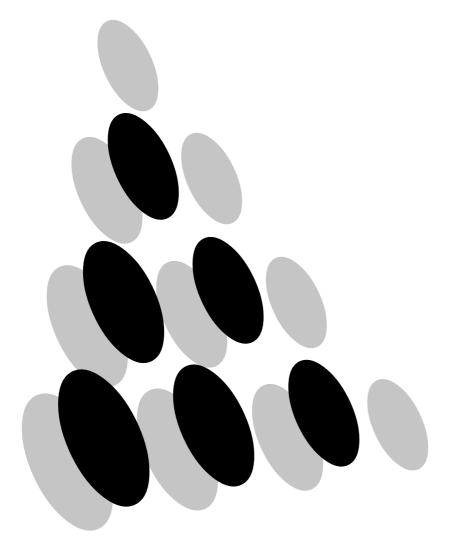
SERVIS[™] Drawer Multi 17inch

8-port KVM Switch Integrated Console Drawer [FD-1108MT]
16-port KVM Switch Integrated Console Drawer [FD-1116MT]

User's Manual





FCC WARNING:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

LAMP (S) INSIDE THIS PRODUCT
H9 CONTAIN MERCURY AND MUST
BE RECYCLED OR DISPOSED OF
ACCORDING TO LOCAL, STATE, OR
FEDERAL LAWS.

This device has been classified as a Class A product by VCCI (Voluntary Control Council for Interference by Information Technology Equipment). If you use this product in a domestic environment, it may cause radio interference, in which case the user may be held responsible for the cost of any required corrective action.VCCI-A

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1.Preface

Congratulations on your purchase of the server rack mountable Console Drawer (SERVIS™ DRAWER 17 inch). (hereinafter called "Console Drawer", "this product" or "this device")

This product will bring you great improvement of efficiency and server switching functionality of your workspace.

Space that was used in previous configurations can now be used more freely due to our compact sliding module design.

The 17-inch TFT monitor has a resolution of 1280 x 1024 dots with 16,770,000 colors.

Also, it is equipped with a keyboard and 3-button pointing device.

The Console Drawer can be used for PC/AT compatible and Sun server machines.

This user's manual applies to both the 8-port and 16-port KVM Switches. However, unless otherwise mentioned, all descriptions in this manual refer to the 8-port KVM Switch.

*KVM Switch: Keyboard Video Mouse Switch

1.1 Conventions

Symbols and terminology that are used in this manual are described below.



This symbol indicates the possibility of physical damage (to this product, or server) or physical injury, which may result through improper operation.



This logo indicates supplemental information, comments or hints

- Text that is preceded by a sequence of numbers (1, 2, etc.) means that the operations must be performed in the indicated order.
- References to important chapter titles and terminology are in brackets [].

1.2 Packing List

Make sure that the items in the following list were included in the shipping package.

Console Drawer

×1

Operation manual (this manual)

×1

We recommend keeping the box and packing material in which the Console Drawer was purchased. They may be required when moving it to another location. If something is missing from the package, contact your place of purchase or a Fujitsu sales person.

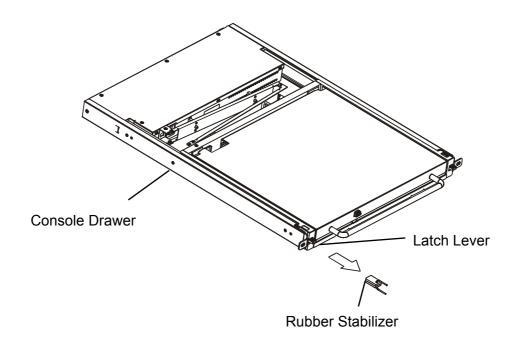


Please note the safety information in [Important Notices].

- 1. Unpack the Console Drawer and check that it has not been damaged in transit.
- 2. Remove the rubber stabilizer from the front left side of the Console Drawer.



The rubber stabilizer is inserted to prevent the Console Drawer from sliding when installing or moving it. Be sure to keep it after finishing the installation for when it needs to be used again.



Rubber stabilizer removal

2. Important Notices

This chapter contains cautions that must be taken when operating the Console Drawer and information related to safety. Carefully read this chapter to use the Console Drawer correctly.

2.1 Safety Information



Precautions

This device conforms to the safety regulations related to information processing equipment such as electronic office machines that are used in an office environment. If you have any questions please contact your place of purchase or a Fujitsu sales person.

- To prevent extreme bumping, shaking, vibration while moving the Console Drawer, please use the original shipping container or a similar box, in addition make sure if it fits well to the product for protection.
- During installation and before using the Console Drawer, carefully read [Installation] and the section about environmental conditions in [Technical Specifications] to use the Console Drawer correctly.
- Moving the Console Drawer from a cold environment to the installation location may cause condensation to occur. Before using the Console Drawer allow it to dry out completely and to reach the ambient temperature of the installation location.
- Make sure that the local power supply voltage is within the acceptable range of the Console Drawer. Make sure that the rated voltage meets the specifications of this device (Refer to [Technical Specifications] and the model plate on this device).
- The Console Drawer's power cable is specially certified. Do not connect it to anything other than a rack power outlet in order to avoid electric shocks and/or short circuits.
- Arrange the adequate area to have the plug quickly pulled out around the Console Drawer's power socket or the rack's power outlet.
- Lay all the cables so that they will not be damaged. Refer to the relevant sections in [Installation] when connecting and removing cables.
- Do not connect or remove any cables during thunderstorms.
- Do not allow foreign substances (such as necklaces or paperclips) or liquids inside the Console Drawer.
- In an emergency (such as: damage to the housing, parts or cables; or liquid or a foreign object has fallen into the Console Drawer) remove the power cable as soon as possible and contact your place of purchase or an authorized maintenance person.
- Do not disassemble or modify the Console Drawer for any purpose, which may cause electric shocks, or fire and so on. Only licensed engineers may repair the Console Drawer.
- Note that the corners of the open Console Drawer can be dangerous if bumped into.
 Always be careful when the Console Drawer is open.
- It is recommended that the Console Drawer be stowed away in the rack when it is not in use, or when other nearby servers or peripheral equipments are being used.
- Avoid using the keyboard when in poor health or for extended periods of time.
- Always hold the connector portion and do not jerk the cables when removing them.
- Avoid operating the Console Drawer with wet hands.
- Do not plug or unplug connectors with wet hands.

- Do not place such unnecessary items as cups on the top of the Console Drawer.
- Do not modify or repair the Console Drawer.
- Only licensed personnel may disassemble, remove or switch parts (such as power supply units) that bear a warning mark (such as a lightning bolt mark).
- Only the resolutions and refresh rates specified in [Adjusting the Monitor] may be set.
 Using settings other than those noted may damage the monitor. Contact your place of purchase or a Fujitsu maintenance person if you have any questions.
- To prevent interference it is necessary to adequately isolate the data cables connected to peripheral equipment.
- To cut off the power supply, unplug the power cable from the rack power outlet.
- Follow the instructions in the appropriate section in [Operation] when cleaning the server
- Keep this manual with the Console Drawer at all times.
- Do not use the Console Drawer as a stepladder or lean against it with it drawn out. Doing so may unbalance the rack, causing it to fall over.
- Some limited life components (such as the LCD, etc.) are included in this product. In cases of extended continuous use, the performance of these components is easily decreased
- To avoid damage to this equipment or personal injury, return console drawer to its closed position when not in use.

2.2 Moving Console Drawer



When moving the Console Drawer to a different location, use the box in which it was purchased or a box that protects the product from bumping and shaking. Do not unpack the Console Drawer until the move has been completed.

2.3 Disposal



This device consists of metal, plastic, electronic parts and so on. Some electronic components, such as LCD monitor, include lead. When it is disposed of, follow exactly the relevant government regulations, instructions and so on.

2.4 Safety Precautions and Limited Warranty Information

Fujitsu's Products are not designed for use in medical or life support appliances, devices, or systems where malfunction of a Product can reasonably be expected to result in a personal injury. The Product is designed, developed and manufactured as contemplated for general use, including, general office use, personal use, household use, and ordinary industrial use, but is not for use for high risks or dangers that could reasonably be expected to result in personal injury, or other loss including without limitation, nuclear application, aircraft flight control, air traffic control, mass transport control, medical life support system, or missile launch control in weapon system ("High Safety Required Use"). You should not use this Product without securing sufficient safety required for such High Safety Required Use. Purchaser and its customers using or selling Products for use in such applications do so at their own risk and agree to fully indemnify Fujitsu for any damages resulting in such improper use or sale.

Fujitsu Component Limited or its affiliates ("Fujitsu") warrants all Product against defects in materials and workmanship for a limited period not to exceed one (1) year from the date of delivery to Fujitsu authorized distributor or authorized system integrator ("Authorized Company"). Check with Fujitsu for such Authorized Company. Fujitsu's liability under this warranty is limited, at Fujitsu's sole discretion, to repairing, or replacing any component with new or like new components or parts, or replacing with a refurbished or alternative product, or issuing credit for the purchase price, if paid, for such Product that was defective at the time delivered to Purchaser, provided that Fujitsu will not be liable under this warranty unless: (i) Fujitsu is promptly notified in writing upon the discovery of defects by Purchaser; (ii) the defective unit is returned to Authorized Company, transportation charges prepaid by Purchaser; (iii) the defective unit is received for adjustment no later than one year following the date on which such Products were delivered by Fujitsu to Authorized Company; and (iv) Fujitsu's examination of such units shall disclose, to its satisfaction, that such defects have not been caused by misuse, neglect, improper installation, repair, alteration, accident, improper storage or other action or inaction beyond reasonable practice for such Product. This warranty shall be administered and returned to the party from whom Purchaser purchased Product which is an Authorized Company.

THE WARRANTY SET FORTH IN THIS SECTION IS IN LIEU OF, AND EXCLUDES, AND EACH PARTY HEREBY WAIVES, ANY OTHER REPRESENTATIONS, GUARANTEES AND WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL FUJITSU BE LIABLE TO PURCHASER FOR LOSS OF PROFITS, LOSS OF USE, COST OF SUBSTITUTE GOODS, OR CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND BASED UPON A CLAIM FOR BREACH OF WARRANTY OR OTHERWISE. FUJITSU'S WARRANTIES SHALL NOT BE ENLARGED, DIMINISHED, OR AFFECTED BY, AND NO OBLIGATION OR LIABILITY SHALL ARISE OR GROW OUT OF, SELLER'S RENDERING OF TECHNICAL ADVICE OR SERVICE IN CONNECTION WITH BUYER'S ORDER OR THE PRODUCTS FURNISHED HEREUNDER.

3. Installation

∴ CAUTION

Please note the safety information in [Important Notices].

3.1 Installing the Console Drawer (procedure for tapped guide rails)



Observe the specified environmental conditions when using the Console Drawer (See [Technical Specifications] for more information). Avoid dust, humidity and extreme temperatures. Installation may require two or more people in some situations. Be careful not to pinch your fingers or hands between the guide rails and the Console Drawer.

3.2 Installation Procedure

- 1. Insert the rear spacer studs of the guide rails into the holes in the rear rack pillars. Extend the guide rails to reach the inside of the front rack pillar. Fasten each guide rail with four screws, one into each of the top and bottom holes of both the front and rear spacers.
 - (Install the left and right guide rails at the same height.)
- 2. Extend the guide rails to reach the inside of the front rack pillar.

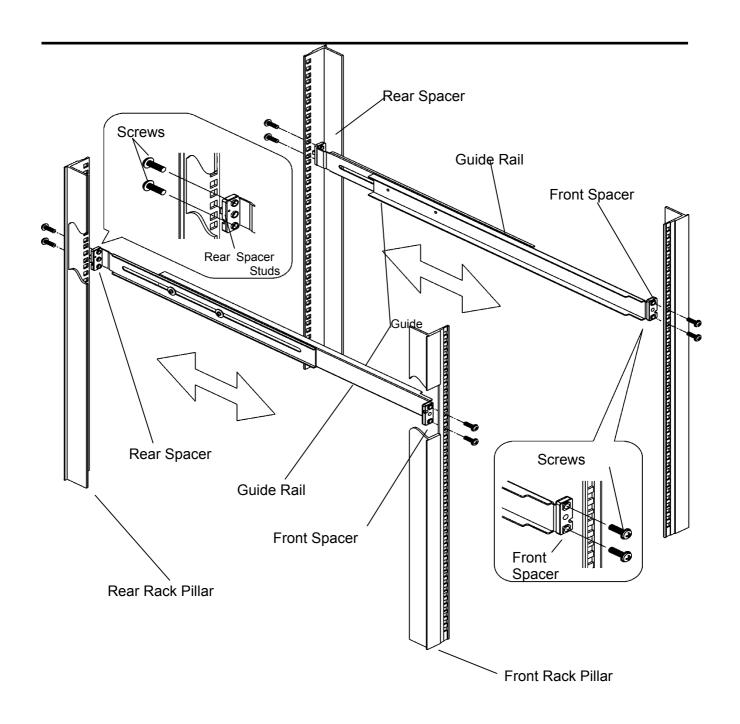
 Fasten each guide rail in place with two screws, one into each of the top and bottom holes of the front spacer. (Attach the guide rails inside the front/rear rack pillar so that the guides face inwards.)
- 3. Install the left and right guide rails at the same height.



Attach the guide rails so that they face inward and are open forward, ready to accept the Console Drawer.

Attach the guide rails inside the front/rear rack pillar.

See the "Installing the Guide Rails" diagram.



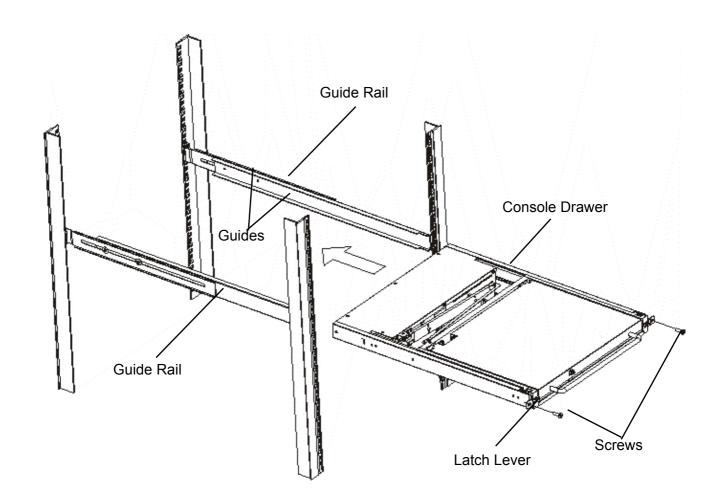
Installing The Guide Rails

4. Slide the Console Drawer into the front end of the guide rails.

Point

Be careful that the latch lever dose not come loose. If the latch lever comes loose the Console Drawer may slip. If the Console Drawer dose not slide easily into the guide rail or is too heavy, get one or more other people to help you lift and insert it.

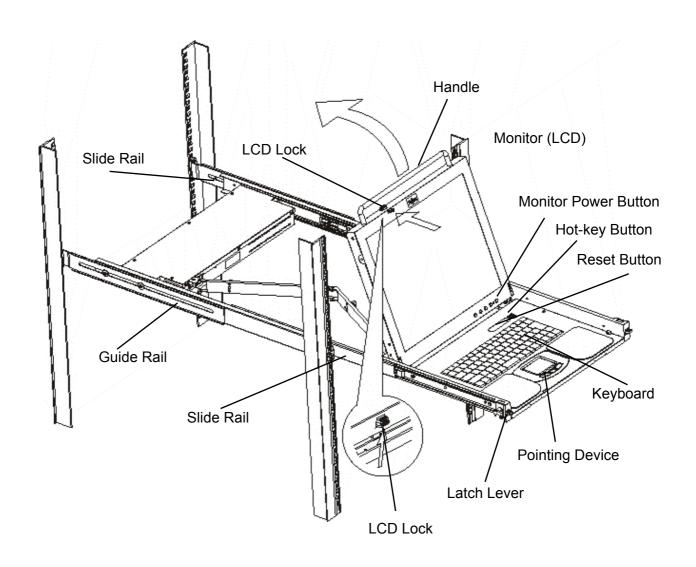
5. Push the Console Drawer in until it stops, then fasten with two screws, one on each side of the front of the Console Drawer.



Installing the Console Drawer

4. Names and Functions of Parts

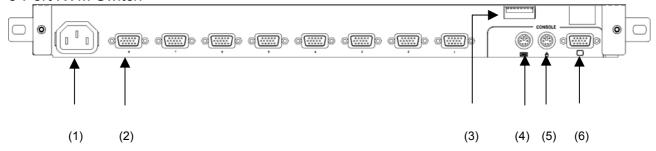
4.1 Overview



Opening the LCD

4.2 Rear Panel

8-Port KVM Switch



8-port KVM Switch Rear Panel

(1) Power cable connector

Connect power cable to power socket.

(2) Connectors for servers [1 through 8]

Connect each port (1 through 8) on this device to the relevant host's keyboard, mouse and monitor connectors with the special cable.

(3) DIP switches

Use for a variety of settings. Numbered from left side while facing the switches starting from 1, 2...8; up is on and down is off.

(4) Keyboard connector

Connect a PS/2 keyboard connector (purple).

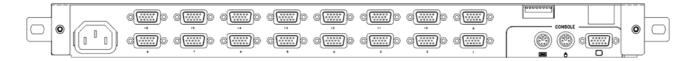
(5) Mouse connector

Connect a PS/2 mouse connector (green).

(6) Monitor connector

Connect a monitor.

16-Port KVM Switch



16-port KVM Switch Rear Panel

4.3 DIP Switch Settings

The factory default settings are as follows:

	1	2	3	4	5	6	7	8
ON	Z			2	Z	2		
OFF	Ш	Ш	Ш	Ш	Ш		Ш	

(*Note: the indicates the switch position)

DIP Switch Functions

SW No.	Function	ON state / OFF state
1	Hot Key Mode:	ON: enabled / OFF: disabled
	<ctrl>+<alt>+<shift> and</shift></alt></ctrl>	
	Hot-Key SW	
2	Hot Key Mode: Double <ctrl></ctrl>	ON: enabled / OFF: disabled
3	Hot Key Mode: Double <scroll< td=""><td>ON: enabled / OFF: disabled</td></scroll<>	ON: enabled / OFF: disabled
	Lock>	
4	Country Setting bit 1	(see following table)
5	Country Setting bit 2	(see following table)
6	Country Setting bit 3	(see following table)
7	Country Setting bit 4	(see following table)
8	Power Mode Setting	ON: the switch device is always ON.
		OFF: the switch device turns ON if any
		connected host is turned ON.

The country code (language) settings are as follows:

Country Setting	SW4	SW5	SW6	SW7
JPN	ON	ON	ON	ON
USA	ON	ON	ON	OFF
GBR	ON	ON	OFF	ON
GER	ON	ON	OFF	OFF
FRA	ON	OFF	ON	ON
ESP	ON	OFF	ON	OFF
SWE	ON	OFF	OFF	ON
POR	ON	OFF	OFF	OFF
TPE	OFF	ON	ON	ON
KOR	OFF	ON	ON	OFF
ITA	OFF	ON	OFF	ON
UNIX	OFF	ON	OFF	OFF
NOR	OFF	OFF	ON	ON
BEL	OFF	OFF	ON	OFF
DEN	OFF	OFF	OFF	ON

5. Connecting and Removing Cables



Read the Console Drawer manual before connecting the cables. Do not connect or remove the cables during a thunderstorm. When unplugging cables hold them by the plug, not the cable. Connect and remove cables in the following order.

5.1 Connecting Cables

1. Getting started

Then confirm that the power cable for each server is plugged into an electric outlet and that the power is off (Confirm connection (1)).

2. Connect the servers

- 2.1 When using one level KVM Switch (using only one switch device) It is possible to hook up a maximum of 8 servers.
 - 1. Connect the first server's keyboard, mouse connector and CRT connector with the special cable (connect (2)), next connect the switching device's Mini D-Sub 15 pin (female) to the special connector (black) (connect (3)). Use the fixing screws to hold the Mini D-SUB15Pin in place.
 - 2. Connect hosts 2 through 8 in the same manner.

3. Connect the console

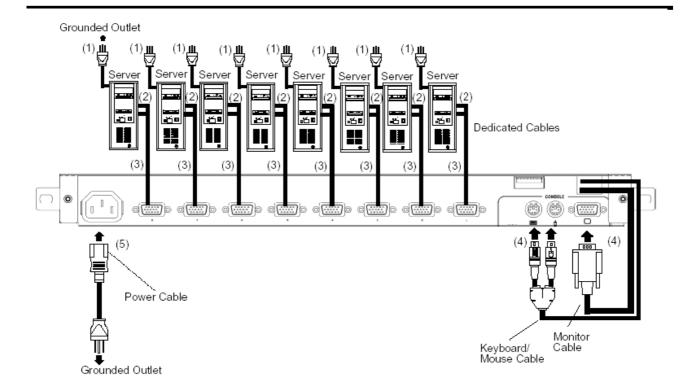
3.1 Connect the monitor cable and keyboard/mouse cable to the keyboard and mouse connectors (connect (4)). Note: **Do not connect the cables to the connectors marked with an X.**

4. Connect the power cable

4.1 Connect the power cable to the Console Drawer. Next, connect the power cable to an earthed power supply outlet.



When connecting the connector (Mini D-SUB 15Pin) for the monitor, use the fixing screws to securely connect the connector to the Console Drawer and server. Otherwise, images may be distorted.



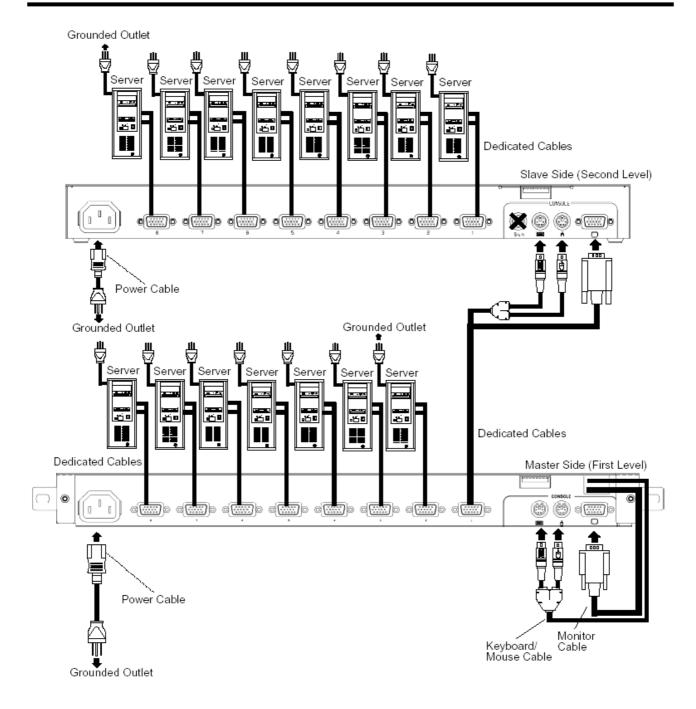
5. In the case of a cascaded connection (when KVM Switch is connected in a two-level connection)

Enable to connect max 64pcs of servers by cascade connection of Console Drawer when using 1pcs of 8 port KVM switch.

- 1. Connect the master switch device's ports one through eight to the second level of switch devices (called slaves), in the same way as for the [first level].
- 2. Next, use the special cables to attach the [keyboard/mouse] and [DISP] connector of the first level switching device (called master) to the [Keyboard], [Mouse], and [Console] connector on the console ports of the second level slave switch devices.
- 3. To increase the number of slaves, connect them in the same way as described in steps 1 and 2 above. <u>Do not connect slaves beyond the second level</u>. Third level connection does not work.



When the Console Drawer is used in a cascaded connection, the connector for the slave Console and for the master-side server can be connected using only the PS/2 special cable. Operation by a cable other than the special cable for the PS/2 cable will not be possible.



5.2 Removing Cables

Unplug the power cords, from the power outlets, of all the equipment that are affected, then remove each cable.

6.Operation



Pull the Console Drawer slowly toward you until the slide rails lock. If the slide rails are not locked, the Console Drawer can move unexpectedly. If they do not lock, the weight of the Console Drawer or any person leaning on the Console Drawer may cause it to move suddenly, and it may cause injury or damage to the product Be careful not to pinch your fingers when pulling or pushing on the slide module or opening and closing the LCD, etc.



Do not apply any significant force while the Console Drawer is pulled out, or while the Console Drawer is used, as there is a risk that the Console Drawer may be forced from the guide rails, damage the guide rails, or the rack may topple over, and cause personal injury or damage to the systems.

Do not apply force to the monitor screen, and not scratch it with any objects, or not bring magnetic objects near the Console Drawer. They can cause failure or damage to these products.



Note that the corners of the open Console Drawer can be dangerous if bumped into. Always Be careful of whatever operations are done close to the Console Drawer, while the Console Drawer is pulled out, because it is easy to be injured by hitting the Console Drawer accidentally.

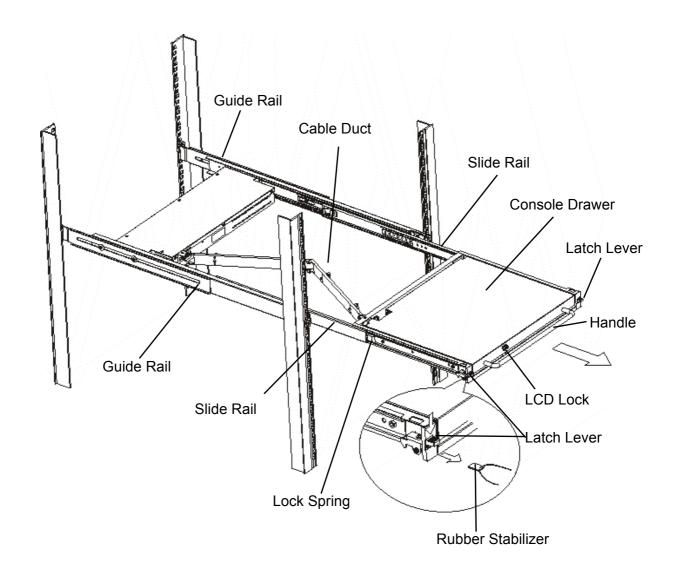
It is recommended that the Console Drawer be stowed away in the rack when it is not in use, or when other nearby servers or peripheral equipments are being used.

6.1 Operating the Console Drawer

- 1. Remove the rubber stabilizer when it is not already removed.
- 2. Push down the latch lever in left side of front end of the Console Drawer, and pull out the Console Drawer by the handle until the slide lock clicks into place.



Before pulling it out, make sure that the two screws on the front of the Console Drawer are tightly fixed to the rack.

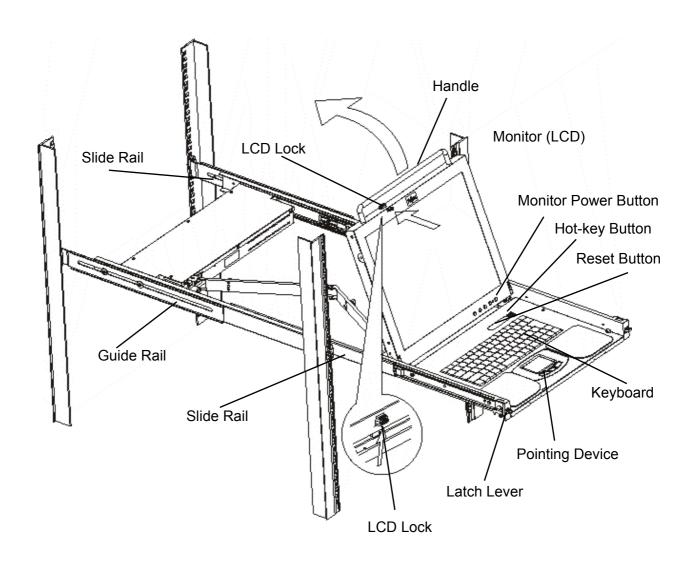


Pulling out the Slide Module

- 3. Push and raise the LCD lock on the left side of the handle, and then grasp the handle and open the top of the monitor.
- 4. Turn on the power by pushing the POWER button.
- 5. Turn on the power of each of the connected servers.

Point

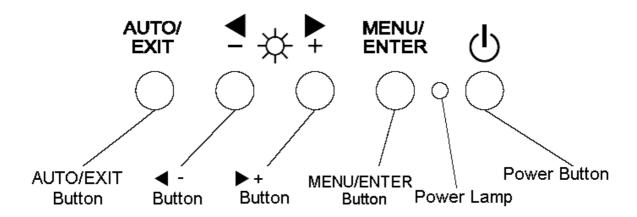
Open the monitor completely.



Opening the LCD

6.2 Monitor Adjustment

There are one LED and five Buttons at the upper right area of Monitor surface.



Power Indicator: It glows blue while the power of the monitor is turned on, and

glows orange while the monitor is in energy-saving mode. It is off

when the backlight power is off.

Monitor Power Button: Press this button to turn on the monitor power. When pressing

this button while power is turned on, the monitor is turned off.

MENU/ENTER Button: Press this button to indicate menu, select or enter the value and

so on.

+ Button: Press this to choose right-side item or increase value.

Button: Press this to choose left-side item or decrease value.

AUTO/EXIT Button: Press this to close the menu, cancel the adjustment items or

settings, or set to automatic setting.

Hot-key: Push this button to display the OSD for switching servers.

Point

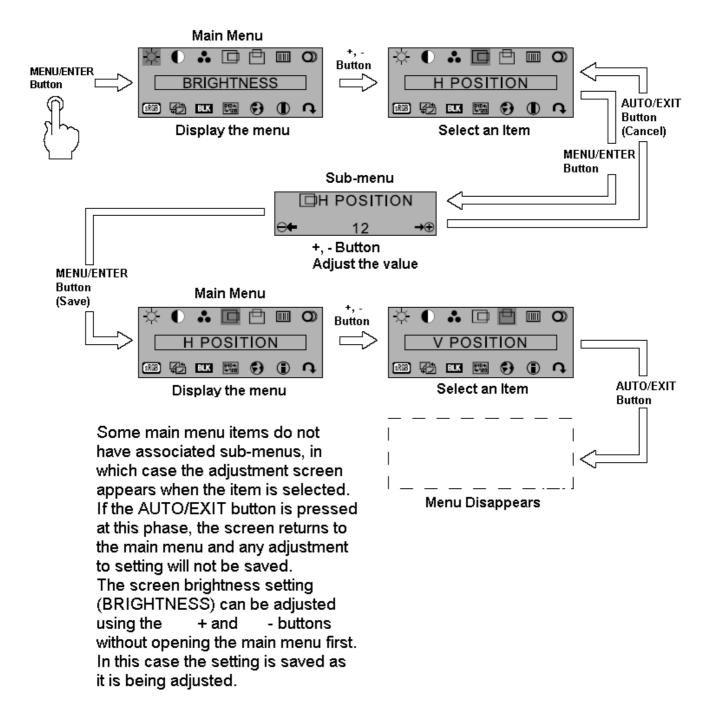
It is possible to directly adjust screen brightness by pressing the

→ + button or
→ - button when the menu is not displayed.

It is possible to perform automatic adjustment (position and focus) by pressing the AUTO/EXIT button when the menu is not displayed.

6.3 Basic Adjustment Procedure

The basic adjustment procedure is as follows:



6.4 Main Menu Items

Symbol	Item	Function
-\\	BRIGHTNESS	Adjusts the screen brightness.
	CONTRAST	Adjusts the screen contrast.
••	COLOR	Adjusts the screen color. Fixed values or individual color tones (red, green, blue) can be set.
	H POSITION	Adjusts the horizontal display position.
	V POSITION	Adjusts the vertical display position.
IIIII	CLOCK	Get rid of vertical striping (noise).
0	FOCUS	Get rid of horizontal noise and sharpens up blurred on-screen lettering.
sRGB	sRGB	Switches the sRGB functions on/off.
	GRADATION	Changes the contrast curve to change half tone image expression
BLK	BLACK LEVEL	Sets black color offset level at any value.
640 ← 120	TEXT MODE	Sets the DOS screen resolution. Be sure to set 720 x 400 when using English DOS.
②	LANGUAGE	Changes the displayed language. (English, German, Italian, French, Spanish)
(i)	INFORMATION	Shows the currently set values for the screen resolution, vertical frequency, etc. (not all settings are shown)
Q	RECALL	Reinstates the factory default values. READJUSTING Recalls all the factory default values. GEOMETRY Recalls the screen resolution, POSITION, CLOCK, and FOCUS default values. COLOR Recalls the BRIGHTNESS, CONTRAST, BLACK LEVEL, and COLOR default values.

6.5 Resolutions and Refresh Rates

Resolution	Horizontal frequency (kHz)	Vertical frequency (Hz)	Mode	
640 x 400	31.5	70	VGA 400 LINE	
	31.5	60	VGA Standard	
640 x 480	37.5	75		
	37.9	72		
720 x 400	31.5	70		
	35.2	56		
800 x 600	37.9	60		
000 x 000	46.9	75		
	48.1	72	VESA	
	48.4	60		
1024 x 768	56.5	70		
	60.0	75		
1280 x 1024	64.0	60		
1200 X 1024	80.0	75		
1152 × 000	61.9	66		
1152 x 900	71.8	76	Sun Composite	
1280 x 1024	71.4	67		

6.6 Caution: LCD display

Following cases are not considered as a failure mode, and the device can be used normally:

- During or soon after power-on, O/S boot-up, power-off, or O/S shut-down, the display position may shift, blink, or otherwise be disturbed.
- Any native resolution can be displayed in 1280 x 1024, full screen mode, by scaling
- function. In this case, letters may be blurred and the thickness of thin lines might be uneven. This is because the full-screen display is made by digital interpolation of the low-res output, not by physical magnification. This is not a display failure, and the device can be used normally.

Although there might be some dots or pixels that are always-off (black) or always-on (red, green or blue), this is a natural characteristic of LCDs and is within specification (it is not a defect), and you can use the device normally.

6.7 Keyboard Operation, LED Indicators and the Reset SW

By making use of the Function (Fn) key, if is possible to obtain full keyboard functionality from even a reduced space keyboard.

Fn key+ key combinations:

The extra command keys that are enclosed in billets (e.g. $\boxed{\text{Help}}$) around the perimeter of the keyboard may be accessed by pressing the associated key together with the Function key (e.g. $\boxed{\text{Help}} = \boxed{\text{Fn}} + \boxed{\text{Esc}}$).

The command keys that are not enclosed (e.g. <compose>) may be accessed by simply pressing the associated key (e.g. <compose> = <Windows menu key>).

Fig US layout (ex: US Keyboard)

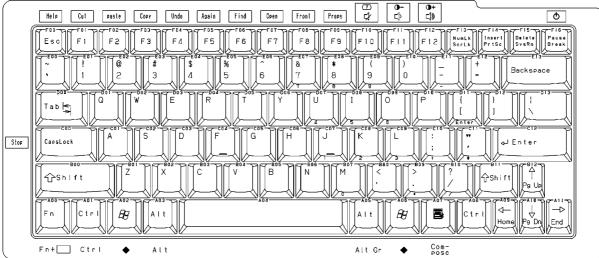
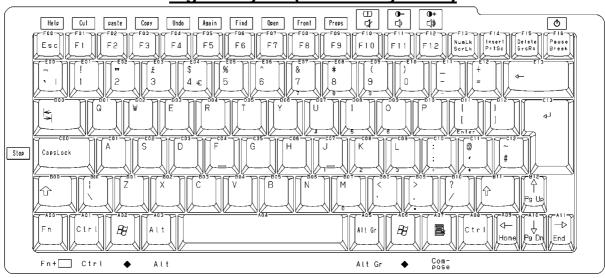


Fig EU layout (ex: UK Keyboard)



Point

Example of usage: Help = Fn + Esc

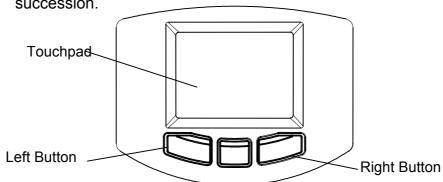
6.8 Pointing Device Operation

Lightly touch or tap the touchpad surface to operate the pointing device.

Moving the pointer: Lightly slide a finger over the touchpad surface in the direction you want the cursor to move.

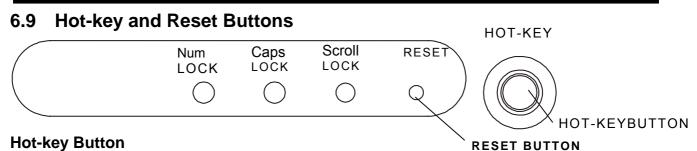
Single click: Lightly tap the touchpad surface once, or press the left button once.

Double click: Lightly tap the touchpad surface twice, or press the left button twice in succession.





- 1. The pointing device is designed to be operated with one finger, and may not respond correctly if you try to operate it:
 - 1) while wearing gloves;
 - 2) with a pen, ballpoint pen or pencil etc;
 - 3) with two or more fingers;
 - 4) Operating while something is placed on the operation surface.
- 2. Normal operation may become impossible if the operation surface gets wet such as when there is high humidity or the operator's hands are damp or sweaty. Thoroughly dry or wipethe operation surface before use.
- 3.Do not perform operations with pointing metal objects such as pens, as they may damage the pointing device.



Outputs the [Ctrl] + [Alt] + [Shift] key Make/Break code.

This will also be the Hot-key mode if a 4-port KVM switch is connected.

Reset Button

Resets the keyboard and pointing device.

Also resets a 4-port KVM switch if one is connected. However, it will not reset any secondary (slave) 4-port KVM switches.



KVM Switch Reset is only valid with the following series: FS-1004, 1008, and 1016.

6.10 Switching Servers

A server can be selected from the OSD menu (Hot Key Mode). When a currently selected server is turned OFF, that state will be maintained. In this case, switch the desired server using the Hot Key Mode.

Keyboard/mouse operations are enabled only on the server currently connected to the selected port. Operation data is not sent to other servers.

Note, however, that commands from servers are processed at all times, even if the server is not selected. For this reason, modes (Key Code mode, LED state, type-setting, Mouse Output Mode, etc.) are reflected when switched.

6.11 Selecting a Server when the Power is ON

When the power is turned ON while all servers are OFF, the server that is turned ON first is automatically selected.

When servers are turned ON at the same time, Servers are selected and connected in numerical sequence (1, 2, 3 ...).

6.12 Selecting the Hot Key Mode

There are two Hot Key Modes: A and B. There are four ways of displaying the Hot Key Mode as follows:

Hot Key Mode A

- Press and release the Hot-Key switch.
- Hold down the <Ctrl>, <Alt>, <Shift> keys at the same time and release.
- Press Scroll Lock twice (Press the Scroll Lock key quickly in succession)

Hot Key Mode B

- Press Ctrl twice (Press the Ctrl key quickly in succession)
- * Enabled/disabled can be set using the DIP switch settings.

When the Hot Key Mode is activated, the OSD (On Screen Display) selection screen is shown on the monitor.

The Scroll Lock LED on the keyboard blinks quickly.

Other LEDs (Num Lock LED, Caps Lock LED, Compose) go out.

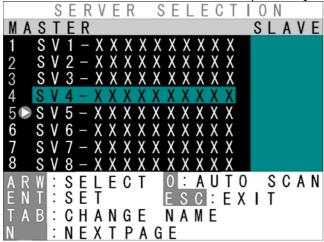
Keyboard/mouse entry is not possible in the Hot Key Mode. The following shows the indications at each of the connections.

*When there is no image (H/V Sync) signal from the currently connected server (suspended state), the OSD menu can be displayed by the image (H/V Sync) signals from other ports. At this time, the OSD menu flashes at 5-second intervals.

When the image signal (H/V Sync) is input to the currently selected port, status returns to normal.

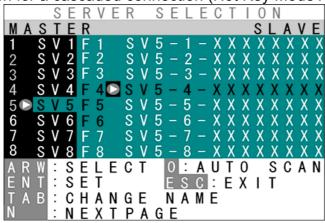
*H Sync: Horizontal sync signal *V Sync: Vertical sync signal

1. OSD screen for a non-cascaded connection (Hot Key Mode A)



(Different from actual server name display)

2. OSD screen for a cascaded connection (Hot Key Mode A)

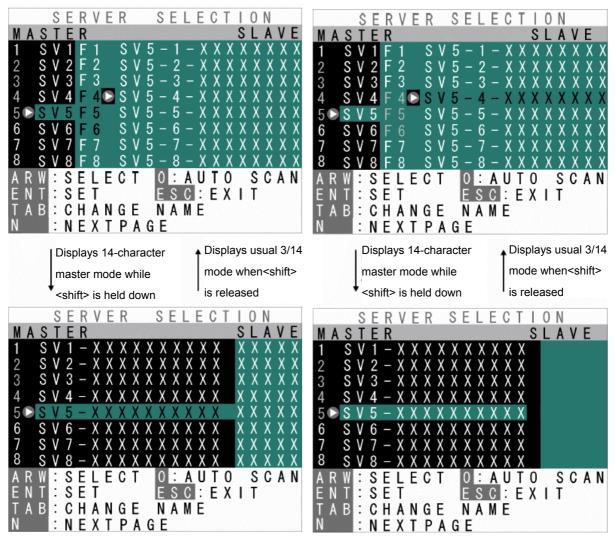


Example: OSD Screen with cascaded channel selected

[Screen Details]

- 1. Numbers 1 to 8 and function keys F1 to F8 (for a cascaded connection) indicate the server connection ports. Any numbers 1 to 8 displayed in green indicates that the currently connected server is turned ON.
- 2. The mark shows the currently selected server.
- 3. Purple text shows the hosts currently selectable with the cursor keys.
- 4. SV1-XXXXXXXXX shows the name of the server currently connected to port 1.
- 5. The bottom of the screen shows simple explanations of key operations.
- 6. Cascaded connections are displayed on the slave in blue. (In the above example, channel 5 is in a cascaded connection.)
- 7. Depending on whether the selected channel has a cascaded slave device attached to it or not, the OSD master device display section changes as follows:
 - Non-cascaded channel: 14-character wide master device section / nothing in slave section. (The OSD screen is the same without cascade connection.)
 - Cascaded channel: 3-character wide master device section / 14-character wide slave section.

3. Changing the master/slave display when there is a cascaded connection (Hot Key Mode A)



Cascade-connected master channel selected

Slave channel selected

[Screen Details]

 If a cascade-connected master channel or any slave channel is selected, while the <Shift> key is pressed the OSD screen switches from "3-character master/14-character slave" mode back to "14-character master/5-character slave" mode. The OSD reverts to usual 3/14 mode when the <Shift> key is released.

Hot Key Mode B

When the <Ctrl> key is pressed twice to enter Hot Key Mode B, a 1-line OSD menu is displayed at the top left of the screen.

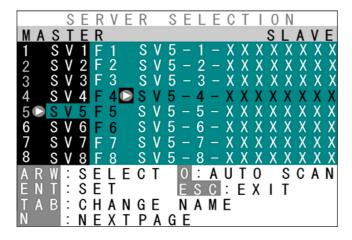
[Screen Details]

- 1. The server name is displayed at the top left of the OSD screen.
- 2. Before switching, the text background turns red.
- 3. After switching the text background turns blue, and the Hot Key Mode is exited after the switch is completed.
- 4. The OSD disappears about 3 seconds later.

How to switch the server from the OSD screen

Switching in Hot Key Mode A

The following OSD screen is displayed if you enter Hot Key Mode A after pressing the Hot-Key SW, after pressing the <Ctrl>+<Alt>+<Shift> keys at the same time, or after pressing the <Scroll Lock> key twice.



Example of Hot Key Mode A Display for a Cascaded Connection

- a. [Switching via Keyboard]
- 1. Use the <↑><↓> cursor keys to select the channel of the server No. on the left side of the OSD screen.
- 2. If a cascade-connected channel is selected, the state of the selected slave device is shown on the right side of the OSD.
- 3. If a cascade-connected channel is selected, pressing the <→> cursor key causes control to switch to the right (slave) side of the OSD, with the currently selected cascaded host shown in purple. Press the <←> cursor key to return control to the left (master) side of the OSD.
- 4. On the right side of the OSD, use the <↑> & <↓> cursor keys as before to select a channel.
- 5. Press the <Enter> key to actually effect the console switch to the selected server. The name of the server switched to is shown at the top-left of the screen for about 3 seconds after the switch is effected.



If ports 1 to 8 are selected when using a 16-port KVM Switch, ports 9 to 16 can be displayed using the <Page Down> key. Ports 1 to 8 can be shown by using the <Page Up> key.

b. [Direct Switching via Keyboard]

8-port KVM Switch

1. Use the number keys <1>~<8>. For a cascaded setup, first use the number keys <1>~<8> to select a master-side channel, then use the function keys <F1>~<F8> to select a slave-side port.

16-port KVM Switch

1. To select master port #1: press <1> (& wait 1 sec), or press <1> then <Enter>
2. To select master port #14: press <1><4> on the keyboard (press <4> within one

second of pressing <1>)

3. To select master port #2: press <2> on the keyboard

4. With a cascaded connection, select the port where the first cascaded connection on the master side was made.

To select slave port #1: press <F1>, or press <F>+<1> (& wait 1 sec) or <Enter>
To select slave port #14: press <F>+<1>+<4> (press <4> within one second after

pressing <1>)

To select slave port #2: press <F2> or <F>+<2>

Screens can be switched directly by these key operations.

After the screen is switched, the name of the server that you switched to is displayed at the top left of the screen, the OSD screen display disappears after about three seconds, and the Hot Key Mode is exited.



When selecting a port in a cascaded connection, first select the cascaded connection port on the master side. Then, select and switch to the port on the slave side.

Switching in Hot Key Mode B

The OSD menu is displayed at the top left of the screen when the <Ctrl> key is pressed twice and Hot Key Mode B is entered. (Press the <Ctrl> key quickly in succession.) While the text background is displayed in red, the screen can be switched by pressing the desired server number key.

a. [Direct Switching via Keyboard]

8-port KVM Switch

1. Use the number keys <1> to <8>. For a cascaded connection, first use the number keys <1> to <8> to select a master-side port, then use the function keys <F1> to <F8> to select a slave-side port.

16-port KVM Switch

1. To select master port #1: press <1> on the keyboard (& wait 1 sec) or <1>+<Enter>

2. To select master port #14: press <1><4> on the keyboard (press <4> within one

second of pressing <1>)

3. To select master port #2: press <2> on the keyboard

4. With a cascaded connection, select the cascade-connected port on the master side.

To select slave port #1: press <F1>, or press <F>+<1> (& wait 1 sec) or <Enter>
To select slave port #14: press <F>+<1>+<4> (press <4> within one second of

pressing <1>)

To select slave port #2: press <F2> or <F>+<2>

Screens can be switched directly by these key operations.

Switching the screen also exits the Hot Key Mode.

No keyboard or mouse input is accepted while the text background is red.

To change the text background back to blue (exit Hot Key Mode), either press a number key, or press the <Esc> key, or the <Enter> key.

If the <0> key is pressed while the text background is red, Auto Scan Mode is entered.

Auto Scan Mode may be cancelled as follows:

<Enter> key: Console switches to the currently displayed screen.

<Esc> key: Console reverts to the server active when Auto Scan Mode was started.

[Auto Scan Mode]

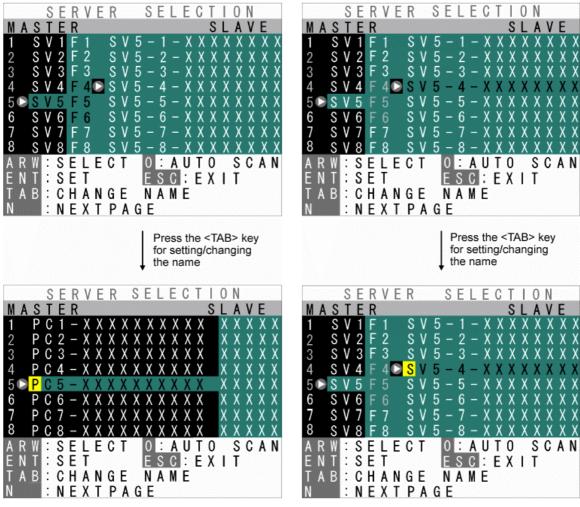
- 1. The screen is automatically switched at fixed cycles by pressing the <0> key on the keyboard in the Hot Key Mode.
- 2. The switching speed (Auto Scan Interval) may be adjusted by pressing the <↑> cursor key to make it faster (shorter) & the <↓> cursor key to make it slower (longer). Allowed Auto Scan Intervals are: 3, 5, 10 (default), 20, 40 and 60 seconds. The new Auto Scan Interval is shown on the OSD for 3 seconds.
- 3. Servers that are powered OFF are skipped.

 No keyboard or mouse input is accepted while the Auto Scan Mode is running.
- 4. To return to Hot Key Mode, the Auto Scan Mode must first be exited.
- 5. Auto Scan Mode may be exited as follows:

<Enter> key: Console switches to the currently displayed screen

<Esc> key: Console reverts to the server active when Auto Scan Mode was started

6.13 Setting/Changing Server Names



Changing a master-side name (Single KVM setup has no blue area)

Changing a slave-side name

[Screen Details]

- 1. Select the server name to be set/changed using the cursor keys, exactly as if switching.
- 2. Press the <Tab> key. The selected name turns yellow, with a single black on yellow character.
- Use the keyboard to enter the desired name, then press the <Enter> key to confirm it.
 Use the key to delete a single character, and the <BS> key to backspace.
 Use the <Esc> key to cancel name change (revert to original name).
- 4. A server name may be up to 14-characters long. The following characters (47 to choose from) can be used: ABCDEFGHIJKLMNOPQRSTUVWXYZ1234567890,./[]:+*-+ and <Space>

6.14 Constant Server Name Display Function

During usual server operation, holding the <Shift> key down and pressing the <Scroll Lock> key twice allows the server name for the currently selected channel to be shown at the top-left of the screen.

If the server name is being displayed, holding the <Shift> key down and pressing the <Scroll Lock> key twice causes the server name to disappear from the screen.

Server name is not indicated when shipping out. (Initial setting)

Server names are not displayed while in the Hot Key Mode or the Auto Scan Mode. While in the Hot Key Mode, holding the <Shift> key down and pressing the <Scroll Lock> key twice will not cause the host name to be shown/hidden.

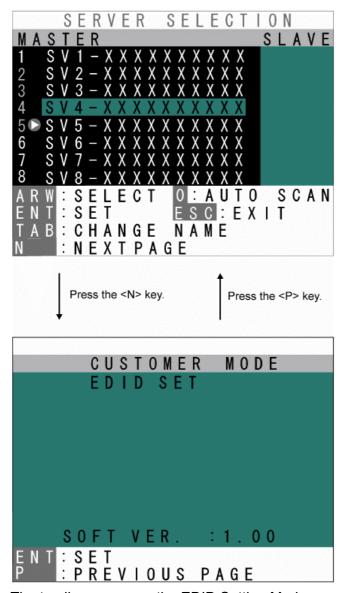
The current Show/Hide Server Name state is retained after switching the server via selector buttons or OSD.

If an FS-10x series device (previous model) is used in a cascaded setup, some or all of the server names may not be displayed, depending on the exact setup used.

- If a device that is not capable of showing server names is used as the master device, no server names will be shown.
- If a device that is not capable of showing server names is used as a slave device, no server names will be shown for the channels of that device.

6.15 EDID Setting Mode

After pressing the Hot-Key SW, the <Ctrl>+<Alt>+<Shift> keys, or double pressing the <Scroll Lock> to enter Hot Key Mode A, pressing the <N> key causes the display to switch to the Customer Mode:



The top line accesses the EDID Setting Mode.

The bottom line displays the firmware version currently installed.

Pressing the <Enter> key on this screen causes the text background to turn purple, while the EDID information is retrieved from the monitor connected to the console port and written to the internal ROM.

After the ROM has been written, the message "PNP MONITOR" is displayed.

When EDID information cannot be retrieved from the connected monitor, the message "DEFAULT MONITOR" is displayed, and "00" is written to the ROM.

If a new monitor is connected, and the EDID Setting performed, the internal ROM setting is subsequently transmitted to each host automatically.

The EDID Setting Mode may be ended as follows:

Press the <P> key to return to the Server Selection screen.

Press the <Esc> key to escape the Hot Key Mode and return to the usual console screen.



EDID for 17" LCDs (Console Drawer) is set before the Console Drawer is shipped from the factory.

When Console Drawer is used in a non-cascaded connection, EDID setting is not required.

Set EDID when other monitors are connected to Console Drawer, or when a cascaded connection is made.

6.16 Storing Console Drawer

The Console Drawer should be stowed away in the rack when the monitor and keyboard are not in use.

Point

Slide the Console Drawer in and out of the rack slowly and with care.

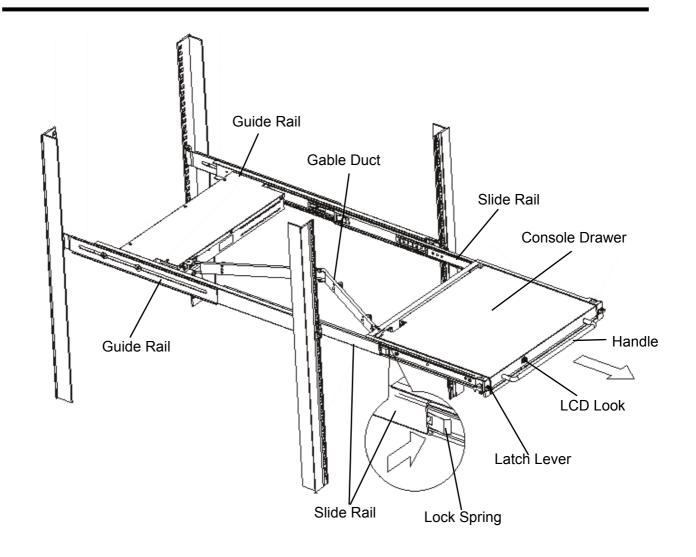
- 1. Push the monitor power button to turn off the power to the monitor.
- 2. Hold the handle and slowly close the monitor. Be sure that the LCD lock engages.
- 3. Push the locking springs on both sides of the slide rail and slide the Console Drawer into the rack. Be sure the latch lever engages.



Be careful not to pinch your fingers in the guide rails, slide rails, or the Console Drawer itself when stowing the Console Drawer. If the latch lever does not lock, the Console Drawer can unexpectly slide out.



We recommend turning off the monitor's power when it is not in use, to conserve electricity. Power is still supplied to the keyboard and mouse even if power to Console Drawer is turned off, so there are no problems with server operation.



Stowing the Console Drawer

7. Cleaning the Console Drawer



Turn off the power and unplug the power cable from the power socket. Do not use cleansers that contain abrasives; or such organic solvents as benzene or thinner glue; or disinfectant alcohol.

Do not apply water, detergent, or spray-type cleaners directly onto the Console Drawer. If liquids enter the interior of the Console Drawer it can cause malfunctions or damage

Wipe the Console Drawer and monitor with a clean dry soft cloth. If the dirt is excessive, wipe it off with a damp-dry soft cloth that has been (thoroughly wrung out after dipping in water).

Remove dust with a soft-bristle brush.

Clean the keyboard and pointing device with a damp-dry cloth.

8. Technical Specifications

Item			Specification	
Product ID			FD-1108MT	FD-1116MT
(KVM Switch Integrated		egrated	(8 port)	(16 port)
Console I	Drawer)		(o port)	(10 port)
Number of	of Conn	ected	Max. 8 (more if connections	Max. 16 (more if connections
Servers			are cascaded)	are cascaded)
Selection	Method	d	OSD Display (Hot Key Mode)	
Hot Key N	Mode		Manual (key operation)/Auto Scan Mode	
Auto Sca	n Cycle		3/5/10 (default)/20/40/60 seconds	
Monitor P	lug & P	lay Function	VESA DDC2 compatible	
		Power (blue)	1	
LED Disp	lay	Indicator		
		lamp	1	
	i	(orange)		
	Inter-	Keyboard	PS/2 Keyboard Interface (OADG compliant)	
	faces	Mouse	PS/2 Mouse Interface (OADG compliant)	
	14000	USB	USB 1.1 compliant	
KVM	Con-	Keyboard	PS/2, Mini DIN 6P Female × 1 (Purple)	
Switch	sole	Mouse	PS/2, Mini DIN 6P Female × 1 (Green)	
	Ports	Monitor	Mini D-SUB 15P Female 1 (Blue)	
	Server	nort	Mini D-SUB 15P	Mini D-SUB 15P
	Server	роп	Female (8 (Black)	Female (16 (Black)
	Panel monitor		17" TFT color LCD	
	Resolu	ution	Max. horizontal 1280 (dots) x vertical 1024 (lines)	
	Refres	h rate	Max.75 Hz	
	Video	Signal	Analog RGB / Separate Sync.	
	Colors	:Max	16,777,216(dithered)	
	Brightr	ness	250cd/m²(Type)	
	Connector		mini D-SUB 15-pin (analog RGB)	
	Power			
consumption		mption	Monitor	
Key-	Layout		Us layout/ EU layout	
board	Number of keys		83/84	
Doalu	Connector		mini DIN 6-pin (PS/2)	
	Model		Static Touch Pad	
Pointing	Pointing Resolution		220 cpi (counts/inch)	
Device	Connector		Mini DIN 6-Pin (PS/2)	
	Number of b		3	

Item		Specification		
Product ID		FD-1108MT	FD-1116MT	
Current supply to keyboard/mouse		Max. 300mA	Max. 150mA	
Rate voltage	range	100V AC - 240V AC	100V AC - 240V AC	
Frequency		50/60Hz	50/60Hz	
Rated curren	t	0.9A/100V , 0.5A/240V		
Operating Te	mperature	0 to 35 °C (Water condensation must not occur.)		
Storage Tem	perature	-20 to 60 °C (Non Operation)		
Size Main part	(1) Slide rail retracted	486 mm x 680 mm x 43.0 mm		
(W x D x H)	(2) Slide rail extended	486 mm x 1210 mm x 43.0 mm		
	(3) (2)plus LCD is fully open	486 mm x 1210 mm x 370 mm		
Construction		Painted (Black) Metal Case		
Weight		16kg		

Included Accessories	User's Manual (x 1)
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Optional Accessories (Sold separately)

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Item	Product ID	Remark
Combined Keyboard +	NC14000-B602	- PS/2 cable (this cable may be used
Mouse + Monitor Cable		for cascade connections)
(1.8m)	NC14000-B102	- USB cable
	NC14000-B202	- Sun cable
Combined Keyboard +	NC14000-B603	- PS/2 cable
Mouse + Monitor Cable	NC14000-B103	- USB cable
(3.0m)	NC14000-B203	- Sun cable
Combined Keyboard +	NC14000-B605	- PS/2 cable
Mouse + Monitor Cable	NC14000-B105	- USB cable
(5.0m)	NC14000-B205	- Sun cable

Item	Product ID	Product ID
Guide Rail	NC14003-T591	M6 tapped rack installation (holes)
	NC14003-T592	untapped rack installation (oblong
		holes) Installation from front/rear
	NC14003-T593	untapped rack installation (oblong
		holes) Installation from side

9. Troubleshooting

9.1 No Monitor Display

Symptom	Predicted cause	Solution
LED light for "Power Indicator" is turned off.	The AC cable is not connected to the electric outlet, or to the switch device, or not inserted into the socket properly. The AC power is off. POWER button was turned off. Power lamp (green) is out. No image signal from server.	Turn on the AC power. Turn POWER button ON. Input image signal from server.
Power Indicator glows orange. Or display shows Message of "POWER SAVING" when pressing the "MENU/ENTER" button. Although the Power Indicator glows, the Monitor does not display at all, or the Monitor only displays one of the	(Suspended state) The server is in the stand-by mode. The monitor cable is not connected, or not inserted into the socket properly. The setting value for resolution and refresh rate in server is out of this product capability.	Press any key in keyboard or operate the touchpad, which makes the server unlock the stand-by mode. Connect the monitor cable properly. Set the proper resolution and refresh rate in the server, which can be supported by this product.
following messages. "OUT OF RANGE H: ***kHz V: ***kHz, SEE USER'S MANUAL," or "NO SYNC SIGNAL, SEE USER'S MANUAL"	The AC power for this product was turned on after the power for the server was turned on The monitor cable is not connected, or not inserted into the socket properly.	Turn on the AC power for this product, before or at the same time when the power for server is turned on. Connect the monitor cable properly

9.2 Monitor display is strange

Symptom	Predicted cause	Solution
Grid screen that flickers	Unfocused	Adjust the focus.
Vertical stripes are visible	Monitor adjustment is not proper.	Adjust clock and then focus.
Display is larger or	Position is not proper.	Adjust clock and then position.

smaller than the monitor screen	USE OF A NON-STANDARD DISPLAY RESOLUTION (MODE)	Change the server settings to use the standard display resolution (mode).
Sometimes no images are displayed on monitor	Power cable is incorrectly connected or not plugged in fully.	Connect the power cable correctly and make sure the plug is fully inserted.
Letter weights are different across the	Focus or clock adjustment is not proper.	Adjust clock and then focus.
monitor	Resolution of lower than 1280 x 1024 has been set.	Letter weights may also be intentionally different if digital magnification is used. The appropriate monitor resolution is 1280 x 1024 settings in the "Monitor Properties".

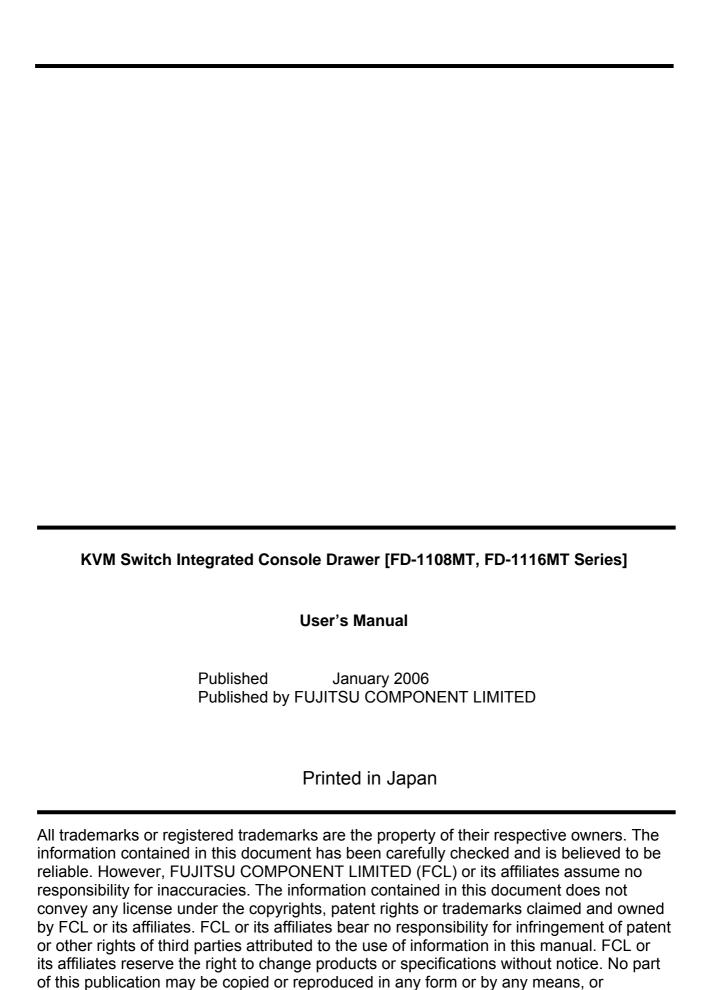
9.3 Monitor cannot be adjusted

Symptom	Predicted cause	Solution	
Automatic adjustment by AUTO/EXIT button does not work and following messages are displayed. "AUTO ADJUSTMENT FAILED SEE USER'S MANUAL"	Automatic adjustment was performed with an extremely dark monitor background/image.	Make the monitor image as bright as possible, then press the AUTO/EXIT button to redo the automatic adjustment.	
"UNSUPPORTED MODE SEE USER'S MANUAL"	Use of non-standard display resolution or refresh rate.	Check the current resolution and refresh rate using the menu screen information. Change the server settings to the standard display resolution and refresh rate (mode) if necessary.	

9.4 Others Irregularities in Monitor Display

Symptom	Cause	Action
Keyboard and mouse do not	The key repeat is abnormal.	Change the speed setting for the key repeat on the server.
operate, or operate strangely.	Connections to PS/2 ports are disconnected.	Check the connection and connect the mouse and keyboard properly.
	Connection to PS/2 ports is in reverse with the keyboard and the mouse.	Correctly connect mouse and keyboard.
	A non-specified cable is used.	Use a specified cable.
	Cannot get out of Hot Key Mode.	Press the [Enter]or[ESC]key.
Operation stops after a period of normal operation.	Connection has been disrupted.	Check the connections and then restart.
operation.	The switcher is hung up.	Press the reset button.
	A problem has occurred at the server.	Correct the problem at the server.
Cannot go into Auto Scan Mode	Device is not in Hot Key Mode.	Set Hot Key. Mode, press the number key (0).
	Wrong key.	Press the number key (0).
Cannot button in Hot Key Mode	Wrong key.	First level, press the number keys (1 through 8). Second level, press F1 through F8.
The auto scan switch cycle is abnormal.	The switch cycle has not been adjusted. (The default value is 10 seconds)	Use the cursor keys (↑ and ↓) to adjust it.
Cascaded connections are not recognized.	A problem has occurred at the switcher.	Press the reset switch. (Both the slave and the master)
The OSD display flashes at 5-second cycles.	No image (H/V Sync) signal from server (suspended state).	Input image (H/V Sync) signal. Or, switch to server having an image (H/V Sync) signal.

<u>memo</u>



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This manual is made of recycled paper.

NC14010-L533_02_060214