

CHAPTER INTRODUCTION

PRC-25

Section I. GENERAL

1. Scope

a. This manual describes Radio Set AN/PRC-25 and covers its installation, operation, and operator's maintenance. It includes instructions for cleaning, checking, and inspecting the equipment and replacing the battery.

b. The maintenance allocation chart (MAC) will appear in TM 11-5820-398-20.

2. Forms and Records

a. *Reports of Unsatisfactory Equipments.* Fill out DA Form 2407 (Maintenance Request) in accordance with instructions in TM 38-750 and forward it to: Commanding Officer, U. S. Army Electronics Materiel Support Agency, ATTN: SELMS-PIE, Fort Monmouth, New Jersey. The form should be filled out and forwarded to report:

- (1) Receipt of defective equipment (use DD Form 6 (c below) if defect is due to damaged or improper shipment).
- (2) Equipment deficiencies (deadlined equipments).
- (3) Equipment shortcomings (operable but at less than rated capacity or efficiency).
- (4) Equipment improvement suggestions and recommendations.

b. *Reports of Equipment Maintenance.* Fill out DA Form 2408-3-1 (Equipment Maintenance Record (Organizational)) in accordance with instructions in TM 38-750 and forward it to: Commanding Officer, U. S. Army Electronics Materiel Support Agency, ATTN: SELMS-PIE, Fort Monmouth, New Jersey.

c. *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 Publications 378, and AFR 71-4 (Air Force).

d. *Comments on Manual.* Forward all other comments on this publication direct to: Commanding Officer, U. S. Army Electronics Materiel Support Agency, ATTN: SELMS-MP, Fort Monmouth, New Jersey. (DA Form 1598 (Record of Comments on Publications), DA Form 2028 (Recommended Changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9), DD Form 96 (Disposition Form), or letter may be used.)

3. Index of Equipment Publications

Refer to DA Pamphlet 310-4 to determine what Changes to or revisions of this publication are current.

Section II. DESCRIPTION AND DATA

4. Purpose and Use (fig. 1)

a. Radio Set AN/PRC-25 is a short-range, man-pack portable, frequency-modulated (fm) receiver-transmitter used to provide two-way voice communication.

b. Receiver-Transmitter, Radio RT-505/PRC-25, part of the AN/PRC-25, is also used as part of Radio Sets AN/GRC-

125 and AN/VRC-53 in vehicular installations (TM 11-5820-498-10).

c. The AN/PRC-25 has a frequency range identical to and can communicate with Radio Sets AN/VRC-12 and AN/VRC-43 through AN/VRC-49 (TM 11-5820-401-10).

d. When used at a fixed location, the AN/PRC-25 can be remotely controlled

with Radio Set Control Group AN/GRA-39 (para 31). The operating range of the AN/PRC-25 can be extended by use of a fixed, elevated ground-plane antenna (para 30).

5. Technical Characteristics

Frequency range:

Low band 30.00 to 52.95 mc.

High band 53.00 to 75.95 mc.

Number of channels 920.

Channel spacing . . . 50 kc.

Types of transmission and reception Voice.

Type of modulation Frequency.

Transmitter output power 1.5 to 2.0 watts.

Type of squelch . . . Tone operated.

Distance range . . . 5 miles (8 kilometers).¹

Types of antennas:

Short antenna . . . Antenna AT-892/PRC-25; 3 feet long, semirigid steel tape.

Long antenna . . . Antenna AT-271A/PRC; 10 feet long, multisection whip.

Power source Battery, Dry BA-386/PRC-25.

Battery life 20 hours (with a 9 to 1 receive-transmit ratio).

6. Components

The components of the AN/PRC-25 are listed in the basic issue items list (appx. II). The components are illustrated in figure 2. Dimensions and weights of the components are given in paragraph 11b.

7. General Description

(fig. 2)

Radio Set AN/PRC-25 consists of Receiver-Transmitter, Radio RT-505/PRC-25 and minor components. Figure 4 shows the RT-505/PRC-25 disassembled.

¹The value is approximate; the range will vary with the type of antenna used, the terrain, and atmospheric conditions.

8. Receiver-Transmitter, Radio RT-505/PRC-25 (fig. 2)

The RT-505/PRC-25 consists of the receiver-transmitter, the receiver-transmitter case, and Battery Box CY-2652/PRC-25.

a. The receiver-transmitter is held in the receiver-transmitter case by four captive screws (fig. 4). The CY-2652/PRC-25 is attached to the receiver-transmitter case by two clamps. The complete RT-505/PRC-25, when assembled, is water tight. All controls are located on the front panel. A battery plug projects from the receiver-transmitter and mates with the connector of the BA-386/PRC-25.

b. The CY-2562/PRC-25 is a light weight, metal case that protects and houses the BA-386/PRC-25. The BA-386/PRC-25 sits on a foam rubber pad which is fastened to the bottom of the CY-2562/PRC-25.

9. Minor Components (fig. 2)

a. *Antenna AT-892/PRC-25.* The AT-892/PRC-25 is a one-section, 3-foot-long, whip antenna. A spring at its base allows for positioning of the antenna to keep it in a vertical position regardless of the position of the RT-505/PRC-25. This antenna is used for general short-range service. Because of its steel tape construction, it can be folded into a small space.

b. *Antenna AT-271A/PRC.* The AT-271A/PRC is composed of six sections; each section fits into the end of a wider section. A stainless-steel, plastic-covered cable (or braided plastic cord), under spring tension, is threaded through the sections to keep them together in the operating condition. When the sections are folded, the cable keeps them together as a group, to prevent the loss of individual sections. Spring tension is provided by a spiral spring in the base section. This antenna is used when maximum range is required.

c. *Support, Antenna AB-591/PRC-25.* The AB-591/PRC-25, which is of rigid tubular construction, is used as a main support of the AT-271A/PRC.