

TABLE OF CONTENTS

INTRODUCTION.....	1
FEATURES.....	1
PACKAGE CONTENTS.....	2
TECHNICAL SPECIFICATIONS.....	5
SYSTEM REQUIREMENT.....	6
CABLE DIAGRAMS.....	7
PRODUCT DETAILS.....	8
HARDWARE INSTALLATION.....	9
USAGE.....	11
DAISY CHAIN CONNECTION DIAGRAM.....	13
HOT PLUG.....	14
ON SCREEN DISPLAY OPERATION.....	15
TROUBLESHOOTING.....	18
ACCESSORIES.....	19
CERTIFICATES.....	19

Introduction

Thank you for purchasing **SMK** KVM switch. **SMK** KVM switch can save your MONEY, TIME, SPACE, EQUIPMENT and POWER.

Controlling multiple PCs from One Keyboard, Mouse and VGA Monitor. **SMK** KVM switch is loaded with features such as 19" Rack Mount Size, Daisy Chain up to eight units, On Screen Display Menu, Password security, Searching PC server name, Hot key Control, Front Panel Push Button and Auto Scan Control. It has complete keyboard and mouse emulation for simultaneous PCs boot-up process.

Features

- 1/8/16 port KVM switch is 19" rack mount size design.
- Support Microsoft Intellimouse, Microsoft Intellimouse Explorer, Logitech Net Mouse or the other fully compatible MS mouse.
- Provide Console PS/2 to PC serial mouse conversion
- Support DOS, Win3.X, Win95/98/98SE/2000/ME/XP, WinNT, Netware, SCO Unix, HP Unix, Linux
- Hot Plug - Add PCs or Remove Connected PCs for Maintenance without Powering Down the KVM switch or PCs.
- Very High Video Quality - Up To 1280X1024, Bandwidth: 200MHz
- No Software Required - easy PC selection via On Screen Display Manual, Push Buttons, Hot Keys
- Support eight characters password protection and search PC server name
- Auto Scan Mode for monitoring PCs and flexible Scan time from 5~99 seconds
- Keyboard status restored when switching PCs
- LED Display for easy status monitoring
- Buzzer sound for switching port confirmation.
- Using Standard Keyboard, VGA, Mouse cable.
- Built-in one extra daisy chain port and no waste any PC port
- No DIP switch setting needed and auto detect daisy chain bank

Package Contents

Model No.: SMK520

SMK 1 port KVM Switch	1 PCS
User's manual	1 PCS
AC to DC Power Adapter	1 PCS
Rack Mount Kit	1 SET
VGA KB MS Cable	1 SET

Model No.: SMK580

SMK 8 port KVM Switch	1 PCS
User's manual	1 PCS
AC to DC Power Adapter	1 PCS
Rack Mount Kit	1 SET
VGA KB MS Cable	8 SET

Model No.: SMK590

SMK 16 port KVM Switch	1 PCS
User's manual	1 PCS
AC to DC Power Adapter	1 PCS
Rack Mount Kit	1 SET
VGA KB MS Cable	16 SET

Technical Specifications

Model No.	SMK520	SMK580	SMK590
PC Port	1	8	16
Console Port	1	1	1
PC Port Connector (All Female Type)	PS/2 Keyboard mini Din 6 pin PS/2 Mouse Mini Din 6 pin VGA HDDB 15pin		
Console Port Connector (All Female Type)	PS/2 Keyboard mini Din 6 pin PS/2 Mouse Mini Din 6 pin VGA HDDB 15pin		
Daisy Chain Port Connector (All Female Type)	PS/2 Keyboard mini Din 6 pin PS/2 Mouse Mini Din 6 pin VGA HDDB 15pin		
PC selection	On Screen Display Menu, Hot Key, Push Button		
7 segment LED	One Bank LED, Two PC Port LED		
On Screen Display Control	Yes		
Scan Intervals	5~99 Sec.		
Keyboard Emulation	PS2		
Mouse Emulation	PS2		
Mouse Conversion (Only Console port to PC port)	Console PS/2 to each PC port serial mouse		
VGA Resolution	15", 1024*768, 17", 1280*1024,		
Bandwidth	200MHz		
Daisy Chain MAX Level	8 levels		
MAX PC Connection	116	120	128
Housing	Metal		
Power supply	AC 110V / 220V auto switch		
Operation Temperature	0~40		
Storage Temperature	-20 ~ 60		
Humidity	0~90%, Non-Condensing		
Size	19" Rack Mount / 1U	19" Rack Mount / 1U	19" Rack Mount/ 1U
Weight (kg)	15 kg	16 kg	17 kg
Dimension (cm)	442 X 44.5 X 550mm	442 X 44 X 625mm	442 X 44 X 625mm

Package Contents

Model No.: SMK520-19

SMK 1 port KVM Switch	1 PCS
User's manual	1 PCS
AC to DC Power Adapter	1 PCS
Rack Mount Kit	1 SET
VGA KB MS Cable	1 SET

Model No.: SMK580-19

SMK 8 port KVM Switch	1 PCS
User's manual	1 PCS
AC to DC Power Adapter	1 PCS
Rack Mount Kit	1 SET
VGA KB MS Cable	8 SET

Model No.: SMK590-19

SMK 16 port KVM Switch	1 PCS
User's manual	1 PCS
AC to DC Power Adapter	1 PCS
Rack Mount Kit	1 SET
VGA KB MS Cable	16 SET

Technical Specifications

Model No.	SMK520-19	SMK580-19	SMK590-19
PC Port	1	8	16
Console Port	1	1	1
PC Port Connector (All Female Type)	PS/2 Keyboard mini Din 6 pin PS/2 Mouse Mini Din 6 pin VGA HDDB 15pin		
Console Port Connector (All Female Type)	PS/2 Keyboard mini Din 6 pin PS/2 Mouse Mini Din 6 pin VGA HDDB 15pin		
Daisy Chain Port Connector (All Female Type)	PS/2 Keyboard mini Din 6 pin PS/2 Mouse Mini Din 6 pin VGA HDDB 15pin		
PC selection	On Screen Display Menu, Hot Key, Push Button		
7 segment LED	One Bank LED, Two PC Port LED		
On Screen Display Control	Yes		
Scan Intervals	5~99 Sec.		
Keyboard Emulation	PS2		
Mouse Emulation	PS2		
Mouse Conversion (Only Console port to PC port)	Console PS/2 to each PC port serial mouse		
VGA Resolution	1280*1024,		
Bandwidth	300MHz		
Daisy Chain MAX Level	8 levels		
MAX PC Connection	116	120	128
Housing	Metal		
Power adaptor	DC 12 V 55W		
Operation Temperature	0~40		
Storage Temperature	-20 ~ 60		
Humidity	0~90%, Non-Condensing		
Size	19" Rack Mount / 1U	19" Rack Mount / 1U	19" Rack Mount/ 1U
Weight (kg)	17 kg	18 kg	19 kg
Dimension (cm)	442 X 44.5 X 650mm		

System Requirements

Specifications:

Model No.	SMK520
Console side	One VGA Monitor One PS/2 Keyboard One PS/2 Mouse
Computer side	1 HDB 15 pin male to male VGA cables 1 PS/2 cables male to male for Keyboard 1 PS/2 cables male to male for Mouse

Model No.	SMK580
Console side	One VGA Monitor One PS/2 Keyboard One PS/2 Mouse
Computer side	8 HDB 15 pin male to male VGA cables 8 PS/2 cables male to male for Keyboard 8 PS/2 cables male to male for Mouse

Model No.	SMK590
Console side	One VGA Monitor One PS/2 Keyboard One PS/2 Mouse
Computer side	16 HDB 15 pin male to male VGA cables 16 PS/2 cables male to male for Keyboard 16 PS/2 cables male to male for Mouse

Cable Diagrams

PC Port Special Cable:

HDB15 pin male to one HDDB 15 pin male and Mini Din 6 pin special cables



AT to PS/2 keyboard adapter: (Optional)

Din 5 pin Male to Mini Din 6 pin Female



Daisy Chain Cable:

PS/2 Cable:

Mini Din 6 pin Male to Male



VGA Cable:

HDB15 pin Male to Male



Product Details

Front Panel & Rear Panel of SMK520:



Front Panel & Rear Panel of SMK580:



Front Panel & Rear Panel of SMK590:



Hardware Installation

Before installation, please make sure all of peripherals and computers have been turned off. This example of installation is based on **SMK580** and you also can think that **SMK520** and **SMK590** have the same installation procedures

Step 1

Find a convenient place to put your KVM Switch. Its 19" rack mount form factor makes it ideal mountable on 19" rack. When mounting to a rack, attach the included brackets to the sides of the KVM Switch. Take note of the length of your cables so that your computers, KVM Switch, keyboard, mouse and monitor are distanced properly.

Step 2

Now the PC connections will be made with the monitor (VGA) connections first. Connect a VGA cable (15-pin HDDB Male / Male) with the Male side to both of the PC and the rear panel of the KVM switch to the connector labeled VGA. Repeat this for all PCs.



Step 3

Connect the first computer's mouse cable to the KVM Switch. If using a PS/2 cable, connect one end to the PS/2 mouse port on the computer, and the other end to the PC1 PS/2 mouse port on the back of KVM Switch. If using a serial mouse cable (optional), connect one end to a DB-9 serial port on the computer, and the other end to the PC1 DB-9 serial mouse port on the back of the KVM Switch. If you need Serial DB-9 to PS2 Mini Din 6 pin adapter, please contact your supplier.



Step 4

Connect the first computer's keyboard cable to the KVM Switch. Using another PS/2 cable connect one end to PS/2 keyboard port on the computer, and the other end to the PC1 keyboard port on the back of KVM unit. If your computer has an AT type keyboard port, you will need a PS/2 to AT keyboard adapter.

The rear side of PC

**Step 5**

Double-check all of the connections. You can check the color of keyboard and mouse connector to make sure the keyboard and mouse cables go to the correct ports.

Step 6

Repeat step 5 to 7 for the remainder of the computers.

Step 7

Attach the power supply to the KVM unit and plug the other end into an electrical receptacle. Now you will see the LED for Port 1 light up, and you will hear a beep.

Step 7

Turn on all the computers and then boot them one by one. Switch on your monitor make sure every monitors can be display and then set the computer's Monitor power always on. In order to keep the connection form KVM to the Computers.

NOTE:

Please be remind to plug in power adapter. Although the PCs connected to KVM Switch are able to support enough power to the stand alone switch, KVM Switch still needs a power adapter for daisy chain more banks. If you forget to plug in power adapter on the status of daisy chain, it may cause the unexpected status occurred.

Usage

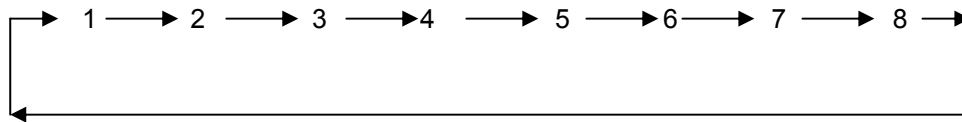
The power on state of 8/16 port KVM switch:

When you power on KVM switch, it will ask you the password, **the default password value is eight zero –“ 00000000 ”**. Please key in eight zero and enter the same value at retype field.

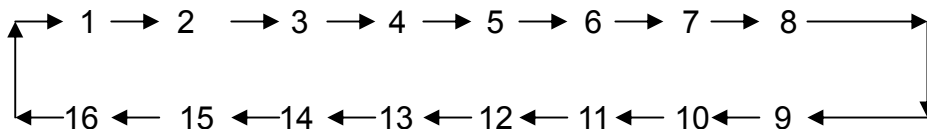
Note: Before you are not familiar with the operation of OSD menu, please don't change the password – i.e. keep default eight zero (00000000) value. Otherwise, if you have set the password and unfortunately forget the password, you need send it back to your distributor for maintaining the password.

When you select one of four 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 four PCs ports and this PC is powered on, the selected port LED is lit.

SMK580 (8 Port)



SMK590 (16 Port)



7-Segment LED Indication :

You can press the button in order like mentioned-above diagram.

When you select one of sixteen PC ports and this PC is powered on, the selected port LED is lit. When you select one of sixteen PC ports and this PC is shut down or disconnected a PC, the selected port LED will flash.

Reset Button ((Bank Select) and (Port Select)):

To press both “select” button and “bank” button of master bank simultaneously can reset KVM switch. This reset action will not only return KVM switch back to initial state --- Check the password, but also re-check all of slave banks which connected to mast KVM Switch.

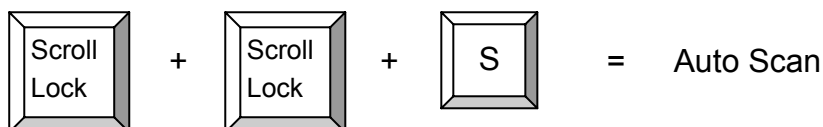
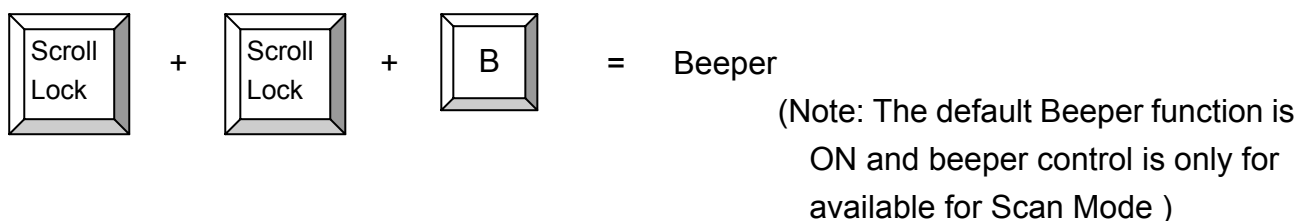
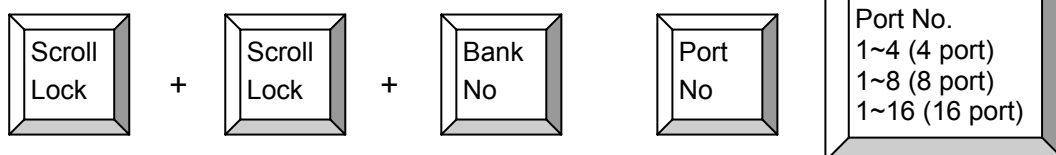
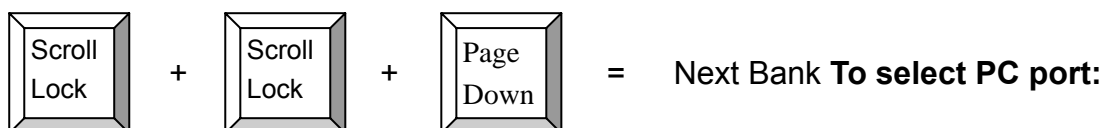
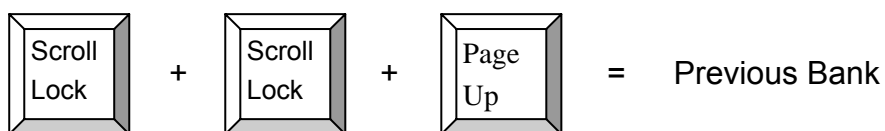
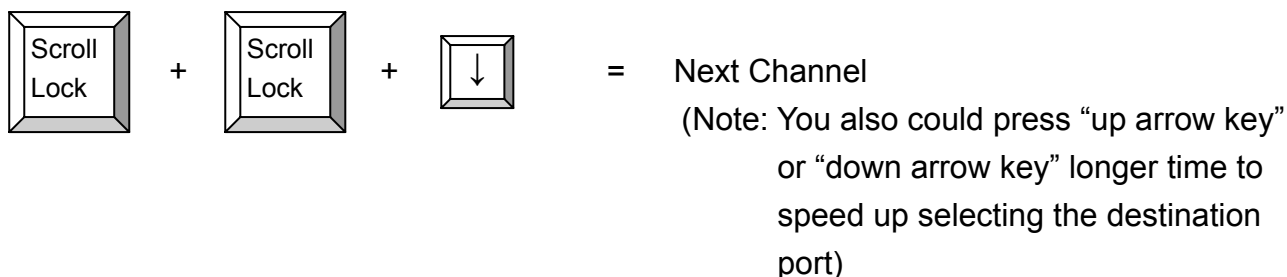
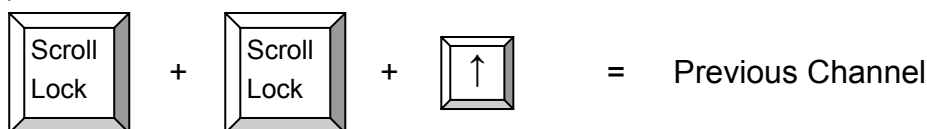
If you add a new KVM Switch as a slave bank, please use reset button of master KVM Switch to automatically assign a new ID to it. You can view this new slave bank go through OSD menu. The PC ports of KVM Switch does not be reset by reset command.

Keyboard Hot Key Commands:

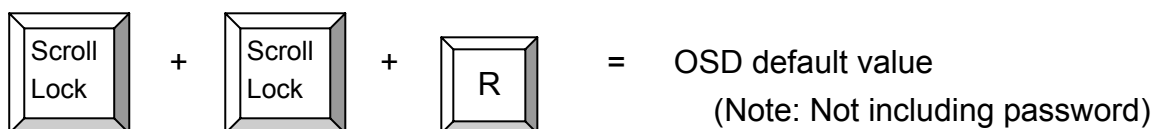
You can also conveniently command **SMK** KVM switch by switching ports through simple key sequences. To send commands to **SMK** KVM switch, **the “SCROLL LOCK” key must be pressed twice within 2 seconds**. You will hear a beep for confirmation and the keyboard is in hot key mode. If you have not pressed 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.

Below are the different hot key commands:

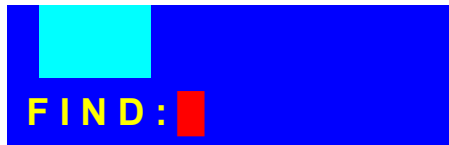
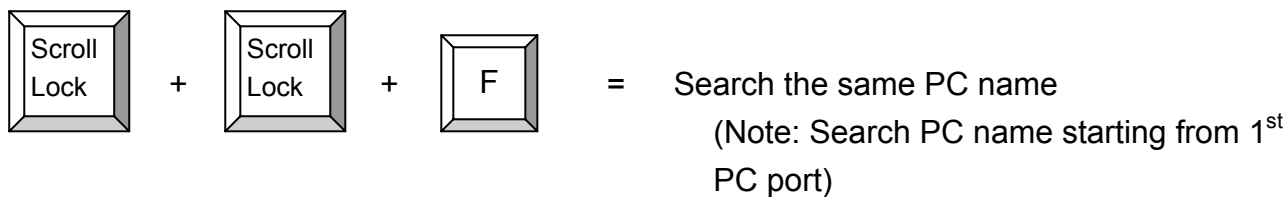
→ **within 2 seconds**



To get out of Auto Scan Mode, Press any key or SPACE bar.



ROM REFLASH



Example :

- A. To access a computer attached to Port 6 of the fifth Bank. You can press through hot key as below:

Scroll lock + Scroll lock + "5" + "0" " 6"

- B. To access a computer attached from Bank 3 to Bank 4, You can press through hot key as below:

Scroll lock + Scroll lock + Page Down

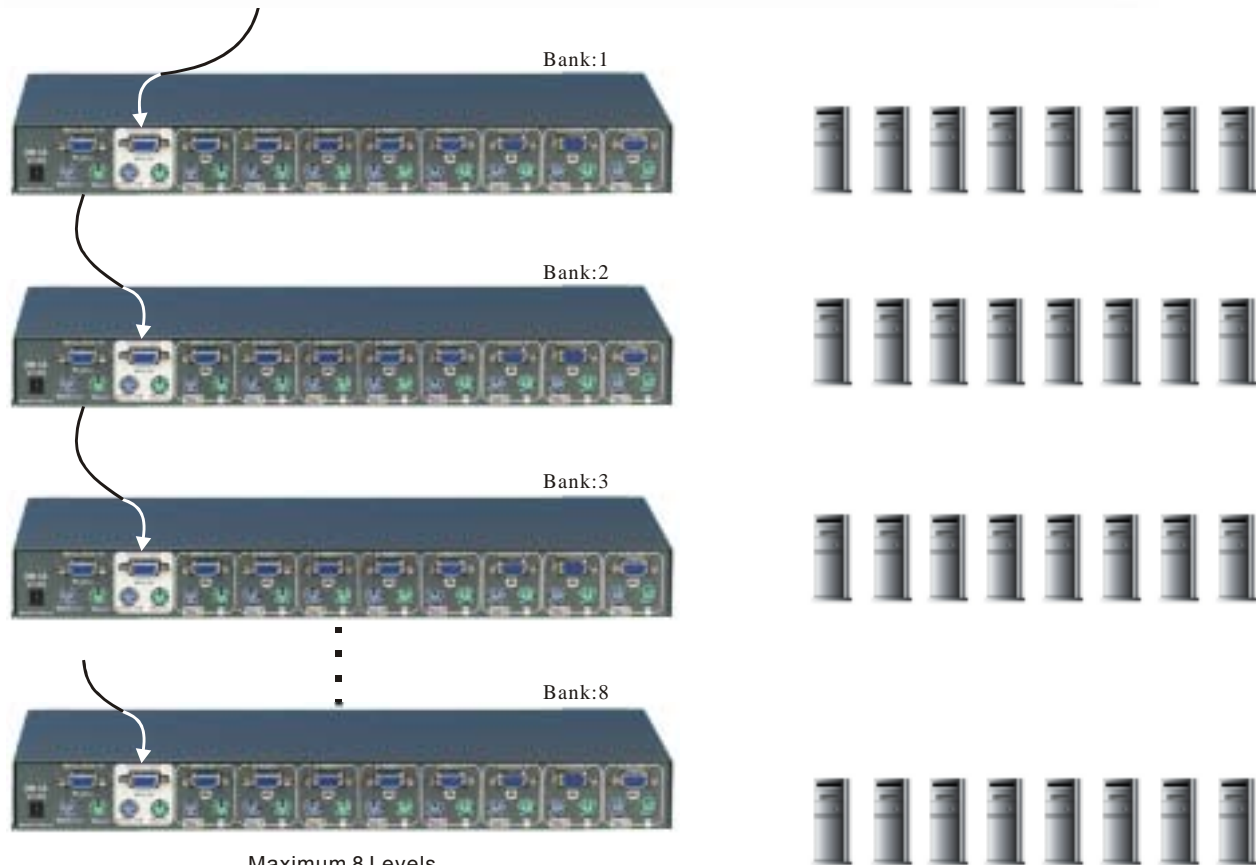
Note:

Bank no. and Port no. selection must be made using the numeric keys on the keyboard. Numeric keys on the keypad are not available as a hot key command.

Daisy Chain Connection Diagram

Please use the attached 3 feet 3-in-one daisy chain Cable Kit to daisy chain the KVM Switch.

- Connect Keyboard, Mouse and Monitor to the console port (white color block) of bank 1 KVM switch.
- Use one end of 3-in-one Cable Kit to connect the daisy chain port of bank 1 and the other end for the console port (white color block) of bank 2 KVM switch.
- Please repeat item B to daisy chain more bank as you want. But, the maximum daisy chain bank is eight levels.
- Before chaining the slave bank up to six banks, you need a VGA extender (Model No. VGA-100, Max. 100 feet) between the fifth bank and the sixth bank to enhance the VGA signal.



Hot Plug

The KVM Switch supports “Hot Plug” function for easy addition or removal of PCs. The user can arrange or maintain PCs as follows:

- A PC can be disconnected and reconnected to the same or different port of the KVM unit without having to power it off as long as it is not the Daisy-chain port or pass through port.
- The pass through port PC (i.e. The pass through port means the console port is connected to PC directly) is powered on. Before you go hot plug function, please switch to this pass through port to next port and then switch back to the pass through port.
- You may unplug the mouse or the keyboard from the console port and plug it back in at any time.

NOTE:

Some O.S. (Operation Systems) like SCO Unix are unable to support “ Hot Plug ” function. If you apply “Hot Plug” to this kind of O.S., it will cause unpredictable behavior or shut down the PC. Before attempting to use “ Hot Plug ” , please make sure your O.S. and software driver supports the “Hot Plug” function.


On Screen Display Operation

When you pop up the OSD menu window go through the hot key, you will see the following small window on your monitor.

BANK : 1			
01	SYSTEM	01	02 ☀SYSTEM 02 🖱
03 ☀SYSTEM	03	04 ☀SYSTEM	04
05 ☀SYSTEM	05	06 SYSTEM	06
07 SYSTEM	07	08 ☀SYSTEM	08
09 SYSTEM	09	10 SYSTEM	10
11 ☀SYSTEM	11	12 ☀SYSTEM	12
13 SYSTEM	13	14 ☀SYSTEM	14
15 ☀SYSTEM	15	16 SYSTEM	16
OSD : 10 SEC.		CHANGE PASSWORD	
SCAN: 10 SEC.		CONSOLE ON/OFF	
ESC : QUIT		ENTER :COMPLETE	
TAB : NEXT		INSERT :EDIT	
⬆/⬇: SELECT PORT			
PgDn/PgUp: BANK SELECT			


PC port you want immediately

a. The 1ST line bar is Bank no.

b. The 2nd block is your PC system name list. You will find the system number list from 01 to 04 (if the current box is 4 port) or from 01 to 8 (if the current box no. is 8 port) or from 01 to 16 (if the current box no. is 16 port). You can define your PC name in maximum 8 characters. The factory default of 16 port KVM switch PC name is from "SYSTEM 01", "SYSTEM 02" ,..., "SYSTEM 16" and 8 port KVM switch is from "SYSTEM 01", "SYSTEM 02",..., "SYSTEM 08". Besides, the sun symbol "  " near to the PC name represents the PC system is powered on.

ect port for destination PC name.
ess the ENTER Key to switch the

To use " PgUp " key or " PgDn " key for selecting previous or next Bank no. (or Box No.)

BANK : 1			
01	SYSTEM	01	02  SYSTEM 02

To press " INS " key for editing PC name.

After finishing the edit, please press " Enter " key for saving information.

To use " Tab " key to select items like Bank, OSD, SCAN, CHANGE PASSWORD, CONSOLE ON/OFF, etc...

15	☀	SYSTEM	15	16	SYSTEM	16
OSD : 10 SEC. 🖱			CHANGE PASSWORD			
SCAN: 10 SEC.			CONSOLE ON/OFF			
ESC : QUIT			ENTER : COMPLETE			
TAB : NEXT			INSERT : EDIT			

- a. The “ OSD: 10 SEC” means that the OSD windows display or PC system name exists 10 sec. on your monitor. You can modify it from 05 sec to 99 sec. The factory default value is 10 sec..

- b. The “ SCAN TIME” means that scan interval from one PC port to next PC port. The default SCAN time is 10 sec and the maximum scan time is 99 sec.
- c. The “ CHANGE PASSWORD” is for user to avoid all PC systems to be intruded by the other person. The default password is 8 digits “ 00000000 “.

ENTER PASSWORD : ■	
ESC : QUIT	ENTER : COMPLETE

There is an enter password window showed out when you select this item and then press the Enter. The maximum password is eight digits. After you key in the password already and press the Enter key, there is another window for confirming your typed password.

ENTER NEW PASSWORD : ■	
ESC : QUIT	ENTER : COMPLETE

RETYPE NEW PASSWORD : ■	
ESC : QUIT	ENTER : COMPLETE

You need to retype the password again for rechecking your previous key-in password is matched or not.

NEW PASSWORD COMPLETE	
ESC : QUIT	ENTER : COMPLETE

- d. The “ CONSOLE ON/OFF “ means to manage the console of KVM switch. If you select “ CONSOLE ON “, it means that any user can use the console. If you select “ CONSOLE OFF “(factory default OFF state), it means that any user will not be allowed to use the console unless you enter the password. When you enter the password already and pass the KVM switch authentication, the CONSOLE will be set to ON. After you finish using KVM switch, please don't forget to set up CONSOLE ON state to OFF state. Besides, if current CONSOLE is ON state and you reset KVM switch, the CONSOLE will be set up ON state back to OFF state.
- e. When you finish the set up of PC name and get out of OSD setting mode, you will find the PC name showed at the up-left corner of monitor. Now, you can use “ESC” key to clear the message right away if you don't need it.



- f. If you want OSD returning back to factory default value, you can execute “SCROLL LOCK”, “SCROLL LOCK”, “R” keys in order. The Seven segment LEDs on the front panel will be flashed during the refresh process.



When the OSD value back to default setting, the seven segment LEDs on the front panel will stop flashing

Troubleshooting

1. Ensure that all cables are well seated. Label all of cables with the number for each respective computer to avoid confusion.
2. 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 (Model No. VGA-100, MAX. 100 feet) to accomplish your applications.
3. The recommended PS2 cable distance is 5 meters maximum. Normally, the cable length is based on driver capacity of your motherboard PS2 port. If you need longer PS2 cable, please use PS2 extender (Model No. PS2-100, MAX. 100 feet) to accomplish your applications.
4. The Power Jack polarity is center positive and the power adapter need be DC12V, 1A .
5. Don't press any keys on the keyboard while the selected computer is booting up. Otherwise, it might cause the keyboard error or keyboard is not detected at PC side.
6. The computer boot up fine, but keyboard doesn't work
Make sure the keyboard works when directly plugged into the computer.
Try a different keyboard, but use only 101, 102 or 104-key keyboard.
7. The Mouse is not detected during PC boot up.
Make sure the mouse works when directly plugged into the computer.
Make sure the mouse is a true PS/2 mouse. A combo mouse will work just as long as it is set for PS/2 mode with the correct adapter. Try a different mouse.
Avoiding moving the mouse or pressing the mouse buttons when switching ports.
Avoiding switching ports during shutting down the PC process.
When you switch one PC port to another PC port, the best scan time setting need to be set to 5 sec. or more. Normally, the VGA monitor change one resolution mode to another will take one or two seconds. So, the scan time is not recommended to below 5 seconds.
8. The power switch is off, but the switch still works fine or power adapter is unplugged from the switch, but the switch still works fine.
KVM Switch unit draws the power source from power adapter and all PC's PS2 port. Some PC's PS2 port can support enough power for the switch, but some PC's PS2 port (like laptop, notebook computer...etc.) is unable to supply enough power for the switch. In order to make sure the system can work steadily, please do not set power switch to off state or remove the power adapter from the switch.

Although the PCs connected to KVM Switch unit are able to support enough power to the stand alone switch, KVM Switch unit still needs a power adapter for daisy chain more banks.

9. If forgetting the " password " you typed, please contact your supplier.

Accessories

Ordering information:

1. **KVM-Cable** 3-in-one VGA and PS2 cable for pc port to KVM Switch, 1.8M, 3M, or 5M
2. **RMB-2** Rack Mount Brackets
3. **USB-PS2** USB to PS2 for converting KVM PS2 port to USB PC, MAC or USB SUN Microsystems.

CERTIFICATES

