

Installation & Maintenance Guide

MD302C6

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- * VESA is a trademark of the Video Electronics Standard Association.
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Symbol Information

	This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.
  CAUTION 	This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.
	Protective earth terminal marked.
	Stand by.
	AC Input.
	Main Power On.
	Main Power Off.

Authentication sign of Standard Inspection Bureau for U.S.A.
Complies with ANSI/AAMI ES60601-1:2005+A1 (2012)
CAN/CSA-C22.2 No. 60601-1:08



AS TO ELECTRICAL SHOCK, FIRE AND MECHANICAL HAZARDS ONLY IN ACCORDANCE WITH ANSI/AAMI ES60601-1(2005)+A1(2012), CAN/CSA-C22.2 NO.60601-1(2008)

Windows is a registered trademark of Microsoft Corporation. NEC is a registered trademark of NEC Corporation. ErgoDesign is a registered trademark of NEC Display Solutions, Ltd. in Austria, Benelux, Denmark, France, Germany, Italy, Norway, Spain, Sweden, U.K.

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Registration Information

Declaration

Declaration of the Authorized Representative		
Means of Conformity	NEC Display Solutions Europe GmbH declares that the product listed is in conformity with the essential requirements and provisions of the Council Directive 93/42/EEC, including the amendments of the Council Directive 2007/47/EC, and conforms to the applicable clauses of the following standards:  – EN 60601-1 – EN 60601-1-2 – EN 61000-3-2 – EN 61000-3-3	
Device Classification:		Class I, non-measuring function
Applicable Rules:		Annex IX, Rules 1.4 (Section 1) and 1.1 (Section 3)
Product Name:		MD302C6 30.0" Diagnostic Imaging LCD color monitor
Model Number:		MD302C6
UMDNS Code:	16-603	
NEC Display Solutions Europe GmbH Landshuter Allee 12-14. 80637 Muenchen, Germany		

FCC Information

- Use the attached specified cables with the MD302C6 color monitor so as not to interfere with radio and television reception.
 - Please use the supplied power cord or equivalent to ensure FCC compliance.
 - Please use the supplied shielded video signal cable.
Use of other cables and adapters may cause interference with radio and television reception.
- 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 your dealer or an experienced radio/TV technician for help.

If necessary, the user should contact the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet, prepared by the Federal Communications Commission, helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

Declaration of Conformity

This device complies with Part 15 of FCC Rules. Operation 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.

U.S. Responsible Party:	NEC Display Solutions of America, Inc.
Address:	500 Park Boulevard, Suite 1100 Itasca, Illinois 60143
Tel. No.:	(630) 467-3000

Type of Product: Display Monitor
Equipment Classification: Class B Peripheral
Model: MD302C6



We hereby declare that the equipment specified above conforms to the technical standards as specified in the FCC Rules.

Classification

- * Type of protection against electric shock: CLASS I equipment
- * Degree of protection against electric shock: No applied part
- * Degree of protection against ingress of water as detailed in the current edition of IEC529: IPX0 - No protection
- * Method of sterilization or disinfection recommended by the manufacturer: Not Specified
- * This device is not suitable for use in the presence of a flammable Anaesthetic Mixture with Air, Oxygen or Nitrous Oxide: No AP or APG category
- * This device shall not be used in the vicinity of the patient, which is the space with surfaces likely to be contacted by the patient or an attendant who can touch the patient. This encloses a space within the room 1.83 m (6 feet) beyond the perimeter of the bed in its intended location, and extending vertically 2.29 m (7-1/2 feet) above the floor.
- * Mode of operation: Continuous operation, maximum 16 hours/7 days



WARNING



TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE. ALSO, DO NOT USE THIS UNIT'S POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLETS UNLESS THE PRONGS CAN BE FULLY INSERTED.

REFRAIN FROM OPENING THE CABINET AS THERE ARE HIGH VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



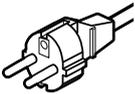
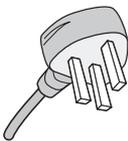
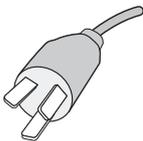
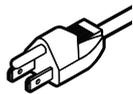
CAUTION



THIS APPARATUS MUST BE EARTHED BECAUSE OF CLASS I EQUIPMENT. TO REDUCE THE RISK OF ELECTRIC SHOCK, MAKE SURE POWER CORD IS UNPLUGGED FROM WALL SOCKET. TO FULLY DISENGAGE THE POWER TO THE UNIT, PLEASE DISCONNECT THE POWER CORD FROM THE AC OUTLET. DO NOT REMOVE COVER (OR BACK COVER). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Power Cord Important Information

CAUTION: Please use the power cord provided with this display in accordance with the table below. If a power cord is not supplied with this equipment, please contact your supplier. For all other cases, please use a power cord that matches the AC voltage of the power outlet and has been approved by and complies with the safety standards of your particular country. When you use this Display for medical in North America, you should use a North America Hospital Grade power cord.

Country	U.S.A. / Canada	EU (except U.K.)	U.K.	Chinese	Japan
Plug Shape					
Voltage	120	230	230	220	100

NOTE: This product can only be serviced in the country where it was purchased.

Intended Use

The MD302C6 color monitor is intended to be used for displaying and viewing of digital images by trained physicians.

Caution: The MD302C6 color display cannot be used for a life-support system.

This device is designed as component of a final system which is in compliance to IEC 60601-1-1 requirements.

Contraindications: None known.

Safety Precautions

This device is designed for exclusive interconnection with IEC 60950-1 certified equipment outside of patient vicinity.

- Equipment connected to digital interfaces must comply with the respective IEC standards (e.g. IEC 60950-1 for data processing equipment and IEC 60601-1 for medical equipment).
- This device complies with IEC 60601-1-2. To minimize the interference from other equipment, a minimum 0.5 m distance shall be kept from other potential electromagnetic sources, such as a Cell Phone.
- To reduce the risk of electric shock, make sure that the power cord is unplugged from wall socket. To fully disengage the power to the unit, please disconnect the power cord from the AC outlet. Do not open the back cover. No user serviceable parts inside. Refer servicing to qualified service personnel. The AC outlet shall be readily available and accessible.

EMC Precaution

This product requires special EMC precautions and needs to be installed and used according to the following information.

Use the specified cable. Using other cables could increase emission or decrease immunity.

Do not place any RF communication equipment in the vicinity of this product. It could affect the performance of the product.

Any additional equipment connected to this product needs to comply with the requirements of IEC 60601-1-2.

North America Customers

Grounding reliability can only be achieved when the equipment is connected to an equivalent receptacle, marked "Hospital Only" or "Hospital Grade". These signal input ports need to be connected properly and any unused signal input ports shall not be accessible for the patient to contact in the patient area after the LCD is integrated into a medical system.

Federal law restricts this device to sale by or on the order of a licensed healthcare practitioner.

European Customers

Unpacking, Installation and calibration of this display should only be done by authorized and trained personnel. Any installation done by a non-authorized person is done under his own risk and we accept no responsibility in any device malfunctioning. To secure full functionality of this display, only NEC approved display controller models for connection with the final system must be used.

Medical Imaging

MD302C6 is designed for 3280 x 2048 medical imaging.

Recommended use

Safety Precautions and Maintenance



FOR OPTIMUM PERFORMANCE, PLEASE NOTE
THE FOLLOWING WHEN SETTING UP AND
USING THE LCD COLOR MONITOR:



WARNING: Do not modify this equipment without authorization of the manufacturer.

WARNING: To disconnect this product from the mains supply disconnect the mains plug from the socket outlet.

WARNING: To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

WARNING: No modification of this equipment is allowed.

WARNING: For EMC details information, please contact the NEC local representative.

- **DO NOT OPEN THE MONITOR.** There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not spill any liquids into the cabinet or use your monitor near water.
- Do not insert objects of any kind into the cabinet slots, as they may touch dangerous voltage points, which can be harmful or fatal or may cause electric shock, fire or equipment failure.
- Do not place any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- The power supply cord you use must have been approved by and comply with the safety standards of your country.
- In UK, use a BS-approved power cord with molded plug having a black (5A) fuse installed for use with this monitor.
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- Do not bend, crimp or damage the power cord.
- Do not use monitor in high temperature, humid, dusty, or oily areas.
- Do not cover vent on monitor.
- Vibration can damage the backlight. Do not install the monitor where it will be exposed to continual vibration.
- If the monitor's LCD panel is broken, do not come in contact with the liquid crystal and handle with care.
- To prevent damage to the LCD monitor caused by tipping over due to earthquakes or other shocks, make sure to install the monitor in a stable location and take measures to prevent falling.
- Please do not touch patient and this medical device at the same time.

Immediately turn off the power, unplug your monitor from the wall outlet and move to a safe location then refer servicing to qualified service personnel under the following conditions. If the monitor is used in this condition, the monitor may cause fall, fire and electric shock:

- If the monitor stand has been cracked or peeled.
- If the monitor has been wobbled.
- If the monitor emanates an unusual odor.
- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet is damaged.
- If the monitor does not operate normally by following operating instructions.



CAUTION

- Allow adequate ventilation around the monitor so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet which is easily accessible.
- Handle with care when transporting. Save packaging for transporting.
- Do not touch LCD panel surface while transporting, mounting and setting. Applying pressure on the LCD panel can cause serious damage.
- Carry the monitor by holding the top and the bottom of the monitor head with both hands.
- Do not carry holding only the stand.

Image Persistence: Image persistence exists, when a residual or “ghost” image of a previous image remains visible on the screen. Unlike with CRT monitors, image persistence on LCD monitors is not permanent, but constant images being displayed for a long period of time should be avoided.

To alleviate image persistence, turn off the monitor for as long as the previous image was displayed. For example, if an image was on the monitor for one hour and a residual image remains, the monitor should be turned off for one hour to erase the image.

NOTE: As with all personal display devices, NEC DISPLAY SOLUTIONS recommends using a moving screen saver at regular intervals whenever the screen is idle or turning off the monitor when not in use.

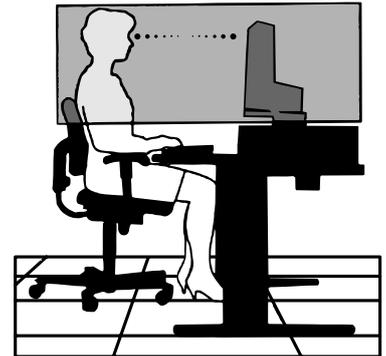
Maintenance: This display is factory calibrated for diagnostic imaging, in accordance with DICOM Part 14. To ensure constant visual quality over the life of this display, the recommended time interval to re-calibrate this model is 12 months.



CORRECT PLACEMENT AND ADJUSTMENT OF THE MONITOR CAN
REDUCE EYE, SHOULDER AND NECK FATIGUE. CHECK THE
FOLLOWING WHEN YOU POSITION THE MONITOR:



- For optimum performance, allow 20 minutes for the display to warm up.
- Adjust the monitor height so that the top of the screen is at or slightly below eye level. Your eyes should look slightly downward when viewing the middle of the screen.
- Position your monitor no closer than 40 cm (15.75 inches) and no further away than 70 cm (27.56 inches) from your eyes. The optimal distance is 50 cm (19.69 inches).
- Rest your eyes periodically by focusing on an object at least 6 m (20 feet) away. Blink often.
- Position the monitor at a 90° angle to windows and other light sources to minimize glare and reflections. Adjust the monitor tilt so that ceiling lights do not reflect on your screen.
- Position whatever you are looking at most of the time (the screen or reference material) directly in front of you to minimize turning your head.
- Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (after-image effects).
- Get regular eye checkups.



Cleaning the LCD Panel

- When the LCD is dusty, please gently wipe with a soft cloth.
- Please do not rub the LCD panel with hard or coarse material.
- Please do not apply pressure to the LCD surface.
- Please do not use OA cleaner as it will cause deterioration or discoloration on the LCD surface.
- Do not touch a LCD luminance sensor. It could cause the set luminance level to change and/or the LCD to fail.
- Do not spray cleaner directly on the panel surface. It could run down the panel surface to the space between the luminance sensor and panel, and could cause the display to fail or malfunction (see page 11).

Cleaning the Cabinet

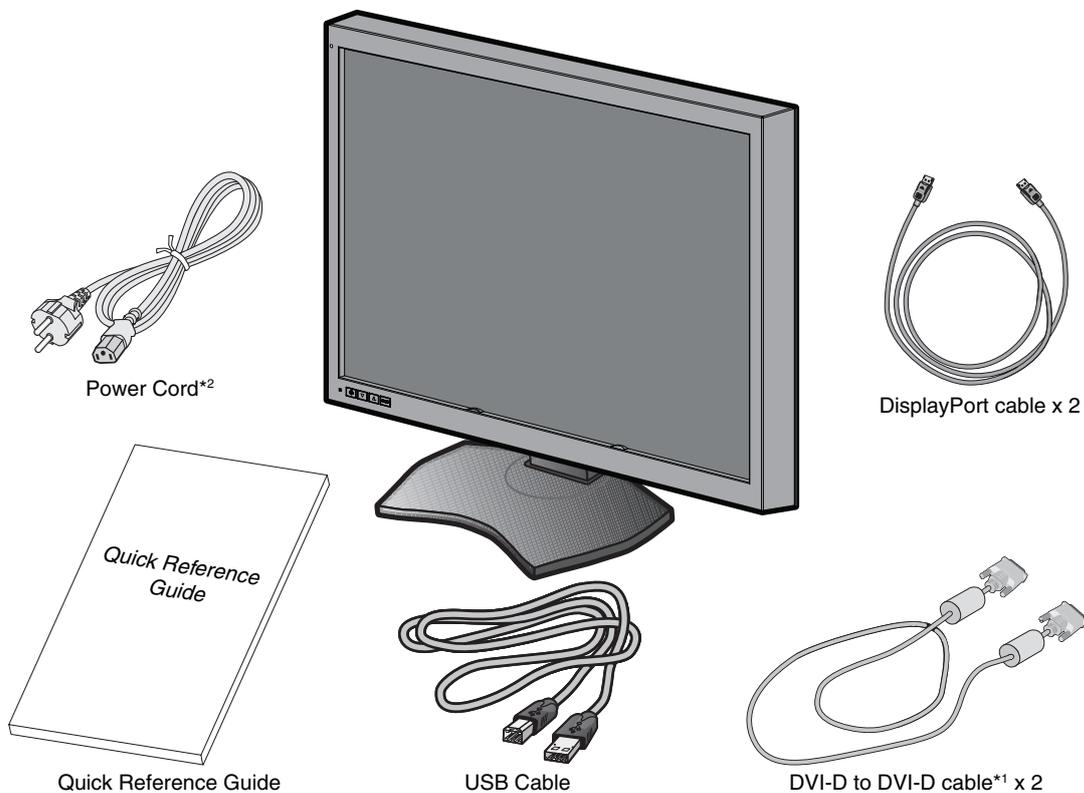
- Unplug the power supply cord from the wall outlet.
- Gently wipe the cabinet with a soft cloth.
- To clean the cabinet, dampen the cloth with a neutral detergent and water, wipe the cabinet and follow with a dry cloth.

NOTE: Many plastics are used on the surface of the cabinet. DO NOT clean with benzene, thinner, alkaline detergent, alcoholic system detergent, glass cleaner, wax, polish cleaner, soap powder, or insecticide. Do not touch rubber or vinyl to the cabinet for a long time. These types of fluids and fabrics can cause the paint to deteriorate, crack or peel.

Contents

Your new NEC monitor box* should contain the following:

- MD302C6 monitor with tilt/swivel/height adjust stand
- Power Cord
- Video Signal Cable (DVI-D to DVI-D cable)*¹ x 2
- Video Signal Cable (DisplayPort to DisplayPort cable) x 2
- USB Cable
- Quick Reference Guide



* Remember to save your original box and packing material to transport or ship the monitor.

*¹ Dual link DVI cable.

*² Type and number of power cords included will depend on the where the LCD monitor is to be shipped. When more than one power cord is included, please use a power cord that matches the AC voltage of the power outlet and has been approved by and complies with the safety standard of your particular country.

Connecting the cables

To connect the LCD monitor to your system, please follow these instructions:

NOTE: Make sure to read "Recommended Use" before installation.
In order to display the maximum resolution, a display controller that can output a resolution of 3280 x 2048 is needed.

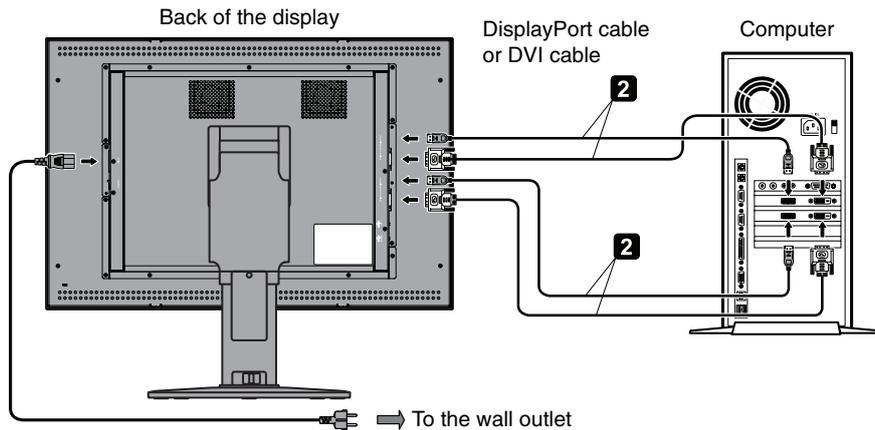
1. Turn off the computer.
2. **DVI connection:** Connect the supplied digital signal cables between the display's DVI and the computer's DVI connector.
DisplayPort connection: Connect the supplied DisplayPort cables between the display's DisplayPort and the computer's DisplayPort connector.

NOTE: The recommended cable length is 2m. If you use a longer cable, the display may become unstable and flicker.

3. Connect one end of the power cord to the AC inlet on the back of the display and the other end to the power outlet.

NOTE: Please refer to the CAUTION section of this Installation & Maintenance Guide for proper selection of AC power cord.

4. Turn on the display and the computer. Make sure that the main power switch on the back side of the display is turned on.



5. To keep the cables neatly organized, place them into the cable management system that is built into the stand. Place the cables in the hooks firmly and evenly (**Figure A**).
6. Slide down the cable cover (**Figure B**).
7. Please check that you can still rotate, raise and lower the monitor screen, when you have installed the cables.

NOTE: Handle with care when raising, lowering, rotating or tilting the monitor screen.

8. Turn on the monitor with the front power switch (**Figure C**) and the computer.

NOTE: If you have any problems, please refer to the **Troubleshooting** section of this Installation & Maintenance Guide.

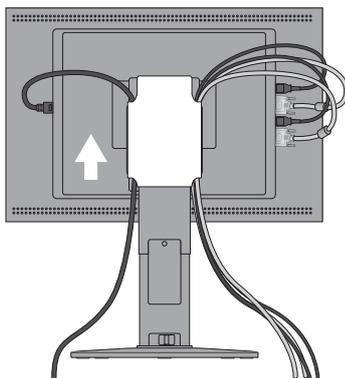


Figure A

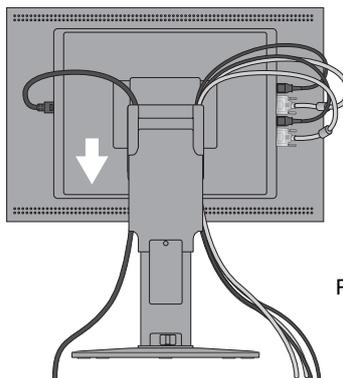


Figure B

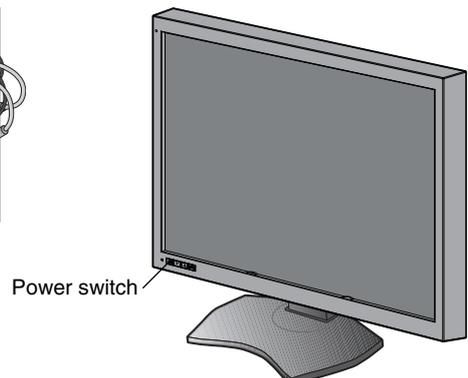
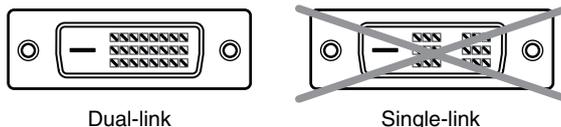


Figure C

! Caution

For connection to the DVI input(s), make sure to use a DVI Dual Link cable.



• Precautions to display two 3MP screens from one computer (Figure D):

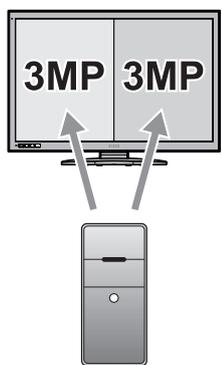
A display controller model, which has two outputs of the same signal type (either DVI + DVI or DisplayPort + DisplayPort) is recommended. Using two outputs with different signal types, (i.e. DVI + DisplayPort) of the same display controller is not recommended. Doing so may result in slight differences of luminance and color between left and right screen and/or a frame skip*.

Using outputs from different display controllers may cause a frame skip, even if the outputs are of the same signal type. Please also refer to the GammaCompMD QA user manual for correct setup for dual screen operation.

• Precautions to display two 3MP screens from two computers (Figure E):

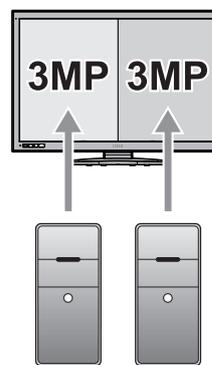
This configuration is not recommended, as it may cause a frame skip*. In addition, mixed connection of different signal types (DVI + DisplayPort) may result in slight differences of luminance and color between left and right screen, depending on the display controller models used in the two computers.

Note: This configuration is not supported by the NEC GammaCompMD QA calibration software.



Two 3MP screens from 1 computer

Figure D

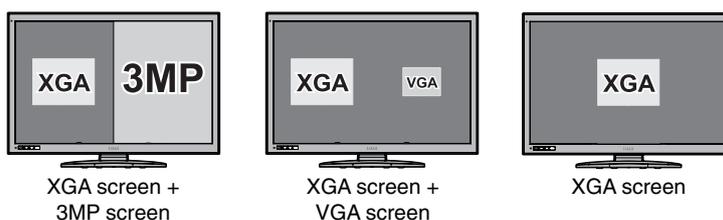


Two 3MP screens from two computers

Figure E

• Precautions to display two 3MP screens or screens with the resolution other than 6MP:

< Examples >



XGA screen + 3MP screen

XGA screen + VGA screen

XGA screen

Some resolutions other than two 3MP screens or one 6MP screen are supported, but their display performance is not guaranteed. Doing so may result in slight differences of luminance and color between left and right screen or a frame skip*.

Note: Mixed resolution configurations are not supported by the NEC GammaCompMD QA calibration software.

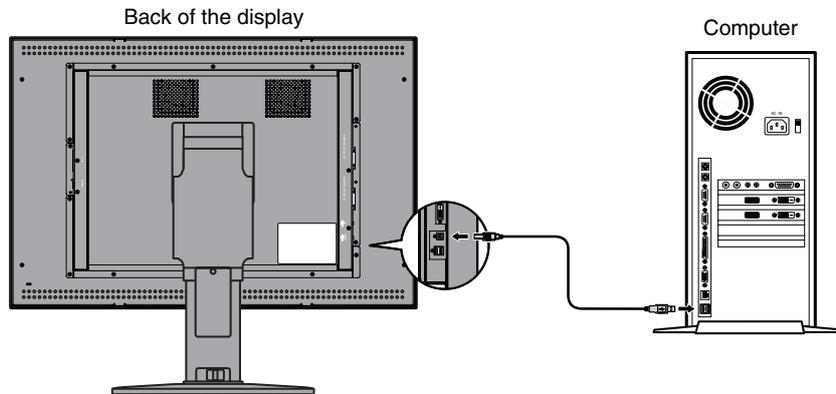
* Frame skip:

Difference of image display between left and right screens caused by fast movement of a cursor or window or by video display.

When using a USB hub...

This display has a USB 2.0 compliant hub. By connecting the supplied USB cable to a USB 2.0 port of the computer or another USB 2.0 hub, USB devices can be connected to the display directly.

With the computer and the display turned on, connect the supplied USB cable between the display's USB upstream port and the computer's USB 2.0 downstream port.



IMPORTANT: Proper operation of all USB devices is not guaranteed. Depending on the computer, operating system, and/or peripheral devices used, the device may not work properly.

The supplied USB cable can also be used for the followings:

- To calibrate the display.
- To calibrate multiple displays in succession.

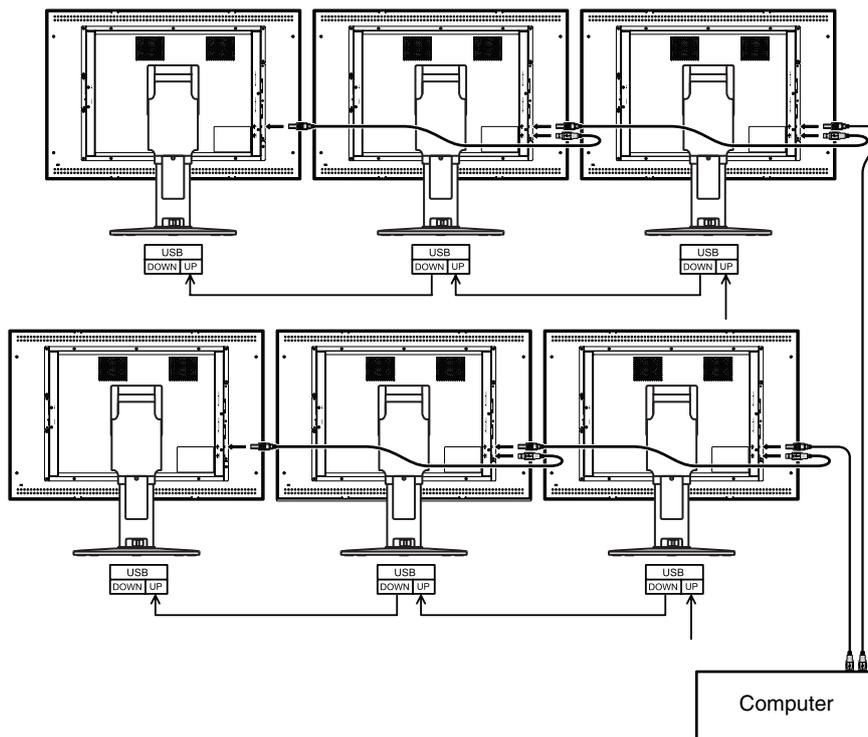
To calibrate the display

Connect the supplied USB cable between one of the display's USB upstream port and the computer's USB 2.0 downstream port. Regarding display calibration, please refer to the GammaCompMD QA user manual.

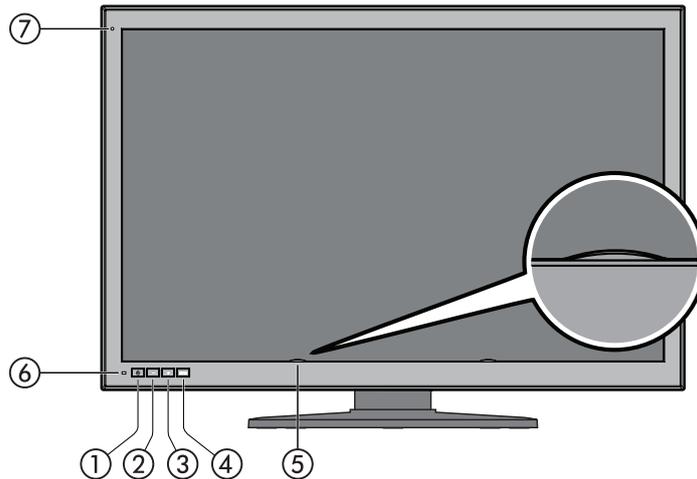
To calibrate multiple displays in succession

Up to six displays can be connected one after another in a daisy chain using USB cables.

1. Connect the supplied USB cable between the first display's USB upstream port and the computer's USB 2.0 port.
2. Connect a USB cable between the first display's USB downstream port and the second display's USB upstream port.
3. Repeat step 2 until all displays are connected one after another.



NOTE: Up to 5 sub monitors may be daisy-chained.



① **Power On/Off** ⏻

Press and hold the switch to turn on/off the display.

NOTE: Wait at least 10 seconds between on/off actions.

② **MINUS button** [-]

Without displaying the OSD on the screen, press this button to switch the input source of ⑩ INPUT 1 to DisplayPort 1 or ⑪ DVI 1. (This function is available only when “ENABLE FUNCTIONS” setting of the direct OSD menu setting is set to “Enable Switching Input Source” or “Enable Both Functions” (see page 26)).

With the OSD screen displayed, press this button to move the cursor to right/left or up/down.

③ **PLUS button** [+]

Without displaying the OSD on the screen, press this button to switch the input source of ⑫ INPUT 2 to DisplayPort 1 or ⑬ DVI 2. (This function is available only when “ENABLE FUNCTIONS” setting of the direct OSD menu setting is set to “Enable Switching Input Source” or “Enable Both Functions” (see page 26)).

With the OSD screen displayed, press this button to move the cursor to right/left or up/down.

④ **MENU button** MENU

Without displaying the OSD on the screen, press this button to switch the input port displayed on the screen. The input port is switched in the following order: INPUT 1, INPUT 2, and Input 1 + Input 2.

(This function is available only when “ENABLE FUNCTIONS” setting of the direct OSD menu setting is set to “Enable Switching Input Source” or “Enable Both Functions” (see page 26)).

Press and hold this button to show OSD setting menus.

With the OSD screen displayed, press this button to select and set OSD items.

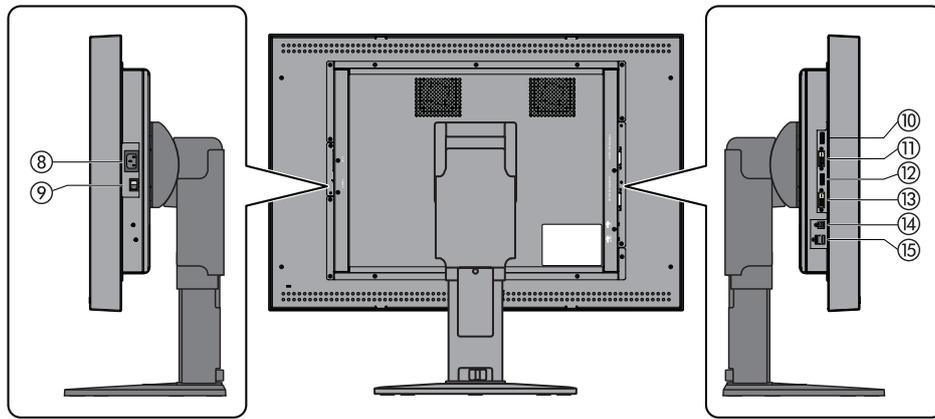
⑤ **LCD Luminance Sensor**

Caution: Do not touch the LCD luminance sensor. It may cause the set luminance level to change and/or the LCD to fail.

⑥ **LED Status Indicator**

No.	LED	Power	Mode
1	Off	Off	Power off
2	Off	On	Normal (Luminance stabilized)
3	Green	On	Luminance stabilizer on
4	Blinking green	On	Calibrating
5	Orange	On	Power management on
6	Blinking orange	On	Advanced power management on
7	Red/blinking red	On	Error (Contact NEC technical support)

⑦ **Ambient Light Sensor**



- ⑧ **AC Inlet:** Connect the supplied Power cord.
- ⑨ **Main power switch:** Main power supply switch.
- ⑩ **INPUT1 of DisplayPort-1:** Digital video signal input port. Connect the supplied DisplayPort cable.
- ⑪ **INPUT1 of DVI-1:** Digital video signal input port. Connect the supplied DVI cable.
- ⑫ **INPUT2 of DisplayPort-2:** Digital video signal input port. Connect the supplied DisplayPort cable.
- ⑬ **INPUT2 of DVI-2:** Digital video signal input port. Connect the supplied DVI cable.
- ⑭ **USB upstream port:** When connecting an USB device to USB downstream port, connect one end of the supplied USB cable to the display's USB upstream port and the other end to an USB 2.0 port of the computer.
- ⑮ **USB downstream port (x2):** An USB device with a maximum current consumption of 500mA per port can be connected to each port. Multiple MD302C6 displays, connected in a daisy chain, can be calibrated in succession by connecting the supplied USB cable between here and the next display's USB upstream port.

Changing signal inputs

Two methods to switch signal inputs are available, input port switching and input source switching. Press the appropriate buttons located on the front bezel of the display as follows.

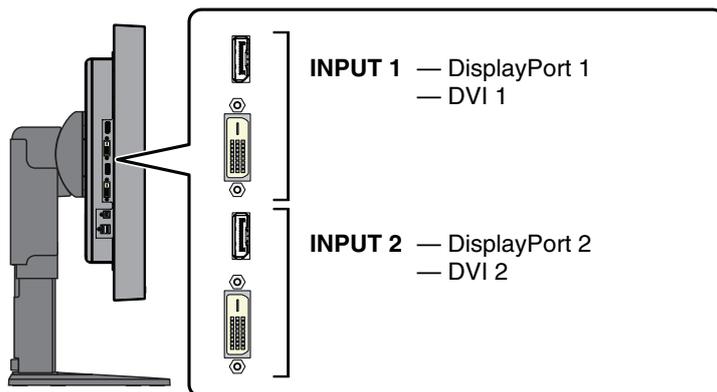
Input port switching

“Input port” here means a combination of the input sources of DisplayPort and DVI.

There are two input ports, INPUT 1 and INPUT 2.

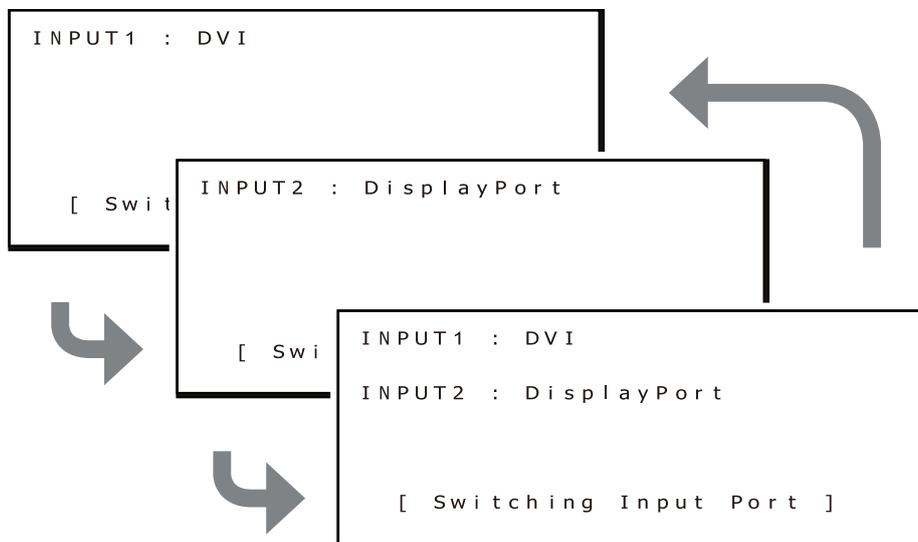
See the following table and figure for the difference between input port and input source.

Input port	Input Source	
Input 1	DisplayPort 1	DVI 1
Input 2	DisplayPort 2	DVI 2



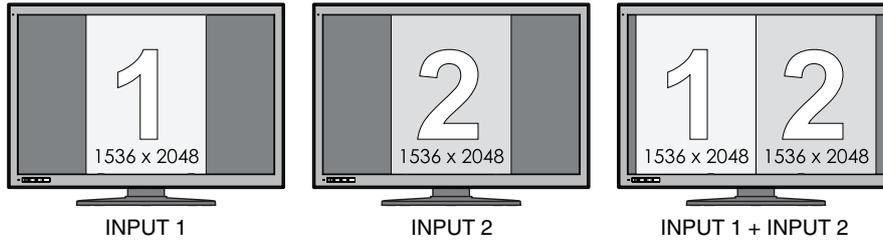
Input ports are located on the side of the display.

Without displaying the OSD on the screen, press the MENU button to switch the input port displayed on the screen. The input port is switched in the following order: INPUT 1, INPUT 2, and Input 1 + Input 2.



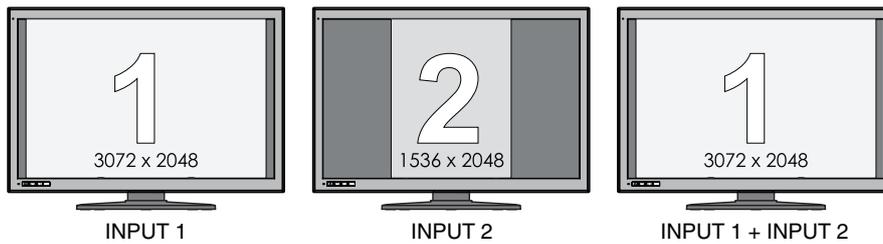
The following shows an example of the case when the resolution of QXGA (1536 x 2048) is selected for both INPUT1 and INPUT 2.

By pressing the MENU button and switching a port, both screens are active when INPUT 1 + INPUT 2 is selected.



The following shows an example of the case when the resolution of 3072 x 2048 is selected for INPUT 1 and QXGA (1536 x 2048) is selected for INPUT 2.

By pressing the MENU button and switching a port, only the screen related to INPUT 1 (the resolution of 3072 x 2048) is active when INPUT 1 + INPUT 2 is selected. This combination exceeds the number of pixels of the LCD panel to show both INPUT 1 and INPUT 2 screens.



Input source switching

Input source of each input port of INPUT 1 and INPUT 2 can be switched.

Input port	Input Source	
Input 1	DisplayPort 1	DVI 1
Input 2	DisplayPort 2	DVI 2

This operation is available only when “ENABLE FUNCTIONS” of the direct OSD menu setting is set to “Enable Switching Input Source” or “Enable Both Functions”.

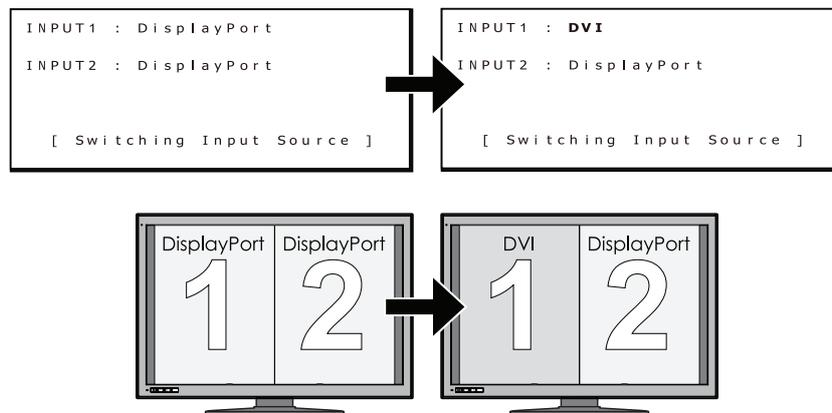
The procedure to switch input source depends on the “INPUT SOURCE BUTTON MODE” selected.

When “Separate Mode” is selected for INPUT SOURCE BUTTON MODE

“Separate mode” allows separate switching of the input source of INPUT 1 and INPUT 2.

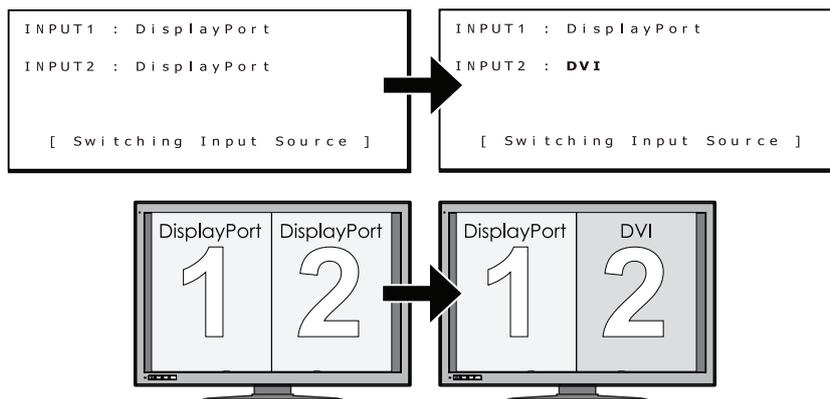
Press the minus (-) button on the front bezel without displaying the OSD menu and the input source of INPUT 1 is switched.

The following shows an example of the case when Displayport is selected for the input source of both INPUT 1 and Input 2, and the input source of INPUT 1 is switched to DVI.



Press the plus (+) button on the front bezel without displaying the OSD menu and the input source of INPUT 2 is switched.

The following shows an example of the case when DisplayPort is selected for the input source of both INPUT 1 and Input 2, and the input source of INPUT 2 is switched to DVI.

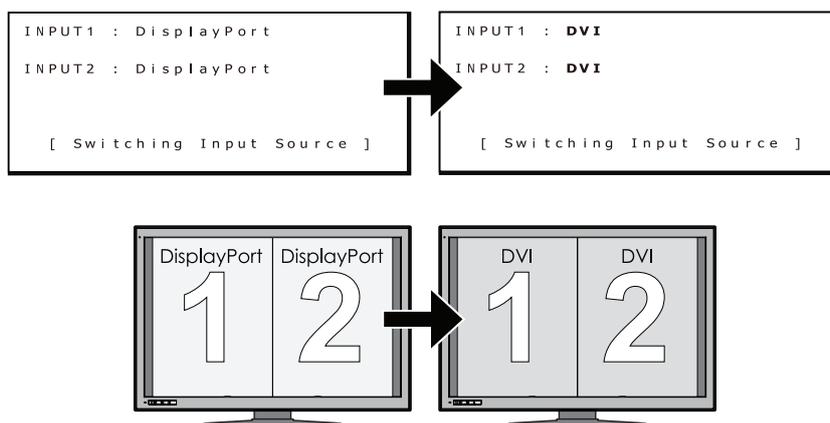


NOTE: Using INPUT 1 and INPUT 2 with different input sources (DVI + DisplayPort) is not recommended for standard applications. It may result in slight differences of luminance and color between left and right screen and/or a frame skip (See page 9).

When “Concurrent Mode” is selected for INPUT SOURCE BUTTON MODE

Concurrent Mode allows simultaneous switching of the input source of INPUT 1 and INPUT 2.

Press either the plus (+) or the minus (-) button on the front bezel of the display without displaying the OSD menu. The input source of INPUT 1 and INPUT 2 will be switched simultaneously.

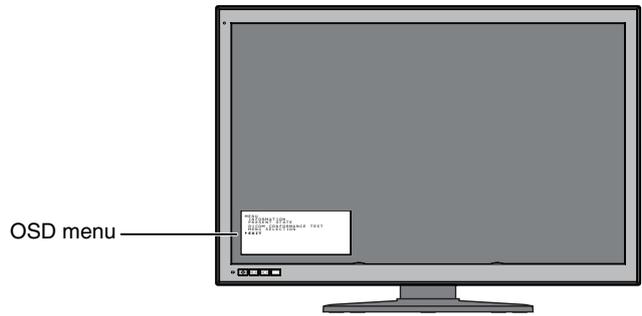


Display information

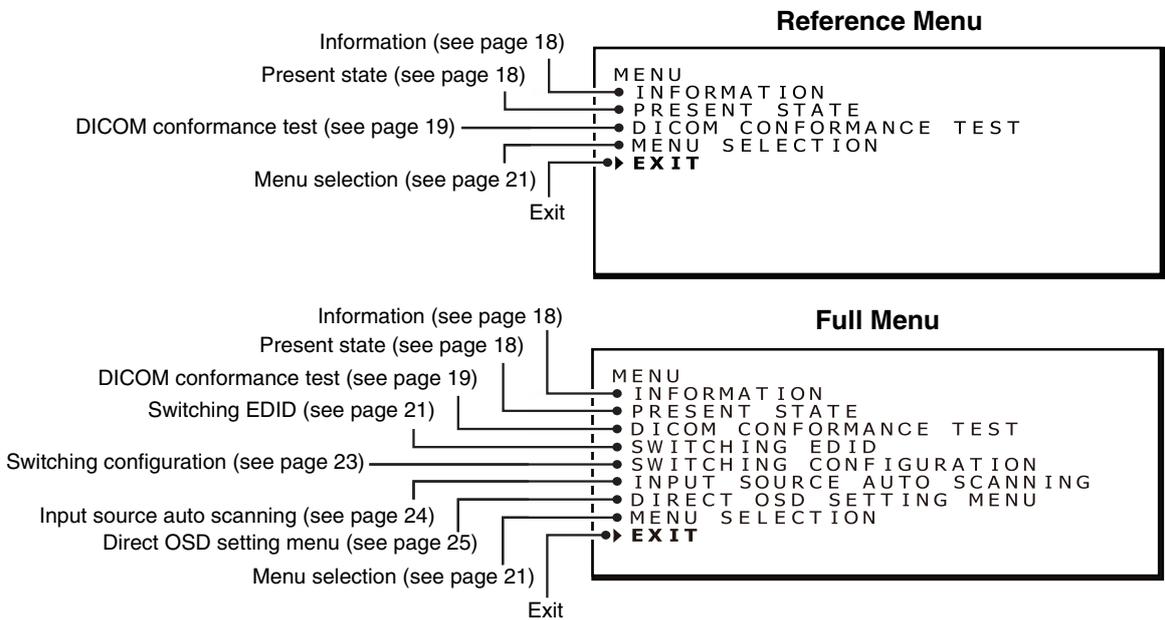
Press the appropriate button located on the front bezel of the display to see display information or change settings.

1. Displaying the OSD menu

Press and hold the MENU button for 2 seconds. The following OSD menu appears.



See the following pages for all display information items.



NOTE: The OSD menu contents may be selected between “Reference menu” and “Full menu”. The “Reference menu” is the factory default.

2. Closing the OSD menu

Press either + or - button to move the cursor “▶” and select “Exit”.
Press the MENU button to close the OSD menu.

NOTE: The OSD menu disappears in 15 seconds without closing.

OSD menu hierarchy

The OSD full menu structure and a brief explanation for each menu item is listed as follows.
The highlighted items are shown in the Reference Menu. The other items are only shown in the Full Menu.

- **INFORMATION** Shows display information
- **PRESENT STATE** Shows luminance and gamma correction information
- **DICOM CONFORMANCE TEST** DICOM conformance test
 - └ **START TESTING**
 - └ **Yes** Performs DICOM conformance test
 - └ **CANCEL TESTING** Cancels DICOM conformance test in execution.
 - └ **Yes** Cancels test
 - └ **No** Continues test
 - └ **No*** Skips DICOM conformance test
- **SWITCHING EDID** Switches EDID data
 - └ **6MP+ (3MP+x2)*** 1x 3280 x 2048 + 2x 1640 x 2048 resolutions
 - └ **6MP (3MPx2)** 1x 3072 x 2048 + 2x 1536 x 2048 resolutions, for backward compatibility with original 3MP displays
- **SWITCHING CONFIGURATION** Switches configuration
 - └ **CONFIG 1*** Configuration 1 (400 cd/m², DICOM GSDF, Clear Base)
 - └ **CONFIG 2** Configuration 2 (400 cd/m², DICOM GSDF, 6500K)
 - └ **CONFIG 3** Configuration 3 (300 cd/m², DICOM GSDF, 6500K)
- **INPUT SOURCE AUTO SCANNING** Automatic switching setting of input signal
 - └ **Disable** Does not switch input signal automatically
 - └ **Enable*** Switches input signal automatically
- **DIRECT OSD SETTING MENU** Direct OSD menu setting
 - └ **ENABLE FUNCTIONS** Functions to be enabled
 - └ **Disable*** Disables both input signal switching and input port switching
 - └ **Enable Switching Input Source** Enables input signal switching only
 - └ **Enable Switching Input Port** Enables input port switching only
 - └ **Enable Both Functions** Enables both input signal switching and input port switching
 - └ **INPUT SOURCE BUTTON MODE** Selects switching mode of input signal
 - └ **Separate Mode*** Selects separate mode
 - └ **Concurrent Mode** Selects concurrent mode
 - └ **EXIT** Closes the submenu
- **MENU SELECTION** Selects OSD menu
 - └ **Reference Menu*** Reference menu
 - └ **Full Menu** Full menu
- **EXIT** Closes the OSD main menu

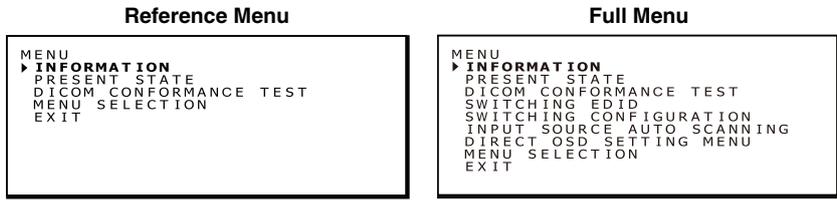
NOTE: Items with * mark indicate factory default settings.

Displaying information

Various display information can be checked by selecting from the OSD menu.

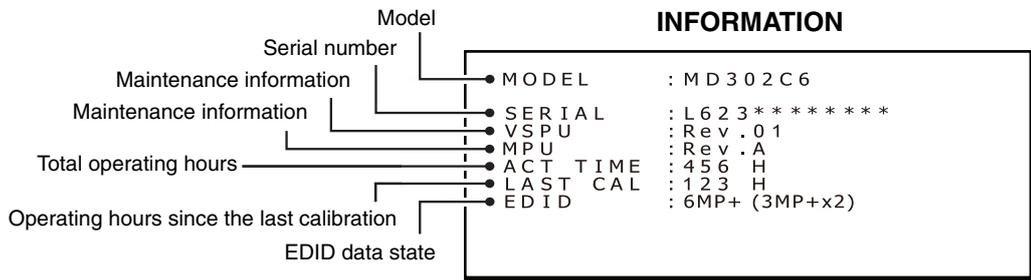
1. Displaying the OSD main menu

Press and hold the MENU button for 2 seconds. The OSD menu appears.
Press either + or - button to move the cursor "▶" and select "INFORMATION".



2. Information window

Press the MENU button and the information submenu appears.



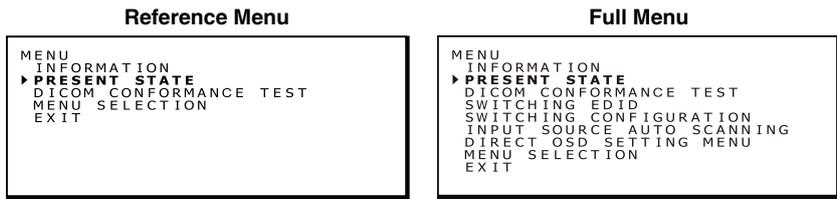
NOTE: The OSD menu disappears in 15 seconds.

Displaying present state

The present operating state and setting of the display can be checked by selecting from the OSD menu.

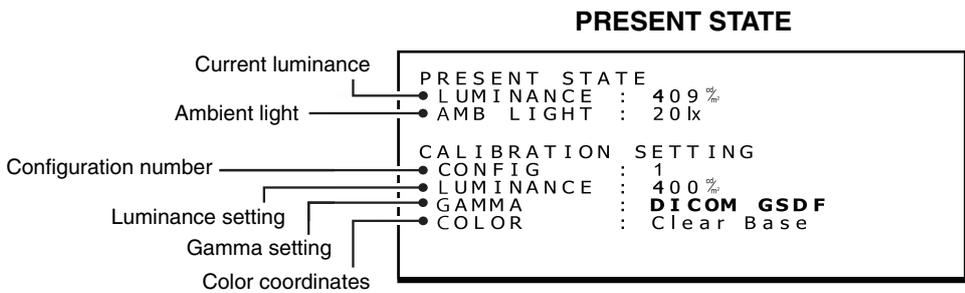
1. Displaying the OSD main menu

Press and hold the MENU button for 2 seconds. The OSD menu appears.
Press either + or - button to move the cursor "▶" and select "PRESENT STATE".



2. Present state submenu

Press the MENU button and the present state submenu appears.



NOTE: The OSD menu disappears in 15 seconds.

Performing a DICOM conformance test

NOTE: This function is available only when the display has been calibrated to DICOM GDSF. Performing a DICOM conformance test ensures DICOM conformance of the display by measuring and checking the display properties.

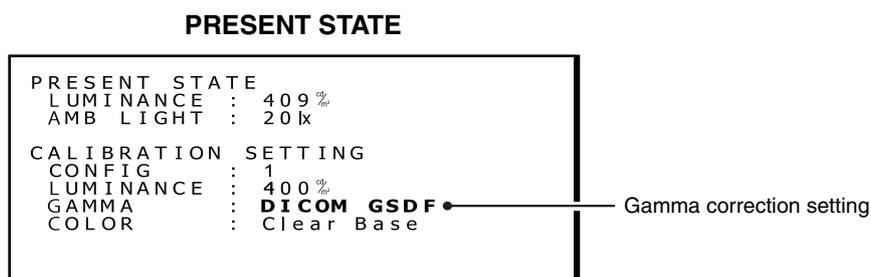
The DICOM conformance test is recommended to be performed after 60 minutes of continuous active backlight time of the LCD panel. If the test is performed within less than 60 minutes of active backlight time, the reported DICOM GDSF error value may be larger because the luminance was not yet stable enough.

NOTE: If the power management setting of the computer is set to less than 60 minutes, either change the computer's power management setting only for this test or try "OSD operation method without actual OSD screen" on page 27.

DICOM conformance test procedure

1. Checking the gamma setting

Follow the instructions "Displaying present state" on page 18 and make sure that the gamma correction is set to "DICOM GDSF".



2. Displaying the OSD main menu

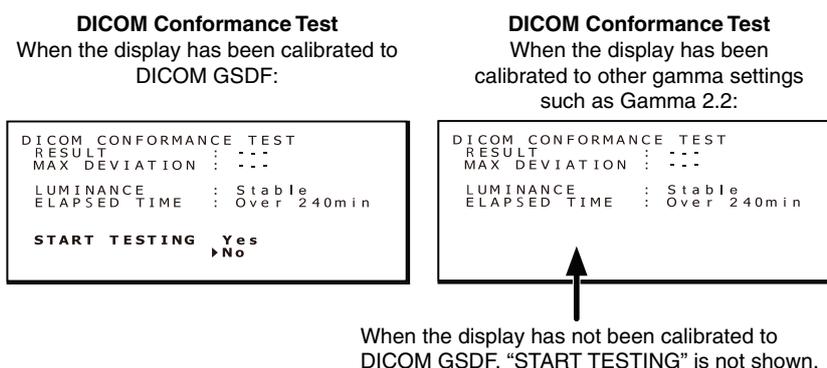
Press and hold the MENU button for 2 seconds. The OSD menu appears.

Press either + or - button to move the cursor "▶" and select "DICOM CONFORMANCE TEST".



3. DICOM conformance test submenu

Press the MENU button and the DICOM conformance test submenu appears.

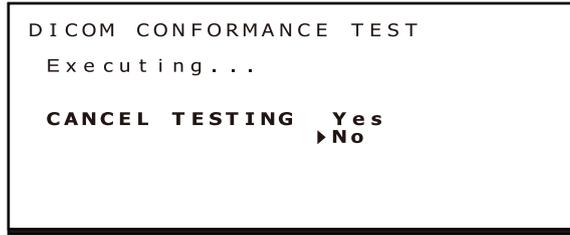


NOTE: If "START TESTING" is not shown, select DICOM GDSF from the "SWITCHING CONFIGURATION" window.

4. Performing the DICOM conformance test

Press either + or - button to select “Yes” for START TESTING. (DICOM conformance test starts immediately).

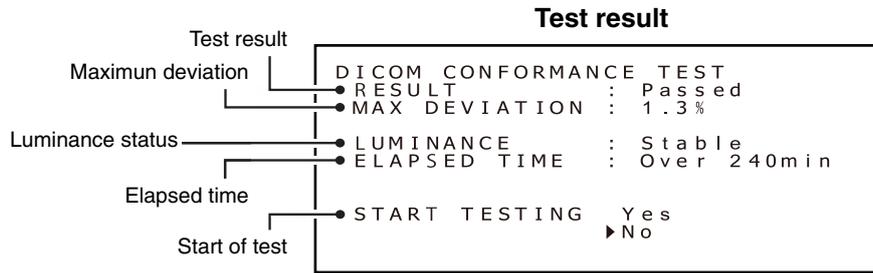
Screen that shows the test is in execution



It takes between 30 seconds to 1 minute to complete the test.
To cancel the test, press either + or - button to select “Yes” for CANCEL TESTING.

5. Showing the test results

When the test has completed, the results are shown similar as below.



The result shown indicates the following status.

RESULT	Explanation
Passed	Max. deviation (GSDF error) ≤ 10%, complies with AAPM TG18 guidelines for primary displays.
Failed	Max. deviation (GSDF error) > 10%, does not comply with AAPM TG18 guidelines for primary displays.
Canceled	Test has been cancelled.
Passed(!)	When “Passed” or “Failed” is followed by “(!),” the test has not been performed under the recommended condition (minimum 60 minutes of active backlight time) or the luminance is unstable.
Failed(!)	

LUMINANCE	Explanation
Stable	Luminance is stable.
Unstable	Luminance is unstable.

NOTE: If the test is repeated within 30 seconds, “Unstable” is shown for LUMINANCE and “(!)” is shown for RESULT.

The test results are saved until the next test or calibration.

If the maximum deviation (GSDF error) result does not conform to the AAPM TG18 guidelines, even though the test has been performed under the recommended conditions, calibrate the display using an external calibration sensor, i.e. the NEC model MDSVSENSOR3. During calibration with an external sensor, the front sensor of the display will be re-adjusted as well.

NOTE: The OSD menu disappears in 15 seconds.

Switching the OSD menu

Different menu contents can be shown for the menu screen by switching between “Reference Menu” and “Full Menu”. Full Menu allows setting changes. Select “MENU SELECTION” for switching menu contents.

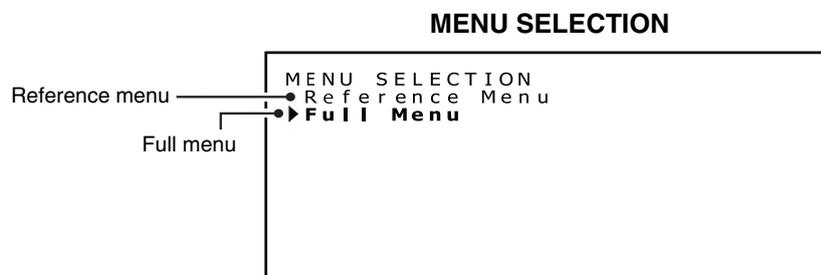
1. Displaying the OSD main menu

Press and hold the MENU button for 2 seconds. The OSD main menu appears. Press either + or - button to move the cursor “▶” and select “MENU SELECTION”.



2. Switching the OSD menu

Press the MENU button. The MENU SELECTION window appears. Press either + or - button to move the cursor “▶” and select the preferred OSD main menu. Press the MENU button again to store the OSD selected main menu.



NOTE: The OSD menu disappears in 15 seconds.

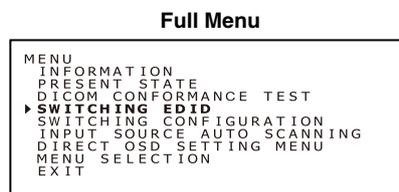
Switching between different EDID content

EDID stands for Extended Display Identification Data, which, among other information, reports the display’s resolution capabilities to the computer’s operating system. With the “Switching EDID” function of the Full Menu OSD, two different display modes are selectable:

“Full pixel mode”, using the complete area of the LCD panel” (1x 3280 x 2048 + 2x 1640 x 2048 resolutions) and “QXGA based mode” for backward compatibility with original 3MP displays (1x 3280 x 2048 + 2x 1536 x 2048 resolutions).

1. Displaying the OSD main menu

Press and hold the MENU button for 2 seconds. The OSD main menu appears. Press either + or - button to move the cursor “▶” and select “SWITCHING EDID”.



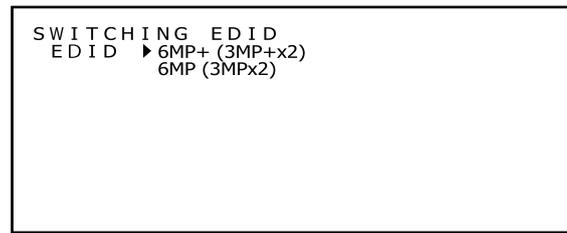
2. Switching EDID sub menu

Press the menu button and the SWITCHING EDID submenu appears.

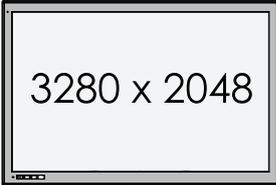
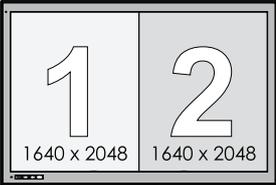
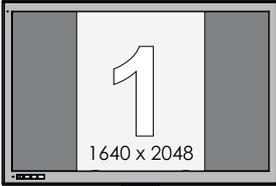
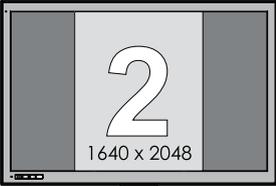
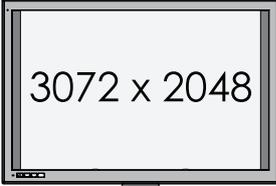
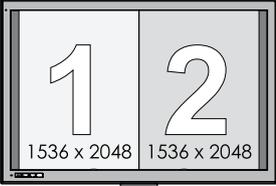
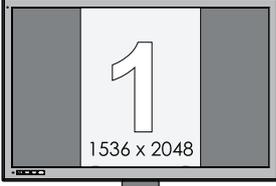
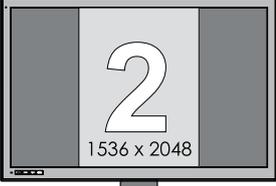
Press either + or - button to move the cursor  and select the preferred mode. See below for selectable resolutions.

Press the MENU button again to store the preferred EDID.

Switching EDID



NOTE: The OSD menu disappears in 15 seconds.

EDID	Explanation
6MP+ (3MPx2)	<p>“Full pixel mode”, using the complete area of the LCD panel: The display is used with a resolution of either 3280 x 2048 or 2x 1640 x 2048.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>3280 x 2048</p> <p>1 screen display with native resolution</p> </div> <div style="text-align: center;">  <p>1 2 1640 x 2048 1640 x 2048</p> <p>2 screen display with 1640 x 2048</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;">  <p>1 1640 x 2048</p> <p>1640 x 2048 display</p> </div> <div style="text-align: center;">  <p>2 1640 x 2048</p> <p>1640 x 2048 display</p> </div> </div>
6MP (3MPx2)	<p>“QXGA based mode”, for backward compatibility with original 3MP displays. The display is used with a resolution of either 3072 x 2048 or 2x 1536 x 2048.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>3072 x 2048</p> <p>1 screen display with 3072 x 2048</p> </div> <div style="text-align: center;">  <p>1 2 1536 x 2048 1536 x 2048</p> <p>2 screen display with QXGA</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;">  <p>1 1536 x 2048</p> <p>QXGA display</p> </div> <div style="text-align: center;">  <p>2 1536 x 2048</p> <p>QXGA display</p> </div> </div>

Changing configurations

The model MD302C6 can save up to three different Luminance - Gamma - Color Tint configuration settings within the display. These settings are selectable by a configuration number, which is shown in the PRESENT STATE submenu. The following three configuration settings were saved prior to shipping, with configuration 1 as the default setting.

Configuration number	Luminance (cd/m ²)			Gamma
	Maximum	Minimum	Ambient	
1	400	0.8	0.0	DICOM GSDF
2	400	0.8	0.0	DICOM GSDF
3	300	0.8	0.0	DICOM GSDF

Configuration switching

1. Displaying the OSD main menu

Press and hold the MENU button for 2 seconds. The OSD main menu appears. Press either + or - button to move the cursor "▶" and select "SWITCHING CONFIGURATION".

Switching Configuration

```

MENU
INFORMATION
PRESENT STATE
DICOM CONFORMANCE TEST
SWITCHING EDID
▶ SWITCHING CONFIGURATION
INPUT SOURCE AUTO SCANNING
DIRECT OSD SETTING MENU
MENU SELECTION
EXIT
  
```

2. Switching between configurations

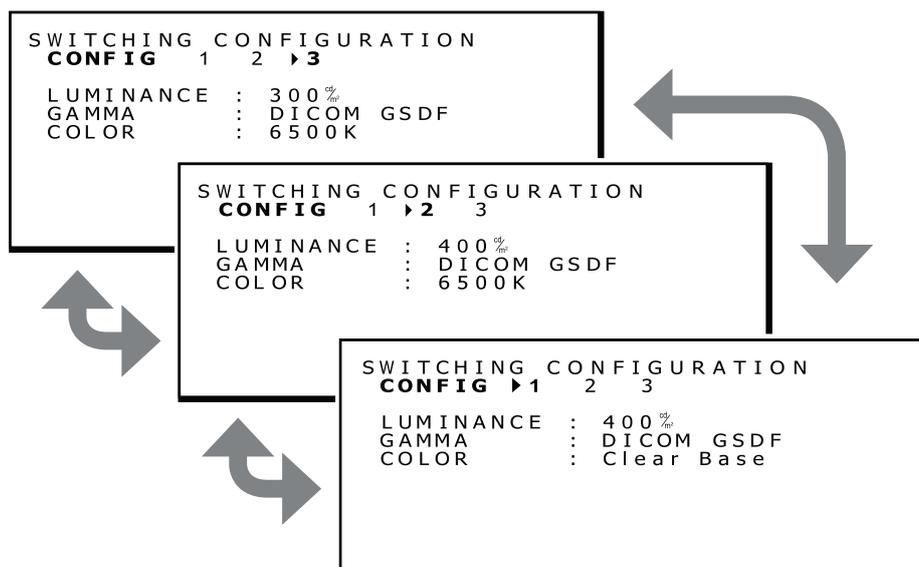
Press the MENU button and the Switching Configuration submenu appears.

Switching Configuration

```

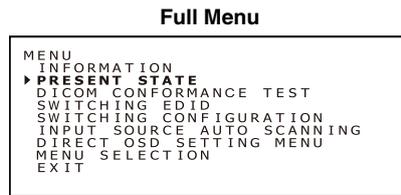
SWITCHING CONFIGURATION
CONF IG ▶ 1 2 3
LUMINANCE : 400 %
GAMMA : DICOM GSDF
COLOR : Clear Base
  
```

Press either + or - button to move the cursor "▶" and select a configuration number.

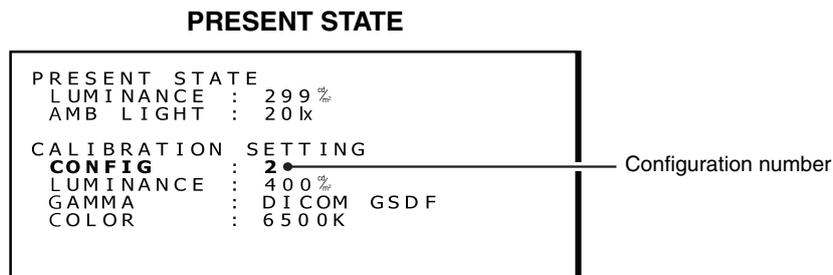


3. Confirming the configuration change

Press the MENU button and return to the full main menu, same as in step 1. Press either + or - button to move the cursor "▶" and select "PRESENT STATE".



Press the MENU button and the PRESENT STATE submenu with the selected configuration number appears. The following picture shows the case when configuration 2 was selected.



NOTE: The OSD menu disappears in 15 seconds.

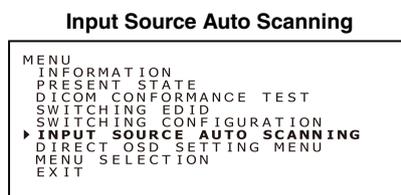
Automatic input source detection

By default, the automatic scanning for input signals is enabled. The function is selectable as follows.

Automatic scanning setting

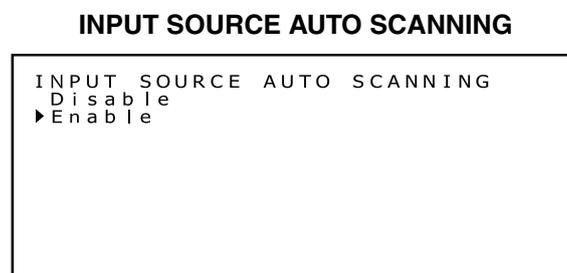
1. Displaying the OSD main menu

Press and hold the MENU button for 2 seconds. The OSD main menu appears. Press either + or - button to move the cursor "▶" and select "INPUT SOURCE AUTO SCANNING".



2. Changing the input signal scanning function

Press the MENU button and the INPUT SOURCE AUTO SCANNING submenu appears.



Press either + or - button to move the cursor "▶" and select the preferred setting.

Input Source Auto Scanning	Explanation
Disable	Disables the automatic scanning function.
Enable*	Enables the automatic scanning function.

* "Enable" is selected by default.

Press the MENU button to return to the full main menu, same as in step 1.

NOTE: The OSD menu disappears in 15 seconds.

Direct OSD setting menu

The direct OSD setting menu allows function setting to be enabled or the mode setting to switch an input signal. Follow the instructions below. By default, this function is disabled.

Functions to be enabled

1. Displaying the OSD main menu

Press and hold the MENU button for 2 seconds. The OSD main menu appears.
Press either + or - button to move the cursor "▶" and select "DIRECT OSD SETTING MENU".

Direct OSD Setting Menu

```
MENU
INFORMATION
PRESENT STATE
DICOM CONFORMANCE TEST
SWITCHING EDID
SWITCHING CONFIGURATION
▶ INPUT SOURCE AUTO SCANNING
▶ DIRECT OSD SETTING MENU
MENU SELECTION
EXIT
```

2. Direct OSD setting menu

Press the MENU button and the DIRECT OSD SETTING MENU submenu appears.

DIRECT OSD SETTING MENU

```
DIRECT OSD SETTING MENU
▶ ENABLE FUNCTIONS
INPUT SOURCE BUTTON MODE
EXIT
```

Press either + or - button to move the cursor "▶" and select "ENABLE FUNCTIONS".

Direct OSD Setting Menu	Explanation
ENABLE FUNCTIONS	Sets the selected function to be enabled.
INPUT SOURCE BUTTON MODE	Selects switching mode of an input signal.
EXIT	Closes the submenu.

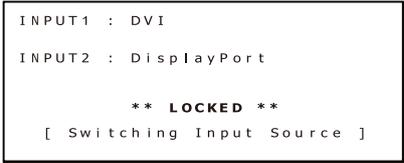
3. Setting of functions to be enabled

Press the MENU button and the ENABLE FUNCTIONS submenu appears.

ENABLE FUNCTIONS

```
ENABLE FUNCTIONS
Disable
Enable Switching Input Source
Enable Switching Input Port
▶ Enable Both Functions
```

Press either + or - button to move the cursor "▶" and select the preferred function.

Enable Functions	Explanation
Disable	Disables both input signal switching and input port switching. (When you try disabled switching operation, the menu will show "LOCKED"). 
Enable Switching Input Source	Enables input source switching only. (When you try input port switching, the menu will show "LOCKED").
Enable Switching Input Port	Enables input port switching only. (When you try input source switching, the menu will show "LOCKED").
Enable Both Functions	Enables both input signal switching and input port switching.

* "Disable" is selected by default.

Press the MENU button and return to the Direct OSD Setting Menu in step 2.

NOTE: The OSD menu disappears in 15 seconds.

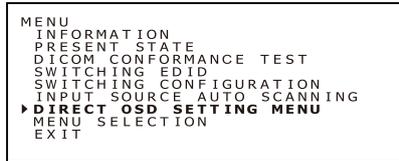
Selecting switching mode of an input signal

1. Displaying the OSD main menu

Press and hold the MENU button for 2 seconds. The OSD main menu appears.

Press either + or - button to move the cursor "▶" and select "DIRECT OSD SETTING MENU".

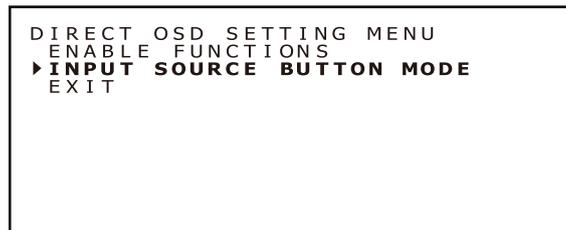
Direct OSD Setting Menu



2. Direct OSD setting menu

Press the MENU button and the DIRECT OSD SETTING MENU screen appears.

DIRECT OSD SETTING MENU screen



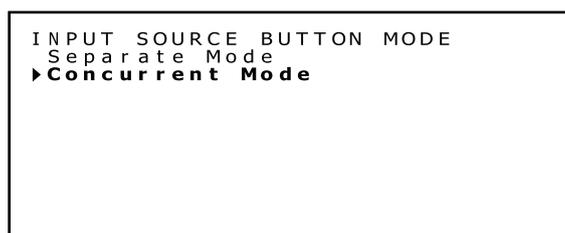
Press either + or - button to move the cursor "▶" and select "INPUT SOURCE BUTTON MODE".

Direct OSD Setting Menu	Explanation
ENABLE FUNCTIONS	Sets the selected function to be enabled.
INPUT SOURCE BUTTON MODE	Selects switching mode for input signals.
EXIT	Closes the submenu.

3. Selecting switching mode of an input signal

Press the MENU button and the INPUT SOURCE BUTTON MODE submenu appears.

INPUT SOURCE BUTTON MODE



Press either + or - button to move the cursor "▶" and select either mode.

INPUT SOURCE BUTTON MODE	Explanation
Separate Mode*	To change the input signal of INPUT 1 and INPUT 2 separately by pressing the + or the - button.
Concurrent Mode	To change the input signal of INPUT 1 and INPUT 2 simultaneously by pressing the + or the - button.

* "Separate Mode" is the factory default.

Press the MENU button and return to the Direct OSD Setting Menu in step 2.

NOTE: The OSD menu disappears in 15 seconds.

OSD operation without signal input from computer

Without a signal input from the computer, normally a display goes into energy saving mode and cannot show the OSD menu. MD302C6 can exit the energy saving mode temporarily and shows the OSD menu in the normal operation mode. Therefore it is possible to change settings in the OSD or perform a DICOM conformance test without changing the computer's power management settings.

Follow the procedures below to show the OSD menus.

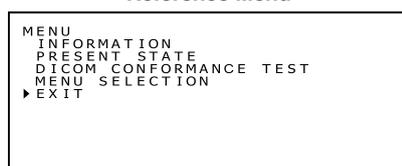
Displaying the OSD main menu

1. While the display is in energy saving mode (the LED indicator is orange), press and hold MENU for 2 seconds.

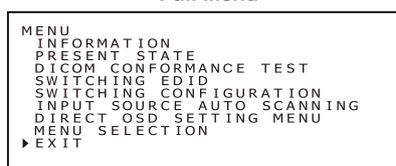


2. The LED indicator next to the power switch turns to green, the display is turned on and is temporarily in the normal operation mode for up to 3 hours. At the same time, the OSD main menu appears.

Reference Menu



Full Menu



3. The OSD operation without signal input from computer allows the following operations and a DICOM conformance test. If "Reference Menu" was selected as the OSD main menu, the items listed below DICOM CONFORMANCE TEST are not shown. To perform one of these operations, switch the OSD main menu to "Full Menu".
 - **DICOM conformance test** (see "Performing a DICOM conformance test" on page 19).
 - **Switching EDID** (see "Switching between different EDID content" on page 21).
 - **Switching configuration** (see "Changing configurations" on page 23).
 - **Switching input source** (see "Automatic input source detection" on page 24).
 - **Direct OSD setting menu** (see "Direct OSD setting menu" on page 25).
 - **Menu selection** (see "Switching the OSD menu" on page 21).

NOTE: The display being turned on to the normal operation mode by the operation above is only temporary.

This mode is left after any of the following conditions are met:

1. 3 hours have passed.
2. The display power has been turned off.
3. A DICOM conformance test has been performed.

Specifications

Monitor Specifications	MD302C6	Notes
LCD panel color	Clear Base	
LCD	30.0-inch (76.8 cm), color, TFT, Active matrix type, normally black Anti-glare	
Pixel pitch (H x V)	0.197 x 0.197 mm	
Display area (H x V)	645.5 x 403.05 mm	
Pixel (H x V)	3280 x 2048	
Display colors	8 bit: 16.77 million out of 68 billion* 10 bit: 1.07 billion out of 68 billion*	
Backlight	LED backlight	
LCD Optical characteristics (typ.)	Viewing angle: 170° horizontal/vertical (contrast ratio ≥ 10:1) Contrast ratio: 1000:1 (Viewing angle of 0° horizontal and vertical)	
Luminance	DICOM calibrated Maximum	400 cd/m ² as factory default 550 cd/m ² (800 cd/m ² typ. as LCD component)
Input sync signal	DVI 1.0 compliant, DisplayPort 1.1a compliant	
Available resolution	640 x 480 800 x 600 1024 x 768 1536 x 2048 (at Fv=60Hz), 3072 x 2048 (at Fv=30Hz) 1640 x 2048 (at Fv=60Hz), 3280 x 2048 (at Fv=30Hz)	
Input connectors	DVI 24-pin connector (x2), DisplayPort connector (x2)	
Power Supply	AC 100-240 V ~ 50/60 Hz	
Current Rating	4.0 - 1.67 A	
USB Hub	USB Rev. 2.0 compliant, Self-powered USB upstream port (x1), USB downstream ports (x2)	
Ambient conditions	Temperature: Operating: 5 - 35°C, Transport / Storage: -20 - 60°C Humidity (no condensation): Operating: 20 - 80%, Transport / Storage: 10 - 85% Air pressure: Operating: 700 - 1060hPa, Transport / Storage: 266 - 1060hPa	
Dimensions & weight	Net: 695.6 x 486.5 - 618.2 x 301.6 mm (W x H x D) approx. 17.6 kg (38.8 lbs) 27.4 x 19.2 - 24.3 x 11.9 inches (W x H x D)	
Safety certifications	ANSI/AAMI ES60601-1:2005+A1 (2012), CAN/CSA-C22.2 No. 60601-1:08, FCC-B, ICES-003-B, CE-MDD, VCCI-B, FDA510(K)	

*1 billion = 10⁹

NOTE: Technical specifications are subject to change without notice.
MD302C6 is intended to be used in rooms with less than 50 to 69.7 lx ambient light.
The maximum ambient light level depends on technical QA standards and/or national obligations.

Troubleshooting

The display won't turn on! (The power indicator is off.)

- Make sure the display is connected to the power outlet.
- Check to see if the display is turned on.

The screen is not lit!

- Check if cables are connected correctly.
- Check if the computer is turned on.
- If the LED indicator is orange, the computer may be in energy saving mode. Press any key on the keyboard to wake up the computer.
- The input signal frequency or display resolution may not be appropriate for the display. Refer to the computer instruction manual and adjust the frequency and/or resolution.
- If the LED is red, this may be an error indication. Contact your supplier.

Images are not displayed properly!

- The display resolution may not be appropriate for the display. Refer to the computer instruction manual and adjust the resolution.

The refresh rate is set to 60Hz (dual-link mode) and resolution loss (scan line gaps) occurs!

- This can happen when a DVI Single Link cable or a DisplayPort to DVI Single Link adapter is used. Use the supplied dual-link cable which supports both single-link (30Hz) and dual-link (60Hz) modes, or set the refresh rate to 30Hz.

Attaching a wall mount or multi-display mounting arm

The tilt and swivel stand, as shipped with the display, is interchangeable with commercially available wall mounts or multi-display mounting arms that:

- Come with a mounting plate with 6 slotted screw holes at 100 mm x 200 mm, and
- Bear the total weight of the LCD panel (without the stand) and the cables connected to it.

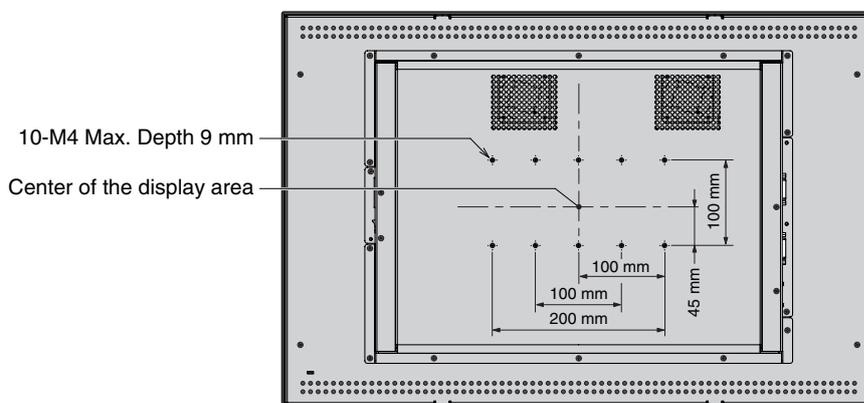
For more information ask your mounting arm supplier.

Note: Use the original screws to use the LCD panel back on its original tilt stand.

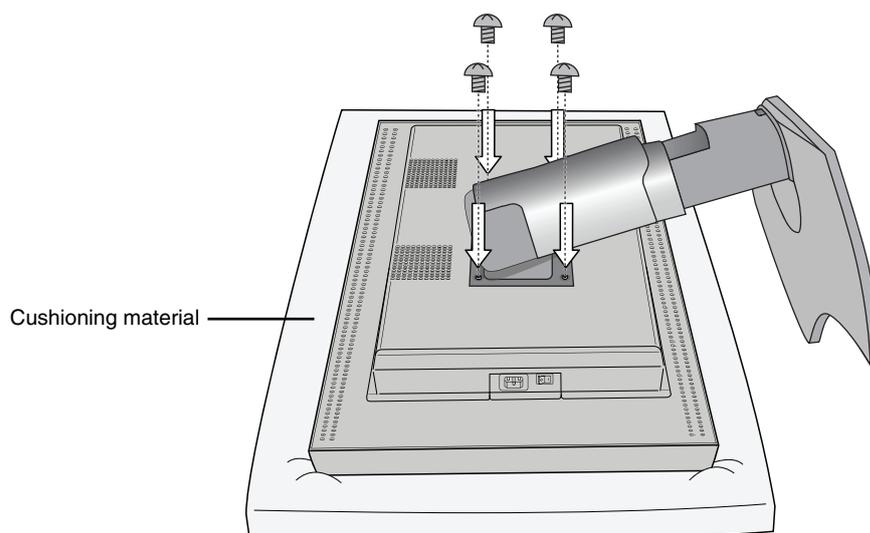
	CAUTION	
<p>Choose the screw size carefully according to the mount plate thickness. If the screws are too long, they could damage the internal parts. If they are too short, the connection becomes loose and the display could fall out.</p>		
	Mounting plate thickness	Screw size
	1.5 - 3.5 mm	ISO M4 x 12

How to attach an arm stand

1. Place a soft cloth or cushioning material over a stable even surface.
2. Put the display face down on the soft cloth.
3. Remove 4 screws and detach the tilt stand, using a Phillips head screwdriver.



Back of the display



Cushioning material

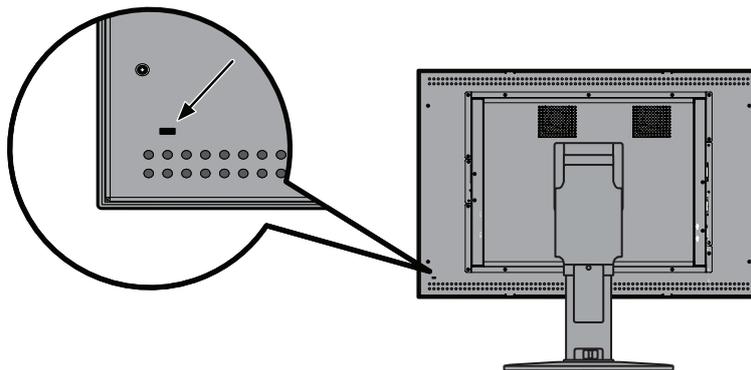
4. Attach an arm stand.

NOTE: Do not try to attach the panel to the arm that is already fixed in place by yourself. Ask for assistance of another person. Tipping the panel over or dropping it could cause damage and/or injury.

Antitheft Security Slot

The display is equipped with the security slot for use with the MicroSaver Security Lock System by Kensington Technology Group. The MicroSaver locks are available at PC supply stores.

Note: Kensington is the registered trademark of Kensington Technology Group.



Manufacturer's Recycling and Energy Information

NEC DISPLAY SOLUTIONS is strongly committed to environmental protection and sees recycling as one of the company's top priorities in trying to minimize the burden placed on the environment. We are engaged in developing environmentally-friendly products, and always strive to help define and comply with the latest independent standards from agencies such as ISO (International Organisation for Standardization).

Disposing of your old NEC product

The aim of recycling is to gain an environmental benefit by means of re-use, upgrading, reconditioning or reclamation of material. Dedicated recycling sites ensure that environmentally harmful components are properly handled and securely disposed. To ensure the best recycling of our products, **NEC DISPLAY SOLUTIONS offers a variety of recycling procedures** and gives advice on how to handle the product in an environmentally sensitive way, once it has reached the end of its life.

All required information concerning the disposal of the product and country-specific information on recycling facilities can be found on our following websites:

<http://www.nec-display-solutions.com> (in Europe),

<http://www.nec-display.com> (in Japan) or

<http://www.necdisplay.com> (in USA).

Energy Saving

This monitor features an advanced energy saving capability.

Mode	Power consumption	LED colour
Normal Operation	Approx. 173.5 W	Green (then unlit when luminance is stabilized)
Energy Saving Mode	Less than 22 W	Orange
Off Mode	Less than 20.5 W	Unlit

WEEE Mark (European Directive 2012/19/EU)



Within the European Union

EU-wide legislation, as implemented in each Member State, requires that waste electrical and electronic products carrying the mark (left) must be disposed of separately from normal household waste. This includes monitors and electrical accessories, such as signal cables or power cords. When you need to dispose of your NEC display products, please follow the guidance of your local authority, or ask the shop where you purchased the product, or if applicable, follow any agreements made between yourself and NEC.

The mark on electrical and electronic products only applies to the current European Union Member States.

Outside the European Union

If you wish to dispose of used electrical and electronic products outside the European Union, please contact your local authority so as to comply with the correct disposal method.

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