# Rackmount LCD Console
## (8 Port /16 Port)
## User Manual

# **Contents**

## Overview

## Product Description

The KVM console integrates multiple port KVM switches in a 1U height console. It can control multiple computers with one monitor, keyboard and mouse,

It is easy and fast to install the KVM console, you just need to connect corresponding cables to the right ports of KVM and its module without software configuration.

The KVM console can control up to 8 or 16 computers, supports multiple hardware platforms and multiple operating systems.

## Product Features

- 17.3" TFT LCD monitor with high resolution.
- 1U height, suitable height for standard 19"rack mount, metal structure.
- Ultra slim 99 keys keyboard with small numeric keyboard.
- High resolution and high flexibility with touchpad with two function buttons and scroll wheel.

## Switch Functions

- A single console controls up to 8/16 computers
- Fully complied with HDCP
- Complied with HDMI1.4a
- No software required – select computers via push button, hotkey and OSD
- User-friendly OSD human-computer interaction interface, call up OSD through keyboard and mouse hotkeys
- Broadcast mode – operations simultaneously performed on all selected computers Easily choose servers with mouse
- Multi-platform – Windows, Linux, Mac, Unix
- Complete keyboard and mouse signal simulation to ensure that the booting and switching are correct
- Auto scan feature for monitoring user-selected computers
- Hot pluggable - add or remove computers without having to power down the switch
- Support firmware upgrade

## Front view
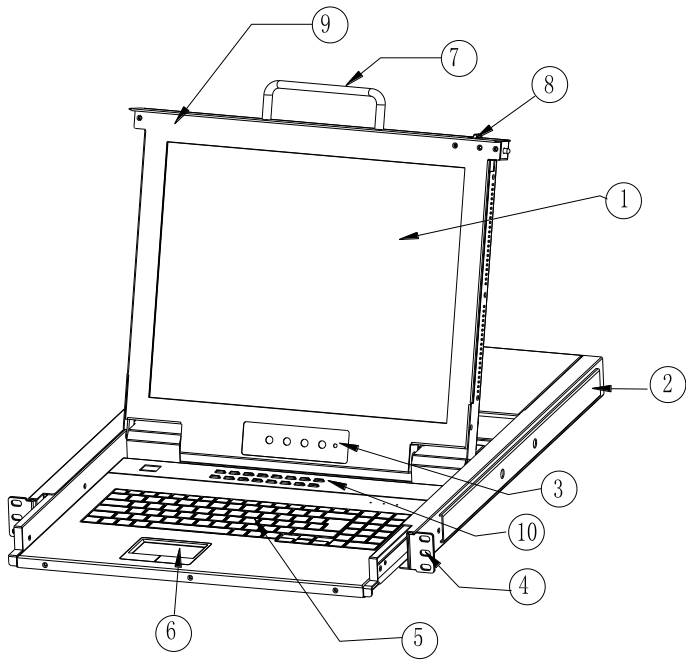


1-1.1 front view

| | |
|---|---|
| 1. LED Module | 6. Touchpad |
| 2. Rear Bracket Slot | 7. Handle |
| 3. LED OSD Controls | 8. Release Catch |
| 4. Front Bracket | 9. Display panel |
| 5. Keyboard | 10. Switch pushbutton |

## Structure and Size (17.3″)
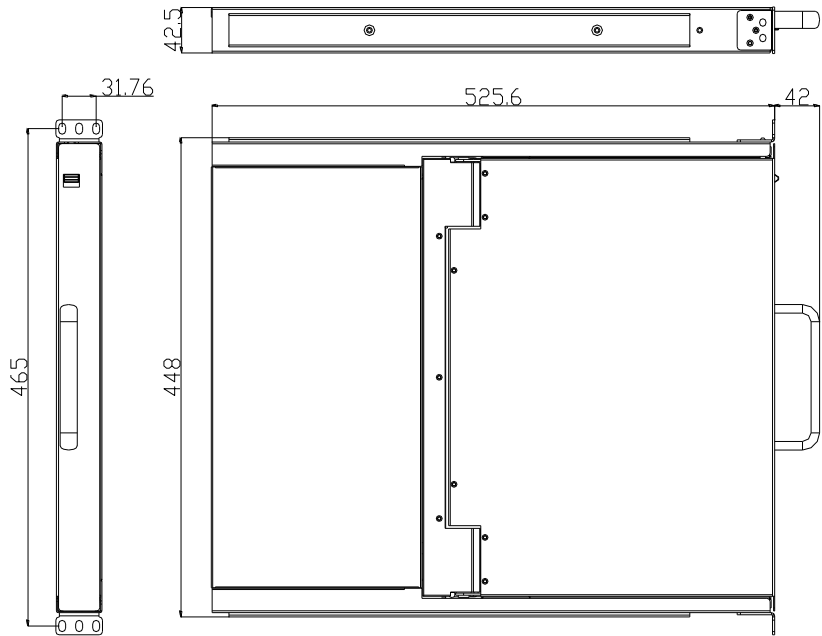
1-1.2
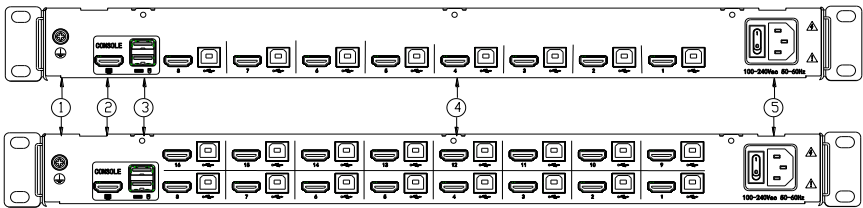
1-1.3 back view

1.   Ground connection screw
2.   HDMI Output
3.   USB port
4.   KVM port
5.   Power input (AC)

## Hardware Installation
### Rack Mounting
A standard rack mounting kit is provided to mount the switch in a depth of 600-850mm in a standard 19" rack.
For other mounting distance, the rear brackets need to be customized accordingly.
With one person hold the switch in place and the other person slides the L bracket into the switch's side mounting brackets from the front to the back, then screws the brackets to the rack. (See below installation drawing)



Bear Bracket

Max installation depth 850mm

1-2.1 rack mounting (1)



Rear bracket

Max installation depth 850mm
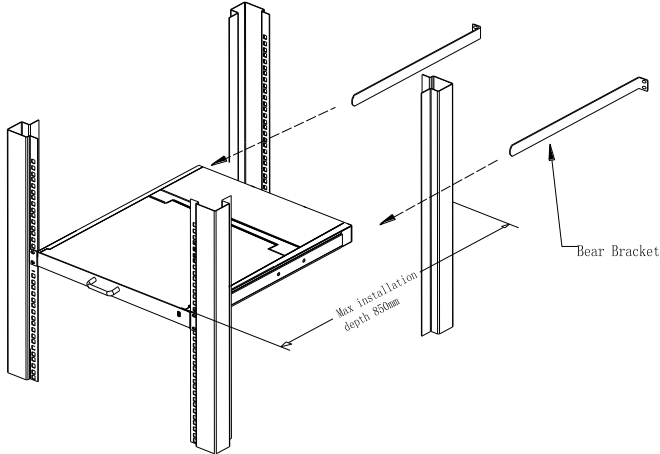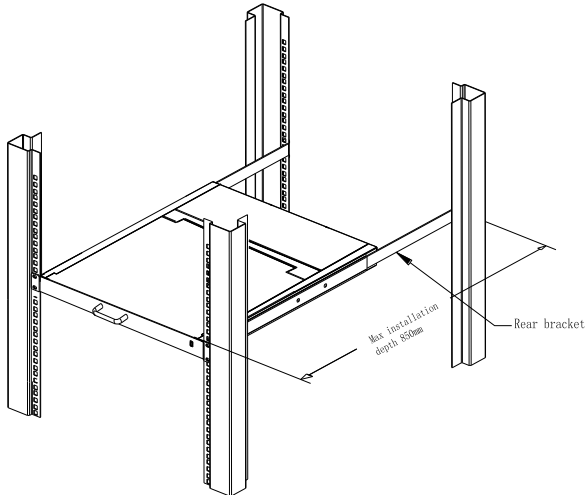
1-2.2 rack mounting (2)

## Installation instruction

1) Make sure the rack mounting KVM switch has been connected to the ground (① in the diagram )

2) Connect power cable to KVM port as shown in(②in the diagram)

3) Connect KVM switch with the computer according to(④in the diagram)

4) Turn on the power, the KVM start to work after power supply(③in the diagram)
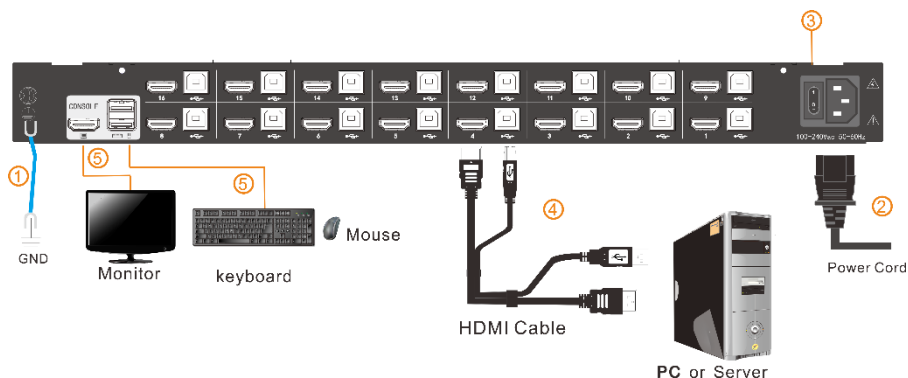


Note：1）Connect monitor, USB keyboard and mouse to Console port to connect another console.（⑤ in the diagram）

## Opening the console

● Release the release catch;





UNLOCK

2-1.3 unlocking

**\*Note：The release lock can only do horizontal locking, it can't bear any load.**

● Pull the LCD panel all the way out until it clicks into place.

● Rotate the LCD module all the way back to expose the LCD screen, the LCD module can be rotated up to108°.
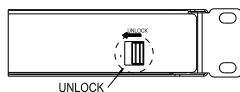


Best Resolution :
1280x1024@60Hz

108°
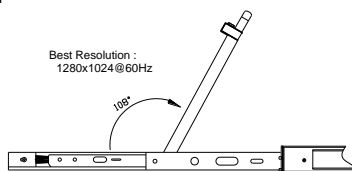
2-1.4 rotate angle of the console

● Turn on power switch, KVM will beep twice The Port LEDs light flashes 4 times, System will prompt to enter username and password



Enter Name and Password
UserName:
Password:
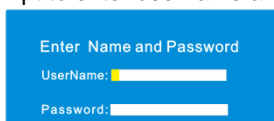
2-1.5 password window

● LCD panel is powered on when the power LED is green.

● Power on computer or server then power on KVM and you will see green light on each port.

● The factory default password is blank, double click "Enter".

## Closing the console

● Close the LCD display panel and the power automatically will shut down.
● Push the release catch in the direction of the arrow, push the LCD panel all the way in until it automatically lock up.



2-1.6 open angle of the console

## LED Instructions



3-1.1 front view

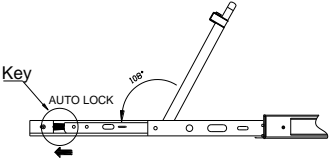| No. | Components | Function |
|---|---|---|
| 1 | 1-8 or 1-16 | 1) Switching freely from port 1 to port 8 /16 |
| 2 | Port Selection Buttons& LEDs | Indicator LEDs are built into the switches, the online LED light is on the left and the selected LED light is on the right. 1）An online LED light(green) indicates that the KVM has connected to its corresponding computer and power on. 2）A selected LED light(orange) indicates that the computer attached to its corresponding port is up and running. |
| 3 | Station ID | Display the current port |

Table 3-1.1 LED instructions

## LED OSD Configuration



The LED OSD allows you to set up and configure the LCD display.

| Buttons | Functions |
|---|---|
| MENU SELECT | Opens the menu function and brings up the main menu. |
| EXIT/AUTO | Press this button exits the current menu and return to the previous menu or press this button exits the LED OSD. Press AUTO for automatic configuration. |
| SL-/SL+ | Moves your menu to make corresponding adjustment. |
| LED state | Green :running Red :power off or access nonstandard VESA signal Flash green：energy saving mode or no signal |

Table 3-1.2 LED OSD configuration instruction

Press AUTO if the screen migrates after power on or under other circumstances, then the screen auto configure to its best display state. It might can't be adjusted to its best state if part of the display mode is not standard VESA mode, if so return back to OSD menu to RESET, then it will back to normal.
We suggest our customers to set up the display mode at 1920x1080@60Hz, refresh

rate at 60Hz.

## OSD Operation

Double click the right buttons of the mouse or double click hotkey【Scroll Lock】 to invoke below OSD main menu. You can customize the OSD hotkeys, find more details in OSD function instructions.
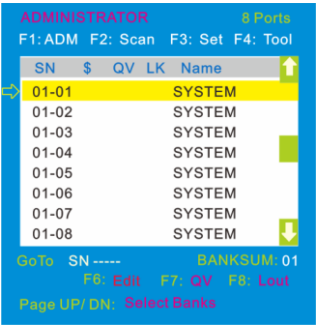
| Headings | Explanation |
|---|---|
| SN | port number |
| ⇨ | It shows the computer port is under monitoring. |
| $ | The computers are power on and are online |
| QV | "#": quick view the port "BC": Broadcast port |
| LK | " @ "shows that the port is only available for viewing |
| Name | Port name, the maximum is 12 bytes |

Table 1.4：OSD interface

To access the OSD menu through keyboard:
1.  In the submenus that appear, moving the highlight bar to your selected port and then press Enter.
2.  Press any key from 【0-9】to enter any port of current station

To access the OSD menu through keyboard:

Move： port selected
Click： port switch

Click：port switch

Double click：display OSD menu
Click：exit OSD menu
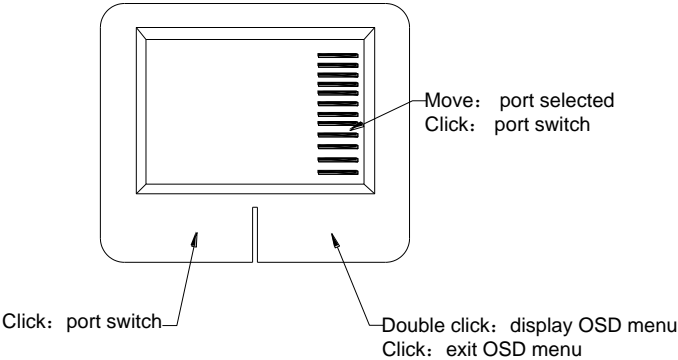
\*Note: Operate via keyboard after invoke the OSD menu via the touchpad.

**OSD Functions**

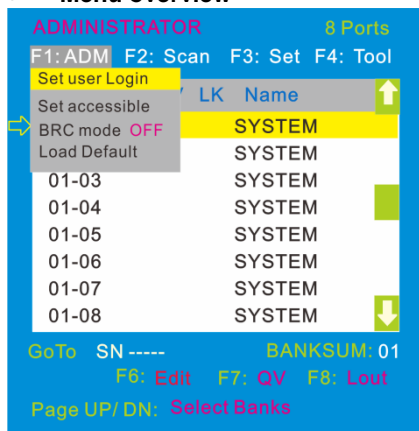| Menus | Keys | Submenu/explanation |
|---|---|---|
| ADM | F1 | Set User login： account and password<br>Set accessible： Set access permissions<br>BRC Mode： monitor multiple computers at the same time<br>Load Default： reset the menu to the original factory default settings |
| Scan | F2 | All： Lists all the ports on the installation<br>Power On： lists only powered on ports that have attached computers.<br>Quick View： Lists only the ports that have been selected as Quick View ports |
| Set | F3 | Auto Scan： set scanning time period<br>Port ID： set how long a port displays on the monitor<br>OSD Hotkey： set OSD hotkeys<br>Lout Time off： to set the time out value |
| Tool | F4 | Reset KM： press Enter resets keyboard and touchpad<br>Beeper【On】： press Enter switch Bee sounds<br>Mouse Hot【On】： press Enter to shut down touchpad operating on OSD.<br>Restore Values： press Enter restore the current user default value.<br>About KVM： press Enter shows the KVM version |
| Edit | F6 | Edits port names |
| QV | F7 | Start or close Quick View |
| Lout | F8 | Log out/blank the console screen |
| Exit | Esc | Press this key exits OSD menu |
| | Scroll Lock | Press this key exits OSD menu |
| | Num Lock | Press this key exits OSD menu |

Table 1.5

**F1-ADM**
- **Menu overview**



Operating instructions
1）Press【F1】or 【←】【→】enters
the F1 submenus.
2）Press 【↑】【↓】moves the highlight
bar to select the submenu.
3）Press【Enter】selects and exits ADM
menu.
4）Press【Esc】cancels the operation
and exits ADM menu.

- **Menu explanation**

1. Set User Login—Press 【Enter】 and select Set User Login, a screen as below
diagram 4-1.1 appears:
One administrator and four users account can be set (the account and the
password are no more than 16 characters)
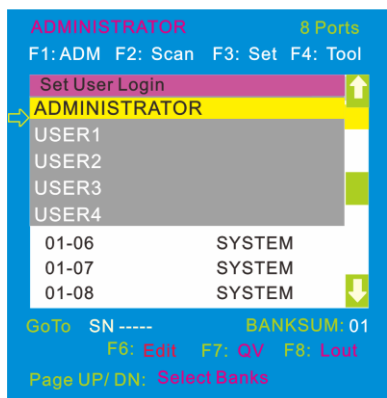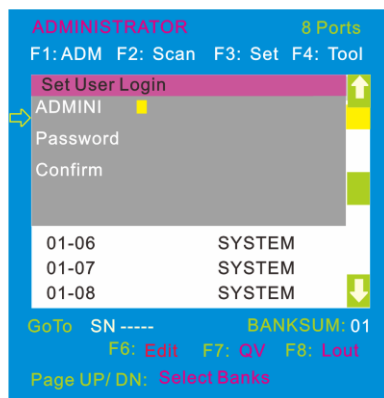


4-1.1                                                                      4-1.2

Note：You can set up an account and password according to diagram 4-1.2, then a
"User setup ok" pops up showing you have done your set, and
"Password Not Match" pops up, you need to type in your password again
as you did in your first type.

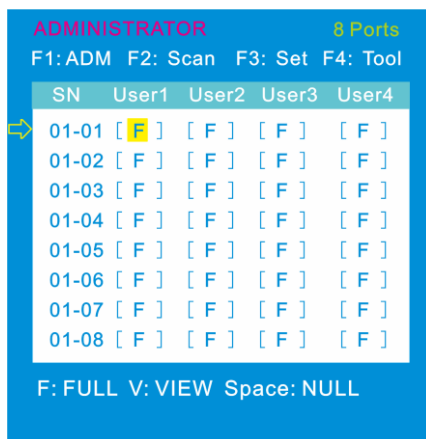2. Set accessible—press 【Enter】 and select Set Access Permission, then below menu appears: (diagram 4-1.3):



4-1.3

| Menu | Explanation |
|------|-------------|
| FULL | Full access function to the station and can do any operation to the ports |
| VIEW | View only function, you can only view the port but you can't operate it if set this function. |
| NULL | If you set this function, the port will be not displayed on the user's OSD menu |

Note：The administrator always has full access to all the ports.
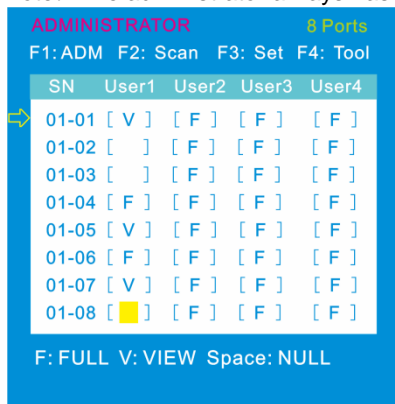


4-1.4
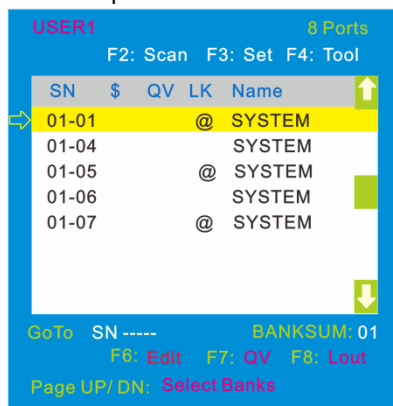


4-1.5

Eg.1). If you want to set access permission of [User1], press 【Space】 to choose the permission options you need to set.
2). [User1] log in OSD menu, as shown in diagram 4-1.5.

3.BRC Mode - Press【Enter】 to enter the BRC mode. Enter the main menu, press 【F7】to add or remove a port that need broadcast function. When BRC mode is effect, a speaker symbol appears in QV column. (See below diagrams).
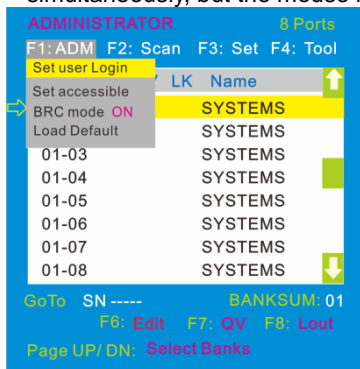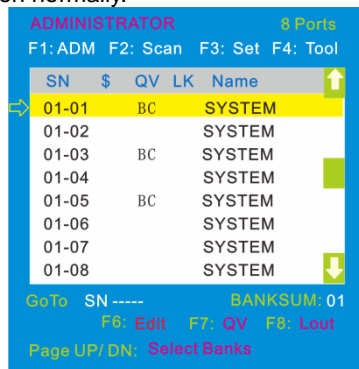While BRC mode is in effect, we can operate multiple computer ports simultaneously, but the mouse is not function normally.



4-1.6                                                  4-1.7

1)   Open BRC mode
【F1】->BRC Mode OFF->press【Enter】-> BRC Mode ON (see diagram 4-1.6)
2)   Open the port that need broadcast function
Press【↑】【↓】key—>select the port that need broadcast function →press 【F7】→a "BC" symbol appears in the QV column which shows the port has entered broadcast mode.
3) Close the broadcasting port
Press【↑】【↓】key—>select the port→press 【F7】→exit BRC mode and the "BC" symbol disappears
4)   Exit BRC mode
Invoke OSD main menu →【F1】->BRC Mode ON ->press【Enter】 --> BRC Mode OFF, the KVM exits BRC mode(diagram 4-1.8)
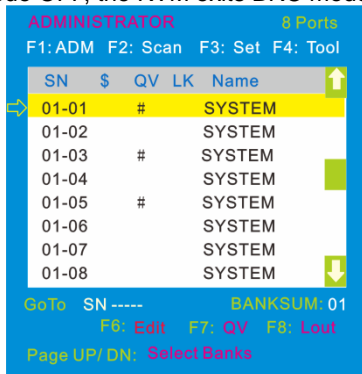


Press 【F1】->BRC Mode OFF ->press 【Enter】 ,enter the main menu, all "#" symbols turn into "BC" symbol(diagram 4-1.7 )

4-1.8

4. Load Default--- press 【Enter】 and select Load Default, all the set values are restore to original factory default settings.

**F2-Scan**
● **Menu overview**
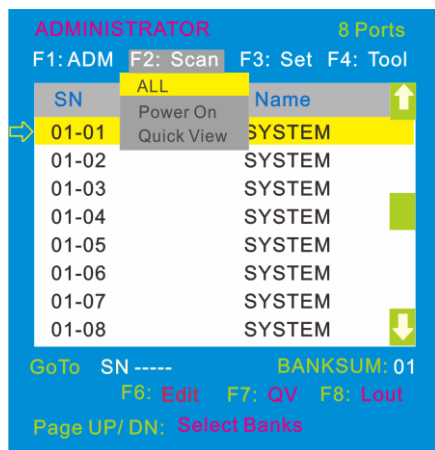


Operating instructions
1）Press【F2】or 【←】【→】enters the F2 submenus.
2）Press 【↑】【↓】moves the highlight bar to select the submenu.
3）Press【Enter】selects and exits Scan menu.
4）Press【Esc】cancels the operation and exits SCAN menu.

● **Menu explanation**

| Submenu | Explanation |
|---------|-------------|
| All | Use this function to scan all ports according to the set scanning interval. |
| Power On | Use this function to scan all ports with"$" according to the set scanning interval. |
| Quick View | Use this function to scan all ports with "#" quick view symbols according to the set scanning interval. |

**F3-Set**
- **Menu overview**



Operating instructions
1）Press【F3】or 【←】【→】enters the F3 submenus.
2）Press 【↑】【↓】moves the highlight bar to select the submenu.
3）Press【Enter】selects and exits Set menu.
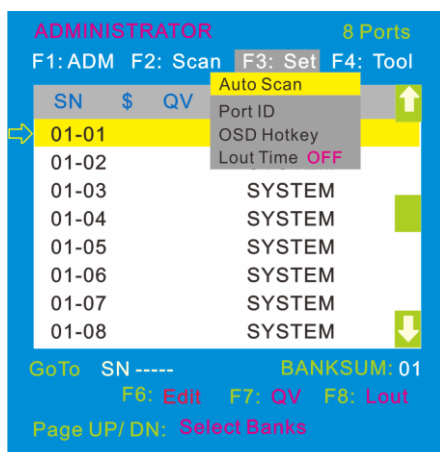4）Press【Esc】cancels the operation and exits Set menu.

- **Menu explanation**

| Submenu | Default value |
|---------|---------------|
| Auto Scan | 5S（effective range 5-99） |
| Port ID | 0S：not display the port ID<br>1-98S: display the seconds, maximum 98s<br>99S: permanent display |
| OSD Hotkey | 【Scroll Lock 】+ 【Scroll Lock 】<br>【Caps Lock】 +【Caps Lock】<br>【F12】 +【F12】<br>【Ctrl】+【Ctrl】+【KVM Hotkey】 |
| Lout Time off | 0: close the screen saver setting<br>01-99M: set the screen saver timeout<br>Note: It is automatically log out if the current operator is no longer operate for a while, then the KVM will be locked and you need to enter user name and password to operate again：<br> |

## OSD Hotkey Operation

**Operating instruction**
1.  Press【F3】and move the highlight bar with【↓】  to select "OSD Hotkey"
    submenu . Press 【Enter】and below screen appears:
2.  KVM default hotkey:【Scroll Lock】
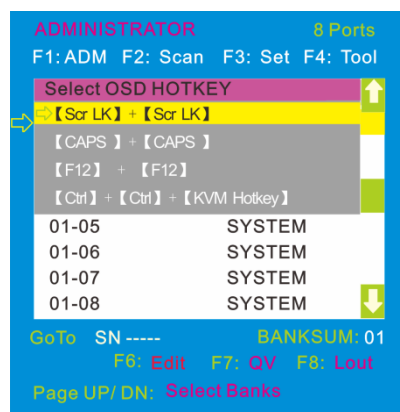


2.Select the"【Ctrl】【Ctrl】+【KVM Hotkey】" and press【Enter】, and then the【Ctrl】
   hotkey is availablein this hotkey mode, themouse hotkey can't enter the
   OSD menu

Invoke hotkey：double click 【L_Ctrl】  + the corresponding function key

| Function | Operating | Function description |
|---|---|---|
| Switching   port | + 1~8 | Switch ports from 1~8，<br>E.g.: Double click【L_Ctrl】  plus 2 to skip to the second port of the current station. |
| | + F1~ F8 | Switch ports from 9-16 |
| | + ↑ / ↓ | Switch to previous/next port |
| Auto scanning | + S | 1. Auto Scan automatically scan ports that attached PC or server. Users can set the scan interval in OSD menu and press any key to exit scanning mode.<br>2. Move the mouse to extend scan interval. |
| Invoke OSD main menu | + "space" key | This allows you to invoke OSD main menu （see OSD menu operation） |

**F4-Tool**
- **Menu overview**
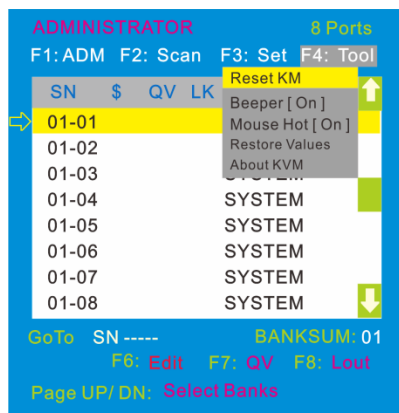


Operating instructions
1）Press【F4】or 【←】【→】enters the F4 submenus.
2）Press 【↑】【↓】moves the highlight bar to select the submenu.
3）Press【Enter】selects and exits Tool menu.
4）Press【Esc】cancels the operation and exits Tool menu.

- **Menu explanation**

| Submenu | Instruction |
|---|---|
| Reset KM | Initialize the keyboard and mouse that connected to KVM when they are break down. |
| Beeper【On】 | The beeper can be turned on or off with this function. |
| Mouse Hot【On】 | To open and close the mouse with this function. We can't operate the OSD when it is【Off】. |
| Restore Values | Restore to original factory default values. |
| About KVM | It shows the KVM version information. |

**F6-Edit port names**
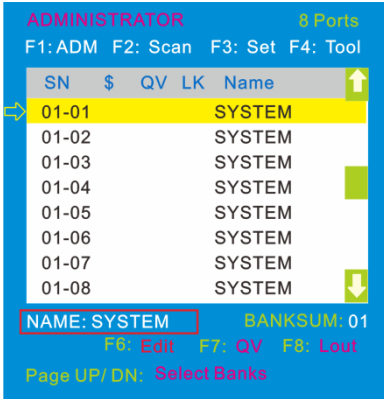


- Select the port with 【↑】【↓】 key;
- Press F6 and key in the new name or modify the old one, then press Enter to save the name and exit editing.
- Press 【Esc】to cancel and exit the editing.

Note:
The NAME characters include:
All alpha characters：A-Z

All numeric characters：0-9
Default value: SYSTEM

**F7-Set quick view port (QV)**
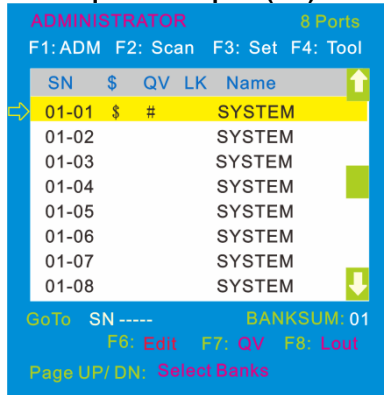


- Select ports with 【↑】【↓】 keys；
- Press 【F7】 to include current port as Quick View, then an arrowhead appears in the QV column to indicate so.

Note：

Press【F7】 to cancel the QV symbol is the current port has already have a QV arrowhead symbol in its QV column; If you want to cancel all the QV function, press Restore Values under F4: Tool. (The port name restores to default setting at the same time.)

**F8-LOUT**

- Press【F8】exits the OSD main menu and fully exits current port, then the log in window appears:



- Users must log in all over again to regain access to the OSD.

## Setting OSD default values

| Settings | Default values |
|---|---|
| OSD hotkey | 【Scroll Lock 】【Scroll Lock 】 |
| Original user name | 【Enter】 |
| Original password | 【Enter】 |
| Port display duration | 0 seconds |
| Port display mode | Port No.+ Port name |
| Port name | SYSTEM |
| Scan duration | 5 seconds |
| Scan mode | All |
| Auto log out | 【Esc】 |

## System support
The device support system below:

| Operation System | | Version |
|---|---|---|
| Windows | | 2000 or above |
| Linux | RedHat | 6.0 or above |
| | SuSE | 8.2 or above |
| | Mandriva(Mandrake) | 9.0 or above |
| UNIX | AIX | 4.3 or above |
| | FreeBSD | 3.51 or above |
| | Sun | Solais8 or above |
| Nove11 | Netware | 5.0 or above |
| Mac | | 8.6 or above |
| DOS | | 6.2 or above |

## Appendix

## Specifications (17.3″)

| Model | | LH1708 | LH1716 |
|---|---|---|---|
| Computer connections | | 8 | 16 |
| Port emulation | Keyboard, mouse | PS/2, USB | |
| LCD Monitor | LCD Model | FHD TFT | |
| | View Area | 17.3" | |
| | Optimum Resolution | 1920×1080@60Hz | |
| | Display Color | 262K | |
| | Brightness | 300cd/m²( T y p ) | |
| | Contrast Ratio | 800 : 1( T y p ) | |
| | Pixel Pitch(mm) | 0.1989(H) × 0.1989(W) | |
| Mouse | X/Y Resolution | >1000 points /inch,( 40 points/mm ) | |
| | Scroll Wheel | Supports scroll wheel function | |
| Keyboard | | 99 keys (82 keys main keyboard +17 independent small numeric keyboard) | |
| Port Selection | | Pushbuttons, hotkeys, OSD menu | |
| Input Power | | 100V – 240Vac, 50 ~ 60Hz, <1.5A | |
| Signal Input | | HDMI | |
| Power Consumption | | 16W | 20W |
| Operating Temperature | | 0 – 40℃ | |
| Store Temperature | | -20 – 60℃ | |
| Humidity | | 0 – 80% RH, non-condensing | |
| Net Weight | | 11.5kg | 11.7kg |
| Product Dimension (W × D × H) | | 448mm×525.6mm×42.5mm | |
| Package Dimension (W × D × H) | | 765mm×615mm×185mm | |

## Troubleshooting

1. The KVM console does not work when I connect and use the console for the first time.
Solutions:
Please re-connect the KVM console according to below steps:
1) Disconnect all the signal and power cables connected to KVM.
2) Then power on KVM and you hear the boot indicating sound from the beeper, a screen automatically pop up for you to enter the user name and password.
3) Type in the correct user name and password, the original password is clicking
   Enter twice, then the OSD main menu pop up on the screen.
4) Check the KVM console and make sure it can normally switch ports.
5) Connect one server (PC) to one of the KVM ports with signal cable and check port switching function, check the keyboard and mouse, if they are not working, try to restart the server (PC).
6) After successfully finishing all above steps, gradually add server (PC) to this console until meet your need.

2. There is no pop up window to type in user name and password or the pop up window is not normally displayed.
Solutions:
1) Check the AC output.
2) Make sure you have heard the indicating sound and the keyboard LED is on after starting up the computer.
3) Check the LED power and make sure the LED signal cable has connected to the KVM console.

3. I can't log in the KVM system after starting computer.
Solutions:
1) Make sure the KVM keyboard is working, the user name and password is correct. The default value is blank, you can log in after press Enter.
2) If you still can't log in the system, try to connect an external USB keyboard.( The original default value is blank, you can log in after double clicking Enter )

4. I can't switch from one port to another after logging in the KVM system.
Solutions:
1) Invoke the OSD main menu and check the user name on the top left, make sure the user has got the access permission from the administrator.
2) Please contact the distributor or the KVM manufacturer.

5. Bad display quality of PC screen.
Solutions:
1) Check the signal cables, make sure they are connected.
2) Reset the monitor's display settings.

6. When I switch to one port, the keyboard and mouse do not work.
Solutions:
1) Make sure you have exited the OSD menu.
2) Invoke the OSD main menu and check the user name on the top left, make sure the user has got the access permission from the administrator.
3) Pull out the USB port of the server (PC) then plug in.

7. I can't invoke the OSD main menu.
Solutions:
1) Check the keyboard to make sure it is working.
2) Double click 【Scroll_Lock】.
3) Double click 【F12】
4) Double click 【Caps Lock】
5) Double click 【Ctrl】+【Space】

8. The OSD code is in disorder or abnormal displayed when daisy chaining.
Solution:
Invoke the OSD menu after daisy chaining, Press 【F1】 and choose 【Load default】,then press enter to refresh OSD ROM.