



SHINING STAR

LCD Monitor Keyboard KVM Drawers

SMA160/161/169

K8/16 Series

User's Guide

KVM

----- **Introduction**

Overview

Thank you for your purchasing our products, and the KVM Switch allows you to access multiple computers from one keyboard, mouse and monitor without extra interface card or software. KVM installation is as easy as connecting cables between KVM Switch and PC. Operation is just pressing push button, keyin Hot-Key command or operating through the function of user-friendly on-screen menu (available for models with OSD only: XXXXD series), and it's simple and easy.

Serial Mouse Conversion (RS-232 Interface)

With the KVM Switch, you can connect computers with PS/2 or serial mouse port and control all PCs with one PS/2 mouse from the KVM console port. Computer side needs a PS/2 to Serial port adaptor if connecting to computer serial port. (This function's not for HDB-15 model.)

High Video Quality

The KVM Switch supports VGA resolution up to 1920 x 1440 (Max, bandwidth 300MHz)* and DDC1/2B compatible.

On-Screen Display (OSD) Menu for 8 /16 Port

For a KVM Switch with built-in OSD menu, you can rename your computers, select to a computer from the menu and configure settings, and view the selected computer, such as: name, time interval setting, security function setting (lock/unlock, channel authorize setting, password), ...etc.

* Depending on the quality of testing monitor and VGA card, VGA cable, both PC and Console port can be distanced up to 20 – 30 meters away.

Features

- ◆ PC port support both PS/2 and serial mouse (specific adaptor)
(Serial mouse for PS/2 model only, not for HDB-15 interface)
- ◆ Support Microsoft IntelliMouse (Pro), Optical, Mouse Man, Wheel Mouse, Scroll Point and Serial Mouse, etc
- ◆ Keyboard states automatically saved and restored when computer channel switching
- ◆ Hot-Key functions available for easy access computers
- ◆ Single Hot-Key for channel left/right shift sequentially. (left/right Alt)
- ◆ Auto-scan can automatically switch computers sequentially (OSD model can set auto-scan conditions)
- ◆ Buzzer sound On/Off selectable
- ◆ Hot-Key Scroll / Caps Lock selectable
- ◆ 3 level cascades: up to 3 levels; control up to 64/256/4096 PCs, from a single console; cascaded units don't need special configuration
- ◆ Operating system independent, transparent to all applications, no any software or hardware adds
- ◆ Hot plug: add or remove PCs or device for maintenance without powering down the KVM Switch
- ◆ Keyboard and mouse can be hot plugged at any time
- ◆ High VGA resolution 1920 x 1440 (Max. bandwidth 300MHz)
- ◆ Keep active capability at PC port: while KVM powers off, the connected PCs still keep alive; while KVM powers on, it can be directly access and control any PCs, and doesn't need to restart them

Hot-Key Function

- ◆ Select and be access computers
- ◆ Sequential channel shift (left-decrease, right-increase)
- ◆ Scan function and time interval setting (Non-OSD model)
- ◆ Buzzer sound On/Off and Hot-Key Scroll / Caps Lock selectable

Extra Function for On-Screen Display Model

- ◆ Assign computers names for much easier to identify
- ◆ Identify and select computers by the names
- ◆ Programmable scan conditions and scan time interval
- ◆ Password security lock/unlock access
(Default Name: admin Password: 123456)
- ◆ Store all setting information to non-volatile memory
- ◆ User friendly OSD interface

Initial Power-Up Process

Before you begin to install, please make sure that the power to all the devices connected up to later have been powered down. You must power up the Master KVM Switch first before turning on any other devices.

- ▶ *For single KVM Switch:*
 - 1) Apply a power adapter to the *Master*, after cables are connected.
 - 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 any powered-down computer and Slave KVM at any time after initial power up process completed.

Hot Plug Capability

Master Console Devices Replacement

You can replace a keyboard or mouse of the *Master* **CONSOLE** port at any time without powering down the Master KVM.

PC Port Hot Plug and Hot Swap

You can plug in or out of PC port or swap PC port at any time without powering down the KVM.

Note: Some PC don't support PnP configuration and it will need to reboot after hot swap.

In case, some devices need to reboot software driver initially, and you may press the **Reset** button in the KVM front panel to re-start the KVM process.

OSD (On-Screen-Display) Operation

● OSD Main Menu for Administrator

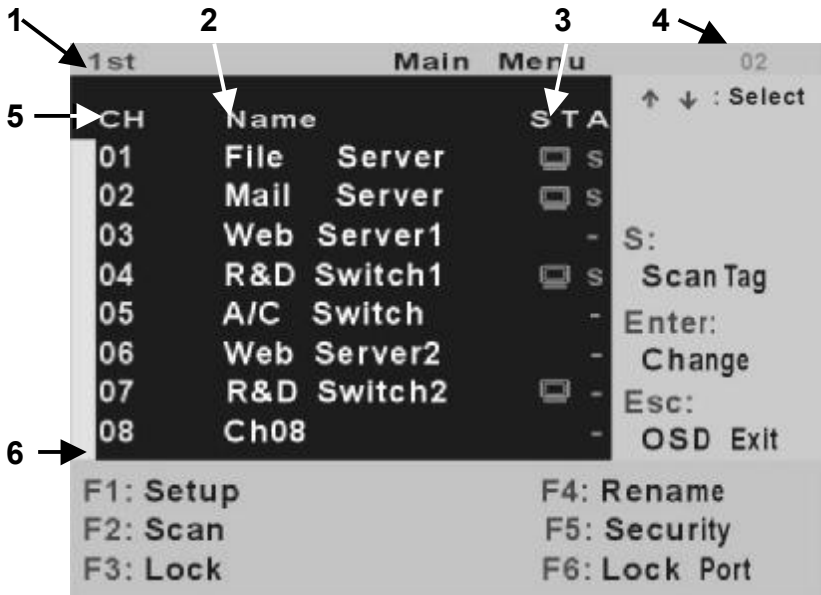


Figure 1: Administrator OSD

A. OSD Main Menu

- KVM layer number:** 1st, 2nd, 3rd
- PC name (defined by user):** 31 characters (Max.)
- PC Status: (Status: STA, See above figure 9)**
 - ☐ Buzzer sound on
 - ✕ Buzzer sound off
 - L Locked port indication, and normal is blank
 - ☐ Indicating the computer is powered on
 - s Indicating the channel scan function is on
- Current channel number**
- Cascade channel number:** only display cascade 2nd, 3rd layer connected channel number; if it's in 1st layer, it will show blank.
- Page down-up indicator:** (to next page) while connecting 16 port OSD KVM, it will show up & down arrows alternatively to select previous/next page's port number. (Only for 16-port KVM only.)

B. Function Control Menu

F1: Set up: basic set up menu

F2: Scan: autoscan function

F3: Lock: setup lock/unlock, and available when **F5** Security is set 'ON'

F4: Rename: rename selected port name.

F5: Security: security function and user priority setting

F6: Lock Port: PC port lock function (administrator only)

● OSD Main Menu for Other User (1, 2, 3)



Figure 2: User OSD

By pressing <Scroll Lock> twice and <Enter>, you will see an OSD 'Main Menu' popped out in the screen with channel number, names and other status and other function keys, please see figure 9 above. The channel of the currently selected computer is displayed in the top right corner and a highlighted pink bar shown in the selected channel row. The sign ☐ is displayed if computer has power on and ready for being selected (its corresponding front panel indicator is green). If it doesn't appear ☐ sign, it means no computer connected or no powered up. OSD menu will update the sign ☐ when computer is activated. Use the <UP> and <DOWN> arrow keys to highlight a computer and the <ENTER> to select it and leave OSD menu. Or, you can press <ESC> to exit OSD menu.

A plus mark (+) showing in the left of a name indicates that the port has cascades. The number at the up-left corner (below KVM layer number) shows the number of port for the upper layer, i.e. 8 means link from upper KVM 8. If in master layer it will show blank. <ENTER> brings you one level down and the screen pops up listing the names of the computers on the *Slave KVM*. The name of the *Slave* will be shown at the OSD menu. It is useful to group computers and still be able to see the group name. Press <R> will return to upper layer OSD menu. Press <ESC> to exit OSD and to return to the selected computer; the computer name is also shown on the screen with a left-up banner.

● F1: Setup Mode



Figure 3: OSD Setup

All changes are enabled by left/right arrow key (← →) to select it.

- Scan Mode: Select – Scan selected channels in ‘STA’ column with ‘s’ on OSD main menu.
PC ON – Scan all powered-on PC channels only.
- Scan Time: 5sec(Default) to 90sec., 5sec. a select step
- Banner Display Time: 5sec. (Default), 10sec., 15sec, and always on (∞).

- Display Position: Menu – use four arrow keys to move the OSD main menu to the desired position.

Banner – use four arrow keys to move the channel banner to the desired position.

- Hot-Key: Scroll Lock – Scroll Lock becomes the Hot-Key.

Caps Lock – Caps Lock becomes the Hot-Key.

Ctrl – Ctrl is a defaulted Hot-Key.

Note: Scroll and Caps Lock are alternative. While Scroll Lock is enabled, if you want to alter the Hot-Key to Caps Lock, you just press 'Scroll Lock' twice, K, and <enter>, and vice versa.

- Sound: ON – Buzzer sound enabled. (Turn on)

OFF – Buzzer sound disabled. (Turn off)

- Language: English (En) / Deutsch (De) / Francais (Fr), 3 languages.

● Position Adjustment

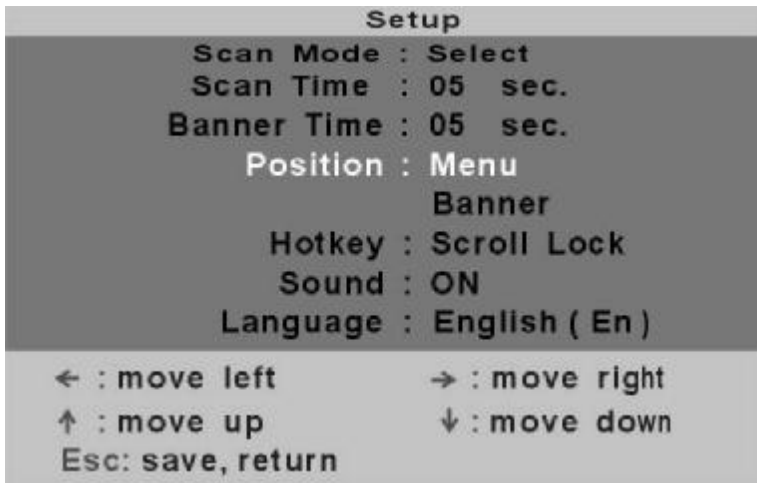


Figure 4: Select Items to Setup

Into the banner Display Position, the display will become:

↑↓↔ : to move Esc : save, return

- **Channel Banner (Single Layer)** (Max. 22 characters)

01 Channel 1

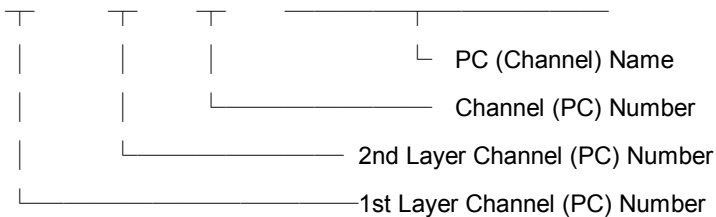


- PC powers on or change channel by OSD/Hot-Key, this banner will display 5 sec, and disappear.

User can change display time in the Setup Mode (F1).

- **Channel Banner (Multi-Layer)** (Max. 22 characters)

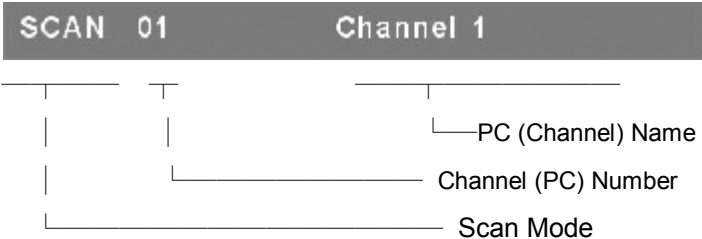
01 - 03 - 02 Channel 1



- PC powers on or changes channel by OSD/Hot-Key, this banner will display 5sec., and disappear.

User can change display time in the Setup Mode (F1).

● **Channel Banner (Scan Mode)**



- Stop scan: press any key.
- Banner will disappear when the scan stops.

● **F4: Rename** (New Name: 31 characters Max)

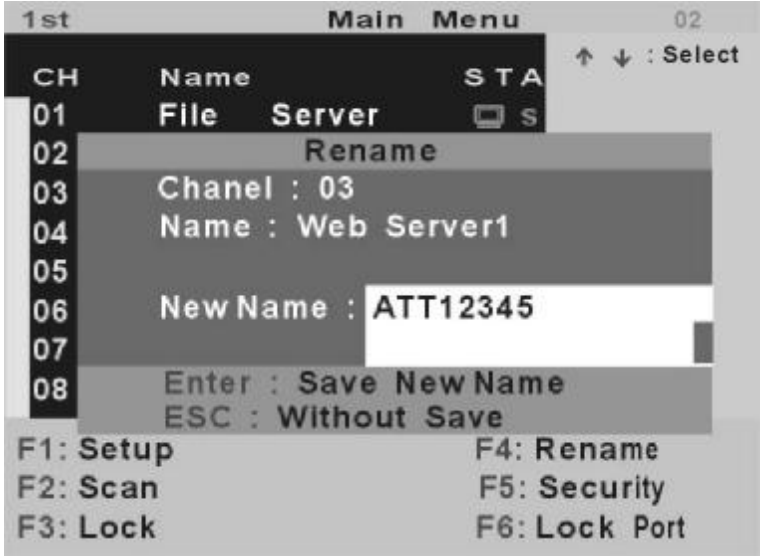


Figure 5: F4 Function Setup

- **F5: Security Mode**

```
Admin.      Password :
```

Entry Password:
(Default User Name: admin, Password: 123456)
 After entering correct password, Security function is enabled.

```

Security
Security Mode : OFF
Admin / Password : ++++++
                1     2     3
User Name : ABC DEF GHI
Ch  Name
01  File Security        
02  Mail Server          
03  Web Server1          
04  R&D Switch1          
↑ ↓ : select
← → : change setting
Esc : save, return

```

Figure 6: Security Function Setup (1)

After the Security mode is 'ON' status, and F3 Lock Mode will be enabled automatically (it will display on the Main Menu). Also the Hot-Key Lock function (H) will be available.

After security mode is on, you can actively lock Hot-Key function (F3 or <H> Hot-Key), until keyin a password, the console will be locked as log-out status. (Hot-Key twice, <H>, and <Enter>)

Only administrator can keyin password to unlock the console, but according to the limit of authority setting, different user will have different access computers.

- **Change Administrator Password:**

```

Security
Security Mode : OFF
Admin / Password : ++++++
new password : ++++++
confirm password : +++
Ch  Name
01  File  Server        
02  Mail  Server        
03  Web   Server1       
▼04  R&D   Switch1       
↑ ↓ : select
← → : change setting
Esc: save, return

```

Figure 7: Security Function Setup (2)

- **Change User Name and Password:**

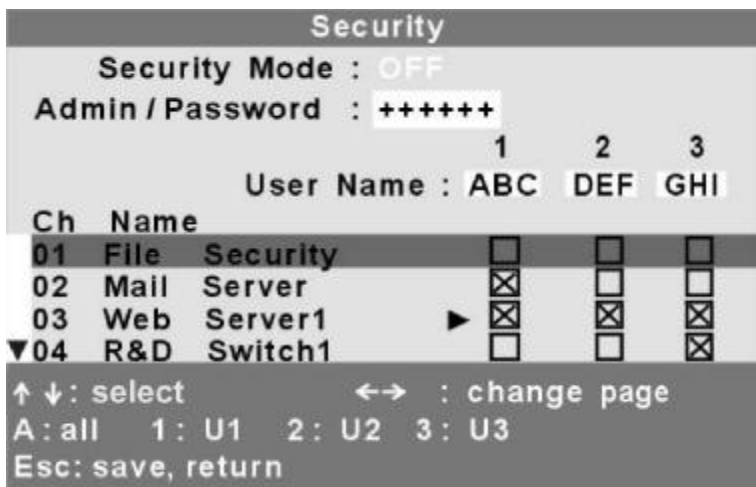
```

Security
Security Mode : OFF
Admin / Password : ++++++
User Name : 1 2 3
           Per DEF GHI
User Name :
Perre - Helene Lewi
Password :
Confirm :
▼04  R&D  Switch1        
↑ ↓ : select
← → : change setting
Esc: save, return

```

Figure 8: Security Function Setup (3)

● User PC Channel Authorization Setting



● F6 Lock Port

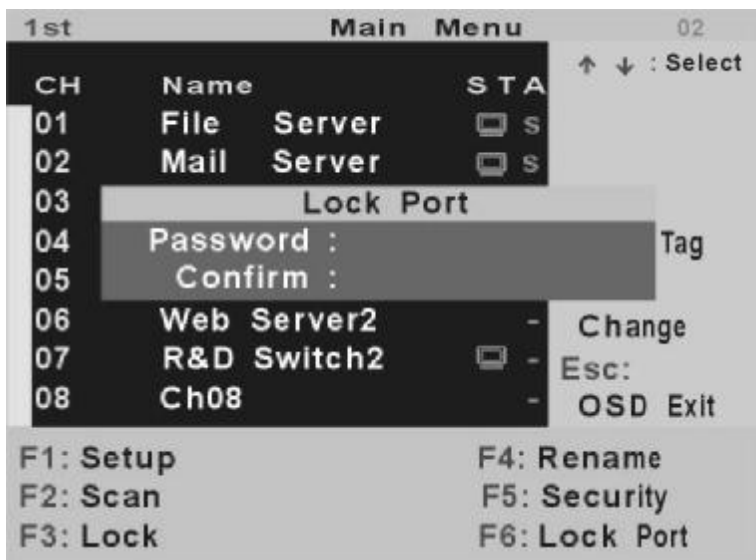


Figure 9-10: Security Function Setup (4-5)

After PC port locked, "L" mark will show in its **STA** column until unlock status.
(Select F6 and keyin password again, and the PC port unlocks.)

- **F3 Console Lock Mode Banner:**



A screenshot of a dark grey banner with three white text elements: "Security", "Mode", and "Protected" spaced out horizontally.

Into the Security lock mode, this banner will display until Unlock status. The console device and KVM button will lock (no any function could be enabled while back to unlock status); the keyboard will just accept the correct password only. (Press any key into the unlock window.)

- **Unlock Window:**



A screenshot of a dark grey window with two lines of white text: "Name : JERRY" and "Password : " followed by a small grey square representing a password input field.

After keyin a correct User Name and Password, the system will unlock (leave the Security mode), screen will be into the normal and all devices are available to operate (according to the authorization setting).

Note: If you forget the password, the only way to permanently disable the security function is to keyin a universal password to unlock KVM. You need to keyin this unlock password to release your device and KVM, and then you can restart everything.

Universal password will let your KVM go back to defaulted account and password, ask the Universal account and password to your agency/distributor.

● Function Control (Hot-Key Commands)

■ Call OSD Menu (OSD Model Only)

Press <Scroll Lock> twice and <ENTER>, and then the OSD 'Main Menu' will be on the screen.

★Hot-Key can be changed to become <Caps Lock>

■ Channel Select

- ◆ OSD: Use Up/Down arrow and <ENTER> to select the channel directly.
- Hot-Key: Press <Scroll Lock> twice, and then Keyin a channel number (1 to 16) and press <ENTER>.
- **Left<Alt> or right <Alt> twice** the PC channel will automatically shift left/right one channel (channel decrease / increase to next), while <Alt> enables.
- **<Alt>** shift function default was off, and press Hot-Key twice, <Alt>, and <Enter>. You can be on/off this function alternately. If buzzer was on, it will generate a beep for correct operating.

Note: this command is a loop, ex: while the model number is selected to 8, you press right <Alt> twice, it will be shifted to 1 in an 8 port KVM switch.

■ Auto Scan

- ◆ OSD: Call OSD 'Main Menu', and then press <F2>.
- Hot-Key: Press <Scroll Lock> twice, <S> and <Enter>.

■ Console Lock (OSD Model Only)

- ◆ OSD: Call OSD 'Main Menu', and then press <F3>.
(<F5>: Security mode must be turn on first.)
- Hot-Key: Press <Scroll Lock> twice, <H> and <Enter>.

■ **Console Unlock (OSD Model Only)**

- ◆ OSD: Display the message only.
- Hot-Key: Press any key into the Unlock window, and then enter the correct User Name and Password. KVM and console device will unlock and be back to normal operation.

■ **Setup Mode (OSD Model Only)**

- ◆ OSD: Call OSD '**Main Menu**', and then press <F1>.
- Hot-Key: No Hot-Key operating.

■ **Daisy Chain Layer Change (Channel Select)**

OSD: Call OSD '**Main Menu**', select channel and then press <Enter> layer by layer.

Hot-Key: Press <Scroll Lock> twice, <D>, number (1,2,3.... 16), and <ENTER>.

Note: with cascading 3 layers, you can select last layer directly: ex: press Hot-Key twice, D2D5D7, and <Enter>: layer 1 channel 2 links to layer 2 channel 5, and then selects layer 3 channel 7.

■ **Buzzer sound ON / OFF**

- Hot-Key: Press <Scroll Lock> twice, , and <Enter>, and buzzer sound will be ON /OFF alternately.

■ **Hot-Key Select**

OSD: Call OSD '**Main Menu**', press [F1], and then select Hot-Key change.

- Hot-Key: Press correct Hot-Key twice, <K>, and <Enter>.
The Hot-Key will change to another one. (<Scroll Lock> or <Caps Lock>)

----- Appendices

Specifications:

Specifications		8Port	16Port
Computer port number		8	16
Cascade control PC number		<i>Up to 512</i>	<i>Up to 4096</i>
On-screen display (OSD)		8Port	16Port
Front panel button control		8	16
Hot plug-and-play		Yes	
Hot-key control		Yes	
Rack-mount kit		<i>Built-in</i>	
Automatic scan interval	OSD	<i>5 ~ 90 sec., 5 sec. step</i>	
	Non OSD	<i>5 ~ 250 sec., 1 sec. step</i>	
Programmable scan pattern		OSD Model Only	
Year 2000 Compliant		Yes	
Cable length (Max)		<i>20M (60 ft) at CONSOLE 20M (60 ft) at PC</i>	
VGA		<i>Max1920 x 1440(300MHZ) , DDC1/DDC2B</i>	
Model PS/2	Computer keyboard mouse monitor	<i>PS/2 PS/2 , serial (with adapter) HD-DB-15 male</i>	
Model HDB15	Computer keyboard mouse monitor	<i>HDB15</i>	
Console keyboard mouse monitor		<i>PS/2 PS/2 HD-DB-15 female</i>	
H x W x D (mm) (in) size		<i>44x440x132 1.7x17.3x5.2 1U 8 Port</i>	<i>44x440x132 1.7x17.3x5.2 1U 16 Port</i>
Power supply		<i>(9V DC , 500mA)</i>	

- *You can mix different models in cascade application.*

Troubleshooting:

Make sure 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 connecting the KVM Switch.

Symptom	Possible causes	Recommended solutions
No Monitor Screen	<ul style="list-style-type: none"> ● No power to KVM ● Loose connection ● Monitor not multi-sync 	<ul style="list-style-type: none"> ● Plug the power adaptor. ● Reconnect monitor cable ● Use multi-sync monitor
Keyboard error on booting	<ul style="list-style-type: none"> ● Loose connection ● Keyboard failure 	<ul style="list-style-type: none"> ● Make sure keyboard cables are well seated ● Change keyboard
PC port serial Mouse doesn't work	<ul style="list-style-type: none"> ● Incorrect serial mouse adaptor ● Loose connection 	<ul style="list-style-type: none"> ● Make sure use specific serial mouse adaptor ● Reconnect cable/adaptor
Multi-function Mouse doesn't work normally	<ul style="list-style-type: none"> ● Mouse do not set in PS/2 standard 	<ul style="list-style-type: none"> ● Make sure the mouse is set in the PS/2 standard
Keyboard strokes shifted	<ul style="list-style-type: none"> ● The computer was in as shifted state when last switching 	<ul style="list-style-type: none"> ● Press either of SHIFT keys down a couple of times
Master/Slave doesn't work	<ul style="list-style-type: none"> ● Incorrect configuration or improper installation procedures. 	<ul style="list-style-type: none"> ● Make sure the console of the slave's connected to <i>Master's</i> PC port. Remove any possible power supplies to the slave (unplug all cables), before connecting it to the <i>Master</i>.
<i>KVM AutoScan</i> doesn't switch PC	<ul style="list-style-type: none"> ● All PCs are off or only one PC is powered on, Scan mode sets for PC-ON only ● <i>Scan type</i> is S mark Selected but no power-up PC is S mark selected in OSD. (screen blank) 	<ul style="list-style-type: none"> ● Turn on computers, and set Selected <i>Scan Type</i> in OSD and determine which PCs is s mark selected, do it in OSD. Press any key to abort <i>Auto Scan</i> mode, and then Press <Scroll Lock> twice, <S>, and <Enter> to restart the <i>Auto Scan</i>.
Double-OSD images at cascade configuration	<ul style="list-style-type: none"> ● Improper slave connection procedure. ● Loose connection 	<ul style="list-style-type: none"> ● Remove any possible power supplies to the <i>Slave</i> (unplug all cables), before connecting it to the <i>Master</i> Make sure cable is connected well, slave console link to master PC port.
OSD menu is not at the proper position	<ul style="list-style-type: none"> ● OSD menu has fixed resolution and its size varies due to the changes of computer VGA resolution. 	<ul style="list-style-type: none"> ● Use <F1>: Setup/Position to move OSD menu and banner to proper position.

Unable to select a computer connected to a slave	<ul style="list-style-type: none"> ● Improper <i>Master</i> unit connection ● Improper slave unit connection ● Too many levels of slaves 	<ul style="list-style-type: none"> ● Only <i>Master</i> PC port can be connected to slaves. ● Connect slave CONSOLE port to PC ports of the <i>Master</i> ● Only 2 level of slave units is allowed. Pop up OSD again to check if <i>Master</i> recognizes the slave connection. Look for plus (+) mark and the number in OSD menu.
The KVM Switch fails to function occasionally.	<ul style="list-style-type: none"> ● Computers do not supply enough power. 	<ul style="list-style-type: none"> ● Make sure a power adapter with minimum of 9V 500mA output rating is firmly connected to the power jack.

Limited Warranty

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