User's Manual

RadiForce® ES240W Color LCD Monitor

Important

Please read PRECAUTIONS, this User's Manual and Setup Manual (separate volume) carefully to familiarize yourself with safe and effective usage.

- Please read the Setup Manual (separate volume)
- The latest User's Manual is available for download from our site: http://www.radiforce.com

It shall be assured that the final system is in compliance to IEC60601-1-1 requirements.



Power supplied equipment can emit electromagnetic waves, that could influence, limit or result in malfunction of the monitor. Install the equipment in a controlled environment, where such effects are avoided.

This is a monitor intended for use in a medical image system.

Using the special functions, such as screen size change (ex. changing the horizontal and vertical ratio of images input) for commercial purposes or for the purpose of showing in public may violate copyright laws.

Product specification may vary with sales areas.

Confirm the specification in the manual written in language of the region of purchase.

Remote control is intended to be used ONLY by operator.

Copyright© 2009 EIZO NANAO CORPORATION All rights reserved.

No part of this manual may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, or otherwise, without the prior written permission of EIZO NANAO CORPORATION.

EIZO NANAO CORPORATION is under no obligation to hold any submitted material or information confidential unless prior arrangements are made pursuant to EIZO NANAO CORPORATION's receipt of said information.

Although every effort has been made to ensure that this manual provides up-to-date information, please note that EIZO monitor specifications are subject to change without notice.

Apple and Macintosh are registered trademarks of Apple Inc.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC. VGA is a registered trademark of International Business Machines Corporation.

Windows, Windows Vista and Xbox 360 are registered trademarks of Microsoft Corporation in the United States and other countries. VESA is a registered trademark or a trademark of Video Electronics Standards Association in the United States and other countries. PlayStation Portable is a product of Sony Computer Entertainment Inc. PlayStation is a registered trademark of Sony Computer Entertainment Inc.

PC-9821 is a trademark of NEC Corporation.

The round gothic bold bit map font used for this product is designed by Ricoh.

EIZO, RadiForce and ScreenManager are registered trademarks of EIZO NANAO CORPORATION in Japan and other countries. PowerManager is a trademark of EIZO NANAO CORPORATION.

Notice for this monitor

This product is suited to displaying endoscope images.

This product has been adjusted specifically for use in the region to which it was originally shipped. If the product is used outside the region, it may not operate as specified in the specifications.

This product may not be covered by warranty for uses other than those described in this manual.

The specifications noted in this manual are only applicable for power cords and signal cables specified by us.

Use optional products manufactured or specified by us with this product.

As it takes about 30 minutes for the performance of electrical parts to stabilize, adjust the monitor 30 minutes or more after the monitor power has been turned on.

In order to suppress the luminosity change by long-term use and to maintain the stable luminosity, use of a monitor in lower brightness is recommended.

When the screen image is changed after displaying the same image for extended periods of time, an afterimage may appear. Use the screen saver or timer to avoid displaying the same image for extended periods of time.

Periodic cleaning is recommended to keep the monitor looking new and to prolong its operation lifetime. (Refer to "Cleaning" on the next page.)

The LCD panel is manufactured using high-precision technology. However, missing pixels or lit pixels may appear on the LCD panel, this is not malfunction.

Percentage of effective pixels: 99.994% or higher.

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 the display malfunction, such as the interference patterns, etc. If pressure is continually applied to the LCD panel, it may deteriorate or damage your LCD panel. (If the pressure marks remain on the LCD panel, leave the monitor with a white or black screen. The symptom may disappear.)

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 LCD panel.

When the monitor is cold and brought into a room or the room temperature goes up quickly, dew condensation may occur inside and outside the monitor. In that case, do not turn the monitor on and wait until dew condensation disappears, otherwise it may cause some damages to the monitor.

When using this product, just in case the images cannot be displayed during use, displaying images on multiple monitors or preparing an alternative monitor is highly recommended.

Periodic maintenance is recommended for stable performance of your monitor. Please ask your dealer for maintenance (non-free).

Cleaning

Attention

• Never use any solvents or chemicals, such as thinner, benzene, wax, alcohol, disinfectant, and abrasive cleaner, which may damage the cabinet or LCD panel.

NOTE

• Optional ScreenCleaner is recommended for cleaning the panel surface.

[LCD Panel]

- Clean the LCD panel with a soft cloth such as cotton cloth or lens cleaning paper.
- Remove persistent stains gently with a cloth dampened with a little water, and then clean the LCD panel again with a dry cloth for better finishing.

[Cabinet]

Clean the cabinet with a soft cloth dampened with a little mild detergent.

To use the monitor comfortably

- An excessively dark or bright screen may affect your eyes. Adjust the brightness of the monitor according to the environmental conditions.
- Staring at the monitor for a long time tires your eyes. Take a 10-minute rest every hour.

CONTENTS

Cover1				
Notice for this monitor3				
CONTE	CONTENTS5			
Chapte	er 1 Features and Overview7			
1-1	Features7			
1-2	Controls and Functions9			
1-3	Functions and Basic Operation11			
Chapte	er 2 Operation14			
2-1	Input Signal Switching 14			
2-2	Volume Adjustment			
	To turn the volume up/down			
•	To mute the sound temporarily14			
2-3	Game Image Display 15			
	To set on / off for Thru Mode			
	To change game screen size			
•				
2-4	External Device Controlling (HDMI CEC Function)			
	HDMI CEC Function			
	To set HDMI CEC [HDMI CEC Setting]			
	To perform play operation and menu operation. 17			
2-5	PinP (Picture in Picture) Display 19			
•	To turn PinP display on or off			
	To change the output sound 19			
•	To change the Main Window and Sub-Window			
	input signal			
	To set the translucent level for Sub-Window			
	[Sub-Window Lucent]			
2-6	Screen Size Changing20			
•	To enable/disable auto changing			
	[Auto Screen Size]20			
	To change the screen size manually 20			
•	To set the screen ratio [Screen Ratio]			
Chapte	er 3 Settings and Adjustments22			
3-1	Screen Adjustment			
PC	C2 Input (Only for Analog Input Signal) 22			
VI	DEO2 Input			

3-2	Color Adjustment	26
•	To select the color mode [Color Mode]2	26
•	To perform advanced adjustments	27
•	Adjustment items in each mode	27
•	To adjust the brightness [Brightness]	
•	To adjust the black level [Black Level]	
•	To adjust the contrast [Contrast]	
•	To adjust the color saturation [Saturation]2	
•	To adjust the hue [Hue]	
•	To adjust the color temperature [Temperature]. 2	29
•	To change the setting of automatic brightness	
	adjustment function [Auto EcoView]	29
•	To compensating the outline of images [OutlineEnhancer]	20
	To enable/disable the automatic contrast	ou
	adjustment [ContrastEnhancer]	ลก
•	To make fine adjustment of the balance of red,	,0
	green, blue (RGB) [RGB Balance]	30
•	To adjust the gamma value [Gamma]	
•	To adjust the gain value [Gain]	
•	To reduce the noise of images [Noise Filter] 3	
•	To set the I/P conversion's processing methods	
	[I/P Conversion]	32
3-3	Cound Adjustment	2
	Sound Adjustment	ာ
•	To adjust the left and right volume balance [Balance]	22
	To adjust Treble and Bass [Treble] / [Bass] 3	
	To adjust the sound level [Sound Level]	
3-4	Power Saving Setting	
•	To enable/disable the automatic power off setting	g
	when no input signal is detected	
	[No Signal Off]	
•	To enable/disable the automatic power off setting	g
	when no operation is done) E
	[No Operation Off]	ງວ
	[Power Saving (PC)]	26
		JU
3-5	Displaying the Level of Power Saving by	
	EcoView Index	37
3-6	Turning Off the Monitor Automatically 3	37
3-7	Input Format Setting for HDMI Input	
	[Input Format]	37
	Audia Innut Connector Cattle - f - LIDAU	
3-8	Audio Input Connector Setting for HDMI Input [Sound Input Jack]	
	Footing tribut agold tributing	-0

CONTENTS

3-9	Locking Buttons	38
3-10	Displaying Monitor Information [Information]	38
3-11	Setting Power Indicator ON/OFF [Power Indicator]	38
3-12	Setting Language [Language]	39
3-13	Setting EIZO logo Display ON/OFF	39
3-14	Resetting the Setting of the Displayed Menuthe Default [Reset]	
Chapte	r 4 Troubleshooting	40
•	Messages List	44
Chapte	r 5 Reference	45
5-1	Attaching an Arm	45
5-2	Specifications	46
5-3	Glossary	50
5-4	Preset Timing	52
FCC De	eclaration of Conformity	54
EMC In	formation	55
Hinwei	se zur Auswahl des richtigen	
Schwei	nkarms für Ihren Monitor	59

Chapter 1 Features and Overview

Thank you very much for choosing an EIZO color LCD monitor.

1-1 Features

- 24" wide format LCD Applicable to WUXGA (1920×1200)
- · Adopting high color gamut panel

Realizing the wide color gamut of 96% of Adobe RGB color space, 92% of NTSC

- * This monitor does not support the conversion to sRGB.
- Equipped with a wealth of output and input connectors

DVI-D connector×1, D-Sub mini 15 pin connector×1,

HDMI connector×2, S-Video/video input connector×1, component video input connector×1

- Applicable to the PC input signal using HDMI input. 4 input connectors including PC input are available
- In addition to NTSC, the PAL input signal is supported using S-Video/video input
- Applicable to 1080p @ 24 Hz (48 Hz) using HDMI input and component video input
- USB auto select function

The PC operating the USB devices switches automatically in conjunction with input signal switching.

- * This function is available only for the PC connected to PC input.
- USB Selection Setting [USB Selection] (page 14)
- Equipped with the specialized function for displaying of game images
 - Thru Mode

Enable to skip image processing and minimize the delay of displaying image

- Real Image

Enable to display game images without dot blurring

2-3 Game Image Display (page 15)

• HDMI CEC (Consumer Electronics Control) function

This monitor supports HDMI CEC. When the monitor is connected to external devices applicable to HDMI CEC, the interactive control becomes possible and the external device can be controlled with the remote control of the monitor.

- 2-4 External Device Controlling (HDMI CEC Function) (page 16)
- Power saving function

Suppressing the power consumption reduces the carbon dioxide emissions.

This product is equipped with various power saving functions.

- Power Consumption when main power switch is Off: 0 W

Equipped with main power switch.

Turning off the main power switch completely shuts off power supply to the monitor while the monitor is not used.

- Auto EcoView function

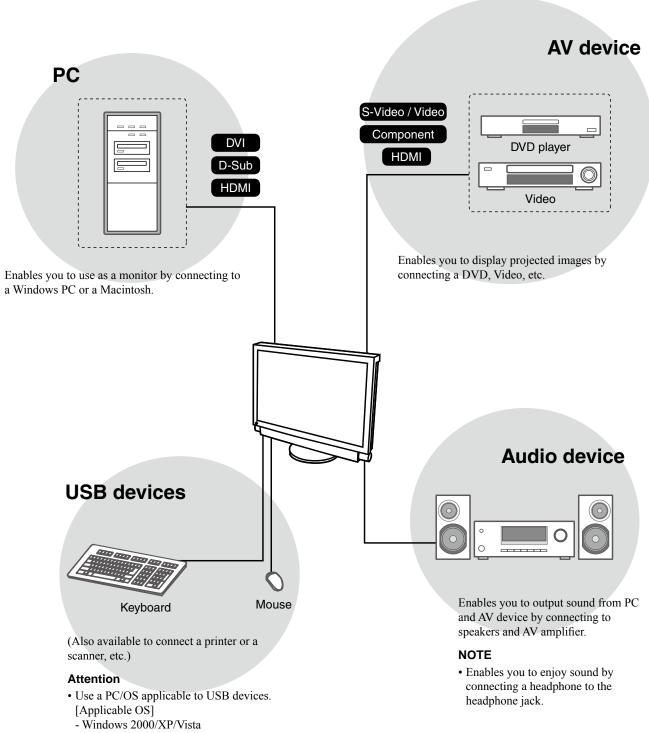
According to the environmental brightness detected by the sensor on the bottom side of the monitor and the brightness of displayed images, the screen brightness is adjusted automatically. Excessively high brightness may lead a damage to the natural environment as well as to your eyes. Suppressing the excessively high brightness will be helpful to reduce the power consumption and the damage to your eyes.

- To change the setting of automatic brightness adjustment function [Auto EcoView] (page 29)
- EcoView Index function

The green indicator shows the power consumption ratio responding to the brightness of the monitor. You can realize the power consumption reduction by taking consideration in the ratio of power saving.

- 3-5 Displaying the Level of Power Saving by EcoView Index (page 37)
- Remote control enables easy operation, setting and adjustment of the monitor.
 - "Remote Control Guide" (separate volume)
- HDCP (High-bandwidth Digital Content Interface)

Connecting to peripheral devices

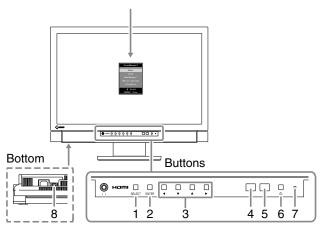


- Mac OS 9.2.2 and Mac OS X 10.2 or later
- USB device does not work when the main power switch of the monitor is off.

1-2 Controls and Functions

Buttons

Setting menu (ScreenManager® *1)



- 1. Select button (SELECT)
 - Displays "SELECT" menu.
 - Each time you press the button, the content of the menu changes.
- 2. Enter button (ENTER)

Displays the Setting menu, fixes the setting or adjustment items on each menu, and saves the setting or adjustment results.

3. Control buttons $(\blacktriangleleft / \blacktriangledown / \blacktriangle / \blacktriangleright)$

Used to select the setting or adjustment items, or to increase or decrease the adjustment values on each menu.

4. Sensor

Detects the environmental brightness.

5. Remote control detector

Receives the signal from the remote control.

6. Power button ((1))

Turns the power on or off.

7. Power indicator

Indicates monitor's operation status.

Indicator status	Operation status
Blue	Operating
Orange	Power saving
Off	Power off

8. Main Power Switch

Turns the main power on or off.

*1 ScreenManager ® is an EIZO's nickname of the Setting menu.

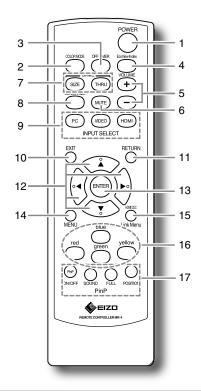
NOTE

 You can adjust the headphone volume and change the input signal in the "SELECT" menu.

NOTE

• While the screen is displayed, the power indicator that is lighting blue can be turned off (see "3-11 Setting Power Indicator ON/OFF [Power Indicator]" on page 38).

Remote Control



Button		Function	
1 POWER		Turns the power on or off	
2	COLOR MODE	Changes the color mode	
3	OFF TIMER	Sets the time until the monitor power-off	
4	EcoView Index	Displays or hides the indicator (green) that indicates the power saving level	
5	VOLUME	Adjust the headphone volume	
6	6 MUTE Mutes sound temporarily		
7	GAME	Use when displaying the game images	
	SIZE	Changes the screen size	
	THRU	Changes to "Thru Mode" (available only for VIDEO input or HDMI (video signal) input)	
8	SCREEN SIZE	Changes the screen size	
9	INPUT SELECT	Switches the input signal	
	PC	PC1 / PC2	
	VIDEO	VIDEO1 / VIDEO2	
	HDMI	HDMI1 / HDMI2	
10	EXIT	Exits the menu in menu operation	
11	RETURN	Returns to the previous menu in menu operation	
12	Control buttons (▲▼◀ ▶)	Used to select the setting or adjustment items, or to increase or decrease the adjustment values on each menu	
13	ENTER	Displays the Setting menu, fixes the setting or adjustment items on each menu, and saves the setting or adjustment results	
14	MENU	Displays/Exits the Setting menu	
15	15 Link Menu Displays/Exits the Link Menu (HDMI CEC)		
16	16 Color Buttons Use when controlling external devices using the HI CEC function		
17	PinP	Use for PinP display mode	
	ON/OFF	Turns PinP display on or off	
	FULL	Displays the Sub-Window in full screen	
	SOUND	Changes the output sound	
	POSITION	Changes the Sub-Window position	

NOTE

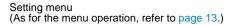
• Thru Mode minimizes the delay of displaying image.

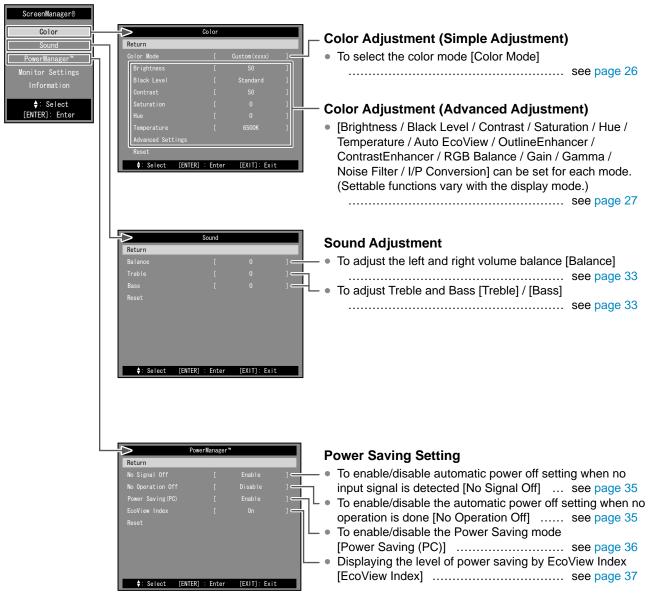
1-3 Functions and Basic Operation

Functions

Attention

• Settable functions differ depending on the input signal. (Refer to "Setting menu list" on page 48.)





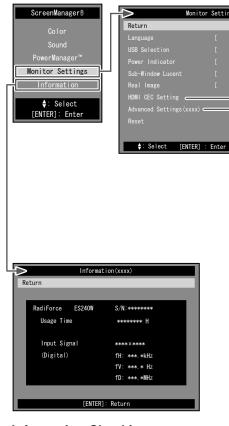
Attention

• Settable functions differ depending on the input signal. (Refer to "Setting menu list" on page 48.)

[EXIT]: Exit

Setting menu

(As for the menu operation, refer to page 13.)



Information Checking

• Displaying Monitor Information [Information]see page 38

Monitor Settings

- Setting Language [Language] see page 39
 USB Selection Setting [USB Selection] ... see page 14
 Setting Power Indicator ON/OFF [Power Indicator]
- To set HDMI CEC [HDMI CEC Setting] ... see page 17

Advanced Settings for Each Input

■ PC Input

- **VIDEO Input**
- incorrectly [Color System] see page 43
 To remove flickering or blurring [Phase] ... see page 25
 To adjust the sound level [Sound Level] ... see page 34

■ HDMI Input

- Input Format Setting [Input Format] see page 37
 To enable/disable Auto Screen Size function
 [Auto Screen Size] see page 20
 To set the screen ratio [Screen Ratio] see page 21
 To set the color space when the image color is displayed incorrectly [Color Space]..... see page 44
 Audio Input Connector Setting [Sound Input Jack] see page 38
 To adjust the sound level [Sound Level] ... see page 34

Functions (Continued)

Input Signal Switching	PinP (Picture in Picture) Display
To switch the input signal according to the device that	 To turn PinP display on or off <on off=""></on>
you want to display <pc hdmi="" video="">see page 14</pc>	 To change the output sound <sound></sound>
Volume Adjusting	see page 19To display the Sub-Window in full screen <full></full>
To turn the volume up/down <volume (+="" -)=""></volume>	
To mute the sound temporarily <mute></mute>	To change the Sub-Window position <position>see page 19</position>
see page 14	Screen Size Changing
Game Image Display Setting	 To change the screen size manually <size></size>
To set on/off for Thru Mode (minimizes the delay of	see page 20
displaying image) <thru> see page 15</thru>	
• To change game screen size <size>see page 15</size>	Color Mode Changing
- I a a a a a a a a a a a a a a a a a a	To select the color mode <color mode=""></color>
External Device Controlling	see page 26
(HDMI CEC Function)	EcoView Index Displaying
 To control external devices with the remote control of the monitor <link menu=""/>see page 16 	 To display/hide the indicator (green) that indicates t power saving level <ecoview index=""> see page 37</ecoview>
	Off Times Cotting
	Off Timer Setting
	_
	To set the time until the monitor is automatically turn off <off timer="">see page 37</off>
Basic operation of the Setting n	To set the time until the monitor is automatically turn off <off timer="">see page 37</off>
Displaying the Setting menu and selecting function	To set the time until the monitor is automatically turn off <off timer="">see page 37 The number of the time until the monitor is automatically turn off <off timer="">see page 37 The number of the time until the monitor is automatically turn off <off timer="">see page 37 The number of the time until the monitor is automatically turn off <off timer="">see page 37</off></off></off></off>
Displaying the Setting menu and selecting function ■ Displaying the Setting menu	To set the time until the monitor is automatically turn off <off timer="">see page 37 nenu</off>
[Displaying the Setting menu and selecting function ■ Displaying the Setting menu • The remote control: Press One Note The Press One The	To set the time until the monitor is automatically turn off <off timer="">see page 37 The page 37 Setting menu Setting menu Sometime in the monitor is automatically turn of the page 37 Setting menu Sometime in the monitor is automatically turn of the page 37 Setting menu Sometime in the monitor is automatically turn of the page 37 Setting menu</off>
Displaying the Setting menu and selecting function ■ Displaying the Setting menu • The remote control: Press On the buttons on the monitor: Press ENTER.	To set the time until the monitor is automatically turn off <off timer=""> see page 37 The page 37 Setting menu Screenkanager® Color Sound Power Manager®</off>
Displaying the Setting menu and selecting function ■ Displaying the Setting menu ■ The remote control: Press On the buttons on the monitor: Press ENTER. ■ Displaying the Item Selecting menu, Setting/Adjusters	To set the time until the monitor is automatically turn off <off timer=""> see page 37 The page 37 Setting menu Screenkanager® Color Sound Power Manager®</off>
Displaying the Setting menu and selecting function ■ Displaying the Setting menu • The remote control: Press ON THE BUTTON ON THE BUTTON ON THE BUTTON ON THE BUTTON ON THE SELECTING MENU, Setting/Adjusted The remote control:	To set the time until the monitor is automatically turn off <off timer=""> See page 37 The page 37 Setting menu Setting menu Setting menu Setting menu Sound Power Manager* Monitor Soutings Information Settings Information Information</off>
 [Displaying the Setting menu and selecting function ■ Displaying the Setting menu • The remote control: Press On the monitor: Press On t	To set the time until the monitor is automatically turn off <off timer=""> See page 37 The page 37 Setting menu Setting menu Setting menu Setting menu Sound Power Manager* Monitor Soutings Information Settings Information Information</off>
 [Displaying the Setting menu and selecting function ■ Displaying the Setting menu • The remote control: Press ON LENUT. • The buttons on the monitor: Press ENTER. ■ Displaying the Item Selecting menu, Setting/Adju • The remote control: 	• To set the time until the monitor is automatically turn off <off timer=""></off>

[Exit the menu]

■ Deciding the item

- The remote control: Press .
 The buttons on the monitor: Press ENTER twice continuously.

• To go back to the previous menu, press .

The remote control: Press (ENTER).
The buttons on the monitor: Press (ENTER).



Chapter 2 Operation

Input Signal Switching

This function allows you to switch the input signal according to the device that you want to display.

(1) Press (PC), (VDEO) or (HDMI) on the remote control.

Each time you press the button, the input signal switches as below.

- (PC): $PC1 \rightarrow PC2$

- $(VIDEO1 \rightarrow VIDEO2$ - (HDMI): $HDMI1 \rightarrow HDMI2$

■ USB Selection Setting [USB Selection]

When connecting the USB devices to the downstream port of the monitor, you can specify the PC on which the USB devices work.

Settings	Using status
Auto	The PC on which the USB devices work switches automatically according to input signal switching (between PC 1 and PC 2).
PC1	The USB devices work on the PC connected to "PC1" input.
PC2	The USB devices work on the PC connected to "PC2" input.

(1) Choose [Monitor Settings] in the Setting menu and press (ENTER)



(2) Choose [USB Selection] in the [Monitor Settings] menu and press (ENTER). The [USB Selection] setting menu appears.

(3) Select "Auto", "PC1" or "PC2" with ◀ or ▶, and then press (ENTER) The setting is completed.

Volume Adjustment

This function allows you to adjust volume of the headphones up or down.

To turn the volume up/down

Adjustable range: 0 to 50

(1) Press (+) or (-) on the remote control.

To mute the sound temporarily

(1) Press \bigcirc on the remote control. Mute sound temporarily.

By pressing the button again or pressing \bigcirc , the sound comes back.

NOTE

- Operation with the buttons on the
 - Press SELECT until the input selection menu appears, and then switch the input signal with \triangleleft or \triangleright .

- "Auto" functions only for the PC connected to PC input.
- To use the USB device on the PC connected to HDMI input, connect the PC to the upstream port ("PC 1" or "PC 2") of the monitor with the USB cable, and then select the port to which the USB cable is connected in [USB Selection].
- · Please note the following when changing the setting.
 - When connecting a memory device such as a USB memory to the monitor, the data may be lost and damaged. Be sure to change the USB setting after removing the memory device.

NOTE

- Operation with the buttons on the monitor
- Press SELECT until the volume menu appears, and then adjust the volume with \triangleleft or \triangleright .

NOTE

• The mute setting can also be released by pressing > on the monitor.

2-3 Game Image Display

• To set on / off for Thru Mode

This function allows you to set Thru Mode (minimizes the delay of displaying image) to display game images.

(1) Press (THRU) on the remote control. Each time you press (THRU), Thru Mode turns on or off.

To change game screen size

This function allows you to change the screen size suitable for game.

■ PC Input / HDMI (PC Signal) Input

Settings	Status
Normal	Displays images with the specified resolution.
	Displays an image with the doubled aspect ratio of "Normal" setting.

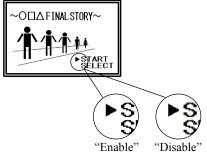
■ VIDEO Input / HDMI (Video Signal) Input

Settings	Status
Portable (VIDEO Input only)	Select this when displaying the images of the PlayStation Portable.
Real	Displays an image with the resolution of the input signal.
Aspect 4:3	Displays an image in 4 : 3 size based on the vertical resolution of the input signal.
Aspect 16:9	Displays an image in 16 : 9 size based on the vertical resolution of the input signal.
2 * Real	Displays an image with the doubled aspect ratio of "Real".
2 * Aspect 4:3	Displays an image with the doubled aspect ratio of "Aspect 4:3".
2 * Aspect 16:9	Displays an image with the doubled aspect ratio of "Aspect 16:9".

(1) Press (SZE) on the remote control. Each time you press (SZE), the size changes.

• To enable/disable Real Image [Real Image]

This function allows you to choose whether the game images are displayed without dot blurring.



(1) Choose [Monitor Settings] in the Setting menu and press (ENTER)

(2) Choose [Real Image] in the [Monitor Settings] menu and press The [Real Image] setting menu appears.

(3) Select "Enable" or "Disable" with ◀ or ▶, and then press The setting is completed.

Attention

- Thru Mode is available only for VIDEO input or HDMI (video signal) input.
- When the signal of 1080p @ 24 Hz / 25 Hz / 30 Hz is input from the gaming device connected to HDMI input, "Thru Mode" is not available. In "Thru Mode", if the signal of 1080p @ 24 Hz / 25 Hz / 30 Hz is input, the setting returns to the former setting automatically during the signal input.

Attention

 When "2 * Normal" is selected and the resolution of the input signal exceeds 960 x 600, the screen is displayed in "Normal".

Attention

- When the input signal is 1080i, 720p or 1080p, the screen size is fixed to "Real", so that the setting could not be changed.
- If the horizontal resolution exceeds 1920 when "2 * Aspect 16:9" is selected, the left and right parts of the image slightly cut off.

Attention

 [Real Image] is available only when the screen size is set for game.

2-4 External Device Controlling (HDMI CEC Function)

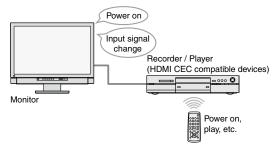
HDMI CEC Function

This monitor supports HDMI CEC (Consumer Electronics Control). The interactive control becomes possible by connecting the external device applicable to HDMI CEC to the monitor with the HDMI cable.

When using the HDMI CEC function, HDMI CEC setting (page 17) is required.

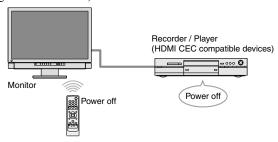
■ Power On Link

When turning on or playing the external device, the monitor is automatically turned on and the signal of the external device is input.



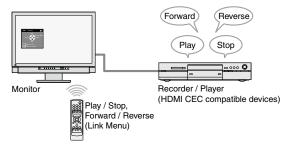
■ Power Off Link

When turning off the monitor, the external devices are also turned off.



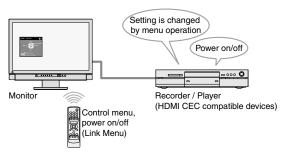
■ Play operation of external devices

The external device can be operated (play and stop, forward and reverse) with the remote control of the monitor.



■ Menu operation of external devices

The menu of the external device can be operated with the remote control of the monitor.



Attention

- Setting the HDMI CEC causes the monitor to operate in connection with the control of external devices (Power OFF, Input Signal Switching, etc.). It is recommended that the [HDMI CEC] be set to "Disable" in cases where no picture displayed during use might be a problem (eg during an operation).
- Using the HDMI CEC function, this monitor can control only those external devices such as recorders and players applicable to HDMI CEC. However, this function does not work correctly with some devices. The HDMI CEC function does not work when the device is connected through the AV amplifier or HDMI selector.
- The setting of the connected device needs to be changed when adding the devices to be connected or changing the connected input signal. Display the Link Menu and select [Search Devices] in [Device List] with the connected device powered on. (See page 17)

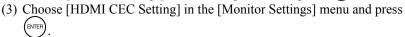
(While the "Please wait a few minutes." message is displayed, do not turn off the monitor and connected device.)

NOTE

- Power On Link can work by controlling from all external devices that are connected to the monitor.
- Power Off Link can work on all external devices that are connected to the monitor.
- The play operation and menu operation work only on the target external devices.
 However, this function does not work correctly with some devices.
- For the procedure of the play operation and menu operation, refer to page 17.

• To set HDMI CEC [HDMI CEC Setting]

- (1) Confirm that the HDMI CEC setting of the external device is enabled. For details on the setting, refer to the manual of the external device.
- (2) Choose [Monitor Settings] in the Setting menu and press (ENTER)



The [HDMI CEC Setting] menu appears.

- (4) Set each item.
 - 1. Choose the setting item with ▲ or ▼ and press The setting menu of the selected item appears.
 - 2. Select the setting with \triangleleft or \triangleright , and then press $\stackrel{\text{ENTER}}{}$.

The setting is completed.

To perform play operation and menu operation

Operate the Link Menu.

(1) Press Link Menu on the remote control. The Link Menu appears.

Appears when the external device does not correspond to the control from the monitor.

The input signal and the name of currently controllable device is displayed.

(When changing the controlled device, see below.)



Indicates the power status of the connected external device.

Green: Power on
Gray: Power off
Orange: is powering up /
is powering off

Link Menu

■ When switching controlled device

(1) Press \bigcirc

The list of controllable devices appears.

"\" mark is displayed next to the currently selected device.



(2) Select the device to be controlled with ▲ or ▼, and then press (ENTER). The setting is completed.

■ How to use

The mode of the Link Menu can be changed by pressing [Change Mode]. The available operation differ according to modes.

- Controlling the play of external devices (Play and stop, forward and reverse)
- Controlling the menu of external devices (control menu, power on/off)

Press (NTER) to switch the mode, and then press the appropriate buttons to the operation of each mode on the remote control. (See page 18)

NOTE

- When not using the HDMI CEC function, Power On Link, or Power Off Link, set "Disable" to each of them.
- While [HDMI CEC] is at "Disable", [Power On Link] and [Power Off Link] cannot be selected.

Attention

- If the device list is displayed with the message "There are no operable devices." when pressing that the device is connected correctly and the power is turned on, and then select [Search Devices] and press
- Press O to close the Link Menu.

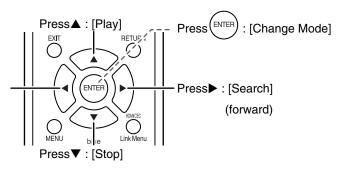
NOTE

- If the target device is not displayed in the device list, confirm that the device is connected correctly and the power is turned on, and then select [Search Devices] and press (ENTER).
- The controlled device can also be changed by switching the input signal.

■ Controlling the play of external devices





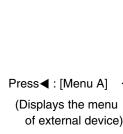


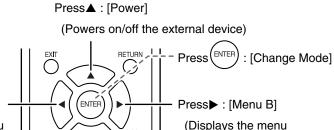


Pressing switches the mode.

■ Controlling the menu of external devices







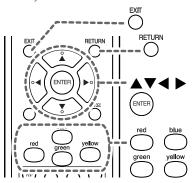
Press▼ : [Exit]*1

(Closes the menu of external device)

*1: Use this when the menu of external device cannot be closed by manipulating the menu.

Attention

- The menu displayed with pressing ◀ or ▶ depends on the external device.
- When the menu of the external device appears, press on to close the Link Menu. (The menu of the external device cannot be controlled without closing of the Link Menu.)
- While the menu of the external device is displayed, the buttons on the remote control shown in right are available. (The works of each button depend on the menu.)

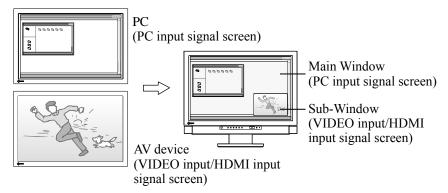


of external device)

2-5 PinP (Picture in Picture) Display

• To turn PinP display on or off

When the PC (PC input) and AV device (VIDEO input / HDMI input) are connected to the monitor, both images can be displayed in Main Window and Sub-Window simultaneously.



(1) Press on the remote control.

Each time you press on, the setting switches between ON and OFF.

• To change the output sound

This function allows you to change the output sound in PinP display mode. (Main Window and Sub-Window)

(1) Press \bigcirc_{SOMO} on the remote control. Each time you press \bigcirc_{SOMO} , the setting of sound changes.

To change the Main Window and Sub-Window input signal

This function allows you to change the input signal of Main Window and Sub-Window.

■ Main Window

(1) Press (PC) on the remote control.

■ Sub-Window

(1) Press (VIDEO) or (HDMI) on the remote control.

To change the Sub-Window position

This function allows you to change the Sub-Window position. (Upper Right, Lower Right, Lower Left and Upper Left)

(1) Press on the remote control.

Each time you press control, the position changes.

To set the translucent level for Sub-Window [Sub-Window Lucent]

This function allows you to display the Sub-Window translucently and see the Main Window through it.

Adjustable range: 0, 1, 2, 3

- (1) Choose [Monitor Settings] in the Setting menu and press (ENTER).
- (2) Choose [Sub-Window Lucent] in the [Monitor Settings] menu and press (ENTER).

The [Sub-Window Lucent] setting menu appears.

(3) Select the level with ◀ or ▶, and then press ENTER.

The setting is completed.

Attention

 The Main Window is not used for VIDEO input/HDMI input signal display and the Sub-Window is not used for PC input signal display.
 The image of the PC connected to HDMI input is displayed on Sub-Window.

NOTE

• In PinP display mode, by pressing
Sub-Window size can be changed.

However, when the signal of 1080i, 720p or 1080p is displayed in the Sub-Window, the size is fixed to "16:9".

 The mode setting of PC input signal is applied to the color mode in PinP display mode.

NOTE

2-6 Screen Size Changing

• To enable/disable auto changing [Auto Screen Size]

The auto changing of the screen size can be set according to the aspect information of the input signal from AV device.

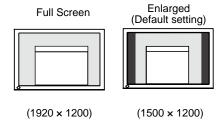
- (1) Choose [Monitor Settings] in the Setting menu and press (ENTER)
- (2) Choose [Advanced Settings] in the [Monitor Settings] menu and press
- (3) Choose [Auto Screen Size] in the [Advanced Settings] menu and press
 The [Auto Screen Size] setting menu appears.
- (4) Select "Enable" or "Disable" with ◀ or ▶, and then press The setting is completed.

To change the screen size manually

■ PC Input / HDMI (PC Signal) Input

Settings	Status
	Displays an image in full screen. Images are distorted in some cases because the vertical rate is not equal to the horizontal rate.
Enlarged	Displays an image in full screen. In some cases, a blank horizontal or vertical border appears to equalize the vertical rate and the horizontal rate.

(Ex.: 1280 x 1024 display)



■ VIDEO Input / HDMI (Video Signal) Input

Settings	Status	Input Signal → Screen Display (Aspect ratio)
4:3	Displays the image in 4:3 size. The borders are shown on both sides of the screen. 16:9 sized images from the input signal are compressed horizontally and spread vertically.	(4:3)
4:3 Zoom1	Displays Letterbox of 16:9 in full screen. Except for Letterbox, the upper and lower parts of the projected image are cut.	(16:9 Letterbox)
4:3 Zoom2	Displays Letterbox of 14:9 in the center of the screen (15.5:10 size). The black borders are shown on both sides of the screen. Except for Letterbox, the upper and lower parts of the projected image are cut.	(14:9 Letterbox)
16:9	Displays the whole image in 16:9 size. Black borders appear on the top and bottom side of the image. The image of 4:3 is slightly spread horizontally.	(16:9)

Attention

• [Auto Screen Size] is available only for VIDEO input or HDMI (video signal) input.

NOTE

- If you do not want to change the Screen size automatically, set the [Auto Screen Size] to "Disable".
- After changing the screen size automatically, it can be changed manually.

NOTE

- When displaying the images of the gaming device, use the (SIZE) changing of the game (Refer to "To change game screen size" on page 15).
- If you want to display the image with the default resolution, select "Normal" in (SUZE) of the game.

Attention

• When the input signal is 1080i, 720p or 1080p, only "16:9" and "16:9 Zoom" are available.

NOTE

• The screen ratio can be selected independently of the screen size (see page 21).

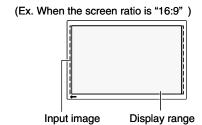
Settings	Status	Input Signal → Screen Display (Aspect ratio)
	Displays the image in 16:9 size in full screen. The left and right parts of the image slightly cut off. The image of 4:3 is slightly spread horizontally.	(16:9)

(1) Press on the remote control.

Each time you press , the size changes.

To set the screen ratio [Screen Ratio]

Generally the input image is displayed with the left, right, upper and lower parts slightly cut off (overscan). The display range of the input image can be changed.



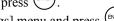
■ When the input signal is 480i/480p/576i/576p

Settings	Status
Standard	Displays the screen with standard setting. (the left, right, upper and lower parts of the input image slightly cut off)
Full Image / Full Screen	Displays most of the input image.

■ When the input signal is 1080i/720p/1080p

Settings	Status
Standard	Displays the screen with standard setting. (the left, right, upper and lower parts of the input image slightly cut off)
Full Image	Displays most of the input image.
Full Screen	Displays the image keeping the aspect ratio of 16:9. The left and right parts of the image slightly cut off.

(1) Choose [Monitor Settings] in the Setting menu and press (ENTER).



- (2) Choose [Advanced Settings] in the [Monitor Settings] menu and press (ENTER).
- (3) Choose [Screen Ratio] in the [Advanced Settings] menu and press (ENTER). The [Screen Ratio] setting menu appears.
- (4) Select "Standard", "Full Image" or "Full Screen" with ◀ or ▶, and then press (ENTER).

The setting is completed.

Attention

• [Screen Ratio] is available only for VIDEO input or HDMI (video signal)

• If you select "Full Screen" when the screen size is "16:9", the screen is displayed as same as the one of "16:9 Zoom".

NOTE

· When selecting "Full Image" or "Full Screen", the noise may appear around the peripheral portions of the screen image. In this case, change to "Standard".

Chapter 3 Settings and Adjustments

3-1 Screen Adjustment

PC2 Input (Only for Analog Input Signal)

The monitor screen adjustment is used to suppress flickering of the screen or adjust screen position and screen size correctly according to the PC to be used.

The Auto Screen Adjust function works in the following cases:

- When a signal is input into the monitor for the first time
- When the resolution or Vertical/Horizontal Frequency not displayed before is set

If the screen is not displayed correctly even after performing the Auto Screen Adjust function, perform the screen adjustments according to the procedures on the following pages to use the monitor comfortably.

[Adjustment Procedure]

- Perform the auto screen adjustment.
 - To adjust flickering, screen position, and screen size automatically [Auto Screen Adjust]
 - (1) Choose [Monitor Settings] in the Setting menu and press (ENTER)
 - (2) Choose [Advanced Settings] in the [Monitor Settings] menu and press (ENTER).
 - (3) Choose [Auto Screen Adjust] in the [Advanced Settings] menu and press [ENTER].
 - (4) Choose "Yes" with ◀ or ▶, and then press ENTER.

 Flickering, screen position, and screen size are corrected by the Auto Screen Adjust function.

If the screen is not displayed correctly even after adjusting in step 1 above, perform the adjustments according to the procedures on the following pages. When the screen is displayed correctly, go to step 5 "To adjust color gradation automatically [Auto Range Adjust]".

2 Prepare the display pattern for the analog display adjustment. Load the "EIZO LCD Utility Disk" to your PC, and then open the screen

NOTE

 When digital signal is input from PC, images are displayed correctly based on the preset data of the monitor. No screen adjustment is required.

Attention

- Wait 30 minutes or more from monitor power on before starting adjustments.
- The Auto Screen Adjust function does not work for the input signal of low resolution, such as VGA, etc.

Attention

- This function works correctly when an image is fully displayed over the Windows or Macintosh display area.
 It does not work properly when an image is displayed only on a part of the screen (command prompt window, for example) or when a black background (wallpaper, etc.) is in use.
- This function does not work correctly with some graphics boards.

NOTE

• When the "Select the input signal resolution." message appears, select the resolution that has been set on the PC and press (ENTER).

NOTE

• For how to open and contents of the screen adjustment pattern files, refer to "Readme.txt".

adjustment pattern files.

3 Perform the Auto Screen Adjust again with the analog screen adjustment pattern displayed.

- To adjust flickering, screen position, and screen size automatically [Auto Screen Adjust]
 - (1) Display Pattern 1 of the screen adjustment pattern files in full screen on the monitor.



- (2) Choose [Monitor Settings] in the Setting menu and press (ENTER)
- (3) Choose [Advanced Settings] in the [Monitor Settings] menu and press [ENTER].
- (4) Choose [Auto Screen Adjust] in the [Advanced Settings] menu and press [ENTER].
- (5) Choose "Yes" with ◀ or ▶, and then press Flickering, screen position, and screen size are corrected by the Auto Screen Adjust function.

If the screen is not displayed correctly even after adjusting in step 3 above, perform the adjustments according to the procedures on the following pages. When the screen is displayed correctly, go to step 5 "To adjust color gradation automatically [Auto Range Adjust]".

4 Perform advanced adjustments in [Advanced Settings] menu of the Setting menu.

Adjust the clock, phase and position, in this order.

- To eliminate vertical bars [Clock]
 - (1) Choose [Clock] in the [Advanced Settings] menu and press The [Clock] adjustment menu appears.
 - (2) Adjust the clock with ◀ or ▶, and then press (ENTER). The adjustment is completed.



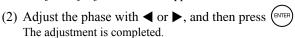
NOTE

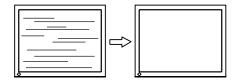
- Press the control button slowly so as not to miss the adjustment point.
- When blurring, flickering or bars appear on the screen after adjustment, proceed to [Phase] to remove flickering or blurring.

• To remove flickering or blurring [Phase]

Adjustable range: 0 to 63

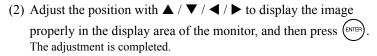
(1) Choose [Phase] in the [Advanced Settings] menu and press The [Phase] adjustment menu appears.

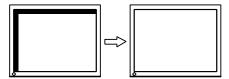




• To correct screen position [Position]

(1) Choose [Position] in the [Advanced Settings] menu and press (*) The [Position] adjustment menu appears.





5 Adjust the color gradation.

• To adjust color gradation automatically [Auto Range Adjust] Every color gradation (0 to 255) can be displayed by adjusting the signal output level.

(1) Display Pattern 2 of the screen adjustment pattern files in full screen on the monitor.



(2) Choose [Auto Range Adjust] in the [Advanced Settings] menu and press (ENTER).

(3) Choose "Yes" with ◀ or ▶, and then press The output range is adjusted automatically.

(4) Close the Pattern 2.

Attention

 Flickering or blurring may not be eliminated depending on your PC or graphics board.

NOTE

 When vertical bars appear on the screen after adjustment, go back to "To eliminate vertical bars [Clock]". (Clock → Phase → Position)

NOTE

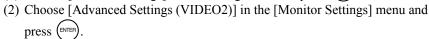
 Since the number of pixels and the pixel positions are fixed on the LCD monitor, only one position is provided to display images correctly. The position adjustment is made to shift an image to the correct position.

VIDEO2 Input

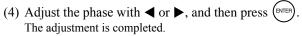
• To remove flickering or blurring [Phase]

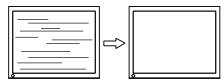
Adjustable range: 0 to 63

(1) Choose [Monitor Settings] in the Setting menu and press



(3) Choose [Phase] in the [Advanced Settings (VIDEO2)] menu and press (ENTER). The [Phase] adjustment menu appears.





3-2 Color Adjustment

• To select the color mode [Color Mode]

Changing the color mode enables you to set the monitor to the appropriate display mode.

Types of Color Mode

■ PC Input / HDMI (PC Signal) Input

Modes	Status			
Text	Suitable for displaying text for word processing or spreadsheets.			
Picture	Suitable for displaying images such as photos or picture images.			
Movie	Suitable for playing back animated images.			
Normal (PC)	Available for making desired settings. (Common settings for all inputs)			
Custom (xxx*1)	Available for making desired settings. (Unique settings for each input)			

 $^{^{*1}}$ The input signal selected at that time is displayed.

■ VIDEO Input / HDMI (Video Signal) Input

Modes	Status			
Standard	Standard video display.			
Cinema	Suitable for cinema effect, etc.			
Dynamic	Suitable for a clearly outlined image.			
Normal	Available for making desired settings. (Common settings for all inputs)			
Custom (xxx*1)	Available for making desired settings. (Unique settings for each input)			

 $^{^{*1}}$ The input signal selected at that time is displayed.

The setting is completed.

(1) Press on the remote control. Each time you press , the mode changes.
When setting the color mode in the Setting menu
(1) Choose [Color] in the Setting menu and press (ENTER).
(2) Choose [Color Mode] in the [Color] menu and press (ENTER)
The [Color Mode] setting menu appears.
(3) Select the mode with \triangleleft or \triangleright , and then press $\stackrel{\text{ENTER}}{\smile}$.

When setting the color mode with the remote control

To perform advanced adjustments

Independent adjustments/settings and saving of the Color adjustment are available for each mode.

Adjustment items in each mode

According to the color mode selected, the adjustable function differs.

■ PC Input / HDMI (PC Signal) Input

√: Adjustment available —: Adjustment unavailable

Function		Color mode				
		Text	Picture	Movie	Normal (PC)	Custom (xxx*1)
Brightness	Brightness		√	√	√	√
Black Leve	I	_	_	_	√	√
Contrast		_	√	√	√	$\sqrt{}$
Saturation		√	√	√	√	$\sqrt{}$
Hue	Hue		√	√	√	V
Temperatu	Temperature		√	√	√	V
Advanced	Auto EcoView	_	√	√	√	√
Settings	OutlineEnhancer	_	√	√	√	$\sqrt{}$
	ContrastEnhancer	-	√	√	√	√
	Gamma	_	_	_	√	√
	Gain	_	-	_	√	$\sqrt{}$
	Reset	-	√	√	√	√
Reset		√	√	√	√	√

■ VIDEO Input / HDMI (Video Signal) Input

√: Adjustment available —: Adjustment unavailable

Function		Color mode				
		Standard	Cinema	Dynamic	Normal	Custom (xxx*1)
Brightness		√	√	√	√	√
Black Leve	I	√	√	√	√	√
Contrast		√	√	√	√	√
Saturation		√	√	√	√	√
Hue		√	√	√	√	√
Temperatu	re	√	√	√	√	√
Advanced	Auto EcoView	√	√	√	√	√
Settings	OutlineEnhancer	√	√	√	√	√
	ContrastEnhancer	√	√	√	√	√
	RGB Balance	√	√	√	√	√
	Gamma	-	-	-	√	√
	Noise Filter	-	-	-	√	√
	I/P Conversion	_	_	_	√	√
	Reset	√	√	√	√	√
Reset		√	√	√	√	√

^{*1} The input signal selected at that time is displayed.

Attention

- Wait 30 minutes or more from monitor power on before starting the color adjustment.
- Perform the range adjustment first when adjusting color for analog input signals.
 (Refer to "To adjust color gradation
 - (Refer to "To adjust color gradation automatically [Auto Range Adjust]" on page 24).
- The same image may be seen in different colors on multiple monitors due to their monitor-specific characteristics. Make fine color adjustment visually when matching colors on multiple monitors.

NOTE

• The value shown in "K" is available only as reference.

To adjust the brightness [Brightness]

The screen brightness is adjusted by changing the brightness of the backlight (Light source from the LCD back panel).

Adjustable range: 0 to 100

(1) Choose [Color] in the Setting menu and press (ENTER).



(2) Choose [Brightness] in the [Color] menu and press (ENTER) The [Brightness] adjustment menu appears.

(3) Adjust the brightness with ◀ or ▶, and then press (ENTER). The adjustment is completed.

To adjust the black level [Black Level]

The black of images is adjusted.

Red, green, and blue (RGB) consisted of the color are adjusted respectively for PC input or HDMI (PC signal) input. RGB is adjusted together for VIDEO input or HDMI (video signal) input.

Adjustable range: 0 to 100

(1) Choose [Color] in the Setting menu and press (ENTER)



(2) Choose [Black Level] in the [Color] menu and press (NTE) The [Black Level] adjustment menu appears.

(3) Adjust the black level with ◀ or ▶, and then press (ENTER) The adjustment is completed.

To adjust the contrast [Contrast]

The luminance of the screen is adjusted by varying the video signal level. Adjustable range: 0 to 100

(1) Choose [Color] in the Setting menu and press



(2) Choose [Contrast] in the [Color] menu and press (ENTER) The [Contrast] adjustment menu appears.

(3) Adjust the contrast with ◀ or ▶, and then press (ENTER) The adjustment is completed.

NOTE

- · You cannot adjust the value if the function is not displayed, depending on the color mode selected. (See "Adjustment items in each mode" on page 27.)
- When setting "50" for all colors in PC input or HDMI (PC signal) input, the status is changed to "Standard" mode.

NOTE

- · You cannot adjust the value if the function is not displayed, depending on the color mode selected. (See "Adjustment items in each mode" on page 27.)
- In the contrast of 50, every color gradation is displayed (PC input only).
- · When adjusting the monitor, it is recommended to perform the brightness adjustment which may not lose the gradation characteristics, prior to the contrast adjustment. Perform the contrast adjustment in the following cases.
 - When you feel the image is dark even if the brightness is set to 100. (Set the contrast to higher than 50).
 - When you feel the image is bright even if the brightness is set to 0. (Set the contrast to lower than 50).

This function does not enable to display every color gradation.

To adjust the color saturation [Saturation]

This function allows you to adjust the saturation of the color on the monitor. Adjustable range: -50 to 50



(1) Choose [Color] in the Setting menu and press
(2) Choose [Saturation] in the [Color] menu and press The [Saturation] adjustment menu appears.

(3) Adjust the saturation of the color with ◀ or ▶, and then press (ENTER) The adjustment is completed.



To adjust the hue [Hue]

This function allows you to adjust the hue. If you set the hue to a high value, the image turns greenish. If low, the image turns purplish.

Adjustable range: -50 to 50

(1) Choose [Color] in the Setting menu and press (ENTER



(2) Choose [Hue] in the [Color] menu and press (ENTER). The [Hue] adjustment menu appears.

(3) Adjust the hue with \triangleleft or \triangleright , and then press (ENTER) The adjustment is completed.

To adjust the color temperature [Temperature]

The color temperature can be adjusted. The color temperature is normally used to express the hue of "White" and/or "Black" by a numerical value. The value is expressed in degrees "K" (Kelvin).

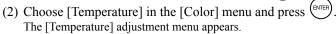
In the same way as the flame temperature, the image on the monitor is displayed reddish if the color temperature is low and is bluish if the color temperature is high. The gain preset values are set for each color temperature setting value.

5000K	The white color image is displayed reddish. The 5000K or 6000K is usually used in the printing industry.
6500K	The white color image is displayed in warm white like paper white. The temperature is suitable to display photographs or video images.
9300K	The white color image is displayed slightly bluish white.

Adjustable range: Off, 4000K-9500K (specified by every 500K unit, including 9300K), Custom

(1) Choose [Color] in the Setting menu and press (ENTER).



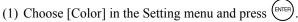


(3) Adjust the color temperature with ◀ or ▶, and then press (ENTER). The adjustment is completed.

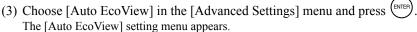
To change the setting of automatic brightness adjustment function [Auto EcoView]

The screen brightness is automatically adjusted corresponding to both the brightness of the image and the environmental brightness detected by the sensor at the lower side of the monitor.

Adjustable range: Standard, High, Disable



(2) Choose [Advanced Settings] in the [Color] menu and press (ENTER)



(4) Select "Standard", "High" or "Disable" with ◀ or ▶, and then press The setting is completed.

This function does not enable to display every color gradation.

NOTE

- · [Gain] allows you to perform more advanced adjustment (See "To adjust the gain value [Gain]" on page 31).
- If you set to "Off", the image is displayed in the preset color of the monitor (Gain: 100 for each RGB).
- When changing the gain value, the color temperature adjusting range is changed to "Off".

NOTE

• "Custom" is a suitable color tone for images that have a lot of reddish coloration, such as medical images.

NOTE

- You cannot adjust the value if the function is not displayed, depending on the color mode selected. (See "Adjustment items in each mode" on page 27.)
- · Do not cover the sensor.
- Set to "High" if you feel a little brighter with "Standard" setting status.

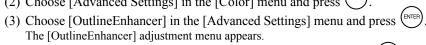
To compensating the outline of images [OutlineEnhancer]

The emphasis level of outline is adjusted.

Adjustable range: -5 to 5

(1) Choose [Color] in the Setting menu and press (ENTER)

(2) Choose [Advanced Settings] in the [Color] menu and press (EVIET)



(4) Adjust the emphasis level of outline with \triangleleft or \triangleright , and then press The adjustment is completed.

To enable/disable the automatic contrast adjustment [ContrastEnhancer]

This function allows you to select whether the contrast of images is automatically adjusted by controlling the backlight for dark scenes.

(1) Choose [Color] in the Setting menu and press (ENTER

(2) Choose [Advanced Settings] in the [Color] menu and press (ENTER)

(3) Choose [ContrastEnhancer] in the [Advanced Settings] menu and press (ENTER)

The [ContrastEnhancer] setting menu appears.

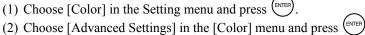
(4) Select "Enable" or "Disable" with ◀ or ▶, and then press (ENTER) The setting is completed.

To make fine adjustment of the balance of red, green, blue (RGB) [RGB Balance]

This function allows you to adjust each color of red, green and blue according to your taste.

Adjustable range: -3 to 3

(1) Choose [Color] in the Setting menu and press



(3) Choose [RGB Balance] in the [Advanced Settings] menu and press (ENTER) The [RGB Balance] adjustment menu appears.

(4) Adjust the values for red, green and blue with \triangleleft or \triangleright , and then press The adjustment is completed.

NOTE

• You cannot adjust the value if the function is not displayed, depending on the color mode selected. (See "Adjustment items in each mode" on page 27.)

NOTE

· You cannot adjust the value if the function is not displayed, depending on the color mode selected. (See "Adjustment items in each mode" on page 27.)

• [RGB Balance] is available only for VIDEO input or HDMI (video signal)

NOTE

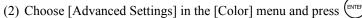
• When setting "0" for all colors, the status is changed to "Standard" mode.

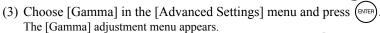
To adjust the gamma value [Gamma]

The gamma value can be adjusted. The luminance of the monitor varies depending on the input signal, however, the variation rate is not proportional to the input signal. To keep the balance between the input signal and the luminance of the monitor is called as "Gamma correction".

Adjustable range: 1.8, 2.0, 2.2, 2.4, 2.6, 2.8

(1) Choose [Color] in the Setting menu and press (ENTER)





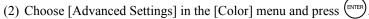
(4) Adjust the gamma value with ◀ or ▶, and then press (ENTER). The adjustment is completed.

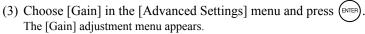
• To adjust the gain value [Gain]

Each luminance of red/green/blue composing the color is called "Gain". The gain adjustment may change the color tone of the "White" (when the max input signal for each color is obtained)

Adjustable range: 0 to 100

(1) Choose [Color] in the Setting menu and press (ENTER)





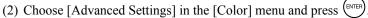
(4) Adjust the respective value of Red, Green or Blue with ◀ or ▶, and then press (BNTER).

The adjustment is completed.

To reduce the noise of images [Noise Filter]

Precise noise or a noise at MPEG compression can be reduced. Adjustable range: Disable, High, Low

(1) Choose [Color] in the Setting menu and press (ENTER).



(3) Choose [Noise Filter] in the [Advanced Settings] menu and press The [Noise Filter] setting menu appears.

(4) Select "Disable", "High" or "Low" with ◀ or ▶, and then press The setting is completed.

NOTE

• You cannot adjust the value if the function is not displayed, depending on the color mode selected. (See "Adjustment items in each mode" on page 27.)

Attention

• [Gain] is available only for PC input or HDMI (PC signal) input.

NOTE

- You cannot adjust the value if the function is not displayed, depending on the color mode selected. (See "Adjustment items in each mode" on page 27.)
- When choosing [Reset] in the [Gain] adjustment menu and pressing (ENTER), the gain value returns to the default settings (factory settings).

Attention

- [Noise Filter] is available only for VIDEO input or HDMI (video signal) input.
- The screen image may be degraded depending on the setting.

NOTE

• You cannot adjust the value if the function is not displayed, depending on the color mode selected. (See "Adjustment items in each mode" on page 27.)

To set the I/P conversion's processing methods [I/P Conversion]

The I/P (Interlace progressive) conversion's processing methods can be set.

Settings	Status
Video (2-3)	Automatically distinguishes between the video signal recorded at 60 frames per second and the video signal recorded at 24 frames per second such as movie film, and converts each of them to an appropriate form. Best suited to most video signals.
Video (2-3/2-2)	Automatically distinguishes the video signal recorded at 30 frames per second such as computer graphics and animation as well as "Video (2-3)", and converts it to an appropriate form.
Video Image	It does not convert the video signals of 24 frames or 30 frames. If there is something wrong with the image movement for "Video (2-3)" or "Video (2-3/2-2)", this setting may improve the condition.
Still Image	If there is flickering in the image with less movement, this setting may improve the condition.

- (1) Choose [Color] in the Setting menu and press
- (2) Choose [Advanced Settings] in the [Color] menu and press
- (3) Choose [I/P Conversion] in the [Advanced Settings] menu and press (ENTER). The [I/P Conversion] setting menu appears.
- (4) Select the setting with ◀ or ▶, and then press (ENTER). The setting is completed.

Attention

• [I/P Conversion] is available only for VIDEO input or HDMI (video signal) input.

3-3 Sound Adjustment

The headphone sound can be adjusted.

To adjust the left and right volume balance [Balance]

This function allows you to adjust the left and right volume balance. Adjustable range: -6 to 6

- (1) Choose [Sound] in the Setting menu and press (ENTER)
- (2) Choose [Balance] in the [Sound] menu and press (ENTER) The [Balance] adjustment menu appears.
- (3) Adjust the volume balance with ◀ or ▶, and then press (ENTER). The adjustment is completed.

• To adjust Treble and Bass [Treble] / [Bass]

This function allows you to adjust the sound strength of treble and bass. Adjustable range: -6 to 6

- (1) Choose [Sound] in the Setting menu and press (ENTER)
- (2) Choose [Treble] or [Bass] in the [Sound] menu and press The [Treble] or [Bass] adjustment menu appears.
- (3) Adjust the sound strength with ◀ or ▶, and then press (BNTER). The adjustment is completed.

Attention

 Depending on the volume setting, sound distortion may occur. In such a case, turn the volume down. The sound distortion may be diminished.

• To adjust the sound level [Sound Level]

The input sound level can be adjusted.

The volume difference may occur depending on the kinds of input signals, since the average sound level of the external device differs.

Adjustable range: -3 to 3

- (1) Change the input signal of which you want to adjust the sound level.
- (2) Choose [Monitor Settings] in the Setting menu and press (ENTER).
- (3) Choose [Advanced Settings] in the [Monitor Settings] menu and press
- (4) Choose [Sound Level] in the [Advanced Settings] menu and press (ENTER). The [Sound Level] adjustment menu appears.
- (5) Adjust the sound level with ◀ or ▶, and then press (The adjustment is completed.

NOTE

 For example, if the volume difference of HDMI 1 and HDMI 2 input signals becomes large, you can reduce the volume difference between them by raising the [Sound Level] of the lower volume side.

Power Saving Setting

To enable/disable the automatic power off setting when no input signal is detected [No Signal Off]

This function allows you to turn off the monitor automatically when the status of no video signal input has continued for 15 minutes.

(1) Choose [PowerManager] in the Setting menu and press (ENTER)



- (2) Choose [No Signal Off] in the [PowerManager] menu and press (NITER). The [No Signal Off] setting menu appears.
- (3) Select "Enable" or "Disable" with ◀ or ▶, and then press (ENTER) The setting is completed.

To enable/disable the automatic power off setting when no operation is done [No Operation Off]

This function allows you to turn off the monitor automatically when the monitor has not been operated with the remote control or the buttons on it for 3 hours.

(1) Choose [PowerManager] in the Setting menu and press (ENTER)



- (2) Choose [No Operation Off] in the [PowerManager] menu and press (ENTER). The [No Operation Off] setting menu appears.
- (3) Select "Enable" or "Disable" with ◀ or ▶, and then press The setting is completed.

• Turning off the main power switch or unplugging the power cord completely shuts off power supply to the monitor.

• [No Signal Off] is available only for VIDEO input or HDMI (video signal)

NOTE

• "The power will turn off soon." appears on the screen one minutes before the monitor turns off.

Attention

• [No Operation Off] is available only for VIDEO input or HDMI (video signal) input.

NOTE

• "The power will turn off soon." appears on the screen one minutes before the monitor turns off.

To enable/disable the Power Saving mode [Power Saving (PC)]

This function allows you to set the monitor into the power saving mode according to the PC status.

■ Digital input

This monitor complies with the DVI DMPM standard.

[Power Saving System]

The monitor enters the power saving mode in five seconds in connection with the PC setting.

PC	Monitor	Power Indicator	
Operating	Operating	Blue	
Power saving	Power saving	Orange	

■ Analog input

This monitor complies with the VESA DPMS standard.

[Power Saving System]

PC		Monitor	Power Indicator	
Operating		Operating	Blue	
Power saving	STAND-BY SUSPENDED OFF	Power saving	Orange	

- (1) Choose [PowerManager] in the Setting menu and press (NITER)
- (2) Choose [Power Saving (PC)] in the [PowerManager] menu and press (ENTER). The [Power Saving (PC)] setting menu appears.
- (3) Select "Enable" or "Disable" with ◀ or ▶, and then press The setting is completed.

Attention

- [Power Saving (PC)] is available only for PC input or HDMI (PC signal) input.
- When using [Power Saving (PC)] function with HDMI input, set "PC" in [Monitor Settings] - [Advanced Settings] menu - [Input Format] (See page 37).
- When displayed in PinP, the monitor does not shift to power-saving mode.
- When selecting "Disable", turning off the PC makes the monitor automatically turn off.
- Devices connected to the USB port (upstream and downstream) work when the monitor is in power saving mode or when the power button of the monitor is Off. Therefore, power consumption of the monitor varies with connected devices even in the power saving mode.

NOTE

- When resuming the monitor from the power saving mode, perform as follows:
- Operate the mouse or keyboard
- Press any buttons other than on the remote control

3-5 Displaying the Level of Power Saving by EcoView Index

This function allows you to display the power saving level by green indicator. The power saving ratio comes to high as the indicator level meter lights towards right.

(1) Press on the remote control. The EcoView Index menu appears.



3-6 Turning Off the Monitor Automatically

This function allows you to set the time to power off the monitor automatically.

Adjustable range: Disable, 30, 60, 90, 120, 150, 180 min

(1) Press on the remote control.

Each time you press , the set time changes.

■ Canceling Off Timer

(1) Press until "Disable" appears.

■ Checking the remaining time

(1) Press when the Off Timer is set.
The time to turn off the power appears.

■ Extending the time of the Off Timer

(1) Press while the remaining time is displayed. Each time you press, the time is extended.

3-7 Input Format Setting for HDMI Input [Input Format]

This is set when PC signal is input through the HDMI connector.

Adjustable range: 50 Hz, 60 Hz, PC

(1) Choose [Monitor Settings] in the Setting menu and press (ENTER).

(2) Choose [Advanced Settings] in the [Monitor Settings] menu and press (NTER)

(3) Choose [Input Format] in the [Advanced Settings] menu and press (ENTER) The [Input Format] setting menu appears.

(4) Choose "PC" with ◀ or ▶, and then press ENTER.

The setting is completed.

NOTE

 EcoView Index appears also when turning on the monitor or exiting the Setting menu, etc.

You can change the enable and disable setting of displaying EcoView Index in [PowerManager] menu - [EcoView Index]. While the setting is "Off", the EcoView Index menu appears only when pressing on the remote control.

NOTE

- "The power will turn off soon." message appears one minute before the power turns off.
- Turning the power off also cancels the Off Timer.
- The remaining time is displayed in minutes (not in seconds).

Attention

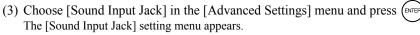
- [Input Format] is available only for HDMI input.
- Set this before starting the PC.
 If you changed the setting after starting the PC, reboot the PC.

3-8 Audio Input Connector Setting for HDMI Input [Sound Input Jack]

This is set when the audio signal is input from the connector other than the HDMI connector.

Adjustable range: HDMI, Analog Sound, PC2 Sound

- (1) Choose [Monitor Settings] in the Setting menu and press (ENTER)
- (2) Choose [Advanced Settings] in the [Monitor Settings] menu and press



(4) Select the connector to which input the audio signal with ◀ or ▶, and then press (SYTER).

The setting is completed.

3-9 Locking Buttons

This function allows you to lock the buttons on the monitor to prevent changing the adjusted or set status.

- (1) Press on the remote control (or \bigcirc on the monitor) to turn off the monitor.
- (2) Hold down SELECT on the monitor for about 5 seconds. The monitor is turned on.

Each time you perform the above operation, the Lock and Unlock setting changes.

3-10 Displaying Monitor Information [Information]

The information such as model name, input signals, resolution is displayed.

(1) Choose [Information] in the Setting menu and press The [Information] menu appears.

3-11 Setting Power Indicator ON/OFF [Power Indicator]

This function allows you to set the power indicator (blue) ON/OFF in the monitor ON condition.

- (1) Choose [Monitor Settings] in the Setting menu and press (ENTER)
- (2) Choose [Power Indicator] in the [Monitor Settings] menu and press The [Power Indicator] setting menu appears.
- (3) Select "On" or "Off" with ◀ or ▶, and then press The setting is completed.

Attention

• [Sound Input Jack] is available only for HDMI input.

NOTE

- The following operations are available even if the buttons are locked:
 - Turning on or off the monitor with the Power button
 - Locking or unlocking the buttons
- Displaying or hiding the EIZO logo (See page 39)

NOTE

 The usage time is not always "0" when you purchase the monitor due to factory inspection.

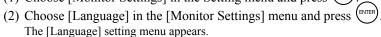
3-12 Setting Language [Language]

This function allows you to select a language for the Setting menu or displaying message.

Selectable languages

English / German / French / Spanish / Italian / Swedish / Japanese / Simplified Chinese / Traditional Chinese

(1) Choose [Monitor Settings] in the Setting menu and press (ENTER).



(3) Select a language with ◀ or ▶, and then press The setting is completed.

3-13 Setting EIZO logo Display ON/OFF

The EIZO logo appears on the display when turning on the monitor. This function allows you to display, or not, the EIZO logo.

(1) Press on the remote control (or on the monitor) to turn off the monitor.

(2) Hold down $\bigcap_{\mathfrak{G}}$ on the monitor for about 3 seconds. The monitor is turned on.

Each time you perform the above operation, the on and off setting changes.

3-14 Resetting the Setting of the Displayed Menu to the Default [Reset]

This function allows you to reset the values of the Setting menu currently displayed to the default settings (factory settings).

(1) Choose [Reset] of each menu and press (ENTER

(2) Choose "Yes" with ◀ or ▶, and then press ENTER.

The values of the settings or adjustments in the one menu are reset to the default settings.

Attention

- After resetting, you cannot undo the operation.
- Settings of all menus cannot be reset at the same time.

Chapter 4 Troubleshooting

If a problem still remains after applying the suggested remedies, contact your local dealer.

• No picture problems→ See No. 1 in (PC Input / HDMI (PC Signal) Input)

See No. 1 in (VIDEO Input / HDMI (Video Signal) Input)

• Imaging problems→ See No. 1 - 6 in (Common)

See No. 2 - 6 in (PC Input / HDMI (PC Signal) Input)

See No. 2 - 7 in (VIDEO Input / HDMI (Video Signal) Input)

• Other problems→ See No. 7 - 12 in (Common)

See No. 7 in (PC Input / HDMI (PC Signal) Input)

See No. 8 in (VIDEO Input / HDMI (Video Signal) Input)

- USB problems→ See No. 8 in (PC Input / HDMI (PC Signal) Input)
- The HDMI CEC function problems→ See No. 9 in (VIDEO Input / HDMI (Video Signal) Input)

(Common)

	Problems	Possible cause and remedy				
1.	The screen is too bright or too dark.	 Adjust using [Brightness] or [Contrast] in [Color] menu. (The LCD monitor backlight has a fixed life span. When the screen becomes dark or begins to flicker, contact your local dealer.) Select "Standard" or "High" in [Color] - [Advanced Settings] menu - [Auto EcoView]. (Refer to page 29.) The monitor adjusts the screen brightness automatically according to the environmental brightness and displayed image brightness. 				
2.	Afterimages appear.	 Use a screen saver, PowerManager, or the Off Timer function for a long-time image display. Afterimages are particular to LCD monitors. Avoid displaying the same image for a long time. 				
3.	Green/red/blue/white dots or defective dots remain on the screen.	This is due to LCD panel characteristics and is not a failure.				
4.	Interference patterns or pressure marks remain on the screen.	Leave the monitor with a white or black screen. The symptom may disappear.				
5.	Noise appears on the screen.	When utilizing [ContrastEnhancer] and/or [OutlineEnhancer] function, the normal images may not be displayed since the display gradation abnormality or noise may occur on the screen depending on the display pattern.				

	Problems	Possible cause and remedy
6.	Characters are pigmentized.	When [OutlineEnhancer] is set excessively, the characters on the screen may be affected by color.
7.	No sound/Volume control is not available.	Check whether the audio cable is connected properly.Adjust the sound volume.
8.	Sound volume varies depending on the device connected.	Adjust the volume difference between the connected devices in [Monitor Settings] - [Advanced Settings] menu - [Sound Level]. (Refer to page 34.)
9.	The monitor turns off suddenly.	Check whether the Off Timer function is set. Check the Off Timer setting. (Refer to page 37.) Check whether the power off functions are enabled in [PowerManager] menu. Please check each setting. (Refer to page 35.)
10.	Unselectable menu items	The selectable menu items differ depending on the input signal. Please check the Setting menu list. (Refer to "Setting menu list" on page 48.)
11.	Buttons on the monitor do not operate.	Check whether the operation lock function works. (Refer to page 38.)
12.	Remote control does not work.	 Check whether the remote control point at the detector. Check that there are not obstacles between the remote control and the detector. Check whether the battery power is run out. Check whether the battery is installed in the right direction.

(PC Input / HDMI (PC Signal) Input)

Problems	Possible cause and remedy
No Picture Power indicator does not light.	 Check whether the power cord is correctly connected. If the problem persists, turn off the main power, and then turn it on again a few minutes later. Turn the main power switch on. Press on the remote control (or on the monitor).
Power indicator lights orange.	 Press any buttons (except for on the remote control. Operate the mouse or keyboard. Check whether the PC is turned on.
Power indicator lights blue.	 Check whether the PC is properly connected to the monitor. Set each adjusting value in [Brightness], [Contrast] and [Gain] to higher level. (Refer to page 28, 31.)

Problems	Possible cause and remedy
The message below appears. Example: PC Signal Error	 The message shows that the input signal is out of the specified frequency range. (Current input signal can be checked in [Information] menu. The signal frequency that is out of the range is displayed in magenta.) Check whether the signal setting of your PC matches the resolution and the vertical frequency settings for the monitor. (Refer to page 46, 47.) Reboot the PC. Change the mode appropriately using the graphics board's utility software. Refer to the manual of the graphics board for details.
2. Auto Screen Adjust does not work.	 This function does not work when digital signal is input. This function does not work correctly with some graphics boards.
3. Display position is incorrect.	Adjust the image position in [Monitor Settings] - [Advanced Settings] menu - [Position]. (Refer to page 24.) If the problem persists, use the graphics board's utility if available to change the display position.
4. Vertical bars appear on the screen or a part of the image is flickering.	Adjust the clock in [Monitor Settings] - [Advanced Settings] menu - [Clock]. (Refer to page 23.) When the resolution is set to 1920 × 1200, the symptom may not be improved depending on the input signal used even if the [Clock] adjustment is performed. In this case, change the resolution to 1600 × 1200, 1920 × 1080, etc.
5. Whole screen is flickering or blurring.	Adjust the phase in [Monitor Settings] - [Advanced Settings] menu - [Phase]. (Refer to page 24.)
6. Noise appears on the screen.	 When entering the signals of analog input, change the setting in [Monitor Settings] - [Advanced Settings] menu - [Signal Filter]. The symptom may not be improved depending on the input signal used. It is recommended that you switch the analog input signal to digital. When receiving HDCP signals, the normal images may not be displayed immediately.
7. The monitor does not enter the power saving mode (HDMI (PC signal) input).	Check whether the setting is "PC" in [Monitor Settings] - [Advanced Settings] menu - [Input Format]. (Refer to page 37.)

Problems	Possible cause and remedy			
The USB devices connected to the monitor do not work.	 Check whether the USB cable is connected correctly. Check the setting in [USB Selection] of [Monitor Settings] menu. (Refer to page 14.) When it does not run on the PC connected to PC input "Auto" or the port ("PC1" or "PC2") connected to the PC with a USB cable is selected. When it does not run on the PC connected to HDMI input The port ("PC1" or "PC2") connected to the PC with a USB cable is selected. Change the USB port to another one (downstream port). If the PC or peripheral devices work correctly by changing the USB port, contact your local dealer. (Refer to the manual of the PC for details.) Reboot the PC. Connect the PC and peripheral devices directly. If the PC or peripheral devices work correctly without connecting via the monitor (working as a USB hub), please contact your local dealer. Check whether the PC and OS are USB compliant. (For USB compliance of the respective devices, consult their manufacturers.) Check the PC's BIOS setting for USB when using Windows. (Refer to the manual of the PC for detail.) 			

(VIDEO Input / HDMI (Video Signal) Input)

	Problems		Possible cause and remedy
1.	No Picture Power indicator does not light up.	the turn Turi	problem persists, turn off the main power, and then it on again a few minutes later. In the main power switch on. So on the remote control (or on the monitor).
•	Power indicator lights in blue.	mor Che turn Set high Che Erro outs sigr	ack whether the device is properly connected to the nitor. ack whether the power of the connected device is ed on. each adjusting value in [Brightness] and [Contrast] to her level. (Refer to page 28.) ack "Input Signal" in [Information] menu. If "Signal or" is displayed, the input signal from the device is side the specification of the monitor. Confirm the heal specification by referring to the instruction manual ne device connected.
2.	The video images are out of control by the FF/REW operation when a video device is connected to the monitor.		monitor mechanism causes the image out of control us a little. This is not a malfunction.
3.	Color blurring and color stripe, and point-like noise appear (VIDEO1 (video signal) input).	PAL Sett Acc disa	en the input format of the video signal is NTSC or ., check whether the setting is "Enable" in [Monitor tings] - [Advanced Settings] menu - [3D-Y/C]. ording to the connected device, setting "Disable" may appear the symptom. 9-Y/C] setting is available only for NTSC and PAL that.)
4.	The display of the screen is not correct (VIDEO1 input).	[Ad	inge the input signal format in [Monitor Settings] - vanced Settings] menu - [Color System]. rmally, select "Auto".)

	Problems	Possible cause and remedy
5.	Whole screen is flickering or blurring (VIDEO2 input).	Adjust the phase in [Monitor Settings] - [Advanced Settings] menu - [Phase]. (Refer to page 25.)
6.	The color shown on the display is not correct (HDMI (video signal) input).	Change the color space of the video signal in [Monitor Settings] - [Advanced Settings] menu - [Color Space]. (Normally, select "Auto".)
7.	The screen flashes (HDMI (video signal) input).	Transferable signals differ on the category of the HDMI cable. Check whether the cable is High Speed compliant.
8.	No sound/Volume control is not available (HDMI (video signal) input). The message below appears. Unsupported Sound	Check whether the applicable format of the device connected is correct. Refer to page 47 for the sound input format of the monitor.
•	The connected device is not detected correctly (when using the HDMI CEC function). The device is not displayed in [Device List]. The input signal of the device is wrong. "Error" is displayed.	 The connected device is applicable to HDMI CEC. Multiple devices are not connected through such as HDMI selector. This monitor does not support the connection through HDMI selector. Check whether the setting of the connection has been changed. The setting of the connected device needs to be changed when adding the devices to be connected or changing the connected input signal. Display the Link Menu and select [Search Devices] in [Device List] with the connected device powered on. (Refer to page 17.) (While the "Please wait a few minutes." message is displayed, do not turn off the monitor and connected device.)

Messages List

The meanings of the main messages appearing on the screen are described below.

Messages	Description
"The power will turn off soon."	Appears on the display one minute before the power turns off when [No Signal Off], [No Operation Off] or the Off Timer is set.
"This operation is not available."	 Appears if you press , (see or) on the remote control when no signal or the signal that is outside the specification is input to the monitor. Appears if you press (see on the remote control during PinP display. Appears if you press (see on the remote control during PinP display. Appears if you press (see on the remote control when the Sub-Window displays the PC input signal from HDMI input during PinP display. Appears if you press (signal from HDMI input during PinP display. Appears if you press (signal from HDMI input during PinP display. Appears if you press (signal from HDMI input during PinP display.
"Select [Enable] of [HDMI CEC] in "ScreenManager®" "	Appears if you press

Chapter 5 Reference

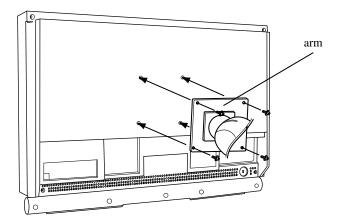
5-1 Attaching an Arm

The stand can be removed and replaced with an arm (or another stand) to be attached to the monitor.

- 1 Lay the LCD monitor on a soft cloth spread over on a stable surface with the panel surface facing down.
- **2** Remove the stand. (Prepare a screwdriver.)

 Unscrew the four screws securing the unit and the stand with the screwdriver.
- Attach the monitor to the arm or stand.

 Secure the monitor to the arm or stand using the screws specified in the user's manual of the arm or stand.



Attention

- When using an arm or stand, confirm the following in advance and select one conforming to the VESA standard.
 - Clearance between the screw holes:100 mm × 100 mm
 - Thickness of plate: 2.6 mm
 - Strong enough to support weight of the monitor unit (except the stand) and attachments such as cables.
- When attaching an arm or stand, follow the instructions of their user's manual.
- When using another manufacturer's arm or stand, use the M4 × 12 screws supplied with this monitor.
- When using an arm or stand, attach it to meet the following tilt angles of the monitor.
 - Up 45 degrees, down 45 degrees
- Do not turn the monitor lengthwise.
- Connect the cables after attaching an arm.

5-2 Specifications

Panel	LCD Panel		24.1-inch (610 mm) TFT color LCD with anti-glare Viewing angle: Horizontal 178°, Vertical 178° (CR:10 or more)						
	Dot Pitch		0.270 mm						
	Resolution		1920 dots × 1200 lines						
	Max. Displa	y Color	Approx. 16.77 million colors: Applicable to 8 bit (1064.33 million colors/10bit LUT)						
	Display Area	a (H × V)	518.4 mm × 324.0 mm	518.4 mm × 324.0 mm					
Power Supply			100-120 VAC ±10%, 50/60 Hz 1.10 A 200-240 VAC ±10%, 50/60 Hz 0.55 A						
Power Consumption	Screen Display On		105 W or less (with USB load) 100 W or less (without USB load)						
	Power savin	ig mode	1.3 W or less (at no input sig	gnal, without USB load)					
	Power butto	n Off	1 W or less (without USB loa	ad)					
	Main Power	switch Off	0 W						
PC Input	(PC1)	Video	Input Signal Connector	DVI-D (Applicable to HDCP) x 1					
			Horizontal Scan Frequency	31.5 - 76 kHz: each preset signal ±1 kHz					
			Vertical Scan Frequency	59 - 61 Hz: each preset signal ±1 Hz - VGA TEXT: 69 - 71 Hz - 720p/1080p @ 50 Hz*1: 49 - 51 Hz - 1080p @ 24 Hz*1: 23.5 - 24.5 Hz - 1080p @ 25 Hz*1: 24.5 - 25.5 Hz - 1080p @ 30 Hz*1: 29 - 31 Hz - 1080p @ 48 Hz*1: 47 - 49 Hz					
			Max. Dot Clock	162 MHz					
			Signal Transmission System	TMDS (Single Link)					
		Audio	Input Signal Connector	Ø3.5 stereo mini jack x 1					
	(PC2)	Video	Input Signal Connector	D-Sub mini 15-pin x 1					
			Horizontal Scan Frequency	31.5 - 80 kHz: each preset signal ±1 kHz					
			Vertical Scan Frequency	55 - 76 Hz: each preset signal ±1 Hz - 720p/1080p @ 50 Hz*1: 49 - 51 Hz					
			Max. Dot Clock	162 MHz					
			Input Signal (Sync)	Separate, TTL, positive/negative					
			Input Signal (Video)	Analog, positive (0.7Vp-p/75Ω)					
			Signal Memory	50 (preset: 37)					
			Plug and Play	VESA DDC2B					
		Audio	Input Signal Connector	Ø3.5 stereo mini jack x 1					

VIDEO Input	(VIDEO1)	Video	Input Signal Connector	S-Video: DIN mini 4 pin x 1 Video: Pin jack x 1			
			Applicable Format	NTSC, PAL, PAL-60			
			Input Signal Level (Video)	S-Video: Y: 1.0Vp-p/75Ω, C: NTSC 0.28Vp-p/75Ω			
				PAL 0.30Vp-p/75Ω Video: Y: 1.0Vp-p/75Ω			
		Audio	Input Signal Connector	Pin jack × 1 (Shared between S-Video and Video)			
	(VIDEO2)	Video	Input Signal Connector	Pin jack × 1			
			Applicable Format	- 525i (480i) / 525p (480p): 60 Hz - 625i (576i) / 625p (576p): 50 Hz - 1125i (1080i) / 750p (720p): 50 Hz / 60 Hz - 1125p (1080p): 24 Hz / 50 Hz / 60 Hz			
			Input Signal Level (Video)	Y: 1.0Vp-p / 75Ω, Cb, Cr: 0.7p-p / 75Ω			
		Audio	Input Signal Connector	Pin jack x 1			
HDMI Input*2	(HDMI1 /	Video /	Input Signal Connector	HDMI Type A × 2			
	HDMI2)	Audio	Applicable Format	PC signal - Horizontal Scan Frequency / Vertical Scan Frequency: Same as PC1 - Max. Dot Clock: Same as PC1 Video signal - 525i (480i) / 525p (480p): 60 Hz - 625i (576i) / 625p (576p): 50 Hz - 1125i (1080i) / 750p (720p): 50 Hz / 60 Hz - 1125p (1080p): 24 Hz / 25 Hz / 30 Hz / 50 Hz / 60 Hz Audio signal - 2ch linear PCM (32 kHz / 44.1 kHz / 48 kHz)			
		Audio*3	Input Signal Connector	Ø3.5 stereo mini jack × 1			
Audio Output	Line Output	Connector	Ø3.5 stereo mini jack x 1				
	Headphone	Jack	Ø3.5 stereo mini jack x 1				
		566 mm (22.3 inch) × 444 - 480 mm (17.5 - 18.9 inch) × 230 mm (9.1inch)					
(Width) × (Height) × (Depth) Main unit (without stand)		566 mm (22.3 inch) × 416 mm (16.4 inch) × 92.3 mm (3.6 inch)					
Mass	Main unit		Approx. 10.5 kg (23.1 lbs.)				
	Main unit (without star	nd)	Approx. 8.1 kg (17.9 lbs.)				
Movable range			Tilt: 35° Up, -5° Down, Swivel: 172° Right, 172° Left Adjustable height: 24 mm (0.94 inch)				
Environmental Conditions	Temperature		Operating temperature: 0 °C - 35 °C (32 °F - 95 °F) Storage temperature: -20 °C - 60 °C (-4 °F - 140 °F)				
	Humidity		Operating humidity: 20% - 80% R.H. (no condensation) Storage humidity: 10% - 80% R.H. (no condensation)				
	Pressure		Operating: 700 to 1,060 hPa Storage: 200 to 1,060 hPa				
USB	Standard		USB Specification Revision 2.0				
	Port		Upstream port × 2, Downstream port × 2				
	Supply curre	ent	Downstream: Max. 500mA/1 port				
Classification of Equipment			Type of protection against electric shock: Class I EMC class: EN60601-1-2:2007 Class B Classification of medical device (MDD 93/42/EEC): Class I				

^{*1} For some AV devices such as Microsoft Xbox 360
*2 The monitor is not applicable to the xvYCC standard for the color space.

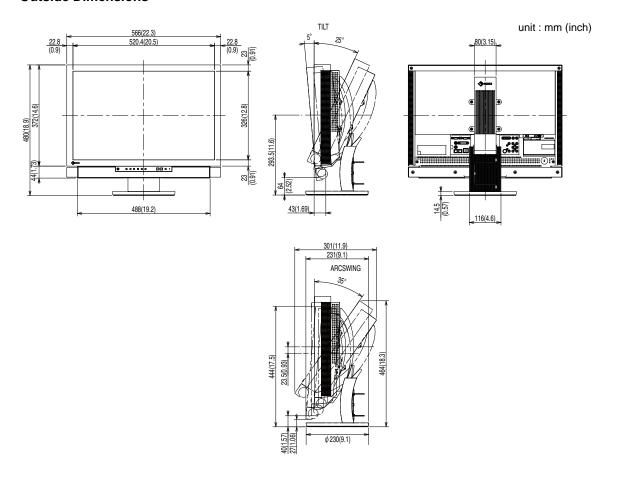
 $^{^{*3}}$ Use when the audio signal is input from other than the HDMI connector.

Setting menu list

	Item		PC1	PC2	HDMI1 / HDMI2 (PC Signal Input)	VIDEO1	VIDEO2	HDMI1 / HDMI2 (Video Signal Input)	PinP
Color	Color Mode			√	√	√	√	√	√
	Brightness		√	√	√	√	√	√	√
	Black Level (R) / (G) / (B)			√	√	-	-	-	√
	Black Level			-	-	$\sqrt{}$	√	√	-
	Contrast			√	√	V	V	√	V
	Saturation		√	√	√	√	√	√	√
	Hue			√	√	√	√	√	√
	Temperatu	re	√	√	√	√	√	√	√
	Advanced Auto EcoView		√	√	√	√	√	√	√
	Settings	OutlineEnhancer	√	√	√	√	√	√	√
		ContrastEnhancer	√	√	√	V	√	√	√
		RGB Balance	-	-	-	V	√	√	-
		Gamma	V	√	√	√	√	√	√
		Gain	√	√	√	-	-	-	√
		Noise Filter	-	-	-	√	V	√	-
		I/P Conversion	-	-	-	√	√	√	-
		Reset	√	\	√	1	V	V	√
	Reset		V	V	V	1	V	V	V
Sound	Balance		V	V	V	1	V	V	1
	Treble		1	V	V	√ √	V	V	1
	Bass			V	V	\ \	√	V	V
	Reset			1	V	√	√	V	V
PowerManager	No Signal O	ff	√ √	1	V		√	\	1
Owenvianager			1	1	√		√	v v	1
	No Operation Off		1	1	\ √		√	√ √	\ \ \ \
	Power Saving (PC) EcoView Index		\ √	V	,		√	,	1
		ex	\ √	V	√ ./			√ ./	
B.4. **	Reset		<u> </u>	<u> </u>	√	√ /	√ /	√ /	1
Monitor Settings	Language		√	√	√ /	√ /	√ /	√ /	√
Settings	USB Selection		√	V	√	√	√	√	√
	Power Indica		√	√	V	√	√	√ /	1
	Sub-Window	Lucent	√	√ /	√	√	√ /	√ /	√
	Real Image		√ /	√ /	√	√,	√ ,	√ ,	√
	HDMI CEC Setting	HDMI CEC	√,	√	√	√,	V	√	√ ,
		Power On Link	√	√	V	√	√	√	√
		Power Off Link	√	√	√	√	√	√	1
		Reset		√	√	√	√	√	V
	Advanced	Auto Screen Adjust	-	√	-	-	-	-	√*1
	Settings	Auto Range Adjust	-	√	-	-	-	-	√*1
		Clock	-		-	-	-	-	√*1
		Phase	-		-	-	V	-	√*1
		Position	-	√	-	-	-	-	√*1
		Signal Filter	-	√	-	-	-	-	√*1
		Input Format	-	-	√	-	-	V	-
		Auto Screen Size	-	-	-	V	V	√	-
		Screen Ratio	-	-	-	V	V	√	-
		3D-Y/C	_	-	-	√	-	-	-
		Color System	-	-	-	, ,	-	_	-
		Color Space	-	-	√	-	-	√	-
		Sound Input Jack	_	-	√	_	-	V	-
		Sound Level	√	√	\ √		√	√ √	
		Reset	\ √	1	\ √		√	√	\ \ \ \
				\ √	\ √	√	\ √	\ √	\ \ \ \
lada was a ti - :-	Reset								
Information		ot DinD dianlar	√		√	√	V	√	

^{*1} When the Main Window uses PC2 at PinP display

Outside Dimensions



Accessories List

For the latest information about the accessories, refer to our web site.

http://www.radiforce.com

5-3 Glossary

Clock

The analog input monitor needs to reproduce a clock of the same frequency as the dot clock of the graphics system in use, when the analog input signal is converted to a digital signal for image display.

This is called clock adjustment. If the clock pulse is not set correctly, some vertical bars appear on the screen.

Color Space

Color space is a method to specify and express the color. There are YUV and RGB, etc. YUV expresses the color by using the luminance (Y), the color difference of R (U) and the color difference of blue (V). RGB does it by using the gradation of 3 colors of Red (R, Green (G) and Blue (B).

Color System

This is a video signal format. This monitor is compatible with NTSC, PAL and PAL-60.

ContrastEnhancer

ContrastEnhancer functions to reproduce images with a taste of contrast by compensating the gamma value as well as controlling the backlight brightness and the gain level according to the image status.

DVI (Digital Visual Interface)

DVI is a digital interface standard. DVI allows direct transmission of the PC's digital data without loss. This adopts the TMDS transmission system and DVI connectors. There are two types of DVI connectors. One is a DVI-D connector for digital signal input only. The other is a DVI-I connector for both digital and analog signal inputs.

DVI DMPM (DVI Digital Monitor Power Management)

DVI DMPM is a digital interface power-saving function. The "Monitor ON (operating mode)" and "Active Off (power-saving mode)" are indispensable for DVI DMPM as the monitor's power mode.

Gain

This is used to adjust each color parameter for red, green and blue. An LCD monitor displays the color by the light passing through the panel color filter. Red, green and blue are the three primary colors. All the colors on the screen are displayed by combining these three colors. The color tone can be changed by adjusting the light intensity (volume) passing through each color's filter.

Gamma

Generally, the monitor brightness varies nonlinearly with the input signal level, which is called "Gamma Characteristic". A small gamma value produces a low-contrast image, while a large gamma value produces a high-contrast image.

HDCP (High-bandwidth Digital Contents Protection)

Digital signal coding system developed to copy-protect the digital contents, such as video, music, etc. This helps to transmit the digital contents safely by coding the digital contents sent via DVI terminal on the output side and decoding them on the input side.

Any digital contents cannot be reproduced if both of the equipments on the output and input sides are not applicable to HDCP system.

HDMI (High-Definition Multimedia Interface)

HDMI is a digital interface standard, developed for consumer electrical appliance or AV device. This standard is issued on the basis of the DVI standard which is one of an interface specification for the connection between a PC and a monitor. The projected image, sound and control signal without compressed enable to be sent/received with one cable. Only the input signal of this product corresponds to the standard.

HDMI CEC (Consumer Electronics Control)

CEC is a standard relating to the inter-device control defined by HDMI. When connecting the CEC compatible device with the HDMI cable, link operation between devices is enabled.

I/P (Interlace Progressive) Conversion

This enables to convert the scanning process of the screen from I (Interlace) to P (Progressive non interlace). This is used to create a higher quality screen to reduce blur, etc. with video input signal digital processed through DVD, etc.

OutlineEnhancer

OutlineEnhancer functions to emphasize outline of the images by emphasizing the color difference between pixels composing the images. This may improve the texture of the material and its feel of the images. On the contrary, it also functions to reproduce the images smoothly by gradating its outline.

Phase

Phase means the sampling timing to convert the analog input signal to a digital signal. Phase adjustment is made to adjust the timing. It is recommended that phase adjustment be made after the clock is adjusted correctly.

Range Adjustment

Range adjustment controls the signal output levels to display every color gradation. It is recommended that range adjustment be made before color adjustment.

Resolution

The LCD panel consists of numerous pixels of specified size, which are illuminated to form images. This monitor consists of 1920 horizontal pixels and 1200 vertical pixels. At a resolution of 1920 x 1200, all pixels are illuminated as a full screen (1:1).

Temperature

Color temperature is a method to measure the white color tone, generally indicated in degrees Kelvin. The screen becomes reddish at a low temperature, and bluish at a high temperature, like the flame temperature.

5000K: Slightly reddish white

6500K: Warm white like paper white

9300K: Slightly bluish white

TMDS (Transition Minimized Differential Signaling)

A signal transmission system for digital interface.

VESA DPMS (Video Electronics Standards Association - Display Power Management Signaling)

VESA provides the standardization of signals from PC (graphics board) for power saving of PC monitors. DPMS defines the signal status between PC and monitor.

5-4 Preset Timing

The following table shows factory preset video timing (for analog signal only).

		Frequency		
Mode	Dot clock		Horizontal: kHz	Polarity
Wiode	DOI CIOCK		Vertical: Hz	lolarity
NEC PC-9821		Horizontal	31.48	Negative
640×400@70 Hz	25.2 MHz	Vertical	70.10	Negative
		Horizontal	31.47	Negative
VGA 640×480@60 Hz	25.2 MHz	Vertical	59.94	Negative
		Horizontal	31.47	Negative
VGA 720×400@70 Hz	28.3 MHz	Vertical	70.09	Positive
Macintosh	00.0.1411	Horizontal	35.00	Negative
640×480@67 Hz	30.2 MHz	Vertical	66.67	Negative
Macintosh	57.0 MILL	Horizontal	49.72	Negative
832×624@75 Hz	57.3 MHz	Vertical	74.55	Negative
Macintosh	400 0 MI I-	Horizontal	68.68	Negative
1152×870@75 Hz	100.0 MHz	Vertical	75.06	Negative
Macintosh	126.2 MHz	Horizontal	74.76	Positive
1280×960@75 Hz	120.2 1/172	Vertical	74.76	Positive
VESA 640×480@73 Hz	31.5 MHz	Horizontal	37.86	Negative
VESA 040x480@73112	31.3 1011 12	Vertical	72.81	Negative
VESA 640×480@75 Hz	31.5 MHz	Horizontal	37.50	Negative
VESA 040×400 @ 73 112	31.3 WH 12	Vertical	75.00	Negative
VESA 720×480@60 Hz	28.3 MHz	Horizontal	31.47	Negative
V26/(126/166/661)2	20.0 1111 12	Vertical	59.94	Negative
VESA 800×600@56 Hz	36.0 MHz	Horizontal	35.16	Positive
		Vertical	56.25	Positive
VESA 800×600@60 Hz	40.0 MHz	Horizontal	37.88	Positive
		Vertical	60.32	Positive
VESA 800×600@72 Hz	50.0 MHz	Horizontal	48.08	Positive
		Vertical	72.19	Positive
VESA 800×600@75 Hz	49.5 MHz	Horizontal	46.88	Positive
		Vertical Horizontal	75.00 31.02	Positive Positive
VESA 848×480@60 Hz	33.8 MHz	Vertical	60.00	Positive
		Horizontal	48.36	Negative
VESA 1024×768@60 Hz	65.0 MHz	Vertical	60.00	Negative
		Horizontal	56.48	Negative
VESA 1024×768@70 Hz	75.0 MHz	Vertical	70.07	Negative
VEQ. 1001 700 075 II	70.01411	Horizontal	60.02	Positive
VESA 1024×768@75 Hz	78.8 MHz	Vertical	75.03	Positive
VEO 4 4450 004 @ 75 11	400 0 1411	Horizontal	67.50	Positive
VESA 1152×864@75 Hz	108.0 MHz	Vertical	75.00	Positive
VESA CVT	79.5 MHz	Horizontal	47.78	Negative
1280×768@60 Hz	79.5 NITZ	Vertical	59.87	Positive
VESA CVT	102.3 MHz	Horizontal	60.29	Negative
1280×768@75 Hz	102.3 1011 12	Vertical	74.89	Positive
VESA CVT RB	68.3 MHz	Horizontal	47.40	Positive
1280×768@60 Hz	00.0 1011 12	Vertical	60.00	Negative
VESA 1280×960@60 Hz	108.0 MHz	Horizontal	60.00	Positive
V = 0/1 1200 x 300 @ 00 112	700.0 IVII IZ	Vertical	60.00	Positive
VESA 1280×1024@60 Hz	108.0 MHz	Horizontal	63.98	Positive
101112301112		Vertical	60.02	Positive
VESA 1280×1024@75 Hz	135.0 MHz	Horizontal	79.98	Positive
	<u> </u>	Vertical	75.03	Positive
VESA 1360×768@60 Hz	85.5 MHz	Horizontal	47.71	Positive
		Vertical	60.02	Positive
VESA 1600×1200@60 Hz	162.0 MHz	Horizontal	75.00	Positive
VESA CVT		Vertical	60.00	Positive
VESA CVT	146.3 MHz	Horizontal	65.29	Negative
1680×1050@60 Hz		Vertical	59.95	Positive

Attention

- Display position may be deviated depending on the PC connected, which may require screen adjustment using Setting menu.
- If a signal other than those listed in the table is input, adjust the screen using the Setting menu. However, screen display may still be incorrect even after the adjustment.
- When interlace signals are used, the screen cannot be displayed correctly even after screen adjustment using the Setting menu.

			Frequency	
Mode	Dot clock		Horizontal: kHz Vertical: Hz	Polarity
VESA CVT RB	119.0 MHz	Horizontal	64.67	Positive
1680×1050@60 Hz	119.0 101112	Vertical	59.88	Negative
VESA CVT RB	154.0 MHz	Horizontal	74.04	Positive
1920×1200@60 Hz	134.0 МП2	Vertical	59.95	Negative
700- @ 50 11- 4000 700-	74.3 MHz	Horizontal	37.50	Positive
720p@50 Hz 1280×720p	74.3 IVITZ	Vertical	50.00	Positive
720p@60 Hz 1280×720p	74.3 MHz	Horizontal	45.00	Positive
	74.3 IVITZ	Vertical	59.94	Positive
1080p@50 Hz	148.5 MHz	Horizontal	56.25	Positive
1920×1080p	140.5 1/172	Vertical	50.00	Positive
1080p@60 Hz	148.5 MHz	Horizontal	67.50	Positive
1920×1080p	140.5 1/172	Vertical	59.94	Positive
VESA CVT RB	64.0 MHz	Horizontal	44.44	Positive
1280×720@60 Hz	04.0 IVITIZ	Vertical	59.98	Negative
VESA CVT	74.5 MHz	Horizontal	44.77	Negative
1280×720@60 Hz	74.5 IVIHZ	Vertical	59.86	Positive
VESA CVT RB	120 E MU-	Horizontal	66.59	Positive
1920×1080@60 Hz	138.5 MHz	Vertical	59.93	Negative

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

FCC Declaration of Conformity

We, the Responsible Party EIZO NANAO TECHNOLOGIES INC.

5710 Warland Drive, Cypress, CA 90630

Phone: (562) 431-5011

declare that the productTrade name: EIZO

Model: RadiForce ES240W

is in conformity with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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

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

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 B digital device.

- AC Cord
- Shielded Signal Cable (DVI DVI, D-Sub mini 15-pin D-Sub mini 15-pin, the enclosed signal cable)

Canadian Notice

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de le classe B est comforme à la norme NMB-003 du Canada.

EMC Information

Essential performance of RadiForce series is to display images and operate functions normally.



The RadiForce series requires special precautions regarding EMC and need to be installed, put into service and used according to the following information.

Do not use any cables other than the cables that provided or specified by us. Using other cables may cause the increase of emission or decrease of immunity.

Do not put any portable and mobile RF communications equipment close to the RadiForce series. Doing so may affect the RadiForce series.

The RadiForce series should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, the equipment or system should be observed to verify normal operation in the configuration in which it will be used.

Anyone who connects additional equipment to the signal input part or signal output parts, configuring a medical system, is responsible that the system complies with the requirements of EN60601-1-2.

-				
Guidance and m	Guidance and manufacturer's declaration - electromagnetic emissions			
The RadiForce series is intended for use in the electromagnetic environment specified below.				
The customer or the ι	The customer or the user of the RadiForce series should assure that it is used in such an environment.			
Emission test	Compliance	Electromagnetic environment - guidance		
RF emissions	Group 1	The RadiForce series uses RF energy only for its internal function.		
EN55011		Therefore, its RF emission are very low and are not likely to cause any		
		interference in nearby electronic equipment.		
RF emissions	Class B	The RadiForce series is suitable for use in all establishments, including domestic		
EN55011		establishments and those directly connected to the public low-voltage power		
Harmonic emissions	Class D	supply network that supplies buildings used for domestic purposes.		
EN61000-3-2				
Voltage fluctuations /	Complies			
flicker emissions				
EN61000-3-3				

Guidance and manufacturer's declaration - electromagnetic immunity The RadiForce series is intended for use in the electromagnetic environment specified below.

The customer or the user of the RadiForce series should assure that it is used in such an environment.				
		1		
Immunity test	IEC60601 test level	Compliance level	Electromagnetic environment -	
			guidance	
Electrostatic	±6kV contact	±6kV contact	Floors should be wood, concrete or	
discharge (ESD)	±8kV air	±8kV air	ceramic tile. If floors are covered with	
EN61000-4-2			synthetic material, the relative humidity	
			should be at least 30%.	
Electrical fast	±2kV	±2kV	Mains power quality should be that of a	
transient / burst	for power supply lines	for power supply lines	typical commercial or hospital environment	
EN61000-4-4	±1kV	±1kV		
	for input/output lines	for input/output lines		
Surge	±1kV line(s) to line(s)	±1kV line(s) to line(s)	Mains power quality should be that of a	
EN61000-4-5	±2kV line(s) to earth	±2kV line(s) to earth	typical commercial or hospital environment	
Voltage dips, short	<5% U⊤ (>95% dip in U⊤)	<5% U⊤ (>95% dip in U⊤)	Mains power quality should be that of a	
interruptions and	for 0.5 cycle	for 0.5 cycle	typical commercial or hospital environment	
voltage variations on	40% U⊤ (60% dip in U⊤) for	40% U⊤ (60% dip in U⊤) for	If the user of the RadiForce series requires	
power supply input	5 cycles	5 cycles	continued operation during power mains	
lines	70% U⊤ (30% dip in U⊤) for	70% U⊤ (30% dip in U⊤) for	interruptions, it is recommended that the	
EN61000-4-11	25 cycles	25 cycles	RadiForce series be powered from an	
	<5% Uт (>95% dip in Uт)	<5% Uт (>95% dip in Uт)	uninterruptible power supply or a battery.	
	for 5sec	for 5sec		
Power frequency	3A/m	3A/m	Power frequency magnetic fields should	
(50/60Hz)			be at levels characteristic of a typical	
magnetic field			location in a typical commercial or hospital	
EN61000-4-8			environment.	
NOTE U⊤ is the a.c. r	nains voltage prior to applica	ation of the test level.		

Guidance and manufacturer's declaration - electromagnetic immunity

The RadiForce series is intended for use in the electromagnetic environment specified below. The customer or the user of the RadiForce series should assure that it is used in such an environment.

Immunity test	IEC60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF EN61000-4-6	3Vrms 150kHz to 80MHz	3V	Portable and mobile RF communications equipment should be used no closer to any part of the RadiForce series,
Radiated RF EN61000-4-3	3V/m 80MHz to 2.5GHz	3V/m	including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
			Recommended Separation distance
			d = 1.2 √ P
			d = 1.2 $\sqrt{\ P}$, 80MHz to 800MHz d = 2.3 $\sqrt{\ P}$, 800MHz to 2.5GHz
			Where "P" is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and "d" is the recommended separation distance in meters (m).
			Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey ^a , should be less than the compliance level in each frequency range ^b .
			Interference may occur in the vicinity of equipment marked with the following symbol.
			((·•))

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the RadiForce series is used exceeds the applicable RF compliance level above, the RadiForce series should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the RadiForce series.

Recommended separation distances between portable and mobile RF communications equipment and the RadiForce Series

The RadiForce series is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the RadiForce series can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the RadiForce series as recommended below, according to the maximum output power of the communications equipment.

Rated maximum	Separation distance according to frequency of transmitter		
output power of	m		
transmitter	150kHz to 80MHz	80MHz to 800MHz	800MHz to 2.5GHz
	d = 1.2 √ P	d = 1.2 √ P	d = 2.3 √ P
W			
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance "d" in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where "P" is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Cable length		
Power Cord :	Accessary	2.0m
Signal Cable (FD-C39):	Accessary	2.0m
Signal Cable (MD-C87):	Accessary	1.8m
USB Cable (MD-C93):	Accessary	1.8m

Hinweise zur Auswahl des richtigen Schwenkarms für Ihren Monitor

Dieser Monitor ist für Bildschirmarbeitsplätze vorgesehen. Wenn nicht der zum Standardzubehör gehörige Schwenkarm verwendet wird, muss statt dessen ein geeigneter anderer Schwenkarm installiert werden. Bei der Auswahl des Schwenkarms sind die nachstehenden Hinweise zu berücksichtigen:

Der Standfuß muß den nachfolgenden Anforderungen entsprechen:

- a)Der Standfuß muß eine ausreichende mechanische Stabilität zur Aufnahme des Gewichtes vom Bildschirmgerät und des spezifizierten Zubehörs besitzen. Das Gewicht des Bildschirmgerätes und des Zubehörs sind in der zugehörenden Bedienungsanleitung angegeben.
- b)Die Befestigung des Standfusses muß derart erfolgen, daß die oberste Zeile der Bildschirmanzeige nicht höher als die Augenhöhe eines Benutzers in sitzender Position ist.
- c)Im Fall eines stehenden Benutzers muß die Befestigung des Bildschirmgerätes derart erfolgen, daß die Höhe der Bildschirmmitte über dem Boden zwischen 135 150 cm beträgt.
- d)Der Standfuß muß die Möglichkeit zur Neigung des Bildschirmgerätes besitzen (max. vorwärts: 5°, min. nach hinten ≥ 5°).
- e)Der Standfuß muß die Möglichkeit zur Drehung des Bildschirmgerätes besitzen (max. ±180°). Der maximale Kraftaufwand dafür muß weniger als 100 N betragen.
- f) Der Standfuß muß in der Stellung verharren, in die er manuell bewegt wurde.
- g)Der Glanzgrad des Standfusses muß weniger als 20 Glanzeinheiten betragen (seidenmatt).
- h)Der Standfuß mit Bildschirmgerät muß bei einer Neigung von bis zu 10° aus der normalen aufrechten Position kippsicher sein.



EIZO NANAO CORPORATION

153 Shimokashiwano, Hakusan, Ishikawa 924-8566 Japan Phone: +81 76 277 6792 Fax: +81 76 277 6793

EIZO GmbH

Siemensallee 84, 76187 Karlsruhe, Germany Phone: +49 721 595 2614 Fax: +49 721 595 4558