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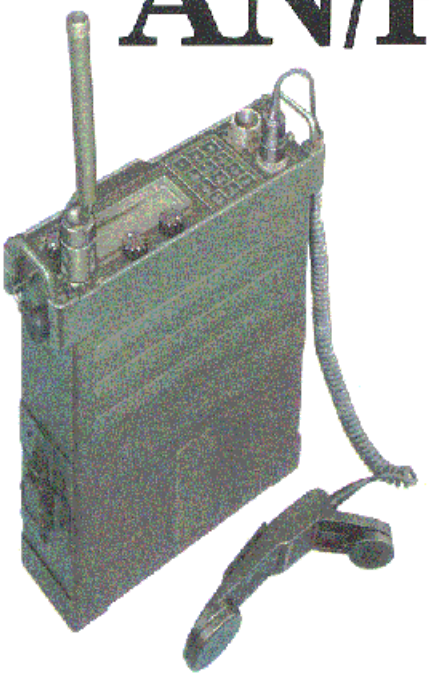
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AN/PRC-113(V)1, 2 & 3 VHF/UHF RADIO SETS

AN/PRC-113(V)*
VHF/UHF
Radio Set



Today's communications needs are more demanding than ever! More radios are operating — closer to one another — in a more threatening environment.

The PRC-113(V) offers a solution to such problems in a small (10.4" W x 3.0" H x 12.0" D), lightweight (15.0 lbs. including batteries, antennas and handset) manpack radio and further provides low live-cycle costs.

The PRC-113 provides improved communications when collocated with other radios due to its reduced transmitter noise floor (-123 dBm/Hz (typical)) and greater receiver dynamic range (less than 2dB degradation in signal-to-noise ratio due to a 100 mV undesired signal). The radio is fully qualified to Military Specifications covering Human Factors, Maintainability, Environment, EMI/EMC, TEMPEST, Nuclear, and Reliability. Further, the PRC-113(V) is baseband COMSEC compatible and is available with [(V)3] or without [(V)1] integral ECCM.

Life-cycle-costs are reduced because of the high reliability (2000 hr (θ_1)/4000 hr (θ_0)), lack of any preventative maintenance, and 30 minute mean corrective maintenance downtime (M_{ct}). Life-cycle-costs are further enhanced by a high degree of module commonality between the PRC-113 and the TRC-176 (a desk-top/rack mounted radio) and the VRC 83 (a vehicular radio). And, the PRC-113 can replace the PRC-41, PRC-66, PRC-75 and SKY-515.

- 116 to 150 and 225 to 400 MHz, 25 kHz increments
- 243.000 MHz GUARD RECEIVER
- FULLY MILITARY QUALIFIED
- 2/10 Watt TRANSMIT POWER
- 8-CHANNEL PRESET
- ECCM COMPATIBLE
- COMSEC COMPATIBLE

Pacer Speak

AN/PRC-113(V)* SPECIFICATION SUMMARY



Model: AN/PRC-113(V) Radio Set*
Magnavox Part No.: 706738 (*)
Equipment Specification: SM-ALC (USAF)
Spec. No. MMC77-027( )
Technical Manuals: 31R2-2PRC-113-1, 31R2-2PRC113-1-1, 31R2-2URC-62, 31R2-2URC-62-1

GENERAL CHARACTERISTICS

Frequency Range: 116.000 to 149.975 and 225.000 to 399.975 MHz
Channel Spacing: 25 kHz
Number of Channels: 8360 (includes 8 Preset and 1 Guard Channel)
Modulation Type: Amplitude Moculation
Primary Power: 24.0 VDC (provided by two BB-590 or BA-5590 Batteries)
Channel Changing Time: 7.5 ms
Warm-Up Time: 10 secs. max.
COMSEC Compatible: Baseband Mode

MAIN RECEIVER CHARACTERISTICS

Sensitivity (10 dB S+N/N): 3 µ V
AGC: +5, -4 dB from 3 µV to 0.5 V
Squelch:
Hysteresis: 2 to 8 dB
Attack Time: 50 ms. max.
Release Time: 150 ms. max.

Selectivity:	Narrowband	Wideband
6 dB	± 11 kHz min.	± 35 kHz min.
50 dB	± 25 kHz max.	–
55 dB	–	– 70 kHz max.

Desense: 2 dB (max) degradation in the S+N/N (at 3 µV input) due to a 0.03 V signal ± 0.9 MHz from f_o
2 dB (max) degradation in the S+N/N (at 3µV input) due to a 0.1 V signal +2.5 MHz from f_o

Audio Output:
Power Level: 0.01 mW to 10 mW (min.)
Response: within 2 dB from 530 to 3000 Hz
within 3 dB from 350 to 530 and 3000 to 3500 Hz
-10 dB min. at 100 Hz
-18 dB/octave from 3500 Hz up
Distortion: (@ 50% mod): 10% max.
Load: H-250 Handset

GUARD RECEIVER CHARACTERISTICS

Same as Main Receiver, except:
Frequency: 243.000 MHz
Selectivity:

6 dB	± 30 kHz min.
60 dB	± 75 kHz max.

TRANSMITTER CHARACTERISTICS

Power Output: 2 w or 10 w – Operator Selectable
Frequency Accuracy: ± 400 Hz max.
Incidental FM: 800 Hz (max.) peak deviation
Audio Input:
Source: H-250 Handset
Distortion: 15% max.

Response:	Narrowband	Wideband
300 Hz	12 dB/octave	–
300 Hz	+1, -2 dB	–
10 to 1 kHz		± 1 dB max.
1 kHz	0 dB (ref.)	0 dB (ref.)
1 k to 4 kHz		± 1 dB max.
3.5 kHz	+1, -2 dB	
3.5 kHz	18 dB/octave	
11 kHz	–	3 ± 1 dB
14 kHz ± 1 kHz	–	-4 dB min.
35 kHz max.	–	30 dB min.
50 kHz max.	–	55 dB min.

Tone Modulation: 1000 Hz ± 15%
Duty Cycle:
2 w Transmit Power: 100% (continuous duty)
10 w Transmit Power: 1 minute transmit, 5 minutes receive
Carrier Noise Level: -40 dB
Wideband Noise: VHF: -110 dBm/Hz (max) for frequencies at least ± 10 MHz from f_o
UHF: -116 dBm/Hz (max) for frequencies at least ± 10 MHz from f_o

PHYSICAL CHARACTERISTICS

Size: 10.4"W x 3.0"H x 12.0"D (26.4 cm W x 7.6 cm H x 30.5 cm D)
Weight (including H-250 Handset, VHF Ant., UHF Ant. & COMSEC Cable): with two BB-590's: 19.5 lbs. (8.4 kg) with two BA-5590's: 15.0 lbs. (6.8 kg)

Mating Connectors:
Handset: U-182 B/U
Remote: MS27487T15B35S
Antenna: UG-88 B/U

ENVIRONMENTAL CHARACTERISTICS

Temperature Range:
Operating: -29°C (limited by batteries) to +55°C
Storage: -57°C to +85°C
Altitude Range:
Operating: 0 to 15,000 feet
Storage: 0 to 40,000 feet
Vibration: 1.5 g's 7 to 30 Hz; 4.2 g's, 50 to 500 Hz
Shock: 40 g's
Humidity: 95%, 10 days, with temperature cycling
Immersion: 3 feet of water for 2 hours

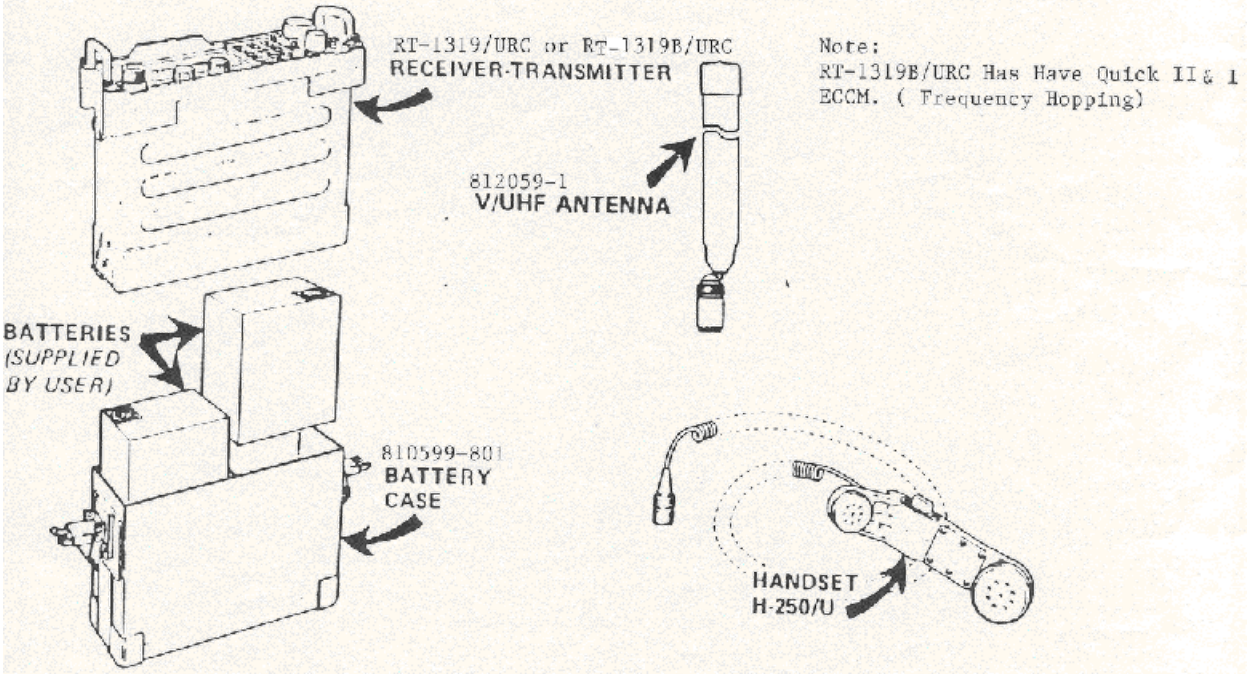
NOTES:
1. Nonvolatile, electronic storage of preset channels.
* 2. Nomenclature

Nomenclature		Part No.	Description
PRC-113(V)1		801	w/o ECCM
~~PRC-113(V)2~~	DELETED	802	
PRC-113(V)3		803	w ECCM

3. + Nomenclatured items contain a specific complement of accessories which may not be optimum for some users. Specific equipment and available accessories are set forth on wall chart "Paser Speak Radio Sets" (MX-61,002).

Specifications furnished are believed to be accurate and reliable. However, all specification data is subject to change without notice.

Magnavox
ELECTRONIC SYSTEMS COMPANY
1313 PRODUCTION ROAD • FORT WAYNE, INDIANA 46808
219 / 429-6000 • TLX 228472 • TWX 810-332-1619



Note:
RT-1319B/URC Has Have Quick II & 1
ECCM. (Frequency Hopping)

AN/PRC-113(V)1 & AN/PRC-113(V)3 Radio Sets

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