

BTT-002 QUICK GUIDE

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1.0 Introduction

The Billionton GBHBTB4 Bluetooth Headset (Bluetooth 2.0) is equipped with a wireless connection, low cost and feature rich mono headset applications, giving you hands-free control over your mobile phone without the need for obtrusive cables or wires. Designed for both looks and comfort, the earpiece fits inconspicuously in either ear, allowing you convenient and discreet access to all basic call controls-whether your phone is stashed away in your golf bag or lying on a table nearby.

1.1 Product Feature

- Fashionable and stylish design catering to diversified outfit.
- Bluetooth 2.0 + EDR supported to reduce power consumption
- Handsfree v1.02, Handsfree v1.5 and Headset profiles supported, compatible with Bluetooth mobile phones.
- 3-way conference call supported
- User friendly MMI and tone indication to easily operate
- Suitable for use of online voice chatting – MSN, ICQ, Yahoo Messenger, Skype, etc.
- Battery rechargeable and Talk time up to 10 hours, standby time up to 100 hours.
- Li-polymer rechargeable battery, charged also from a PC via the supplied USB cable.
- Weight only 20g.

1.2 Specifications

Bluetooth	
Wireless Interface	Compliant with Bluetooth Spec. Version 2.0
Bluetooth Protocol Stack Supported	L2CAP, RFCOMM, SDP
Bluetooth Profiles Supported	GAP, HandsFree1.02, HandsFree1.5, Headset
Frequency	2.4 GHz license-free ISM band
Range(open environment)	Up to 10 meters range (30ft)
Radio Receiver Sensitivity	< -84 dBm at 1e-3 BER
Max. Simultaneous Links	Up to 1 user
Max. Paired Devices	Up to 8 users
Compatibility	Sony Ericsson K700i, P910i Nokia 9500,6630,6670,6230,3230,6820a,7600,7280, 6260, N-Gage QD, Motorola V620,V635, V3 MPx 220 and devices supporting HS/AG or HF/AG profiles.
Device Name	GHSBTB4
Pin Code	0000
Display	
OLED	NONE
Power	
Adaptor Type	90V-240VAC, 50/60Hz, 5V/500mA.
Battery Type	LI-Polymer; 3.7V/150mAH
Talk Time	Up to 10 hours
Standby Time	Up to 100 hours
Charging Time	Less than 2.5 hours
Voice Characteristics	
Frequency Response	100Hz to 3.8 KHz
Signal to Noise Ratio	Larger than 70dB
Distortion and Noise at 1KHz	-75 dB
Receive Gain Control	-18 dB to 3 dB
Receiver Gain Control Step Size	3dB
Digital wind noise filter	3dB@800Hz High Pass Filter
Man Machine Interface	
Talk Button	Multi-function button for controlling Bluetooth headset
Volume Up Button	8 volume levels adjustment
Volume Down Button	8 volume levels adjustment
Power/Battery state LED indicator	Indicator of battery full, low and charging.
Bluetooth state LED indicator	Indicator of Bluetooth operation state.
Regulatory	
Bluetooth	GAP, Headset, Handsfree profiles.
ETSI	EN 300328-1, EN 301489-1/-17
FCC	FCC part 15 subpart B, subpart C
Safety	EN 60950
TELEC	
Environment	
Storage	-20°C to 70°C; 10% to 90% RH
Operating	0°C to 55°C; 15% to 85% RH

Dimensions

Size	69.3mmx19.7mmx12.4mm
Weight	20g

2.0 Man Machine Interface Specification

2.1 Button Control Interface Specification

Button	Action	Function
1. Talk	Short Click	Answer an incoming call
	Short Click	Voice recognition dial
	Short Click	Hang up an active call
	Short Click	One call active and one call on hold, and all calls joint together to become 3-way call
	Press and hold for longer than 2 seconds	Audio Transfer from AG to Headset or from Headset to AG
	Press and hold for longer than 2 seconds	The held call is dropped and the active call remains connected
	Press and hold for longer than 2 seconds	To send "Last Number Redial" request to AG and the running mode is Handsfree.
	Press and hold for longer than 2 seconds	To Reject the incoming call if the headset is running in Handsfree mode and there is an incoming call
	Press and hold for longer than 5 seconds	Power on the headset if it is currently OFF. But the headset will power off automatically if there is not any operation in headset side within 10 minute
	Press and hold for longer than 5 seconds	Power off the headset if it is currently ON.
2. Volume UP	Short Click	To increase the volume
	Press and hold for longer than 2 seconds	One call is active and one call on hold, and the AG has dropped call, and the other two calls are connected to each other
3. Volume Down	Short Click	To decrease the volume
	Press and hold for longer than 2 seconds	MIC Mute function
4.Volum UP and Volume Down	Short Click	In a call, make a second incoming and original active call is put on hold and new incoming call is connected
	Press and hold for longer than 2 seconds	In a call, make a second incoming and original active call is dropped and new incoming call is connected
	Press and hold for longer than 5 seconds	Enter pairing mode if the headset is in standby mode, the headset will be standby again if there is not any pairing process in AG side within 2 minute
5.Talk and Volume UP	Press and hold for longer than 5 seconds	Pairing removal and reset volume setting

2.2 Power/Battery LED Indicator Specification (RED)

#	Power / Battery State	Flashing Pattern	COMMENT
1	Power on	Flash 6 times ON (250ms) OFF (250ms)	Only applied when user power on the system.
2	Battery Low	ON (250ms) OFF (250ms)	The Battery Low is defined as 3.3V +- 0.1V.
3	Battery Full	OFF	The Battery Full is defined as 4.15 V.
4	Press and hold for longer than 2 seconds	Flash 2 times ON (250ms) OFF (250ms)	To indicate user to release button, and then long press function will be workable
5	Press and hold V+ and V- for longer than 5 seconds	Flash 2 times ON (250ms) OFF (250ms)	To indicate user to release button, and then Pair operation will be executable
5	Press and hold Talk and V+ for longer than 5 seconds	Flash 2 times ON (250ms) OFF (250ms)	To indicate user to release button, and then Pairing removal and reset volume setting will be executable

2.3 Bluetooth State LED Indicator Specification (BLUE)

#	System state	Flashing Pattern	COMMENT
1	Pairing	ON(200ms) OFF(200ms)	If any mobile devices paired exists, headset will do auto connection first. After auto connection, then pairing function will be workable
2	Standby	ON(100ms) OFF(2400ms)	N/a
3	RFCOMM connected	ON(100ms) OFF(900ms)	N/a
4	SCO Connected	ON(190ms) OFF(10ms)	N/a

2.4 Sound Indicator Specification

#	Action	Sound played
1	Power ON	Long middle (500ms GS7)
2	Power OFF	Long middle (500ms GS7)
3.	Transfer Audio	V Long high (800ms G6)
3	Press Talk button for 2 seconds	Short middle (100ms GS7)
4.	Press V- button for 2 seconds	Short middle (100ms GS7)
5.	Press V+ and V- button for 5 seconds	Short high (100ms G6)
6	Volume level reaches the max/Min	Short 4 (100ms AS6)
7	Error	Long low (500ms G5)
8	Ring tone	ring_valkyries
9	Low Battery Indicator	Long high (500ms G6)

#	Action	Sound played
10	Pair Operation Fail	Long low (500ms G5)
11	Pairing removal	Short double low (100ms G5 G5)
12	SLC(ACL) connected	Short middle (100ms GS7)
13	SLC(ACL) disconnected	Short high (100ms G6)
14	End of Call	2 Note falling scale (300ms A6 E6)
15	Voice dial	4 Note rising scale (150ms GS4 DS5 GS5 C6)
16	Last number redial	4 Note rising scale (150ms GS4 DS5 GS5 C6)
17	Answer	2 Note rising scale (200ms E6 A6)
18	Reject	2 Note falling scale (200ms A6 E6)
19	Toggle mute	2 Note rising scale (200ms E6 A6)
20	Cancel/End	2 Note falling scale (300ms A6 E6)

2.5 Power Specification

#	Item	Specification
	Adaptor	90V-240VAC, 50/60Hz, 5V/300mA.
	Battery Cap	LI-polymer 3.7V/150mAH
	Battery Size /Weight	4*20*25 mm / 5g
	Charging current/time	90mA / 2.5hr Max
	Power consumption	100mW Max

FCC Caution

1. The 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.
 - (2) This device must accept any interference received, including interference that may cause undesired operation.
2. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
3. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

FCC statement in User's Manual (for class B)

"Federal Communications Commission (FCC) Statement

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.