

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

MAINTENANCE KIT, ELECTRONIC EQUIPMENT

MK-733/ARC-54

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DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

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	Paragraph	Page
CHAPTER 1. INTRODUCTION		
Section I. General	1-1--1-4	1-1
II. Block diagram functioning	1-5--1-8	1-1
III. Stage analysis	1-9--1-16	1-8
CHAPTER 2. DIRECT SUPPORT MAINTENANCE		
Section I. General	2-1,2-2	2-1
II. Direct support troubleshooting	2-3--2-5	2-1
III. Repair and replacement	2-6--2-17	2-12
IV. Adjustments	2-18--2-21	2-18
V. Inspection and service	2-22--2-24	2-20
CHAPTER 3. GENERAL SUPPORT MAINTENANCE		
Section I. Scope of general support maintenance	3-1,3-2	3-1
II. General support troubleshooting	3-3--3-5	3-1
III. Repairs and replacement	3-6--3-12	3-2
IV. Adjustment	3-13--3-15	3-8
APPENDIX A. REFERENCES	-----	A-1
INDEX _ _	-----	Index 1

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LIST OF ILLUSTRATIONS

<i>Figure</i>	<i>Title</i>	<i>Page</i>
1-1	Blower and inverter, simplified schematic diagram _ _ _ _ _	1-9
1-2	Frequency selector circuit, simplified schematic diagram _ _ _ _ _	1-10
1-3	Simplified four-wire reentrant switch and drive motor circuit _ _ _ _ _	1-11
1-4	Simplified .05 megahertz selector switch and typical drive circuit _ _ _ _ _	1-11
1-5	Frequency readout counter, simplified schematic diagram _ _ _ _ _	1-15
1-6	Audio Amplifier A1 (located in TS-1967/ARC-54), simplified schematic diagram _ _ _ _ _	1-16
1-7	Rf power-measuring circuit, simplified schematic diagram _ _ _ _ _	1-18
1-8	Homer signal simulator, simplified schematic diagram _ _ _ _ _	1-18
2-1	Test Set, Radio TS-1967/ARC-54, front panel view, parts location _ _ _ _ _	2-3
2-2	Test Set, Radio TS-1967/ARC-54, inside left view, parts location _ _ _ _ _	2-4
2-3	Test Set, Radio TS-1967/ARC-54, inside top view, parts location _ _ _ _ _	2-5
2-4	Test Set, Radio TS-1967/ARC-54, inside bottom view, parts location _ _ _ _ _	2-6
2-5	Blower inverter assembly parts location _ _ _ _ _	2-7
2-6	Audio Amplifier A1, parts location _ _ _ _ _	2-8
2-7	Simulator-Test Set SM-349/ARC-54, front panel view, parts location _ _ _ _ _	2-9
2-8	Simulator-Test Set SM-349/ARC-54, inside view, parts location _ _ _ _ _	2-10
2-9	Motor Control Unit A2, parts location _ _ _ _ _	2-11
2-19	Audio Amplifier A-1 rear view, cover removed (located in TS-1967/ARC-54) _ _ _ _ _	2-14
2-11	Audio Amplifier and motor control unit A2 top view, cover removed (located in SM-349/ARC-54) _ _ _ _ _	2-15
2-12①	Test Set, Radio TS-1967/ARC-54, chassis assembly, left side, (as viewed from front panel) _ _ _ _ _	2-16
2-12②	Test Set, Radio TS-1967/ARC-54, chassis assembly, right side, (as viewed from front panel) _ _ _ _ _	2-18
2-13	Adjustment of Audio Amplifier A1, bench test setup _ _ _ _ _	2-21
2-14	Cable assembly, special purpose, electrical CX-9070/ARC-54, schematic diagram _ _ _ _ _	2-23
2-15	Cable assembly, special purpose, electrical CX-9071/ARC-54, schematic diagram _ _ _ _ _	2-24
2-16	Cable assembly, special purpose, electrical CX-9072/ARC-54, schematic diagram _ _ _ _ _	2-25
2-17	Cable assembly, power, electrical CX-11136/ARC-54, schematic diagram _ _ _ _ _	2-26
2-18	Extender, Module MX4930/ARC-54, schematic diagram _ _ _ _ _	2-26
2-19	Extender, Module MX4931/ARC-54, schematic diagram _ _ _ _ _	2-27
2-20	Extender, Module MX4932/ARC-54, schematic diagram _ _ _ _ _	2-28
2-21	Extender, Module MXA933/ARC-54, schematic diagram _ _ _ _ _	2-29
2-22	Extender, Module MX4934/ARC-54, schematic diagram _ _ _ _ _	2-30
3-1	Major components, TS-1967/ARC-54, top view, cover removed _ _ _ _ _	3-4
3-2	Frequency counter assembly, exploded view _ _ _ _ _	3-7
3-3	Rf power meter adjustment bench test setup _ _ _ _ _	3-9
FO-1	Color code marking for MIL-STD capacitors, resistors and coils _ _ _ _ _	Fold-In
FO-2	SM-349/ARC-54 connected to aircraft, simplified schematic diagram _ _ _ _ _	Fold-In
FO-3	TS-1967/ARC-54 connected to Antenna Coupler CU-942/ARC-54 (CU-943/ARC-54), schematic diagram _ _ _ _ _	Fold-In
FO-4	TS-1967/ARC-54 and SM-349/ARC-54 connected to Control, Radio Set C4835/ARC-54, simplified schematic diagram _ _ _ _ _	Fold-In
FO-5	TS-1967/ARC-54 connected to Receiver-Transmitter, Radio RT-348/ARC-54, simplified schematic diagram _ _ _ _ _	Fold-In
FO-6	Power distribution, schematic diagram _ _ _ _ _	Fold-In

LIST OF TABLES

<i>Number</i>	<i>Title</i>	<i>Page</i>
1-1	0.05 Megahertz Coding -----	1-12
1-2	Whole Megahertz Coding -----	1-12
2-1	Test Equipment Required for Direct Support Maintenance -----	2-1
2-2	Voltage and Resistance Measurements for Audio Amplifier A1 (part of TS-1967/ARC-54) -----	2-11
2-3	Voltage and Resistance Measurements for Audio Amplifier A1 (part of SM-349/ARC-54) -----	2-12
2-4	Test Equipment for Direct Support Adjustments -----	2-19
2-5	Items Requiring Direct Support Inspection -----	2-21
3-1	Test Equipment Required for General Support Maintenance -----	3-1
3-2	Voltage and Resistance Measurements for Blower Inverter (part of TS- 1967/ARC-54) -----	3-2
3-3	Test Equipment Required for Adjustment -----	3-4

CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Scope and Indexes of Publications

a. Scope. This manual contains instructions covering direct support and general support maintenance for Maintenance Kit, Electronic Equipment MK-733/ARC-54. It includes instructions for troubleshooting, testing, aligning and repairing the equipment. It also lists tools, materials, and test equipment to perform the maintenance of the equipment. Operation and organizational maintenance are covered in TM 11-6625-501-12.

b. Indexes of Publications.

(1) *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.

(2) *DA Pam 310-7.* Refer to the latest issue of DA Pam 310-7 to determine whether there are modification work orders (MWO's) pertaining to the equipment.

1-2. Maintenance Records and Reporting of Equipment Publication Improvements

a. Maintenance Records. Department of the Army forms and procedures used for equipment

maintenance shall be those prescribed in TM 38-750.

b. Reporting of Equipment Publication Improvements. 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 forwarded direct to Commander U.S. Army Electronics Command, ATTN: AMSEL-MA-AC, Form Monmouth, N.J. 07703.

NOTE

For other applicable forms and records see paragraph 1-3, TM 11-6625-601-12.

1-3. Administrative Storage

For procedures, forms and records, and inspection required during administrative storage of this equipment, refer to TM 790-90-1.

1-4. Destruction of Army Materiel To Prevent Enemy Use

Refer to TM 750-244-2 for methods of destruction of materiel to prevent enemy use.

Section II. BLOCK DIAGRAM FUNCTIONING

1-5. Signal Path of Simulator-Test Set SM-349/ARC-54 Connected to Radio Set AN/ARC-54 System in Aircraft (fig. FO-2)

The simulator contains circuits that give visual indication of the operation of functions normally applied to Receiver-Transmitter, Radio RT-348/ARC-54. Also included in the simulator are circuits that simulate the homer signals and retransmit grounds. When the simulator is substituted in the place of the RT-348/ARC-54 in the aircraft, operation of the AN/ARC-54 system is checked by the use of visual indications. The functions that the simulator checks include frequency selection, squelch control, homing operation, and transmit operation.

a. Power Distribution. Operating voltage of +27.5 volts direct current (dc) for the simulator is obtained from Control, Radio Set C-3835/ARC-54. The regulated +27.5 volts dc is applied to the C-3835/ARC-54 on pin C of J101. The voltage is applied to the SM-349/ARC-54 through pin e of jack J101 and pin 18 of plug P4 to POWER switch S2. Setting switch S2 to LOAD connects resistors R2 and R3 across the power input line. This simulates the load of the RT-348/ARC-54. Setting switch S2 to ON applies +27.5 volts dc to a voltage regulator composed of resistor R1 and Zener diode CR1. The regulated +27.5 volts dc from the voltage regulator is applied to COAX CONT LEFT lamp DS9, COAX CONT RIGHT lamp DS10,