

# Mini Compact

## Two Ports USB KVM Switch

### USER'S MANUAL

Rev 1.0

#### Introduction

Thank you for purchasing the compact USB KVM switch. KVM switch can save your TIME, SPACE, EQUIPMENT and POWER.

Controlling multiple USB PCs from One PS/2 Keyboard, PS/2 Mouse and VGA Monitor or One USB Keyboard, USB Mouse and VGA Monitor. USB KVM switch is loaded with features such as hot key control, push button control and Console could be USB keyboard (or USB mouse) or standard PS/2 keyboard (or PS/2 mouse).

USB KVM switch also supports extra two comprehensive USB type A ports (if you use PS/2 console) for user to share more USB peripherals.

USB KVM Switch is compatible to AT, PS/2 style computers, SUN Microsystems computers, G3/G4 MACs or iMACs with USB port. All of USB ports of KVM switch are compliant to USB 1.1 Specification.

#### Features

- Two ports USB KVM switch, compact size design
- USB 1.1 Specification compliant
- Support UHCI, OHCI USB interface
- USB console works with Win98/98SE/ME/2000/XP, WinNT, HP Unix, Linux Sun Solaris, MAC O.S 8.6 or later version
- PS/2 console works with Win98/SE/ME/2000/XP WinNT, HP Unix, Linux, Sun Solaris, MAC O.S 8.6 or later version
- USB KVM switch is embedded with two USB device ports (if you use PS/2 console) for computers to share different USB peripherals.
- Manage multiple PCs, G3/G4 MACs, iMACs from one USB keyboard (or PS/2 keyboard), USB Mouse (or PS/2 mouse) and Monitor.
- Add PCs or Remove Connected PCs for Maintenance without powering down the PC
- Legacy Control: PS/2 Style Keyboard and PS/2 Style Mouse control all PCs and real time switch PCs without Hub
- USB Control: USB Style Keyboard and USB Style Mouse control all PCs
- Use push button or hot key control for easy computer selection.
- LED display for easy status monitoring
- Plug N Play, No Windows software driver needed for PS/2 keyboard and PS/2 mouse operation.
- Buzzer sound for switching port confirmation.
- Support auto scan function .
- High VGA resolution 1920X1440 and High bandwidth 200MHz.
- Support VGA DDC, DDC2, DDC2B.
- Supports USB bus power mode.
- Independently access USB devices and select PC port simultaneously

#### Package Contents

- 2 port USB KVM Switch:
- Compact 2 ports USB KVM Switch
- One user's manual

#### Technical Specifications

Model No.	KVM-112UEC
PC Port	2 USB Type B ports
Console Port	2 USB type A ports 2 PS/2 ports
PC Port Connector	USB Type B receptacle VGA HDB 15pin Female
Console port connector	USB Type A receptacle PS/2 Keyboard Mini Din 6 pin Female PS/2 Mouse Mini Din 6 pin Female VGA HDB 15pin Female
PC selection	Hot Key or Push Button
On Screen Display	No
PC port LED	2
Hub port LED	2
MAX PC Connections	2
Scan Intervals	5 ~ 100 sec (Default 5Sec When power on)
Keyboard Conversion	PS/2 to USB
Mouse Conversion	PS/2 to USB
VGA Resolution	1920X1440
Bandwidth	200MHz
Power Type	Bus Power
Power Adapter	No needed* for bus power
Operation Temperature	0~40°C
Storage Temperature	-20 ~ 60°C
Humidity	0~90%, NonCondensing
Size	Compact size
Dimension (cm)	11.2*7.5*2.5
Weight (kg)	170g

#### System Requirements

- Console side:**
- One VGA or the other VGA monitor
  - One USB keyboard or PS/2 keyboard
  - One USB mouse or PS/2 mouse

- Computers side:**
- Two HDB 15 pin male to male VGA cables
  - Two USB A-B cables

#### Product Details

2 port USB KVM front Panel & Rear Panel:



## MAC O.S. and Sun Micro Systems Keyboard Mapping

The following diagram indexes the Hotkey combination that emulates Mac O.S. and Sun Micro keyboard commands. This feature is only available on the PS/2 keyboard attached to the KVM, and is not available on the USB keyboard.

Left Windows Key = L\_Win

Sun Microsystems Keyboard	Windows ps2 Keyboard	Mac OS
Stop	L_Win & L_Alt	
Props	L_Win & L_Ctrl	
Compose	L_Win & L_Shift	
Front	L_Win & F1	
Open	L_Win & F2	
Find	L_Win & F3	
Again	L_Win & F4	
Undo	L_Win & F5	
Copy	L_Win & F6	
Paste	L_Win & F7	
Cut	L_Win & F8	
Help	L_Win & F11	
Power 	L_Win & F12	Power 
Mute 	L_Win & "1"	
V_DN 	L_Win & "2"	
V_UP 	L_Win & "3"	
	Windows Key	Apple Key
	Alt	Option
	Print Screen	F13
	Scroll Lock	F14
	Pause Break	F15

## Hardware Installation

Before installation, please make sure all of peripherals and computers have been turned off.

### Windows 98/98SE user:

When you apply Windows 98/98SE to USB KVM Switch, please use the following set up procedures:

#### 1st Step:

- Connecting USB A-B type cables to PC and USB KVM switch.  
The type A connector of USB cable is for PC and the other end of USB cable is for USB KVM Switch.
- Connecting HDB15 pin ( Male to Male) cables to PC and USB KVM switch.
- VGA monitor's cable is connected to console VGA port.
- Connecting PS2 keyboard to PC PS/2 keyboard port directly and do not connect PS2 mouse to your PC
- Boot the PC and PC is unable to get the mouse during boot up system. The Windows O.S. will show the following message or similar things :

" Windows did not detect a mouse attached to the computer. You can safely attach a serial mouse now. To attach a mouse to a PS/2 mouse port, you must first turn the computer off.

Do not show this message in the future. "

Please use keyboard "Tab" key, "Space" bar and "Enter" key to select the item " Do not show this message in the future." and finishing booting Windows O.S..

- It will mount USB HID (Human Interface Device) driver. Using Keyboard "Tab" key, "Left Arrow" key, "Right Arrow" key and "Enter" key to accomplish set up process.
- Repeat item 5 and 6 procedures to all of PCs.
- Please turn off USB KVM Switch and use "Windows" key to shut down computers.

#### 2nd Step:

- Connect PS2 keyboard ( or USB keyboard ) and PS2 mouse ( or USB Mouse ) to USB KVM Switch's console port.
- Turn on USB KVM switch and then power on all of PCs

### Windows ME/XP/NT/2000 user:

When you apply Windows ME/XP/NT/2000 to USB KVM Switch, please use the following set up procedure:

- Connecting USB A-B type cables to PC\* and USB KVM switch.  
The type A connector of USB cable is for PC and the other end of USB cable is for USB KVM Switch.
- Connecting HDB15 pin ( Male to Male) cables to PC and USB KVM switch.

- VGA monitor's cable is connected to console VGA port.
- Connecting keyboard and mouse to console PS/2 port or USB port.
- Turn on USB KVM switch and then boot all of PCs

\* MAC and Sun Micro Systems has the similar installation to mentioned-above PC installation process.

**Note:** Few monitors might cause SUN Microsystems fails in boot-up process (Or SUN Microsystems cannot detect monitor), please power off all systems and console monitor. You can go one of methods to solve this problem :

- Putting SUN Microsystems at 1<sup>st</sup> port of this KVM switch and boot up SUN Microsystems again.
- To add a power adapter to this KVM switch and power on this switch first, then go the same boot up process again.

### DOS User:

If the motherboard BIOS' USB port is disable in default mode and you apply USB keyboard or USB mouse to PC. It does not work in DOS mode. Please disconnect USB keyboard or USB mouse and connect PS2 keyboard to the PS2 port of PC for enabling BIOS USB port.

Different motherboard BIOS has different USB port set up procedure. Here are some examples, which based on some kind of BIOS version, below for the user reference.

- AWARD BIOS: To press "Del" key immediately for a couple of times when powering on PC and you will get into BIOS setup mode → Select "Advanced" item → USB Legacy support → Select "AUTO" → Save and quit BIOS set up.
- PHOENIX BIOS: To press "F2" after powering on PC gets into BIOS set up mode → Select "Advanced" item → Legacy USB support → Select "Enable" → Save and quit BIOS set up.
- AMI BIOS: To press "Del" key immediately for a couple of times when powering on PC and you will get into BIOS setup mode → Select "Chipset features setup" → USB controller → all USB port USB KB/Mouse → KEYB+MOUSE → Save and quit BIOS setup.

**Note:** If the PC BIOS need check keyboard to accomplish boot up process and the PC might show keyboard error message on the screen, please configure the BIOS setting again.

When you enter BIOS set up mode, please select the item "Halt on Error" or the other Error condition setting and select "Halt all errors but Keyboard" or to ignore keyboard during boot up BIOS process.

## Usage

### The Push Button:

USB KVM switch supports one push button. You can select PC port and USB hub together through it. i.e. Hub and PC are selected at the same time

### Keyboard:

There are two kinds of keyboard --- PS/2 type or USB type can be applied to this switch.

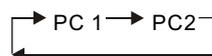
### Mouse:

There are two kinds of mouse --- PS/2 type or USB type can be applied to this switch.

### The Push Buttons:

Pressing the button cyclically through all the ports with USB Hub.

2 Ports USB KVM



### The LED of PC Selection Indication:

You can press the button in order like mentioned-above diagram. When you select one of two PC ports and this PC is shut down or this PC port is disconnected to the PC, the selected port LED will flash. When you select one of two PCs ports and this PC is powered on, the selected port LED is lit.

**The LED of USB Hub Selection Indication:**

There are two LEDs indicate the location of USB hub. When USB hub LED 1 is lit, it means that USB hub is occupied by PC 1. When USB hub LED 2 is lit, it means that USB hub is occupied by PC 2.

**Hot Key control:**

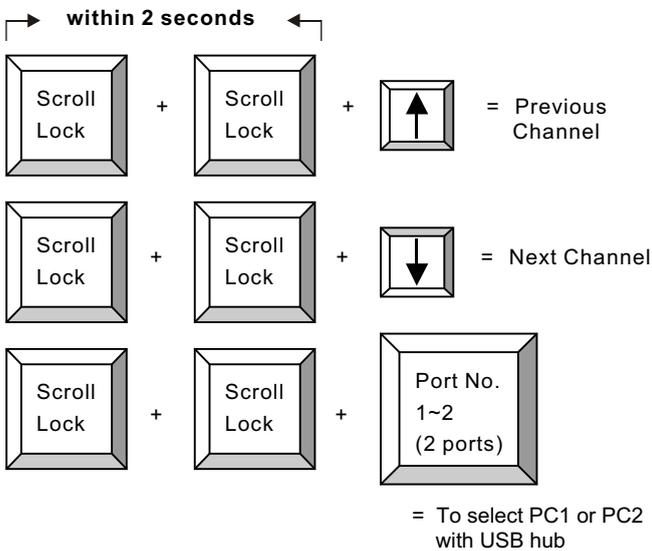
You can also conveniently command KVM switch by switching ports through simple key sequences.

**Operation: PS2 Keyboard Hot Key**

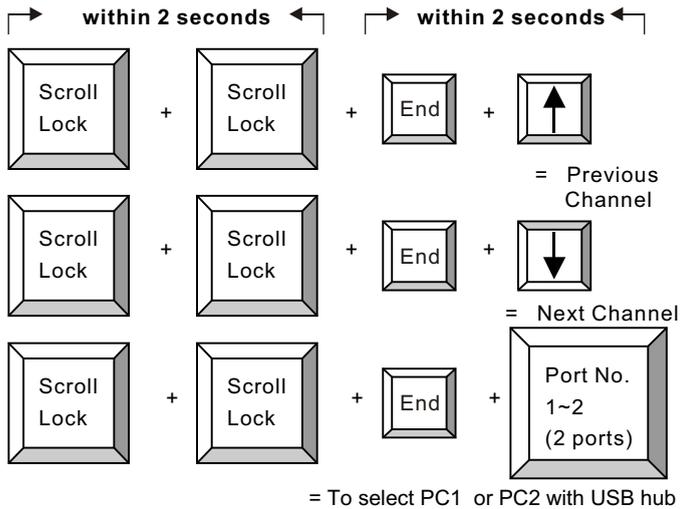
PS/2 Keyboard user : ( This application is for Win98/98SE/ME/2000/XP , HP Unix, Linux, Sun Solaris, MAC O.S 8.6 or later version operation systems )

To send commands to USB KVM, the SCROLL LOCK key must be pressed twice within 2 seconds. You will hear a beep for confirmation. If you have not pressed any key in hot key mode within 2 seconds (It means to key in any key follows up Scroll Lock Scroll Lock key ), the keyboard will back to under Operation System control state.

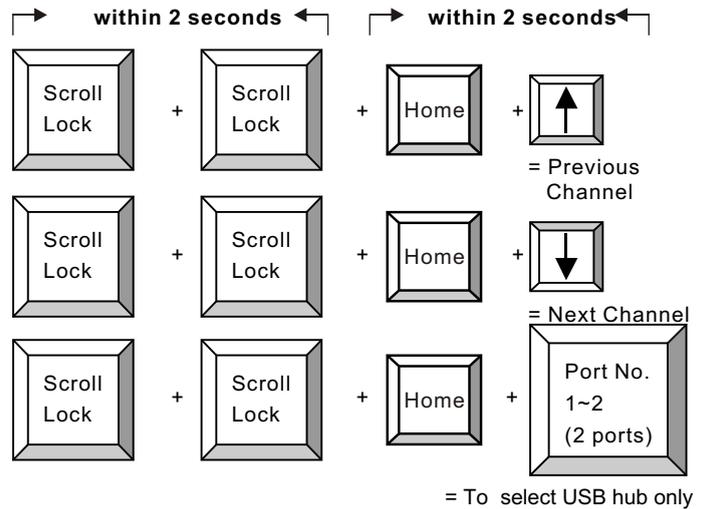
**To select PC port with USB hub in PS2 hot key :**



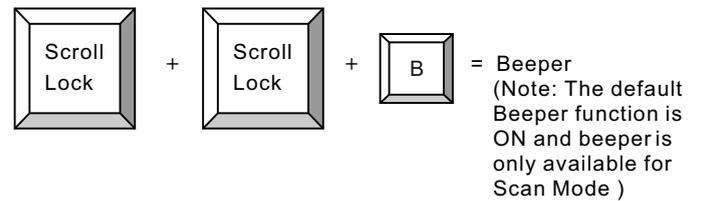
**To select PC port only in PS2 hot key :**



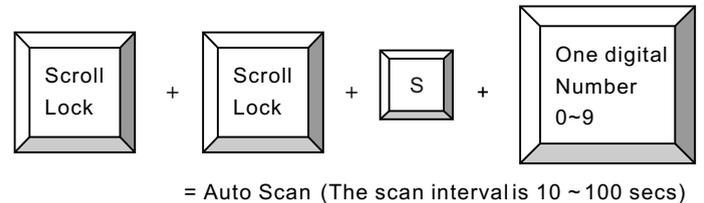
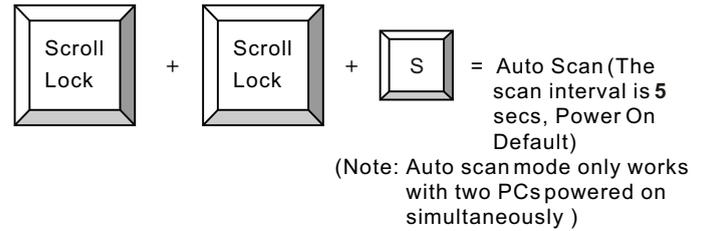
**To select USB Hub port only in PS2 hot key :**



**Beeper Function:**



**Auto Scan Mode:**



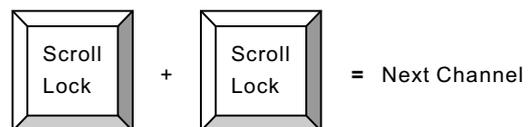
Digital Number	1: 10 secs	2: 20 secs	3: 30 secs	4: 40 secs
	5: 50 secs	6: 60 secs	7: 70secs	8: 80 secs
	9: 90 secs	0: 100 secs		

**Operation: USB Keyboard Hot Key**

USB Keyboard user : ( This application is only available on PC\* with Win98/98SE/ME/2000/XP operation systems )

Press "Scroll Lock" twice within two seconds to switch to the next channels.

**To switch PC channel and USB Hub together in the following key sequence:**



" \* " Mac O.S. and Sun Micro Systems Keyboard Mapping is not available on USB keyboard

## Troubleshooting

Ensure that all cables are well seated. Label all of cables with the number for each respective computer to avoid confusion.

### IBM PC or Compatible :

PC cannot find keyboard or mouse after the boot process. Please make sure you power on the system PC port by PC port for booting Windows O.S. and for recognizing what kind of keyboard and mouse before you install this USB KVM switch first.

Keyboard or mouse not working or not compatible with the PC, please make sure the keyboard or mouse works when directly plug in to the computer. If the problem persists, please try another keyboard or mouse.

Mouse doesn't work in Auto Scan mode, you can press any key on the keyboard or the front button on the face plate for returning standard mode and then use the Keyboard or Mouse again.

When KVM switch is in Auto Scan mode, there are only VGA monitor display and CPU alternately (but the USB Hub is not switched in auto scan mode). After you press any key, the PC port will be selected at the same time, as you see the current PC Screen.

If you apply PS/2 keyboard to USB KVM switch's PS/2 port and are fail in booting PC on account of keyboard error ( There is a keyboard error message exists on the screen ), the PC BIOS( Basic Input Output System) need be set (please see the hardware installation procedure) or upgraded to new BIOS for accepting USB to PS/2 conversion. Normally, most of BIOS' support , during PC boot process, to recognize USB to PS/2 keyboard conversion or USB keyboard.

For 4D or 5D mouse user, it is recommended to be used with a USB hub port of USB KVM switch if the mouse supported with USB type. Due to USB conversion standard does not define PS2 to USB converter for 4D or 5D mouse, these extra user define key will lose function when the users use the PS2 port of USB KVM switch.

The recommended VGA cable distance is 5 meters maximum without ghosting and degradation. Normally, the cable length is based on driver capacity of your VGA card. If you need longer VGA cable, please use VGA extender to accomplish your applications.

The recommended keyboard or mouse cable is 10 feet maximum without degradation. Normally, the cable length is based on driver capacity of your motherboard. If you need longer keyboard or mouse cable, please use keyboard or mouse extender to get your applications.

When you switch USB Hub from one PC to another and there are many USB devices are attached to the PC, it will take about 5~10 seconds for all USB devices initialization. So, to switch port will take more time than the switching time of conventional PS/2 KVM switch.

When you use Japanese windows OS with 106 key keyboard, there are some special keys like "¥" need 106 key driver(Microsoft native driver in OS CD-ROM). Please follow procedures below and click the mouse to add new driver.

### Win98/SE/ME :

control panel → Add new hardware → Next → Next → Select "No, the device isn't in the list" → Select "No, I want to select the hardware from a list" → Select keyboard → Select standard keyboard → Select (日本語) Japanese 106 key keyboard → Reboot PC

### Win2000 :

Control panel → System → Hardware → Device manager → Keyboards → Standard keyboard → Click mouse right key → Properties → Driver → Update driver → Display a list of the known drivers → For this device so that I can choose a specific driver → Standard keyboard → Standard (日本語) Japanese 106 key keyboard → Reboot PC

### WinNT :

Control panel → Keyboard → General → Change → Show all devices → Standard (日本語) Japanese 106 key keyboard → Reboot PC

### WinXP :

Control panel → System → Hardware → Device manager  
Keyboards → Standard keyboard → Click mouse right key  
driver → Update driver → Install from a list or specific location (advanced) → Don't search. I will choose the driver to install → Deselect show compatible hardware → Standard keyboard → Standard (日本語) Japanese 106 key keyboard → Reboot PC

### SUN Microsystems :

If you apply a PC USB keyboard to one of USB hub ports and SUN Microsystems are connected to this USB KVM switch, there is no SUN-to-PC keyboard mapping available. SUN-to-PC keyboard mapping is only valid at PS/2 keyboard port of USB KVM switch. You also can connect SUN USB keyboard to one of USB Hub ports.

If you apply PC USB keyboard or SUN USB keyboard to one of USB hub ports and SUN Microsystems are connected to this USB KVM switch, there is no Hot Key function for this application.

### MAC Computer :

If you apply PC USB keyboard to one of USB hub ports and MAC computers are connected to this USB KVM switch, there is no MAC-to-PC keyboard mapping available. MAC-to-PC keyboard mapping is only valid at PS/2 keyboard port of USB KVM switch. You also can connect MAC keyboard to one of USB Hub ports.

If you apply PC USB keyboard or MAC keyboard to one of USB hub ports and MAC computers are connected to this USB KVM switch, there is no Hot Key function for this application.

## CERTIFICATIONS

### FCC

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference
- (2) This device must accept any interference received. Including interference that may cause undesired operation.

### CE Certificate

This equipment is in compliance with the requirements of the following regulations: EN 55 022: CLASS B

CE

FC

