

KORAT

LCD Drawer Series

KORAT-1701

KORAT-1716

User Manual

TABLE OF CONTENTS

KORAT-1701 LCD DRAWER CONSOLE AND KORAT-1716 LCD DRAWER + BLACKCAT5 16-PORT KVM	
MANUAL CONVENTIONS	P1
INTRODUCTION	P1
APPLICATIONS.....	P2
OVERVIEW	P2
FEATURES	P3
PACKAGE CONTENTS.....	P4
EQUIPMENT REQUIREMENTS	P4
SPECIFICATIONS.....	P5
DISPLAY DIAGRAMS	P6
INSTALLATION	P8
HARDWARE INSTALLATION.....	P9
LCD PANEL CONTROLS AND FUNCTIONS.....	P11
SINGLE SWITCH INSTALLATION	P15
MULTIPLE STAGE (DAISY-CHAIN) INSTALLATION	P17
CONFIRMATION PROCEDURE.....	P19
OPERATION	P20
HOT KEYS	P21
HOT KEY CONFIRMATION	P23
HOT KEY SUMMARY COMMANDS	P24
OSD OPERATION	P26
FIRMWARE UPDATES	P31

ABOUT THIS MANUAL

Document Conventions

This manual uses different formats to quickly identify information;

- [] “ ” Indicates keyboard selection. E.g., [Ctrl],”8” indicates you should press the Control key followed by the numeral 8. Sequenced keys appear with a comma between them: [Ctrl], [Ctrl]
- Bulleted information
- 1. Numbered lists designate sequenced instructions indicating important information.

Italics Italics Represents text given in reference or as example.



Important Information

Please have the following information ready beforehand:

- Your current computer installation (operating system, configuration details, software etc.)
- Error messages, reports or other information that may assist our staff.

INTRODUCTION

Thank you for purchasing KORAT rack-mount console solution. It is available in two configurations: console-only (KORAT-1701), or with integrated 16-port Black CAT5 KVM switch (KORAT-1716). Designed for IT professionals, KORAT leverages the power of existing server networks with minimal intrusion. Highly efficient: it allows centralized access and control of up to 256 computers (via Daisy-Chaining, on KORAT-1716 only) from an integrated 1U console drawer; with built-in 17” LCD display, 16-port Black CAT5 KVM switch(KORAT-1716 only), keyboard and touchpad.

The KORAT series is designed to deliver considerable return on investment; saving time, money and valuable server room real estate, it can be rack mounted at any user-height. KORAT-1716 with integrated Black CAT5 KVM switch includes additional features such as: intelligent OSD (On Screen Display) menu, Hot Key switching, Auto sensing of cascade computers, Quick View scanning and Firmware upgrades.

Whether it’s in educational, government, or corporate sectors, the KORAT series provides network managers and IT managers a stable management tool for consolidated server access and control.

APPLICATIONS

The KORAT-1701 / KORAT-1716 rack-mount console offers IT managers and MIS staff consolidated control of hundreds of computers* via a single integrated console. Applications include:

- ISPs / IDCs
- Data centers & server firms
- Test labs

* KORAT-1701 needs to connect to optional Black CAT5 16-port KVM switches

OVERVIEW

OSD (On Screen Display)

An intelligent menu system designed to easily access and control multiple servers.

Hot Keys

Hot keys allow you to use designated key commands to switch computers. Control multiple computers using a simple hot key sequence from your keyboard.

Manual Port Selectors

Push button selectors allow for convenient manual PC selection.

LCD Bank Display

The LCD Bank Display shows bank identification when daisy-chaining.

Quick View Scan

The Quick View Scan function allows you to automatically scan and monitor all computers - one by one, that are connected to your KORAT KVM switch.

Video Resolution

The 17 “ LCD monitor supports up to 1280 x 1024 @75Hz.

Port LED Display

Port LEDs allow for easy status monitoring of all connected computers. A lit Green LED indicates which computer the KVM console currently has control of. A Red LED indicates which computer is connected but not in use.

Sliding (1U) console Drawer

The entire LCD KVM console simply slides away into a compact 1U rack space when not in use.

FEATURES

KORAT-1701 and KORAT-1716

- * Dual-Rail Sliding console for any 1U(19") system rack
- * Simple rack mount installation
- * Lockable rail (screw type) on both ends to prevent unit from sliding out during transportation
- * 17" LCD display, integrated console keyboard & touchpad in a 1U rack drawer
- * RGB analog LCD display-up to 1280x1024 video resolution
- * Multilanguage OSD (LCD control)
- * Detachable console for easy repair or replacement

Additionally, the Black CAT5 KVM switch equipped KORAT-1716 offers following added features

- * Integrated 16 port CAT-5 KVM switch, yet maintaining the same 1U dimension
- * Integrated CAT5 KVM switch allows connected computers to be placed up to 30m (100 feet) away
- * Mix PS/2 and USB interfaces via simple KVM Cat5 "Dongles" between switch and computers
- * Supports Windows® 9x/ NT/ 2000/ ME/ XP/2003, NetWare5.0, Linux®, Free BSD, Mac OSX, SUN

New Rackmount Advantages

- One person installation saves valuable human resources and time
- Quick release rack-mount draw thumbscrews
- Adjustable rack slides for convenient positioning in 22"-36" server racks

PACKAGE CONTENTS

Item	Qty
KORAT-1701 or KORAT-1716	1
Power Cord	1
Power Adapter	1
Bracket	2
User Manual	1
Cable Tie	1
Console Cable: VGA + PS/2 keyboard and mouse (KORAT-1701 only)	1
Power Adapter External Module (KORAT-1716 only)	1

Please check to make sure that each item of the above list is included in your KORAT package. Contact your dealer immediately if any item is missing or damaged in shipment.

EQUIPMENT REQUIREMENTS

Cables

It is highly recommended that you use only our Cable sets. These cables offer the highest quality possible to ensure optimal data transmission. our KVM cables feature micro-cable construction and are molded together for a neat and organized setup.

For KORAT-1716: the integrated Black CAT5 16-port KVM switch requires optional HAMSTER dongle per computer (USB dongle P/N: HAMSTER-U; PS/2 dongle P/N: HAMSTER-P). Please use CAT5E UTP or higher grade cable with lengths no more than 30M. For optimal performance, use CAT5E cables with similar lengths to connected PCs.

Daisy-chain Cable:

The daisy-chain cable uses standard DB25 to DB25 pin-to-pin configuration; if using a third party cable, please minimize the cable length to less than 30cm and use high quality, shielded cables.

Power Supply

- AC 100-240V 50-60Hz

Operating Systems

- Windows® 9x/ NT/ 2000/ ME/ XP/2003, NetWare5.0, Linux®, Free BSD, Mac OSX, SUN

Computers

- PS/2 Based: PS/2 Keyboard and Mouse, VGA Monitor
- USB Based(KORAT-1716 only): USB Keyboard and Mouse, VGA Monitor

Note: KORAT-1701 support PS/2 based PC only. KORAT-1716 support PS/2 and USB based computers via optional HAMSTER-P and HAMSTER-U dongles, one dongle is required per computer.

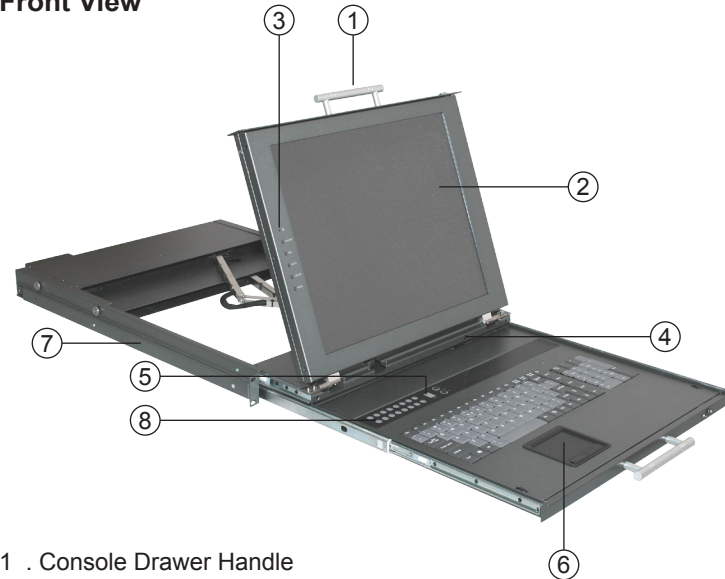
SPECIFICATIONS

	KORAT-1701	KORAT-1716
DisplayArea(mm)	337.92(H) x 270.34(V) (17.0" diagonal)	
Pixel Pitch	0.264(H) x 0.264(V)	
Number of Pixels	1280(H) x 1024(V)	
Contrast Ratio	(500:1)	
Display Color	16.2M	
Brightness(CD / m ²)	300(CD/ m ²)	
Input Signal	RGBAnalog	
Keyboard and Key Pad	106 key PS/2 keyboard with touch pad	
Power Supply	AC100-240V50-60Hz	
LCD On-Screen Display	Auto, Brightness, Contrast, Horizontal, Vertical, Color, OSDHP, OSDVP OSD Time, Language, Recall, Exit.	
Port Selection	OSD/Hot Key/Push button	
Computer Port Connector	HDDB15 Female(Keyboard · Mouse ·VGA)	
Computer Connections(Direct)	1 (VGA + PS/2 Keyboard and Mouse)	16 <small>(via optional Hamster CAT5 dongle, one unit required per PC)</small>
Computer Connections(Daisy chain)	1 (VGA + PS/2 Keyboard and Mouse)	256
Port LEDs	-	16
Port Switch Button	-	16
Temperature	0 - 40 deg .C in operting ; -20-60 deg. C in storage	
Humidity	0 - 80% RH, non-condensing	
Housing	Metal	
Size & Weight	439.2 x 554.6 x 44mm / 10 kg	439.2 x 554.6 x 44mm / 10.3 kg
Flash upgrade	-	Firmware upgradeable

Note : Specifications are subject to change without notice.

DISPLAY DIAGRAMS

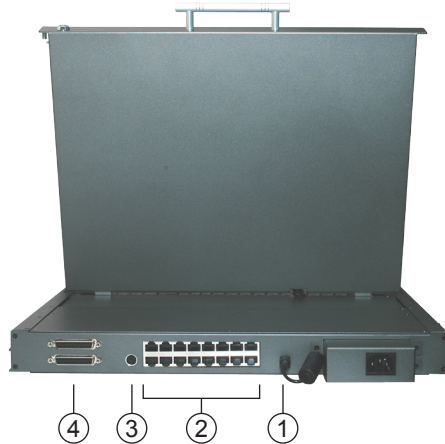
Front View



- 1 . Console Drawer Handle
- 2 . 17" LCD Display
- 3 . LCD Display Control (see the LCD Display Guide for details)
- 4 . Power Saving Switch
- 5 . LED Bank Display (KORAT-1716 only)
- 6 . Touchpad
- 7 . Rack Mounting Brackets
- 8 . Manual 1-16 Port selectors (KORAT-1716 only)

Rear View (KORAT-1701)

1. DC Power Input
2. Console VGA Port
3. Console PS/2 Keyboard Port
4. Console PS/2 Mouse Port

Rear View (KORAT-1716)

1. DC Power Input
2. PC Ports (RJ-45 connectors)
3. Firmware Upgrade Port
4. Daisy-Chain

INSTALLATION**Where to Place the Switch**

The enclosure of the KORAT Switch is designed for standalone or rack-mount configuration. The Switch is natively rack-mountable in a standard 1U (19") server rack. Rack-mount hardware is included with your switch for a sturdy rack installation.

Cautions and Warnings

Avoid placing cables near machines that create electrical noise such as fluorescent lighting, air conditioning equipment, etc.

Important Information

Before you begin, make sure that power to all the computers you will be connecting has been powered off.

To prevent damage to your installation due to ground potential difference, make sure that all computers on the installation are properly grounded. Failure to follow these instructions can result in damage to computers and / or the Switch.

Installing the Switch into a Server Rack

The KORAT series includes 2 adjustable sliding rack mount brackets for installation in 19-inch rack systems. The sliding brackets feature adjustable positions for rack depths of 22-36 inches.

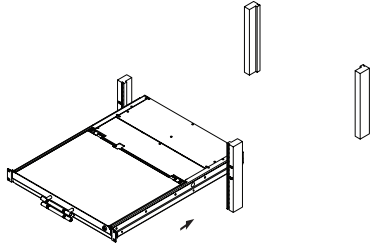
**Important Information**

Installing and or removing the Switch (module and chassis) improperly could void your warranty. If you are uncertain what to do please contact our technical support.

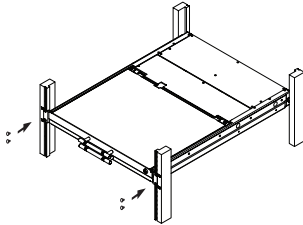
Hardware Installation

Please follow these simple steps to install the 15"/17" LCD drawer into a server rack:

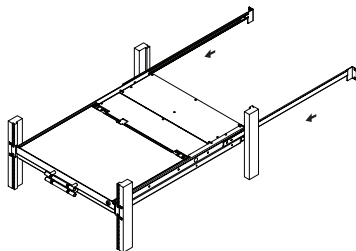
1. One person holds and installs the console into the rack.



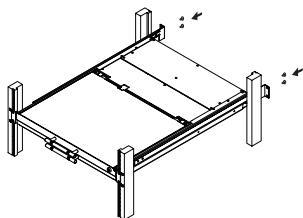
2. Adjust the height and the other person tightens the front screws.



3. Install hangers to both sides of brackets from the back.



4. Tightens the back screws.



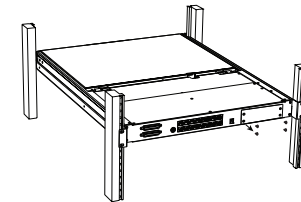
Connecting the Power Adapter

Attach the power cord to the back of the console and connect to a power source.

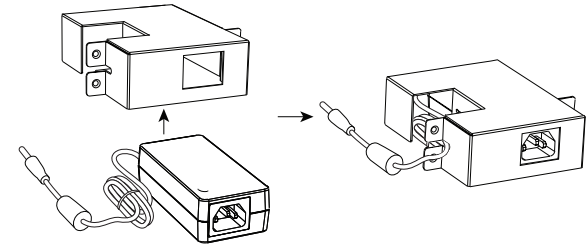
Power Adapter External Module Installation (Optional)

Please follow these simple steps to connect the power adapter with the external module (KORAT-1716 only).

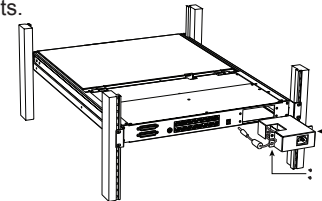
1. Loosen the screws and remove the back cover.



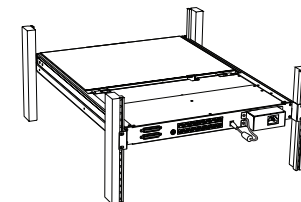
2. Install the power adapter to the external module and enwind the power cord as shown.



3. Install the power adapter external module to the back of the console. Fasten the screws on the side brackets.






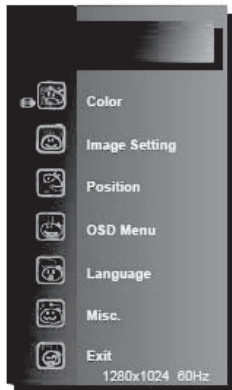
4. Connect the power cord to the DC Power Input. Your KORAT-1716 is now ready for use.





Panel Controls and Functions

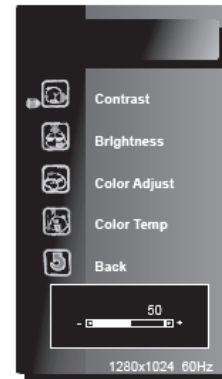
LCD FLAT PANEL DISPLAY Instruction Manual for Panel Controls and OSD Functions

Buttons	Features
ON/OFF	Powers ON/OFF the LCD panel. When powered on the  LED will light on.
SEL	Confirms the selection or changed value
AUTO	Normal Operation: automatically adjusts to optimal screen placement. Other Features: Scrolls  in a menu/function selection, or increases the value during adjustment
COLOR	Normal Operation: automatically adjusts to proper color (useful if screen is not displaying proper colors). Other Features: Scroll  in a menu/function selection, or decreases the value during adjustment
MENU	Serves two functions: 1) accesses the Main OSD menu 2) acts as Confirm & Exit button in Factory Mode and Color Adjust Mode (only)



Main OSD Menu

- Press the **MENU** button to bring up the OSD as illustrated on the left.
- Use the **AUTO** () and **COLOR** () buttons to scroll to the desired submenu from the list below:
 - Color** - settings for contrast, brightness, RGB levels, and color temp.
 - Image Setting** - settings for clock, phase, gamma, and sharpness.
 - Position** - settings for horizontal and vertical positions.
 - OSD Menu** - settings for OSD positions and OSD display timer
 - Language** - settings for 7 different languages (English, French, German, Spanish, Traditional Chinese, and Simplified Chinese.)
 - Misc.** - settings for signal source, reset, and factor mode.
 - Exit** - exits the main OSD menu.
- Press the **SEL** button to enter the selected submenu.



Color















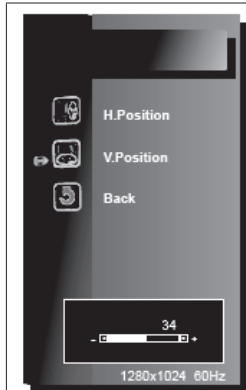
- Use the **AUTO** () and **COLOR** () buttons to scroll to the desired selection from the list below:
 - Contrast** - adjusts LCD Contrast level (0~100)
 - Brightness** - adjusts LCD Brightness level (0~255)
 - Color Adjust** - this option is disabled by default, as the monitor is factory set to default color temp of 9300K. To enable this feature and be able to manually adjust the R,G or B values, you would need to first go to the Color Temp submenu and change to USER option. After that, you can custom adjust LCD RGB Color level as indicated below:
Red : (0~255) Green : (0~255) Blue : (0~255)
Once you enter the RGB submenu, use **AUTO** () and **COLOR** () buttons to change the respective values, **SEL** to confirm and exit back to RGB submenu, and press **MENU** to exit back to the **Color** submenu. Then please skip to step 6.
 - Color Temp** - adjusts LCD Color Temp level
9300K : Default Color Temp
6500K : Default Color Temp
5500K : Default Color Temp
 - sRGB : Default Color Temp
 - USER** : Default Color Temp (only with this setting can you manually adjust the RGB levels in the **Color Adjust** submenu.)
 - Back** - returns to the main OSD menu
- Press the **SEL** button to enter/confirm selection.
- Use the **AUTO** () and **COLOR** () buttons to adjust the values.
- Press the **SEL** button to execute the settings in the menu.
- Use the **AUTO** () and **COLOR** () buttons to select to **Back**.
- Press the **SEL** button to confirm and go back to the main OSD menu.



Image Setting

- Use the **AUTO** () and **COLOR** () buttons to scroll to the desired selection from the list below:
 - Clock** - adjusts LCD display width level (0~100)
 - Phase** - adjust LCD display Phase level (0~63)
 - Gamma** - adjust LCD display Gamma level (0~3)
 - Sharpness** - adjust LCD display Sharpness level (0~4)
 - Back** - returns to the main OSD menu
- Press the **SEL** button to enter/confirm selection.
- Use the **AUTO** () and **COLOR** () buttons to adjust the values.
- Press the **SEL** button to execute the settings in the menu.
- Use the **AUTO** () and **COLOR** () buttons to select **Back**.
- Press the **SEL** button to confirm and go back to the main OSD menu.



Position

- Use the AUTO (↑) and COLOR (↓) buttons to scroll to the desired selection from the list below:
 - **H.Position** - adjusts LCD display horizontal level (0~200)
 - **V.Position** - adjusts LCD display vertical level (0~58)
 - **Back** - returns to the main OSD menu
1. Press the **SEL** button to enter/confirm selection.
 2. Use the AUTO (↑) and COLOR (↓) buttons to adjust the values.
 3. Press the **SEL** button to execute the settings in the menu.
 4. Use the AUTO (↑) and COLOR (↓) buttons to select **Back**.
 5. Press the **SEL** button to confirm and go back to the main OSD menu.



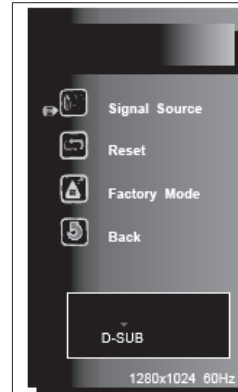
OSD Menu

1. Use the AUTO (↑) and COLOR (↓) buttons to scroll to the desired selection from the list below:
 - **OSD H.Pos.**- OSD horizontal level (0~200)
 - **OSD V.Pos.** - OSD vertical level (0~200)
 - **OSD Timer** - OSD Display Timer(0~60)
 - **Back** - returns to the main OSD menu
2. Press the **SEL** button to enter/confirm selection.
3. Use the AUTO (↑) and COLOR (↓) buttons to adjust the values.
4. Press the **SEL** button to execute the settings in the menu.
5. Use the AUTO (↑) and COLOR (↓) buttons to select **Back**.
6. Press the **SEL** button to confirm and go back to the main OSD menu.



Language

1. Use the AUTO (↑) and COLOR (↓) buttons to scroll to the desired language. 7 languages are supported:
2. from the list below:
 - **(English)**
 - **(French)**
 - **(Deutsch)**
 - **(Español)**
 - **(Traditional Chinese)**
 - **(Simple Chinese)**
 - **(Japanese)**
 - **Back** – returns to the main OSD menu
3. Press the **SEL** button to enter/confirm selection and exits back to the main OSD menu.



Misc

1. Use the AUTO (↑) and COLOR (↓) buttons to scroll to the desired selection from the list below:
 - **Signal Source** - select Video source(D-SUB)
 - **Reset** - resets to factory default setting
 - **Factory Mode** - accesses factory setting mode
 - **Back** - returns to the main OSD menu
2. Press the **MENU** button to enter/confirm selection.
3. Use the AUTO (↑) and COLOR (↓) buttons to adjust the values.
4. Press the **SEL** button to execute the settings in the menu.
5. Use the AUTO (↑) and COLOR (↓) buttons to select **Back**.
6. Press the **SEL** button to confirm and go back to the main OSD menu.



Factory Mode*

1. Use the AUTO (↑) and COLOR (↓) buttons to scroll to the desired selection from the list below:
 - **Auto Color**
 - **Reset**- reserved for future use; has no function right now
 - **ADC Offset**
 - **ADC Gain**
 - **9300K**
 - **6500K**
 - **5800K**
 - **sRGB**
 - **User**
 - **Brightness**
 - **Auto Config**
 - **Exit**
2. Press the **SEL** button to enter/confirm selection.
3. Use the AUTO (↑) and COLOR (↓) buttons to go to R, G, or B selections.
4. Press the **SEL** button to confirm selection.
5. Use the AUTO (↑) and COLOR (↓) buttons to adjust the values.
6. Press the **SEL** button to enter/confirm changed values.
7. Press the **MENU** button to exit to Factory Mode menu.
8. Use the AUTO (↑) and COLOR (↓) buttons to select **Exit**.
9. Press the **SEL** button to confirm and go back to the main OSD menu.

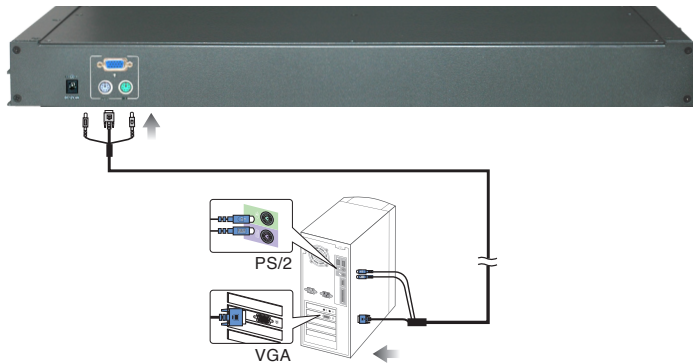
*Note:

1. Factory Mode is only available in English language.
- Settings in the Factory Mode should NOT be changed unless done by authorized trained personnel or experienced professionals.

SINGLE SWITCH INSTALLATION

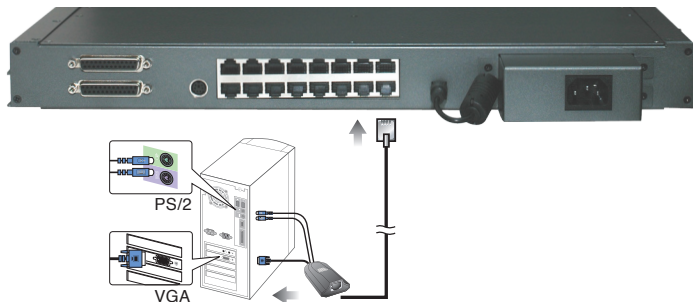
Connecting the Computers (KORAT-1701)

1. Power off the computer you wish to connect.
2. Using the supplied Console Cable Kit, connect one end of the VGA, PS/2 keyboard, and PS/2 mouse connectors to the rear console VGA, PS/2 keyboard, and PS/2 mouse ports of the KORAT-1701, respectively.
3. Connect the other end of the Console Cable Kit to the VGA, PS/2 keyboard, and PS/2 mouse port of the computer.



Connecting the Computers (KORAT-1716)

1. Power off all computers.
2. Using standard CAT5E Cable, connect one end of the cable to user Port 1 on the rear of the switch. Connect the other end of the cable to the CAT5 (RJ-45) port of the Hamster CAT5 Dongle (PS2 dongle P/N: Hamster-P ; USB dongle P/N: Hamster-U)
3. Connect the keyboard, mouse and video of the Hamster CAT5 Dongle to the computer you are installing.
4. Repeat steps 2 and 3 for each additional computer you wish to connect.



- Note:**
1. The use of CAT5E cabling allows computers to be placed at a maximum distance of 30m (100 feet) away. Performance and VGA quality may degrade beyond this distance.
 2. Signal transmission cannot pass through network hubs or switches as data signals are not transmitted in packets. Instead patch cables, patch panels and the alike can be used to channel data traffic.
 3. For the KORAT-1716 connection diagram, only the PS/2 connection is shown. USB connection is similar except that only one USB port is needed for both USB keyboard and USB mouse.

Connecting the Power Supply (KORAT-1701 and KORAT-1716)

1. Connect the power cord to the power jack on the rear of the Switch.
Then plug the other end of the power cord into an available power outlet.
2. Power ON your computers.

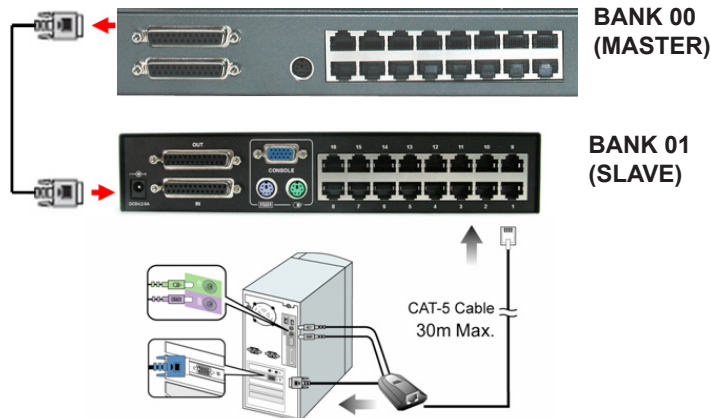
MULTIPLE STAGE INSTALLATION (KORAT-1716)

Daisy-chaining

For greater expansion capability of your installation, the Black CAT5 KVM Switch is designed for 15 levels of daisy-chaining. Unlike Cascading, which uses a KVM switch's CPU ports to connect to a slave switch, Daisy-chaining uses dedicated daisy-chain ports. On an installation with 15 daisy-chained switches, a system administrator can control up to 256 computers.

To set up a Multiple Level Installation, do the following;

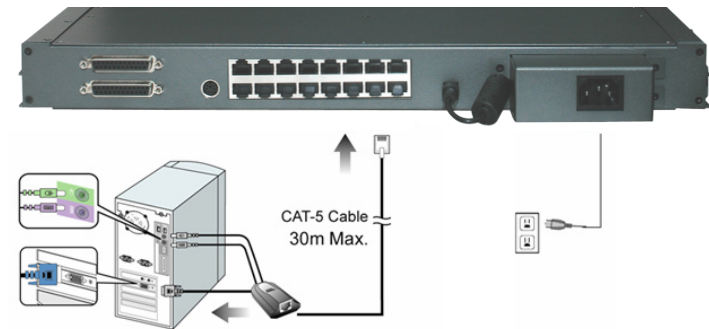
1. Power off all computers and connected devices.
2. Using Black CAT5's daisy-chain cable set, connect the Chain Out port of the KORAT-1716(Master switch) to the Chain In port of the Black CAT5 KVM switch you are installing.
3. Using standard CAT5E Cable, connect one end of the cable to user Port 1 on the rear of the switch. Connect the other end of the cable to the RJ-45 port of the Hamster CAT5 Dongle (P/N: Hamster-P / Hamster-U).
4. Connect the keyboard, video and mouse connectors of the Hamster CAT5 Dongle to the computers you are installing.
5. Repeat the above steps for any other additional Black CAT5 switches you wish to add to the daisy-chain installation.



- Note:**
1. The use of CAT5 cabling allows computers to be placed at a maximum distance of 30m (100 feet) away. Performance and VGA quality may degrade beyond this distance.
 2. Signal transmission cannot pass through network hubs or switches as data signals are not transmitted in packets. Instead patch cables, patch panels and the alike can be used to channel data traffic.
 3. Only the PS/2 connection is shown on the connection diagram. USB connection is similar except that only one USB port is needed for both USB keyboard and USB mouse.

Connecting the Power Supply

1. Connect the supplied power cord to the KORAT's power jack and plug the other end of the power cord into an available power outlet.
2. Connect the power adapter to the Black CAT5's power jack and plug the power adapter into an available power outlet. Do the same for all other connected switches.



3. Power up the installation in turn. Power ON each Switch starting with the KORAT Master switch, in each case wait for the BANK ID to display before powering on the next.
4. Perform a manual reset of the "Master" KVM switch by simultaneously pressing for port 1 and port 2 simultaneously selectors, located on the front panel. All port LEDs of the "Master" switch will flash green for reset confirmation.
5. Power ON all computers.

Confirmation Procedure

Once all computers are powered on, the switch emulates both mouse and keyboard signals on each port allowing your computer to boot normally without errors.

To make sure your daisy-chain installation was successful, do the following:

1. Press **[SCROLL LOCK]** twice and enter your 4 digit port ID code (refer to Hot Keys on p.15 for details).
For example: **[SCROLL LOCK], [SCROLL LOCK], "0101"**, displays PC1's screen.
2. Check to see that the keyboard, monitor, and mouse are working normally. Proceed to do this with all occupied ports to verify that all computers are connected and responding correctly. If you encounter an err, check your cable connections for that computer and reboot.

Keyboard / Mouse Reset

If the keyboard and or mouse stop responding, perform a manual reset and reboot. To reset, simultaneously press both Port 1 and Port 2 selectors simultaneously , located on the front panel of the KORAT-1716.

OPERATION

Hot Plugging

The KORAT-1716's integrated Black CAT5 features hot plugging where by computers can be added or removed without shutting down the Switch. When hot plugging console ports (keyboard, monitor, and mouse) if you experience a problem after removing and adding a new mouse, perform a manual reset by pressing Port 1 and 2 selectors of KORAT-1716's front panel. Should the problem continue after performing a system reset, restart the computer/s in question.

Powering Down and Restarting

Powering down the KORAT-1716 and/or attached Switches will not affect the computers of your installation. On restarting the KORAT-1716 and/or attached Switches, operator control is regained immediately. To replace a Switch, simply do the following:

1. Power down.
2. Remove the cables and plug them into the new switch.
3. Power On.

Access and Control

Controlling your computers with the KORAT-1716's integrated Black CAT5 KVM switch couldn't be easier. The Black CAT5 allows you to access the computers using three simple methods:

- **Manual Selectors**
- **Hot Keys**
- **OSD (On Screen Display) Menu**

Manual Switching

You can directly select any single computer or access any connected Bank (↑ / ↓) by using the convenient direct-access selector located on the front panel of the KORAT-1716 Rack Mount Console with integrated Black CAT5 KVM Switch. Each port switch has a corresponding LED for easy status monitoring. A Green LED indicates current port selection (Selected). A Red LED light indicates a port is not selected but the connected computer is powered and ready (Online). The KORAT-1716 is also equipped with a seven segment LED display for BANK identification when daisy-chaining.

HOT KEYS

Port Identification

Each computer in an Black CAT5 installation has a unique port ID. You can directly switch the KVM focus to any computer by entering the switch port number and the BANK number (for daisy-chained installations). Each is assigned a two digit numeric ID.

BANK Identification

Daisy-chained switches are referred to as slaves or BANKS and assigned a location ID. For example, the console keyboard, monitor and mouse that connect to the Master switch has a BANK ID of “0.”. The decimal point denotes the Master switch.

If, for example, a user selects BANK 2 as the new Master Switch then the BANK ID displays “2.”.

(Note: a BANK ID succeeded by a decimal point denotes Master switch status.)

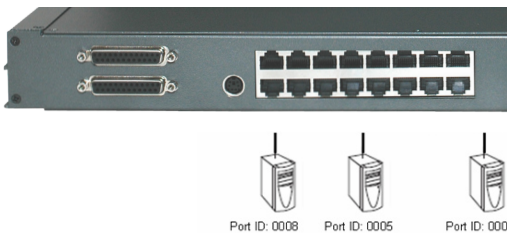
Invoking Hot Key Mode

All Hot key operations begin with invoking the Hot Key mode. Simply invoke the Hot Key mode by pressing; **[SCROLL LOCK], [SCROLL LOCK]** within two seconds.

Single Switch Installation

- The BANK number (Y) is the first two digit number that identifies the Switch’s position. In a single switch installation the BANK number is always “00”.
- The Port number (X) is a two the two digit number (preceded by the BANK number) that identifies the port on the Black CAT5 switch that the computer is connected to.

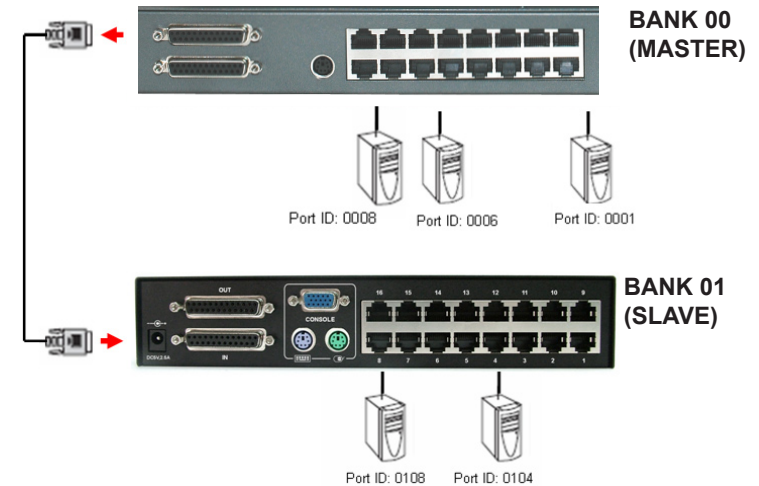
For example, a computer connected to **Port 8** has the numeric ID of 0008.
(Note: the BANK number always precedes the Port number.)



Daisy-chained Installation

- The BANK number (Y) is the first two-digit number that identifies the Switch’s position in a daisy-chained installation.
- The Port number (X) is a two-digit number that identifies the port on the KVM switch that the computer is connected to.

For example, a computer connected to ‘**Port 8**’ of ‘**BANK 6**’ has the numeric ID of **0608**. (Note: the BANK number always precedes the Port number.)



Note: The above working diagram represents a KORAT-1716 daisy-chained with a single.

Selecting the Active Port

Directly switch the KVM focus to any computer by entering the BANK number and the Port number:

For example, to access the computer connected to Master, port 8, press: **[SCROLL LOCK],[SCROLL LOCK], “0008”**

For example, to access the computer connected to Bank 1, port 4, press: **[SCROLL LOCK], [SCROLL LOCK], “0104”**

Hot Key Configuration

Reset PC Name

This function resets PC Name settings to default values.

Quick View Scan Mode

The Quick View Scan feature allows you to monitor the activity of the connected computers at regular intervals so that you can monitor the computer activity without having to take the trouble of switching yourself. This time interval can be changed as desired.

- Note:**
1. The interval between these two keys should be no more than 0.5 seconds. Once the scanning begins, it continues until you press any key to exit Quick View Scan Mode.
 2. A Port LED will flash indicating that the connected computer is under Auto Scan mode.

Setting the Quick View Scan Time

The scan time or the time the Switch spends on each port can be changed using either Hot Keys or OSD.

Password Security – Locking Server Access

Administrators can set a unique password to restrict access to computers connected to the Black CAT5 switch.

Changing your Password

To change your password, do the following;

1. [SCROLL LOCK] key twice within two seconds.
2. Key in [R]
3. Enter old password (up to 6 characters).

ENTER PIN:

4. Enter the new password (up to 6 characters).

NEW PIN:

5. Re-enter the new password for confirmation.

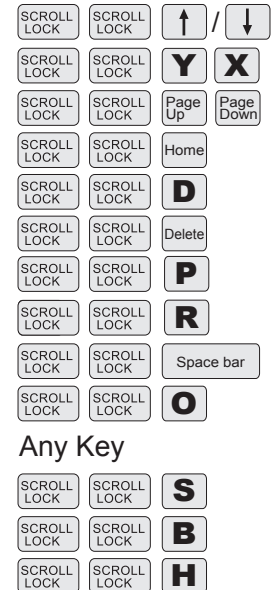
AGAIN PIN:

Hotkey Beeper Confirmation

The beeper function can be turned on and off as desired.

HOT KEY SUMMARY COMMANDS

- Switch Ports
- Switch Bank & Port
- Switch Banks
- Return to Master KVM
- Set OSD Display Time
- OSD Default Setting
- Activate Password
- Change Password
- Enable OSD Menu
- Enable Quick View Scan
- Disable Quick View Scan
- Set Quick View Scan
- Time Turn ON/OFF Beeper
- Change Default Hot Key



- Note:**
1. Where X = Port 01~16, Y= Bank 00~15
 2. The [SCROLL LOCK] key must be pressed within 2 seconds.
 3. The "Shift" key can be another Hot Key choice.
 4. You will find that after the KVM unit switches to another computer, there is a mouse- keyboard delay of 1-2 seconds. This is normal and ensures re-synchronization of the console and connected computers.

Keyboard Emulation (Hamster-U ONLY)

Sun Keyboard

When the Right Control key (RCtrl) is used with combination keys (see below), a standard PS/2 (101/104) key keyboard can emulate the functions of a Sun keyboard. Please refer to the corresponding functions shown in the table below.

PS/2 Keyboard	Sun Keyboard
[Ctrl] 1	
[Ctrl] 2	
[Ctrl] 3	
[Ctrl] 4	
[Ctrl] [F1]	Stop
[Ctrl] [F2]	Again
[Ctrl] [F3]	Props
[Ctrl] [F4]	Undo
[Ctrl] [F5]	Front
[Ctrl] [F6]	Copy
[Ctrl] [F7]	Open
[Ctrl] [F8]	Paste
[Ctrl] [F9]	Find
[Ctrl] [F10]	Cut
[Ctrl] [H]	Help
	right-◆
	Left-◆
	Compose
Right [Alt]	Alt Graph
Left [Alt]	Alt

Note: For the above Control key combinations, press and release the Right Control key ([Ctrl]), followed by the corresponding activation key.

Mac Keyboard

A compatible PS/2 (101/104) key keyboard can emulate the functions keys of a Mac keyboard. The table below shows the keyboard emulation mappings.

PS/2 Keyboard	Mac Keyboard
[Ctrl] [4]	
[Print Screen]	F13
[Scroll Lock]	F14
[Pause Break]	F15
Right	Right
Left	Left
Right [Alt]	Right [Option]
Left [Alt]	Left [Option]

Note: For the above Control key combinations, press and release the Right Control key ([Ctrl]), followed by the corresponding activation key.

OSD OPERATION

The On Screen Display (OSD) is an intelligent menu system designed to help administrators set up and easily access and control a multiple server installation. The menu driven interface consists of a main Overview menu and an Administrative sub-menu from which users can perform multiple tasks from naming servers to configuring operations.

The superimposed OSD overlay screen is generated by the Switch and does not affect your computers or software in any way.

OSD Overview Menu

The main On Screen Display (OSD) menu can be accessed by doing the following:

1. Press the [SCROLL LOCK] key twice followed by the "Space Bar".

The OSD overlay screen appears, as below:

OVERVIEW		
NAME	PWR	PORT
1 COMPUTER 1		0.1
2 COMPUTER 2		0.2
3 COMPUTER 3		0.3
4 COMPUTER 4		0.4
5 COMPUTER 5		0.5
6 COMPUTER 6		0.6
7 COMPUTER 7		0.7
8 COMPUTER 8		0.8
HOME: MASTER	ENTER-SELECT	
↑/↓ UP/DN	INS: RENAME	
SPACE: ADMIN	ESC-EXIT	
PG UP/DN: NEXT/BANK	SCREEN	

Note: When Hot plugging computer ports you must manually 'refresh' (exit and re-enter) the OSD menu to display the new status information of the corresponding port.

The OSD Overview Menu displays a list of connected computers, controls and function keys as well as symbols that refer to the status of each computer.

Navigation

Use the following to navigate through the OSD menu:

- To escape from the OSD menu or sub-menu, press the [Esc] key.
- To move up and down through the screen list use the Up / Down arrows.
- Move the highlight bar to the desired location and press [Enter] to activate a port

OSD Main Menu Functions

This section provides details on the use of the following OSD functions; HOME-MASTER, UP/DOWN, SPACE-ADMIN, ENTER, INS and ESC. From the main OSD mode, the following OSD functions can be accessed:

HOME-MASTER

To return the KVM focus to the Master switch's first active port press "Home" from the keyboard.

UP / DOWN

To select any computer at the same KVM level, move the highlight bar using the ↑/↓ arrow keys and press [Enter].

(Pg UP/Down)

To scroll through the Previous/Next BANK screen list.

(INS): RENAME

Press the "Insert" key to name each computer by port (up to 15 characters).

(ENTER)

To confirm a selection and save the content input, press [ENTER].

OVERVIEW		
NAME	PWR	PORT
1 COMPUTER 1		0.1
2 COMPUTER 2		0.2
3 COMPUTER 3		0.3
4 COMPUTER 4	☀	0.4
5 COMPUTER 5		0.5
6 COMPUTER 6	☀	0.6
7 COMPUTER 7		0.7
8 COMPUTER 8	☀	0.8
HOME:MASTER	ENTER-SELECT	
↑/↓UP/DN	INS:RENAME	
SPACE:ADMIN	ESC-EXIT	
PG UP/DN:NEXT/BANK	SCREEN	

Accessing Computers of the Master Switch

1. Press the [SCROLL LOCK] key twice followed by the "Space Bar".
2. Move the highlight bar (1-8 or 9-16) to a connected computer designated by the power symbol ☀ .
3. Press [ENTER] to access to the selected computer.

OVERVIEW		
NAME	PWR	PORT
1 COMPUTER 1		0.1
2 COMPUTER 2		0.2
3 COMPUTER 3		0.3
4 COMPUTER 4	☀	0.4
5 COMPUTER 5		0.5
6 COMPUTER 6	☀	0.6
7 COMPUTER 7		0.7
8 COMPUTER 8	☀	0.8
HOME:MASTER	ENTER-SELECT	
↑/↓UP/DN	INS:RENAME	
SPACE:ADMIN	ESC-EXIT	
PG UP/DN:NEXT/BANK	SCREEN	

Note: OSD display disappears after [ENTER] is pressed.

Accessing Daisy-chained Computers

1. Press the [SCROLL LOCK] key twice followed by the "Space Bar".
2. Press [Page Up] / [Page Down] to access the required BANK.
3. Move the highlight bar to select a connected computer designated by the ☀ 'power symbol' and press [ENTER].

OVERVIEW		
NAME	PWR	PORT
1 COMPUTER 1		1.1
2 COMPUTER 2		1.2
3 COMPUTER 3		1.3
4 COMPUTER 4	☀	1.4
5 COMPUTER 5		1.5
6 COMPUTER 6		1.6
7 COMPUTER 7		1.7
8 COMPUTER 8		1.8
HOME:MASTER	ENTER-SELECT	
↑/↓UP/DN	INS:RENAME	
SPACE:ADMIN	ESC-EXIT	
PG UP/DN:NEXT/BANK	SCREEN	

Note: The Black CAT5 series is designed for 15 levels of daisy-chaining only.

(SPACE) (SPACE) - ADMIN

To access the Administration sub-menu press **[Space Bar]**, **[Space Bar]** from the main OSD menu. (See next section for details.)

(ESC)

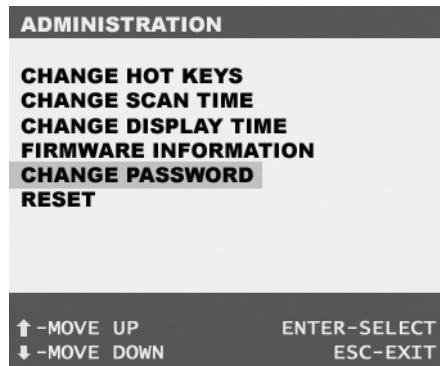
To exit the current OSD menu, press **[ESC]**.

OSD Administration Sub-Menu

This section provides details on configuring default Hot keys to setting up user password access.

To access the Administration sub-menu complete the following:

1. Press **[Space Bar]**, **[Space Bar]** from the main OSD menu (see above).
The OSD overlay screen appears.



OSD Function	Description
CHANGE HOT KEYS	Changes the default HOT Key option (Scroll Lock <=> Shift)
CHANGE SCAN TIME	Quick View Scan allows users of large installations hands-free automatic scanning and viewing of all connected ports for a selected time interval. You may choose 7, 15, 30, or 60 seconds.
CHANGE DISPLAY TIME	Changes the amount of time the OSD menu is displayed on-screen and also specifies the amount after making a port selection. You may choose 7, 15, 30, or 60 seconds.
CHANGE PASSWORD	Modify and/or delete user passwords (up to 6 characters)
RESET	Resets OSD function setting to default values (server names designated by the administrator are NOT affected). Perform an OSD Reset when Daisy-chaining or when keyboard / mouse inactivity is experienced. NOTE: Pressing [SCROLL LOCK] , [SCROLL LOCK] , [Delete] will reset the OSD to its factory default settings.

FIRMWARE UPDATES

Firmware upgrades enable your KVM switch to maintain consistent compatibility with the latest devices and computers. Firmware upgrades are free for the life of your KORAT-1716's integrated Black CAT5 KVM switch. Refer to the Windows flash upgrade instructions below or visit us at <http://www.BlackCAT5KVM.com> for the latest upgrade software, information and support.

To update the firmware, you will need the following items:

1. A separate computer running Windows 95/98/ME/2000 or XP.
This computer must not be connected to the CPU ports on your KVM switch.
2. An available USB port on the computer.
3. A custom Flash cable (USB type A to mini-USB). Requires separate purchase.
4. Firmware update files available at <http://www.BlackCAT5KVM.com>.

Setting Up

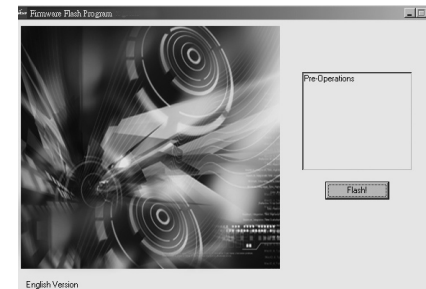
To setup for the flash upgrade, do the following:

1. Unplug all computers and or KVM switches connected to your KORAT-1716's integrated Black CAT5 KVM switch.
2. Use a computer that is not connected to your KVM computer ports.
3. Connect the power cord to the power jack of the KVM switch. Then plug the power cord into an available power outlet.
4. Using a Flash cable (USB type A to mini-USB)* to connect to an available USB port on your computer. Take the other cable end and connect it to the FLASH port (mini-USB) on the rear of the KVM switch.

* flash cable sold separately

Starting the Upgrade

1. Execute the firmware upgrade program
2. The firmware upgrade "Welcome" screen appears.
3. Click "Flash" to perform the upgrade.



4. Click "Close" to Exit the firmware upgrade utility.

