SONY

4-489-316-**13**(1)

Digital Cinema Projector Package

Operating Instructions

Before operating the unit, please read this manual and supplied Safety Regulations thoroughly and retain it for future reference.

SRX-R510P

HDMI

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Please Read This First

Notations Used in This Guide

In this guide, SRX-R510 Digital Cinema Projector is referred to as the “projector”, XCT-S10 Digital Cinema Server is referred to as the “server”, and LKRA-007 Touch Panel Monitor is referred to as the “touch panel monitor.”

Manual Structure

The following manuals are provided for the SRX-R510P depending on the application.

Safety Regulations

This includes safety instructions and precautions for using the SRX-R510P.

Installation Manual

This includes instructions on how to install the unit, information on default settings, and instructions on how to adjust the unit. Be sure to refer to this manual whenever you need to change settings or readjust the unit after installation.

Operating Instructions (this guide)

This includes instructions for screening controls in a theater, how to create a screening schedule, how to change lenses, projector part names, and product specifications. Be sure to refer to this guide for instructions on daily usage.

Maintenance Manual

This includes information such as instructions on periodic inspection, maintenance, and cleaning.

Service Manual

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

About License

Refer to “Software License Agreement.”

USB HDD and USB Memory Devices That can be Used on INGEST PORT 1/2 of This Unit

USB HDD and USB memory devices that can be used on INGEST PORT 1/2 of this unit are as follows.

- USB 2.0/3.0 (bus power capacity up to 1 A)
- Do not insert a bus-powered USB HDD and a USB memory device into the two ports at the same time.
- USB HDD compatible file system
  ext2, ext3

(Operation is not guaranteed for all types of USB HDD and USB memory devices.)

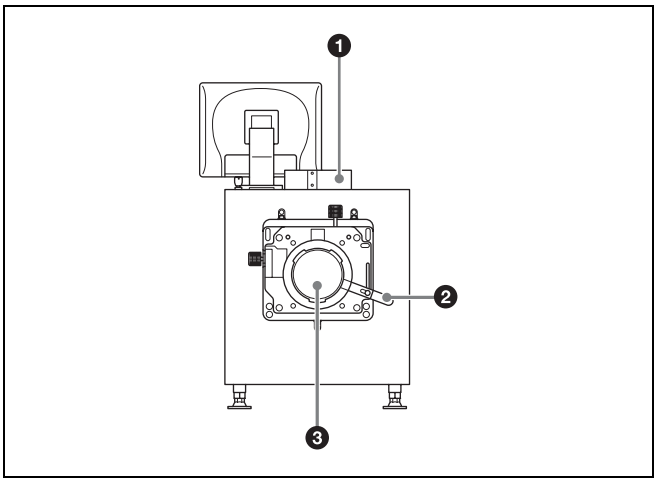
Recognized Folder Names

Regarding the external directories (USB HDD, USB memory devices, network folders, etc.) that are connected to the unit, only folder names that consist of alphanumeric characters will be recognized by the unit.

Part Names and Functions

Digital Cinema Projector SRX-R510

Front



❶ **8-inch duct attachment part**
Used to attach an 8-inch exhaust duct.

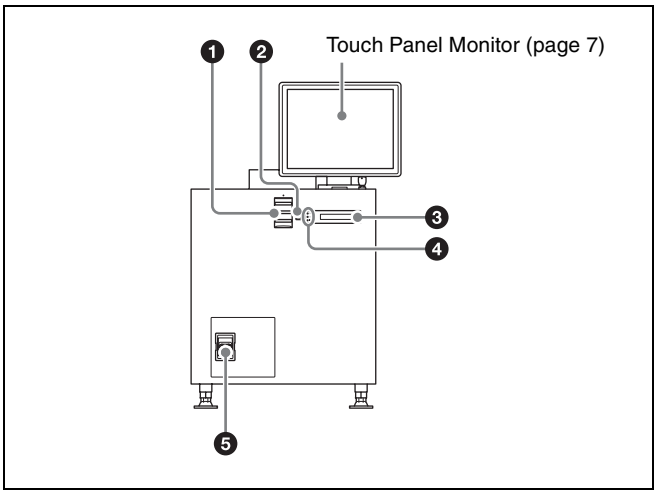
❷ **Lens fixing lever**
Locks/unlocks the lens.

For further details, see "Attaching and Removing the Lens" (page 29), and "Replacing the Lens Using the Lens Change Table" (page 31).

❸ **Lens attachment part**
Used to attach a separately-sold lens.

For further details, see "Attaching and Removing the Lens" (page 29), and "Replacing the Lens Using the Lens Change Table" (page 31).

Rear



❶ **Status lights**
Shows the status of the projector.

For further details, see "How to Read the Indicators" (page 34).

❷ **EMERGENCY switch**
Forcibly shuts off the lamp (equipped with a cooling function).

❸ **STATUS MESSAGE window**
Displays various messages.

❹ **Status indicators**
Shows the status of the projector.

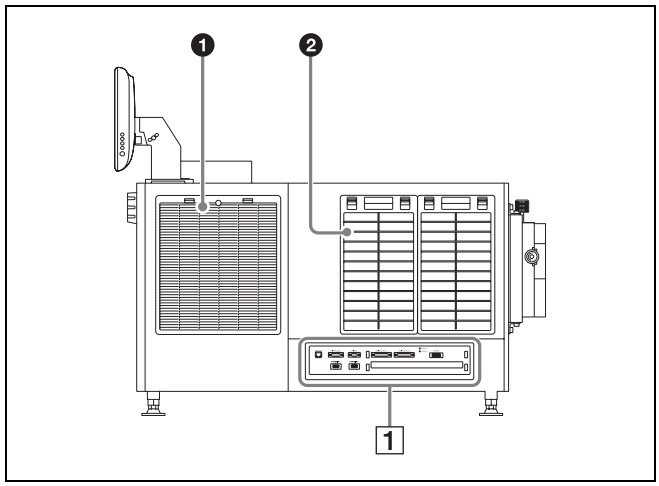
For further details, see "How to Read the Indicators" (page 34).

❺ **Power switch**
Turns the projector's main power on (**I**) or off (○).

When turning the power off
Wait for the lamp's cooling process to complete before turning the power switch off.

For further details, see "Shutting Down the System" (page 13).

Left side



❶ **Lamp access panel (lamp grill)/ventilation holes (intake)/air filter**
A lamp access panel (lamp grill), ventilation holes (intake), and air filter are also located on the right side of the unit.

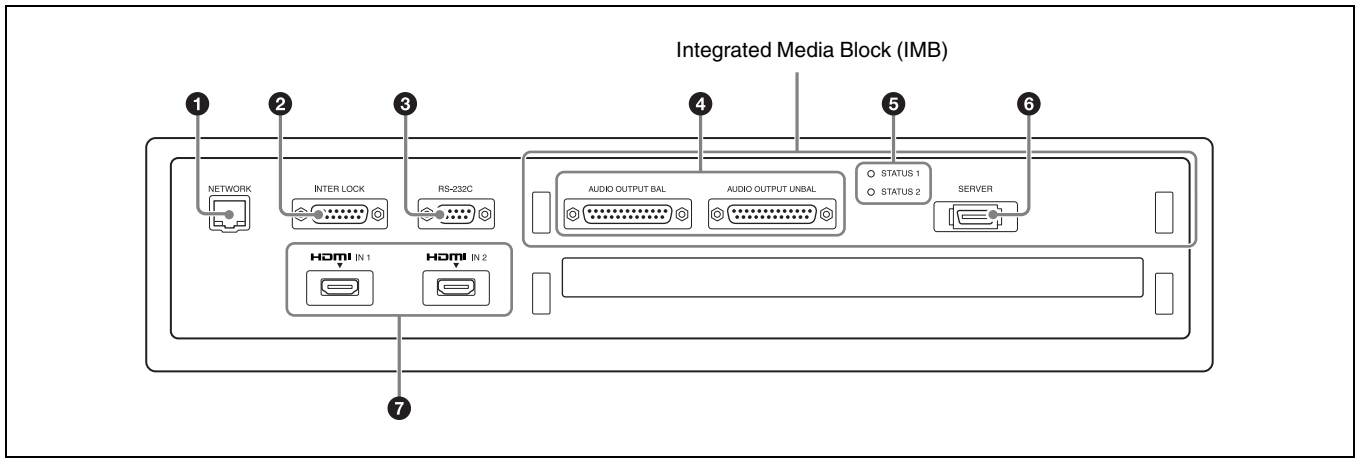
For details on lamp replacement, refer to the "Maintenance Manual."

For details on air filter cleaning, refer to the "Maintenance Manual."

❷ **Ventilation holes (intake)/air filter**

For details on air filter cleaning, refer to the "Maintenance Manual."

1 **Connectors**



❶ **NETWORK connector (RJ-45 modular jack)**
Used to connect to the server's PRJ connector with the supplied LAN cable.

❷ **INTER LOCK connector (D-sub 15 pin, female)**

For further details, refer to the "Installation Manual."

❸ **RS-232C connector (D-sub 9 pin, female)**
For service use.

❹ **AUDIO OUTPUT BAL/UNBAL (audio output BAL/UNBAL) (AES/EBU) connector (D-sub 25 pin, female)**
For connecting to an audio signal processor.

❺ **STATUS 1/2 (Status 1/2) indicator**
Shows the status of the projector.

For further details, see "How to Read the Indicators" (page 34).

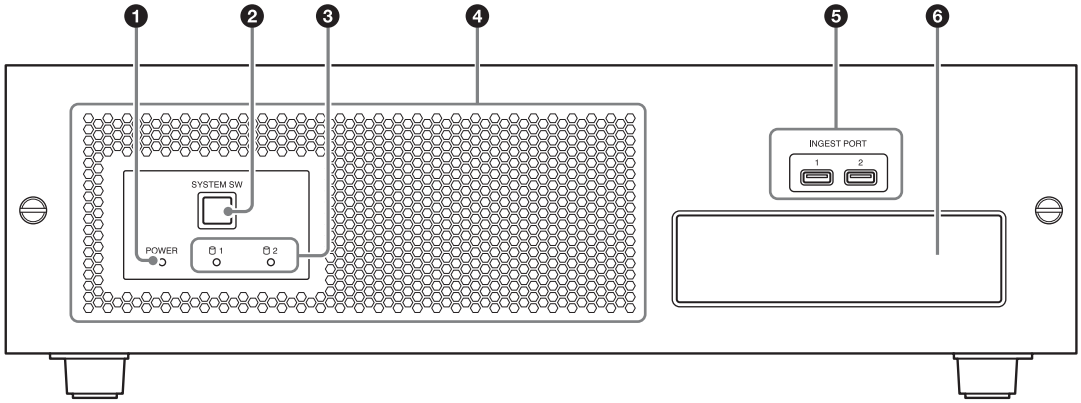
❻ **SERVER connector**
Used to connect to the server with the supplied PCI express cable (2 m).

❼ **HDMI IN 1/2 (HDMI input 1/2) connector**
For HDMI signal input.

For details on signal format, see "HDMI signals" (page 39).

Digital Cinema Server XCT-S10

Front



❶ **POWER indicator**
Shows the status of the server's power.

For further details, see "How to Read the Indicators" (page 34).

❷ **SYSTEM SW switch**
Starts up the server.

❸ **(HDD) 1/2 indicator**
Shows the status of the HDD.

For further details, see "How to Read the Indicators" (page 34).

❹ **Ventilation holes (intake)/air filter**

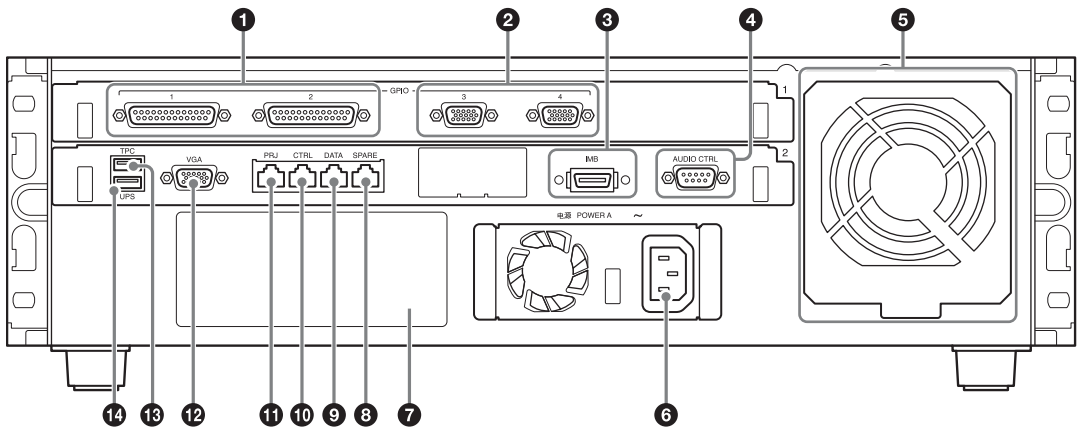
For details on air filter cleaning, refer to the "Maintenance Manual."

❺ **INGEST PORT 1/2 connector**
For inserting HDD or USB memory to ingest DCP/KDM.
These can only be used for a USB HDD or USB memory device.

For further details, see "Ingesting from HDD via USB Connector" (page 14), and "Ingesting from a USB Flash Drive" (page 17).

❻ **CRU DATAPORT**
For inserting HDD to ingest DCP/KDM.
A CRU DATAPORT carrier is necessary to use the CRU DATAPORT. For further details, contact Qualified Sony Service Personnel.

Rear



❶ **GPIO 1/2 connector (D-sub 25 pin, female)**
For connecting to an external device.

For further details, refer to the "Installation Manual."

❷ **GPIO 3/4 connector (D-sub 15 pin, female)**
For connecting to an external device.

For further details, refer to the "Installation Manual."

❸ **IMB connector**
Used to connect to the projector with the supplied PCI express cable.

❹ **AUDIO CTRL connector (D-sub 9 pin, male)**
Used to control audio devices.

❺ **Fan Unit**
An exhaust fan.

❻ **Power unit (~)**
Connects with the power cord.

❼ **Power unit B mount**
For use with separately-sold expansion power units. With both power units A and B attached, each can be used as a redundant power source.
To connect a power unit, contact Qualified Sony Service Personnel.

❽ **SPARE connector (RJ-45 modular jack)**
For future expansions.

❾ **DATA connector (RJ-45 modular jack)**
Used to connect to a theater network (LAN) and allow linking and data transfer with other systems.
Be sure to use a CAT6 or above for the LAN cable.

❿ **CTRL connector (RJ-45 modular jack)**
Used to connect to a theater network (LAN) and allow linking and data transfer with other systems.
Be sure to use a CAT6 or above for the LAN cable.

⓫ **PRJ connector (RJ-45 modular jack)**
Used to connect to the projector's NETWORK connector with the supplied LAN cable.

⓬ **VGA connector (D-sub 15 pin, female)**
Used to connect to the touch panel monitor's VGA connector with the supplied VGA cable.

For connection instructions, refer to the "Installation Manual."

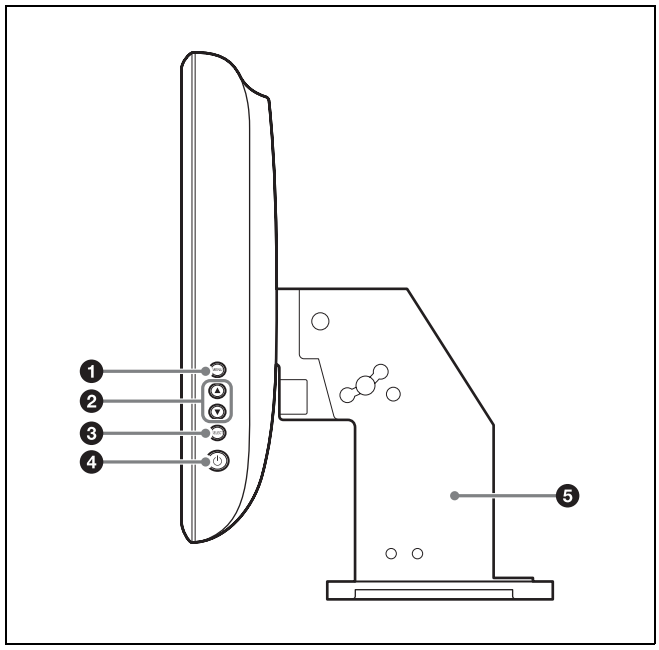
⓭ **TPC connector**
Used to connect to the touch panel monitor's TPC connector with the supplied USB cable.

For connection instructions, refer to the "Installation Manual."

⓮ **UPS connector**
Used to connect to an uninterruptible power supply (UPS).

Touch Panel Monitor LKRA-007

Right side



❶ **MENU switch**
Displays the menu.

❷ **▲ / ▼ switches**
Used for moving the menu and setting new values.

❸ **SELECT switch**
Used for selecting the menu and items.

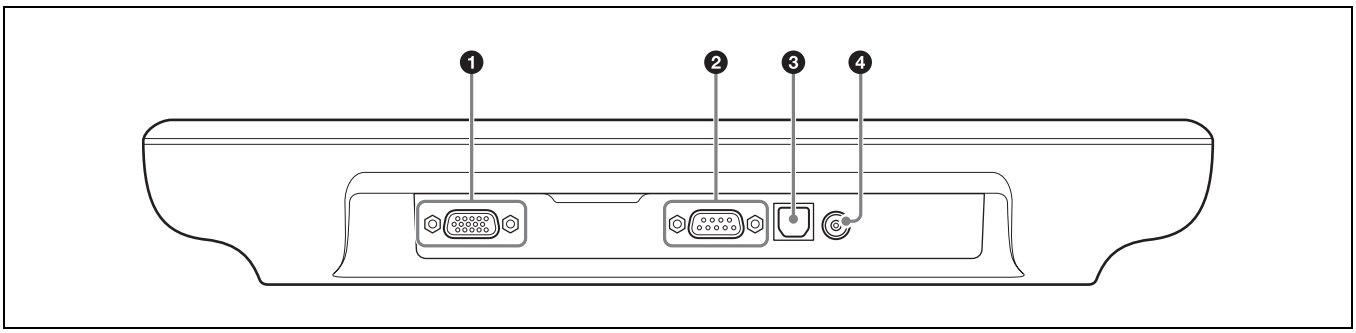
❹ **⏻ (Power) switch**
Press this to turn the power on.
Press this again to turn the power off.

Caution

- When turning the power on, do not touch the touch panel monitor screen. Doing so may prevent normal operations after start-up.
- When the power is on, do not remove the touch panel monitor cable.

❺ **Monitor stand**
This is equipped with a tilt mechanism.
The monitor's position can be adjusted in the up, down, left, and right directions.

Bottom



❶ **VGA connector (D-sub 15 pin, female)**
Used to connect to the server's VGA connector with the supplied VGA cable.

For connection instructions, refer to the "Installation Manual."

❷ **RS-232C connector (D-sub 9 pin, female)**
For service use.

❸ **TPC connector**
Used to connect to the server's TPC connector with the supplied USB cable.

For connection instructions, refer to the "Installation Manual."

❹ **Power input connector**
For connecting the supplied AC adapter.

Main Screen

❶ Auditorium number
If a computer is being used to control multiple auditoriums via a network, the auditorium numbers will be displayed. Touch the number to display the auditorium selection dialog box, and then select the auditorium to operate.

Caution

Multiple auditoriums can only be controlled via a network when a Web browser is used on a computer to operate this unit. Do not control multiple auditoriums using the touch panel monitor.

❷ Date display
Displays the current date (server date).

❸ Next SPL title for screening

❹ SPL playback status
Displays the SPL playback status using the same icons used for the playback control buttons.

For details on the buttons, see "CPL Playback Operations" (page 20).

❺ Current SPL title

❻ Progress bar
Displays the progress of the title currently being screened by CPL or SPL frames.

❼ Elapsed showing time
Displays an approximate time. Although there may be a slight discrepancy in the units depending on system conditions, this will not affect the actual screening.

❽ Time remaining until start of next SPL for screening

❾ Lamp status indicator / control button
Displays the status of the projector lamp.
When you tap the button, the "Projector Lamp Control" screen appears allowing you to operate the lamp.

❿ Job display button
Tap the button to switch to the "Job Status" screen in the [Library] tab.

⓫ Error display button
Displays the status of the device being controlled by the server.
When you tap the button, the "Error History" screen appears.

For details on the "Error History" screen, refer to the "Maintenance Manual."

Error: An error has occurred. (screening stops)
Warning: A non-fatal problem or error has occurred. (screening continues)
Normal: The status is normal.

⓬ **Login user name**
Displays the login user name.

⓭ **(Power) button**
This enables shutdown, or logout from the projection system. (page 13)

⓮ **Main menu**
This menu provides access to all the functions on this unit. The following menus are also available.
[Status]: Monitors the title being screened.
For details on how to read the status, see "To check installation/connections" (page 36).
[Schedule]: Creates a schedule. Manual playback can also be performed here.
See "Creating a Schedule" (page 25).
[SPL]: Creates an SPL (Show Playlist).
See "Creating an SPL" (page 21).
[Library]: Manage DCP (Digital Cinema Package) or KDM (Key Delivery Message).
See "Ingesting DCP" (page 14), and "Ingesting KDM" (page 17).
[Configuration]: Adjusts various settings.
For details on indicators, refer to the "Installation Manual."

⓯ **Playback mode display button**
Displays the playback mode.
Tap the button to switch the playback mode.
Manual: Playback is performed manually.
Scheduled: Playback is performed using a schedule. You can select the [Play Manually] checkbox to perform playback manually even in schedule mode.

⓰ **Version information**
Displays the version information of the projector.

⓱ **Projector information display**
Displays information about the projector.

See "Calling up Screen Adjustment Data" (page 19), "Manually Controlling Theater Facilities" (page 28).

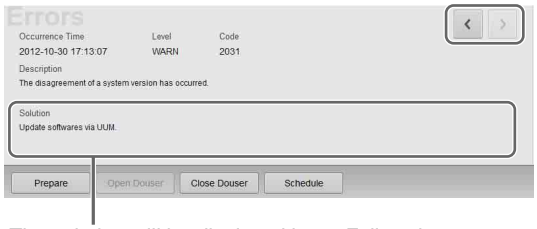
⓲ **Shortcut button**
Often-used functions are registered to this button. Tap the button to activate a function.

Note

The following operations can be carried out in [Prepare].
- Turn the lamp on
- Open the douser
- Cancel mute
- Cancel test pattern display

To register a function to the shortcut button, refer to the "Installation Manual."

⓳ **Error information display**
Displays the location and time an error occurred, an explanation of the error and a solution.
When an error occurs, refer to [Solution] on the lower left to deal with the problem.
When multiple errors or warnings have occurred, you can check the next or previous warning by tapping [>] or [<].



The solution will be displayed here. Follow the instructions to deal with the problem.

⓴ **Playback control button**
In manual playback mode, you can control playback.

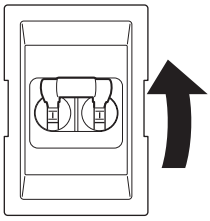
For details, see "CPL Playback Operations" (page 20).

Startup

When starting up the projection system, turn on the projector's main power first, and then start up the server and log in to the system.

Turning on the Projector's Main Power

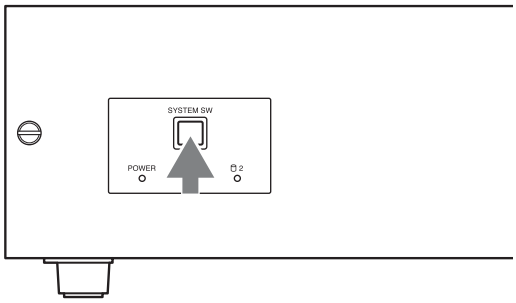
Move the projector's power switch on the rear to on (I) to turn on the power.



The power will turn on and the MAIN indicator and LAMP indicator will turn solid red when the projector enters standby mode.

Starting up the Server

Press the SYSTEM SW switch on the server's front to turn it on.



The POWER indicator will blink green, and after start-up is complete, it will turn solid green.
Once the server is on, the "Login" screen will be displayed on the monitor.

Caution

- Do not start up the server with a USB devise inserted in INGEST PORT1/2 connector on the front of the server. The USB device may not be recognized.
- When starting-up the server, do not touch the touch panel monitor screen. Doing so may prevent normal operations of the touch panel monitor after start-up.

Logging Into the System

Caution

It is necessary to pre-register as a user to log in to the projection system.

For further details, refer to the "Installation Manual."

1 Tap your own user name in the user list, and then tap the [Password] column.

A virtual keyboard for entering your password will be displayed.

2 Use the virtual keyboard to enter your password, and then tap [Enter].

If you make a mistake when entering your password, tap [BS] to delete the last character.
When the password is entered, it will be displayed masked above the keyboard.

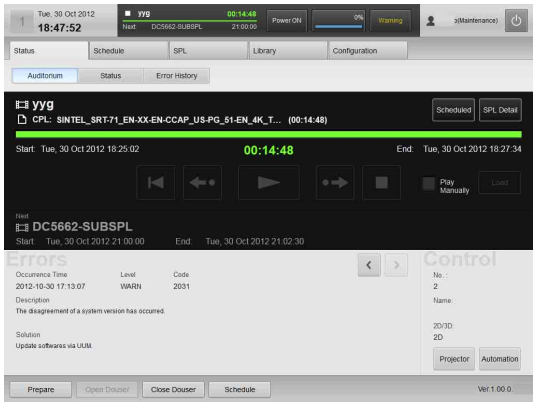
Notes

- Startup of the projection system will take some time. Startup processes for the server continue even after the user list appears. Lists, such as those for ingested CPLs, will not appear until the startup processing is complete.
- You can change your password.

See "To change your login password" (page 12).

The virtual keyboard will disappear, and asterisks (*) will be entered in the [Password] column.

3 Tap [Login].
Once you log in to the system, the “Status” screen will be displayed.

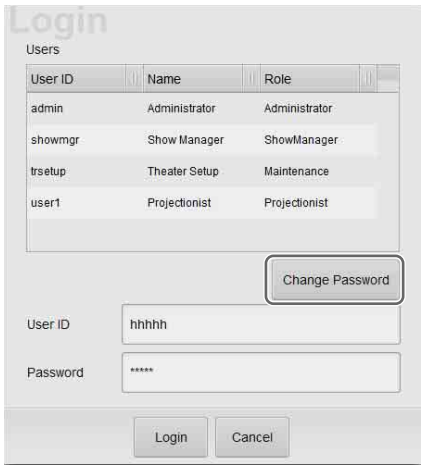


Proceed to “Starting the Projector” (page 13).

To change your login password

As a user, you can change your own password.

1 In the “Login” screen, tap [Change Password].
In the login screen, tap the area where the user name is displayed in the upper right of the screen to display the user name.



A screen for changing your password will be displayed.

2 Enter a new password, and then tap [OK].
Tap each field to display a virtual keyboard, and enter the necessary information.

A confirmation screen appears.

3 Tap [OK].

Your password will be changed.

Changing the login user

1 Tap  on the upper right of the screen.
The following screen will be displayed.

2 Select [Logout], and then tap [OK].

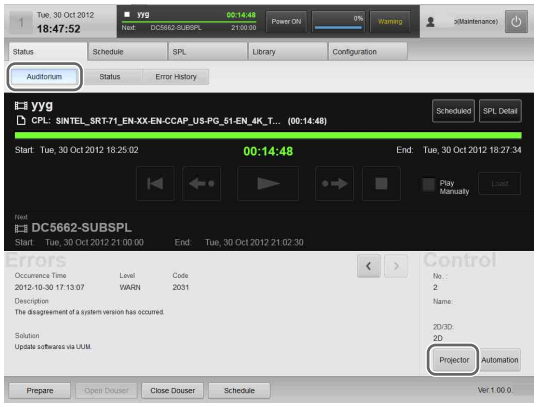
The login screen will be displayed.

3 Change the user and log in.

Starting the Projector

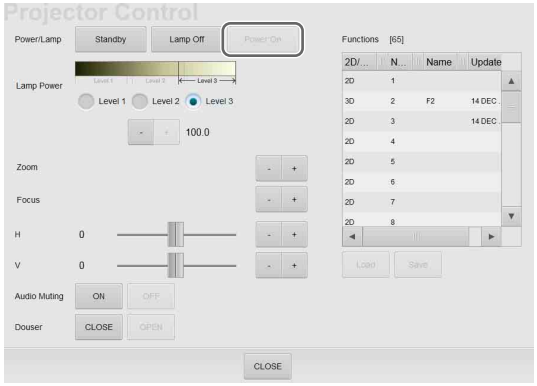
The projector can be started in the “Status – Auditorium” screen.

1 In the “Status” screen, tap [Auditorium], and then tap [Projector] in the [Control] pane.



The “Projector Control” screen will be displayed.

2 Tap [Power On] in [Power/Lamp].



The MAIN indicator on the rear of the projector will turn solid green, and the LAMP indicator will blink green.
Once the projector is on, the lamp will turn on, the LAMP indicator will turn from a blinking to solid green, and the three indicators (MAIN, LAMP, IMB) will be solid green.

3 Tap [Close] to close the “Projector Control” screen.

The above procedures complete preparations and confirmation for using the projection system.

Shutting Down the System

1 Tap on the upper right of the screen.
The following screen will be displayed.

2 Select [Shutdown], and then tap [OK].

The projection system will shut down.
The MAIN indicator and LAMP indicator on the rear of the projector will turn to blinking green while cooling. Once cooling is complete, the LAMP indicator will turn to solid red. Leave the system as it is at this point.

3 Once the MAIN and LAMP indicators turn solid red, and the IMB indicator begins blinking red, move the power switch to off (○) to turn off the power.

Caution

If, after shutdown, the power switch on the rear of the projector is not turned off and only the server is turned on, the IMB on the projector will not power on. If this happens, the IMB indicator will blink red. Turn the power switch off, and then turn the power on again.

Sequence of Operations

The sequence of operations from receiving distributed DCP to screening operations are shown below.

Starting up (page 11)
Starting up the projection system.

↓

Ingesting DCP (page 14)
Ingest distributed DCP to the server.

↓

Ingesting KDM (page 17)
When DCP is encrypted, ingest the KDM (encryption key file) necessary for playback.

↓

Playing Back CPL (page 19)
Call up screen adjustment data and play back CPL to confirm.

↓

Creating an SPL (page 21)
Create an SPL to screen DCP in an auditorium.

↓

When screening via manual operations

Playing Back a SPL (page 25)
Select an SPL to screen.

When using a screening schedule

Creating a Schedule (page 25)
Create a schedule to automatically screen titles.

Ingesting DCP

This procedure ingests DCP, such as the main feature to be screened, or previews, to the server.

Notes

- When DCP is encrypted, the KDM encryption key file is necessary.
- Depending on the USB HDD type being used, the following messages may be displayed on the center of the screen. These do not indicate problems.
  “Unable to mount Audio Disc”
  “Unable to mount Utility_**USB HDD model number**”

For details on ingesting KDM, see “Ingesting KDM” (page 17).

Note

When importing (ingesting) DCP or KDM it is not necessary for the projector lamp to be lit, however, the power switch must be set to ON.

DCP can be ingested in the following ways.
- Ingesting from HDD via USB Connector (page 14))
- Ingesting from HDD via CRU DATAPORT (page 16)
- Ingesting via Network (page 16)

Ingesting from HDD via USB Connector

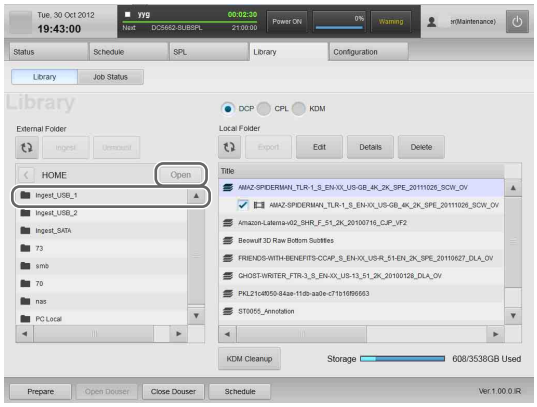
Caution

Do not start up the server with a USB devise inserted in INGEST PORT1/2 connector on the front of the server. The USB device may not be recognized.

1 Connect the HDD containing the DCP to the server’s INGEST PORT 1/2 connector.

2 Tap the [Library] tab, and then tap [Library].
The “Library” screen will be displayed.

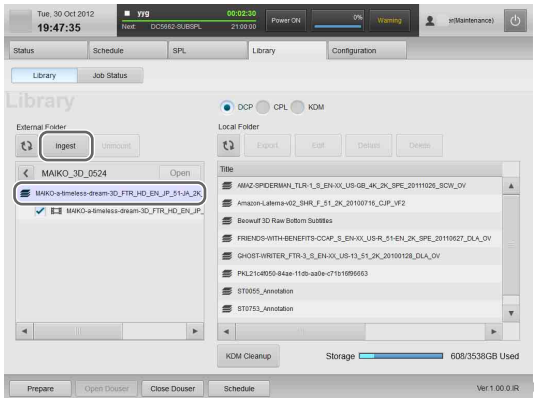
3 In the [External Folder] pane, select the following terminals connected to the HDD, and then tap [Open].
- When connected to INGEST PORT 1 terminal, select [Ingest_USB_1].
- When connected to INGEST PORT 2 terminal, select [Ingest_USB_2].



The content inside the HDD connected to INGEST PORT 1/2 will be displayed.
However, folders with the following character strings (regardless of case) will not appear.

bin, boot, dev, etc, home, initrd, lib, misc, opt, proc, root, sbin, selinux, srv, tmp, sys, usr, var

4 Select the DCP ( ) to ingest, and then tap [Ingest].



Notes

- Select the CPL ( ) within DCP and tap [Ingest] to ingest the selected CPL only as new DCP.
- To refresh the displayed content, tap .

The selected DCP will be ingested into the server.
Tap [OK] to close the message.

5 To continue ingesting multiple DCPs, repeat step **4**.
The DCP ingest request will be registered as the following job.

6 After DCP has been ingested, select the following terminals connected to the HDD, and then tap [Unmount].

- When connected to INGEST PORT 1 terminal, select [Ingest_USB_1].
- When connected to INGEST PORT 2 terminal, select [Ingest_USB_2].

You can now safely remove HDDs.

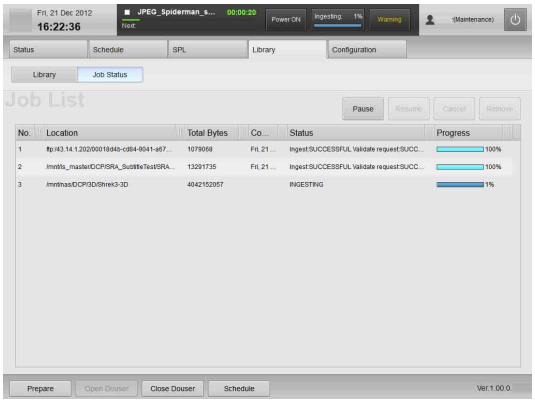
How to export ingested DCP

1 In the [External Folder] pane, select the export destination.

2 In the [Local Folder] list, select a DCP to export, and then tap [Export].

How to confirm progress of ingesting/ exporting DCP

You can check the progress and status of the ingestion process in the [Library] tab of the “Job Status” screen.



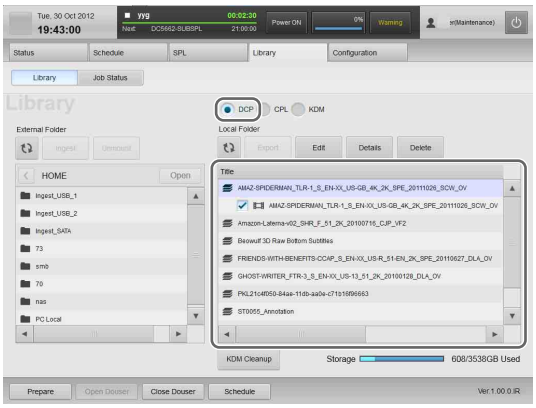
The following operations are available for each button in the [Job List] pane.
[Pause]: Suspends jobs
[Resume]: Reopens jobs
[Cancel]: Cancels jobs in progress.
[Remove]: Deletes jobs

Note

When a job has been paused, tap [Resume] to resume that, and any other jobs.

To check ingested DCP

Ingested DCP can be checked in the “Library” screen’s [Local Folder] list.
Select [DCP] to display DCP ingested to the server in a list in the [Current Auditorium] pane.



Other operations for ingested DCP

The following operations are available for each button in the [Local Folder] list.
[Edit]: The name of the selected DCP can be changed.
[Detail]: Detailed information on the selected DCP will be displayed.
[Delete]: The selected DCP can be deleted.

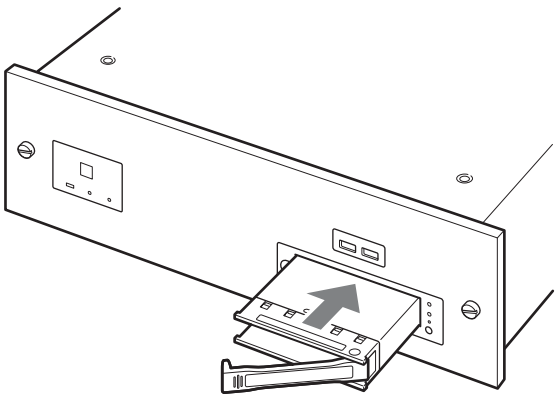
Note

To refresh the displayed content, tap .

Ingesting from HDD via CRU DATAPORT

A CRU DATAPORT carrier is necessary to use the CRU DATAPORT. For further details, contact Qualified Sony Service Personnel.

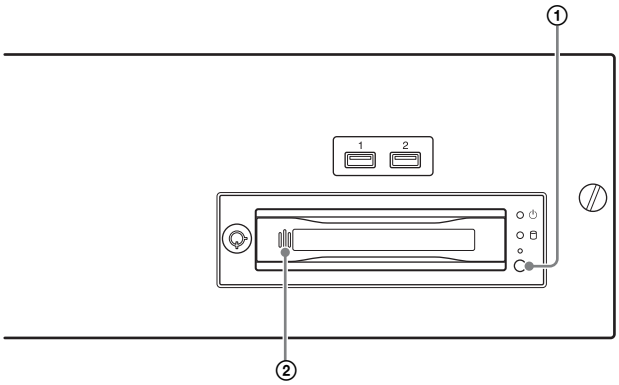
1 Insert the HDD containing DCP to the server’s CRU DATAPORT.



2 For further instructions, follow steps **2** to **6** in “Ingesting from HDD via USB Connector” (page 14) to ingest DCP.
In step **3** and **6**, select [Ingest_SATA] in the [External Folder] pane.

To remove the HDD

Perform the following to remove the HDD.



① Press the power button.
The LED blinks for a moment and then turns off.

② Verify that the LED is off, push the left side of the handle, and remove the HDD.

Ingesting via Network

DCP stored on another server can be ingested via network.

Caution

To ingest DCP via network, it is necessary to register the source device ahead of time.

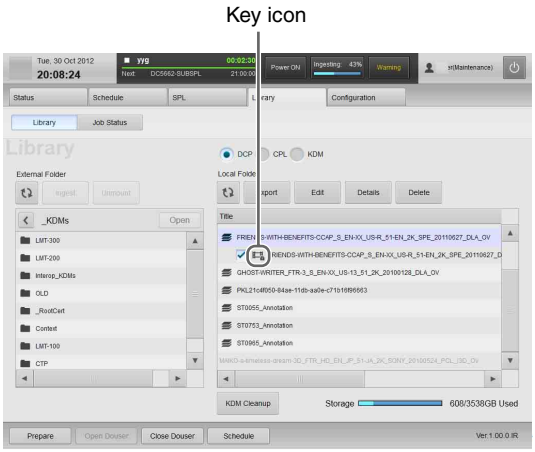
For further details, refer to the “Installation Manual.”

To ingest DCP, follow steps **2** to **5** in “Ingesting from HDD via USB Connector” (page 14).
In step **3**, select the source device in the [External Folder] pane.

Ingesting KDM

When DCP is encrypted, it is necessary to also ingest the KDM encryption key file to the server.

When DCP is encrypted, a key icon will be displayed on any CPL containing DCP.
DCP can be opened in the “Library” screen.



KDM can be ingested in the following ways.
- Ingesting from a USB Flash Drive (page 17)
- Ingesting from a Network Folder (page 18)

Ingesting from a USB Flash Drive

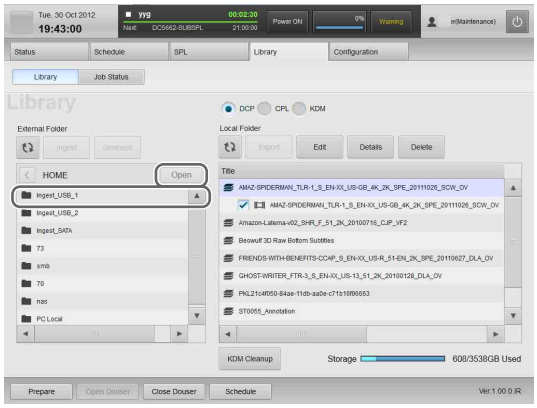
Caution

Do not start up the server with a USB devise inserted in INGEST PORT1/2 connector on the front of the server. The USB device may not be recognized.

1 Connect the USB flash drive containing the KDM to the server’s INGEST PORT 1/2 connector.

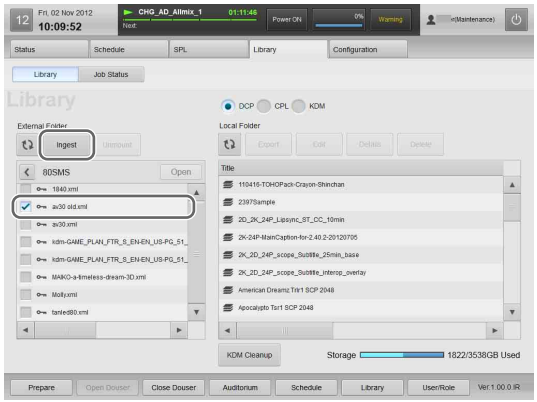
2 Tap the [Library] tab, and then tap [Library].
The “Library” screen will be displayed.

3 In the [External Folder] pane, select the following terminals connected to the USB memory device, and then tap [Open].
- When connected to INGEST PORT 1 terminal, select [Ingest_USB_1].
- When connected to INGEST PORT 2 terminal, select [Ingest_USB_2].



The content on the USB memory device connected to INGEST PORT 1/2 will be displayed.

4 Select the KDM ( ) to import, and then tap [Ingest].



Note

To refresh the displayed content, tap .

The selected KDM is ingested to the server.
Tap [OK] to close the message.

5 Confirm that the ingested KDM has been applied to the DCP.

For further details, see “To confirm that KDM has been applied” (page 18).

Note

You can ingest KDM from the CRU DATAPORT. For instructions, see steps **1** to **2** in “Ingesting from HDD via CRU DATAPORT” (page 16), and steps **1** to **4** in “Ingesting from a USB Flash Drive” (page 17). For steps

on how to remove an HDD, see “To remove the HDD” (page 16).

Ingesting from a Network Folder

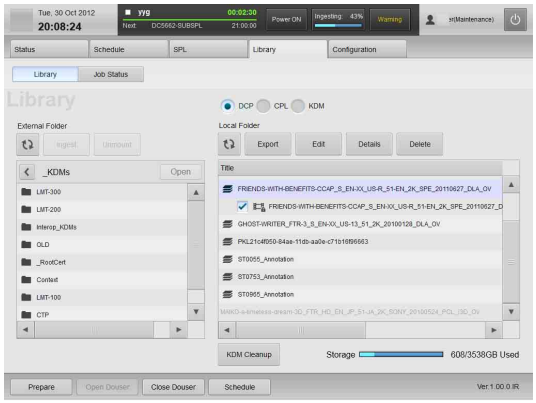
If a KDM is copied to a preset network folder, it will be automatically ingested.

For details on network folder settings, see the “Installation Manual”.

Execute the following steps to ingest to a network folder that has not been set.

1 Tap the [Library] tab, and then tap [Library].
The “Library” screen will be displayed.

2 Select a network folder, select the KDM you want to ingest, and then tap [Ingest].



The selected KDM is ingested to the server.
Tap [OK] to close the message.

3 Check that the ingested KDM has been applied to the DCP.

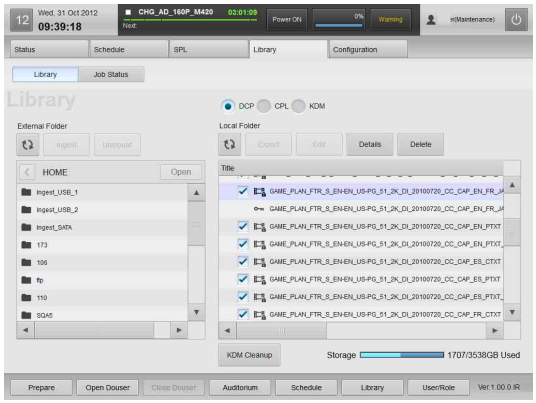
For details on operations, see “To confirm that KDM has been applied” (page 18).

To confirm that KDM has been applied

Confirm that the ingested KDM has been applied to the CPL.

1 In the [Library] tab’s “Library” screen, tap .
The displayed content will be refreshed.

2 Tap the desired DCP to open it and confirm that the ingested KDM is displayed underneath the applicable CPL.
When KDM has not been ingested, “No Key” will be displayed.



To confirm the KDM time limit

After selecting the KDM radio button in the “Library” screen, select a KDM in the [Local Folder] pane, select a KDM to check, and then tap [Detail] to check the period of validity.

Deleting unnecessary KDM files

Tap [KDM Clean up] to delete KDM that are not related to DCP.

Playing Back CPL

Play back CPL within a DCP.

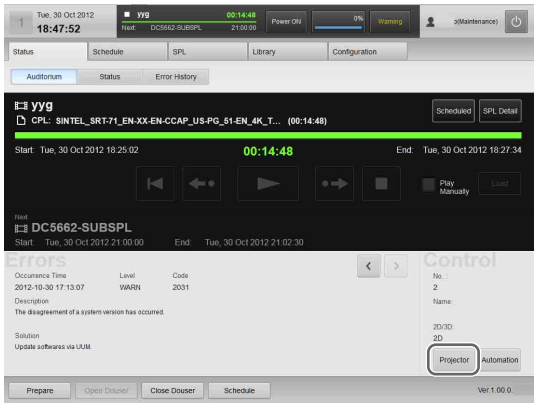
Calling up Screen Adjustment Data

Depending on the content's signal classification (2D/3D, viewing angle (HD/scope/flat)) for playback, screen adjustment data can be called up when registered in the function memory. Settings such as 2D/3D mode, zoom ratio, and brightness are recorded in the adjustment data.

For details on the function memory or adjustment data, refer to the "Installation Manual."

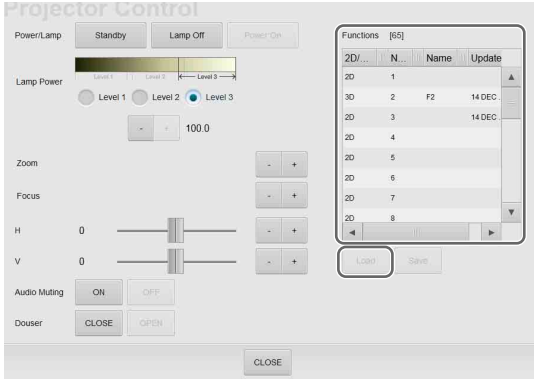
1 Tap the [Status] tab, and then tap [Auditorium]. The "Auditorium" screen will be displayed.

2 Tap [Projector] in the [Control] pane.



The "Projector Control" screen appears.

3 Select the adjustment data appropriate to the content from the [Function] list, and then tap [Load].

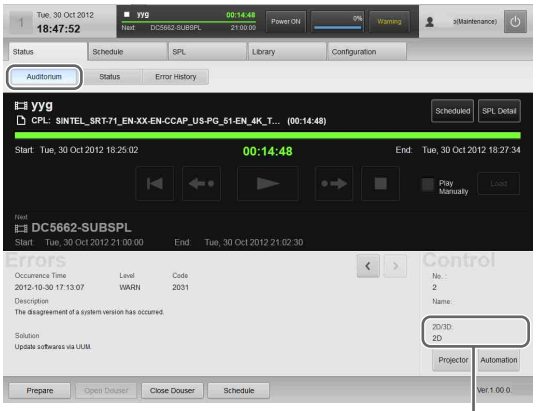


The adjustment data will be loaded into the projector.

4 Tap [CLOSE] to close the screen.

Note

It is necessary to have a 2D lens mounted on the projector, and for screening of 3D content, it is necessary to have a 3D lens mounted on the projector. Showing of 2D content is possible with either a 2D or 3D lens.
The lens mounted on the projector can be checked in the "Status" tab's "Auditorium" screen.



Information based on Function settings currently loaded will be displayed.

For details on how to change the lens, see "Attaching and Removing the Lens" (page 29), and "Replacing the Lens Using the Lens Change Table" (page 31).

Procedures for fine-tuning adjustment data

The following operations are available for each button in the "Projector Control" screen.

*For details on how to open the "Projector Control" screen, see steps **1** to **2** in "Calling up Screen Adjustment Data" (page 19).*

[Lamp Power]: You can adjust the screen brightness
[Zoom]: Adjusts the screen size (for 2D lenses only)
[Focus]: Adjusts the screen focus (for 2D lenses only)
[H]: Adjusts the horizontal position of the screen (for 2D lenses only)
[V]: Adjusts the vertical position of the screen (for 2D lenses only)

Caution

If you tap [Save], the function being loaded will be overwritten with the current setting value in the Function number selected in the list.

Selecting a CPL

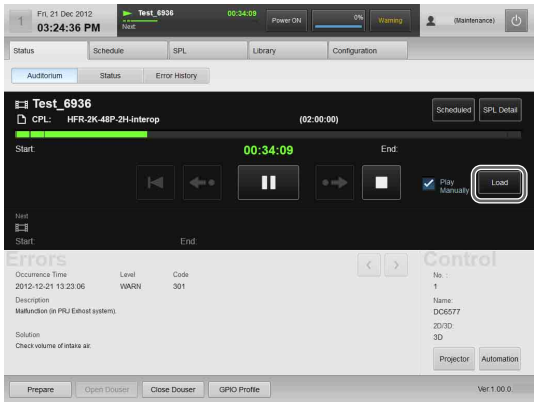
Select a CPL for playback.

Notes

- When in Schedule Playback mode, tap [Scheduled] or [Manual] (the display will change) to set to Manual mode, or select the [Play Manually] check box. [Play Manually] is convenient for temporary playback of tests while in Schedule Playback mode.

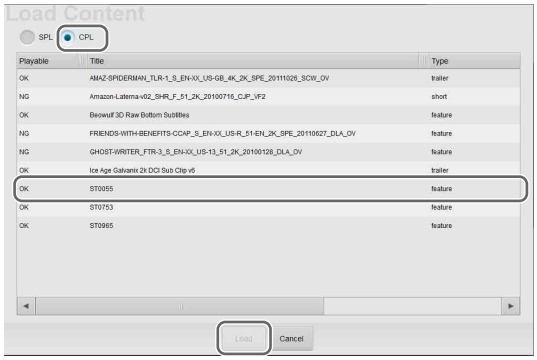
- When [Play Manually] is selected and the manual playback and scheduled playback overlap, the content played back last will take priority.

1 In the [Status] tab's "Auditorium" screen, and then tap [Load].

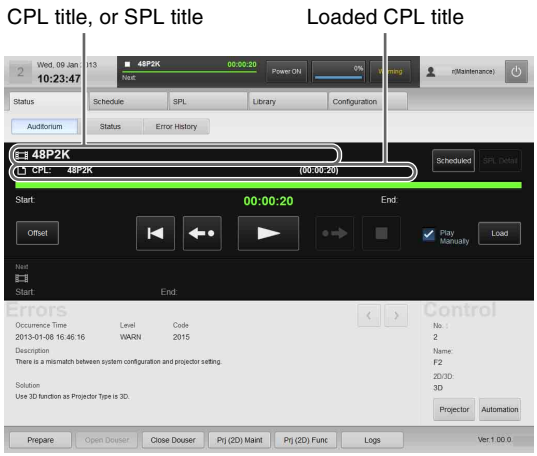


The "Load Content List" screen will be displayed.

2 Select [CPL] to display the "CPL" list, select a CPL for playback, and then tap [Load].

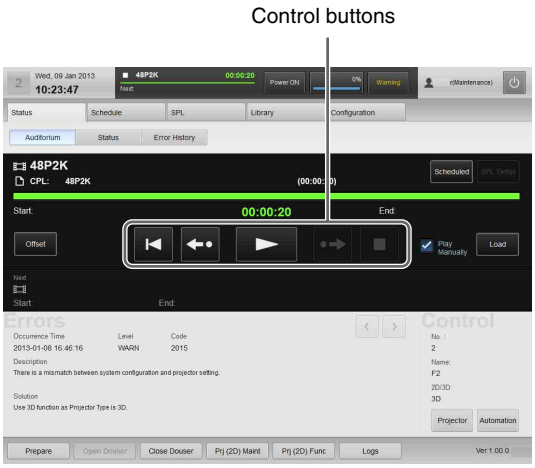


The selected CPL will load, and will be displayed in the "Auditorium" screen.



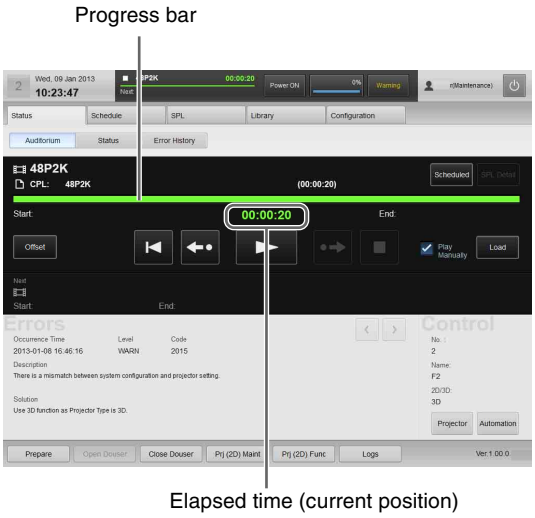
CPL Playback Operations

Using buttons in the "Auditorium" screen, CPLs can be played back, paused, or cued to a certain position, and they can be checked for missing files or damaged tracks.



Control buttons	Description
(Play back from the beginning)	Plays back the CPL from the beginning. This button is displayed while content is paused.
(Playback will start from the previous 30 seconds.)	The playback position will rewind 30 seconds and playback will begin. This button is displayed while content is paused. When the elapsed time does not total 30 seconds, playback will start from the beginning.
(Pause)	Pauses playback. This button is only displayed during playback. While paused, the last displayed frame will remain on the screen.
(Play)	Plays back a CPL. This button is displayed while content is paused or stopped.
(Playback will start from the previous 5 minutes in advance.)	The playback position will advance 5 minutes and playback will begin. This button is displayed while content is paused. When the current remaining time is more than 30 seconds, but less than 5 minutes, you can tap this button to play back the final 30 seconds of Duration. When the remaining time is less than 30 seconds, playback will start from the stop location.
(Stop)	Stops playback. This button is displayed during playback.

During CPL playback, the playback progress is displayed on the progress bar.



Creating an SPL

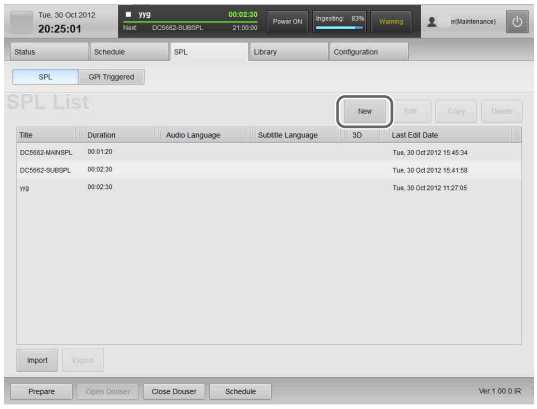
Create an SPL to show DCP in an auditorium.
In an SPL, the screening order of a CPL for a single screening, and automatic controls for theater facilities during a screening are defined.

Creating an SPL

Create a new SPL.
In addition to CPLs, you can add cues such as completed SPLs and lighting controls to an SPL.

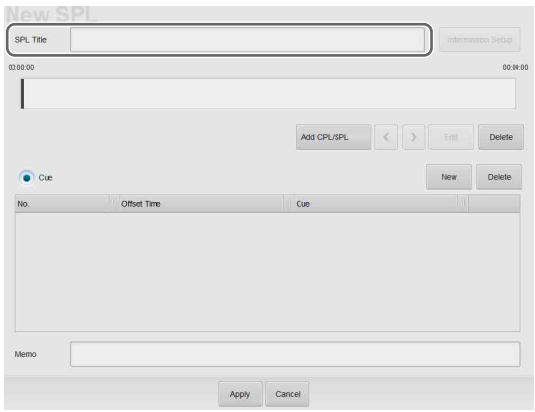
1 Tap [SPL] in the [SPL] tab.
The “SPL List” screen will be displayed.

2 Tap [New].



The SPL setting screen will be displayed.

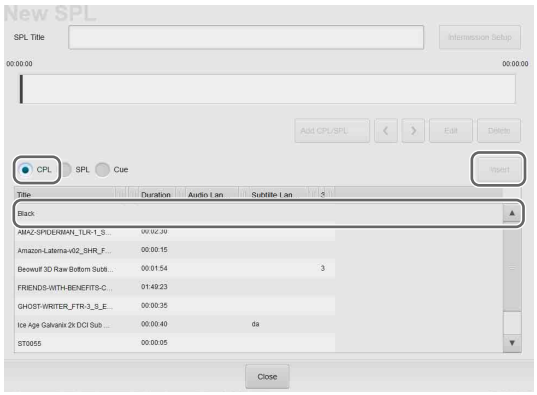
3 Enter the SPL title in [SPL Title].
You can enter up to 128 alphanumeric characters and symbols, excluding quotation marks (").



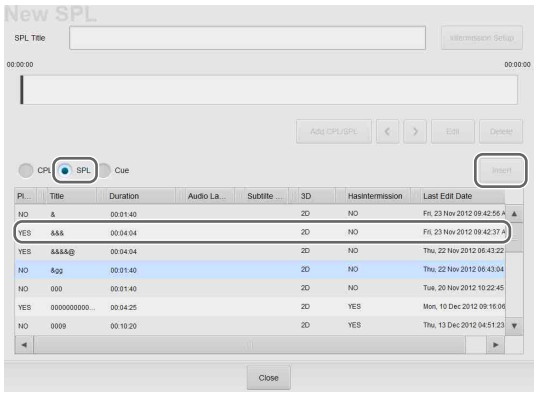
4 Tap [Add CPL/SPL].
The SPL/CPL/Cue list will be displayed.

5 Select [CPL], select the CPL from the list that you want to add to the SPL, and then tap [Insert].

To insert in a black screen (Black), select “Black” and then tap [Insert]. Next, set the time for the black screen (Black), and then tap [Apply].



6 To add the completed SPL to an SPL, select [SPL], select the SPL from the list that you want to add, and then tap [Insert].



Notes

- List operations can be carried out with the following buttons.
  [<] / [>]: Changes the CPL or SPL order
  [Delete]: Deletes the selected CPL or SPL
  [Edit]: Changes the length of the black screen (Black) when that option is selected
- You can insert a CPL or SPL and change the order by dragging and dropping the CPL or SPL.
- Up to about 10 CPLs or SPLs should be inserted in a single SPL. If you want to create an SPL that includes more than 10 CPLs, create SPLs that include about 10 CPLs each, and then combine the SPLs.
- Continuing black screens (Black) will be automatically merged into a single black screen (Black) with a total length of all screens combined. Caution: When a CPL or SPL is deleted using [Delete], and black screens (Black) exist at both ends of the CPL or SPL, they will be automatically merged.
- If you want to replace a registered CPL or SPL, insert a CPL or SPL to replace and then delete the registered CPL or SPL.

7 Tap [Close] to close the list.
The added content will be displayed.

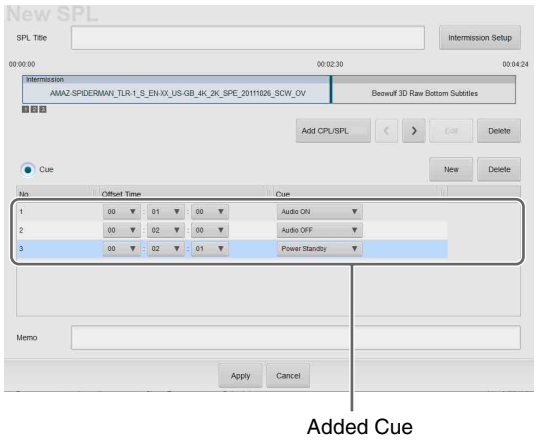
Caution

The Cue and the CPL inserted in the added SPL will not be displayed.

8 To insert control cues for lights and other theater facilities in an SPL, tap [New].
When configuring events (Cues) of multiple GPIO pulse types to the SPL, place them so that they are longer than the pulse intervals.

A Cue will be added to the list.

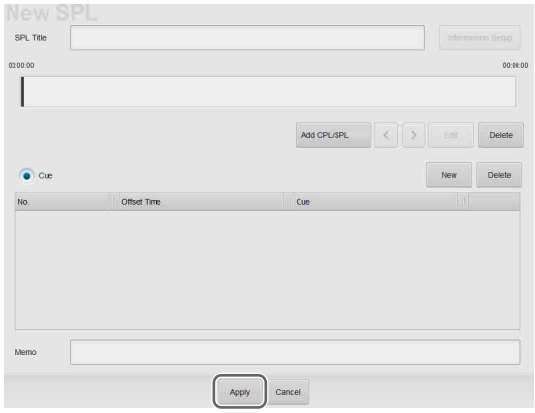
9 Select the insertion time and type of Cue.
To delete the inserted Cue, tap [Delete].



Caution

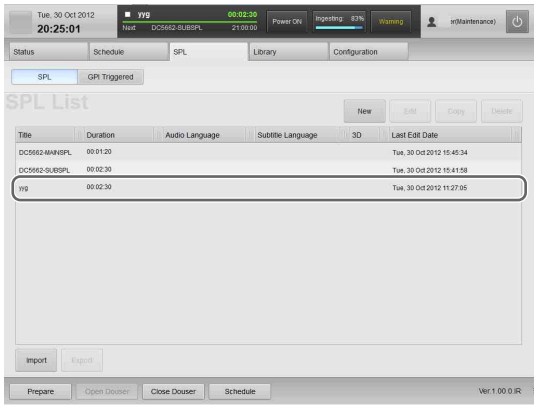
When a Cue has been inserted, you should check to see that the Cue is executed before screening content.

10 Adjust the settings, and tap [Apply].



To set an intermission, see “Setting an Intermission in the SPL” (page 23).

The setting will be saved and added to the SPL list.



To change the content of an SPL

Select the SPL you want to change from the SPL list and tap [Edit]. The SPL setting screen will be displayed, and you can change the content there.

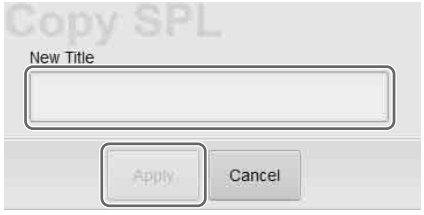
For further details, see step ***9*** *in "Creating an SPL" (page 21).*

To copy an SPL

You can copy the content of a SPL, add a different title, and use it to create a new SPL.

1 In the SPL list, select the copy source, and then tap [Copy].
The following screen will be displayed.

2 Enter the SPL title, and then tap [Apply].



The SPL will be created.

To delete an SPL

In the SPL list, select the SPL you want to delete, and then tap [Delete]. Once the confirmation message is displayed, tap [OK] to delete the SPL.

Procedures for importing/exporting SPL

You can import and use an SPL that was created on another projection system, and export schedules created on the current projection system.

Note

SPL import and export can only be performed from a computer.

Exporting an SPL

Select the SPL and click [Export]. When the download screen of the browser appears, save the file.
Normally, the file is saved to the downloads folder. After downloading is complete, we recommend renaming the file to a name that is easy to remember.

Importing an SPL

Click [Import]. When the upload screen of the browser appears, select the SPL file and click [Open].

Note

When you click [Import], a dialog will be displayed.

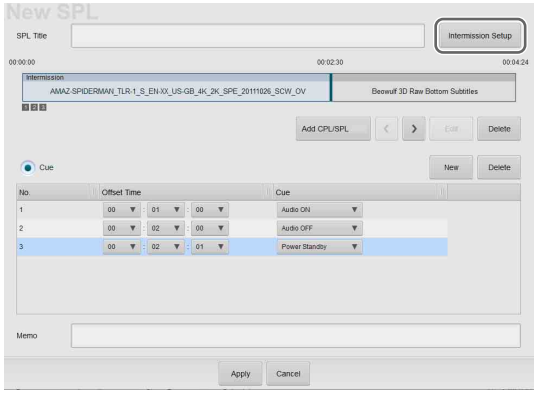
- To assign a new UUID when importing an SPL, select "New SPL UUID".
- To use the same UUID as when exporting, select "Old SPL UUID".
- When importing an SPL that contains a Sub SPL, select "Old SPL UUID" and import the Sub SPL first.

Setting an Intermission in the SPL

You can set an intermission anywhere in the CPL registered to the SPL.
To set an intermission, insert the intermission at the desired position while playing back the CPL.

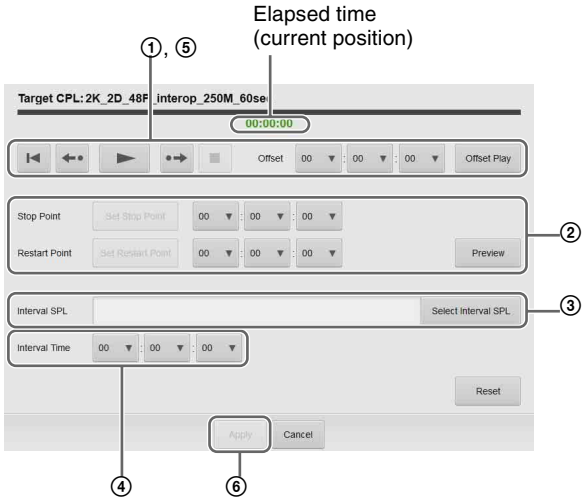
1 In the SPL list, select the SPL you want to add an intermission to, and then tap [Edit].
The SPL setting screen will be displayed.

2 Tap [Intermission Setup].



The intermission setting screen will be displayed.

3 Set the intermission.



① Set the position where you want to insert the intermission.
Using the operation buttons, play back the CPL and tap [Set Stop Point] at the position you want to add the intermission. Similarly, tap [Set Restart Point] where you want to restart playback.
The set time will be entered in ② [Stop Point] and [Restart Point].

For an explanation of how to use the control buttons, see "CPL Playback Operations" (page 20).

② Adjust the time as required.

③ Tap [Select Interval SPL] and select the SPL to play during the interval period (Interval SPL).

④ Specify the interval period.

⑤ Using the control buttons, play back the CPL to confirm intermission operation.

⑥ Tap [Apply].

The intermission will be set.

Note

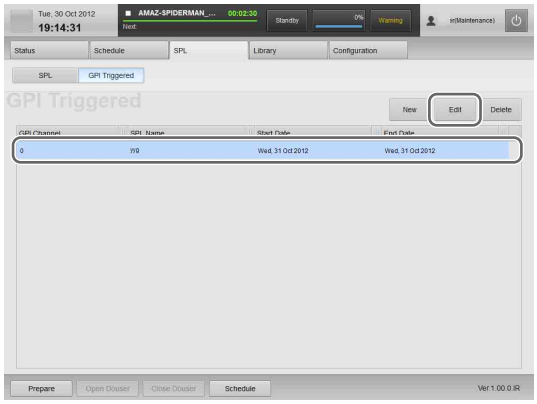
Only one intermission can be set per SPL.

Triggering SPL Playback Using GPI Signals

You can use a GPI signal as a trigger to start playing back an SPL.

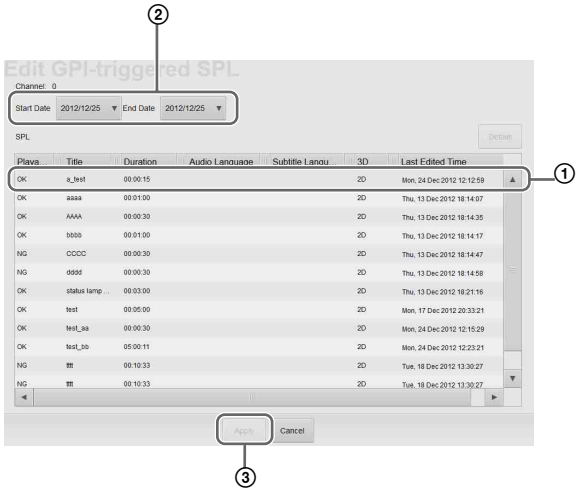
1 Tap [GPI Triggered] in the [SPL] tab.
The "GPI Triggered" screen will be displayed.

2 Select the GPI signal, and then tap [Edit].



The "Edit GPI-triggered SPL" screen will be displayed.

3 Specify the duration for which playback is enabled.



① Select the SPL for which to start playback.

② Determine the duration for which this playback will be enabled, and change the start and end dates.

③ Tap [Apply].

Note

[Details] to display detailed information on the selected SPL.

Playing Back a SPL

Play back a created SPL.
This section describes steps for manual playback of SPLs.

For instructions on how to create a screening schedule, see “Creating a Schedule” (page 25).

Selecting an SPL

Notes

- When in Schedule Playback mode, tap [Scheduled] or [Manual] (the display will change) to set to Manual mode, or select the [Play Manually] check box. [Play Manually] is convenient for temporary playback of tests while in Schedule Playback mode.
- When [Play Manually] is selected and the manual playback and scheduled playback overlap, the content played back last will take priority.

Select an SPL for playback in the [Status] tab’s “Auditorium” screen.
Operations are the same as for selecting a CPL.

See “Selecting a CPL” (page 19).

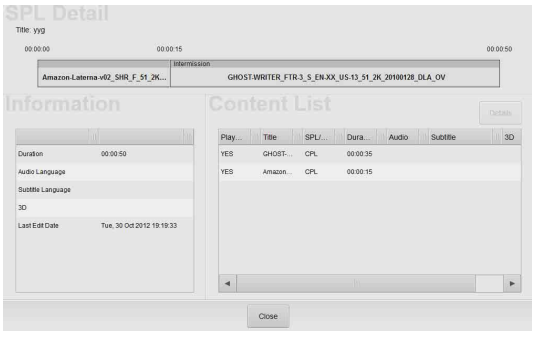
SPL Playback Operations

Using buttons in the “Auditorium” screen, SPLs can be played back, paused, or cued to a certain position.
Operations are the same as for CPL playback.

See “CPL Playback Operations” (page 20).

To check the detailed information of an SPL

In the “Auditorium” screen, tap [SPL Detail] to check detailed information on the currently loaded SPL.



Creating a Schedule

The schedule is a function that allows you to automatically play back an SPL at a set time.

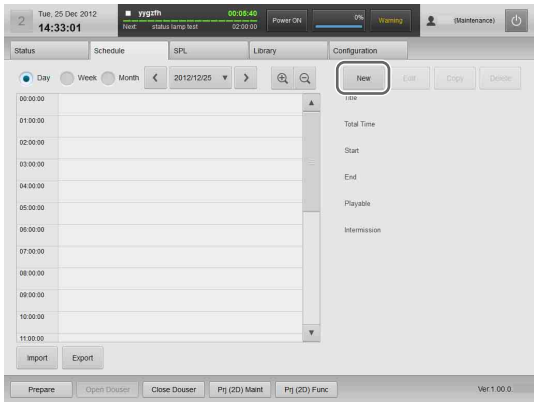
Note

For scheduled playback, it is necessary to tap [Scheduled] / [Manual] (the display will change) in [Status] tab’s [Auditorium] and select [Scheduled].

Creating a Schedule

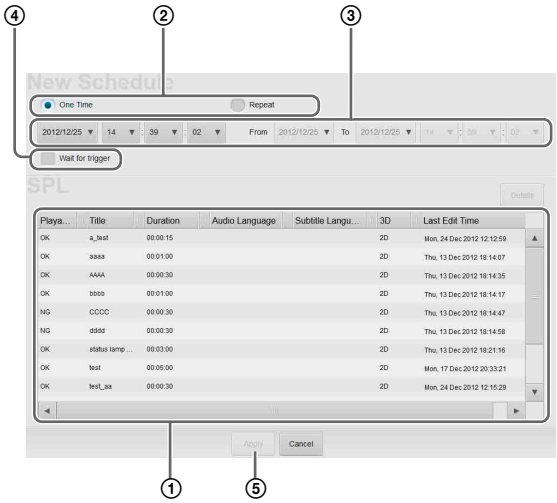
1 Tap the [Schedule] tab.
The “Schedule” screen will be displayed.

2 Tap [New].



The schedule setting screen will be displayed.

3 Set the schedule.



① Select the SPL from the SPL list that you want to set to the schedule.
To check detailed information on the SPL, select an SPL and tap [Detail].

② Select whether the schedule is a one-time event, or repeating.
To set a one-time event, select [One Time], and to create a repeating schedule, select [Repeat].

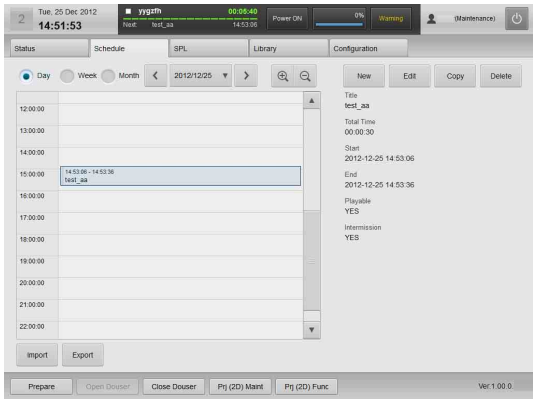
③ Set a date to execute the schedule.
- When [One Time] has been chosen, set the date to execute the schedule.
- When [Repeat] has been chosen, set the time period to execute the schedule.

④ Add a check mark to receive triggers (notifications) from other systems, to begin playback, and coordinate with other systems.

For information on triggers, refer to the "Installation Manual."

⑤ Tap [Apply].

The schedule will be saved and reflected in the "Schedule" screen.



4 Repeat step **3** to set another schedule in a different time slot.
As preparation for each CPL showing may take several seconds, the show durations for SPLs that include multiple CPLs may be longer than expected (As a guideline, "Number of CPLs × 6"). As a result, such shows may not finish before the scheduled start time of the next show, depending on the content. In such cases, the next show will not start.

Notes

- The same processing will be applied whether [Week] or [Month] is selected.
- Schedules can be moved via drag-and-drop, however, this option is not available when [Month] is selected.
- When using the unit with a connected computer, it is necessary to match the computer's regional and time settings with the regional and time settings of this unit. For details on settings, refer to your computer manual.

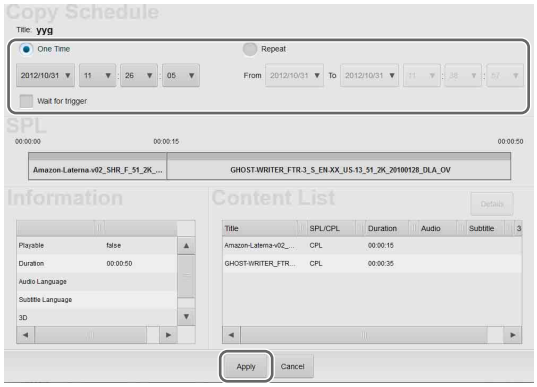
To copy schedules

You can copy a set schedule to another time slot.

1 In the "Schedule" screen, select a source schedule to copy, and then tap [Copy].
The following screen will be displayed.

2 Set the copy destination and then tap [Apply].

For details on setting items, see "Creating a Schedule" (page 25).



The schedule will be copied.

Importing/Exporting Schedules

You can import and use a schedule that was created on another projection system, and export schedules created on the current projection system.

Notes

- For schedule import and export, operations are only available from a computer.
- Import the necessary SPL before importing schedules.

To import schedules

1 In the bottom left of the "Schedule" screen, tap [Import].
The file selection screen appears.

2 Select the schedule file to import, and tap [OK].
The schedule will be imported, and it will be displayed on the "Schedule" screen.

To export schedules

1 In the bottom left of the "Schedule" screen, tap [Export].
The "Schedule Export" screen will be displayed.

2 Select a schedule period to export, and then tap [Apply].

The schedule file is exported.
Schedule files are normally stored in the downloads folder. After downloading is complete, we recommend renaming the file to a name that is easy to remember.

Projecting Images Using an External Playback Device

Images can be projected on a screen from a playback device connected to the projector.

1 Connect the external playback device to the projector's HDMI IN 1/2 connector.

2 Call up the adjustment data for the external playback device registered to function memory.

For details on how to call up the adjustment data, see "Calling up Screen Adjustment Data" (page 19).

Note

It is necessary to create an HDMI input function memory beforehand.

3 Project the images on an external playback device.

Note

Audio signals included in HDMI cannot be output from the audio output connector of this unit.

Manually Controlling Theater Facilities

Using touch panel monitor controls, you can control various theater facilities, such as opening and closing the curtain, and controlling the lights.
It is necessary to make some initial connections and adjust settings to control theater facilities.

For further details, refer to the "Installation Manual."

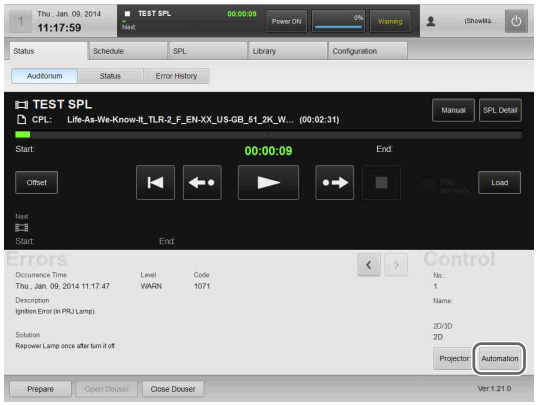
Note

You can also register theater facility controls to the SPL to automatically execute them.

For further details, see "Creating an SPL" (page 21).

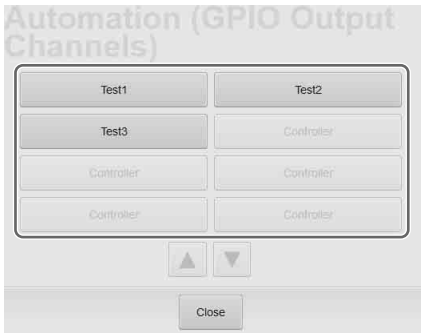
1 Tap the [Status] tab, and then tap [Auditorium].
The "Auditorium" screen will be displayed.

2 Tap [Automation] in the [Control] pane.



The following screen will be displayed.

3 Tap the button for the control you want to execute.



The control will be executed.

4 Tap [Close] to close the screen.

Attaching and Removing the Lens

This section describes how to attach and remove the lens using illustrations of 2D lenses, however, the steps are the same for 3D lenses.

Before changing the lens

The projection system must be shut down, and the projector switch must be set to OFF before changing the lens.

Caution

Changing the lens while the power is on may damage the projector.

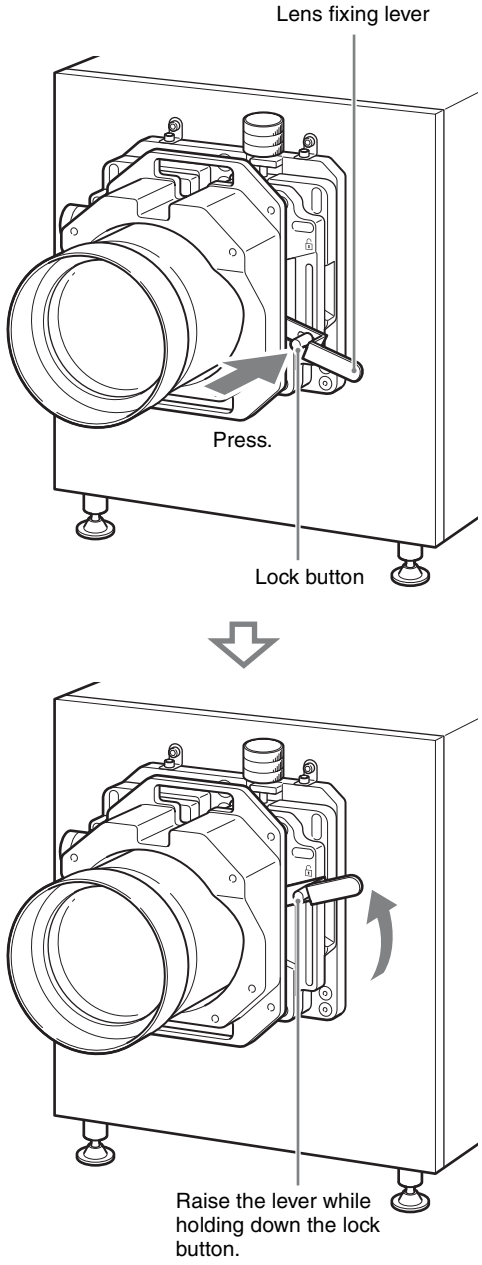
1 Shut down the projection system.

2 Move the projector power switch to the OFF position.

For detailed steps, see "Shutting Down the System" (page 13).

Removing the Lens

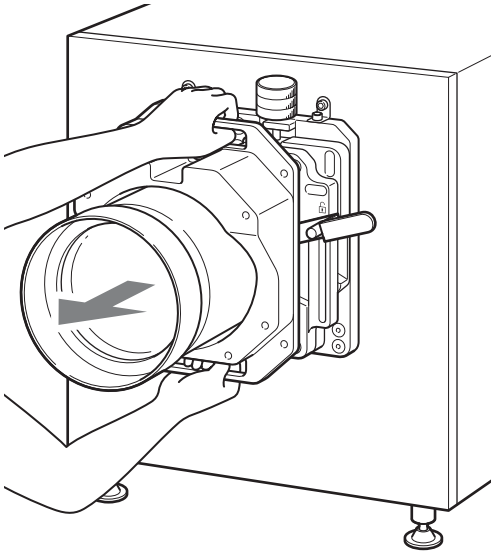
1 Press the lock button all the way, and after the lock is released, press and hold the lock button and lift the lens fixing lever toward 🔓.



Caution

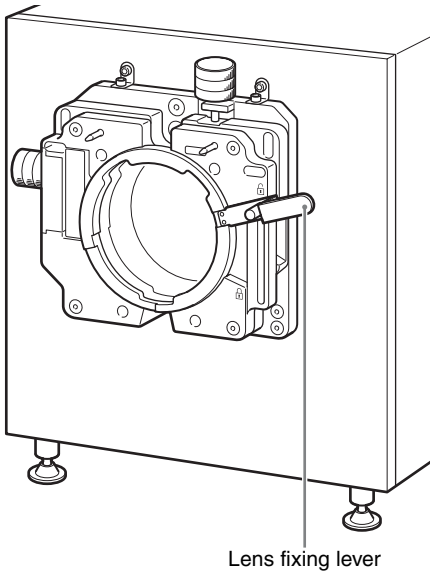
If you lift the lever without pressing the lock button, the lock button and lever will be damaged. Be sure to press the lock button and make sure the lock is released before lifting the lever.

2 Remove the lens from the projector while firmly holding the lens not to drop it.

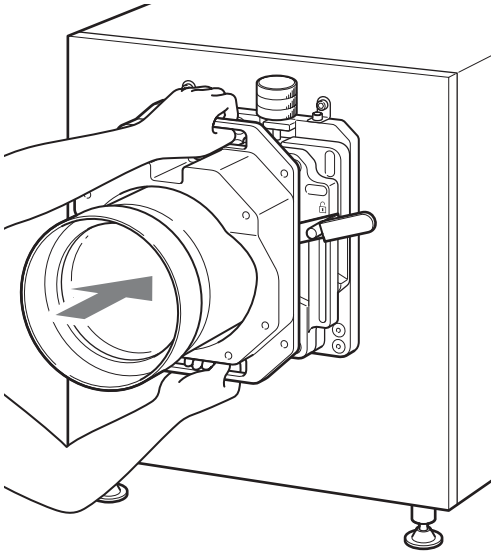


Attaching the Lens

1 Confirm that the lens fixing lever is in the position.



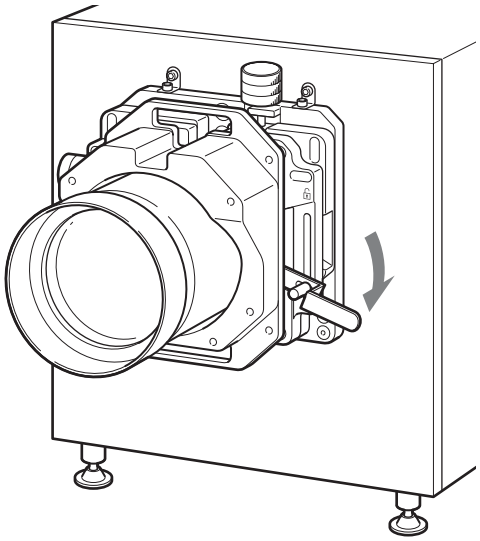
2 Attach the lens to the projector while firmly holding the lens not to drop it and aligning the position.



Caution

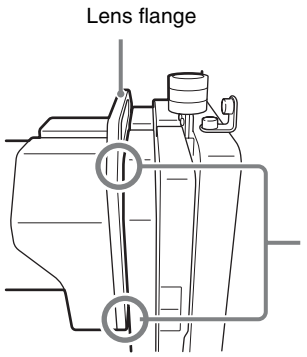
When attaching the lens to the projector, insert it straight.

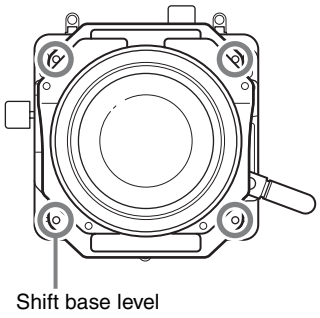
3 While supporting the lens, lower the lens fixing lever while the lens flange and shift base level are contacting each other.



Caution

If locked while there is a gap between the lens flange and shift base level, the lens flange base will become warped. Be sure to attach the lens while supporting it. Make sure there are no gaps in the 4 locations on the shift base level.

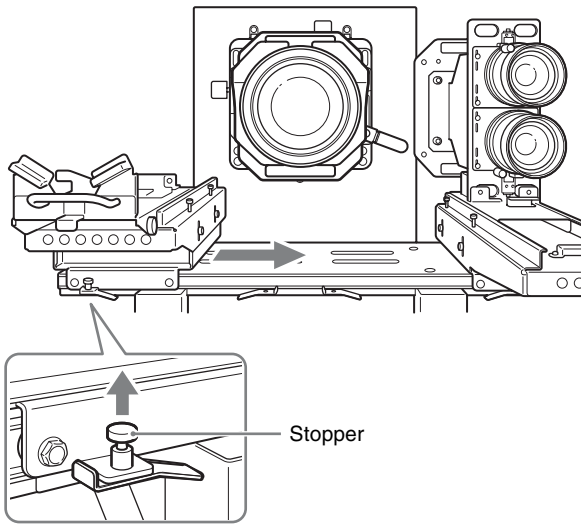




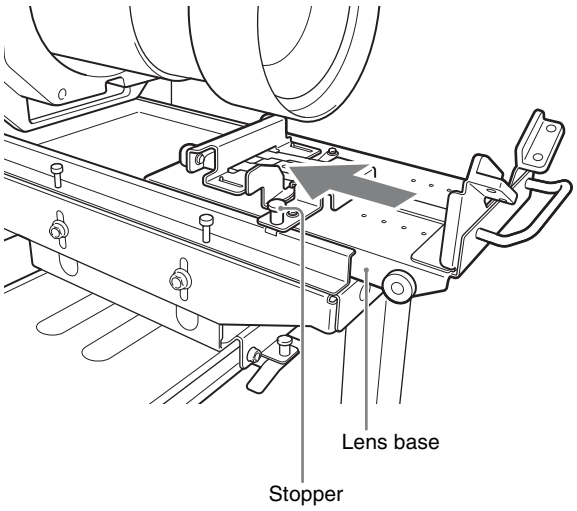
Replacing the Lens Using the Lens Change Table

As an example, this section describes how to switch from the 2D lens to the 3D lens. To switch from the 3D lens to the 2D lens, perform the procedure in reverse.

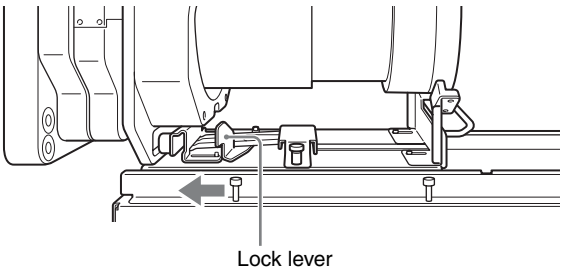
1 Raise the stopper on the 2D lens table, and slide the table until it is under the 2D lens.



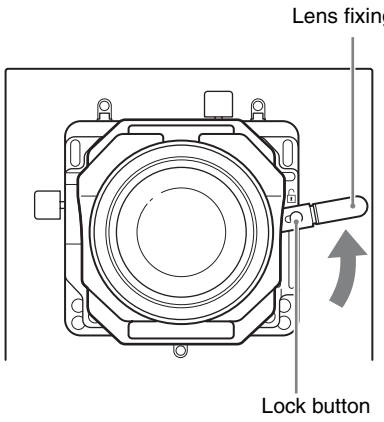
2 Lower the stopper and slide it until it contacts the inner side of the lens base.



3 Slide the lock lever in the direction of the arrow, and lock the lens.



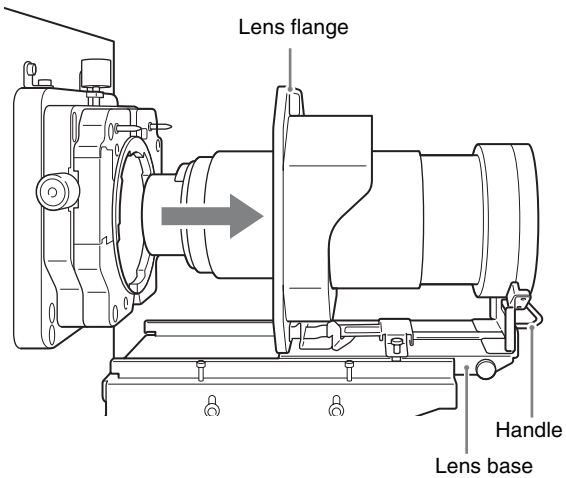
4 With the lock button pushed all the way in (lock released), and lift the lens fixing lever toward 🔓.



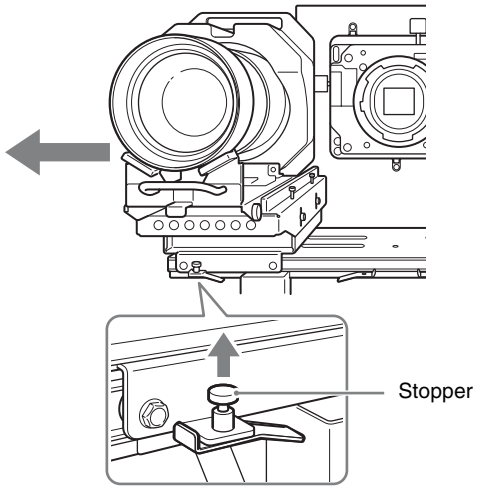
Caution

If you lift the lens fixing lever without pressing the lock button, the lock button and lever will be damaged. Be sure to press the lock button and make sure the lock is released before lifting the lever.

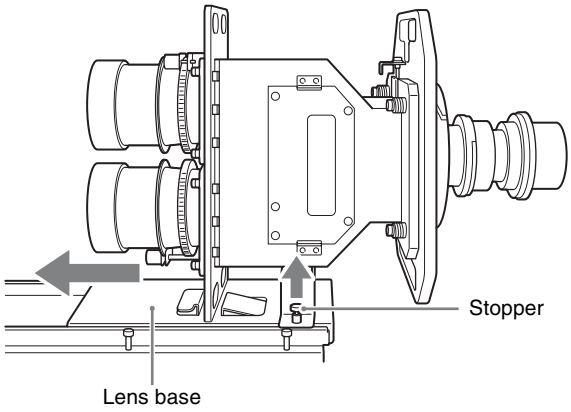
5 Grip the lens base handle and lens flange, and pull the lens toward you to remove the lens.



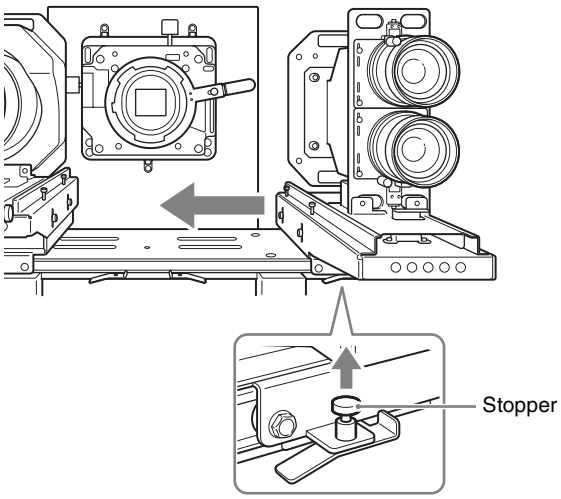
6 Raise the stopper on the 2D lens table, and slide the table all the way to the left.



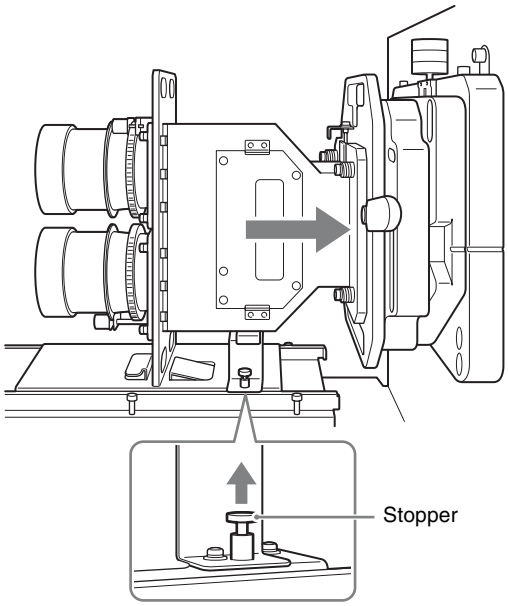
7 Raise the stopper on the 3D lens base, and pull out the lens base.



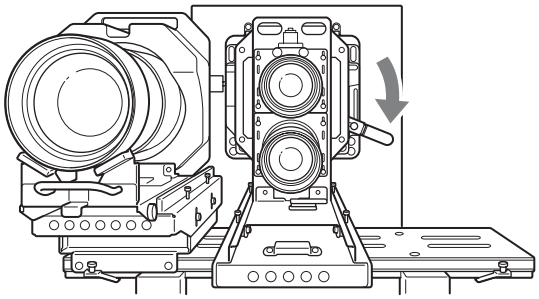
8 Raise the stopper on the 3D lens table, and slide the table until it is under the lens attachment area.



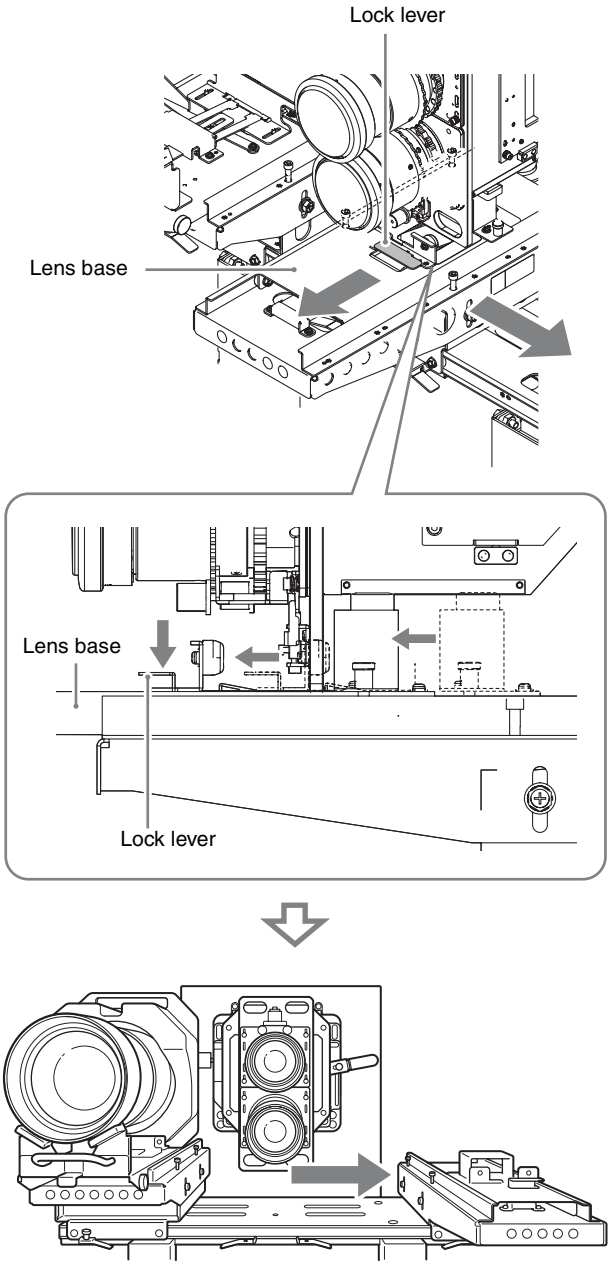
9 Lift the lens base stopper, slide it inward, and then insert the lens.



10 Lower the lens fixing lever to lock the lens in place.



11 While pressing the lock lever, pull the lens base toward you, and slide the 3D lens table to the right edge.

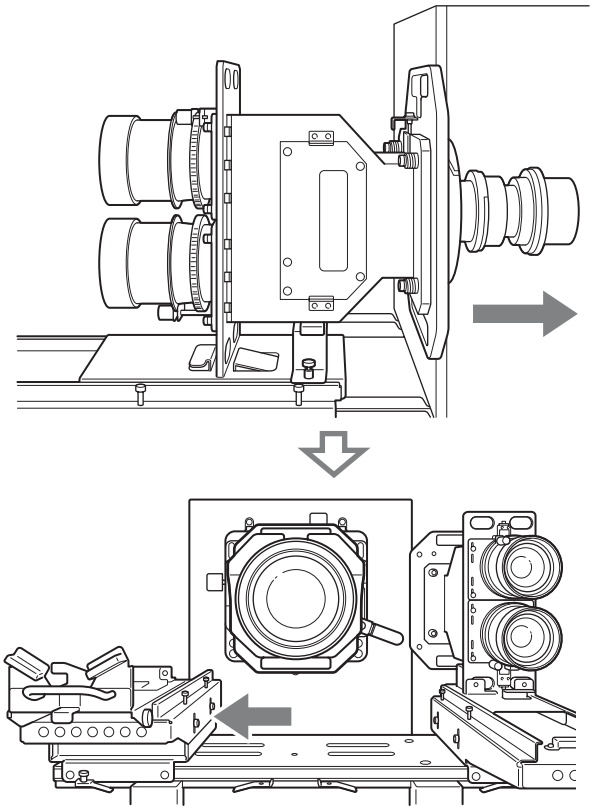


Caution

When using a 3D lens, move the 3D lens table to the right edge as shown in the illustration.

When the 3D lens is not attached

Push the lens all the way until it locks.



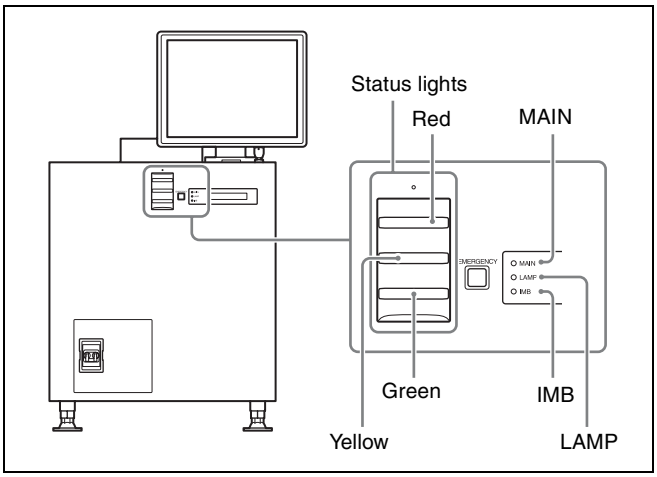
Caution

When using a 2D lens, move the 2D lens table to the left edge as shown in the illustration.

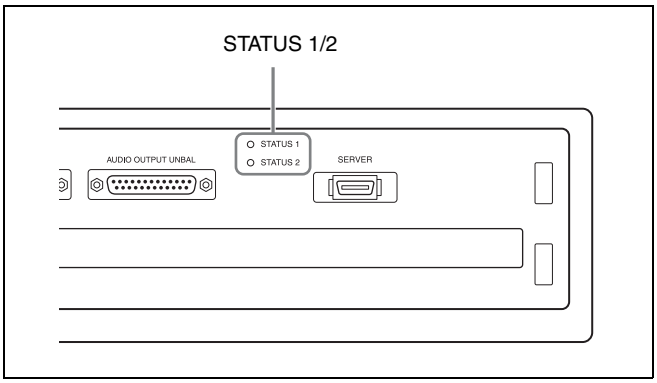
How to Read the Indicators

The following indicators show the status of the projector.

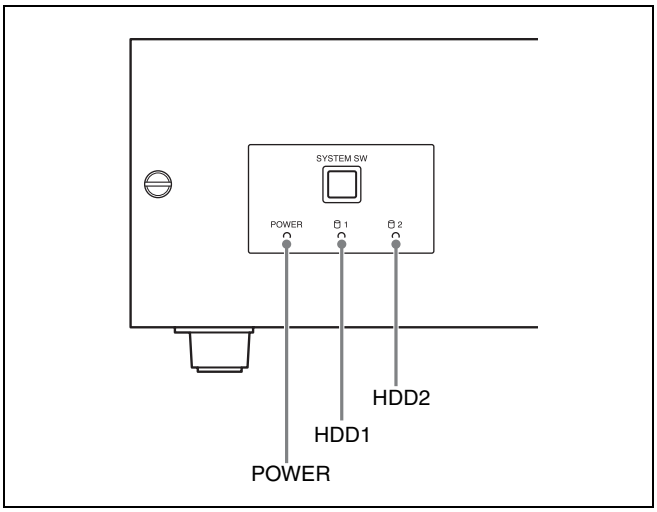
Projector (rear)



Projector (IMB)



Server (front)



The relationship between the way the indicators light and the device's status is shown in the following table.

Projector (rear) (status indicators)

MAIN	LAMP	Device status
Lit red	Lit red	Standby mode
Lit green	Blinking green (rapid)	Starting up
Lit green	Lit green	Power ON (lamp ON)
Lit green	Blinking green (slow)	Power ON (lamp OFF)
Blinking green (rapid)	Blinking green (rapid)	Shutting down or cooling

Projector (rear) (status indicators)

IMB	Device status
Lit red	Standby mode
Lit green	Access from server or start-up complete
Blinking green (rapid)	Shutting down
Blinking red (rapid)	Shutdown complete After shutting down the server, it is necessary to turn the power switch on the rear of the projector off and on again.

Projector (rear) (status lights)

Status light	Device status
Lit green	System stable and projector ON, standby mode, or lamp ON
Blinking green	System shutting down System starting up Ingesting Playing Projector status changing
Blinking yellow	Minor error
Blinking red	Severe error (hardware malfunction, show failure)
Off	Power OFF

Projector (IMB section) (Status indicator)

STATUS 1	Device status
Solid red	Start-up
Solid orange	Connecting to the server
Solid green	Connection to server complete

STATUS 2	Device status
Solid red	IMB section error Contact Qualified Sony Service Personnel
Solid green	Normal

Caution

If STATUS 1 indicator does not turn solid green even after a few minutes when connected to the server, contact Qualified Sony Service Personnel.

Server (front)

POWER	Device status
Lit red	Standby mode
Blinking green (rapid)	Starting up, shutting down
Lit green	Startup complete

Caution

When the MAIN lamp is solid red and the IMB is solid green, set the power switch on the rear of the projector to OFF. After shutting down from the server, set the power switch on the rear of the projector to OFF.

HDD1 indicator: Shows that the hard disk drive for the system is being accessed.

HDD2 indicator: This indicates the RAID access containing the DCP.

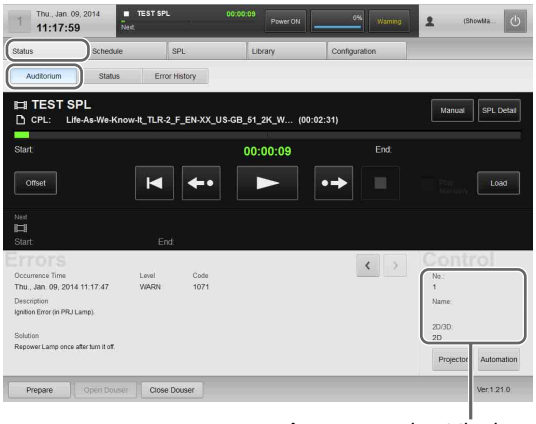
Troubleshooting

Check this section before consulting Qualified Sony Service Personnel. If the unit still does not function properly, consult Qualified Sony Service Personnel.

To check installation/connections

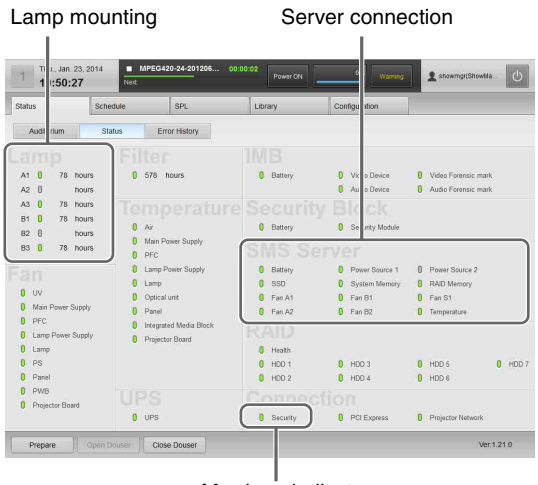
In the “Status” window, check to make sure that the lens mount, lamp mount, and server connection are properly married.

1 In the “Status” tab, tap [Auditorium] and check that the lens is correctly mounted.



A message about the lens mounting can be seen here.

2 Tap [Status] and confirm that the lamp for each item is lit solid green.

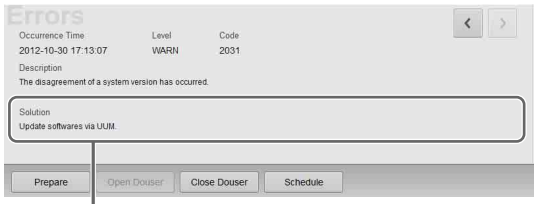


Lamps

Lamps show the health status of each part of the unit.
Green: normal
Yellow: warning (title will continue to be shown)
Red: error (title will stop)

Note

If the lamp is lit yellow or red, check the “Status – Auditorium” screen’s [Solution] message for a solution.



The solution will be displayed here. Follow the instructions to deal with the problem.

The projector does not turn ON

- Confirm that the lamp access panel (lamp grill) is firmly attached. If the lamp access panel (lamp grill) is not completely attached, the projector will not turn ON.
- Check to make sure the exhaust duct fans are operating. If the exhaust duct fans are not operating, the projector will not turn on.

There is something wrong with the screen/ the screen is too bright/the screen is too dark

Confirm that the correct screen adjustment data for the playback content has been called up.

Or check “Calling up Screen Adjustment Data” (page 19).

Screen is too dark

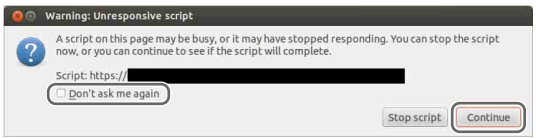
The brightness may be lowered due to deterioration of the lamp. Check how long the lamp has been used in the “Status – Status” screen, and change the lamp if necessary.

For further details, refer to the “Maintenance Manual.”

When operating the screen, a dialog box appears with a stopped process confirmation dialog

If this happens, tap [Continue] to continue the process. If you add a check mark to [Don't ask me again] this dialog will no longer be displayed.

Screenshot



Caution

If you tap [Stop script], processing will stop and normal operation may be hindered.

Cannot shut down

Unplug the power cord connected to the rear of the server.

The projector switched to standby during playback

When the projector switches to standby during playback due to events such as sudden power outages, use the touch panel monitor to shut down after screening is complete, and then restart the system.
If you cannot shut the unit down using the touch panel monitor, unplug the power cord connected to the rear of the server, reconnect the cord, and then start the system.

Specifications

Digital Cinema Projector SRX-R510

Optical system

Projection method	1.48 inch, 4K, SXRD (3)
Resolution (H x V)	4096 × 2160 pixels
Lamp	450 W, high-voltage mercury (HPM) lamp (4) or 330 W, high-voltage mercury (HPM) lamp (4)
Contrast	8,000:1 (average) (LKRM-U450 450 W lamp)
Light output	9,000 lumens (average) (LKRM-U450 450 W lamp)

Input/output

Video input	HDMI (2)*
Audio output	Unbalance, 8 channels, 24 bit, 48/96 kHz, linear PCM, D-sub 25 pin (female) (1) AES/EBU, 16 channels, 24 bit, 48/96 kHz, linear PCM, D-sub 25 pin (female) (1)

* Audio signals included in HDMI cannot be output from the audio output connector of this unit.

Playback format

JPEG 2000	4K 2D: 24p 2K 2D: 24p/25p*/29.97p*/30p*/48p/60p 2K 3D: 24p/29.97p*/30p*/48p/60p
MPEG-2**	MP@HL, YUV420 /422 8 bit, 80 Mbps (max.) bitrate, 1920 × 1080, 23.98p/24p/25p

* Digital watermarking (Watermarking) is not supported.
** Digital watermarking (Watermarking) and playback of subtitle files are not supported.

General

Power	200 V - 240 V AC, 50/60 Hz, single phase, 21.5 A - 18 A
External dimensions	548 × 634 × 1,119 mm ($21\ ^{5}/_{8} \times 25 \times 44\ ^{1}/_{8}$ inches) (W/H/D) (Including lens shift block and feet. Excluding touch panel monitor and projection parts (Status lights, ducts, etc.))

Weight Approx. 145 kg (319 lb.) (Excluding touch panel monitor and lamp) (Serial No. xx2xxxx) (The fifth digit from the last is “2”)
Approx. 139 kg (306 lb. 7.9 oz.) (Excluding touch panel monitor and lamp) (Serial No. xx4xxxx) (The fifth digit from the last is “4”)

Operating temperatures
5 °C to 35 °C

Operating humidity
35% to 85% (Without condensation)

Storage temperatures
–20 °C to +60 °C

Storage humidity
10% to 90%

Supplied accessories

- Key for removing housing (5)
- Safety Regulations (1)
- TPC adapter (1 set)
- Cable clamper (2)

Digital Cinema Server XCT-S10

Input/output

Ingest USB 3.0 (2)
CRU DATAPORT (open slot) (1)

System control GPI (8)
GPO (16)
D-sub 9 pin, female, for audio processor control (1)
USB 2.0, for UPS control (1)

Network Gigabit Ethernet (2)

Storage

HDD 4 TB (Expandable to 8 TB), Modified RAID 6

General

Power 100 V - 240 V AC, 50/60 Hz, single phase, 2.2 A - 1.0 A

External dimensions
482 × 131 × 560 mm ($19 \times 5\ ^1/_4 \times 22\ ^1/_8$ inches) (W/H/D)

Weight Approx. 24 kg (52 lb. 13 oz.) (Serial No. xx0xxxx) (The fifth digit from the last is “0”)
Approx. 19 kg (41 lb. 14 oz.) (Serial No. xx1xxxx) (The fifth digit from the last is “1”)

Operating temperatures
5 °C to 35 °C

Operating humidity
35% to 85% (Without condensation)

Storage temperatures
–20 °C to +60 °C

Storage humidity
10% to 90%

Supplied accessories

- Feet (1 set)
- PCI express cable (2 m) (1)
- Ethernet cable (2 m) (1)

Touch Panel Monitor LKRA-007

Optical system

Screen size 15 inch

Resolution (H × V)
1024 × 768 pixels (XGA)

General

Power Touch panel monitor: 12 V DC, 1 A
AC adapter: 100 - 240 V AC, 50/60 Hz

External dimensions
350 × 310 × 57 mm ($13\ ^7/_8 \times 12\ ^1/_4 \times 2\ ^1/_4$ inches) (W/H/D)

Weight Approx. 3.6 kg (7 lb. 15 oz.)

Operating temperatures
5 °C to 35 °C

Operating humidity
35% to 85% (Without condensation)

Storage temperatures
–20 °C to +60 °C

Storage humidity
10% to 90%

Supplied accessories

- AC adapter (1)
- VGA cable (1)
- USB cable (1)

Design and specifications are subject to change without notice.

Notes

- Always make a test recording, and verify that it was recorded successfully.
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HDMI signals

The unit can handle up to the following HDMI signals.

2D

Resolution	Frame Rate
720 × 480	59.94p/60p
720 × 480	59.94i/60i
720 × 576	50p
720 × 576	50i
1280 × 720	59.94p/60p
1280 × 720	50p
1920 × 1080	59.94p/60p
1920 × 1080	50p
1920 × 1080	23.98p/24p
1920 × 1080	59.94i/60i
1920 × 1080	50i
VGA (640 × 480)	60
XGA (1024 × 768)	60
UXGA (1600 × 1200)*	60
WUXGA (1920 × 1200)*	60
2048 × 1080**	23.98/24
2048 × 1080**	60

* Projection is not available while a 3D lens is attached.
** Sony's original specification.

3D

3D Format	Resolution	Frame rate
Frame Packing (progressive)	1280 × 720	59.94p/60p
Frame Packing (progressive)	1280 × 720	50p
Frame Packing (progressive)	1920 × 1080	23.98p/24p
Top & Bottom	1920 × 1080	59.94p/60p
Top & Bottom	1920 × 1080	50p
Top & Bottom	1920 × 1080	23.98p/24p
Top & Bottom	1280 × 720	59.94p/60p
Top & Bottom	1280 × 720	50p
Side by Side	1280 × 720	59.94p/60p
Side by Side	1280 × 720	50p
Side by Side	1920 × 1080	59.94p/60p
Side by Side	1920 × 1080	50p
Side by Side	1920 × 1080	59.94i/60i
Side by Side	1920 × 1080	50i
2 inputs	1920 × 1080	59.94p/60p
2 inputs	1920 × 1080	50p
2 inputs	1920 × 1080	23.98p/24p
2 inputs	1920 × 1080	59.94i/60i
2 inputs	1920 × 1080	50i

3D Format	Resolution	Frame rate
2 inputs	1280 × 720	59.94p/60p
2 inputs	1280 × 720	50p