The User Spec of OPTIMA 2 BT Dongle

Revision History

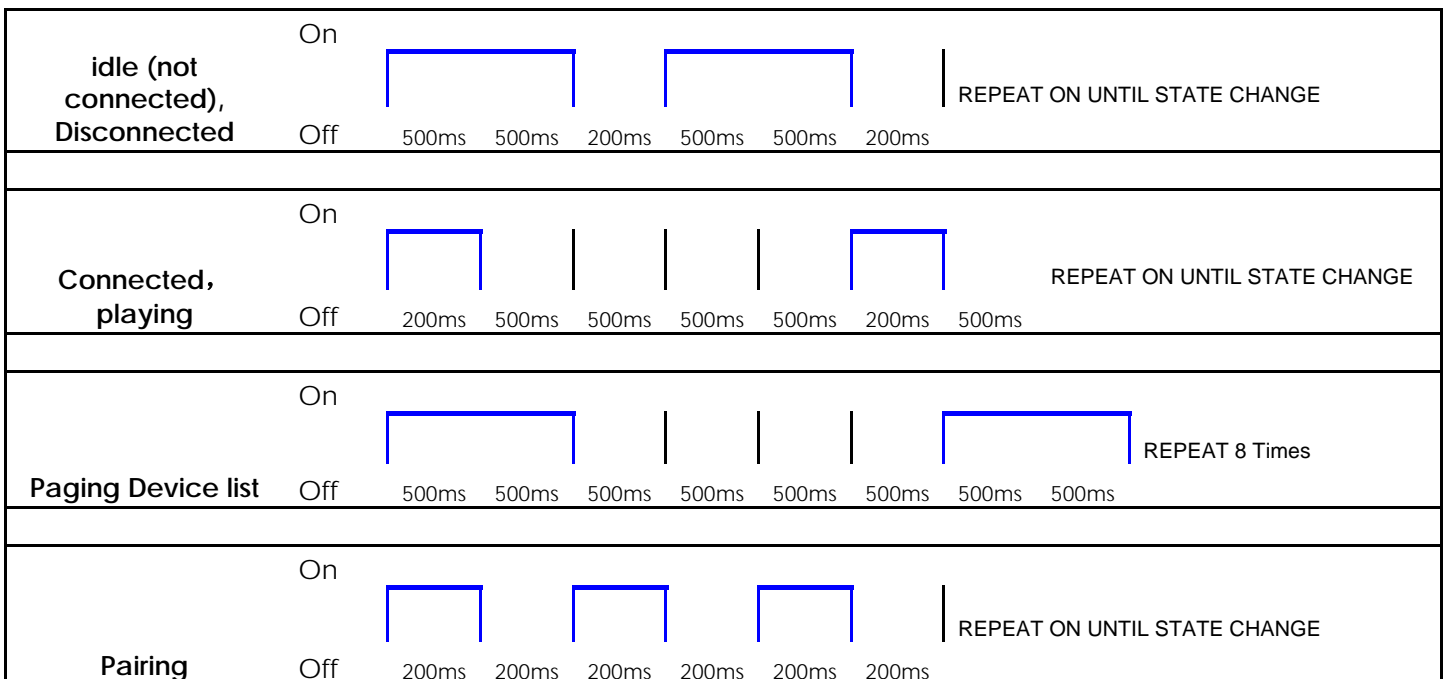| Rev.	Date	Author	Reason for Changes
0.1	2009/4/16	Andy Lu	Initial draft
0.2	2009/4/23	Andy Lu	Add "page device time out" to the flowchart Modify "pairing" to "paging device list"
0.3	2009/4/27	Andy Lu	1. Change in button function "After press 7s or more, dongle will clear the device list. The dongle will enter into pairing mode automatically." 2. Refer to "Page device" in the flow chart, please add "N<= 5min" beside "Fail". 3. add "clean disconnect" explanation on "Q & A"
0.4	2009/4/27	Andy Lu	1. modify the function 4.9 to dongle will go to pairing device automatically after cleaning device list 2. Add "Dongle doesn't try to re-connect to speaker, if it is a clean disconnect." to appendix #3
0.4	2009/8/4	Frank Feng	1. Change LED blinking pattern to make the distinction of different states more obvious

1. Product Introduction

OPTIMA 2 BT Dongle is a Plug and Play device for Windows 2000/XP/Vista and Mac OS. It is easy to install and use. OPTIMA 2 BT Dongle supports bluetooth profiles such asHFP, A2DP and AVRCP.

2. Product Exterior

1.   LED Indicator (blue light)

2.   Pairing Button
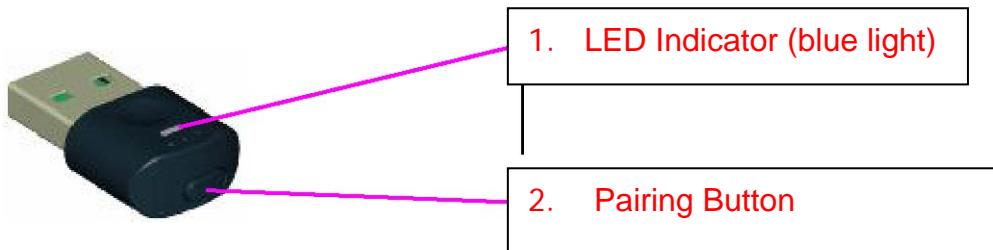
3. Introduction to LED Signals & button function

3.1 The LED light indicates different states with different blinking patterns. The blinking patterns and their corresponding states are illustrated in the following charts and table.

idle (not connected), Disconnected	On / Off — 500ms 500ms 200ms 500ms 500ms 200ms	REPEAT ON UNTIL STATE CHANGE
Connected, playing	On / Off — 200ms 500ms 500ms 500ms 500ms 200ms 500ms	REPEAT ON UNTIL STATE CHANGE
Paging Device list	On / Off — 500ms 500ms 500ms 500ms 500ms 500ms 500ms 500ms	REPEAT 8 Times
Pairing	On / Off — 200ms 200ms 200ms 200ms 200ms 200ms	REPEAT ON UNTIL STATE CHANGE

4. How to Use

4.1 Start the computer;

4.2 Put the Bluetooth headset (HS) into the pairing mode

4.3 Plug in the OPTIMA 2 BT dongle to the USB port of the computer

- **Windows: Wait for Window to automatically install the driver of OPTIMA 2 BT Dongle. A note will pop up from the taskbar indicating that the installation has been successful finished.**

- **MAC OS: You may get a prompt saying "keyboard identifying process". Close the dialogue and proceed to the next step.**

4.4 If you are using Mac OS, open **System Performances** and double click the sound icon. Select **Output** and switch to **Creative Audio Adaptor**. This step is not necessary for Windows.

4.5 Press the pairing button for 2 seconds, the Dongle will consequently enter the pairing mode with the LED blinking quickly to search and connect to HS devices nearby.

4.6 When LED's light starts blinking slowly, it indicates that the connection is established.

4.7 OPTIMA 2 BT Dongle will enter stand by/playing state after pairing is completed, you can use the HS device for music listening or VoIP. Slow blinking of LED light indicates that the Bluetooth data is being transferred.

4.8 For a new connection to another HS device, power off all existing HS devices and proceed to the following.

- **For the HS device which was paired with the dongle before (must be the latest paired device), just turn on the HS to be paired and wait for about 3~4 seconds, connection will automatically be established. If it is the 2nd latest paired device, the connection will be established 30sec later.**

- **For a new HS device, turn on the device and repeat steps starting 4.5.**

4.9 OPTIMA 2 BT Dongle can remember up to 2 HS devices. To delete the existing pairing record,   press the button for at least 7 seconds and wait for 4 seconds, the dongle will enter pairing mode automatically. The deletion is completed when the LED light starts blinking quickly.

5. Flowchart
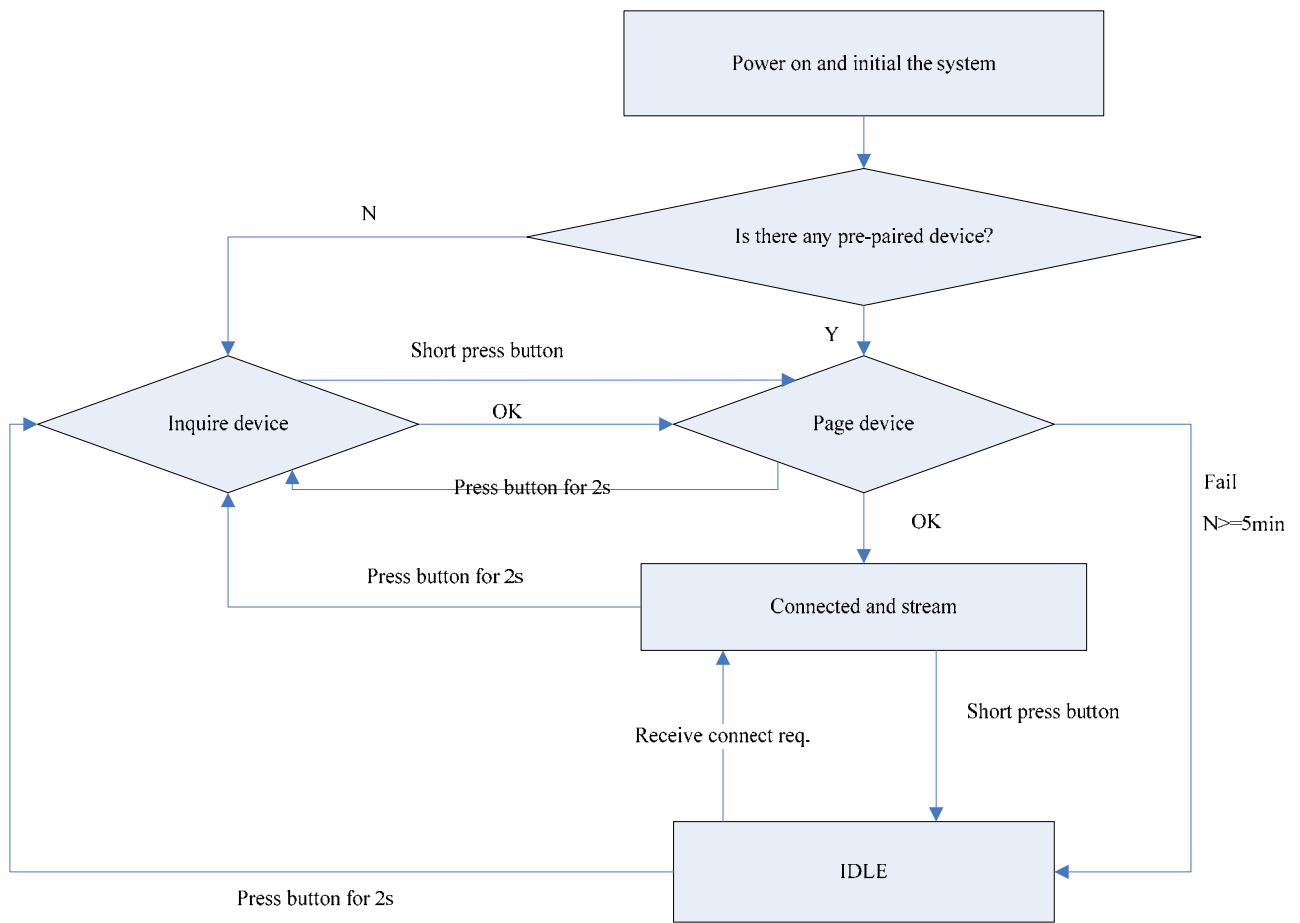
6. Button function

Duration of pressing the pairing button can have different function as shows in the chart below:

Press	Duration	State	Functions	Operation
Short press	0.5 - 2 sec	idle	paging device list	none
		Connected, playing	disconnect	Dongle disconnect the headset
		paging Device list	none	none
		pairing	paging device list	stop pairing and enter paging device list
Long press	2-4 sec	idle	pairing	force dongle into pairing mode
		Connected, playing	pairing	force dongle into pairing mode
		paging device list	pairing	force dongle into pairing mode
		pairing	paging device list	stop pairing and enter paging device list
Very long press	7+ sec	in any state	clear device list	After press 7s or more, dongle will clear the device list. The dongle will enter into pairing mode automatically.

Appendix
Q & A

1. What's the power on (when just plug in USB port) status? Is it idle?
   What does dongle do in idle mode?
=> If the dongle remembered prepaired device, it will try to connect the prepaired device once power on.
   When in idle mode, the dongle will be connectable. It means if prepaired device is trying to connet the dongle at this time; the dongle is available for connecting.

2. What's the timeout of pairing?
=> The dongle is trying to pair any device which is in pairing mode. The pairing time is set to 1min.

3. When BT link's accidentally broken, i.e. out of range or strong interference. How does dongle re-act? If it tries to re-connect, then how long will it try to re-connect before give up and switch to idle mode?
=> Dongle will try to re-connect the device. We can set the re-connect time, now it is set to 10min. Dongle doesn't try to re-connect to speaker, if it is a clean disconnect.

4. How many paired devices can dongle remember?
=> Dongle could remember many devices (we have verified remembering 8 devices OK). It could set as requirement. Now it sets to remember 2 devices.

5. How is the paging device list process implemented?
=> If dongle has paired with a device, it will remember the device's bd_addr and password and authorization information and store this infomation in pskey. The dongle will remember the latest device and move the other device remembered back.

6. What's the definition of "Connection Lost: Clean Disconnect" and "Connection Lost: Dirty Disconnect"?
=> "Connection Lost: Clean Disconnect" means dongle know why the connection is lost.
   "Connection Lost: Dirty Disconnect" means dongle don't know why the connection is lost.

IMPORTANT REGULATORY INFORMATION

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 that is received, including any interference that may cause undesired operation.

WARNING:
Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipments.

NOTE: 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 communication. 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, 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.