

SHARP

8M-B32C1

LCD MONITOR

OPERATION MANUAL

HDMI™



Information on the Disposal of this Equipment and its Batteries

IF YOU WISH TO DISPOSE OF THIS EQUIPMENT OR ITS BATTERIES, DO NOT USE THE ORDINARY WASTE BIN, AND DO NOT PUT THEM INTO A FIREPLACE!

Used electrical and electronic equipment and batteries should always be collected and treated SEPARATELY in accordance with local law.

Separate collection promotes an environment-friendly treatment, recycling of materials, and minimizing final disposal of waste. IMPROPER DISPOSAL can be harmful to human health and the environment due to certain substances! Take USED EQUIPMENT to a local, usually municipal, collection facility, where available.

Remove USED BATTERIES from equipment, and take them to a battery collection facility; usually a place where new batteries are sold.

If in doubt about disposal, contact your local authorities or dealer and ask for the correct method of disposal.

ONLY FOR USERS IN THE EUROPEAN UNION, AND SOME OTHER COUNTRIES; FOR INSTANCE NORWAY AND SWITZERLAND: Your participation in separate collection is requested by law.

The symbol shown above appears on electrical and electronic equipment and batteries (or the packaging) to remind users of this. If 'Hg' or 'Pb' appears below the symbol, this means that the battery contains traces of mercury (Hg) or lead (Pb), respectively.



Users from PRIVATE HOUSEHOLDS are requested to use existing return facilities for used equipment and batteries.

Batteries are collected at points of sale. Return is free of charge.

If the equipment has been used for BUSINESS PURPOSES, please contact your SHARP dealer who will inform you about take-back. You might be charged for the costs arising from take-back. Small equipment (and small quantities) might be taken back by your local collection facility. For Spain: Please contact the established collection system or your local authority for take-back of your used products.

IMPORTANT INFORMATION

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



The lightning flash with arrowhead symbol, within a triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within a triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

FOR CUSTOMERS IN U.K. IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

GREEN-AND-YELLOW:	Earth
BLUE:	Neutral
BROWN:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

- The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter **E** or by the safety earth \perp or coloured green or green-and-yellow.
- The wire which is coloured BLUE must be connected to the terminal which is marked with the letter **N** or coloured black.
- The wire which is coloured BROWN must be connected to the terminal which is marked with the letter **L** or coloured red.

Ensure that your equipment is connected correctly. If you are in any doubt consult a qualified electrician.

“WARNING: THIS APPARATUS MUST BE EARTHED.”

To maintain compliance with EMC regulations, use shielded cables to connect to the following terminals: HDMI input terminal, DisplayPort input terminal, and USB port.

DEAR SHARP CUSTOMER

Thank you for your purchase of a SHARP LCD product. To ensure safety and many years of trouble-free operation of your product, please read the Safety Precautions carefully before using this product.

SAFETY PRECAUTIONS

Electricity is used to perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. However, improper use can result in electric shock and/or fire. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your LCD product, please read the following precautions carefully before using the product.

1. Read instructions — All operating instructions must be read and understood before the product is operated.
2. Keep this manual in a safe place — These safety and operating instructions must be kept in a safe place for future reference.
3. Observe warnings — All warnings on the product and in the instructions must be observed closely.
4. Follow instructions — All operating instructions must be followed.
5. Cleaning — Unplug the power cord from the power outlet before cleaning the product. Use a dry cloth to clean the product. Do not use liquid cleaners or aerosol cleaners. Do not use dirty cloths. Doing so may damage the product.
6. Attachments — Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
7. Water and moisture — Do not use the product near water. Do not install the product in a place where water may splash onto it. Be careful of equipment which drains water such as an air-conditioner.
8. Ventilation — The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a sofa, rug or other similar surface, since they can block ventilation openings. Do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.
9. Power cord protection — The power cords must be routed properly to prevent people from stepping on them or objects from resting on them.
10. The screen used in this product is made of glass. Therefore, it can break when the product is dropped or applied with impact. Be careful not to be injured by broken glass pieces in case the screen breaks.
11. Overloading — Do not overload power outlets or extension cords. Overloading can cause fire or electric shock.
12. Entering of objects and liquids — Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
13. Servicing — Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
14. Repair — If any of the following conditions occurs, unplug the power cord from the power outlet, and request a qualified service person to perform repairs.
 - a. When the power cord or plug is damaged.
 - b. When a liquid was spilled on the product or when objects have fallen into the product.
 - c. When the product has been exposed to rain or water.
 - d. When the product does not operate properly as described in the operating instructions.

Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
 - e. When the product has been dropped or damaged.
 - f. When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.
15. Replacement parts — In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.
16. Safety checks — Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
17. Wall mounting — When mounting the product on a wall, be sure to install the product according to the method recommended by the manufacturer.
18. Heat sources — Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).

SAFETY PRECAUTIONS (Continued)

19. Usage of the monitor must not be accompanied by fatal risks or dangers that, could lead directly to death, personal injury, severe physical damage or other loss, including nuclear reaction control in nuclear facility, medical life support system, and missile launch control in a weapon system.
20. Do not stay in contact with the parts of the product that become hot for long periods of time. Doing so may result in low-temperature burns.
21. Do not modify this product.

WARNING:

An apparatus with CLASS I construction shall be connected to a MAIN socket outlet with a protective earthing connection.

STABILITY HAZARD

If a monitor is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Using fixing devices like wall mount brackets recommended by the manufacturer.
- Only using furniture that can safely support the monitor.
- Ensuring the monitor is not overhanging the edge of the supporting furniture.
- Not placing the monitor on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the monitor to a suitable support.
- Not standing the monitors on cloth or other materials placed between the monitor and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the monitor or its controls.
- This equipment is not suitable for use in locations where children are likely to be present unsupervised.

Especially for child safety

- Don't allow children to climb on or play with the monitor.
- Don't place the monitor on furniture that can easily be used as steps, such as a chest of drawers.
- Remember that children can become excited while watching a program, especially on a "larger than life" monitor. Care should be taken to place or install the monitor where it cannot be pushed, pulled over, or knocked down.
- Care should be taken to route all cords and cables connected to the monitor so that they cannot be pulled or grabbed by curious children.

TIPS AND SAFETY INSTRUCTIONS

- The TFT color LCD panel used in this monitor is made with the application of high precision technology. However, there may be minute points on the screen where pixels never light or are permanently lit. Also, if the screen is viewed from an acute angle there may be uneven colors or brightness. Please note that these are not malfunctions but common phenomena of LCDs and will not affect the performance of the monitor.
- Do not display a still picture for a long period, as this could cause a residual image.
- Do not press the monitor surface. Doing so may cause display unevenness.
- Never rub or tap the monitor with hard objects.
- Please understand that SHARP CORPORATION bears no responsibility for errors made during use by the customer or a third party, nor for any other malfunctions or damage to this product arising during use, except where indemnity liability is recognized under law.
- This monitor and its accessories may be upgraded without advance notice.
- Do not use the monitor where there is a lot of dust, where humidity is high, or where the monitor may come into contact with oil or steam. Do not use in an environment where there are corrosive gases (sulfur dioxide, hydrogen sulfide, nitrogen dioxide, chlorine, ammonia, ozone, etc.). As this could lead to fire.
- Ensure that the monitor does not come into contact with water or other fluids. Ensure that no objects such as paper clips or pins enter the monitor as this could lead to fire or electric shock.
- Do not place the monitor on top of unstable objects or in unsafe places. Do not allow the monitor to receive strong shocks or to strongly vibrate. Causing the monitor to fall or topple over may damage it.
- Do not use the monitor near heating equipment or in places where there is likelihood of high temperature, as this may lead to generation of excessive heat and outbreak of fire.
- Do not use the monitor in places where it may be exposed to direct sunlight. Risk of cabinet deformation and failure if the monitor is used in direct sunlight.
- Please be sure to constantly remove dust and garbage that has attached to the ventilation opening. If dust collects in the ventilation opening or the inside of the monitor, it may lead to excessive heat, outbreak of fire, or malfunction. Please request a cleaning of the inside of the monitor from an authorized SHARP servicing dealer or service center.
- When using this monitor in a portrait orientation, prepare portrait-oriented content in advance.
- The power outlet shall be installed near the equipment and shall be easily accessible.

The Power Cord

- Use only the power cord supplied with the monitor.
- Do not damage the power cord nor place heavy objects on it, stretch it or over bend it. Also, do not add extension cords. Damage to the cord may result in fire or electric shock.
- Do not use the power cord with a power tap. Adding an extension cord may lead to fire as a result of overheating.
- Do not remove or insert the power plug with wet hands. Doing so could result in electric shock.
- Unplug the power cord if it is not used for a long time.
- Do not attempt to repair the power cord if it is broken or malfunctioning. Refer the servicing to the service representative.

Manual Scope

- The terms HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.
- DisplayPort is a registered trademark of Video Electronics Standards Association.
- VESA is either registered trademark or trademark of Video Electronics Standards Association in the United States and/ or other countries.
- All other brand and product names are trademarks or registered trademarks of their respective holders.
- This product comes with RICOH Bitmap Fonts produced and sold by RICOH COMPANY, LTD.
- Language of OSD menu used in this manual is English by way of example.
- Illustrations in this manual may not exactly represent the actual product or display.
- This manual assumes use in landscape orientation, except where specifically noted.

LED Backlight

- The LED backlight in this product has a limited lifetime.
 - * If the screen gets dark or does not turn on, it may be necessary to replace the LED backlight.
 - * This LED backlight is exclusive to this product and must be replaced by an authorized SHARP servicing dealer or service center. Please contact an authorized SHARP servicing dealer or service center for assistance.

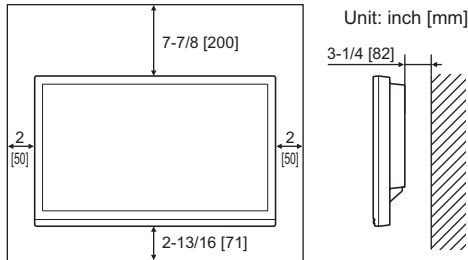
Fan

- The fan in this product has a limited lifetime.
- Please contact an authorized SHARP servicing dealer or service center for assistance with fan replacement.

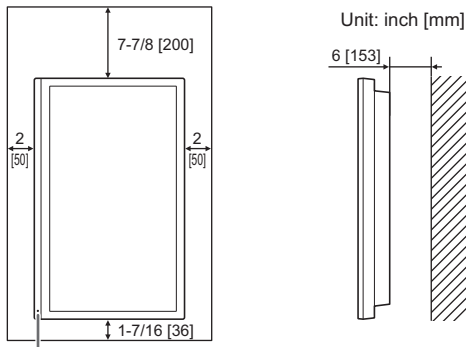
MOUNTING PRECAUTIONS

- This product is for use indoors.
- When moving the monitor, be sure to hold its sides or bottom. Do not hold the LCD panel or buttons. This may cause product damage, failure, or injury. This may cause product damage, failure, or injury.
- Use the monitor with the surface perpendicular to a level surface.
- This monitor should be used at an ambient temperature between 41°F (5°C) and 95°F (35°C). Provide enough space around the monitor to prevent heat from accumulating inside.

For the monitor in landscape orientation

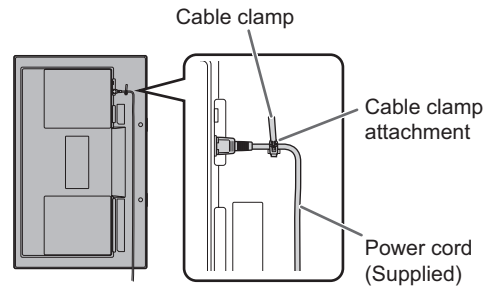


For the monitor in portrait orientation



Power LED

- To install the monitor in portrait orientation, a mounting bracket compliant with VESA specifications is required. A stand supplied with this product cannot be used for installation in portrait orientation.
- Adhere to the following when installing the monitor in its portrait orientation. Failing to adhere to the following may cause malfunctions.
 - Install the monitor such that the power LED is located on the bottom side.
 - Set the PORTRAIT/LANDSCAPE INSTALL in the MONITOR menu to PORTRAIT. (See page 23.)
 - Be sure to clamp the power cord (supplied) onto the cable clamp attachment using the supplied cable clamp. When clamping the power cord, take care not to stress the terminal of the power cord. Do not bend the power cord excessively.



- After mounting, please carefully ensure the monitor is secure, and not able to come loose from the wall or mount.

- Temperature condition may change when using the monitor together with the optional equipments recommended by SHARP. In such cases, please check the temperature condition specified by the optional equipments.
- Do not block any ventilation openings. If the temperature inside the monitor rises, this could lead to a malfunction.
- Do not place the monitor on a device which generates heat.

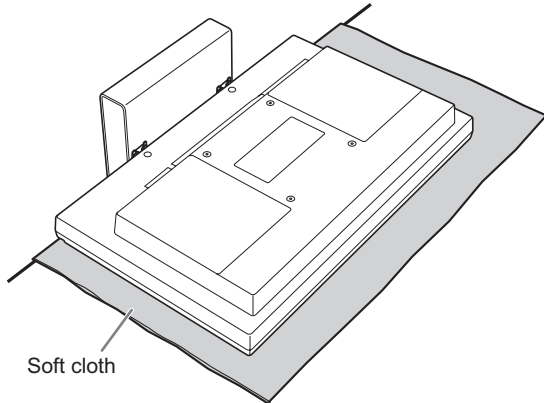
MOUNTING PRECAUTIONS (Continued)

■ Removing the stand

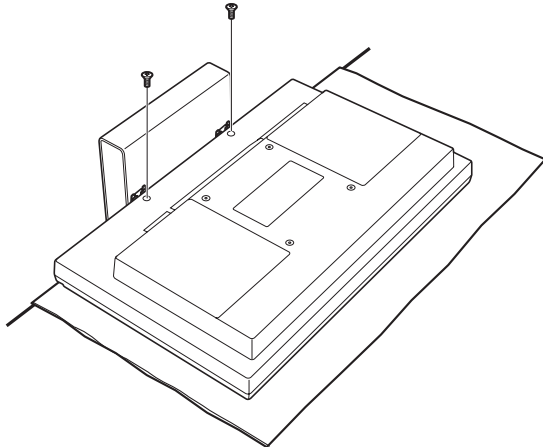
! Caution

- If there are cables already connected, disconnect them all.

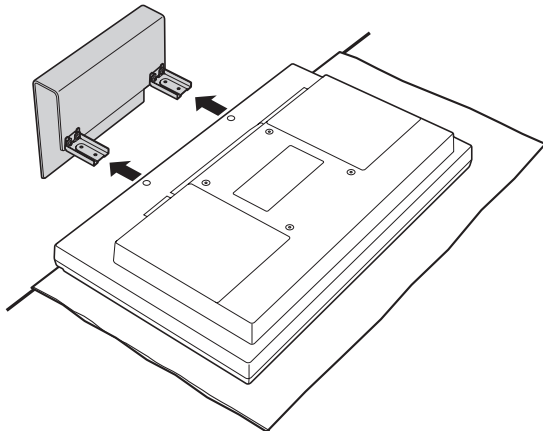
1. Spread a thick, soft cloth (blanket, etc.) that will prevent damage to the LCD panel on a stable flat surface where the entire monitor can be placed, and place the monitor with the LCD panel face down on the cloth.



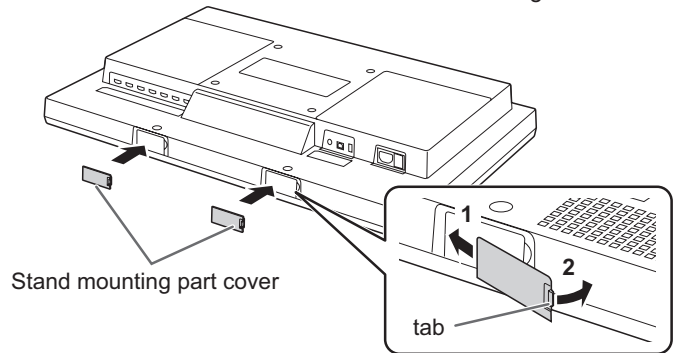
2. Remove the screws(x2) that fasten the stand. Keep the removed screws in a safe place.



3. Pull out the stand from the monitor.



4. Install the provided stand mounting part covers to the holes where the stand was attached to. Install the covers so that their tabs are on the right side.



■ Installing the stand

Assemble in the opposite order of the removal.

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Supplied Components

If any component should be missing, please contact your dealer.

- Liquid Crystal Display Monitor: 1
- Cable clamp: 5
- Power cord
- Stand mounting part cover: 2
- CD-ROM: 1
- Setup Manual: 1

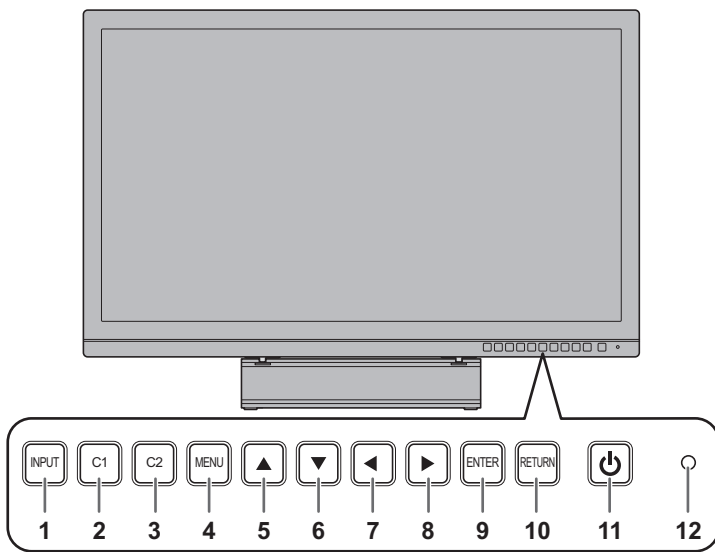
* SHARP Corporation holds authorship rights to the Utility Disk program. Do not reproduce it without permission.

TIPS

- Install SHARP Information Display Downloader.
 - Download SHARP Display Calibration Utility from SHARP Information Display Downloader.
 - When using SHARP Display Calibration Utility, connect the monitor to the computer in which SHARP Display Calibration Utility using a commercially available USB cable.
 - When the Information Display Downloader is installed, you can check and download the most recent versions of the software programs.
 - For detailed information of SHARP Information Display Downloader, refer to its operation manual.
- * You must be in a network environment that allows access to the Internet.

Part Names

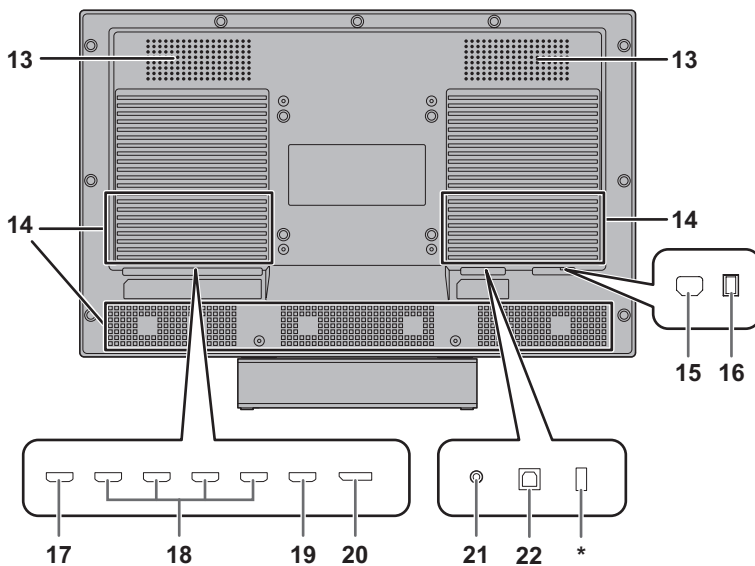
■ Front view



1. INPUT button
2. Custom button 1*
3. Custom button 2*
4. MENU button
5. Cursor control (▲) button
6. Cursor control (▼) button
7. Cursor control (◀) button
8. Cursor control (▶) button
9. ENTER button
10. RETURN button
11. POWER button
12. Power LED

* Menu items can be assigned to custom buttons by holding the custom button 1 or 2 while the menu item you want to assign is selected. (See page 23.)

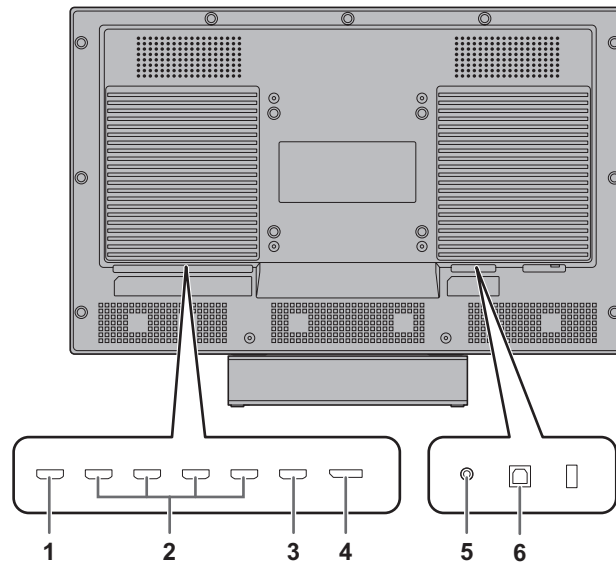
■ Rear view



13. Fan
14. Vents
15. AC input terminal (See page 13.)
16. Main power switch (See page 14.)
17. HDMI1 input terminal (See page 11.)
18. HDMI2 input terminal (HDMI x 4)
(See page 11.)
19. HDMI3 input terminal (See page 11.)
20. DisplayPort input terminal (See page 12.)
21. Audio output terminal (See page 12.)
22. USB Type B port (See page 12.)

* Terminal for firmware update
Normally not used.

Connecting Peripheral Equipment



! Caution

- Be sure to turn off the main power switch and disconnect the plug from the power outlet before connecting/ disconnecting cables. Also, read the manual of the equipment to be connected.
- Do not use any cable that has a damaged or deformed terminal. Using such cables may cause malfunctions.
- Do not forcibly bend or apply force to cables. Doing so may result in wire breakage or other damage.

TIPS

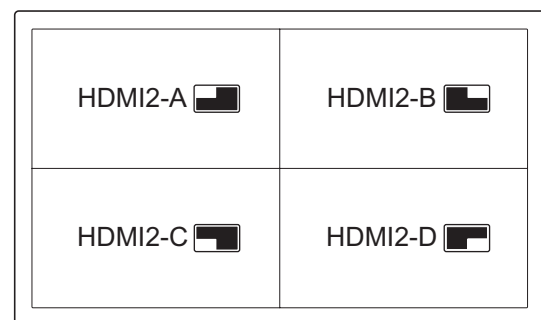
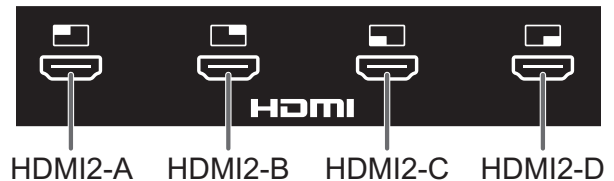
- Images may not be displayed properly depending on the computer (video card) to be connected.
- If the audio output from the playback device is connected directly to speakers or other devices, the video on the monitor may appear delayed from the audio portion. Audio should be played through this monitor by connecting the playback device to the monitor, and connecting the monitor's audio output to the speakers or other devices.


1. HDMI1 input terminal (8K)

- Use a commercially available HDMI cable (conforming to the HDMI standard).
To input 4K video, a 4K-compliant cable is required. And to input 8K video, a 8K-compliant cable is required.

2. HDMI2 input terminal (8K, HDMI×4)

- Use a commercially available HDMI cable (conforming to the HDMI standard) that supports 4K. All 4 cables must be identical.
- 8K display is available when all 4 of 4K input signals are synchronized.
- Connect cables according to the display positions.
- Connect so that output signals from 8K-output-compliant device are displayed on the appropriate positions.



- Select an audio input in HDMI2 AUDIO SELECT of the SETUP menu. (HDMI2-A  is selected by factory default.)

3. HDMI3 input terminal (4K)

- Use a commercially available HDMI cable (conforming to the HDMI standard).
To input 4K video, a 4K-compliant cable is required.

Connecting Peripheral Equipment

4. DisplayPort input terminal (4K)

- Use a commercially available DisplayPort cable (conforming to the DisplayPort standard).
To input 4K video, a 4K-compliant cable is required.

5. Audio output terminal

- The output sound varies depending on the input mode.
- The volume of the output sound can be fixed by setting AUDIO OUTPUT on the SETUP menu.

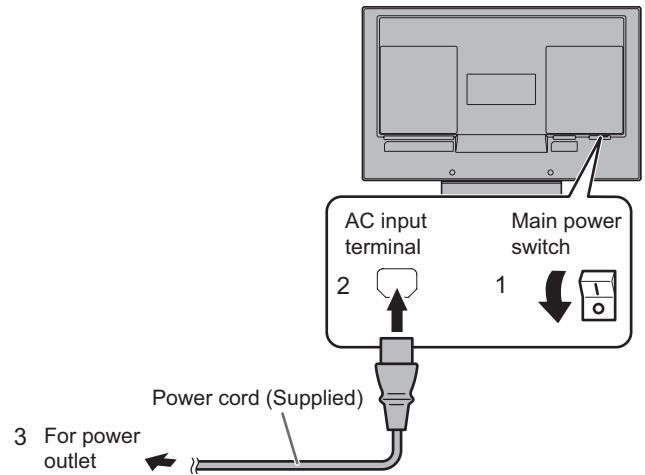
6. USB Type B port (USB2.0)

- You can control the monitor from a computer. (See page 26.)
- Connect to the computer with a commercially available USB cable (type A - type B).
- Connect when using SHARP Display Calibration Utility.

Connecting the Power Cord

! Caution

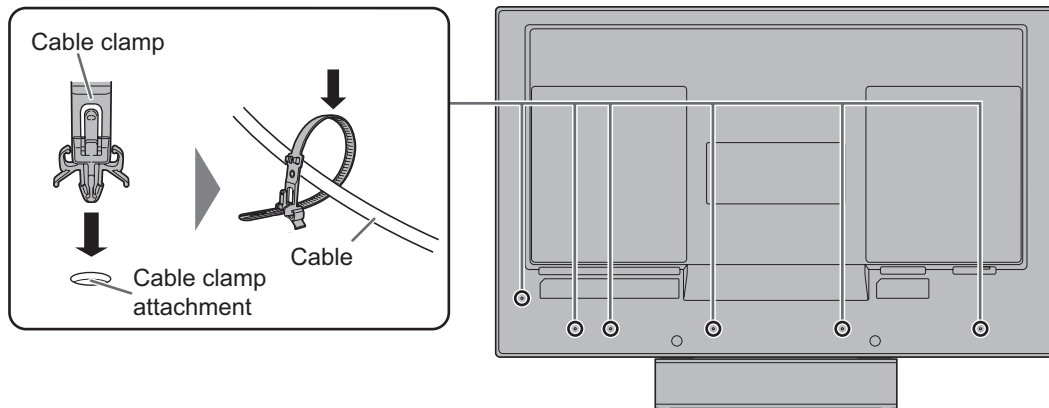
- Use only the power cord supplied with the monitor.
1. Turn off the main power switch.
 2. Plug the power cord (supplied) into the AC input terminal.
 3. Plug the power cord (supplied) into the power outlet.



Binding Cables

The cables connected to the terminals on the rear of the monitor can be fastened with the cable clamp.

Insert the cable clamp into the cable clamp attachment on the rear of the monitor and fasten the cables.

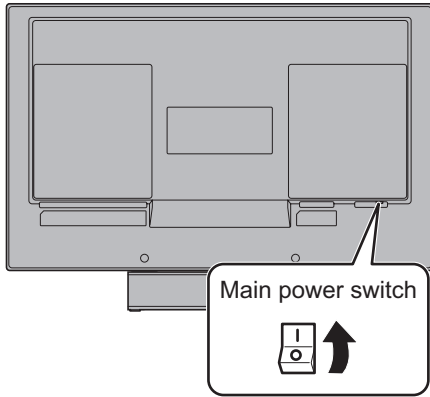


Turning Power On/Off

! Caution

- Turn on the monitor first before turning on the computer or playback device.
- When switching the main power switch or the POWER button off and back on, always wait for at least 5 seconds. A short interval may result in a malfunction.

Turning on the main power



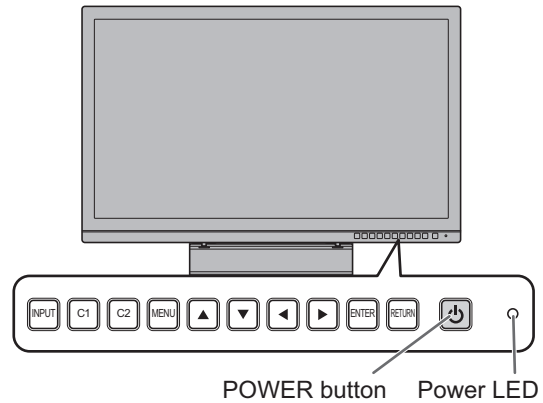
Off mode, when main power is off.

! Caution

- The main power must be turned on/off with the main power switch. Do not connect/disconnect the power cord or turn the breaker on/off while the main power switch is on.
- For a complete electrical disconnection, pull out the main plug.

Turning power on/off

Press the POWER button to turn the power ON/OFF. Wait for 15 minutes or more before use to stabilize the image quality.



Status	Status of the monitor
Green lit	Power on
Not lit	Power off (Standby state*)
Orange lit	Input signal waiting state

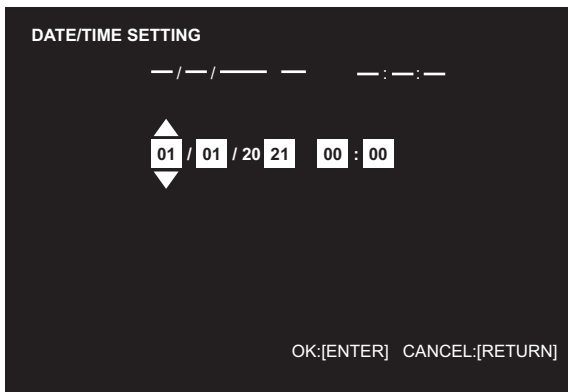
* Standby mode

TIPS

- When the main power switch is off, the monitor cannot be turned on.
- If the monitor is in the input signal waiting state and you press the POWER button, the monitor enters standby state.
- To disable the logo screen from displaying when turning the power ON, set LOGO SCREEN to OFF on the OTHERS menu. (See page 23.)

Date/time setting

- If the time has yet to be set, the date/time setting screen appears. Set the date and time.



1. Press the ◀ or ▶ button to select the date and time, and press the ▲ or ▼ button to change the numerical values.
 2. Press the ENTER button.
- Be sure to set the date and time.
 - The date/time setting screen will close automatically if no operation is performed for about 15 seconds. The date and time can be set using DATE/TIME SETTING from the SETUP menu when the date/time setting screen disappears.

TIPS

- Set the date in “Day/Month/Year” order.
- Set the time on a 24-hour basis.
- The clock is maintained by the internal battery.
- If you already set the time but the date/time setting screen appears when the power is turned on, the internal battery may be exhausted. Please contact an authorized SHARP servicing dealer or service center for assistance with battery replacement.
- Estimated service life of the internal battery: About 5 years (depending on monitor operation)
- The initial battery was inserted at the factory when the monitor was shipped, so it may run out of power before its expected operation life.

Menu Items

Displaying the menu screen

Video adjustment and settings of various functions are enabled. This section describes how to use the menu items. See page 17 for details of each menu items.

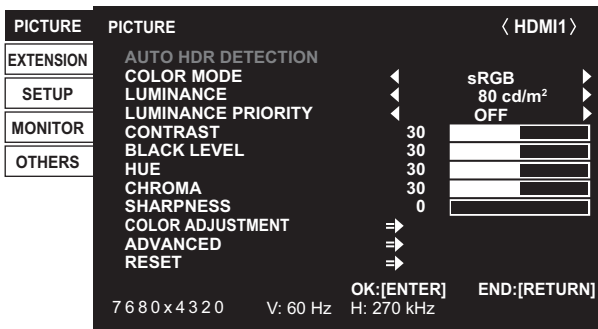
! Caution

- Do not turn the main power switch off while the menu items are being displayed. Doing so may initialize the settings.

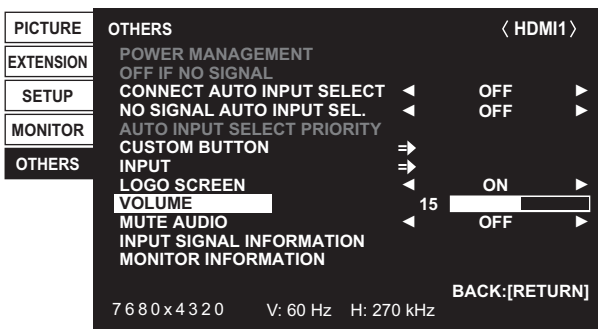
Example of operation

(Adjusting VOLUME in the OTHERS menu)

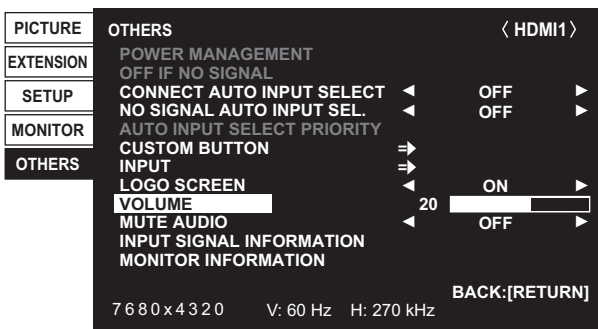
- Press the MENU button to display the menu screen.



- Press the ▲ or ▼ button to select OTHERS, and press the ENTER button.
- Press the ▲ or ▼ button to select VOLUME.



- Press the ◀ or ▶ button to adjust the setting.



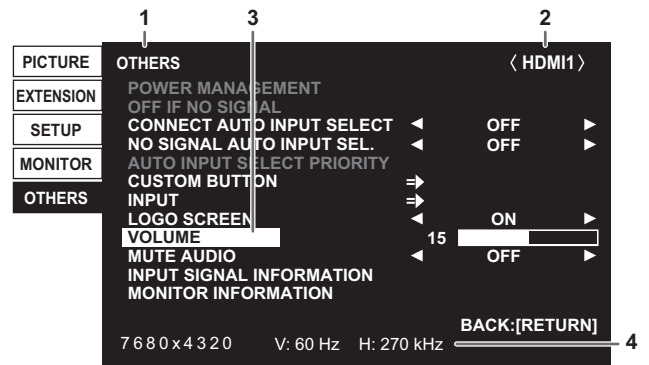
For items that have ⇒, press the ENTER button, make settings and then press the RETURN button.

- Press the MENU button to close the menu screen.

TIPS

- The menu will differ depending on the input mode.
- The menu screen will close automatically if no operation is performed for about 1 minute. (DATE/TIME SETTING screen will close in about 4 minutes.)

Menu screen display



- Name of the menu
- Input mode
- An item being selected (highlighted)
- Screen resolution of input signal, and other data.

TIPS

- Items that cannot be selected appear in gray. (e.g. Function not supported by the current input signal)

Menu item details

The menu will differ depending on the input mode.

■ PICTURE

AUTO HDR DETECTION

OFF Configure the color mode according to the signal.

ON According to the input HDR signal (HLG or PQ), COLOR MODE automatically switches between HDR AUTO(HLG) and HDR AUTO(PQ).

AUTO HDR DETECTION can be configured in the following cases:

When COLOR MODE is HDR AUTO(HLG), HDR AUTO(PQ), BT.2020, BT.709, DCI-P3, Adobe RGB, sRGB, or EBU.

COLOR MODE

Changes the color mode on the screen. It cannot be changed when HDR signal is input and AUTO HDR DETECTION is set to ON.

LUMINANCE

Adjusts the backlight brightness.

LUMINANCE PRIORITY

OFF Displays input video according to each setting parameter in the PICTURE menu.

ON Displays input video with peak brightness of 1000 cd/m² (equivalent).

CONTRAST

Adjusts the difference between the bright and dark portions of the image.

BLACK LEVEL

Adjusts the entire brightness of the video signals.

HUE

Adjusts the hue. Selecting + changes the color towards green, and selecting - changes it towards magenta.

CHROMA

Adjusts the chroma.

SHARPNESS

Adjusts the sharpness.

COLOR ADJUSTMENT

WHITE BALANCE

- THRU Displays the input signal level as is.
PRESET Selects the color temperature using PRESET.
USER Adjusts R-/G-/B-CONTRAST and R-/G-/B-OFFSET respectively using USER.
WHITE BALANCE can be configured in the following cases:
- When COLOR MODE is USER1 or USER2.

PRESET

- Selects the color temperature when the WHITE BALANCE is set to PRESET.
The setting values are shown for reference. The color temperature of the screen varies over time. This function is not intended to keep the color temperature constant.
PRESET can be configured in the following cases:
- When COLOR MODE is USER1 or USER2.

USER

- Adjusts each item when the WHITE BALANCE is set to USER.
R-CONTRAST.... Adjusts bright-toned red component.
G-CONTRAST ... Adjusts bright-toned green component.
B-CONTRAST Adjusts bright-toned blue component.
R-OFFSET Adjusts dark-toned red component.
G-OFFSET Adjusts dark-toned green component.
B-OFFSET Adjusts dark-toned blue component.
USER can be configured in the following cases:
- When COLOR MODE is USER1 or USER2.

COPY TO USER

- Copies the value of white set for PRESET to the USER setting.
Select ON and then press the ENTER button.
(In the case other than white, color tone may differ from the PRESET.)
COPY TO USER can be configured in the following cases:
- When COLOR MODE is USER1 or USER2.

COLOR GAMUT

- Select color gamut.
COLOR GAMUT can be configured in the following case:
- When COLOR MODE is USER1 or USER2.

GAMMA(EOTF)

- Select gamma for the current color mode.
GAMMA(EOTF) can be configured in the following case:
- When COLOR MODE is BT.2020, BT.709, DCI-P3, Adobe RGB, sRGB, EBU, USER1, or USER2.

HLG SYSTEM GAMMA

- Adjusts system gamma value according to the input HDR (HLG) signal.
HLG SYSTEM GAMMA can be configured in the following cases:
- When COLOR MODE is BT.2100(HLG) or HDR AUTO(HLG).
 - When COLOR MODE is USER1 or USER2, CUSTOM SETTING is OFF, and GAMMA(EOTF) is HYBRID LOG GAMMA(HLG).
 - When COLOR MODE is USER1 or USER2, CUSTOM SETTING is ON, Gamma* is HLG*, and LUT (.cube file)* is not specified.
- * They are setting items for Display Calibration Utility.

6-AXIS - HUE

- Adjusts color tone with 6 colors of R (red), Y (yellow), G (green), C (cyan), B (blue), and M (magenta).

6-AXIS - CHROMA

- Adjusts color vividness with 6 colors of R (red), Y (yellow), G (green), C (cyan), B (blue), and M (magenta).

6-AXIS - VALUE

- Adjusts color brightness with 6 colors of R (red), Y (yellow), G (green), C (cyan), B (blue), and M (magenta).

CUSTOM SETTING

- Selects how to configure LUMINANCE, WHITE BALANCE, COLOR GAMUT, and GAMMA of the color modes CUSTOM1 and CUSTOM2.
OFF LUMINANCE, WHITE BALANCE, COLOR GAMUT, and GAMMA regarding CUSTOM1 and CUSTOM2 can be selected in the menu screen.
ON Configures LUMINANCE, WHITE BALANCE, COLOR GAMUT, and GAMMA regarding CUSTOM1 and CUSTOM2 using SHARP Display Calibration Utility.
CUSTOM SETTING can be configured in the following case:
- When COLOR MODE is USER1 or USER2.

ADVANCED**UNIFORMITY**

Sets the LCD panel's discoloration correction level.

- OFF Discoloration will not be corrected.
 ON Discoloration will be corrected.

DYNAMIC RANGE EXPAND

Configures local dimming control and peak brightness.

- MODE1 LOCAL DIMMING: OFF, LUMINANCE: 600cd/m²*
 MODE2 LOCAL DIMMING: ON, LUMINANCE: 600cd/m²*
 MODE3 LOCAL DIMMING: ON, LUMINANCE: 600cd/m² or more*

The peak luminance increases, but it changes depending on a displayed video.

- * Luminance and contrast change depending on factors such as input mode and picture settings.
 Value of luminance is the standard value at the time of shipment and not a guaranteed value.

In addition, luminance deteriorates by the time. Therefore, the monitor does not maintain constant luminance.

USER SETTING NAME

Arbitrary names can be given to USER1 and USER2 of COLOR MODE.

Press the ◀ or ▶ button to move the cursor to a character you want to edit, press the ▲ or ▼ button to swap characters.

Press the INPUT button to switch character types (upper case alphabet, lower case alphabet, numerics, symbols).

Once the edit is complete, press the ENTER button.

Up to 12 characters (single-byte alphanumerics and symbols) can be entered.

USER SETTING NAME can be configured in the following case:

- When COLOR MODE is USER1 or USER2.

DISPLAY COLOR PATTERN

Displays a color pattern. Can be displayed while the menu screen is displayed, so you can refer to the pattern while adjusting the image. When WHITE, RED, GREEN, or BLUE is displayed, you can set the level in the range of 0 to 255.

OFF No pattern display.

WHITE White single color pattern display.

RED Red single color pattern display.

GREEN Green single color pattern display.

BLUE Blue single color pattern display.

USER Red/green/blue mixed color pattern display. When USER is selected, set each color's level.

RESET

Resets the values of the PICTURE menu items to the factory default settings except COLOR MODE and AUTO HDR DETECTION.

The selected item regarding COLOR MODE will be reset.

Select ON and then press the ENTER button.

■ EXTENSION (HDMI1/HDMI2)

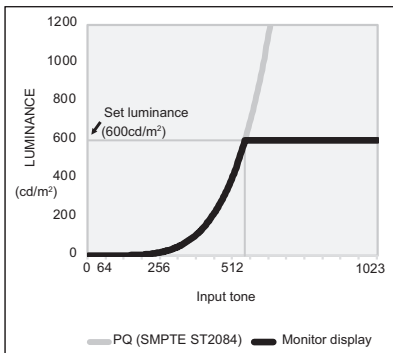
LUMINANCE CLIPPING*1*2

Clips area with luminance higher than the one specified in CLIP LUMINANCE according to the input HDR signal.
When PQ signal is inputCan be selected from OFF, ON, or TONE-MAPPING.

In addition, luminance can be configured from CLIP LUMINANCE. According to the setting, video display is adjusted as follows.

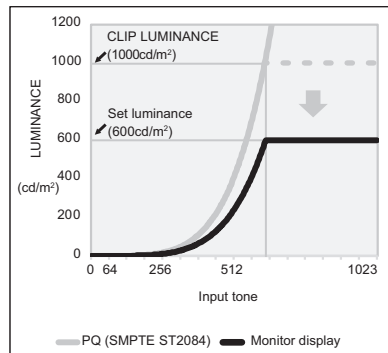
OFF

Displays up to 600 cd/m² following the PQ curve.



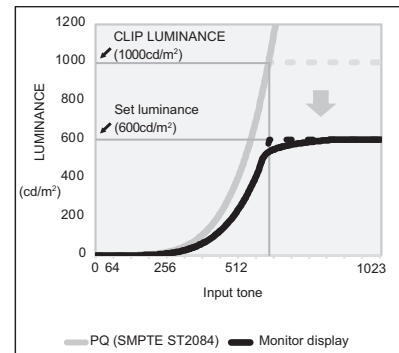
ON

Area with luminance higher than the one set in CLIP LUMINANCE will be clipped and displayed.



TONE-MAPPING

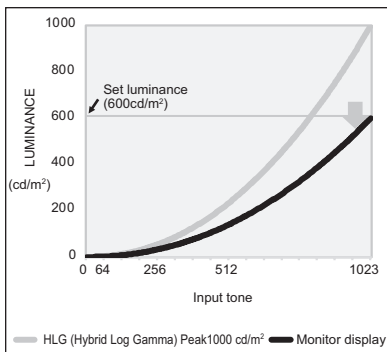
Displays to avoid excessive change near the luminance set in CLIP LUMINANCE.



When HLG signal is inputCan be selected from OFF or ON. According to the setting, video display is adjusted as follows.

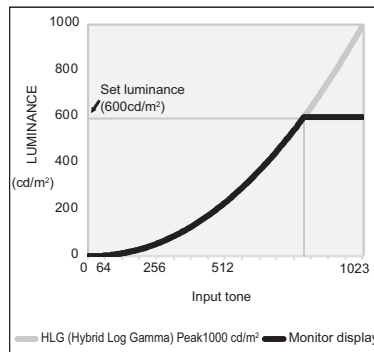
OFF

Lowers the overall luminance and displays so that the luminance of video is wholly below the set luminance of the monitor.



ON

Area higher than 600 cd/m² will be clipped and displayed.



ON, OFF, and TONE-MAPPING of LUMINANCE CLIPPING can be configured in the following cases:

- When COLOR MODE is BT.2100(PQ) or HDR AUTO(PQ).
- When COLOR MODE is USER1 or USER2, CUSTOM SETTING is OFF, COLOR GAMUT is Rec.2020, and GAMMA(EOTF) is SMPTE ST 2084(PQ).
- When COLOR MODE is USER1 or USER2, CUSTOM SETTING is ON, Color gamut*3 is Rec.2020*3, Gamma*3 is PQ*3, and LUT (.cube file)*3 is not specified.

OFF and ON of LUMINANCE CLIPPING can be configured in the following cases:

- When COLOR MODE is BT.2100(HLG) or HDR AUTO(HLG).
- When COLOR MODE is USER1 or USER2, CUSTOM SETTING is OFF, COLOR GAMUT is Rec.2020, and GAMMA(EOTF) is HYBRID LOG GAMMA(HLG).
- When COLOR MODE is USER1 or USER2, CUSTOM SETTING is ON, Color gamut*3 is Rec.2020*3, Gamma*3 is HLG*3, and LUT (.cube file)*3 is not specified.

*1 These are examples with LUMINANCE set to 600 cd/m². If LUMINANCE is set lower than 600 cd/m², the overall luminance will become low.

*2 Set DYNAMIC RANGE EXPAND to MODE1 or MODE2.

*3 They are setting items for Display Calibration Utility.

! Caution

- For HDMI3 input and DisplayPort input, the menu is displayed but the function cannot be enabled.

ADVANCED**CLIP LUMINANCE**

Configures clip luminance for LUMINANCE CLIPPING.

LUMINANCE WARNING

Displays the area which has higher luminance than the one set in LUMINANCE CLIPPING in a color set in COLOR.

LUMINANCE WARNING can be configured in the following case:

- When LUMINANCE CLIPPING is ON.

COLOR

Configures the displaying color for LUMINANCE WARNING.

COLOR can be configured in the following case:

- When LUMINANCE WARNING is ON.

GAMUT WARNING

For input signal conforming Rec.2020 standards or DCI-P3, configures the displaying method of colors outside of color gamut of Rec.709 standards. When the input signal has color gamut of Rec.2020 or DCI-P3 which matches the setting, video will be displayed correctly.

OFF Displays in the color gamut of the input signal as it is.

ON Displays colors outside of Rec.709 color gamut in grayscale.

CLIP..... Clips colors outside of Rec.709 color gamut so that they are within Rec.709 color gamut.

GAMUT WARNING can be configured in the following cases:

- When COLOR MODE is BT.2100(HLG), BT.2100(PQ), BT.2020, HDR AUTO(HLG), HDR AUTO(PQ), or DCI-P3.
- When COLOR MODE is USER1 or USER2, CUSTOM SETTING is OFF, and COLOR GAMUT is Rec.2020 or DCI-P3.
- When COLOR MODE is USER1 or USER2, CUSTOM SETTING is ON, Color gamut* is Rec.2020* or DCI-P3*, and LUT (.cube file)* is not specified.

* They are setting items for Display Calibration Utility.

MARKER

Displays square frame and cross-shaped marker.

ADVANCED**DISPLAY MODE**

Configures the display mode of MARKER.

CENTERDisplays a cross-shaped marker on the center of the screen

ASPECT.....Displays a square frame to indicate the valid area configured in ASPECT and SAFETY AREA.

CENTER + ASPECTDisplays both markers at the same time.

COLOR

Configures the color of MARKER.

BRIGHT

Configures the brightness of MARKER.

ASPECT

Configures the aspect ratio of MARKER when DISPLAY MODE is set to ASPECT or CENTER + ASPECT.

ASPECT (VARIABLE)

Adjusts the aspect ratio when ASPECT is set to VARIABLE.

SAFETY AREA

Configures the size of safety area when DISPLAY MODE is set to ASPECT or CENTER + ASPECT.

SAFETY AREA (VARIABLE)

Adjusts the size of safety area when SAFETY AREA is set to VARIABLE.

PEAKING

Highlights where the outline is sharp (i.e. where the focus is on) on the screen.

ADVANCED**OUTLINE ENHANCEMENT LEVEL**

Configures the outline enhancement level for PEAKING.

COLOR

Configures the color of PEAKING.

BACKGROUND

Configures the background displaying method of PEAKING.

Menu Items

FALSE COLOR

Colorizes input video according to luminance.

LEGEND

Hides the legend of false color, or changes its location. Press the ◀▶ buttons while the legend is displayed to switch the legend display.

MONO/BLUE ONLY

Displays input video in monochrome or blue signal only.

OFF Displays according to the input signal.

MONO Displays in monochrome.

BLUE ONLY Cuts off red and green signals and displays blue signal only. The menu will be displayed in blue as well.

■SETUP

DATE/TIME SETTING

Set the date and time. Press the ◀ or ▶ button to select the date and time, and press the ▲ or ▼ button to change the numerical values.

Set the date in "Day/Month/Year" order.

Set the time on a 24-hour basis. (Factory default)

DATE/TIME FORMAT

Sets the date/time display format.

DATEMM/DD/YYYY, DD/MM/YYYY, YYYY/MM/DD
(YYYY: Year, MM: Month, DD: Day)

TIMESelect 12- or 24-hour time.

LANGUAGE

Set the display language for the menu screen.

INPUT SELECT

INPUT RANGE (HDMI1/HDMI2)

Sets the ranges of RGB input signal and YCbCr.

When set to AUTO, the input signal range is detected automatically. Use AUTO normally.

If the input signal range cannot be set appropriately even when using AUTO, set according to the image. When the setting is different, images will be displayed with washed out blacks and compressed gradients.

RGB INPUT RANGE (HDMI3/DisplayPort)

Sets the RGB input signal range.

When set to AUTO, the RGB input signal range is detected automatically. Use AUTO normally.

If the RGB input signal range cannot be set appropriately even when using AUTO, set according to the image. When the setting is different, images will be displayed with washed out blacks and compressed gradients.

HDR (HDMI1/HDMI2)

Select ON when displaying contents which support HDR.

To make the setting effective, you must restart this monitor.

AUDIO OPTION






AUDIO OUTPUT

Sets the volume of sound output from the audio output terminal.

VARIABLE You can adjust the volume from the audio output terminal by using VOLUME.

FIXED Fixes the volume from the audio output terminal. Adjust the volume by using an external device.

HDMI2 AUDIO SELECT

Selects a terminal for audio input when input mode is set to HDMI2 from HDMI2-A , HDMI2-B , HDMI2-C , or HDMI2-D . (HDMI2-A  is selected by factory default.)

■MONITOR

PORTRAIT/LANDSCAPE INSTALL

LANDSCAPELandscape orientation
 PORTRAITPortrait orientation

VIDEO ROTATION

If video is upside down when the monitor is installed in portrait orientation, you can rotate the video 180 degrees.
 Interlaced signals may not be displayed properly.

OSD H-POSITION

Adjusts the horizontal display position of menu screen.

OSD V-POSITION

Adjusts the vertical display position of menu screen.

OPERATION MODE

MODE1 is the recommended setting and conforms to the “Normal Configuration” as defined in the EcoDesign Regulation (2019/2021).
 MODE1POWER MANAGEMENT setting can not be changed. If there is no signal for approx. 5 minutes, this monitor automatically enters standby mode.
 OFF IF NO SIGNAL is set to ON.
 This setting cannot be changed.
 MODE2OFF IF NO SIGNAL, and POWER MANAGEMENT can be changed.

LUMINANCE DROP ALERT

Automatically notifies that the backlight luminance is dropping by blinking the power LED in orange.
 This function is available only if DYNAMIC RANGE EXPAND is set to MODE3.

CALIBRATION NOTIFICATION

Notifies that the set period has passed since the last calibration when the monitor is turned on.
 Even if period is set, notification will not be made if date and time is not set.

■OTHERS

POWER MANAGEMENT

POWER MANAGEMENT determines whether or not to switch modes from no signal to the input signal waiting state.

OFF IF NO SIGNAL

When POWER MANAGEMENT is ON and OFF IF NO SIGNAL is ON, the monitor enters standby state when there is no signal.
 When POWER MANAGEMENT is ON and OFF IF NO SIGNAL is OFF, the monitor enters input signal waiting state when there is no signal.

CONNECT AUTO INPUT SELECT

Sets whether the input mode of the input terminal automatically changes when a video signal is input into that terminal.
 (With some input signals, the input mode may not change.)

NO SIGNAL AUTO INPUT SEL.

Specify whether to change inputs automatically. When ON is selected and no signal is present in the selected input mode, the monitor automatically changes the selected mode to another mode where a video signal is present.

AUTO INPUT SELECT PRIORITY

Sets the order of input terminal priority for NO SIGNAL AUTO INPUT SEL..
 Input mode does not change automatically for terminals without a priority setting.
 The lower the number, the higher the priority.

CUSTOM BUTTON (See page 10.)

Displays or resets the menu items assigned to the custom buttons.

INPUT

Switches the input mode.

LOGO SCREEN

Sets whether or not to display the logo screen.

VOLUME

Adjusts the volume.

MUTE AUDIO

Temporarily mutes the audio.

INPUT SIGNAL INFORMATION

Input signal information in current input mode can be checked. Information is displayed according to the signal information from the external device. It may differ depending on input mode.

MONITOR INFORMATION

Displays monitor information.

Menu Items

TIPS

- Some items in the PICTURE menu may not be adjustable depending on settings in AUTO HDR DETECTION, COLOR MODE, and LUMINANCE PRIORITY.
 - When WHITE BALANCE is THRU, PRESET, USER, and COPY TO USER cannot be configured.
 - When displaying the color pattern, it is possible to adjust certain items of the PICTURE menu. Non-adjustable items cannot be selected.
 - When COLOR MODE is USER1, USER2, or THRU, AUTO HDR DETECTION does not operate.
 - When COLOR MODE is set to THRU, following items cannot be configured: AUTO HDR DETECTION, LUMINANCE PRIORITY, CONTRAST, BLACK LEVEL, HUE, CHROMA, SHARPNESS, WHITE BALANCE, PRESET, USER, COPY TO USER, COLOR GAMUT, GAMMA(EOTF), HLG SYSTEM GAMMA, 6-AXIS - HUE, 6-AXIS - CHROMA, 6-AXIS - VALUE, CUSTOM SETTING, DYNAMIC RANGE EXPAND, USER SETTING NAME, LUMINANCE CLIPPING, GAMUT WARNING, MARKER, PEAKING, FALSE COLOR, MONO/BLUE ONLY.
 - When INPUT MODE is HDMI3 or DisplayPort, AUTO HDR DETECTION cannot be configured.
 - When HDR is OFF, AUTO HDR DETECTION cannot be configured.
 - When LUMINANCE PRIORITY is ON, following items cannot be configured: LUMINANCE, CONTRAST, BLACK LEVEL, WHITE BALANCE, PRESET, USER, COPY TO USER, UNIFORMITY, DYNAMIC RANGE EXPAND, PEAKING.
 - When LUMINANCE PRIORITY is ON, MONO/BLUE ONLY cannot be set to BLUE ONLY.
 - When WHITE BALANCE is USER or THRU, PRESET and COPY TO USER cannot be configured.
 - When WHITE BALANCE is PRESET or THRU, USER cannot be configured.
 - When WHITE BALANCE is THRU, MONO/BLUE ONLY cannot be set to BLUE ONLY.
 - When COLOR MODE is BT.2020, BT.709, DCI-P3, Adobe RGB, sRGB, or EBU, GAMMA(EOTF) cannot be set to HYBRID LOG GAMMA(HLG) or SMPTE ST 2084(PQ).
 - When CUSTOM SETTING is ON, following items cannot be configured: LUMINANCE, WHITE BALANCE, PRESET, USER, COPY TO USER, COLOR GAMUT, GAMMA(EOTF).
 - When LUMINANCE CLIPPING is ON or TONE-MAPPING, COLOR GAMUT and GAMMA(EOTF) cannot be configured.
 - When LUMINANCE WARNING is ON, following items cannot be configured: CONTRAST, BLACK LEVEL, HUE, CHROMA, 6-AXIS - HUE, 6-AXIS - CHROMA, 6-AXIS - VALUE.
 - When GAMUT WARNING is ON or CLIP, following items cannot be configured: CONTRAST, BLACK LEVEL, HUE, CHROMA, COLOR GAMUT, GAMMA(EOTF), HLG SYSTEM GAMMA, 6-AXIS - HUE, 6-AXIS - CHROMA, 6-AXIS - VALUE.
 - When PEAKING is ON, LUMINANCE PRIORITY and DYNAMIC RANGE EXPAND cannot be configured.
 - When FALSE COLOR is ON, following items cannot be configured: CONTRAST, BLACK LEVEL, HUE, CHROMA, COLOR GAMUT, GAMMA(EOTF), HLG SYSTEM GAMMA, 6-AXIS - HUE, 6-AXIS - CHROMA, 6-AXIS - VALUE.
 - When DYNAMIC RANGE EXPAND is MODE3, HLG SYSTEM GAMMA does not operate properly.
 - When MONO/BLUE ONLY is BLUE ONLY, following items cannot be configured: LUMINANCE PRIORITY, WHITE BALANCE, PRESET, USER, COPY TO USER.
 - When MONO/BLUE ONLY is MONO, CHROMA cannot be configured.
 - The following items cannot be configured together: LUMINANCE CLIPPING, GAMUT WARNING, MARKER, PEAKING, FALSE COLOR, MONO/BLUE ONLY.
 - When COLOR MODE is USER1 or USER2, CUSTOM SETTING is ON, and LUT (.cube file)* is 1D* only, 3D* only, or both 1D* and 3D*, MONO/BLUE ONLY cannot be configured.
 - When COLOR MODE is USER1 or USER2, CUSTOM SETTING is ON, and LUT (.cube file)* is 3D* only or both 1D* and 3D*, following items cannot be configured: CONTRAST, BLACK LEVEL, HUE, CHROMA, 6-AXIS - HUE, 6-AXIS - CHROMA, 6-AXIS - VALUE.
 - When COLOR MODE is USER1 or USER2, CUSTOM SETTING is ON, Gamma* is HLG* or PQ*, and LUT (.cube file)* is 1D* only, following items cannot be configured: CONTRAST, BLACK LEVEL, HUE, CHROMA, 6-AXIS - HUE, 6-AXIS - CHROMA, 6-AXIS - VALUE.
- * They are setting items for Display Calibration Utility.

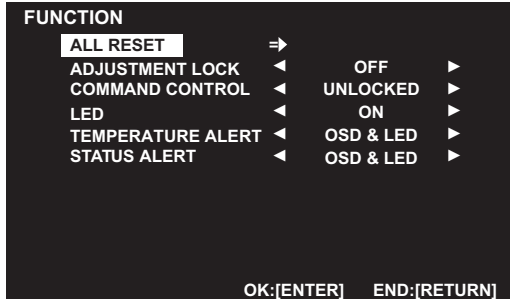
! Caution

- When configurable condition and unconfigurable condition are met at the same time, the unconfigurable condition is prioritized.

Initialization (Reset)/Functional Restriction Setting (FUNCTION)

You can reset the settings to the factory default settings or restrict operations.

1. Press the **MENU** button and **INPUT** button at the same time until "F" is displayed in the upper left area of the screen, then while "F" is being displayed, press the **MENU** button.



2. Select and set the items.

ALL RESET

Resets the settings to the factory default settings.
After pressing the ENTER button, select ALL RESET if you want to reset, and press the ENTER button again. All settings will be reverted to the factory default.
After initialization, turn the main power switch off and then back on.

ADJUSTMENT LOCK

You can disable operations on the monitor that use buttons.
OFF Enables operation.
ON 1 ... Disables all operations other than turning power on/off and FUNCTION.
ON 2 ... Only the FUNCTION operation is enabled. Disables all operations other than FUNCTION (not even power on/off).

COMMAND CONTROL

Switches whether to permit control from USB.

LED

Specifies whether to light the power LED.

TEMPERATURE ALERT

Selects the notification method for an abnormal temperature.
OFF Do not notify about an abnormal temperature.
OSD & LED When an abnormal temperature is detected, the power LED flashes in red and green alternately and the screen displays a message: TEMPERATURE.
LED..... When an abnormal temperature is detected, the power LED flashes in red and green alternately.

STATUS ALERT

Selects the notification method for a hardware error.
OFF Do not notify about the error.
OSD & LED When a hardware error is detected, the power LED flashes in red and the screen displays a message: STATUS [xxxx].
LED..... When a hardware error is detected, the power LED flashes in red.

3. Press the **RETURN** button to return to the normal screen.

TIPS

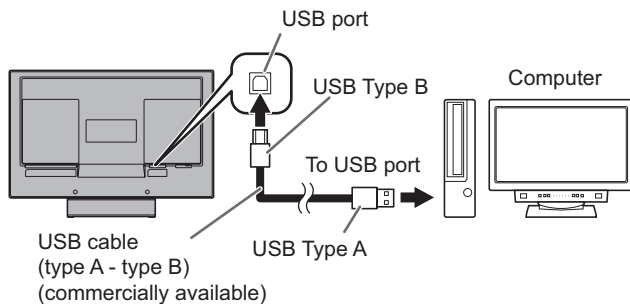
- When both abnormal temperature and hardware error are detected, the hardware error notification overrides.
- If TEMPERATURE ALERT or STATUS ALERT is set to LED or OSD & LED, the power LED lights even if LED is set to OFF.

Controlling the Monitor with a computer

If the monitor is connected to a computer via commercially available USB cable, the monitor can be controlled from the connected computer.

Computer connection

Connect the USB ports of the computer and monitor with a commercially available USB cable (type A - type B).



! Caution

- The monitor is controlled via USB Virtual COM port. Connect the monitor and computer with a USB cable, and the monitor identifies the port as a COM port when the main power is turned ON. The COM port disappears when the main power of the monitor is OFF, during restart for such as all reset, or when a USB cable is not connected. Some communication software may not operate properly if the COM port disappears while it is open. This issue may be solved by quitting the communication software and reconnecting the USB cable or restarting the monitor.

Communication conditions

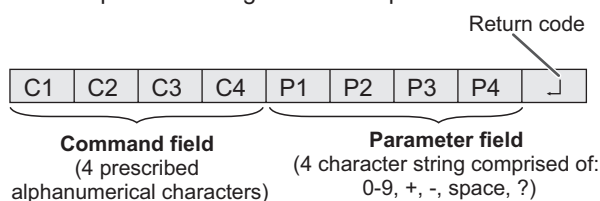
Set the communication settings on the computer to match the monitor's communication settings as follows:

Baud rate	38400 bps	Stop bit	1 bit
Data length	8 bits	Flow control	None
Parity bit	None		

Communication procedure

■ Command format

When a command is sent from the computer to the monitor, the monitor operates according to the received command and sends a response message to the computer.



Example: INPS0010
INPS _ _ 10

- * Be sure to input 4 characters for the parameter. Pad with spaces (" ") if necessary. (" " is a return code (0DH, 0AH or 0DH))
Wrong : INPS10
Right : INPS _ _ 10

When inputting a negative value, specify a numerical value in three digits.

Example: OFSR-127

If a command has "R" listed for "Direction" in the "Command table" on page 28, the current value can be returned by using "?" as the parameter.

Example:

INPS ? ? ? ← From computer to monitor (How is current input setting?).
10 ← From monitor to computer (Current volume setting: 10).

■ Response code format

When a command has been executed correctly

O K ↵ Return code (0DH, 0AH)

A response is returned after a command is executed.

When a command has not been executed

E R R ↵ Return code (0DH, 0AH)

TIPS

- "ERR" is returned when there is no relevant command or when the command cannot be used in the current state of the monitor.
- If communication has not been established for reasons such as a bad connection between the computer and monitor, nothing is returned (not even ERR).
- "ERR" may be returned when a command cannot be received correctly due to interference from the surrounding environment. Please ensure that the system or software resends the command if this occurs.

If execution of the command is taking some time

W A I T ↵ Return code (0DH, 0AH)

When the following commands are used, "WAIT" is returned. In this case, a value will be returned if you wait a while. Do not send any command during this period.

No ID number is attached to WAIT response.

- Commands which return WAIT:
When one of the following commands is used:
RSET, POWR, INPS, LCUF, DMRE, CNM1, CNM2

When USB control is disabled (see page 25.)

L O C K E D ↵ Return code (0DH, 0AH)

■ Communication interval

- After “OK” or “ERR” is returned, you must send the following commands.
To set a timeout for the command response, specify 10 seconds or longer.
- Provide an interval of 100 ms or more between the command response and the transmission of the next command.

POWR0001
OK



INPS0001
WAIT
OK

TIPS

- When executing ALL RESET, set the timeout period to 90 seconds or longer.

Controlling the Monitor with a computer

Command table

How to read the command table

- Command: Command field (See page 26.)
 Direction: W When the "Parameter" is set in the parameter field (see page 26), the command functions as described under "Control/Response Contents".
 R The returned value indicated under "Reply" can be obtained by setting "?????" or , "____?" in the parameter field. (see page 26.)
 Parameter: Parameter field (See page 26.)
 Reply: Response (Returned value)

Power control/Input mode selection

Function	Command	Direction	Parameter	Reply	Control/Response contents
Power control	POWR	W	0		Switches to standby state.
			1		Returns from standby state.
		R		0	Standby state
				1	Normal mode
		2	Input signal waiting state		
Input mode selection	INPS	W	0		Toggle change for input mode.
			10		HDMI1
			13		HDMI2
			14		DisplayPort
			18		HDMI3
		R		10	HDMI1
				13	HDMI2
				14	DisplayPort
		18	HDMI3		

PICTURE menu

Function	Command	Direction	Parameter	Reply	Control/Response contents	
AUTO HDR DETECTION	ADHD	WR	0-1	0-1	0: OFF, 1: ON	
COLOR MODE	BMOD	WR	10	10	THRU (no adjustment)	
			11	11	BT.2100 (HLG)	
			12	12	BT.2100 (PQ)	
			13	13	sRGB	
			14	14	BT.2020	
			15	15	BT.709	
			16	16	DCI-P3	
			17	17	Adobe RGB	
			18	18	EBU	
			50		HDR AUTO(HLG)	
			51		HDR AUTO(PQ)	
101	101	USER1				
102	102	USER2				
LUMINANCE	VLMP	WR	0-22, 9999	0-22, 9998, 9999	0: 48cd/m ² , 1: 80cd/m ² , 2: 100cd/m ² , 3: 120cd/m ² , 4: 150cd/m ² , 5: 175cd/m ² , 6: 200cd/m ² , 7: 225cd/m ² , 8: 250cd/m ² , 9: 275cd/m ² , 10: 300cd/m ² , 11: 325cd/m ² , 12: 350cd/m ² , 13: 375cd/m ² , 14: 400cd/m ² , 15: 425cd/m ² , 16: 450cd/m ² , 17: 475cd/m ² , 18: 500cd/m ² , 19: 525cd/m ² , 20: 550cd/m ² , 21: 575cd/m ² , 22: 600cd/m ² , 9998: CUSTOM, 9999: THRU	
LUMINANCE PRIORITY	LUMP	WR	0-1	0-1	0: OFF, 1: ON	
CONTRAST	CONT	WR	0-60	0-60		
BLACK LEVEL	BLVL	WR	0-60	0-60		
HUE	TINT	WR	0-60	0-60		
CHROMA	COLR	WR	0-60	0-60		
SHARPNESS	SHRP	WR	0-24	0-24		
COLOR ADJUSTMENT	WHITE BALANCE	WHBL	WR	0-2	0-2, 99	0: THRU, 1: PRESET, 2: USER, 99: Custom
	PRESET	CTMP	WR	1-18, 29-33	1-18, 29-33, 101	1: Approx. 3000K-15: Approx. 10000K (in steps of 500K), 16: Approx. 5600K, 17: Approx. 9300K, 18: Approx. 3200K, 29: Approx. 2500K, 30: D50, 31: D60, 32: D65, 33: DCI, 101: CUSTOM "ERR" when WHBL is not set to 1.

Controlling the Monitor with a computer

Function		Command	Direction	Parameter	Reply	Control/Response contents	
COLOR ADJUSTMENT	USER	R-CONTRAST	CRTR	WR	0-256	0-256	"ERR" when WHBL is not set to 2.
		G-CONTRAST	CRTG	WR	0-256	0-256	
		B-CONTRAST	CRTB	WR	0-256	0-256	
		R-OFFSET	OFSR	WR	-127-127	-127-127	
		G-OFFSET	OFSG	WR	-127-127	-127-127	
		B-OFFSET	OFBS	WR	-127-127	-127-127	
	COPY TO USER		CPTU	W	0		Copies a preset value to the user setting.
	COLOR GAMUT		CLGM	WR	0-7	0-7, 99	0: Rec.2020, 1: Rec.709, 2: SMPTE-C, 3: DCI-P3, 4: Adobe RGB, 5: sRGB, 6: EBU, 7: THRU, 99: CUSTOM
	GAMMA(EOTF)		GAMM	WR	0	0	1.8
					1	1	2.2
					2	2	2.4
					5	5	2.0
					10	10	1.6
					11	11	2.6
					12	12	A-LOG
					13	13	A-LOG TO 1.6
					14	14	A-LOG TO 1.8
					15	15	A-LOG TO 2.0
					16	16	A-LOG TO 2.2
					17	17	A-LOG TO 2.4
					18	18	A-LOG TO 2.6
					21	21	21: THRU
	22	22	22: HYBRID LOG GAMMA(HLG)				
23	23	23: SMPTE ST 2084(PQ)					
	99	99: CUSTOM					
HLG SYSTEM GAMMA		HSGM	WR	100-150	100-150	If set to 100 to 150, it is displayed as 1.00 to 1.50 on the monitor menu.	
6-AXIS - HUE		CMHR	WR	-10-10	-10-10	R	
		CMHY				Y	
		CMHG				G	
		CMHC				C	
		CMHB				B	
		CMHM				M	
		CRST				W	1
6-AXIS - CHROMA		CMSR	WR	-10-10	-10-10	R	
		CMSY				Y	
		CMSG				G	
		CMSC				C	
		CMSB				B	
		CMSM				M	
		CRST				W	2
6-AXIS - VALUE		CMVR	WR	-10-10	-10-10	R	
		CMVY				Y	
		CMVG				G	
		CMVC				C	
		CMVB				B	
		CMVM				M	
		CRST				W	3
CUSTOM SETTING		CMST	WR	0	0	0: OFF	
				1	1	1: ON	
ADVANCED	UNIFORMITY		LCUF	WR	0	0	0: OFF
					1	1	1: ON
	DYNAMIC RANGE EXPAND		DMRE	WR	1	1	1: MODE1
					2	2	2: MODE2
					3	3	3: MODE3
	USER SETTING NAME (for USER1)		CNM1	WR	XXXXXXXXXX	XXXXXXXXXX	INPUT MODE NAME (single-byte alphanumerical and symbols, up to 12 characters)
	USER SETTING NAME (for USER2)		CNM2	WR	XXXXXXXXXX	XXXXXXXXXX	INPUT MODE NAME (single-byte alphanumerical and symbols, up to 12 characters)

Controlling the Monitor with a computer

OTHERS menu

Function	Command	Direction	Parameter	Reply	Control/Response contents
RESET	ARST	W	2		When COLOR MODE is set to USER X: Initialization of video adjustment settings including image quality adjustment data with Display Calibration Utility.
			4		When COLOR MODE is set to USER X: Initialization of video adjustment settings excluding image quality adjustment data with Display Calibration Utility.
Resolution check	PXCK	R		000,000	Returns current resolution in a form of 000,000.
HDMI2 resolution check	PXCD	R		000,000, 000,000, 000,000, 000,000	In the case of HDMI2, returns input signal resolution of each terminal in the order of HDMI2-A, HDMI2-B, HDMI2-C, and HDMI2-D. In the case of PXCK, returns information of each terminal, since PXCK can return the overall resolution only.
ALL RESET	RSET	W	0		

Troubleshooting

If you are experiencing any problem with your display, before calling for service, please review the following troubleshooting tips.

There is no picture or sound.

- The power LED is off.
 - Is power supplied to this monitor?
 - Is the power cord disconnected? (See page 13.)
 - Is the main power switch off? (See page 14.)
 - This monitor is in standby state. Turn on the power. (See page 14.)
- The power LED lights orange.
 - There is no input signal.
 - Is an input mode selected that is appropriate for the input terminal to which the cable is connected?
 - If any external equipment is connected, make sure the equipment is operating (playing back).

Sound from left and right speakers is reversed.

Sound is heard from only one side.

- Are audio cables connected properly?

There is a picture but no sound.

- This monitor does not have integrated speakers.
Are audio cables connected properly?
- Is the sound muted?
- Make sure the volume is not set to minimum.
- In the case of HDMI2, is HDMI2 AUDIO SELECT in the SETUP menu set to the audio input terminal?

Unstable video.

- The signal may be incompatible.

The video from the HDMI input terminal does not appear properly.

- Is the input signal compatible with this monitor? (See pages 34 and 35.)
- Is it HDMI standard compliant? The monitor will not work with cables that are not standard compliant.
- 8K video does not appear properly.
 - In the case of HDMI1, does the HDMI cable support 8K, and is it conforming to the HDMI standard?
 - In the case of HDMI2, does the HDMI cable support 4K, and is it conforming to the HDMI standard?
Are all 4 cables identical?
 - HDMI3 input terminal cannot be used to display 8K video.
- 4K video does not appear properly.
 - Does the HDMI cable support 4K, and is it HDMI standard compliant?

The video from the DisplayPort does not appear properly.

- Does the DisplayPort cable support 4K, and is it DisplayPort standard compliant? The monitor will not work with cables that are not standard compliant.
- Is the input signal compatible with this monitor? (See page 34.)
- Does the video card support DisplayPort1.2?
- DisplayPort input terminal can not be used to display 8K video.

Control buttons do not work.

There is no picture.

- Load noises from outside may be interfering with normal operation. Turn off the main power and turn it on after waiting at least 5 seconds, and then check the operation.

The input mode changes automatically.

- When CONNECT AUTO INPUT SELECT is ON, the input mode automatically changes to that terminal when a video signal is input into the input terminal.
For this reason, the input mode may change when the computer wakes up from system standby.
- When NO SIGNAL AUTO INPUT SEL. is ON and the current video signal input stops, the input mode automatically changes to the mode of an active video signal.
Consequently, the input mode may change even in the following cases:
 - When a computer enters standby mode.
 - When video play is stopped with a playback device.

Power LED flashes red.

“STATUS [xxxx]” appears in the corner of the screen.

- Hardware has a problem. Turn off the monitor and request repair from your SHARP dealer.
(When STATUS ALERT is set to OSD & LED. This varies depending on the setting.)

Power LED flashes orange.

- When DYNAMIC RANGE EXPAND is set to MODE3, backlight luminance automatically decreases when white area on the monitor becomes large.

When “AUTO DIMMING” is displayed.

- When the internal temperature of the monitor rises excessively, the brightness of the backlight automatically decreases in order to prevent a further temperature rise. If you attempt to adjust the brightness while the monitor is in this state, “AUTO DIMMING” is displayed and you cannot change the brightness.
- Remove the cause of the excessive temperature rise.

The monitor makes a cracking sound.

- You may occasionally hear a cracking sound from the monitor. This happens when the cabinet slightly expands and contracts according to change in temperature. This does not affect the monitor's performance.

The Power LED is flashing in red and green alternately.

When “TEMPERATURE” is displayed in the corner of the screen.

- When the internal temperature of the monitor rises excessively, the brightness of the backlight decreases automatically in order to prevent high-temperature-related problems. When this occurs, “TEMPERATURE” is displayed on the screen and the Power LED flashes red and green alternately. (When TEMPERATURE ALERT is set to OSD & LED. This varies depending on the setting.)
- If the internal temperature rises further, the monitor automatically enters standby state. (The Power LED continues flashing red and green alternately.)
- Remove the cause of the excessive temperature rise.
 - If the monitor enters standby state due to a rise in temperature, to return to normal display, turn the power switch off and then back on again. The monitor, however, will enter standby state again if the cause of the temperature rise is not eliminated. (See page 7.)
 - Check whether the monitor is placed at a location where a quick rise in temperature is likely. Internal temperature rises quickly if the vents on the monitor are blocked.
 - Internal temperature rises quickly if dust accumulates inside the monitor or around the vents. Remove dust if possible. Ask SHARP dealer about removing internal dust.

Specifications

■Product Specifications

Model		8M-B32C1
LCD component		32" Class [31-1/2 inch (80.0cm) diagonal] TFT LCD
Max. resolution	(pixels)	7680 x 4320
Max. colors		Approx. 1.07 billion colors
Pixel pitch		0.091 mm (H) x 0.091 mm (V)
Brightness (typical)		Full screen white: 800 cd/m ² , Peak: 1000 cd/m ² *1
Contrast ratio (typical) *1		1000000 : 1 ²
Viewing angle		176° right/left/up/down (contrast ratio ≥ 10)
Screen active area		inch (mm) 27-7/16 (W) x 15-7/16 (H) (697.7 x 392.5)
Ratio of effective pixel *3		99.9999% or more
Plug and play		VESA DDC2B
Computer input signal		DisplayPort 1.2
Input terminals	Video	HDMI1 (8K-compliant, HDR (HLG/PQ)-compliant, HDMI x 1) x 1 HDMI2 (8K-compliant, HDR (HLG/PQ)-compliant, HDMI x 4) x 1 HDMI3 (4K-compliant) x 1 DisplayPort (4K-compliant) x 1
Output terminals	Audio	3.5 mm mini stereo jack x 1
USB port		B type x 1
Power requirement		AC 100 V - 240 V, 2.9 A, 50/60 Hz
Operating temperature *4		41°F to 95°F (5°C to 35°C)
Operating humidity		20% to 80% (no condensation)
Power consumption (Input signal waiting state *5 / Standby mode / Off mode)		260W (25W / 0.5W / 0.0W)
Dimensions (excluding protrusions)		inch (mm) With the stand Approx. 29-9/16 (W) x 10-1/4 (D) x 21-1/4 (H) (751 x 260 x 540) Without the stand Approx. 29-9/16 (W) x 3-7/8 (D) x 18-7/16 (H) (751 x 99 x 469)
Weight		lbs. (kg) Approx. 29.4 (13.3) (monitor only) Approx. 42.4 (19.2) (with the stand attached)

*1 Brightness and contrast ratio will depend on input mode and other picture settings. Brightness level will decrease over time. Due to the nature of the equipment, it is not possible to precisely maintain a constant level of brightness.

*2 When DYNAMIC RANGE EXPAND is set to MODE2 or MODE3.

*3 Even though the LCD panel of this product is manufactured with high precision, there may be ineffective pixels such as ones which never lights up or always lighting up. "Ratio of effective pixel" means the ratio of the number of effective pixel (subtracting the number of ineffective pixels from the whole number of pixels) against the whole number of pixels on the LCD panel. Please note that presence of ineffective pixels does not mean failure of LCD panel.

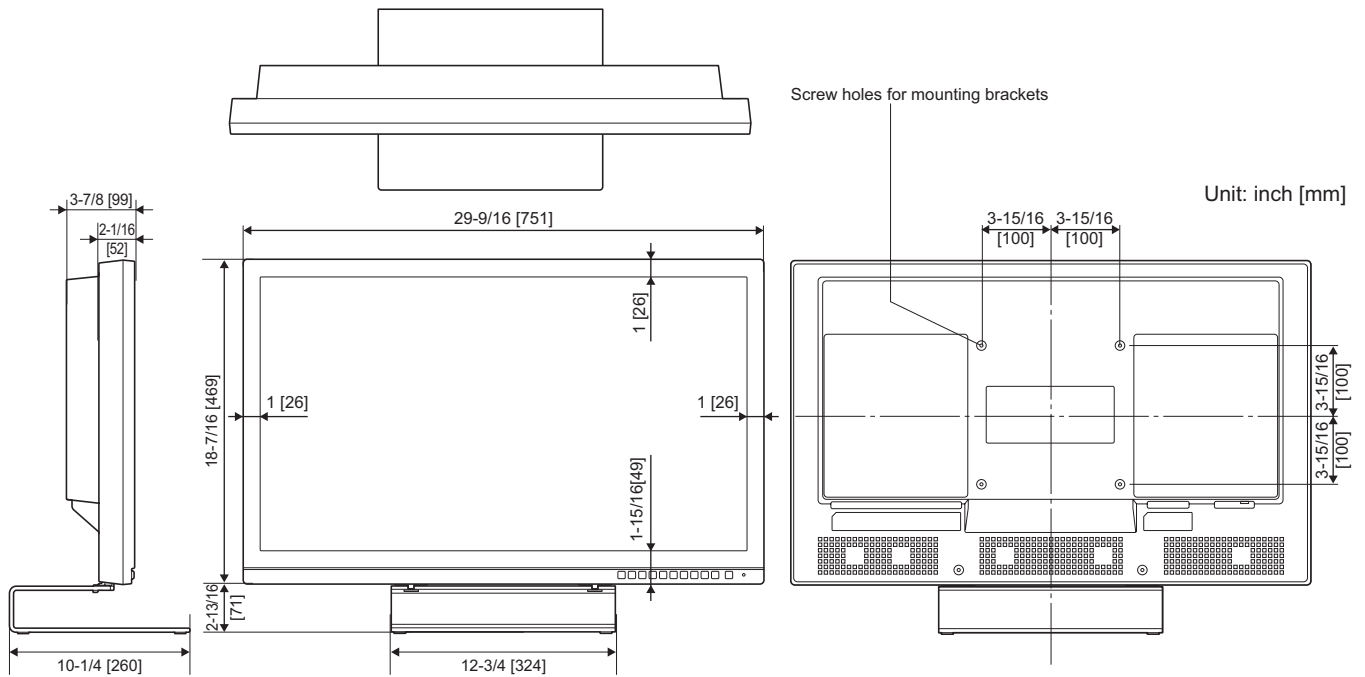
*4 Temperature condition may change when using the monitor together with the optional equipments recommended by SHARP. In such cases, please check the temperature condition specified by the optional equipments.

*5 When NO SIGNAL AUTO INPUT SEL. is set to OFF.

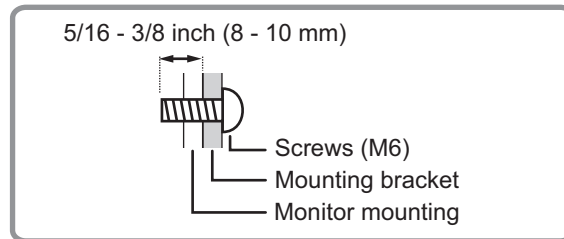
As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

■ Dimensional Drawings

Note that the values shown are approximate values.



- To attach a VESA-compliant mounting bracket, use M6 screws that are 5/16 inch (8 mm) to 3/8 inch (10 mm) longer than the thickness of the mounting bracket.



- Be sure to use a wall-mount bracket designed or designated for mounting the monitor.
- This monitor and bracket must be installed on a wall which can endure at least 4 times or more the weight of the monitor. Install by the most suitable method for the material and the structure.
- Do not use an impact driver.
- Do not use any screw holes other than those for mounting brackets, located on the rear of the monitor, for installation.

Specifications

■Compatible signal timing (PC)

Screen resolution		Vertical frequency (Hz)	HDMI1	HDMI2	HDMI3	DisplayPort
VESA	640 × 480	60	Yes	-	Yes	Yes
		72	-	-	Yes	Yes
		75	-	-	Yes	Yes
	800 × 600	60	-	-	Yes	Yes
		72	-	-	Yes	Yes
		75	-	-	Yes	Yes
	1024 × 768	60	-	-	Yes	Yes
		70	-	-	Yes	Yes
		75	-	-	Yes	Yes
	1152 × 864	75	-	-	Yes	Yes
	1280 × 768	60	-	-	-	Yes
		75	-	-	-	Yes
	1280 × 800	60	-	-	Yes	Yes
	1280 × 960	60	-	-	Yes	Yes
	1280 × 1024	60	-	-	Yes	Yes
		75	-	-	Yes	Yes
	1360 × 768	60	-	-	Yes	Yes
	1400 × 1050	60	-	-	Yes	Yes
1440 × 900	60	-	-	Yes	Yes	
1600 × 1200	60	-	-	Yes	Yes	
1680 × 1050	60	-	-	Yes	Yes	
WIDE	1280 × 720	60	-	-	Yes	Yes
	1920 × 1080	60	Yes	-	Yes	Yes
	3840 × 2160	24	Yes	Yes	Yes	Yes
		25	Yes	Yes	Yes	Yes
		30	Yes	Yes	Yes	Yes
		50	Yes	Yes	Yes	Yes
		60	Yes	Yes	Yes	Yes
	4096 × 2160	24	-	-	Yes	Yes
		25	-	-	Yes	Yes
		30	-	-	Yes	Yes
		50	-	-	Yes	Yes
		60	-	-	Yes	Yes
	7680 × 4320	24	Yes	-	-	-
		25	Yes	-	-	-
		30	Yes	-	-	-
		50	Yes ^{*1}	-	-	-
		60	Yes ^{*1}	-	-	-
	US TEXT	720 × 400	70	-	-	Yes

*1 Only for YCbCr 4:2:0.

- Depending on the connected computer, images may not be displayed properly even if the compatible signal described above is input.

Compatible signal timing (AV)

Screen resolution	Frequency (Hz)	HDMI1	HDMI2	HDMI3
7680 × 4320p	24	Yes	-	-
	25	Yes	-	-
	30	Yes	-	-
	50	Yes ^{*1}	-	-
	59.94	Yes ^{*1}	-	-
	60	Yes ^{*1}	-	-
4096 × 2160p	24	-	-	Yes
	25	-	-	Yes
	30	-	-	Yes
	50	-	-	Yes
	59.94	-	-	Yes
	60	-	-	Yes
3840 × 2160p	24	Yes	Yes	Yes
	25	Yes	Yes	Yes
	30	Yes	Yes	Yes
	50	Yes	Yes	Yes
	59.94	Yes	Yes	Yes
	60	Yes	Yes	Yes
1920 × 1080p	24	Yes	-	Yes
	50	Yes	-	Yes
	59.94	Yes	-	Yes
	60	Yes	-	Yes
1920 × 1080i	50	Yes ^{*2}	-	Yes
	59.94	Yes ^{*2}	-	Yes
	60	Yes ^{*2}	-	Yes
1280 × 720p	50	Yes	-	Yes
	59.94	Yes	-	Yes
	60	Yes	-	Yes
720 × 576p	50	Yes	-	Yes
720 × 480p	59.94	Yes	-	Yes
	60	Yes	-	Yes
640 × 480p (VGA)	59.94	Yes	-	Yes
	60	Yes	-	Yes
720 (1440) × 480i	59.94	-	-	Yes

*1 Only for YCbCr 4:2:0.

*2 The screen shakes vertically.

DDC (plug and play)

The monitor supports the VESA DDC (Display Data Channel) standard.

DDC is a signal standard for plug and play between monitors and computers. Information about resolution and other parameters is exchanged between the two. This function can be used if the computer supports DDC and it has been configured to detect plug-and-play monitors.

There are several types of DDC, depending on the communication method used. This monitor supports DDC2B.

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