

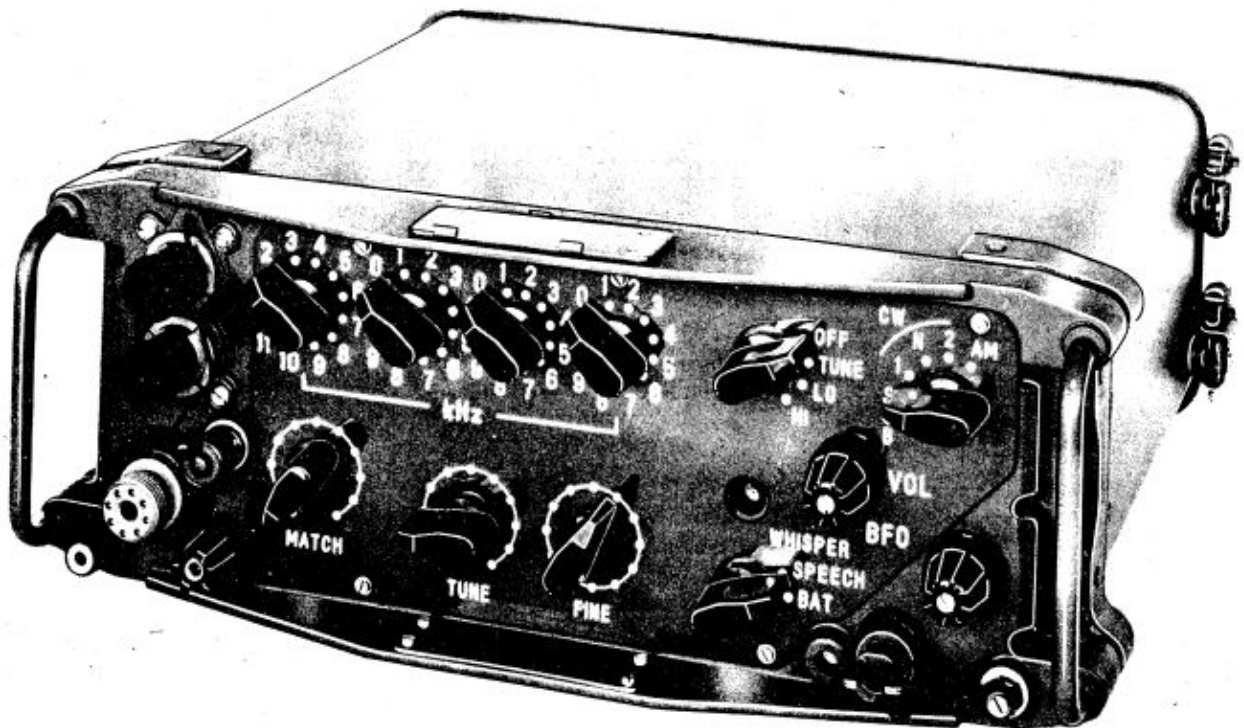
RECEIVER-TRANSMITTER, RADIO RT-F1/PRC

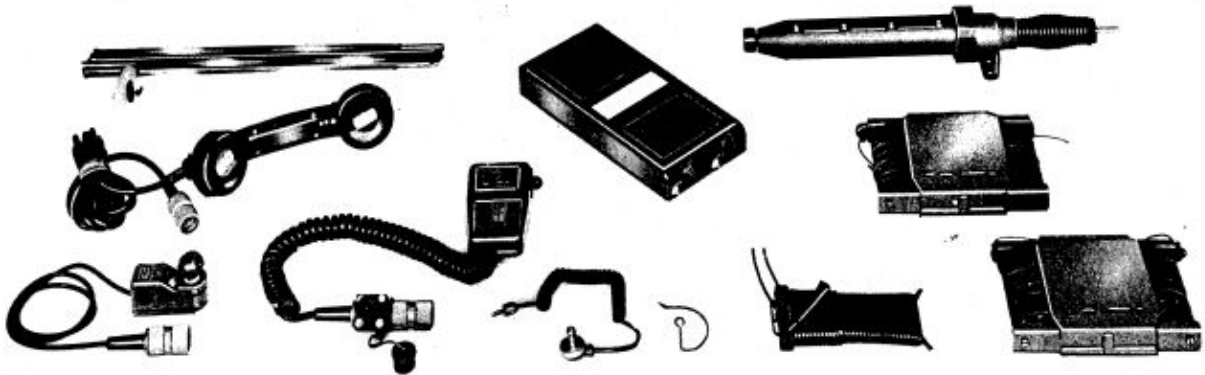
USED WITH RADIO SETS PRC-F1, GRC-F2

DATA SUMMARY

1. The Receiver-Transmitter, Radio RT-F1/PRC is a compact, lightweight receiver-transmitter, providing radio communication over the frequency range of 2 to 11.999 MHz on CW, SSB or AM. It is suitable for use in any of three roles:
 - a. Manpack (Radio Set PRC-F1)
 - b. Ground Station (Radio Set GRC-F2)
 - c. Vehicular Station, in conjunction with Installation Kit, Radio Set GRC-F2 in Vehicles.
2. The Radio Set PRC-F1 includes the receiver-transmitter unit complete with internal battery and the following operational accessories:- rod antenna and tuning inductor, dipole antenna and feeder, key, handset and the additional alternative single earpiece receiver and hand microphone/pressel.
3. The RT unit is housed in a magnesium alloy case. It is panclimatically sealed and capable of operating over a temperature range of -21°C to $+71^{\circ}\text{C}$ and under extreme conditions of humidity, shock and vibration.
4. **Dimensions:** Height 4 $\frac{3}{4}$ ins Width 13 ins Depth 12 ins.
Weight: 20 pounds (complete manpack station).
5. **Transit Data**

The complete equipment is packed for storage and transport in Case Assembly, Transit, CY-F1 which, with the lid on, is sealed against the ingress of moisture and dust.
6. **Assigned Frequency:** 2000 to 11,999 kHz. Set to any multiple of 1 kHz in the range using direct reading switches.





7. Modes of Operation

- SSB: Upper sideband only.
- CW1: Equivalent to 2 kHz tone telegraphy over SSB channel.
- CWN: 425 Hz bandwidth on receive and fixed beat note of 2 kHz.
- CW2: 6 kHz receiver bandwidth and BFO.
- AM: 6 kHz bandwidth. Compatible AM transmission, normal AM reception.

8. Range of Operation

Varies widely with siting, antenna type and operating frequency, but over flat clear terrain the following range may be expected:-

8 ft rod antennas - high power: approximately 15 miles on ground wave.

9. Performance

a. General

Frequency Accuracy and Stability: ± 25 Hz (90 days).

b. Transmitter

Power Output - High: 10 W pep on SSB or Compatible AM and 5 W on CW.
- Low: 1 W pep on all modes.

Carrier Suppression
on SSB: 40 dB min.

c. Receiver

Sensitivity SSB and CW: $0.5\mu\text{V}$ in series with 50Ω for 1 mW output into 100Ω
AM: $2\mu\text{V}$ in series with 50Ω for 1 mW output into 100Ω .

Noise Figure. 13 dB max.

Intermediate Frequency: 500 kHz.

10. Power Requirements

- a. Internal secondary battery (28V) providing at least 6 hours operating on high power, or 24 hours operation on low power assuming a ratio of 10 to 1 for receive time to transit time.
- b. External source of 20V to 40V using Power Supply, PP-F1.
- c. Current drain on internal battery at 27.5 V:-

		High Power	Low Power
Transmit	Average	500 mA	100 mA
	Peak	700 mA	-
Receive		30 mA	30 mA

11. Special Facilities

- a. Narrow band CW reception.
- b. Two headsets or handsets may be used simultaneously.
- c. Whisper/speech facility allows low level or normal speech to be used.
- d. Internal rechargeable nickel-cadmium battery.

12. Ancillary Equipment

- a. Conversion Kit, MK-F7.
- b. Installation Kit, Electronic Equipment MK-F8.
- c. Regulator Set, MX-F1.
- d. Battery, Storage, BB-F1.

13. Stock No. Radio Set, PRC-F1 5820-66-025-9722.
Receiver Transmitter, Radio RT-F1/PRC 5820-66-026-4334.

14. Associated Publications -

AC in WM No.	
Maintenance Scale	TC 661
User Handbook	7610-66-029-5013
EMEI TELECOMMUNICATIONS	F572 to F579 L130 to L139 F560 to F569 F576 to F579 K570 to K579

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