

DATASHEET

PART NO: 01191Q2

# BWI900

## Wireless Intercom



Full Duplex Audio With Up To 10 Users Talking Hands-Free Simultaneously



PTT Simplex Audio Mode User Selectable As Required



Crystal Clear Audio, Noise Cancellation Circuitry



Up To 1000m Communication Range Between Radios



AES 128bit Secured Individual Encryption Per Group



IP-65 Water-Resistant and Robust Design



Convenient Drop In & USB Charging



Replaceable Battery & Detachable Antenna



Compact & Light Rugged Construction

## FEATURES

### 10 Users Talk Simultaneously

Unlimited number of users in a group, with up to 10 users able to talk simultaneously while all others listen.

### Up to 1000m Transmission Range

2 antenna options are provided for varying range requirements

### IP 65 Rugged and Waterproof

Heavy duty, robust & water-resistant design, including the detachable antenna.

### Advanced CODEC Protocol

Super dynamic range of noise cancellation of more than 95dB, and minimal ambient audio interference.

### Convenient Battery Charge System

This device has the ability to easily replace the battery. As well as the ability to individually charge the device via USB cable or drop into a charging 5-bay charger. Each battery provides ~12 hours of radio use.

### Encryption

AES 128 bit encryption is provided with each radio. Each talk group is individually able to have separate encryption keys.



**RADIO GATEWAY**  
(OPTIONAL)  
073103



## INCLUDED ACCESSORIES



**Carry Case**  
with Foam Insert



**0631235**  
BWI900 Full Dipole  
**0631236**  
BWI900 1/4 Wave Stub



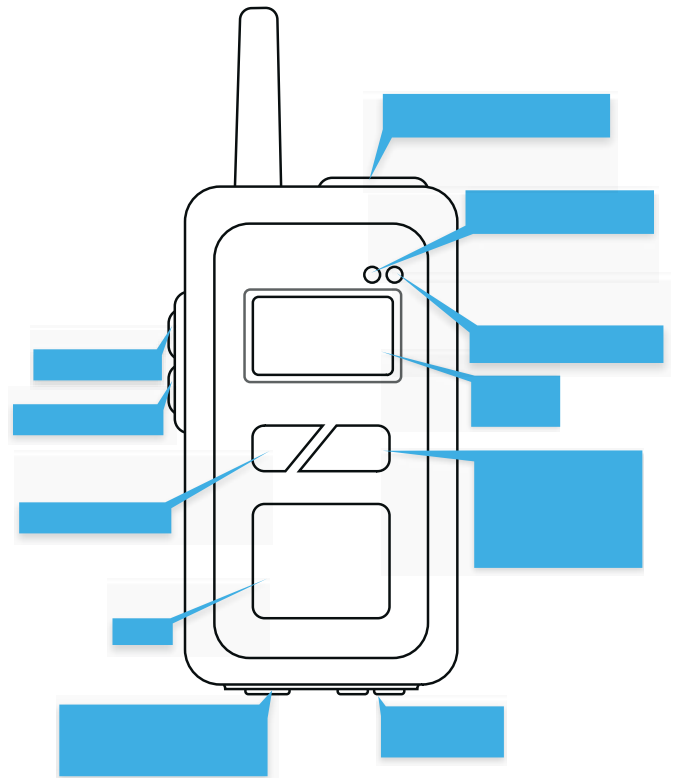
**0620635C**  
USB Charging  
Cable



**06105109**  
Battery x  
3

## SPECIFICATIONS

Dimension	122.7 x 23.5 / 31.0 (+Belt Clip) x 67 mm
Weight	180 g including Battery
Frequency Range	ISM 915 MHz ~ 928 MHz
Modulation	GFSK with FHSS
Voice Codec	16 bit / 8 KHz
Tx Max Output Power	320 mW typical
Rx Sensitivity	-95 dBm
Audio Output	Max 3.0 V pp
Voice Latency	< 180 ms
Noise Cancellation	More than 95 dB
Encryption	AES 128 bit
Num. of Frequency	26 Channels / Talk Groups
Channels Channel Spacing	500 KHz
Battery Type	Li-ion Battery @ 3.7 V 2000 mA
Antenna	Detachable Type Helical Antenna
Talk Distance	1000 m typical
Frequency Response	50 Hz ~ 4 kHz
Maximum Operation Users	10 User including Master Device
Display	OLED display for Group Number, ID, Volume Level, Battery status, Operational Mode and Talk On/Off
LED Indication	RED LED; Charging Status, BLUE LED; Device Operating Status
Battery Operating Time	12 Hours typical
Battery Charging Time	3 to 5 Hours
Headset Input / Output	Dual 3.5 mm 4 pole jack, reversible cable - left and right cable entry options
Control Buttons	Side panel: Push button for Volume Up/Down, Front panel: Push buttons for Power On/Off and Talk On/Off select, Top panel; Push button for Mute On/Off
External Interfaces	4 Pole 3.5 mm Headphone Jack X 2 ea, Drop in Battery charge contacts, Micro USB Jack for Battery Charging & Firmware update



## BLUETOOTH INTERFACE

BWI900 Optional Wireless Dongle will provide a wider extended range of accessories that can be used with the BWI900 solution. An integrated battery provides separate power for this interface. This solution will enhance the operational use case.



## BWI900 RADIO GATEWAY

PART NO: 073103

### FEATURES

- 3 Way Audio Bridge
- User Headset Support for RJ11 Plantronics or Benelec B4 Headsets
- Volume Control for User Headset
- Internal audio adjustments for various radio interfaces
- Dedicated PTT Button for Radio Network use with Indication LED
- Mechanical Support for BWI900 to securely clip on
- 4 Hole Mounting Pattern
- Suitable for 12V and 24V vehicles
- Charges and Powers BWI900 radio via micro-USB
- Audio Port for Mobile radio or Radio console



### SPECIFICATIONS

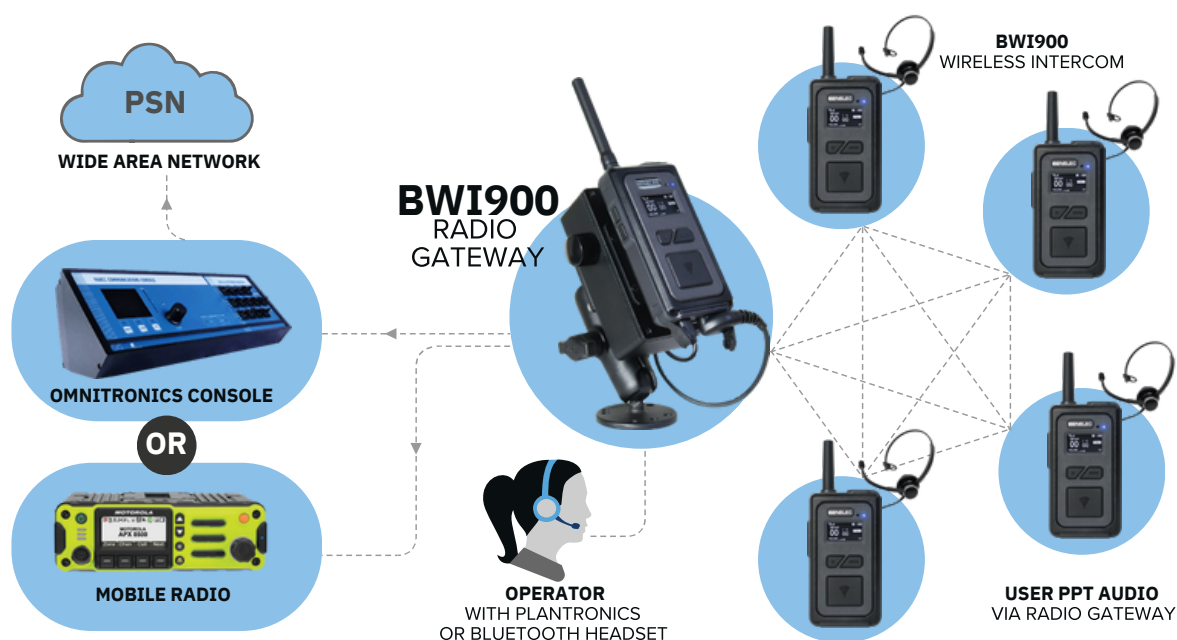
DC Input		10-36V
Micro-USB	Out	5V 1A(max)
(BWI900)	B4	Audio port for BWI900
termination		4 Wire E & M
Radio Interface Headset Interface		RJ11 or B4 headset port for BWI900 headsets. CANNOT BE USED SIMULTANEOUSLY
Charging Interface		Micro-USB
Weight		395 gram (without BWI900 & Mount)
Dimensions		120 h x 65 w x 40 d (mm)
Mount	Support	AMPS Standard 4 Hole Mount
plate	Supplied	RAM Mount – GPSMAP 600

Mount

### APPLICATIONS

The Benelec BWI900 Radio Gateway allows the BWI900 family of Wireless Intercoms to be interfaced to external radio systems providing direct access to the radio network from the wireless intercom users. This system has been created to be integrated to any mobile radio via 4W E&M. Interface leads have been developed for the Benelec BLP6000 series P25 mobiles and Motorola APX series P25 mobiles, other models can be provided on request.

The gateway provides direct use for a single user and creates the interface to the Wireless Intercom users. The audio from the radio network is also fed into the Wireless Intercom group. Dedicated gateway firmware has been developed for the BWI900 radio allowing the user to optionally PTT across the radio system remotely. A typical use case is a mobile radio in a vehicle being accessed by up to 10 users in the field, each with the ability to hear and respond over the mobile radio remotely. Typical coverage between the BWI900 radios is around 1Km.



## BWI900 OPTIONAL HEADSETS



**078421Y1**  
Single Ear Boom Mike  
Light Weight Headset



**07841B4**  
Throat Microphone  
with Air Tube Earphone  
and On/Off Switch



**0784234B4**  
Rugged Light Single  
Ear Headset



**0784235B4**  
Dual Ear Light Heavy  
Duty Headset



**078604A**  
Bluetooth Bone  
Conduction Headset



**0785111B4**  
High Noise Headset with  
Boom Microphone



**078521H**  
Peltor™ WS™ ProTac  
XPI Headset



**07842B4**  
Ultra Light Headset



**07835B4**  
Lightweight In Ear  
Headset Inline



**0784233B4**  
Tempest 2  
Ultra Light Headset

## BWI900 OPTIONAL ACCESSORIES



**06105109**  
3.7VDC 2000mAh Li Ion  
Replacement Battery



**0620635C**  
Replacement USB  
Charging Cable



**0620635P**  
Programming Cable for  
Firmware update



**0991102**  
Lithium Polymer  
Battery



**090705420**  
Dual USB 4.8Amp 12  
VDC Adaptor



**0631235** BWI900 Full Dipole  
**0631236** BWI900 1/4 Wave Stub  
Replacement Antennas



**07892B4**  
Wireless Headset  
Interface



**0610525**  
Drop-In 5 Bay Rapid  
Charger with 5 Batteries  
Simultaneously



**06107310**  
Leather Carry  
Case