

User's Manual

Model: R-RB5;C-UR37
Customer: Logitech
Version : 0.1
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Table of Contents

1 General.....	3
2 Product Outline	3
3.Electrical Specification.....	3
4.Functions and Features.....	8
4.1 Wireless Connection and Radio feature	8
4.2 Functionality of Presentation	9
4.2.1 HID Function	9
4.2.2 LCD Display	10
4.2.3 Laser Point	11

1. General

R-RB5;C-UR37 is a product of 2.4GHZ radio presenter, it's a special designed for Logitech, which the whole package including a wireless presenter and an USB nano-Dongle which as bridge with PC system, it offers the function as a human input device especially it be used for making a presentation .

WirelessUSB 2.4GHZ radio solution of Cyptess are employed, it has the best in the radio performance supporting two way and multi-channels communication in wireless interface via 2.4GHZ DSSS. It's designed for portable use such as a palm size of wireless presenter, a thumb size of nanodongle, presenter inside also reserve a space to store the nano-dongle while not use. A low power consumption designed was also implemented to the presenter, so it is only required two AAA batteries installed inside for use. (refer to user's manual).

Besides providing the major function in PowerPoint control, the product also offer many extra function in friendly use like displaying a timer of presentation, vibration alert, laser point and low battery indication.

The USB Nano-dongle of the product meets the USB version 1.1 specification .

2 Product Outline

*Product Outline:



3 Electrical Specification

3.1 Power Consumption

Operation Voltage:

Voltage supplied to presenter : 3 VDC (AAA battery *2)

Voltage supplied to Dongle : 5 VDC

Operation Current:

USB Dongle : Under 5 VDC power supplied ,typical current is 18mA.

PC System Suspend current : 1mA

Maximum current of Pairing : 80 mA

Laser Point : 25~45 mA,

Output power of beam : under 1mW

Power consumption:

Typical power consumption of Presenter will be less than 40mW.

Typical power consumption of Dongle will be less than 100mW.

3.2 Circuitry Design

1. Presenter :Radio transceiver-- Cypress LS RADIO TRANSCEIVER CYWUSB6934,QFN-48 pin
Functionality IC -- CY8C27443 PROGRAMMABLE ,28 pin SSOP .
2. USB Dongle: Radio transceiver-- Cypress LS RADIO TRANSCEIVER CYWUSB6934,QFN-48 pin
Functionality IC -- Cypress USB controller , CY8C27643 QSOP .

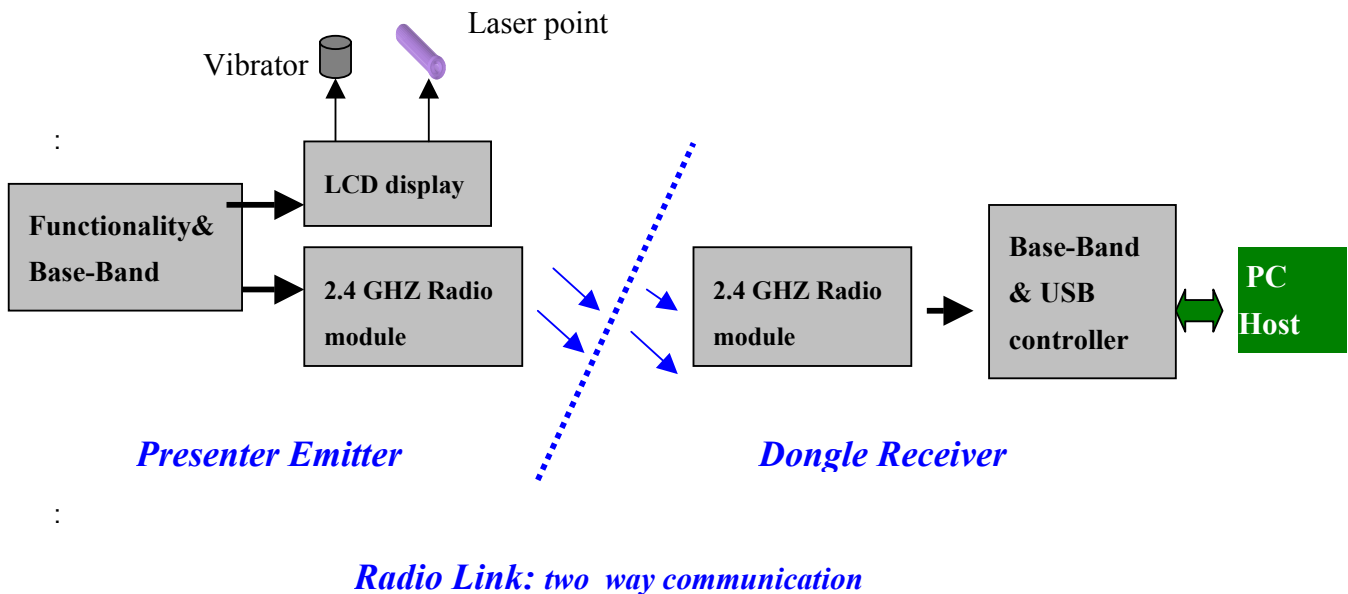
3.3 USB connector of Dongle

USB 1.1 connector consists of four conductors, one power conductor, one GND conductor and two signal conductors and an overall shield.

USB 1.1 connector is the Low-speed connector which is a Series 'A' plug

4. Functionality and Radio Feature

*Functional Block diagram



Main Feature.

- * Intelligent Auto- channel switching function to have a best radio connection always.
- * Two way radio communication .
- * Maximum 64k transmission baud rate .
- * Low power consumption design/Low battery indicated function.

4.1 Wireless Connection and Radio feature

---- Bind function (like Bluetooth pairing) and Connection

*Bind mode function:

The bind function is like the pairing function of bluetooth that allow many same radio products to be used at same time and same place also avoid the interference between same product each other.

We shall complete the bind function before the wireless device to be first used. (End user needn't do that due to It had done at manufacturer site).

*Procedure of performing Bind function (by following step by step) :

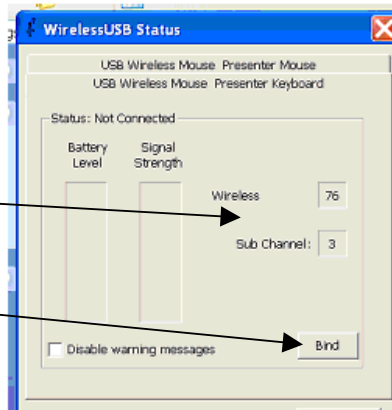
Plugging the nano-dongle attached to PC then turn on PC system, or attached the device by hot

plugging.

b. Run the bind AP on PC, it shall be under the WIN2000 or above, the screen will shown up the “bind window” as following shown .in which will appear the “initial value” of the numbers of wireless and sub channel. It means USB enumerated successfully and being ready for bind

No. of wireless channel and sub-channel

Bind button of AP



- c. Activate the bind button on the “bind window” above. At same time, press the bind button on the back of presenter (Assume the batteries was installed). The numbers of “wireless” and “Sub Channel” will be a various for scanning that is in binding.
- d. It is completed the binding when the numbers scanning are fast to settle at some value. Suppose the numbers scanning return to be “initial value” or over 10 sec,maybe it fail to bind and we have to re-bind again.

*Auto-Connection:

The radio connection (wireless function on line) will be done automatically between presenter and nano-dongle when we turn ON the product both presenter and dongle also enable the HID function (Stoke any Key of presentation function).

4.2 Functionality of presentation

4.2.1 HID function

There are overall 9 buttons on the presenter that 6 buttons SW1~.SW6 for HID function, one button SW7 for LCD control , one button SW8 for laser point and the other buttons SW9 on the back of presenter for bind function.

Key Code/Function Table:

No.	Key name	HID Usage ID / function
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No.1	START/STOP	29/3E (toggle)
No.2	Black Screen	05
No.3	Backward	4E
No.4.	Forward	4B
No.5	Volume Up	0040
No.6	Volume down	0080
No.7	Stop/Watch	Set the LCD timer (refer to the description of LCD function)
No.8	Laser point	Enable laser point
No.9	Connect	Bind

4.2.2 LCD display

---- LCD/Stopwatch/Battery level features, Stopwatch LCD functionality can be programmable with Set button

- ***Turning the LCD on:**
 - From Off state, press Set button to turn LCD on. LCD flashes "0:00" for 5 seconds (If Set button is not pressed again within 5 seconds, LCD turns off.).
- ***Setting stopwatch time on the LCD:**
 - Each time Set button is pressed, 10 mins are added to the stopwatch time.
 - LCD number display continues to flash while time is added.
 - Once time of presentation is set, number stops flashing after 5 seconds and countdown begins
 - At any point during the countdown, the Set button can be pushed to add more time. First push rounds up to the next increment of 10 mins (for example, if countdown is at 1:27, pressing Set once increases time to 1:30). A second push of the Set button would add 5 more minutes (etc).
- *** Buzze remind:**
 - At 5:00 (0:05)min remaining mark, the counter flashes for 5 seconds during countdown and a vibrator buzzes briefly in hand (approx 0.5 second vibration)
 - At 2:00 (0:02) min mark, number flashes and vibrator buzzes briefly (same as for 5 min mark)
 - At 0 (0:00)min, vibrator again buzzes briefly and 0:00 flashes for 5 seconds, then LCD goes blank.
- ***To turn off LCD during middle of countdown:**
 - Holding the Set button for 2 seconds during countdown clears the display and resets to 0:00 (flashing). After 5 seconds, display turns off.
- ***Battery level indicator in LCD:**

- -- Battery status only needs to be shown on display when device is on (i.e. when receiver is removed from the presenter). However it should remain on independent of whether or not the Stopwatch feature is being used.

4.2.3 Laser point

Pressing the laser button (which between Backward and Forward button, with red dot print), presenter will generate a laser spot from the front edge of device.

*Once the StopWatch button stuck, improperly operated for 10 sec then enter sleep mode automatically.

*Once the button of laser point was turn on for last 30 sec then enter sleep node automatically.

Federal Communication Commission Interference 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 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.

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 received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE:

FCC 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.

"Lite-On Technology Corporation declare that R-RB5 (for Presenter) / C-UR37 (for Dongle) is limited in CH1~CH11 by specified firmware controlled in USA."

The equipment has been SAR-evaluated for use in laptops (notebooks).