



4PortKeyboard/Mouse/Monitor  
SharingSwitchUSB-PS/2



## User's Manual

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SV431H



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# ***Introduction***

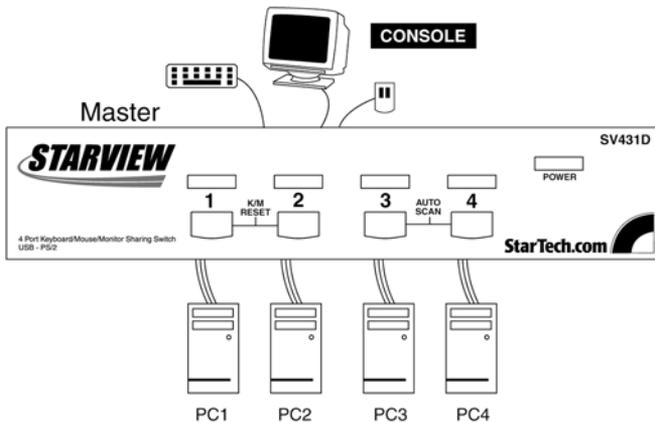
## **Overview**

The StarTech.com SV431H, fully compatible with USB specification, is a hybrid USB and PS/1 keyboard/mouse/monitor sharing switch. The SV431H USB switch lets a user manage four computers by USB or PS/2 interface or a combination of both, from 1 monitor, PS/2 keyboard and mouse saving you space, time, equipment and money.

Installation is as easy as connecting USB A-B cables or PS/2 cables in between computers and the SV431H switch. Selecting a computer is as easy as front panel push button pressing or by entering hotkey commands. The SV431H switch provides the easiest way to manage multiple USB or PS/2 computers with one PS/2 keyboard, mouse and monitor. No more tangled cables and messy working environments.

## **Features**

- Manage 4 PCs with USB or PS/2 interfaces from one PS/2 keyboard, mouse or monitor.
- Front panel push buttons and hotkey commands for easy computer selection.
- No drivers needed for keyboard and mouse operation.
- Support keyboard and mouse operation.
- High VGA resolution: 1920 x 1440.
- Buzzer sound for computer switching confirmation.
- Activate Auto Scan by front button pressing.
- Selectable Scan Time interval.
- Support the latest DDC2B VGA monitor.
- Saves time, space, equipment and power.
- No software required.



## ***Installation***

### **PC BIOS Notice**

*The following BIOS setup changes are necessary for PC users using USB and not necessary for Mac users:*

1. In STANDARD CMOS, set HALT ON ERROR to ALL BUT KEYBOARD.
2. In PNP AN PCI SETUP, set PNP OS INSTALLED to YES and set USB IRQ to ENABLE.
3. For newer computers: in INTEGRATED PERIPHERALS, set USB CONTROLLER and KEYBOARD SUPPORT to ENABLE.

Also make sure that USB is properly selected in Device Manager under Control Panel, as shown below.

*Note: The SV431H is applicable for USB keyboard and mouse.*

*Switching from one computer to the next is equivalent to unplugging the USB device from one computer and plugging it to another. Some USB drivers check attached USB peripherals all the time and do not accept plug-n-play function.*

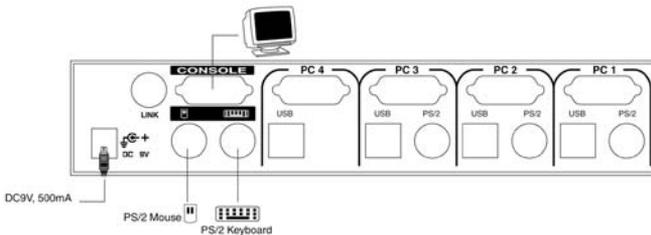
## Adhesive Rubber Feet

For desktop operation, you may stick the four round rubber feet (supplied with the unit) to the bottom of the StarView. Do not use the rubber feet with the rack mount option.

## Console Connection

Before installation make sure all devices and computers to be connected to the SV431H have been turned off.

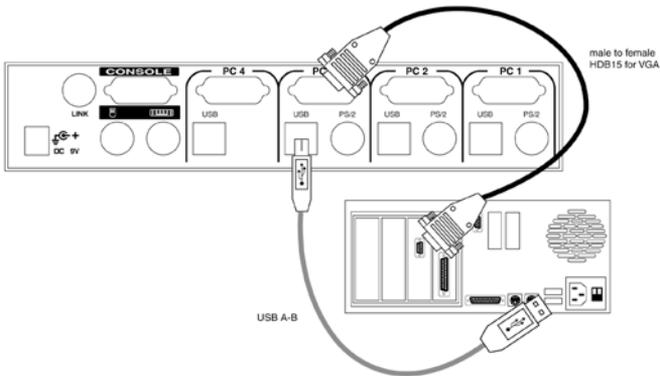
Plug you monitor to the console's VGA port; connect the PS/2 mouse and keyboard to the condole port marked with a mouse and a keyboard as shown in figure below.



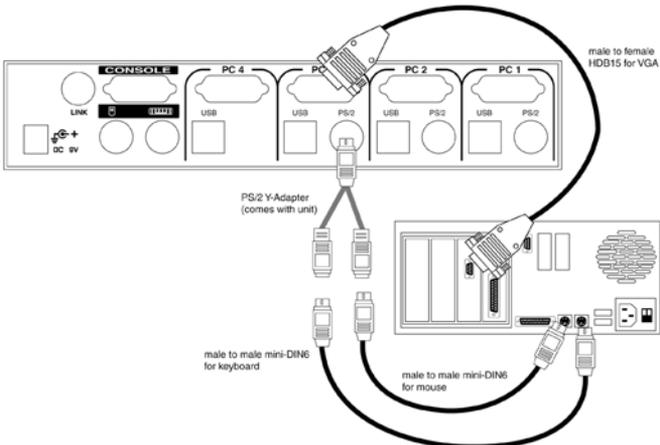
## Computer Connection

Use a HDB15 male-to-female cable to connect from your computer's VGA port to the SV431H VGA port as shown on the following page.

- For USB computers: Use a USB A-B cable to connect from one of the SV431H PC ports to the USB port on the corresponding computer (series A connector), as shown on the following page.



- For PS/2 computers: Connect a “PS/2 Y-adapter”, which comes with the unit, to the SV431H PS/2, then use two mini-DIN6 male-to-male cables for keyboard and mouse, see figure below. There are two mini-DIN6 female connectors on the “PS/2 Y-adapter” marked as keyboard and mouse. Be sure not to swap the connections.



- For notebook computers: In most cases, all you need is one PS/2 male-to-male cable connected between the SV431H and your Notebook; the Y-adapter is not necessary. However, some Notebook computers do not follow industry-standard, please check your Notebook user's manual for details.

You can now turn on all devices and computers.

*Note: Do use both PS/2 and USB of a PC port on the SV431H at the same time. Only the USB port will effective if this occurs.*

## ***Operations***

### **Front Panel**

- **Online LED & Selected LED**

When the LED turns green, the connected computer is powered-on. When a computer is selected, its corresponding red LED illuminates.

- **Pushbuttons**

Each computer has a button associated with it on the front panel for selection.

- **K/M Reset**

K/M Reset solves most problems developed by keyboard, mouse, device replacement or change of configuration. Press both of the front-panel number 1 and 2 push buttons for 2 seconds to re-configure the whole system without turning either the SV431H or any computer off.

- **Auto Scan**

Auto Scan automatically scans through computers one by one in a fixed intervals. The SV431H provides an easy to use feature to start Auto Scanning. You can press down both the front-panel number 3 and 4 buttons for 2 seconds to start Auto Scanning.

*Note: Computers using a USB keyboard and mouse are not immediately operable when selected during Auto Scan. Wait for about three seconds after switching to a USB computer, then use the keyboard and mouse.*

## Hot Key Commands

Hot Key commands are short keyboard sequences used to select a computer, to activate computer scan, etc. The SV431H interprets keyboard strokes for Hot Keys all the time. A Hot Key sequence starts with 2 left <Ctrl> keystrokes followed by 1 or 2 more key strokes. A built-in buzzer generates a high-pitch beep for correct hot key commands; otherwise, one low-pitch beep for an error and the bad key sequence will not be forwarded to the selected computer.

L-Ctrl: is the <Ctrl> key located at the left side of the keyboard.

1~4: are the numbers '1' ~ '4' at the upper row of the keyboard.

*Do not use the keypad at the right of the keyboard.*

- To select a computer by hot key command, you must know its port address, which is determined by the SV431H connection at the back.

Left **Ctrl** + Left **Ctrl** + **4**

Selects a computer connected to the PC port 4.

- To start Auto Scan, which will automatically scan power-on computers one by one at a fixed interval:

Left **Ctrl** + Left **Ctrl** + **F1**

When Auto Scan detects any keyboard or mouse activity, it suspends the scanning until activity stops; it then resumes with the next computer in sequence. The length of the Auto Scan interval (Scan Rate) is adjustable. To abort the Auto Scan mode, press the left Ctrl key twice.

- Manual Scan enables you to manually switch back and forth between power-on computers.

Left **Ctrl** + Left **Ctrl** + **F2**

Press ↑ or ↓ to select the previous or the next computer in sequence. Press any other key to abort the Manual Scan.

- To adjust the Scan Rate which sets the duration before switching to the next computer in Auto Scan:

Left **Ctrl** + Left **Ctrl** + **F3**

The SV431H sends one to four beeps indicating scan intervals of 3, 8, 15 and 30 seconds respectively.

- To adjust keyboard typematic rate (characters/sec), this setting over-rides that of the BIOS and any operating system:

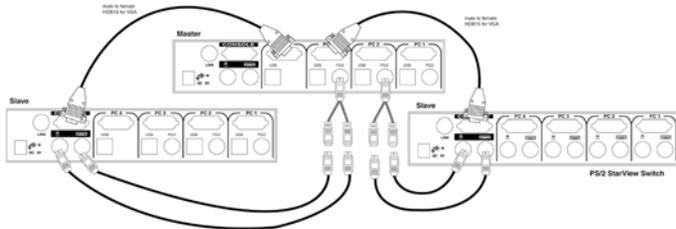
Left **Ctrl** + Left **Ctrl** + **F4**

The Sv431H generates 1 to 4 beeps corresponding to 10, 15, 20 and 30 characters/sec respectively.

## ***Cascade Configuration***

### **Connection**

Before connecting a device (a computer or any other SV431H) to the master under power, you must turn off the devices. Only the PS/2 ports are operable for cascade operation.



### **Computer Selection by Hot Key Command**

The first digit is the port address of the Master unit (1~4) and the second digit is the port address of the Slave (1~4). Please note that only the Master's PS/2 ports can be connected to a Slave's Console port.

Left **Ctrl** + Left **ctrl** + **1** + **3**

Selects a computer connected to PS/2 port 3 of a Slave connected to PS/2 port 1 of the Master.

## Appendices

### Specifications

Specification	SV431H
No. of computers supported	4
Front panel push button	4
Hot plug-and-play	Automatic scan interval
Automatic scan interval	3, 8, 15, 30 seconds
Cable Length (Max)	30M (100ft) for VGA 5M (15ft) for USB 30M (90ft) for PS/2
Computer Online LED	4
Computer Selected LED	4
VGA	1920 x 1440, DDC2B
Computer peripheral connector monitor	USB Type B x 4, PS/2 x 3 HDB-15 male x 4
Console peripheral connector monitor	PS/2 x 2 HDB-15 female x 1
Weight (g) (oz.)	90 31.74
H x W x D (mm) (in.)	44 x 220 x 130 1.7 x 8.7 x 5.1
Size	Compact

## ***Troubleshooting***

Ensure that all cables are well seated. Label the cable for each computer to avoid confusion when connected to the SV431H.

<b><i>Key</i></b>	<b><i>Possible causes</i></b>	<b><i>Solutions</i></b>
Keyboard or mouse does not work	<ul style="list-style-type: none"> <li>• In Auto Scan, computers using USB keyboard and mouse are not operable.</li> <li>• Too many keyboard or mouse drivers installed.</li> </ul>	<ul style="list-style-type: none"> <li>• Press any front button to select a computer, then use the keyboard and mouse.</li> <li>• Remove all unnecessary keyboard and mouse drivers.</li> </ul>
Keyboard or mouse does not work after switching to a different USB computer.	The USB computer does not support plug-and-play as specified by the USB standard.	Update that computer's USB driver. Device hot plug-and-play is one of the basic USB specifications.
Computer hangs up while switching computers.	USB computer initialization take too much time.	Wait at least 5 seconds before switching from one USB computer to another to ensure proper USB communication.
Auto Scan does not switch PCs automatically and the SV431H beeps.	All PCs are off or only one PC is turned on. Scan mode works for power-on computers only.	Turn computers on.

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