TM 11-5821-277-20

TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE MANUAL

RADIO SETS AN/ARC-134, AN/ARC-134A, and AN/ARC-134B

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

HEADQUARTERS, DEPARTMENT OF THE ARMY
AUGUST 1969

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WASHINGTON, D.C., 5 *August* 1969

Organizational Maintenance Manual
RADIO SETS AN/ARC-134, AN/ARC-134A, AND AN/ARC-134B

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"This manual supersedes so much of TM 11-5821-277-25-1, 23 September 1986, Including changes, and so much of TM 11-5821-277-25-2, 7 July 1966, Including changes, as pertains to organizational maintenance.

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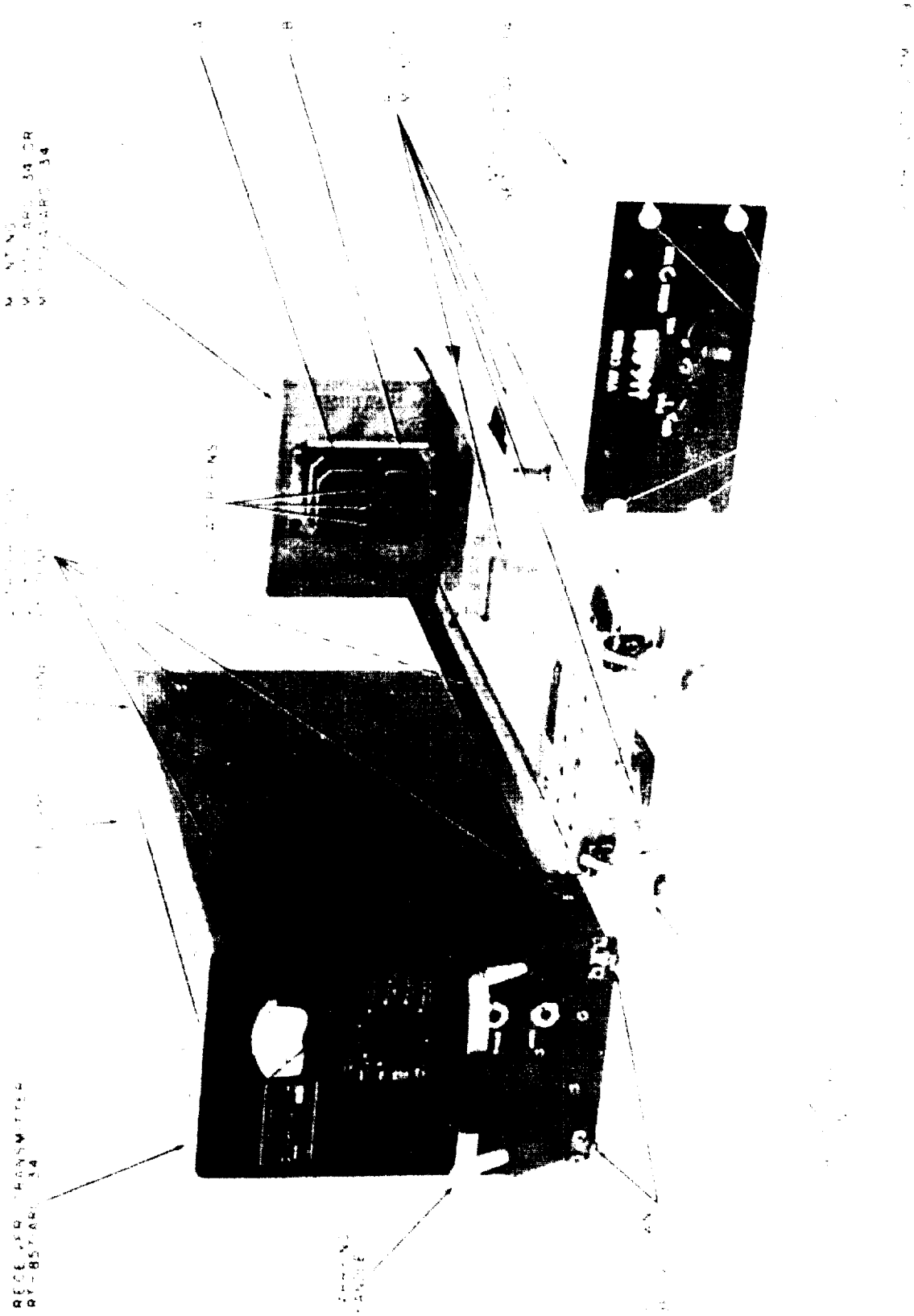

Figure 1-1. Radio Sets AN/ARC-134 and AN/ARC-134A.

Figure 1-1. Radio Set AN/ARC-134B.

CHAPTER 1
INTRODUCTION

Section 1. GENERAL

1-1. scope

a. This manual describes Radio Set AN/ARC-134(A, B) (fig. 1-1) and includes instructions for installation and operation. The manual also covers organizational maintenance, troubleshooting, cleaning and inspection of the equipment, and replacement of parts available to the organizational maintenance repairman.

b. Nomenclature references in this manual followed by an (*) indicate that all models of equipment are specified, For example, Radio Set AN/ARC-134(*) represents Radio Set AN/ARC-134, AN/ARC-134A, and AN/ARC-134B, Mounting MT-3791(*)/ARC-134 represents Mounting MT-3791/ARC-134, MT-3791A/ARC-134, MT-3791B/ARC-134, and MT-3791OARC-134.

c. The maintenance allocation chart appears in appendix B.

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 31O-T,* Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO'S) pertaining to the equipment .

1-3. Maintenance 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. ***Discrepant in*** *Shipment Report (DISREP) (SF* **361).** Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33/AFM 75-18/MCO P461O.19A, and DSAR 4500.15.

1-3.1 Reporting of Equipment Pubication improvements

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

1-3.2 Destruction of Materiel to Prevent Enemy Use

For information on this subject, refer to TM 750-244-2

1-3.3 Administrative Storage

For procedures, forms and records, and inspection required during administrative storage of this equipment, refer to TM 740-91.

1-4. Use of Term Hertz

The National Bureau of Standards has officially adopted the term Hertz (Hz) to replace cycles per second (cps). This technical manual uses the term Hz in lieu of cps. The table below provides common equivalents.

Unit quantity	Old term	Old abbrev	New term	New abbrev
Frequency	Cycles per second	cps	Hertz	Hz
10^3 cycles per second	Kilocycles per second	kc	Kilohertz	kHz
10^6 cycles per second	Megacycles per second	mc	Megohertz	MHz
10^9 cycles per second	Gigacycles per second	gc	Gigohertz	GHz

Section II. DESCRIPTION AND DATA

1-5. Purpose and **Use**

a. *Purpose,* Radio Set AN/ARC–134(*) werates in the very high frequency (vhf) range, 116.000 through 149.975 MHz, and uses amplitude modulation (am.) to provide receive and transmit voice communications between aircraft, and between aircraft and fixed or mobile ground radio stations. Radio Set AN/ARC-134 (*) has the design capability to be tuned to any one of 1,360 channels spaced at 25-kHz intervals throughout its operating frequency range; however, filters supplied with the AN/ARC–134(*) limit channel spacing to 50 kHz and permit the AN/ARC-134(*) to be tuned to only 680 selectable channels Alternate filters can be installed which provide a bandpass of 20 kHz for 25-kHz channel spacing, providing the 1,360 channel tuning capability When used with auxiliary equipment, Radio Set AN/ARC-134(*) receives and transmits communication signals for an Air Traffic control Signaling System (ATCSS).

b. Use. Radio Set AN/ARC-134(*) is normally installed in an aircraft and used by crewmembers to establish voice communication with crewmembers of other aircraft and personnel in fixed or mobile ground radio stations, Mounting MT-3791(*)/ARC-l34 and Receiver-Transmitter RT–857/ARC–134 are located in the electronics bay of the aircraft. Control, Radio Set C-7197/ARC-134 is on the pilot's or copilot's instrument panel to facilitate tuning b the desired frequency. Figure 1–2 is a typical block diagram of Radio Set AN/ARC–134(*) installed in an aircraft. Additional equipment (para-10) is necessary to permit Radio Set AN/ARC-134(*) to perform its desired function. A vhf antenna must be provided on the aircraft to permit reception and transmission. Headset H1O1A/U, or equivalent, must be available to provide the operator monitoring capability for audio signals received by Receiver-Transmitter RT-857/ARC 134. The headset is normally wired through aircraft wiring to Control, **Intercommunication Set C-1611(D)/AIC,** or equivalent. External push-to-talk switching is also wired through aircraft wiring to the C–1611D/AIC which is wired to Receiver-Transmitter RT-857/ARC-134. When the operator presses the push-to-talk switch and speaks into the microphone, the transmit function of Receiver-Transmitter RT-857/ARG 134 is enabled and the desired signal is transmitted. When the push-to-t.alk switch is not pressed, Receiver-Transmitter RT-857/ARC-194 is in the receive mode. Detected audio signals are routed through the C–1611D/AIC to the operator's headset.

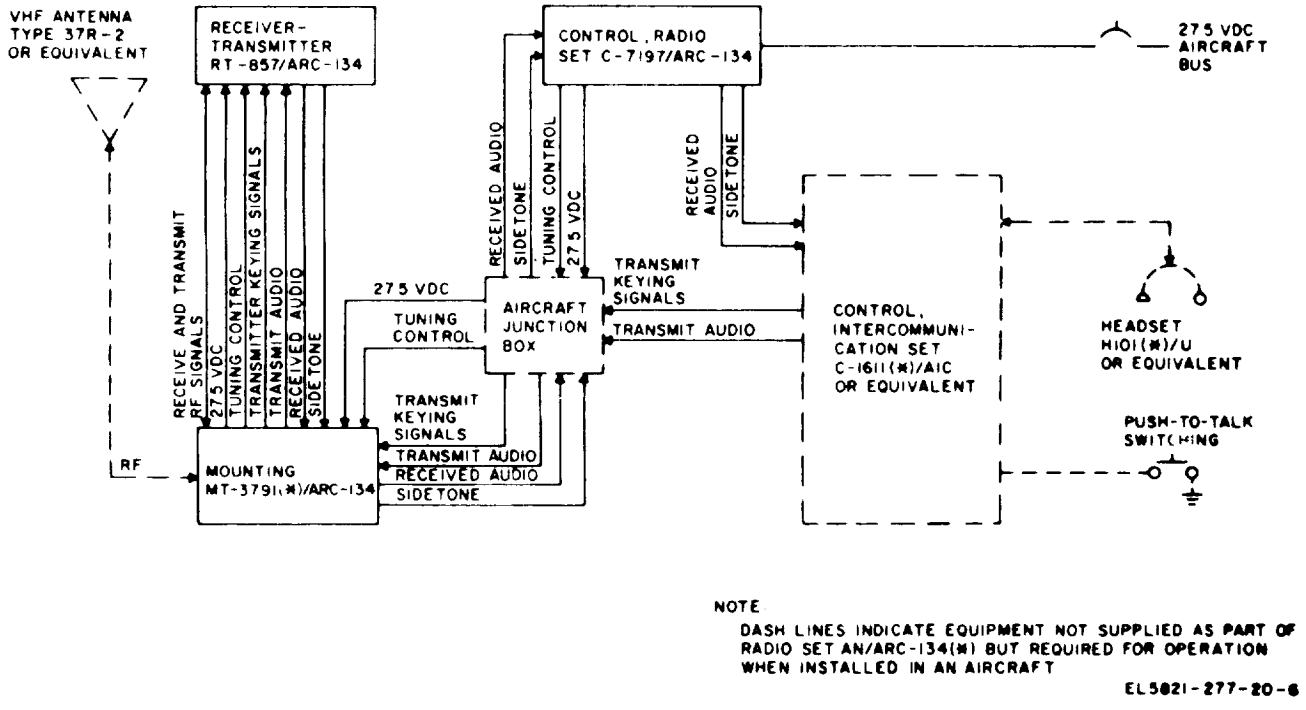

Figure 1-2. Typical operational block diagram.