User's Manual

RadiForce™
G51/G31

Monochrome LCD Monitor

It shall be assured that the system finally complies with
IEC60601-1-1 requirements.

EIZO®

SAFETY SYMBOLS

This manual uses the safety symbols below. They denote critical information. Please read them carefully.

⚠ # WARNING

Failure to abide by the information in a WARNING may result in serious injury and can be life threatening.

⚠ # CAUTION

Failure to abide by the information in a CAUTION may result in moderate injury and/or property or product damage.

🚫 Indicates a prohibited action.

⏚ Indicates to ground for safety.

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ScreenManager and EIZO are registered trademarks of EIZO NANAO CORPORATION.

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⚠**PRECAUTIONS**

IMPORTANT!

• This product has been adjusted specifically for use in the region to which it was originally shipped. If operated outside the region to which it was originally shipped, the product may not perform as stated in the specifications.

• To ensure personal safety and proper maintenance, please read this section and the caution statements on the unit (refer to the figure below).

[Location of the Caution Statements]
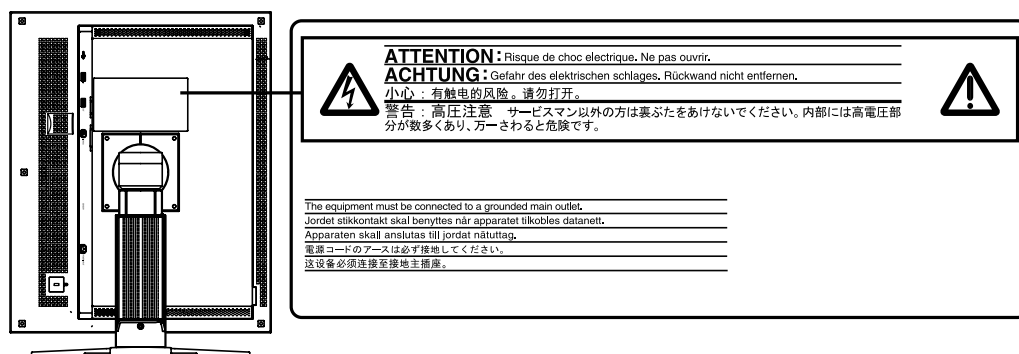
[Symbols on the unit]

Symbol	Location	This symbol indicates
◯	Side	Main power switch Press to turn the monitor's main power off.
|	Side	Main power switch Press to turn the monitor's main power on.
⏻	Front Control panel	Power button Press to turn the monitor's power on or off.
∼	Rear Name Plate	Alternating current
⚡	Rear Name Plate	Alerting electrical hazard
⚠	Rear Name Plate	Caution Refer to SAFETY SYMBOLS section in this manual.

⚠ **WARNING**

If the unit begins to emit smoke, smells like something is burning, or makes strange noises, disconnect all power connections immediately and contact your dealer for advice.

Attempting to use a malfunctioning unit may result in fire, electric shock, or equipment damage.

Do not open the cabinet or modify the unit.

Opening the cabinet or modifying the unit may result in fire, electric shock, or burn.

Refer all servicing to qualified service personnel.

Do not attempt to service this product yourself as opening or removing covers may result in fire, electric shock, or equipment damage.

Keep small objects or liquids away from the unit.

Small objects accidentally falling through the ventilation slots into the cabinet or spillage into the cabinet may result in fire, electric shock, or equipment damage.

If an object or liquid falls/spills into the cabinet, unplug the unit immediately. Have the unit checked by a qualified service engineer before using it again.
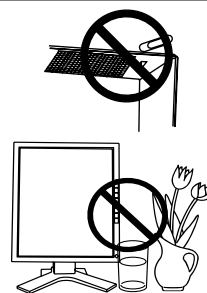
Place the unit at the strong and stable place.

A unit placed on an inadequate surface may fall and result in injury or equipment damage.

If the unit falls, disconnect the power immediately and ask your dealer for advice.

Do not continue using a damaged unit. Using a damaged unit may result in fire or electric shock.

Set the unit in an appropriate location.

Not doing so may result in fire, electric shock, or equipment damage.

* Do not place outdoors.
* Do not place in the transportation system (ship, aircraft, trains, automobiles, etc.)
* Do not place in a dusty or humid environment.
* Do not place in a location where the steam comes directly on the screen.
* Do not place near heat generating devices or a humidifier.
* Do not place in an inflammable gas environment.
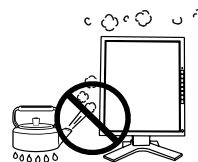
⚠ WARNING

To avoid danger of suffocation, keep the plastic packing bags away from babies and children.

Use the enclosed power cord and connect to the standard power outlet of your country.

Be sure to remain within the rated voltage of the power cord.

Not doing so may result in fire or electric shock.

To disconnect the power cord, grasp the plug firmly and pull.

Tugging on the cord may damage and result in fire or electric shock.

OK

The equipment must be connected to a grounded main outlet.

Not doing so may result in fire or electric shock.

Use the correct voltage.

* The unit is designed for use with a specific voltage only. Connection to another voltage than specified in this User's Manual may cause fire, electric shock, or equipment damage.
* Do not overload your power circuit, as this may result in fire or electric shock.

Handle the power cord with care.

* Do not place the cord underneath the unit or other heavy objects.
* Do not pull on or tie the cord.

If the power cord becomes damaged, stop using it. Use of a damaged cord may result in fire or electric shock.

Never touch the plug and power cord if it begins to thunder.

Touching them may result in electric shock.

⚠ WARNING

When attaching an arm stand, please refer to the user's manual of the arm stand and install the unit securely with the enclosed screws.

Not doing so may cause the unit to become unattached, which may result in injury or equipment damage. When the unit is dropped, please ask your dealer for advice. Do not continue using a damaged unit. Using a damaged unit may result in fire or electric shock. When reattaching the tilt stand, please use the same screws and tighten them securely.

Do not touch a damaged LCD panel directly with bare hands.

The liquid crystal that may leak from the panel is poisonous if it enters the eyes or mouth.

If any part of the skin or body comes in direct contact with the panel, please wash thoroughly. If some physical symptoms result, please consult your doctor.

Follow local regulation or laws for safe disposal.

The backlight of the LCD panel contains mercury.

⚠ CAUTION

Handle with care when carrying the unit.

Disconnect the power cord and signal cables and remove the optional unit. Moving the unit with the cord or the option attached is dangerous. It may result in injury.

When handling the unit, grip the bottom of the unit firmly with both hands ensuring the panel faces outward before lifting.

Dropping the unit may result in injury or equipment damage.

OK
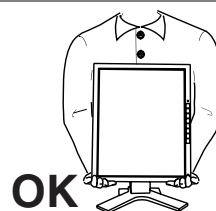
Do not block the ventilation slots on the cabinet.

* Do not place any objects on the ventilation slots.
* Do not install the unit in a closed space.
* Do not use the unit laid down or upside down.
Blocking the ventilation slots prevents proper airflow and may result in fire, electric shock, or equipment damage.

⚠ CAUTION

Do not touch the plug with wet hands.

Doing so may result in electric shock.

Use an easily accessible power outlet.

This will ensure that you can disconnect the power quickly in case of a problem.

Periodically clean the area around the plug.

Dust, water, or oil on the plug may result in fire.

Unplug the unit before cleaning it.

Cleaning the unit while it is plugged into a power outlet may result in electric shock.

If you plan to leave the unit unused for an extended period, disconnect the power cord from the wall socket after turning off the power switch for the safety and the power conservation.

LCD Panel

In order to suppress the luminosity change by long-term use and to maintain the stable luminosity, please use the monitor with the brightness below 450 cd/m^2 (equal to default setting of BRIGHTNESS approximately 70 %).

The screen may have defective pixels. These pixels may appear as slightly light or dark area on the screen. This is due to the characteristics of the panel itself, and not the product.

The backlight of the LCD panel has a fixed life span. When the screen becomes dark or begins to flicker, please contact your dealer.

Do not press on the panel or edge of the frame strongly, as this may result in damage to the screen. There will be prints left on the screen if the pressed image is dark or black. If pressure is repeatedly applied to the screen, it may deteriorate or damage your LCD panel. Leave the screen white to decrease the prints.

Do not scratch or press on the panel with any sharp objects, such as a pencil or pen as this may result in damage to the panel. Do not attempt to brush with tissues as this may scratch the panel.

1. INTRODUCTION

Thank you very much for choosing an EIZO Monochrome Monitor.

1-1. Features

- DVI (p.34) Digital input (TMDS (p.34)) compliant
- G51: Resolution: 5M pixels (2048 dots × 2560 lines)
    Horizontal scanning frequency: 99.9 - 107.9 kHz
    Vertical scanning frequency: 47.06 - 53.06 Hz

  G31: Resolution: 3M pixels (1536 dots × 2048 lines)
    Horizontal scanning frequency: 92.86 - 96.72 kHz
    Vertical scanning frequency: 60 Hz
- USB (Universal Serial Bus) hub supported (p.22)
- The height adjustable stand incorporated
- Ultra slim bezel incorporated
- Power saving function (p.18) (DVI-DMPM(p.34))

NOTE
- Regarding the scanning resolution, the G51/G31 supports only the exclusive timing.

1-2. Package Contents

Please contact your local dealer for assistance if any of the listed items are missing or damaged.

- LCD Monitor [*1]
- Power Cord
- Signal Cable (FD-C39)
- User's Manual
- LIMITED WARRANTY

[*1] The orientation of display is landscape position at the default setting. For the portrait display, pivot the panel in the counter-clockwise direction 90° before installing the monitor.

NOTE
- Please retain the packing materials for future transference.

1-3. Controls & Connectors

Front (G51 is given as an example.)

Control Panel
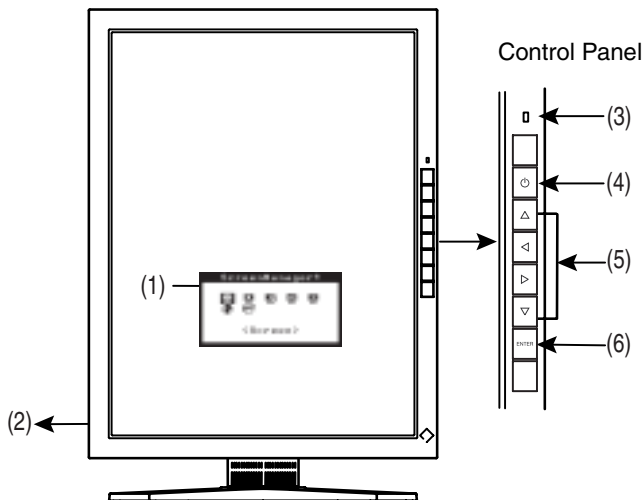
(1) ScreenManager®
(2) I O   Main Power Switch
(3) ▭   Power Indicator *1

Green	Operation
Orange	Power saving
Flashing orange (2 times for each)	Power save mode
Flashing orange slowly	Power is off (Main power is on)
Off	Power off

(4) ⏻   Power Button
(5) △◁▷▽   Control Buttons (Up, Left, Right, Down) *2
(6) ENTER   Enter Button

*1 Green lighting when the screen is displayed (Operation mode) can be changed to non-light, see page 16.
    Regarding the power indicator for the off timer, see page 17.
*2 These buttons are changed to Right, Up, Down, Left in case of selecting "Landscape" for <Orientation> of ScreenManager <Others> (p.16).

Rear (G51 is given as an example.)

Side
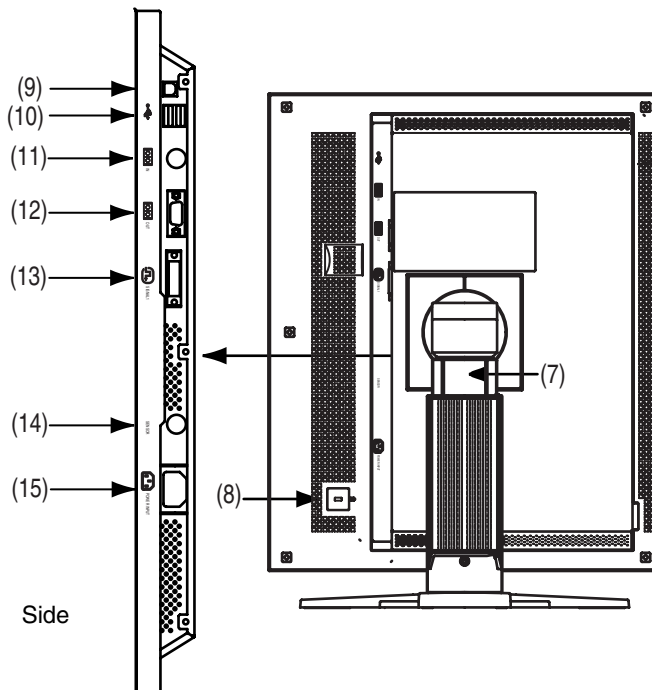
(7)   Height Adjustable Stand (Detachable) [*3]

(8)   [K]   Security Lock Slot [*4]

(9)   ⟵•⟶   USB Port (1 Upstream)
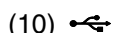
(10)   ⟵•⟶   USB Port (2 Downstream)

(11)   [◎◎] IN   Serial Port, Remote IN (Mini DIN 6 pin) [*5]

(12)   [◎◎] OUT   Serial Port, Remote OUT (D-Sub 9 pin) [*5]
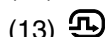
(13)   🔁   DVI-D Input Connector

(14)   SENSOR   Serial Port, Photo Sensor Connector (Mini DIN 8 pin) [*6]
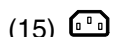
(15)   [▫]   Power Connector

[*3] The LCD monitor has the capability of the Portrait/Landscape display. (The panel pivots in the clockwise direction 90°.) The LCD monitor can be used with an optional arm stand by removing the stand (p.24).

[*4] Allows for connection of a security cable. This lock supports Kensington's MicroSaver security system. For further information, please consult'
Kensington Technology Group
2855 Campus Drive, San Mateo, CA 94403 USA
Tel.: 800-650-4242, x3348, Intl: 650-572-2700, x3348, Fax: 650-572-9675
http://www.kensington.com

[*5] This connector is used for specified photo sensor (p.19) only. Other peripheral equipment cannot be connected to the connector.

[*6] This connector is used for the connecting the photo sensor. Please buy EIZO original optional calibration kit (p.32).

2. CABLE CONNECTION

NOTE
- Be sure that the power switches of both the PC and the monitor are OFF.
- Please refer to the manual of the PC also to connect the monitor.

1. Pivot the panel in the counter-clockwise to fix in portrait position.

2. Plug the signal cable into the connector at the rear of the monitor and the other end of the cable into the video connector on the PC.

After connecting, secure the connection with the screw-in fasteners.

90°

Signal Cable
FD-C39
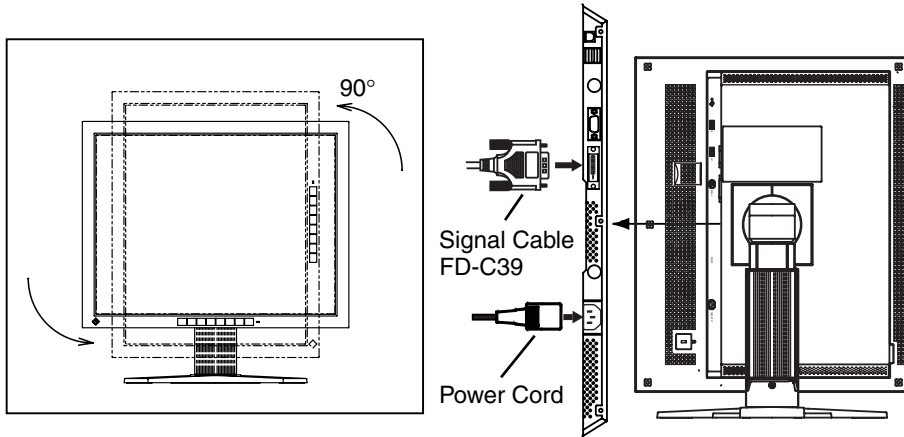
Power Cord

Signal Cable	Connector	PC
Signal Cable (FD-C39 enclosed)	Video Output Connector / DVI	Exclusive graphics board

NOTE
- The monitor is not compatible with a color graphics board.

3. Plug the power cord into the power connector on the rear of the monitor.

4. Lead the power cord and signal cable into the cable holder at rear of the monitor.

NOTE
- When housing the cables into the cable holder, lead them to the cable entrance side and pinch the projection to open the cable entrance.
- The cables are recommended to lead with slight sag for the smooth motion of the stand.

Projection

Cable Entrance

Cable Holder
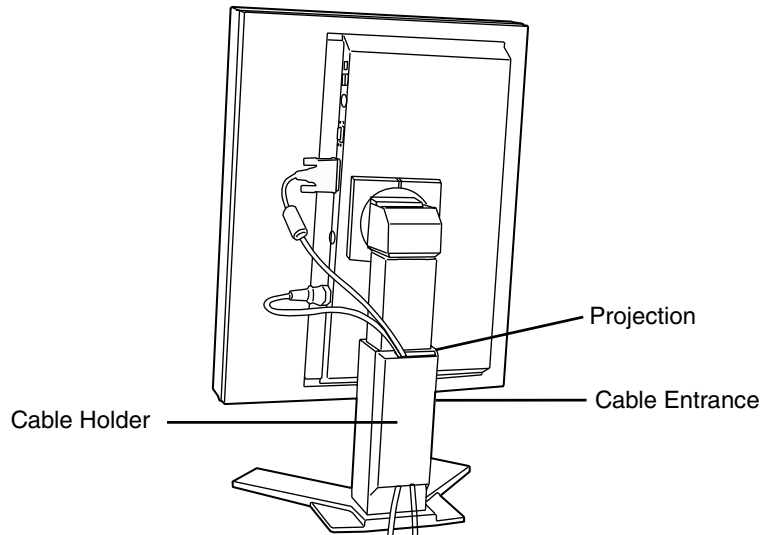
5. **Plug the other end of the power cord into a power outlet.**

⚠ WARNING

Use the enclosed power cord and connect to the standard power outlet of your country.

Be sure to remain within the rated voltage of the power cord.

Not doing so may result in fire or electric shock.

The equipment must be connected to a grounded main outlet.

Not doing so may result in fire or electric shock.

6. **Turn on the monitor's Power Button and then switch on the PC's power.**

The monitor's power indicator will light up (green).

If an image does not appear, refer to the "7. TROUBLE SHOOTING" (p.26) for advice.

Whenever finished, turn off the PC and the monitor.

NOTE
* Adjust brightness of the screen depending on the brightness of your environment.
* Be sure to take adequate rests. A 10-minute rest period each hour is suggested.

3. ScreenManager

3-1. How to use the ScreenManager

ScreenManager
Main Menu

Control Buttons
Up, Left, Right, Down
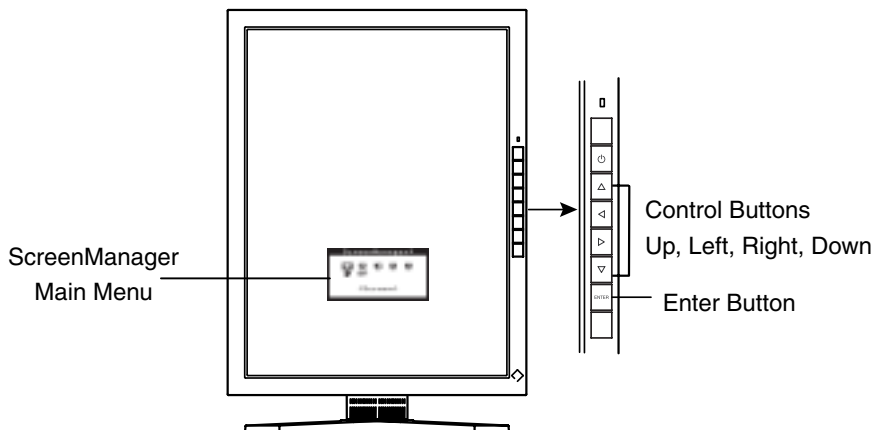
Enter Button

1. Entering the ScreenManager

Press the Enter Button once to display the main menu of the ScreenManager.

2. Making Adjustments and Settings

(1) Select the desired sub menu icon using the Control Buttons and press the Enter Button. The sub menu appears.

(2) Use the Control Buttons to select the desired setting icon and press the Enter Button. The setting menu appears.

(3) Use the Control Buttons to make all required adjustments and press the Enter Button to save the settings.

3. Exiting the ScreenManager

(1) To return to the main menu, select the <Return> icon or press the Down Button twice, followed by the Enter Button.

(2) To exit the ScreenManageru, select the <Exit> icon or press the Down Button twice, followed by the Enter Button.

NOTE
• Double clicking the Enter Button at any time also exits the ScreenManager menu.

3-2. ScreenManager Adjustments and Settings

The following table shows all the ScreenManager's adjustment and setting menus.

Main menu	Sub menu		Reference
Screen	Brightness[1]		Control the brightness for the entire screen.
	Unlock [2]		Unlock the lock. (p.20)
LUT Setting	Default / Normal [3] / Custom[4]		Set the LUT (Look-up table) (p.34) setting.
PowerManager	DVI DMPM		Refer to "3-4. Power-save Setup". (p.18)
Others	Off Timer		Set the monitor's off timer to on or off. (p.17)
	Menu Settings	Menu Position	Adjust the menu position.
		Menu Off Timer	Set the menu displaying time.
	Orientation		Change the orientation of the ScreenManager for monitor's portrait position.
	ID [2]		Set from 1 to 4 for the monitor ID number. (p.21)
	Power Indicator		Make non-light for green lighting when the screen is displayed.
	LUT Level		Switch the softness on gradation displaying.
	Reset		Return to the factory default settings. (p.30)
Information	Information		Review the ScreenManager's settings, model name, serial number and usage time [5].
Language	English/Japanese		Select the ScreenManager's language.

[1] Directly pressing the Control Buttons also adjusts the brightness.

[2] These functions are used for the calibration (p.19).

[3] Set to the "Normal" in case of using the monitor with the characteristic of panel original.

[4] "Custom" automatically stores the customized data after the calibration is performed.

[5] Due to the inspection on the factory, the usage time may not be "0 hour" at shipping.

3-3. Useful Functions

Adjustment Lock

Use the "Adjustment Lock" function to prevent any accidental changes.

Locked function	• Settings in the ScreenManager.
Unlocked function	• Adjustment of brightness by the Control Buttons.

[To lock]

(1) Switch off the monitor's power by the power button on the control panel.

(2) Press on the Enter Button while switching on the monitor's power.

[To unlock]

(1) Switch off the monitor's power by the power button on the control panel.

(2) Hold down the Enter Button once again and turn the power back on.

Off Timer

The off timer function causes the monitor to automatically enter a power off state after a predetermined amount of time has lapsed. This function was created to reduce afterimage (p.34) characteristics that are particular to LCD monitors when the monitor screen is left on for a long period without use.

[Procedure]

(1) Select <Off Timer> in the ScreenManager <Others> menu.

(2) Select "Enable" and press the Right and Left Buttons to adjust the "On Period" (1 to 23 hours).

[Off timer System]

PC	Monitor	Power Indicator
On Period (1H - 23H)	Operation	Green
Last 15 min. in "On period"	Advance Notice [1]	Green Flashing
"On period" expire	Power off	Flashing orange slowly

[1] Advance notice (Power Indicator flashing green) will be given 15 minutes before the monitor automatically enters the "Power Off" mode. To delay entering the "Power Off" mode, press the Power Button during the advance notice period. The monitor will continue to operate for an additional 90 minutes.

[Power Resumption Procedure]

Press the Power Button to return to a normal screen.

NOTE

• The off timer function works while the PowerManager is active, but there is no advance notice before the monitor's power is switched off.

3-4. Power-save Setup

The <PowerManager> menu in the ScreenManager enables to set the power-save setup.

NOTE
- Do your part to conserve energy, turn off the monitor when you are finished using it. Disconnecting the monitor from the power supply is recommended to save energy completely.
- Even if the monitor is in a power saving mode, USB compliant devices function when they are connected to the monitor's USB (both the upstream and the downstream ports). Therefore, power consumption of the monitor will change according to the connected devices even if the monitor is in a power saving mode.

This monitor complies with the DVI DMPM (p.34).

[**Procedure**]
(1) Set the PC's power saving settings.
(2) Select "DVI DMPM" in the <PowerManager> menu.

[**Power saving system**]

PC	Monitor	Power Indicator
Operation	Operation	Green
Power saving	Power saving	Orange
Off mode	Power saving	Flashing orange (2 times for each)

Operate the mouse or keyboard to return to a normal screen.

Power on the PC to return a normal screen from the Off mode of the PC.

4. CALIBRATION

The calibration is available when using the specified optional calibration kit (p.32).

Accessories for Calibration Kit

- Photo Sensor x 1
- Maintenance cable x 4
- Calibration Software
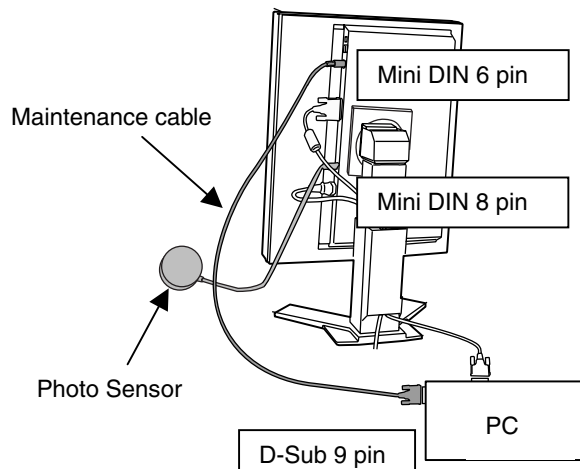
1. **Confirm the graphics board settings (If the graphics board has the settings below). Please read the User's manual of the graphics board in details.**

- Set the output signal level to "Linear" or "Static Gray".

2. **Plug the maintenance cable into the REMOTE IN (Mini DIN 6 pin) connector of the monitor and the other end of the cable into the serial port (D-Sub 9 pin) of the PC.**

3. **Plug the photo sensor to the photo sensor connector (Mini DIN 8 pin) of the monitor.**

4. **Install the calibration and calibrate the monitor.**

Regarding the directions (for use), please read the user's manual of the software.

NOTE
- Lead the maintenance cables into the cable holder after connecting (p.12).
- Brightness adjustment is not available while the calibrating the monitor.
- After the calibration, brightness and other functions are automatically locked. Please refer to below procedure to unlock.

Unlock Function after Calibration

After the calibration, the functions like brightness are automatically locked. Unlock function is available by using ScreenManager.

Locked function	• Brightness adjustment (including the adjustment by Left and Right Buttons on the front panel)
	• LUT Setting

How to unlock

(1) Select the <Unlock> of <Screen> menu.

(2) Select "Unlock".

NOTE
- Performing the <Reset> of <Others>, locked functions are also unlocked.

Calibrating the Several Monitors

A remote control adjustment for the several monitors is available by using the
maintenance cable (Maximum 4 monitors).

Example (4 monitors)
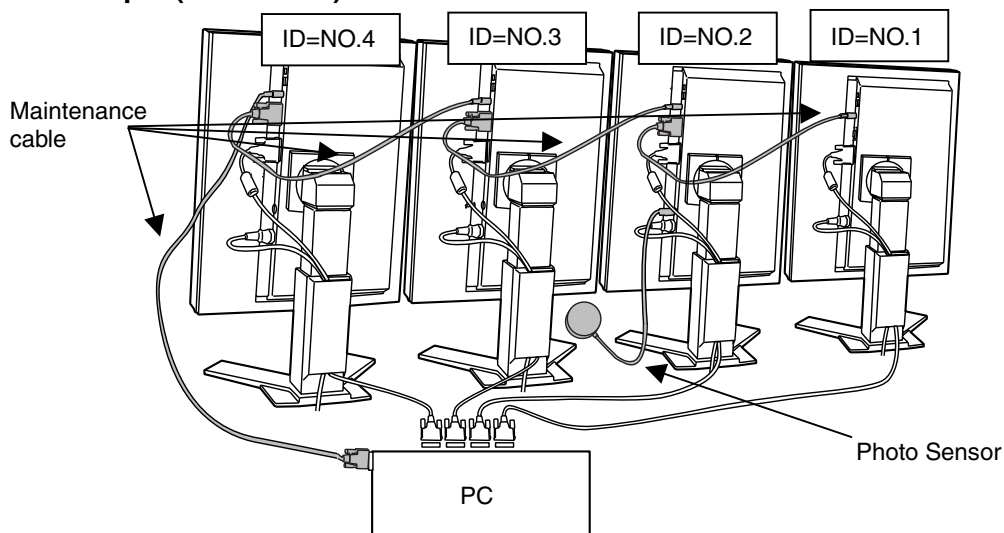
1. Plug the maintenance cable into the REMOTE IN (Mini 6 pin)
connector of the first monitor and the other end of the cable into the
serial port (D-Sub 9 pin) of the PC.

2. Plug the maintenance cable into the REMOTE OUT (D-Sub 9 pin)
connector of the first monitor and other end of the cable into the
REMOTE IN (Mini 6 pin) of the second monitor.

3. Plug the second monitor OUT and third monitor IN, and third
monitor OUT and fourth monitor IN.

4. Identify the ID number to each monitor by using the ScreenManager.

[Procedure]
(1) Select <ID> in the <Others> menu.
(2) Select the ID number (1 - 4). (Do not set the same ID number.)

5. Plug the photo sensor to the photo sensor connector (Mini DIN 8
pin) of any monitor.

5. MAKING USE OF USB (Universal Serial Bus)

This monitor provides a hub which supports the USB standard. When connecting to a USB compliant PC or another hub, the monitor functions as a hub to which the USB compliant peripherals can be easily connected.

Required system environment

- PC with build-in USB ports or another USB hub connected to the USB compliant PC
- USB Cable

NOTE
- The USB hub function may not work properly depending on the PC, OS or peripherals. Please consult the manufacturer of each device about the USB support.
- When the monitor is not on, the peripherals connected to the downstream ports will not operate.
- Even if the monitor is in a power saving mode, the devices connected to the monitor's USB ports (both the upstream and the downstream) will function.

Connecting to the USB HUB

1. **Connect the monitor to the PC with the signal cable (p.12) first, then turn on the PC.**

2. **Connect the upstream port of the monitor to the downstream port of the USB compliant PC or another hub by using the USB cable.**

Upstream Port:

Connect the USB compliant PC or another hub using the USB cable.

To Downstream Ports of the PC or Another Hub
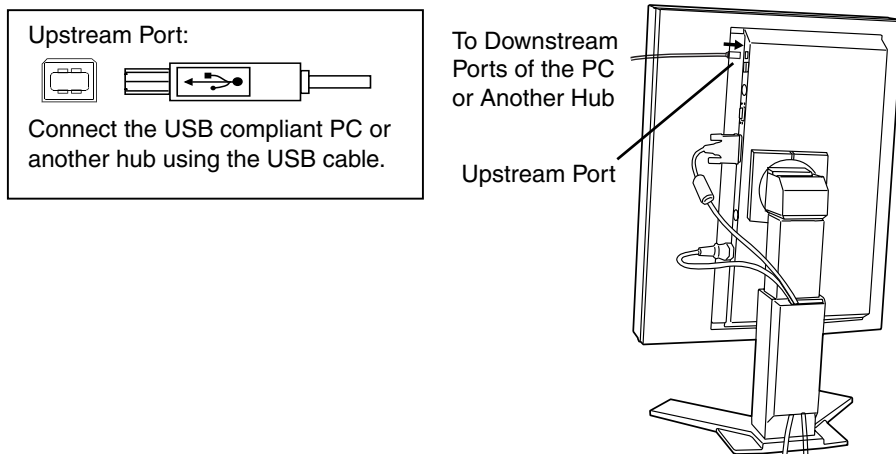
Upstream Port

After connecting the USB cable, the USB function can be set up automatically.

3. **After setting up, the monitor's USB hub is available for connecting USB compliant peripherals to the downstream ports of the monitor.**

Connecting Examples

Monitor

PC

Keyboard

Mouse

Printer

Downstream Ports:

Connect the cables from USB compliant peripherals such as a mouse, keyboard, etc.

Printer
Keyboard

Downstream Ports
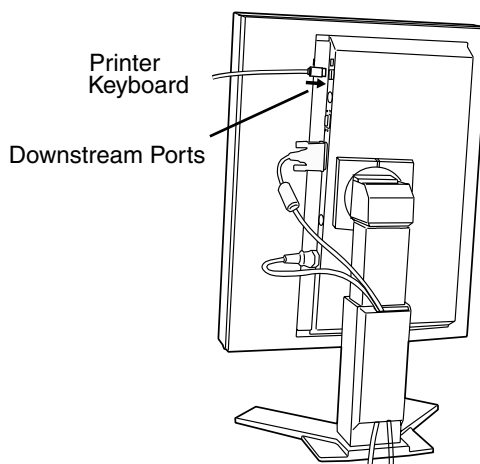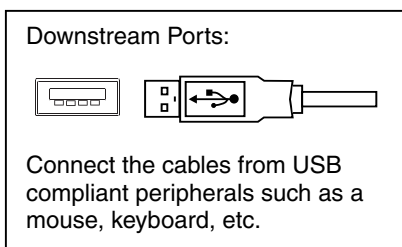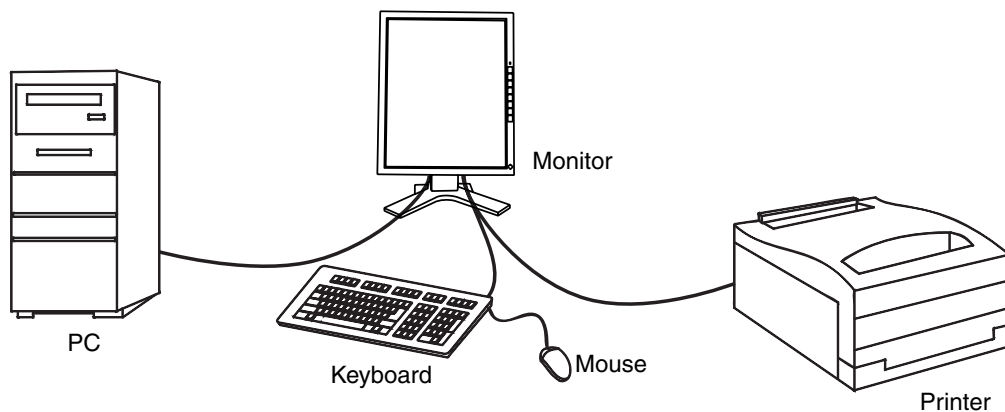
6. ATTACHING AN ARM

The LCD monitor can be used with an arm by removing the tilt stand and attaching the arm or stand to the LCD monitor.

NOTE
- If you will use the arm or stand of other companies, confirm the followings to the arm or stand maker before selecting.
  - Hole spacing on the arm mounting: 100 mm x 100 mm (VESA compliant)
  - Supportable Weight: Total weight of the monitor (without stand) and attaching equipment such as a cable
  - TÜV/GS approved arm or stand
- Please connect cables after attaching an arm stand.

Setup Procedure

1. Hold the center of the stand mounting cover and slide them rightward or leftward to remove the mounting cover.

Stand mounting cover
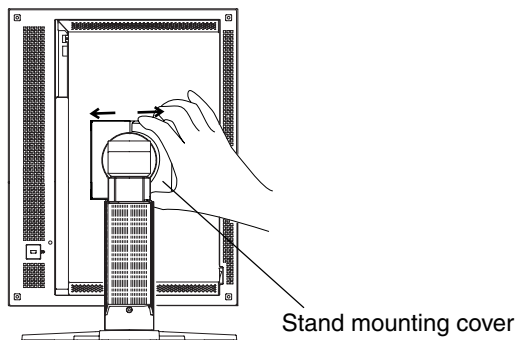
2. Lay the LCD monitor down. Do not scratch the panel.

3. Remove the tilt stand by loosening the screws.
(4 pcs of M4 x 10 mm Ni/Fe)

4. Attach an arm stand to the LCD monitor securely.

Arm-stand

4 Mounting Screws: M4 × 10 (mm) Ni/Fe

7. TROUBLESHOOTING

If a problem persists even after applying the suggested remedies, contact an EIZO dealer.

- No picture problems → See No.1 - No.2
- Imaging problems → See No.3 - No.6
- Other problems → See No. 7 - No.8
- USB problems → See No.9 - No.10

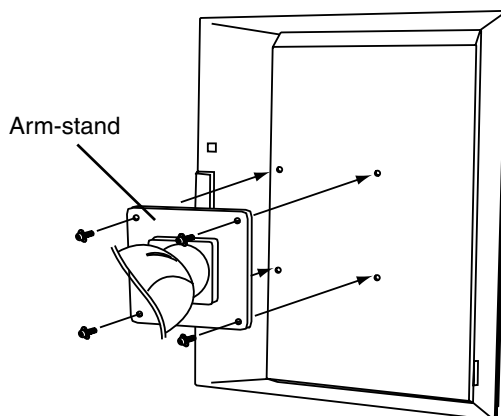| Problems	Points to check with possible solutions
1. No picture • Indicator status: Off	☐ Check that the power cord is correctly connected. If the problem persists, turn off the monitor power for a few minutes, then turn it back on and try again.
• Indicator status: Green • Indicator status: Orange • Indicator status: Slowly flashing Orange • Indicator status: Flashing Orange (twice for each)	☐ Check the "Brightness" setting. ☐ Try pressing a key on the keyboard, or clicking the mouse. (p.18) ☐ Try pressing the Power Button. ☐ Try turning the PC on.
2. Error message shown below will remain on the screen for 40 seconds. No Signal	This message appears when the signal is not inputted correctly, even if the monitor functions properly. ☐ When the image is displayed correctly after a short time, there is no problem with the monitor. (Some PCs do not output the signal soon after powering on.) ☐ Check that the PC is turned ON. ☐ Check that the signal cable is properly connected to the PC or graphics board.
3. The screen is too bright or too dark.	☐ Adjust the <Brightness>. (The backlight of the LCD monitor has a fixed life span. When the screen becomes dark or begins to flicker, please contact your dealer.)
4. Afterimages appear.	☐ When the screen image is changed after displaying the same image for a long period, an afterimage may appear. The "Afterimage" can be removed gradually by changing the displayed image. Use the "Off Timer" function and avoid keeping the screen on all the time. (p.17)

Problems	Points to check with possible solutions
5. The screen has defective pixels (e.g. slightly light or dark).	☐ This is due to the characteristics of the panel itself and not the LCD product.
6. Fingerprints remain on the screen.	☐ Leaving the screen white may solve the problem.
7. "Locked!" message appears and the adjustment controls are not available when pressing the Control Buttons. Locked !	☐ After the calibration, the functions like brightness are automatically locked. Please refer to page 20 to unlock.
8. The Main menu of ScreenManager does not operate.	☐ The adjustment lock is probably on. To unlock: switch the LCD monitor off. Then, while pressing the Enter Button, switch the power on. (p.17)
9. USB function cannot be setup.	☐ Check that the USB cable is correctly connected. ☐ Check that the PC and OS are USB compliant. (For verification of USB support, consult the manufacturer of each system.) ☐ Check the PC's BIOS setting for USB. (For details, refer to the manual of the PC.)
10. PC is hung up. / The peripherals connected to the downstream ports do not operate.	☐ Check that the USB cable is correctly connected. ☐ Check the downstream ports by connecting the peripherals to other downstream ports. If the problem is solved by doing this, contact an EIZO dealer. (For details, refer to the manual of the PC.) ☐ Try executing the following method. - Restarting the PC - Connecting the PC and peripherals directly If the problem is solved by doing this, contact an EIZO dealer. ☐ The Power Button of the Apple keyboard does not operate if it is connected to the EIZO USB Hub. Please connect the keyboard directly with the PC. Refer to the instruction of the PC for details.

8. CLEANING

Periodic cleaning is recommended to keep the monitor looking new and to prolong its operation lifetime.

NOTE
* Never use thinner, benzene, alcohol (ethanol, methanol, or isopropyl alcohol), abrasive cleaners, or other strong solvents, as these may cause damage to the cabinet or LCD panel.

Cabinet

To remove stains, wipe the cabinet with a soft, lightly moistened cloth using a mild detergent. Do not spray wax or cleaner directly into the cabinet.

LCD Panel

* The LCD surface can be cleaned with a soft cloth, such as cotton or lens paper.
* If necessary, stubborn stains can be removed by moistening part of a cloth with water to enhance its cleaning power.

9. SPECIFICATIONS

G51

LCD Panel	54 cm (21.3 inch), TFT Monochrome LCD panel
	Anti-Glare Hard Coating 2H, Response Time: approx. 100 ms
Viewing Angle	Horizontal: 170°, Vertical: 170°
Dot Pitch	0.165 mm
Horizontal Scan Frequency	99.9 ~ 107.9 kHz (only exclusive timing supported)
Vertical Scan Frequency	47.06 ~ 53.06Hz (only exclusive timing supported)
Resolution	5M pixels (2048 dots × 2560 lines)
Dot Clock	142 ~ 152 MHz
Gray Scale	1024 steps of 3061 steps
Display Area	337.9 mm (H) × 422.4 mm (V) (13.3" (H) × 16.9" (V)) (Viewable image size: 540 mm (21.2"))
Power Supply	100-120/200-240 VAC ±10%, 50/60 Hz, 0.9-0.6/0.5-0.4 A
Power Consumption	Min.: 70 W, Max.: 85 W (With USB hub) Power Saving Mode: Less than 6 W (When the USB hub are not connected.)
Input Connector	DVI-D× 1
Input Signal	TMDS (Single Link)
Plug & Play	VESA DDC 2B
Dimensions	388 mm (W) × 509 ~ 591 mm (H) × 209mm (D) (15.3" (W) × 20.1" ~ 23.2" (H) × 8.2" (D))
Dimensions (without stand)	388 mm (W) × 472 mm (H) × 83.5 mm (D) (15.3" (W) × 18.6" (H) × 3.3" (D))
Weight	9.5 kg (20.9 lbs.)
Weight (without stand)	6.3 kg (13.9 lbs.)
Environment Conditions	
Temperature	Operating: 0 °C ~ 40 °C (32 °F ~ 104 °F) Storage: -20 °C ~ 60 °C (-4 °F ~ 140 °F)
Humidity	30 % to 80 % R.H. Non-condensing
Pressure	860 to 1,060 hPa
USB Standard	Rev. 1.1 complied self-powered hub
Communication Speed	12 Mbps (full), 1.5 Mbps (low)
Downstream Power Supply	500 mA for each (Max.)
USB ports	Upstream port × 1, Downstream port × 2
Certifications and Standards	TÜV Rheinland /GM, CB, NRTL/C-TÜV, CE (93/42/EEC), FCC-A
Classification of Equipment	Type of protection against electric shock: Class I EMC class: EN60601-1-2 2001 Group1 Class A Classification of medical device (MDD 93/42/EEC): Class I

G31

|	
LCD Panel	53 cm (20.8 inch), TFT Monochrome LCD panel Anti-Glare Hard Coating 2H, Response Time: approx. 50 ms
Viewing Angle	Horizontal: 170°, Vertical: 170°
Dot Pitch	0.207 mm
Horizontal Scan Frequency	92.86 ~ 96.72 kHz (only exclusive timing supported)
Vertical Scan Frequency	60 Hz (only exclusive timing supported)
Resolution	3M pixels (1536 dots × 2048 lines)
Dot Clock	120 ~ 132 MHz
Gray Scale	1024 steps of 3061 steps
Display Area	318.0 mm (H) × 423.9 mm (V) (12.5" (H) × 16.7" (V)) (Viewable image size: 529 mm (20.8"))
Power Supply	100-120/200-240 VAC ±10%, 50/60 Hz, 0.9-0.6/0.5-0.4 A
Power Consumption	Min.: 70 W, Max.: 85 W (With USB hub) Power Saving Mode: Less than 6 W (When the USB hub are not connected.)
Input Connector	DVI-D × 1
Input Signal	TMDS (Single Link)
Plug & Play	VESA DDC 2B
Dimensions	368 mm (W) × 510 ~ 592 mm (H) × 209 mm (D) (14.5" (W) × 20.1" ~ 23.3" (H) × 8.2" (D))
Dimensions (without stand)	368 mm (W) × 474 mm (H) × 83.5 mm (D) (15.3" (W) × 18.7" (H) × 3.3" (D))
Weight	9.5 kg (20.9 lbs.)
Weight (without stand)	6.3 kg (13.9 lbs.)
Environment Conditions	
Temperature	Operating: 0 °C ~ 40 °C (32 °F ~ 104 °F) Storage: -20 °C ~ 60 °C (-4 °F ~ 140 °F)
Humidity	30 % to 80 % R.H. Non-condensing
Pressure	860 to 1,060 hPa
USB Standard	Rev. 1.1 complied self-powered hub
Communication Speed	12 Mbps (full), 1.5 Mbps (low)
Downstream Power Supply	500 mA for each (Max.)
USB ports	Upstream port × 1, Downstream port × 2
Certifications and Standards	TÜV Rheinland /GM, CB, NRTL/C-TÜV, CE (93/42/EEC), FCC-A
Classification of Equipment	Type of protection against electric shock: Class I EMC class: EN60601-1-2 2001 Group1 Class A Classification of medical device (MDD 93/42/EEC): Class I

Dimensions

mm (inches)

G51

FRONT SIDE TOP

G31

FRONT SIDE TOP
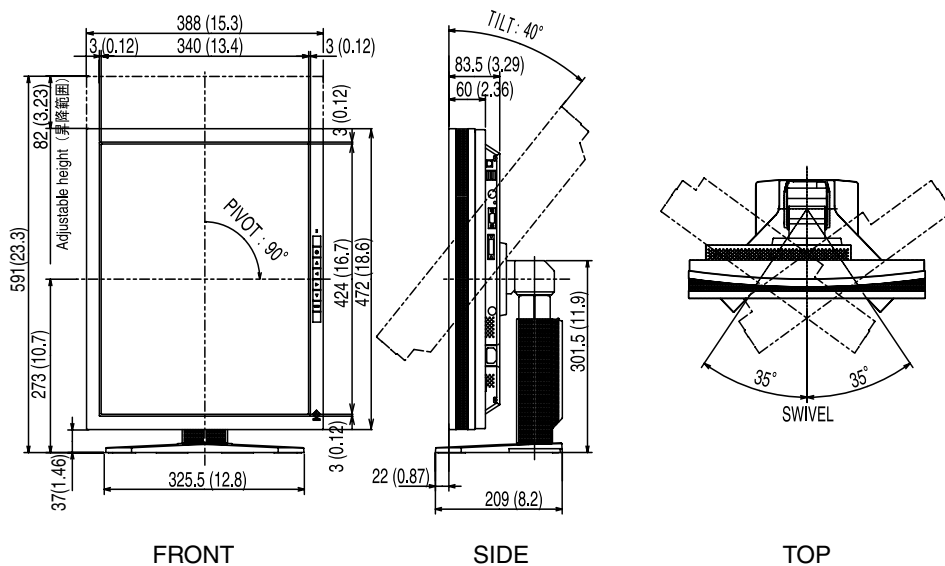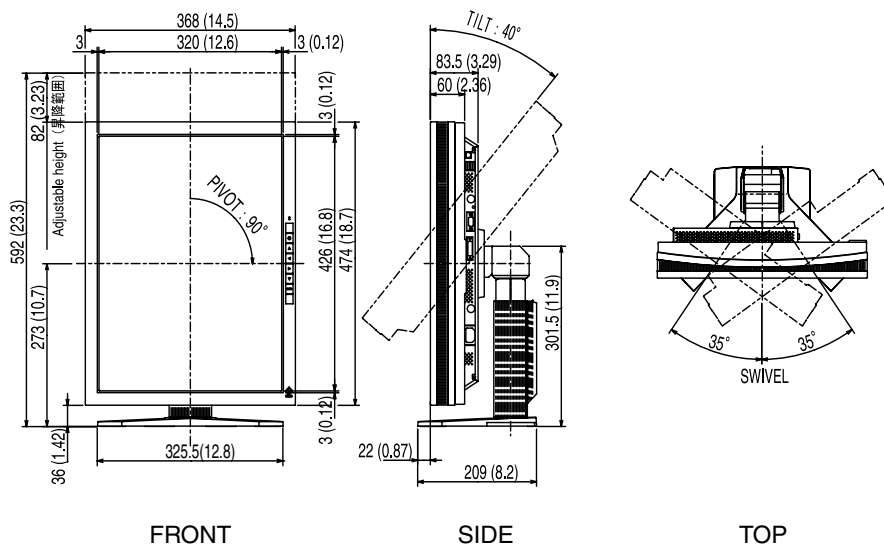
Default settings

PowerManager	DVI DMPM
Off Timer	Disable
Menu Off Timer	45 seconds
Orientation	Portrait
ID	1
LUT Level	3061
Language	English

Optional

Calibration Kit	EIZO RadiForce Calibration Kit GX1
	(Accessories: Photo Sensor × 1, Maintenance cable × 4, Calibration Software)

Pin Assignment

DVI-D Connector
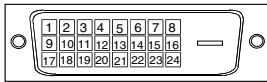
Pin No.	Signal	Pin No.	Signal	Pin No.	Signal
1	TMDS Data2-	9	TMDS Data1-	17	TMDS Data0-
2	TMDS Data2+	10	TMDS Data1+	18	TMDS Data0+
3	TMDS Data2/4 Shield	11	TMDS Data1/3 Shield	19	TMDS Data0/5 Shield
4	NC*	12	NC	20	NC
5	NC	13	NC	21	NC
6	DDC Clock (SCL)	14	+5V Power	22	TMDS Clock shield
7	DDC Data (SDA)	15	Ground (For +5V)	23	TMDS Clock+
8	Analog Vertical Sync	16	Hot Plug Detect	24	TMDS Clock-

(*NC: No Connection)

Remote Out connector (D-Sub 9 pin connector)
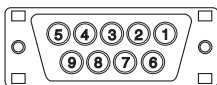
Pin No.	Signal
1	NC*
2	RXD
3	TXD
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

(*NC: No Connection)

Remote In connector (Mini DIN 6 pin)

Pin No.	Signal
1	NC*
2	NC
3	TXD
4	RXD
5	NC
6	GND

(*NC: No Connection)

Photo sensor connector (Mini DIN 8 pin)

Pin No.	Signal
1	NC*
2	RXD
3	TXD
4	NC
5	GND
6	NC
7	NC
8	NC

(*NC: No Connection)

USB Ports

Upstream

2   1
3   4

Series B

Downstream

1 2 3 4

Series A
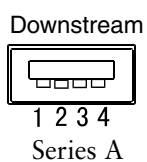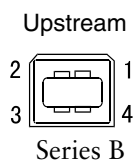
No.	Signal	Signal
1	VCC	Cable power
2	- Data	Serial data
3	+ Data	Serial data
4	Ground	Cable Ground

10. GLOSSARY

Afterimage

The Afterimage is particular to LCD monitors when the monitor screen is left on for a long period without use. The "Afterimage" can be removed gradually by changing the displayed image.

DVI

(Digital Visual Interface)

A digital flat panel interface. DVI can transmit digital data from the PC directly without loss with the signal transition method "TMDS".

There are two kinds of DVI connectors. One is DVI-D connector for digital signal input only. The other is DVI-I connector for both digital and analog signal inputs.

DVI DMPM

(DVI Digital Monitor Power Management)

The Power management system for the digital interface. The "Monitor ON" status (operation mode) and the "Active Off" status (power-saving mode) are indispensable for the DVI-DMPM as the monitor's power mode.

LUT

(Look-up table)

Look-up table is the compensation data, to which the monitor refers, when the monitor outputs the input data from a graphics board. In this model, the "Default*" adjusted beforehand referring to look-up table at a factory or "Normal", which is in the state of the characteristic of panel original, (i.e. not adjusted) can be available. "Custom" automatically stores the customized data after the calibration is performed.

*"Default" is adjusted with the 100 % brightness to DICOM grayscale standard.

Resolution

The LCD panel consists of a fixed number of pixel elements which are illuminated to form the screen image. The EIZO G51 display panel consists of 2048 horizontal pixels and 2560 vertical pixels, and the G31 consists of 1536 horizontal pixels and 2048 vertical pixels. At a resolution of 2048 × 2560 (G51) / 1536 × 2048 (G31), all pixels are displayed as a full screen.

TMDS

(Transition Minimized Differential Signaling)

A signal transition method for the digital interface.

For U.S.A, Canada, etc. (rated 100-120 Vac) Only

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 required to correct the interference at his own expense.

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

Note
Use the attached specified cable below or EIZO signal cable with this monitor so as to keep interference within the limits of a Class A digital device.
- AC Cord
- Shielded Signal Cable (enclosed)

Canadian Notice

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de le classe A est comforme à la norme NMB-003 du Canada.

For Europe, etc. (rated 200-240 Vac) Only

Warning

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Warnung

Bey dem gerät handelt es sich um ein Klasse-A-Produkt. Bei Betrieb des Geräts in Wohnumgebungen ist gegebenenfalls durch entsprechende Maßnahmen dafür zu sorgen, dass eine Störung des Radio- und Fernsehempfangs vermieden wird.

Avertissement

Cet appareil est de classe A. Il est susceptible de créer des interférences radio dans un environnement domestique, dans ce cas l'utilisateur devra prendre les mesures appropriées.

Recycle Auskunft
Die Rücknahme dieses Produktes nach Nutzungsende übernimmt EIZO in Deutschland zusammen mit dem Partner von Roll MBB Recycling GmbH. Dort werden die Geräte in ihre Bestandteile zerlegt, die dann der Wiederverwertung zugeführt werden. Um einen Abholtermin zu vereinbaren und die aktuellen Kosten zu erfahren, benutzen Sie bitte folgende Rufnummer: 02153-73 35 00. Weitere Informationen finden Sie auch unter der Internet-Adresse: www.eizo.de.

Recycling Information for customers in Switzerland:
All recycling information is placed in the SWICO's website.
http://www.swico.ch

Recycling-Information für Kunden in der Schweiz:
Alle Informationen zum Thema Recycling finden Sie auf der Homepage des Brancheverbandes SWICO.
http://www.swico.ch

Renseignements de recyclage pour les clients en Suisse:
Vous trouvez tous les renseignements pour le sujet de recyclage sur la page WEB de I'UNION DE BRAN CHE SWICO.
http://www.eizo.com/cotact/index.html

Recycling Information for customers in USA:
All recycling information is placed in the EIZO Nanao Technologies, Inc's website.
http://www.eizo.com/contact/index.html

Återvinnings information för kunder i Sverige:
All information om återvinning finns på Eizo Nordics hemsida:
www.eizo.se