4-692-870-**12** (1)

SONY

Display Unit
Display Controller

Operating Instructions

Before operating the unit, please read this manual and the supplied Before Using this Unit document thoroughly and retain it for future reference.

ZRD-1
ZRCT-100

Table of Contents

Trademarks

Products or system names appearing in this document are trademarks or registered trademarks of their respective owners.
Further, the ® or ™ symbols are not used in the text.

Please Read This First

Manual Structure

This product includes the following manuals to be used according to the situation.

Before Using this Unit (ZRD-1, ZRCT-100)
This includes important safety precautions, specifications, etc.

Installation Manual
This includes information on installation, initial setup, equipment adjustment procedures, etc. Refer to this manual when changing equipment settings or performing readjustments after installation as well.

Operating Instructions (this document)
This includes information on video input selection, picture quality adjustment, parts identification, etc. Refer to this manual when performing general operations.

Service Manual
This is intended for use by service personnel and includes information on diagnosing malfunctions and instructions on repair.

Licenses

Refer to the Software License Agreement.

Condensation

If the product is suddenly taken from a cold to a warm location, or if ambient temperature suddenly rises, moisture may form on the outer surface and/or inside of the product. This is known as condensation. If condensation occurs, turn off the product and wait until the condensation clears before operating the product. Operating the product while condensation is present may damage the product.

Security

SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND RESULTING FROM A FAILURE TO IMPLEMENT PROPER SECURITY MEASURES ON TRANSMISSION DEVICES, UNAVOIDABLE DATA LEAKS RESULTING FROM TRANSMISSION SPECIFICATIONS, OR SECURITY PROBLEMS OF ANY KIND.
Depending on the operating environment, unauthorized third parties on the network may be able to access the product. When connecting the product to the network, be sure to confirm that the network is protected securely.

Burn-in

Permanent burn-in may occur if a still image is displayed for a prolonged period of time. Playing a video with moving images may reduce the severity of burn-in once it occurs, but it will not remove the burn-in completely.

Defective pixels

The panel fitted to this unit is manufactured with high precision technology, giving a functioning pixel ratio of at least 99.99%. Thus a very small proportion of pixels may be “stuck,” either always off (black), always on (red, green, or blue), or flashing. In addition, such “stuck” pixels may appear spontaneously over a long period of use due to the physical characteristics of the organic light-emitting diodes.
Such occurrences do not indicate a malfunction.

General Precautions

- Avoid getting the product wet. In the event of accidental contact with liquids, do not turn on the power, and contact a service representative.
- If an error or malfunction occurs or if foreign matter enters the interior of the product, turn off the power and discontinue use, and contact a service representative.
- Do not subject the front panel of the display units to damage or shocks.
- Request cleaning and maintenance periodically from a service representative.

Overview

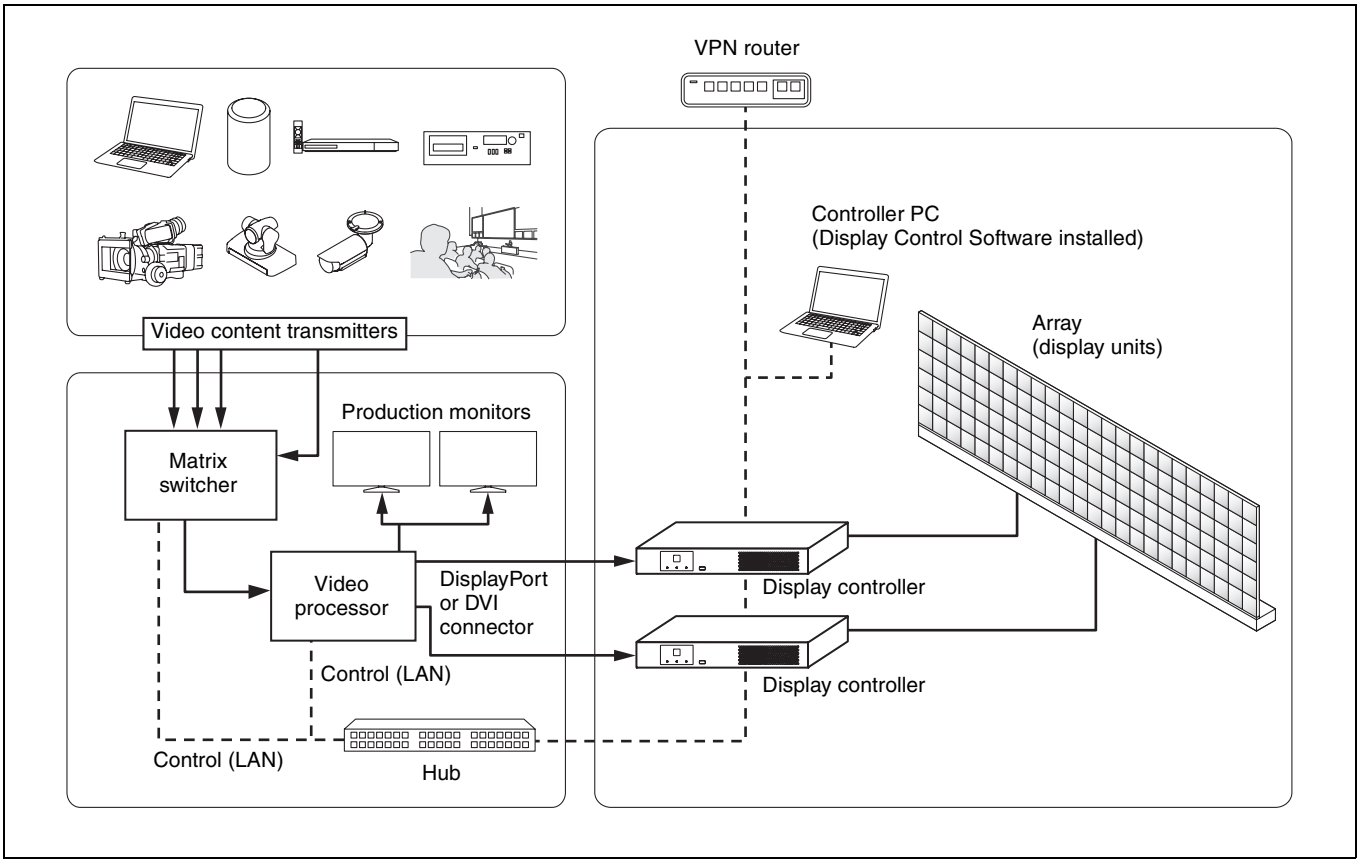
You can connect the display units based on the installation location and intended use, convert the video content signals that are input to the display controller based on the array size, and output the signals onto the display units. 4K2K video can be controlled via a single display controller. Control of the display units is performed from a computer on which Display Control Software is installed.
Daisy-chain connections between display units can be configured using power cords (not supplied) and Category 7 cables (not supplied). (For details on the number of display units that can be connected, refer to the Installation Manual.)

Notes

- Display of 4K2K video requires 72 display units.
- Each display controller is equipped with 12 ports, and each port is capable of controlling up to 6 display units.

System Configuration Diagram

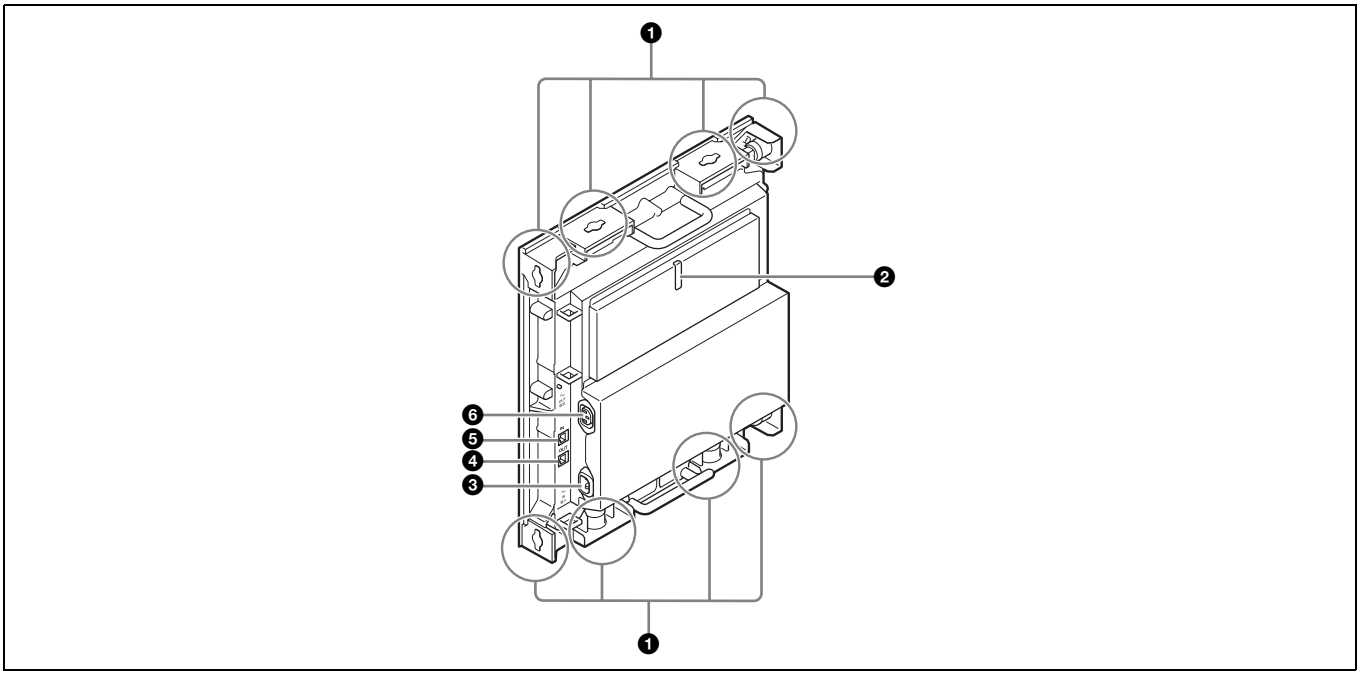
Configuration example of the entire system



Parts Identification

ZRD-1 Display Unit

Left / rear



Caution

Do not connect the OUT and IN connectors to a hub. The input/output signals for these connectors are unique to the product and are not Ethernet signals. In particular, be aware that connecting these connectors to a PoE injector hub may result in damage to the product.

❶ **Unit joints**
Connect to other display units.
Two unit joints are located on each of the top, bottom, left, and right sides of the display unit.

❷ **Status indicator**
Indicates the status of the display unit.

Indicator	Status
Off	The display unit is turned off.
Lit yellow	The display unit is starting up.
Blinking yellow	A warning has occurred. *For details, see "Troubleshooting" (page 13).*
Lit red	The display unit is in standby mode.
Blinking red	An error has occurred. *For details, see "Troubleshooting" (page 13).*
Lit green	The display unit is operating normally.

❸ **∿ IN (AC power input) connector**
Use a power cord (not supplied) to connect this connector to the ∿ OUT (AC power output) connector on the preceding display unit in the daisy-chain connection.
For the first display unit in the daisy-chain connection, use a power cord (not supplied) to connect this connector to the circuit breaker.

❹ **OUT (unit output) connector (RJ-45)**
Use a Category 7 cable (not supplied) to connect this connector to the IN (unit input) connector on the succeeding display unit in the daisy-chain connection. This connector is not used for the last display unit in the daisy-chain connection.

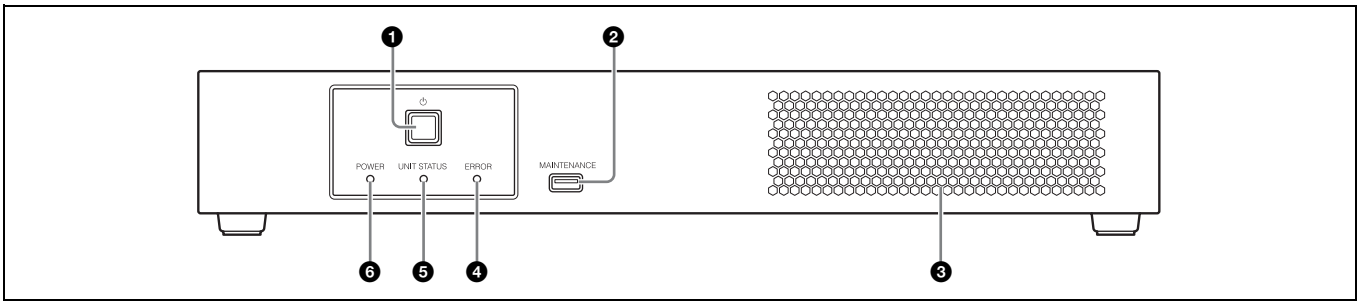
❺ **IN (unit input) connector (RJ-45)**
Use a Category 7 cable (not supplied) to connect this connector to the OUT (unit output) connector on the preceding display unit in the daisy-chain connection. For the first display unit in the daisy-chain connection, use a Category 7 cable (not supplied) to connect this connector to the UNIT OUTPUT connector on the display controller.

❻ **~ OUT (AC power output) connector**
Use a power cord (not supplied) to connect this connector to the ~ IN (AC power input) connector on the succeeding display unit in the daisy-chain connection.

This connector is not used for the last display unit in the daisy-chain connection.

ZRCT-100 Display Controller

Front



❶ **⏻ (power) switch**
Turns the display controller on/off.

For details, see "Turning the Power On/Off" (page 8).

❷ **MAINTENANCE connector**
This connector is used for maintenance servicing.

❸ **Intake vent**
Do not block the intake vent, as doing so will result in interior heat buildup which may result in fire or malfunction.

❹ **ERROR indicator**
Blinks when warnings occur, and lights when errors occur.

For details, see "Troubleshooting" (page 13) and "Error Codes" (page 15).

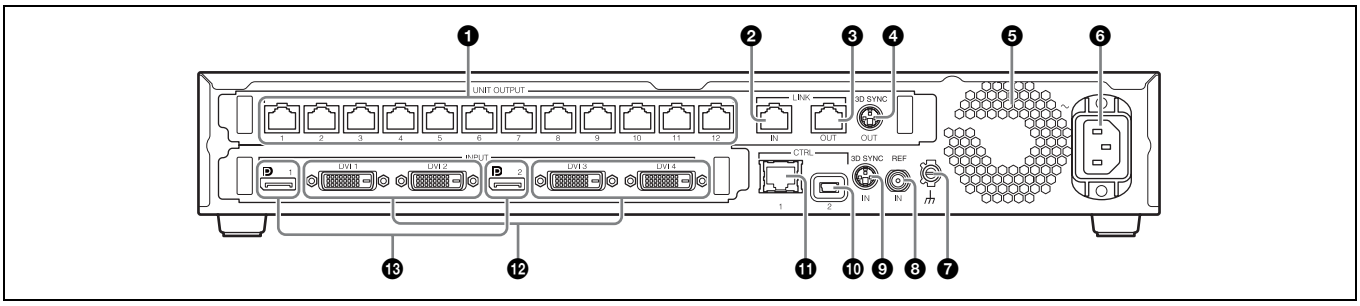
❺ **UNIT STATUS indicator**
Indicates the power status of the display units.
The indicator lights green when all the display units that are connected to the display controller according to the display unit layout settings are turned on.
If any of the display units are turned off according to the display unit layout settings, the indicator turns off.

For details on the display unit layout settings, consult your system administrator.

❻ **POWER indicator**
Indicates the power status of the display controller.

Indicator	Status
Off	The display controller is turned off.
Lit orange	The display controller is in standby mode.
Lit green	The display controller is turned on (normal operating status).
Blinking green	The display controller is starting up or shutting down.
Lit red	The forced standby mode has been entered. *For details, see "Entering the forced standby mode" (page 14) in the "Troubleshooting."*

Rear



Caution

Do not connect the UNIT OUTPUT, LINK IN, and LINK OUT connectors to a hub. The input/output signals for these connectors are unique to the product and are not Ethernet signals. In particular, be aware that connecting these connectors to a PoE injector hub may result in damage to the product.

❶ **UNIT OUTPUT connectors 1 to 12 (RJ-45)**
Use a Category 7 cable (not supplied) to connect this connector to the IN (unit input) connector on the display unit you want to control (i.e., first display unit in the daisy-chain connection).

❷ **LINK IN connector (RJ-45)**
Use this when using multiple display controllers to control the display units.
Use a Category 7 cable (not supplied) to connect this connector to the LINK OUT connector on the display controller you want to link.

❸ **LINK OUT connector (RJ-45)**
Use this when using multiple display controllers to control the display units.
Use a Category 7 cable (not supplied) to connect this connector to the LINK IN connector on the display controller you want to link.

❹ **3D SYNC OUT connector (mini-DIN, 3-pin)**
Outputs 3D sync signals.

❺ **Exhaust vent/fan**
Do not block the exhaust vent, as doing so will result in interior heat buildup which may result in fire or malfunction.

❻ **~ IN (AC power input) connector**
Use a power cord (not supplied) to connect this connector to the circuit breaker.

❼ **⏚ (earth) terminal**
Connect this to the earth conductor of the system.

Caution

Failure to connect the system to the protective earth may result in electric shock. Be sure to connect to the earth conductor, even during operation inspections.

❽ **REF IN (external reference signal input) connector (BNC)**
Inputs external reference signals used for synchronization.

For details, refer to the Installation Manual.

❾ **3D SYNC IN connector (mini-DIN, 3-pin)**
Inputs 3D sync signals.

❿ **CTRL (control) connector 2 (Mini-USB, Type B)**
Use this to connect to the controller PC via a USB (SERIAL) connection.
Use a USB cable (not supplied) to connect this to a USB port on the controller PC.

⓫ **CTRL (control) connector 1 (RJ-45)**
Use this to connect to the controller PC via an Ethernet (LAN) connection. Use an Ethernet cable (Category 5, not supplied) to connect this to a LAN port on the controller PC.

⓬ **DVI (video input) connectors 1 to 4**
Connect these to the video processor.

⓭ **DisplayPort (video input) connectors 1 to 2**
Connect these to the video processor.

Turning the Power On/Off

Turning the Power On

You can turn on the system's power using one of three methods. Consult your system administrator regarding which method to use.

- Turning the power on via the display controller
- Turning the power on via Display Control Software
- Turning the power on by connecting the power cord to the display controller

Caution

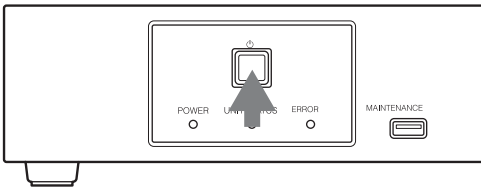
Always connect the display controller's power cord to the circuit breaker.

Note

If a startup delay is configured in the [Function] - [System Settings] - [Display Unit Power On Delay] setting of Display Control Software, the display units will turn on according to the configured delay.

Turning the power on via the display controller

1 Press and hold the power switch on the display controller for about 2 seconds.
Turn on all the display controllers by pressing each of their power switches.



When a display controller turns on, its POWER indicator lights green.
When a display unit turns on, its status indicator lights green.

To enter standby mode

Press the power switch on a display controller twice to set the display controller and display units to standby mode.
To return to the power ON state, press and hold the power switch again.

Note

If you press the power switch only once in the power ON state, the POWER indicator will blink red for 2 seconds, but the standby mode will not be entered.
You can enter standby mode by pressing the power switch again while the indicator is still blinking red.

2 Turn on the video source equipment.

Turning the power on via Display Control Software

The initial settings must be configured beforehand to turn the power on via Display Control Software. For details, consult your system administrator.

1 Start the controller PC, and click [All Programs] - [Display Control Software] - [Display Control Software] in the start menu to start Display Control Software.

2 Click [Power ON] in the main screen.

Under default settings, all display controllers and display units will turn on.
When a display controller turns on, its POWER indicator lights green.
When a display unit turns on, its status indicator lights green.

When you click [Standby]

The power status of all connected display controllers and display units will enter standby mode, and the main screen will remain displayed.
Click [Power ON] to turn the power on again.

3 Turn on the video source equipment.

Turning the power on by connecting the power cord to the display controller

When [Function] - [System Settings] - [Direct Array Power On] is set to [ON] in Display Control Software beforehand, simply connecting the display controller's power cord will turn on the display controller and display units.

1 Connect the power cord to the ∿ IN connector on the display controller.
When a display controller turns on, its POWER indicator will switch from blinking red/orange to remaining lit green.
When a display unit turns on, its status indicator lights green.

2 Turn on the video source equipment.

Turning the Power Off

You can turn off the system's power using one of two methods.

- Turning the power off via the display controller
- Turning the power off via Display Control Software

Turning the power off via the display controller

1 Turn off the video source equipment.

2 Press the power switch on the display controller twice.
The display controller and display units will enter standby mode.

3 If necessary, disconnect the AC power supply.

Turning the power off via Display Control Software

1 Turn off the video source equipment.

2 Click [Standby] in the main screen of Display Control Software.
The display controller and display units will enter standby mode.

3 If necessary, disconnect the AC power supply.

Selecting the Video Input

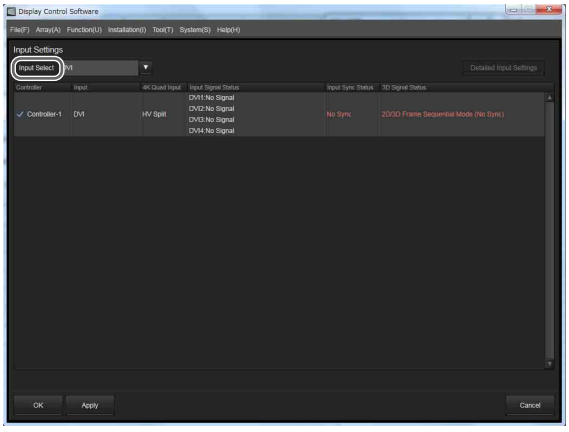
Select the video signals that will be input.
The settings configured on the primary controller will be applied to all the other display controllers, including the subordinate controllers (hereafter referred to as "sub controllers"). Sub controllers cannot be configured individually.

Caution

If the a primary controller is not configured via Display Control Software or the primary controller is not already turned on at the time the [Input Setting] screen is displayed, video input selection cannot be performed. In addition, the video input settings will not be applied to the sub controllers if they are not turned on.

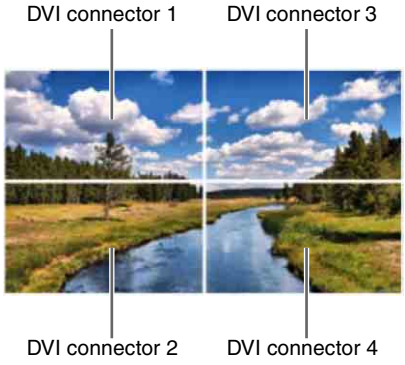
1 Select [Input Settings] in the [Array] menu on the main screen of Display Control Software.

2 Select the input channel in [Input Select], and click [OK] or [Apply].
The video input changes.



[DVI]: Use the DVI connectors to display pictures as large as 4K 50p/60p. (All four DVI connectors are used.)
Example of picture positions and DVI connectors:

- DVI connector 1: Top left
- DVI connector 2: Bottom left
- DVI connector 3: Top right
- DVI connector 4: Bottom right



Note

A picture can be displayed using only one DVI connector. For details, refer to the Installation Manual.

[DisplayPort (Single)]: Use one DisplayPort connector to display the picture. Only DisplayPort connector 1 can be used for this setting. (DisplayPort connector 2 cannot be used.)

For details on the supported video signals for display, see "Signal Formats" (page 17).

[DisplayPort (Dual)]: Use two DisplayPort connectors to display pictures as large as 4K 100p/120p.

Note

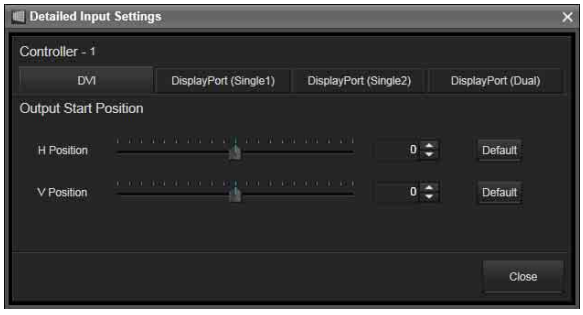
If you are only inputting single-stream signals that are 50p/60p or lower, we recommend clicking [Detailed Input Settings] and clearing the [High Frame Rate Mode] checkbox in the [Detailed Input Settings] screen.

3 Click [OK] or [Apply] to apply the settings.
The setting values will be registered to the display controller and saved to Display Control Software.

Changing the Display Starting Positions of Pictures

You can change the display positions for each picture. For example, you can move a low-resolution picture from the top left of the screen to the center.

1 Click [Detailed Input Settings] in the [Input Settings] screen.
The [Detailed Input Settings] screen appears.



2 Click the tab ([DVI], [DisplayPort (Single1)], [DisplayPort (Single2)], or [DisplayPort (Dual)]) of the video signal for which you want to change the display starting position.

3 Use the sliders and buttons for [H Position] and [V Position] to specify the horizontal and vertical positions.
The settings are reflected in the picture immediately after they are configured.

For details, refer to the Installation Manual.

4 Click [Close].
The [Detailed Input Settings] screen closes.

Adjusting the Picture Quality

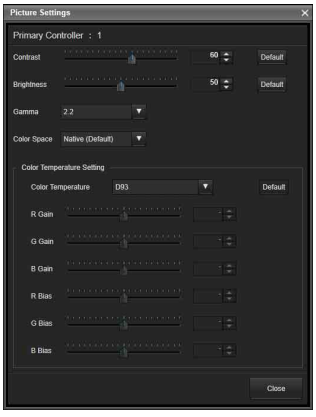
Adjust the contrast, brightness, and other picture quality settings.
The settings configured on the primary controller will be applied to all the other display controllers, including the sub controllers. Sub controllers cannot be configured individually.

Caution

If the a primary controller is not configured via Display Control Software or the primary controller is not already turned on at the time the [Picture Settings] screen is displayed, picture quality adjustment cannot be performed. In addition, the picture quality settings will not be applied to the sub controllers if they are not turned on.

1 Select [Picture Settings] in the [Array] menu on the main screen of Display Control Software.

2 Configure each setting.
The values currently configured on the primary controller are displayed on the [Picture Settings] screen.
The settings are reflected in the picture immediately after they are configured.



[Contrast]: Use the slider and ⇕ buttons to adjust the contrast.
Setting range: 0 to 100
Default value: 60

[Brightness]: Use the slider and ⇕ buttons to adjust the brightness.
Setting range: 0 to 100
Default value: 50

[Gamma]: Select the gamma correction value.
Default value: 2.2

Caution

This product is not a medical device. The device cannot be used for medical examinations, even when [DICOM SIM] is selected.

[Color Space]: Select the color space.
- [Native (Default)]: Display the picture using the original color space that is input.
- [sRGB]: Display the picture using the sRGB color space standard.
- [AdobeRGB]: Display the picture using the Adobe RGB color space standard.
- [DCI]: Display the picture using the DCI color space standard.
- [BT.2020]: Display the picture using the BT.2020 color space standard.

Caution

[AdobeRGB], [DCI], and [BT.2020] do not include the entirety of the color spaces defined by their respective standards.

[Color Temperature Setting]: Select the color temperature in [Color Temperature].
- If you selected [D93], [D65], or [D50], proceed to step **4** .
- If you selected [D93 Custom (Offset)], [D65 Custom (Offset)], or [D50 Custom (Offset)], proceed to step **3** .

3 Configure the offset values.
These settings can only be configured when [Color Temperature] is set to “Custom (Offset)” in step **2** .
Use the slider and ⇕ buttons to adjust the contrast.
Setting range: –128 to +127
Default value: 0

4 When you are finished configuring settings, click [Close].

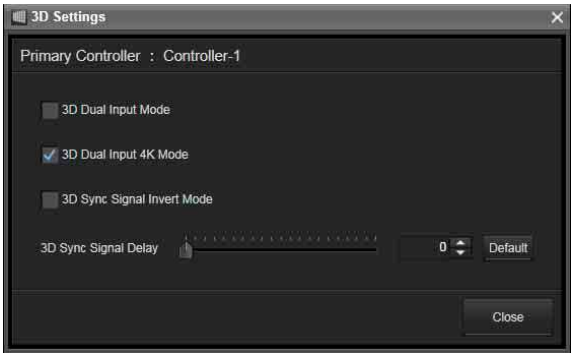
Displaying 3D Video

Note

In this document, the signals for the left and right eyes are referred to as the L and R signals respectively.
For details, refer to the Installation Manual.

For mixed L/R signals (frame sequence mode):
Video signal inputs from the DisplayPort connector are output to the display unit. 3D sync signal inputs from the 3D SYNC IN connector are output from the 3D SYNC OUT connector according to the picture output's timing.
For separated L/R signals (3D dual input mode):
Video signal inputs from the DisplayPort connectors (L from DP 1 and R from DP 2) and the DVI connectors (L from DVI 1 and R from DVI 3) are mixed (L/R) and output to the display unit.
Internally generated 3D sync signals are output from the 3D SYNC OUT connector according to the picture output's timing.

Select [3D Settings] in the [Array] menu on the main screen of Display Control Software to display the [3D Settings] screen.



[3D Dual Input Mode]: Leave this checkbox cleared if the signal input from the DisplayPort connector is a mixed L/R signal (100/120 Hz). Select the checkbox if L (50/60 Hz) and R (50/60 Hz) are separated in the input signal.
[3D Dual Input 4K Mode]: Clear this checkbox for 3D video other than 4K.
[3D Sync Signal Invert Mode]: Select this checkbox to invert the L and R signals.
[3D Sync Signal Delay]: Use the slider or buttons to adjust the phase (when 3D video is not displayed properly). Moving the slider also changes the number value. Clicking [Default] restores the default value.

Note

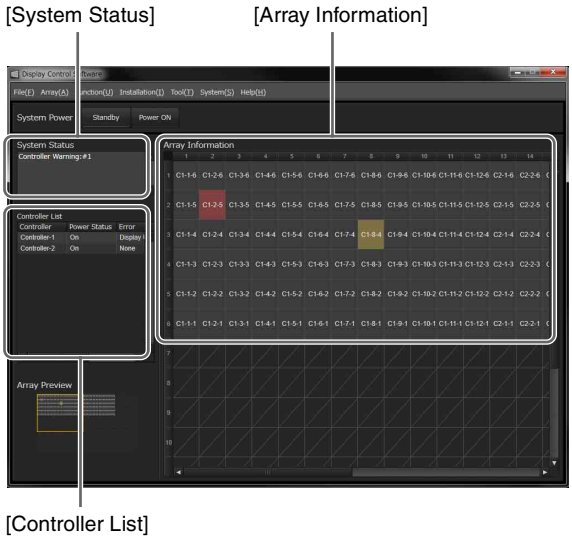
Inversion and phase adjustments can be configured for both mixed L/R and separated L/R. The settings are reflected in the picture immediately after they are configured.

Troubleshooting

Be sure to conduct a check before requesting assistance. If the problem persists, contact your local Sony representative.

Checking the status of the system and devices

You can check the status of the system, display controllers, display units, and other devices in the main screen.



[System Status]

Displays the status of the system and display controllers.

- [Operation Normal]: Operation is normal.
- [Controller Error]: Device operation has stopped due to an error. The display controllers and display units have entered standby mode, and picture display has stopped. For details on the error, check the [Error] column under [Controller List].
- [Controller Warning]: Device operation continues but a warning (fan error, picture sync error, etc.) has occurred. Check the details of the warning, and resolve the problem as soon as possible.
  For details on the warning, check the [Error] column under [Controller List].
- [System Configuration Warning]: Displays details on warnings detected during system configuration checks. For details on system configuration checks, refer to the Installation Manual.

[Controller List]

Displays the status of each display controller.

[Power Status]: "-" indicates that communication with the display controller is not possible.

[Error]: "None" indicates that there are no errors or warning.
If an error or warning occurs, see "Error Codes" (page 15), and resolve the problem as soon as possible.

Note

You can view information on a display controller by double-clicking its controller number or by right-clicking it and selecting [Controller Info.].

[Array Information]

Displays the status of each display unit.

- (gray): The display unit is turned on.
- (black): The display unit is turned off.
- (maroon): An error has occurred on the display unit.
- (ocher): A warning has occurred on the display unit.
- (black): A display unit does not exist.

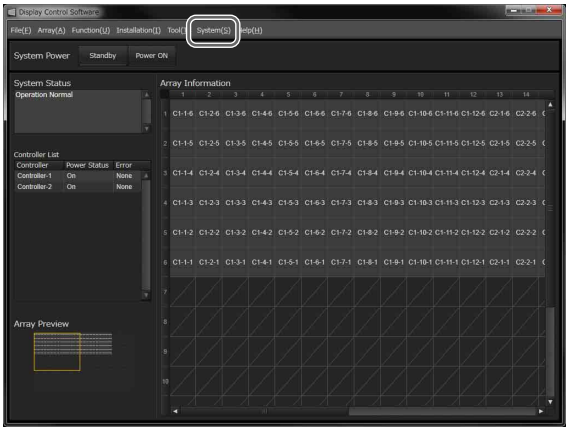
Note

You can view information on a display unit by double-clicking within its frame or by right-clicking it and selecting [Display Unit Info.].

If the controller PC is slow

By suspending the connection to the display controllers, you can avoid slow communication responses that may occur when using other applications, for example.

Select [Disconnect] in the [System] menu on the main screen of Display Control Software to suspend communication with the display controllers.



The following dialog box is displayed while communication is suspended.

To reestablish connection

Close the dialog box.

Entering the forced standby mode

If the controller PC hangs, for example, you can force display controllers and display units into standby mode.

1 Press and hold the power switch on the display controller for at least 5 seconds.
The forced standby mode is entered, and the POWER indicator lights red.

2 Press and hold the power switch again for about 2 seconds.
After the POWER indicator blinks red/orange, the normal standby mode is entered.
The display units will also enter the normal standby mode.

Error Codes

When a system error or warning occurs, verify the error code as follows.

For display units:
Under [Array Information] in the main screen, double-click within the frame of the display unit or right-click it and select [Display Unit Info.] to display the [Display Unit Information] screen and the error code.

For display controllers:
Under [Controller List] in the main screen, double-click the display controller number or right-click it and select [Controller Info.] to display the [Controller Information] screen and the error code.

Display Units

Errors

Error code	Category	Definition	Solution
102	Power	Main Power (VDD1 / VDD2)	Contact your local Sony representative.
104		AC Power Supply	
111	Temperature	Temperature (UC)	Check the device environment and remove any obstructions from the fan and intake vent. If the problem persists, contact your local Sony representative.
110		Temperature (Ambient)	
113		Temperature (CELL_1 to CELL_12)	
121	Board	UC Board (Power-up Sequence / Shut-Down Sequence / Power Supply / Flash Data Error / IC Setting / Other)	Contact your local Sony representative.
122		UP Board (CELL_1 to CELL_12)	
130	Connection/ communication	Connection_Error / RS485 Communication / Video Input Signal / Connection_Error / RS485 Communication / Video Input Signal	Check that all cables are properly connected. If the problem persists, contact your local Sony representative.

Warnings

Warning code	Category	Definition	Solution
310	Temperature/fan	Temperature (UC / Ambient)	Check the device environment and remove any obstructions from the fan and intake vent. If the problem persists, contact your local Sony representative.
313		Temperature (CELL_1 to CELL_12)	
315		Fan (Right): stop / speed-down	
		Fan (Right): performance degradation	Check the fan status and running time.
316		Fan (Left): stop / speed-down	Check the device environment and remove any obstructions from the fan and intake vent. If the problem persists, contact your local Sony representative.
		Fan (Left): performance degradation	Check the fan status and running time.
321	Board	UC Board (Reserved)	Turn the power off and turn it on again. If the problem persists, contact your local Sony representative.
322		UP Board (Reserved)	
330	Connection/ communication	UNIT Communication (RS485)	Check the fan status and running time.
		RS485 Wrong Command / Video Input	Check that all cables are properly connected. If the problem persists, contact your local Sony representative.
340	System	Update (UNIT FPGA)	Perform update again. If the problem persists, contact your local Sony representative.
350			

Display Controllers

Errors

Error code	Category	Description	Solution
001	Power	CPU power supply error	Contact your local Sony representative.
002		DIF power supply error	
003		PIF power supply error	
012	Temperature	DIF temperature error	Check the device environment and remove any obstructions from the fan and intake vent. If the problem persists, contact your local Sony representative.
013		PIF temperature error	
017		UNIT temperature error	
023	Board determination	PIF determination error	Contact your local Sony representative.
050	System	System version error	

Warnings

Error code	Category	Description	Solution
212	DIF	Temperature warning	Check the device environment and remove any obstructions from the fan and intake vent. If the problem persists, contact your local Sony representative.
213	PIF		
214	PS		
215	Fan (Front)	Rotation stop warning / speed warning	Check the device environment and remove any foreign objects that may be obstructing the fan. If the problem persists, contact your local Sony representative.
216	Fan (Rear)		
230	System	Controller configuration data mismatch warning	Check the installation, wiring, and Display Control Software settings, and if a problem does not exist, turn the power off and turn it on again. If the problem persists, contact your local Sony representative.
233	PIF	DIF signal connection warning / Link connection warning / Sync connection warning	
240	System	Update warning (CPU / DIF / PIF)	Perform update again. If the problem persists, contact your local Sony representative.

Cleaning and Storage

Display Units

Caution

Do not wet the surface of the display units.

Daily cleaning

- Use a soft anti-static cloth that does not produce lint when cleaning the surface of the display units.
- Use ethyl alcohol (near 100%) to clean stubborn stains on the surface. Do not use any other solvents.
- Use commercially available anti-static dust blowers to clean joints.

Storage (for transportation)

- Make sure the display units are completely dry before packing them.
- Store the display units in dry, well-ventilated environments.

Display Controllers

Daily cleaning

- Use a cloth that has been dampened with a neutral detergent and thoroughly wrung out to wipe the device clean. Never use solvents, such as benzene and thinners.

Storage

- Do not store in environments where condensation may occur inside the device.

Signal Formats

The system supports the following video signals.

DisplayPort (single input)

Resolution	Input frame rate [1]	Input bit length	Input color sampling
3840 × 2160 [2]	60p/50p/30p/25p/24p	8-/10-bit	RGB 4:4:4
1920 × 2160	120p [2]/100p [2]/60p/50p/30p/25p/24p	8-/10-bit	RGB 4:4:4
1920 × 1080	120p/100p/60p/50p/30p	8-/10-bit	RGB 4:4:4

DisplayPort (dual input)

Resolution	Input frame rate [1]	Input bit length	Input color sampling
3840 × 2160 [3]	120p/100p	8-/10-bit	RGB 4:4:4

DVI (1 input)

Resolution	Input frame rate [1]	Input bit length	Input color sampling
1920 × 1080	60p/50p/30p/25p/24p	8-bit	RGB 4:4:4

DVI (4 input)

Resolution	Input frame rate [1]	Input bit length	Input color sampling
3840 × 2160 [4]	60p/50p/30p/25p/24p	8-bit	RGB 4:4:4

1) 1,000/1,001 frame rate is also supported.
2) Only multi-stream is supported.
3) Supported by two input signals of 1920 × 2160, 100p/120p.
4) Supported by four input signals of 1920 × 1080.