

# BES112

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# 1 Product Description

BES112 is a set of Bluetooth stereo headphones which allows music streaming via the Bluetooth USB Dongle, Bluetooth A2DP cellphone, PDA, smartphone, and Bluetooth built-in notebook.

BES112 can also work as a Bluetooth Hands-free device. BES112 will keep you informed of incoming calls while listening to music.

## 2 Product Contents and Functionality

### 2.1 Product Contents

- BES112 Bluetooth stereo headphones
- USB port charger
- USB cable
- Protection bag
- Detachable microphone
- Warranty Card

### 2.2 Hardware Specification

#### 2.2.1 BES112 (Headphone)

Product Name	Blue-Tooth Stereo Headphones
Product ID	BES112
Hardware Version	Rev.R01
Software Version	Rev. 20060307
Product category	End-user product
Blue-Tooth specification	Blue-Tooth 1.2 compliant
Qualification	FCC 、 CE 、 BQB
Support Profile	A2DP 、 AVRCP 、 Headset 、 HandsFree
Power class	Class 2
Power control	Auto
Antenna	Print
Frequency range	2402-2480MHz
Spread Spectrum	FHSS(79 channels) USA/EU
Modulation	GFSK(Gaussian Frequency Shift Keying)
Data Rate	1Mbps

<b>Interoperability</b>	<b>All devices support the Blue-Tooth A2DP 、AVRCP 、HS 、HF profile</b>
<b>Security</b>	<b>Pairing, Encryption and Authentication</b>
<b>RF Output power</b>	<b>-3dBm ~ +2 dBm</b>
<b>Sensitivity</b>	<b>&lt;0.1% BER at -78dBm</b>
<b>Operation range</b>	<b>Up to 10 meters</b>
<b>Audio Specification</b>	
<b>Sample Rate</b>	<b>48 KHz</b>
<b>Noise Level</b>	<b>&lt; -60dBA</b>
<b>Dynamic Range</b>	<b>&lt; -60dBA</b>
<b>THD%</b>	<b>5%</b>
<b>Frequency Response</b>	<b>20Hz~18KHz @ -3dB</b>
<b>Codec</b>	<b>Sub Band Codec</b>
<b>Headphone Output</b>	<b>7mW @ 32Ω</b>
<b>Power Consumption</b>	<b>Link &lt;47mA</b>
<b>Playing Music</b>	<b>&lt;87mA</b>
<b>Talking Using the Headset</b>	<b>&lt;55mA</b>
<b>Battery</b>	<b>3.7V Lithium-Polymer battery Typical 550mAh</b>
<b>Charging time</b>	<b>1.5~2.3 hours</b>
<b>Input Power</b>	<b>DC 5V 1A</b>
<b>Playing time</b>	<b>Up to 6.5 hours</b>
<b>Dimension</b>	<b>121.5mm x 150.0mm x 30.22mm</b>
<b>Weight</b>	<b>82g</b>
<b>Operation Temperatures</b>	<b>-20°C~+60°C</b>

## 2.3 BES112 Buttons and LED Definitions

Button	Functions			
	While listening to Music		While connected to a Mobile Phone (Headset, HandsFree function)	
	Connected to AV Dongle	Connected to General Dongle	Ring	During a call
ON/OFF Button	<ul style="list-style-type: none"> <li>* Power On (Hold for 5 seconds)</li> <li>* Power Off (Hold for 4 seconds)</li> <li>* mute / un-mute music</li> </ul>	<ul style="list-style-type: none"> <li>* Power On (Hold for 5 seconds)</li> <li>* Power Off (Hold for 4 seconds)</li> <li>* Pause/Play (note 2 below)</li> </ul>	Accept a call	End a call
Volume UP Button (+)	Volume Up	Volume Up	Reject a call	Volume Up
Volume DOWN Button (-)	Volume Down	Volume Down	Reject a call	Volume Down
Forward Button (>)	N/A	Skip to next song	Reject a call	Mute/Un-mute Microphone
Back Button (<)	N/A	Skip to previous song	Reject calls	Mute/Un-mute Microphone

### Notes:

1) IVT's BlueSoleil 1.6 supports Winamp 5 and Microsoft Media Player 8(or higher).

LED Definition	Description
Blue LED	Solid when connected (to a transmitter or mobile phone) Blinks slowly when the power is on and it is waiting to be connected. Blinks rapidly when ringing (incoming call)
Red LED	Solid when charging Off when finished charging



## 2.4 BES112 Bluetooth stereo headphones functionality:

### 2.4.1 Power On

1. Hold the **ON/OFF** Button for about 5 seconds until a short welcome sound is heard. Meanwhile, the function LED (blue) will blink.
2. When connected to a Bluetooth device (a transmitter or mobile phone), the function LED (blue) will remain solid.

### 2.4.2 Power Off

Hold the **ON/OFF** Button for about 4 seconds, until the function LED (blue) turns off.

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### 2.4.3 Volume Control

- Press the Volume UP (+) button to increase the volume.
- Press the Volume DOWN (-) button to decrease the volume.
- Volume levels : 20 levels; default: 13.

### 2.4.4 Forward Track/ Backward Track

When BES112 is connected via the General Dongle to similar IVT BlueSoleil software, use the Forward Track (>) / Backward Track (<) button to skip the next/previous song.

## Power saving Settings:

**Note: BES112 will automatically shut down if it is idle for more than two minutes. If this is the case you will need to restart the unit.**

## 3 Charging

BES112 is embedded with a rechargeable Lithium Polymar battery. The embedded battery is not fully charged when packaged. Therefore, before using the BES112 for the first time, it will be necessary to recharge the battery with the enclosed 5.0V DC power adapter.

### Charging Reminders:

1. It takes 1.5 to 2.3 hours to fully recharge the battery.
2. While the battery is charging, the Charging LED lights up in a solid state.
3. When finished charging, the Charging LED will turns off.
4. The BES112 will be reset when the power adapter is plugged in. This function can be used to reset the device in case of malfunction.
5. Press the On/Off button if you wish to use BES112 while charging..
6. If you want to charge BES112 using a computer, please connect your Bluetooth device to a USB 2.0 port or USB 2.0 hub using the USB charger cord (included in the package.) High powered USB 2.0 ports are typically found on the computer itself (not on your keyboard or other low powered peripherals)..

**Note: BES112 : A sequence of beeps in 5-second intervals indicates that the battery of BES112 needs to be recharged, If you do not charge the unit it will be automatically powered off after 100 seconds.**

**Note: \*\*Signs to identify possible lithium battery fail \***

1. Unit fails to switch on, or switches off after a very short period of time.
2. LED keeps turn-off while charging with the unit properly plugged to the power cord.
3. Battery not properly charged after the charge process has been completed.
4. The earphone constantly emits a beep indicating that the charge process has been completed, even though the unit has just started the charging process.

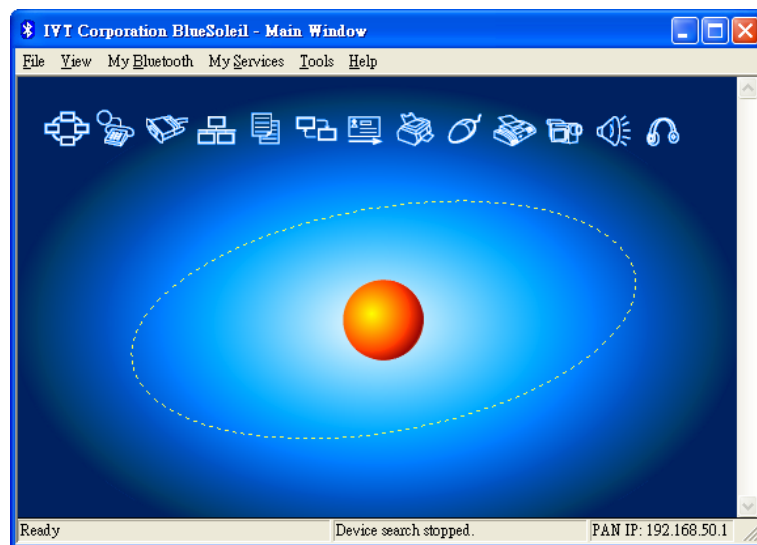
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**\*\*\* If you experience any of the problems mentioned above, please contact your dealer or distributor for a battery examination \*\*\***

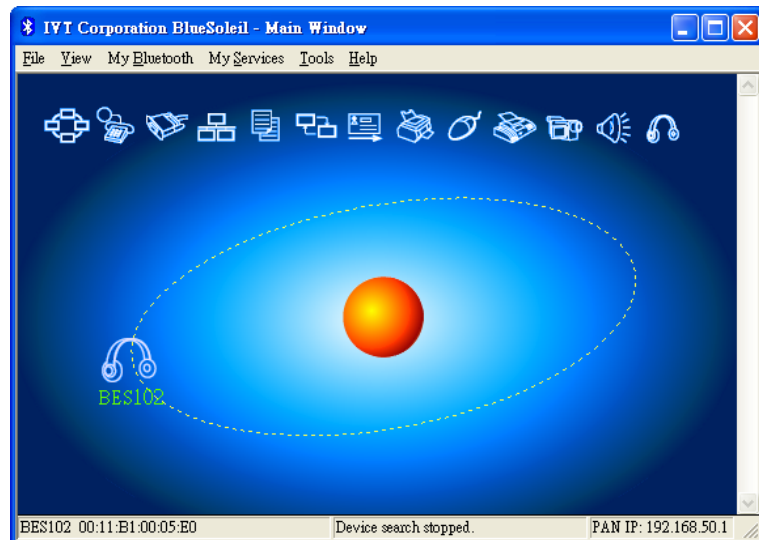
## 4 Listening to music

### 4.1 Connecting to a Bluetooth USB Dongle

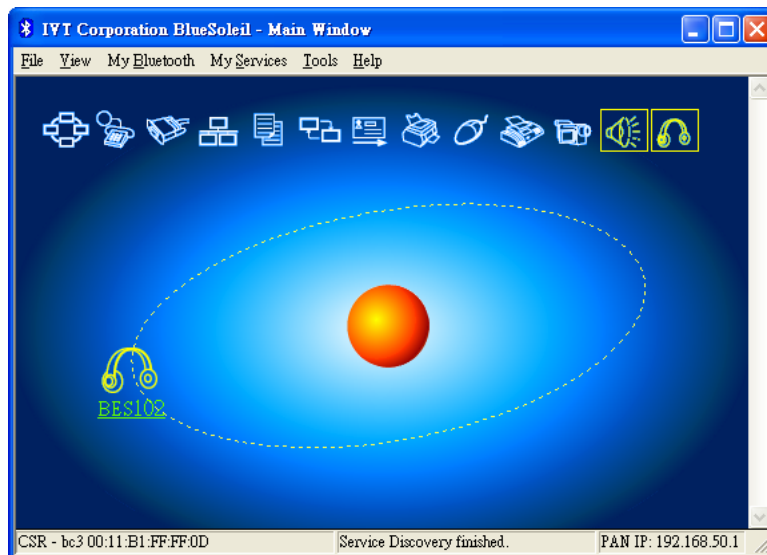
1. Install the Bluetooth software (e.g. IVT's BlueSoleil). You may need to restart the omputer during this process.
2. Plug the Bluetooth USB Dongle into the USB port of your PC.
3. Double-click on the Bluetooth tray icon in the lower right corner of the screen. BlueSoleil will appears as shown:



4. Turn on the BES112.
5. Command BlueSoleil to search for Bluetooth devices around the General Dongle by pressing F5.
6. The BES112 headphones icon should appear in the BlueSoleil screen if the BES112 has been found. The screen should appear as shown:

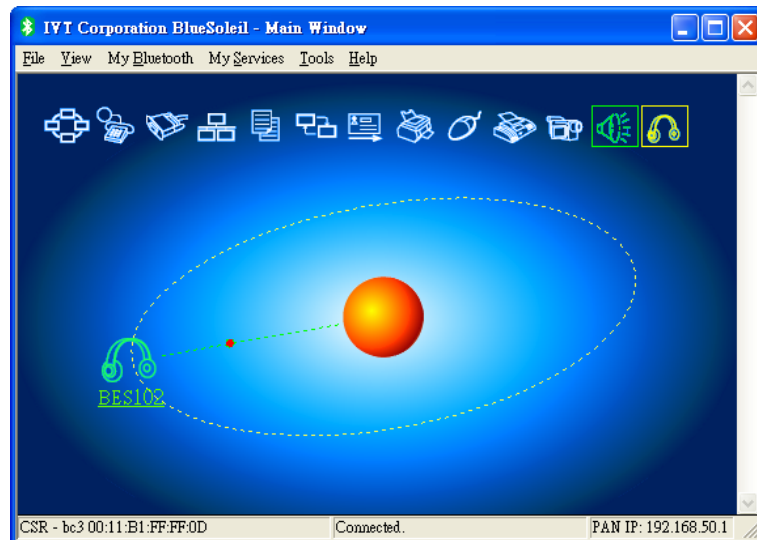


7. Command BlueSoleil to find out all the services that the BES112 provides (AV and headset) by double-clicking the BES112 icon in the BlueSoleil screen. The 2 services will appear on the screen as shown:



8. Connect the General Dongle to the BES112 by pressing the AV service icon (the trumpet icon). A dotted line will appear between the BES112 icon and the sun icon.





9. Now you can enjoy wireless music streaming by launching the audio player software and playing music!!!

## 5 Connecting to a Bluetooth mobile phone



### 5.1 Pairing stage

1. First, enable the Bluetooth function of your mobile phone.
2. Select 'HandsFree devices' and perform the search.
3. Once the BES112 has been found by the mobile phone, it will require you to enter a 4-digit PIN code (0000).

### 5.2 Answering a call

1. You will hear the ring tone if there is an incoming call.
2. Press the **ON/OFF** button once to pick up the incoming call, or press any of the

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other buttons to reject the incoming call.

### 5.3 Ending a call

Press the **ON/OFF** button again to end the call previously accepted by pressing the **ON/OFF** (see point 5.2).

### 5.4 Muting de microphone on/off

- While you are talking on the phone, you can press the “**Forward Track**” or “**Backward Track**” button to mute the microphone. This will prevent your voice from being heard on the other end of the call.
- Press the “**Forward Track**” or “**Backward Track**” button again to un-mute.

### 5.5 Making a call

Dial the number as usual on your mobile phone, then use the BES112 as a HandsFree device to talk.

## 6 Notice

1. If you want the BES112 to work as a HandsFree device while you are listening to music, you will need to first pair the BES112 with your Bluetooth mobile phone.
2. If the devices are malfunctioning, you can reset them by plugging in the power adapter.

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

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 receiver.
- Connect the equipment into 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.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.