



**KVM Discovery powered by**  
**Haitwin-Delphin Technologie GmbH,**  
**Kieselstraße 15, 41472 Neuss / Germany**  
**phone: 0049(0)2131/7421652 email: info@kvm-discovery.com**

## **KS-3104/KS-3108/KS-3116 User Manual**

### **NOTE**

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the measures listed below.

- ◆ Reorient or relocate the receiving antenna.
- ◆ Increase the separation between the equipment and receiver.
- ◆ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ◆ Consult the dealer or an experienced radio/television technician for help.



## **PACKING LIST**

The complete KS-3104/KS-3108/KS-3116 4ports/8 ports/16 ports PS/2 / USB switch package consists of:

- ◆ KS-3104/ KS-3108/KS-3116 4ports/ 8 ports/16 ports PS/2 / USB switch
- ◆ Power Adapter
- ◆ User Manual

Please check to make sure that all the components are present and that nothing was damaged in shipping. If you encounter a problem, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedure carefully to prevent any damage to the unit, and/or any of the devices that connect to it.

OVERVIEW.....	4
FEATURES.....	4
HARDWARE REQUIREMENTS.....	4
CONSOLE.....	4
COMPUTER.....	4
INTRODUCTION.....	5
KS-3104 FRONT VIEW .....	5
KS-3108 FRONT VIEW.....	5
KS-3116 FRONT VIEW.....	5
KS-3104 REAR VIEW .....	6
KS-3108 REAR VIEW.....	6
KS-3116 REAR VIEW.....	6
INSTALLATION.....	7
BEFORE YOU BEIGIN.....	7
SINGLE STAGE INSTALLATION.....	7
Illustration of Dongle.....	8
OPERATION.....	8
HOT PLUGGING.....	8
POWERING OFF AND RESTARTING.....	8
PORT SELECTION.....	8
OSD OPERATION.....	9
OSD OVERVIEW.....	9
OSD NAVIGATION.....	9
OSD MAIN SCREEN HEADINGS.....	10
OSD FUNCTIONS.....	10
TROUBLE SHOOTING.....	13
SPECIFICATION.....	13
SAFE GUIDE.....	14

## OVERVIEW

The KS-3104/KS-3108/KS-3116 4ports/8 ports/16 ports PS/2 / USB CAT5 UTP KVM (Keyboard, Video, Mouse) Switches are control units that allow access and control of up to 4(KS-3104) or 8 (KS-3108) or 16 (KS-3116) computers from a single PS/2 / USB keyboard, PS/2 / USB mouse, and monitor console.

There are two convenient methods to access any computer connected to the installation: (1) using the push button port selection switches located on each unit's front panel; (2) selecting from menus provided by the On Screen Display (OSD).

Setup is fast and easy: simply plug cables into their appropriate ports. There is no software to configure, and no incompatible problems. It works on multiple operating platform (PC compatible, Sun, etc.).

There is no better way to save time and money than with a KS-3104/ KS-3108 / KS-3116 installation. Since a single console manages all of the computers, the KS-3104/ KS-3108 /KS-3116; setup: (1) eliminates the expense of having to purchase a separate keyboard, monitor, and mouse for each computer; (2) saves all the space those extra components would take up; (3) saves on energy costs; (4) eliminates the inconvenience and wasted effort involved in constantly moving from one computer to another.

## FEATURES

- ◆ Control 4(KS-3104) or 8 (KS-3108) or 16 (KS-3116) computers with local or remote console.
- ◆ Both the console and the computer are compatible with PS/2 / USB mouse and keyboard.
- ◆ Computer selection via front panel switches and OSD.
- ◆ LEDs display for easy status monitoring.
- ◆ Auto Scan Mode for monitoring all computers.
- ◆ Superior video quality.
- ◆ Easy installation – no software required
- ◆ Hot pluggable – add or remove computers for maintenance without powering down the switch
- ◆ Support Windows, Solaris etc

## HARDWARE REQUIREMENTS

### CONSOLE

- ◆ A VGA, SVGA monitor capable of the highest resolution that you will be using on any computer in the installation.
- ◆ A PS/2 / USB mouse
- ◆ A PS/2 / USB keyboard

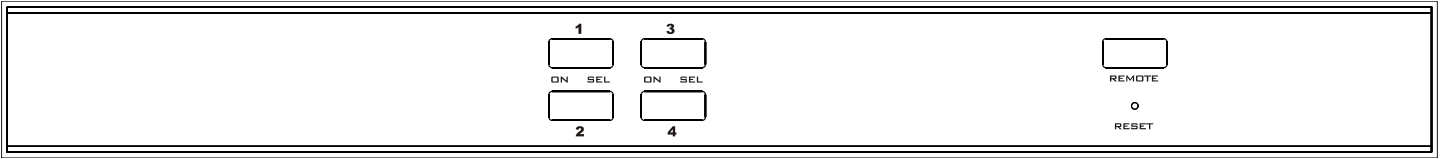
### COMPUTER

The following equipment must be installed on each computer:

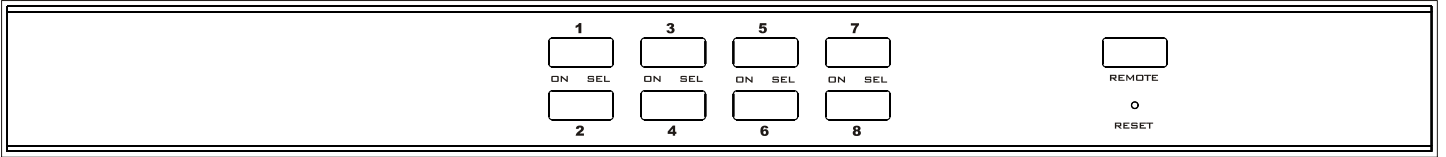
- ◆ A VGA, SVGA card
- ◆ Either USB port or PS/2 keyboard and mouse ports.

# INTRODUCTION

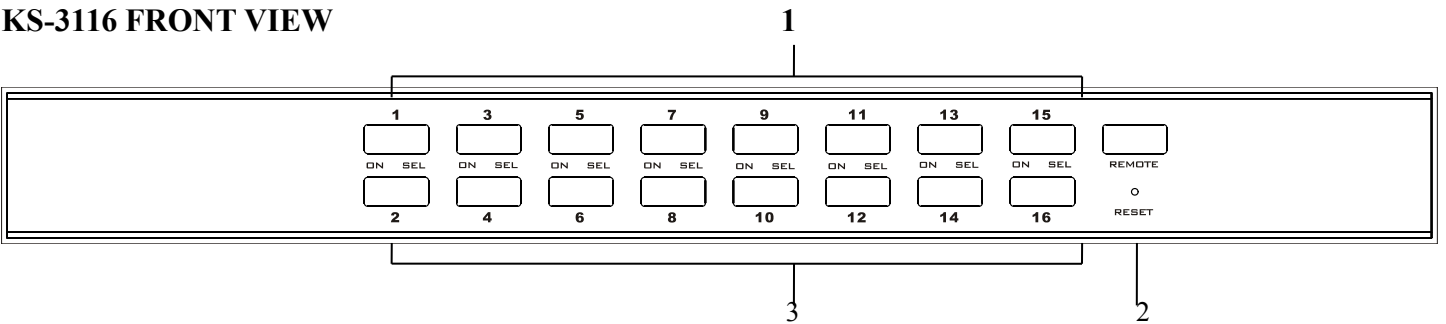
## KS-3104 FRONT VIEW



## KS-3108 FRONT VIEW

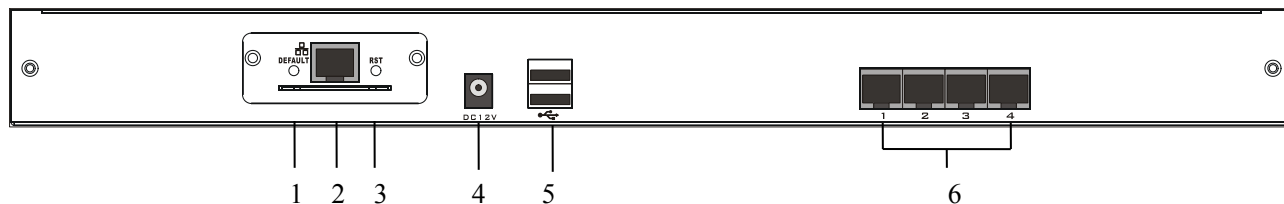


## KS-3116 FRONT VIEW

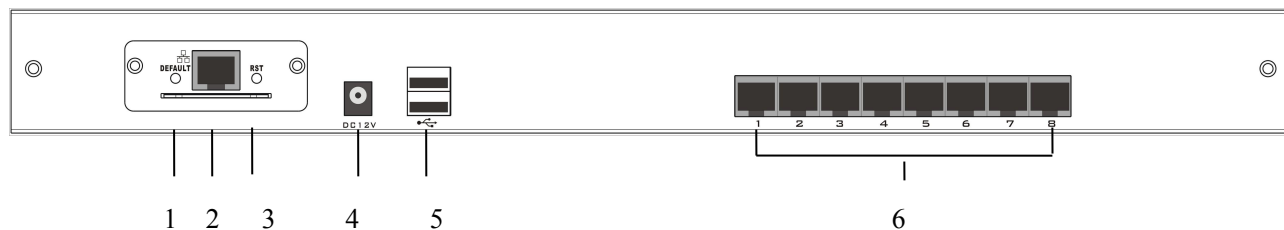


1. The port LEDs are built into the Port Selection Switches. The upper ones are the On Line LEDs; the lower ones are the Selected Port LEDs:
  - ◆ The On Line LEDs light RED to indicate that the computer attached to the corresponding port is up and running.
  - ◆ The Selected LEDs light GREEN to indicate that the computer that attached to the corresponding port is the one that has the KVM focus.
2. Reset
  - ◆ When the switch has no responding, use needle or ballpoint pen to plug into the hole to reset the switch.
3. Port Selection Switches
  - ◆ Press a switch button to access the computer attached to its corresponding port.

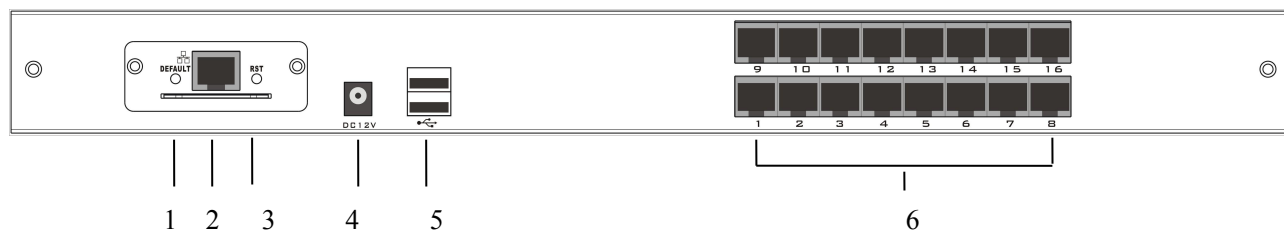
### KS-3104 with IP module KI-4101 (Rear View)



### KS-3108 with IP module KI-4101 (Rear View)



### KS-3116 with IP module KI-4101 (Rear View)



1. IP Module Restore to Default
  - ◆ Plug needle or ballpoint pen into the hole to restore the IP module to default setting.
2. RJ45 Port
  - ◆ CAT UTP can be plugged into it to be connected to the LAN including the controlling computer.
3. IP Module Reset
  - ◆ If the IP module has no responding, plug needle or ballpoint pen into the hole to reset it.
4. Power Jack
  - ◆ The DC 9V~12V power supply cable plugs into this jack.
5. USB Port
  - ◆ Ports to plug in your USB keyboard and mouse are found here.
6. Dongle Port
  - ◆ Port to connect dongles.

**Note: For operation of IP module , please refer to KI-4101 the related user manuals.**

# INSTALLATION

## BEFORE YOU BEIGIN

1. Make sure that power to all the devices you will be connecting up have been turned off.
2. To prevent damage to your installation, make sure that all devices on the installation are properly grounded.

## SINGLE STAGE INSTALLATION

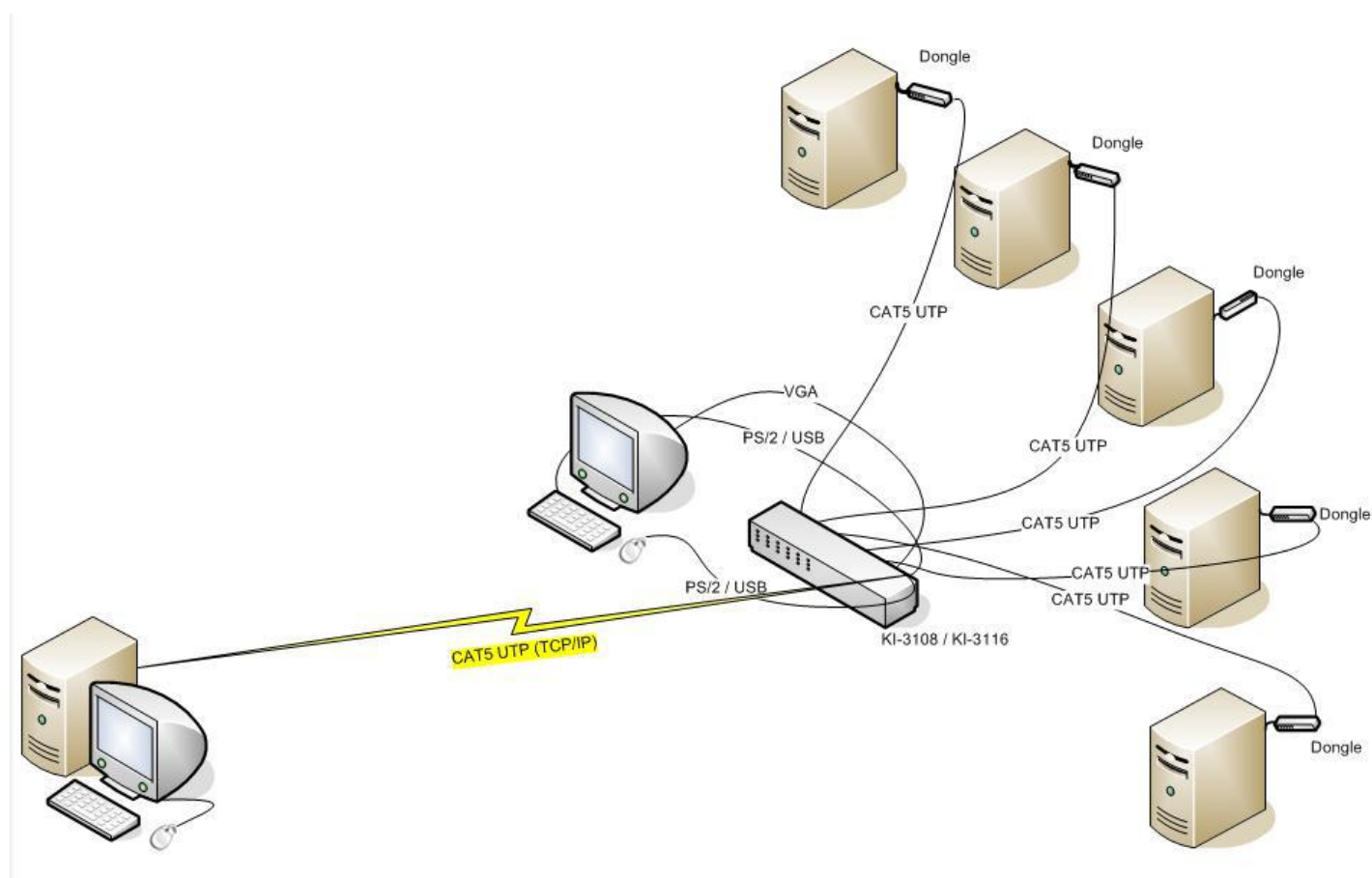
To set up your KS-3104/ KS-3108 / KS-3116 installation, do the following:

1. Plug your PS/2 / USB keyboard, PS/2 / USB mouse and monitor into the console port section located on the unit's rear panel.
2. Plug one end of the CAT5 UTP into the available computer port on the switch.
3. Plug the other end of the CAT5 UTP into the RJ45 port on the matching dongle. Connect the dongle to the computer.
4. Repeat step 2-4 for any other computers you are connecting up
5. To connect the remote VNC client, plug CAT5 UTP into the RJ45 port on the real panel.
6. 6. Plug the power adapter cable into the switch's power jack, then plug the power adapter into an AC power source.

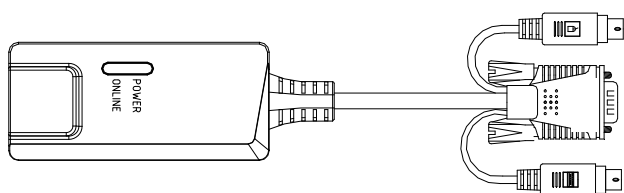
This completes the single stage installation, and you can turn on the power to the computers.

NOTE: The KS-3104/ KS-3108/ KS-3116 initially links to computer connected to the first Computer port.

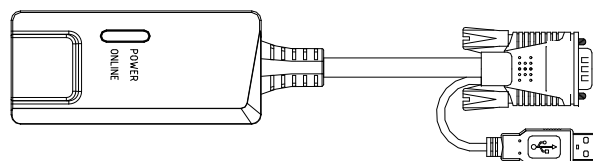
ILLUSTRATION:



## Illustration of Dongle



KT-250 (PS/2 x 2)



KT-150 (USB)

## OPERATION

### HOT PLUGGING

The KS-3104/ KS-3108/ KS-3116 supports hot plugging. Components can be removed and added back into the installation by unplugging and replugging their cables from their respective ports without the need to shut the switch down. For hot plugging to work properly, the following procedure must be observed:

#### ◆ Hot Plugging CPU Ports

When to plug or unplug the cable from the port in powering;©©

1. The cable must be plugged back into the same port it was removed from.

#### ◆ Hot Plugging Console Ports:

The PS/2 / USB keyboard, mouse can be hot plugged.

### POWERING OFF AND RESTARTING

If it becomes necessary to power off one of the KVM unit, before starting it back up you must do the following:

1. Shut down all the computers that are attached to the unit.

Note: If the unit is operating under external power, unplug the power adapter cable.

2. Wait 10 seconds, then plug the power adapter back and power on all computers.

### PORT SELECTION©

The KS-3104/KS-3108/KS-3116 provides two methods to obtain instant access to any computer in your installation: manual and OSD.

#### Manual

Simply press the appropriate port selection switch on the KS-3104/ KS-3108/KS-3116's front panel. After pressing the switch, the selected LED lights to indicate that the port has been selected.

#### OSD

OSD (On Screen Display), provides a menu driven interface to handle the computer switching procedure to provide instant access to any computer on the installation. OSD operation is discussed below.



## OSD OPERATION

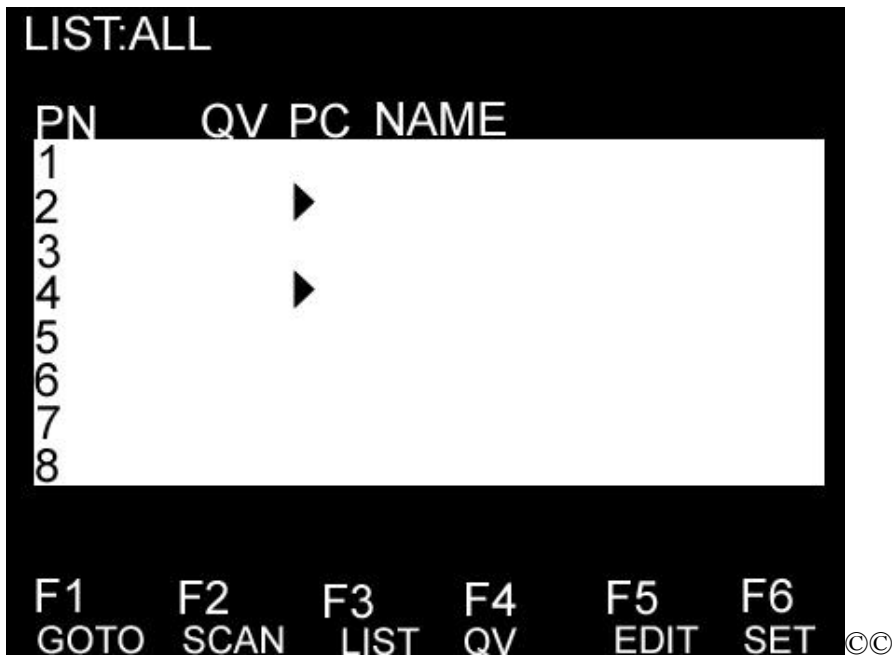
### OSD OVERVIEW

The On Screen Display (OSD) is used to handle all computer control and switching procedures. All procedures start from the OSD main menu. To pop up the main menu, tap the [Ctrl] twice.

If OSD menu is set as “console locked”, you must input password each time the main menu appears. If no password has been set, just press [Enter] to show main menu.

Note: There are two passwords in OSD. One is user password which is initially empty. And the other is factory password which is “admin”.

OSD menu interface is shown as below:



Note: OSD always starts in List View, with the highlight bar at the same position it was in the last time it was closed.

### OSD NAVIGATION

To dismiss OSD, press [Esc].

To move up and down through the list one line at a time, use the Up and Down Arrow Keys. If there are more list entries than what can appear on the main screen, the screen will scroll.

To activate a port, move the highlight bar to it then press [Enter].

After selecting a port, the OSD menu automatically disappear and a blue tip window appears to indicate the port currently selected.

## OSD MAIN SCREEN HEADINGS

Heading	Explanation
PN	This column lists the port numbers for all the CPU ports on the installation. The simplest method to access a particular computer is to move the highlight bar to it, then press [Enter].
QV	If a port has been selected for Quick View scanning, an arrowhead symbol displays in this column to indicate so.
PC	The computers that are powered on and are on line have an arrowhead symbol in this column to indicate so.
NAME	If a port has been given a name, its name appears in this column.

## OSD FUNCTIONS

OSD functions are used to configure and control the OSD. For example, you can: rapidly switch to any port; scan selected ports only; limit the list you wish to view; designate a port as a Quick View Port; create or edit a port name; or make OSD setting adjustments.

### F1 GOTO:

GOTO allows you to switch directly to a port either by keying in the port's name or its port number.

To use NAME method, move highlight bar to "NAME", press [Enter], input name of a port, then press [Enter] to confirm.

To use PN method, move highlight bar to "PN", press [Enter], input port number, then press [Enter] to switch. If the port number is invalid, it will remind the user to input again.

Note: When keying name, if there is a matching name, the matched name will appear on the screen, just press [Enter] to switch to that port.

To return to main menu, press [Esc].

### F2 SCAN

The SCAN function can automatically scan from current selected port, the scan interval can be set by users. When scanning, a small window on the screen indicates the current port number. Press [Space] to stop scanning, and the KVM switches to the port last scanned.

### F3 LIST

The LIST function lets you broaden or narrow the scope of which ports the OSD displays on the main screen. Many of the OSD functions only operate on the computers that have been selected for listing on the main screen with this function. The choices and their meanings are given in the table below:

Choice	Meaning
ALL	Lists all of the ports on the installation.
QVIEW	Lists only the ports that have been selected as Quick View Ports.
POWERED ON	Lists only the ports that have their attached computers powered on.
POWERED ON + QVIEW	Lists only the ports that have their attached computers powered on and have been selected as Quick View Ports.

QVIEW + NAME	Lists only the ports that have been selected as Quick View Ports and have name.
NAME	Lists only the ports that have names.

Move the highlight bar to the choice you want, then press [enter]. An icon appears before the choice to indicate that it is the currently selected one.

After you make your choice and press [Enter], you return to the OSD main screen with the newly formulated list displayed.

#### F4 QV

QV function can select port as Quick View. Move the highlight bar to a port, press [F4], an icon of up triangle appears. Press [F4] again, the icon disappears.

#### F5 EDIT

EDIT function creates or edits the name of a port. Press [F5], a pink edit box will appear on the screen. Input name, and then press [Enter], the port is set a name and it will also appear on the screen.

#### F6 SET

SET function configures the OSD menu. Move the highlight bar to an option, press [Enter] to enter a setting option.

CHANNEL DISPLAY MODE: Mode of small tip window。

Choices and meanings are below:

Choice	Meaning
PN + NAME	Tip window displays port number and port name.
PN	Tip window displays port number.
NAME	Tip window displays port name.

Move the highlight bar to an option and press [Enter] to select it.

CHANNEL DISPLAY DURATION: Time the tip window last.

Options are following:

- ◆ 3 SECOND The tip window lasts for 3seconds.
- ◆ ALWAYS ON The tip window always on the screen.

Move the highlight bar to an option and press [Enter] to select it.

CHANNEL DISPLAY POSITION: Position of the tip window.

A small blue window appears on the screen. Use arrow key to move it, then press [Enter] to specify the position.

SCAN DURATION: Duration for scanning one port.

Options are 3 seconds, 5 seconds, 10 seconds, 15 seconds, 20 seconds, 30 seconds, 40 seconds, 60 seconds.

Move the highlight bar to an option and press [Enter] to select it.

OSD ACTIVATING HOTKEY: Hotkey to activate OSD.

Options are CTRL, SCROLL, SHIFT and ALT. Move the highlight bar to an option and press [Enter] to select it.

**SET PASSWORD:** Set new password.

First enter old password, then enter new password and confirm it. The new password is set. If error occurs, the screen will remind users.

**CLEAR THE NAME LIST:** Clear the names of port list.

You need to enter password to clear the names of port list.

**RESTORE DEFAULT VALUE:** Restore settings to default value.

You need to enter password to Restore settings to default value.

Note: The user password will also be cleared, and the factory password will not.

**LOCK CONSOLE:** Lock the console.

You cannot switch or scan after you lock the console (including switch by push button on the panel or OSD).

You need to enter password to set.

Note: After Locking the console, you can also unlock the console by this option. It also needs password verification.

## TROUBLE SHOOTING

Symptom	Possible Cause	Action
Keyboard and/or mouse not responding.	Keyboard and/or mouse need to be reset.	Unplug the cables from the console ports , then plug them back in.
	No connection to the computer.	Check the cable from the switch to the computer to make sure it is properly connected.
	KVM switch needs to be reset.	Press reset button on the rear panel.
OSD menu no display.	Power supply problem.	Plug power adapter to supply enough power.

## SPECIFICATION

Type	KS-3104	KS-3108	KS-3116	
Computer connections	4	8	16	
CPU port selection	Front panel switches/OSD menu			
Console connectors	Keyboard	Disassembled standard 99-key keyboard		
	Mouse	Disassembled standard PS/2 touch pad		
	Video	15/17/19 inch SXGA color TFT-LED		
Dongle connectors	Keyboard	1 x PS/2 male (purple)	1 x USB male	
	Mouse	1 x PS/2 male (green)		
	Video	4 x HDB-15 male (blue)	8 x HDB-15 male (blue)	16 x HDB-15 male (blue)
	Network	RJ45 port		
LEDs	On Line	4 red LEDs	8 red LEDs	16 red LEDs
	Selected	4 green LEDs	8 green LEDs	16 green LEDs
Video resolution	1920 x 1080 (max)			
Power adaptor	External: DC 12V			
Operating temperature	-10°C~50°C			
Storage temperature	-20°C~60°C			
Housing	Metal			
Weight	1.65 Kg	1.71 Kg	1.83 Kg	
Dimensions(L x W x H )	432 x 155 x 44 mm			

## **SAFE GUIDE**

Please follow the directions below when installing, using and maintaining it in order to guarantee the device to work well.

- ◆ When installing and operating the device, please make sure proper power supply first, and then do other operations after it is initialized.
- ◆ As signal and power transfer need custom cable, please use matched cable, unmatched cable may cause system work improperly or even damage the device.
- ◆ Keep airy during operating to prevent high temperature.
- ◆ Keep the device away from working long in wet environment to prevent short circuit.
- ◆ Please do not open the device without permission of professionals.