



AMBRIEL - Wireless datalink system

Current platform communication methods using long leads can be heavy and inconvenient, are vulnerable to damage, and have a limited range. Hand signals, or word of mouth, are also used but they too can be unclear, especially during night operations or in noisy environments.

SELEX Galileo's Wireless Datalink System (WDS) consists of two wirelessly connected units; The Platform Interface Unit (PIU), configured to interface with the platform intercom system, and the Operator Interface Unit (OIU), worn on the body of the operator.

SELEX Galileo's WDS offers a plug and play technology capable of interfacing with all platform intercom systems via a crew station intercom box and all standard helmets/headsets, including those incorporating Active Noise Reduction (ANR).

It is an air-qualified product that has been successfully demonstrated on a range of land, sea and air intercom systems.

The WDS overcomes the limitations of conventional platform communications by removing physical leads, providing the freedom to walk and talk hands-free and enabling crew members to work in a safer and more efficient environment.

KEY FEATURES

Plug and play

- Interfaces with existing intercoms, headsets and helmets
- Minimum integration required

Full duplex operation

- Hands-free ICS communication for the wireless user
- Press-to-Talk (PTT) function for remote radio broadcasts
- Wireless relay switching capability

Digital transmission

- Enhanced voice quality

Frequency hopping

- Avoids problems with fading in enclosed areas caused by multi-pathing
- Inherent protection against intentional or unintentional jamming

Low RF power

- Well below the ICNIRP Specific Absorption Rate limits
- Dynamic power control

Voice security

- 128 bit encryption

Durable design

- Rigorously tested to various military standards
- Extensive battery life
- Immersion proof to >1 metre.

SYSTEM OVERVIEW

Operator Interface Unit (OIU)

The OIU consists of a single unit with an integrated antenna. Unit controls consist of an on/off, volume control and a separate multi-function button. To maximise mission duration, the OIU is powered by an air-qualified rechargeable battery. In excess of 30 hours operational life is provided when connected to a standard headset, or typically six hours when used to power a headset incorporating ANR.

Platform Interface Unit (PIU)

The PIU consists of a single unit with an integrated antenna, an on/off switch and a reset button. The PIU plugs directly into any one of the platform's intercom station boxes via a simple connector. The station box relays the audio signals, and where appropriate, the necessary power supply to the PIU. A battery powered PIU is available as an optional extra.

Full duplex

The WDS is configured to provide a full duplex audio connection between the operator and the platform's intercom system. Once selected at the station box, operators are able to remotely transmit using the OIU multi-function button. This innovative function does not affect the full-duplex nature of the OIU/PIU link.

Radio Frequency output

The transmitter has a peak radiated power output approximately one-tenth that of a standard mobile phone. The system has been tested and shown to conform with the ICNIRP Guidelines on Specific Absorption Rate for near head/body exposure to RF radiation.

Range

In excess of 100m.

Frequency band

The PIU and OIU communicate in the ISM frequency band of 2.400GHz to 2.4835GHz.

Real-time configuration

Individual OIUs and PIUs can be paired with each other quickly and efficiently for excellent user functionality. The process is simple and does not require any external equipment. Once paired, the two units remain as a working system until either is re-matched.



Load master activities



Search and rescue tasks



Short range ground communications link