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MOTOMANUAL

HF850

Welcome

Welcome to Motorola's "connected" world of Bluetooth® personal area wireless networking. The Motorola Bluetooth Wireless Handsfree Car Kit makes wireless connection simple and quick.

The advanced, sophisticated Motorola Bluetooth Wireless Handsfree Car Kit offers these features:

- seamless, wireless hands-free audio through Bluetooth link
- digital audio interface with high quality, full-duplex, handsfree speech
- uses voice dialing in your phone (if available)
- entertainment mute—automatically mutes radio during calls
- noise reduction and acoustic echo cancellation
- automatic volume control
- Ignition sense—continue an active call after car is turned off
- compatible with Bluetooth 1.2 and backwards-compatible with Bluetooth 1.1 devices—supports Headset and Handsfree Profiles

Note: The use of wireless devices and their accessories may be prohibited or restricted in certain areas. Always obey the laws and regulations on the use of these products.

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Contents

Welcome	1
Safety and General Information	4
Installing the Handsfree Kit	7
Guidelines for Installation and Connection	7
Installation Procedure	8
Using Your Car Kit	12
The User Interface Module	12
Linking Your Car Kit and Phone	12
Placing a Call with the Car Kit	14
Answering a Call with the Car Kit	14
Using Features While on a Call	15
Using the Car Kit When the Ignition Is Off	17
Disconnecting the Car Kit from Your Phone	18
Troubleshooting	19
Calling Features Quick Reference	20
Warranty	25
Export Law Assurances	27

Safety and General Information

IMPORTANT INFORMATION ON SAFE AND EFFICIENT OPERATION. READ THIS INFORMATION BEFORE USING YOUR DEVICE.

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 equipment. See 47 CFR Sec. 15.21.

This device complies with part 15 of the 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 a device must be in accordance with applicable regulations per airline crew instructions.

Medical Devices

Hearing Aids

Some devices may interfere with some hearing aids. In the event of such interference, you may want to consult with 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.

Industry Canada Notice to Users

Operation is subject to the following two conditions: (1) This device may not cause interference and (2) This device must accept any interference, including interference that may cause undesired operation of the device Ref IC RSS 210 Sec. 5.11. The term "IC:" before the certification/ registration number only signifies that registration was performed based on a Declaration of Conformity indicating that Industry Canada technical specifications were met. It does not imply that Industry Canada approved the equipment. See Ref IC Self-Marking 6(f) and RSP-100 Sec. 4.

FCC Notice to Users

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.

- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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Installing the Handsfree Kit

Guidelines for Installation and Connection

- Only qualified personnel should install this car kit. If necessary, contact with vehicle manufacturer for air bag information specific to the vehicle.

Caution: An air bag inflates with great force. DO NOT place objects, including communication equipment, in the area over the air bag or in the air bag deployment area. If the communication equipment is improperly installed and the air bag inflates, serious injury could occur.

- Mount components securely on strong surfaces to prevent shifting that could cause injury or interfere with safe vehicle operation. Always use the supplied mounting hardware
- Mounted components and attached wires or cables must not interfere with seating or leg space.
- Route cables so they are protected from pinching, sharp edges, and crushing. Keep all in-line connectors easily accessible.
- This car kit is intended for use in 12 volt negative ground systems only. The car kit draws less than 3 amps.

Confirm that the vehicle's electrical system can supply this current.

Installation Procedure

Caution: This car kit must be connected to a maximum 10A fuse in the car fuse panel to prevent fire or other damages if a short circuit should occur somewhere in the Junction Box.

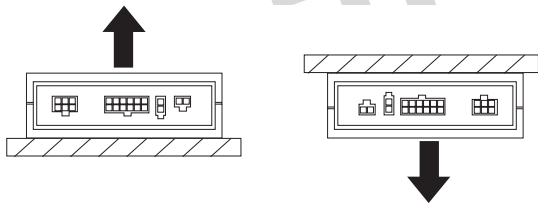
Before installation, unpack, assemble, and test all components on a service bench.

Installing the Bluetooth® Junction Box

Mount the box using the screws provided.

The best location for the Bluetooth junction box is under the dash. The box must be protected from dirt and moisture and have adequate space for cooling and to allow for cable connection.

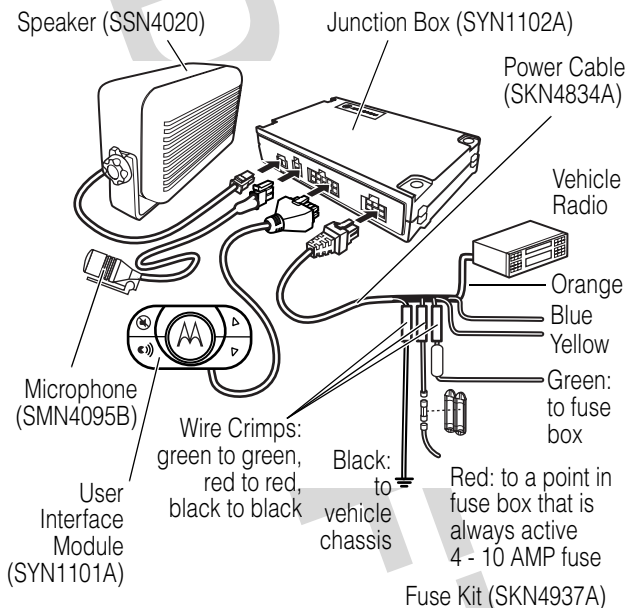
For optimal Bluetooth performance, mount the junction box so that the side with the barcode faces away from the mounting surface.



The location **MUST NOT** interfere with the vehicle's air bag deployment.

Installing the Power Cable and Fuse Kit

Caution: Failure to follow these steps may cause the accessory not to work properly and may cause damage to the car kit.



- 1 Remove all fuses and tape them to their respective holders. DO NOT re-insert fuses until you complete and inspect all connections.
- 2 Connect the fuse kit's **GREEN** Ignition Sense wire (3 amp fuse) to an ignition-switched location on the fuse block. When the ignition is off, the ignition sense line is low.

- 3 Connect the power cable's **ORANGE** Entertainment Mute Wire to the vehicle's entertainment system.

Note: This feature is only operational if the car radio and/or phone support this capability. Installation may require an optional relay (not included).

- 4 Connect the fuse kit's **RED** positive primary lead (4 amp fuse) to a point in the vehicle's fuse box that is fused at 4 to 10 amp.
- 5 Connect the fuse kit's **BLACK** ground wire to the vehicle chassis.
- 6 Inspect all connections.

Note: The Yellow and Blue wires are not used.

- 7 Re-insert all fuses. Do not replace any fuse with a higher amperage fuse.

Installing the Microphone

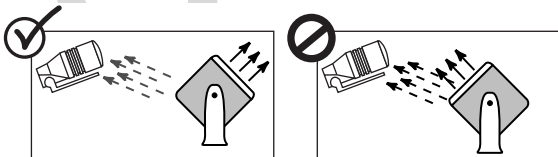
Note: Always use the supplied mounting hardware.

- 1 Connect the microphone to the Bluetooth Junction Box.
- 2 Clip the microphone in a suitable location.
 - Locate the microphone no more than 16 inches (40 cm) from the driver.
 - Aim the microphone directly toward the driver.
 - Do not allow anything (such as a rear-view mirror or sun visor) to block the path between the microphone and the driver.
 - Mount the microphone firmly so that vibrations do not affect audio quality.

Installing the External Speaker

Note: Always use the supplied mounting hardware.

- 1 Mount the speaker to the transmission hump or beneath the dash. Position the speaker so that it does not directly face the microphone.



Caution: The location of the external speaker **MUST NOT** interfere with the vehicle's air bag deployment.

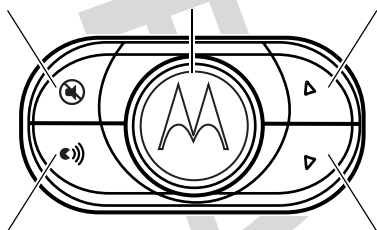
- 2 Connect the speaker to the Bluetooth Junction Box.

Using Your Car Kit

The User Interface Module

The user interface module enables you to set up and use the Bluetooth® Handsfree Car Kit.

Microphone Mute Button Multi-Function Button Volume-Up Button



Voice Dial Button Volume-Down Button

Linking Your Car Kit and Phone

Before you can use this car kit, you must link it with your phone. You establish a Bluetooth® link between your car kit and phone with a *paired link*.

When you set up a paired link, the car kit remembers the phone's ID. Once the car kit and phone are paired, your car kit automatically connects to your phone every time you start your vehicle or power up the car kit.

Initial Pairing

With the car kit and phone in close proximity:

- 1 If the car kit's Multi-Function button is flashing:** Press and hold it until it stops flashing.
- 2 Press and hold the Multi-Function button until a flash alternates between the Multi-Function button and the voice dial button.
- 3 Perform a device discovery from the phone. For details on device discovery for your phone, refer to the phone's user's guide.

Your phone scans all Bluetooth Handsfree devices around it, and displays a list of the devices it finds.

- 4 Select **Motorola HF850** from the list of devices.
- 5 Enter the passkey **0000** when prompted, and press the **OK** key.
- 6 Follow the phone's display prompts to confirm the connection.

Automatic Connection

After initial pairing, every time you start your vehicle, your phone and car kit will automatically be connected (if your phone's relevant settings are not changed and it is in power-on mode). When the wireless connection is established, the Multi-function button stays lighted.

If your phone is powered off when you start your vehicle, the Bluetooth connection may not be automatically established when you turn on your phone.

To manually establish the connection:

- 1 Turn on the phone.
- 2 **Press the Multi-function button.** The Multi-function button begins to flash, and the car kit attempts to connect to your phone.

If the wireless connection is established, the Multi-function button will stop flashing and stay lighted.

If the connection is not established in 1 minute, press the Multi-function button again to restart the paging.

Placing a Call with the Car Kit

You can place a call with the car kit in these ways:

- Dial a number from the phone.
- Press the Voice Dial Button and follow the phone's instructions for voice dialing.
- Press and hold the Multi-Function button for 3 seconds to redial the last number.

In both cases, you must first link your car kit and phone as described in “Linking Your Car Kit and Phone” on page 12.

When connected, the call is handsfree.

Answering a Call with the Car Kit

While the phone is ringing, answer the call by briefly pressing the Multi-function button. The Mute button lights during a call.

You can reject the call by holding the Multi-function button for 3 seconds.

Note: Performance may vary on different phones. For example, for some phones (such as Ericsson's T68), rejecting an incoming call can break the Bluetooth link.

Using Features While on a Call

Note: To use the functions described below, a Bluetooth® link must be established between the car kit and your phone. Most phones automatically activate a Bluetooth connection when you place a call.

Transferring a Call

From the car kit to your phone:

During a call, press and hold the Voice Dial button for more than 3 seconds. (Most phones prompt you to accept the transfer before completing the transfer.)

From your phone to the car kit:

During a call, press and release the Multi-function button. (Some phones require you to press the Multi-function button twice. See the user's guide for your phone for more information.)

Muting and Unmuting a Call

To mute the microphone during a call. Press the car kit's mute button. The Mute button will flash, and the other party will not be able to hear you.

To un-mute the call. Press the mute button again.

Receiving a Second Call

If you receive a call while you already have a call in progress, you can end the current call or place it on hold while you answer the second call.

Note: Your car kit supports second call notification with phones that support the Handsfree profile. To see what your phone supports, please consult your phone's user guide.

- To reject the second call, hold the Mute button for 3 seconds.
- To end the current call and answer the second call. Press the Multi-function button for 1 second.
- To put the current call on hold and answer the second call, hold the Multi-function button for 3 seconds. The Voice Dial button flashes when a call is on hold.

To switch between the active and held calls, hold the Multi-function button for 3 seconds. To end a call on hold. Press the Voice Dial button for 1 second.

Note: Call waiting is a subscription-dependent feature. Contact your network service provider for more information.

Using Three-Way Calling

Your car kit supports three-way calling features with phones that support the Handsfree profile. To see what your phone supports, please consult your phone's user guide.

Note: Three-way calling is a subscription-dependent feature. Contact your network service provider for more information.

If a call is in progress and another call is incoming or on hold. Press the Voice Dial and Volume Down buttons together for 3 seconds to create a three-way conference call.

Note: Some phones may require you to press the Voice Dial and Volume Down buttons together for 3 seconds *twice*.

Tip: You can reject the second incoming call by holding the Mute button for 3 seconds.

Volume Buttons

Press the volume buttons (▲ and ▼) on the car kit to increase and decrease the volume.

If you press and hold a volume button, the volume is automatically increased or decreased to the highest or lowest step.

You can also adjust the volume remotely by pressing the phone's volume buttons, if your phone supports this feature.

Using the Car Kit When the Ignition Is Off

When your car ignition is off, you can connect the car kit to the last phone it used by pressing the Multi-function button for 1 second.

The Multi-function button flashes as the car kit tries to connect to the phone. When the car kit connects, the Multi-function button stays lit.

If the car kit does not connect in 1 minute, or connects but does not detect any sound for 1 hour, it shuts off.

Disconnecting the Car Kit from Your Phone

To disconnect the car kit from your phone. Press and hold the Voice Dial button for more than 3 seconds.

The car kit and phone are automatically disconnected when you turn off the vehicle, unless you are in an active call.

Troubleshooting

<p>You cannot pair your phone with the car kit.</p>	<p>Turn the phone off and then back on. (You may need to remove the phone's battery.) Try pairing the phone and car kit again.</p>
<p>You make a call and the other party hears too much background noise.</p>	<p>Check the location and placement of your car kit's microphone. (See "Installing the Handsfree Kit" on page 7 for details.)</p>

Calling Features Quick Reference

State	Action	Indication
Off	IGN is removed and no call is active.	none
Pairing	Press the Multi-function button for 3 seconds.	Multi-function and Voice Dial buttons alternate flashing
Paging (Attempting connection)	Press the Multi-function button for 1 second.	Multi-function button flashing
Standby and Not Connected	Car kit is able to connect to a previously paired phone.	Volume Keys illuminated
Connected	Car kit is connected to a phone.	Multi-function button and Volume Keys illuminated
Call in Progress	Car kit is connected to a phone and audio is available.	Multi-function button, Mute button, and Volume Keys illuminated
Mute Call	Press the Mute Button for 1 second.	Multi-function button and Volume Keys illuminated, Mute Button is flashing

State	Action	Indication
UnMute Call	Press the Mute Button for 1 second.	Multi-function button, Mute button and Volume Keys illuminated
Last Number Dialed (*)	Car kit is connected to a phone. Press Multi-Function Button for 3 seconds.	Multi-function button and Volume Keys illuminated
Reject Incoming Call (*)	Car kit is connected to a phone. Press Multi-Function Button for 3 seconds.	Multi-function button and Volume Keys illuminated
Voice Recognition Activation	Car kit is connected to a phone. Press Voice Dial Button for 1 second.	Multi-function button and Volume Keys illuminated, Voice Dial Button turns on then off when the function is completed, either successful or not
Disconnect from Phone	Car kit is connected to a phone. Press Voice Dial Button for 3 seconds.	Volume Keys illuminated

State	Action	Indication
Answer Call	Car kit is connected to a phone. Press Multi-Function Button for 1 second.	Multi-function button, Mute button, and Volume Keys illuminated
End Call	During a call. Press Multi-Function Button for 1 second.	Multi-function button and Volume Keys illuminated
Transfer Call to Phone (*)	During a call, Press Voice Dial Button for 3 seconds.	Multi-function button and Volume Keys illuminated
Volume Up (Single Step)	During a call. Press Volume Up Button for 1 second.	Multi-function button and Volume Keys illuminated, and tone indicates volume increase
Volume Up (Continuous)	During a call. Press and hold Volume Up Button.	Multi-function button and Volume Keys illuminated, tone indicates volume increase with different tone for maximum volume
Volume Down (Single Step)	During a call. Press Volume Button Down for 1 second.	Multi-function button and Volume Keys illuminated, and tone indicates volume decrease

State	Action	Indication
Volume Down (Continuous)	During a call. Press and hold Volume Down Button.	Multi-function button and Volume Keys illuminated, tone indicates volume decrease with different tone for minimum volume
Place Call On Hold (*)	One call is in progress and the other is alerting. Press Multi-Function Button for 3 seconds.	Multi-function button, Mute button, and Volume Keys illuminated. Voice Dial Button is flashing
Answer Incoming Call and End Current Call (*)	One call is in progress and the other is alerting. Press Multi-Function Button for 1 second.	Multi-function button, Mute, Volume Keys are illuminated
Toggle Held Calls (*)	One call is in progress and the other is on hold. Press Multi-Function Button for 3 seconds.	Multi-function button, Mute, Volume Keys are illuminated. Voice Dial Button is flashing

State	Action	Indication
Create Three Way Call (*)	One call is in progress and the other is on hold. Press Volume Down and Voice Dial Buttons together for 3 seconds.	Multi-function button, Mute, Volume Keys are illuminated. Voice Dial Button is flashing
End Held Call (*)	One call is in progress and the other is on hold. Press Voice Dial Button for 1 second.	Multi-function button, Mute, and Volume Keys are illuminated
Reject 2nd Incoming Call (*)	One call is in progress and the other is alerting. Press Mute Button for 3 seconds.	Multi-function button, Mute, and Volume Keys are illuminated

- * Requires Handsfree Profile Connection
The indication for these cases is only guaranteed to function properly if all commands are initiated from the car kit.

Motorola Limited 1 Year Warranty for Accessories

Coverage: Motorola, Inc. warrants this accessory (“Accessory”) against defects in materials and workmanship under normal consumer use for 1 year from the date of purchase. Motorola, at its option, will at no charge repair, replace or refund the purchase price of this Accessory should it not conform to this warranty. This limited warranty is a consumer’s exclusive remedy, extends only to the first consumer purchaser, is not transferable and is valid only on Accessories purchased by consumers in the United States or Canada.

Exclusions:

Normal Wear and Tear: Periodic maintenance, repair and replacement of parts due to normal wear and tear are excluded from coverage.

Batteries: Only batteries whose fully charged capacity falls below 80% of their rated capacity and batteries that leak are covered by this limited warranty.

Miscellaneous: This warranty does NOT cover defects or damage that result from: (a) improper operation, storage, misuse or abuse, accident or neglect, such as physical damage (cracks, scratches, etc.) to the surface of the Accessory resulting from misuse; (b) contact with liquid, water, rain, extreme humidity or heavy perspiration, sand, dirt or the like, extreme heat, or food; (c) use of the Accessory for commercial purposes or subjecting the Accessory to abnormal usage or conditions; (d) service, installation, alteration, or modification in any way by someone other than Motorola, or its authorized service centers and, (e) other acts which are not the fault of Motorola.

Obtaining Service: To obtain service or information, please call 800-331-6456 in the USA or 800-461-4575 in Canada. You will receive instructions on how to ship the Accessory, at your expense, to a Motorola Service Center. To obtain service, you must include a copy of your receipt or other

comparable dated proof of purchase, a written description of the problem and your address and telephone number.

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