TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

TEST SET, CONTROL MONITOR - RECORDING HEAD AN/AYM-9 (FSN 6625-150-1882)

This copy is a reprint which includes current pages from Change 1

H E A D Q U A R T E R S , D E P A R T M E N T O F T H E A R M Y

MARCH 1973

WARNING

DANGEROUS VOLTAGES EXIST IN TEST SET, CONTROL MONITOR RECORDING HEAD AN/AYM-9.

Voltages as high as 550 volts dc are present at connectors and test points. Be careful when working around connectors and test points when equipment is energized. Keep protective caps on all connectors when not in use.

Technical Manual

No. 11-6625-2478-12

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D.C., *1 March 1973*

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LISTS

TEST SET, CONTROL MONITOR-RECORDING HEAD AN/AYM-9 (NSN 6625-00-150-1882)

CHAPTER 5. SHIPMENT AND LIMITED STORAGE AND DEMOLITION TO PREVENT ENEMY USE - Continued

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CHAPTER 1
INTRODUCTION

SECTION I. GENERAL

1-1. Scope

This manual describes Test Set, Control Monitor Recording Head AN/AYM9 (fig. 1-1) and covers its operation and organizational maintenance. It includes instructions for performing preventive and periodic maintenance and replacement of parts available to the organizational repairman.

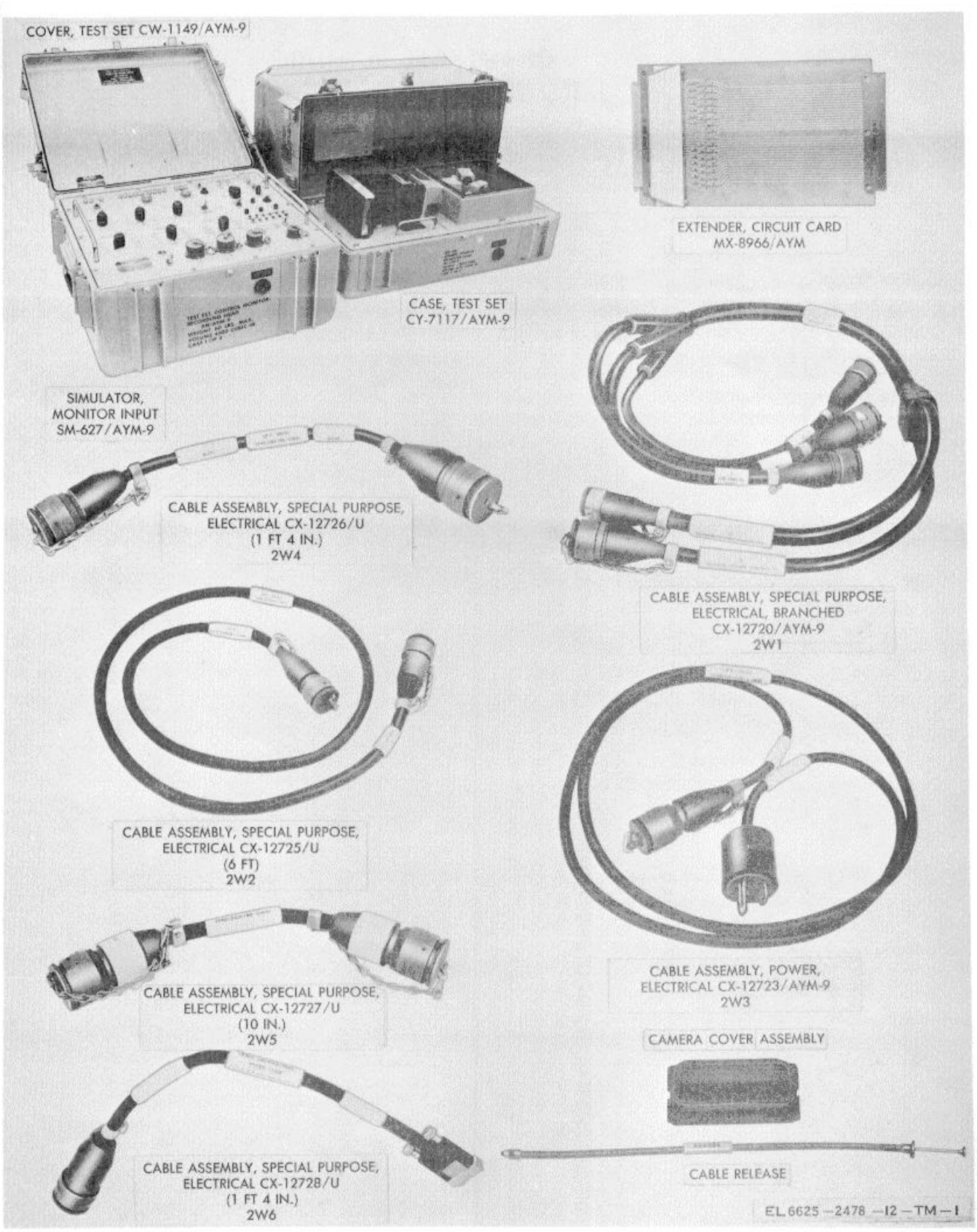


Figure 1-1.
Test Set, Control Monitor-Recording head AN/A YM-9.

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 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.

1-3.1. Reporting of Errors

You can help improve this manual by calling attention to errors and by recommending improvement and stating your reasons for the recommendations. Your letter or DA Form 2028 (Recommended Changes to Publications and
Blank Forms) should be mailed direct to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-MA-Q, Fort Monmouth, New Jersey 07703. A reply will be furnished direct to you.

1-4. Reporting Equipment Improvement Recommendations (EIR)

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 directly to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-MA-Q, Fort Monmouth, New Jersey 07703. A reply will be furnished direct to you.

Section II. DESCRIPTION AND DATA

1-5. Purpose and Use

a. The purpose of Test Set, Control Monitor Recording Head AN/AYM-9 is to test Control-Monitor C-8338/AYA-10, CRT monitor assemblies, and recording head assemblies.

b. The AN/AYM-9 is used for performing functional tests and maintenance operations for the accomplishment of the following.

(1) Testing of Control-Monitor C-8338/AYA-10, a component of Airborne Data Annotation System AN/AYA-10.

(2) Fault isolation to a malfunctioning sub- C-assembly or component of Control-Monitor .
8338/AYA-10.

(3) Testing of recording head assemblies (RHA) associated with Detecting Set, Infrared AN/AAS-24; Radar Surveillance Set AN/APS-94D; Camera, Still Picture KA-6OC; and Camera, Still Picture KA-76A.

c. Figure 1-2 is a simplified block diagram of Test Set, Control Monitor-Recording Head AN/AYM-9. It shows the primary input and output signals to and from Simulator, Monitor Input SM-627/AYM-9; Case, Test Set CY-7117/AYM-9; and units under test.

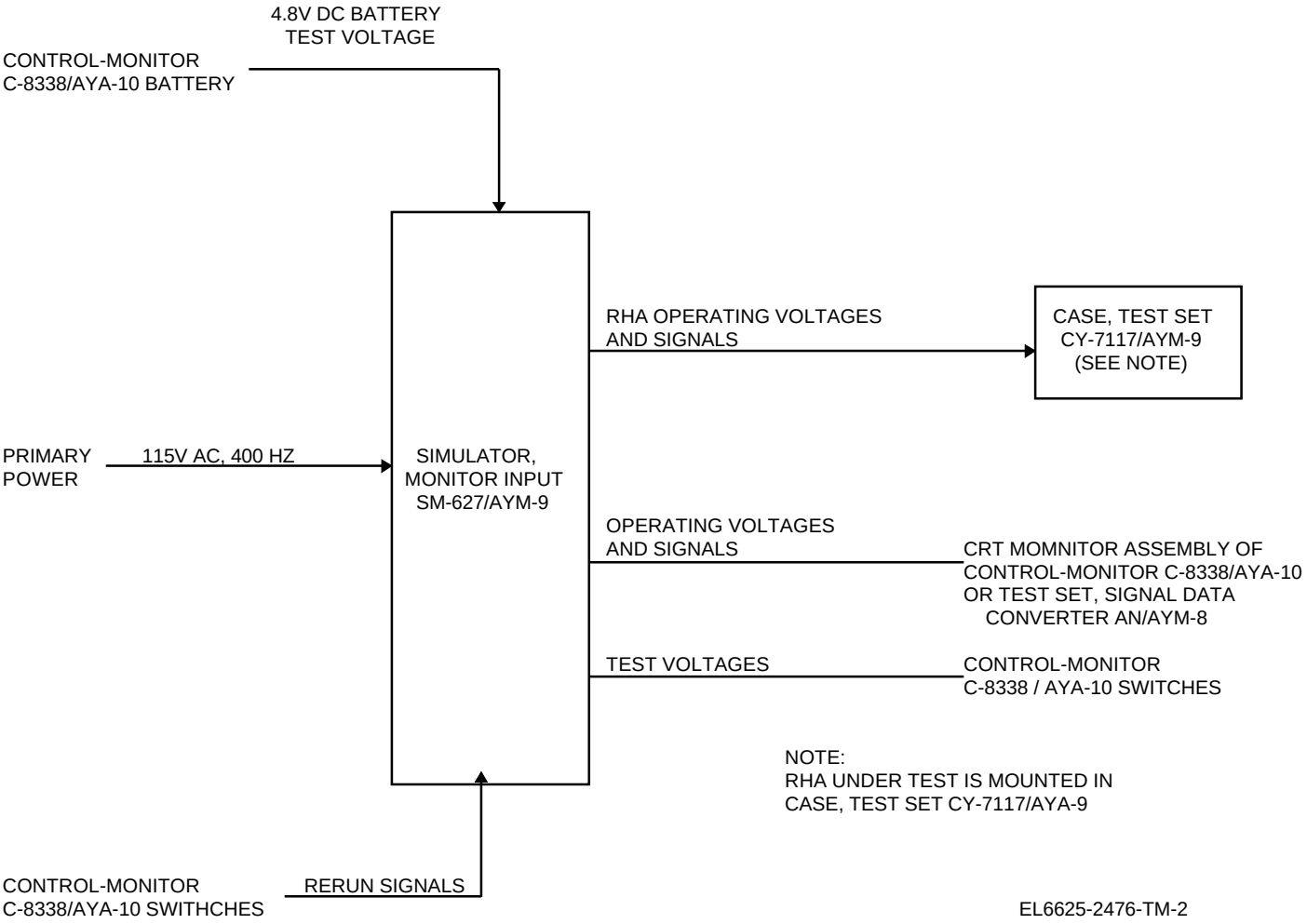


Figure 1-2.
Test Set Control Monitor-Recording Head ANA YM-9, block diagram.

1-6. Technical Characteristics

Technical characteristics for Test Set, Control Monitor-Recording Head AN/AYM9 are given in table 1-1.

1-7. Items Comprising Test Set, Control Monitor-Recording Head AN/AYM-9

The components and dimensions of the AN/AYM-9 are listed in table 1 and shown in figure 1-1.

Table 1-1. Test Set, Control Monitor-Recording Head AN/A YM-9, Technical Characteristics

Parameter or signal	*Characteristics*
Temperature range:	
Non operating	65F. to 155°F
Operating	4F. to 120F.
Altitude range:	
Non operating	0 to 50,000 feet (15.24 kilometers) above sea level
Operating	0 to 1 0,000 feet(3.048 kilometers)above sea level
Relative humidity range	0 to 998%
Input power requirement	115 ± 11.5 volts ac, 400 ± 20 Hz
Input data from Control-Monitor C-8 /AYA-10	
Decimal test signal, binary coded decimal test signal, or binary coded decimal (+3) test signal	+10 1.5 volts dc signal level
Battery voltage	+4.8 0.2 volts de
Output data from Simulator, Monitor Input SM27/AYM-9:	
Resistor test voltage	+5 0.voldc
Switch test voltage	+ 10 I1.5 volts de
Deflection and accelerating anode voltage	+500 ± 50.0 volts de
Filament voltage	63 ± 063 volts ac

Table -1. Test Set, Control Monitor-Recording Head
ANA YM-9 Technical Characteristics - Continued

Parameter or signal	*Characteristics*
Output data from Simulator, Monitor Input SM-/AY-9-	
C*onti*nued:	
Grid voltage	-52.2 volt dc
Vertical deflection signals for RHA TEST SELECT switch position:	
KA60, IR/SLAR, CDM	14.32±14 volts ac, 100 Hz ± Hz sine wave
KA?6 or PHOSPHOR	8.35 ± 0.08 volts ac, 100 Hz ± 1 Hz sine wave
Horizontal deflection signals for RHA TEST SELECT switch position:	
KA60, IR/SLAR, CDM	14.32 ± 0.14 volts ac, 100 Hz ± Hz sine wave
KA76....	8.35 ± 0.08 voltsac,100Hz ± 1Hz sine wave
PHOSPHOR	$30.4^{+60}_{-4.5}$ volts peak-to-peak, 6.25 0.655 kHz triangular wave
Unblinking pulses for RHA TEST SELECT switch position:	
KA60, IR/SLAR,	80 ± 5 volts dc pulses at 10 0.50 kHz pulse repetition rate with 20 3 µsec pulse width
KA76	80 ± 5 volts dc pulses at 5.85 ± 0.29 kHz pulse repetition rate with 20 ± 3 µsec pulse width
PHOSPHOR	80 ± 5 volts dc pulses at6.25 0.3 kHz pulse repetition rate with 80 + 12 u sec pulse width

Table 1-2. Test Set Control Monitor-Recording Head
AN/A YM-9, Components (fig. 1-1)

FSN	*Item*	*Qty (ea)*	*Height (in)*	*Depth (in.)*	*Width (in.)*	*Unit weight (lb)*
6625-233-9202	Simulator, Monitor Input SM27/AYM-91	1	11 5/8	20 1/8	24	60 (max)
6625-242-3783	Cover, Test Set CW-1149/AYM-9	1	2 1	20 1/8	24	
6625-242-3795	Case, Test Set CY-711AYM-9	1	20	13 1/2	29 l/4	60 (max)
5995-230408	Cable Assembly, Special Purpose, Electric CX-12726/U (2W4)		1	(lg)	1 ft. 4 in.	
S99181-9866	Cable Assembly, Special Purpose, Electrical CX-1272S/U (ZW2)		1	(lg)	6 ft A.	
5995-2300409	Cable Assembly, Special Purpose, Electrical CX-12727/U (2W5)		1	(lg)	10 in.	
5995431-3542	Cable Assembly, Special Purpose, Electric CX-12728/U (2W6)		1	(lg)	1 ft. 4 in.	
6625-1864149	Cable Assembly, Special Purpose, Electrical, Branched CX-1272WAYM-9 (2W1)			(lg)	5 f. 5 in.	
59954510437	Cable Assembly, Power, Electrical CX-12723/AYM-9 (2W3)	1		6 ft 4 i. (lg)		
662233-9198	Extended, Circuit Card MX-8966/AYM	1	5/8	9	5 3/8	9 oz
	Camera cover assembly	1	3/4	1 1/2	3 1/8	4 oz
	Cable release	1	10 in. (lg)			
	Welded plate assembly cover	1				

1-8. Description

Test Set, Control Monitor-Recording Head AN/AYM-9 consists of Simulator, Monitor Input SM427/AYM-9 (para a) and Cas, Test Set CY-7117/AYM-9 (para 6).

*a. Simulator, Moni*tor *Input S M.-62/AYM-9* (fig.14). Simulator, Monitor Input SM427/AYM-9 consist of a warfight, rectangular, aluminum case and a test set panel assembly. The case is made up of Cover, Test Set CW-1149/AYM-9 and a base. A pressure relief valve is located on the base. The case is equipped with reinforced latch guards and handles, and is designed for routine relocation. All operating controls, indicators, test points, and connectors are mounted on the front panel.

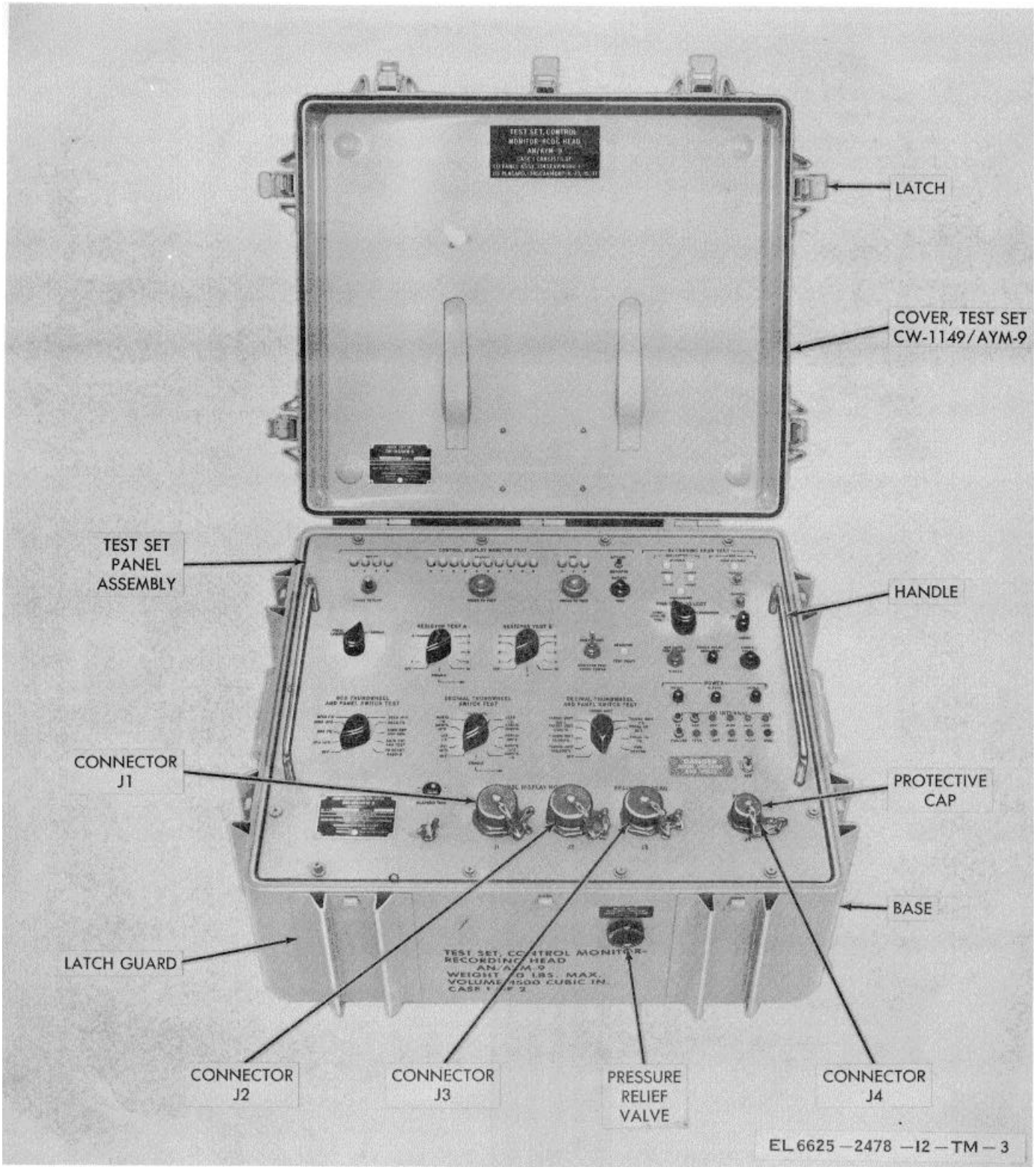


Figure 1-3.
Simulator, Monitor Input SM-627/AYM-9

b *Case, Test Set CY-7117/AYM-9* (figs.1-4 and 1-5). Case, Test Set CY-7117/AYM-9 (fig. 1-1) consists of a water tight, rectangular, aluminum case; Camera, Still Picture KE-59A; and all cable assemblies and accessories used with the SM-627/AYM-9. The case is made up of a base and cover. A pressure relief valve is located on the base. The KE-59A consists of Polaroid Camera CU-5 and a welded plate assembly. Three lamp assemblies for holding the recording head assembly under test are mounted on a turntable assembly within a shielded compartment on the welded plate assembly. Connector J1 is a double-sided connector used for interconnecting the recording head assembly under test and the SM-627/AYM-9; it is mounted on the wall of the shielded compartment. Six cable assemblies, a camera cover assembly, a cable release, and film are stored in the base of the CY-7117/AYM-9 under the KE-59A. The case cover contains Extender, Circuit Card MX-8966/AYM in a storage compartment and a welded plate assembly cover mounted on a cover holding bracket. The welded plate assembly cover is used for enclosing the shielded compartment when testing a recording head assemblv.

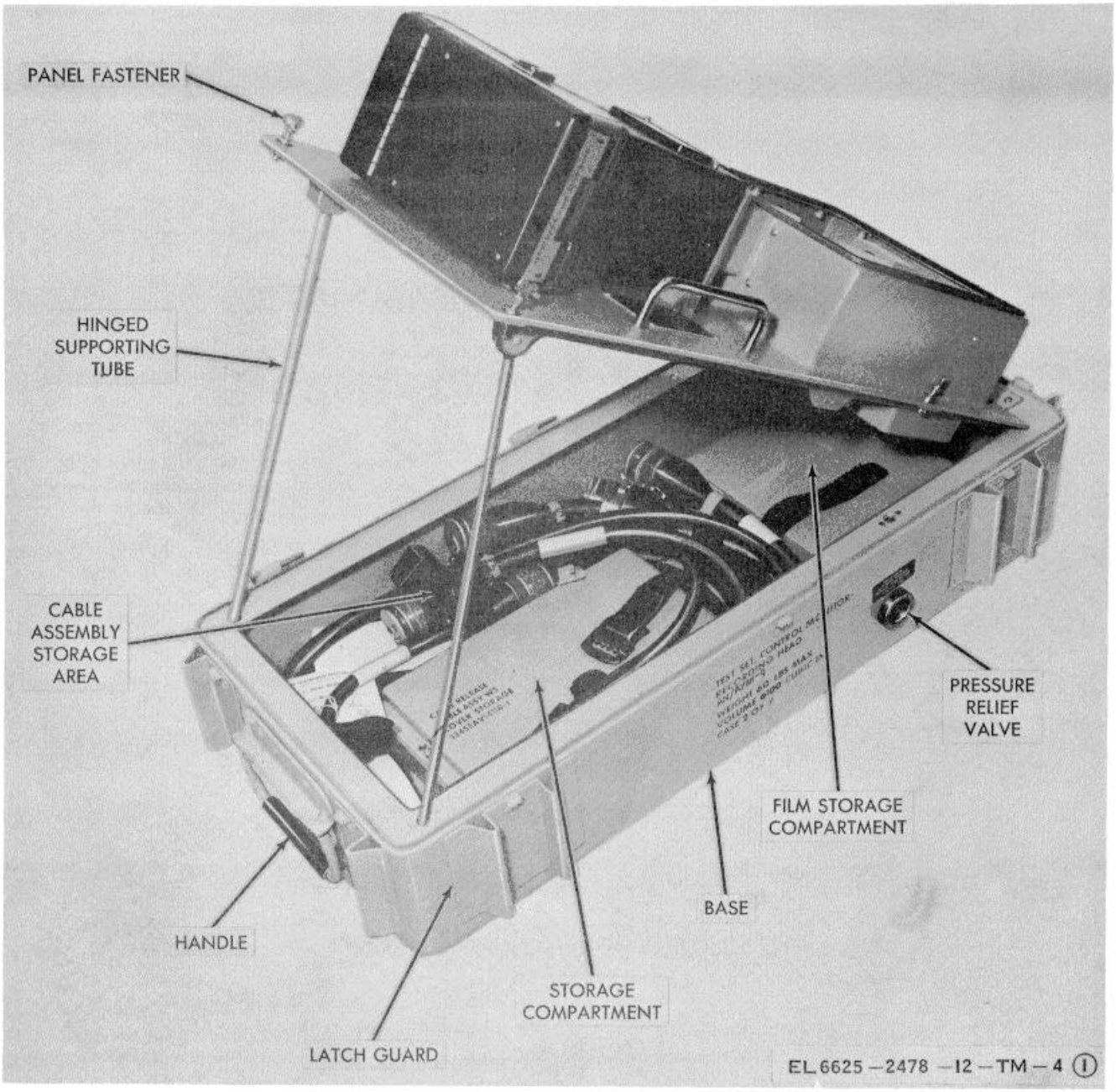


*Figure 1 - 4.*①
Case, Test Set CY-7117/AYM-9 with cover removed (Part 1 of 2).

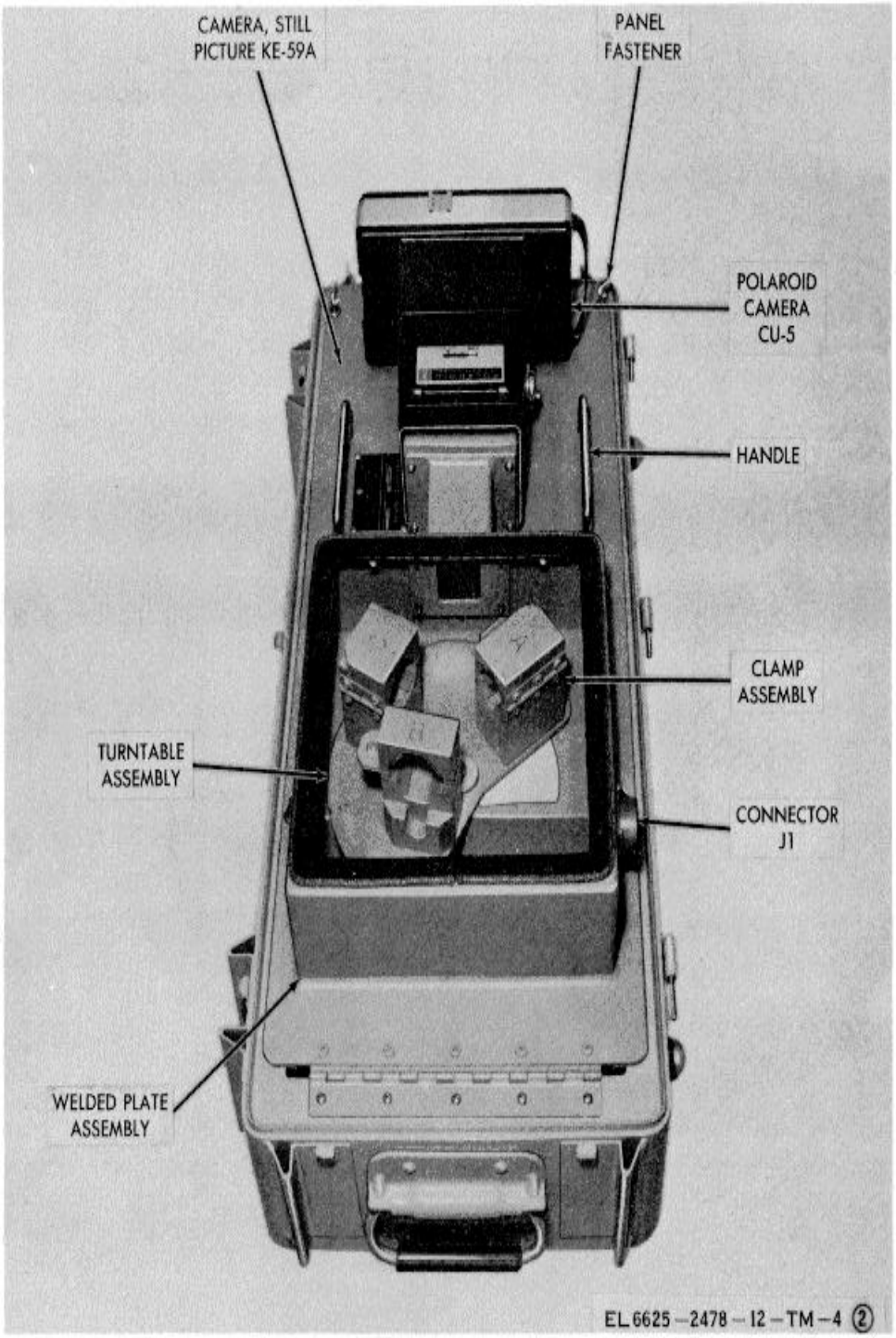


Figure 1-4 ② case, test set CY-7117/AYM-9 with cover removed (Part 2 of 2)

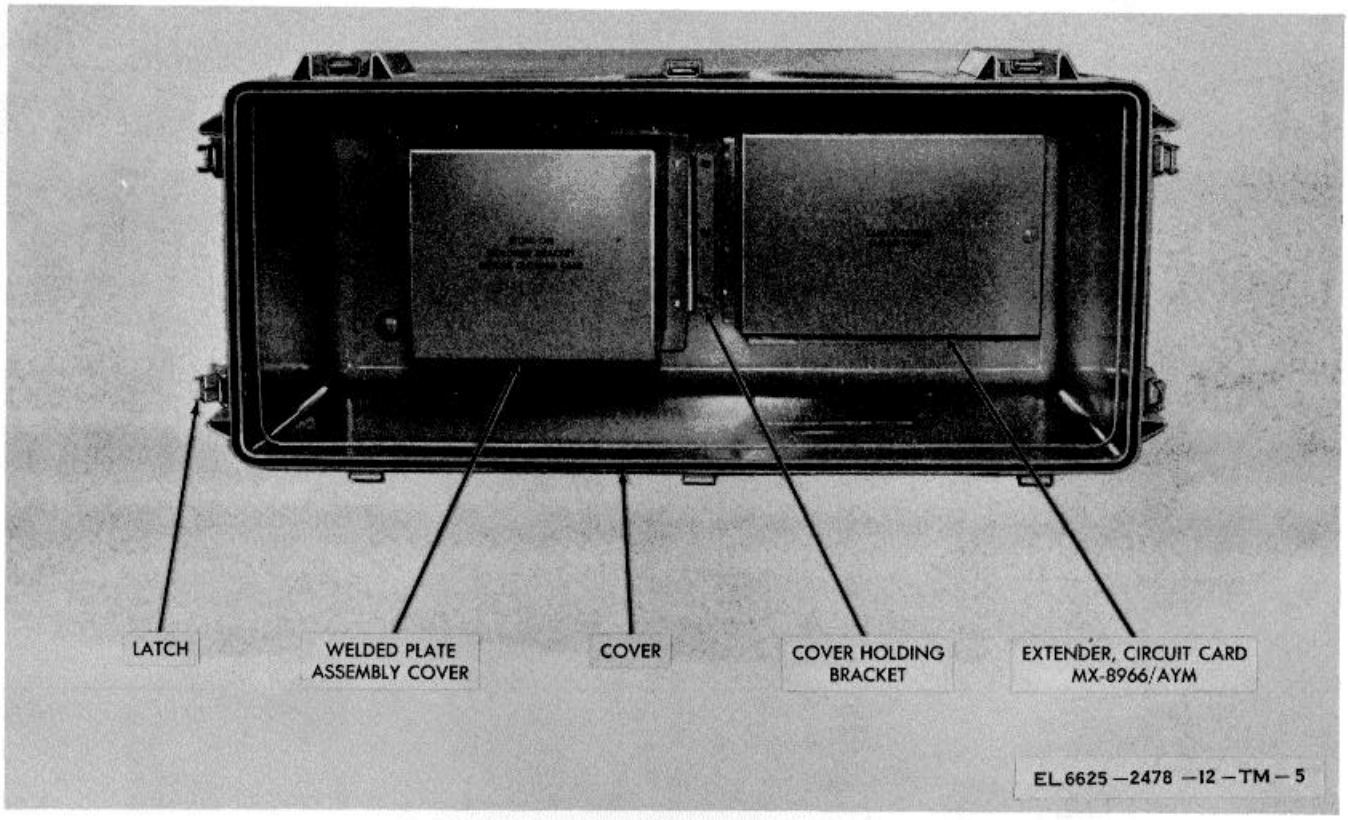


Figure 1-5.
Case test set CY-7117/AYM-9 with cover

1-9. Additional Equipment Required

Table 1-3 lists the equipment required to operate Test Set, Control Monitor-Recording Had AN/AYM-9 but not provided with it

Table 1-3. Additional Equipment Required

Equipment	***Purpose***	***Applicable publication***
Polaroid Land Film, Type 107 (FSN 6750-252- 9553)	*Used to photograph pattern displayed on recording head assembly*	*None*

CHAPTER 2
SERVICE UPON RECEIPT OF EQUIPMENT

2-1. Packaging Data

Table 2-1 is packaging data for the packing cases containing components of Test Set, Control Monitor-Recording Head AN/AYM- as packed for shipment

2-2. Unpacking Instructions

Figure 2-1 shows a typical packing case and its contents. To unpack the equipment use a crowbar to carefully remove the wooden cover and one side of each case. Remove the rubberized horsehair and slide the equipment from the case.

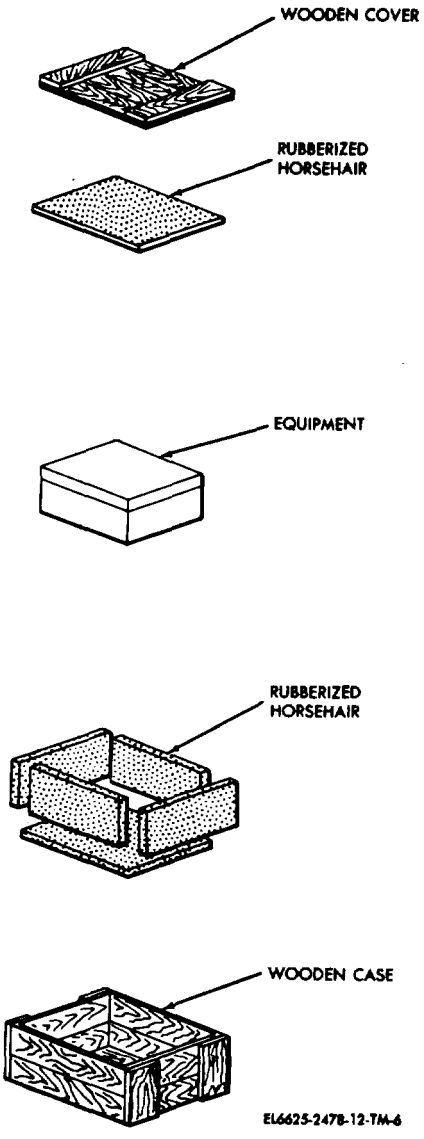


Figure 2-1. Typical packaging diagram

Table 2-1. Packaging Data

Carton contents	*Dimensions*	*Volume (cu. ft.)*	*Unit Weight (lb.)*
Simulator, Monitor Input SM-627/AYM-9	28 x 25 x 16	6.5	70
Case, Test Set CY-117/ AYM-9	34 x 24 x 18	8.5	70

2-3. Checking Unpacked Equipment

a. Inspect the equipment for 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 list of components (table 1-2). Report all discrepancies in accordance with TM 38-750.

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.

NOTE

Current MWO's applicable to the equipment are listed in DA Pam 310-7.

d. Check the latest issue of DA Pam 3104 (never more than one year old) and its latest changes (never more than six months old) to see whether you have the latest editions of all applicable maintenance literature. (Equipment issued by depots may have been in stock for some time and may contain superseded manuals.)

CHAPTER 3
OPERATION

Section I. OPERATOR'S CONTROLS AND INDICATORS

3-1. Introduction

This section illustrates and describes the function of controls, indicators, connectors, and test points of Test Set, Control Monitor-Recording Head AN/ AYM-9.

3-2. Operator's Controls, Indicators, Connectors, and Test Points

Tables 3-1 and 3-2 identify and describe the function of controls, indicators, connectors, and test points of Test Set, Control Monitor-Recording Head AN/AYM-9. Figure 3-1 illustrates and locates the controls, indicators, connectors, and test points on Simulator, Monitor Input SM-627/AYM-9. The function of controls and connectors on Case, Test Set CY-7117/AYM-9, including Polaroid Camera CU-5, are given in table 3-2 and illustrated in figures 3-2 and 3-10.

Table 3-1. Simulator, Monitor Input SM-627/A YM-9, Controls, Indicators and Connectors (fig. 3-1)

Control, indicator or connector	*Function*
BCD+3 indicator lamps	Light to indicate presence of binary coded decimal (+3) readout which corresponds to various positions of Control-Monitor C-8338/ AYA-10 thumbwheel switches. Lamp indications are as follows: Lamp 1 = BCD + 3 bit 2^0; Lamp 2 = 2^2; Lamp 4 = 2^2; Lamp 8 = 2^3
BCD + 3—PRESS TO TEST switch (pushbutton switch)	When pressed, lights BCD+ indicator lamps first purposes.
DECIMAL indicator lamps	Lighted lamp indicates presence of decimal number which corresponds to selected positions of Control-Monitor C-8338/AYA-10 thumbwheel switches.
DECIMAL-PRESS TO TEST switch (pushbutton switch)	When pressed, lights DECIMAL indicator lamps for test purposes.
BCD indicator lamps	Light to indicator presence of binary coded decimal readout which corresponds to various positions of Control-Monitor C-8338/ AYA-10 thumbwheel switches. Lamp indications are as follows: *Lamp* 1 = *BCD bit* 2^0; Lamp 2 = 2^1; Lamp 4 = 2^2
BCD-PRESS TO TEST switch (pushbutton switch)	When pressed, lights BCD, BATTERY INDICATOR, SINGLE PULSE INDICATOR, 6.3VAC, GO, +5V, and FAILURE indicator lamps for test purposes
BATTERY INDICATOR lamp	When BATTERY TEST switch is pressed, lights to indicate correct Control-Monitor C-8338/AYA-10 battery voltage.
BATTERY TEST switch (pushbutton switch)	When pressed, checks Control-Monitor C-8338/AYA-10 battery voltage
-522VDC indicator lamp	Lights to indicate presence of -522 volts dc output
+ 500VDC indicator lamp	Light to indicate presence of + 500 volts dc output.
-80VDC indicator lamp	Lights to indicate presence of -80 volts dc output.
+HORIZ test point	Provides means of monitoring + horizontal deflection signal.
-HORIZ test point	Provides means of monitoring -horizontal deflection signal.
+ VERT test point	Provides means of monitoring + vertical deflection signal.
VERT test point	Provides means of monitoring -vertical deflection signal.
UNBLANKING test point	Provides means monitoring unblanking signal.

Table 3-1. Simulator, Monitor Input SM-627/A YM-9,
Controls, Indictors and Connectors (fig -1) -- Continued

Control, indicator or connector	*Function*
-522VDC test point	Provides means of monitoring -522 volts dc output.
RHA TEST SELECT switch (3-position rotary switch)	Selects pattern to be displayed on recording head assembly under test:
	Switch position — *Function* KA60, IR/SLAR, CDM — Selects dotted circular pattern, 0.6 ±0.1 inch in diameter KA76 — Selects dotted circular pattern, 0.35 ±0.10 inch in diameter. PHOSPHOR — Selects raster pattern.
FOCAL LENGTH-NORMAL switch (2-position rotary switch)	In FOCAL LENGTH position, routs binary coded decimal (+3) test signals from Control-Monitor C-8338/AYA-10 FOCAL LENGTH thumbwheel switches to BCD + 3 indicator lamps. In NORMAL position, routes all other binary coded decimal (+3) test signals from Control-Monitor C-8338/AYA-10 to BCD + 3 indicator lamps.
RESISTOR TEST A switch (12-position rotary switch)	Provides means of selecting various Control-Monitor C-8338/AYA-10 thumbwheel switch resistors for testing *Switch position* — *Connections* OFF — Disconnects Control-Monitor C-8338/AYA-0 thumb wheel switch resistors from RESISTOR TEST POINT. 1 through 10 — Connects Control-Monitor C-8338/AYA-10 thumbwheel switch resistors to RESISTOR TEST POINT. ENABLE — Places RESISTOR TEST B switch in circuit between Control-Monitor C-8338/AYA-10 thumbwheel switch resistors and RESISTOR TEST POINT.
RESISTOR TEST B switch (12-position rotary switch)	With RESISTOR TEST A switch in ENABLE position, OFF positions disconnects Control-Monitor C-8338/AYA-10 thumbwheel switch resistors from RESISTOR TEST POINT; positions through i1, provide means of selecting various Control-Monitor C-8338/AYA-10 thumbwheel switch resistors for testing.
SWITCH TEST-RESISTOR TEST + 5VDC POWER switch (2-potion toggle switch)	In SWITCH TEST position, routes decimal and binary coded decimal test signals from Control-Monitor C-8338/AYA-10 thumbwheel switches to DECIMAL indicator lamps and BCD indicator lamps In RESISTOR TEST + SVDC POWER position, routes + 5 volts dc power to Control-Monitor C-8338/AYA-10 thumbwheel switches and routes Control-Monitor C-8338/AYA-10 thumbwheel switch resistors to RESISTOR TEST A and RESISTOR TEST B switches
RESISTOR TEST POINT	Provides means of monitoring voltages during Control-Monitor C-8338/AYA-10 resistor test.
RHA MODC switch (2-position toggle switch)	In CONTINUOUS position, selects continuous presentation of pattern selected by RHA TEST SELECT switch. In SINGLE position, provides enabling voltage to SINGLE PULSE pushbutton switch.
SINGLE PUILSE INDICATOR lamp	Flashes to indicate that single pulse mod of operation has been initiated
SINGLE PULSE witch (pushbutton switch)	When operated. provides single CRT sweep, as selected by RHA TEST SELECT switch, to unit under test
BCD THUMBWHEEL AND PANEL SWITCH TEST switch (l0-position rotary switch)	Routes binary coded decimal, binary coded decimal(+3, or panel switch test signals from corresponding Control-Monitor C-438/AYA-10 thumbwheel switches or panel switches to appropriate BCD or BCD - 3 indicator lamps; in OFF position, disconnects B(D and BCD + 3 indicator lamps from Control-Monitor C-8338/AYA-10 thumbwheel switches and panel switches.

Table 3-1. Simulator, Monitor Input SM-627/AYM-9,
Controls, Indicators and Connectors (fig. 3 -1) - Continued

Control, indicator or connector	*Function*
DECIMAL THUMBWHEEL SWITCH TEST switch (12-position rotary switch)	Provides test of Control-Monitor C-8338/AYA-10 thumbwheel switches corresponding to selected switch position. In OFF position, disconnects Control-Monitor C-8338/AYA-10 thumb-wheel switches In ENABLE position, actiates DECIMAL THUMBWHEEL AND PANEL SWITCH TEST switch.
DECIMAL THUMBWHEEL AND PANEL SWITCH TEST (12-position rotary switch of which 10 positions are used)	Provides test of Control-Monitor C-8338/AYA-*10* thumbwheel switches and POWER switch corresponding to selected switch position In OFF position, disconnects Control-Monitor C-8338/AYA-10 switches.
115VDC indicator lamp	Lighs to indicate that 115 volts dc power supply is operational
6.3VAC indicator lamp	Lights to indicate that 6.3 volts ac power supply is operational
115VAC indicator lamp	Lights to indicate that 115 volts ac, 400 Hz has been applied
GO indicator lamp	Lights to indicate that voltages within Simulator, Monitor Iput SM-627/AYM-9 are operational.
+5V indicator lamp	Lights to indicate that + 5 volts dc power supply is operational.
FAILURE indicator lamp	Lights o indicate that one or more operating voltages within Simulator, Monitor Input SM-6i/AYM-9 are absent.
+5V testpoint..	Provides means of monitoring +5 o!ts deoutput
+ 10V test point	Provides means of monitoring + 10 olts deoutput
+ 15V test point	Provides means of monitoring + 15 voltsdeoutput
-15V stesint point	Provides means of monitoring-15 volts deoutput.
+ 25V test point	Provides means of monitoring +25 volts deoutput
-25V tst point	Provides means of monitoring --25 volts dc output.
+ 85V st point	Provides means of monitoring +85 volts deoutput.
+ 115V tst point	Provides means of monitoring + 115 volts dc output.
GND test point	Provides means of conneting test equipment to internal ground.
ELAPSED TIME meter	Provides indication of total hours of operation of Simulator, Monitor Input SM-627/AYM-9.
ON-OFF switch (2-position toggle switch)	In ON position, connecs primary power to Simulator, Monitor Input SM-627/AYM-9. In OFF position, disconnects primary power.
EXT GND terminal	Proides for connection of external ground to Simulator, Monitor Input SM427/AYM-9 chassis
CONTROL DISPLAY MONITOR:	
Connector J1	Provides means of connecting Simulator, Monitor Input SM-627/AYM-9 to Control-Monitor C-8338/AYA-10.
Connector J2	Provides means of connecting Simulator, Monitor Input SM627/AYM-9 to Control-Monitor C-8338/AYA-10.
RECORDING HEAD ConnetorJ3	Provides means of connecting Smulator, Monitor Input SM-627/AYM-9 to Control Monitor C-8338/AYA-10 or Camera, Still Picture KE-59A.
POWER Connector J4	Provides means of connecting Simulator, Monitor Input SM627/AYM-9 115 volts ac, 400 Hz power source.

Table 3-2. Case Test Set CY-7117/AYM-9, Connector (fig. 3-2)

Connector	*Function*
Connector J1	Provides means of connecting Camera, Still Picture KE-9A to Simulator, Monitor Input SM-627/AYM-9 Also provides means of connecting recording head assembly or monitor assembly under test to Camera, Still Picture KE-59A.

Table 3-3. Polaroid Camera CU-5 Controls and Indicators (fig 3-10)

Control or indicator	*Function*
Shutter speed lever	Provides for setting speed of shutter operation.
Red mark	Points shutter speed setting on setting indicator.
Lens opening lever	Provides for setting lens diaphragm to desired opening.
Lens opening poin*ter*	Points to lens opening setting on setting indicator.
Setting indicator	Indica*tes* shutter speed and lens opening setting.
Cable release socket	Provides for connecting able release to shut*ter* mechanism.
Exposure door control (fig. 3-2)	In OPEN position, prevents image from being projected on film. In LOCK position, permits image to be projected on film.

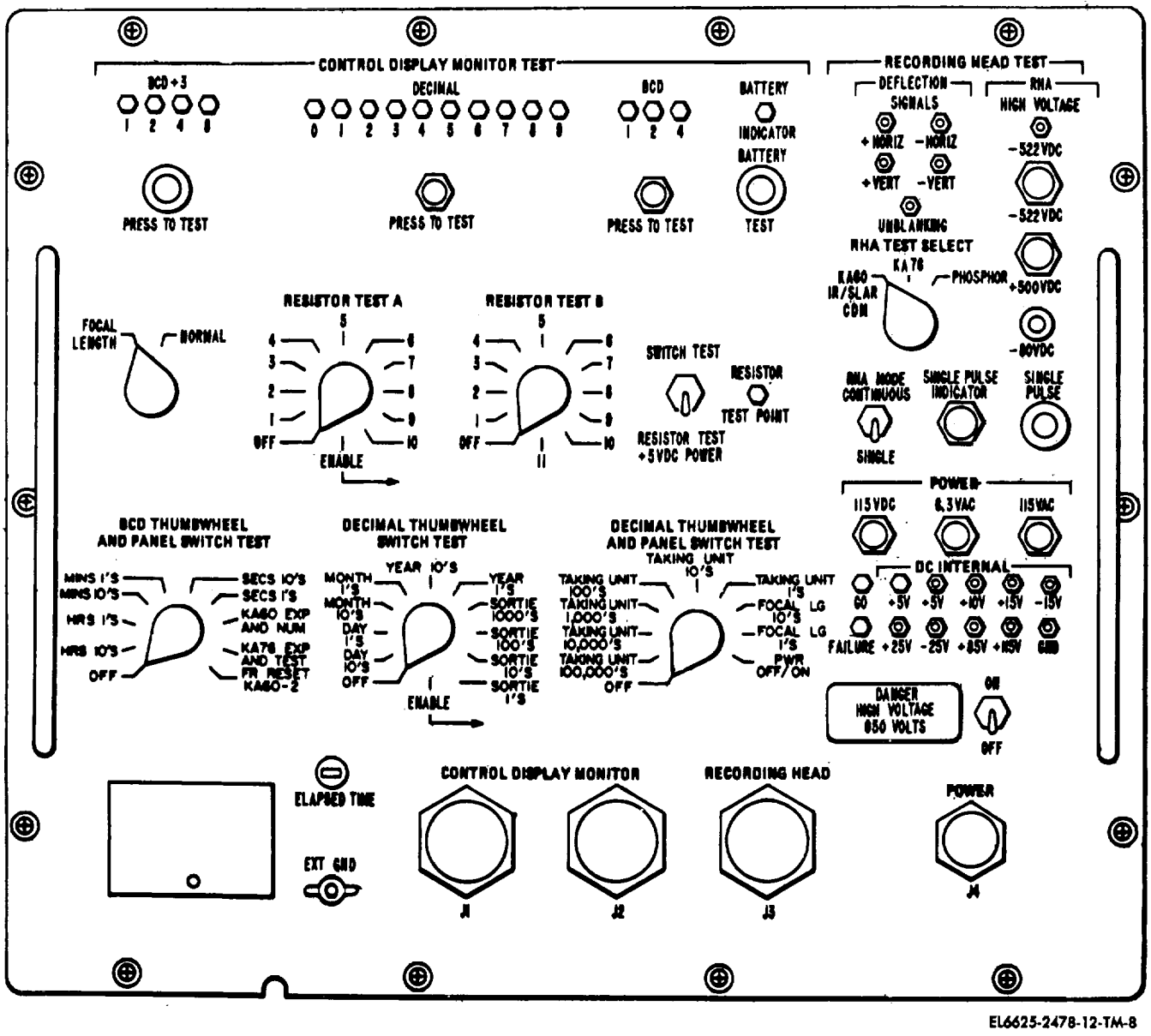


Figure 3-1. Simulator, Monitor Input SM-627/AYM-9, controls and indicators

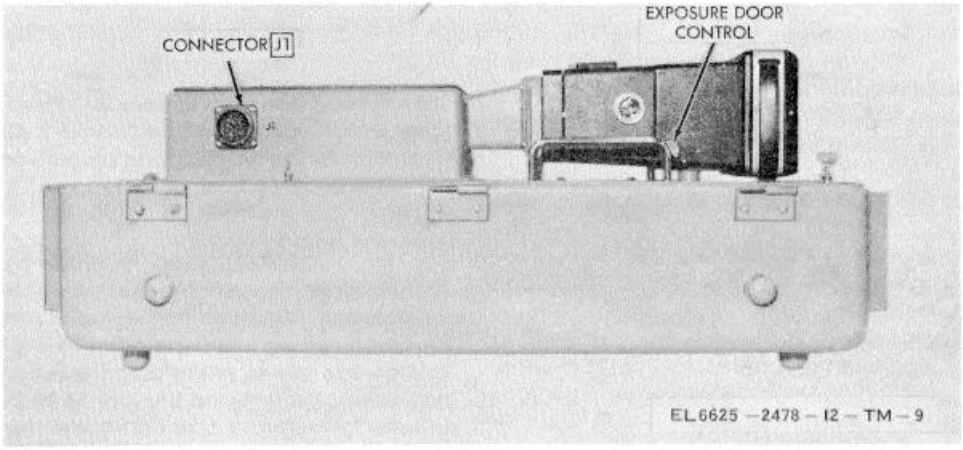


Figure 3-2. Case, Test Set CY-7117/AYM-9, controls and indicators.

Section II. OPERATION UNDER USUAL CONDITIONS

3-3. Preparation for Use

a. Place Simulator, Monitor Input SM-627/AYM- 9 on a work bench or other suitable area convenient to a 115 volts at 400 Hz power source. b. Press the core of the pressure relief valve on Simulator, monitor Input SM27/AYM-9 (fig. 1). Allow the internal pressure to equalize with atmospheric pressure (approximately 30 seconds).

c. Release seven latches securing Cover, Test Set CW-1149/AYM-9 of Simulator, Monitor Input SM-627/AYM-9. Separate Cover, Test Set CW-1149/ AYM-9 from e base.

d. Place Simulator, Monitor Input SM 627/AYM- 9 in upright position.

e. Place Case, Test Set CY-7117/AYM-9 on the work bench adjacent to Simulator, Monitor Input SM627/AYM-9.

f. Press the core of the pressure relief valve on Case, Test Set CY-7117/AYM-9 (fig. 14). Allow the internal pressure to equalize with atmospheric pressure (approximately 30 seconds).

g. Release seven latches securing the cover of Case, Test Set CY-7117/AYM-9. Separat the cover from the base.

h. Release four panel fasteners and with the handles, lift Camera, Still Picture KE-59A of Case, Test Set CY-7117/AYM-9. Lower two hinged sup- porting tubes located on the bottom of Camera, Still Picture KE-59A into the holes provided in the base of Case, Test Set CY-7117/AYM-9 to support the free end of Camera, Still Picture KE-59A (fig. 1J4 0).

I. Remove all cable assmblies from storage area in base of Case, Test Set CY-7117/AYM-9.

j. Lift Camera, Still Picture KE-59A of Case, Test Set CY-7117/AYM-9 (fig. 14 @) by handles until the two hinged supporting tubes located on bottom of Camera, Still Picture KE-59A are free of the holes provided in base of Case, Test Set CY-7117/AYM-9 and stow the supporting tubes in the clamps provided on the underside of Camera, Still Picture KE-59A.

k. Lower Camera, Still Picture KE-59A of Case, Test Set CY-7117/AYM- and engage four panel fasteners (fig. 14 ①).

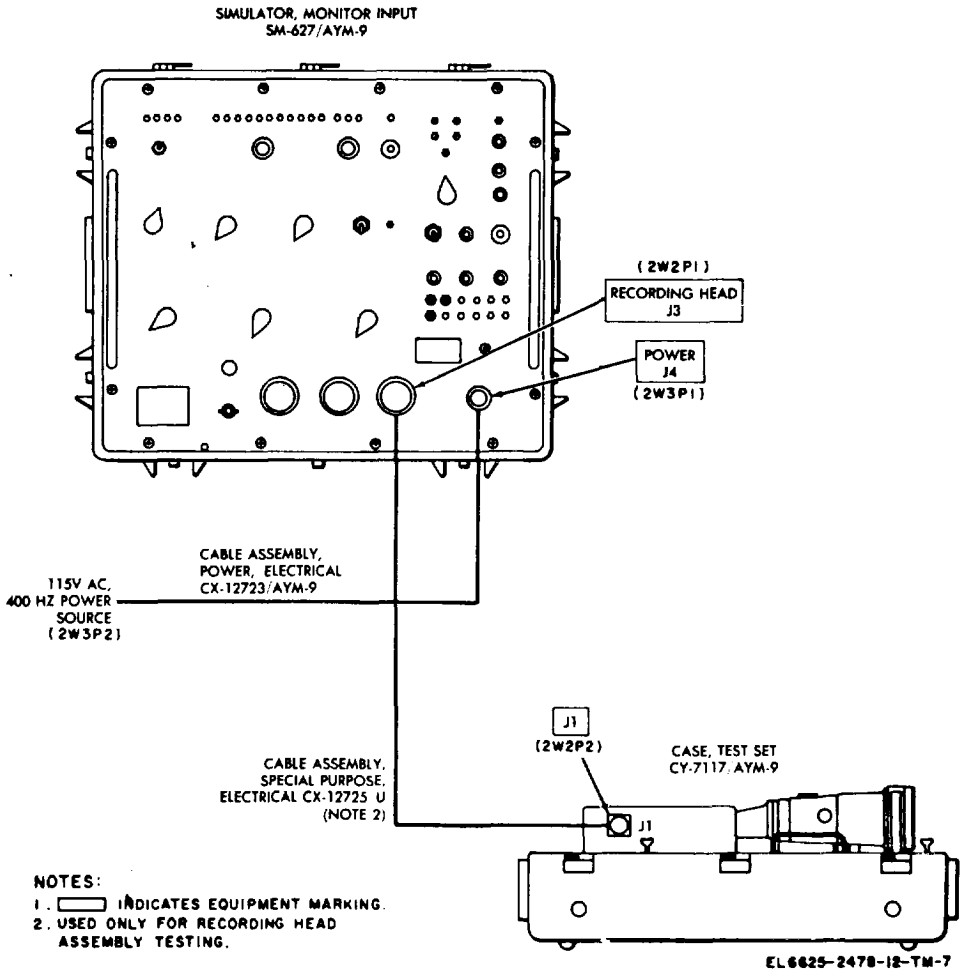


Figure 3-3. Test Set Control Monitor-Recording Head AN/A YM-9, cable interconnection diagram.

3-4. Initial Checking and Adjustment of Equipment Before placing Test Set, Control Monitor-Recording Head AN/AYM-9 in operation, perform a go, no-go check to verify that the equipment is operable. Connect the equipment as shown in figure 3-3 and perform the procedures of paragraphs 3-5 and 3-4 to accomplish this check.

3-5. Preliminary Starting Procedure

(fig. 3-1)

With Test Set, Control Monitor-Recording Head AN/AYM-9 prepared for use as described in paragraph 34, set Simulator, Monitor Input SM-627 AYM-9 switches to the following positions:

Switch	*Setting*
FOCAL LENGTH--NORMAL	NORMAL
RESISTOR TEST A	OFF
RESISTORTESTB	OFF
SWITCH TEST-RESISTOR TEST + 5VDC POWER	SWITCH TEST
RHA TEST SELECT	KA60, IR/SLAR, CDM
RHA MODE	SINGLE
BCD THIMBWHEEL AND PANEL SWITCH TEST	OFF
DECIMAL THUMBWHEEL SWITCH TEST	OFF
DECIMAL THUMBWHEEL AND PANEL SWITCH TEST	OFF
ON-OFF	OFF

3-6. Operating Procedure

(fig. 3-1) The following instructions provide for energizing Simulator, Monitor Input SM627/AYM- and per- forming a preoperational check of the equipment. If during performance of steps a through d any of the specified indicator lamps fail to light, refer to chapter 4 for troubleshooting procedures.

a. Set Simulator, Monitor Input SM627/AYM-9 ON-OFF switch to ON. The following indicator lamps shall light: -522VDC, +500VDC, -80VDC, 115VDC, 6.3VAC, 115VAC, GO, and + 5V.

b. Press the BCD+3--PRESS TO TEST push- button switch. All BCD+3 indicator lamps shall light.

c. Firmly press the DECIMAL-PRESS TO TEST pushbutton switch. All DECIMAL indicator lamps shall light

d. Press the BCD-PRESS TO TEST pushbutton switch. The following indicator lamps shall light: BCD, BATTERY INDICATOR, SINGLE PULSE INDICATOR, and FAILURE.

NOTE

If the FAILURE indicator lamp lights at any time other than during the above test,

terminate the test procedure and refer Simulator, Monitor Input SM-627/AYM-9 to the next higher category of maintenance.

e. Set Simulator, Monitor Input SM27/AYM-9 ON-OFF switch to OFF.

f. Disconnect cables CX-12723/AYM-9 and CX-12725/U.

3-7. Control-Monitor C-8338/AYA-10

Test Procedures With the SM-627/AYM-9 prepared for use as de- scribed in paragraph 3-3, test the C-338/AYA-10 as follows:

a. On the SM?27/AYM-9, set switches to positions specified in paragraph 3-5.

b. On the C-8338/AYA-10, set the switches and controls to the following positions

Switch/Control	*Setting*
DAY	00
MONTH	00
YEAR	00
FOCAL LENGTH	00
KA60-2 EXP	1
SORTIE NO	0000
TAKING UNIT	000000
KA60-1 EXP	1
KA76 EXP	1
HRS	00
MINS	00
SECS	00
MODE	ALT
POWER	OFF

c. Connect the equipment as shown in figure 34.

d. On the SM-627/AYM-9, set the ON-OFF switch to the ON position.

e. Set the RHA MODC switch to CONTINUOUS.

f. On the C-8338/AYA-10, the cathode ray tube shall display a rotating circle of dots near the circumference of the phosphor (fig. 3-5). Adjust the INTENSITY control as required.

g. On the SM?27/AYM-9, set the RHA TEST SELECT switch to KA76.

h. On the C-8338/AYA-1O, the cathode ray tube shall display a rotating circle of dots around the center of the phosphor (fig. 3-6).

i. On the SM-627/AYM-9, set the RHA TEST SELECT switch to PHOSPHOR.

j. On the C-8338/AYA-1O, the cathode ray tube shall display a raster (fig. 3-7).

k. On the SM-627/AYM-9, set the ON-OFF switch to the OFF position.

l. Disconnect cables CX-12720/AYM- and CX-12723/AYM-9.

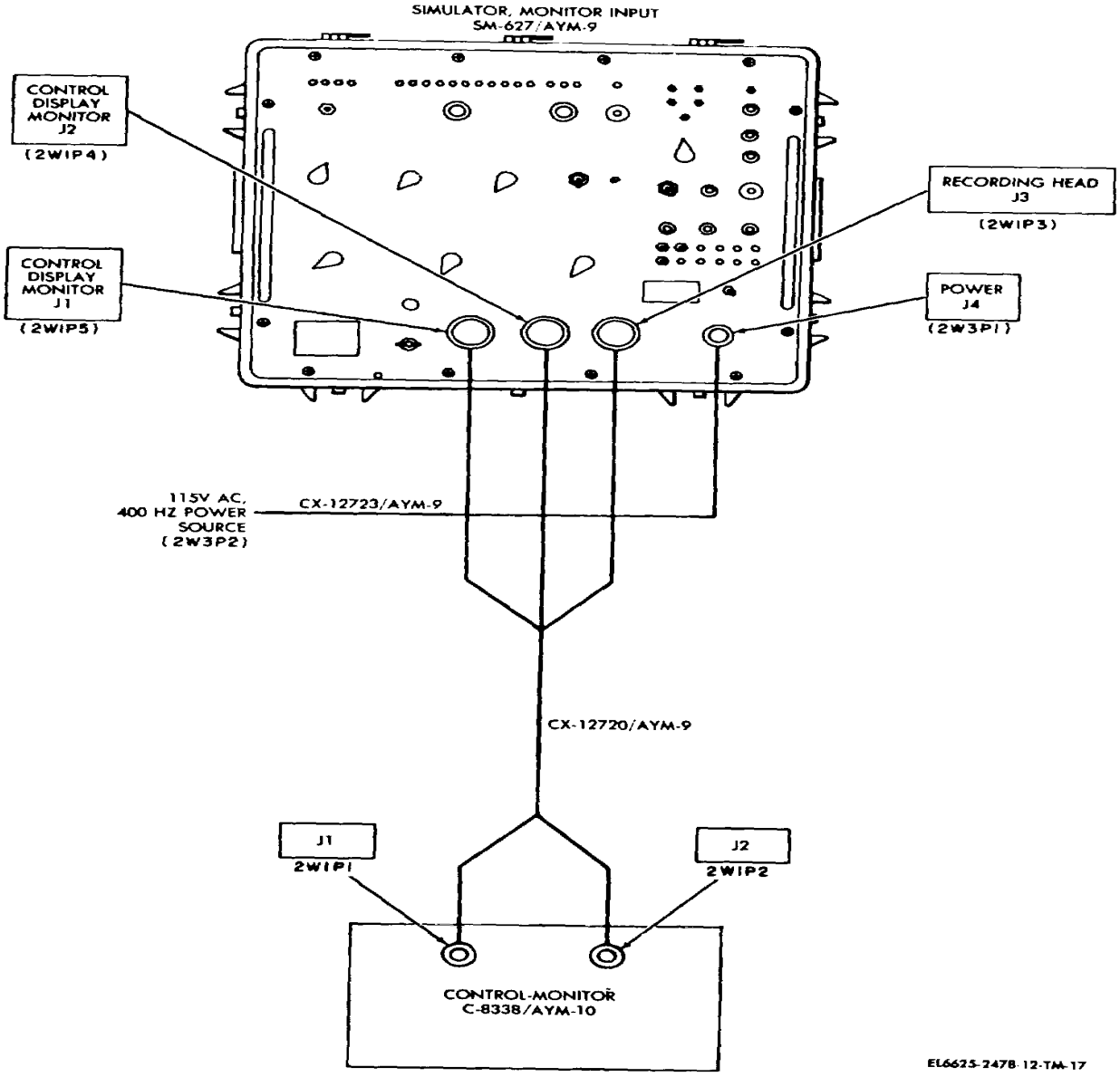


Figure 3-4. Control-Monitor C-8338/AYA-test setup.

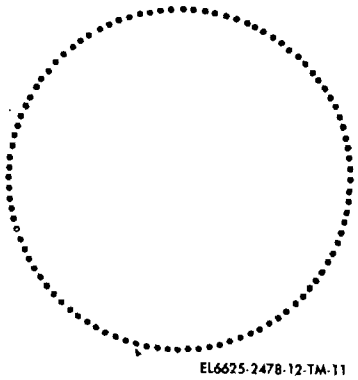


Figure 3-5. Large circular dot pattern.

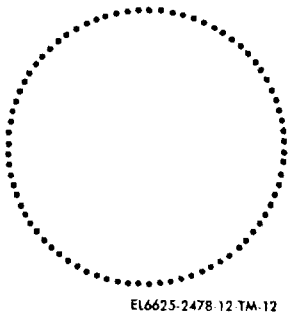


Figure 3-6. Small circular dot pattern

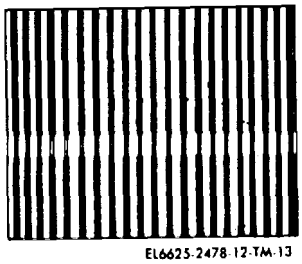


Figure 3-7. Raster Pattern.

3-8. Recording Head Assembly Test Procedures

To test a recording head assembly (RHA), perform the preliminary steps described in paragraph a and the test procedure for the specific type of recording head assembly given in paragraph *c, d,* e, or f.

a. Preliminary Steps.

(1) Release four panel fasteners and lift Cam- era, Still Picture KE-59A of Case, Test Set CY- 7117/AYM-9 by handles. Lower two hinged supporting tubes located on bottom of Camera, Still Picture KE-59A into holes provided in base of Case, Test Set CY-7117/AYM-9 to support free end of Camera, Still Picture KE-59A (fig. 14 O).

(2) Remove camera cover assembly, cable re- lease, and film from storage compartment in the base of Case, Test Set CY-7117/AYM- (fig. 14 O).

(3) Lift Camera, Still Picture KE-59A of Case, Test Set CY-7117/AYM-9 (fig. 1-40) by handles until the two hinged supporting tubes located on bottom of Camera, Still Picture KE-59A are free of the holes provided in base of Case, Test Set CY-7117/ AYM-9. Next, stow supporting tubes in the clamps provided on underside of Camera, Still Picture KE-59A.

(4) Lower Camera, Still Picture KE-59A of Case, Test Set CY-7117/AYM-9 and engage four panel fasteners (fig. 1-4).

(5) Remove welded plate assembly cover from the cover of Case, Test Set CY-7117/AYM-9 (fig. 1-5).

(6) On the SM-627/AYM-9, set switches to positions specified in paragraph 3-5.

(7) Connect connector P2 of Cable Assembly, Special Purpose, Electrical CX-2725/U to external side of connector J1 on CY-7117/AYM-9. Connect connector P1 t connector J3 on SM-627/AYM-9 (fig. 3-3).

b. Operation of Polaroid Camera CU-5.

(1) Loading film in the camera. Load camera with Polaroid Land film, Type 107 (3000 speed black and white film) as follows

(a) Open top of the film box and remove coater tube, instruction sheet, and foil bag containing the film.

CAUTION

Do not press hard on the middle of the film package or film pack.

(b) Hold film package near the edges and tear open sic of the foil bag along the dotted line. Start the tear at one corner of the foil bag.

(c) With the side of the foil bag open, tear apart the front and back of the bag and lift out film pack.

(d) Release four panel fasteners and lift Camera, Still Picture KE-59A of Case, Test Set CY-7117/AYM-9 by handles. Lower two hinged sup- porting tubes located on bottom of Camera, Still Picture KE-59A into holes provided in base of Case, Test Set CY-7117/AYM-9 to support free end of Camera, Still Picture KE-59A (fig. 1-40).

(e) Press back door latch (fig. 3-8) away from the end of the camera until back door springs open.

(f) Inspect steel rollers for signs of dirt, dried developer, or lint. If rollers are clean, proceed to step *(h).* If not, perform step (g) before proceeding.

(g) Lift up red latch securing rollers and swing roller assembly out. Scrape off any dried developer using a bit of cardboard or a matchstick. Wipe rollers clean with a damp cloth and dry with a clean lint-free cloth. Swing roller assembly into position, making certain red latch engages.

*(*h) Hold film pack so that the printing on the black safety cover faces the lens of the camera. Push closed end of film pack under door hinge against light spring pressure (fig. 3-9).

(i) Gently press film pack down into the cam- era until it snaps into place. Make certain that white tabs are free and not folded under the end of film pack.

(j) Close back door, pressing both sides together firmly to be certain that they lock.

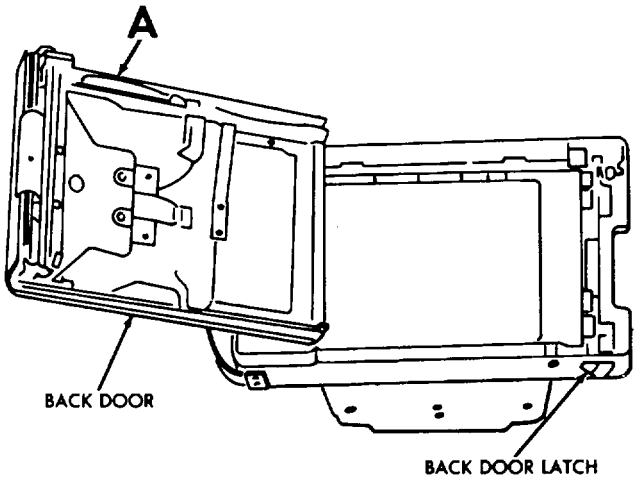
(k) Check that black tab of film pack protrudes through slot at end of camera. If not, reopen back door and place black tab in slot. Then close back door again.

(l) Grasp black tab and pull black safety cover straight out. Pull safety cover all the way out with- out stopping.

(m) When safety cover is out, a white tab will protrude from the slot. Do not pull white tab at this time. If no white tab is visible, open back of camera part way, and without moving the film pack, push white tab through the slot. Close and lock back door.

(n) Lift Camera, Still Picture KE-59A of Case, Test Set CY-7117/AYM-9 (fig. 1-40) by handles until the two hinged supporting tubes located on bottom of Camera, Still Picture KE-59A are free of the holes provided in base of Case, Test Set CY-7117 /AYM-9. Then stow supporting tubes in the clamps provided on underside of Camera, Still Picture KE-59A.

(o) Lower Camera, Still Picture KE-59A of Case, Test Set CY-7117/AYM-9 and engage four panel fasteners (fig. 1-4 ①).



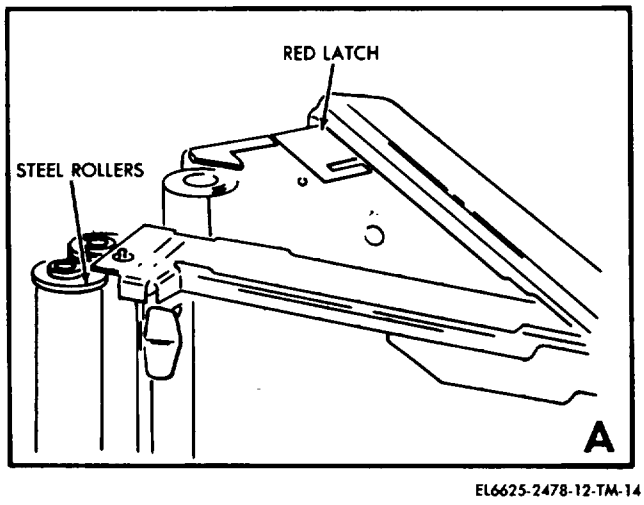


Figure 3-8. Camera with back door open and steel rollers swung out for cleaning.

(2) Setting the exposure controls. To gain access to the exposure controls, open access door (fig. 3-10).

(a) To set shutter speed, move shutter speed lever until red mark is opposite desired speed on indicator. Speeds are available from 1 second to 1/125 second.

(b) To set lens opening, move lens opening lever until lens opening pointer is opposite desired f number.

(c) To connect camera cable release, pass cable release through hole in camera cover assembly

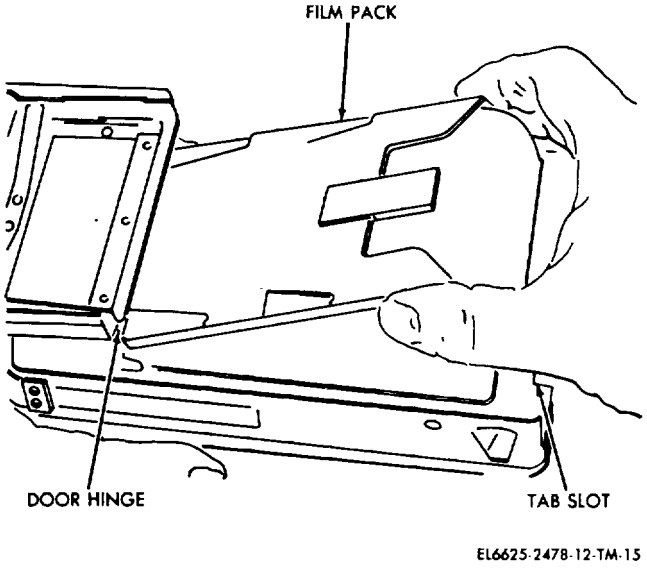


Figure 3-9. Inserting film pack into camera..

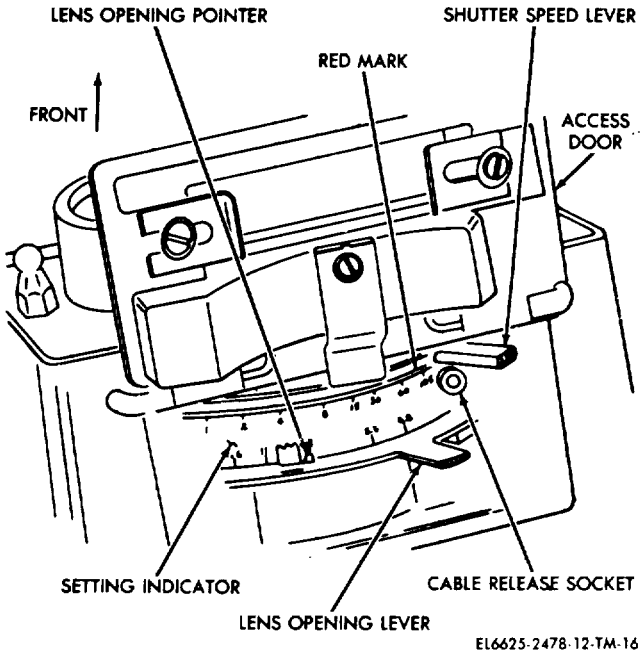


Figure 3-10. Camera controls and indicators

and thread end of cable release into cable release socket.

(3) Making the exposure. With shutter speed lever and lens opening lever set to desired position, press camera cover assembly into access opening to exclude extraneous light. Make exposure as follows:

NOTE

Before making exposure, be sure that exposure door control is in ,LOCK position (fig. 3-2).

*(*a) For an automatically timed exposure, de- press cable release. The shutter is of the self-cocking type and trips after it is cocked.

*(*b) For manually-timed exposures, set shutter speed lever to B. To make the exposure, depress cable release and hold it depressed for duration of desired exposure.

(c) To open lens and have it stay open for a period of time, set shutter speed lever to T. To open shutter, depress cable release. The shutter will re- main open until cable release is depressed a second time.

(*4) Developing the exposed film.* To develop the exposed film, proceed as follows:

*(*a) Grasp small white tab which extends through slot at the end of the camera back door (para (1***)()**).

*(*b) Pull white tab straight out of the camera. Discard tab.

(c) Pulling white tab out of the camera will cause a large yellow tab marked PULL to pop out of a concealed door. Do not block this door while pulling the tabs. Grasp yellow tab at its center and pull it straight out, moderately fast, without hesitation. This starts the developing action. *(*d) As soon as yellow tab has been pulled from camera, start timing the developing action. Hold film by the yellow tab or lay film down flat during development. Do not touch or bend the white paper or lift it off. Depending on room temperature, allow film to develop for the time specified below:

Room temperature(°F.)	***Developing Time (Sec)***
70 or over	15
65	20
60	25
50	30 to 40
40	45 to 55
35	55 to 70

(e) After specified developing time, quickly strip white paper print from the brown paper. Start by grasping white paper print at end nearest the yellow tab.

*(*f) To avoid contact with chemicals, fold brown paper negative with the moist sic in and discard.

(g) Remove coater from tube. Holding print face up on a flat surface spread liquid by rubbing moist face of coater across film starting at edge being held. Use 6 to 8 overlapping strokes. The coating dries quickly and leaves a tough protective layer over the image.

*(*h) Return coater to tube and place cap on tube.

c*. Indicator, Digital Display IP-1080A YA-10 Test Procedures.*

(1) Connect connector P1 of Cable Assembly, Special Purpose, Electrical CX2728/U to the internal sic of connector J1 on the CY-7117/AYM-9. Connect connector P1 to the connector on the IP- 1080/AYA-O0 (fig. 3-11).

(2) Rotate turntable of Camera, Still Picture KE-59A until springloaded locator pin locks into position A.

(3) Mount IP-1080/AYA-10 on clamp assembly A up to stop and secure camp assembly by means of captive fastener stud. (4) Mount welded plate assembly cover on top of welded plate and secure with 10 captive fastener studs.

(5) On the SM4-7/AYM-9, set the RHA MODE switch to SINGLE and set the RHA TEST SELECT switch to KA60, IR/SLAR, CDM.

(6) On SM-627/AYM-9, set ON-OFF switch to ON.

(7) Remove camera cover assembly from access opening of Polaroid Camera CU-5 and slide cover assembly along cable release to gain access to shut- ter speed and lens opening levers.

(8) Set camera shutter speed to T and set lens opening to f/8 (para 3-8 (3)).

(9) Slide camera cover assembly along cable re- lease and press camera cover assembly into access opening of the Polaroid Camera CU-5 to exclude extraneous light.

(10) Depress camera cable release.

(11) On SM427/AYM-9, depress SINGLE PULSE pushbutton. The SINGLE PULSE INDICATOR lamp shall flash.

(12) Depress camera cable release.

(13) Develop exposed film; refer to paragraph 3-*8 b(*4). The resulting print shall show a circle of small dots 0.6 ± 0.1 inch in diameter (fig. 3-5).

(14) Remove camera cover assembly from access opening of Polaroid Camera CU-5 and slide cover assembly along cable release to gain access to shutter speed and lens opening levers.

(15) Set camera shutter speed for a 1/15 second exposure time and set lens opening to f5.6 (para 3-8 b (3)).

(16) Slide camera cover assembly along the cable release and press camera cover assembly into ac- cess opening of Polaroid Camera CU-5 to exclude extraneous light.

(17) On SM-627/AYM-9, set RHA TEST SELECT switch to PHOSPHOR.

(18) Depress camera cable release.

(19) Develop exposed film (para 3-8 b (4)). The resulting print shall show a raster (fig. 3-7).

(20) On SM-627/AYM-9, set ON-OFF switch to OFF.

(21) Loosen 10 captive fastener studs securing the welded plate assembly cover and remove cover.

(22) Loosen captive fastener stud securing damp assembly A and remove IP-1080/AYA-10 from the clamp assembly.

(23) Disconnect connector P1 of cable CX-12728- /U, removing the IP-1080/AYA-10.

(24) Close camp assembly A and secure with captive fastener stud.

(25) Rotate turntable assembly for maximum access connector J1 (fig. 3-11).

(26) Disconnect connector P1 of cable CX-2728 /U from connector J1 on internal sic of the CY- 7117/AYM-9.

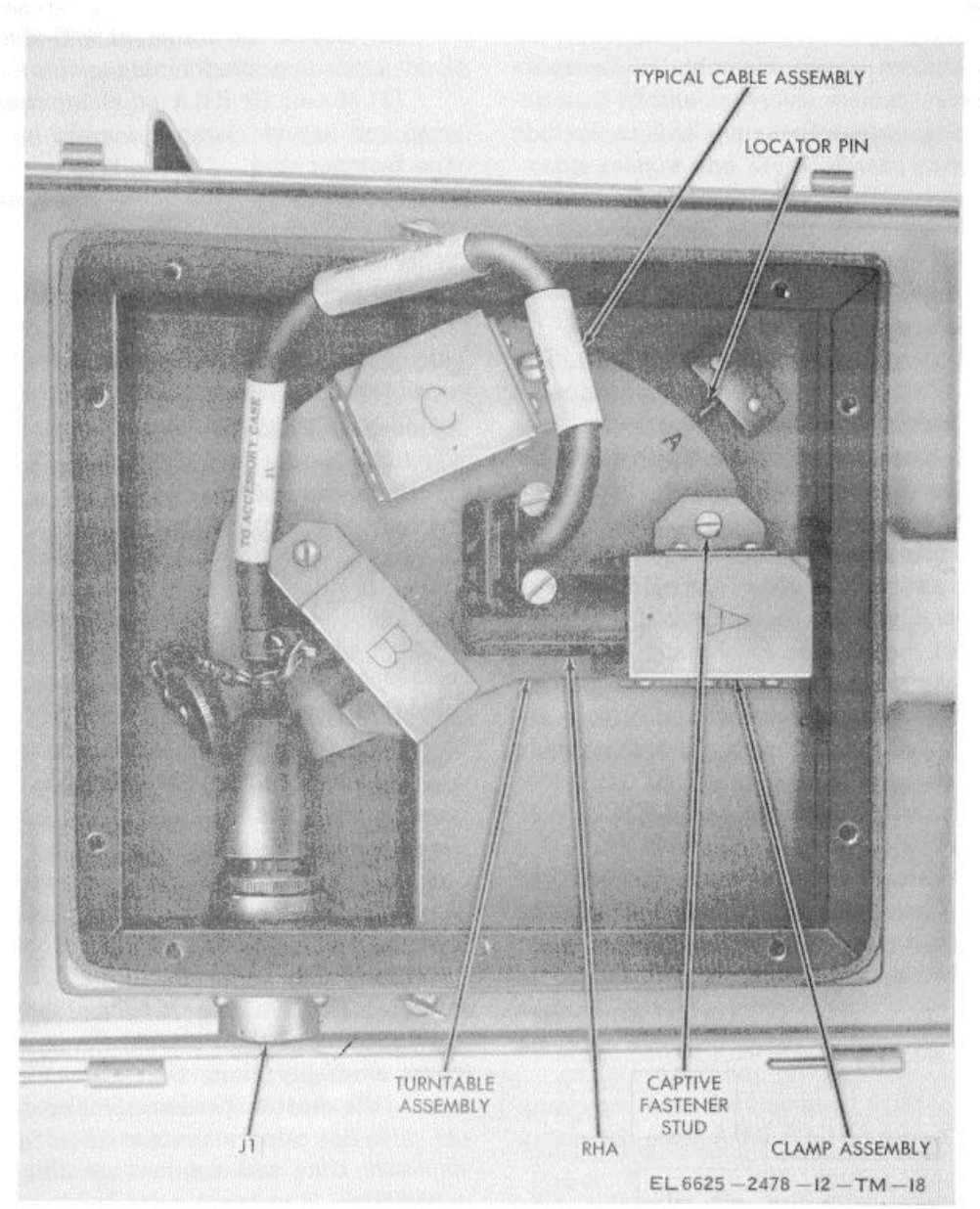


Figure 3-11. Typical installation of RHAT for testing.

d. SLA RHA Test Procedures.

(1) Connect connector P1 of Cable Assembly, Special Purpose, Electrical, CX-2727/U to the internal sic of connector J1 on CY-7ll7/AYM-9. Connect connector P2 to connector on the SLAR RHA (fig. 3-11**).**

(2) Rotate turntable of the KE-59A until spring-loaded locator pin locks into position C.

(3) Mount SLAR RHA on clamp assembly C up to stop and secure clamp assembly by means of captive fastener stud.

(4) Mount welded plate assembly cover on top of the welded plate and secure with 10 captive fastener studs.

(5) On SM-627/AYM-9, set RHA TEST SELECT switch to KA60, IR/SLAR, CDM.

(6) On SM-627/AYM-9, set ON-OFF switch to ON.

(7) Remove camera cover assembly from access opening of Polaroid Camera CU-5 and slide cover assembly along cable release to gain access to shutter speed lens opening levers.

(8) Set camera shutter speed to T and set lens opening to f/8 (para 3-8 b(3)).

(9) Slide camera cover assembly along cable release and press camera cover assembly into ac- cess opening of Polaroid Camera CU-5 to exclude extraneous light.

(10) Depress camera cable release.

(11) On S-627/AYM-9, depress SINGLE PULSE pushbutton. The SINGLE PULSE INDICATOR lamp shall flash.

(12) Depress camera cable release.

(13) Develop exposed film (para 3-8 b(4)). The resulting print shall show a circle of small dots 0.6 0 .1 inch in diameter (fig. 3-5).

(14) Remove camera cover assembly from access opening of Polaroid Camera CU-5 and slide cover assembly along cable release to gain access to shutter speed and lens opening levers.

(15) Set camera shutter speed for a 1/15 second exposure time and set lens opening to f/5.6 (para 3- b (3)).

(16) Slide camera cover assembly along cable release and press camera cover assembly into access opening of Polaroid Camera CU-5 to exclude extraneous light.

(17) On SM-627/AYM-9, set RHA TEST SELECT switch to PHOSPHOR.

(18) Depress camera cable release.

(19) Develop exposed film (para 3-8 b (4)). The resultant print shall show a raster (fig. 3-7).

(20) On SM-627/AYM-9, set ON-OFF switch to OFF.

(21) Loosen 10 captive fastener studs securing the welded plate assembly cover and remove cover.

(22) Loosen captive fastener stud securing clamp assembly C and remove SLAR RHA from the clamp assembly.

(23) Disconnect connector P2 rod cable CX-12727/U, removing the SAR RHA.

NOTE

If IR RHA test is to be performed, omit steps (24) through (26).

(24) Close clamp assembly C and secure with captive fastener stud.

(25) Rotate turntable assembly for maximum access to connector J1 (fig. 3-11).

(26) Disconnect connector P1 of cable CX-12727 /U from connector J1 on the internal sic of CY-7117/AYM-9.

e. IR RHA Test Procedure.

(1) Connect connector P1 of Cable Assembly, Special Purpose, Electrical CX-12727/U to the internal sic of connector J1 on the CY-7117/AYM-9. Con nect connector P2 to connector on the IR RHA (fig. 3-11).

(2) Rotate turntable of KE-59A until spring- loaded locator pin locks into position C.

(3) Mount IR RHA on clamp assembly C up to stop and secure clamp assembly by means of captive fastener stud.

(4) Mount welded plate assembly cover on top of the welded plate and secure with 10 captive fastener studs.

(5) On SM-627/AYM-9, set the RHA TEST SE-LECT switch to KA60, IR/SLAR, CDM.

(6) On SM-627/AYM-9, set ON-OFF switch to ON.

(7) Remove camera cover assembly from access opening of Polaroid Camera CU-5 and slide cover assembly along the cable release to gain access to shutter speed and lens opening levers. (8) Set camera shutter speed to T and set lens opening to f/8 (para 3-8*b(*3)).

(9) Slide camera cover assembly along cable release and press camera cover assembly into access opening of the Polaroid Camera CU-5 to exclude extraneous light.

(10) Depress camera cable release.

(11) On SM-627/AYM-9, depress SINGLE PULSE pushbutton. The PULSE INDICATOR lamp shall flash.

(12) Depress camera cable release.

(13) Develop exposed film (para 3-*8(*4)). The resulting print shall show a circle of small dots 0.6 0.1 inching diameter (fig. 3-5).

(14) Remove camera cover assembly from access opening of the Polaroid Camera CU-5 and slide cover assembly along the cable release to gain access to the shutter speed and lens opening levers. (15) Set camera shutter speed for a 1/15 second exposure time and set lens opening to f/5.6 (para *3*-8(3)).

(16) Slide camera cover assembly along cable re-lease and press camera cover assembly into access opening of the Polaroid Camera CU-5 to exclude extraneous light.

(17) On SM-627/AYM-9, set RHA TEST SELECT switch to PHOSPHOR.

(18) Depress camera cable release.

(19) Develop exposed film (para 3-8b(4). The re-sulting print shall show a raster (fig. 3-7).

(20) On SM-627/AYM-9, set ON-OFF switch to OFF.

(21) Loosen 10 captive fastener studs securing he welded plate assembly cover and remove cover.

(22) Loosen captive fastener stud securing clamp assembly C and remove IR RHA from the clamp assembly.

(23) Disconnect connector P2 of cable CX-12727 'U, removing the IR RHA.

(24) Close clamp assembly C and secure with raptive fastener stud.

(25) Rotate turntable assembly for maximum access to connector J1 (fig. 3-11).

(26) Disconnect connector P1 of cable CX-12727 /U from connector J1 on the internal sic of CY-7117/AYM-9.

f Recorder, Code Matrix Block LA-4A Test Procedures.

(1) Connect connector P1 of Cable Assembly, Special Purpose, Electrical CX-12726/U to the internal sic of connector J1 on the CY-7117/AYM-9. Connect connector P2 t the connector on LA434A (fig. 3-11).

(2) Rotate turntable of KE-59A until spring-loaded locator pin locks into position B. *(3)* Place LA434A on clamp assembly B and rotate the LA-434A until captive fastener on the body of LA-434A is in the down position and in the space provided on clamp assembly B.

(4) Position LA434A such that the front face is in line and parallel with the lens of the camera. *(5)* Secure clamp assembly B by means of cap- tive fastener stud.

(6) Mount welded plate assembly cover on top of the welded plate and secure with 10 captive fastener studs.

(7) On SM-627/AYM-9, set RHA TEST SELECT switch to KA76.

(8) On SM4-627/AYM-9, set ON-OFF switch to ON.

(9) Remove camera cover assembly from access opening of Polaroid Camera CU-5 and slide cover assembly along cable release to gain access to the shutter speed and lens opening levers.

(10) Set camera shutter speed to T and set lens opening to f/5.6 (para 3-8b(3)).

(11) Slide camera cover assembly along cable release and press camera cover assembly into access opening of Polaroid Camera CU-5 to exclude ex- traneous light.

(12) Depress camera cable release.

(13) On SM-627/AYM-5, depress SINGLE PULSE pushbutton. The SINGLE PULSE INDICATOR lamp shall flash.

(14) Depress camera cable release.

(15) Develop exposed film (para -8(4)). The resulting print shall show a circle of small dots 0.35 t 0.10 inch in diameter (fig. 3-6).

(16) Remove camera cover assembly from access opening of Polaroid Camera CU-5 and slide cover assembly along cable release to gain access to the shutter speed and lens opening levers.

(17) Set camera shutter speed for a 1/15 second exposure time and set the lens opening to f/5.6 (para *3-8b(3)).*

(18) Slide the camera cover assembly along the cable release and press camera cover assembly into access opening of Polaroid Camera CU-5 to exclude extraneous light.

(19) On SM427/AYM-9, set RHA TEST SELECT switch to PHOSPHOR.

(20) Depress camera cable release.

(21) Develop exposed film (para 3-8b(4)). The resulting print shall show a raster (fig. 3-7).

(22) On SM-627/AYM-9, set ON-OFF switch to OFF.

(23) Loosen 10 captive fastener studs securing the welded plate assembly cover and remove cover.

(24) Loosen captive fastener stud securing clamp assembly B and remove LA434A from the clamp assembly.

(25) Disconnect connector P2 of cable CX-12726/U, removing the LA434A.

(26) Close clamp assembly B and secure with captive fastener stud.

(27) Rotate turntable assembly for maximum access to connector J1 (fig. 3-11).

(28) Disconnect connector P1 of cable CX-12726/U from connector J1 on the internal sic of CY-7117/AYM-9.

3-9. Stopping Procedure

To stop operation of Test Set, Control Monitor-Recording Head AN/AYM-9, proceed as follows:

a. Set ON-OFF switch to OFF (fig. 3-1).

b. Disconnect P2 of Cable Assembly, Power, Electrical, CX-12723/AYM-9 from 115 volts, 400 Hz power source (fig. 3-3). Disconnect P1 of Cable Assembly, Power, Electrical, CX-12723/AYM-9 from connector J4 on Simulator, Monitor Input SM-627/AYM-9.

c. Disconnect P1 of Cable Assembly, Special Purpose, Electrical CX-12725/U from connector J3 on Simulator, Monitor Input SM-627/AYM-9. Disconnect P2 of Cable Assembly, Special Purpose, Electrical CX-12725/U from connector J1 on Case, Test Set CY-7117/AYM-9.

d. To secure Test Set, Control Monitor-Recording Head AN/AYM-9 after use, proceed as follows:

(1) Disconnect all cable assemblies from Test

Set, Control Monitor-Recording Head AN/AYM-9 and stow in base of Case, Test Set CY-7117/AYM-9.

NOTE

If RHA's were not tested, proceed to step *(7).*

(2) Remove camera cover assembly from access opening of the Polaroid Camera CU-5 and slide the cover assembly along the cable release to gain access to the shutter speed and lens opening lvers.

(3) Unscrew cable release from the cable re- lease socket and remove camera cover assembly and cable release.

(4) Pass cable release through hole in camera cover assembly, separating cable release from cam- era cover assembly.

(5) Set shutter speed lever to 1/125 and lens opening lever to f/8 (fig. 3-10).

(6) Close access door of Polaroid Camera CU-5 (fig. 3-10).

(7) Release four panel fasteners and lift Cam- era, Still Picture KE-59A of Case, Test Set CY- 7117/AYM-9 by handles. Lower two hinged supporting tubes located on bottom of Camera, Still Picture KE-59A into holes provided in base of Case, Test Set CY-7117/AYM-9 to support fee end of Camera, Still Picture KE-59A (fig. 1-4)

(8) Stow all accessories in respective storage areas of Case, Test Set CY-7117/AYM-9.

(9) Lift Camera, Still Picture KE-59A of Case, Test Set CY-717/AYM-9 (fig. 1-4s by handles until the two hinged supporting tubes located on bottom of Camera, Still Picture KE-59A are free of the holes provided in base of Case, Test Set CY-7117/ AYM-9. Then stow supporting tubes in the clamps provided on underside of Camera, Still Picture KE-59A.

(10) Lower Camera, Still Picture KE-59A of Case, Test Set CY-7117/AYM-9 and engage four panel fasteners (fig. 1-4).

(11) Screw protective caps onto all connectors of Simulator, Monitor Iput SM-627/AYM-9 and Case, Test Set CY-7117/AYM-9.

(12) Secure the cover to base of Case, Test Set CY-7117/AYM-9 with seven latches.

(13) Secure Cover, Test Set C-1149/AYM-9 to base of Simulator, Monitor Input SM427/AYM-9 with seven latches.

CHAPTER 4
ORGANIZATIONAL MAINTENANCE

4-1. Scope of Maintenance

The maintenance duties assigned to the organizational repairman of Test Set, Control Monitor-Re- cording Head AN/AYM-9 are listed below, together with a reference to the paragraphs covering the specific maintenance functions. The tools and materials required for maintenance are listed in table 4-1.

a. Daily preventive maintenance checks and services (table 4-2).

b. Weekly preventive maintenance checks and services (table 4-3).

c. Monthly preventive maintenance checks and services (table 44).

d. Quarterly preventive maintenance checks and services (table 4-5).

e. Cleaning (para 4-5).

f. Touchup painting (para 4-6).

g. Troubleshooting (para 4-7).

h. Lamp removal and replacement procedures (para 4-8).

i. Switch knob removal and replacement (para 4-).

4-2. Tools and Materials Required

Tools and materials required for organizational maintenance are listed in table 4-1.

Table 4-1. Tools and Materials Required

Tools or material	*Federal stock No.*
Cleaning compound trichloroethane	6810-664-0273
Cleaning cloth	
Cleaning brush	
Fine sandpaper	53505-0124
Tool Kit TK-1OI/G	51804-5178

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 insure that the equipment is serviceable.

a. Systematic Care. The procedures given in tables 4-2 through 4-5 cover routine systematic care and cleaning essential to proper upkeep and operation of the equipment.

b. Preventive Maintenance Checks and Services. The preventive maintenance checks and services chart (tables 4-2 through 4-5) outline functions to be performed at specific intervals. These checks and services are to maintain the equipment in serviceable condition; that is, in good physical condition, and in good operating condition. To assist maintenance personnel in maintaining serviceability, the charts indicate what to check, how to check and the normal condition; the Reference column lists the paragraph that contains additional information. If the defect cannot be remedied by the organizational repairman, 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 equipment are required on a daily, weekly, monthly and quarterly basis. *a.* Table 4-2 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 re- moval for any reason.

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

b. Table 4-3 specifies additional checks and ser- vices that must be performed weekly.

c. Monthly preventive maintenance checks and services are specified in table 4-4. A month is de- fined 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. Adjustment 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 perform- ed on it. Equipment in limited storage (requires service before operation) does not require monthly preventive maintenance.

d. Quarterly preventive maintenance checks and services are listed in table 4-5.

Table 4-2. Daily Preventive Maintenance Checks and Services

Sequence No.	*Item*	*Procedure*	*Paragraph reference*
1	Exterior surfaces	Clean exterior surfaces, including test set panel assembly **WARNING** Dangerous voltages are used in this equipment. Death may result f contact is made with them. Make sure that no power is applied to equipment when checking or cleaning connectors.	(Para 4-5)
2	Controls and indicators	During operation of equipment observe that each control and indicator functions properly. Mechanical action of each knob, dial, and switch should be smooth and free of external or internal binding. Tighten loose controls as required.	None
3	Operation	When operating equipment (chap. 3), be alert for any unusual performance or condition.	None

Table 4-3. Weekly Preventive Maintenance Checks and Services

Sequence No.	*Item*	*Procedure*	*Paragraph reference*
1	Cables	Inspect cable assemblies for signs of mechanical damage, such as chafed, cracked or frayed insulation. Refer damaged cables to higher category of maintenance for repair.	None
2	Connectors	Inspect connectors for bent, broken, or missing pins and check that all connectors are properly secured.	None

Table 4-4. Monthly Preventive Maintenance Checks and Services

Sequence No.	*Item*	*Procedure*	*Paragraph reference*
1	Simulator, Monitor Input SM27/AYM-9 and Case, - Test Set CY-f117/AYM-	*a*. Inspect for damage and check for proper action of hinged covers, hinged Camera, Still Picture KE-59A, and latches. *b.* Clean as necessary.	a. None *b.* (Para 4-5)
2	Connectors	*a.* Inspect for bent, broken or missing pins and check that all connectors are properly secured. *b*. Clean as necessary.	a. None b. (Para 4-5)
3	Polaroid Camera CU-5	Inspect for damage.	None
4	Camera, Still Picture KE-9A	Inspect for bent supporting rods, damaged hinges, and other damage. Check that turntable assembly rotates properly.	None
5	Lens caps	Check that lens caps are not cracked or broken.	(Para 4-8)
6	Switch knobs	Check that switch knobs are not cracked or broken. Tighten loose setscrews.	(Para 4-9)
7	ELAPSED TIME meter	Check tat cover glass is not cracked or broken. None	
8	Cable assemblies and accessories	Inspect cable assemblies for cut abraded, or otherwise damaged insulation; bent, broken or missing connector pins; cracked or otherwise damaged connector insulation; cracked or deformed connector shells; and missing connector protective caps. Inspect accessories for damage.	None
9	Initial setup	Set following switches to positions specified:	None

Switch	*Setting*
FOCAL LENGTH-NORMAL	NORMAL
RESISTOR TEST A	OFF
RESISTOR TEST B	OFF
SWITCH TEST - RESISTOR TEST	SWITCH TEST
+ 5VDC POWER	KA60, IR/SLAR, CDM
RHA TEST SELECT	

Table 4-4 Monthly Preventive Maintenance Checks and Services - Continued

Sequence No.	*Item*	*Procedure*		*Paragraph reference*
		Switch	*Setting*	
9-Con-tinued		RHA MODE	SINGLE	
		BCD THUMBWHEEL AND PANEL SWITCH TEST	OFF	
		DECIMAL THUMB-WHEEL SWITCH TEST	OFF	
		DEIMAL THUMB-WHEEL AND PANEL SWITCH TEST	OFF	
		ON-OFF	OFF	
10	-522VDC, + 500VDC, -80VDC, 115VDC, 115VAC, 6.3VAC, GO, and +5V indicator lamps	Set ON-OFF switch t ON. Indicator lamps specified should light.		(Para 4-7)
11	BCD + 3 indicator lamps	PRESS BCD + 3-PRESS TO TEST switch. All BCD + 3 indicator lamps should light.		(Para 4-7)
12	DECIMAL indicator lamps	Firmly press DECIMAL--PRESS TO TEST switch. All DECIMAL indicator lamps should light.		(Para 4-7)
13	BCD, BATTERY INDICATOR, SINGLE PULSE INDICATOR, and FAILURE indicator lamps	Press BCD-PRESS TO TEST switch. All indicator lamps specified should light		(Para 4-7)
14	Shutdown	Set ON-OFF switch to OFF.		None

Table 4-5. Quarterly Preventive Maintenance Checks and Services

Sequence No.	*Item*	*Procedure*	*Paragraph reference*
1	Publications.....	Check to se that all pertinent publications are current, complete and serviceable Requisition pertinent publications not on hand.	(DA Pam 310-4 and App A)
2	Modifications	Determine whether new MWO's have been published. URGENT MWO's must be applied. All NORMAL MWO's must be scheduled (TM 38-7).	DA Pam 310-7
3	Completeness.....	Check to see that equipment is complete. (Para 1-7a)	
4	Paint.....	Inspect equipment for condition of paint. If surfaces bear many scratches, turn equipment in for higher category maintenance.	

4-5. Cleaning

To clean exterior surfaces of Simulator, Monitor Input SM-27/AYM-9 and Case, Test Set CY-7117 /AYM-9, use cleaning compound trichloroethane FSN 6810-664-0273 and proceed as follows

WARNING

Prolonged breathing of cleaning compound trichloroethane FSN 6810-664-0273 is dangerous. Provide adequate ventilation when using. Do not use near open flame as it is flammable.

a. Use a clean, dry, lint-free cloth to remove moisture and loose dirt.

b. Use a clean, lint-free cloth dampened (not wet) with cleaning compound trichloroethane FSN 6810-664-0273 to remove grease, fungus, and dirt from exterior surfaces.

c. Use a soft-bristle brush to remove dirt from connectors. Use a clean, dry, lint-free cloth to remove moisture.

4-6. Repainting and Refinishing

If necessary, refinish or touch up painted surfaces or Simulator, Monitor Input SM-627/AYM-9 and Case, Test Set CY-7117/AYM-9 as follows:

a. Clean surface to be painted in accordance with paragraph 4-5.

b. Remove rust and corrosion with fine sandpaper FSN 5350-235-0124.

c. 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.

4-7. Troubleshooting

To isolate the causes of troubles which may occur, refer to the troubleshooting chart, table 4-6. The table provides corrective maintenance procedures for malfunctions that may be observed during preventive maintenance checks. It also covers malfunctions that may be observed during normal operation. References given in the corrective action column are to paragraphs giving instructions for corrective maintenance at the operator and organizational level. Find applicable malfunction in table 4-6 and perform indicated corrective action for probable cause.

4-8. Removal and Replacement of Indicator Lamps and Lens Caps

a*. Remov*al To remove indicator lamps lA3DS1 through lA3DS21, proceed as follows:

(1) Unscrew lens cap counterclockwise until free.

(2) Remove indicator lamp from lens cap.

*b. Replacemen*t. To replace indicator lamps 1A3DS1 through 1A3DS21, proceed as follows:

(1) Insert new lamp into the lens cap base up.

(2) Screw lens cap into lampholder clockwise until secured.

c. Removal. To remove indicator lamps 1A3DS22 through lA3DS26 and lA3DS28, proceed as follows:

(1) Unscrew lens cap counterclockwise until free.

(2) Grasp lamp base at its rim and pull from the lens cap.

Table 4-6. TroubleShooting Chart

Item No.	*Malfunction*	*Probable Cause*	*Corrective Action*
1	None of the following indicator lamps, light when ON-OFF switch is set to ON: -522DC, + 500 DC,--VDC, 115VDC, and 115VAC.	*a*. Defective Cable Assembly, Power, Electrical CX-127/AYM-9 *b.* Defective shop power source.	*a*. Refer to next higher category of maintenance. *b.* Refer to next higher category of maintenance.
2	One or more of the following indicator lamps do not light when ON-OFF switch is set to ON -522V'DC, + 50VDC, -80VDC, 115VDC, and and 115VAC	*a*. Defective indicator lamp or lamps *b.* Defective Simulator, Monitor Input SM-627/AYM-9	*a.* Replace indicator lamp or lamps. (para 4-8.) *b*. Refer to next higher category of maintenance.
3.	One or more of the following indicator lamps do not light when ON-OFF switch is set to ON. 6.3VAC, GO, and + 5V	*a.* Defective indicator lamp or lamps. *b.* Defective Simulator, Monitor Input SM-627/AYM-9.	*a*. Press BCD-PRESS TO TEST pushbutton switch If indicator lamp or lamps still do not light, replace. (para 4-8.) *b*. Refer to next higher category of maintenance.
4.	One or more of the BCD + 3 indicator lamps do not light when BCD * 3-PRESS TO TEST pushbutton switch is pressed category of maintenance.	*a.* Defective indicator lamp or lamps. *b.* Defective Simulator, Monitor Input SM-627/AYM-9	*a.* Replace indicator lamp or lamps, (para 4-8.) *b*. Refer to next higher category of
5.	One or more of the DECIMAL indicator lamps do not light hen DECIMAL-PRESS TO TEST pushbutton switch is pressed maintenance	*a.* Defective indicator lamp or lamps *b.* Defective Simulator, Monitor Input SM-627/AYM-9	*a*. Replace indicator lamp or lamps. (para 4-8.) *b*. Refer to next higher category or
6.	One or more of the following indicator lamps do not light when BCD-PRESS TO TEST pushbutton switch is pressed BCD, BATTERY INDICATOR, SINGLE P'ULSE INDICATOR, 6 3SAC, GO, + 5V, and FAILURE	*a.* Defective indicator lamp or lamps. *b.* Defective Simulator Monitor Input SM-67/AYM-9	*a.* Replace indicator lamp or lamps. (para 4-8.) *b*. Refer to next higher category of maintenance.
7.	FAILURE indicator lamp lights at any time other than during BCD--PRESS TO TEST indicator lamp test	Defective Simulator, Monitor Input SM-627/AYM.	Refer to next higher category of maintenance.

d. Replacement. To replace indicator lamps IA3DS22 through IA3DS26 and iA3DS28, proceed as follows:

(1) Insert new lamp by pressing it into the lens cap, base up, up to its rim.

(2) Screw lens cap into lampholder clockwise until secured.

e. Removal To remove indicator lamp lA3DS27, proceed as follows

(1) Unscrew lens cap counterclockwise until free.

(2) Grasp lamp at top and pull lamp straight out until pins in lamp's base are clear of-front panel. Do not turn lamp.

f. Replacement. To replace indicator lamp A3DS27, proceed as follows

(1) Hold new lamp at its top and line up pins in lamp base with pin holes in lampholder.

(2) Insert new lamp through front panel into lampholder. Do not screw or twist lamp.

(3) Press lamp firmly into place.

(4) Screw lens cap into lampholder clockwise until secure.

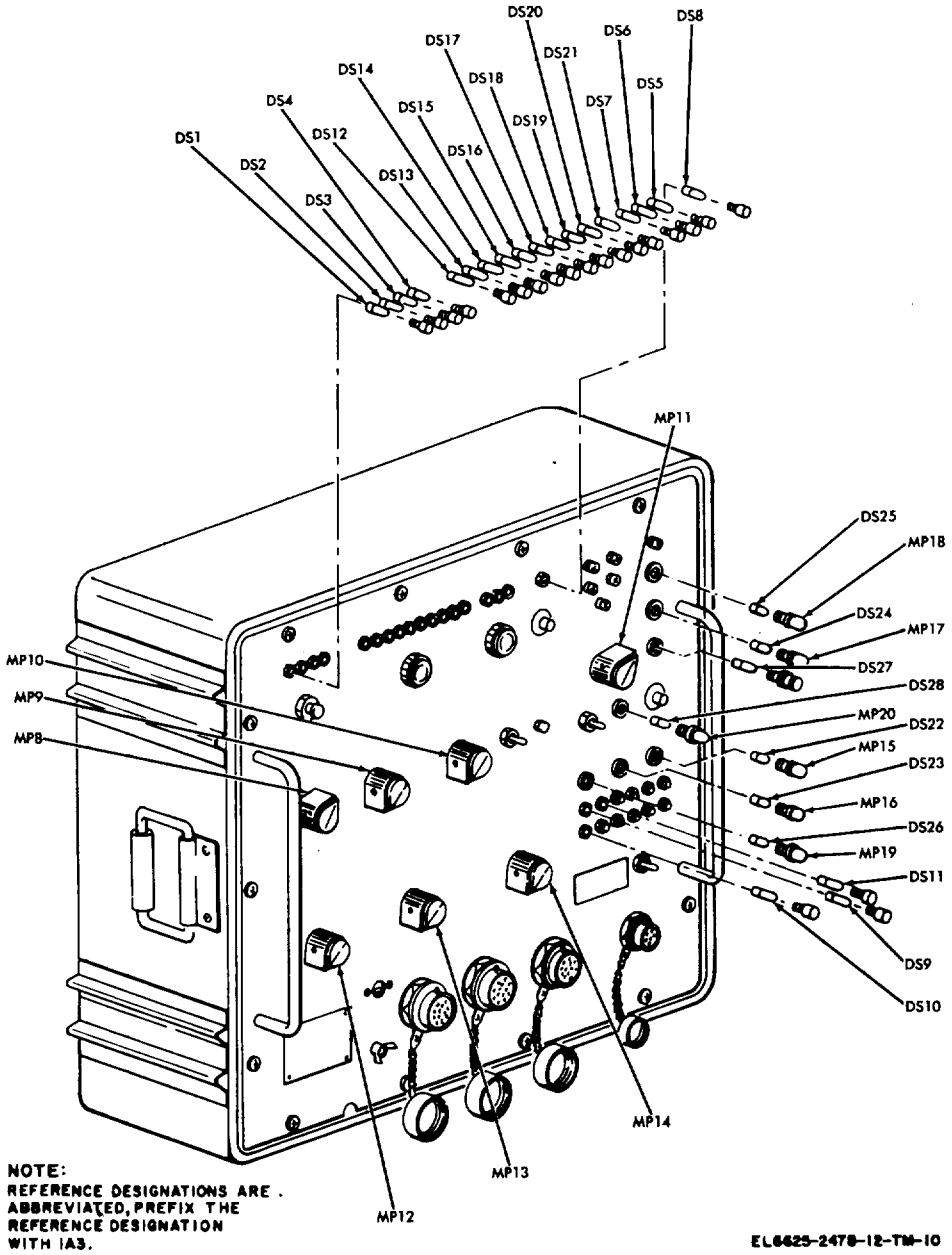


Figure 4-1. Simulator, Monitor Input SM-327/AYM-9, parts location diagram

4-9. Removal and Replacement of Switch Knobs

(fig. 4-1)

a. Removal To remove switch knobs 1A3MP8 through 1A3MP14, proceed as follows:

(1) Note switch position.

(2) Loosen two setscrews.

(3) Grasp switch knot and carefully remove it from the switch shaft

b. Replacement To replace switch knobs lA3MP8 through 1A3MP14, proceed as follows:

(1) Carefully place serviceable switch knob on switch shaft and align it in the same position as the switch knob that was removed.

NOTE

The setscrew opposite the switch knob pointer should be opposite the flat in the switch shaft.

(2) Tighten the two setscrews.

CHAPTER 5
SHIPMENT AND LIMITED STORAGE AND DEMOLITION TO PREVENT ENEMY USE

Section I. SHIPMENT AND STORAGE

5-1. Disassembly
To disassemble Test Set, Control Monitor-Recording Head AN/AYM-9, remove the film pack and clean the rollers (paragraph 3-*8b*); then follow the instructions provided in paragraph 3-9d. The equipment can be repacked for shipment or limited storage after the above procedures are performed.

5-2. Repackaging
Repackaging of equipment for 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. Package the equipment in accordance with the original packaging, insofar as possible, with the available materials.

Section II. DEMOLITION TO PREVENT ENEMY USE

5-3. Authority for Demolition
Demolition of the equipment will be accomplished only upon order of the commander. Use the destruction procedures outlined in paragraph 54 to prevent further use of the equipment.

5-4. Methods of Destruction
The following methods of destruction may be used, as applicable.

a. Smash. Smash all components of Test Set, Control Monitor-Recording Head AN/AYM-. Use sledges, hammers, crowbars, axes, and any other heavy tools available.

b. Cut. Cut all cable assemblies and internal wiring. Use any cutting tool available to accomplish this.

c*. Burn.* Burn as much of Test Set, Control Monitor-Recording Head AN/AYM-9 as is flammable. Use gasoline, kerosene, oil, flame-throwers, and other similar flammable materials. Burn the technical manuals, cables, wiring, and spare parts.

WARNING

Be extremely careful with explosives and incendiary devices to prevent injury or death to personnel. Use this method only when the need is extremely urgent.

d. Explode. Use explosives to complete demolition or to cause maximum damage, before burning, when time does not permit complete demolition by other means. Powder charges, fragmentation grenades, or incendiary grenades may be used. Incendiary grenades usually are most effective.

e. Dispose. Bury or scatter destroyed parts or throw them into nearby waterways. This method is particularly applicable to parts that have not been completely destroyed.

5-5. Reporting
Report the destruction of equipment through command channels as soon as practicable.

APPENDIX A
REFERENCES

The following publications contain information applicable to the operation and maintenan of Test Set, Control Monitor-Recording Head AN/AYM-9:

DA PAM 3104	Index of Technical Manuals, Technical Bulletins, Supply Manuals (Types 4, 6, 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 Prervation Supplies Available for Field Use for Eletronics Command Equipment.
SB 38-100	Preservation, Packaging, Packing and Marking Materials, Supplis, and Equipment Used by te Army.
TB 746-10	Field Instructions for Painting and Presrving Electronics Command Equipment.
TM 11-6625-366-15	Organizational, Direct Support, General Support, and Depot Maintenance Manual for Multimeter TS52B/U.
TM 38.750	The Army Maintenance Management System (TAMMS).
TM 740-90-1	Administrative Storage of Equipment.

APPENDIX B
MAINTENANCE ALLOCATION

Section I. INTRODUCTION

B-1. General

This appendix provides a summary of the maintenance operations covered in the equipment literature. 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.

B-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 or test equipment used in precise 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 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 item.

i. Repair. To restore an item to serviceable condition through correction of a specific failure of 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 in order to minimize timework in process 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 materiel 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. Symbol. The uppercase letter placed in the appropriate column indicates the lowest level at which that particular maintenance function is to be performed.

B-3. Explanation of Format

*a. Column 1, Group Numbe*r. 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 S Maintenance Functions. 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:

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

d. Column 4, Too 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 I.

e. Column 5 Remarks. Self-explanatory.

B-4. Explanation of Format of Table I, Tool and Test Equipment Requirements

The column in Table 1 Tool and Test Equipment Requirements are as follows:

a. Tool and Equipment. The numbers in this column coincide with the numbers used in the tools and equipment column of 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.

SECTION II. MAINTENANCE ALLOCATION CHART
FOR
TEST SET, CONTROL MONITOR-RECORDING HEAD AN/AYM-9

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
00	TEST SET CONTROL MONITOR-	Inspect		0.1				VISUAL	
	RECORDING HEAD AN/AYM-9	Test		0.1				BITE	
		Calibrate					0.5		A
		Replace		0.1					
		Repair		0.3				7	B
		Overhaul					3.0	1 thru 22	
01	SIMULTOR MONITOR INPUT SM-627/AYM-9	Inspect		0.1				VISUAL	
		Test		0.1				BITE	
		Test				0.3		1 thru 10	
		Replace		0.1					
		Repair	0.3					7	B
		Repair				1.0		1 thru 10	
0101	BASE ASSEMBLY, TEST SET	Replace				0.2			
	(1A1)	Repair				1.0		8,9	
0102	COVER TEST SET C-l49/AY9	Replace				0.1			
		Repair				1.0		08,9	
0103	PANEL ASSEMBLY	Test				0.5		1 thru 10	
	(A3)	Align				0.3		8,9	
		Replace				0.2			
		Repair				1.0		1 thru 10	
010301	LOW VOLTAGE REGULATOR ASSEMBLY	Adjust				0.2		8,9	
	(1A3A)	Replace				0.2			
		Repair					2.0	1 thru 10	
010302	LOW VOLTAGE REGULATOR ASSEMBLY	Adjust				0.2		8,9	
	(A33)	Replace				0.2			
		Repair					2.0	1 thru 10	
010303	LOW VOLTAGE REGULATOR ASSEMBLY	Adjust				0.2		8,9	
	(1A3A4)	Replace				0.2			
		Repair					2.0	1 thru 10	
010304	OSCILLATOR BOARD ASSEMBLY	Replace				0.1			
	(1A3A5)	Repair					2.0	1 thru 10	
01030	PULSE GENERATOR BOARD ASSEMBLY	Adjust				0.2		8,9	
	(1A3A6)	Replace				0.1			
		Repair					2.0	1 thru 10	
010306	DEFLECTION AMPLIFIER BOARD ASSEMBLY	Adjust				0.2		8,9	
	1A3A7 (1A3A8)	Replace				0.1			
		Repair					2.0	1 thru 10	
010307	POWER SUPPLY ASSEMBLY	Adjust				0.2		8,9	
	(1A3A9)	Replace				0.1			
		Repair				2.0		2,3	
01030701	COMPONENT BOARD ASSEMBLY	Replace				0.2		8,9	
	(1A3A9A1)	Repair				0.1		2,3	
01030702	COMPONENT BOARD ASSEMBLY	Replace				0.2		8,9	
	(1A3A9A2)	Repair				1.0		2,3	
01030703	COMPONENT BOARD ASSEMBLY	Replace				0.2		8,9	
	(1A3A9A3)	Repair				1.0		2,3	
01030704	COVER ASSEMBLY	Replace				0.2		8,9	
	(1A3A9A4)	Repair				0.5		2,3	
02	CASE, TEST SET CY-7117/AYM-9	Inspect						VISUAL	
		Replace		0.2				8,9	
		Repair				1.0		2,8 thru 22	
0201	BASE ASSEMBLY	Replace				0.2		8,9	
	(2A1)	Repair				0.5		8,9	

SECTION II MAINTENANCE ALLOCATION CHART
FOR
TEST SET, CONTROL MONITOR-RECORDING HEAD AN/AYM-9

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
0202	COVER ASSEMBLY	Replace				0.1		8,9	
	(2A2)	Repair				0.5		8,9	
0203	CAMERA, STILL PICTURE KE-59A	Replace				0.2			
		Repair				2.0		8,9	
020301	TURNABLE ASSEMBLY	Replace				0.3		8,9	
	(2A3A3)	Repair				2.0		8,9	
0204	EXTENDER, CIRCUIT CARD MX-8966/AYM	Replace		0.1					
		Repair				0.5		2,8,9	
0205	CAMERA COVER ASSEMBLY	Replace		0.1				8,9	
		Repair				0.5		8,9	
06	CABLE ASSEMBLIES INCLUDES:	Inspect		0.1				VISUAL	
		Test		0.2				2	
		Replace		0.1					
		Repair				1.0		2,7 thru 22	
	CABLE ASSEMBLY SPECIAL PURPOSE ELECTRICAL, BRANCHED CX-12720/AYM-9 (2W1)								
	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12723/AYM-9 (2W3)								
	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12726/U (2w4)								
	CABLE ASSEMBLY SPECIAL PURPOSE, ELECTRICAL CX-1272T/U (2W5)								
	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12728/U (2w6)								

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS FOR TEST SET, CONTROL MONITOR-RECORDING HEAD AN/AYM-9

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	H,D	OSCILLOSCOPE AN/USM-281C	6625-00-106-9622	
2	O,H,D	MULTIMETER TS-352B/U	6625-00-553-0142	
3	H,D	DIFFERENTIAL VOLTIMETER ME-202/U	6625-00-709-0288	
4	H,D	DIGITAL READOUT, ELECTRONIC COUNTER AN/USM-207	6625-00-911-6368	
5	H,D	VOLTMETE, DIGITAL AN/GSM-6B	6625-00-022-7894	
6	H,D	POWER SUPPLY PP-3940/G	6130-00-953-7500	
7	O,H,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-101/G	5180-00-064-5178	
8	O,A,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-00-610-8lT7	
9	O,H,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-100/G	5180-00-605-0079	
10	H,D	EXTENDER, CIRCUIT CARD MX-8966/AYM	6625-00-233-9198	
11	H,D	WIRE STRIPPER	5110-00-268-4220	
12	H,D	POSITIONER	5120-00-075-2545	M-3191-2
13	H,D	POSITIONER	5120-00-075-2546	MS-3191-1619
14	H,D	CRIMP TOOL	5120-00-786-4933	46223
15	H,D	CRIMP TOOL	5120-00-860-0654	46222
16	H,D	POSTTIONER		4716-2 (89020)
17	H,D	POSITIONER		4561-1 (89020)
18	H,D	POSITIONER		4561-2 (89020)
19	H,D	INSERTER	5120-00-84-2884	386431-7 (00779)
20	H,D	EXTRACTR	5120-00-772-2467	380168-1 (00779)
21	H,D	INSERTE		PCD91-013
22	H,D	EXACTOR		PCD91-021

(Edition of 1 Oct 74 may be used until exhausted)

SECTION IV. REMARKS FOR RADIO SET AN/GRC-240

REFERENCE CODE	REMARKS
A	SEE TB 43-180 CALIBRATION REQUIREMENTS FOR THE MAINTENCE OF ARMY MATERIAL.
B	BY REPLACING LAMPS, KNOBS, CABLE ASSEMBLIES, ETC.

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APPENDIX C
ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. Scope

This appendix lists repair parts required for the performance of organizational maintenance of the AN/AYM-9.

NOTE

No special tools, test, or support equipment is required.

C-2. General

This repair parts list contains a list of repair parts authorized for the performance of maintenance at the organizational level (sec II).

C-3. Explanation of Columns

The following provides an explanation of columns in the tabular list:

a. Source, Maintenance, and Recoverability Codes (SMR), Column 1.

(1) Source cod indicates 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.
P2	Repair parts which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
P9	Assigned to items which are NSA design controlled: unique repair parts, special tools, test, measuring and diagnostic equipment, which are stocked and supplied by the Army COMSEC logistic system, and which are not subject to the provisions of AR 380-41.
P10	Assigned to items which are NSA design controlled: special tools, test, measuring and diagnostic equipment for COMSEC support, which are accountable under the provisions of AR 38041, and which are stocked and supplied by the Army COMSEC logistic system.
M	Repair parts which are not procured or stocked, but are to be manufactured at 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.
X	Parts and assemblies which are not procured or stocked and the mortality of which normally is below that of the applicable end item or component. The failure of such part or assembly should result in retirement of the end item from the supply system.
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 exchange assemblies at DSU and GSU level. These assemblies will not be stocked abc. - DS and GS level or returned to depot supply level.

(2) Maintenance code indicates the lowest category of maintenance authorized to install the listed item. The maintenance level code is:

Code	*Explanation*
0	Organizational maintenance

(3) Recoverability code indicates 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 that are economically repairable at DSU and GSU activities and are normally furnished by supply on an exchange basis.
S	Repair parts and assemblies which are economically repairable 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 repairable, 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 speifically 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 . This column indicates the Federal stock number assigned to the item and will be used for requisitioning purposes. Description, Column . This column indicated the Federal item name and any additional description of the item required. A part number or other reference number is followed by the applicable five-digit Federal supply code for manufacturers in parentheses.

d. Unit of Measure, Column 4. A two-character alphabetic abbreviation indicating-the amount or 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 AN/AYM9.

f. 15.Day Organizational Maintenance Allowance, Columns 6.

(1) The repair parts indicated by an asterisk in the allowance column represent those authorized for use at the organizational category, and will be requisitioned on an "as require" basis until stockage is based on demand in accordance with AR 710-2.

(2) Major Army commanders are authorized to approve reduction in the range of support items authorized for use within their commands. Recommendations for increase in range of items authorized for use will be forwarded to the Commander, US Army Electronics Command, ATTN: AMSEL-MA-S, Fort Monmouth, NJ 07703.

g. Illustrations, Column This column i 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 reference designation used to identify the item in the illustration.

C-4. Location of Repair Parts

a. This appendix does not contain any cross-reference indexes.

b. To locate a repair part, scrutinize the repair parts list until the repair part is located.

C-5. Federal Supply Code for Manufacturers

Code	*Manufacturer*
72619	Dialight Corp
81349	Military Specifications
96906	Military Standards

(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) ILLUS-TRATION (a) FIG NO.	(b) ITEM NO.
	6625-150-1882	TEST SET, CONTROL MONITOR-RECORDING HEAD AN/AYM-9									1-1
G-O-S	6625-233-9202	SIMULATOR, MONITOR INPUT		EA	1					1-1	1
G-O-R	6625-242-3783	COVER, TEST SET CW-1149/AYM-9		EA	1					1-1	1A2
P-O	3240-752-2581	LAMP, INCANDESCENT MS24515-685 (96906)		EA	21	*	*	*	*	4-1	1A3DS1 thru 1A3DS21
P-O	3240-892-4420	LAMP, INCANDESCENT MS25252C7A (96906)		EA	5	*	*	*	*	4-1	1A3DS22, 1A3DS24 thru 1A3DS26, 1A3DS26
P-O	6240-155-7851	LAMP, INCANDESCENT MS25237-326 (96906)		EA	1	*	*	*	*	4-1	1A3DS13
P-O	5355-559-8943	KNOB MS91526-2K2B (96906)		EA	7	*	*	*	*	4-1	1A3MP6 thru 1A3MP14
P-O		LAMP, GLOW 507-3840-0933-60 (72619)		EA	1	*	*	*	*	4-1	1A3DS27
P-O	6210-451-8923	LENS CAP LC26YN2 (81349)		EA	2	*	*	*	*	4-1	1A3MP15, 1A3MP16
P-O	6210-145-8323	LENS CAP LC26RN2 (81349)		EA	3	*	*	*	*	4-1	1A3MP17, 1A3MP18, 1A3MP19
P-O	6210-231-0613	LENS CAP LC27RN2 (81349)		EA	1	*	*	*	*	4-1	1A3MP20
G-O-S	6625-242-3795	CASE, TEST SET CY-7117/AYM-9		EA	1					1-1	2
P-O-R	5995-230-0408	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12726/U (16 in)		EA	1	*	*	*	*	1-1	2W4
P-O-R	5995-230-0409	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12727/U 10in)		EA	1	*	*	*	*	1-1	2W5
P-O-R	5995-431-3542	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12726/U (1ft 4 in)		EA	1	*	*	*	*	1-1	2W6
G-O-S	6720-482-9032	CAMERA, STILL PICTURE KE-59A		EA	1					1-4	2A3
P-O-R	3325-233-9198	EXTENDER, CIRCUIT CARD MX-8966/AYM		EA	1	*	*	*	*	1-1	2A4
P-O-R	6625-186-6149	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12720/AYM-9		EA	1	*	*	*	*	1-1	2W1
P-O-R	5995-181-9866	CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL CX-12725/U (6ft)		EA	1	*	*	*	*	1-1	2W2
P-O-R	5995-451-0437	CABLE ASSEMBLY, POWER, ELECTRICAL CX-12723/AYM-9		EA	1	*	*	*	*	1-1	2W3

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Amy
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

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THE METRIC SYSTEM AND EQUIVALENTS

'NEAR MEASURE

. Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

'VEIGHTS

Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 lb.
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

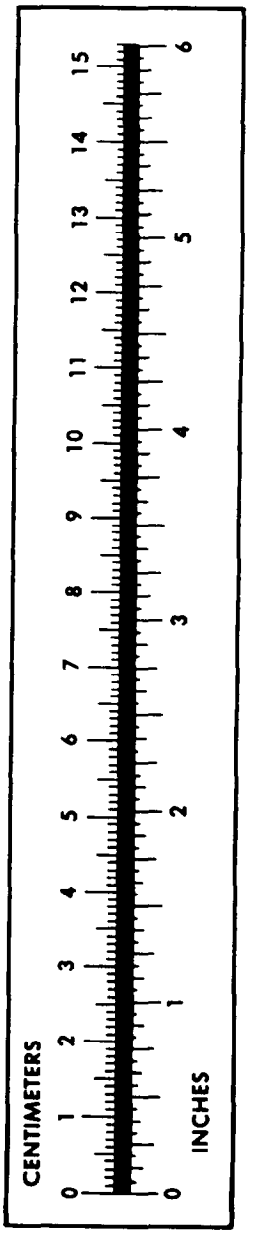
TEMPERATURE

5/9(°F - 32) = °C
212° Fahrenheit is evuivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5C° + 32 =°F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
ıts	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
ers	Gallons	0.264
ms	Ounces	0.035
ograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
lometers per Liter	Miles per Gallon	2.354
meters per Hour	Miles per Hour	0.621



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