

TECHNICAL MANUAL
GENERAL SUPPORT MAINTENANCE
MANUAL TEST SET, RECORDER-FILM
MAGAZINE AN/AAM-32

This copy is a reprint which includes current page from Change 1.

HEADQUARTERS, DEPARTMENT OF THE ARMY

NOVEMBER 1970

**GENERAL SUPPORT MAINTENANCE MANUAL
TEST SET, RECORDER-FILM MAGAZINE AN/AAM-32
(NSN 6625-00-403-1065)**

	<i>Paragraphs</i>	<i>Pages</i>
CHAPTER 1.	INTRODUCTION	
	Scope of Manual.....	1-1 1-1
	Indexes of publications	1-2 1-1
	Reporting of errors	1-3 1-1
	Reporting equipment improvement recommendations (EIR)	1-3.1 1-1
	Reference designations	1-4 1-1
CHAPTER 2	FUNCTIONING OF EQUIPMENT	
SECTION I.	Block diagram discussion	
	Overall function	2-1 2-1
	Block diagram	2-2 2-1
II.	Circuit discussion	
	Equipment interconnection	2-3 2-2
	Circuit functioning	2-4 2-2
III.	Printed circuit board functioning	
	Heatsink 1A1A1	2-5 2-4
	Heatsink 1A1A2	2-6 2-4
	Heatsink 1A1 A3	2-7 2-4
	+ 13-vdc regulator, 1A1A4	2-8 2-4
	+ 6-vdc regulator 1A1A5	2-9 2-5
	Power control, 1A1A6	2-10 2-7
	Sync generator, 1A1A7	2-11 2-7
	Film drive amplifier and bit logic circuit, 1A1A8	2-12 2-9
	V/h generator and hot target marker, 1A1A9	2-13 2-9
	Rectifier filter, 1A1A10A10	2-14 2-12
	Video oscillator and film fail amplifier, 1A1A11	2-15 2-12
	Filter assembly , 1A1A12	2-16 2-12
IV.	Integrated circuits	
	Decade counter SN5490J	2-17 2-14
	Operational amplifier SN52709L	2-18 2-14
	Operational amplifier SN52710 and 52710L.....	2-19 2-14
	Positive nand gate SN5400	2-20 2-16
	Dual J-K master-slave flip-flop SN573J	2-21 2-16
CHAPTER 3	GENERAL SUPPORT MAINTENANCE	
SECTION I.	General	
	Level of maintenance	3-1 3-1
	Maintenance forms and records	3-2 3-1
	Tools and test equipment	3-3 3-1
II.	Troubleshooting	
	General troubleshooting instructions	3-4 3-2
	Organization of troubleshooting	3-5 3-2
	Interunit troubleshooting	3-6 3-17
III.	Removal and replacement	
	Removal	3-7 3-27

	<i>Paragraphs</i>	<i>Pages</i>
	Replacement	3-8 3-27
IV.	Adjustment and alignment.....	
	Adjustment procedures	3-9 3-31
	Alignment	3-10 3-31
V.	Repair	
	Parts replacement techniques	3-11 3-32
	Parts substitution	3-12 3-32
VI.	General support test procedures	
	Purpose and instructions	3-13 3-32
	Test equipment required for testing	3-14 3-33
	Test procedure	3-15 3-33
APPENDIX	REFERENCES	A-1

LIST OF TABLES

<i>Table</i>	<i>Title</i>	<i>Page</i>
3-1	Test equipment	3-1
3-2	Voltage measurements	3-12
3-3	Resistance measurements.....	3-14
3-4	Continuity measurements	3-17

LIST OF CHARTS

<i>Table</i>	<i>Title</i>	<i>Page</i>
3-1	Oscilloscope AN/USM 281A control settings	3-1
3-2	Troubleshooting procedure.....	3-4
3-3	General support test procedure.....	3-34

LIST OF ILLUSTRATIONS

<i>Figure</i>	<i>Title</i>	<i>Page</i>
2-1	Interconnecting diagram.....	2-3
2-2	Heatsink 1A1A1, 1A1A2, or 1A1A3, schematic diagram.....	2-5
2-3	+ 13-vdc regulator 1A1A4, schematic diagram.....	2-6
2-4	+ -vdc regulator 1A1A5, schematic diagram	2-8
2-5	Sync generator 1A1A7, schematic diagram	2-10
2-6	Film drive amplifier and bit logic circuit 1A1A8, schematic diagram .	2-11
2-7	V/h generator and hot target marker 1A1A9, schematic diagram	2-13
2-8	Filter assembly 1A1A12, schematic diagram	2-14
2-9	Decade counter SN5490J, schematic diagram and truth tables	2-15
3-1(1)	Waveforms (part 1 of 2)	3-3
3-1(2)	Waveforms (part 2 of 2)	3-4
3-2(1)	Control unit 1A, arts location (part 2 of.....)	3-28
3-2(2)	Control unit 1A1, parts location (part I of 2)	3-29
3-3	Filter assembly 1A1A12, parts location	3-30
3-4	Test setup for DVM and oscilloscope	3-32
FO-1	Color code for military standard resistors, inductors, and capacitors .	FO-1
FO-2	Block diagram.....	FO-2
FO-3(1)	Overall schematic diagram (part 1 of 3)	FO-3
FO-3(2)	Overall schematic diagram (part 2 of 3).....	FO-4
FO-3(3)	Overall schematic diagram (part 3 of 3).....	FO-5
FO-4	Power control 1A1A6 schematic diagram	FO-6
FO-5	Rectifier filter 1A1A10, schematic diagram	FO-7
FO-6	Video oscillator and film fail amplifier 1A1A1 1, schematic diagram .	FO-8
FO-7(1)	Cable assemblies W1 through W11 (part 1 of 2)	FO-9
FO-7(2)	Cable assemblies W1 through W11 (part 2 of 2)	FO-10
FO-8(1)	Wiring diagram (part 1 of 6)	FO-11
FO-8(2)	Wiring diagram (part 2 of 6)	FO-12
FO-8(3)	Wiring diagram (part 3 of 6)	FO-13
FO-8(4)	Wiring diagram (part 4 of 6)	FO-14
FO-8(5)	Wiring diagram (part 5 of 6)	FO-15
FO-8(6)	Wiring diagram (part 6 of 6)	FO-16

CHAPTER 1

INTRODUCTION

1-1. Scope of Manual

a. This manual contains functioning of equipment and general support maintenance for Test Set, Recorder-Film Magazine AN/AAM-32 (recorder test set.) General support maintenance includes troubleshooting, removal and replacement, adjustment and alignment, repair and general support testing.

b. Operator and organizational maintenance procedures are contained in TM 11-6625-1827-40.

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.

NOTE

Applicable forms and records are covered in TM 11-6625-1828-12.

1-3. Reporting of Errors

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

1-3.1. 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 direct to Commander, US Army Electronics Command, ATTN: DRSEL-MA Q, Fort Monmouth, NJ 07703. A reply will be furnished direct to you.

1-4. Reference Designations

Reference designations for major components of the receiver test set are listed in TM 11-6625-1827 12.