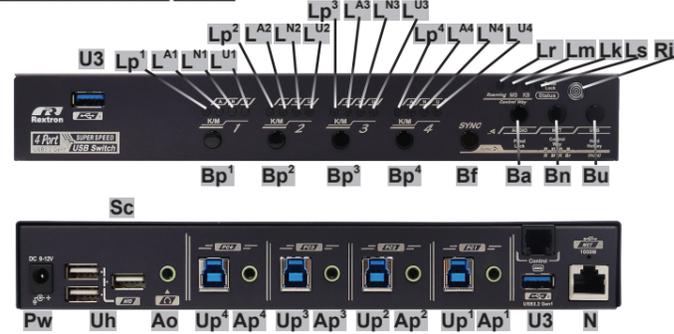


## Specifications

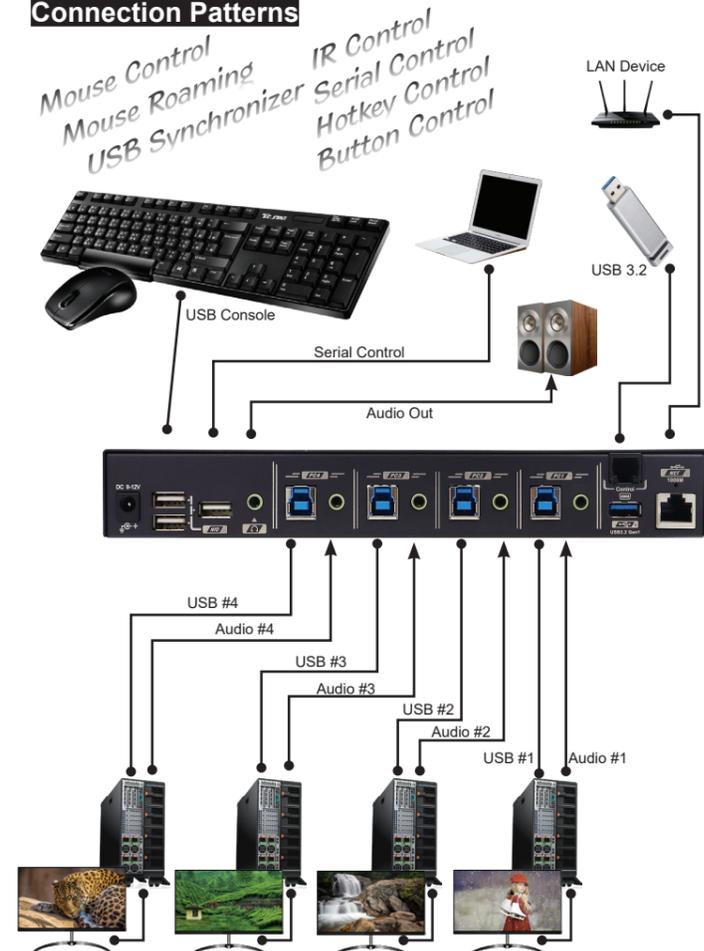
<b>Model Number</b>		<b>USW-N334</b>
<b>MAX. Resolution</b>		Video Directly Connected to the PCs
<b>Computer Interface (4-Port)</b>	USB 3.2 Gen 1 Ports	USB-B x 4
	Audio Input	3.5mm Speaker Jack x 4
<b>Console Interface</b>	USB HID Ports (KM Console)	USB-A x 3 (Rear) (Hotkey / Mouse Roaming / USB Broadcast)
	USB 3.2 Gen 1 Ports	USB-A x 1 (Front) USB-A x 1 (Rear)
<b>Sharing Ports</b>	NET	RJ45 x 1 (Rear) (USB Based GbE LAN)
	Audio Output	3.5mm Speaker Jack x 1
<b>Serial Control</b>		RJ11 x 1
<b>Baud Rate Selections</b>		9600~115200 (Up to 8 Selections)
<b>IR Control</b>		IR Receiver x 1 (Front)
<b>Mouse Roaming</b>		Yes
<b>Monitor Layouts</b>		4x1, 2x2, 1+3, 1x4, T1~T4, M1~M4
<b>Push Button Control</b>		Port-Select x 4, Functions x 4
<b>USB Broadcast (Synchronizer)</b>		Yes
<b>Control Methods</b>	Hotkey Control	Serial Control
	Button Control	IR Control
	Mouse Control	Mouse Roaming
	USB Broadcast (Synchronizer)	USB Broadcast (Synchronizer)
<b>LED Indicators</b>		Port x 16 (4 Ports x 4), Function x 3, Status x 1
<b>Power supply</b>		DC 9~12V
<b>Operation Environment</b>		0~55°C, Humidity<80% (Storage: -20~70°C)
<b>H x W x D (mm) / Weight</b>		34 x 240 x 160 / 1000g
<b>Material</b>		Metal

## Product Description



Label	Description	Function
Up <sup>1-4</sup>	PC USB Ports	Connect to Computers' USB 3.2 Ports
Ap <sup>1-4</sup>	PC Audio Ports	Connect to Computers' Audio Ports
Uh	USB HID Ports	Connect to USB Keyboard / Mouse Console
Ao	Audio Output	Connect to an Active Speaker
U3	USB 3.2 Ports	Connect to USB 3.2 or 2.0 Devices
N	LAN Sharing	Connect to an Over-LAN Device or LAN HUB (Switch among PCs)
Sc	Serial Control	Connect to a Serial Host PC
Bp <sup>1-4</sup>	PC Select Button	Click to Select a PC for Console
Lp <sup>1-4</sup>	PC Select LED	Emit <b>Cyan</b> when PC Selected
LA <sup>1-4</sup>	Audio Select LED	Emit <b>Yellow</b> when PC Selected Independently
LN <sup>1-4</sup>	NET Select LED	Emit <b>Blue</b> when Synchronized with the Console
LU <sup>1-4</sup>	USB 3.2 Select LED	
Bf	Function Button	
Ba	Audio Button	Press-n-Hold, then Click <b>Bp<sup>1-4</sup></b> to Select a PC for Audio Out [Ao]
Bn	NET Button	Press-n-Hold, then Click <b>Bp<sup>1-4</sup></b> to Select a PC for NET [N]
Bu	USB 3.2 Button	Press-n-Hold, then Click <b>Bp<sup>1-4</sup></b> to Select a PC for USB 3.2 [U3]
Lr	Roaming LED	Emit <b>Purple</b> when Mouse Roaming Enabled
Lm	Mouse Control LED	Emit <b>Purple</b> when Mouse Control Enabled ( <b>White</b> when Mouse Control Button Pressed-n-Hold)
Lk	Hotkey LED	Emit <b>Purple</b> when Keyboard Hotkey Enabled ( <b>White</b> when Hotkey Mode Acting)
Ls	Status LED	Emit <b>Green</b> when Normal Operating ( <b>Orange</b> when Panel Locked)
Ri	IR Receiver	Point the IR Controller Here for Remote Control
Pw	Power Supply	Connect to DC 12V

## Connection Patterns



## Features

- USB KM Switch** Allows 4 Computers Share 1 Set of USB KM Console (KB / MS / Devices)
- 7 Flexible Switching Control Methods**:
  - Hotkey Control
  - Mouse Roaming
  - Mouse Control
  - USB Broadcast (Synchronizer)
  - Front Push Buttons
  - IR Control
  - Serial Control
- Mouse Roaming** Allows Seamless Switching among PCs by Moving the Cursor across the Screen Borders and Circulating among PCs, and the **Flexible Monitor Layouts** Supports Most Popular Scenarios Including: 4x1, 2x2, 1+3, 1x4, L1~L4, M1~M4
- USB Broadcast (Synchronizer)** Allows Users to Duplicate USB KB/MS Console Signals to All PCs
- Serial Control** Allows Controlling Remotely or Incorporation with Central Control System, or Controlling Other Serial Device via Hotkey Command
- IR Control** Allows Controlling Remotely, Even in the RF-Communication Restricted Areas
- Mouse Control** Allows Controlling via Mouse Scroll Wheel
- LAN Sharing Port** Facilitates IP Scanner / Printer / Camera Applications
- 5Gbps USB 3.2 Gen 1 Sharing Port** Supports Most Modern USB Devices
- Front USB 3.2 Gen 1 Port** Allows Easy Access to the Applied USB Device
- Audio / USB 3.2 / NET Independent Switching** Allows the Audio / USB 3.2 / NET Ports to Either Follow the Main Control or Stick to a Certain PC

## Package Contents

USB KM Switch Unit	x 1
Power Adaptor	x 1
User's Manual	x 1
IR Controller	x 1
Foot Pad Set	x 1 Set
<b>Optional:</b>	
Brackets (Number Depends on Actual Application)	
RJ11-to-DB9 Adaptor	

# User's Manual

## 4 Ports 5Gbps USB 3.2 KM Switch with IR/Serial/Mouse/Hotkey/Button Controls, LAN

- Mouse Control
- Mouse Roaming
- USB Synchronizer
- IR Control
- Serial Control
- Hotkey Control
- Button Control



Nueteq Technology, Inc.  
11F, No.112, Sec. 1, Zhong-Xiao E Rd.,  
Taipei, Taiwan

- The final specification is the actual product based.
- Features, photos, and functions may be added or changed after the manual was written. Please visit our website to download the latest version of manual for reference.

PP5-UHK834Z-001



## Installation

- Prior to the installation, ensure to power off all devices that will be connected to this system.
- Ensure that all devices you will connect are properly grounded.
- Place cables away from fluorescent lights, air conditioners, and machines that are likely to generate electrical noise

### Installation

- Connect the unit to the computers using USB and audio cables.
- Connect the computers to the monitors using video cables.
- Connect the console unit to the keyboard/mouse, and an active speaker.
- If serial control is to be used, connect the serial host to the unit.
- Apply power to the units and connected devices.

### Limited Warranty

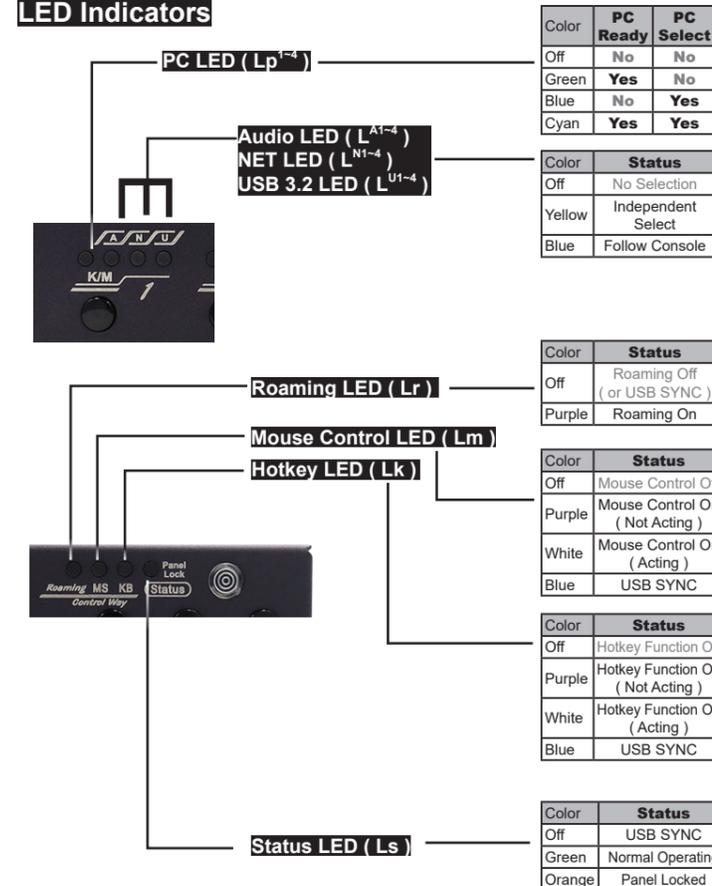
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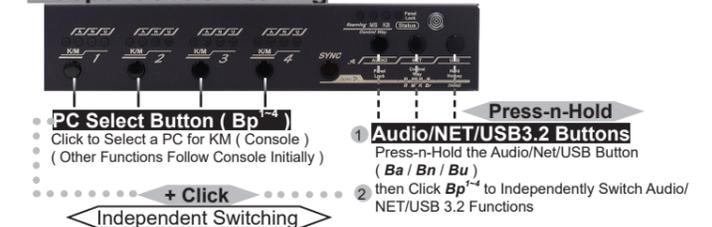
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## LED Indicators



## Push Button Control

### Independent Switching



### Synchronized Switching



## Function Modes



Function Modes	1st Step	2nd Step	3rd Step
Panel Lock (On/Off)		Click Audio Button (Ba)	
Hard Hotkey*		Click USB 3.2 Button (Bu)	
Roaming (On/Off)	Function Button (Bf)	Click NET Button (Bn)	Click Bp <sup>1</sup> (See <b>Mouse Roaming</b> )
MS Control (On/Off)			Click Bp <sup>2</sup> (See <b>Mouse Control</b> )
Hotkey Control (On/Off)			Click Bp <sup>3</sup> (See <b>Hotkey Control</b> )
USB Synchronizer**			Click Bp <sup>4</sup> (See <b>USB Broadcast</b> )

\* Start Interception of Key Strokes for Hotkey Control (Equals to Hotkey Leading Code)  
\*\* Repeat the Operation to Exit the USB Synchronizer Mode

## Hotkey Control

**Hotkey leading code** allows user to enter **hotkey mode** and send commands to the KVM. ( Intercepts keyboard entries and accept the entries as hotkey commands ) After the hotkey commands accepted ( beep once ), user can access computer normally.( Beep low tone twice if the hotkey command received is invalid )

3 Ways **Hotkey Leading Code** Available :

Hotkey Leading Code 1\* :

**"L-Ctrl" + "L-Ctrl"**

( or "R-Ctrl" + "R-Ctrl" )

It's the most convenient hotkey leading code to use. Left **Ctrl** may be switched to right **Ctrl** when left ctrl is occupied in some cases such as KVM cascading, specific program requirements, ... etc.

Hotkey Leading Code 2 :

**"Scroll Lock" + "Scroll Lock"**

In some cases, both ctrl keys are occupied, the scroll lock key may be used for hotkey leading code.

Hotkey Leading Code 3 :

**"L-Shift" (Hold) + "Num Lock" + "Num Lock" + Release "L-Shift"**

Certain keyboards do not have scroll lock key. In such cases, user may use this num lock key based hotkey leading code.

\* Ctrl key based hotkey leading code may be turned on/off to facilitate usage with other hotkey related products. Simply input : "Hotkey Leading Code 2 or 3" + "Left or Right **Ctrl** (with respect to Hotkey Leading Code 1 situation)" Switch from L-Ctrl based hotkey to R-Ctrl based hotkey :

**"L-Ctrl" + "L-Ctrl" + Alt (Hold) + "R-Ctrl"** ( Release R-Ctrl then Alt )

Switch Back from R-Ctrl based hotkey to L-Ctrl based hotkey :

**"R-Ctrl" + "R-Ctrl" + Alt (Hold) + "L-Ctrl"** ( Release L-Ctrl then Alt )



Do NOT Use Numpad for Numbers

## Hotkey List ( General )

Key Sequence	Function
Hotkey Leading Code + "1"~"4"	<b>KM ( Console )</b> Selection = Computer 1~4
Hotkey Leading Code + "0"	<b>KM ( Console )</b> Selection = Previous Selection
Hotkey Leading Code + "F5"	<b>Audio Follow KM ( Console )</b> Selection ( OFF / ON )*
Hotkey Leading Code + "A"	Force Audio Follow to Current Computer
Hotkey Leading Code + "F7"	<b>USB 3.2 Follow KM ( Console )</b> Selection ( OFF / ON )**
Hotkey Leading Code + "U"	Force USB 3.2 Ports Follow to Current Computer
Hotkey Leading Code + "F8"	<b>NET Follow KM ( Console )</b> Selection ( OFF / ON )**
Hotkey Leading Code + "N"	Force NET Follow to Current Computer
Hotkey Leading Code + "L-Alt" (Hold) + "G"	Enable/Disable <b>Beep Sound</b> ( OFF / ON )
Hotkey Leading Code + "L-Alt" (Hold) + "F" + "A" + "C"	Return to Factory Default

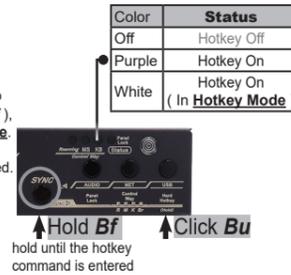
\* The default audio follow status is on, and the audio follows port switching. User may turn it off so that the audio stays at original port after port switching. ( Default HDMI/DP Audio Is Activated )

\*\* The default usb follow status is on. User may turn off usb follow to prevent from damaging usb drive or other usb devices while operating.

\*\*\* Apply this hotkey when image anomaly happens

## Hard Hotkey

While the hotkey command is conflicting with other devices such as KVM extender, user can use the front push button to enter **hotkey mode**. Press and hold the function button ( **Bf** ), then click on the USB button ( **Bu** ) to enter the **hotkey mode**. Now user can input hotkey command normally, and release the function button only after the full hotkey command is finished.



\* If the Hotkey Requires Holding Certain Key, User Can Release the USB Button after Holding the Key on the Keyboard

## USB Broadcast Mode (Send Mouse & Keyboard Signals to All Ports)

Important : Requires all setup (Hardware & Software) of PCs to be identical.

### Enable / Disable USB Broadcast



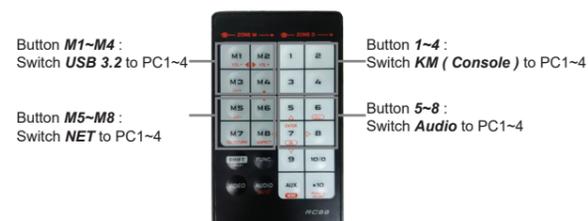
Press and hold the function button ( **Bf** ), then click on the NET button ( **Bn** ), then click on the PC select button 4 ( **Bp1** ) to enable / disable **USB Broadcast**.

### Add / Remove PCs in USB Broadcast

The PCs that was not available upon enabling the USB Broadcast, will be excluded thereafter. The PC select LED emits red for the excluded PCs. Clicking the PC select buttons ( **Bp1-4** ) in the USB Broadcast, adds / removes the PC from the USB Broadcast.

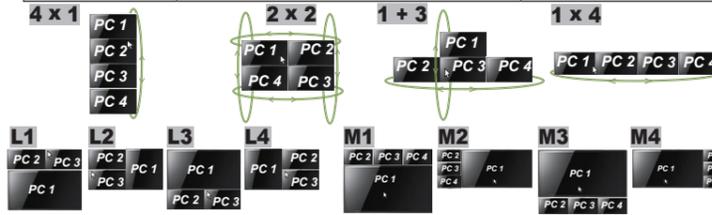


## IR Remote Control



## Mouse Roaming

Function	Hotkey	Description
Enable Mouse Roaming & Select Monitor Layout	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "1"	<b>4 x 1 Mode</b>
	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "2"	<b>2 x 2 Mode</b>
	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "3"	<b>1 x 3 Mode</b>
	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "4"	<b>1 x 4 Mode</b>
	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "L" + "1"	<b>L1-L4 Mode</b>
Disable Mouse Roaming	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "M" + "1"	<b>M1-M4 Mode</b>
	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "9"	Enable Mouse Roaming and Resume the Last Layout
<b>Borderless Circulation</b> (On / Off)	Hotkey Leading Code + "L-Alt" (Hold) + "R"	Borderless Circulation On ( Beep Once )
		Borderless Circulation Off ( Default, Beep Twice )



\* Port 4 Can Be Selected with Other Control Methods

## Mouse Speed Management ( when Mouse Roaming Enabled )

<b>Set Mouse DPI</b> by ↑↓ Keys	Hotkey Leading Code + "L-Alt" (Hold) + "↑"	Beep Once = -100 DPI ( <b>Speed Up</b> ) "↑" Can Be Pressed Again ( Consecutively ) While Holding Down "Alt" Lowest at 100 DPI, Beep Twice to Indicate Error While Pressing ↑ at 100 DPI.
	Hotkey Leading Code + "L-Alt" (Hold) + "↓"	Beep once = +100 DPI ( <b>Speed Down</b> ) "↓" Can Be Pressed Again ( Consecutively ) While Holding Down "Alt" Highest at 4800 DPI, Beep Twice to Indicate Error While Pressing "↓" at 4800 DPI ( Lowest Speed ) Beep Once = ABS Speed = <b>Low ( 2400 DPI )</b> Beep Twice = ABS Speed = <b>Mid ( 800 DPI )</b> Beep 3 Times = ABS Speed = <b>High ( 200 DPI )</b>
<b>Mouse DPI</b> Fast Configuration	Hotkey Leading Code + "L-Alt" (Hold) + "S"	Beep Once If Succeeded <b>xx=01-48</b> 01: 100 DPI ; 02: 200 DPI ; 20: 2000 DPI ; 24: 2400 DPI ; 48: 4800 DPI ( Lowest Speed )
<b>Mouse DPI</b> Configuration	Hotkey Leading Code + "L-Alt" (Hold) + "xx"	( Where xx is a 2-digit variable )

\* Higher the DPI, Slower the Mouse Speed

## Serial Commands

Serial Command	Function
K = 1 ~ 4 ( + Enter )	Select <b>KM ( Console )</b> = Port 1~4
K = < ( + Enter )	Select <b>KM ( Console )</b> = Previous Active PC Port
K = > ( + Enter )	Select <b>KM ( Console )</b> = Next Active PC Port
U = 1 ~ 4 ( + Enter )	Select USB 3.2 Ports = Port 1~4 ( Stop Following )
U = * ( + Enter )	USB 3.2 Ports Follow <b>KM ( Console )</b> Selection ( Default )
U = \$ ( + Enter )	USB 3.2 Ports Stay at Current Port ( Stop Following )
A = 1 ~ 4 ( + Enter )	Select Audio = Port 1~4 ( Stop Following )
A = * ( + Enter )	Audio Follow <b>KM ( Console )</b> Selection ( Default )
A = \$ ( + Enter )	Audio Stays at Current Port ( Stop Following )
N = 1 ~ 4 ( + Enter )	Select LAN = Port 1~4 ( Stop Following )
N = * ( + Enter )	NET Follow <b>KM ( Console )</b> Selection ( Default )
N = \$ ( + Enter )	NET Stays at Current Port ( Stop Following )
H = R ( + Enter )	Restart The KM Switch
B = 1~4	Equal to Click of " <b>Bp1-4n</b> "
B = S / A / N / U	Equal to Click of " <b>Bf</b> " / " <b>Ba</b> " / " <b>Bn</b> " / " <b>Bu</b> "
B = a1 / a2 / a3 / a4 / aS	Equal to " <b>Ba</b> " (Hold) + Click of " <b>Bp1-4n</b> " / " <b>Bf</b> "
B = n1 / n2 / n3 / n4 / nS	Equal to " <b>Bn</b> " (Hold) + Click of " <b>Bp1-4n</b> " / " <b>Bf</b> "
B = u1 / u2 / u3 / u4 / uS	Equal to " <b>Bu</b> " (Hold) + Click of " <b>Bp1-4n</b> " / " <b>Bf</b> "
B = sA / sU	Equal to " <b>Bf</b> " (Hold) + Click of " <b>Ba</b> " / " <b>Bu</b> "
B = sN1-4	Equal to " <b>Bf</b> " (Hold) + Click of " <b>Bn</b> " + + Click of " <b>Bp1-4n</b> "

Note :

- Returns ">" when command accepted.
- Returns "<" when command failed.
- Commands are case-sensitive, only upper case is accepted.
- When serial control and hotkey control are both used, the function follows the latest command.

## Control Other Serial Device via Hotkey Command

The Serial Port Can Also Be Used to Control Other Serial Device\* :

- Connect a Serial Device to the Serial Port
- Adjust the Baud Rate Based on The Connected Device ( If necessary )
- Use the Console's USB Keyboard to Enter\*\* :  
3.1 "**L-Ctrl**" + "**L-Ctrl**" + "**L-Win**" (Hold) + "**L-Shift**" (Hold)
- Enter the Serial Command with the Console's Keyboard ( Keep Holding the Buttons )
- Release the Buttons after Finishing the Serial Commands

\* The Baud Rate Should Be the Same

\*\* Release "**L-Shift**" if Lower-Case Is Required or Special Symbols Is Required

## Remove PC from Mouse Roaming

Function	Hotkey	Description
Remove Port from Mouse Roaming (& Resume)	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "1"	Remove the Selected PC from Mouse Roaming ( Can Select with Other Control Methods )
	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "2"	Resume the Selected PC to Mouse Roaming
	Hotkey Leading Code + "L-Alt" (Hold) + "Q" + "7"	Resume All PCs to Mouse Roaming

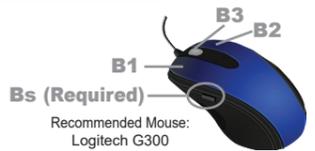
\* User can remove dual-monitor computer from Mouse Roaming, and use button control / hotkey control / mouse control to switch to the dual-monitor computer. ( Windows do not allow mouse roaming application to the extended desktop )

## Mouse Control (Mouse Command Key (Bs) as Hotkey Leading Code)

Important : A 3~5-button-mouse is required to activate this mode.

\* After Being assigned as Bs, The Additional Button Will Not Serve It's Original Function Until Exit of Mouse Control Mode.

\*\* 8-Button Mouse is not supported



Key Sequence	Function
Hotkey Leading Code + "L-Alt" (Hold) + "Bs"	Enable Mouse Control* & Set " <b>Bs</b> " as the Leading Key
"Bs" (Hold) + "B3" (Row Up)	Select <b>Previous</b> PC Channel
"Bs" (Hold) + "B3" (Row Down)	Select <b>Next</b> PC Channel
Hotkey Leading Code + "L-Alt" (Hold) + "B1"	Disable Mouse Control**

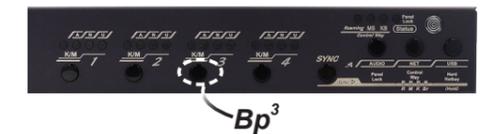
\* Alternative hotkey : Hotkey Leading Code + "L-Alt" (Hold) + "A" + "L" + "L"

\*\* Alternative hotkey : "L-Alt" (Hold) + "L-Ctrl" (Hold) + "R-Alt" (Hold) + "R-Ctrl" (Hold)

## Change Baud Rate Setting of the Serial Port

There are 8 bands of baud rates available ( 9600~115200 ).

User may combine keyboard hotkey and front push button to change the baud rate. "**Bp3n**" is the 3rd port selection button on the front panel.



- 1a. Set Baud Rate = **9600bps**  
Hotkey Leading Code + "L-Alt" (Hold) + "**Bp3n**" + "A" + "1"
- 1b. Set Baud Rate = **14400bps**  
Hotkey Leading Code + "L-Alt" (Hold) + "**Bp3n**" + "B" + "1"
- 2a. Set Baud Rate = **19200bps**  
Hotkey Leading Code + "L-Alt" (Hold) + "**Bp3n**" + "A" + "2"
- 2b. Set Baud Rate = **28800bps**  
Hotkey Leading Code + "L-Alt" (Hold) + "**Bp3n**" + "B" + "2"
- 3a. Set Baud Rate = **38400bps**  
Hotkey Leading Code + "L-Alt" (Hold) + "**Bp3n**" + "A" + "3"
- 3b. Set Baud Rate = **57600bps**  
Hotkey Leading Code + "L-Alt" (Hold) + "**Bp3n**" + "B" + "3"
- 4a. Set Baud Rate = **76800bps**  
Hotkey Leading Code + "L-Alt" (Hold) + "**Bp3n**" + "A" + "4"
- 4b. Set Baud Rate = **115200bps**  
Hotkey Leading Code + "L-Alt" (Hold) + "**Bp3n**" + "B" + "4"

After the command is accepted, the baud rate will be effective immediately.