

Wireless Belt Pack

BP5-10 5 Conductor with
Radio Transmit

Operation Manual



www.firecom.com

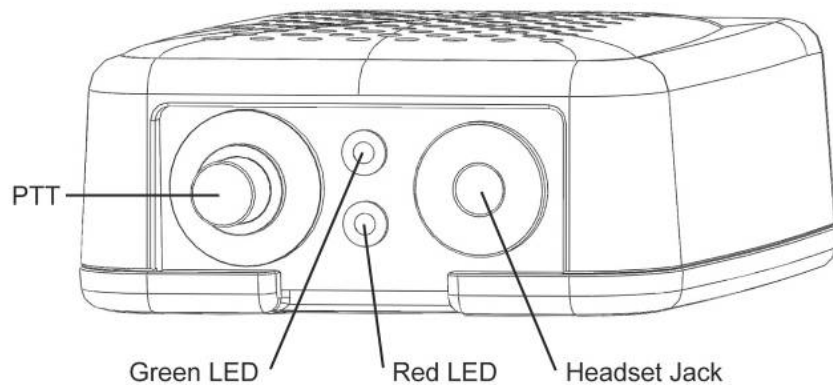
7340 SW Durham Road • Portland, OR 97224 USA
1-800-527-0555 • Phone: 503-684-6647
Fax: 503-620-2943 • email: sales@firecom.com

Introduction

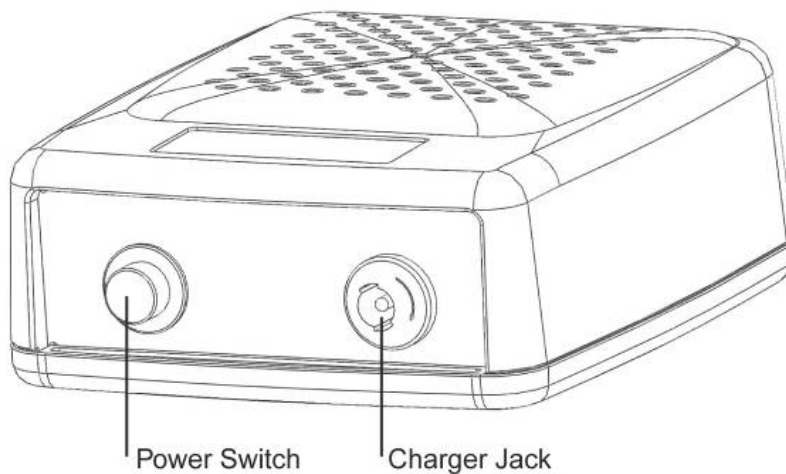
The BP5-10 is a highly reliable wireless communication module for first responder apparatus operator applications. The BP5-10 allows the operator to use any wired Firecom headset to communicate wirelessly to a base station mounted on the fire or emergency apparatus. It provides secure, digitally encoded, interference free communications. When operated as part of a wireless system, up to 40 headsets can be used interference free, in close vicinity to each other.

Note: Under certain site conditions, it may be possible to operate up to 50 headsets in close proximity.

- BP5-10 5-conductor jack with PTT for transmitting on the vehicle's radio; compatible with Firecom's UH/FH series headsets



Front



Back

Proper Fit

Firecom recommends that the belt pack be worn on the hip, using the enclosed belt-carried pouch. The user can then plug in a headset of his/her preference and convert it to a wireless communications headset.

Notes:

- Refer to the wired headset's user manual for proper fit and use of the headset.
- Refer to the Specifications section in this manual to determine whether a certain headset is compatible with the BP5-10 belt pack.

PTT Switch:

The BP5-10 belt pack is equipped with a red momentary PTT switch located on the top panel. When this switch is activated, the belt pack enables radio transmission through the apparatus radio via the intercom system connected to the wireless base station.

Notes:

The PTT switch on the belt pack will key the apparatus radio regardless of whether or not the microphone on the headset is enabled. If the belt pack PTT is depressed while the UH-20/40 mic is disabled, the apparatus radio will transmit a silent carrier. If radio-transmit capability is not required, then a non-radio-transmit headset such as Firecom UH-20 with a momentary microphone may be used.

If a Firecom UH/FH-10 radio-transmit capable headset is used, radio transmission can be enabled using either the headset's PTT switch or the belt pack's PTT switch.

Power push-button:

The BP5-10 belt pack is equipped with a momentary black power switch located on the bottom panel. Press and hold this switch for 3-4 seconds to turn on power to the belt pack. To turn off power to the belt pack, press and hold the switch again for 3-4 seconds.

Operation

The base station should be installed and powered up prior to operating the belt pack. If the belt pack has not been previously paired to the base station, refer to the "Pairing Section" for pairing instructions. The belt pack is equipped with two status indicators (LEDs); one red and one green. Plug the headset into the belt pack and turn the power on. The green LED will flash rapidly to indicate that the belt pack is attempting to link to the base. At this point, the corresponding link LED on the base station will also be flashing rapidly. After approximately 5 seconds the belt pack will link to the base and the green LED will turn on steadily to indicate that the belt pack is linked to the base. The headset will sound a one time double beep on connection to the base. Once the connection is established, full duplex communication between the base station and the headset through the belt pack will become possible.

Out-of-Range Warning

The BP5-10 wireless belt packs incorporate an out-of-range audible safety feature to warn the user against exceeding the coverage range of the belt pack. The headset connected to the belt pack will sound a 1 second cautionary beep every 10 seconds when the belt pack is at the fringes of the coverage range and before the belt pack goes completely out of range and loses its link to the base. The cautionary beep will stop if the user steps back within range from the base station.

Warning:

Firecom recommends that the wireless belt pack always be operated within the coverage range to ensure consistent and reliable communications, ensuring the safety of the crew and helping them perform their duties in the safest and most effective manner.

Reconnect Feature

Should the belt pack go out of range and lose its link to the base station, the belt pack is capable of automatically reestablishing its link to the base within 10-15 seconds of the belt pack's coming back into range. However, if the belt pack is not able to reconnect to the base station within 5 minutes of losing its link, the belt pack will be timed out and powered down automatically. The user will then have to cycle power to the belt pack in order to reestablish the link to the base station.

LED Indicators

All belt packs have one green and one red externally viewable LED indicator located in the center of the top panel.

LED INDICATOR CHART

Unit Off, Charging:	Steady ON
Green LED	Fully Charged
Red LED	Charging

Unit On, Charging:	Steady ON	Flashing Fast
Green LED	Linked to Base	Not Linked to Base
Red LED	Charging	

Unit On:	Steady ON	Flashing Fast	Flashing Slow	3 beeps every 10 min	6 beeps every min
Green LED	Linked to Base	Not Linked to Base			
Red LED		Very Low Battery	Low Battery		
Audible				Low Battery	Very Low Battery

Pairing Procedure

1. Press and hold the pairing button on the front panel of the base station for approximately 5-7 seconds until the yellow LED(s) on the front panel of the base station start flashing, indicating that the base station has entered pairing mode. Once the base station is placed in pairing mode, the user has approximately 15 seconds to place the belt pack in pairing mode.
2. Press and hold the PTT button while turning on power to the belt pack. After approximately 5 seconds, the green and red LEDs will start flashing in a relatively fast alternating pattern. Release the PTT button.
3. Monitor the green and red LEDs on the top panel of the belt pack. After about 5-7 seconds, the alternating flashing pattern ends, the green LED will flash rapidly for two seconds and then the green and red LEDs resume normal operation (as stated in the section titled "LED Indicators") to indicate that the belt pack is paired and linked to the base station. The respective LINK LED on the base station will illuminate steadily after flashing rapidly for two seconds to indicate that a link to the belt pack has been established.
4. When pairing with a multi-unit base station all headsets and belt packs previously paired with that device must be powered and connected to the base during the pairing procedure, or those devices will lose their pairing. See the Wireless Base Station manual for details on this procedure.

Charging

Ensure that the belt pack is fully charged prior to operating for the first time. The BP5-10 belt pack has a 2.1mm panel mounted charger jack located on the bottom panel. A charger cable assembly with a 2.1mm x 5.5mm plug is provided with the belt pack. The unterminated end of the charger cable can be wired to nominal 12V (11-16V) from the vehicle. Plug the terminated end of the charger cable into the belt pack charger jack (refer to the "LED Indicators" section for proper operation of status indicators during battery charging).

NOTES:

1. Observe correct polarity when connecting the charger cable to 12V from the vehicle. Connect the white striped black wire to +12V and the solid black wire to GND. This will result in a positive center terminal of the 2.1mm charger jack as shown in the following illustration.



2. Firecom does not recommend operating the belt pack while the belt pack is being charged. It is recommended that the belt pack be charged only when it's not being operated and with power turned off on the belt pack.

Firecom recommends charging the wireless belt pack on the vehicle by connecting to the vehicle's uninterruptible 12V supply (battery). The use of unregulated 12V AC/DC wall adapters is not recommended. However, if an adapter must be used, Sonetics provides a 12V 0.5A regulated wall adapter.

Reset

In rare cases, resetting the belt pack may become necessary. Plug the charger plug into the charger jack. The system will reset. Both red and green LEDs will illuminate for approximately two seconds and then the belt pack will resume normal operation.

NOTES:

1. In case the battery is deeply discharged, no LED indication will be possible until the battery is partly charged to an operable voltage level.
2. Plugging the charger plug into the belt pack at any time will cause the belt pack to reset even when it is linked to a base station. Resetting a connected belt pack will result in losing the link for about 10-12 seconds.
3. Resetting the BP5-10 belt pack will cause the belt pack to resume normal operation in the stand-by (power-off) mode. Press and hold the power button for 3-4 seconds to turn the belt pack power on.

Care and Maintenance

Never remove the charging cable from the belt pack by pulling on the cord. The belt pack should be unplugged at the jack location by pulling the charger plug from the jack.

Wipe the external surfaces of the belt pack with a mild soap and water mixture only.

Do not store in direct sunlight or in areas of high temperature.

Specifications

Speaker Output

Amplifier Frequency Response.....	300Hz - 3.4 KHz, +/- 3dB
Impedance Range.....	150-600 ohm
Weight.....	19.50z

Headset Jack

5-conductor jack (mates with U-384/U plug) to fit Firecom headsets

Microphone Input

Frequency Response.....	Microphone dependent
Max. Amb. Noise Level.....	Headset dependent
MIC Sensitivity range.....	20-80mv, at 1KHz, 94dB SPL
DC Bias.....	9V through 1K resistor
Frequency range.....	300Hz – 3.4KHz
Noise Canceling.....	Microphone dependent
S/N ratio.....	Microphone dependent
Output Impedance.....	50-2.2K Ohm

Due to continuous product improvements, all specifications are subject to change without notification.

RF

- Range: 700' open field, 100' minimum from base station depending on base station mounting position on the fire or emergency truck.
- Digital encoding for secured communications.
- Interference free communications for up to 40 headsets operating in close proximity.
- Immunity to interference from other communications devices operating in the entire frequency spectrum from 30 MHz – 18 GHz.

FCC/IC Compliance

This device complies with FCC Part 15 Rules and IC RSS-213 Rules. Operation of this is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference that may be received, including interference that may cause undesired operation.

FCC/IC RF Exposure Warning

- This product complies with FCC radiation exposure limits set forth for an uncontrolled environment.
- This product may not be collocated or operated in conjunction with any other antenna or transmitter.
- This product has been tested and meets the FCC RF exposure guidelines. Max. SAR is 0.003 W/kg.

Changes or modifications not expressly approved by Firecom can void the user's authority to operate the equipment.

Power

- 3.7V rechargeable lithium ion battery
- 8-10 hours of talk time
- Cycle life: 500 cycles minimum
- Over voltage, under voltage, over current and over temperature protection.
- Charge source: 12V nominal (11-16v), 0.25A minimum
- Charge time: 3 hours max at 12V from deeply discharged state

Environmental

- Operating temperature -10 to +70°C
- Storage temperature -25 to +85°C
- Meets standards SAE J1455 and J1113
- Chemical resistance, corrosion, and humidity per MIL-STD-810

Package Contents

BP5-10 Belt Pack: P/N 107-0203-00

- User's manual P/N 600-3008-00
- Charger cable P/N 420-0048-00 w/ 2.1mm plug
- Power adapter/charger, 110VAC to 12VDC, 500mA P/N 321-0007-00
- Belt Pack Pouch 540-0057-00

WARRANTY

Two-Year Limited Warranty to the Original Purchaser

Sonetics Corporation warrants to the original purchaser of its products, that they will be free from defects in materials and workmanship, under normal and proper use, for the period of two years from date of purchase. Sonetics Corporation will repair or replace, at its option, any parts showing factory defects during this warranty period, subject to the following provisions. This warranty applies only to a new product which has been sold through authorized channels of distribution. All work under warranty must be performed by Sonetics Corporation. All returned products must be shipped to our address, freight prepaid, accompanied by a dated proof of purchase. The purchaser voids this warranty if he, she, or others attempt to repair, service, or alter the product in any way. This warranty does not apply in the event of accident, abuse, improper installation, unauthorized repair, tampering, modification, fire, flood, collision, or other damage from external sources, including damage which is caused by user replaceable parts (leaking batteries, etc.). This warranty does not extend to any other equipment or apparatus to which this product may be attached or connected. The foregoing is your sole remedy for failure in service or defects. Sonetics Corporation shall not be liable under this or any implied warranty for incidental or consequential damages, nor for any installation or removal costs or other service fees. This warranty is in lieu of all other warranties, express or implied, including the warranty of merchantability or fitness of use, which are hereby excluded. To the extent that this exclusion is not legally enforceable, the duration of such implied warranties shall be limited to two years from date of purchase. No suit for breach of express or implied warranty may be brought after two years from date of purchase.