

PERSONAL ROLE RADIO PRR

DESCRIPTION

Today's theatre of war is a dynamic asymmetric battlespace, with forces on the ground, often involved in simultaneous operations and with an increased emphasis on urban warfare. The SELEX Communications PRR significantly enhances combat effectiveness by providing all informed communications to front line soldiers, replacing traditional methods based on hand signals and shouting.

Users returning from active service have described the introduction of PRR as having a profound effect on the operational effectiveness of infantry, as significant as the first introduction of the rifle.

The PRR uses advanced 2.4GHz spread spectrum technology innovatively packaged to meet the demanding needs of the soldier. The PRR system is easy to use through its simple man machine interface, is unobtrusive and comfortable to wear yet is rugged enough to sustain the harshest environments presented by active front line operations. The modularity of the PRR design leads to flexibility and its use in many scenarios. It includes a unique wireless Press To Talk (PTT) that enables the user to operate the radio without removing his hands from his weapon, it has an interchangeable switch pack that allows configuration to different roles e.g. interface to a commanders radio and audio ancillaries that can be tailored to suit the needs of all users.

MAIN FEATURES

- > Simple to use machine Interface
- > Compact and lightweight design
- > Stealth Technology, 50mW transmit power using Direct Sequence Spread Spectrum modulation at 2.4GHz
- > Typical operating range is 500m in open terrain, and through 3 floors of a building or through 5 houses in Urban environments
- > Wireless Press to Talk with up to 2m range
- > 256 channels, 16 available directly to the user.
- > Operates from 2 x AA batteries for greater than 24 hours (1:7:16 Tx/Rx/Standby)
- > Operates independently of any infrastructure
- > NBC Compatible
- > Interface for Combat Radio with security barrier





OPERATIONAL BENEFITS

The use of PRR within infantry units greatly enhances all aspects of dismounted combat. Operations are much slicker, more effectively applied, better co-ordinated and safer. Key improvement areas are:

- > Increased tempo of operations
- > Improved Targeting and direction of fire
- > Improved situational awareness
- > Better targeting
- > Element of surprise maintained, particularly in urban operations.
- > Improved survivability: reduced friendly fire
- > Reduced briefing time/quicker briefings
- > Better/quicker re-supply operations
- > Better resource visibility.

OPTIONS

- > Simultaneous Voice and Data (38.4 Kbps)
- > Rebroadcast drop bag
- > Covert ancillaries
- > Swimmers kits
- > Variety of headsets



WIDER APPLICATIONS:

- > Mortar Fire Support co-ordination
- > Anti-Tank detachment coordination
- > Wireless Intercom
- > Logistic support
- > HQ protection and dispersal

WIRELESS PTT SWITCH

A unique Wireless PTT Switch is provided (in addition to the Single or Dual PTT Switch Assemblies), which can be attached to a weapon or any other equipment.

- > The Wireless PTT Switch remotely operates the PRR, by means of a short-range radio signal.

- > Each wireless PTT has a unique identity which, once programmed by the user, will only operate its own PRR.
- Replacement Wireless PTT Switches are easily re-programmed in a matter of seconds.

THE LIGHTWEIGHT HEADSET

This slim headset can be worn comfortably underneath most military/ballistic helmets and is easily secured on a user's head. Its vented structure does not impair a user's peripheral hearing, yet allows an ear defender to be worn over it for hearing protection. The Lightweight Headset is extremely comfortable to wear over prolonged periods of time. The Lightweight Headset, fitted with a noise-cancelling microphone, will work in conjunction with any secondary radio.





Wireless PTT Switch

THE DAYLIGHT HEADSET

The Daylight Headset is lower profile than the Lightweight Headset and is available in either left-hand or right-hand sided versions.

It is purposely designed to fit underneath the US PASGT Helmet.

PTT SWITCH PACKS

The PRR can be configured in two roles. The PRR body is fitted with one of two interchangeable PTT switch assemblies: Single PTT Switch Pack = 'Single user', operating the PRR only.

Dual PTT Switch Pack = Commander is able to connect to the PRR and Combat Net Radio (CNR).

An ancillaries socket is incorporated into the Switch Packs in which the Lightweight Headset, or alternative ancillaries, can be connected.

DUAL PTT SWITCH PACK

The Dual PTT Switch Pack houses a mixing circuit, which isolates incoming radio messages from both the PRR and the CNR merging them into the earphone, therefore the Commander will hear both messages simultaneously. The qualified circuit also prevents accidental re-transmissions of secure CNR traffic over the PRR net.

A built-in alarm feature ensures that received secondary radio messages are not missed. The Commander will hear an audio alarm, until he releases his PRR's operating PTT Switch allowing the secondary radio to receive.

Lightweight/Daylight Headset



DUAL SWITCH INTERFACE

Second radio interfaces can be provided for:

- > MBITR
- > Harris
- > Sincgars
- > PR4G
- > BOWMAN
- > Sabre
- > TETRA
- > ICOM
- > Astro

NBC MICROPHONE ADAPTOR

To communicate whilst wearing an NBC respirator, a Microphone Adaptor is available, which connects the

Lightweight Headset's microphone to the NBC respirator, delivering a high level of speech clarity. The PRR and associated equipment is NBC compatible and can be worn outside an NBC suit.

DATA PRR

The emergence of small low power GPS (Global Positioning Systems) and other sensors (e.g. chemical sensors) will fuel operational improvements provided that the information can be delivered on time and to the correct place. To support data transfer within the infantry section PRR has been enhanced to provide a data capability. The Data Enabled PRR provides an all-informed data service operating at dial-up speeds. This data service enables the transfer of sensor information or messages to be performed in conjunction with normal voice operations.



NBC Microphone Adaptor

PRR CONNECTED TO A PDA

The reprogrammable capability of Data PRR offers the possibility for the integration of body-worn and remote sensors into the section's communications net. The PRR can be programmed to deliver a tone or a digitised voice annunciation to the section net on the trigger of an external sensor e.g. gas detector.

FEATURES

- > Dial-up data speeds
- > Simultaneous voice and data
- > Compatible with standard voice only PRR
- > Standard data entry device interface
- > Single and dual pressel switch options available

TYPICAL USAGE

- > Soldier Modernisation Programmes enabler
- > Position reporting
- > Status reporting
- > Image transfer
- > Message transfer
- > Integration of remote sensors into section level communication nets
- > Synchronised fire control systems

RE-BROADCAST UNIT

PRR is designed to support the operations performed by a deployed infantry section. However there are operational scenarios where the infantry section will be deployed over

PRR connected to a PDA





extended ranges or there are particularly demanding requirements placed upon the communications system e.g. operations in enclosed spaces such as buildings or maritime platforms.

For these situations the re-broadcast unit enhances the voice facilities provided by the standard PRR.

The re-broadcast unit consists of two inter-linked PRRs and filters, packaged in a saddlebag. The physical configuration is small, light, easily carried and deployed by operational troops. It also provides a flexible solution for a range of deployment scenarios.

RE-BROADCAST UNIT DEPLOYED AS AN INTERNAL TO EXTERNAL BUILDING LINK

A typical scenario is to provide communication between an internal building search team and external protection elements. The re-broadcast unit would be used to provide the link between the two elements. Here the unit is positioned at the entry point to the building. A second scenario is for deep building or vessel searches. Here, due to the environment, a single re-broadcast unit would be augmented with more units to form a re-broadcast chain.

FEATURES

- > Self contained
- > Flexible deployments
- > Selectable dual channel
- > Interoperable with standard PRR
- > Small dimensions
- > Low weight

TYPICAL USAGE

- > Range extension
- > Building searches and clearance
- > Maritime assaults
- > Operations in tunnels
- > Intersection operations

PRR INTERFACE

The PRR Interface has been developed for use on a ship's landing craft, allowing users to communicate whilst roaming the decks and nearby shore, even when out of sight and in darkness.

WIRELESS INTERCOM SYSTEM

A Wireless Intercom System is available, incorporating the Personal Role Radio (PRR).

The standard version of the system provides a live-mic, all-informed intercom for four crew members, who have access to up to four radios. A fifth radio, the PRR, provides a wireless radio intercom link. Each crew member is allocated a personal operating console, to which he connects his PRR (with an intercom compatible Dual PTT Switch), in line with an Ear Defender/Headset.

The wireless intercom facility is available whenever one or more crew members disconnect from the wired intercom system. At this time, a roaming crew member maintains communication using normal simplex radio procedures with the other crew members.

It is also available in versions for use on both land and sea platforms.

WATERPROOF PRR

The PRR can be housed in a waterproof radio carry bag, which is submersible to 8 metres, thus making it waterproof. The PRR connector is located inside the bag, protected by a waterproof gland. The waterproof carry bag is fastened using the waterproof zip fastener, which also enables easy access to the PRR for volume/channel adjustment and battery replacement, when the bag is not submerged. Various single-sided headset options can be incorporated with the waterproof radio carry bag, depending on the user's requirement.

Waterproof PRR communications are useful for divers, swimmers, boat crew/coastguard and more.

COVERT PRR

Covert PRR is available incorporating a neck loop with built-in microphone, and an inductive earpiece.

Re-broadcast saddlebag



Waterproof PRR



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