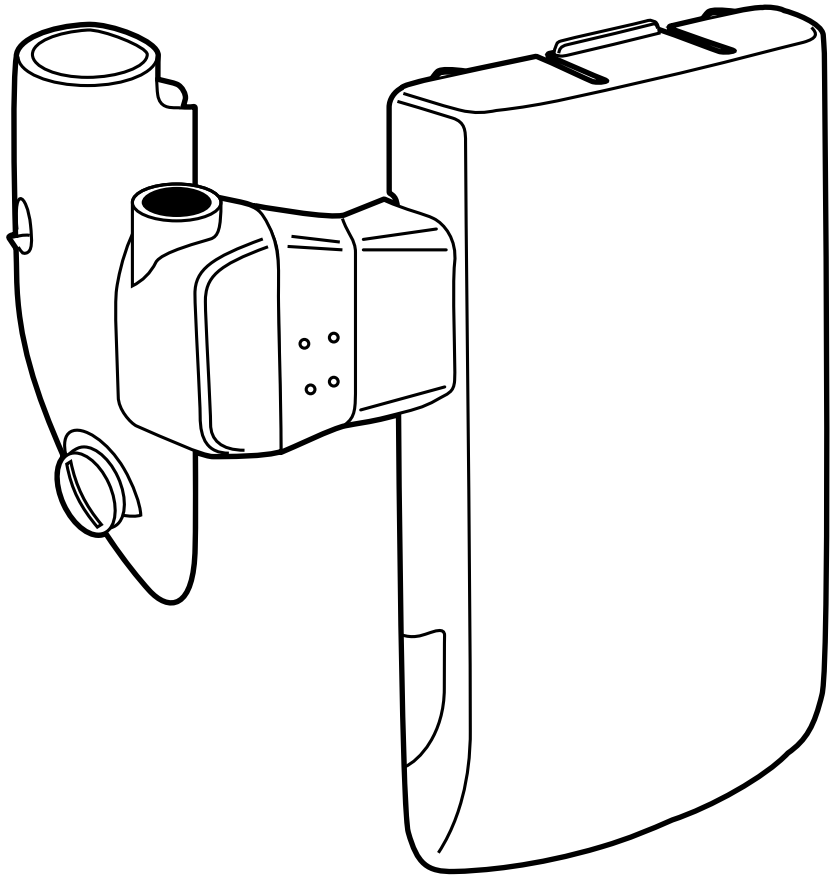
MOTOROLA

Radio Bluetooth™ Adapter (RBA)

for the Professional Radio Series
Model HHLN4125



Accessories

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TABLE OF CONTENTS

Safety and General Information 3

Electromagnetic Interference/Compatibility
- Facilities 4
- Aircraft 4
- Medical Devices 4

Safety and General
- Use While Driving 9

***Bluetooth* Wireless Technology Overview** 6

Getting Started
- Installing the Radio *Bluetooth* Adapter (RBA) 8
- Removing the Radio *Bluetooth* Adapter (RBA) . . . 9
- Turning ON the RBA 9
- Establishing the *Bluetooth* Wireless Connection 9
- Connection Verification 10
- Lost Link 11
- Turning OFF the RBA 11
- Disconnecting the *Bluetooth* Wireless Connection 12
- LED Indicators 13

Operation
- Operational Range 14
- Receiving 14
- Transmitting 14
- Volume Control 15
- VOX (Voice Activated Transmission) 15

Battery
Low Battery Alert 16
Battery Life 16
Temperature Effects On Your RBA 16
RBA Replacement Parts Lists 17
Service and Support 17
Warranty 17
Replacing the HHLN4125 Side Connector Board . . . 18

SAFETY AND GENERAL INFORMATION

IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION.

READ THIS INFORMATION BEFORE USING YOUR RADIO.

Users are not permitted to make changes or modify the device in any way. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device. See 47 CFR Sec. 15.21.

This device complies with Part 15 of the U.S. FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. See 47 CFR Sec. 15.19(3).

ELECTROMAGNETIC INTERFERENCE/ COMPATIBILITY

NOTE: Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed or otherwise configured for electromagnetic compatibility.

Facilities

To avoid electromagnetic interference and/or compatibility conflicts, turn off your device in any facility where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.

Aircraft

When instructed to do so, turn off your device when on board an aircraft. Any use of your device must be in accordance with applicable regulations per airline crew instructions.

Medical Devices

Pacemakers

The Health Industry Manufacturers Association recommends that a minimum separation of 6 inches (15 centimeters) be maintained between a

wireless device and a pacemaker. These recommendations are consistent with the independent research by, and recommendations of, Wireless Technology Research.

Persons with pacemakers should:

- ALWAYS keep the wireless device more than 6 inches (15 centimeters) from their pacemaker when the device is turned ON.
- not carry the device in the breast pocket.
- use the ear opposite the pacemaker to minimize the potential for interference.
- turn the device OFF immediately if you have any reason to suspect that interference is taking place.

Hearing Aids

Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

BLUETOOTH WIRELESS TECHNOLOGY OVERVIEW

At Motorola we believe that easy portable communication is the key to creating a safer environment. That's why we designed this exciting new two-way communication device called the Radio *Bluetooth* Adapter (RBA). The RBA represents another breakthrough in applying *Bluetooth* wireless technology by Motorola. This adapter allows your radio to send and receive audio from a wireless accessory such as a Remote Speaker Microphone (RSM) without wires.

This RBA uses a new protocol based on state-of-the-art *Bluetooth* technology specifications, which result in simplifying the use of your radio. *Bluetooth* wireless technology is an open standard, connecting wireless devices within a short range. The range for this particular adapter (RBA) and the *Bluetooth* audio accessory is approximately 30 feet in ideal line-of-sight conditions. It is important to be aware that the specific *Bluetooth* technology was designed and engineered for use between your radio and special *Bluetooth* audio accessories. Your *Bluetooth* audio accessory will not operate with other non-Motorola two-way radio *Bluetooth* products.

If your radio is VOX (voice activated transmission) capable, the *Bluetooth* wireless functionality will continue with your adapter and a VOX capable *Bluetooth* wireless headset.

We’re confident that once you try the *Bluetooth* wireless adapter and accessories, you’ll wonder how you survived with all those attachment wires in the first place!

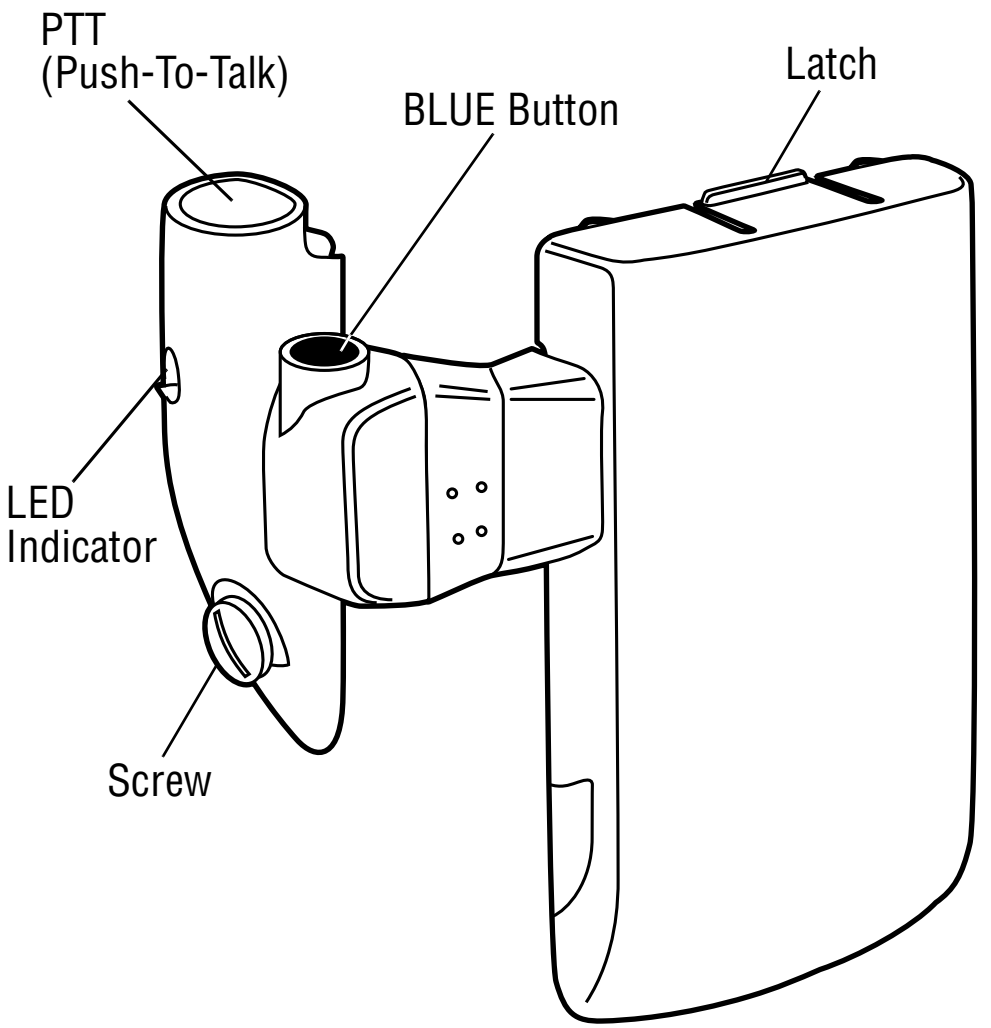


Figure 1. Radio Bluetooth Adapter

Installing the Radio Bluetooth Adapter (RBA)

NOTE: The RBA is designed to clip onto the back of specially designed radio batteries.

1. Place the bottom of the RBA to the battery. Press the top latch of the RBA to the battery until it snaps into place. Refer to Figure 2.
2. Attach the side connector to the radio's accessory connector. Secure the side connector with the metal screw using a coin or thin bladed screwdriver.

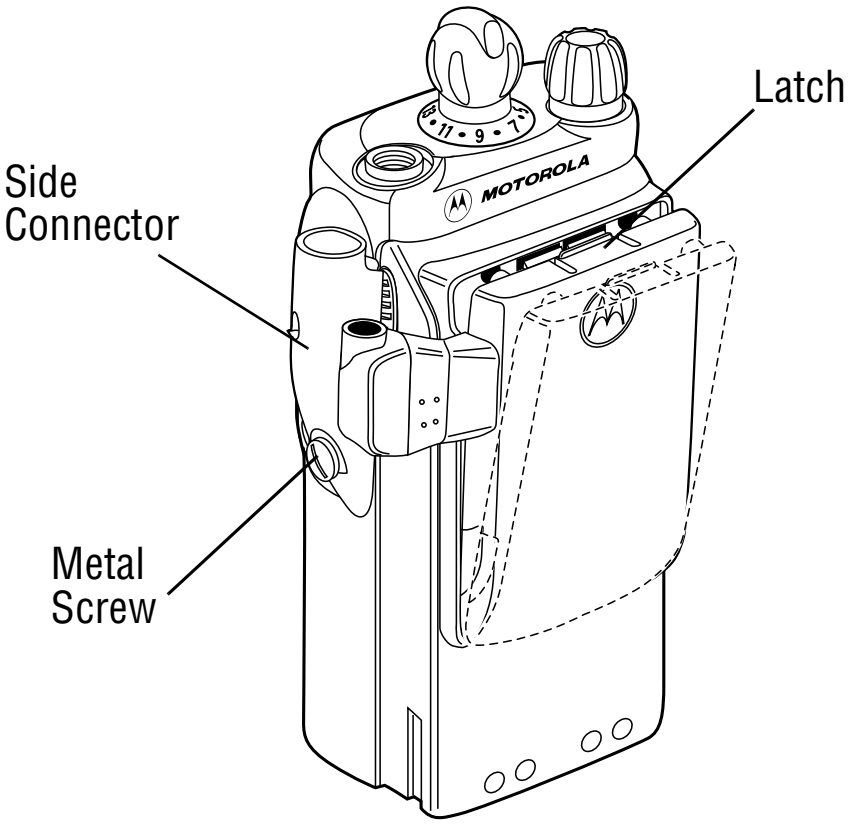


Figure 2. RBA and Radio Attachment

Removing the Radio Bluetooth Adapter (RBA)

1. Detach the side connector from the accessory connector with the metal screw using a coin or thin bladed screwdriver.
2. Detach the top latch by pressing down and pulling the RBA away from the battery.

Turning ON the RBA

The RBA turns ON when the radio is turned ON. The RBA LED lights GREEN for one second, indicating successful power-up. When you first turn on your RBA, it will first attempt to establish a connection with the last *Bluetooth* audio accessory it was connected to, otherwise it will attempt to connect to a new accessory.

Establishing the Bluetooth Wireless Connection

Following these simple steps establishes a new connection when your RBA and audio accessory are first turned on:

1. Turn ON your radio. The RBA turns on when the radio is turned on.
   - The RBA LED lights GREEN for one second, indicating successful power-up.
2. Turn ON the *Bluetooth* wireless capable audio accessory. (Refer to your accessory manual.)

3. Place the audio accessory next to the radio. (For best results keep both within a few inches of each other.)
   - The RBA LED flashes ORANGE until a successful connection is established. If a connection has not been established, the LED flashes RED.
   - Once the RBA and audio accessory have connected, the RBA LED flashes GREEN every few seconds.

NOTE: Connecting for the first time takes longer to establish than subsequent connections.

Connection Verification

You may want to verify the wireless connection before you start communicating with the accessory.

NOTE: Pressing the audio accessory PTT button first, keys-up the radio

1. Press and hold the RBA BLUE button.
2. Press the audio accessory PTT button.
   - The RBA LED lights a solid GREEN for the duration of the audio accessory PTT press. If this does not happen, the connection was not established and the connection process will have to be repeated.

Lost Link

If the connection is lost at any time, the RBA LED flashes ORANGE until the connection is re-established. If a connection has not been re-established within 30 seconds the LED flashes RED.

NOTE: During the attempt to re-establish a connection, your radio and PTT button function normally.

Turning OFF the RBA

If a wireless connection is established, you can turn off your RBA without losing its memory to the connection with the audio accessory. The connection is automatically re-established the next time the RBA is turned on.

1. To turn OFF the RBA, turn off the radio.
2. To turn ON the RBA, turn on the radio.

Disconnecting the Bluetooth Wireless Connection

You can disconnect and re-establish the connection when both the RBA and audio accessory are still on.

1. Press *both* the RBA BLUE and PTT buttons.
   - The RBA LED flashes RED, indicating the connection is broken.
2. To re-establish the connection while the RBA and audio accesory are on, place the RBA within a few inches of the audio accessory. Press *both* the RBA's BLUE and PTT buttons, then immediately press *both* the audio accessory's BLUE and PTT buttons.

LED Indicators

RBA LED Indicator	Description
GREEN	Solid GREEN for 1 second, indicates successful RBA power-up, or...
	Solid GREEN for 1 second, indicates successful connection with an accessory, or...
	Solid GREEN for duration of the PTT press or while receiving, indicates the RBA is functioning correctly.
Flashing GREEN	Flashes GREEN every few seconds when connected to the radio and no communication or transmission is taking place.
Flashing ORANGE	Flashes ORANGE every few seconds, indicates the RBA is attempting to reconnect or reconnect to the accessory.
RED	Solid RED for 1 second followed by flashing orange, indicates that connection is lost and is attempting to reconnect to the accessory, or...
Flashing RED	Flashes RED every few seconds, indicates connection is disconnected and has not been re-established within 30 seconds.

OPERATION

Operational Range

For optimum performance from your RBA, use it within 30 feet of your audio accessory. This range will vary depending on environmental conditions, i.e. clothing, radio placement on body, buildings.

Receiving

Once the RBA is connected to your audio accessory, the radio speaker mutes and the audio is heard only from the audio accessory.

- While receiving, the RBA LED lights a solid GREEN for the duration of the received communication.

Transmitting

The Push-To-Talk (PTT) button on *either* the audio accessory or the RBA initiates transmission.

NOTES: Pressing the audio accessory or RBA PTT button activates only the microphone in the audio accessory.

Pressing the radio's PTT button activates only the microphone in the radio.

- While transmitting, the RBA LED lights a solid GREEN for the duration of the transmission.

Volume Control

Refer to your *Bluetooth* wireless audio accessory manual for any volume control instructions.

VOX (Voice Activated Transmission) (Available only with select VOX capable radios)

If your radio is VOX capable and has been programmed into the radio, this feature can be enabled to operate with the RBA and an audio accessory.

NOTE: VOX can only be enabled on the RBA during radio power up.

To Activate VOX

1. Turn off your radio.
2. Press and hold the RBA PTT button while turning on the radio. Release the PTT button after power-up.
3. Turn on your audio accessory.
4. Turn your radio to the assigned VOX channel.
5. Establish the wireless connection. Refer to “Establishing the Bluetooth Wireless Connection” on page 9.
    - Once the connection has been established, your radio and audio accessory operate in VOX mode.

To De-activate VOX

Press either the RBA or audio accessory PTT button.

- The radio exits VOX mode and returns to normal operation.

BATTTERY

Your RBA and battery are safe to charge in your current radio's battery charger.

Low Battery Alert

Refer to your radio's operator manual for specific battery instructions.

Battery Life

Refer to your radio's operator manual for specific battery instructions.

TEMPERATURE EFFECTS ON YOUR RBA

Your RBA was designed to work in all environments your current radio is designed for. Refer to your radio's manual for specific details.

RBA REPLACEMENT PARTS LISTS

Parts List for HHLN4125

Replacement Part	Motorola Part Number
Side Connector Screw	0380475E01
Side Connector Assembly	0185724M01
Radio Battery (for use with HHLN4125)	HNN9003
RBA Replacement Parts Instruction Sheet	6880309K91

SERVICE AND SUPPORT

Your RBA is not repairable. If there is a problem with the unit after the warranty period, please order a replacement unit or replacement parts. To order replacement parts or for warranty information, contact Motorola Americas Accessories Aftermarket Division (AAD) at:
1-800-422-4210 or 847-538-8023.

WARRANTY

The RBA is covered under the standard Motorola one (1) year limited warranty:

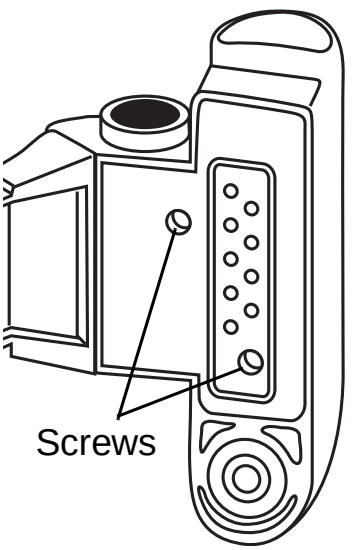
Refer to your Motorola dealer for detailed information on your RBA’s standard warranty.

REPLACING THE HHLN4125 SIDE CONNECTOR BOARD

Disassembling the RBA before the one (1) year limited warranty has expired will void the warranty.

Disassembling the Side Connector Board

1. Detach the RBA from the radio.
2. Remove the two screws in the housing/button assembly using a T6 Torx® driver.
3. Gently pull the rubber gasket from the housing/button assembly.
4. Lift the cover flap of the 15-pin connector and disconnect the flex connector from the board.



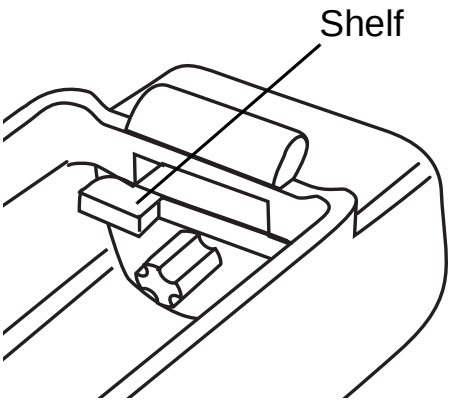
5. Repeat Steps 1 through 3 to disassemble the replacement side connector.

Reassembling the Side Connector Board

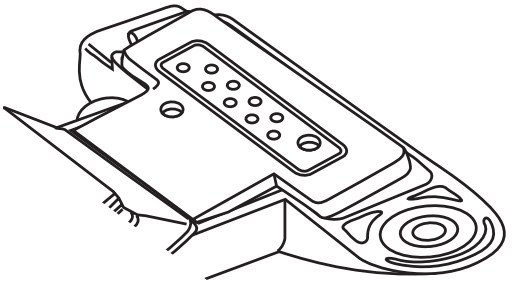
1. Lift the cover flap of the 15-pin connector and connect the RBA flex connector to the board removed from the replacement side connector.

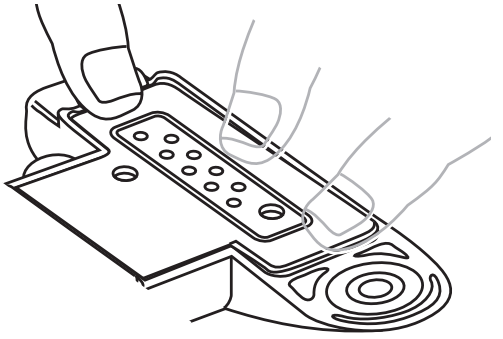
2. Flip the board over so the 7-pin connector is facing upward.

3. Place the board into the housing so that it is seated properly onto the board retention shelf.



4. Carefully press the rubber gasket into the housing/button assembly starting at the strain relief. Slowly continue pressing the remaining three sides of the gasket into the housing/button assembly. Make sure that the seal on the gasket is completely tucked into the housing/button assembly.





CAUTION: Do Not use any instruments to tuck or remove the gasket from the housing/button assembly. Doing so can stretch and damage the seal on the gasket.

5. Replace the two screws into the housing/button assembly using a T6 Torx® driver.
6. Re-attach the RBA to the radio.

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