----------------------- *Introduction*

Overview

The SH-6510 is only 1U Four in one control center (KVM switch, KEYBOARD, LCD and MOUSE). It can control up to 8 PCs or 64 PCs by cascade. There is no interface card or software to configure. Installation is as easy as connecting cables between SH-6510 and your computers.   Operation is as simple as pressing push button, entering hot-key command and navigating through the user-friendly on-screen menu.   Depending on the model you have, it switches up to 4 (KVM104D), 8 (KVM108D) IBM-compatible computers.   The KVM Switches is independent of the computer operating system.

Two-Console KVM Switches (Optional)

The advanced multi-access KVM Switches enable you to control multiple computers from **two** different locations: one is contained in SH-6510; the other one you can connect from outside, the distance is up to 30M. KVM208D controls 8 computers.

On-Screen Display (OSD) Menu
For KVM104D, KVM108D,
KVM208D models

For KVM Switches with built-in OSD control, you can name your computers, switch to a computer from a list, configure settings with easy-to-use menus, view the name of the selected computer on-screen with programmable time interval.   The OSD displays the system status throughout operation.

For Monitor with built-in OSD control, you can be easy to set up your monitor.

Automatic Mouse Conversion

The KVM Switches enable you to connect computers with PS/2 or serial mouse ports (using adapters supplied with each KVM Switches) and control the computers from one PS/2 mouse(Touch pad).   The KVM Switches automatically identifies the mouse and switches to proper mouse protocol.

High Video Quality

KVM Switches supports VGA resolution up to 1600x1200 @85Hz without any degradation (But it is limited by Monitor, so only up to Monitor resolution). Advanced VGA circuit design guarantees smooth and flicker-free switching from one computer to the other with distance up to 100ft (30M)* at both Console and PC sides.

NOTE: The following is the optional KVM Switch and Display models.

Optional KVM Switch Models			
OSD Optional switch	KVM104D	KVM108D	KVM208D
No. of console supported	1	1	2
No. of PC supported	4	8	8

Optional DISPLAY Models				
Optional DISPLAY	12.1	13.3	14.1	15.0
Display's Resolution	800x600	1024x768	1024x768	1024x768

* Tested with high-quality UL2919-rated, low-loss and shielded cables.

Features

- ■Supports both PS/2 and serial mouse
- ■Cascade configuration expands system capability up to 64 PCs
- ■Auto-scan automatically selects computers sequentially
- ■Supports Microsoft IntelliMouse (Pro)
- ■Hot-key functions allow easy computer access
- ■Keyboard states automatically saved and restored when switching computers
- ■Operating system independent, transparent to all applications
- ■Plug and play system configuration
- ■Keyboard and mouse can be hot plugged at any time
- ■High VGA resolution 1600x1200 for KVM switch, but limited by LCD.
- ■DDC2B compatible
- ■Standard 1U 19 inch rack mounting
- ■Supports optional multimedia module for microphones and stereo speakers (MAV108).

Extra features for On-Screen Display model

- ■Assign computers with unique and meaningful names
- ■Identify and select computers by the names
- ■Programmable scan filters unused computers
- ■Store system settings and name entries to non-volatile memory
- ■Password security locks computer from unauthorized access
- ■Gain complete control with easy-to-use OSD interface

More features for multi-access models(KVM208D)

- ■Manage multiple computers from two locations
- ■Support different type of mouse i.e. generic PS/2 mouse and scroll mouse
- ■Selectable User Timeout

Configurations

SH-6510 has several models each supporting a different number of computers. For applications with a large number of computers, KVM Switches can be cascaded in a master/slave configuration to support even more computers.

Single Configuration

First let one side of adapter Plug-in power insert and connect the other side of the adapter to the port of KVM switches. Then, connect multiple sets of keyboard, mouse and monitor cables to the "**PC** x" ports of the KVM Switches, as shown in figure 1.
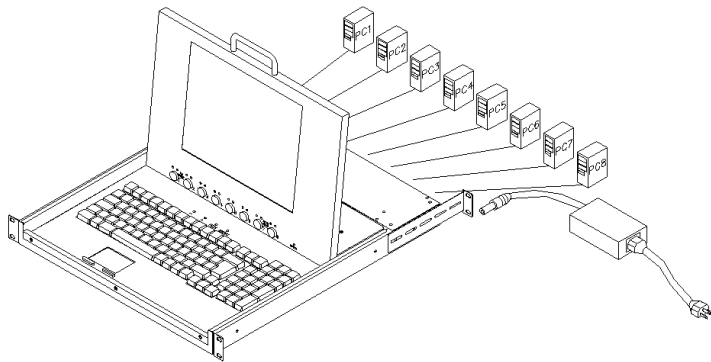
Figure 1: A single configuration

Cascade (Master/Slave) Configuration

You can connect a second level of one or more KVM Switches to "**PC 1**"~"**PC 4**" (KVM104) or "**PC 1**"~"**PC 8**" ports (KVM108) of a *Master* unit. Cascade configuration expands system ability allowing you to select computers connected to the *Master* or *Slaves* (There is only one *Master*, which has a mouse, a keyboard and a monitor connected to its **CONSOLE** port directly operated by a user). Once connected, KVM Switches automatically configure themselves to either *Master* or *Slave*. *Slaves* of different KVM Switches models can be mixed in cascade configuration. *[NOTE: Master must have equal or more PC ports than that of Slaves, i.e., if KVM104 is a master, KVM104 can be Slaves, but KVM108 can not.]*
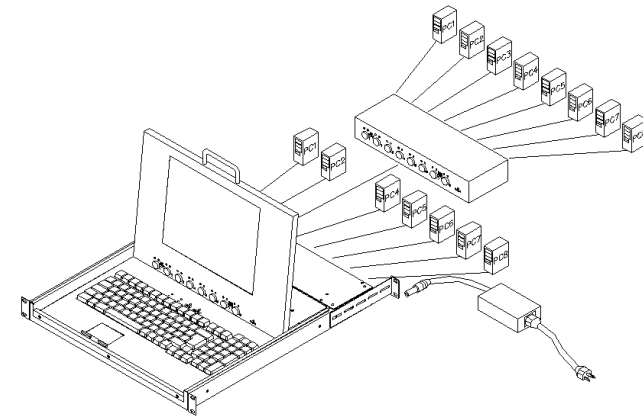
Figure 2: A cascade KVM Switches configuration

Throughout this manual, *Master* is the SH-6510. *Slave* is a KVM Switches that has its **CONSOLE** port connected to a *Master's* "**PC** x" port. *Slave* only exists in cascade configuration.

---------------------- *Installation*

Device Connection

Determine the channel address of each computer. For computers using PS/2 mouse, connect the computer's mouse and keyboard cables to the KVM Switches's connectors marked with a mouse and keyboard respectively, as shown in figure 4.
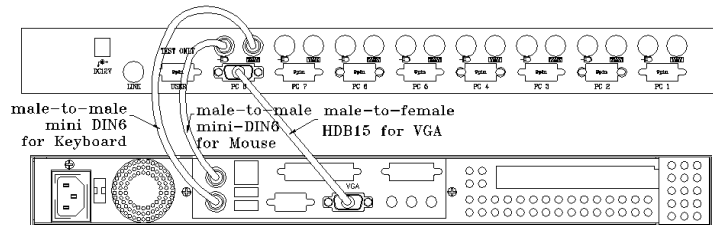

Figure 4: Master computer connection

For computers using serial mouse, connect the DB-9 to mini-DIN-6 adapter (supplied with the KVM Switches) to the computer mouse port, then use PS/2 cables to connect the mouse to KVM Switches, see figure 5. Connect the computer's monitor cable to the HD-DB-15 VGA connector. Repeat above steps for all remaining computers to be connected to the KVM Switches.
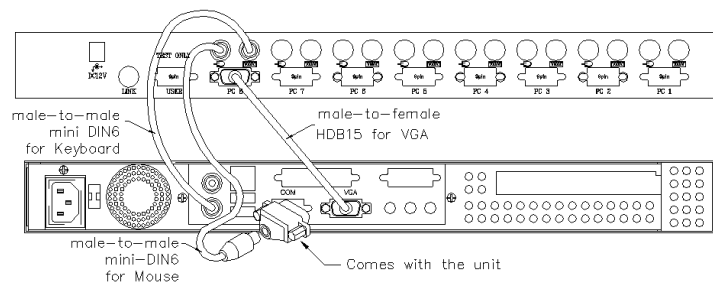

Figure 5: Adapter and serial mouse connection

Initial Power-Up

Make sure all computers and KVM Switches are powered down during installation. You must power up the Master KVM Switches before turning on any other devices.

- ▸ *For single KVM Switches:* 1) Apply a power adapter to the *Master*. 2) Turn on computers.
- ▸ *For cascade:* 1) Apply a power adapter to the *Master*. 2) Apply power adapters to all *Slaves.* 3) Turn on computers.

Note: You may hot plug additional powered-down computer and *Slave* without turning any existing KVM Switches or computer off after initial power up.

Replace Master Console Devices

You can replace a faulty keyboard or mouse of the *Master* **CONSOLE** port at any time without powering down the Master, as long as your computers are booted with proper device driver for the new device. Should you encounter any difficulty, just activate **K/M RESET** by holding both front-panel '**1**' and '**2**' push buttons down for 2 seconds.

Rack Mount Accessories

Figure 6 shows how to attach optional mounting brackets to the SH-6510 unit for standard 19-inch rack cabinet.
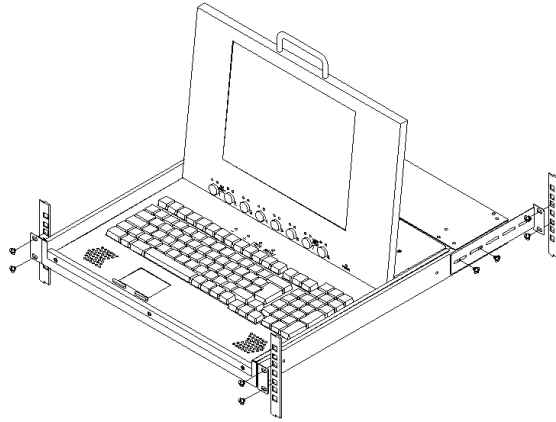

Figure 6: Attaching rack mount bracket

Figure 7 shows how to assemble rack cable support then screw it to the back and inside the rack cabinet vertical post.
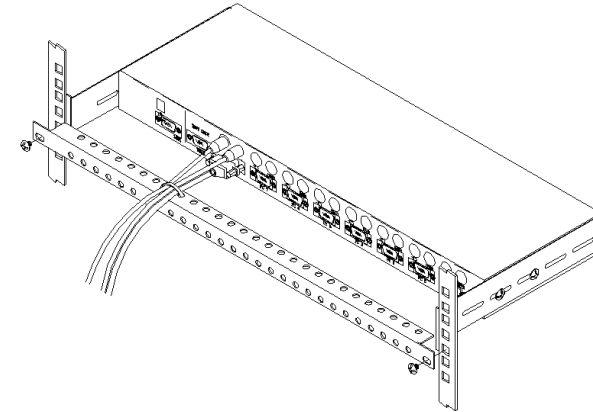

Figure 7: Assembling rack cable support

Then, keyboard/mouse/monitor cables can be routed over the cable support. You can use plastic cable ties to bundle and label the cables through the rack cable support holes for easy identification.

Multimedia Module

An optional multimedia A/V module (MAV108) is used to select microphone, speaker and monitor signals from one out of eight computers. The A/V module is connected to the **LINK** port on the rear panel via an mini-DIN-8 connector. When a computer is selected, the microphone signal is directed to that computer, speaker and monitor signal source from the same computer.

As an OSD option, the A/V module may select a computer different from that of the KVM Switches system. There are two options in *Audio Stick* function (<F4>:More\Audio Stick). When set to '**On**', A/V module selection follows computer selection. When set to '**Off**', A/V module selection stops following computer selection. It is useful if you want to listen to one particular computer's audio signal while selecting other computers during operation.

With extra VGA ports, the A/V module enables you to view multiple monitors from one PC at the same time. Now you can extend your Windows desktop for all your computers and switch accordingly.

---------------------- *Operation*

Front Panel Push Buttons

You may select a computer by pressing the front panel push button directly, by issuing hot-key commands or by activating the OSD window (for models with OSD support). The front panel indicator changes to reflect the computer port selected (red) and whether the port is connected to a powered computer (green). The indicator flashes red when it is in either *Auto Scan* or *Manual Scan* mode.
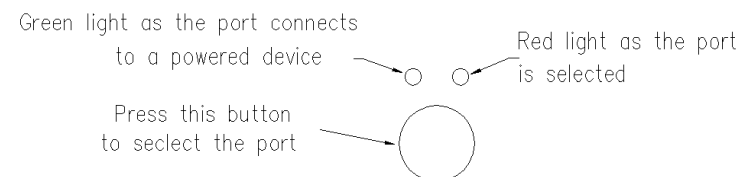

Figure 8: Front panel indictor

Some computers support 'keyboard/mouse power up' function, i.e., press certain keys or mouse buttons to startup the computers. Their corresponding green front indicators lit all the time even if the computers are 'off'.

■ **K/M RESET**

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

■ **AUTO SCAN**
KVM Switches provides an easy to use feature to start *Auto Scan*ning. You can press down both the front-panel number **7** and **8** buttons for 2 seconds to start Auto Scanning.

KVM Switch OSD (On-Screen-Display) Operation
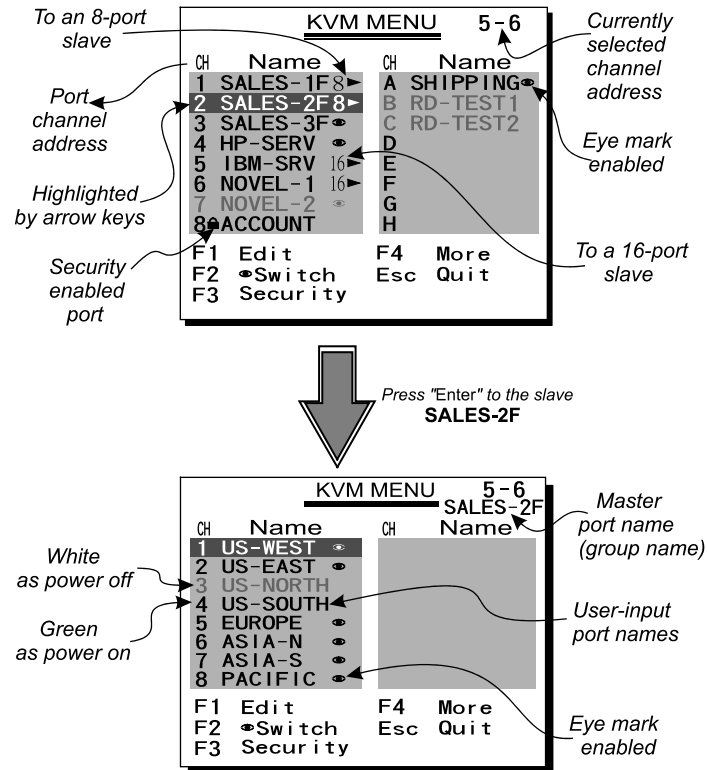*KVM104D,KVM108D,KVM116D,KVM208D,KVM216D*

Figure 9: OSD screen illustration

By hitting the left <CTRL> key twice within two seconds, you may see the 'Hotkey Menu' if it is enabled (an OSD option).   Or, by hitting the left <CTRL> key three times within two seconds, you will see a 'KVM MENU' screen showing a list of the computers with corresponding channel addresses, names and status, see figure 9.

The channel address of the currently selected computer is displayed in red, same as the front indicator, to the right of the OSD title 'KVM

MENU'.   The color of a device name is green if it has power and is ready for selection (its corresponding front panel indicator is green), or the color is white as it has no power.   OSD menu updates the color when it is activated.   Use the <UP> and <DOWN> arrow keys to highlight a computer and the <ENTER> key to select it.   Or, you may press <ESCAPE> to exit OSD and remove the OSD menu from the display; the status window returns to the display and indicates the currently selected computer or operating status.

A triangle mark (▸) to the right of a name indicates the port is cascaded to a *Slave*; the number at the left of the triangle mark shows the number of ports the *Slave* has, i.e. **8 ▸** for KVM108. <ENTER> key brings you one level down and another screen pops up listing the names of the computers on that *Slave*.   The name of the *Slave* will be shown at the upper right corner of the OSD menu. It is useful to group computers and still be able to see the group name.

An eye mark (👁) to the right of a name indicating the computer is selected to be monitored in Scan mode.   In OSD, this mark can be switched on or off by function key <F2>.

Press <ESCAPE> key to exit OSD and to return to the selected computer; the computer name is also shown on the screen.

● Function key <F1>:To edit name entry of a computer or a *Slave*.   First, use the <UP> and <DOWN> arrow keys to highlight a channel then press <F1> followed by name entry. Valid characters are 'A'~'Z', '0'~'9' and the dash character. Lowercase letters are converted to uppercase ones.   Press <BACKSPACE> to delete a letter one at a time.   Non-volatile memory stores all name entries until you change, even if the unit is powered down.

● Function key <F2>: To switch the eye mark (👁) of a computer on or off.   First, use the <UP> and <DOWN> arrow keys to highlight it, then press <F2> to switch its eye mark on or off.   If *Scan Type* is '**Ready PC +👁**', only the power-on and eye mark selected computers will be displayed sequentially in

Scan mode.

● <u>Function key <F3></u>: To lock a device (a computer or a *Slave*) from unauthorized access, use *Security*. *Security* is effective for only one device (a computer or a *Slave*). To lock a device, use the <UP> and <DOWN> arrow keys to highlight it, then press <F3>. Now, enter up to 4 characters ('A'~'Z', '0'~'9', '-') followed by <ENTER> as new password. A Security-enabled device is marked with a lock (🔒) following its channel number. To permanently disable the *security* function from a locked device, highlight it, press <F3> then enter the password.

If you want to access the locked device temporarily, simply highlight it and press <ENTER>, the OSD will ask you for the password. After entering correct password, you are allowed to use the device. This device is automatically re-locked once you switch to another one. During Scan mode, OSD skips the security-enabled device. NOTE: Only one device (a computer or a *Slave*) can be locked by this function at a time.

> *If you forget the password, the only way to permanently disable the security function is to remove all possible power sources from the master KVM Switches. You need to turn off all computers and unplug all power adapters, then restart everything.*

● <u>Function key <F4></u>: More functions are available by hitting <F4>. A new screen pops up displaying more functions as described below. Most of them are marked with a triangle (▸) indicating there are options to choose from. Using the <UP> and <DOWN> arrow keys, select the functions and press <ENTER>. Available options will be shown in the middle of the screen. Again, using the <UP> and <DOWN> arrow keys to view options then press <ENTER> to select it. You can press <ESCAPE> to exit at any time.

■ *Auto Scan*

In this mode, the KVM Switches automatically switches from one power-on computer to the next sequentially in a fixed interval. During *Auto Scan* mode, the OSD displays the name of the selected computer. When *Auto Scan* detects any keyboard or mouse activity, it suspends the scanning till activity stops; it then resumes with the next computer in sequence. To abort the *Auto Scan* mode, press the left <CTRL> twice, or, press any front button. *Scan Type* and *Scan Rate* set the scan pattern. *Scan Type* (<F4>:More\Scan Type) determines if scanned computers must also be eye mark selected. *Scan Rate* (<F4>:More\Scan Rate) sets the display interval when a computer is selected before selecting the next one.

■ *Manual Scan*
Scan through power-on computers one by one by keyboard control. *Scan Type* (<F4>:More\Scan Type) determines if scanned computers must also be eye mark selected. Press the up arrow key ( ) to select the previous computer and the down arrow key ( ) to select the next computer. Press any other key to abort the *Manual Scan* mode.

■ *Audio Stick*
An optional multimedia module can be linked to the back of each KVM Switches for selecting microphone and stereo speaker signals. There are two options for *Audio Stick*: **ON** and **Off**. When set to '**On**', audio selection follows computer selection. When set to '**Off**', audio selection stops following computer selection. It is useful if you want to listen to a particular computer's audio signal while operating other computers. The non-volatile memory stores the *Audio Stick* setting.

■ *Scan Type*
Ready PC +👁: In Scan mode, scan through power-on and eye mark selected computers.
Ready PC: In Scan mode, scan through power-on computers.
The non-volatile memory stores the *Scan Type* setting.

■ *Scan Rate*
Sets the duration of a computer displayed in *Auto Scan* mode. The options are **3 seconds, 8 seconds, 15 seconds and 30 seconds**. The non-volatile memory stores the *Scan Rate* setting.

■ *Keyboard Speed*
KVM Switches offers keyboard typematic setting that overrides the similar settings in BIOS and in Windows. Available speed options are **Low**, **Middle**, **Fast** and **Faster** as 10, 15, 20 and 30 characters/sec respectively.
The non-volatile memory stores the Keyboard Speed setting.

■ *Hotkey Menu*
When you hit the left <CTRL> key twice within two seconds, the "Hotkey Menu" appears displaying a list of hot-key commands if the option is **On**. The 'Hotkey Menu' can be turned **Off** if you prefer not to see it when the left <CTRL> key is hit twice.
The non-volatile memory stores the Hotkey Menu setting.

■ *CH Display*
 Auto Off: After you select a computer, the channel address and name of the computer will appear on the screen for 3 seconds then disappear automatically.
 Always On: The channel address and name of a selected computer and/or OSD status displayed on the screen all the time.
The non-volatile memory stores the CH Display setting.

■ *Position*
The position of the selected computer name and/or OSD status displayed on screen during operation. The actual display position shifts due to different VGA resolution, the higher the resolution the higher the display position. The non-volatile memory stores the Position setting.
 UL as Upper Left,   **UR** as Upper Right,
 LL as Lower Left,   **LR** as Lower Right.

 MI as MIddle,

● ESC: To exit the OSD, press the <ESCAPE> key.

DISPLAY OSD(On-Screen-Display) Operation

There are five push buttons "AUTO", "MENU", "**+**", "**-**", "LCD-I/0" and one "POWER" LED on the keyboard. When the control center is power on, the LED is bright. When the display is power on, the LED is green. When the display is power off, the LED is red. If you want to adjust the display, first press "MENU" button. Use "+" or "-" selecting which function you want. Then press "MENU" to work out. If you press the button "AUTO", the display will work out for AUTO configure.

When you put down the display, the display is off after 3~5Second. Oppositely the display is on after 3~5 Second. If the display is on, it will be off when you press the "LCD-I/0" after 3~5 Second. Oppositely the display will be on 3~5 Second.

DISPLAY OSD MENU

FIRST LEVEL	SECOND LEVEL	THIRD LEVEL
AUTO TUNE.		
BRIGHTNESS		
CONTRAST		
COLOR	9300 7500 6500 USER RETURN	 RED GREEN BLUE RETURN
QUALITY	SIZE PHASE NOISE TEXT/ GFX	 TEXT

		GFX RETURN
	RETURN	
POSITION	IMAGE POS.	
		HORIZONTAL VERTICAL CENTRE RETURN
	OSD POS.	
		HORIZONTAL VERTICAL CENTRE RETURN
	RETURN	
LANGUAGE	ENGLISH GERMAN FRENCH ITALIAN SPANLISH	
RECALL	YES NO	
SAVE		
CANCEL		

Hot-key commands

Hot-key command is a short keyboard sequence to select a computer, to activate computer scan, etc. KVM Switches interprets keystrokes for hot-keys all the time. A hot-key sequence starts with two left <CTRL> keystrokes followed by one or two more keystrokes. A built-in buzzer generates a high-pitch beep for correct hot-key command; otherwise, one low-pitch beep for error and the bad key sequence will not be forwarded to the selected computer.

The short form hot-key menu can be turned on as an OSD function (<F4>:more\Hotkey Menu) every time the left <CTRL> key is pressed twice.

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

1~8: are the number keys '1' ~ '8' 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 channel address, which is determined by the KVM Switches connection. For a computer connected to a *Master*, its address is represented by the PC port label (1~8). For a computer connected to a *Slave*, two characters represent its address. The first character is the channel address of the *Master* unit (1~8) and the second one is the channel address of the *Slave* (1~8). Please note that only *Master's* 'PC 1' ~'PC 8' ports can be connected to a *Slave*.

Left *Ctrl* + left *Ctrl* + *7*

Selects a computer connected to port 7 of the *Master*.

Left *Ctrl* + left *Ctrl* + *6* + *7*

Selects a computer connected to port 7 of a *Slave* connected to port 6 of the *Master*.

■ To start *Auto Scan*, automatically scan <u>power-on</u> computers one by one at a fixed interval:

left *Ctrl* + left *Ctrl* + *F 1*

When *Auto Scan* detects any keyboard or mouse activity, it suspends the scanning till activity stops; it then resumes with the

next computer in sequence.   The length of the *Auto Scan* interval (*Scan Rate)* is adjustable, see below.   To abort the *Auto Scan* mode, press the left **Ctrl** key twice.

Note: For OSD models, *Scan Type* determines whether eye mark is necessary during *Auto Scan*.

■ *Manual Scan* enables you to manually switch back and forth between <u>power-on</u> computers.

> left **Ctrl** + left **Ctrl** + **F2**

Press   or   to select the previous or the next computer in sequence.   And, press any other key to abort the *Manual Scan*.

Note: For OSD models, *Scan Type* determines whether eye mark is necessary during *Manual Scan*.

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

> left **Ctrl** + left **Ctrl** + **F3**

The KVM Switches sends one to four beeps indicating scan interval of *3*, *8*, *15* and *30* seconds respectively.

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

> left **Ctrl** + left **Ctrl** + **F4**

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

■ *Audio Stick*

An optional multimedia module can be LINKed to the back of each KVM Switches for selecting microphone and stereo speaker signals. There are two options for *Audio Stick*: **ON** and **Off**.   When set to '**On**', audio selection follows computer selection.   When set to '**Off**', audio selection stops following computer selection.   It is useful if you want to listen to a particular computer's audio signal while operating other computers.

> left **Ctrl** + left **Ctrl** + **F5**

The KVM Switches generates 1 or 2 beeps corresponding to *On* and *Off* respectively.

Touch Pad

There are two function buttons on the Touch Pad (function similar with mouse).

You can touch the Touch Pad twice continually instead of using "enter" button.

If you want to pull something, you can touch the Touch Pad twice continually. But your hand can't leave the Touch Pad at the second time. You have to touch the Touch Pad and move your finger until you pull something to the place that you want.

-------------- *Cascade Configuration*

Connection

Before connecting a device (a computer or a Slave) to the Master under power, you must turn off the device. The Master must have equal or more **'PC x'** *ports than that of the Slave, i.e., if KVM104D is the master, KVM104 can be Slaves, but KVM108 can not.*

The ports labeled "**PC 1**"~"**PC 8**" can be connected to either a computer or a *Slave*'s **CONSOLE** port, as shown in figure 10. A power adapter with DC 12V output rating must be connected to the *Master*.
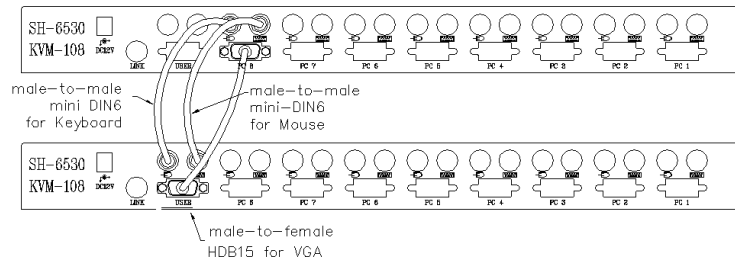

Figure 10: Slave console connection

The maximum number of computers controlled by a master/slave configuration with all KVM104s is 16 with 4 *Slaves* and each *Slave* connects to 4 computers, see figure. For an all KVM108s configuration, the number is 64 with 8 *Slaves* and each *Slave* connects to 8 computers, see figure 11.
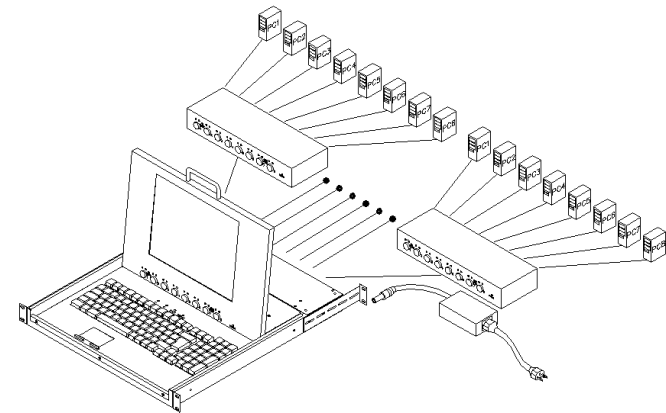
Figure 11: Cascaded 8-port KVM Switches

> **For OSD model:**
> After connection completes, you should re-activate the OSD menu to check if the *Master* recognizes the *Slaves*. A triangle mark (▸) is placed to the right of the channel name indicating the port is connected to a *Slave not* a computer. A number to the left of the triangle mark indicates the *Slave* model, i.e. 8 ▸ for KVM108 or KVM108D.

Change Configuration while Running

Devices at any '**PC** x' port can be changed at any time after initial power-up. If you change any one of the "**PC 1**" to "**PC 8**" ports connection from a computer to a *Slave* or vice versa, or replace the devices of a port; the OSD will update this change the next time it is activated. *[NOTE: Any new device, a computer or a Slave, must be turned off before it is connected to the Master.]*

------------Multi-access KVM Switches
KVM208D

Overview

The advanced multi-access KVM208D has all the features of KVM108D respectively. The model has two Console ports facilitate you to access multiple computers from two different locations, local and remote. Thanks to the high-drive circuit design, you may connect high quality cables at Console and PC sides for up to 100ft (30M), a definite plus for server room applications. Now you can access all computers either in the server room when you have to physically access the computers such as software upgrade, or away from the server room for everyday use.

Connections

Connect one keyboards, mouse and monitors to the **CONSOLE** ports. The built-in PS/2 mouse signal translation enables you to connect PS/2 mice of different type to the **CONSOLE** ports, i.e., a generic PS/2 mouse for one **CONSOLE** and a scroll mouse for another.

Operation

On power up, the KVM208D is in Idle mode broadcasting VGA signal from the selected computer and detecting for keyboard and mouse activity. User LEDs (marked with reverse black A and B) are both green indicating the KVM Switches is not in use.

When keyboard or mouse activity is detected at one **CONSOLE**, the KVM Switches immediately disables the other **CONSOLE** from accessing the computer. Only one User LED, at the front panel, remains lit indicating the KVM Switches is under user operation. In the mean time, keyboard LEDs (Num/Caps/Scroll Lock) of the other **CONSOLE** start to flash as its access is denied and the monitor is blocked from VGA signal for security reason. After the user has finished his operation for a period of time (i.e., *User Timeout*), the multi-access KVM Switches Switch returns to Idle mode. *User Timeout* has four options, **5 sec**, **30 sec**, **60 sec** and **HOLD**. Select **HOLD** when you plan to access the KVM Switches for a long time. Pressing the <Scroll Lock> twice forces the KVM Switches return to Idle mode immediately regardless of the *User Timeout* setting.

The *User Timeout* is available in the OSD menu by pressing the Function key <F4>, under the sub-menu **More**. Note: *Keyboard Speed* option is not available for multi-access models.

Configuration

To expand the number of computers under control, you may connect **CONSOLE** port of another KVM Switches to "**PC 1**" ~ "**PC 8**" port. Refer to the chapter *Cascade Configuration* for more detail. There are rules to apply for Master/Slave configuration. When KVM208D is a Master, its slave includes KVM104, KVM104D, KVM108 and KVM108D. These multi-access KVM Switches already come with OSD menu, their Slaves do not have to be OSD equipped.

----------------------- *Appendices*

Specifications:

Specifications	SH-6530-KVM104 SH-6530-KVM104D	SH-6530-KVM108 SH-6530-KVM108D
User port number	1	1
Computer port number	4	8
Cascade control PC number	Up to 16*	Up to 64*
On-screen display (OSD)	KVM104D	KVM108D
Front panel button control	4	8
Hot plug-and-play	Yes	
Hot-key control	Yes	
Rack-mount kit	RMK04	RMK08
Automatic scan interval	3, 8, 15, 30 seconds	
Programmable scan pattern	KVM104D	KVM108D
Cable length (Max)	30M (100ft) at CONSOLE 30M (100ft) at PC ports	
VGA	1600 x 1200, DDC2B	
Computer keyboard mouse connector monitor	PS/2 PS/2, serial (with adapter) HD-DB-15 male	
Console keyboard mouse connector monitor	PS/2 PS/2 HD-DB-15 female	
H x W x D (mm) (in.) size	44x220x130 1.7x8.7x5.1 Compact	44x436x130 1.7x17.2x7.0 1U
Power supply (min)	9V DC, 500mA	

* *You can use the SH-6530 KVM Switches series independently.*
* Cascaded with KVM Switches Switches supporting the same number of PC ports.
You can mix different models in cascade applications.

Troubleshooting:

Ensure that all cables are well seated. Check that keyboard/mouse cables are not swapped. Label and bundle the cables for each computer to avoid confusion when connected to the KVM Switches.

Symptom	*Possible causes*	*Recommended solutions*
No OSD screen	.No power to KVM Switches .Monitor not multi-sync	.Establish power by turning on computers, wait, press left CTRL keys several times. .Press and hold the 7 and 8 push buttons to initiate Auto scan.
Keyboard error on boot	.Loose keyboard connection	.Make sure keyboard cables are Well seated
Master/slave does not work	.Improper installation procedures	.Make sure slave's CONSOLE is connected to *Master's* PC 1~ PC 8 port .Press and hold the **1** and **2** push buttons to initiate K/M reset .Remove any possible power supply to the slave (unplug all cables), before connecting it to the *Master*
Keyboard strokes shifted	.The computer was in shifted state when last switched	.Press both SHIFT keys
The and keys do not work in *Manual Scan*	.All PCs are off or only one PC is turned on. Scan mode works for power-on computers only .*Scan type* is eye mark selected but no PC is eye mark selected in OSD.	.Turn computers on. .Press any other key to abort *Manual Scan* mode. .Set proper *Scan type* in OSD and determine which PCs are eye mark selected, do it in OSD.
Auto Scan does not switch PC and KVM Switches beeps from time to time and red indicator flashes	.All PCs are off or only one PC is turned on. Scan mode works for power-on computers only .*Scan type* is eye mark selected but no power-up PC is eye mark selected in OSD.	.Turn on computers .Set proper *Scan Type* in OSD and determine which PCs are eye mark selected, do it in OSD. .Press left CTRL key twice to abort *Auto Scan* mode. .Press any front button to select a PC, and *Auto Scan* stops.

Double OSD images at cascade configuration	.Improper slave connection procedure.	.Press push buttons 1 and 2 down for 2 seconds to activate K/M RESET. . Remove any possible power supply to the *Slave* (unplug all cables), before connecting it to the *Master.*
OSD menu is not at the proper position	.OSD menu has fixed resolution and its size varies due to computer VGA resolution changes.	.Use <F4>:More\Position to select UL or UR. OSD menu may appear near the middle of the screen when LL or LR is selected.
Computer can not use serial mouse	.Loose mouse adapter .Incorrect mouse adapter	.Secure the mouse adapter to computer's COM port .Use only the mouse adapter comes with the unit
Can not select a computer connected to a slave	.Improper *Master* unit connection .Improper slave unit connection .Too many levels of slaves	.Only *Master* ports PC1~PC8 can be connected to slaves. .Connect slave CONSOLE port to PC1~PC8 ports of the *Master* .Only one level of slave units is allowed. Pop up OSD again to check if *Master* recognizes the slave connection. Look for triangle mark and the number before it.
The KVM Switches fails to function occasionally.	.Computers do not supply enough power.	.Make sure a power adapter with minimum of 12V 2A output rating is firmly connected to the power jack for the SH-6510.

Limited Warranty

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