BENELEC
Innovative Radio Technology

RADIO TERMINALS

EDITION 4.0

FM ANALOGUE

PoC PTT over Cellular

P25 · DIGITAL WIRELESS · SANS FRONTIERS · INALÁMBRICO DIGITAL

DUPLEX

WWW.BENELEC.COM.AU

Over **43 years** of service to the radio industry
Our motto is
'Care & Effort'
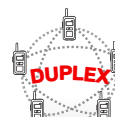
Since its establishment in 1978, Benelec Pty. Ltd. has been supplying transmission components and devices and antenna systems to the professional radio communication, public safety, auto vehicle location (AVL), wireless, broadcast and defence industries for frequency bands 2MHz to 6GHz.

Antenna products and systems are designed and manufactured at the Botany facility which occupies over 3,000 square meters, comprising metal and plastic parts engineering manufacturing, metal finishing plants, assembly lines, warehousing, sales, distribution and administration.

Benelec also offers its design, manufacturing and processing facilities through its industrial services division to provide solutions to industry problems for volume reprocessing, repairs, retrofits, modifications, refinishing and repackaging.

Sales and warehousing facilities are provided through Benelec Offices in NSW, Queensland and Western Australia. Exports are handled from the NSW Branch.

Benelec products have earned an enviable reputation for good design and a high quality of materials and manufacturing, underscored by better than industry average performance and durability. Starting from a high base, we consistently strive to improve our products.

At Benelec we are a team of caring members who work well together and enjoy what we do, which is to provide our customers with honest, straightforward, prompt and reliable service.

CATALOGUE CONTENTS

BENELEC
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P25 PROFESSIONAL DIGITAL RADIOS

PORTABLE RADIOS
BLP650 - 5000 CH TDMA PHASE 2

MOBILE RADIOS
BLP6000 - 5000 CH TDMA,PHASE 2

REPEATER
BLPR2500 PORTABLE, - 25W FDMA PHASE 1

SCANNERS
BR400
BR100

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BLP650

P25 PHASE 2 TDMA, VHF/UHF PROFESSIONAL PORTABLE RADIO

NSW GRN APPROVED · **BENELEC 3 YEAR WARRANTY GUARANTEE** · **IP67** · **VOTE SCAN** · **GPS** · **WIRELESS INTERFACE** · **AES 256** · **P25 PHASE 2**

KEY FEATURES

- Frequency Options:

    VHF 136 - 174MHz (BLP650V)

    UHF 380 - 470MHz (BLP650U1)

    UHF 440 - 520MHz (BLP650U2)

    UHF 763 - 870MHz (BLP650U3)

- P25 CAI Phase 2 TDMA
- 1/3/5W Output Power
- 2300mAH Li-Ion battery
- 5000 Channels
- P25 Trunking Option
- Vote Scan Capability
- P25 Signalling Radio to Radio

- Compact & Lightweight:

    63 x 46 x 140mm

    454g (inc. Battery/Antenna)

- MIL STD 810 C/D/E/F
- CAP Certified

- NIST AES 256Bit & DES/OFB Encryption
- Authentication
- IP67 Rating

EXTRA FEATURES

- Enlarged Colour LCD Display
- Integrated GPS
- Integrated Wireless Interface
- Display Viewable at Wide
- Angles & All Light Conditions
- Enlarged Rx Speaker Provides Improved Audio
- Optional Case Colour Design

AMBE+2 ENHANCED DIGITAL VOCODER · **MADE IN AMERICA**

BENELEC

155.80500
Douglas Co Area
01/17/00 07:30
ZONE HOME LITE MENU

ACTUAL SIZE

63(w) x 140(h) x 46(d)mm

BLP650

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BLP650 Features

Project 25 Phase 2
Our BLP650 portables are Project 25 Phase 2 (TDMA) ready out of the box, supporting double the voice capacity of Phase 1 trunking systems.

Enlarged Colour LCD Display
1.77" (45mm) 5 Line Fully Colour Backlit Display

Exceptional Battery Life
The BLP650 Series works as long as you do, putting in 12+ hours of reliable communication every day via the standard 2300mAH Li-Ion battery. Upgrade to the high capacity battery for 22+ hours.

Compact & Lightweight
The BLP650 Series' design is slim and light, weighing only 454g, battery included

Enhanced Voice Quality
A third generation enhanced IMBE P25 dual rate Vocoder (AMBE+2 V1.80) provides robust performance even in noisy environments.

Enhanced Noise Cancellation
Dual Microphone nose canceling technology to improve communications in loud environments.

Environmental Reliability
Ruggedly designed and tested to MIL-STD-810 and IP-67/IP-68 standards, designed to withstand 30 minutes of water immersion at a depth of 1m.

DHS P25 CAP Approved
DHS P25 Compliance Assessment Program tested and approved public safety grade (TIA Class A).

GPS/Location Services
P25 radio authentication per TIA-102-BAJB are supported. Tier I Conventional, Tier II Trunking.

Robust Receiver & Simulcast Operation
Improved range and less susceptibility to interference. C4FM and CQPSK modes for robust performance in simulcast systems (including LSM).

Internal Bluetooth Hardware
Wireless Bluetooth is a programmable option for wireless accessory connectivity

5000 Channels, Dynamic Grouping
5000 Channels, Dynamic Grouping Custom-tailored user groups can be programmed into the BLP650 Series by radio users and can also be field changed or reprogrammed whenever necessary.

Scan Modes
Dual priority, trunked priority, and dual mode scan.

Enhanced Analog Signaling
The BLP650 Series radios provide complete MDC1200 Signaling send and receive, including paging and duress/emergency. Also provided are analogue 2-tone, DTMF encode and decode capabilities, and limited 5-tone functionality.

NIST FIPS-140-2 Certification
The BLP650 Series employ a NIST certified cryptographic module.

Multi-Key/Algorithm & Encryption Key Fill
Multi-key/multi-algorithm encryption and over-the-air (OTA) rekey. Encryption key fill is TIA-102-AACD compliant and interoperable with commercially available keyfill devices. Recommended keyloader is our BKL5000.

Enhanced Control Lock
Radio programming software now allows specific radio controls to be locked out when the control lock function has been activated. Users can selectively include any of the following to be included: Keypad, Side Buttons, Emergency, Toggle Switch, Collar Switch, Channel Knob and PTT.

P25 Signalling Direct from Portable
Features commonly available via P25 consoles are now available directly from the BLP650 Series Portable. Key features implemented include Duress, Radio Inhibit, Radio Uninhibit, and Manual Entry & Predefined Text Messaging.

Room to Grow
Currently uses less than 20% of available memory processor cycles, allowing for future expansion and versatility.

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BLP650 Overview & Functions

CHANNEL / ZONE SELECT

COLLAR SWITCH

POWER / VOLUME

UHF / VHF ANTENNA

LED INDICATOR

DURESS BUTTON

» Receive
(Flashing) » Busy Channel
» Transmit
» Flash Mode
(Flashing) » Low Battery

PROGRAMMABLE TOGGLE SWITCHES

Large, clear buttons and top mounted LED allow for easy operation and radio status confirmation at a glance - even in a carry case, or attached to a belt.

Side View

Standard Battery

High Capacity Battery Option

ENLARGED RX SPEAKER PROVIDES SIGNIFICANTLY LOUDER AUDIO

ENLARGED COLOUR LCD DISPLAY VIEWABLE AT WIDE ANGLES & ALL LIGHT CONDITIONS

PUSH-TO-TALK

PROGRAMMABLE BUTTONS

KEYPAD (BLP650A)

MIC

ACTUAL SIZE

RXD
155.80500
Douglas Co Area
01/17/00 07:30
ZONE HOME LITE MENU

63(w) x 140(h) x 46(d)mm

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BLP650 Specifications

Model Number	BLP650V	BLP650U1	BLP650U2	BLP650U3
Part Number	0113126	0115160	0115161	0115162
Frequency Range	136 - 174 MHz	380 - 470 MHz	440 - 520 MHz	763 - 870 MHz
Channel Capacity	5000			
Display	1.77" (45mm) 6 Line Fully Colour Backlit Display, 3 customisable lines of 16 characters			
Memory	64MB Volatile / 256MB Flash			
Dimensions	63 x 46 x 140 mm			
Weight (Including Battery)	454 g			
Operating Temperature	-30℃ ~ +60℃			
RECEIVER				
Channel Spacing	6.25/12.5/25/30 kHz	6.25/12.5/25 kHz	6.25/12.5/25 kHz	6.25/12.5/25 kHz
Maximum Frequency Separation	Full Band			
Audio Output Power at Rated	500 mW			
Frequency Stability	±.00015% (-30C to +60C, +25C Reference)			
Sensitivity - 12 dB SINAD - 1% BER 5% BER	0.200 µV	0.250 µV	0.250 µV	0.250 µV
Selectivity - 25 KHz -12.5 KHz	80 dB	78 dB	77 dB	75 dB
Intermediation	-78 dB	-75 dB	-75 dB	-75 dB
Spurious Rejection	-80 dB	-80 dB	-80 dB	-75 dB
FM Hum & Noise	-50 dB (25KHz) / -44 dB (12.5KHz)			
Audio Distortion	1%			
TRANSMITTER				
Channel Spacing	6.25/12.5/25/30 kHZ	6.25/12.5/25 kHZ	6.25/12.5/25 kHZ	6.25/12.5/25 kHZ
Maximum Frequency Separation	Full Band			
Rated RF Output Power	5 / 1 W	5 / 1 W	5 / 1 W	3 / 1 W
Frequency Stability	1.5 PPM			
Modulation Deviation	c	5 (2.5) KHz	5 (2.5) KHz	5 (2.5) KHz
Spurious and Harmonics	75 dB			
Audio Response	+1, -3 dB			
FM Hum & Noise Audio Distortion	-50 / -44 dB	-50 / -45 dB	-50 / -45 dB	-50 / -45 dB
Audio Distortion	3%			
ENCRYPTION				
Supported Algorithms	AES-256, AES-128, DES-OFB, DES-CFB, ADP			
Algorithm Capacity	Unlimited			
Encryption Keys	3%			
Frame Re-sync Interval	P25 Common Air Interface 300mS			

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BLP650 Specifications

Keyloading	IAW TIA-102-AACD (KVL-3000/4000)
Synchronisation	OFB - Output Feedback or CFB - Cyber Feedback
Vector Generator	NIST Approved Random Number Generator
Type	Digital Encryption
Key Storage	Programmable volatile / Non-volatile
Key Erasure	Keyboard Command and KMF
Standards	FIPS-140-2 Level 2, FIPS-197
SIGNALLING	
Channel Spacing	9.6Kbps (FDMA) / 12Kbps (TDMA) / 1.2Kbps (MDC)
Digital ID Capacity	16,777,216 (Conventional and Trunking)
Network Access Codes	4096 per TIA-102
P25 Talk Group Ids	65,535 (Conventional and Trunking)
Error Correction	Soft Decision, Golay, BCH, Reed-Solomon
Modulation	FM, C4FM, C-QPSK, H-CPM, H-DQPSK
CERTIFICATIONS	
FCC Emission Designators	11K0F3E, 16K0F3E, 8K10F1D, 8K10F1E, 8K10F1W, 20K0F1E
P25CAP Performance	Trunked and Conventional Performance Class A
P25CAP Interoperability	Motorola, Harris, EFJohnson, Tait/Cassidian, Daniels

BLP SINGLE BAND RADIO ACCESSORIES
AUDIO ACCESSORIES

SPEAKER MICS

HEADSETS

07814B2 — IP67

07814DB2 — IP67 Duress

07814GB2 — IP67 GPS & Duress

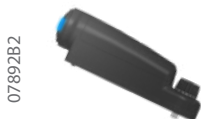078211B2 — Single Wire Surveillance Kit

07860MH — Bone Conduction with in-line PTT

07864 (Headset) 07816B2 (Mic) — Breathing Apparatus & Speaker Mic

WIRELESS INTERFACE

07892B2 — Bluetooth Dongle

07817B — M12 — Bluetooth Speaker Mic

07840B — M12 — Bluetooth PTT / Headset Interface

07832M12 — Flexible D Listen Only (for 07816B & 07840B)
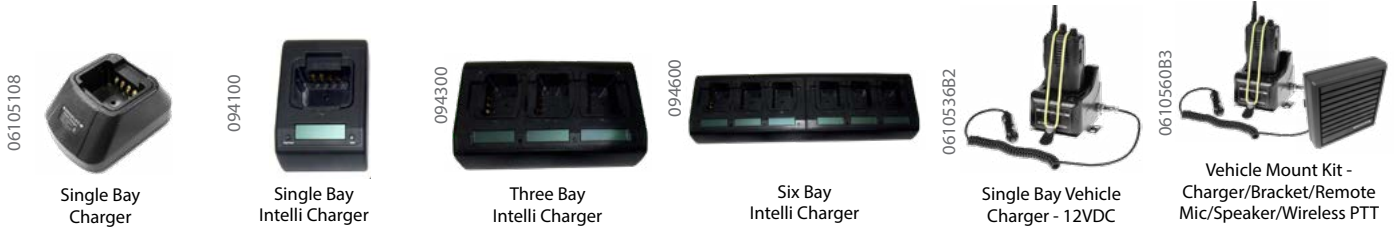
07862M12 — Ear Bone Mic Headset (for 07816B & 07840B)

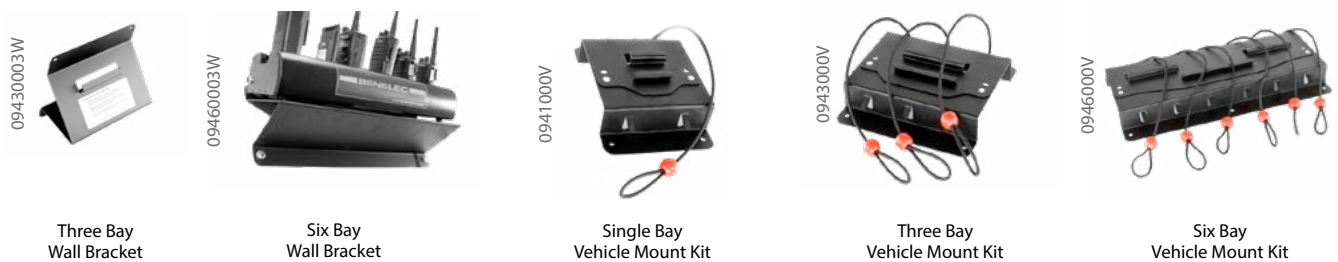078521H — Peltor Bluetooth High Noise Headset

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BLP Single Band Radio Accessories

POWER ACCESSORIES

BATTERY CHARGERS

06105108
Single Bay
Charger

094100
Single Bay
Intelli Charger

094300
Three Bay
Intelli Charger

094600
Six Bay
Intelli Charger

0610536B2
Single Bay Vehicle
Charger - 12VDC

061056 0B3
Vehicle Mount Kit -
Charger/Bracket/Remote
Mic/Speaker/Wireless PTT

WALL MOUNTING

09430003W
Three Bay
Wall Bracket

09460003W
Six Bay
Wall Bracket

0941000V
Single Bay
Vehicle Mount Kit

0943000V
Three Bay
Vehicle Mount Kit

0946000V
Six Bay
Vehicle Mount Kit

BATTERIES

06104 521B
Intelli Smart Li-Ion
2300mAH battery

06104522
3600 mAH
Li-Ion

061045201
Intrinsically Safe
2300mAH Li-Ion

06104523
Clamshell
Backup

094600062
3m Vehicle DC Cable
Hard Wire Kit (Multi Bay Chargers)

RADIO ACCESSORIES

131350
BKL5000
Programming/Key Loader Kit

0631234(U1)(U2)(U3)(V)
Replacement
UHF/VHF Antenna

063123UJ
Replacement
UHF/VHF Stubby Antenna

0620625C
BLP Radio
Programming Kit

0620298
ASK
(Advanced Security Key)

CARRY CASES

06107307N
Heavy Duty Security
Nylon & Belt Loop

06107307
Security Leather,
Belt Clip & Loop (full keypad)

06107308
Security Leather,
Belt Clip & Loop (4 keypad)

COLOUR HOUSING OPTIONS (MOQ 1000PCS)

0630510Y

0630510O

0630510B

0630510R

0630510G

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BLP900 - P25/LTE Terminal

MULTIBAND - VHF+UHF+LTE
SINGLE VHF/UHF

KEY FEATURES

- Frequency Bands:

  VHF 136 - 174MHz

  UHF 380 - 520MHz

- PTT over Cellular
- P25 CAI Phase 2 TDMA
- 1/3/5W Output Power
- 5000mAH Li-Ion battery
- 5000 Channels
- P25 Trunking Option Phase 1 & 2
- Vote Scan Option
- P25 Signalling Radio to Radio
- Enlarged Colour LCD Display
- Top LCD Display
- Integrated GPS
- Integrated Bluetooth Interface
- Integrated WiFi Wireless Interface
- Display Viewable at Wide
- Angles & All Light Conditions
- Enlarged Rx Speaker Provides Improved Audio
- Meets MIL SPEC 810 G
- IP68 Rated

CHANNEL / ZONE SELECT

POWER / VOLUME

SPEAKER

MIC

PUSH-TO-TALK

CONFIGURABLE BUTTONS

ALPHANUMERIC KEYPAD

TOP LCD DISPLAY

LARGE DURESS BUTTON

BENELEC 3 YEAR WARRANTY GUARANTEE

PoC PTT over Cellular

lte

Ex

Bluetooth

IP68

GPS

WIFI

AES 256

AMBE+2 ENHANCED DIGITAL VOCODER

MADE IN AMERICA

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BLP6000

P25 PROFESSIONAL MOBILE RADIO
PHASE 2 TDMA 5000 CHANNELS

KEY FEATURES

- Frequency Options:
    - VHF 136 - 174MHz
    - UHF 380 - 470MHz
    - UHF 440 - 520MHz
    - UHF 763 - 870MHz
- P25 CAI Phase 1 FDMA
- 5/25W Output Power
- P25 Trunking Option
- Vote Scan Capability
- Multi-Mode Operation

- Colour Touchscreen
  w/ Universal Interface
- CAP Certified
- NIST AES 256Bit & DES/OFB Encryption
- Authentication
- IP54 Environmental Rating
- MIL STD 810 C/D/E/F/G
- Tailor Your Mobile Solution - Mix & Match
  Control Options

MOBILE RADIO

HAND CONTROLLER

SMART CONTROL

REMOTE HEAD

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BLP6000 Features

Innovative Colour Touchscreen
The BLP6000's responsive touch-screen provides unparalleled levels of end-user customisation, ease of use, and expansion, as new technologies are integrated with Project 25 standards. It features status icons, three customisable display lines of 14 characters, and soft key legends.

Enhanced Voice Quality
A third generation enhanced IMBE P25 dual rate vocoder (AMBE+2 V1.80) provides robust performance even in noisy environments. Software-based noise cancellation preserves situational awareness lost with dual microphone systems.

Mixed-Mode Operation
Whether analog or digital, the BLP6000 Series will Rx in either mode, and Tx back in the same mode.

Flexible Control Options
The BLP6000 can be configured for 1, 2 or 3 control options. These can be a dash-mount, remote head, and/or hand controller.

Environmental Reliability
Ruggedly designed and tested to MIL-STD-810 and IP-54 standards.

DHS P25 CAP Approved
DHS P25 Compliance Assessment Program tested and approved public safety grade (TIA Class A).

GPS/Location Services
P25 radio authentication per TIA-102-BAJB are supported.

Robust Receiver & Simulcast Operation
Improved range and less susceptibility to interference. C4FM and CQPSK modes for robust performance in simulcast systems (including LSM).

5000 Channels, Dynamic Grouping
Custom-tailored user groups can be programmed into the Benelec mobile by radio users, and can also be field changed or reprogrammed whenever necessary

Scan Modes
Dual priority scan, trunked priority scan, and dual mode scan.

USB or Mobile Programmability
Program the Benelec Mobile out in the field in minutes using the easy to use customisable menu system, or simply plug in your laptop via the USB port on the front of the unit.

Talk Around
This feature allows you to bypass or "talk around" a repeater for a direct connection.

Birdie Free
Benelec goes the extra mile to create a truly birdie free radio, which means there are no blacked out frequencies on our mobile.

256 Programmable Quick Call IDs
Connect with select radio users easily and ASAP through Benelec's Quick Call function.

Busy Channel Selections
Designed to prevent other radio communications and interference on channels being used.

Problem Prevention Features
The keypad lock prevents you from accidentally hitting a button that may activate functions unintentionally.

NIST FIPS-140-2 Certification
The BLP6000 Series employ a NIST certified cryptographic module.

Multi-Key/Algorithm & Encryption Key Fill
Multi-key/multi-algorithm encryption and over-the-air (OTA) rekey. Encryption key fill is TIA-102-AACD compliant and interoperable with commercially available keyfill devices. Recommended keyloader is our BKL5000.

Room to Grow
Currently uses less than 20% of available memory processor cycles, allowing for future expansion and versatility.

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BLP6000 Specifications

BLP6000 Model Number	BLP6000V(P)	BLP6000U1(P)	BLP6000U2(P)	BLP6000U3(P)
BLP6000 Part Number	0113230(P)	0115237(P)	0115238(P)	0115239(P)
Frequency Range	136 - 174 MHz	380 - 470 MHz	440 - 520 MHz	763 - 870 MHz
Channel Capacity	5000(BLP6000)			
Display	Alpha-numeric Touchscreen (TFT)			
Memory	64MB Volatile / 256MB Flash			
Dimensions	63 x 165 x 215 mm			
Weight	3.4 kg			

RECEIVER

Channel Spacing	6.25/12.5/25/30 kHZ	6.25/12.5/25 kHZ	6.25/12.5/25 kHZ	6.25/12.5/25 kHZ
Maximum Frequency Separation	Full Band			
Audio Output Power at Rated	13W			
Frequency Stability	±.00015% (-30C to +60C, +25C Reference)			
Sensitivity - 12 dB SINAD- 1% BER 5% BER	0.200 µV	0.250 µV	0.250 µV	0.250 µV
Selectivity - 25 KHz -12.5 KHz	80 dB	78 dB	77 dB	75 dB
Intermediation	-78 dB	-75 dB	-75 dB	-75 dB
Spurious Rejection	-80 dB	-80 dB	-80 dB	-75 dB
FM Hum and Noise	-50 dB (25KHz) / -44 dB (12.5KHz)			
Audio Distortion	3%			

TRANSMITTER

Channel Spacing	6.25/12.5/25/30 kHZ	6.25/12.5/25 kHZ	6.25/12.5/25 kHZ	6.25/12.5/25KHz
Maximum Frequency Separation	Full Band			
Rated RF Output Power	5 / 25 W			
Frequency Stability	±.00015% (-30C to +80C)			
Modulation Limiting	±5 / 2.5 KHz	±5 / 2.5 KHz	±5 / 2.5 KHz	±5 / 4 / 2.5 KHz
Emissions	-75 dB (Conducted and Radiated)			
Audio Response	+1, -3 dB			
Emissions	-75 dB (Conducted and Radiated)			
FM Hum and Noise	-50 / -44 dB			
Audio Distortion	3%			

ENCRYPTION

Supported Algorithms	AES-256, AES-128, DES
Algorithm Capacity	Unlimited
Encryption Keys	64 SLN / CKR

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BLP6000 Specifications

Frame Re-sync Interval	P25 Common Air Interface 300mS
Keyloading	IAW TIA-102-AACD (KVL-3000/4000)
Synchronization	OFB - Output Feedback
Vector Generator	NIST Approved Random Number Generator
Type	Digital Encryption
Key Storage	Non-volatile
Key Erasure	Keyboard Command and KMF
Standards	FIPS-140-2, FIPS-197

SIGNALLING

Channel Spacing	9.6Kbps (FDMA) / 12Kbps (TDMA) / 1.2Kbps (MDC)
Digital ID Capacity	16,777,216 (Conventional and Trunking)
Network Access Codes	4096 per TIA-102
P25 Talk Group Ids	65,535 (Conventional and Trunking)
Error Correction	Soft Decision, Golay, BCH, Reed-Solomon
Modulation	FM, CSFM, C-QPSK, H-CPM, H-DQPSK

GPS

Channels	50
Tracking Sensitivity	<-155 dBm
Accuracy	<6m (95%)
Cold Start	<32sec (95%)
Hot Start	<1sec (95%)
Mode of Operation	Autonomous (Non-assisted) GPS

POWER

Power Supply	13.8V DC ± Negative Ground
Transient Protection	Per EIA-374-A
Standby Current	0.15A (@ 13.8V)
Receive Current Rated Audio	2.5A (@ 13.8V)
Transmit Current Rated Power	6.5A

CERTIFICATIONS

FCC Emission Designators	11K0F3E, 16K0F3E, 8K10F1D, 8K10F1E, 8K10F1W, 20K0F1E
P25CAP Performance	Trunked and Conventional Performance Class A
P25CAP Interoperability	Motorola, Harris, EFJohnson, Tait/Cassidian, Daniels

BLP6000 Advanced Options

Project 25 9600 Baud Trunking

The Benelec 9600 Baud Trunking option gives you the ability to communicate without hassle or complication. Compatible with competitor Trunking systems, Benelec Wireless Trunking is P25 compliant and loaded with features, such as encryption and many unit-to-unit specialisations. Best of all, you get Benelec's ease of use; our intuitive software makes modifying your trunking features simple.

OTAP Capability

Over-the-air programming can be implemented via P25 trunking systems. Radio profiles can now be updated on the fly with this option.

OTAR Capability

Over-the-air rekeying is an easy solution to efficiently change encryption keys. Completed almost effortlessly, encryption keys are changed over the air with the touch of a button

Multicast Vote Scan

Multicast Vote Scan capable BLP4000/BLP6000 Mobile radios automatically select the best site to operate from in a wide area system. Channels in the multicast conventional system are added to the scan list and designated as "voted" channels. The BLP4000/BLP6000 radio scans all voted channels and selects the channel with the best signal.

AES/DES Encryption

AES and DES-OFB (Digital Encryption Standard) allows you to communicate with other radios that have the specific key programmed. Benelec's AES/DES Encryption is NIST certified, validated FIPS 140-2 Type III encryption with a 256 bit key load. Keys are managed via KVL4000/BKL5000 key loaders.

ASK (Advanced Security Key)

The mobile radios can be configured with Benelec's ASK solution, providing visibility & security around the profiling of radios. As required by government managed P25 trunking networks.

REMOTE CONFIGURATION OPTIONS

DASH MOUNT

With in-built touchscreen and smart controller.

REMOTE HEAD

CHOOSE A MOBILE BODY

SELECT 1 OR 2 REMOTE OPTIONS

CONCEALED BODY

When a direct radio interface is not required

HAND CONTROLLER

![BENELEC - Innovative Radio Technology]

REMOTE HEAD

0620650

- Compatible with BLP4000 & BLP6000 Mobiles
- Vivid, Full-Colour Touchscreen
- 5 Line Display Featuring:
  - » Status icons
  - » 3 Customisable Display Lines (14 Char)
  - » 4 Programmable Touch Keys
  - » Menu Touch Key
- Easy to Navigate Interface is Universal Across the Radio Mobile Range
- Dash & Remote Mount Configurations
- Multiple Remote Heads Supported
- USB Programming Port
- Dual 15 Watt External Speaker Outputs per Remote Head

CHANNEL SELECT
POWER / VOLUME
DURESS
SELECT
MENU NAV
HOME
USB PORT
MIC JACK
COLOUR TOUCHSCREEN

Display showing: DIBP Zone 1 / Torres Sec 1 / UID 1000 / SEC / T/A / CHAN

HAND CONTROLLER

0620652

- Compatible with BLP4000 & BLP6000 Mobiles
- Labelled & Colour Coded for Easy Identification
- Vivid, Full-Colour Touchscreen
- 5 Line Display Featuring:
  - » Status icons
  - » 3 Customisable Display Lines (14 Char)
  - » 4 Programmable Touch Keys
  - » Menu Touch Key
- Easy to Navigate Interface is Universal Across the Radio Mobile Range
- Built-In Microphone
- Built in Speaker (On Reverse Side)
- USB Programming Port
- Smartphone-Style Contextual Display
- Large, Backlit Programmable Navigation Buttons
- Long, Rugged 6" Coiled Cable

COLOUR LABELS
COLOUR TOUCHSCREEN
MIC
REAR SPEAKER
USB PORT
PROGRAMMABLE KEYS
NAVIGATION BUTTONS

Display showing: DIBP Zone 1 / Torres Sec 1 / UID 1040 / MENU / SEC / T/A

REMOTE DESK CONSOLE

PART#514008

- Goose Neck Microphone W/ PTT
- Telephone Handset W/ PTT For Privacy when Required
- Integrated Speakers
- Integrated 7" Touch Screen Windows 10 Computer
- Full Remote Control Of P25 Mobile Radio via Soft Radio Interface
- Up To 200 Meters Distance Between Desk Controller And Mobile Radio via Cat-5/6
- Optional Gps Console for Location Services
- Programmable Buttons for Tailored Requirements

FIXED BASE

PART# 514002

- Integrated BLP6000 Mobile
- Integrated 240VAC Linear PSU
- Integrated Backup Battery
- Battery Status Level LED Indicator
- Integrated EMP protector
- Integrated Speaker
- External Antenna Option
- Benelec P25 Signalling Console Software (BPSC)

BLP6000B

MARINE HOUSING

PART# 514003P

- Panel Surface Mounted Option
- Dashtop Mounted Option
- IP65 Rating Protects Remote Head Option from Dust & Jets of Water
- Rugged Stainless Steal & Delrin Construction
- IP67 Duress Speaker Mic
- Remote External Mic Socket
- Sealed IInterface Throughout

19" RACK MOUNT

PART# 514007P

- 2Ru Rack Mount Enclosure
- Integrated Ac Power Supply
- Integrated Speaker
- Dashtop Mounted Radio
- Microphone Clip Fitted

TRANSPORTABLE BASE

PART# 514006

- Integrated BLP6000 Mobile
- Integrated 240VAC or 12VDC Power Supply
- Internal Antenna
- External Antenna Option
- IP54 Rated (When Closed)
- Integrated Speaker
- External DC Socket
- DC Lighter Plug/Battery Cable Kit

BLP6000 Optional Accessories

0620652

Remote Hand Controller

0620112

Smart Controller

0620625K2

USB Radio Programming Kit

0620298

ASK (Advanced Security Key)

0620650

Remote Head

09210

Desktop Power Supply 240VAC

0620601

BLP4/6000 DC Replement Cable Set

602002

BPSC P25 Signalling Software

02636T

Mobile Covert Antenna 400-420MHz

131350

BKL5000 Programming/Key Loader Kit

0620110

Standard Mic

026802

Base Broadband 2 Stack S/S Dipole 360-520MHz

02680

Base Broadband Folded S/S Dipole 360-520MHz

514003

IP65 Marine Housing Panel Mount

02633R

Mobile 1/2 Wave Dipole 400-420MHz

02631R

Mobile Elevated Feed 3.0db Dipole 400-420MHz

02634UMC

Mobile Broadband Antenna 380-450MHz

02635R

Mobile Elevated Feed 6.5db Collinear 400-420MHz

514002

Fixed Base Enclosure Housing Kit with PSU & Battery

BENELEC
Innovative Radio Technology

BLPR2500

IP65 | LTE | AES 256 | WIFI | GPS | P25 | 3 YEAR WARRANTY GUARANTEE

P25 PORTABLE
GATEWAY BASE REPEATER

KEY FEATURES

- Fixed Base or Repeater Operation
- Integrated Speaker and Microphone
- P25 Conventional Repeater via Software Defined Radio Platform
- Continuous 25w Use with the Lid Closed
- Full Broadband Coverage, with 256 Programmable Channels
- No In-field Tuning or Aligning: IP Remote Upgrade
- Network Management via SNMP
- Base P25/Analog Voting over IP
- Analog/digital Auto Sense
- P25/Analog Networking over IP via DFSI Interface
- Integrated Compact Diplexer
- LiFePO4 15AH 13.8VDC Internal Battery (w/ Protection and charging circuitry)
- 100-240V AC Input via Integrated AC Supply
- 10-40V DC Input
- Power Management Circuitry
- Optional WiFi and LTE/4G IP Interface
- IP65 Environmental rating with the lid closed
- Voice Status Indication
- Compact size: 510 x 350 x 175mm
- Light Weight: <13Kg

DC IN | 4G TNC | UHF Ns | AC IN

BENELEC
Innovative Radio Technology
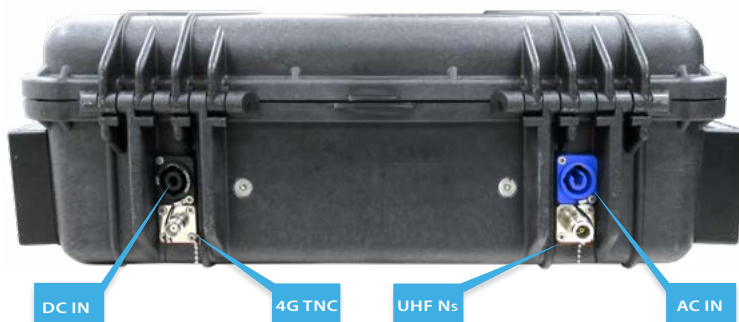
BLPR2500 Specifications

Model Number	BLPR2500V	BLPR2500U1	BLPR2500U2	BLPR2500U3
Part Number	01148p1	01168P1	01178P1	01188P1
Band	136 - 174MHz	380 - 420MHz	400 - 440MHz	440 - 480MHz
Channel Spacing	12.5 & 25 kHz Software Programmable			
Dimensions	510 x 350 x 175mm			
Weight	<13kg			
Channel Capacity	256 channels BCD coded 0 – 255			
Tone Squelch	Fully Programmable, one EIA Tone per Channel			
Programming	Windows or Linux, through Serial Port, USB or Ethernet			
Software	IP Commander			
Test & Diagnostics	Front Panel Test Connector USB, via Ethernet and ALM, SQ, TX, PWR LEDs			
Audio Response:	Selectable flat or 750uSec pre/de - Emphasis			
Audio Interface:	Standard 600 Ohm 0dBm Balanced and Hi - Z Unbalanced			

RECEIVERS

Frequency Stability:	1 ppm Standard (TCXO) Temp -30 to +60C
Frequency spread 1dB degradation:	38 MHZ
Sensitivity:	0.25 uV (119 dBm) for 12 dB Sinad, 0.35 uV (-119 dBm) for 20 dB Quieting
Spurious & Image Rejection	90 dB
Selectivity:	80 dB at 25 KHz spacing per RS -204 -C, 7 5 dB at 12.5 KHz Spacing
Inter-modulation	80 dB p er RS -204 -C
Modulation Acceptance:	7.5 and 3.75 KHz
Squelch:	Software adjustable from 6 to 26 dB Sinad Carrier Squelch, Adjustable from 1 to 200 uV
Audio Response:	+1 to 3 dB 300 to 3000 Hz
Audio Level:	600 Ohm Line Adjustable from -10 to +10 dBm Monitor Output, 3 Watts @ 4 Ohms. Discriminator & Subtone Output 1 V Peak at 100% System Deviation
Audio Distortion:	Less than 3% at 1KHz, 60% System Deviation w/ 750 uSec De-Emphasis
COS Output:	Opto-Coupled +12V, GND and Free Switch Connections
Diagnostics:	VCO Unlock, Tuning Voltage, Signal Strength, External Mute, Alarms and Supply

POWER AMPLIFIER

Output Power (Adjustable)	5/25 watts switchable
Protection:	Automatic power reduction w/ high VSWR and temperature
Spurious & Harmonics:	Less than 0.25 uW

EXCITERS TRANSMITTERS

Standby (RX active):	1 amp
Full power RX/TX active:	9.5 amp

BLPR2500 Specifications

EXCITERS TRANSMITTERS	
Frequency Spread:	Full band
Frequency Stability:	+/- 1 ppm
Power output adjustable:	0.5 to 5 Watt
Power regulation:	+/- 10% from 12 -16 Vdc, 0 to 50 deg C, all channels
Duty Cycle:	100% to 40 deg C. Temp -30 to +60C
Attack Time:	20 mSec
Spurious and Harmonics:	Less than -36dBm (0.25 uW)
Audio Response:	+1 to -3 dB 300 to 3000 Hz
Audio Distortion:	Less than 3% at 60% system deviation at 1KHz
Residual Hum & Noise relative to 60% System Deviation:	Less than -50dB
Audio Input Level:	600 Ohm line, - 30 to +10 dBm Hi -Z input, 25 mV to 1 Vrms Subtone input compatible with receivers Test microphone, 6mV rms at 200 Ohms
Remote Keying:	DC Opto-coupled Input
External Ref. Option:	Allows the transmitter to be phase locked to an external 1 MHz reference
Diagnostics:	VCO Unlock, tuning voltage, signal strength, external mute, alarms and supply voltage via password protected via IP Commander software

INCLUDED ACCESSORIES

Duplexer with slot

AC Cable 1.8m

Easy Guide

Instructions

Magnetic Antenna Base with N Plug 5m

Ground Independent Vertical Dipole

DC Fused Cable Kit Cigarette Lighter and Battery Clamps

BENELEC
Innovative Radio Technology

BLPR2500 Features

- Remote diagnostics over Ethernet
- Radio over IP (VoIP)
- In Base voting over IP
- (No Central Comparator required)
- TIA APCO P25 AFSI/DFSI compliant
- SNMP and syslog functionality
- P25 advanced conventional
- Software configurable
- Analogue and P25 auto detect
- Field proven robust hardware
- Full duplex base station or repeater
- Software upgradeable to P25
- dPMR/DMR ready
- Local voice reporting
- Individual channel profiles
- Alarm reporting over the air
- Multisite networking over IP
- Smart signal & noise detection
- Self-calibration in real time
- External reference input for
- Simulcast/paging
- Remotely configurable via IP

- Front panel mounted USB programming socket
- Flash firmware upgrade capable
- Remote IP firmware rollback safeguard facility
- Upgradeable to 6.25Mhz spacing
- Broadband high efficiency LDMOS PA module
- Programmable IO for added equipment
- RX & TX switching BW covers full sub band
- Cross band capabilities
- Low RFI and EMI emission design
- Low current consumption with full operating system ideal for solar sites
- Advance security features
- Network reporting & alarms using RFT-g
- Latest technology, full SMD
- Advanced and optimized RF design
- Fast & simple disassembly for service
- Minimal technician adjustments for future maintenance
- Built on proven technology
- Virtual elimination of internal wiring
- 100% Duty cycle

BLPR2500 Optional Accessories

028310K

Light Weight
Stand Alone/Guided 8m Mast Kit

Heavy Duty Hurry Up 9.15m Mast]
with Vehicle Anchor

17310X

Compact UHF Channel Diplexer

Additional External Battery

131350

BKL5000
Programming/Key Loader Kit

Antenna

• 02461A 820 - 960 & 1710 - 2500MHz Cellular Unity Gain 3G Mast
  Mount Antenna

• 02633QC UHF 1/2 Wave 380 - 450MHz

• 02633 UHF 1/2 Wave 450 - 520MHz
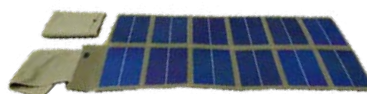
• 02515C VHF 1/2 Wave 148 - 174 MHz

024584 Cellular 5G
Antenna

02728 Mounting Bracket

12m Low Loss Cable
Np to Np

Portable Solar Charging Kit
50W

4G/Wifi IP Linking Gateway

BENELEC
Innovative Radio Technology

Wireless Intercoms

BWI950 – WIRELESS INTERCOM

BWI900 – WIRELESS INTERCOM

WIRELESS DECT SYSTEM

FULL DUPLEX

BENELEC
Innovative Radio Technology

BWI950

IP67

BENELEC 3 YEAR WARRANTY GUARANTEE

Long Range Wireless Intercom (Part# 01191Q1)

DUPLEX No base, Unlimited Listeners

Various Operational modes: Hands Free Full duplex, PTT when PTT is integrated and Listen Only

Crystal clear audio, Noise Cancellation Circuitry

Up to 2000m communication range between radios

Enhanced D.C.M Encryption

IP-67 waterproof, shockproof and robust design

Li-PO rechargeable battery, USB charging (1.5hours)

Detachable antenna
Up to 8 hours Talk time, 10 hours listen time.

Compact Size: 91(h) x 48(w) x 15(d)mm
114(h) x 54(w) x 30(d)mm (with rubber case)

FEATURES

Bluetooth Connectivity

Atex version option

Unlimited Listeners
Unlimited number of listeners in a group. 3 Users able to talk simultaneously while others listen.

Up to 2000m Transmission Range
Up to 2000m communication range between radios

IP 67 Waterproof & Shockproof
Heavy duty and robust, complete water and shockproof design, including the detachable antenna.

Customisable & Compact
Various colour skins available. Ultra-light weight (80g) and super compact (fits into uniform pockets).

Various Operation Modes
Various operation modes available: Hands Free Full Duplex, PTT and Listen Only modes.

Encryption
Advanced D.C.M Encryption is provided with each radio.

Mobile Security Companion App
Enhances safety features of the Safety Pack & provides easy access to the radio parameter. App includes: Automated/voluntary calls, Beep-to-Call, Man-Down Alerts, GPS Location, Remote Control Interface & Automated Alert System.

Wireless Headset Version

114(h) x 54(w) x 30(d)mm

ACTUAL SIZE

TALK VOL:8
CH:2 KIT:854
Menu

No More Push-To-Talk!

INCLUDED ACCESSORIES

09121420
USB 5v AC Power Supply with US & AU Interchangeable Plugs

Protective Silicone Skin

0620635C
USB Charging Cable

0631237
BWI950 1/4 Wave Stub Antenna

BWI950

BWI950 RANGE

Model	Original Wireless Intercom	Atex Version	Wireless Headset Version
Part Number	01181Q1	01181Q1I	01181Q1H
Product Image			

MOBILE SECURITY COMPANION APP

MOBILE APP FOR SECURITY

The Mobile Security Application enhances the features of the Safety Pack & provides easy access to radio parameters. It gives you convenient remote access to your radio through your mobile device.

KEY FEATURES

- Automated or voluntary calls from non-covered areas
- Beep-to-Call central operation for external support
- Man-Down Alerts (text, emails with timestamps)
- Remote Control Interface
- Instant Automated Alert System
- GPS Location

Multiple Skin Colour Options Available

BENELEC
Innovative Radio Technology

BWI950

OVERVIEW & FUNCTIONS

BA + SCBA + CBRN

Suitable for applications with Breathing Apparatus, Self Contained Breathing Apparatus Apparatus & Chemical Biological, Radiological or Nuclear equipment

GAS DETECTOR INTERFACE

MSA AHair4XR connection to gas detector for a vocal alert both to the user and its team.

COVERT TEAMS

Tiny compact light radio
Secure Digital Platform – spread spectrum
Full Duplex – NO PTT required all in NET
Integrated wireless clarity headset
Integrated neck loop w/ wireless RX ear piece

NECK LOOP

WIRELESS SPEAKER

MICROPHONE

EMERGENCY RESPONSE

Suited for all environments

DEFENCE

SPR, Solider Personal Radio, Crew Communications, Full Duplex

BENELEC
Innovative Radio Technology

BWI950

SPECIFICATIONS

Dimension	91 x 48 x 15 mm (3.6" x 1.9" x 0.6")
Weight	80 g (3 oz)
SAR	1.1~1.24 W/kg
Frequency Range	915-928 MHz FHSS (License free AU band)
Modulation	FM
Emitted Power	<500 mW
Range Between Devices	Up to 2000 m (LR Channel, 2 dBi Antenna)
Noise Cancellation	DSP Based Noise Cancelling Function
Encryption	Enhanced D.C.M Encryption
Num. of Frequency Channels	16 Channels
Users per Network	Unlimited
TX User Limit	3 Users Talking Simultaneously
RX User Limit	Unlimited
Talk Distance	1000 m typical
Battery Type	Lithium Polymer 3.7 v Rechargeable
Battery Operating Time	Up to 9 Hours (Talk Mode) or Up to 10 Hours (Listen Mode)
Battery Charging Time	1.5~2 Hours (Wall Plug)
Operating Temperature Range	-10/+50 °C (-10/+60 °C ATEX version)
Environmental Rating	Waterproof IP67 & Shockproof IK8

OPTIONAL ACCESSORIES

07860L
Bone Conduction Intra-ear Headset M3hD Right Ear/2HP

0784233
Tempest 2 Light Duty Audio Headset

0784233L
Tempest 2 Light Duty Audio Headset Latching PTT Inline

0784235A
Skippy Dual Ear Heavy Duty Light Headset

07842L
Bluetooth Noise Cancelling Side Audio Headset

07860B
Light Weight Bluetooth Bone Conductor Headset

078151L
Remote Speaker Mic, Amplified RSM90

0610766L
Holster with Splitter & Power Pack Battery 6000mAh

991102
Lithium Polymer Battery

090705420
Dual USB 4.8Amp 12 VDC Adaptor

512NJJLE2
Large Transport Case

0610765L
Arm Band

ATEX HEADSETS PROVIDED ON REQUEST

BENELEC
Innovative Radio Technology

BWI900

Wireless Intercom (Part# 01191Q2)

IP65

BENELEC 3 YEAR WARRANTY GUARANTEE

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.

ACTUAL SIZE

INCLUDED ACCESSORIES

Carry Case with Foam Insert

0631235 BWI900 Full Dipole
0631236 BWI900 1/4 Wave Stub

0620635C
USB Charging Cable

09121420
USB 5v AC Power Supply with US & AU Interchangeable Plugs

06105109
Battery x 3

BENELEC
Innovative Radio Technology

BWI900

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 Channels	26 Channels / Talk Groups
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

TALK MODE SELECTION DUPLEX/SIMPLEX PTT

RED LED: CHARGING STATUS

BLUE LED: DEVICE OPERATING STATUS

OLED SCREEN

VOLUME UP

VOLUME DOWN

FEATURE SELECT
- TALK GROUP
- UNITY ID
- SIDE TONE
- MIC GAIN
- ENCRYPTION CODE

POWER ON/OFF

PTT

USB MICRO B PORT FOR CHARGING & FIRMWARE UPDATE

HEADSET AUDIO
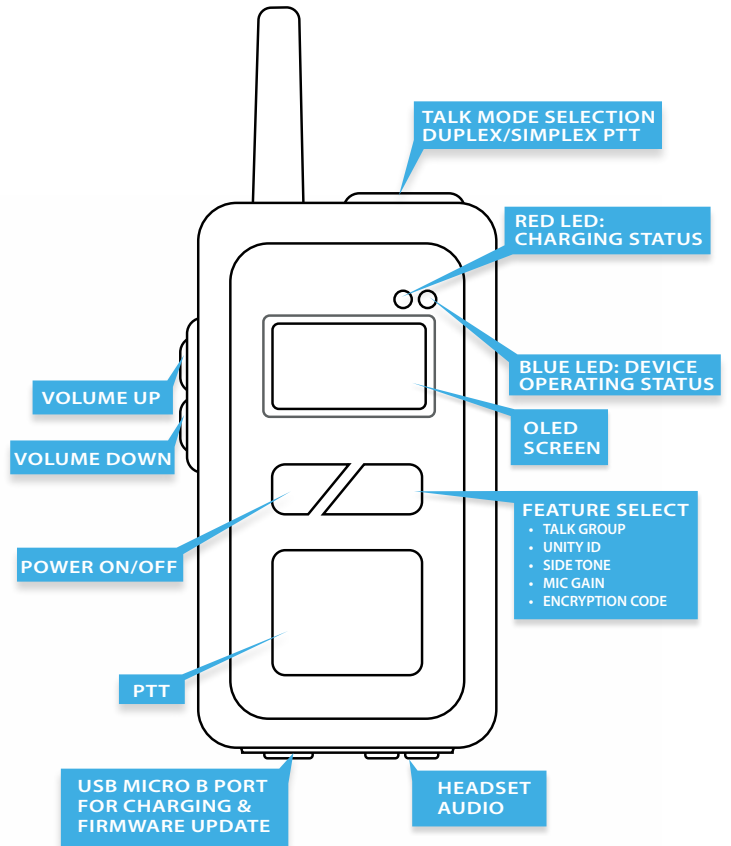
BLUETOOTH INTERFACE

The BWI900 Bluetooth Dongle will provide a wider extended range of accessories that can be used with the BWI900 solution. This will enhance the operational use case.

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

07842B4
Ultra Light Headset

07835B4
Lightweight In Ear Headset
with Boom Mike

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

WIRELESS DECT SYSTEM

FULL DUPLEX PTT SOLUTION

- Full Duplex Between Belt Stations
- Fixed Gateway Radio Interface
- PTT From Any Belt Station via Fixed Radio
- Fixed or Mobile Base Controller
- IP67 Environmental Rating
- Li-Ion Battery - 20 Hours Use

- DECT 1800MHz Technology
- No Frequencies Required
- Frequency Hopping with Encryption
- Fixed Interface to Ship's Intercom
- Suitable for MOTS & COTS Radios

Multiple Headset
Options to Suit
Varying Environments
(Refer page 28)

FULL DUPLEX

Belt
Stations

**WIRELESS PTT
VIA MOBILE RADIO**

Mobile
Radio

Wireless Gateway

Wireless DECT System Configurations
Full Duplex PTT Solution

4 Station System

4x Headsets / 4x Belt Stations

+

Radio Interface
Gateway &
Mobile Radio

Intercom

OR

Universal
Gateway

Intercom

Multiple 4 Station Systems

+

OR

Full Duplex
Daisy-chain Link Between
Systems

Intercom   Intercom

OR

+

These systems can be
daisy-chained for multiples of 4 wireless belt
stations as required.

Wireless DECT System Configurations
Full Duplex PTT Solution

Stand Alone System

Belt Station Controller

Belt Station

Belt Station

Belt Station

Wireless DECT Product Range

Gateways

Universal Gateway
078555U

Radio Interface Gateway
078555

Belt Station Stand Alone Controller
078556

Power

Replacement Battery
0785582

4 Way Charger 5-15V DC Input
0785581

Belt Station

Belt Station
078557

Belt Station Protector

Black 078557SB
Orange 078557SO
Yellow 078557SY

Full Duplex PTT Solution

Ultra Light-Weight

0785563

Bone Conduction

07860DW

Ultra High-Noise & Noise Shield

0785560

26dB NRR

Magnesium Alloy

Light-weight

Headset

0784011HN

Medium-Noise

0785562

High-Noise

0785561

23dB NRR

BENELEC
Innovative Radio Technology

KWSA80 - PoC Terminal

ULTRA RUGGED PTT OVER CELLULAR TERMINAL

BENELEC 3 YEAR WARRANTY GUARANTEE

KEY FEATURES

- LTE Bands

  1/2/3/4/5/7/8/12/13/14/20/25/26/27/28/29/30/38/39/40/41/66

- 3G Bands

  UMTS: B1/2/4/5/8

- 2G Bands

  GSM Quad Bands

- WiFi Bands

  2.4GHz/5GHz802.11 a/b/g/n/ac/r

- NFC

- Bluetooth 5.0/BLE

- Android N (7.0)

- External Memory Support 128GB

- Rear Camera 12MP AF with Flash

- Front Camera 8MP FF

- Replaceable 4900mAh Battery

- Dedicated Emergency Button for Lone Worker/Man Down Solution

- ATEX - Ex II 3G Ex ic IIC T4 Gc IP64Ex II 3D Ex ic IIIC T135°cDc IP64

- IECEx - Ex II 3G Ex ic IIC T4 Gc IP64Ex II 3D Ex ic IIIC T135°cDc IP64

- MIL810G, IP-68, Class 1 Div 2

- 5.0" puncture resistant, glove and wet compatible touchscreen, visible in direct sunlight

- Screen Resolution FHD (1920x1080)

- Loud, Clear Audio

  100db+ speaker and noise cancellation

- Dimensions: 152 x 79.5 x 18mm

- Weight: 335g

ACTUAL SIZE

KENWOOD

PoC PTT over Cellular

Lte

Ex

Bluetooth

IP68

GPS

WIFI

AES 256

Dual Shift Battery Life	**Shock Resistant**	**Drop/Impact Resistant**
Glove-friendly Display	**Puncture Resistant**	**Pressure Resistant**
Extra-loud Audio	**Operational In Extreme Temperatures**	**Resistant to Chemicals**

KWSA80 SPECIFICATIONS

Band & Connectivity Support	
2G Bands	GSM Quad bands
3G bands	UMTS: B1/2/4/5/8
LTE Bands	1/2/3/4/5/7/8/12/13/14/20/25/26/27/28/29/30/38/39/40/41/66
CA Supported	Yes 3xCA DL
CA Bands	See Note 1
WiFi Bands	2.4GHz/5GHz 802.11 a/b/g/n/ac/r
NFC	Yes
Bluetooth Version	5.0/BLE

IMS Servicess	
IR92 VoLTE	Yes
IR94 Video Calling	Yes
OMA CPM Advanced Messaging	Yes
WiFi Calling	Yes

OS, Screen & Chipset	
OS & Version	Android N
OS Upgrade Support	Yes
Screen Size	5.0"
Screen Resolution	FHD (1920x1080)
Chipset Manufacturer	Qualcomm
Chipset & Processor Speed	Snapdragon 630 OctaCore 2.2GHz

Memory, Camera & Battery	
RAM (Processor Memory)	4GB
ROM (Storage)	64GB
ROM Estimated User Memory	45GB
External Memory Support	128GB
Rear Camera	12MP AF
Front Camera	8MP FF
Rear Camera Flash	Yes
Front Camera Flash	No
Battery Size	4900mAh
Battery Removable	Yes

LARGE PTT

DURESS

Regulatory, Sensors & Other Items	
WEA / Cell Broadcast	Yes
HAC Support	Yes
CVAA Support	Yes
SIM Type	Dual 4FF
Type C Support	Yes
Biometric Sensors	Fingerprint
Other Sensors (GPS/Accelerometer/Proximity etc)	GPS/Accel/Baro/Prox/Light/Gyro/E-Compass/Gesture
USB Type C	Yes
Dimensions	152x79.5x18mm
Weight	335g
Other Details	Dedicated PTT button Dedicated SOS button Xpand Connector SecureAudio Connector

CHARGERS FOR KWSA80

Single Bay Desktop Charger

Six Bay Desktop Charger

LMR Professional Analogue Radios

PORTABLE RADIOS
BL650

MOBILE RADIOS
BL2800

BENELEC
Innovative Radio Technology

BL650

RUGGED IP67 SUBMERSIBLE VHF/UHF PROFESSIONAL LAND MOBILE RADIO

KEY FEATURES

- Frequency Options:

  VHF 66 - 88MHz (BL650M)

  VHF 136 - 174MHz (BL650V)

  UHF 450 - 527MHz (BL650U)

  Pre-programmed UHF CB 476-477MHz

- 5 / 1W Output Power

- 256 Channels

- 5 / 2 Tone / DTMF Signaling

- ANI / Selcall / Remote Stun

- S13 Audio Termination

- VOX

- Password Protected

- Dealer Programming

- Wireless Interface (BL650XB)

- Priority Scan/Dual Watch

- CTCSS / DCS

- Voice-Inversion Scrambler

- Whisper / Voice Commander

- Lone Worker

- Emergency

- Talk Around

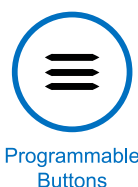- IP67 Water & Dust Protection

- MIL-STD-810 Construction

APPROVED
AUSTRALIAN ★ APPROVED ★ UHF CB & LMR

WIRELESS INTERFACE
(Option)

IP67

BENELEC
3 YEAR
WARRANTY GUARANTEE

INCLUDED ACCESSORIES

UHF Antenna

Battery

Belt Clip

Single Bay Charger

AD Adaptor

(other colours on request)

BL650

IP67 Water Submersible

Rugged Device

Long Battery Life

Clear Audio

Programmable Buttons

53(w)x108(h)x36(d)mm

BENELEC
Innovative Radio Technology

BL650 Specifications

Model Number	BL650M	BL650V	BL650U
Frequency Range (MHz)	VHF 66 - 88 MHz	VHF 136 - 174 MHz	UHF 450 - 520 MHz
Part Number	01121F01	01131F01	01151F01
Part Number (Wireless)	01121FB1	01131FB1	01151FB1
Number of Channels	Up to 256		
Modulation Type	16K0F3E, 11K0F3E		
Frequency Control	PLL Synthesizer		
Channel Spacing	12.5 kHz / 20 kHz / 25 kHz		
Frequency Stability	± 2.5 ppm		
Power Supply	7.4 V Rechargeable Battery		
Battery Capacity	2300mAh, ≥ 8 hours Battery Life		
Audio Termination	Benelec S13		
Dimensions	53(w) x 108(h) x 36(d) mm		
Weight	260 g (Including Battery)		
Temperature Range	-20°C to +60°C (Operational)		
Humidity	Operational up to 90%		
Environmental Ratings	IP67		
TRANSMITTER			
RF Output Power	5W / 1W		
Modulation Type	16K0F3E, 11K0F3E		
Spurious Emissions & Harmonics	≥ -36 dBm		
Audio Distortion	≤ 3%		
FM Hum / Noise	> 36 dB @ 12.5 kHz / > 40 dB @ 25kHz		
RECEIVER			
Circuit Type	Double Conversion Superheterodyne		
Intermediate Frequency	1st 45 MHz / 2nd 455 kHz		
Sensitivity	≤ 0.25 µV @ 12 dB SINAD		
Adjacent CH Selectivity	≥ 60 dB @ 12.5 kHz / 70 dB @ 20 kHz / 70 dB @ 25 kHz		
Spurious Response Rejection	≥ 70 dB		
Intermodulation Response Rejection	≥ 70 dB		
Blocking	≥ 85 dB		
Audio Distortion	≤ 3%		
Audio Output Power	≥ 500 mW @ 10% Distortion		
Standby Current Drain	≤ 70 mA / ≤ 25 mA (w/ Save)		
Rated Audio Current Drain	≤ 250 mA		
FM Noise	40dB @ 12.5 kHz / 45 dB @ 20 kHz / 45 dB @ 25 kHz		

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BL650 Features

Wireless Built In (option)

The ability to use this eliminates the need for wires to headsets or ear-pieces. Providing a comfortable user experience and increasing safety near machinery and all environments, being compatible with all of Benelec portable wireless accessories and Bluetooth radio accessories.

Water Submersible IP67

Rated to **IP67**, these robust radios are water submersible and protect against dust. The radio's rugged construction means it is perfect for heavy duty applications.

2 / 5 Tone Selcall

Fully compliant and interoperable with 5 tone languages, flexible timing capabilities. 100 alpha numeric tags supporting **lone worker, emergency call, man down, possum,** and many other advanced safety and security features.

BL650 OPTIONAL ACCESSORIES

0610519
Li-Ion
2600mAH Battery

07817B
Wireless
Speaker Mic M12

07814S13
Submersible IP67
Speaker Mic

0610736
Leather Case with
Window and Swivel

06107307N
Universal Heavy-Duty
Nylon Case
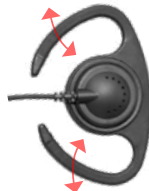
078522H
Benelec Wireless High
Noise Headset

078521H
Peltor Wireless High
Noise Headset

07840B
Bluetooth PTT /
Headset Interface M12

07832M12
Flexible D Headset

07862M12
Ear Bone Mic
M12

07834S13
Earpiece Headset with Mini Mic &
In-Line PTT

078211S13
Single Wire
Surveillance Kit

07832S13
Flexible D Single
Wire Kit

06206241K
BL650 USB PC
Programming Cable Kit

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BL2800

VHF/UHF PROFESSIONAL MOBILE RADIO

BENELEC 3 YEAR WARRANTY GUARANTEE

KEY FEATURES

- Frequency Options:

    VHF 136 - 174MHz (BL2800V)

    UHF 400 - 470MHz (BL2800U1)

    UHF 450 - 520MHz (BL2800U2)

- 5/25W Output Power

- 512 Channels

- Dimensions: 112 x 30 x 142mm

- Weight: ~510g

- Amateur mode and Professional Mode

- SQ/VOL/Voltage level display

- All controls and display via Smart Controller Microphone

- Scan Functions including CTCSS/DCS

- Programmable RB/CALL function

- FM radio receiver (optional)

62(W) X 116(H) X 30(D)MM

SMART CONTROLLER MICROPHONE

116(W) X 30(H) X 142(D)MM

MOBILE RADIO

INCLUDED ACCESSORIES

Radio Mounting Bracket

DC Cable Kit

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BL2800 Specifications

Model Number	BL2800V	BL2800U1
Frequency Range (MHz)	136 - 174MHz	450 - 520 MHz
Number of Channels	Up to 512	
Number of Zones	64	
Channel Spacing	12.5 KHz (Narrow Band) / 25 KHz (Wide Band)	
Phase-locked Step	5 KHz, 6.25 KHz, 8.33 KHz, 10 KHz, 12.5 KHz, 20 KHz, 25 KHz, 30 KHz, 50 KHz	
Operating Voltage	5 KHz, 6.25 KHz, 8.33 KHz, 10 KHz, 12.5 KHz, 20 KHz, 25 KHz, 30 KHz, 50 KHz	
Operating Temperature	-20~+60 (℃)	
Frequency Stability	± 5 ppm	
Dimensions	112 x 30 x 142mm	
Weight (approx)	510g	

TRANSMITTER

	Narrow Band	Wide Band
Power Output	25W / 15W / 5W	
Modulation	11KΦF3E	16KΦF3E
Adjacent Power Levels	≥60dB	≥70dB
Hum & Noise	≥36dB	≥40dB
Spurious Emission	≤60dB	≤60dB
Audio Response	+1~-3dB (0.3~2.55KHz)	+1~-3dB (0.3~3KHz)
Audio Distortion	≤5%	

RECEIVER

	Narrow Band	Wide Band
Sensitivity (12dBm SINDA)	≤0.35μV	≤0.25μV
Adjacent Channel Selectivity	≥60dB	≥60dB
Audio Response	+1~-3dB (0.3~2.55KHz)	+1~-3dB (0.3~3KHz)
Hum & Noise	≥40dB	≥45dB
Audio distortion	≤5%	
Audio power output	>2W@8Ω	
External Audio Output (Rated)	10W	

BL2800 Features

Multiple Signalling Options

Providing a wide range of signalling options allows dealers maximum flexibility in configuring systems. Signalling options include: **DTMF, 2-Tone, 5-Tone**

512 Channel Capacity

With a 512 Channel Capacity, communication between multiple groups of people can be achieved with ease.

Squelch Tail Elimination

This function minimises undesired audio outputs that can occur at the end of the receiver during a transmission.

Powerful Audio

A powerful 4W internal speaker and 10W external speaker ensures high quality, clear sound, even in noisy environments.

Built In Voice Encryption

The scrambler feature provides enhanced security for your important public safety and private security communications.

Remote Kill / Stun / Revive

These functions can disable and enable the mobile radio remotely and are used to prevent unauthorized use of the device.

Emergency Alert

Users can transmit signals discreetly to the control centre or predefined person for emergency help if required.

Working Alone

Users can set a time period when working alone which will sound an alarm automatically if the set time is over. This is to ensure that users are safe while working alone. The alarm can be stopped by pressing the safe key.

BL2800 OPTIONAL ACCESSORIES

08108R

Replacement Microphone

Extension Speaker

09210

Backup Battery Power Supply

02515C

136 - 174MHz Tunable Antenna

02633CT

400 - 450MHz Tunable Antenna

02633C

450 - 520MHz Tunable Antenna

10507

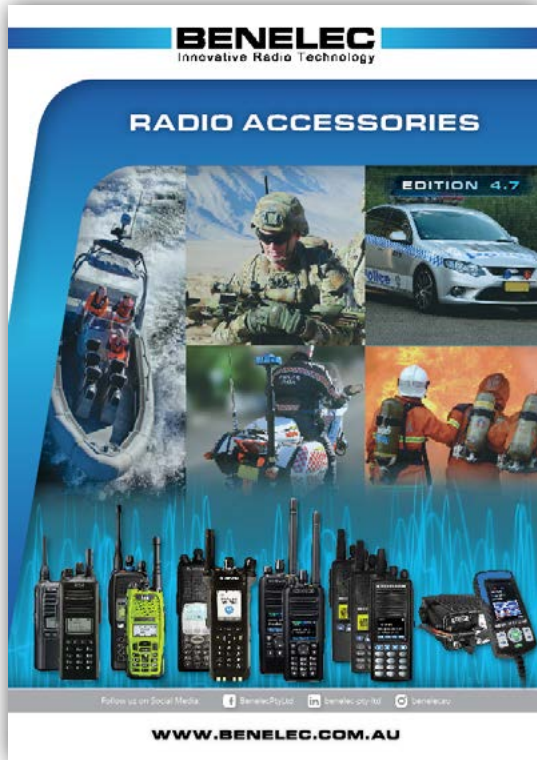DC Fused Power Lead

10109

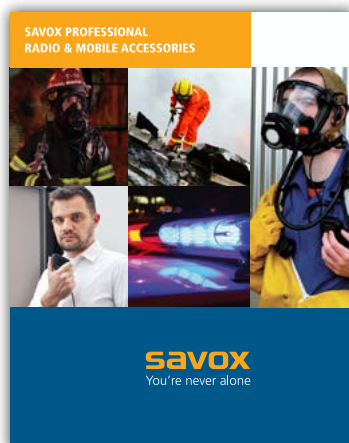5m M Base Lead & FMEs

0620638

BL2500 Programming Kit

Notes....

Notes....

Accessories, Turn Radios into Solutions

Find Further Accessories Partner Catalogues

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