

Philips Consumer Lifestyle

Project	Bluetooth Infrared (Lenovo Upsell) Remote Installation Guide
BLC	Category Peripherals & Control
Version	0.5
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Date	24 October 2008

Change record:

Version	Date	Status	Change
0.1	14 April 2008	Preliminary	-
0.2	15 July 2008	Preliminary	-
0.3	28 July 2008	Preliminary	-
0.4	29 July 2008	Preliminary	-
0.5	24 October 2008	Preliminary	-

Note:

The Bluetooth Infrared Remote Control bundled with PC / notebook product as an ITE peripheral and accessories device only.

The Bluetooth Infrared Remote Control with the incoming call alert function is controlled by PC / notebook application software only.

FCC Statement

FCC Part 15.19

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.

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 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.

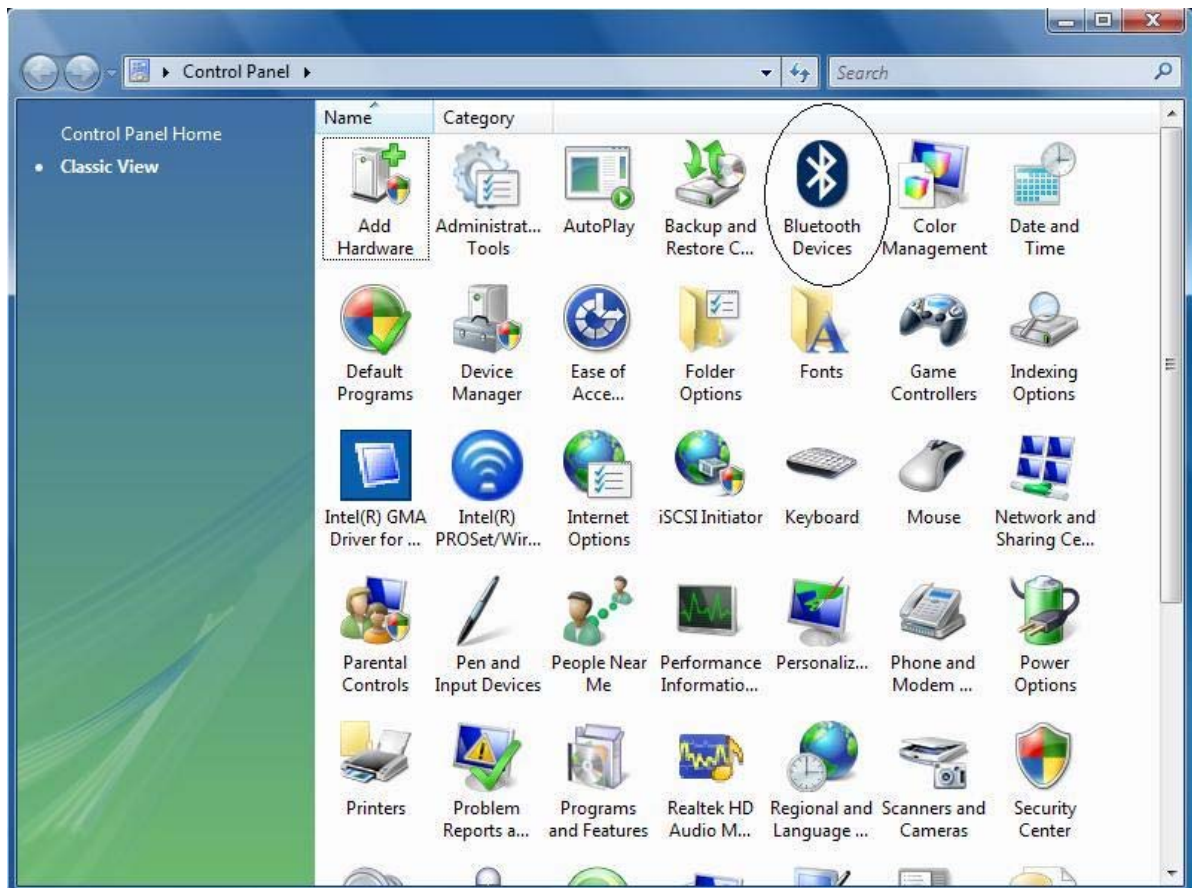
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

No special accessory is required to enable the equipment to comply with the emission limits.



Remember to charge the remote for 2 hrs or you can proceed the following setup with the USB power source connected. Notice the amber light blinks  which indicate charging is in progress. Once battery charge is full, red LED will remain On until the USB power source is removed.

Go to Vista control panel, select the Bluetooth Devices for first initial Bluetooth RF pairing & setup.



Press & hold the Bluetooth side button for 8 second to initiate Bluetooth RF pairing.

Blue LED will turn-on  . Remote is prepared to negotiate Bluetooth pairing (make it recoverable) with Lenovo Laptop. If no successful pairing for more than 180 seconds , the Blue LED will turn off . Re-pairing process need to be re-do again.



In the Vista Bluetooth setup , check ✓ “ My device is set up and ready to be found “. Press Next for the associating process.



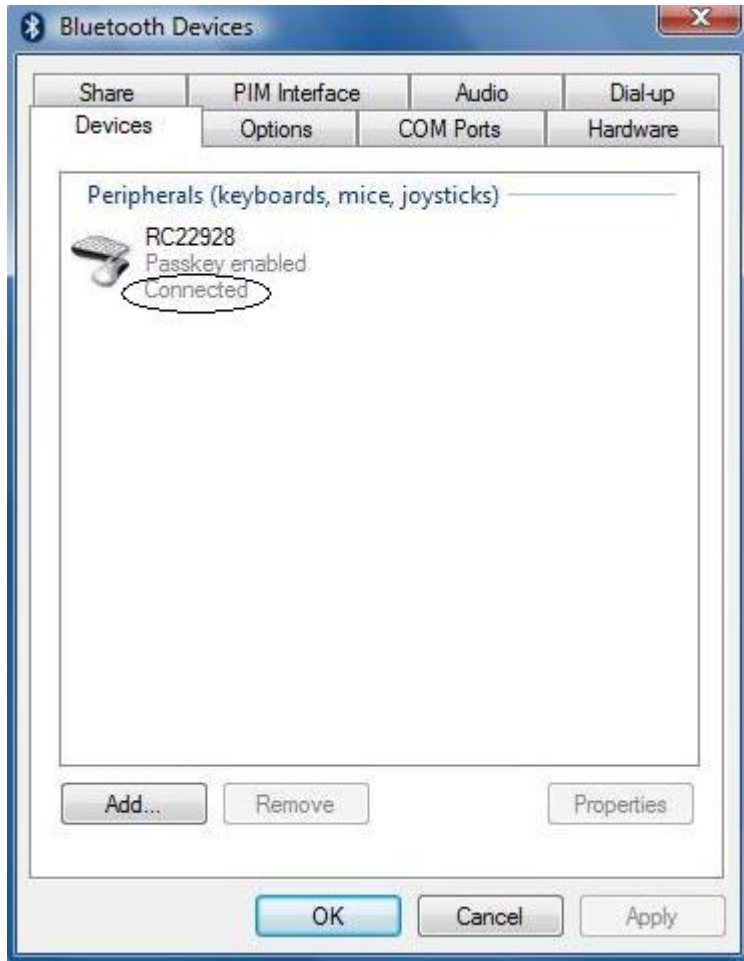
Once Vista Bluetooth application discovered the remote , RC22928 icon will appear in Add Bluetooth Device Wizard . Click on the icon and press 'Next >' to proceed pass-code entry .



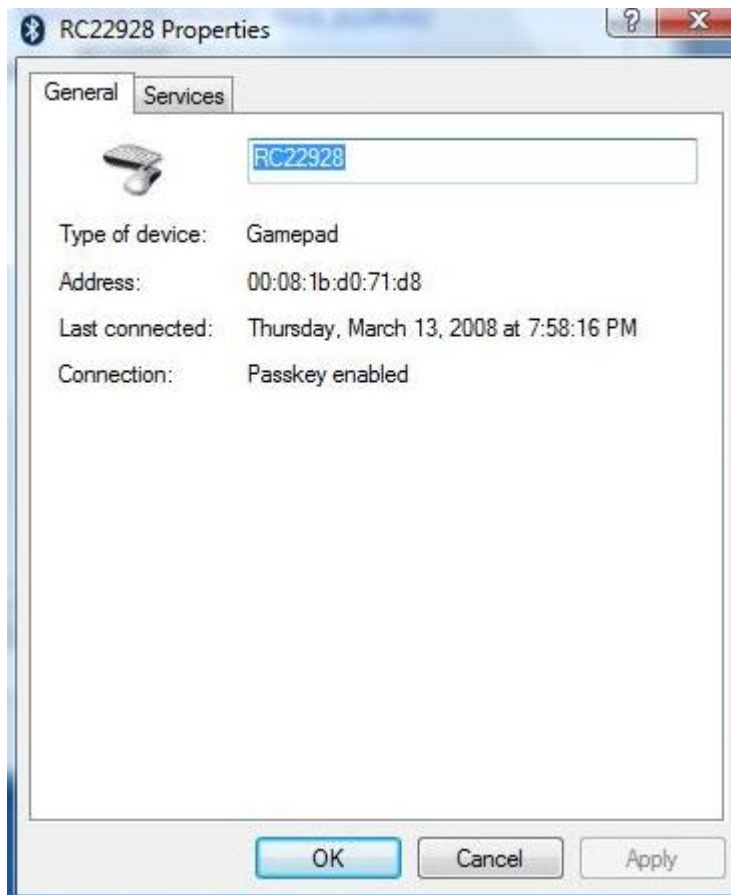
In the Bluetooth Wizard application enter the pass-key “0000”. Once entered the passkey, Bluetooth pairing process is undergoing.

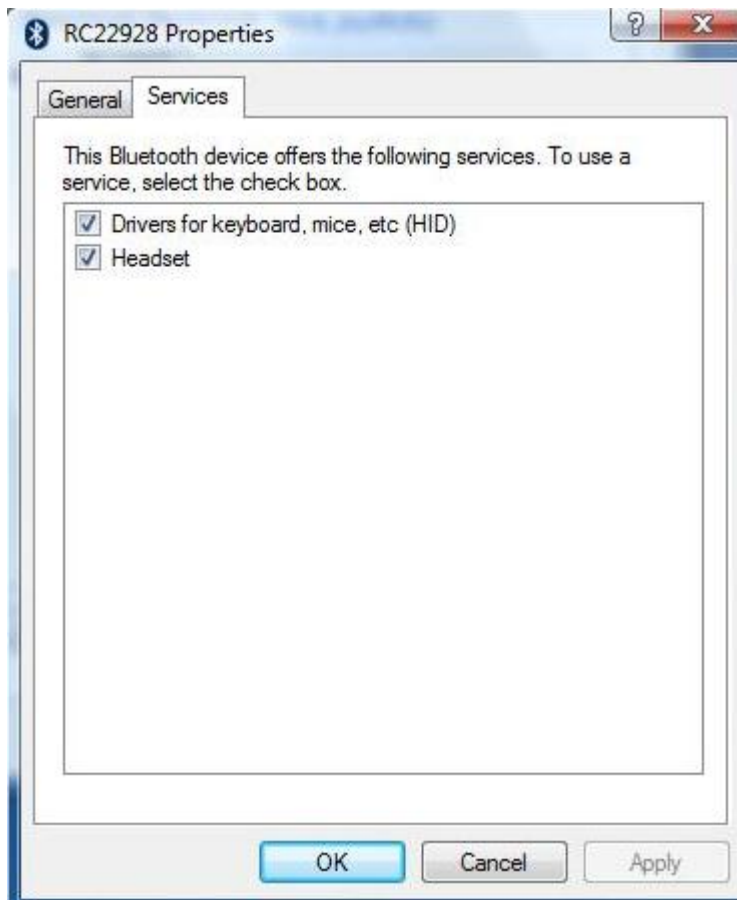


As the remote is connected , you are able to see the RC22928 icon Bluetooth device in the wizard . Double click the Icon to get the remote to connect with the Laptop via Bluetooth. Once successfully paired , connected & HID peripherals enumerated , you should see the 'Connected' message underneath the icons as shown.



Go to the RC22928's Properties , Check ✓ all the services as shown.



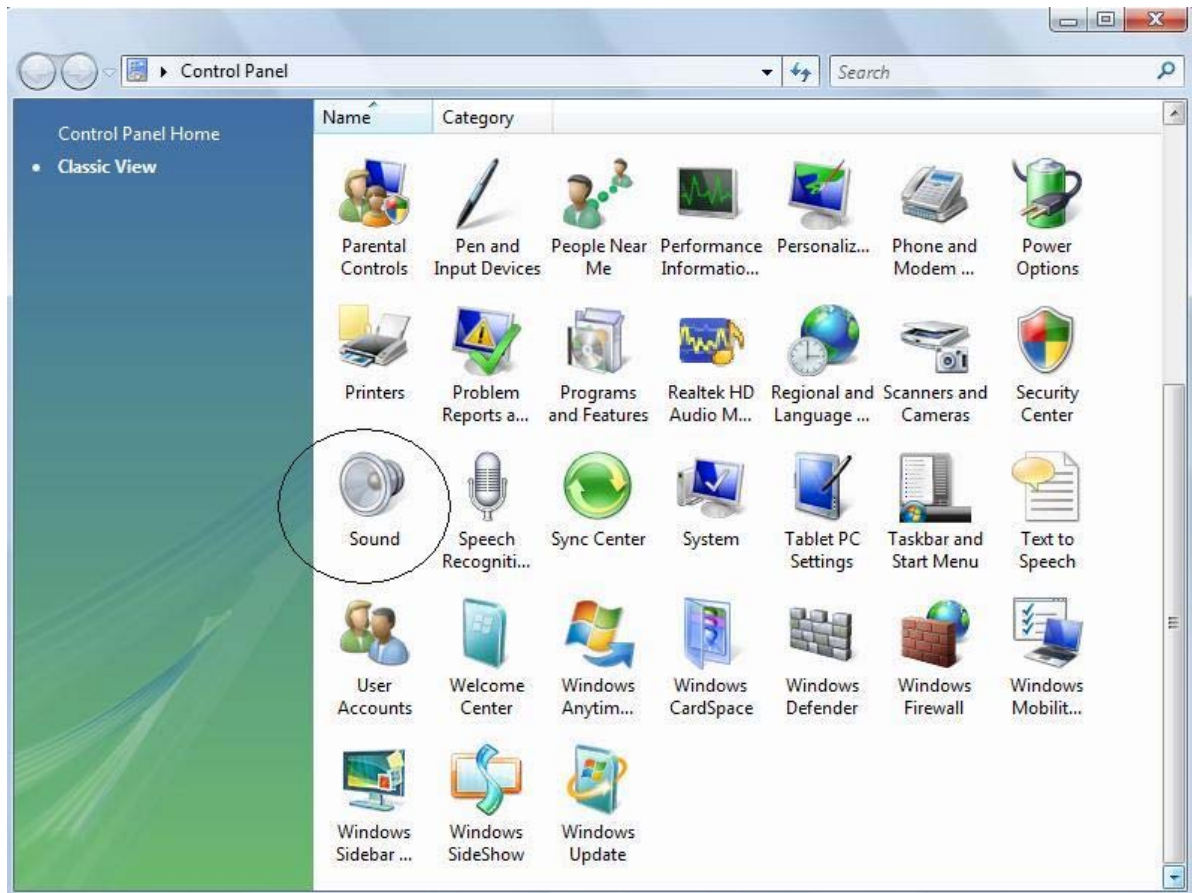


If all the necessary steps have been successfully done. You should be able use the remote as a 3D mouse Pointer by pressing the mouse side button key as shown below:

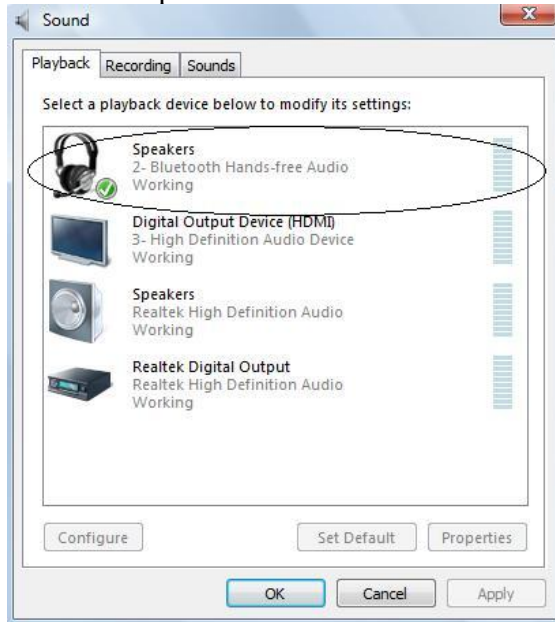


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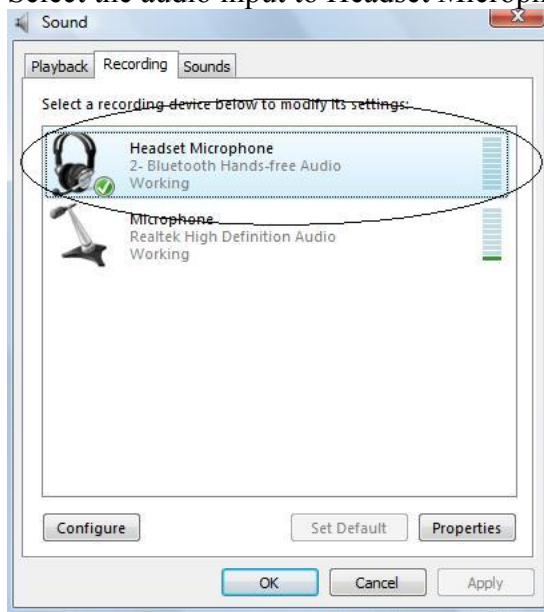
To use the remote as an audio gateway , some steps are still needed . Go to control panel again to select the Sound icon to configure sound path output to Bluetooth devices



Select the Speakers to Bluetooth Hands-free Audio



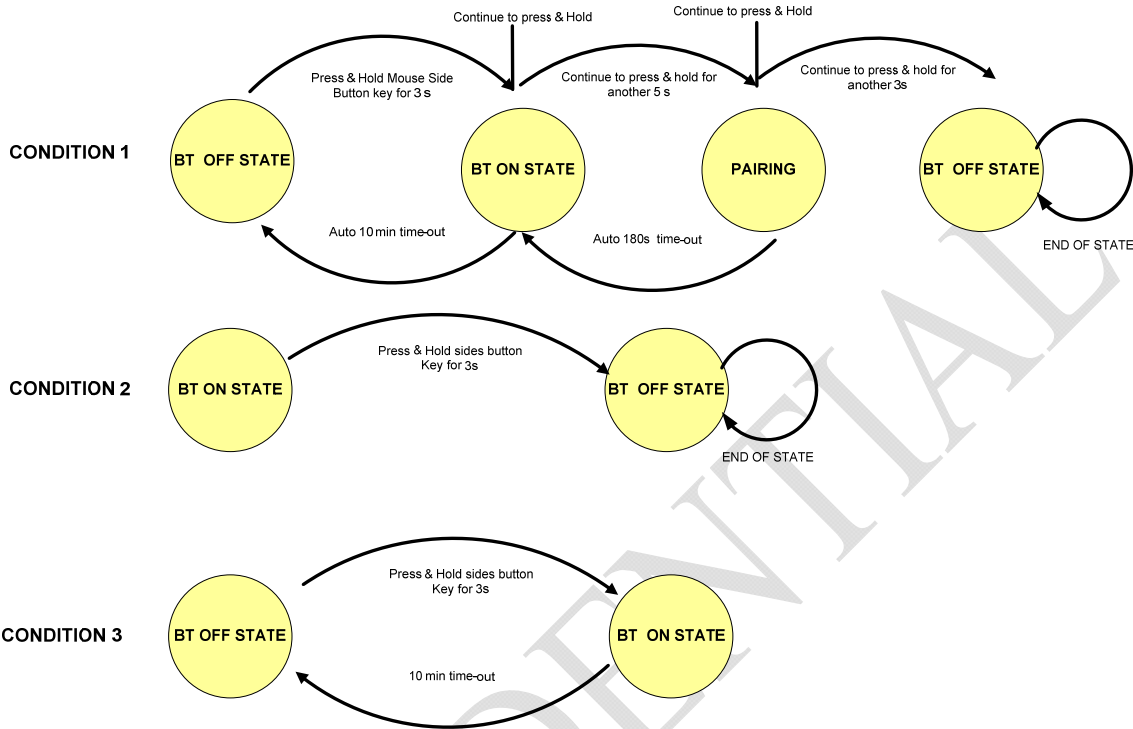
Select the audio input to Headset Microphone



By now, you should be able to play a media audio content and the audio can be heard from the remote's earpiece. Do a mic recording by speaking into the remote, playback can be heard from the remote earpiece.

APPENDIX A

Bluetooth side button state diagram :



APPENDIX B

LEDs SEQUENCE

Function Code	Red LED	Blue LED	LED blinking pattern description	Function
LED_Fn1	Off	On	Blue LED stays on for 180 secs throughout pairing duration	BT pairing mode , relate to FB_01
LED_Fn2	Off	Blink	Blue LED blink once every 3 secs	BT On (inactive or without connection)
LED_Fn3	Off	Blink	Blue LED blink twice every 3 secs	BT Active (Mouse, VOIP, game in use) Paired & connected
*LED_Fn4	Blink	Off	Red LED double blinks once every 1 sec	VoIP incoming call
LED_Fn5	Blink	-	Red Blink once together every 3 seconds with 3 beeps for 8 cycles. Repeat cycle over 3 minute until battery low threshold is reach.	Battery critically low
LED_Fn6	Blink	Off	Single Red led blink every 1 sec	Battery charging
LED_Fn7	ON		Red LED turn ON	Battery fully charged
LED_Fn8	Off	Blink once, then off	Blue LED blinks once follow by a beep , then blink continuous	Enable BT , relate to FB_03
LED_Fn9	Off	Blink twice, then off	Blue LED blinks twice follow by a low beep , then off	Disable BT , relate to FB_02

- the timing can be adjusted according after the 1st prototype sample to give the optimal display results.

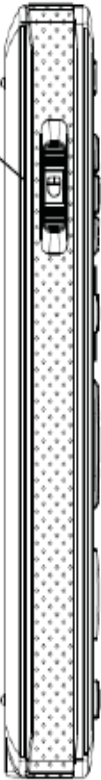
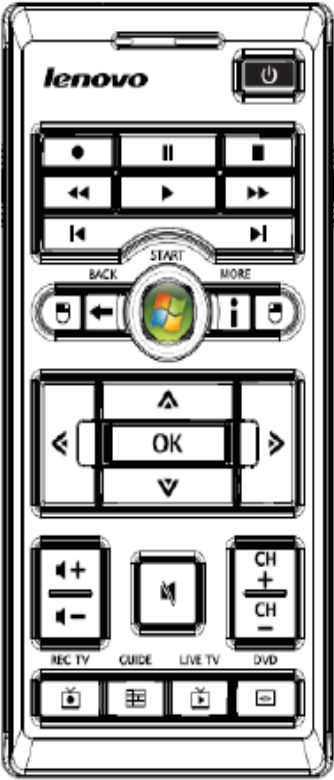
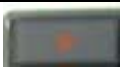
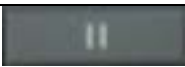
Table 6.2

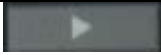
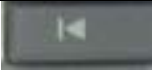
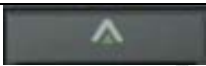
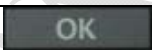
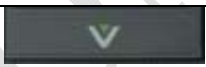
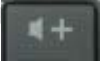
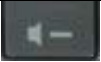
Bluetooth Side Button sequence

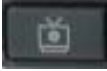
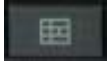
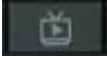
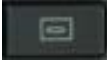
Function Code	Key code	Duration	Description
FB_01	Press and Hold 	8sec	Enter Bluetooth Pairing Blue LED turn ON , refer LED_Fn 1 Provided BT previous state is OFF
FB_02	Press and Hold 	3sec	Disable Bluetooth Blue LED double blink then OFF ,refer LES_Fn9
FB_03	Press and Hold 	3sec	Enable Bluetooth Blue LED Blink once then OFF , refer LED Fn8
FB_04	Press & hold , Mouse Left & right key together	15sec	Hard reset of the remote . Red LED and Blue LED both ON and OFF for 2 sec.

Function code	Operate	Time	Function Description
FM_01	Press & Hold	Immediate	Operating 3D mouse with finger on the mouse button
FM_02	Double Press and release	Within 1 sec.	Free your finger to operate 3D mouse (default state)
FM_03	Single press and release	Within 1 sec.	Disable mouse but ready for next use

Function of each keypad

Mouse side button   Bluetooth® side button 	
Key	Function
	Enable / Disable Mouse Function.
	Enable / Disable Bluetooth Function.
	Bluetooth: Mouse key. Left Click
	Bluetooth: Mouse key. Right Click
	Infrared key: Power Key. Turn on / off the target devices.
	Infrared key: REC Key. Recording the show / music into CD / DVD.
	Infrared key: Pause Key. Pausing the show / music.
	Infrared key: Stop Key. Stopping the show / music.

Key	Function
	Infrared key: Backward Key. Backward the show / music.
	Infrared key: Play Key. Playing the show / music.
	Infrared key: Forward Key. Forward the show / music.
	Infrared key: Previous / First Key. Playing the previous or the first show / music.
	Infrared key: Next / Last Key. Playing the next or last show / music.
	Infrared key: Back Key. Playing back previous show / music.
	Infrared key: More Key. Display the information of the show / music.
	Infrared key: Media Player Key. Launch the Microsoft Media Center.
	Infrared key: Cursor Left Key. Move the cursor to the left side.
	Infrared key: Cursor Up Key. Move up the cursor.
	Infrared key: Cursor Right Key. Move the cursor to the right side.
	Infrared key: OK Key. Confirm or enter the selection.
	Infrared key: Cursor Down Key. Move down the cursor.
	Infrared key: Volume Up Key. Increase the volume.
	Infrared key: Volume Down Key. Decrease the volume.

Key	Function
	Infrared key: Mute Key. Mute the sound / music.
	Infrared key: Channel Up Key. Switch to higher channel by 1 channel.
	Infrared key: Channel Down Key. Switch to lower channel by 1 channel.
	Infrared key: REC TV Key. Recording the TV show.
	Infrared key: GUIDE Key. Display the “Help” menu to guide the user.
	Infrared key: LIVE TV Key. Switch to TV mode.
	Infrared key: DVD Key. Switch to DVD mode.

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