

Cell Phone - Bluetooth Hands Free Kit Information

NO: 39-50

DATE: 9-7-2005

MODEL:

XC90 All

2001- S60/V70/XC70/S80 (excl. Executive, Elite, Premier, 75th anniversary)

2005- S40 from ch. no. 80924 // V50 from ch. no. 78750

SUBJECT: Bluetooth Hands Free Kit Information

REFERENCE: VRC2/Aftersales information

The purpose of this TNN is to provide information

The Volvo Bluetooth hands free kit will integrate most Bluetooth enabled cell phones into the Volvo audio system. It consists of a base kit, and an adapter harness which is vehicle specific. The system is wired into the [speaker](#) output of the Volvo audio system and will automatically mute the audio and [navigation system](#) when making an outgoing call or receiving an incoming call.

In addition, the system uses speech recognition for initiating call and menu commands.

Frequently Asked Questions

Item	Question	Answer
Microphone - Speech recognition/Audio Uplink		
1A	Where should I place my microphone for the best performance?	Securely mount the microphone on the overhead console or headliner between the driver and passenger. DO NOT mount on the visor or windshield. Vibrations will negatively impact audio and speech recognition performance.
2A	People on the other end of the line complain that the audio from my car kit is choppy. Is there anything I can do to improve the audio quality?	Make sure your microphone is installed properly. If the background noise on the other end of the line (the person you are talking to) is excessive, your voice may be muted or choppy to the person you are speaking with due to the noise cancellation software running. Verify that there is not an excessive amount of background noise (including car radio, climate control system, windshield wipers, or a passenger speaking) in the car, as it may impact voice quality and volume as well.
Speaker - Audio Downlink/Mute		
1B	Even though I increased the volume of my last call, the next call seems to be quiet again. How can I get the car kit to retain the higher volume level?	To change the default volume setting, it should be increased or decreased during the voice prompt of one of the speech recognition menus.
2B	Why does the radio un-mute during dialling?	This is a limitation of the handset. The handset takes longer to dial. So the Volvo Handsfree System with Bluetooth times out and unmutes the radio. Handset may only support Handsfree Profile 0.96 profile.
UIM		
1C	Why don't I get a visual indication when making an outgoing call from the Volvo Handsfree System with Bluetooth?	The Volvo Handsfree System with Bluetooth is dependent on call setup indication/AT command from the handset. Some handsets do not provide this indication.
2C	Why don't I get a visual indication when making an outgoing or accepting an incoming call from the Volvo Handsfree System with Bluetooth while turning on the ignition or returning into BT range?	The Volvo Handsfree System with Bluetooth is dependent on call setup indication/AT command from the handset. Some handsets do not provide this indication.
3C	Why does the call waiting visual indication stop?	The Volvo Handsfree System with Bluetooth is dependent on the handset sending call status indicators/AT commands. Not all handsets repeat the call waiting status indications and therefore the visual indication stops
Bluetooth		
1D	Why does my handset complete the pairing process after passcode entry when I've terminated the pairing process before passcode entry screen?	This is a BT limitation of the handset. The handset is finishing its pairing process before it prompts for the passkey.
2D	Why does my handset reconnect before the SIM PIN is entered?	This is a handset limitation. The handset is finishing its re-connection process before prompting for the SIM PIN.
3D	How do I turn the Bluetooth on to link up my handset and car kit?	Follow the instructions provided by your handset's manufacturer to ensure that Bluetooth is turned on (for Motorola handsets this can be found from the main menu: Settings -> Connection -> Bluetooth Link -> Setup, then select Power and turn it on. The turn the phone off, then on again). The first time you link with the car kit, you will have to pair your handset (see user manual for instructions), but subsequent times your handset and car kit should connect automatically over the Bluetooth link.
4D	My handset has the Bluetooth headset profile. Can I use the car kit?	No, you cannot use the Volvo Handsfree System with Bluetooth car kit with a handset that does not have hands-free profile. You will not be able to complete the pairing process with a handset that has the BT headset profile.

5D	Why can I make a connection with the Volvo Handsfree System with Bluetooth from the handset quickly sometimes and other times it takes awhile?	-The Volvo Handsfree System with Bluetooth always tries to connect to the last connected handset. This process takes approximately 15 sec per each handset in its device list. -After the Volvo Handsfree System with Bluetooth has gone through its device list, there is a 20 sec idle state. It is during this idle state that you can connect to the Volvo Handsfree System with Bluetooth from your handset.
6D	Why can I connect another handset to the Volvo Handsfree System with Bluetooth, after a previous handset has moved out of BT range, quickly and other times it takes awhile?	-After a link loss of the BT signal between the Volvo Handsfree System with Bluetooth and a handset, the Volvo Handsfree System with Bluetooth continues to try to connect to the previously connected handset. This reconnection time depends some internal timing within the Volvo Handsfree System with Bluetooth. After it times out, It will go into a 10 Sec - idle state. This is the only time to connect to another device. The Volvo Handsfree System with Bluetooth will continue this cycle indefinitely.
Call Issues		
1E	Why do my active or held calls terminate when I press and release the END button?	This is a handset limitation. The handset does not respond properly when the AT command, 'hangup', is sent by the Volvo Handsfree System with Bluetooth
2E	Why can't I store handset voice tags while connected to the Volvo Handsfree System with Bluetooth?	Some handsets do not support storing handset voice tags while connected to the Volvo Handsfree System with Bluetooth. Drop the BT connection to the Volvo Handsfree System with Bluetooth, store your handset voice tag and re-connect to the Volvo Handsfree System with Bluetooth.
3E	Why does a last number redial happen when I answer an incoming call?	This is due to a delay when the handset gets the call and notifies the Volvo Handsfree System with Bluetooth. Since the Volvo Handsfree System with Bluetooth has not been notified of the call, it interprets the ANSWER button press as a redial.
4E	Why can't I answer a call waiting after I've terminated an active call?	Due to some handset limitations, the call waiting call must be answered within 6 seconds of notification.
5E	Why does the ANSWER button continue to flash, indicating a call is still waiting, when the held call is terminated on the handset or remote handset?	The handset does not respond properly to the 'multi-party call' AT command from the Volvo Handsfree System with Bluetooth. This is a limitation of the handset, which could be improved with a software update of the handset.
6E	Why can't I toggle between active and held call with button presses of the ANSWER button?	The handset does not respond properly to the 'multi-party call' AT command from the Volvo Handsfree System with Bluetooth. This is a limitation of the handset, which could be improved with a software update of the handset.
7E	Why are DTMF tones heard as continuous tone on the remote handset?	This is a handset limitation. Sometimes the handset stops responding to the Volvo Handsfree System with Bluetooth's DTMF AT command. It will continue to play a tone until it recovers, which is to respond to another command.
8E	Why can't I terminate a call with the END button while the call is dialing on the network?	This is a handset limitation. The handset does not notify the Volvo Handsfree System with Bluetooth of a DIP when using the handset voice tags or the call button of the handset. Since the Volvo Handsfree System with Bluetooth was not notified of a DIP, it remains in the ready state. Therefore, the END button will not work. However, the Volvo Handsfree System with Bluetooth receives a DIP notification from the handset if a redial is made.
9E	When an active call is terminated with a call on hold, why does my handset continue to display call is active?	This is a handset limitation. The handset does not resume the held call automatically when an active call is terminated.
10E	Why can't I terminate an active and a held call with a press and hold of the END button?	This is a handset limitation. The handset does not respond properly when the AT command, 'hangup', is sent by the Volvo Handsfree System with Bluetooth
11E	Why can't I answer a call after I turn the ignition on?	This is a handset limitation. The Volvo Handsfree System with Bluetooth does not get the DIP and or the ringing AT command to put the UIM in the state to answer the call. Therefore, you will not be able to answer the call from the Volvo Handsfree System with Bluetooth. However, the Volvo Handsfree System with Bluetooth may get the 'call connected' AT command, so the buttons may be set to an in call state which will allow the ability to switch, end etc.
12E	Why do I have HF audio when the call was put into private mode during DIP?	This is a handset issue. The Volvo Handsfree System with Bluetooth will not get the call indication while dialing. The indication will be received after the call is connected, so the call is in handsfree, but the ring will not

		be heard.
13E	Why can't I reject an incoming call when the active call is held?	The handset does not respond properly to the 'multi-party call' AT command from the Volvo Handsfree System with Bluetooth. This is a limitation of the handset, which could be improved with a software update of the handset.
14E	Why does the ringing stop or the call ends if the flip is closed during an incoming call.	This is a handset issue. It does this because when you open the flip on the handset for an incoming call it automatically answers the call even though it is connected to the Volvo Handsfree System with Bluetooth. In addition, something similar happens when the flip is closed. But it terminates the call.
15E	Why, when using hold and resume, do I hear a busy signal?	This is a handset issue. After it enters the HOLD mode, after a gap of about 20 seconds the handset automatically resumes. You will hear quick BeepBeepBeep when that happens.
16E	Why don't I hear call rejected when the END button is pressed with an incoming call?	This is a limitation of the handset, which could be improved with a software update of the handset.
17E	Why doesn't hold and resume work?	This is a limitation of the handset, which could be improved with a software update of the handset.
18E	Will the car kit announce the caller ID if I have an incoming call via call waiting?	No, the car kit will not announce the incoming number (caller ID) so as not to disturb the original call. The car kit will play a tone to notify you that there is a second call coming in.
21E	Why does the speed dial command dial the last number dialed?	This is a limitation of the handset, which could be improved with a software update of the handset.
22E	Why doesn't the HANG UP command work when a call is on hold?	This is a handset issue. The call needs to be resumed before ending the call.
23E	Can I answer or end a call with voice recognition?	You cannot answer a call using the voice recognition. You must press the ANSWER button on the UIM. However, you can end a call by pressing the TALK button and saying "end call" after the listening beep. Alternately you can end the call by using the END button on the UIM.
24E	Why don't I hear a ring tone when making an outgoing call from the Volvo Handsfree System with Bluetooth?	The Volvo Handsfree System with Bluetooth is dependent on call setup indication/AT command from the handset. Some handsets do not provide this indication.
25E	Why don't I hear a ring tone when making an outgoing or accepting an incoming call from the Volvo Handsfree System with Bluetooth while turning on the ignition or returning into BT range?	The Volvo Handsfree System with Bluetooth is dependent on call status indications/AT command from the handset. Some handsets do not provide this indication.
26E	Why do I hear the ring tone from handset, not from the Volvo Handsfree System with Bluetooth's speaker?	This is handset specific behavior.
27E	Why don't I get an audio indication from the Volvo Handsfree System with Bluetooth for new messages or voicemail?	This is handset specific behavior.
28E	Why don't I get audio while answering an incoming call, and receiving an SMS?	This is a limitation of the handset, which could be improved with a software update of the handset.
29E	Why can't I transition the audio to Private Mode from Handsfree Mode via the UIM or SR?	This is a limitation of the handset, which could be improved with a software update of the handset.
30E	Why didn't I hear '+' on the Caller ID during an incoming international call?	This is a handset issue. The handset does not send the '+'.
31E	Why doesn't an active call switch to HF audio during a BT connection?	This is a limitation of the handset. When there is an incoming call and the BT connection is made there will not be any handsfree audio.
32E	Why doesn't mute work for held call?	After pressing the ANSWER button to place a call on hold, wait at least 5 seconds to press Mute button. Else the Mute will not be effective.
33E	I don't hear the touch tones while I'm dialing a call. Am I doing something wrong?	No, unless you are in a call, you will not hear the touch tones when your handset is linked up to the car kit.

34E	How do I maintain my call when I turn off my car?	First, if you have a flip handset, ensure the flip is open (if it is not, your call may disconnect when your car is turned off). Depending on your handset model, the call will either be automatically switched to the handset or it may prompt you to "switch to handset". These same steps apply if you are switching from hands-free to privacy mode while the car is running.
35E	Why does my handset end the call when I transfer the audio from Handsfree Mode to Private Mode?	This is a limitation of the handset, which could be improved with a software update of the handset.
36E	Why is there a pause in audio after I press the ANSWER button and before the person on the other end hears me?	This is a combination of delays from both the Volvo Handsfree System with Bluetooth and the handset. There is a slight delay from the Volvo Handsfree System with Bluetooth between when the call is setup and when the audio channel is opened. In addition, most handsets will pass the audio to the Volvo Handsfree System with Bluetooth when a call is setup. However, if the Volvo Handsfree System with Bluetooth doesn't receive the audio within a certain time, it will request the audio.
37E	Why don't I hear my handset's ring tone on the car kit?	This is a limitation of the handset, which could be improved with a software update of the handset.
38E	Ring tone audio quality sounds poor. Why is that?	This is a limitation of the handset, which could be improved with a software update of the handset.
39E	Why does the handset call timer continue to give an indication that a call is in progress after the call has been ended on the Volvo Handsfree System with Bluetooth?	This problem is caused by network delays.
40E	Why do I have to press the END button multiple times before a call is ended?	There is a delay in responding to the user due to network and handset delays.
41E	Why, with low network signal, the Volvo Handsfree System with Bluetooth remains in an in-call status when redial is initiated by pressing the ANSWER button?	This is a handset/network issue. The Volvo Handsfree System with Bluetooth does not get the end notification. The handset may indicate "call failed, retry?"

Miscellaneous

NOTE: Some handset limitations may be overcome with a handset software update. Contact your handset provider for more information.

Abbreviations/Definitions

AT command - command set used for communication between the handset and Volvo Handsfree System with Bluetooth

BT - Bluetooth

CIP - call in progress

DIP - dial in progress

HF - handsfree

LED - light emitting diode

UIM - User Interface Module

Troubleshooting guide

Item	Symptom	Solution	Next-Level Solution	Last Solution
UIM				
1A	System does not respond. UIM buttons not lit.	<ul style="list-style-type: none"> - Switch on ignition. - Check UIM connection. 	<ul style="list-style-type: none"> - Check the UIM connection to the interface harness. Look for loose connectors, loose pins, and crimped or frayed wires. 	<p>Check the power connections to the module (Battery, Ignition, Ground). This is easily done by probing the 8 Pin Molex connector: pins 1 for Ground, 2 for Battery, 3 for Ignition. Voltages are nominally 12.5V. If voltage is not ok, check vehicle fuses. If fuses are intact replace the Mute Adaptor Harness.</p> <p>If voltages are ok, check the system fuses on the Interface Harness. If fuses are intact, replace the UIM. If not corrected, replace the Interface Harness. If not corrected, replace the ECU.</p>
Microphone - Speech recognition/Audio Uplink				
1B	Poor Speech Recognition (SR) performance	<ul style="list-style-type: none"> - Enter Digits in Segments. - Speak with no pauses. - Wait until after the listening prompt before speaking. If you speak too early, the Volvo Handsfree System with Bluetooth may not recognize what you are saying. - Talk Loudly. - Speak in the direction of the microphone. - Check position of the microphone (see microphone installation sheet). - Verify that there is not an excessive amount of background noise (including car radio, climate control system, windshield wipers, or a passenger speaking) while you are using the voice command functions as this could also interfere with the voice recognition. - If you are using the kit in English, you may find that UK English or US English works better depending upon your accent. You 	<ul style="list-style-type: none"> - Check microphone connection to Interface Harness. Look for loose connectors, loose pins, and crimped or frayed wires. 	<p>Replace microphone. If not corrected, and the UIM is lit, replace the Interface Harness. If UIM is not lit see 1A. If not corrected, replace the ECU.</p>

		can find instructions on how to switch the language in your user guide.		
2B	SR does not respond, or in-vehicle audio is not heard on the remote handset	- Check microphone connection	- Check microphone connection to Interface Harness. Look for loose connectors, loose pins, and crimped or frayed wires.	Is the UIM lit? If not, see 1A. Replace microphone. If not corrected, and the UIM is lit, replace the Interface Harness. If not corrected, replace the ECU.
3B	Poor uplink audio. Far side hears an echo. Etc.	- Check position of the microphone. - Ensure that your microphone is securely mounted. - Ensure air vent is not blowing into microphone.	- Reduce the volume of the speakers in the car kit as this may help to reduce the echo on the line as well. - Ensure there is not an excessive amount of background noise (including car radio, climate control system, windshield wipers, or a passenger speaking) in the car, as it may impact voice quality and volume as well.	
Speaker - Audio Downlink/Mute				
1C	No Speech Recognition (SR) prompts or Hands-Free (HF) audio is heard. Radio audio is muted.	- Check the speaker connections through the Mute Adapter Harness and Relay. - Check that the relay "clicks" when a SR of HF session starts and ends.	- Check speaker connections through the Interface Harness, Mute Adapter Harness, and Relay. Look for loose connectors, loose pins, and crimped or frayed wires.	Is the UIM lit? If not, see 1A. Check the power connections to the Mute Adapter Harness (Battery, Ground). This is easily done by probing the Mute Adapter Harness side of the 8 Pin Molex connector: pins 1 for Ground, 2 for Battery. Voltages are nominally 12.5V. If voltages are ok and the Volvo Handsfree System with Bluetooth fuses are intact, replace the Mute Adaptor Harness. If not corrected, replace the Interface Harness. If not corrected, replace the ECU.

2C	Vehicle Audio System does not Mute when an SR or HF session is active.	<ul style="list-style-type: none"> - Check the Mute Adapter Harness connection to the Relay. Check that the Relay "clicks" when a SR or HF session starts and ends. 	<ul style="list-style-type: none"> - Check Mute line connections through the Interface harness, Mute Adapter Harness, and Relay. The Mute line is on pin 4 of the 8p White Molex connector of the Mute Adapter Harness and Interface Harness. Look for loose connectors, loose pins, and crimped or frayed wires. 	<p>Is the UIM lit? If not, see 1A.</p> <p>If the Mute signal does not show 0V (ground, active low) at the 8p White Molex connector when HF or SR audio should be present, replace the Interface Harness.</p> <p>If the Mute signal is still not active low, replace the Adaptor Harness.</p> <p>If the Mute signal is still not active low, replace the Mute Adaptor Harness.</p>
3C	Vehicle Audio System is Muted all the time.	<ul style="list-style-type: none"> - Check Mute line connections through the Interface Harness and Mute Adapter Harness. Look for any place that the Mute line may be shorted to Ground through a crimped or frayed wire, loose connection of loose pin. - Short press the end key. 	<ul style="list-style-type: none"> - Reset the system 	Replace the ECU.
Bluetooth				
1D	Cannot pair a new handset with the system	<ul style="list-style-type: none"> - The handset must support Bluetooth Handsfree Profile 0.96 or 1.0 - The system supports a maximum of 4 handsets at once. Make sure this limit is not exceeded. - Remove all previous pairings using the REMOVE ALL command. The system should be reset. - Delete the pairing information on the handset and ensure that the handset is removed from any other systems with which it is paired. 	<ul style="list-style-type: none"> - Check handset Compatibility Matrix to see if the handset being used has been tested and is supported. 	<p>Is the UIM lit? If not, see 1A.</p> <p>Replace the ECU.</p>
2D	Handset doesn't reconnect when starting car.	<ul style="list-style-type: none"> - Check is Bluetooth is switched on at handset. - Is ECU set as authorized on handset. - Is handset a paired device on ECU? - Is ECU a paired device on handset? - Is UIM lit? If not see 1A. 	<ul style="list-style-type: none"> - Check handset Compatibility Matrix to see if the handset being used supports seamless mobility. - Restart vehicle or reset system. 	<p>Remove all previous pairings using the REMOVE ALL command. The system should be reset. Then delete the pairing information on the handset and ensure that the handset is removed from any other systems with which it is paired. Pair the handset to the system again.</p> <p>If not corrected, replace the ECU.</p>

Call Issues				
1E	Digits not caller name is heard on incoming call.	- Add caller's number to contact list on ECU.		
2E	Handset voice tag not working.	- Check handset Compatibility Matrix to see if the handset being used supports handset voice tags.	- Check to see if handset voice tags are enabled on handset - Wait for handset to open audio channel before entering voice tag. Handset should sent a beep to indicate this.	Update handset SW.
3E	Speed dial not working?	- Check handset Compatibility Matrix to see if the handset being used supports speed dial.	- Is it a valid speed dial.	Update handset SW.
4E	Unable to switch audio back to handsfree when in Private Mode.	- Check to see if ECU is in the call menu in private mode. if not, handset has removed the BT link. - Check handset Compatibility Matrix to see if the handset being used supports private Mode to Handsfree Mode transition.	Use handset menu to transfer audio back to handsfree.	Purchase handset that supports Private Mode to Handsfree Mode transition.
5E	No ring tone is heard on system for incoming call.	- Check if handset ring mode is set to silent/vibrate. If so change.		
6E	No caller ID is heard.	- Check handset Compatibility Matrix to see if the handset being used supports caller ID. - Check if caller ID is hidden.	- Set 'Call Announce' to On in setup menu.	Purchase handset that supports caller ID.
7E	Incoming call is automatically answered.	- Check if handset is set to auto answer. If so change.		
8E	Radio is unmuted when switched to Private Mode.	- Check to see if the Volvo Handsfree System with Bluetooth is in the Call Menu in Private Mode. if not, handset has removed the BT link and unmuting the radio is expected behavior.	#NAME?	Purchase handset that supports Private Mode to Handsfree Mode transition.
9E	Unable to access contact list.	- Contact list is only available when a handset is connected to system.		

Fault tracing guide and FAQs Information regarding the Bluetooth kit

Please go to; VRC2 external links < Aftersales Business Volvo Hands Free Compatibility Matrix > for links to the following information;

- ^ Phone compatibility matrix
- ^ Phone pairing procedures and examples
- ^ Volvo Handsfree with Bluetooth Brochure
- ^ Volvo Handsfree with Bluetooth training Overview
- ^ Frequently asked questions
- ^ Interactive users guide for the IHF1000

Questions regarding phone compatibility, set up, and Motorola(R) specific operational

problems can be forwarded to the Motorola(R) technical assistance Hotline. 877-MOTO-2-GO (877-668-6246)

Installation questions on Genuine Volvo Handsfree Bluetooth should be forwarded to the Volvo Technical Hotline. Please have the installation instructions handy if you need assistance.

***Updates to this Chart reflecting new products can be found on [VRC2 >External links>Aftersales information>Volvo hands free compatibility matrix](#)**

IHF1000 Phone Interoperability Results	
<p>The IHF1000 car kit supports the Bluetooth® Hands-Free Profile. In order for your compatible Bluetooth enabled phone to communicate with the IHF1000 car kit, it must also support this profile. However, even if your phone supports the Bluetooth Hands-Free Profile, it may not be capable of taking advantage of all the advanced features/functionality of the IHF1000 car kit. The chart below outlines the compatibility of several popular Bluetooth enabled phones with many of the advanced features of the IHF1000 car kit. This chart was compiled based on testing conducted by Motorola, and is believed to be accurate, however product compatibility and/or features/functionality are subject to change without notice or obligation. The IHF1000 car kit supports Bluetooth Hands-Free Profile. Your phone should support this profile.</p>	
# BLINC Feature List	Phone Model
1. Pair phone	Sony Ericsson Z600
2. Remove phone	Sony Ericsson T681
3. Answer incoming call using UIM	Sony Ericsson T610
4. Terminate call from UIM or using SR	Sony Ericsson K700
5. Last number redial using the UIM or SR	Siemens S66
6. Call reject from UIM	Siemens S56
7. Incoming call indication	Siemens S55
8. Multi-party calling - toggle between calls	Orange SPV C500
9. Multi-party calling - terminate	Nokia 6600
10. Transfer audio to Phone using UIM and/or SR	Nokia 6310i
11. Make a call using phone voice taps	Nokia 6230b
12. Make a call using digit dialing SR	Nokia 3650
13. Call waiting - accept	Motorola V80
14. Call waiting - reject	Motorola V710
15. Transfer audio to HF using UIM and/or SR	Motorola V635
16. Make a Call using "SPEED DIAL"	Motorola V600
17. Using DTMF tones via "ENTER" command	Motorola V6
18. Low Battery Audio Indicator	Motorola V551
19. Voicemail Audio Indicator	Motorola V3
20. SMS Audio Indicator	Motorola MPx220
21. Seamless Mobility	Motorola E815
UIM = User Interface Module, or in other words the keypad mounted in the car	Motorola E398
SR = Speech Recognition	Motorola A630
IHF = Hands Free	Motorola A1000
	LG PM-325
	iDEN i605
	Motorola M1000
	BlackBerry 7290