

Remote Production Unit

Operating Instructions

Software Version 1.1

CBK-RPU7

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Overview

Features

The CBK-RPU7 Remote Production Unit is a video transmission device that incorporates a Sony-developed codec chip. It employs QoS technology and an HEVC codec to achieve high-compression, high-quality video data up to 4K 60p and network transmission with low latency. In addition to wired LAN connection, connecting the unit to a compatible 5G communications device via USB enables wireless video transmission at high-quality for mobile live broadcast production. In addition, remote production is supported via remote camera operation, tally, and return functions, as well as centralized control of multiple transmitters and receivers using the VideoPath Connection Control Manager (CCM).

Supported Transmission Signals

Video signals

SDI input 4:2:2 10-bit format is supported.

System frequency	Video format
29.97 Hz	3840×2160/59.94p 1920×1080/59.94p 1920×1080/59.94i 1280×720/59.94p
25 Hz	3840×2160/50p 1920×1080/50p 1920×1080/50i 1280×720/50p
23.98 Hz	3840×2160/23.98p

Audio signals

- Linear PCM, 24-bit, 48 kHz (up to 4 channels)
- Opus 16-bit 48 kHz (up to 4 channels)

Ancillary signals

You can specify ancillary signals to transmit using a filter function based on the DID (Data Identifier). Up to eight types of DID are supported.

The transmission of all types of ancillary signals is not guaranteed.

Supported Networks

The unit supports two types of network connectors.

Networks that are connected to the connectors are assumed to be either a dedicated line or a

bandwidth-guaranteed shared network with guaranteed low latency, stable transmission bandwidth, and quality.

LAN connector

Video transmission is supported using the built-in LAN function of the unit.

USB connectors

Video transmission is supported using the tethering function of a 5G communications device.

Notes

- Simultaneous video transmission using the LAN connector and USB connectors is not supported.
- iPhone is not supported.
- IPv6 streaming is not supported.
- Low latency performance requires a high-quality network environment, so low latency performance may not be fully exhibited depending on the environment.
- This unit is not intended to be operated constantly powered-on for extended periods of time.

Logging In/Logging Out

A user account is required to log in to the unit. Roles must be configured for user accounts, and privileges differ depending on the role.

Role	Description
Maintainer	Role for performing maintenance. Initial setup and changes to the installation environment can be performed, but tasks relating to normal operation of the unit cannot be performed.
Operator	Role for operating the unit. Use a user with this role for normal operation.
Guest	Role for monitoring the operation status of the unit. Changes to settings and operation of the unit cannot be performed.
Administrator	Role with the privileges of both Maintainer and Operator.

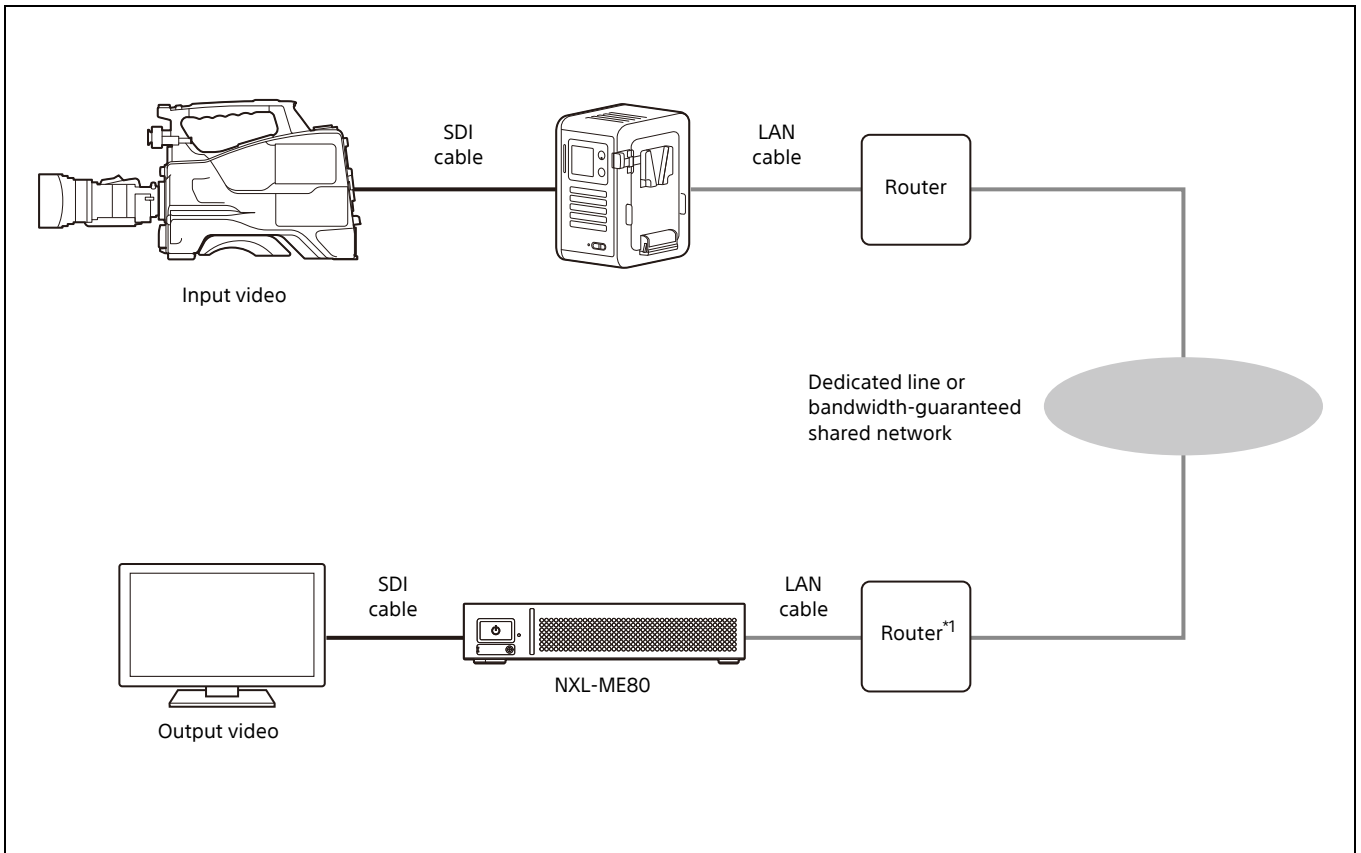
A policy of granting minimal privileges on the unit is used for security reasons.

Create and use user accounts with roles that are appropriate for configuration and operation. The Administrator role is a superuser-like role that can perform all operations, but using the Maintainer, Operator, and Guest roles for operation is recommended.

The unit has an internal authentication server that manages the access of user accounts using authentication and authorization policies based on OAuth 2.0 and Open ID Connect.

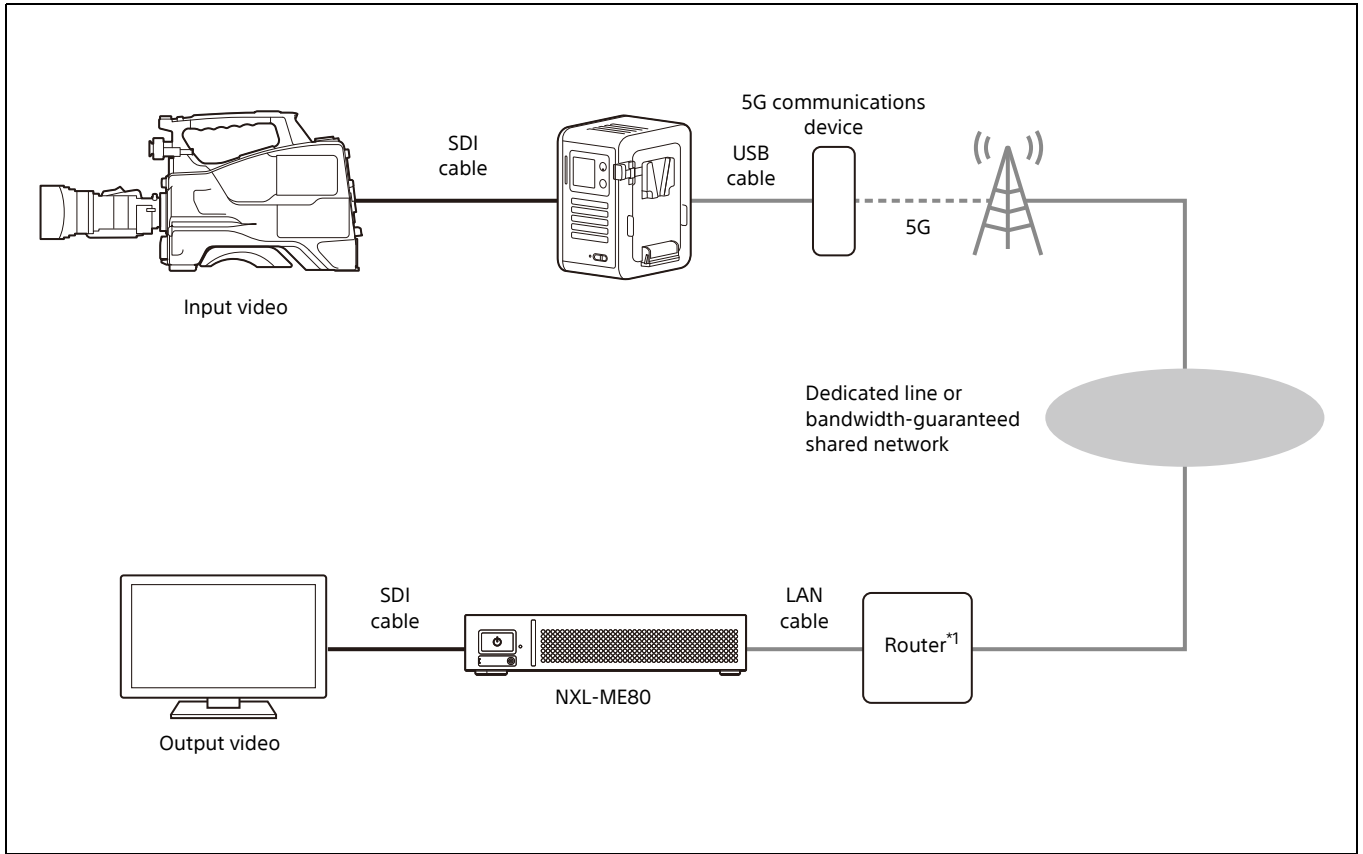
System Configuration Examples

Wired Connection



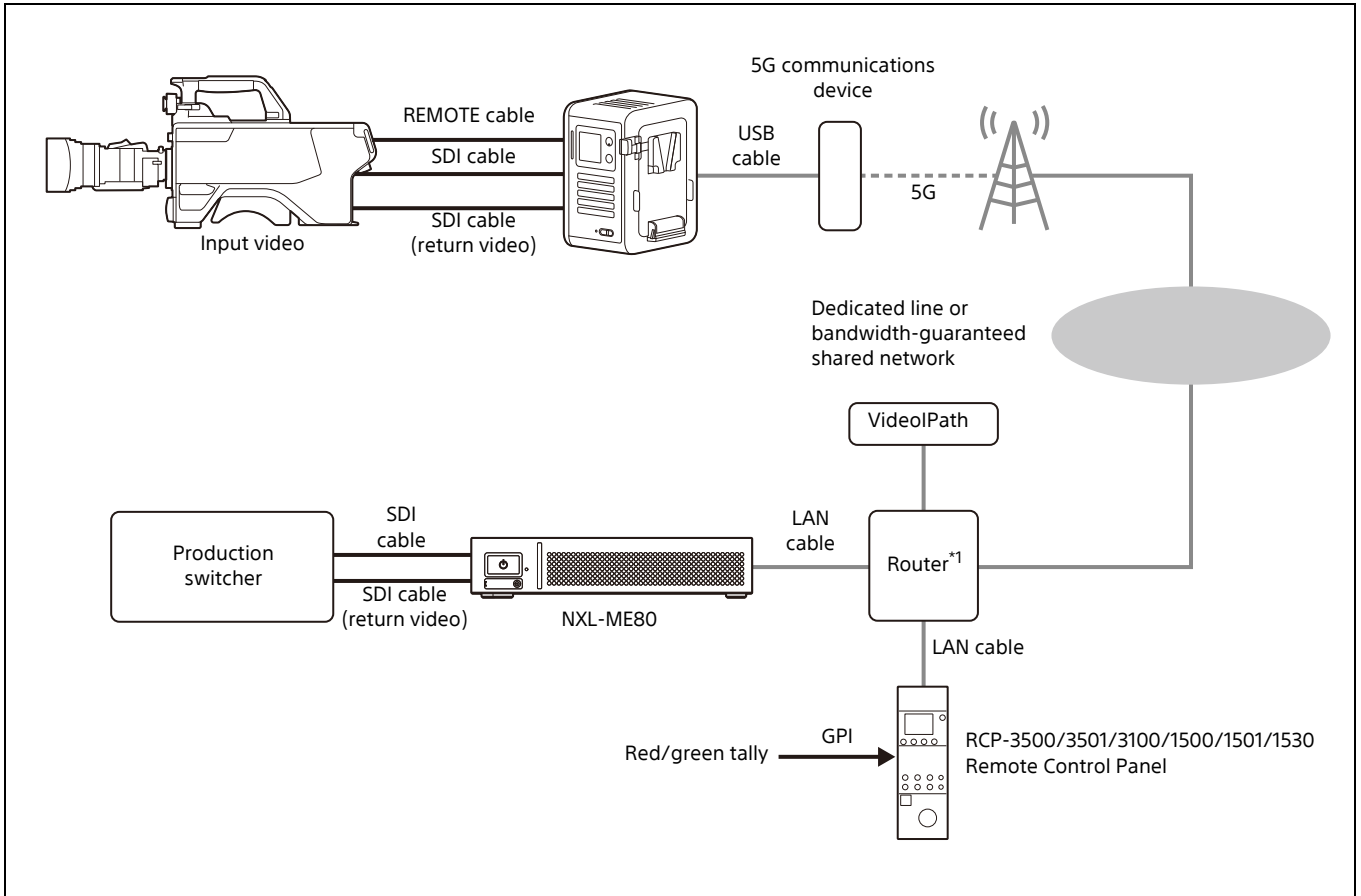
*1 The router on the receiving side must have port forwarding enabled.

Wireless Connection



*1 The router on the receiving side must have port forwarding enabled.

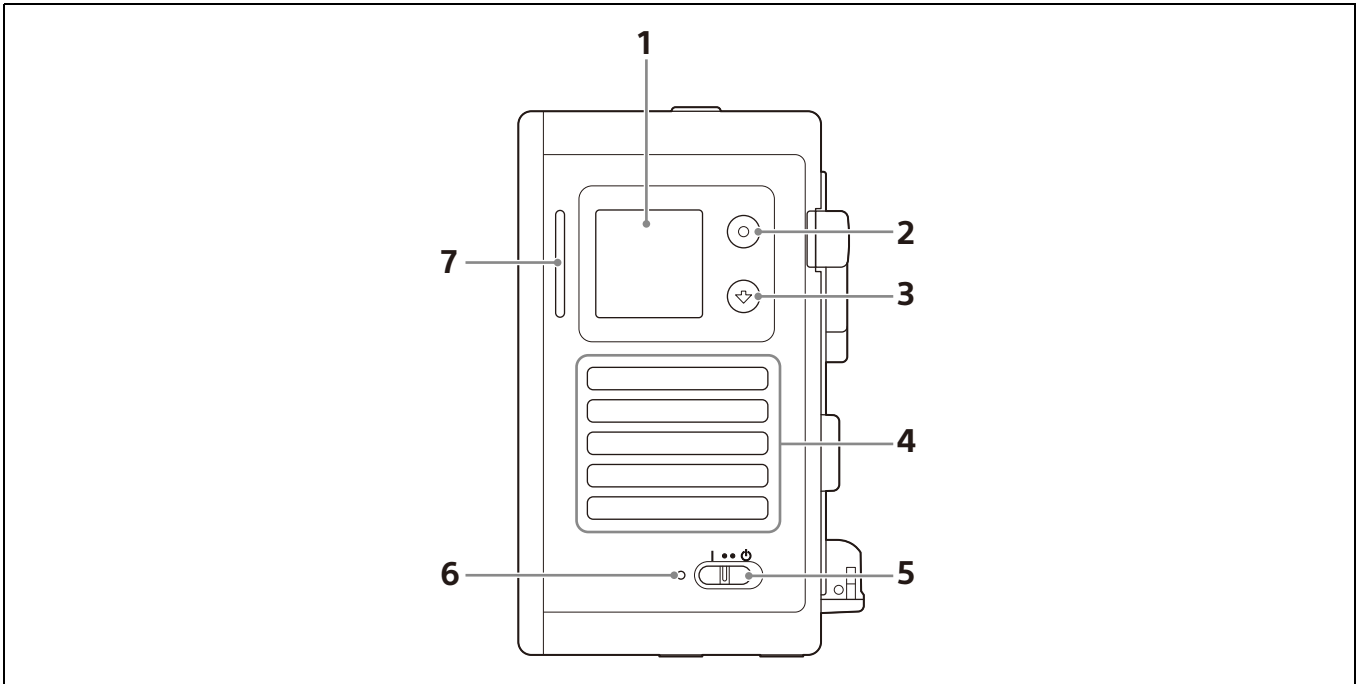
When Using Remote Control, Tally, Return, and CCM



*1 The router on the receiving side must have port forwarding enabled.

Name and Function of Parts

Front



1 Display

Displays the status of the unit and an access link for the web menu. You can also turn streaming on/off using the Apply button and Forward button.

Switch between display content using the Apply button and Forward button.

2 Apply button

Switches between the main screen and subscreen on the display and applies settings on the subscreen.

3 Forward button

Switches pages on the main screen and subscreen on the display and changes selection options of settings on the subscreen.


4 Air intake vent

Note

Do not block the air intake vent.

5 Power switch

Switches the power of the unit to on/standby. When switched to standby, the unit shuts down and transitions to standby mode.

The  switch does not completely disconnect the power supply to the unit.

6 Power lamp

Lit when the power is turned on.

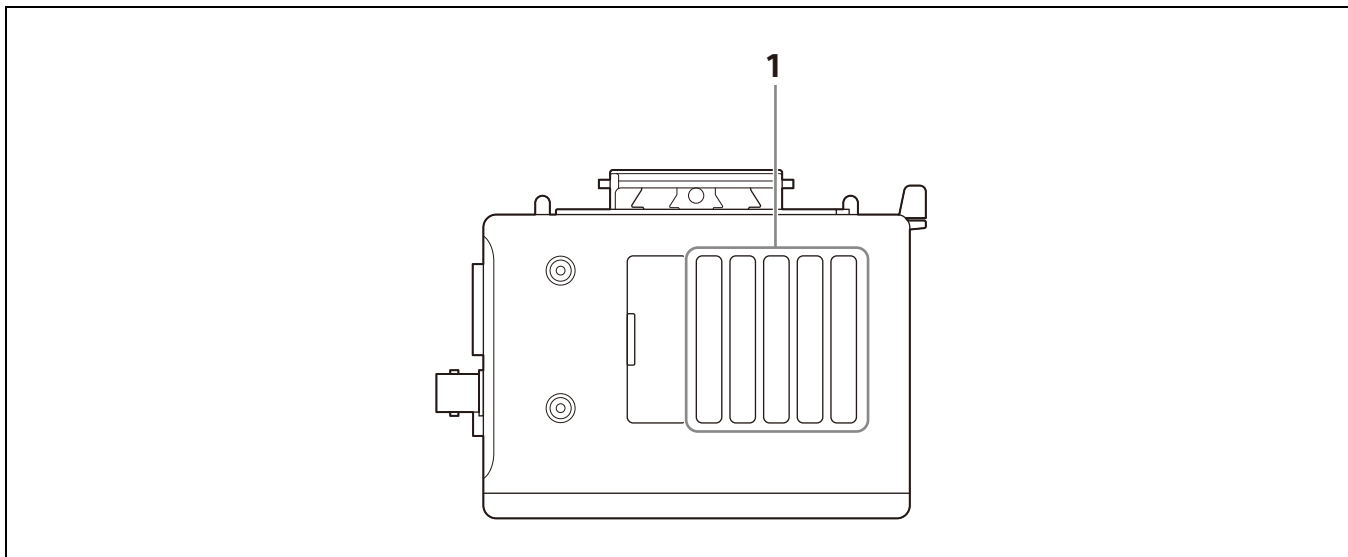
7 Status lamp

Indicates the status of the unit by the color and state (lit/blinking).

Status lamp indication	Color	Description
Blinking	Blue	Booting/shutting down
Lit	Blue	Streaming
Blinking	White	Updating firmware
High-speed blinking	Orange	Caution
Blinking	Red	Warning
High-speed blinking	Red	Warning

You can check the description of cautions and warnings on the [System Message] tab of the [Monitoring] page in the web menu or on the Message screen on the display of the unit.

Top

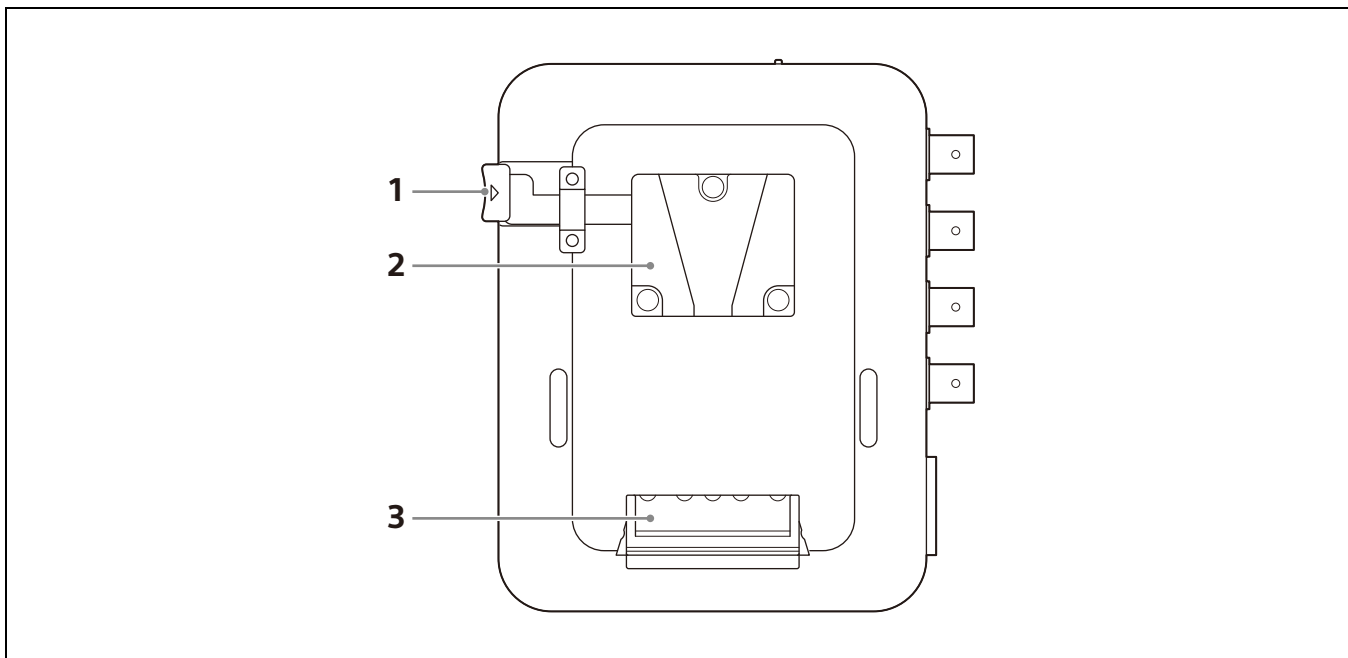


1 Air exhaust vent

Notes

- The area surrounding the air exhaust vent may become hot.
- Do not block the air exhaust vent.

Right Side

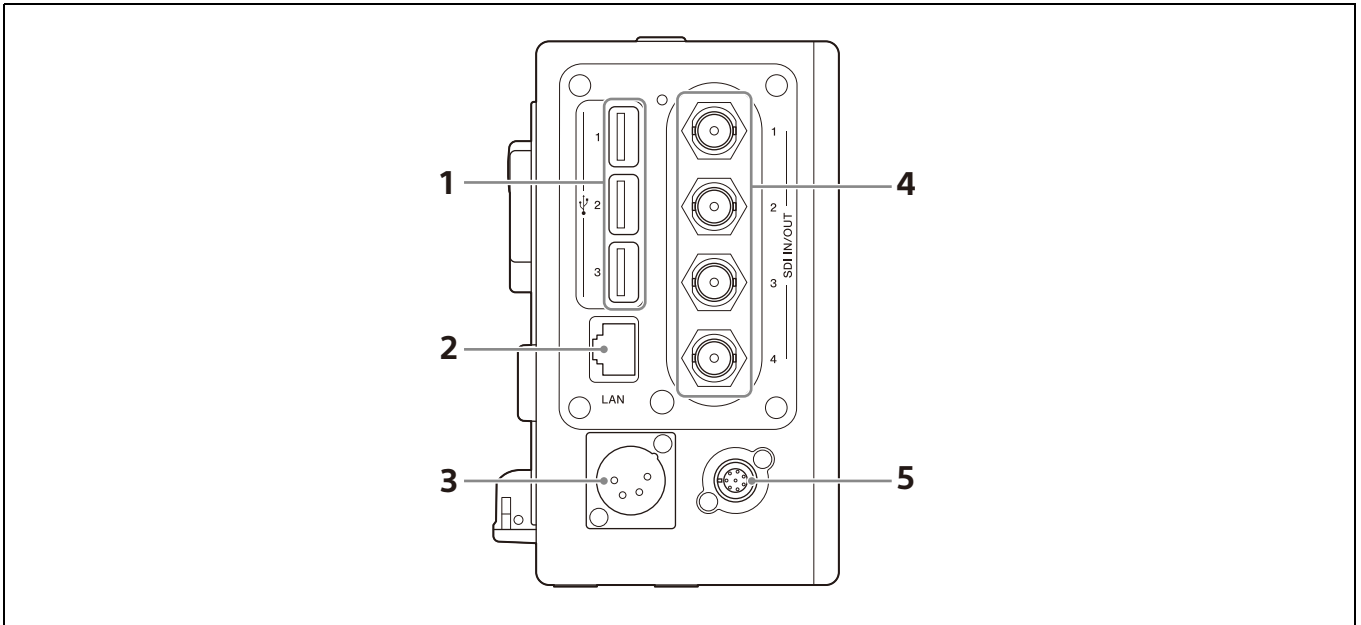


1 Battery release lever (see "Using a battery pack" (page 11))

2 Battery pack mount (see "Using a battery pack" (page 11))

3 Battery connector (see "Using a battery pack" (page 11))

Rear



1 USB connectors × 3 (USB 3.0 (HOST) type A)

Connect to a 5G communications device with tethering enabled to access the web menu and to send video. The function is the same regardless of which USB connector is used.

2 Wired LAN connector (RJ-45 type, with LED)

Connect to a computer within a LAN to access the web menu and to send video.

CAUTION

For safety, do not connect the connector for peripheral device wiring that might have excessive voltage to the following port:

- LAN

3 DC IN connector (XLR type, 4-pin)

4 SDI IN/OUT connectors × 4 (BNC type)

Use to input SDI signals.

Connector 1 supports 12G-SDI connection.

Connectors 1 to 4 combined support 3G-SDI (Quad Link) connection.

The return signal is output from connector 4.

5 REMOTE (remote control) connector (8-pin)

If using the remote control function, connect to a camera.

Note

The SDI OUT function and remote control function are not supported in software version 1.0.

Supported SDI formats

Inputs

System frequency	Video format	Input SDI format
29.97 Hz	3840×2160/59.94p	12G 3G Quad Link 2SI Level A
	1920×1080/59.94p	3G Single Link Level A
	1920×1080/59.94i	1.5G
	1280×720/59.94p	1.5G
25 Hz	3840×2160/50p	12G 3G Quad Link 2SI Level A
	1920×1080/50p	3G Single Link Level A
	1920×1080/50i	1.5G
	1280×720/50p	1.5G
23.98 Hz	3840×2160/23.98p	6G

Outputs

System frequency	Video format	Output SDI format
29.97 Hz	1920×1080/59.94p	3G Single Link Level A
	1920×1080/59.94i	1.5G
	1280×720/59.94p	1.5G
25 Hz	1920×1080/50p	3G Single Link Level A
	1920×1080/50i	1.5G
	1280×720/50p	1.5G

Preparation

Power Supply

You can use a battery pack or AC power via an AC adaptor.

For safety, use only the Sony battery packs and AC adaptors listed below.

- BP-GL95B Battery Pack
- AC-DN10A AC Adaptor

Using a battery pack

Insert the battery pack into the battery pack mount (page 8) and slide the battery pack down to lock it in place.

To remove it, unlock the battery pack by sliding it up while pressing the battery release lever (page 8), then remove it.

Notes

- Before use, charge the battery pack with a battery charger.
- A warm battery pack immediately after use may not be able to be fully recharged.

Checking the remaining battery charge

When using a battery pack, the remaining battery time or battery voltage is displayed on the Home screen (page 41) of the display of the unit and on the [Power Status] tab (page 23) of the [Monitoring] page in the web menu.

The remaining time is displayed in minutes by calculating how long the battery pack can be used if the unit is used continuously at the current rate of power consumption.

If the remaining battery charge becomes low

If the remaining charge of the battery pack falls below a set value during use, the status lamp blinks as a warning.

If the remaining charge is further reduced until operation cannot be continued, a message will be displayed to inform you that the battery pack is empty.

Replace the battery pack with one that is fully charged.

Changing the remaining charge warning level

Change the settings on the [Power Setting] tab (page 22) of the [Monitoring] page in the web menu.

Using AC power (DC IN power)

The unit can be powered by connecting to an AC power source using an AC adaptor.
The unit supports 11 V to 17 V input voltage range.

Note

When switching to the DC IN power supply during battery operation, use a power supply with a voltage in the range 12 V to 17 V for safer power supply switching.

Using a battery pack and DC IN power supply together

Whenever an active power supply is applied using a battery pack and a DC IN power supply, the DC IN power supply takes precedence.

Note

When the power supply switches from battery operation to the DC IN power supply, operation of the unit may stop if the following occurs.

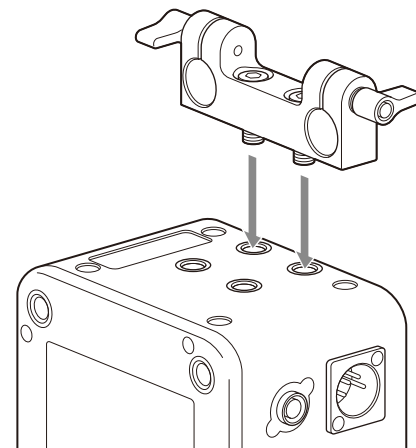
- Chattering of the connector contacts when inserting or removing the DC connector
- Voltage drop when switching between power supplies (more prevalent when the external load is greater)

Attaching to a Camcorder using Rods

You can attach the unit to a camcorder fitted with $\varnothing 15$ rods (option) using a rod bracket.

Attachment procedure

- 1 Attach $\varnothing 15$ rods to the camcorder.
- 2 Attach the rod bracket to the bottom of the unit.



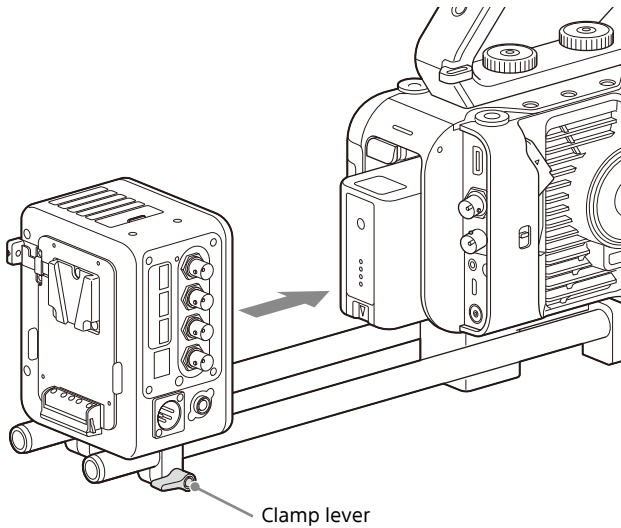
There are two sets of mounting screw holes on the bottom of the unit, and either set can be used.

The screw holes ($1/4$ inch) are 1/4-20UNC with depth of 7.0 mm.

- 3 Pass the $\varnothing 15$ rods through the holes in the rod bracket, then turn the left and right clamp levers to fasten in position.

Note

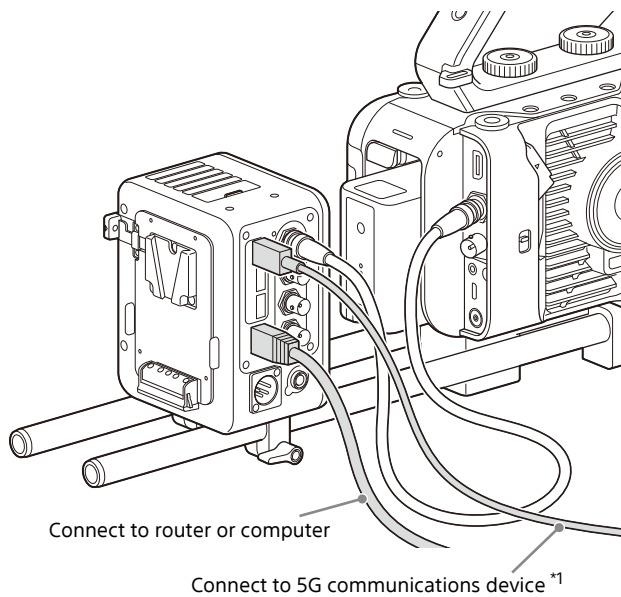
If the clamp lever is loose, the unit may fall off during use.



- 4 Connect the camcorder to SDI connector 1 using an SDI cable (available separately).

To transmit video using a wireless connection, connect a 5G communications device to a USB connector using a USB cable (available separately).

To transmit video using a wired connection, connect a router or computer to the LAN connector using a LAN cable (available separately).



*1 The function is the same regardless of which USB connector is used.

When using the remote control function

Connect a system camera or camcorder to the REMOTE connector using a remote control cable.

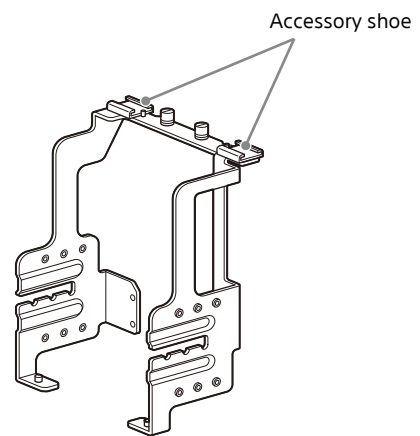
Note

Turn off the unit before connecting/disconnecting an SDI cable, USB cable, LAN cable, or remote control cable to/from this unit.

Attaching to a Camcorder using Brackets

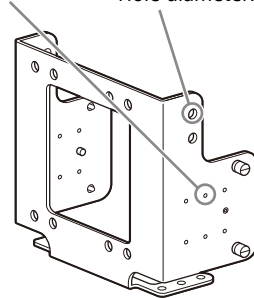
You can attach the unit to a PXW-Z750, PXW-Z450/Z580, or PXW-X400/X580 camcorder using camera mount brackets.

Camera mount bracket A



Camera mount bracket B

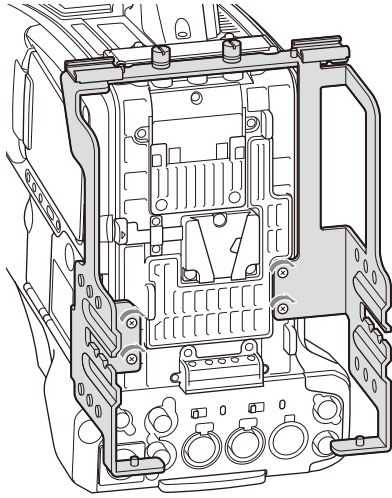
M3 screw holes, plate thickness 2.5 mm, screw protrusion of 3 mm or less
Hole diameter: $\varnothing 7$



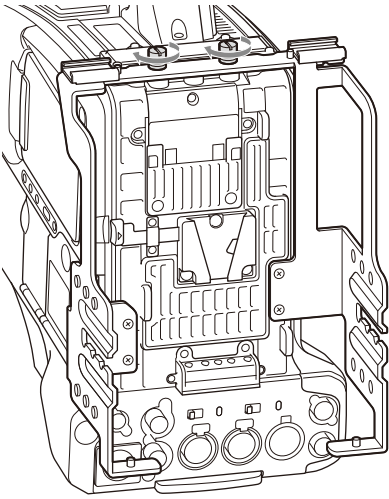
Attachment procedure

- 1 Attach camera mount bracket A to the camcorder.

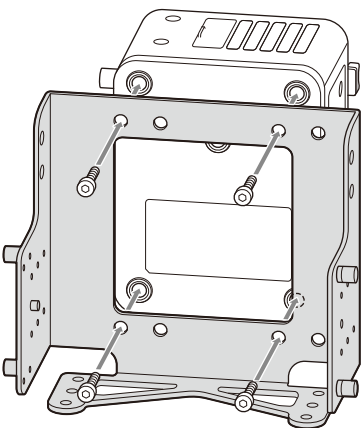
Fasten the bracket using the four screws at the front.



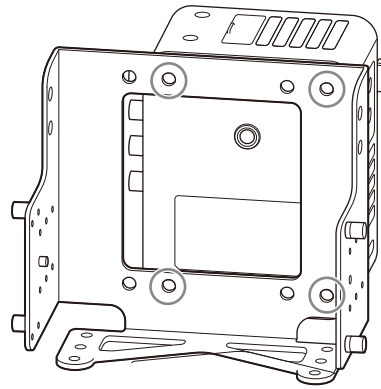
2 Fasten the bracket using the two screws on the top of camera mount bracket A.



3 Attach camera mount bracket B to the unit using four hex screws supplied with the unit.

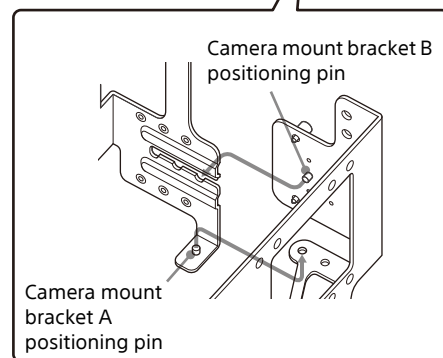
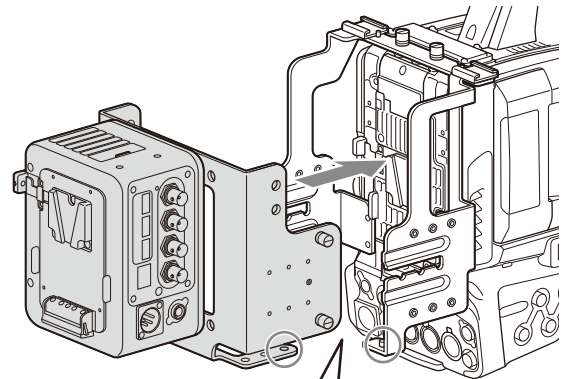


You can also attach the bracket using the holes shown in the following diagram.

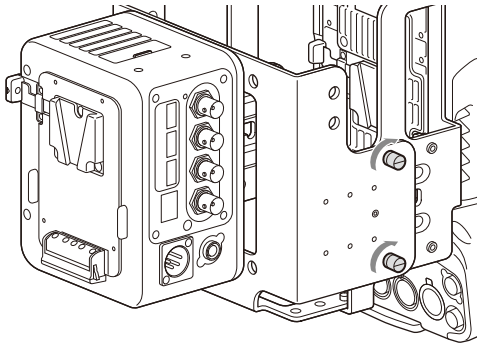


4 Attach camera mount bracket B to camera mount bracket A.

Insert the positioning pins on the sides of camera mount bracket B into the grooves on the sides of camera mount bracket A, then insert the positioning pins of camera mount bracket A into the holes on the bottom (same on left and right). You can adjust the attachment position of camera mount bracket B to suit the size of the battery attached to the camcorder.



5 Fasten camera mount bracket B using the four screws on the sides.



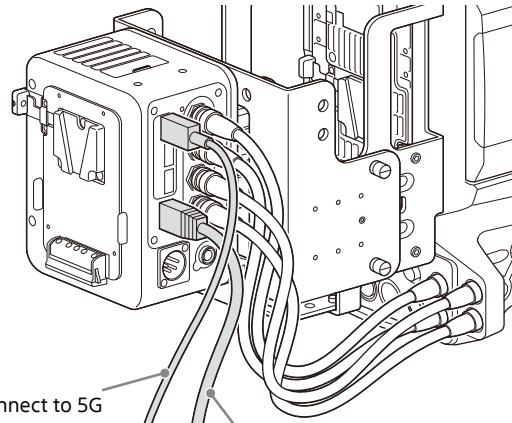
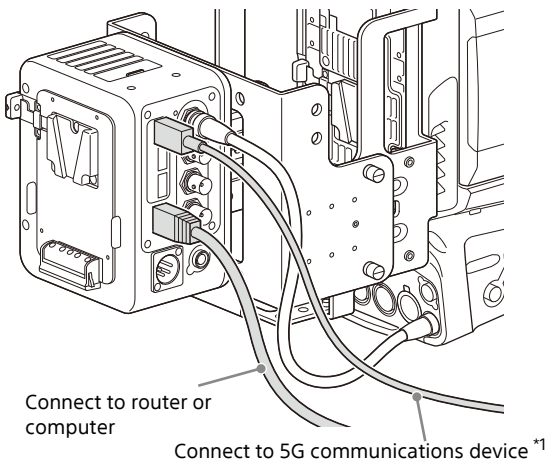
6 Connect the camcorder to SDI connector 1 using an SDI cable (available separately).

To transmit video using a wireless connection, connect a 5G communications device to a USB connector using a USB cable (available separately).

To transmit video using a wired connection, connect a router or computer to the LAN connector using a LAN cable (available separately).

Note

Use an SDI cable of length 42 cm (16.5 inches) or longer.



Connect to 5G communications device *1

Connect to router or computer

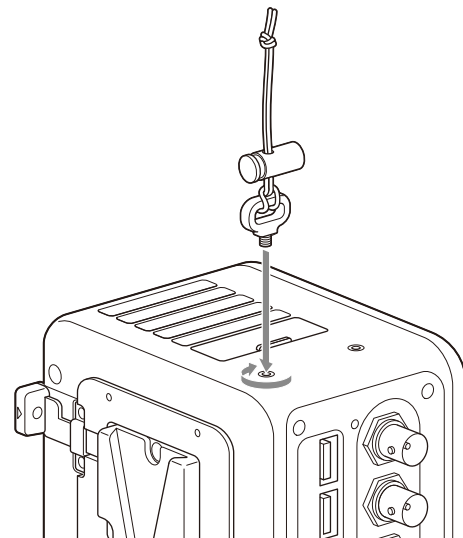
*1 The function is the same regardless of which USB connector is used.

Attaching a Cable Strap

You can prevent the USB cable from being inadvertently disconnected by attaching a cable strap.

Attachment procedure

1 Insert the cable strap into the screw hole on the top of the unit and turn clockwise to fasten in position.



For 3G-SDI (Quad Link) connection

Connect the camcorder to SDI connector 1 to 4 of the unit using SDI cables (available separately).

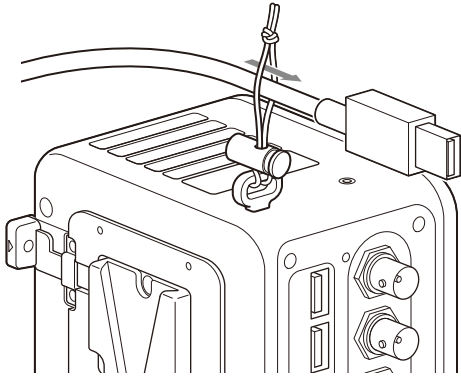
When using the remote control function

Connect a camcorder to the REMOTE connector using a remote control cable.

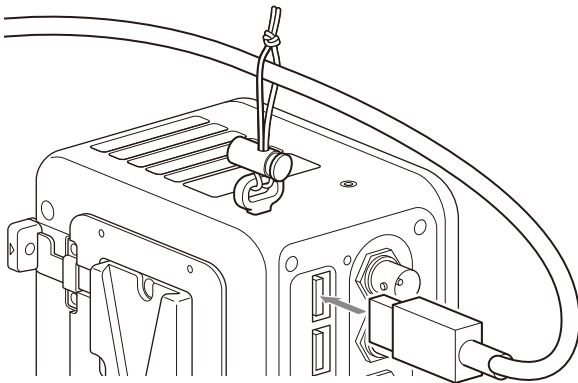
Notes

- Use an SDI cable of length 42 cm (16.5 inches) or longer.
- Turn off the unit before connecting/ disconnecting an SDI cable, USB cable, LAN cable, or remote control cable to/from this unit.

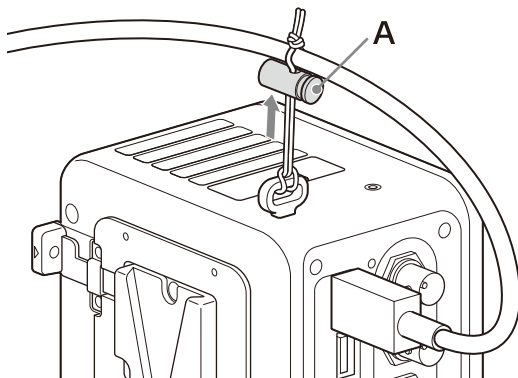
- 2** Pass the USB cable through the loop in the cable strap.



- 3** Connect the USB cable to the USB connector of the unit.



- 4** With the cable strap straight, adjust the length of the USB cable, then press clamp A and slide it up to secure the USB cable.

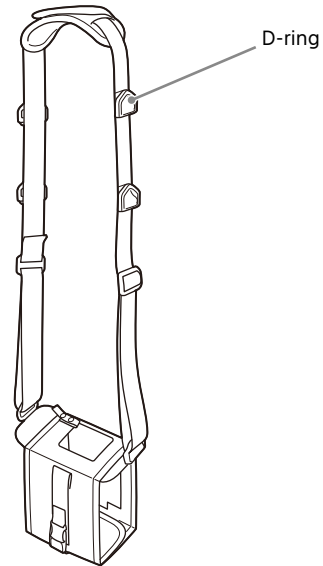


Attaching a Shoulder Case

You can carry the unit by attaching a shoulder case. When using a shoulder case, remove the cable strap.

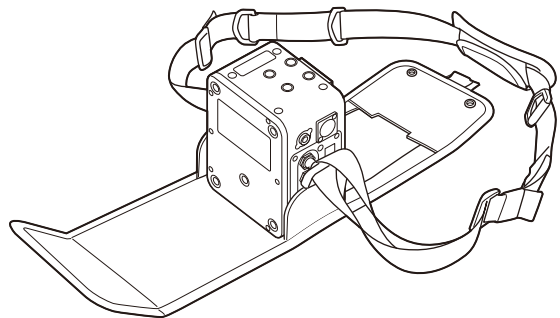
Note

Remove the shoulder case while supporting the unit by hand.

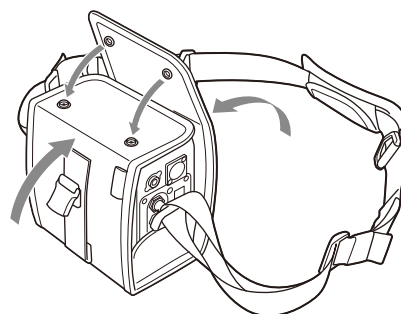


Attachment procedure

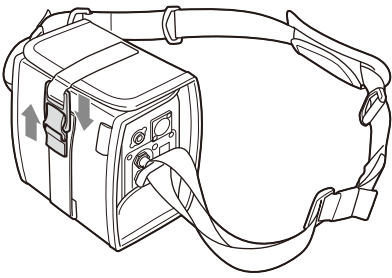
- 1** Open and lay the shoulder case out flat and set the top of the unit facing down onto the shoulder case.



- 2** Fold the shoulder case around the unit and attach it using the two hooks.



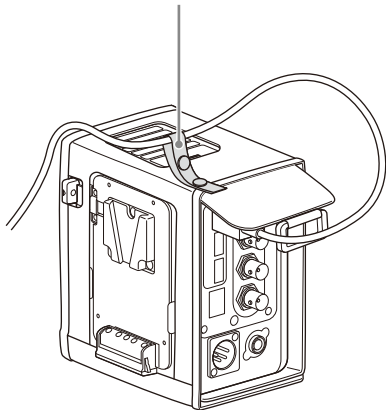
3 Fasten the buckle.



USB cable removal prevention strap

After connecting the USB cable to the unit, you can prevent the USB cable from being inadvertently disconnected by passing the USB cable through the strap of the shoulder case.

Cable removal prevention strap



Configuration

Setup Procedure

This section describes setup procedure when you use the unit for the first time.

Logging in to the web menu

- 1 Access the following URL in a web browser of a computer connected to the LAN connector of the unit.

IPv6 (multicast DNS) access

`https://CBK-RPU7-*****.local/webui/`

Replace "*****" with the 7-digit serial number on the nameplate of the unit.

IPv4 access

`https://192.168.10.20/webui/`

* Subnet mask: 255.255.255.0

Note

If an IP address has been configured for the unit using [WAN] (page 35) > [LAN (RJ-45)] on the [Network] tab of the [Maintenance] page in the web menu, use "https://IP_address_of_unit/webui/" as the IPv4 access URL.

Alternatively, connect a smartphone set to USB tethering mode to the unit using a USB cable, and access the address displayed on the subscreen of the Web Menu URL screen of the unit in a web browser on the smartphone. You can also access the web menu by scanning the QR code displayed on the Web Menu URL screen of the unit using a smartphone.

(See "Web Menu URL screen" (page 43))

Refer to the following table for device operating system and browser support for accessing the web menu.

Device	Operating system	Browser
Computer	Microsoft Windows 10/11	Chrome
Smartphone	Android 13.x	Chrome

Notes

- The picture may not be depicted correctly, depending on the version of your browser. Operation with the following browser versions has been verified.
Chrome: 130
- Display in landscape mode when viewing the web menu on a smartphone.

- 2 Log in using the following user name and password on the authentication screen.

Username: cbk-rpu7
Password: rpu-cbk-rpu7

Notes

- The initial user has Maintainer role.
- An error page will be displayed if you attempt to log in after 10 minutes or longer of inactivity has elapsed since the authentication screen was first displayed. In this case, perform the procedure again from step 1.

You can reset the settings of the unit to the factory defaults using [Option Menu] > [Reset] on the System screen (page 43) on the display of the unit.

- 3 When logging in for the first time, change the password.
You can also change the user name, as desired.

Set the user name and password as follows.

- From 1 to 31 characters comprising ASCII characters in the range 0x20 to 0x7E can be configured for a user name.
- From 12 to 31 characters comprising a mix of both numeric characters and ASCII characters in the range 0x20 to 0x7E can be configured for a password.
- All users cannot use the same password as the initial password.

After logging in successfully, the [Control] page in the web menu appears.

Note

The user configured here cannot be deleted.

Initial setup

- 1 Select the [Time] tab (page 33) of the [Maintenance] page in the web menu and set the date, time, and time zone.

Note

If the settings on the [Time] tab are changed, you may need to log in again.


- 2 Create a user account for operation in [Users] on the [Certificates] tab.

Create a new user with Operator role to allow operation of the unit.
(See "Certificates tab" (page 37))

Setting the configuration (operating mode)

- 1 Log out from the user with Maintainer role, and log in as the user with Operator role that you created during the initial setup.

Note

To log out, select the  icon at the top right of the screen.

- 2 Open the [Configuration] tab (page 24) of the [Streaming] page in the web menu.

- 3 Select the top row setting and click the [Edit] button.

The configuration edit screen appears.

- 4 Configure the system frequency and select the [Operation Mode] on the edit screen of the [Configuration] tab (page 24).

- 5 Click the [Apply] button.

The unit will reboot when the system frequency is changed.

Setting the WAN port

When connecting the unit to a network, you can select whether to use the LAN connector or a USB connector.

- 1 Select [WAN] on the [Network] tab (page 35) of the [Maintenance] page in the web menu, set [Streaming] to [LAN] or [USB], and click the [Apply] button.

When LAN is selected

Configure the IPv4 network settings of the LAN connector of the unit.
(See "Network tab" (page 35))

Note

The connection may be disconnected if you change the IP address.

When USB is selected

Check whether the IP address is displayed. If the IP address is not displayed, configure tethering on a 5G communications device connected to a USB connector of the unit.

Creating a destinations list

Create destinations as streaming transmit destinations.

Note

Check the IP address, stream number, and port number on the receiver side before configuring settings.

- 1 Open the [WAN List] tab (page 29) of the [Streaming] page in the web menu.
- 2 Click the [Edit] button in [Destination] on the [WAN List] tab and create a transmit destinations list.
- 3 Enter the following transmit destination information and click the [OK] button.
 - Transmit destination name
 - IP address
 - MTU
 - Network jitter buffer
 - Stream number
 - Port number(See "WAN List tab" (page 29))

Configuring transmission

- 1 Configure the following settings on the [Settings] tab (page 25) of the [Streaming] page in the web menu.
 - Destination (select a transmit destination created as described in "Creating a destinations list")
 - Return
 - Video resolution
 - Video bit rate
 - Scene change detection
 - OETF/color gamut
 - Number of audio channels
 - Ancillary transmission mode
 - DID filter number
 - SDI input type
 - Test signal
 - Return video resolution
 - Return OETF/color gamut
 - Number of return audio channels
 - Return test signal

Notes

- Items may not be selectable, depending on the configuration.
 - When [Operation Mode] is set to [CCM] on the edit screen of the [Configuration] tab (page 24) of the [Streaming] page in the web menu, the [Settings] tab is disabled.
- 2 Click the [Apply] button.

Inputting video signals

Input the video on SDI IN/OUT connector 1 of the unit. The input video must match the transmit settings.

Notes

- When SDI Input is set to 3G x4 in the transmit settings, input the video on all of SDI IN/OUT connectors 1 to 4 of the unit.
- Set [Streaming] to the OFF position before changing the format of the SDI signal input to the unit.

Starting transmission

- 1 Open the [Control] page (page 20) in the web menu and set the [Streaming] slide switch to the ON position. Alternatively, set [Streaming] to the ON position on the subscreen of the Home screen (page 41) on the display of the unit.

To stop transmission, set [Streaming] to the OFF position.

Checking the transmission status

You can check the WAN transmission statistics information on the [Statistics] page (page 23) in the web menu.

If a problem occurs, you can check the description on the [System Message] tab (page 21) of the [Monitoring] page in the web menu or on the Message screen (page 43) on the display of the unit.

Transmission Latency

You can transmit 4K or HD using the unit in ultra-low latency transmission mode.

Note

The final transmission delay is determined by the delay introduced by the lines and the configured buffer size. Optimize the settings for your environment to ensure stable operation.

Web Menu List

Web Menu Structure

The unit is configured using a web menu.

Page list

The web menu contains the following pages. Select from the menus in the left pane.

Page	Description
Control	Starts/stops stream transmission. It also displays the transmission status and input/output status (page 20). Only users with Operator role have permission to operate. Users with other roles can only check the status.
Monitoring	Displays the device status. It is also used to configure power supply settings (page 21). Only users with Operator role have permission to operate. Users with other roles can only check the status.
Statistics	Displays transmission statistics information (page 23). Users with any role can check the status.
Streaming	Used to configure transmission settings (page 24). Only users with Operator role have permission to operate. Users with other roles can only check the status.
Maintenance	Used to perform maintenance on the unit. It is also used to set the stream output destination connector (page 32). The roles for operation and configuration will vary depending on the item. For details, see the description of each item in "Maintenance Page" (page 32).

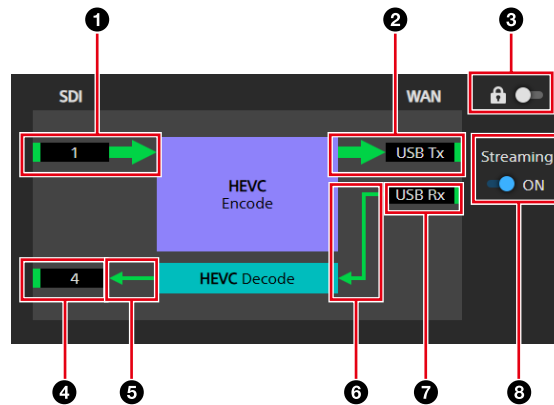
Title bar



- 1 Describes basic information about the unit.
- 2 Displays the name and role of the currently logged in user. Also used to log out and end operation of the unit.

Control Page

This page is used to start/stop streaming. It also displays the input/output and operating status. The structure of the screen will vary depending on the contents of the configuration created on the [Streaming] page (page 24).



- ① Displays the number of the input signal SDI connector and the input status.

SDI connector number

- 1: Input video on SDI IN/OUT connector 1.
1-4: Input video in a 3G-SDI (Quad Link) connection using SDI IN/OUT connectors 1 to 4.

Input status

- Green: Normal input
Red: Input error (includes incorrect format signal)
Gray: No input

- ② Displays the name of the connector (LAN/USB) for transmitting video.

The color on the right side of the connector name indicates the output status.

- Green: Transmitting
Gray: Stopped

When you move the cursor to a connector name on the WAN side, the name of the transmit destination is displayed in a tooltip.

A test signal is being output when "SG" is displayed.

- ③ Set to the ON position to prevent transmit and receive operations. The settings are enabled only in your web browser.

- ④ Displays the number of the output signal SDI connector and the output status.

SDI connector number

- 4: Output video on SDI IN/OUT connector 4.

Output status

- Green: Normal output (always displayed green)

- ⑤ Displays the output direction and status of the decoder.

The following status is displayed.

- Green: Normal output
Yellow: A decode error was detected on the output
Red: A fatal error was detected during decoding
Gray: No output

- ⑥ Displays the input direction and status of the decoder.

The following status is displayed.

- Green: Normal input
Yellow: No decode processing occurred due to anomaly detection
Gray: No input

- ⑦ Displays the logical connector name on the WAN side and the input status.

The color on the right side of the connector name indicates the input status.

- Green: Receiving
Yellow: Receiving stream with different settings
Red: Not receiving
Gray: Stopped

- ⑧ Set the [Streaming] slide switch to the ON position to start streaming. Set the slide switch to the OFF position to stop streaming.

Notes

- The transmit configuration must be completed before starting to transmit. For details about transmit settings, see "Settings tab" (page 25).
- If streaming cannot be started, the switch is set to OFF automatically and the reason the stream cannot be started is displayed.

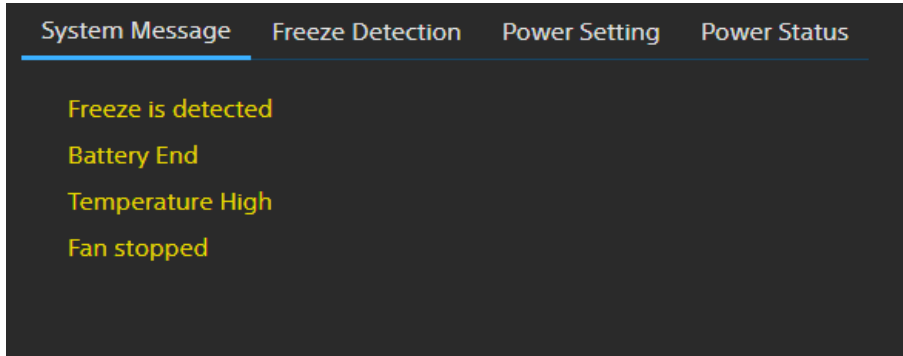
Monitoring Page

This page displays the status of the unit.

System Message tab

This tab displays caution and warning messages.

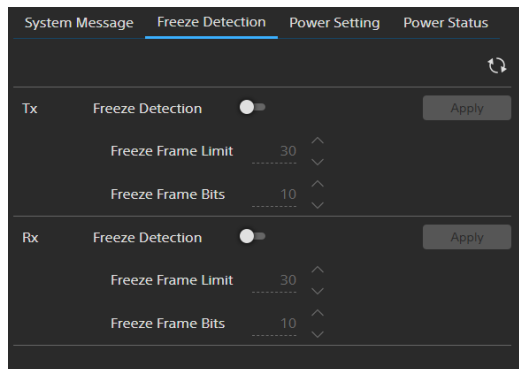
For details about caution and warning messages, see “Warning/Caution System” (page 45).



Freeze Detection tab

This tab is used to monitor the input signals and receive stream video from the SDI connectors, and to set the function that displays a caution message if it has been determined that a video freeze has occurred. When a freeze is detected, the detection result is displayed on the [System Message] tab and on the Message screen (page 43) on the display of the unit.

[Rx Freeze Detection] is displayed when [Mode] > [Return] is set to the ON position on the [Settings] tab (page 25) of the [Streaming] page.



Item	Description
Tx/Rx Freeze Detection	Enables/disables the freeze detection function. <ul style="list-style-type: none">• ON• OFF
Freeze Frame Limit	Sets the number of consecutive frames that are the same as the previous frame for determining whether the image has frozen. <ul style="list-style-type: none">• 1 to 30 to 120
Freeze Frame Bits	Sets the number of high-order bits of the baseband signal (10 bits) to compare when determining whether the image has frozen. <ul style="list-style-type: none">• 1 to 10

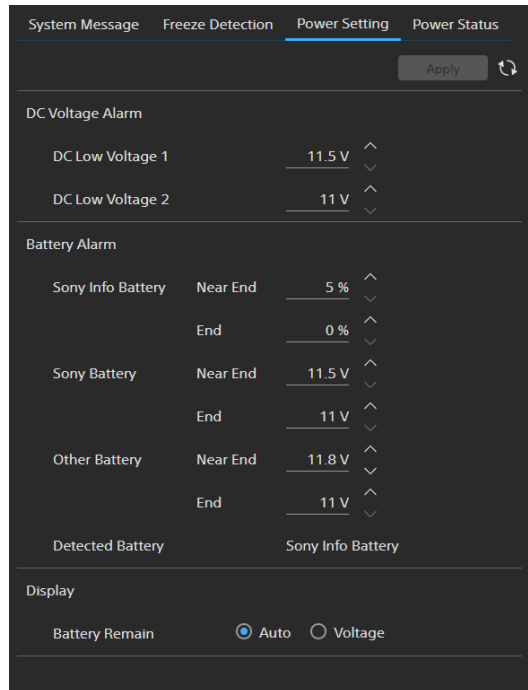
Notes

- Accurate comparison is possible for SDI inputs. On the other hand, input via WAN may not be sufficiently detected due to compression distortion caused by the codec. Accordingly, there may be a difference in detection performance even with the same settings.

- If the detected level of freezing exceeds the threshold within a certain period of time, a caution message will be displayed and the freeze detection function will stop.

Power Setting tab

This tab is used to set alarms related to the voltage of the external DC power supply and the battery.

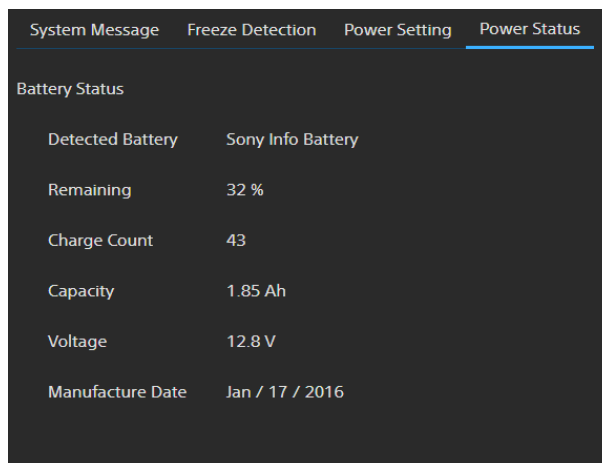


Item	Description	
DC Voltage Alarm		
	DC Low Voltage1	Sets the threshold value for displaying "Voltage Low" when an external power supply is connected to the DC IN connector. • 11.5V to 17V (0.1V increments)
	DC Low Voltage2	Sets the threshold value for displaying "Insufficient Voltage" when an external power supply is connected to the DC IN connector. • 11.0V to 14.0V (0.1V increments)
Battery Alarm		
	Sony Info Battery	
	Near End	Sets the threshold value for displaying "Battery Near End" when using an Info battery. • 5% /10%/15%...95%/100%
	End	Sets the threshold value for displaying "Battery End" when using an Info battery. • 0% /1%/2%/3%/4%/5%
	Sony Battery	
	Near End	Sets the threshold value for displaying "Battery Near End" when using a Sony non-Info battery. • 11.5V to 17V (0.1V increments)
	End	Sets the threshold value for displaying "Battery End" when using a Sony non-Info battery. • 11.0V to 12.5V (0.1V increments)

Item	Description	
	Other Battery	
	Near End	Sets the threshold value for displaying "Battery Near End" when using a non-Sony battery pack. <ul style="list-style-type: none"> 11.5V to 11.8V to 17.0V (0.1V increments)
	End	Sets the threshold value for displaying "Battery End" when using a non-Sony battery pack. <ul style="list-style-type: none"> 11.0V to 14.0V (0.1V increments)
	Detected Battery	Displays the result of automatic battery type detection. <ul style="list-style-type: none"> Sony Info Battery/Sony Battery/Other Battery/DC IN
Display		
	Battery Remain	Sets the battery level/input voltage display. <ul style="list-style-type: none"> Auto: Displays the remaining battery level according to the battery type. Voltage: Displays the input voltage regardless of the battery type.

Power Status tab

This tab displays the status of the installed battery and power supply.



Item	Description
Battery Status	
Detected Battery	Displays the detected type of the battery.
Remaining	Displays the remaining battery level (%).
Charge Count	Displays the number of times the battery has been charged.
Capacity	Displays the remaining battery capacity (Ah).
Voltage	Displays the voltage.
Manufacture Date	Displays the date of manufacture of the battery.

Statistics Page

This page displays streaming statistics information.

The screen is updated automatically every 5 seconds.

Rx statistics are displayed when [Mode] > [Return] is set to the ON position on the [Settings] tab (page 25) of the [Streaming] page.

The screenshot shows the WAN statistics page with the following data:

Tx		Rx	
Bitrate	40.500 Mbps	Bitrate	15.400 Mbps
RTT	9 ms	Packets	4,000
RTT (Max)	18 ms	Packets Loss	194
		RTT	9 ms
		RTT (Max)	15 ms
		QoS Loss	0

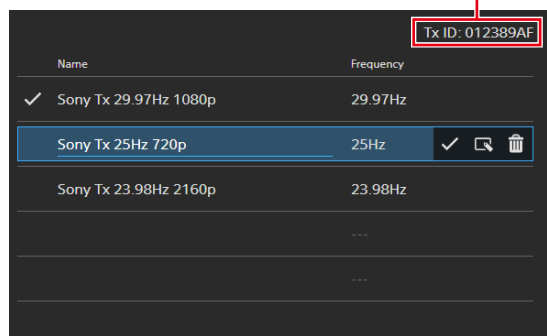
Item	Description		
WAN	Tx	Bitrate	Displays the transmit bit rate. Also displayed on the Home screen (page 41) on the display of the unit.
		RTT	Displays the average value of the Round Trip Time (RTT) between transmitter and receiver.
		RTT(Max)	Displays the maximum value of the Round Trip Time (RTT) between transmitter and receiver.
	Rx	Bitrate	Displays the receive bit rate.
		Packets	Displays the number of received packets.
		Packets Loss	Displays the number of packets judged to have been lost from the packets received by the receiver. The Sony QoS processing is implemented based on this number of packets judged to have been lost.
		RTT	Displays the average value of the Round Trip Time (RTT) between transmitter and receiver.
		RTT(Max)	Displays the maximum value of the Round Trip Time (RTT) between transmitter and receiver.
		QoS Loss	Displays the number of packets that could not be recovered by Sony QoS processing. Sony QoS processing is performed not only when packet loss is detected in [Packets Loss], but also when the network buffer settings are insufficient.

Streaming Page

Configuration tab

This tab is used to display, create, and modify the configuration of the unit.

Tx ID (settings required on receiver side)

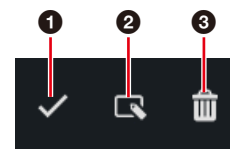


Up to five configurations can be configured, which can be modified or added to match the application.

Tx ID (Transmitter ID) is an ID that identifies the transmitter. This value is required when creating a destination on a receiver. The value differs for each device.

Configuration operations

When a configuration is selected in the list, buttons for the following operations are displayed on the right side.



- ❶ [Apply]: Switches to the selected configuration. The unit may need to be rebooted.
- ❷ [Edit]: Use to create or edit a configuration using the wizard.
- ❸ [Delete]: Deletes the configuration settings.

Note

The currently used configuration cannot be deleted.

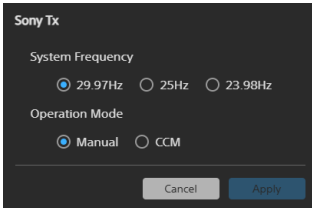
You can click the name of a configuration to rename it.

Creating/editing a configuration

1 Click the [Edit] button for a configuration.

The configuration edit screen appears.

Editing screen example



2 Select the system frequency in [System Frequency].

3 Select [Manual] or [CCM] in [Operation Mode].

4 Click the [Apply] button.

Notes

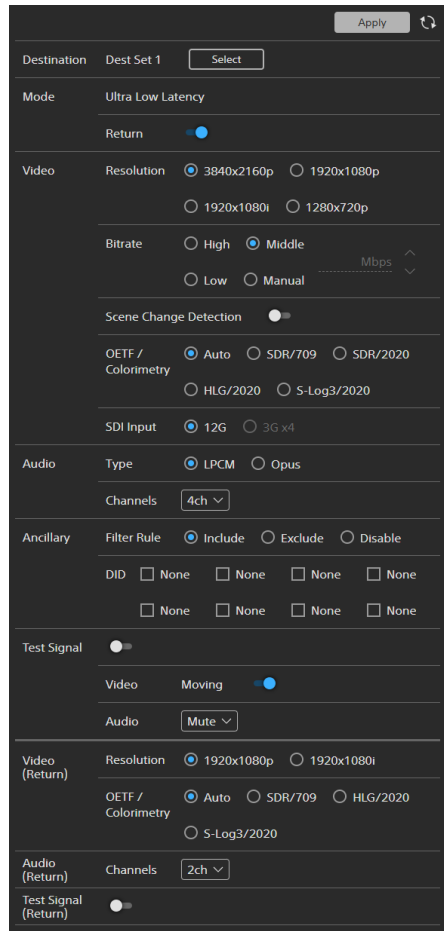
- If the currently selected configuration is edited, the unit must be rebooted.
- When [Operation Mode] is set to [CCM], the [Settings] tab (page 25) is disabled.

Settings tab

This tab is used to configure stream transmit settings.

The structure of the screen will vary depending on the configuration.

The settings on this screen are saved for each configuration.



Item	Description
Destination	Click [Select] and select a destination and stream number. The destination and stream number are selected from the transmit destinations list created in [Destination] on the [WAN List] tab.
Mode	Displays the low latency transmission mode. Ultra Low Latency: Ultra-low latency transmission mode
Return	Selects whether to enable return. <ul style="list-style-type: none"> • OFF • ON
Video	
Resolution	Selects the video resolution. <ul style="list-style-type: none"> • 3840×2160p • 1920×1080p • 1920×1080i • 1280×720p
Bitrate	Selects the video transmission bit rate. <ul style="list-style-type: none"> • High: Setting to transmit with high image quality. • Middle: Recommended setting. • Low: Setting to economize on bandwidth. • Manual: Set manually. <p>Notes</p> <ul style="list-style-type: none"> • The following configurable ranges are available when set to [Manual]. 4K:35 to 200 Mbps HD: 12 to 100 Mbps • [High] may not be selectable, depending on the configuration. • When [WAN] > [Streaming] > [USB] is selected on the [Network] tab (page 35) of the [Maintenance] page in the web menu, the maximum value for [Bitrate] is 100 Mbps.

Item		Description
	Scene Change Detection	Selects whether to detect scene changes in the input signal to optimize the encoding process. <ul style="list-style-type: none"> • OFF: Suitable for camera output transmission. • ON: Suitable for program out transmission.
	OETF/Colorimetry	Selects the OETF and color gamut. <ul style="list-style-type: none"> • Auto • SDR/709 • SDR/2020 • HLG/2020 • S-Log3/2020 <p>Notes</p> <ul style="list-style-type: none"> • When a setting other than [Auto] is selected, transmission occurs using the specified value regardless of the signal content. • Selection options other than [SDR/709] may not be selectable, depending on the configuration. • There is no OETF/Colorimetry conversion function.
Audio		
	Type	Selects the type of audio to transmit. <ul style="list-style-type: none"> • LPCM • Opus
	Channels	Selects the number of audio channels to transmit. <ul style="list-style-type: none"> • 0ch • 2ch • 4ch <p>Note</p> <p>The set value must match the [Audio] > [Channels] setting in the receive list set for the paired receiver.</p>
Ancillary		
	Filter Rule	Selects the mode for ancillary data transmission. <ul style="list-style-type: none"> • Include: Transmits ancillary data specified using DID. • Exclude: Transmits ancillary data other than the data specified using DID. • Disable: Do not transmit ancillary data. <p>Note</p> <p>Not all specified ancillary data can be transmitted. When [Include] or [Exclude] is selected, the ATC (Ancillary Time Code) is transmitted regardless of the DID setting. ATC is also not transmitted when [Disable] is selected.</p>
	DID	Specifies the DID used by the filter rule when transmitting ancillary data. Up to eight can be specified.
SDI Input		
		Selects the type of the input connectors for 4K input over SDI. <ul style="list-style-type: none"> • 12G • 3G x4 <p>Note</p> <p>This item is displayed only when a resolution of [3840x2160p] (except when [System Frequency] is set to 23.98 Hz) is selected. When [System Frequency] is set to 23.98 Hz, SDI (Quad Link) input is not supported.</p>
Test Signal		
	Video	
	Moving	Selects whether to output the test signal internal video as still image color bars or moving color bars. <ul style="list-style-type: none"> • OFF • ON

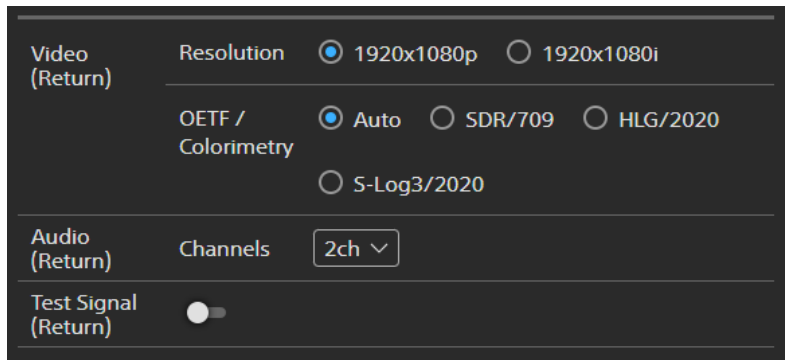
Item	Description
Audio	<p>Selects the level of the test signal internal audio (1 kHz tone signal).</p> <ul style="list-style-type: none"> • Mute • -24dB • -22dB • -20dB • -18dB • -16dB • 0dB

Note

During streaming, settings other than [Test Signal] cannot be changed.

Settings tab (when [Return] is ON)

Displayed when [Mode] > [Return] is set to the ON position.

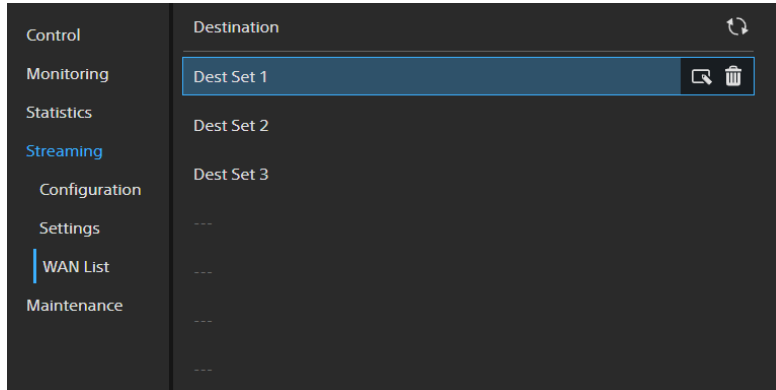


Item	Description
Video (Return)	
Resolution	<p>Selects/displays the return video resolution.</p> <ul style="list-style-type: none"> • 1920×1080p • 1920×1080i • 1280×720p <p>When [Video] > [Resolution] is set to [3840×2160p] or [1920×1080p], [1920×1080p] and [1920×1080i] can be selected.</p> <p>Note</p> <p>The set value must match the setting for the paired receiver.</p>
OETF/Colorimetry	<p>Selects the return video OETF and color gamut.</p> <ul style="list-style-type: none"> • Auto • SDR/709 • HLG/2020 • S-Log3/2020 <p>When [Auto] is selected, parameters are determined automatically from the received stream. When an individual setting is selected, the signal is output at the specified setting regardless of the stream contents.</p> <p>Notes</p> <ul style="list-style-type: none"> • For HD-SDI (1.5G), the payload ID is not embedded in the SDI output. • Selection options other than [SDR/709] may not be selectable, depending on the configuration. • There is no [OETF/Colorimetry] conversion function.
Audio (Return)	
Channels	<p>Selects the number of audio channels to transmit.</p> <ul style="list-style-type: none"> • 0ch • 2ch <p>Note</p> <p>The set value must match the setting for the paired receiver.</p>

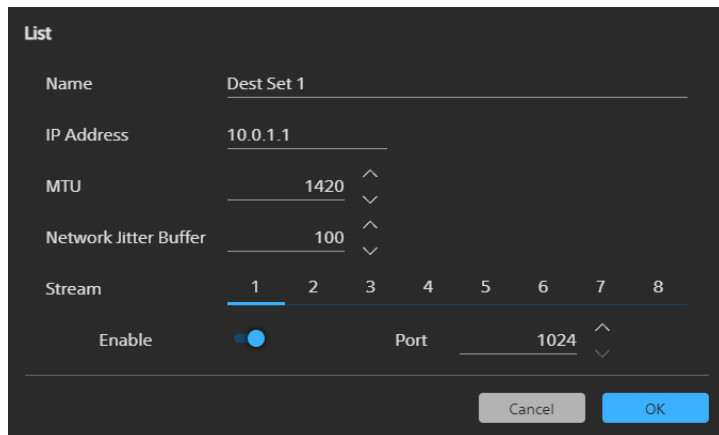
Item	Description
Test Signal (Return)	Selects whether to output the internal test signal instead of the return signal. <ul style="list-style-type: none"> • OFF • ON

WAN List tab

This tab is used to create a list of destinations to which the unit will transmit. The settings of receivers are required to create a list for transmission. Check the settings of devices beforehand. The destinations that you create are used when selecting a [Destination] on the [Settings] tab.



Create a transmit list for specifying the receivers to which the transmitter will transmit streams. Select a blank row and click the [Edit] button to display the edit screen.



Configure the following items on the edit screen and click the [OK] button.

Item	Description
Name	Sets the name that identifies the transmit destination (receiver). The configured transmit destination is displayed on the main screen of the Network screen (page 42) on the display of the unit.
IP Address	Sets the IP address of the transmit destination. <ul style="list-style-type: none"> • 0.0.0.0 to 255.255.255.255 The configured transmit destination IP address is displayed on the main screen of the Network screen (page 42) on the display of the unit.
MTU	Sets the MTU of packets to transmit. <ul style="list-style-type: none"> • 1300 to 1420 to 1500

Item	Description
Network Jitter Buffer	<p>Sets a buffer size in milliseconds that can absorb network jitter on the WAN lines. If the network jitter on a line cannot be absorbed, image/audio distortion may occur.</p> <p>Note The set value must match the [Network Jitter Buffer] value in the receive list set for the paired receiver. If you change the value, also change the receive list that specifies this unit on the paired receiver.</p> <ul style="list-style-type: none"> • 1 to 100 to 1000
Stream	Sets which stream number on the receiver will receive the stream.
Enable	<p>This can be enabled/disabled and a receive port number configured independently for streams 1 to 8. The receive port number to specify is the port number set for each stream number using [Maintenance] page > [Network] tab > [WAN] > [Receiver Port] on the receiver.</p> <ul style="list-style-type: none"> • OFF • ON
Port	<p>Sets the receive port number for the receiver for each stream number. The default value for Stream 1 is 1024, and increases by 2 for Stream 2 and each subsequent stream.</p> <ul style="list-style-type: none"> • 1024 to 65535

Note

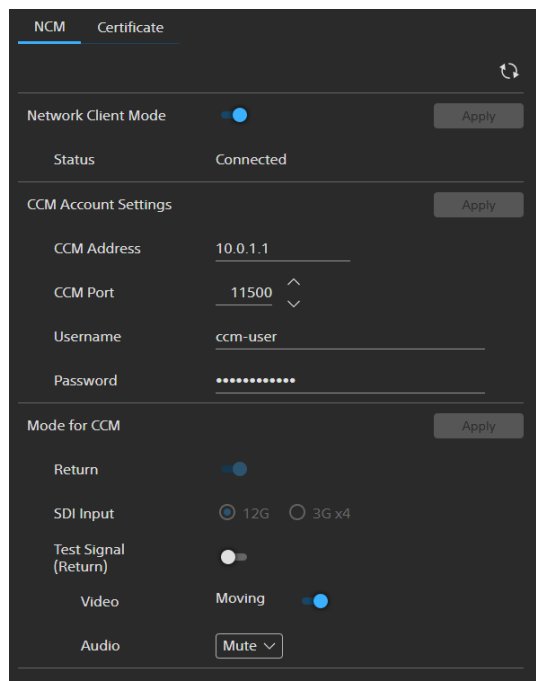
Communication with the receiver uses four consecutive UDP ports from the port number specified in [Port]. For example, if [Port] is set to 1024, UDP ports 1024, 1025, 1026, and 1027 are used for communication.

CCM tab

This tab is used to connect to a CCM and to configure and control transmission and reception of streaming from the CCM.

Displayed when [Operation Mode] is set to [CCM] on the edit screen of the [Configuration] tab (page 24).

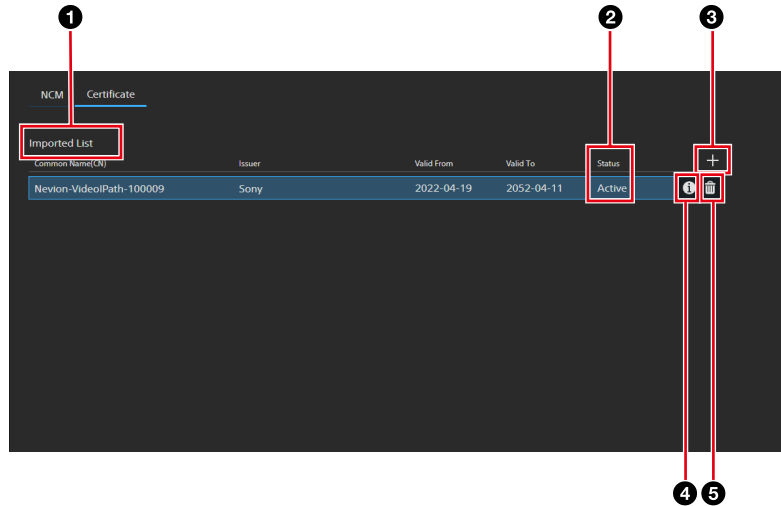
NCM (Network Client Mode)



Item	Description
Network Client Mode	<p>When set to the ON position, connection to the CCM starts. Also, connection to the CCM is established automatically after rebooting the unit.</p> <ul style="list-style-type: none"> • OFF • ON <p>Note When [Network Client Mode] is set to the ON position, the [Streaming] slide switch operation on the [Control] page (page 20) is disabled.</p>
Status	<p>Displays the status of the connection to the CCM.</p> <ul style="list-style-type: none"> • Connected: Connection established • Connecting: Connection in progress • Disconnected: Disconnected • Auth. Failed: The user name or password for CCM connection is incorrect. • Dest-Addr. Error: Cannot connect to the CCM. • No Network Access: Cannot find the CCM server. • Server Cert. Error: Certificate verification failed.
CCM Account Settings	Configures settings for connection to the CCM.
CCM Address	<p>Sets the IP address of the CCM.</p> <ul style="list-style-type: none"> • 0.0.0.0 to 255.255.255.255
CCM Port	<p>Sets the port number of the CCM.</p> <ul style="list-style-type: none"> • 0 to 65535
Username	Sets the user name for connection to the CCM.
Password	Sets the password for connection to the CCM.
Mode for CCM	Sets items that cannot be configured from the CCM.
Return	<p>Selects whether to enable return.</p> <ul style="list-style-type: none"> • OFF • ON
SDI Input	<p>Selects the type of the input connectors for 4K input over SDI.</p> <ul style="list-style-type: none"> • 12G • 3Gx4 <p>Note When [System Frequency] is set to [23.98 Hz], SDI (Quad Link) input is not supported.</p>
Test Signal (Return)	<p>Selects whether to output the internal test signal instead of the return signal.</p> <ul style="list-style-type: none"> • OFF • ON
Video	
Moving	<p>Selects whether to output the test signal internal video as still image color bars or moving color bars.</p> <ul style="list-style-type: none"> • OFF • ON
Audio	<p>Selects the level of the test signal internal audio (1 kHz tone signal).</p> <ul style="list-style-type: none"> • Mute • -24dB • -22dB • -20dB • -18dB • -16dB • 0 dB

Certificate

Manages CCM server certificates.



- ❶ Up to 20 certificates can be saved.
- ❷ Displays the certificate status.
Active: Active certificate
Expired: Valid period expired certificate
Not Yet Active: Valid period for date in the future
- ❸ Imports a certificate (pem file).
- ❹ Displays the certificate contents.
- ❺ Deletes a certificate.

Maintenance Page

Version tab

This tab displays the model name, serial number, and version of each block in the unit. When [Browser Tab Title] is set to the ON position, the characters entered in [Name] are displayed on the browser tab. When [Operation Mode] is set to [CCM] on the edit screen of the [Configuration] tab (page 24), the characters entered in [Name] are sent to the CCM. You can update the version of the unit using the [Software Update] > [Execute] button. Only users with Maintainer role can update the software version. Click the [Execute] button to select and apply a file on your computer. The file is transferred and then the update begins. The status lamp of the unit blinks white during the update process. The unit will automatically reboot when the update is completed.

Note

Always connect to an AC adaptor (AC-DN10A) for operation. If a battery is installed, operation will continue if the AC power supply is subsequently disconnected.

Model Name	CBK-RPU7
Serial No.	99999
Browser Tab Title	<input checked="" type="checkbox"/>
Name	SONY CBK-RPU7
	Version
PACKAGE	1.10
SYS-0	1.10
SYS-1	1.10
SYS-2	1.10
SYS-3	1.10
PROC	1.10
CODEC	1.10
UPDATER	1.10
Software Update	<input type="button" value="Execute"/>

Time tab

This tab is used to set the date and time.
Only users with Maintainer role can change settings.

When [Daylight Saving Time] is set to [Manual Dates]

	<input type="button" value="Apply"/>	
Local Time	2024 - 03 - 01	00 : 00 : 00
Time Zone	UTC+00:00	
Daylight Saving Time	Manual Dates	
Offset	60 min	<input type="button" value="^"/> <input type="button" value="v"/>
Spring	2024 - 03 - 31	01 : 00
Autumn	2024 - 10 - 29	02 : 00

When [Daylight Saving Time] is set to [Manual Recurring]

Apply
↻

Local Time 2024 - 03 - 01 00 : 00 : 00

Time Zone UTC+00:00 ▾

Daylight Saving Time Manual Recurring ▾

Offset 60 min [^]
▾

Spring Last ▾ Sun ▾ Mar ▾ 01 : 00

Autumn Last ▾ Sun ▾ Oct ▾ 02 : 00

Next Spring Change 2024-03-31 01:00

Next Autumn Change 2024-10-27 02:00

Item	Description
Local Time	Sets the date and local time.
Time Zone	Sets the offset from UTC time. <ul style="list-style-type: none"> • UTC+14:00 • UTC+13:00 • UTC+12:45 • UTC+12:00 • UTC+11:00 • UTC+10:30 • UTC+10:00 • UTC+09:30 • UTC+09:00 • UTC+08:45 • UTC+08:00 • UTC+07:00 • UTC+06:30 • UTC+06:00 • UTC+05:45 • UTC+05:30 • UTC+05:00 • UTC+04:30 • UTC+04:00 • UTC+03:30 • UTC+03:00 • UTC+02:00 • UTC+01:00 • UTC+00:00 • UTC-01:00 • UTC-02:00 • UTC-03:00 • UTC-03:30 • UTC-04:00 • UTC-05:00 • UTC-06:00 • UTC-07:00 • UTC-08:00 • UTC-09:00 • UTC-09:30 • UTC-10:00 • UTC-11:00 • UTC-12:00
Daylight Saving Time	Configures summer time (daylight saving) settings. <ul style="list-style-type: none"> • OFF: Do not use summer time (daylight saving). • Manual Dates: Specify the summer time (daylight saving) start/end dates and times, and set the time offset. • Manual Recurring: Specify the summer time (daylight saving) start/end dates as “m” month “n” day of week counter (such as 1st Sunday or 2nd Monday), and set the time offset. Displays the summer time (daylight saving) interval calculated from the configured values.
Offset	Sets the time offset to apply when [Daylight Saving Time] is enabled. <ul style="list-style-type: none"> • 0 to 60 to 240
Spring	Sets the summer time (daylight saving) start date when [Daylight Saving Time] is set to [Manual Dates]. <ul style="list-style-type: none"> • yyyy-mm-dd HH:MM (yyyy: year, mm: month, dd: day, HH: hour, MM: minute) Sets the summer time (daylight saving) start date when [Daylight Saving Time] is set to [Manual Recurring]. <ul style="list-style-type: none"> • 1st to Last • Sun to Sat • Jan to Dec • HH:MM (HH: hour, MM: minute)
Autumn	Sets the summer time (daylight saving) end date when [Daylight Saving Time] is set to [Manual Dates]. <ul style="list-style-type: none"> • yyyy-mm-dd HH:MM (yyyy: year, mm: month, dd: day, HH: hour, MM: minute) Sets the summer time (daylight saving) end date when [Daylight Saving Time] is set to [Manual Recurring]. <ul style="list-style-type: none"> • 1st to Last • Sun to Sat • Jan to Dec • HH:MM (HH: hour, MM: minute)

Item	Description
Next Spring Change	Displays the next summer time (daylight saving) start date when [Daylight Saving Time] is set to [Manual Recurring].
Next Autumn Change	Displays the next summer time (daylight saving) end date when [Daylight Saving Time] is set to [Manual Recurring].

Notes

- If the settings on the [Time] tab are changed, you may need to log in again.
- The retention period for date information is approximately three months. Once the retention period has elapsed, the date returns to the initial value of 2024, January 1, 0 hours, 0 minutes, 0 seconds.

Network tab

This tab is used to configure settings for WAN and Internal networks.

WAN

Configures network settings for the LAN connector and USB connectors. Only users with Maintainer role or Operator role can change settings. After configuring the network settings, click the [Apply] button.

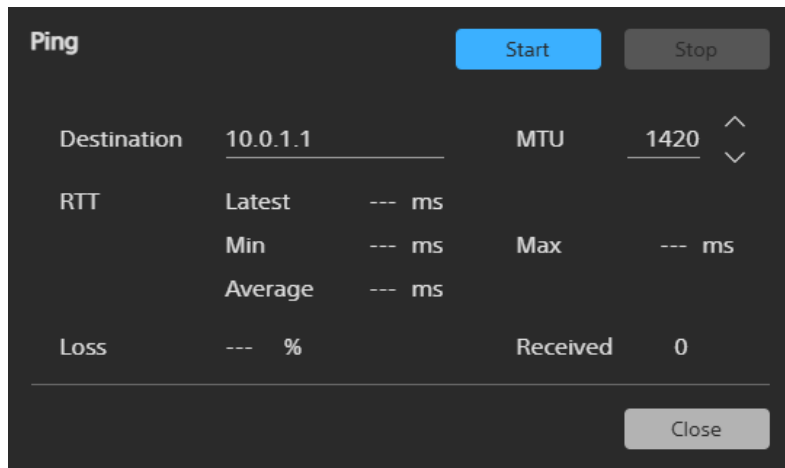
The screenshot shows the WAN configuration page with two tabs: 'WAN' (selected) and 'Internal'. Under 'WAN', there are two main sections: 'LAN (RJ-45)' and 'USB Tethering'. The 'LAN (RJ-45)' section has a 'Streaming' dropdown set to 'LAN' (with 'USB' as an alternative), an 'Apply' button, and a 'Ping' button. Below this, 'Link Speed' is set to 'Auto'. The 'IP v4' section has 'DHCP' disabled, 'IP Address' set to '192.168.10.10', 'Prefix Length' set to '24', and 'Default Gateway' set to '192.168.10.254'. The 'IP v6' section has 'mDNS' enabled. 'Link Status' is 'Up' and 'Mac Address' is '01:23:67:89:AB:EF'. 'ICMP Reply' is also enabled. The 'USB Tethering' section has 'IP Address' set to '192.168.0.1' and 'Link Status' is 'Up'.

Item	Description
Streaming	Selects the connector for sending a stream. <ul style="list-style-type: none"> • LAN: LAN connector • USB: USB connector

Item	Description
LAN (RJ-45)	
Ping	Displays the IPv4 ping test screen.
Link Speed	Sets the link speed. <ul style="list-style-type: none"> • Auto • 1G Full Duplex
IPv4	
DHCP	Enables/disables DHCP. <ul style="list-style-type: none"> • OFF • ON
IP Address	Sets the IP address. When DHCP is enabled, it displays the obtained IP address. 0.0.0.0 to 192.168.10.20 to 255.255.255.255
Prefix Length	Sets the prefix length. 4 to 24 to 31
Default Gateway	Sets the default gateway 0.0.0.0 to 255.255.255.255
IPv6	
mDNS	Enables/disables multicast DNS. <ul style="list-style-type: none"> • OFF • ON
Link Status	Displays the network link status. <ul style="list-style-type: none"> • Down • Up
MAC Address	Displays the MAC address.
ICMP Reply	Sets whether to enable ICMP replies. Set to ON to use the ping test. <ul style="list-style-type: none"> • OFF • ON
USB Tethering	
Ping	Displays the IPv4 ping test screen.
IP Address	Displays the IP address. When a 5G communications device which is set to tethering mode is connected to a USB connector, an IP address is assigned to the unit.
Link Status	Displays the network link status. <ul style="list-style-type: none"> • Down • Up

Ping

Executes a ping test.



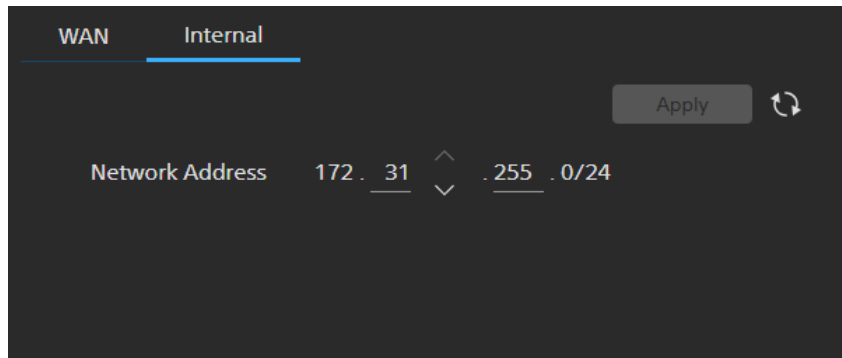
Item	Description	
Destination	Specifies the IP address of the destination for an IPv4 ping test. <ul style="list-style-type: none"> • 0.0.0.0 to 255.255.255.255 	
MTU	Sets the size of ping packets for which fragmentation is prohibited.	
RTT	Displays the round-trip time (RTT) value to and from the destination.	
	Latest	Displays the latest RTT value.
	Min	Displays the minimum RTT value.
	Max	Displays the maximum RTT value.
Average	Displays the average RTT value.	
Loss	Displays the ping packet loss percentage.	
Received	Displays the number of received ping replies.	

Internal

Configures the IP addresses of a virtual network used internally within the unit.

By default, this is set to 172.16.0.0/24.

If the IP address space assigned to WAN conflicts with the default value, change the IP address.



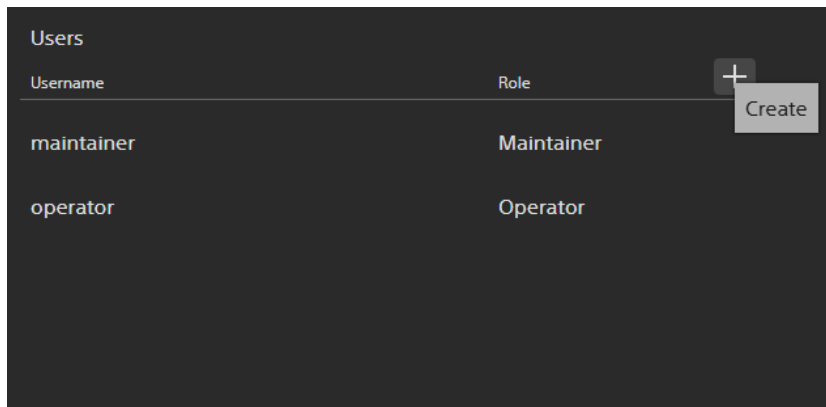
Item	Description
Network Address	Sets the network address space used internally within the unit. Change the setting if this address space overlaps the address space used by WAN and LAN. <ul style="list-style-type: none"> • 172.16.0.0/24 to 172.31.255.0/24

Certificates tab

Users

Used for user management.

Only users with Maintainer role can add and delete users.



To create a new user, select the bottom row and click the [Create] button.
Enter a user name and set the password on the screen that is displayed.

Create new user screen

Select the role from Maintainer, Operator, or Guest according to the roles listed in “Logging In/ Logging Out” (page 3).

To delete an existing user, select the user and click the [Delete] button. You cannot delete the initial user or your own user account.

To change the password of the logged-in user, select the user and click the [Edit] button.

Service tab

This tab is used to configure and run service tasks.

The role required for changing settings and operations is described for each item.

Item	Description
Operating Hours	Displays the cumulative operating time of the unit.
Operating Hours (r)	Service item. Only users with Maintainer role have permission to reset.

Change password screen

Notes

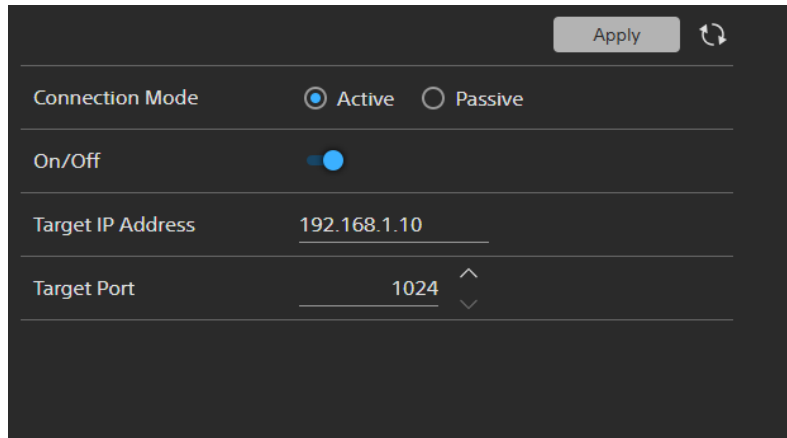
- From 1 to 31 characters comprising ASCII characters in the range 0x20 to 0x7E can be configured for a user name.
- From 12 to 31 characters comprising a mix of both numeric characters and ASCII characters in the range 0x20 to 0x7E can be configured for a password.
- All users cannot use the same password as the initial password.

To change the password of the logged-in user, select the user and click the [Edit] button. Only your password can be changed. Users with any role can change their own password.

Item	Description
Settings	<p>You can export the settings as a file, or apply the settings from a file to the unit. Use to back up settings and to apply the same settings to multiple units. Only users with Maintainer role have permission to operate.</p> <ul style="list-style-type: none"> • Export: Export the settings of the unit as a file. • Import: Imports settings saved in a file and apply them to the unit. The unit will reboot automatically when executed. <p>Notes</p> <ul style="list-style-type: none"> • User accounts, IP addresses, network settings, and dates are not transferable. • The unit may reboot twice, depending on the file that is imported.
Provide Personal Information	Includes IP address and other personal information in the service log downloaded using [Download Service Log]. To download a service log, you must set this switch to the enabled position and agree to provide logs containing personal information. Only users with Maintainer role or Operator role have permission to operate.
Download Service Log	Downloads a service log. To download, [Provide Personal Information] must be enabled. Only users with Maintainer role or Operator role have permission to operate.
Factory Reset	Resets to the factory default state. After execution, the unit will reboot. Only users with Maintainer role have permission to operate.
Download OSS Information	Downloads a file containing open-source software (OSS) license information. Users with any role have permission to operate.
Repair EEPROM	Service item. After execution, the unit will reboot. Only users with Maintainer role have permission to operate.

RCP tab

This tab is used to configure remote control panel connections for remotely operating a camera connected to the REMOTE connector of the unit.



Item	Description
Connection Mode	<p>Selects the method of connection with a remote control panel.</p> <ul style="list-style-type: none"> • Active: Connects to a remote control panel from the unit. • Passive: Connects to the unit from a remote control panel.
On/Off	<p>Selects whether to enable the function for connecting to a remote control panel from the unit.</p> <ul style="list-style-type: none"> • OFF • ON
Target IP Address	<p>Sets the destination IP address of the remote control panel connection.</p> <ul style="list-style-type: none"> • 0.0.0.0 to 255.255.255.255
Target Port	<p>Selects the destination port of the remote control panel connection.</p> <ul style="list-style-type: none"> • 1024 to 7700 to 65535

Note

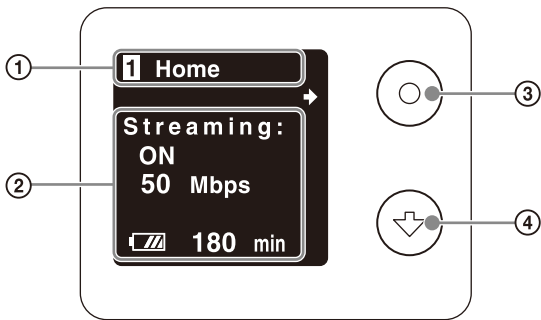
When using a remote control panel, use only in environments with an RTT lower than 150 ms. Correct operation may not occur in environments with an RTT of 150 ms or higher

Display of the Unit

You can check the status of the unit and the access link for the web menu on the display of the unit.

You can also turn streaming on/off. Switch between display content using the Apply button and Forward button.

Display screen operations



Display

① Title

Displays the title of the main screen.

② Display area

Displays information and configuration items.

Controls

③ (Apply) button

Switches between the main screen and subscreen, and applies settings on the subscreen.

④ (Forward) button

Switches pages on the main screen and subscreen, and changes selection options of settings on the subscreen.

Switching the main screen

1 Turn the power switch on to boot the unit.

The Home screen appears.

2 Press the (Forward) button.

The screen switches between Home, IN/OUT, Network, Web Menu URL, System, and Message screens in that order. Press the (Forward) button on the Message screen to return to the Home screen.

If a warning or caution state occurs on the unit, the warning or caution is displayed on the Message screen.

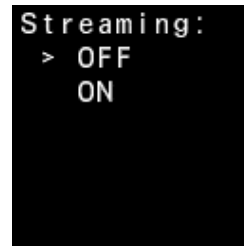
If you switch to the Message screen while not in the warning or caution state, "No Message" is displayed.

Switching the subscreen

When is displayed on the 2nd line on the main screen, you can switch to the subscreen by pressing the (Apply) button.

Subscreens include screens for configuring settings and screens that display information.

Screen for configuring settings:



Select a selection option using the (Forward) button, and confirm the selection using the (Apply) button.

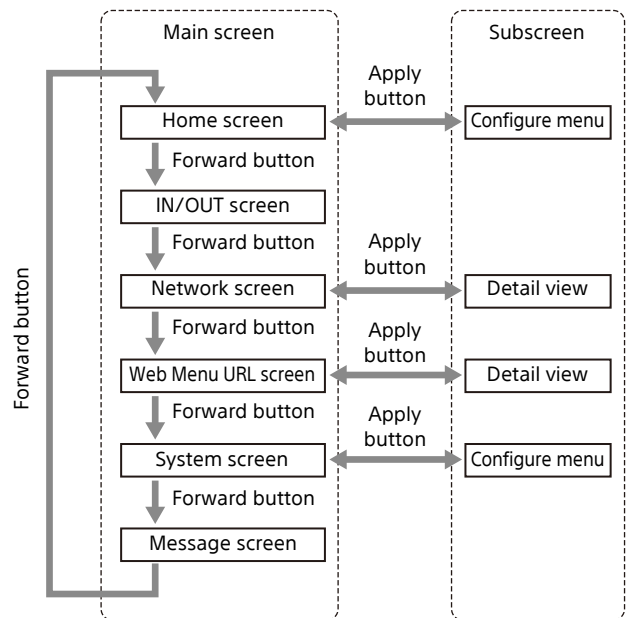
After an option is applied, the display returns to the main screen or the subscreen for selecting a menu item.

Screen displaying information:

Press the (Forward) button to switch the content displayed on the subscreen. Press the (Apply) button to return to the main screen.

Display screens

Screen structure





Home screen







Main screen:

Displays the power supply and streaming status. You can press the (Apply) button to display the subscreen and turn streaming on/off.

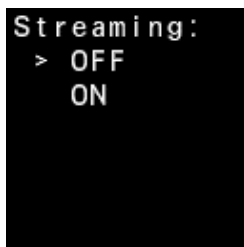
Item	Description
Streaming:	Displays the streaming status (ON/OFF) and transmit bit rate (Mbps).



Item	Description
Battery level/voltage display	Displays the following according to the type of power supply driving the unit.
 ** min ¹⁾	Displays a battery level icon and the remaining use time (minutes) when using an Info battery.
 ** % ¹⁾	Displays a battery level icon and the remaining capacity (%) when using an Anton/Bauer digital battery.
Batt: **V	Displays the battery voltage (V) when using a battery other than the above or when [Battery Remain] > [Voltage] is selected in the web menu. (See "Power Setting tab" (page 22))
DC IN: **V	Displays the input voltage (V) on the DC IN connector when using an external power supply connected to the DC IN connector.

1) Battery level icon display

Display	Description
	100% to 91% charge
	90% to 71% charge
	70% to 51% charge
	50% to 31% charge
	30% to 11% charge
	10% to 0% charge

Subscreen:



Switches streaming on/off. The default value is OFF. Select ON or OFF using the  (Forward) button and press the  (Apply) button. If streaming cannot be started when Streaming is set to ON, it is automatically set to OFF, the status lamp blinks orange for 3 seconds, and the reason streaming cannot be started appears on the Message screen.


IN/OUT screen

Displays the video input/output settings and status.

Item	Description	
Input setting	SDI 1: IN	Displayed for SDI connector 1 input setting.
	SDI 1-4: IN	Displayed for 3G-SDI (Quad Link) input setting.
Input signal	QFHD 59.94P	QFHD: 3840×2160
	QFHD 50P	
	QFHD 23.98P	
	FHD 59.94P	FHD: 1920×1080
	FHD 59.94i	
	FHD 50P	
	FHD 50i	
	HD 59.94P	HD: 1280×720
	HD 50P	
	No Signal	Displayed when there is no input or the input cannot be detected.
Mismatch	Displayed when the input signal does not match the settings.	


Network screen


Main screen:

Displays the network status. Press the  (Apply) button to display the IP address of the unit on the subscreen.

Item	Description
<Dest.>	Displays the transmit destination name and IP address configured using [Destination] on the [Settings] tab of the [Streaming] page in the web menu (see "Settings tab" (page 25)). Displays the [CCM] character string and transmit destination IP address from the CCM when [Operation Mode] is set to [CCM] on the edit screen of the [Configuration] tab (page 24) of the [Streaming] page in the web menu.

Subscreen:


Displays the selected WAN port (for example, [LAN: Selected]). The network link status and IP address of the LAN connector or USB connector are also displayed. For details about WAN port selection, see "Network tab" (page 35). You can toggle the display between the LAN connector and USB connectors with each press of the  (Forward) button.

Press the  (Apply) button to return to the main screen.


Web Menu URL screen

Displays the URL or QR code for the web menu. To display the web menu, enter the URL in a web browser or scan the QR code on a computer or smartphone that is connected to the unit. The URL and QR code will vary depending on the connection method.

Main screen:

Press the  (Apply) button to display the subscreen.

Subscreen:

Press the  (Forward) button to switch from the LAN URL 1 screen in sequence.

- LAN URL 1

Item	Description
<LAN URL 1>	Displays the URL of the web menu when connected via the LAN connector using IPv6 (multicast DNS). Note Not displayed when [WAN] (page 35) > [mDNS] is set to OFF on the [Network] tab of the [Maintenance] page in the web menu.

- LAN URL 2

Item	Description
<LAN URL 2>	Displays the URL of the web menu when connected via the LAN connector using IPv4.

- USB Tether (URL display)


Item	Description
<USB Tether>	Displays the URL of the web menu for entry on a smartphone set to USB tethering mode and connected to a USB connector. Note Displayed only when a smartphone set to USB tethering mode is connected.

- USB Tether (QR code display)



Item	Description
<USB Tether>	Displays the QR code of the web menu for scanning on a smartphone set to USB tethering mode and connected to a USB connector. Notes <ul style="list-style-type: none"> • Displayed only when a smartphone set to USB tethering mode is connected. • The QR code may be difficult to read or may not be readable in strong sunlight or in dark locations. In these cases, adjust the brightness of the display of the unit using [Bright.] on the System screen. Alternatively, use a QR code reading app or enter the URL displayed in [USB Tether] (URL display) directly on your smartphone.

System screen

Main screen:

Displays the software version of the unit. Press the  (Apply) button to display the subscreen.

Subscreen:



Use to configure option functions. Select an item by moving the [>] cursor using the  (Forward) button, and confirm the selection using the  (Apply) button.


Item	Description
Back	Returns to the main screen.
Bright.	Changes the brightness of the display of the unit. <ul style="list-style-type: none"> • High • Mid • Low • Minimum
Reset	Resets the settings of the unit to the factory default state. For the user name and password used to access the web menu, see "Logging in to the web menu" (page 16). <ul style="list-style-type: none"> • No • Yes

Message screen

Displays a message when a warning or caution occurs.

For a warning, the status lamp blinks red slowly or rapidly. For a caution, the status lamp blinks orange rapidly for 3 seconds.

When  is displayed, press the  (Apply) button to display the next message.

Press the  (Forward) button to return to the Home screen.

If you switch to the Message screen while not in the warning or caution state, "No Message" is displayed.

For details about caution and warning messages, see "Warning/Caution System" (page 45).

Warning/Caution System

Warning and caution messages are displayed on the [System Message] tab of the [Monitoring] page in the web menu and on the Message screen on the display of the unit.

Warning messages displayed when a problem occurs

The status lamp blinks red slowly or rapidly. When the problem is resolved, the status lamp returns to normal state and the warning message display closes.

Message		Status lamp	Color	Description
Web menu	Display of the unit			
Shutdown due to over temp	High Temp	High-speed blinking	Red	The internal temperature is too high. The unit is forcibly shut down. Stop use until the temperature drops.
Insufficient Voltage	Voltage Err	High-speed blinking	Red	DC IN voltage is too low (level 2). Connect to a different power supply.
Battery End	Battery End	High-speed blinking	Red	The battery pack is fully discharged. Connect a power supply to the DC IN connector. Or stop operation and recharge the battery pack.
EEPROM failure (ENC)	E2P Fail ENC	High-speed blinking	Red	The ENC board EEPROM has failed.
EEPROM failure (IF)	E2P Fail IF	High-speed blinking	Red	The IF board EEPROM has failed.
Serial number mismatch	SN mismatch	High-speed blinking	Red	A serial number mismatch was detected.
Firmware update failed	SW Up Fail	High-speed blinking	Red	A failure occurred when updating the firmware.
Module xx failure	xx Fail	High-speed blinking	Red	A failure of an internal module was detected.
Video codec fatal error was detected	Codec Err	High-speed blinking	Red	A fatal error has occurred with the video codec.
Voltage Low	Voltage Low	Blinking	Red	The DC IN voltage is low (level 1). Check the power supply voltage.
Battery Near End	BattNearEnd	Blinking	Red	The remaining level of the battery pack is low. Charge at the earliest convenience.
Temperature High	Temp High	Blinking	Red	The internal temperature is high. Turn off the unit and stop use until the temperature drops.
Fan stopped	Fan stopped	Blinking	Red	The fan has stopped.
Boot in recovery mode	RecoveryMode	Blinking	Red	Booting in recovery mode.
Settings data failure	Setting Err	Blinking	Red	The settings could not be loaded.

Caution messages displayed when a problem occurs

The status lamp blinks orange rapidly. Approximately 3 seconds after the problem occurs, the status lamp stops blinking rapidly and the caution message display closes after approximately 20 seconds.

Message		Status lamp	Color	Description
Web menu	Display of the unit			
CRC error is detected (SDIx)	CRC Err SDI	High-speed blinking	Orange	A CRC error was detected in the video signal on the SDI connector.
Freeze is detected (SDIx)	FreezeDetect	High-speed blinking	Orange	An image freeze was detected.

Message		Status lamp	Color	Description
Web menu	Display of the unit			
DHCP timeout (LAN)	DHCP Err LAN	High-speed blinking	Orange	When DHCP for the LAN connector is set to ON, information for connecting to the network could not be acquired within a certain amount of time.
DHCP timeout (USB)	DHCP Err USB	High-speed blinking	Orange	When DHCP for the USB connector is set to ON, information for connecting to the network could not be acquired within a certain amount of time.
DHCP conflict with internal network (LAN)	IP Conf LAN	High-speed blinking	Orange	The IP address assigned to the LAN connector from the DHCP server conflicts with an IP address in the internal network.
DHCP conflict with internal network (USB)	IP Conf USB	High-speed blinking	Orange	The IP address assigned to the USB connector from the DHCP server conflicts with an IP address in the internal network.
CCM connection establishment failed	CCM Err	High-speed blinking	Orange	Could not connect to the CCM.
CCM connection lost	CCM Err	High-speed blinking	Orange	The connection with the CCM was disconnected.

Caution messages displayed when streaming

If a problem occurs while [Streaming] is set to ON, the status lamp blinks orange rapidly and a caution message is displayed. The status lamp stops blinking rapidly after 3 seconds and the caution message display closes when the problem is resolved.

Message		Status lamp	Color	Description
Web menu	Display of the unit			
Link down (LAN)	LinkDown LAN	High-speed blinking	Orange	The LAN connector is not connected to a network switch or the network switch is turned off.
Link down (USB)	LinkDown USB	High-speed blinking	Orange	The USB connector is not connected to a network.
SDI signal is NOT detected (SDIx)	No SDI Sig	High-speed blinking	Orange	A signal is not being input on the SDI connector.
3G Level mismatch (SDIx)	3G mismatch	High-speed blinking	Orange	A signal with a video format different from the configured SDI Level is being input on the SDI connector.
Format mismatch (SDIx)	SDI Fmt Err	High-speed blinking	Orange	A signal with a video format different from the configured format is being input on the SDI connector.
Frequency mismatch (SDIx)	SDI Freq Err	High-speed blinking	Orange	A video signal with a frequency different from the configured frequency is being input on the SDI connector.
Resolution mismatch (SDIx)	SDI Res Err	High-speed blinking	Orange	The video format is set to 3840×2160, but a 4096×2160 video signal is being input. Or the video format is set to 1920×1080, but a 2048×1080 video signal is being input.
SDI link number mismatch (SDIx)	Quad SDI Err	High-speed blinking	Orange	In Quad Link input configuration, the cable connections to the SDI connectors are incorrect.
Unsupported audio data found	AudioDataErr	High-speed blinking	Orange	An unsupported return audio signal was detected.
Audio Type setting mismatch	AudioTypMiss	High-speed blinking	Orange	Packets were received with different audio settings than the configured setting.

Message		Status lamp	Color	Description
Web menu	Display of the unit			
Partial image was skipped due to underflowing the coded picture buffer	UnderflowErr	High-speed blinking	Orange	Partial image was skipped because of a CPB (Coded Picture Buffer) underflow.
Some parts of image may have concealed	Image Err	High-speed blinking	Orange	Part of the output image may have been concealed during decode processing.
Unexpected video decoder error was detected	Decode Err	High-speed blinking	Orange	An error has occurred with the video codec.
Streaming data check error found	Stream Err	High-speed blinking	Orange	A stream received via WAN is different from expected.
Receiver Port settings mismatch	PortMismatch	High-speed blinking	Orange	Packets were received on a port different from the configured port.
Unknown stream received	Unknown Pkt	High-speed blinking	Orange	An unknown stream was received.
Received Tx ID mismatch	TxID Miss	High-speed blinking	Orange	Packets were received from a source different from the configured Tx ID.
Stream number mismatch	StrmNum Miss	High-speed blinking	Orange	Packets were received with a stream number different from the configured stream number.
Audio Channels setting mismatch	AudioCh Miss	High-speed blinking	Orange	Packets were received with different number of audio channels than the configured setting.
Unknown Sony QoS stream received	Unknown QoS	High-speed blinking	Orange	An unknown Sony QoS stream was received.

The following messages are displayed for about 20 seconds during return output.

Message		Description
Web menu	Display of the unit	
QoS Loss in video stream	QoSL Video	QoS loss occurred in the return video stream.
QoS Loss in audio stream	QoSL Audio	QoS loss occurred in the return audio stream.
QoS Loss in ancillary stream	QoSL Ancilla	QoS loss occurred in the return ancillary stream.
Video was freeze-framed due to unstable input	Freeze Video	The return video output was freeze-framed.
Audio muted due to unstable input	Freeze Audio	The return audio output was muted.
Video continuity was broken due to unstable input	Broken Video	A continuity problem occurred in the return video output.
Audio continuity was broken due to unstable input	Broken Audio	A continuity problem occurred in the return audio output.

Specifications

General specifications

Mass	Approx. 850 g (1 lb 14 oz) (unit only)
Dimensions	105 mm × 135 mm × 75 mm (4 1/4 in × 5 3/8 in × 3 in) (excluding protrusions) (width × height × depth)
Power requirement	DC 11 V to 17 V
Power consumption	Nominal power consumption: Approx. 25 W (when streaming 3840×2160/59.94p) Maximum power consumption: Approx. 60 W (when streaming 3840×2160/59.94p, USB 1.5 A × 3)
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Continuous operating time	Approx. 3 hours 30 minutes (when using BP-GL95B)

I/O specifications

SDI connector 1 and 4	BNC type, 12G/6G/3G (Level-A)/1.5G IN/OUT
SDI connector 2 and 3	BNC type, 3G (Level-A)/1.5G IN/OUT

Display specifications

Display	1.3-inch OLED, 128×128 pixels
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Other

Wired LAN connector	RJ-45 type, with LED
REMOTE connector	8-pin
USB connectors	USB 3.0 type A, 1.5 A (3)
DC IN connector	XLR type, 4-pin, male

Note

The SDI OUT function and remote control function are not supported in software version 1.0.

Supplied accessories

Rod bracket (1)
Camera mount bracket (1)
Shoulder case (1)
Cable strap (1)

Before Using This Unit (1)
Warranty (1)
Hex screws (4)

Related devices

AC adaptor	AC-DN10A
Battery pack	BP-GL95B
Media Edge Processor	NXL-ME80

Design and specifications are subject to change without notice.

Notes

- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
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Usage Precautions

Condensation

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

OLED panel

Due to the characteristics of the material used in the OLED panel, permanent burn-in or reduction in brightness may occur.

These problems are not a malfunction.

Consumable parts

The fan is a consumable part that will need periodic replacement.

When operating at room temperature, a normal replacement cycle will be about 5 years.

However, this replacement cycle represents only a general guideline and does not imply that the life expectancy of this part is guaranteed. For details on parts replacement, contact your dealer.

The life expectancy of the electrolytic capacitor is about 5 years under normal operating temperatures and normal usage (8 hours per day; 25 days per month).

If usage exceeds the above normal usage frequency, the life expectancy may be reduced correspondingly.

Battery and AC adaptor usage precautions

i) For safety, use only the Sony battery packs and AC adaptors listed below.

- BP-GL95B Lithium-ion Battery Pack
- AC-DN10A AC Adaptor

ii) The battery terminal of this unit (the connector for battery packs and AC adaptors) is a consumable part.

Power may not be supplied to the unit properly if the pins of the battery terminal are bent or deformed by shock or vibrations, or if they become corroded due to prolonged outdoor use. Periodic inspections are recommended to keep the unit working properly and to prolong its usable lifetime. Contact a Sony service or sales representative for more information about inspections.

Network 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 system.

We strongly recommend configuring all of the passwords for security purposes.

Do not browse any other website in the Web browser while making settings or after making settings. Since the login status remains in the Web browser, close the Web browser when you complete the settings to prevent unauthorized third parties from using the unit or harmful programs from running.

When connecting this product to a network, connect via a system that provides a protection function, such as a router or firewall. If connected without such protection, security issues may occur.

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<https://oss.sony.net/Products/Linux/common/search.html>

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Last Updated: 2024-03

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