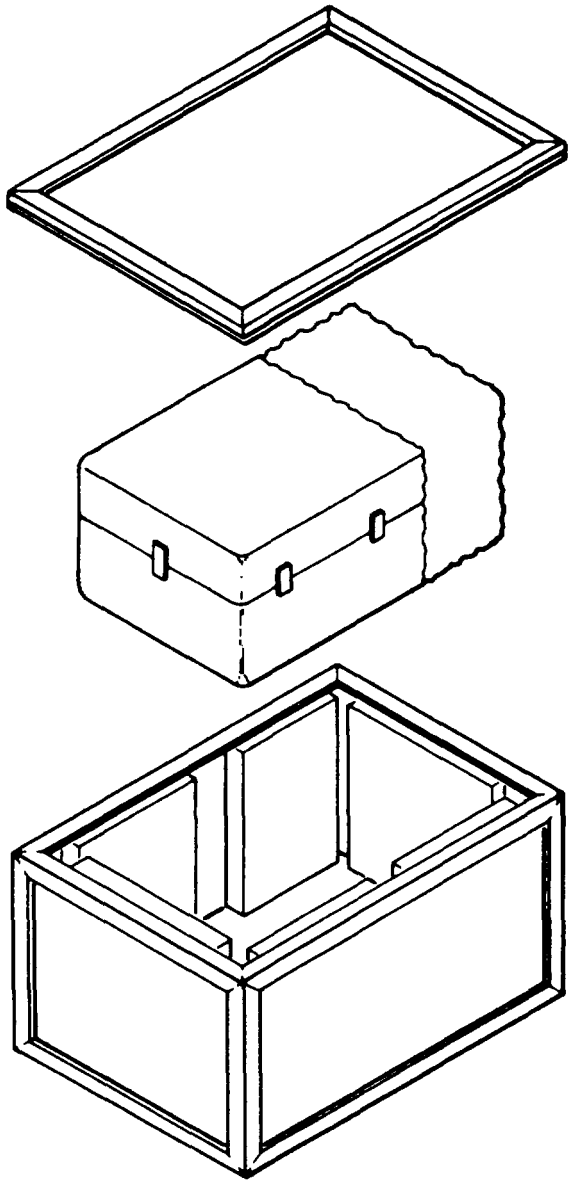
b. Connect cable W1 between control unit connector 1A1J1 (fig. 3-1) and the 28 vdc source.

c. Connect cable W2 between control unit connector 1A1J2 and the 115 vac, 400-Hz, 3-phase source.

Note: Interconnection of cables 1W3 through 1W10 between the control unit connectors and Detecting Set, Infrared AN/AAS-24 is covered in TM 11-5850-241-34.

2-6. Initial Checking of Equipment

Upon completion of installation, the indicator test set will be given an initial checkout by performing the preliminary starting procedure (para 3-6) and the stopping procedure (para 3-7).



EL 6625-1826-12-TM-2

Figure 2-1. Indicator test packaging.

CHAPTER 3
OPERATION

Section I. OPERATOR'S CONTROLS, INDICATORS AND CONNECTORS

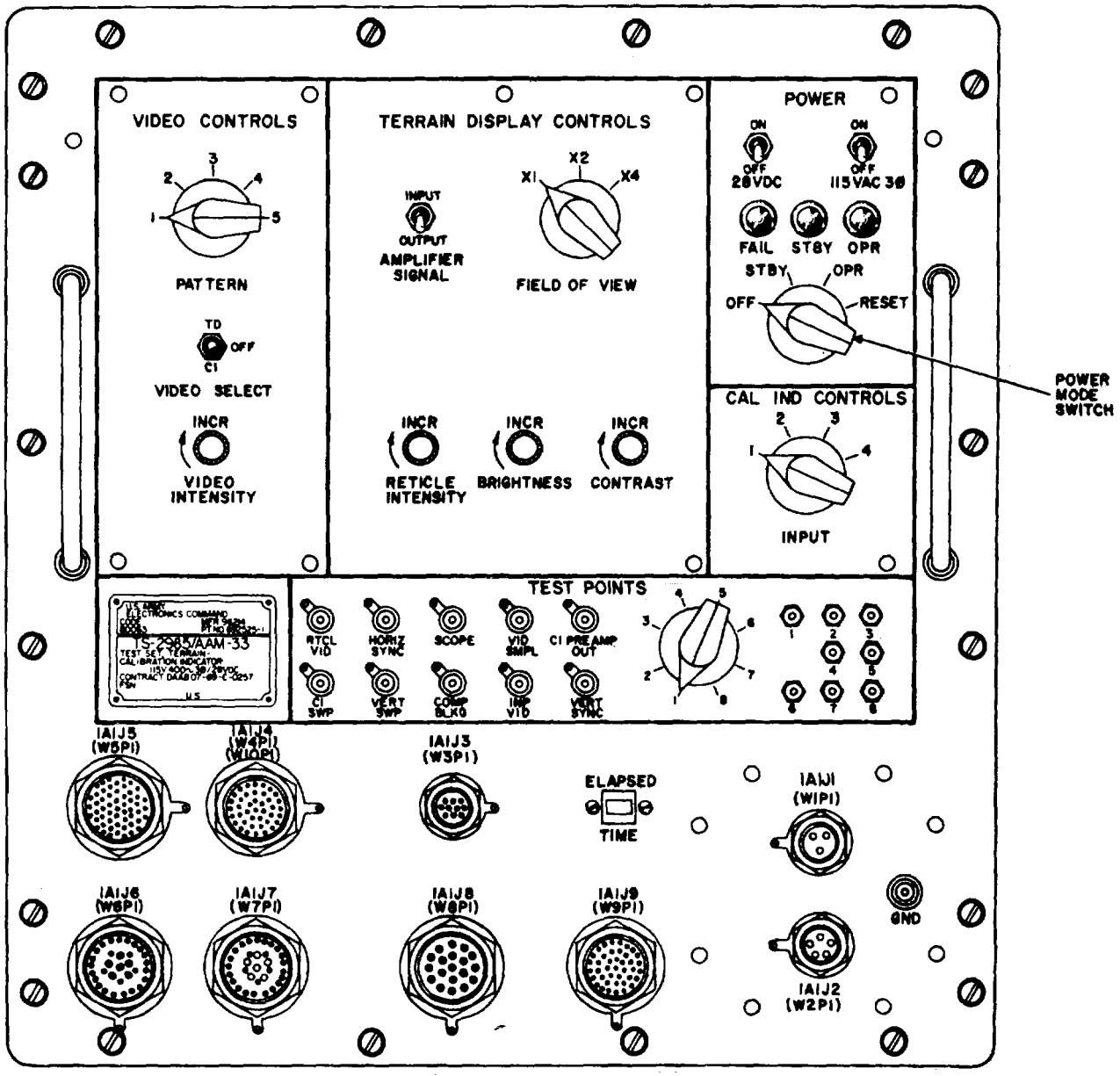
3-1. Control Unit 1AI, Controls and Indicators

(fig. 3--1)

Controls and indicators are listed in table 3-1.

Table 3--1. Control Unit 1A1 Controls and Indicators

Control or indicator	Function
VIDEO CONTROLS:	
PATTERN (5-position rotary switch).	Selects external signal generator or generates internal video signal and applies to unit under test *Sw Pos* — *Action* 1 ..... Selects reticle video. 2 ..... Selects linearity. 3 ..... Selects contrast. 4 ..... Selects 2 MHz signal. 5 ..... Selects 10 MHz signal.
VIDEO SELECT (2-position toggle Switch).	*Sw Pos* — *Action* OFF ..... None. TD..... Selects outputs to terrain display indicator. CI..... Selects outputs to calibration indicator.
VIDEOINTENSITY (potentiometer).	Adjusts indicator test set video output.
TERRAIN DISPLAY CONTROLS:	
AMPLIFIER SIGNAL (2-position toggle switch).	*Sw Pos* — *Action* INPUT..... Applies video amplifier input to test point VID SMPL. OUTPUT ..... Applies video amplifier output to test point VID SMPL.
FIELD OF VIEW (3-position rotary switch).	Varies reticle position with respect to field of view. *Sw Pos* — *Action* X1 ..... No magnification. X2. ..... Magnifies field of view by fact or of 2. X4 ..... Magnifies field of view by a factor of 4
RETICLE INTENSITY(potentiometer)	Varies reticle line intensity of the terrain display indicator crt
BRIGHTNESS (potentiometer)	Varies brightness of the terrain display indicator crt
CONTRAST (potentiometer)	Varies contrast of terrain display crt display
POWER:	
28 VDC (2-position circuit breaker)	Controls operating voltages to test set and unit under test *Sw Pos* — *Action* ON .....Applies 28 volts dc to indicator test set and unit under test OFF.....Removes 28 volts dc from indicator test set and unit under test
115 VAC 30 (2-position circuit breaker)	Sw Pos Action ON Applies filtered 115 vac, 400-Hz, 3-phase power to indicator test set OFF.....Removes filtered 115 vac, 400-Hz, 3-phase power from indicator test set
FAIL (Press-to-test lamp assembly)	Lights when a fail indication is received, extinguished by RESET position of power mode switch
STBY (Press-to-test lamp assembly)	Lights when power mode switch is set to STBY Lights when fail indication is received to indicate standby condition is present
OPR (Press-to-test lamp assembly)	Lights when power mode switch is set to OPR Lamp is extinguished when rail indication is received, lights when power mode switch is momentarily set to RESET



EL 6625-1826-12-TM-3

Figure 3-1. Control unit 1A1 controls, indicators, and connectors.

Table 3--1. Control Unit 1A1 Controls and Indicators (Continued)

Control or indicator	Function
Power Mode Switch (4-position rotary. switch)	*Sw Pos* — *Action* OFF ..... Removes filtered 115vac, 400-Hz, 3-phase power and filtered 28-volts dc power from indicator test set and unit under test and extinguishes all lamps STBY ..... Applies ac and dc power to indicator test set only and lights standby lamp OPR..... Applies ac and dc power to indicator test set and unit under test and lights OPR lamp RESET (momentary position) Restores ac and de power to indicator test set and unit under test and extinguishes FAIL lamp after a fail indication is received
CAL IND CONTROLS:	
INPUT (4-position rotary switch)	In conjunction with PATTERN control, applies video signal from video or external generator to unit under test *Sw Pos* — *Action* 1,2,3, and 4 Selects video signals for application to unit under test
TEST POINTS switch (8-position rotary switch)	Selects various signals to be connected to test point 1 through 4 or SCOPE jacks for external monitoring
ELAPSED TIME (meter)	Indicates accumulative time that the power mode switch has been in STBY or OPR position
GND	Chassis ground

3-2. Control Unit 1Al Connectors

(fig. 3-1)

Control unit 1A1 connectors are listed in table 3-2.

3-3. Test Points

(fig. 3-1)

Control unit 1A1 test points are listed in table 3-3.

Table 3-2. Control Unit 1A1 Connectors

Control unit connector	Connects cable assembly	To-
1A1J1	W1	+28 vdc power source.
1A1J2	W2	115 vac, 400-Hz, 3-phase power source.
1A1J3	W3	Light sensor (part of Maintenance Kit, Electronic Equipment MK--1172/AAS-24).
1A1J4	W4	Terrain display indicator.
1A1J4	W10	Terrain display indicator.
1A1J5	W5	Terrain display indicator.
1A1JS	W6	Terrain display indicator.
1A1J7	W7	Terrain display indicator.
1A1J8	W8	Calibration indicator.
1A1J9	W9	Calibration indicator.
GND	.....	Ground points.

Table 3-3. Test Point Functions

Test point	Signal
1	Selected by TEST POINTS switch.
2	Selected by TEST POINTS switch.
3	Selected by TEST POINTS switch.
4	Selected by TEST POINTS switch.
SCOPE	Selected by TEST POINTS switch.
6	Vertical deflection sample.
6 and 7	Power cannot be supplied to the indicator test set or to the unit under test unless these two points are connected.
8	Ground.
RTCL VID	Reticle video.
HORIZ SYNC	Terrain display horizontal synchronization.
VID SMPL	Terrain display video sample.
CI PREAMP OUT	Calibration indicator video amplifier output.
CI SWP	Calibration indicator sweep.
COMP BLKG	Composite blanking.
INP VID	Input video.
VERT SYNC	Terrain display vertical synchronization.
VERT SWP	Vertical sweep.

Section II. OPERATION UNDER USUAL CONDITIONS

3-4. Operating Procedures

To operate the indicator test set perform the following procedures:

a. Preparation for use (para 3-5).

b. Preliminary starting procedure (para 3-6).

c. Test procedure for unit under test (TM 11-5850-241-34).

d. Stopping procedure (para 3-7).

3-5. Preparation for Use

a. Place the indicator test set on the bench where it is to be used.

b. Remove the cover from the indicator test set. Remove the cables from the cover.

c. Set the 28 VDC and the 115 VAC 30 circuit breakers and power mode switch to OFF (fig. 3-1).

d. Connect cable W1 between control unit connector lA1Jl (fig. 3-1) and the 28 vdc power source.

e. Connect cable W2 between control unit connector 1A1J2 and the 115 vac. 400-Hz, 3-phase, 4-wire power source.

3-6. Preliminary Starting Procedure

(fig. 3-1)

a. Set the 115 VAC 30 circuit breaker to ON.

b. Set the 28 VDC circuit breaker to ON.

c. Set the power mode switch to STBY and verify that the STBY indicator lamp lights.

3-7. Stopping Procedure

(fig. 3-1)

a. Set power mode switch to OFF.

b. Set the 28 VDC circuit breaker to OFF.

c. Set the 115 VAC 30 circuit breaker to OFF.

d. Replace all cables in the cover of the indicator test set.

e. Replace the cover on the indicator test set and secure with the latches provided.

Section III. OPERATION UNDER UNUSUAL CONDITIONS

3-8. Operation at Low Temperatures

Freezing or subfreezing temperatures affect the efficient use of the indicator test set. Extreme changes from cold to warm areas, such as movement of the equipment into a heated area, will cause condensation. To maintain operating efficiency under these conditions, exercise the following precautions:

a. Operate the indicator test set in a heated area.

b. When cold equipment is brought into a warm area allow the equipment to reach room temperature. Wipe condensation off with a clean, dry cloth before operating the indicator test set.

3-9. Operation in Tropical Climates

In tropical climates, moisture conditions are more acute than normal. Ventilation in closed areas is usually very poor, and the high relative humidity causes condensation of moisture on the equipment. Wipe the indicator test set with a clean, dry cloth and apply power to the indicator test set (standby power mode) once a day to eliminate moisture.

3-10. Operation in Desert Climates

a. When operated in desert climates, sand, dust, or dirt will reach the moving parts of the indicator test set causing binding of controls and switches. Foreign particles in connectors may cause faulty operation. Make the operating area as dustproof as possible with available materials. If the indicator test set is installed in a tent, secure the side walls with sand to prevent their flapping in the wind. When equipment is not in use, secure the cover to the equipment.

b. A drastic fall in temperature at night often causes condensation. To prevent condensation, cover the indicator test set with a tarpaulin or similar covering material.

c. Wipe off accumulated sand, dust, dirt, or condensation with a clean, dry cloth. Inspect connectors and clean as necessary before making test connections.

CHAPTER 4
MAINTENANCE INSTRUCTIONS

Section I. OPERATOR'S MAINTENANCE

4-1. Scope of Operator's Maintenance

The maintenance duties assigned to the operator of the indicator test set are listed below, together with a reference to the paragraphs covering the specific maintenance functions. The materials required for operator's maintenance are listed in paragraph 4-2.

a. Operator's daily preventive maintenance checks and services (para 4-5).

b. Cleaning (para 4-6).

c. Operator's weekly preventive maintenance checks and services (para 4-7).

4-2. Materials Required for Operator's Maintenance

The following materials are required to perform operator's maintenance of the indicator test set:

a. Cleaning Compound, Trichloroethane (app. B).

b. Cleaning cloth.

c. Cleaning brush.

4-3. Preventive Maintenance

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to ensure that the equipment is serviceable.

a. Systematic Care. The procedures given in paragraphs 4-5, 4-6, and 4-7 cover routine systematic care and cleaning essential to proper unkeep and operation of the equipment.

b. Preventive Maintenance Checks and Services. The preventive maintenance checks and services charts (paras 4-5 and 4-7) outline functions to be performed at specific intervals. These checks and services are to maintain Army equipment in a serviceable condition; that is, in good general (physical) condition-and in good operating condition. To assist operators in maintaining service- ability, the charts indicate what to check, how to check, and the normal conditions; the Reference column lists the paragraph that contains additional information. If the defect cannot be remedied by the operator, higher category of maintenance is required. Records and reports of these checks and services must be made in accordance with the requirements set forth in TM 38-750.

4-4. Preventive Maintenance Checks and Services Periods

Preventive maintenance checks and services of the indicator test set are required on a daily and weekly basis.

a. Paragraph 4-5 specifies the checks and services that must be accomplished daily and under the following conditions:

(1) When the equipment is initially installed.

(2) When the equipment is reinstalled after removal for any reason.

(3) At least once each week if the equipment is maintained in standby condition.

b. Paragraph 4-7 specifies additional checks and services that must be performed weekly.

4-5. Operator's Daily Preventive Maintenance Checks and Services

Operator's daily checks and services are listed below.

Sequence No.	Item	Procedure	Reference
1	Exterior surfaces	Clean exterior surfaces including indicator test set control 1unit 1A1. Clean storage area of cover	Para 4-6
2	Connectors	Check connectors on equipment and cables for security of attachment, proper fit, and cleanliness	Para 4-6c
3	Controls and indicators	During operation of equipment (sequence No 4), observe that each control and indicator functions properly Mechanical action of each knob, dial, and switch should be free of external or internal binding Tighten loose controls as required	None
4	Operation	When operating equipment (paras 3-3 through 3--7), be alert for any unusual performance or condition	None

4-6. Cleaning

Inspect the exterior of the indicator test set. The exterior surfaces should be free of dust, dirt, grease, and fungus.

a. Remove dust and loose dirt with a clean, soft cloth.

WARNING

The fumes of trichloroethane are toxic. Provide thorough ventilation whenever used. DO NOT use near an open flame. Trichloroethane is not flammable, but exposure of the fumes to an open flame converts the fumes to highly toxic, dangerous gases.

b. Remove grease, fungus, and ground-in dirt from the transit case; use a cloth dampened (not wet) with cleaning compound.

c. Remove dust or dirt from plugs and connectors with a brush.

d. Clean the control unit panel; use a soft clean cloth. If dirt is difficult to remove, dampen the cloth with water use mild soap if necessary.

4-7. Operator's Weekly Preventive Maintenance Checks and Services

Operator's weekly checks and services are listed below.

Sequence No.	Item	Procedure	Reference
1	Cables	Inspect cables (fig 1-1) for signs of mechanical damage, such as chafed, cracked, or frayed insulation. Refer damaged cables to higher category of maintenance for repair.	None.
2	Gaskets	Inspect gaskets of transit case for looseness, deterioration, or damage. If gaskets require replacement, refer to higher category of maintenance.	None.

Section II. ORGANIZATIONAL MAINTENANCE

4-8. Scope of Organizational Maintenance

a. This section contains instructions covering organizational maintenance of the indicator test set. It includes instructions for performing preventive and periodic maintenance services, trouble- shooting, and repair functions to be accomplished by the organizational repairman.

b. Organizational maintenance of the indicator test set includes-

(1) Organizational monthly preventive maintenance checks and services (para 4-12).

2) Organizational quarterly preventive maintenance checks and services (para 4-14).

(3) Touchup painting (para 4-15).

(4) Troubleshooting (para 4-18).

5) Lamp removal and replacement (para 4--19).

4-9. Tools and Materials Required

Authorized organizational maintenance repair parts appear in appendix D. The tools and materials required for organizational maintenance are listed in table 4-1.

Table 4-1. Tools and Materials

Tools and materials	*FSN*
Toolkit, Electronic Equipment TK 101/G.	5180-064-5178
Cleaning compound, trichloroethane	6810-664-0273
Cleaning cloth.	
Lubricating oil, general purpose, preservative (PL--Special).	9150-185-0629
Fine sandpaper	5350--235--0124
Insulation tape, electrical	5970-44-2636
Paintbrush (1 inch).	

4-10. Organizational Preventive Maintenance

a. Preventive maintenance is the responsibility of all categories concerned with the equipment and includes the inspection, testing, and repair or replacement of parts, subassemblies, or units that inspection and tests indicate would probably fail before this next scheduled periodic service. Preventive. maintenance checks and services of the indica- ',or test set at the organizational category are made at monthly and quarterly intervals unless otherwise directed by the commanding officer.

b. Maintenance forms and records to be used and maintained on this equipment are specified in TM 38-750.

4-11. Organizational Monthly Maintenance

Perform the maintenance functions indicated in the organizational monthly preventive maintenance checks and services chart (para 4-12) once each month. A month is defined as approximately 30-calendar days of 8-hour-per-day operation. If the equipment is used more often or under adverse conditions, the monthly preventive maintenance checks and services should be performed at 20- or 15-day intervals. Adjustments of the maintenance interval must be made to compensate for any unusual operating conditions. Equipment maintained in a standby (ready for immediate operation) condition must have monthly preventive maintenance checks and services performed on it. Equipment in limited storage (requires service before operation) does not require monthly preventive maintenance.

4-12. Organizational Monthly Preventive Maintenance Checks and Services

Organizational monthly checks and services are listed below.

Sequence No.	Item	Procedure	Reference
1	Cables	Inspect cables (fig 1-1) for cuts or other damage. Repair cut insulation by covering cut with plastic tape.	None.
2	Handles, latches, etc.	Inspect handles, latches, hinges, screws, and other such hardware for looseness. Tighten or replace as required.	None.
3	Metal surfaces	Inspect exposed metal parts of equipment for rust and corrosion. Clean and touchup paint as required. Note. If equipment is operated in tropical climate, dampen cloth with oil (PS-Special) and apply light film of oil to metal parts and surfaces.	Para 4-15.

4-13. Organizational Quarterly Maintenance'

Periodic weekly and monthly services constitute a part of the organizational quarterly preventive maintenance checks and services (para 4-14) and must be performed concurrently. All deficiencies or shortcomings will be recorded in accordance with the requirements of TM 38-750.

4-14. Organizational Quarterly Preventive Maintenance Checks and Services

Organizational quarterly checks and services are listed below.

Sequence No.	Item	Procedure	Reference
1	Publications	Check to see that all pertinent publications are current, complete, and serviceable.	DA Pam 310-4 and app. A.
2	Modifications	Determine whether new applicable MWO's have been published. All URGENT	DA Pam 310-7.

Chart on page 18

Sequence No.	Item	Procedure	Reference
		MWO's must be applied. All NORMAL MWO's must be scheduled (TM 38-750).	
3	Completeness	Check to see that equipment is complete.	Para 1-6.
4	Paint	Inspect equipment for condition of paint. If surfaces bear only slight scratches, retouch these with paint. If surfaces bear many scratches, turn equipment in for higher category of maintenance painting.	Para 4-15.
5	Operation	a. Prepare indicator test set for use.	*a.* Para 3-5.
		b. Apply power to test set.	*b.* Para 36.
		c. Press FAIL and OPR lamps and verify each light.	*c.* None.
		d. Check ELAPSED TIME meter. When in STBY, the indicator will run.	*d.* None.
		e. Perform stopping procedure.	*e.* Para 3-7.

4-15. Touchup Painting

Remove rust and corrosion from metal surfaces by lightly sanding them with fine sandpaper. Brush two thin coats of paint (only on those parts meant to be painted) on the bare metal to protect it from further rust or corrosion. Refer to the applicable cleaning and refinishing practices specified in TB 746-10. Refer to SB 11-573 for paint to be used.

4-16. Lubrication

No lubrication is required for the indicator test set.

Section III. TROUBLESHOOTING

4-17. Preliminary Troubleshooting

Troubleshooting of the indicator test set is based upon the operational check contained in the organizational quarterly preventive maintenance checks and services chart. To troubleshoot the indicator test set, perform sequence number 5 in the organizational quarterly preventive maintenance checks and services chart (para 4-14) and proceed until an abnormal condition or result is observed. Perform the checks and corrective measures indicated in the troubleshooting chart (para 4-18). If the corrective measures indicated do not result in correction of the trouble, higher category of maintenance is required.

4-18. Troubleshooting

Troubleshooting procedures are listed below.

Item No.	Probable symptom	Corrective trouble	Measure
1	Any individual indicator does not light.	Defective indicator lamp	Replace lamp (para 4-19).
2	All indicators do not light.	Defective power cables.	Replace power cables.
3	STBY indicator does not light.	Defective indicator test set.	Higher category of mainte nance required.
4	ELAPSED TIME meter fails to operate.	Defective meter.	Higher category of mainte-nance required.

4-19. Lamp Removal and Replacement

a. Unscrew the metal lampholder counterclockwise until free.

b. Grasp the lamp base at its rim and pull from the lampholder.

c. If a new lamp is required, press it into the holder and screw the holder into its panel socket.

CHAPTER 5
SHIPMENT AND LIMITED STORAGE

5-1. Repackaging for Shipment and Limited Storage

a. Repackaging of equipment for shipment or limited storage normally will be performed at a packaging facility or by a repackaging team. Should emergency packaging be required, select the materials from those listed in SB 38-100. Pack- age the equipment in accordance with the original packaging, insofar as possible, with the available materials.

b. The exact procedure for repackaging depends upon the material available and the conditions under which the equipment is to be stored or shipped. Adapt the packaging procedures outlined in TM 38-230.

c. The indicator test set may be stored for limited periods in the transit case.

5-2. Packaging Procedure

a. Original Shipping Container Available.

(1) Remove the cover and one side from the shipping container.

(2) Place the indicator test set in container as shown in figure 2-1, making certain that polyurethane foam cushioning material is in place on bottom of container and along sides.

(3) Place cushioning material (4 pieces) on top of the indicator test set, and replace and secure the one side and the cover.

b. Original Container Not Available.

(1) Select a cleated plywood box, conforming to Military Specification MIL-601, of the approximate size of the original container (para 2-2). If a plywood container is not available, use a suitable wooden box.

(2) Cut 3-inch polyurethane foam cushioning for the top, bottom, and four sides of the container (fig. 2-1).

(3) Place the foam cushioning inside the container on bottom and four sides, using adhesive MIL-A-140, if necessary, to hold in place.

NOTE

If container is slightly larger than original container, it may be necessary to provide additional cushioning material to in- sure proper fit of test set in container.

(4) Place the indicator test set in container making certain that cushioning material is in place along sides.

(5) Place cushioning material on top of the indicator test set.

(6) Place cover on container and secure in place with nails, spaced sufficiently close together to in- sure that the cover is securely attached to the container.

APPENDIX A
REFERENCES

The following publications contain information applicable to the operation and maintenance of Test Set, Terrain-Calibration Indicator AN/AAM-33.

DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (Type 7, 8, and 9), Supply Bulletins and Lubrication Orders.
DA Pam 310-7	U.S. Army Equipment Index of Modification Work Orders.
SB 11-573	Painting and Preservation Supplies Available for Field Use for Electronics Command Equipment.
SB 38-100	Preservation, Packaging, Packing and Marking Materials, Supplies and Equipment Used by the Army.
TB 746-10	Field Instructions for Painting and Preserving Electronics Command Equipment.
TM 11-5850-241-34-1 and -2	Direct Support and General Support Maintenance Manual: Detecting Set, Infrared AN/AAS-24.
TM 11-6625-1703-15	Operator, Organizational, DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tool List; Oscilloscope AN/USM-281A.
TM 11-6625-1732-12	Operator's and Organizational Maintenance Manual Including Repair Parts and Special Tools Lists: Test Set, Resolution AN/AAM-30; Cable Assembly Set, Electrical MX-8408/AAS-24; Maintenance Kit, Electronic Equipment MK-1172/AAS-24; Fixture, Alignment MX-8409/AAS-24.
TM 38-230-1 and -2	Preservation, Packaging, and Packing of Military Supplies and Equipment, Preservations and Packing.
TM 38-750	The Army Maintenance Management System (TAMMS).

APPENDIX B
BASIC ISSUE ITEMS LIST (BILL) AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST (ITIAL)

Section I. INTRODUCTION

B-1. Scope
This appendix lists only basic issue items required by the crew/operator for installation, operation, and maintenance of the Test Set, Terrain- Calibration Indicator AN/AAM-33.

B-2. General
This Basic Issue Items and Items Troop Installed or Authorized List is divided into the following sections:

a. Basic Issue Items List-Section II. A list, in alphabetical sequence, of items which are furnished with, and which must be turned in with the end item.

b. Items Troop Installed or Authorized List- section III. Not applicable.

3-3. Explanation of Columns
The following provides an explanation of columns found in the tabular listings:

a. Illustration. This column is divided as follows:

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

(2) Item number. The number used to identify each item called in the illustration.

b. Federal Stock Number. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description. Indicates the Federal item name and a minimum description required to identify the item.

(1*) Part number.* Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements, to identify an item or range of items.

(2) *Federal Supply Code for Manufacturer (FSCM).* The FSCM is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., and is identified in SB 708-42.

d. Unit of Measure (U/M). Indicates the standard of basic quantity of the listed item as 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 Furnished with Equipment (Basic Issue Items Only). Indicates the quantity of the basic issue item furnished with the equipment.

Section II. BASIC ISSUE ITEMS LIST

(1) Illustration		(2) Federal stock number	(3) Description		(4) Qty furn with equip
(A) Fig. no	(B) Item no		Part number & FSCM	Usable on code	
1-1	1MP1	6625-403-5843	COVER, TEST SET CW-1104/AAM-33		

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 Test Set, Terrain-Calibration Indicator AN/AAM-33. It authorizes categories of maintenance for specific maintenance functions on repair- able 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 serviceability of an item by comparing its physical, mechanical, and electrical characteristics with established standards.

b. Test. To verify serviceability and to detect incipient electrical or mechanical failure by use of special equipment such as gages, meters, etc. This is accomplished with external test equipment and does not include operation of the equipment and operator type tests using internal meters or indicating devices.

c. Service. To clean, to preserve, to charge, and to add fuel, lubricants, cooling agents, and air. If it is desired that elements, such as painting and lubricating, be defined separately, they may be so listed.

d. Adjust. To rectify to the extent necessary to bring into proper operating range.

e. Align. To adjust two or more components or assemblies of an electrical or mechanical system so that their functions are properly synchronized. This does not include setting the frequency control knob of radio receivers or transmitters to the desired frequency.

f. Calibrate. To determine the corrections to be made in the readings of instruments of test equipment used in precise measurement. Consists of the comparison of two instruments, one which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared with the certified standard.

g. Install. To set up for use in an operational environment such as an encampment, site, or vehicle.

h. Replace. To replace unserviceable items with serviceable like items.

i. Repair. To restore an item to serviceable condition through correction of specific failure or unserviceable condition. This function includes, but is not limited to welding, grinding, riveting, straightening, and replacement of parts other than the trial and error replacement of running spare type items such as fuses, lamps, or electron tubes.

j. Overhaul. Normally, the highest degree of maintenance performed by the Army to minimize time work in process and is consistent with quality and economy of operation. It consists of that maintenance necessary to restore an item to completely serviceable condition as prescribed by maintenance standards in technical publications for each item of equipment. Overhaul normally does not return an item to like new, zero mileage, or zero hour condition.

k. Rebuild. The highest degree of material maintenance. It consists of restoring equipment as nearly as possible to new condition in accordance with original manufacturing standards. Rebuild is performed only when required by operational considerations or other paramount factors and then only at the depot maintenance category.

Rebuild reduces to zero the hours or miles the equipment, or component thereof, has been in use.

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 identify components, assemblies, subassemblies and modules with the next higher assembly.

b. Column 2, Functional Group. Column 2 lists the noun names of components, assemblies, subassemblies and modules on which maintenance is authorized.

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

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

d. Column 4, Tools and Test Equipment. Column 4 specifies, by code, those tools and test 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 1.

e. Column 5, Remarks. Self-explanatory.

C-4. Explanation for Format of Table 1, Tool and Test Equipment Requirements

The columns in table 1 are as follows:

a. Tools or Test Equipment Reference Code. Not used.

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. The numbers in this column coincides with the numbers in the tools and equipment column of the maintenance allocation chart (sec. II).

SECTION II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) FUNCTIONAL GROUP COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTIONS											(4) TOOLS AND EQUIPMENT	(5) REMARKS
		INSPECT	TEST	SERVICE	ADJUST	ALIGN	CALIBRATE	INSTALL	REPLACE	REPAIR	OVERHAUL	REBUILD		
1	Test Set, Terrain-Calibration	O		O					O				4	
	Indicator AN/AAM-33		H		H	H	*			H			1, 2, 3, 5* Calibration team	
											D	D	1, 2, 3, 5	
1A1	Control Unit	O											4	
			H						H	H			1, 2, 3, 5, 6	
											D		1, 2, 3, 5	
1A1A1	Generator, Video		H		H				H				1, 2, 3, 5	
										D	D		1 ,2, 3, 5, 7, 8	
1A1A2	Processor, Video		H						H				1, 2, 3, 5	
										D	D		1,2,3,5,7, 9	
1A1A3	Circuit Board, Miscellaneous Circuits		H		H				H	D	D		1, 2, 3, 5 1,2,3,5,7	
1A1A4	Control, Power Input		H		H				H				1, 2, 3, 5	
										D	D		1, 2, 3, 5, 7	
1A1A5	Power Supply, +15 Vdc		H		H				H				1, 2, 3, 5	
										D	D		1,2,3,5,7	

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MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) FUNCTIONAL GROUP COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTIONS											(4) TOOLS AND EQUIPMENT	(5) REMARKS
		INSPECT	TEST	SERVICE	ADJUST	ALIGN	CALIBRATE	INSTALL	REPLACE	REPAIR	OVERHAUL	REBUILD		
1A1A6	Power Supply, -15 Vdc		H		H				H				1, 2, 3, 5	
										D	D		1, 2, 3, 5, 7	
1A1A7	Power Supply, Integrated		H		H				H				1, 2, 3, 5	
	Circuit									D	D		1, 2, 3, 5, 7	
1A1A8	Power Supply, 150 Vdc		H		H				H				1, 2, 3, 5	
										D	D		1, 2, 3, 5, 7	
1A1A9	Heatsink		H						H				1, 2, 3, 5	
										D	D		1, 2, 3, 5, 7, 10	
1A1A10	Assembly, Filter		H						H	H			1, 2, 3	
											D		1, 2, 3	
W1	Cable Assembly	O							O				4	
thru			H							H			1, 3	
W10											D		1, 3	
WH1	Wiring Harness, Branched		H						H	H			1, 3	
											D		1, 3	

TABLE 1. TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOLS AND EQUIPMENT	MAINTENANCE CATEGORY	NOMENCLATURE	FEDERAL STOCK NUMBER	TOOL NUMBER
	H, D	Multimeter TS-352B/U	6625-553-0142	1
	H, D	Oscilloscope AN/USM-281A	6625-053-3112	2
	H,D	Tool Kit, Electronic Equipment TK-1O5/G	5180-605-0079	3
	O	Tool Kit, Electronic Equipment TK-101/G	5180-064-5178	4
		Digital Voltmeter (Non-Linear Systems	Commercial	5
	H,	Model X-2; two required) with dual function converter, part number 37-42, and AC converter, part number 37-45.		
	H	Maintenance Kit,. Electronic Equipment MK- 1172/AAS-24	5850-434-5539	6
	D	Test Set, Electronic Circuit Plug-In Unit AN/ AAM- 39	5850-434-5539	7
	D	Digital Readout, Electronic Counter AN/USM: 207	6625-911-6368	8
	D	Signal Generator AN/USM-264		9
	D	Pulse Generator (Hewlett-Packard Model 222A)	Commercial	10

APPENDIX D
ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LISTS

Section I. INTRODUCTION

D-1. Scope

This appendix lists repair parts and special tools required for the performance of organizational Maintenance of the Test Set, Terrain-Calibration indicator AN/AAM-33.

D-2. General

This repair parts and special tools list is divided into the following sections:

a. Prescribed Load Allowance (PLA)-Section II. A composite listing of the repair parts, special tools, test and support equipment having quantitative allowances for initial stockage at the organizational level.

b. Repair Parts-Section III. A list of Test Set, Terrain-Calibration Indicator AN/AAM-33 repair parts authorized for the performance of maintenance at the organizational level in figure and item number sequence.

c. Special Tools, Test and Support Equipment.
Not applicable.

D-3. Explanation of Columns

The following provides an explanation of columns:
a. Source, Maintenance, and Recoverability Codes (SMR), Column 1.
(1) Source codes indicate the selection status and source for the listed item. Source codes are-

Code	*Explanation*
P--	Repair parts which are stocked in or supplied from the GSA/DSA, or Army supply system and authorized for use at indicated maintenance categories.
M-	Repair parts which are not procured or stocked, but are to be manufactured in indicated maintenance levels.
A-	Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.
X1--	Repair parts which are not procured or stocked. The requirement for such items will be filled by use of the next higher assembly or component.
X2--	Repair parts which are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain same through cannibalization. Where such repair parts are not obtainable through cannibalization, requirements will be requisitioned, with accompanying justification, through normal supply channels.
G--	Major assemblies that are procured with PEMA funds for initial issue only as ex- change assemblies at DSU and GSU level. These assemblies will not be stocked above DS and GS level or returned to depot supply level.

(2) Maintenance codes indicate the lowest category of maintenance authorized to install the listed item. The maintenance level codes are-

Code	*Explanation*
C	Crew or operator maintenance.
O	Organizational maintenance.
F	Direct support maintenance.
H	General support maintenance.
D	Depot maintenance.

(3) Recoverability codes indicate whether unserviceable items should be returned for recovery or salvage. Items not coded are expendable. Recoverability codes are-

Code *Explanation*

R-- Repair parts and assemblies which are nomically reparable at DSU and GSU activities and are normally furnished by supply on an exchange basis.

S-- Repair parts and assemblies which are economically reparable at DSU and GSU activities and which normally are furnished by supply on an exchange basis. When items are determined by a GSU to be uneconomically reparable, they will be evacuated to a depot for evaluation and analysis before final disposition.

T-- High-dollar value recoverable repair parts which are subject to special handling and are issued on an exchange basis. Such repair parts normally are repaired or overhauled at depot maintenance activities.

U-- Repair parts specifically selected for salvage by reclamation units because of precious metal content, critical materials, or high-- dollar value reusable casings or castings.

b. Federal Stock Number, Column 2. This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Description, Column 3. This column indicates the Federal item name and any additional description of the item required. The abbreviation "w/e", when used as a part of the nomenclature, indicates the Federal stock number includes all armament, equipment, accessories, and repair parts issued with the item. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parentheses. Repair parts quantities included in the kits, sets, and assemblies are shown in front of the repair part name. Material required for manufacture or fabrication is identified.

d. Unit of Measure (U/AI), Column 4. A two- character alphabetic abbreviation indicating the amount of quantity of the item upon which the allowances are based, e.g., ft, ea, pr, etc.

e. Quantity Incorporated in Unit, Column 5. This column indicates the quantity of the item used in the unit. A "V" appearing in this column in lieu of a quantity indicates that a definite quantity cannot be indicated (e.g., shims, spacers, etc.).

f. 15-Day Organizational Maintenance Allowance, Column 3.

(1) The allowance columns are divided into four subcolumns. Indicated in each subcolumn opposite the first appearance of each item is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have the letters "REF" in the allowance columns. Items authorized for use as required but not for initial stockage are identified with an asterisk in the allowance column.

(2) The quantitative allowances for organizational level of maintenance represents one initial prescribed load for a 15-day period for the number of equipments supported. Units and organizations authorized additional prescribed loads will multi- ply the number of prescribed loads authorized by the quantity of repair parts reflected in the density column applicable to the number of items supported to obtain the total quantity of repair parts authorized.

(3) Organizational units providing maintenance for more than 100 of these equipments shall determine the total quantity of parts required by converting the equipment quantity to a decimal factor by placing a decimal point before the next to last digit of the number to indicate hundredths, and multiplying the decimal factor by the parts quantity authorized in the 51-100 allowance column. Example, authorized allowance for 51-100 equipments is 40; for 150 equipments multiply 40 by 1.50 or 60 parts required.

(4) Subsequent changes to allowances will be limited as follows: No change in the range of items is authorized. If additional items are considered necessary, recommendation should be forwarded to the Maintenance Engineering Directorate, AMSEL-ME-NMP-RS, Fort Monmouth, N.J., for exception or revision to the allowance list. Revisions to the range of items authorized will be made by the Maintenance Engineering Directorate based upon engineering experience, demand data, or TAERS information.

g. Illustration, Column 7. This column is divided as follows:

(1) *Figure number, column 7a.* Indicates the figure number of the illustration in which the item is shown.

(2) *Item number, column 7b.* Indicates the callout number used to reference the item in the illustration.

D-4. Special Information

a. Parts which require manufacture or assembly at a category higher than that authorized for installation will indicate in the source column the higher category.

b. For end items authorized mandatory stockage of repair parts by the Department of the Army, on a case by case basis, the mandatory stockage items are indicated by a plus "+" sign as the first character in the end item density columns of both the repair parts list and the prescribed load allowance for each such authorized allowance quantity.

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D-5. How to Locate Repair Parts

Locate the sequence number in the repair parts list sequence number/SMR code column which is in ascending alphanumeric order, to find the repair part.

D-6. Abbreviations

Not applicable.

D-7. Federal Supply Codes for Manufacturers

Code	*Manufacturer*
96906	..... Military Standards

SECTION II. PRESCRIBED LOAD ALLOWANCE

(1) FEDERAL STOCK NUMBER	(2) DESCRIPTION USABLE ON CODE	(3) 15 DAY ORG. MAINT. ALLOWANCE			
		(A) 1-5	(B) 6-20	(C) 21-50	(D) 51-10C
5355-985-6888	KNOB, CONTROL: MS91528-2M2B (96906)	*	*	2	2
6240-155-7836	LAMP, INCANDESCENT: MS25237-327 (96906)	*	*	2	2

SECTION III. REPAIR PARTS FOR ORGANIZATIONAL MAINTENANCE

(1) SMR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION REF NUMBER & MFR CODE	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) 15-DAY ORGANIZATIONAL MAINTENANCE ALW (A) 1-5	(B) 6-20	(C) 21-50	(D) 51-100	(7) ILLUSTRATION (A) FIG NO.	(B) ITEM NO.
A002 P--O-S	6625-196-2844	CABLE ASSEMBLY, POWER, ELECTRICAL CX-12408/U-(8 FT)		EA	1	*	*	*	*	1-1	1W1
A009 P--O-S	6625-470-4315	CABLE ASSEMBLY, POWER, ELECTRICAL CX-12409/U-(8 FT)		EA	1	*	*	*	*	1-1	1W2
A015 P--O-S	6625-489-0456	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12422/AAY-33		EA	1	*	*	*	*	1-1	1W10
A024 P--O-S	6625-489-0429	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12423/AAM-33		EA	1	*	*	*	*	1-1	1W4
A034 P--O-S	6625-489-0457	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12424/AAM-33		EA	1	*	*	*	*	1-1	IW5
A043 P--O-S	6625-196-2859	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX- 12425/AM-33		EA	1	*	*	*	*	1-1	1W6
A056 P--O-S	6625-489-2665	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12426/AAM-33		EA	1	*	*	*	*	1-1	1W7
A068 P--O-S	6625-489-2663	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12427/AAM-33		EA	1	*	*	*	*	1-1	1W8
A080 P--O-S	6625-489-2666	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12428/AAMY-33		EA	1	*	*	*	*	1-1	1W9
A091 P--O-S	6625-242-5795	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12429/AAM-33		EA	1	*	*	*	*	1-1	1W3
A661 P--O--	5355-616-7669	KNOB, CONTROL: YS91528-2D2B (96906)		EA	4	*	*	*	2	1-1	1A1MP11MP17
A662 P--O--	5355-616-7669	KNOB, CONTROL: NS91528-2D2B (96906)		EA	REF	REF	REF	REF	REF	1-1	1A1MP11MP18
A663 P--O--	5355-616-7669	KNOB, CONTROL: MS9152R-2D2B (96906)		EA	REF	REF	REF	REF	REF	1-1	1A1MP11MP19
A664 P--O--	5255-616-7669	KNOB, CONTROL: 1S91528-2D2B (96906)		EA	REF	REF	REF	REF	REF	1-1	1A1MP11MP20
A665 P--O--	5355-985-6888	KNOB, CONTROL. hS91528-2M2B (96906)		EA	5	*	*	2	2	1-1	1A1MP11MP21
A666 P--O--	5355-985-6888	KNOB, CONTROL: YS91528-2M2B (96906)		EA	REF	REF	REF	REF	REF	1-1	1A1MP11MP22
A667 P--O--	5355-985-6888	KNOB, CONTROL: YS91528-212B (96906)		EA	REF	REF	REF	REF	REF	1-1	1A1MP11MP23
A668 P--O--	5355-985-6888	KNOB, CONTROL: MS91528-2M2B (96906)		EA	REF	REF	REF	REF	REF	1-1	1A1MP11MP24
A669 P--O--	5355-985-6888	KNOB, CONTROL. YS91528-2M2B (96906)		EA	REF	REF	REF	REF	REF	1-1	1A1MP11MP25
A673 P--O--	6240-155-7836	LAMP, INCANDESCENT: YS25237-327 (96906)		EA	3	*	*	2	2	1-1	1A1DS1
A674 P--O--	6240-155-7836	LAMP, INCANDESCENT: S1525237-327 (96906)		EA	R REF	REF	REF	REF	REF	1-1	1A1DS2
A675 P--O--	6240-155-7836	LAMP, INCANDESCENT: YS25237-327 (96906)		EA	REF	REF	REF	REF	REF	1-1	1A1DS3

By Order of the Secretary of the Army:

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Chief of Staff.

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