

UK/PRC320 Clansman and PRC320/1 HF/SSB Manpack Transceivers

UK/PRC320 is a lightweight HF/SSB radio station designed as part of the British Army's Clansman range of radio equipments for combat use throughout the world. It is particularly suitable for use by long-range patrols or special forces because of its sky-wave range performance and hand generator system.

The equipment operates in the 2 to 30 MHz band with 100 Hz channel spacing, which gives a choice of 280 000 frequencies. Selection is by decade knobs which control a micro-miniature synthesiser locked to a temperature compensated reference oscillator, giving a high order of stability under all environmental conditions. The PRC320 provides SSB (USB), AM, CW (wide) and CW (narrow) facilities. Speech processing and automatic level control are employed to provide whisper speech facilities and a high mean output power.

A transmitter output power of 30 W PEP working into a 2.4 m whip antenna gives the PRC320 a ground-wave communications range in excess of 40 km by day under normal conditions.

The PRC320 is suitable for use as a ground station, working into static ground- or sky-wave antennas.

Working into a dipole or end-fed antenna, sky-wave communications at ranges from 50 to 2000 km or greater can be achieved. This range performance is due in part to the high grade receiver and high efficiency manual antenna tuning unit (ATU) which is integral with the transmitter/receiver unit.

The radio is carried on the operator's back and allows him full use of his weapons. It is powered by rechargeable 24 V Ni/Cd batteries of 1 or 3.3 Ah capacity. Alternatively, the radio can be powered by a hand generator system with a 1 Ah battery, and can be operated remotely if required at distances up to 3 km.

With its manpack carrier and battery the PRC320 can be used as a clip-in vehicle installation. A vehicle-mounted antenna is used and the battery is float-charged by a DC charging unit from the vehicle supply.

PRC320/1 is similar in appearance and built to the same standard as the PRC320 but provides LSB and USB, compatible AM and CW (wide) facilities. Channel spacing is 1 kHz providing 28 000 channels. The PRC320-100 or PRC320/1-100 100 W HF/SSB

vehicle stations use the manpack station in its clip-in role to drive a 100 W amplifier with automatic ATU.

The VRC320/2 30 W HF/SSB vehicle station is a vehicle variant in repackaged form which provides the same facilities as the PRC320/1 and has an automatic ATU. The VRC320/2-100 100 W HF/SSB vehicle station utilises RT320/2 plus 100 W amplifier with automatic ATU.

Status

Introduced in 1976, since when more than 15 000 sets have been manufactured. Part of the Clansman range. In service with the British Army and armed forces in Europe, Africa and the Middle East.

Technical Specification

Modes

UK/PRC320: USB, AM, CW (wide and narrow)

PRC320/1: USB, LSB, compatible AM, CW

Frequency range

UK/PRC320: 2-30 MHz

PRC320/1: 2-30 MHz

Channel spacing

UK/PRC320: 100 Hz intervals

PRC320/1: 1 kHz intervals

Power output

manpack: 30 or 3 W PEP selectable

vehicle radio: 100, 30 or 3 W PEP selectable

Power supply

manpack: 24 V, 3.3 Ah rechargeable battery or power supply unit

vehicle radio: 20-32 V DC negative earth

Manpack battery operating life: 12 h at 1:9 TX:RX

MANPACK

Temperature range

operating: -37 to + 55°C (plus solar radiation)

storage: -40 to + 65°C

Altitude

operating: 2500 m

transport: 7500 m

Immersion: 1 m for 2 h

Weight: 10.6 kg

Width: 248 mm

Depth: 344 mm

RECHARGEABLE BATTERY

Height: 72 mm

Width: 127 mm

Depth: 184 mm