

## UK/PRC319 HF/VHF Tactical Radio

The UK/PRC 319 is a microprocessor-based 50 W HF/VHF tactical radio. The radio is claimed to give up to five times more transmit power per kilogram weight than any other portable in-service radio.

Four detachable units - a transmitter/receiver, electronic message unit and two antenna tuners - have been combined with a standard Clansman battery.

Six deployment options are available ranging from a 50 W voice-only station, using pre-cut resonant antennas, to a 50 W voice and burst data station capable of matching simple wire or rod antennas. *The total system size is slightly less than 300 x 200 x 110 mm.* A 50 W transmitter extends the groundwave coverage out towards the first sky-wave hop.

Extension of the HF band, up to 40 MHz into the VHF band, gives a close support VHF voice communications capability using SSB -as well as providing skywave channels under unusual ionospheric conditions.

Low probability of intercept is enhanced as a result of using semi-duplex transmission and burst data, and dispensing with the constant intermediate frequency in the receiver.

The integral pocket-size electronic message unit (EMU Mk III), weighing 0.7 kg, is also removable from the radio for independent operation. Powered by a built-in battery, it is capable of storing messages for up to 500 hours. The EMU Mk III also contains a forward error detection and correction system to STANAG 4202. Received messages are called from the memory store and displayed on a two line LCD. The UK/PRC 319 can receive and store messages into memory even during unattended operations.

In addition to the numeric only EMU Mk III, a newly developed alphanumeric unit has built-in crypto, EDC and data interleaving. This EMU Alpha has

independent 2000-character receive and transmit memories and a range of user definable fixed format messages.

The UK/PRC 319 can match a variety of antennas and features a high speed fully automatic antenna tuner (TURF) which permits the use of a remote antenna for covert operations. The TURF can be operated remotely up to a distance of 50 m from the radio through a single coaxial cable.

Operator control is carried out through a keyboard and mode select switch. All control information is displayed on an LCD along with a range of user confidence checks.

Ten pairs of channels can be preset and stored in the UK/PRC 319's electronic memory; switching to a new pair of channels is effected by the depression of a single key.

### Status

In production for Special Air Service Regiment, Special Boat Squadron and used in four overseas countries, including the UK and, reportedly, New Zealand.

### Technical Specification

**Frequency range:** 1.5-40 MHz

**Channel storage:** 10 receive/10 transmit

Power output: burst greater than 50 W; CW (Morse) and voice (SSB) greater than 50 W PEP, low power between 2-5 W

Temperature range

operating: -31 to + 55°C,

storage: -46 to + 70°C

Humidity: 95% at 40°C

**Immersion:** to 2 m

**TURF tuning time:** < 220 ms, remote operation: up to 50 m through the coaxial cable

### Manufacturer

MEL Communications Ltd, Crawley.