



# PERSONAL ROLE RADIO

THE MODERN TOOL BY WHICH SOLDIERS AND TACTICAL TEAMS COMMUNICATE

— QUICKLY AND EASILY —

WITH A LOW PROBABILITY OF DETECTION.

BECAUSE OF THIS IMPROVED COMMUNICATIONS

INCIDENTS OF **“FRIENDLY FIRE”** WILL BE SUBSTANTIALLY REDUCED

## FEATURES

- wireless PTT - world's first
- short range digital radio - small & rugged
- 256 channels - every team gets its own channel
- lightweight headset - NBC compatible - peripheral hearing
- dual radio option - Commanders/signallers operate 2 radios
- secure comms - with a low probability of detection.



### PRR IN USE

PRR is the world's first purposely designed Personal Soldier Radio - over 65,000 units sold to the British Army as part of Bowman project.

The standard PRR Equipment that would be supplied to a user consist of the Personal Role Radio itself, a Wireless PTT switch, the Lightweight Headset (a single sided communications headset) and a heavy duty Nylon Pouch

### PRR IN ACTION



# BREAKDOWN OF STANDARD PRR EQUIPMENT

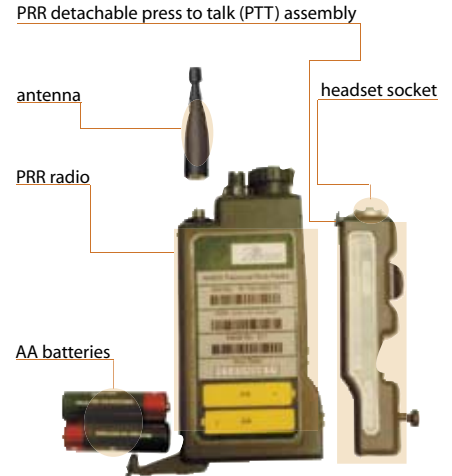
## PERSONAL ROLE RADIO (PRR)



PRR is a short range radio which operates independently of any infrastructures. Utilizing advanced wireless LAN technology and incorporating spread spectrum techniques at 2.4GHz - (50Mw transmit power), PRR ensures low probability of interception and detection.

PRR has a 256 channel capability (16 directly available to the user and a further 16 under PTT assembly) and an operating range in rural terrain of more than 500 meters. Transmission is possible through 3 floors of urban terrain.

PRR is small - only 3.5 x 5.5 inches. It operates on 2 standard AA batteries and these typically provide 24 hour use (1:7:16 Tx/Rx/Standby)



PRR is fitted with a detachable Press to Talk (PTT) assembly which contains a single PTT button and socket for the Lightweight headset.

## THE WIRELESS PTT SWITCH



In addition to the main PTT switch assembly on the PRR radio body, a unique wireless PTT Switch is provided - it's about the size of your car door opener. Using the strap provided, this can be attached to a personal weapon or any other equipment in use. When pressed, the wireless PTT switch remotely operates the PRR (by means of a short range radio assembly). The user therefore does not need to take his eyes off a target or his hands away from his weapon.

The transmission range from each wireless PTT switch is approximately 2 meters making it suitable for support weapon, boat or handle-bar mounting.

Each wireless PTT switch has a unique identity which can be easily "learnt" by the PRR radio. Once programmed, the wireless PRR switch will only operate its own PRR - therefore it can not trigger another user's accidentally. Should a user lose his wireless PTT switch, he can easily re-program his PRR to accept a replacement in a matter of seconds.

## LIGHTWEIGHT HEADSET

This slim headset is constructed from glass filled nylon and can be worn comfortably underneath most military/ballistic helmets. The vents in the earshell do not obstruct the user's peripheral hearing yet, when required, its unique design allows that an ear defender be worn over it to protect user's hearing from noise and/or concussion. The headset is submersible to US and UK Military Specifications

The microphone (noise cancelling electret) is housed in a black, tough moulded, glass filled nylon case. This is supported by a flexible boom arm which is made from non corrosive materials and coated in an abrasive resistant, plastic sheath. The sheath protects the user should the boom arm touch his face during use in extremes of temperature.

The headset is NBC compatible, see below - NBC microphone adapter under accessories.

The earphone is a 36mm moving coil unit with the ability to withstand extremes of climate and deliver excellent speech quality.

The Lightweight headset is secured on the user's head with a ventilated harness which prevents displacement during vigorous action. The headband is made from a combination of cotton and nylon (for strength). It is Velcro adjustable, washable, lightweight and extremely comfortable to wear.



## HEAVY DUTY NYLON POUCH

The PRR fits inside a heavy duty polyurethane, textured nylon pouch. This pouch not only allows a user to secure the PRR to his webbing or belt but helps protect the PRR from harsh conditions and impact.

# DUAL PRR OPTION FOR COMMANDER OR SIGNALLER

## SINGLE AND DUAL PTTs



PRR Dual radio with two PTTs and lead to second radio

As standard, the PRR is supplied with a single PTT switch assembly which operates the PRR only. The Commander can replace the single PTT with a Dual PTT switch assembly. When the radio lead from the Dual PTT switch assembly is connected to a secondary radio (Command Net), the Commander can operate the command radio by pressing the bottom button on his Dual PTT. These two PTT switch assemblies are easily interchangeable on any PRR body and are secured by means of a single fixing screw (which can be unscrewed with a dime)



Dual PTT detachable press to talk assembly with two press to talk buttons plus lead to second radio.

Standard single PTT detachable press to talk assembly with one PTT button for PRR radio

With the dual version of PRR, the commander or Signaller can operate a 2nd radio to communicate with other groups

## COMMON ANCILLARIES FOR SINGLE AND DUAL PTT USERS

An ancillaries socket is supplied on both types of PTT switch assemblies. This is where you plug in the Lightweight headset.

The Lightweight headset is fitted with a noise cancelling electret microphone which obtains its power from the PRR. The Microphone therefore will work in contention with almost any secondary radio.

For the user of the Single PRR, all received PRR messages will be heard via the headset's earphone. The Commander's Dual PTT houses a mixing circuit. This circuit isolates incoming radio messages from both the PRR and secondary radio and merges them into a common earphone. When both the PRR and the secondary radio receive messages at the same time, the Commander will hear both messages simultaneously.

## OTHER DUAL PTT INTERFACES

The Dual PTT aspect of the Personal Role Radio can be integrated into several other systems. Request information on:

- PRR Interfaces
- PRR vehicle intercom system
- PRR RHIB intercom system



## SECONDARY RADIO SIGNAL PROTECTION

A UK qualified COMSEC circuit, housed in the Dual PTT, prevents accidental re-transmission over the PRR of any secure messages that may be received from the Secondary radio. This COMSEC circuit intervenes should the Commander accidentally press both PTT switches on his Dual PTT simultaneously or attempt to operate one radio while already transmitting on the other. The COMSEC circuit makes it impossible to transmit on both radios at the same time. Therefore, whichever radio's PTT is selected first takes transmit priority.



# PRR ACCESSORIES

## NBC MICROPHONE ADAPTER

The PRR and associated equipment is NBC compatible and can be worn outside an NBC suit. To communicate while wearing a respirator, an adapter for the Lightweight headset's microphone is available. Speech is diverted straight down the adaptor's sound tube to the Lightweight headset's microphone delivering a high quality of clarity.

The NBC microphone adapter incorporates a soundtube which clips to certain respirators - in a suitable location. e.g. Speech port or exhalation diaphragm. At the other end of this tube, the adapted slides firmly over the microphone.



## PRR USER OPTIONS

The PRR is a valuable asset to the professional user. Alternative ancillaries to the Lightweight headset can be supplied for use with PRR. Request information on

- PRR alternative headset options
- PRR SF options
- PRR covert options
- PRR police options
- PRR rescue options
- PRR OSK1 (waterproof)



Adapter to interface boom mic with gas mask

## PERFORMANCE SUMMARY



Operating Frequency - 2,400 - 2,483 MHz - 256 channels available  
Transmit power - 50 mW  
Modulation: Direct sequencing spread spectrum - voice coding CVSD  
Data Protocol: Modified IEEE 802.11  
Battery - 2 AA primary cells provide typically 24 hours use. (1:7:16 Tx/Rx/S'BY radio)  
Range: 500 meters (rural terrain) - Transmission through up to three floors in Urban terrain.  
Microphone: Electret noise cancelling  
Respirator: NBC compatible  
Ear piece: custom moulded design  
Compatibility: VHF combat radio; UHF combat radio; HF combat radio  
Remote wireless PTT; 433 Mhz wireless operation; 128 bit unique coding; simple code learn mode.

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