# LASER KEYBOARD

# User's Guide



# Certifications

● CE ● FCC

C€0890



• ISO 9001







## Safety Precautions

- 1. Avoid exposing this product to direct sunlight for extended periods of time, and keep it away from heat sources.
- 2. There is a risk of malfunction if product is used in places where sudden or extreme temperature changes occur.
- 3. Applying excessive force or impact to this product may result in product damage, and will void warranty.
- 4. To ensure safety and prevent damage, use only the dedicated mini-USB to USB cable supplied with this product.
- 5. Never attempt to disassemble or service this product yourself. Doing so can result in electrical shock and will void the warranty.
- 6. Avoid placing any object within the space between the main unit and the laser projection keyboard layout.
- 7. Please do not use this product on uneven or irregular surfaces. Place the product on a flat surface. Avoid table or surface that is as transparent or reflective as glass or mirror.

## **FCC Compliance Information**



This device complies with Part 15 of the FCC Rules. Its 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.

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### **FCC Class B Notice**

Note: This product 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 product 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 product 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.

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### 1. Product Overview

- Compact and ultra-portable for mobility
- > English QWERTY keyboard layout
- > Easy connection via Bluetooth 2.0 HID profile or USB
- > Lithium-ion Polymer rechargeable battery, Mini-B Type charge interface
- Compatible with latest operating systems:
   Windows XP/VISTA/7/8, Windows Phone 7, IOS4/5/6(iPhone and iPad)
   Android 3.1 higher, Mac OS X.

## 2. Package Contents

- > Laser keyboard
- > USB cable
- User's Guide

## 3. How this product works

When the user presses a key on the projected keyboard, the infrared layer is interrupted. This produces IR reflections that are recognized by the sensor in three dimensions, allowing the system to assign a coordinate.

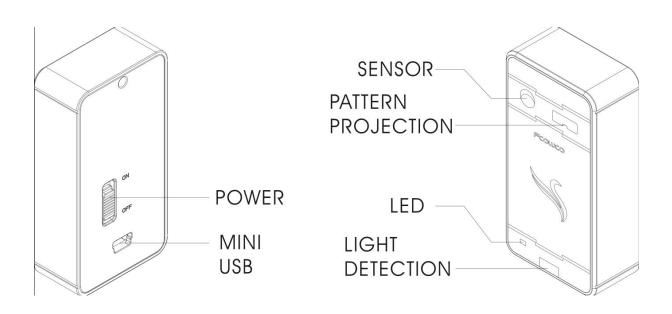
#### Conditions to avoid

- 1. Avoid direct sunlight
- 2. Avoid low color temperature light source, such as tungsten, halogen, or incandescent lamp.
- 3. Avoid uneven or irregular surface, Put the product on flat, opaque surface.
- 4. Avoid putting any objects within the space between the main unit and the laser projected keyboard layout.

#### Note:

Because this product uses infrared rays, strong infrared radiation from direct or reflected sunlight or from tungsten (halogen or incandescent) lighting may cause operating error.

# 4. Identifying parts and their functions



Battery	LED
Charging	Red
Full	LED Red Stop
Start	LED
Working Start	LED Yellow Blinking One Second
Being Searched	LED Blue Blinking
Finish Searching	LED Blue Stop

#### Laser Keyboard Use:



> DEL+B Clear the current Bluetooth pair and search status

Note: Please restart the device after clearing the current Bluetooth search status so that Bluetooth start new searching.

> DEL+S Switch on/off key stroke sound

Adjusting keyboard brightness:

- > CTRL+↑ Increase the keyboard brightness
- ➤ CTRL+↓ Lower the keyboard brightness

Note: when users press every key on the projected keyboard, the device will make "beep" key stroke sound.

#### **USB Connection Terminal**

Interface Specification: USB HID keyboard

Input Power: 1A 5V USB charge

## 5. Using Laser Keyboard

This product is used as keyboard via Bluetooth HID and USB HID connection.

This device is compatible with all USB HID capable operation system, USB HID connection allows plug-n-play without installing a separate driver.

#### 5.1 USB HID Connection Instruction

- Connect laser keyboard and host device using supplied USB cable, and your host device must support USB HID.
- Turn on laser keyboard.
- Green LED indicates proper connection. If LED indicates blinking red, it is charging.

#### 5.2 Bluetooth HID Connection Instruction

Connection via Bluetooth HID

Compatible with All Microsoft OS,

IOS4/5/6(iPhone and iPad), Android 3.1 Up, Mac OS X

Laser keyboard support Bluetooth HID, it's connection does not require installation of separate driver. It only needs pairing with your device for one time and automatically register it, if the user wants to connect it with another device, it require to clear the previous paired device by pressing and hold "DEL+B" on the projection keyboard.

- Power on device
- Press and hold "DEL+B", device become pairing status after beep sound, then shutdown and restart this device once, it can be researched by other host.
- > Blue LED with flash fast indicates that the device is ready to pair
- Scan Bluetooth device from your host(phone or PC or PAD)
- On IOS, tap on Settings-General-Bluetooth



➤ Turn on Bluetooth by tapping the ON button. iPhone/iPad will now search for pairing device ⇒ Laser Keyboard shown as follows:



One message will pop up "Bluetooth Pairing Request", input the passkey "xxxx" from your iPhone or iPad and tap "Enter" key on the Laser keyboard



> Successful pairing will be indicated by "Connected" message, and blue LED stop

flash.



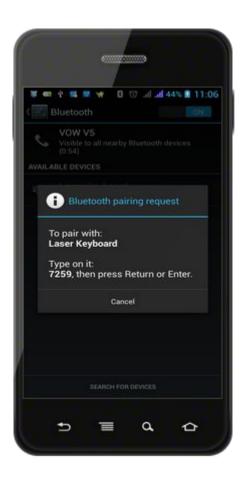
#### 5.3 Connection to Android devices

Navigate through Android as follows:
 Home → Main Menu→ Settings→ WIRELESS & NETWORKS→ Bluetooth.



➤ Click "Laser keyboard ID" to pair as shown in the above

A new message will display on your Android device: "Bluetooth pairing request", and type this key from your Android device on the laser keyboard to pair with it.



> Upon successful pairing, blue LED will stop flash. "Laser keyboard connected" will be displayed on your Android device.



### 5.4 Laser keyboard brightness adjustment

- > Press and hold "CTRL" key and press up arrow key to increase brightness
- > Press and hold "CTRL" key and press down arrow key to decrease brightness

## 6. SPECIFICATION

Item	Description
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Physical Dimension	36mmx18mmx74mm
weight	Approx. 40g
Keyboard light source	Red laser diode
Keyboard language	English
Keyboard layout	20.8mm sized QWERTY layout
Projection size	Approx. 241mm*101mm
Projected Keyboard location	Approx. 97.9mm from keyboard device
Keystroke Sound	Built in buzzer(Mute on/off the sound)
Visibility	Good contrast up to 1800 lux ambient illumination
Detection rate	Over 400 characters per minute
Detection algorithm	Multiple key stroke support
Effective key stroke	Approx. 2mm
Required projection surface	Non-reflective, opaque flat surface
	The USB bus power
Power source	Lithium-ion battery power
	The DC input power
Battery capacity:	600mAH(Max)@3.7V
, , ,	Replaceable soft-pack type
Charger	Rating 800mA @ 5V
Interface	USB 1.1 and 2.0 for PC
	Bluetooth(v2.0 class 2,class 3 )HID for Mobile devices
Switch mode	Switch the active/Standby mode manually
Power consumption	max. 2.4W@4.2V
Use temperature	Approx. 0~50°C
Storage temperature	Approx20~50°C
Software compatibility:	All USB HID Compliant OS, All Bluetooth HID Compliant Mobile Device, Windows XP/WINDOWS 7 or Higher, LINUX, Ipad ,Iphone,Android 2.2 or Higher