

TM 11-5821-248-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR AND ORGANIZATIONAL
MAINTENANCE MANUAL
RADIO SET AN/ARC-102

Headquarters Department of the Army Washington 25 D.C.

27 November 1963

WARNING

Be careful when working on the power connections. Serious injury or death may result from contact with these terminals.

DON'T TAKE CHANCES!

EXTREMELY DANGEROUS VOLTAGES EXIST IN THE FOLLOWING COMPONENT OF RADIO SET AN/ARC-102:

RECEIVER-TRANSMITTER, RADIO RT-698/ARC-102 1,500 volts

DANGEROUS VOLTAGES EXIST AT THE ANTENNA TERMINALS

Be careful when working around the antenna or the antenna terminals. Radiofrequency high voltages exist at these points.

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Figure 1. Radio Set AN/ARC-102.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

This manual describes Radio Set AN/ARC-102 (fig. 1) and covers its operation and second echelon maintenance. It includes operation, cleaning and inspection of the equipment, and replacement of parts available to second echelon maintenance.

2. Index of Publications

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. Department of the Army Pamphlet No. 310-4 is an index of current technical manuals, technical bulletins, supply manuals, supply bulletins, lubrication orders, and modification work orders which are available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc) and the latest changes to and revisions of each equipment publication.

3. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment Use equipment forms

and records in accordance with instructions in TM 38-750.

b. Report of Damaged or Improper Shipment. Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), NAVSANDA Publication No. 378 (Navy), and AFR 71-4 (Air Force).

c. Reporting of Equipment Manual Improvements. The direct reporting, by the individual user, of errors, omissions, and recommendations for improving this equipment manual is authorized and encouraged. DA Form 2028 will be used for reporting these improvement recommendations. This form may be completed by the use of pencil, pen, or typewriter. DA Form 2028 will be completed in triplicate and forwarded by the individual using the manual. The original and one copy will be forwarded direct to: Commanding Officer, U. S. Army Electronics Materiel Support Agency, ATTN: SE LMS-MP, Fort Monmouth, New Jersey 07703. One information copy will be furnished to the individual's immediate supervisor (officer, noncommissioned officer, supervisor, etc).

Section II. DESCRIPTION AND DATA

4. Purpose and Use (fig. 1)

a. Purpose. Radio Set AN/ARC-102 is a lightweight airborne radio set. It provides transmission and reception of amplitude-modulated (am.), single-sideband (ssb), and continuous-wave (cw) signals within the high frequency (hf) range of 2.000 to 29.999 megacycles (mc) on any of its 28,000 channels.

b. Use. Radio Set AN/ARC-102 is used in aircraft for air-to-air and air-to-

ground two-way communications. The operating range of Radio Set AN/ARC-102 varies according to the terrain, atmospheric conditions, and the altitude of the aircraft.

5. Technical Characteristics

a. General.

Frequency range . . . 2.000 to 29.000
mc.

Frequency channels . 28,000 at 1-kilo-
cycle intervals