

M2 Live

This guide describes how to use M2 Live (hereinafter referred to as “this service”) to create video by compositing live video input from multiple cameras with video files produced beforehand and how to output the created video.

Note

- The images used in this Help Guide may differ from the actual display contents of this service.

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Features

Cloud live production system

This service allows you to operate all-in-one switchers in the cloud. This service creates an event for each virtual switcher. Creation of multiple events is supported, enabling you to perform a wide variety of video production by configuring and managing each event according to the application. The use of multiple events running simultaneously is supported.

Operation is controlled from web browsers, allowing simultaneous control by multiple operators in different locations. When producing live video, the required setup items are displayed for each operation, providing a visual indication of what you need to do next.

Scene function

You can save video, composited content, and settings as “scenes” on this service. Scenes can be created beforehand and those saved scenes can be recalled instantly, allowing you to perform on-air operations in a minimum number of steps.

Input/output

A total of eight video sources can be used for each event, comprising six external streaming input videos and two preconfigured video files. Two streaming output destinations can be configured. With appropriate configuration beforehand, live distribution to various video sites and output recording can be performed with the touch of a single button. Clean output is also supported.

XDCAM pocket integration

When XDCAM pocket is used as an input source, tally can be displayed in XDCAM pocket when the video from the camera associated with XDCAM pocket becomes the preview output/program output. The program output video of this service can also be monitored using XDCAM pocket.

Auto highlight creation

Highlight scenes can be extracted/edited automatically to create highlight clips using A2 Production (requires a separate subscription than this service) integration. The created highlight clips can be used as video clips.

Display configurable according to role

You can switch the screen display and functions for each user. This allows instant replay operators, commentators, and others to check just the video that they require without affecting the video that is actually output.

Instant replay

Up to three streaming input video sources from among the external sources can be recorded internally, and a simple replay video can be cut out from those video sources. You can also record input video as an MP4 file to use for instant replay simultaneously while recording the output (ISO recording).

Compositing multiple content simultaneously

Five separate elements can be superimposed and composited against a video source (background video). The range of effects can be expanded by using a different layer for each element according to the application and type of content.

- **USK:** An image is always composited against the background video. A different image can be configured for each of the eight video sources. Used to continuously display on-screen text, for example, displaying “Replay” against the replay video during a live sports broadcast.
- **DSK:** Composites an image on the upper-most layer of the program output. Two different images can be composited. Compositing input from an external graphics system is also supported. Used to continuously display an image, such

as a program logo, or when you entrust the operation of logos and on-screen text to a dedicated operator of an external graphics system.

- KEY: Used to manually show/hide an image to composite against a video. Can be used, for example, to display the name of a reporter or commentator only while the reporter or commentator is on-screen.
- PinP (Picture in Picture): Used to composite a separate video in a subscreen against the background video. Can be used, for example, to show the live video while a replay video is simultaneously being displayed full-screen.

Audio adjustment

This service supports simultaneous handling of video and associated audio. In addition to adjusting and monitoring the volume for each input and output, you can also make other adjustments for each input. For input content with different input audio on two channels within a stereo pair (2-channel monaural content), you can also adjust the audio of the two channels separately.

Audio commentary

Up to three audio-only inputs can be configured. Configured audio inputs can be used as audio commentary sources.

File management function

Video clips and images for use with this service must be uploaded to this service beforehand. Video clips and images are managed separately in each event.

Supported Devices and Services

The following devices and services have been verified to connect and operate with this service. For details about other supported devices, contact your dealer.

Note

- Refer to the Setup Guide for details about configuring each device.

Input

In addition to Sony's QoS streaming, both SRT and RTMP/ RTMPS inputs are supported. Input from the following devices has been verified.

- BRC-AM7 Ver. 1.00
- BRC-X400 Ver. 3.10
- HXR-NX800 Ver. 1.00
- ILME-FR7 Ver. 2.20
- ILME-FX3 Ver. 6.00
- ILME-FX30 Ver. 5.02
- PXW-Z190 Ver. 4.21
- PXW-Z200 Ver. 1.00
- PXW-Z280 Ver. 6.02
- SRG-A12 Ver. 2.01
- SRG-A40 Ver. 2.01
- XDCAM pocket Ver. 2.4.0

Hint

- Video from cameras that support HDMI output or USB output can be streamed as input to this service using XDCAM pocket on Xperia devices that support HDMI input or USB input.
- The continuous streaming time of each camera varies depending on the streaming settings, temperature environment, network connection status, previous usage status, battery charge status, and other factors.

Output

Output using the SRT and RTMP/RTMPS protocols is supported. Output to the following video distribution services has been verified.

- YouTube Live
- Facebook Live
- Vimeo

It is also possible to link with A2 Production as a destination for creating auto highlight clips.

Note

- An A2 Production subscription is required.

External graphics system

Input from a graphics system that exports HTML5 is supported. Support for the following graphics systems has been verified.

- Singular.Live

Note

- Not all operations are guaranteed.

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Operation Flow

Perform the following procedure to use this service. For details about each operation, refer to the corresponding topics in this Help Guide. Also, refer to the training video of this service. You can view the training video from the [\[Support\]](#) page of the portal screen.

Hint

- If a problem occurs with drawing the screen while using this service, press the [F5] key on the keyboard to reload the web browser screen display.
- When using this service, it is recommended that you press the [F11] key on the keyboard to display the web browser in full-screen mode.

Note

- A Professional ID for a corporation or a Sony account for personal use that is subscribed to this service is required to use this service. Signing in using a Sony account may not be supported in some countries and regions.
- The functions that can be used with this service vary depending on whether you are using Professional ID or a Sony account. Also, for a Sony account, there are restrictions on the functions that can be used without subscribing to a plan or during a free trial.
- Configure and connect the devices and services used for video input/output beforehand. Refer to the Setup Guide for details about configuring each device.

1 Access the portal screen of this service.

URL: <https://www.m2l.sony.net>

2 Sign in to this service.

- **[Sign In with Professional ID]:** Use to sign in using Professional ID.
- **[Sign In with Sony Account]:** Use to sign in using a Sony account.

3 Enter the ID and password, and press [SIGN IN].

The [Dashboard] screen appears.

Note

- The user agreement and privacy policy are displayed when signing in for the first time.

4 Create an event.

This step is not required when using a previously created event.

5 Check/edit the properties of the event.

Change the event name and subdomain as required.

6 Upload the content to use in the event to this service.

Upload the video clips and images to use in the event to this service beforehand. Video clips and images are managed for each event.

7 Configure streaming for the event.

Configure the streaming settings for the video input source and output destination used in the event. Configure the video format, bit rate, and other settings appropriate for each device and service.

8 Start the event.

Start the event for live operation.

Note

- It may take several minutes to begin operation after starting the event.
- The time from when an event is started until it is stopped is counted as the usage time of this service.
- You can set whether to automatically stop events, and set the time after starting to automatically stop each event. While an event is running, if you select [Extend] when the [Live Operation] screen displays a message notifying you that the event will stop automatically, you can extend the event for a specified duration from that point.

9 Perform live operation of the event.

On the [Live Operation] screen, you can switch between live video from the device set as the input source or a video clip uploaded beforehand, and perform operations, such as setting keys and audio. You can output the generated video to a device or service configured beforehand.

Note

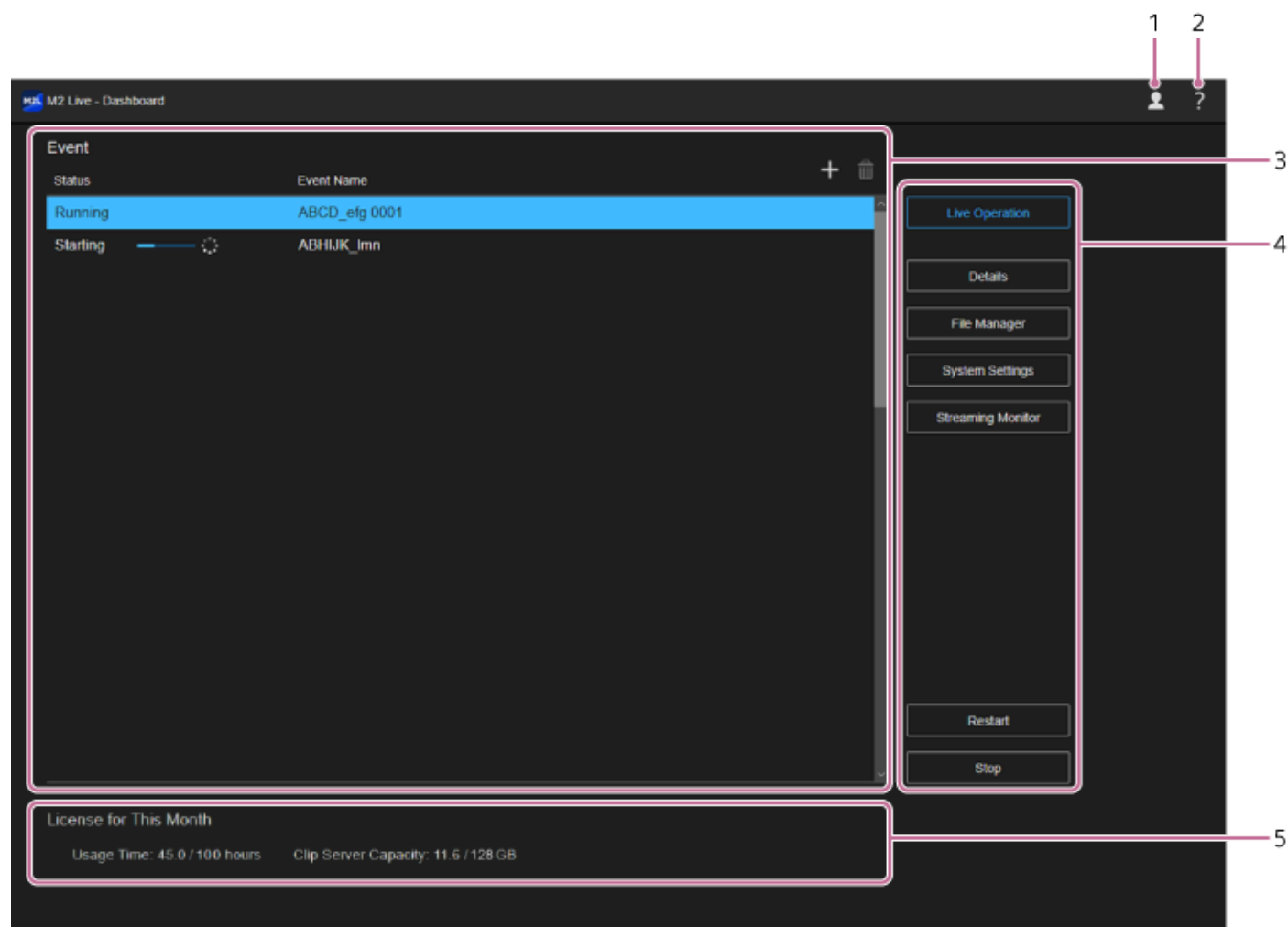
- An event must be started in order to perform live operations.

10 Stop the event.

Note

- The time from when an event is started until it is stopped is counted as the usage time of this service. The upper limit of event usage time per month is determined for each subscription plan. It is recommended that you stop an event as soon as the desired operations have ended.

Structure of the [Dashboard] Screen



1. (Account): Press the icon to display a drop-down list.

- [Account Manager] (displayed when using a Sony account): Use to manage account information and subscription plan. The [Account Manager] screen will appear in a separate tab.
- [Group Manager] (displayed when using a Sony account): Use to check the status of your group and other groups in which you are a member. The [Group Manager] screen will appear in a separate tab.
- [Preferences]: Use to change the operation method of this service. The following sub-items are available:
 - [Shortcut Keys]: Press to display the [Shortcut Keys] screen in a separate tab. Use to configure shortcut keys for use with this service.
 - [Accessibility Mode]: Press to enable/disable accessibility mode.
When accessibility mode is enabled, you can move items by pressing the directional keys displayed for each item when sorting items in a list on the [Live Operation] screen.
When accessibility mode is disabled, you can move items using drag & drop.
- [Privacy Policy]: Displays the user agreement and privacy policy. On the consent screen of the privacy policy, you can select whether to consent to the recording of operation information at any time.
- [Sign Out]: Select to sign out from this service.

2. (Help Guide): Select to display this Help Guide.



3. **Event list**: Displays the list of created events. When using a Sony account, events belonging to groups in which you are a member are also displayed.

- **[Status]:** Displays the status of each event.
 - “Initializing”: Registering the event in this service.
 - “Stopped”: Event is in the stopped state.
 - “Starting”: Event is starting. A progress bar indicating the progress status is displayed.
 - “Running”: Event is in the running state.
 - “Stopping”: Event is stopping. A progress bar indicating the progress status is displayed.
 - “Resetting”: Resetting a running or stopped event. A progress bar indicating the progress status is displayed.
 - “Failed” (Resetting): Failed to run or stop the event. Stop the event and try the operation again.
 - “Failed” (Initializing): Failed to register the event in this service. Delete the event and create the event again.
- **[Event Name]:** Displays the name of the event.
- **+ (Create New):** Use to create an event.
- **🗑️ (Delete):** Use to remove the event selected in the list.

4. Operation buttons: Buttons for performing operations on the selected event in the list.

- **[Live Operation] button:** Use to initiate live operation for the event. The [Live Operation] screen will appear. Available when the event is in the “Running” state.
- **[Details] button:** Use to check/edit the properties of the event. The [Details] screen will appear in a separate tab.
- **[File Manager] button:** Use to manage the content (video clips or images) used in the event. The [File Manager] screen will appear in a separate tab.
- **[System Settings] button:** Use to configure the video input source and output destination devices used in the event and to configure this service. The [System Settings] screen will appear in a separate tab.
- **[Streaming Monitor] button:** Use to monitor the streaming status of the event. The [Streaming Monitor] screen will appear in a separate tab. Available when the event is in the “Running” state.
- **[Restart] button:** Use to restart the event.
- **[Start]/[Stop] button:** Use to start/stop the event. The label switches between [Start] and [Stop] according to the status of the event.

5. License information: When using Professional ID, this displays the usage time and data capacity for the subscription license. When using a Sony account, this displays the usage time and data capacity for the selected event.

When the remaining level falls below 20% or below 4 hours,  (Caution) appears. When the usage level exceeds the upper limit,  (Warning) appears.

- **[Usage Time]:** Displays “(Current monthly usage time) / (Available usage time).”
- **[Clip Server Capacity]:** Displays “(Used storage capacity) / (Available storage capacity).”

Managing Your Account/Groups (when using a Sony account)

When using a Sony account, you can manage your account and groups.

Accounts and Groups

When using a Sony account, a group is created for you automatically the first time you sign in. Each account can have one group of its own, and the events, usage time, and storage capacity are managed for each group.

Note

- Only one group can be owned by an account.

To share an event with other Sony account users to perform live operations collaboratively, you all must be members of the same group. Invite other users to your own group or have other users invite you to their group beforehand to collaborate in the same group.

Functions available in each group

The functions supported in each group will vary depending on the subscription plan status of the owner of the group. There are restrictions on the functions that can be used if the owner of the group is not subscribed to a plan or is using the free trial. To use all the functions of this service that can be used with a Sony account, the owner of the group must be subscribed to a paid plan. Subscribe to a paid plan and invite other users, or receive an invitation to join a group from another user who is subscribed to a paid plan.

In groups where the owner has a paid subscription plan, other users can freely use the events in the group even if they are not subscribed to a plan.

Functions unavailable if the owner of the group is not subscribed to a plan


- Creating/starting events
- Input/output recording
- Uploading content

Functions unavailable if the owner of the group is using the free trial

- Input/output recording
- Uploading content


Managing your account

You can check account information and subscribe/change plans using the [Account Manager] screen.

To display the [Account Manager] screen, press  (Account) > [Account Manager] on the [Dashboard] screen.

Managing groups

You can manage your own group and check the status of groups in which you are a member using the [Group Manager] screen.

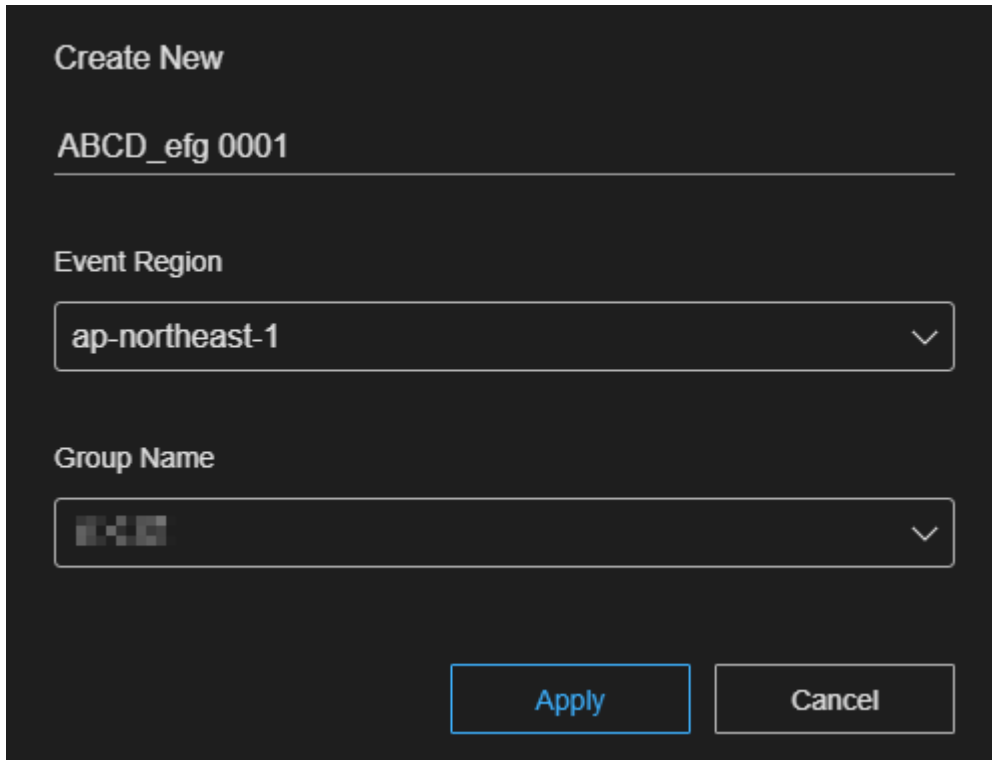
To display the [Group Manager] screen, press  (Account) > [Group Manager] on the [Dashboard] screen.

Related Topic

- [Structure of the \[Account Manager\] Screen](#)

Creating and Deleting an Event

- 1 Press **+** (Create New) on the [Dashboard] screen.



- 2 In the dialog that appears, set the event name, region, and group (group is required only when using a Sony account) in which to create the event.

Enter 1 to 40 characters for the event name.

Select a region that is close to the installation location of the camera and where live operation will be performed.

If the region close to the installation location of the camera and the region close to where live operation will be performed are different, select a region using the following guidelines.

- To minimize phase shift fluctuations when working with multiple cameras:
Select a region close to where the cameras are installed.
- To minimize the response time for live operation:
Select a region close to where live operation will be performed.


Note

- The region cannot be changed after creating an event. Select appropriately when creating an event.
- The region selection options will vary depending on the target country or region configured for the user account. There may also be only one selection option.


- 3 Press the [Apply] button.

The event is created and is added to the event list.

Hint

- In rare cases where an event is not created and the status remains “Initializing” for 5 minutes or longer, you can cancel the creation of the event by pressing  (Delete).

To delete an event

Select the event you want to delete in the event list and press  (Delete). Press [YES] in the confirmation dialog to delete the event.

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Checking/Editing Event Properties

- 1 Select an event on the [Dashboard] screen and press the [Details] button.

The [Details] screen appears in a separate tab and displays the properties of the selected event.

The screenshot shows the 'M2 Live - Details' screen for an event named 'ABCD-efg 0001' which is in a 'Stopped' state. The interface includes a header with the event name and status, and a question mark icon. Below the header, there are five rows of event properties: 'Event Name' (ABCD-efg 0001), 'Event ID' (qa3-2dc9501b-83a3), 'Event Sub Domain' (hijk), 'Event Region' (ap-northeast-1), and 'Event Off Timer' (3 hours). The 'Event Off Timer' is displayed in a dropdown menu. At the bottom of the screen, there are two buttons: 'Apply' and 'Cancel'.

Hint

- The [Details] button is disabled when the status of the selected event is "Initializing."

- 2 Check the properties of the event and edit as required.

Properties can be edited only when the selected event is in the "Stopped" state.

- [Event Name]: Displays the name of the event. You can select the name to rename the event.
- [Event ID]: Displays the ID of the event. Cannot be modified.
- [Event Sub Domain]: Displays the subdomain used for the server address for streaming input to this service. It is automatically configured by this service when creating an event, but it can be changed as required. To change the setting, press the value to select it and enter a new value.

Hint

- The [Connection Information] > [Address/Host] value in the input device settings on the [System Settings] screen will change based on the value set in [Event Sub Domain].
- A prefix is added to the subdomain. If [Event Sub Domain] is "aaa" and the prefix is "bbb", then the [Address/Host] value becomes "bbb-aaa" when the prefix is added.

Note

- Only alphanumeric characters and hyphens can be used for the subdomain. In addition, a hyphen cannot be used as the first or last character for the subdomain.

- Enter 1 to 50 characters for the subdomain.
- Subdomains used by other events cannot be used.
- [Event Region]: Displays the region of the event. Cannot be modified.
- [Event Off Timer]: You can set whether to automatically stop an event, and set the time after starting to automatically stop the event.

3 When finished editing, press the [Apply] button.

The changes are applied.

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Starting an Event and Starting Live Operation

Hint

- An input source and output destination must be configured beforehand in order to start an event. Configure settings on the [Input] tab and [Output] tab of the [System Settings] screen.

1 To start an event, select an event on the [Dashboard] screen and press the [Start] button.

The event status changes to “Starting” and the starting process begins. When the starting process is completed, the event status changes to “Running.”

2 To perform live operation of an event, select a running event and press the [Live Operation] button.

The [Live Operation] screen appears.

To stop an event

Select a running event and press the [Stop] button. The event status changes to “Stopping” and the stopping process begins. When the stopping process is completed, the event status changes to “Stopped.”

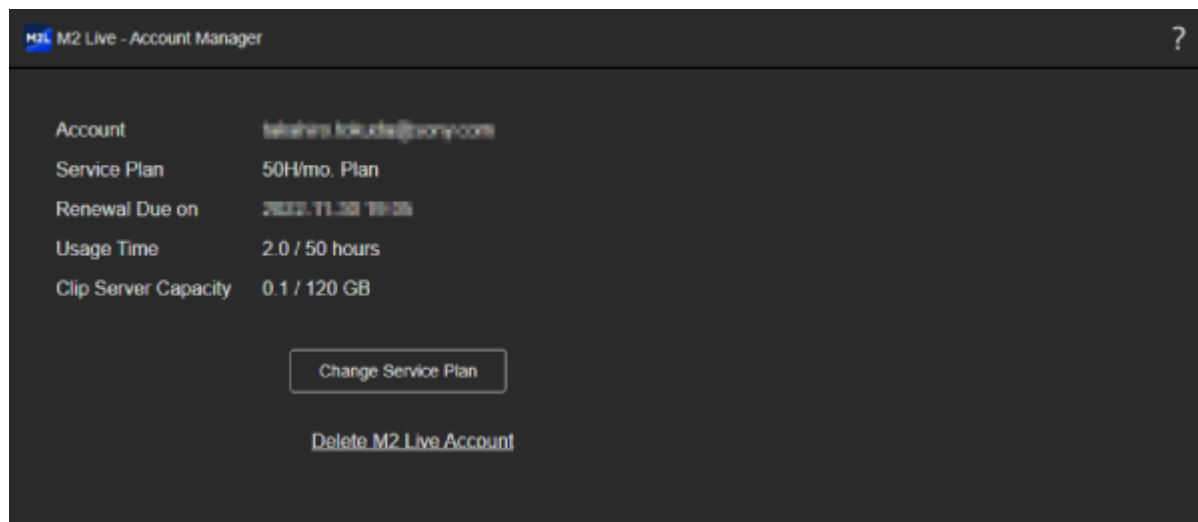
Note

- In rare cases where the status remains “Starting” or “Stopping” for 30 minutes or longer, you can forcibly cancel the event by pressing the [Cancel] button. Note that tasks may not be completed successfully if there is a task in progress (including background operations) when forcibly canceled.

Related Topic

- [Structure of the \[Live Operation\] Screen](#)

Structure of the [Account Manager] Screen



- **[Account]:** Displays the name of the signed in account.
- **[Service Plan]:** Displays the name of the current subscription plan.
- **[Renewal Due On]:** Displays the date on which your subscription plan will automatically be renewed.
- **[Usage Time]:** Displays the current monthly usage time. When the remaining level falls below 20% or below 4 hours, ⚠ (Caution) appears. When the usage level exceeds the upper limit, ⚠ (Warning) appears.
- **[Clip Server Capacity]:** Displays the currently used storage capacity. When the remaining free space falls below 20%, ⚠ (Caution) appears. When the usage capacity exceeds the upper limit, ⚠ (Warning) appears.
- **[Change Service Plan] button:** Use when you want to subscribe to or change/cancel a subscription plan. The [Change Service Plan] screen appears.
- **[Delete M2 Live Account]:** Use when you want to delete your account with this service. When you delete your account, all events and content in your group are deleted and cannot be restored.

Note

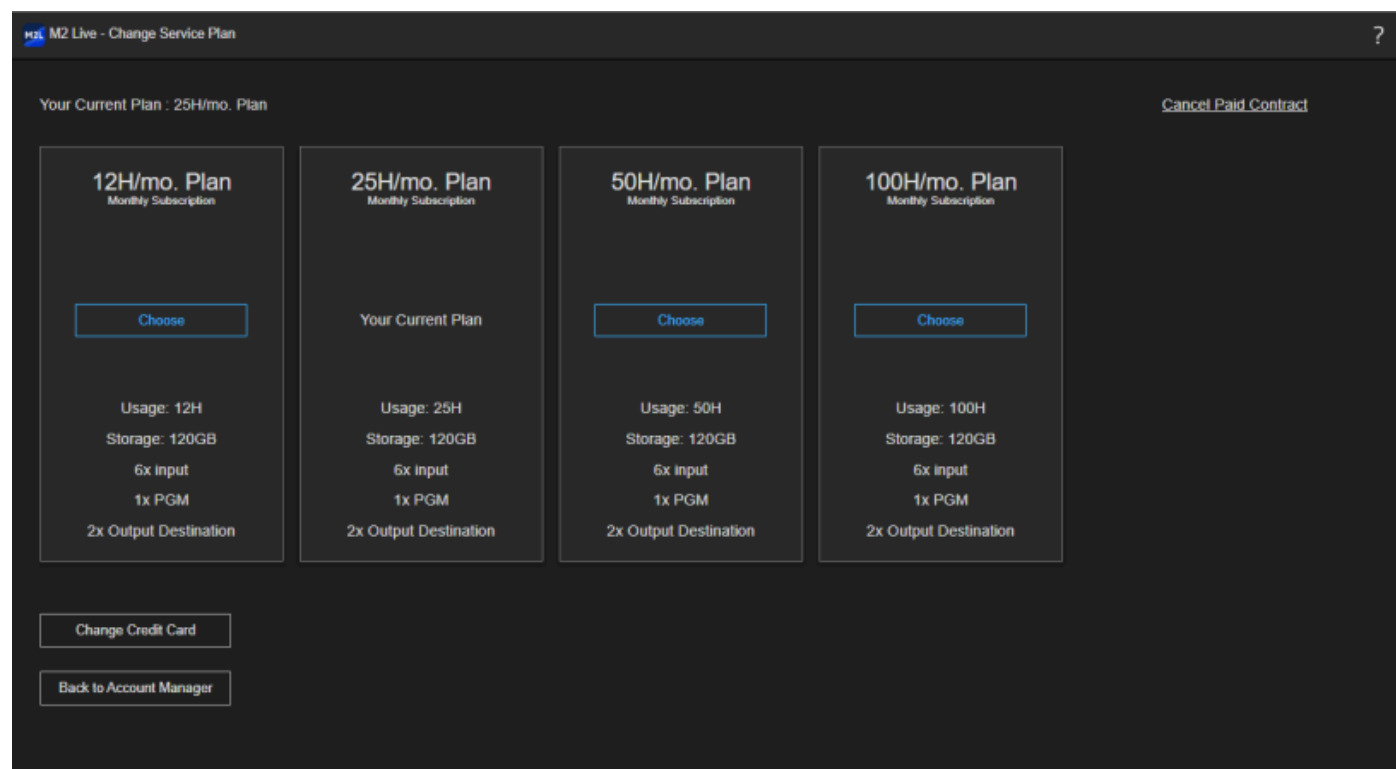
- The Sony account used to sign in to this service is not deleted.

Related Topic

- [Subscribing/Changing/Canceling a Plan](#)

Subscribing/Changing/Canceling a Plan

Press the [Change Service Plan] button on the [Account Manager] screen to display the [Change Service Plan] screen. The available plans and their content are listed on the [Change Service Plan] screen. In addition to subscribing/changing/canceling a plan, you can change the credit card used for payment.



Subscribing to a plan

Press the [Choose] button for the plan to which you want to subscribe and follow the instructions in the dialog that appears. When you subscribe to a paid plan for the first time, you will be forwarded to an external site. Follow the on-screen instructions to enter the required information.

After subscribing to a plan, your subscription plan is displayed in the “Your Current Plan” field at the top left of the [Change Service Plan] screen (“No Contract” is displayed if you do not have a subscription). “Your Current Plan” is also displayed at the [Choose] button position of the subscribed plan.

Hint

- A 1-month free trial is also provided in addition to the paid plans for this service. The free trial can be used only once.

Changing a plan

Press the [Choose] button for the plan to which you want to subscribe in the same way as when you initially subscribed, and follow the instructions in the dialog that appears. When you subscribe to a paid plan for the first time, you will be forwarded to an external site. Follow the on-screen instructions to enter the required information.

When upgrading a plan, the plan is activated immediately and cannot be canceled.

When downgrading a plan, the plan will change after the valid period of the current plan expires. Until the plan changes, the date and time that the subscription will end (date and time the plan will change) and the name of the new plan are displayed in the display area of the current subscription plan.

Canceling a plan

If you want to cancel a subscription plan, press [Cancel Paid Contract] displayed at the top right of the screen and follow the instructions in the dialog that appears.

After canceling, you can continue to use the plan until the subscription expiry date. Until the subscription expires, the date and time that the subscription will end (date and time the plan will change) and “No Contract” are displayed in the display area of the current subscription plan.

Hint

- During the free trial, [Cancel Free Trial] is displayed. When a free trial is canceled, it is canceled immediately without waiting for the valid period to end.

Undoing a plan downgrade/cancellation

After downgrading/canceling a plan, you can continue to use the current subscription plan until the expiry date of the plan. During that period, a [Resubscribe] button is displayed in the display area of the current subscription plan.

To undo the downgrade/cancellation and continue using the current plan, press the [Resubscribe] button and follow the instructions in the dialog that appears.

Changing the credit card used for payment

Press the [Change Credit Card] button at the bottom left of the screen and follow the instructions in the dialog that appears. You will be forwarded to an external site. Follow the on-screen instructions to enter the required information.

Hint

- The [Change Credit Card] button is enabled only while you are subscribed to a paid plan.

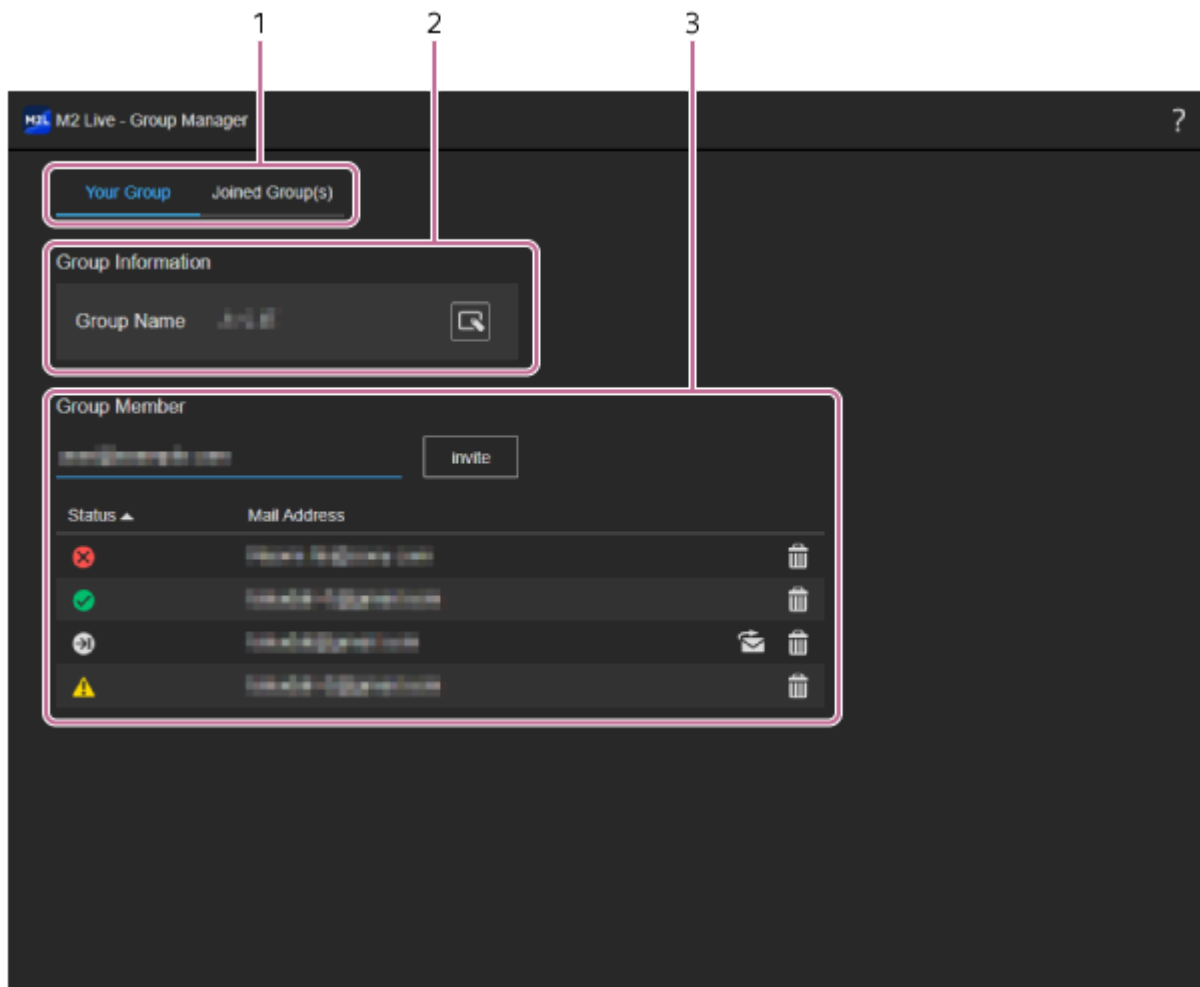
Switching to the [Account Manager] screen


Press the [Back to Account Manager] button at the bottom left of the screen to return to the [Account Manager] screen.

Structure of the [Group Manager] Screen





You can manage your group and check information about the groups in which you are a member on the [Group Manager] screen.

Managing your group ([Your Group] tab)



- 1. Group selection tabs:** Switches the content displayed on the [Group Manager] screen. To display information about your group, press [Your Group]. To display information about groups in which you are a member, press [Joined Group(s)].
- 2. [Group Information]:** Displays the name of the group. To rename the group, press  (Rename) and specify a group name in the dialog that appears.
- 3. [Group Member]:** Enter a mail address in the entry field at the top and press the [Invite] button to invite another user to your group. The users who are members of your group and the invited users are displayed in the list at the bottom. You can check the status of each user and delete users from the group.

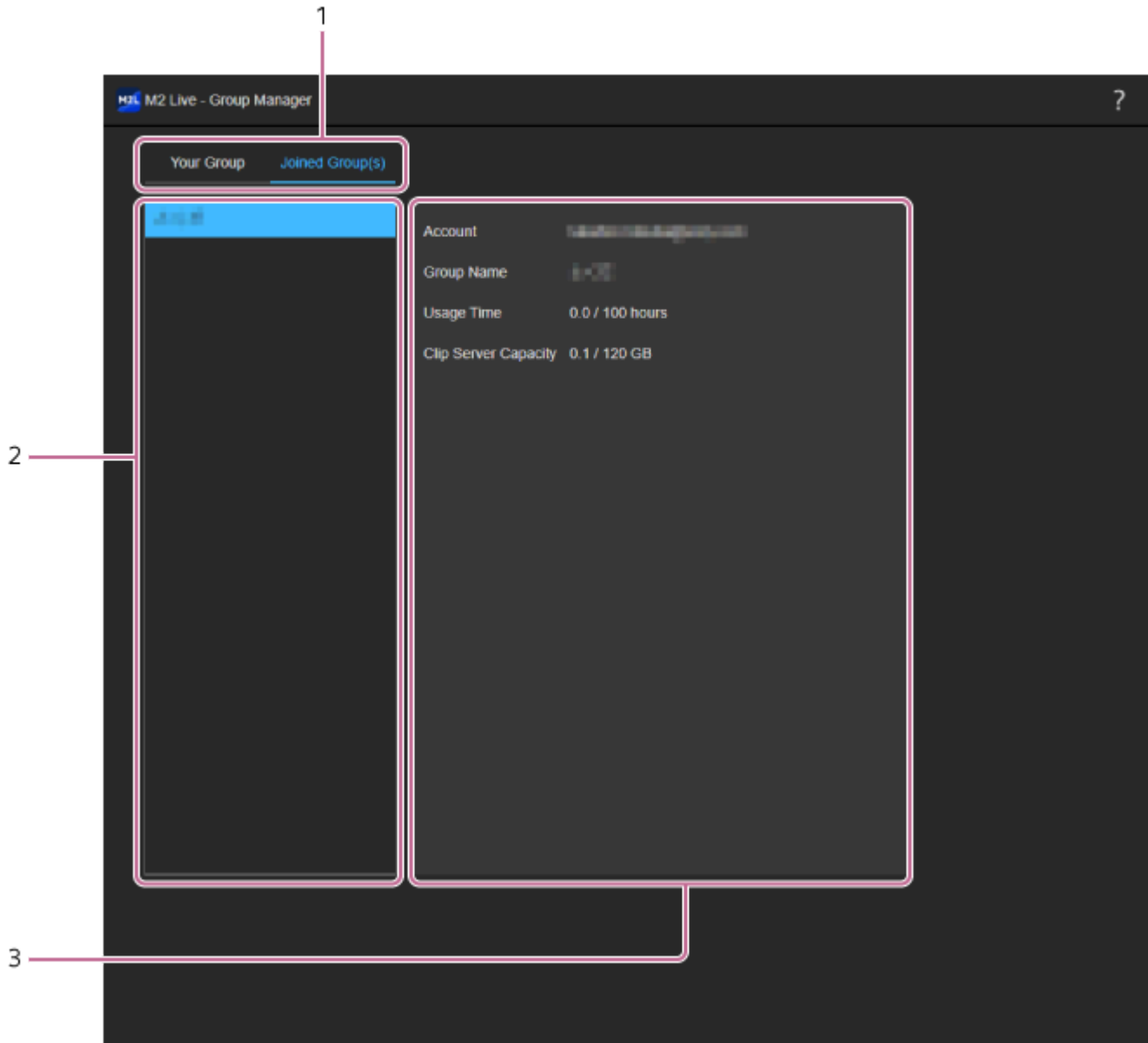
[Status] column icons:

-  **(Invitation accepted):** Users who are members of the group.
-  **(Awaiting approval):** Users who have been invited to the group but have neither joined nor declined.
-  **(Invitation declined):** Users who declined an invitation to the group.
-  **(Invitation error):** Indicates that the invitation process was not executed normally due to a server error. Delete the user from the list and invite them again.

[Mail Address] column buttons:

- **(Resend) button:** Resends an invitation mail to a user. You can resend an invitation only to users from whom you are waiting for approval.
- **(Delete) button:** Deletes the user from the list. If the user is a member of the group, the user is also removed from the group.

Checking information about groups in which you are a member ([Joined Group(s)] tab)



- 1. Group selection tabs:** Switches the content displayed on the [Group Manager] screen. To display information about your group, press [Your Group]. To display information about groups in which you are a member, press [Joined Group(s)].
- 2. Group list:** Displays the list of groups in which you are a member. Select a group to display information about the group on the right side.
- 3. Group information display area:** Displays information about the group selected in the group list.
 - **[Account]:** Displays the name of the user account that is the owner of the selected group.
 - **[Group Name]:** Displays the name of the selected group.
 - **[Usage Time]:** Displays the current monthly usage time of the selected group. When the remaining level falls below 20% or below 4 hours, ⚠ (Caution) appears. When the usage level exceeds the upper limit, ⚠ (Warning) appears.
 - **[Clip Server Capacity]:** Displays the currently used storage capacity of the selected group. When the remaining free space falls below 20%, ⚠ (Caution) appears. When the usage capacity exceeds the upper limit, ⚠ (Warning) appears.

Related Topic

- [Inviting a User to a Group](#)

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Inviting a User to a Group

Inviting another user to your group

Display the [Your Group] tab of the [Group Manager] screen, enter the mail address of the user you want to invite in the [Group Member] entry field, and press the [Invite] button. An invitation mail is sent to the entered mail address and the user is added to the [Group Member] list.

When invited to a group belonging to another user

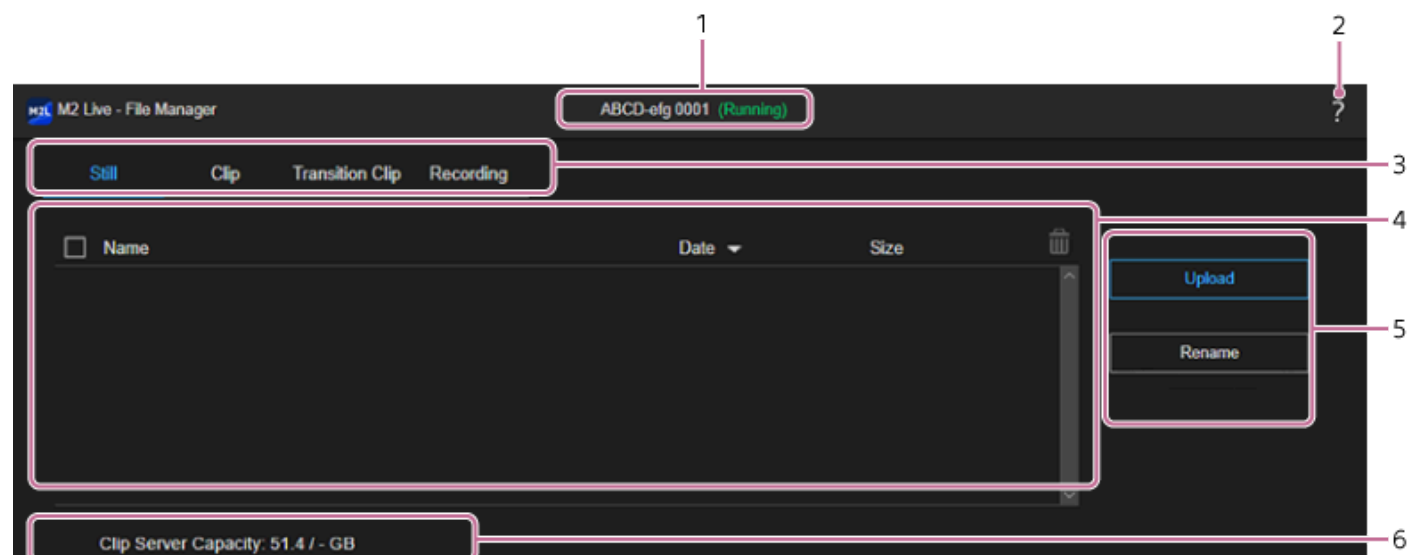
When you are invited to join a group belonging to another user, an invitation mail is sent to your mail address. Follow the instructions in the mail to open this service and sign in. In the dialog that appears, press the [Join] button to join the group or the [Decline] button to decline the invitation.

Leaving a group belonging to another user

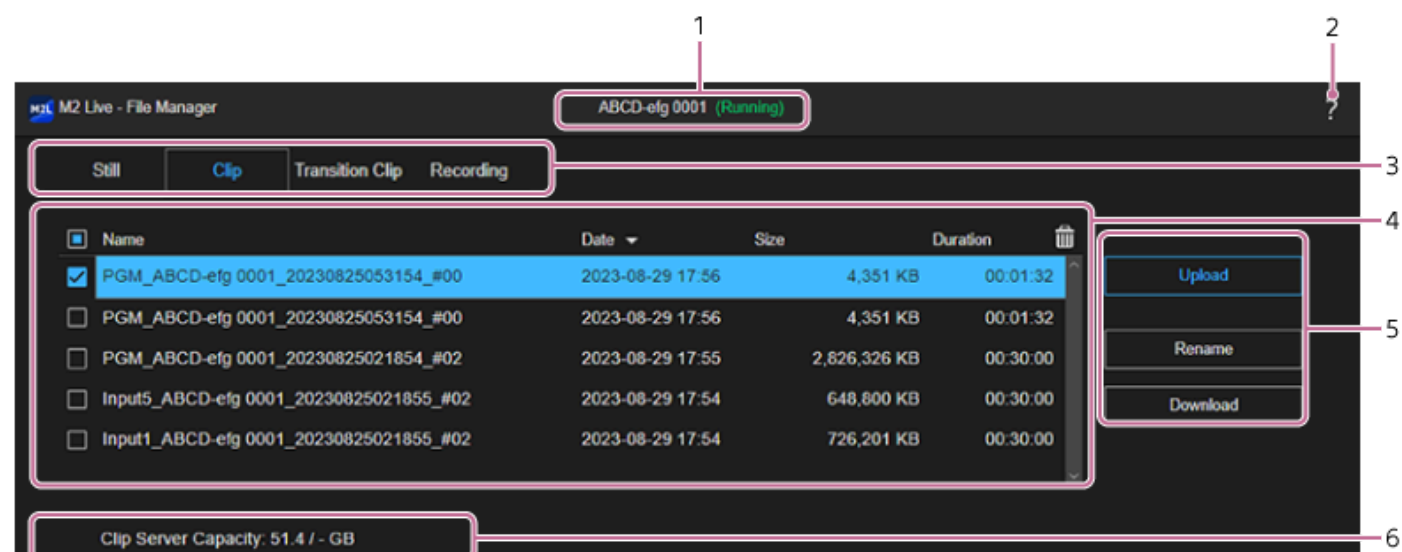
When you want to leave a group belonging to another user, ask the owner of the group to remove you from the group. You cannot leave the group by yourself.

Structure of the [File Manager] Screen

[Still] tab



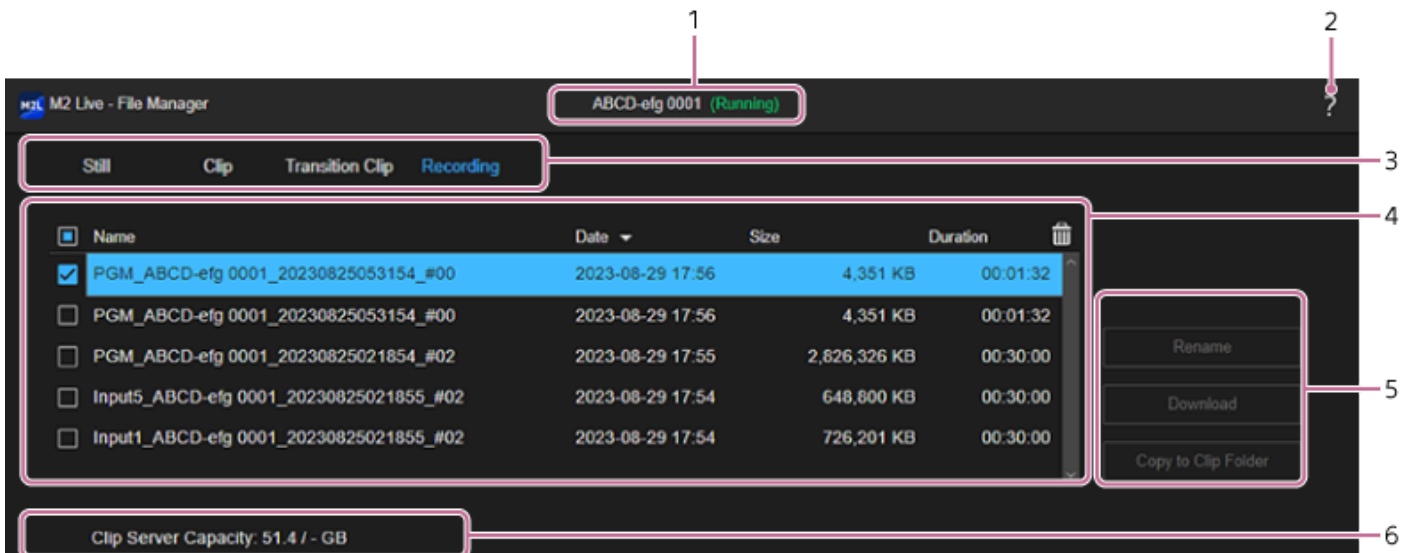
[Clip] tab



[Transition Clip] tab



[Recording] tab



1. **Event name/status display:** Displays the name/status of the event for which the [File Manager] screen was opened.
2. **? (Help Guide):** Select to display this Help Guide.
3. **Content type tabs:** Press a tab to switch the file list display contents.

- **[Still]:** Displays a list of uploaded images for the event.
- **[Clip]:** Displays a list of uploaded video clips for the event, created highlight files, and files which were copied using [Copy to Clip Folder] on the [Recording] tab.
- **[Transition Clip]:** Displays a list of animations for transitions for the event.
- **[Recording]:** Displays a list of recorded output and input content files.

Hint

- To play a recorded video file using a clip player, it must be displayed in the list on the [Clip] tab. Select a video file on the [Recording] tab and execute [Copy to Clip Folder] to copy the video file to the [Clip] tab.
- Files up to a total capacity of 100 GB on the [Still] tab, [Clip] tab, and [Transition Clip] tab can be used in a single event.

4. **File list:** Displays a list of files (video clips or still images) corresponding to each tab.

Hint

- Files that are currently recording the output and input content, and highlight files currently being created are not displayed. Only files for which recording/highlight creation has finished are displayed.

- **Checkbox:** Place a check mark in the checkbox for files you want to delete or copy to the [Clip] tab ([Recording] tab only). You can press the checkbox at the top of the list to add or clear the check marks for all files in the list.
- **[Name]:** Displays the name of each file. You can press the [Name] label at the top of the list to change the sort order alphabetically. Each press changes the sort order between ascending and descending.
- **[Date]:** Displays the upload date and time of each file. You can press the [Date] label at the top of the list to change the sort order by the upload date and time. Each press changes the sort order between ascending and descending.
- **[Size]:** Displays the file size of each file. You can press the [Size] label at the top of the list to change the sort order by the file size. Each press changes the sort order between ascending and descending.
- **[Duration]:** Displays the length of each file. You can press the [Duration] label at the top of the list to change the sort order by the length. Each press changes the sort order between ascending and descending.

Note

- This field may be blank for video clips that were uploaded in prior versions.
- [Unknown] is displayed if information about the file cannot be obtained due to file corruption or other reason.

-  **(Delete):** Use to remove the files selected in the list.

5. **Operation buttons:** Buttons for performing operations on files.

- **[Upload] button:** Use to upload files.
- **[Rename] button:** Use to rename the selected file in the list.
- **[Download] button:** Use to download the files selected in the list.
- **[Copy to Clip Folder] button:** Use to copy the files selected in the list to the [Clip] tab.

6. **[Clip Server Capacity]:** Displays the used storage capacity in an event and available storage capacity.

7. **[Upload Option]:** Set the frame rate during playback of animations for transitions using [Frame Rate]. This setting is applied when uploading animations for transitions.

Note

- The frame rate of animations for transitions that have already been uploaded is not changed if the [Frame Rate] setting is subsequently changed.

Supported Content Types

This service supports the following content.

Images

Uploaded images or images input from an external graphics system can be composited for use as a logo or other on-screen display. Also, a series of PNG images compressed in ZIP format can be used as an animation for a transition.

Supported images

- File format: RGB 24-bit (32-bit with alpha channel) JPEG or PNG format
- Image size: 1920×1080 (max)

Note

- An alpha channel is supported. When an image without an alpha channel is used as a key, the whole image is used as a key.
- Images that exceed the maximum size can also be uploaded to this service. However, when such an image is used as a key, the portions that exceed the maximum size are cropped on the right and bottom sides.

Supported animations for transitions

- File format: Series of RGB 24-bit (32-bit with alpha channel) PNG images compressed in ZIP format*
- File size: 500 MB (max)
- Number of images: 2 to 300
- Image size: 1920×1080
- Frequency: 25 fps, 30 fps, 50 fps, 60 fps

* A transition animation is created by displaying ZIP-compressed PNG images consecutively in numerical order.

Supported external graphics systems

Graphics system input using HTML5 is supported.

Note

- Currently, Singular.Live is the only external graphics system whose operation with this service has been verified. However, not all operations are guaranteed.

Video

Uploaded video files, files recorded using this service, and highlight files created using this service can be assigned to a clip player and used for video production.

Supported video clip specifications

- File format: MP4 (AVC standard only)
- Video
 - Color depth: 8 bits
 - Color space: YCbCr 4:2:0
 - Color gamut: Rec. 709
 - Scan type: Progressive
 - Resolution: Full HD
 - Frame rate: 25, 29.97, 30, 50, 59.94, 60 (fps)

- Video compression format: H.264
- Audio
 - Audio compression format: AAC
 - Sampling frequency: 48 kHz
 - Number of quantization bits: 16 bits, 24 bits
 - Monaural audio, stereo audio
- Maximum bit rate: 25 Mbps
- File size: Unlimited

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Uploading/Downloading/Deleting Files

To upload files

Note

- Uploaded files are managed separately in each event. To use a file in multiple events, upload the file separately for each event.
- Files up to a total capacity of 100 GB on the [Still] tab, [Clip] tab, and [Transition Clip] tab can be used in a single event.

1 Prepare the files you want to upload on the computer used to operate this service.

2 Select the desired tab on the [File Manager] screen and configure the required settings.

- Select the [Still] tab to upload image files.
- Select the [Clip] tab to upload video clip files.
- Select the [Transition Clip] tab to upload animations for transitions and set the playback frame rate in [Upload Option]. Set the playback frame rate to match the setting back when the animation for transition was created.

3 Press the [Upload] button.

4 Select and apply the files that you want to upload to this service on the computer.

The files are uploaded and are displayed in the file list.

Note

- Do not close the [File Manager] screen until after uploading of files has been completed. Uploading will be terminated if you close the [File Manager] screen while uploading is in progress.


To download files to an external destination (video clip files, animations for transitions only)

Select the row for the file you want to download on the desired tab and press the [Download] button. A save destination selection dialog appears. Select and apply a save destination to start the download.

Note

- Multiple files cannot be downloaded simultaneously.
- If the name of the content file contains characters that are not supported on the download destination computer, the unsupported characters are replaced by an underscore (_) character.

To delete files

Place a check mark in the checkbox of the files you want to delete on the desired tab and press  (Delete). Press the [YES] button in the confirmation dialog to delete the selected files.

Related Topic

- [Assigning Video to a Clip Player](#)

Preparing to Play a Recorded File using a Clip Player

To play a video file recorded in an event using a clip player, it must be displayed in the list on the [Clip] tab beforehand. Select the row for a file you want to copy on the [Recording] tab and execute [Copy to Clip Folder] to copy the selected video file to the list on the [Clip] tab.

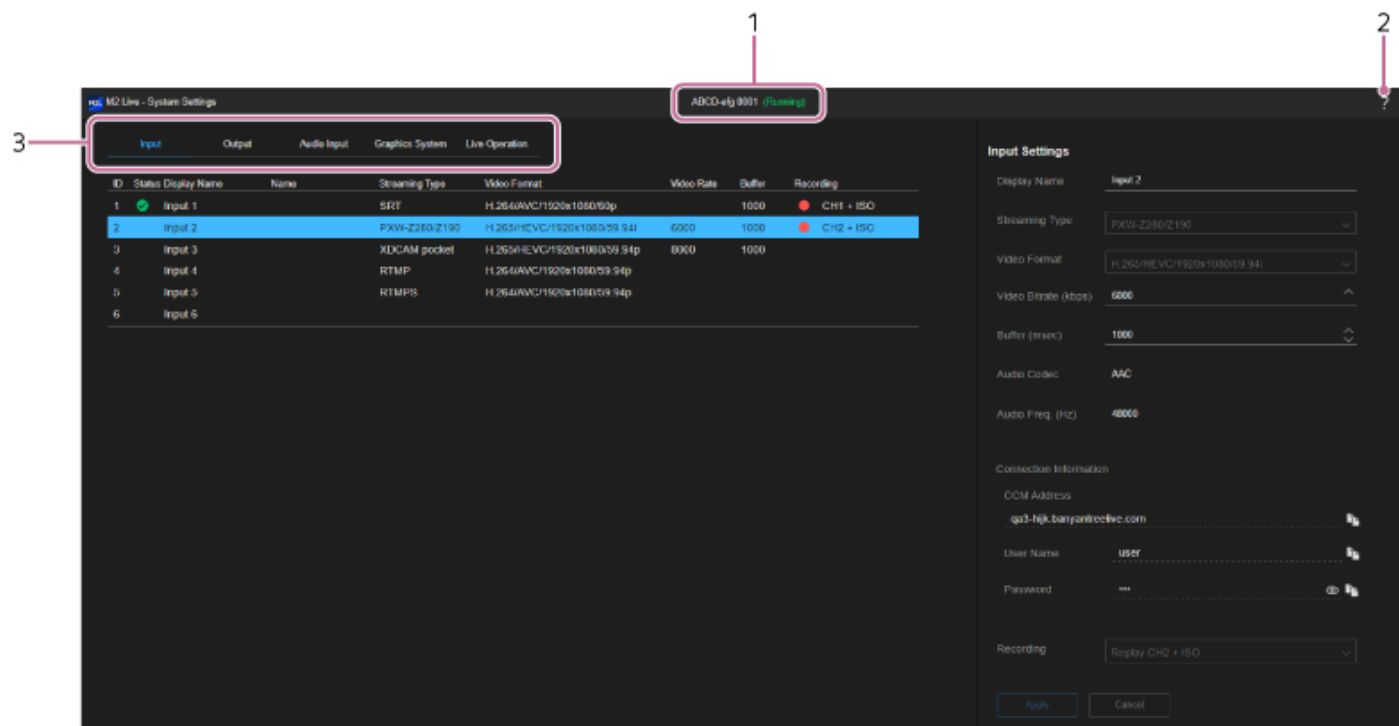
Note

- Files up to a total capacity of 100 GB on the [Still] tab, [Clip] tab, and [Transition Clip] tab can be used in a single event.

Renaming a File

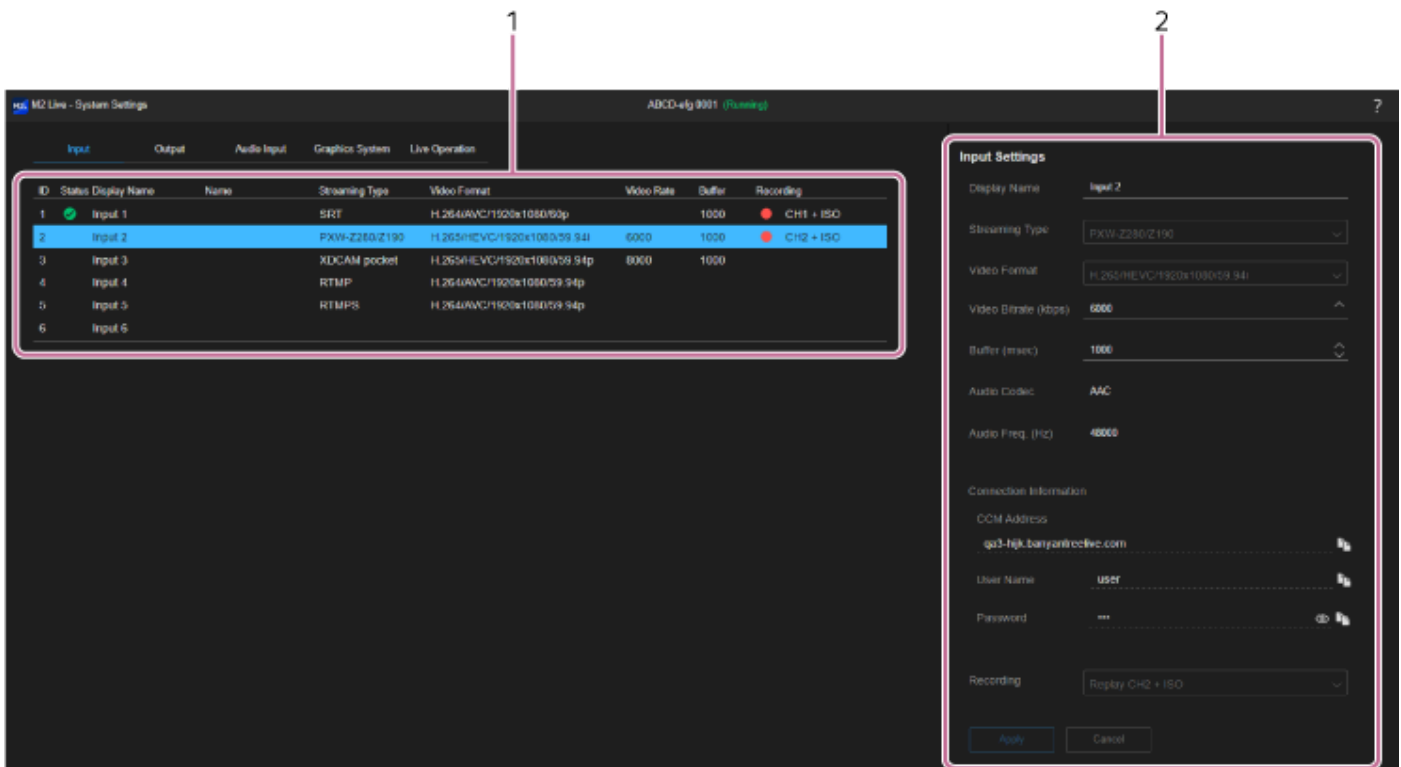
To rename a file, select the file on each tab of the [File Manager] screen and press the [Rename] button. Enter a new file name in the dialog that appears and press the [Apply] button to rename the content file.

Structure of the [System Settings] Screen



- 1. Event name/status display:** Displays the name/status of the event for which the [System Settings] screen was opened.
- 2. ? (Help Guide):** Select to display this Help Guide.
- 3. Category tabs:** Press a tab to switch the display contents.
 - **[Input]:** Displays the status of streaming input source devices assigned to the event. Also used to set the input source device.
 - **[Output]:** Displays the status of streaming output destination devices or services assigned to the event. Also used to set the output destination device or service.
 - **[Audio Input]:** Displays the status of the audio input for audio commentary. If microphones are assigned to each channel, you can also release the assignments.
 - **[Graphics System]:** Sets an external graphics system to input to this service.
 - **[Live Operation]:** Adjusts the image quality of the video displayed on the [Live Operation] screen.

[Input] tab

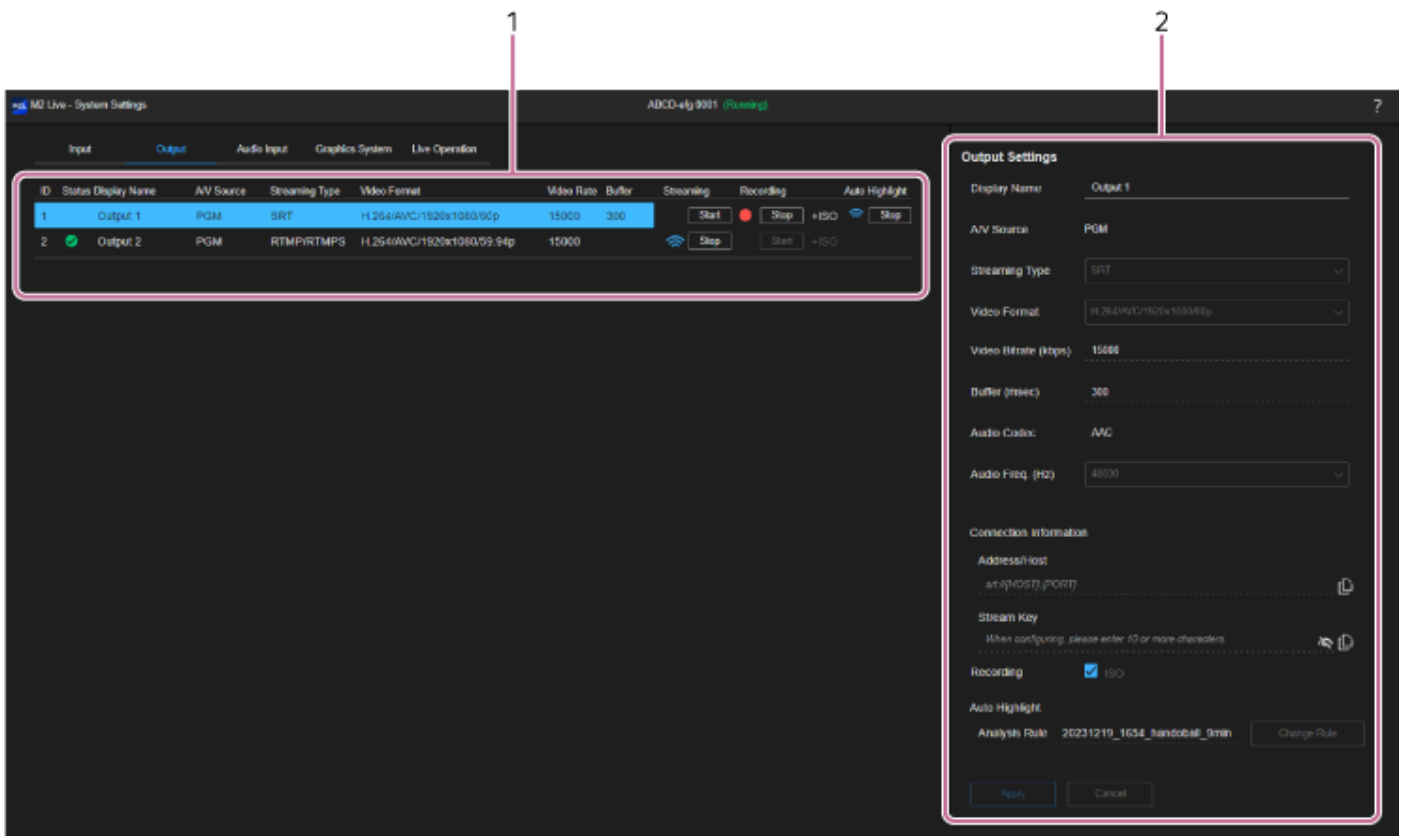


1. Input sources list: Displays the status of streaming input source devices assigned to the event. Up to six input source devices can be assigned.

- **[ID]:** A number is automatically assigned to each row starting from the top.
- **[Status]:** Displays the streaming status using icons.
 - **(Normal):** Streaming input in progress.
 - **(Caution):** Streaming input in progress when both [Streaming Type] is [XDCAM pocket] and the frame rate settings are different.
 - **(Error):** Streaming input stopped or an error occurred after streaming had been in progress.
 - No display: No streaming input.
- **[Display Name]:** Displays the name specified when the device was assigned.
- **[Name]:** Displays the name of the input source.
 - When [Streaming Type] is [PXW-Z280/Z190]: Displays a name in “(Camera model)_(Serial number)” format.
 - When [Streaming Type] is [XDCAM pocket]: Displays the name specified in [Display name] in the XDCAM pocket app.
 - When [Streaming Type] is other than the above: Not displayed.
- **[Streaming Type]:** Displays the streaming type.
- **[Video Format]:** Displays the video format.
- **[Video Rate]:** Displays the video bit rate (Unit: kbps).
- **[Buffer]:** Displays the buffer size (Unit: milliseconds).
- **[Recording]:** Displays [CH 1] to [CH 3], whichever is assigned as an internal recording channel for instant replay. An “+ ISO” suffix is displayed when the ISO recording setting is enabled on the [Output] tab. During internal recording or ISO recording, (Recording) is displayed on the left side

2. [Input Settings]: You can change the settings for the row selected in the list on the left side.

[Output] tab



1. Output destinations list: Displays the status of streaming output destination devices or services assigned to the event. Up to two output destination devices or services can be assigned.

- **[ID]:** A number is automatically assigned to each row starting from the top.
- **[Status]:** Displays the streaming status using icons.
 - **(Normal):** Streaming output in progress.
 - **(Error):** Streaming output stopped due to an error or other cause.
 - No display: No streaming output.

- **[Display Name]:** Displays the name specified when the device or service was assigned.
- **[A/V Source]:** Displays the output source.
- **[Streaming Type]:** Displays the streaming type.
- **[Video Format]:** Displays the video format.
- **[Video Rate]:** Displays the video bit rate (Unit: kbps).
- **[Buffer]:** Displays the buffer size (Unit: milliseconds).
- **[Streaming]:** Press the [Start] button to start streaming output and press the [Stop] button to stop streaming output.

The label switches between [Start] and [Stop] according to the status of the streaming output. During streaming output, (Streaming output) is displayed on the left side of the button.

- **[Recording]:** Press the [Start] button to start recording the output and press the [Stop] button to stop recording. The label switches between [Start] and [Stop] according to the status of the recording.


When ISO recording is enabled, "+ ISO" is displayed on the right side of the button and ISO recording occurs with the same timing as output recording.

During recording, (Recording) is displayed on the left side of the button.

Note

- The output recorded content will vary depending on the [A/V Source] setting. When [A/V Source] is set to [PGM], program output is recorded. When set to [Clean], clean output is recorded. Clean output in this service refers to program output video excluding DSK and audio excluding audio commentary (AUX).
- Recording the output is supported only when [Video Format] is set to an H.264 format and [Audio Freq. (Hz)] is set to [48000] in the output destination settings. The [Start] button is disabled in all cases except the above.

- The recording of output on the two output destinations simultaneously is not supported. When you start recording one output destination, the [Start] button for the other output destination is disabled.

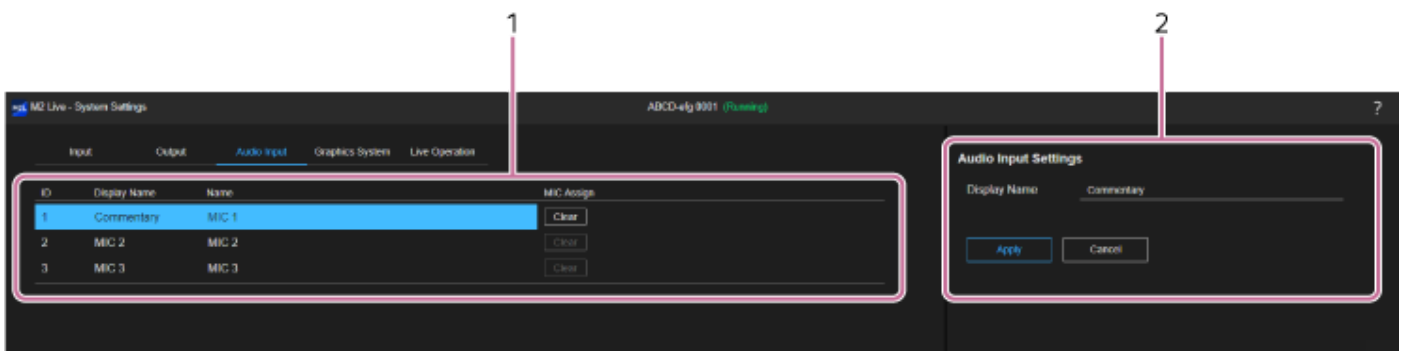
- **[Auto Highlight] (output with [ID] of 1 only)**: Press the [Start] button to start sending program output video to A2 Production for auto highlight creation, and press the [Stop] button to stop sending video. The label switches between [Start] and [Stop] according to the output status. During the sending of video,  (Sending) is displayed on the left side of the button.

Note

- To send video for auto highlight creation, the following conditions must be satisfied.
 - An A2 Production subscription exists.
The [Start] button is not displayed unless you have a subscription with A2 Production.
 - Using Professional ID.
The [Start] button is not displayed when using a Sony account.
 - [Analysis Rule] is configured and [Video Format] is set to an H.264 format with progressive scan method in the output destination settings.
The [Start] button is disabled in all cases except the above. To configure [Analysis Rule], you must log in to A2 Production and agree to the terms of use and privacy policy.

2. **[Output Settings]**: You can change the settings for the row selected in the list on the left side.

[Audio Input] tab

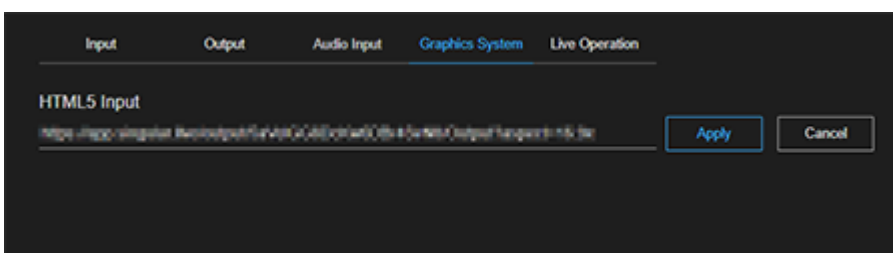


1. **Audio input sources list**: Displays the status of the audio input for audio commentary. You can assign audio input devices, such as a microphone on a computer being used, to each channel on the [Audio Mixer] tab of the [Live Operations] screen.

- **[ID]**: A number is automatically assigned to each row starting from the top.
- **[Display Name]**: Displays an arbitrary specified name.
- **[Name]**: Displays [MIC 1] to [MIC 3].
- **[MIC Assign]**: If microphones are assigned to each audio input on the [Audio Mixer] tab of the [Live Operation] screen, you can release the assignment by pressing the [Clear] button. This is useful when you cannot release a microphone assignment on the [Live Operation] screen or when a person other than the user of the microphone (such as the director) wants to change the microphone assignment.

2. **[Audio Input Settings]**: You can change the settings for the row selected in the list on the left side.

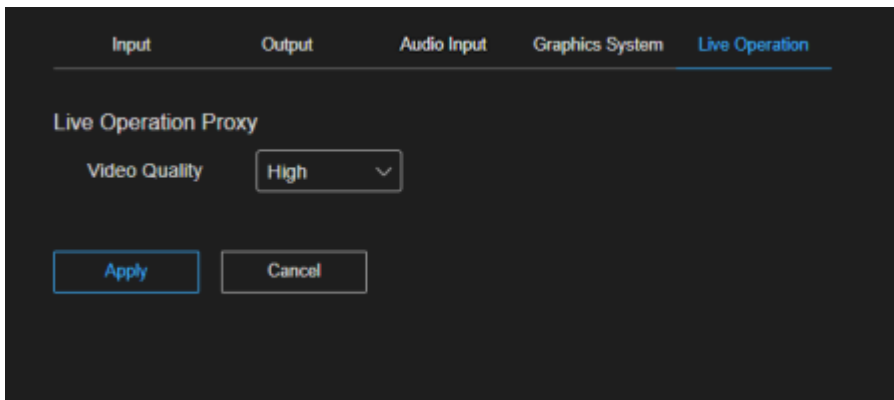
[Graphics System] tab



Sets the URL of an external graphics system to input to this service.

Modifying the setting when the event status is "Running" will display a confirmation message and cause the event to be restarted automatically. When streaming output, recording, or sending video for auto highlight creation is in progress, the setting cannot be changed.

[Live Operation] tab



You can select the image quality of the video displayed on the [Live Operation] screen. Modifying the setting when the event status is “Running” will display a confirmation message and cause the event to be restarted automatically. When streaming output, recording, or sending video for auto highlight creation is in progress, the setting cannot be changed.

Configuring a Streaming Input Source

Configuration method

Select a row on the [Input] tab of the [System Settings] screen and configure each item in the [Input Settings] pane. When finished configuring items, press the [Apply] button to apply the settings.

Setup items

Set [Streaming Type] to the appropriate setting for the input source device. The setup items and the available selection options will vary depending on the [Streaming Type] setting.

When using [PXW-Z280/Z190]

Note



- If the setting is changed when both a camera is not connected and the event status is “Running” when using [PXW-Z280/Z190], the event will be restarted automatically. However, when streaming output, recording, or sending video for auto highlight creation is in progress with a camera not connected, the setting cannot be changed.

Use this option when the video input source is a PXW-Z280/Z190.

Input Settings

Display Name	Input 2
Streaming Type	PXW-Z280/Z190
Video Format	H.265/HEVC/1920x1080/59.94i
Video Bitrate (kbps)	6000
Buffer (msec)	1000
Audio Codec	AAC
Audio Freq. (Hz)	48000
Connection Information	
CCM Address	
User Name	user
Password	...
Recording	Replay CH2 + ISO

- **[Display Name]**: Enter an arbitrary name.
- **[Streaming Type]*** : Select [PXW-Z280/Z190].
- **[Video Format]**** : Select the video format from the list. When creating an event, the selection options will vary depending on the [Event Region] setting.
- **[Video Bitrate (kbps)]**: Set the video bit rate in the range 3000 to 12000.
- **[Buffer (msec)]**: Set the buffer size in the range 500 to 10000. The setting can also be changed on the [Live Operation] screen.
- **[Audio Codec]**: Displays the audio codec. Cannot be modified.
- **[Audio Freq. (Hz)]**: Displays the audio frequency. Cannot be modified.
- **[Connection Information]**
 - **[CCM Address]**: Displays the CCM address based on the subdomain set for the event. Cannot be modified on this screen. To change the subdomain, select the event on the [Dashboard] screen, press the [Details] button, and perform the operation on the [Details] screen. Set the same value on the PXW-Z280/Z190.
 - **[User Name]*** : Set the user name. Set the same value on the PXW-Z280/Z190.

- **[Password]*** : Set the password. Press  (Shown)/ (Hidden) to show/hide the setting. Set the same value on the PXW-Z280/Z190.
- **[Recording]*** : To use the instant replay function, set one of [Replay CH 1 + ISO] to [Replay CH 3 + ISO] to assign a channel for internal recording.
You can also use this setting when you want to enable the ISO recording function for recording input content simultaneously when recording the output.

* Can be modified only when the event status is “Stopped.”

** Modifying the setting when the event status is “Running” will display a confirmation message and cause the event to be restarted automatically. Also, when streaming output, recording, or sending video for auto highlight creation is in progress, the setting cannot be changed.

When using [XDCAM pocket]

Note

- Modifying the setting when both a camera is not connected and the event status is “Running” when using [XDCAM pocket] will cause the event to be restarted automatically. However, when streaming output, recording, or sending video for auto highlight creation is in progress with a camera not connected, the setting cannot be changed.

Use this option when the video input source is XDCAM pocket.

Input Settings

Display Name	Input 3
Streaming Type	XDCAM pocket
Video Format	H.265/HEVC/1920x1080/59.94p
Video Bitrate (kbps)	8000
Buffer (msec)	1000
Audio Codec	AAC
Audio Freq. (Hz)	48000

Connection Information

Device ID

Recording	Replay CH3 + ISO
-----------	------------------

Apply

Cancel

- **[Display Name]:** Enter an arbitrary name.
- **[Streaming Type]* :** Select [XDCAM pocket].
- **[Video Format]** :** Select the video format from the list. When creating an event, the selection options will vary depending on the [Event Region] setting.
- **[Video Bitrate (kbps)]:** Set the video bit rate in the range 3000 to 20000.
- **[Buffer (msec)]:** Set the buffer size in the range 100 to 10000. The setting can also be changed on the [Live Operation] screen.
- **[Audio Codec]:** Displays the audio codec. Cannot be modified.
- **[Audio Freq. (Hz)]:** Displays the audio frequency. Cannot be modified.
- **[Connection Information]**
 - **[Device ID]:** Displays the device ID that uniquely identifies the XDCAM pocket app assigned as the input source. Blank if an XDCAM pocket app is not assigned.
When blank, select an event using XDCAM pocket and connect to the event input to assign XDCAM pocket as the input source. To cancel the XDCAM pocket assignment, delete the entry so that it is blank.

- **[Recording]*** : To use the instant replay function, set one of [Replay CH 1 + ISO] to [Replay CH 3 + ISO] to assign a channel for internal recording.

You can also use this setting when you want to enable the ISO recording function for recording input content simultaneously when recording the output.

* Can be modified only when the event status is "Stopped."

** Modifying the setting when the event status is "Running" will display a confirmation message and cause the event to be restarted automatically. Also, when streaming output, recording, or sending video for auto highlight creation is in progress, the setting cannot be changed.

When using [SRT]

Note

- This service supports SRT input with AES 256 encryption enabled when operating in Listener mode only. To use SRT input, set the SRT setting of the input source to Caller mode.

Use this option when the video input source is SRT.

Input Settings

Display Name

Left CAM

Streaming Type

SRT

Video Format

H.264/AVC/1920x1080/60p

Buffer (msec)

1000

Audio Codec

AAC

Audio Freq. (Hz)

48000

Connection Information

Address/Host

Stream Key



Recording

Replay CH 1 + ISO

Apply

Cancel

- **[Display Name]**: Enter an arbitrary name.

- **[Streaming Type]**^{*} : Select [SRT].
- **[Video Format]**^{**} : Select the video format from the list. When creating an event, the selection options will vary depending on the [Event Region] setting.
- **[Buffer (msec)]**: Set the buffer size in the range 0 to 10000. The setting can also be changed on the [Live Operation] screen.
- **[Audio Codec]**: Displays the audio codec. Cannot be modified.
- **[Audio Freq. (Hz)]**^{**} : Select 44100 or 48000 for the audio frequency.
- **[Connection Information]**
 - **[Address/Host]**: Displays the address and host based on the subdomain set for the event. Cannot be modified on this screen. To change the subdomain, select the event on the [Dashboard] screen, press the [Details] button, and perform the operation on the [Details] screen. Set the same value for the input source.
 - **[Stream Key]**^{*} : Set a stream key of 10 or more characters. Press  (Shown)/ (Hidden) to show/hide the setting.
Set the same value for the input source.
- **[Recording]**^{*} : To use the instant replay function, set one of [Replay CH 1 + ISO] to [Replay CH 3 + ISO] to assign a channel for internal recording.
You can also use this setting when you want to enable the ISO recording function for recording input content simultaneously when recording the output.

* Can be modified only when the event status is "Stopped."

** Modifying the setting when the event status is "Running" will display a confirmation message and cause the event to be restarted automatically.
Also, when streaming output, recording, or sending video for auto highlight creation is in progress, the setting cannot be changed.

When using [RTMP] or [RTMPS]

Use this option when the video input source is RTMP/RTMPS.

Input Settings

Display Name	Input 4
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Streaming Type **RTMP**

Video Format H.264/AVC/1920x1080/59.94p



Audio Codec	AAC
-------------	-----

Audio Freq. (Hz)

Connection Information



Address/Host

<http://www.sagepub.com>

Stream Key ...  

Recording **Replay CH 2 + ISO**

Apply

- **[Display Name]**: Enter an arbitrary name.
- **[Streaming Type]**^{*}: Select [RTMP] or [RTMPS].
- **[Video Format]**^{**}: Select the video format from the list.
- **[Audio Codec]**: Displays the audio codec. Cannot be modified.
- **[Audio Freq. (Hz)]**^{**}: Select 44100 or 48000 for the audio frequency.
- **[Connection Information]**
 - **[Address/Host]**: Displays the address and host based on the subdomain set for the event. Cannot be modified on this screen. To change the subdomain, select the event on the [Dashboard] screen, press the [Details] button, and perform the operation on the [Details] screen. Set the same value for the input source.
 - **[Stream Key]**^{*}: Set a stream key of one or more characters. Press  (Shown)/ (Hidden) to show/hide the setting.
Set the same value for the input source.
- **[Recording]**^{*}: To use the instant replay function, set one of [Replay CH 1 + ISO] to [Replay CH 3 + ISO] to assign a channel for internal recording.

You can also use this setting when you want to enable the ISO recording function for recording input content simultaneously when recording the output.

* Can be modified only when the event status is “Stopped.”

** Modifying the setting when the event status is “Running” will display a confirmation message and cause the event to be restarted automatically. Also, when streaming output, recording, or sending video for auto highlight creation is in progress, the setting cannot be changed.

To cancel an input source assignment

Select the row for the assignment you want to cancel on the [Input] tab of the [System Settings] screen, and delete the [Streaming Type] setting so that it is blank. [Streaming Type] can be modified only when the event status is “Stopped.”

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Configuring a Streaming Output Destination

Configuration method


Select a row on the [Output] tab of the [System Settings] screen and configure each item in the [Output Settings] pane. When finished configuring items, press the [Apply] button to apply the settings.

Setup items


Output Settings

Display Name Output 1

A/V Source PGM

Streaming Type SRT 


☒ Caller ☐ Listener

Video Format H.264/AVC/1920x1080/60p 

Video Bitrate (kbps) 15000 


Buffer (msec) 300 

Audio Codec AAC



Audio Freq. (Hz) 48000 

Connection Information

Address/Host

srt://{HOST}:{PORT} 

Stream Key

When configuring, please enter 10 or more characters.  

Recording ☒ ISO

Auto Highlight

Analysis Rule 20231219_1654_handoball_9min

[Change Rule](#)

[Apply](#)

[Cancel](#)

Note

- This service supports SRT output with AES 256 encryption enabled.
- Depending on the event or video output status, there may be restrictions on modifying the setting of each item.
 - The following items can be modified only when the event status is “Stopped.”
 - [A/V Source]
 - [Streaming Type]
 - [Video Format]
 - [Audio Freq. (Hz)]

- Modifying the following items when the event status is “Running” will display a confirmation message and cause the event to be restarted automatically.
 - [Video Bitrate (kbps)]
 - [Buffer (msec)]
 - [Recording]
- Only the following items can be modified during streaming output.
 - [Display Name]
 - [Analysis Rule]
- Only the following items can be modified while recording.
 - [Display Name]
 - [Address/Host]
 - [Stream Key]
 - [Analysis Rule]
- Only the following items can be modified when sending video for auto highlight creation.
 - [Display Name]
 - [Address/Host]
 - [Stream Key]
- Recording the output is supported only when [Video Format] is set to an H.264 format and [Audio Freq. (Hz)] is set to [48000] in the output destination settings.
- Sending video for auto highlight creation is supported only when [Video Format] is set to an H.264 format with progressive scan method for the output destination with [ID] of 1.
- The recording of output on the two output destinations simultaneously is not supported.

- **[Display Name]:** Enter an arbitrary name.
- **[A/V Source]:** Select the output source.
 When [PGM] is selected, program output is output as-is.
 When [Clean] is selected, program output video excluding the DSK and audio excluding the audio commentary (AUX) are output.
 The output destination with [ID] of 1 is set to [PGM] (fixed).
- **[Streaming Type]:** Select a protocol supported by the output destination. When [SRT] is selected, select whether to use this service in [Caller] mode or [Listener] mode.
- **[Video Format]:** Select the video format from the list. When creating an event, the selection options will vary depending on the [Event Region] setting.

Note

- Interlaced can only be selected for the output destination for which [A/V Source] is set to [PGM]. However, Interlaced cannot be selected on both of the two output destinations.

- **[Video Bitrate (kbps)]:** Set the video bit rate in the range 3000 to 25000.
- **[Buffer (msec)]:** Set the buffer size in the range 0 to 10000. Displayed only when [Streaming Type] is [SRT].



Note

- For SRT, buffering is referred to as latency. Setting the latency to 0 msec is not recommended. Set a value according to the SRT standard.
 For details, refer to the official SRT documentation.

- **[Audio Codec]:** Displays the audio codec. Cannot be modified.
- **[Audio Freq. (Hz)]:** Select 44100 or 48000 for the audio frequency.
- **[Connection Information]**
 - **[Address/Host]:** Set the address/host of the streaming output destination device or service. The name of the setup item may vary depending on the output destination. Check the specifications for the output destination beforehand.

Note

- Cannot be configured when [SRT] and [Listener] mode are selected in [Streaming Type]. Displayed automatically when the [Apply] button is pressed to apply the setting.

- **[Stream Key]:** Set the stream key of the streaming output destination device or service. Press  (Shown)/ (Hidden) to show/hide the setting.
- **[Recording]:** Place a check mark in [ISO] when you want to enable the ISO recording function for recording input content simultaneously when recording the output.
The status of the ISO recording function is linked between the two output destinations. When enabled on one output destination, it cannot be disabled on the other output destination.
- **[Auto Highlight] (ID 1 only)**
 - **[Analysis Rule]:** Displays the analysis rule to use for auto highlight creation. You can press [Change Rule] to change the analysis rule to use. Analysis rules must be created using A2 Production beforehand.

Note

- A separate A2 Production subscription is required for auto highlight creation. [Auto Highlight] is not displayed unless you have a subscription with A2 Production.
- Auto highlight creation is available only when using Professional ID. When using a Sony account, [Auto Highlight] is not displayed.
- To configure [Analysis Rule], you must log in to A2 Production and agree to the terms of use and privacy policy.

To cancel an output destination assignment

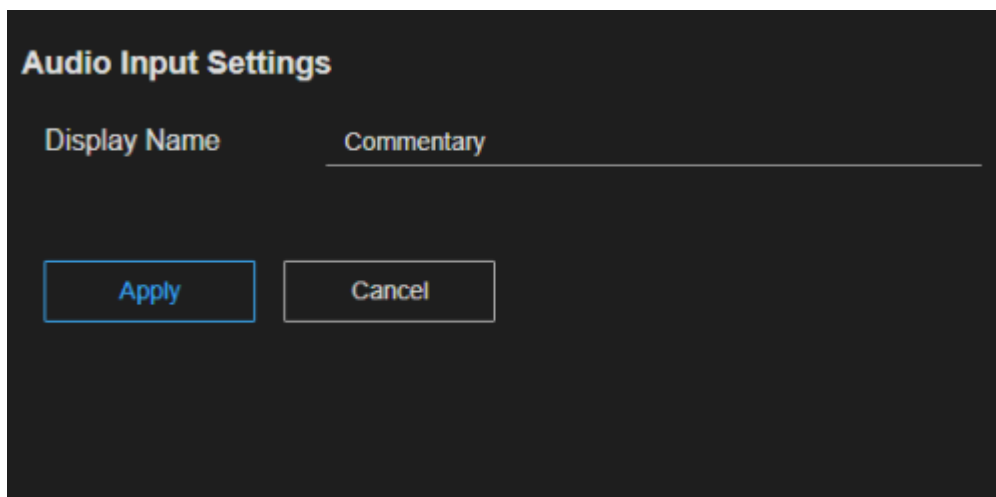
Select the row for the assignment you want to cancel on the [Output] tab of the [System Settings] screen, and delete the [Streaming Type] setting so that it is blank. [Streaming Type] can be modified only when the event status is “Stopped.”

Configuring Microphone Audio Input for Audio Commentary

Configuration method

Select a row on the [Audio Input] tab of the [System Settings] screen and configure [Display Name] in the [Audio Input Settings] pane. When finished configuring items, press the [Apply] button to apply the settings.

Setup items



- **[Display Name]:** Enter an arbitrary name. It will be displayed on the [Live Operation] screen.

Hint

- The name configured here is also displayed when you assign a microphone for audio commentary use. Naming each audio input is recommended so that commentary personnel know to which channel the microphone should be assigned.

Related Topic

- [Audio Commentary Function](#)

Setting an External Graphics System

Note

- Modifying the external graphics system setting when the event status is “Running” will display a confirmation message and cause the event to be restarted automatically. Also, when streaming output, recording, or sending video for auto highlight creation is in progress, the setting cannot be changed.
- Currently, Singular.Live is the only external graphics system whose operation with this service has been verified. However, not all operations are guaranteed.

On the [Graphics System] tab of the [System Settings] screen, register the URL for graphics output from the external graphics system you want to use and press the [Apply] button. Input from a configured external graphics system can be composited on the video as a DSK.

For details about how to use an external graphics system, refer to the operating instructions for the external graphics system.

Related Topic

- [Setting a DSK](#)

Adjusting the Image Quality of the Video Displayed on the [Live Operation] Screen

You can adjust the image quality of the video displayed on the [Live Operation] screen using the Live Operation Proxy function on the [Live Operation] tab of the [System Settings] screen.

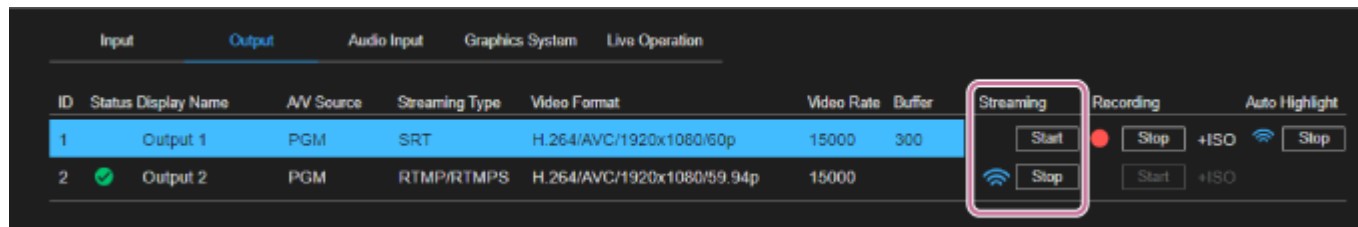
Increasing the [Video Quality] setting improves the video quality and also raises the required bit rate. However, if increased too high, the video may stop intermittently depending on the bandwidth of your network connection. Select [High], [Middle], or [Low] according to the state of your network connection.

Modifying the Live Operation Proxy settings when the event status is “Running” will display a confirmation message and cause the event to be restarted automatically. Also, when streaming output, recording, or sending video for auto highlight creation is in progress, the setting cannot be changed.


Starting/Stopping Streaming

Note

- Streaming output is supported only when an event is in the “Running” state.



For streaming output, an output destination must be configured on the [Output] tab of the [System Settings] screen beforehand.

Press the [Start] button in the [Streaming] column on the [Output] tab of the [System Settings] screen. Streaming output begins and the [Start] button changes to the [Stop] button. During output,  (Output) is displayed on the left side of the button.

Press the [Stop] button to stop streaming output. The [Stop] button changes to the [Start] button.

Note

- A short delay may occur after pressing the [Start]/[Stop] button until streaming output actually starts/stops.

Related Topic

- [Starting an Event and Starting Live Operation](#)
- [Configuring a Streaming Output Destination](#)

Starting/Stopping Recording

Note

- Recording is supported only when an event is in the “Running” state.

Types of recording

You can record output and input content to files using this service.

- Output recording

When [A/V Source] for an output destination is set to [PGM], program output is recorded. When set to [Clean] for an output destination, clean output is recorded.

Hint

- Clean output in this service refers to program output video excluding DSK and audio excluding audio commentary (AUX).
- Input content recording (ISO recording)
Records input content on channels (up to three channels) configured for recording beforehand. The recording is performed with the same timing as output recording.

Preparation for recording

This section describes the prerequisites for recording.

The recording of two output destinations simultaneously is not supported.

Output recording

Configure the following settings for the output destination that you want to record on the [Output] tab of the [System Settings] screen. The [Start] button/[Stop] button becomes enabled when the following settings are configured.

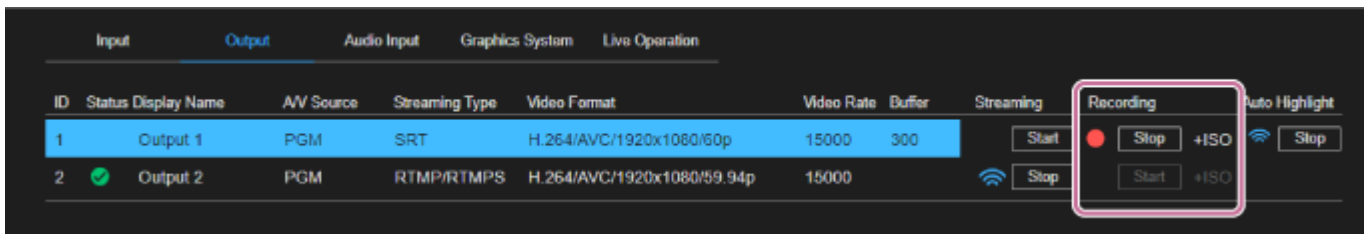
- Set [Video Format] to an H.264 format.
- Set [Audio Freq. (Hz)] to [48000].

ISO recording

Configure the following settings on the [Input] tab and [Output] tab of the [System Settings] screen. “+ ISO” is displayed on the right side of the [Start] button/[Stop] button when the following settings are configured.


- [Input] tab
Configure the following settings for the input sources (up to three channels) that you want to record.
 - Select [Replay CH 1 + ISO] to [Replay CH 3 + ISO] in [Recording].
- [Output] tab
Configure the following settings for the output destination that you want to record.
 - Set [Video Format] to an H.264 format.
 - Set [Audio Freq. (Hz)] to [48000].
 - Place a check mark in [ISO].

Starting/stopping recording



When “+ ISO” is displayed on the right side of the [Start] button/[Stop] button, ISO recording of input content is performed with the same timing as output recording when you start/stop recording. When “+ ISO” is not displayed, only output recording occurs.

Starting recording

Press the [Start] button in the [Recording] column on the [Output] tab of the [System Settings] screen. Recording begins and the [Start] button changes to the [Stop] button. During recording,  (Recording) is displayed on the left side of the button.

Stopping recording

Press the [Stop] button to stop recording. The [Stop] button changes to the [Start] button.

Note

- A short delay may occur after pressing the [Start]/[Stop] button until recording actually starts/stops.

Recorded files

During recording, the content is saved automatically as one file every 30 minutes.

Recorded files are displayed on the [Recording] tab of the [File Manager] screen. To enable playback of a recorded file using a clip player, execute [Copy to Clip Folder] to display the file in the list on the [Clip] tab.

Hint

- The recording start date and time included in the name of the recorded file uses universal standard time (UTC).
- Up to approximately 5 hours of recording time is supported for output recording at 25 Mbps and ISO recording at 9 Mbps × 3 channels. The recording time will vary depending on the settings and shooting environment, and is not guaranteed.

For output recording

Program output is recorded in MP4 format with the same angle of view, frame rate, and codec as the output destination settings.

The file name when saving is in the following format.

- When recording program output:
PGM_“Event Name”_YYYYMMDDhhmmss (recording start date and time)_#nn (chunk number).mp4
- When recording clean output:
CLN_“Event Name”_YYYYMMDDhhmmss (recording start date and time)_#nn (chunk number).mp4

For ISO recording

The content is converted to H.264, 1920×1080, progressive format (other settings are the same as the input source) and saved in MP4 format

The file name when saving is in the following format.

InputX (input source ID)_“Event Name”_YYYYMMDDhhmmss (recording start date and time)_#nn (chunk number).mp4

Related Topic

- [Starting an Event and Starting Live Operation](#)
- [Configuring a Streaming Input Source](#)


Starting/Stopping the Sending of Video for Auto Highlight Creation

Note

- To send video for auto highlight creation, the following conditions must be satisfied.
 - An A2 Production subscription exists.
The [Start] button is not displayed unless you have a subscription with A2 Production.
 - Using Professional ID.
The [Start] button is not displayed when using a Sony account.
 - Event status is “Running,” [Analysis Rule] is configured, and [Video Format] is set to an H.264 format with progressive scan method for the output destination with [ID] of 1.
The [Start] button is disabled in all cases except the above. To configure [Analysis Rule], you must log in to A2 Production and agree to the terms of use and privacy policy.

Input		Output	Audio Input	Graphics System	Live Operation					
ID	Status	Display Name	A/V Source	Streaming Type	Video Format	Video Rate	Buffer	Streaming	Recording	Auto Highlight
1		Output 1	PGM	SRT	H.264/AVC/1920x1080/60p	15000	300	<div>Start</div>	<div></div> <div>Stop</div>	<div>+ISC</div>
2	✓	Output 2	PGM	RTMP/RTMPS	H.264/AVC/1920x1080/59.94p	15000		<div></div> <div>Stop</div>	<div>Start</div> <div></div>	<div>+ISC</div>

To send video for auto highlight creation, the output destination with [ID] of 1 must be configured in the [Output] list on the [System Settings] screen beforehand.

Press the [Start] button in the [Auto Highlight] column in the [Output] list to start sending video for auto highlight creation. The [Start] button changes to the [Stop] button. During the sending of video,  (Sending) is displayed on the left side of the button.

Press the [Stop] button to stop sending video. The [Stop] button changes to the [Start] button.

Note

- A short delay may occur after pressing the [Start]/[Stop] button until sending video actually starts/stops.

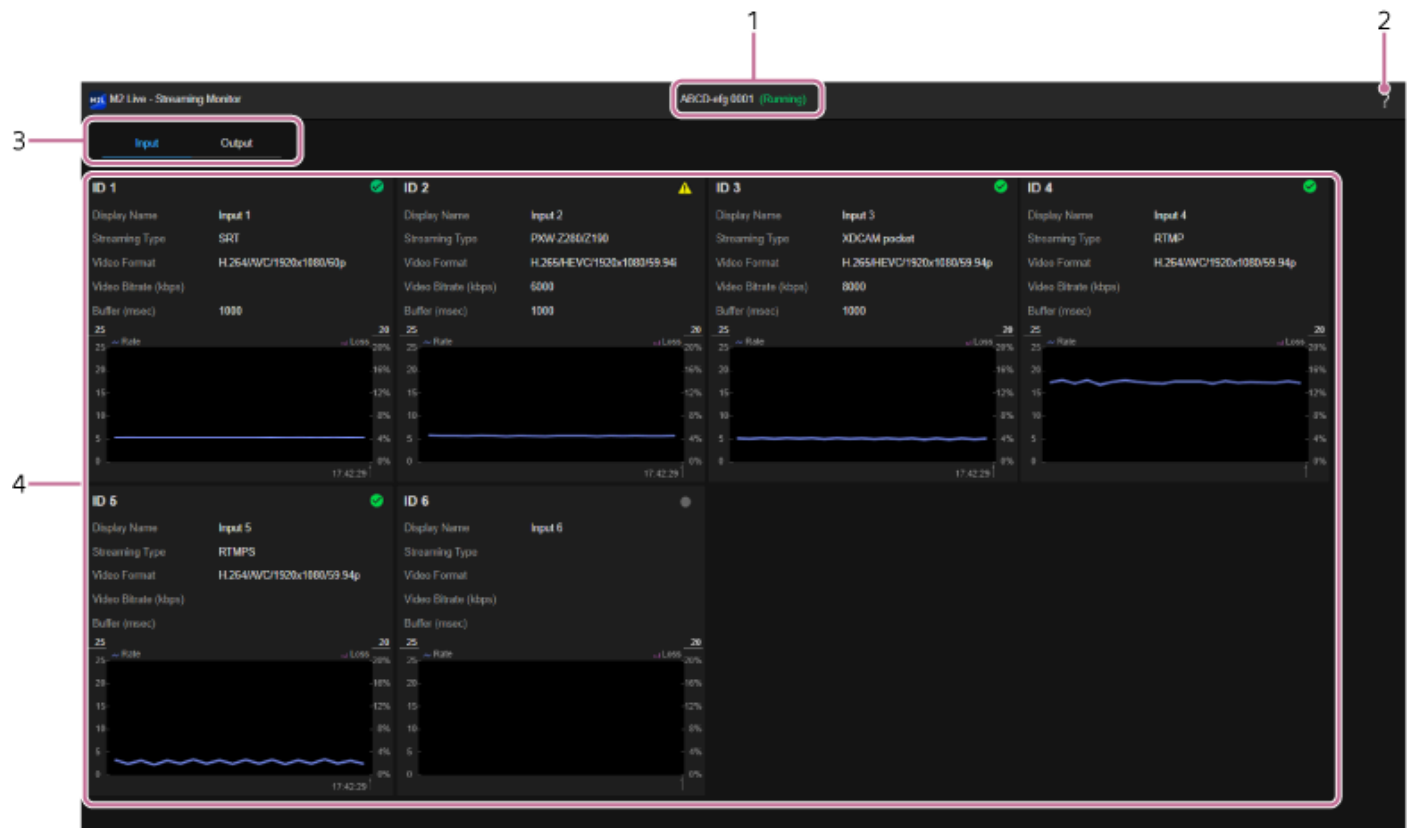
Related Topic

- Starting an Event and Starting Live Operation
- Configuring a Streaming Output Destination
- Creating Highlights Automatically (when using Professional ID)

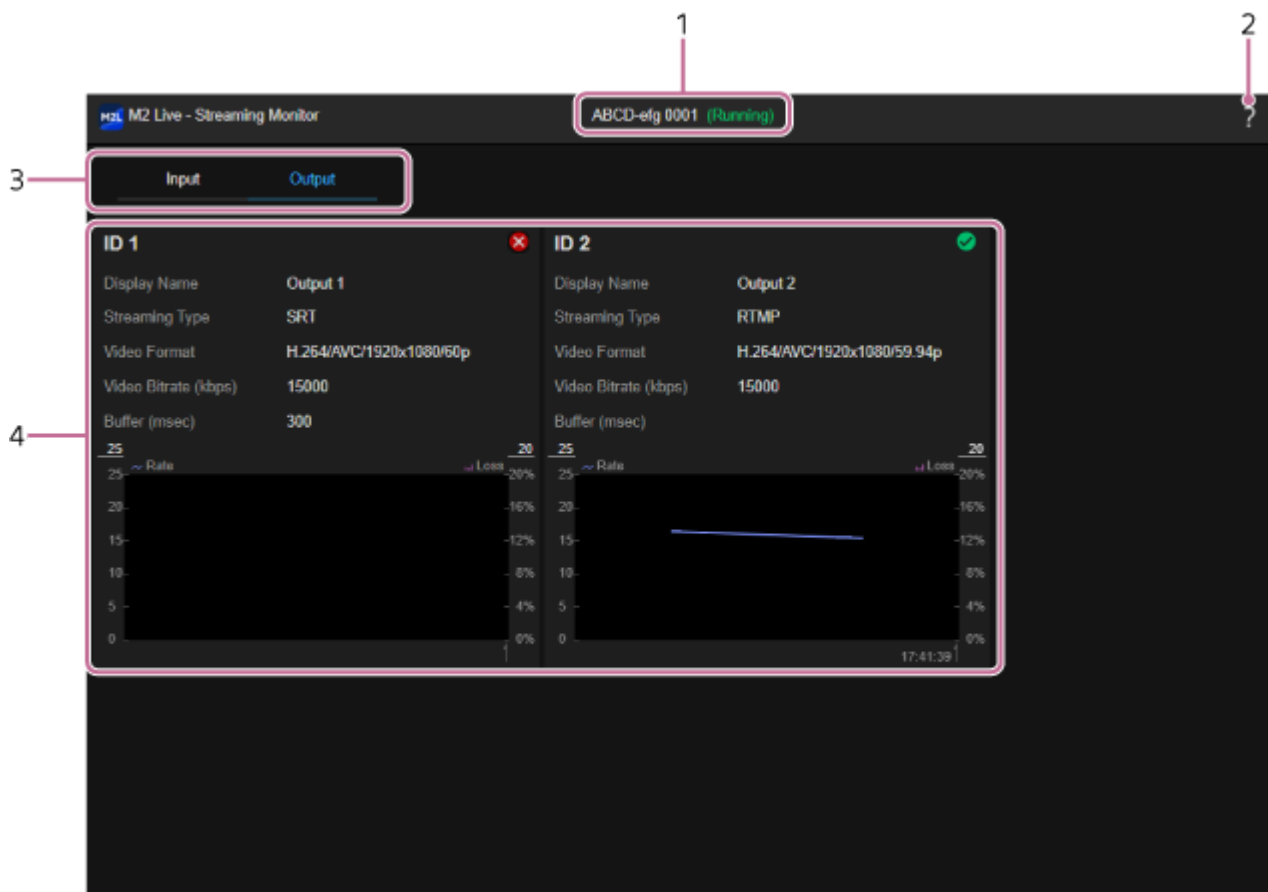
Monitoring the Streaming Status

You can monitor the status of each input/output on the [Input] tab and [Output] tab of the [System Settings] screen on the [Streaming Monitor] screen.

[Input] tab



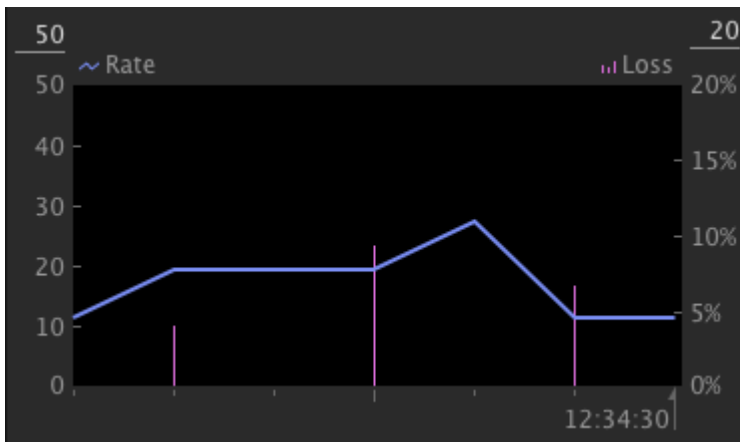
[Output] tab



1. **Event name/status display:** Displays the name/status of the event for which the [Streaming Monitor] screen was opened.
2. **? (Help Guide):** Select to display this Help Guide.
3. **Category tabs:** Press a tab to switch the display contents.
 - [Input]: Displays the status of the input source.
 - [Output]: Displays the status of the output destination.
4. **[ID 1] to [ID 6]:** Displays the settings of the streaming input source device assigned on the [System Settings] screen and indicates the communication status using an icon and graph.
 - **Icon display**
 - **(Normal):** Streaming input in progress.
 - **(Caution):** Streaming input in progress when both [Streaming Type] is [XDCAM pocket] and the frame rate settings are different.
 - **(Error):** Streaming input stopped or an error occurred after streaming had been in progress.
 - No display: No streaming input.
 - **[Display Name]:** Displays the name specified when the device was assigned.
 - **[Streaming Type]:** Displays the streaming type.
 - **[Video Format]:** Displays the video format.
 - **[Video Bitrate (kbps)]:** Displays the video bit rate. Displayed only when [Streaming Type] is [PXW-Z280/Z190] or [XDCAM pocket].
 - **[Buffer (msec)]:** Displays the buffer size. Displayed only when [Streaming Type] is [PXW-Z280/Z190], [XDCAM pocket], or [SRT].
 - **Graph:** Displays the communication rate and loss graph.
5. **[ID 1], [ID 2]:** Displays the settings of the streaming output destination device or service assigned on the [System Settings] screen and indicates the communication status using an icon and graph.
 - **Icon display**
 - **(Normal):** Streaming output in progress.
 - **(Error):** Streaming output stopped due to an error or other cause.
 - No display: No streaming output.

- **[Display Name]**: Displays the name specified when the device or service was assigned.
- **[Streaming Type]**: Displays the streaming type.
- **[Video Format]**: Displays the video format.
- **[Video Bitrate (kbps)]**: Displays the video bit rate.
- **[Buffer (msec)]**: Displays the buffer size. Displayed only when [Streaming Type] is [SRT].
- **Graph**: Displays the communication rate and loss graph.

Graph operations



The graph is updated every second. Hover the mouse pointer over the graph to check the graph details.


You can change the upper limit of each vertical axis of the graph by selecting the numerical value at the top of the graph.

The maximum value for the communication rate on the left can be set in the range 10 to 50. The maximum value for the loss on the right can be set in the range 10 to 100.

Structure of the [Live Operation] Screen



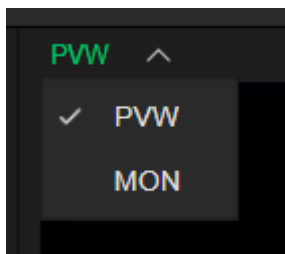
1. **Remaining usage time (when using a Sony account):** When the remaining event usage time falls below 20% or below 4 hours, ⚠ (Caution) appears. When the usage time exceeds the upper limit, ⛔ (Warning) appears.
2. **Event name/status display:** Displays the name/status of the event for which the [Live Operation] screen was opened.
3. **[Dashboard] button:** Use to return to the [Dashboard] screen after finishing live operation.
4. **👤 (Account):** Press the icon to display a drop-down list.
 - [Account Manager] (displayed when using a Sony account): Use to manage account information and subscription plan. The [Account Manager] screen will appear in a separate tab.
 - [Group Manager] (displayed when using a Sony account): Use to check the status of your group and other groups in which you are a member. The [Group Manager] screen will appear in a separate tab.
 - [Preferences]: Use to change the operation method of this service. The following sub-items are available:
 - [Shortcut Keys]: Press to display the [Shortcut Keys] screen in a separate tab. Use to configure shortcut keys for use with this service.
 - [Accessibility Mode]: Press to enable/disable accessibility mode.
When accessibility mode is enabled, you can move items by pressing the directional keys displayed for each item when sorting items in a list on the [Live Operation] screen.
When accessibility mode is disabled, you can move items using drag & drop.
 - [Privacy Policy]: Displays the user agreement and privacy policy. On the consent screen of the privacy policy, you can select whether to consent to the recording of operation information at any time.
 - [Sign Out]: Select to sign out from this service.
5. **❓ (Help Guide):** Select to display this Help Guide.

6. **[Scene] pane:** Displays a list of registered scenes. Press  (Close) to close the [Scene] pane. To open the [Scene] pane, press the [Scene] bar on the left edge of the screen.

Hint

- The [Scene] pane open/close status is stored for each user. This does not affect other users using the same event.

7. **[PVW] pane:** Displays the preview output video (the video that will be the next program output). Also used to check the image assigned to USK/KEY, and the size and position of a PinP subscreen, among other things. When [MON] is selected in the pull-down list on the top left, only the video selected in the [Source] pane can be monitored.






Hint

- The [PVW] and [MON] selection status is stored for each user. This does not affect other users using the same event.

8. **Transition control pane:** Displays buttons and settings for configuring and performing transitions.
9. **[PGM] pane:** Displays the program output video and status of the audio and output. When [Direct Mode] is enabled, a red frame is displayed around the video area.



1. **[Highlight] button (when using Professional ID):** Button to initiate auto highlight creation. During auto highlight creation, a status icon is displayed on the right side of the button.

-  (creating): Displayed during auto highlight creation.
-  (completed): Displayed when auto highlight creation is finished.
-  (failed): Displayed if auto highlight creation failed.

Note

- The [Highlight] button is enabled only when the following conditions are satisfied.
 - An A2 Production subscription exists.
The [Highlight] button is not displayed unless you have a subscription with A2 Production.
 - Using Professional ID.
When using a Sony account, the [Highlight] button is not displayed.
 - When configuration of the output destination with [ID] of 1 in the [Output] list on the [System Settings] screen is completed and the sending of video for auto highlight creation has started.

The [Highlight] button is disabled if the sending of video for auto highlight creation has not been started.

2. **[Recording] status indicator:** Displays the recording status.

- **Recording** (Recording): Displayed when recording.
- **Recording** (Stopped): Displayed when not recording.
- **Recording** (Recording error): Displayed when an error occurs during recording.
- **Recording** (Error stop): Displayed when an error occurs and recording has stopped.

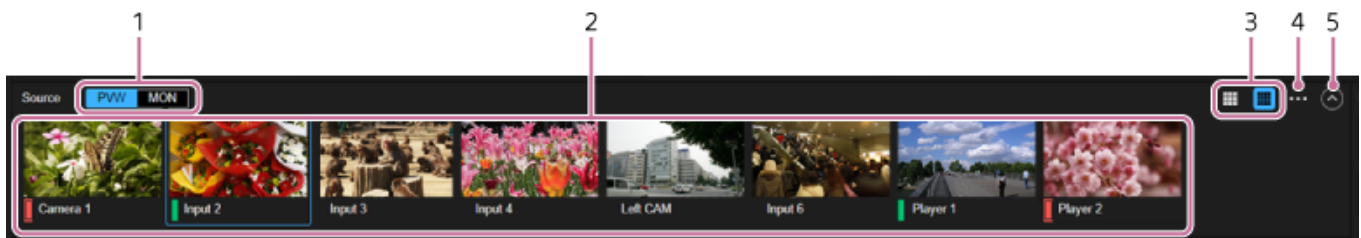
3. **[Streaming 1]/[Streaming 2] status indicator:** Displays the streaming output status.

- **Streaming 1** (Streaming output): Displayed when streaming output is in progress.
- **Streaming 1** (Stopped): Displayed when streaming output is not in progress.
- **Streaming 1** (Streaming output error): Displayed when an error occurs during streaming output.
- **Streaming 1** (Error stop): Displayed when an error occurs and streaming output has stopped.

4. **Video display pane:** Displays the program output video.

5. **Audio adjustment pane:** Use to adjust the volume and monitor the audio level of the output audio. Each time you press the [PGM]/[AUX] button, the monitor target switches between the program output and AUX output. Also, while a [PFL] button is held pressed on the [Audio Mixer] tab on the Edit/Control pane, only the audio for the channel for which the [PFL] button is pressed becomes the monitor target.

10. **[Source] pane:**



1. **Mode selection button:** You can switch to private video monitoring by pressing [MON]. This does not affect other users even when selecting video on the [Source] pane.

2. **Thumbnail view:** Displays the input source [Display Name] setting and video configured on the [Input] tab of the [System Settings] screen. You can assign an uploaded/recorded/automatically created highlight video file to [Player 1] and [Player 2]. If the instant replay function is enabled, [Player 2] is replaced by [Replay], which is used for the instant replay function.

A blue frame is displayed around the selected video.

A tally is lit for the current program output and current preview output video.

The tally is lit red during program output and lit green during preview output.

3. **(Large)/** **(Small)** : Changes the display size of the thumbnails.

4. **(Options)** :

- [Buffer Settings]: Displays a dialog for adjusting the buffer for each input content.

5. **(Increase display area)/** **(Decrease display area)** : Changes the size of the display area of the [Source] pane. Increasing the size of the display area of the [Source] pane decreases the size of the display area in the [PVW] pane and [PGM] pane, with part of the [PGM] pane and transition control pane hidden.

Hint

- The sizes of thumbnails and the size of the display area in the [Source] pane are stored for each user. This does not affect other users using the same event.

Note

- If there is a problem with the input video, such as image freezing, you can check whether an error has been output using [Status] on the [System Settings] screen or using the [Streaming Monitor] screen.

11. **Edit/Control pane:** Displays the setup items for assigning content and editing settings. The display content will vary depending on the selection status of the [Source] pane and [Layer] pane.

12. [Layer] pane: Displays the layers of each content composited in the video.




Press  (Close) to close the [Layer] pane. To open the [Layer] pane, press the [Layer] bar on the right edge of the screen.

Hint

- The [Layer] pane open/close status is stored for each user. This does not affect other users using the same event.

You can press the thumbnail area of a layer to assign content and edit settings. You can also press the name of a layer to switch the output status.

The background color and icon vary depending on the output status.

- Gray: The layer is not being output anywhere.  (No output) is displayed to indicate that the layer is not being output.
- Red: The layer is active and is being used in the program output video.  (Output) is displayed to indicate that the layer is being output.
- Green: The layer is active and is being used in the preview output video.  (Output) is displayed to indicate that the layer is being output.

Related Topic

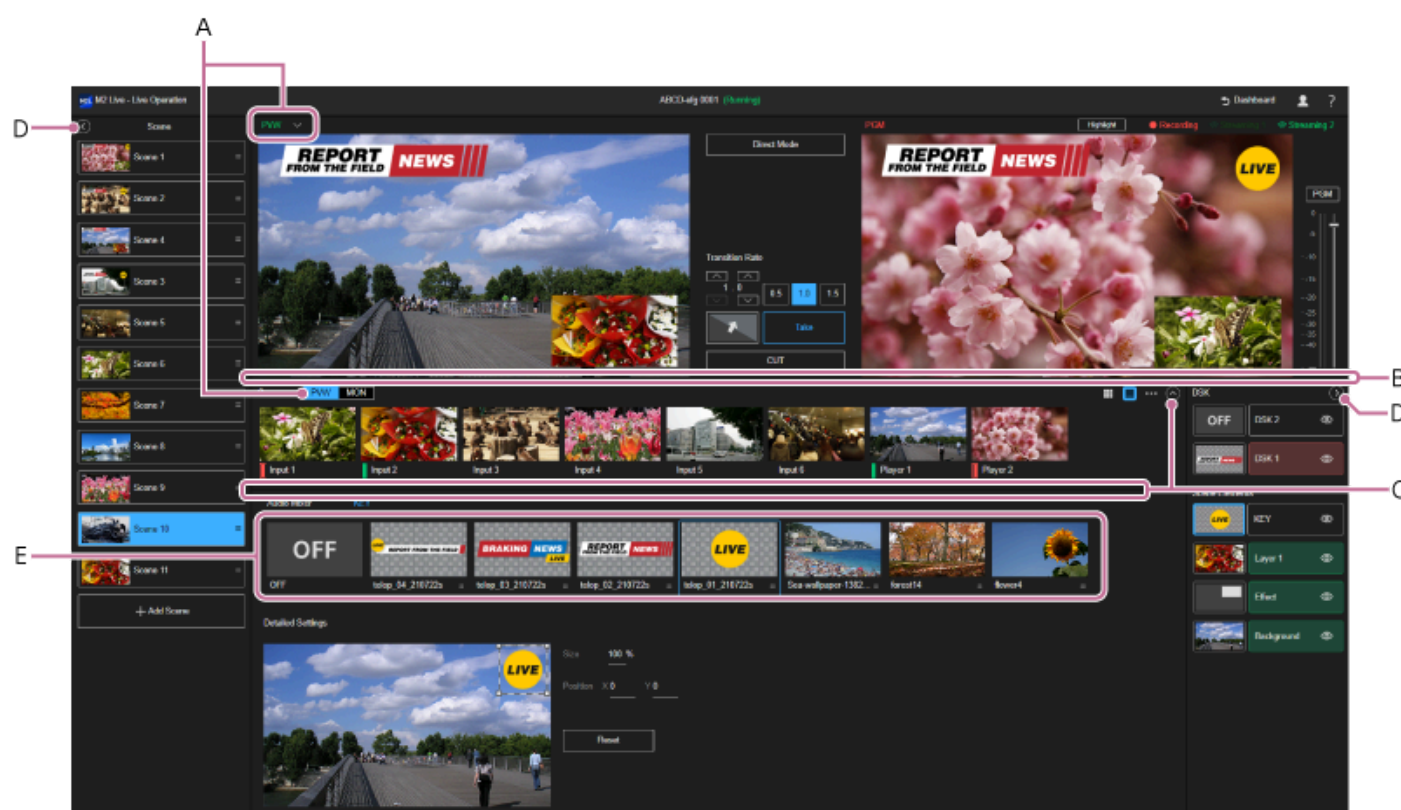
- [Starting an Event and Starting Live Operation](#)

Tailoring Operations According to Desired Task

On the [Live Operation] screen, the size of the display area of each pane can be changed and functions can be switched for each user. This allows replay operators, commentators, and others to tailor the operating environment to suit their tasks.

Hint

- These preferences are stored for each user. This does not affect other users using the same event.



A: To operate and monitor without affecting the preview output

The use of a combination of the following two settings allows replay operators, commentators, and others to perform their required tasks and check the video without affecting the video that is actually output.

When [MON] is selected in the pull-down list on the top left of the [PVW] pane, the video selected in the [Source] pane can always be monitored. The output is not affected even if the preview output is switched.

When [MON] mode is selected using the mode selection button on the top left of the [Source] pane, selecting a video in the [Source] pane has no effect on the preview output and program output.

Usage example

Switcher operator

Select [PVW] mode in both the [PVW] pane and [Source] pane. The display in the [PVW] pane switches according to the selection in the [Source] pane.

Replay operator

Select [MON] mode in the [Source] pane. You can always display the [Replay] tab in the Edit/Control pane. For a switcher operator to check a replay in the preview output in the [PVW] pane, select [PVW] mode in the [PVW] pane.

Commentator

Select [MON] mode in both the [PVW] pane and [Source] pane. You can continuously monitor the required video.

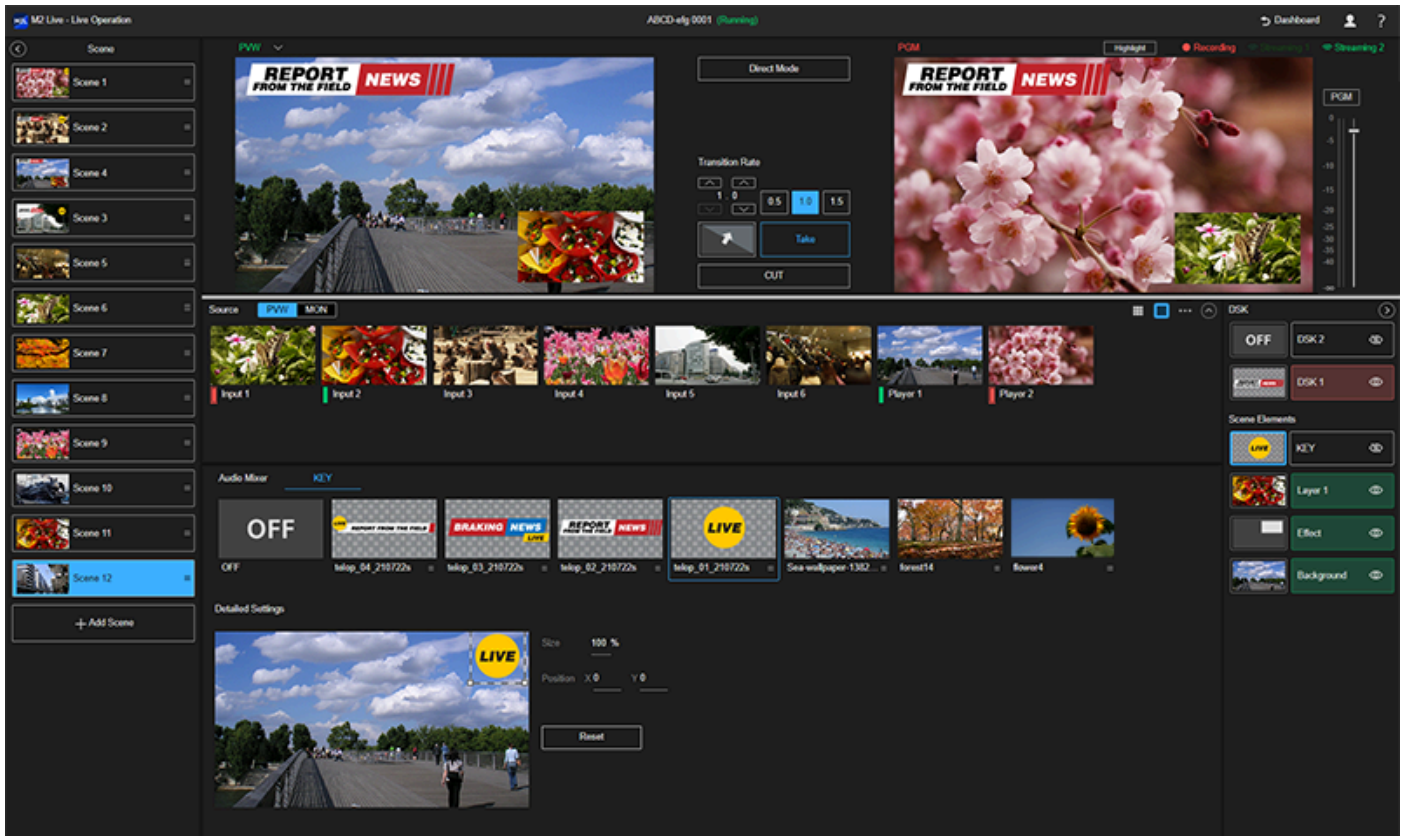
Hint

- For users other than switcher operator, selecting [MON] mode in the [Source] pane is recommended. Incorrectly selecting video in the [Source] pane does not affect the output.

To change the size of the display area of each pane



B: To change the size of the display area of the monitor area

You can change the size of the display area of the monitor area ([PVW] pane/transition control pane/[PGM] pane) by dragging the border lines up/down in the monitor area and [Source] pane.

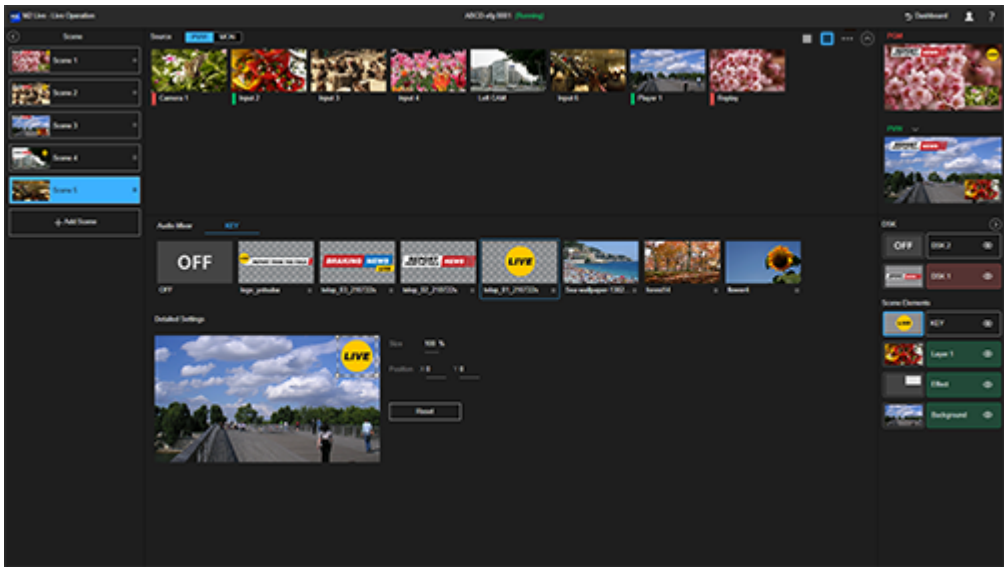


C: To change the size of the display area of the [Source] pane

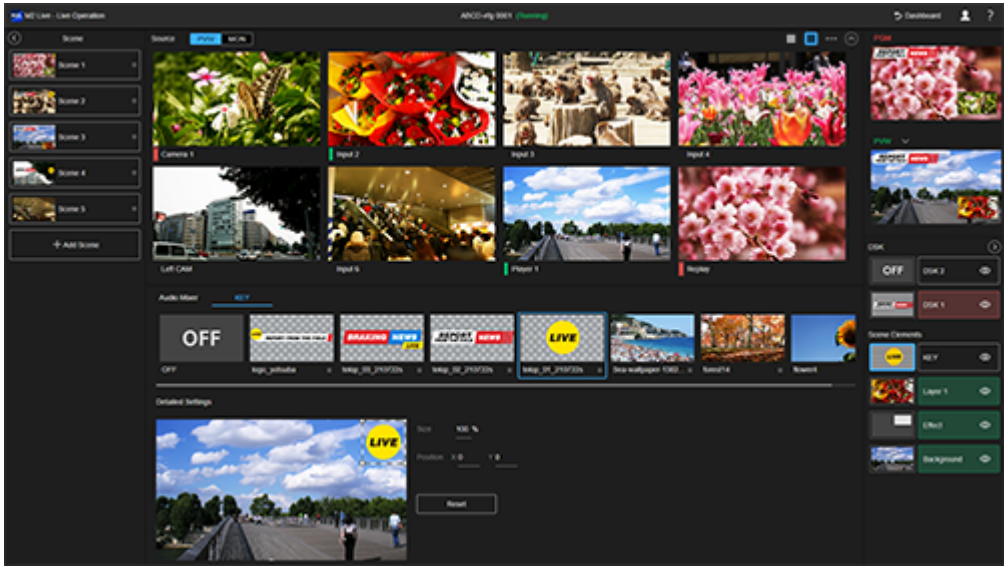
You can change the size of the display area of the [Source] pane by dragging the border lines up/down in the [Source] pane and Edit/Control pane.

You can also change the size of the display area of the [Source] pane using  (Increase display area)/ (Decrease display area). Increasing the size of the display area of the [Source] pane decreases the size of the display area in the [PVW] pane and [PGM] pane, with part of the [PGM] pane and transition control pane hidden.

When only the size of the display area on the [Source] pane is increased





When the thumbnail display size on the [Source] pane is also increased

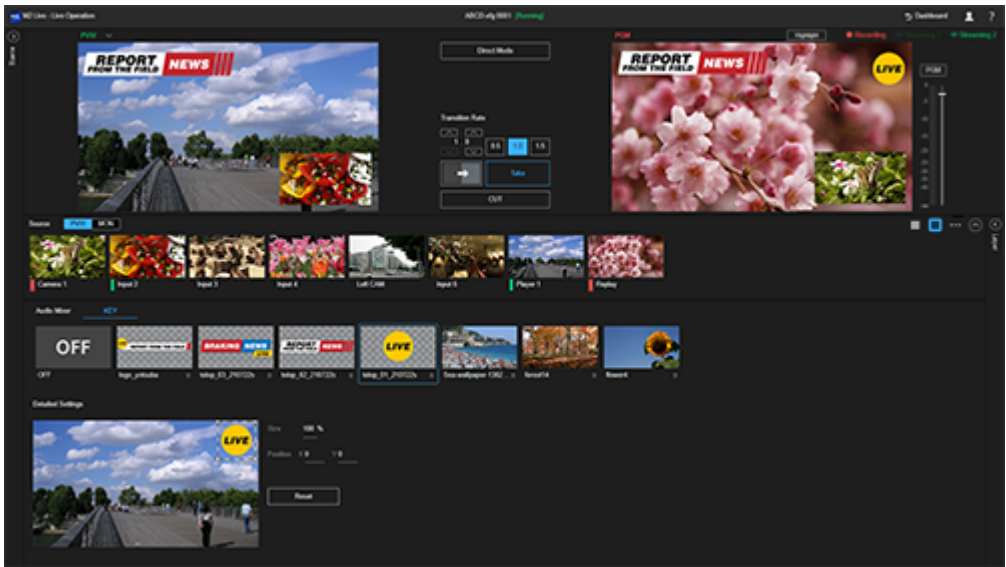


Hint


- To change the thumbnail display size on the [Source] pane, use  (Large)/ (Small).

D: To hide the [Scene] pane and [Layer] pane

Press  (Close) in the [Scene] pane or  (Close) in the [Layer] pane to hide the pane in the bar along the edge of the screen. This allows you to increase the width of the monitor area, the [Source] pane, and Edit/Control pane.



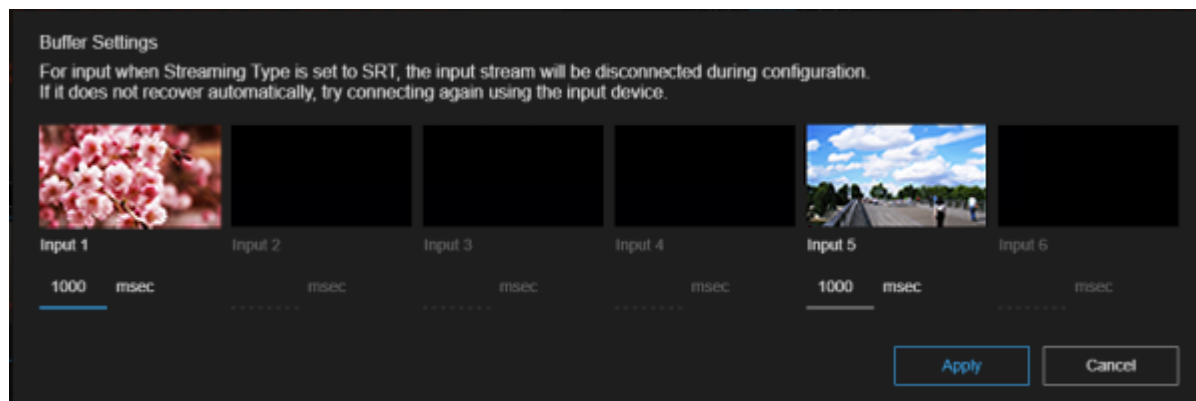
E: To change the display order of images

You can change the display order of images displayed on the [KEY] tab/[DSK] tab/[USK] tab in the Edit/Control pane. However, the position of [OFF] and [HTML5 Input] ([DSK] tab only) cannot be changed. To change the display order of still images, drag & drop the  handle on the right of the image name or press the [Ctrl] + left/right arrow keys for the still image that has keyboard focus to move the still images.

Related Topic


- [Structure of the \[Live Operation\] Screen](#)

Adjusting the Buffer on the [Live Operation] Screen



You can adjust the buffer for each input content on the [Live Operation] screen. The buffer can also be adjusted using [Buffer (msec)] on the [Input] tab of the [System Settings] screen. The last configured value is the value that will be applied.

Configure the settings in the [Buffer Settings] dialog.

Click  (Options) at the top right of the [Source] tab and select [Buffer Settings] to display the [Buffer Settings] dialog. The [Buffer Settings] dialog displays the video, name, and buffer settings for each input content. Set the buffer value for the input content you want to change and press the [Apply] button.

Note

- Buffer adjustment is available when [Streaming Type] for the input content is set to [SRT], or when set to [PXWZ280/Z190] or [XDCAM pocket] and connection with the input device has been established.
- Adjusting the buffer may cause distortion of the image. Depending on the input source, you may need to reconnect. Exercise care when making adjustments.

Related Topic

- [Configuring a Streaming Input Source](#)

Transitions

Description

A transition is a change in the program output video to a different video.

When you execute a transition, the video in the [PGM] pane is switched to the same video in the [PVW] pane using the selected transition effect.

Hint

- A DSK is used for direct transitions in the program output. When a transition is executed, the video is switched using a cut without selecting an effect.

Transition methods

The following methods for executing a transition are supported.

- Switching using cut effect ([CUT] button)
Press the [CUT] button to execute a transition using the cut effect.
- Switching using configured effect ([Take] button)
Press the [Take] button to execute a transition using a preconfigured effect. You can also configure the switching duration beforehand. You can also composite animations for transitions.
- Switching the program output directly ([Direct Mode] button)
When [Direct Mode] is enabled, the program output is switched directly when a layer is shown/hidden or when the video source is changed. Use when you want to switch the program output video instantaneously without checking the preview output video.

Hint

- If you want to check the preview output video before executing a transition, disable [Direct Mode] and execute a transition using the [CUT] button or [Take] button.

Related Topic

- [Switching Using the Cut Effect](#)
- [Switching Using a Configured Effect](#)
- [Switching the Program Output Directly](#)

Switching Using the Cut Effect



Hint

- This topic describes a background video only transition as an example. If you want to include other layers in a transition, change the settings and show/hide status of each layer and then execute a transition.

1 Select the thumbnail for the [Background] layer in the [Layer] pane.

The [Background] layer is selected.

2 Press the thumbnail for the video source you want to set for preview output in the [Source] pane.

The selected video source is displayed as the background video in the [PVW] pane.

3 Select the [CUT] button in the transition control pane at the instant you want to execute a transition.

A transition is executed using the cut effect and the video in the [PGM] pane is switched to the same video in the [PVW] pane.

Hint

- When a transition is executed using the [CUT] button, the transition uses the simple cut effect. No animations for transitions will be composited even if the clip transition function is enabled.
If you want to execute a transition using the cut effect composited with an animation for transition, use the [Take] button.

Switching Using a Configured Effect



Hint

- This topic describes a background video only transition as an example. If you want to include other layers in a transition, change the settings and show/hide status of each layer and then execute a transition.

1 Set the duration time required for the transition in the transition control pane.

Press the up/down arrow buttons to change the value or press the [0.5], [1.0], or [1.5] button to set the value (Unit: seconds).

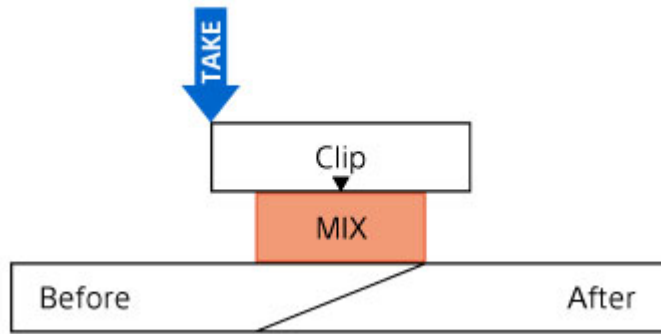
You can set a value in the range 0.1 to 4.9.

2 Set the transition effect.

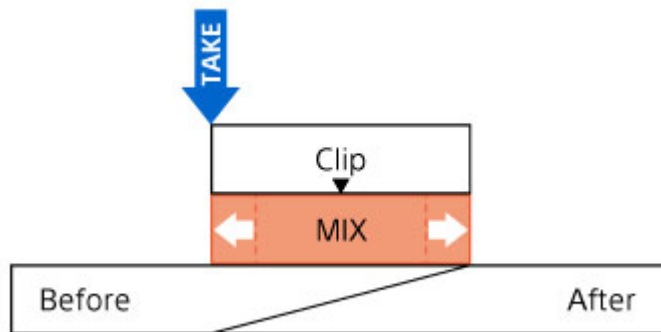
- Select the thumbnail for a transition pattern in the transition control pane.
The [Transition] tab is displayed in the Edit/Control pane, and displays a list of transition effects.
- Press the button for the transition effect you want to set.
The configured transition effect is displayed on the transition pattern thumbnail.

3 Set the animation to be composited during the transition.

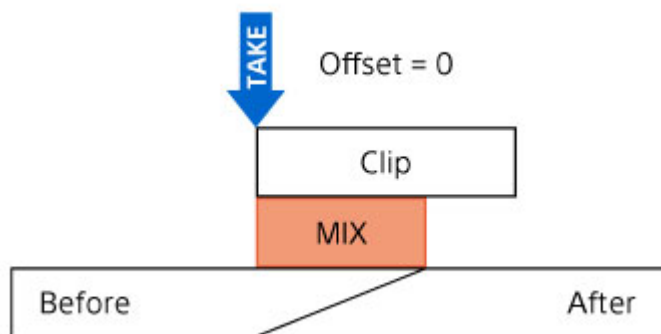
- To composite an animation during a transition, select the animation for transition you want to composite from [Clip Transition] at the bottom of the [Transition] tab.
[Clip Transition] displays a list of animations for use in transitions that have been uploaded to this service.
- Select the timing for compositing the animation for the transition using [Alignment].
 - [Center]: The transmission animation is played with timing such that the midpoint of the animation coincides with the midpoint of the time required for the transition that was set in step 1.



- [Match]: The transition occurs with a duration that matches the length of the animation for the transition. The time required for a transition that was set in step 1 is not applied.



- [Manual]: The animation for the transition is played with timing that matches the specified [Offset] value. You can set a value for [Offset] in the range “-5.0” to “5.0” (seconds). If you set a negative value for [Offset], the animation for the transition will start playing before the start of the transition by the set value. If you set a positive value, the transition animation will start playing after the start of the transition by the set value.



The configured transition effect and the animation for the transition are displayed on the transition pattern thumbnail.

4 Select the thumbnail for the [Background] layer in the [Layer] pane.

The [Background] layer is selected.

5 Select the thumbnail for the video source you want to set for preview output in the [Source] pane.

The selected video source is displayed as the background video in the [PVW] pane.

6 Press the [Take] button in the transition control pane at the instant you want to execute a transition.

A transition is executed using the configured effect/duration and the video in the [PGM] pane is switched to the same video in the [PVW] pane.

Switching the Program Output Directly



When [Direct Mode] is enabled, the program output is switched directly using the cut effect when a layer is shown/hidden or when the video source is changed. Use when you want to switch the program output video instantaneously without checking the preview output video.

Note

- To use content being played in a clip player, for example, it is recommended that you disable [Direct Mode] and check the content in the [PVW] pane before displaying it in the [PGM] pane.
- When the following operations are executed, the program output video will not be switched. Only the preview output is switched. Check the preview output video settings, then execute a transition using the [CUT] button or [Take] button.
 - When an image/video clip file to be composited is changed (including disabling) in the Edit/Control pane
 - When a scene is recalled in the [Scene] pane

To enable/disable [Direct Mode]

To enable/disable [Direct mode], press the [Direct Mode] button in the transition control pane. When [Direct Mode] is enabled, the [Direct Mode] button lights up and a red frame is displayed around the video in the [PGM] pane.

Switching the Program Output Subscreen Video Directly



To switch only the program output subscreen video directly, [Direct Mode] must be enabled.

Press the thumbnail for the [Layer 1] layer in the [Layer] pane to select it. Select the thumbnail for the video source to display in the subscreen from the [Source] pane. The program output subscreen video switches using the cut effect.

Related Topic

- [Switching the Program Output Directly](#)
- [Setting PinP](#)

Compositing

Up to five separate elements containing videos and images can be superimposed and composited against the background video. Use a different layer for each element according to the application and type of content. Images for use with a USK/DSK/KEY must be uploaded to this service beforehand. You can also use input from an external graphics system on a DSK.

Types of compositing

This service includes USK (Upstream Key), DSK (Downstream Key), KEY, and Effect with different functions and use.

USK

A USK always composites an image against the background video. One image content can be configured for each of six input videos, [Player 1], and [Player 2] (or [Replay]).

Image content configured for a USK is always displayed while the video source is displayed on the [Background] layer. Unlike other compositing, a USK is associated with the [Background] layer, so it is not possible to switch the show/hide state for the output video easily.

DSK

A DSK composites an image directly on the upper-most layer of the program output video. You can configure a total of two images, one each for the [DSK 1] and [DSK 2] layers. Compositing input from an external graphics system is also supported.

In the [Layer] pane, you can switch the show/hide state for the program output (transition effects cannot be applied).

KEY

A KEY is used when you want to manually show/hide a composited image against a video. Only one image can be set for the [KEY] layer.

Effect

An effect is a function for compositing another video on the background video according to a preset provided by this service. A box-shaped PinP (Picture in Picture) preset is provided.

Select a preset on the [Effect] layer and set the video in the displayed [Layer 1] layer.

- PinP

This function composites a separate video as a subscreen against the background video. You can set one video on the [Layer 1] layer.

Display priority

When multiple elements are composited for the background video, they are displayed in the following order from the front to the back.

1. [DSK2] layer
2. [DSK1] layer
3. [KEY] layer
4. [Layer 1] layer (PinP subscreen)
5. USK (displayed on the [Background] layer)

- [Setting a USK](#)
- [Setting a DSK](#)
- [Setting a KEY](#)
- [Setting PinP](#)

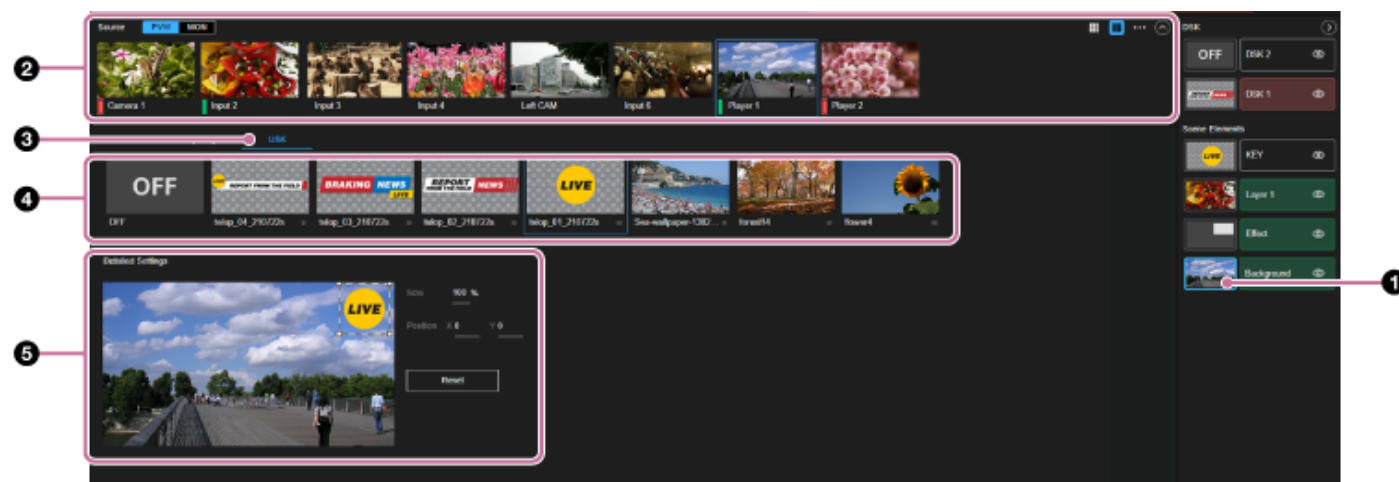
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Setting a USK

A USK always composites an image against the background video. One image content can be configured for each of six input videos, [Player 1], and [Player 2] (or [Replay]).

Image content configured for a USK is always displayed while the video source is displayed on the [Background] layer. Unlike other compositing, a USK is associated with the [Background] layer, so it is not possible to switch the show/hide state for the output video easily.

To set an image in the USK, the image must be uploaded to this service using the [File Manager] screen beforehand.



- 1 Select the thumbnail for the [Background] layer in the [Layer] pane.
- 2 Select the thumbnail for the video source you want to associate with the USK in the [Source] pane.
- 3 Select the [USK] tab in the Edit/Control pane.
The [USK] tab setup items are displayed.

- 4 Select the image to set in the USK from the images uploaded to this service.

The selected image is composited on the background video and is displayed in the [PVW] pane. The composited USK image is not displayed in the video in the [Source] pane.

Hint

- When [OFF] is selected, the image assignment is released and the USK is hidden.

- 5 Make adjustments to the USK image as required.

For details about adjustment, see “Adjusting Composited Content.”

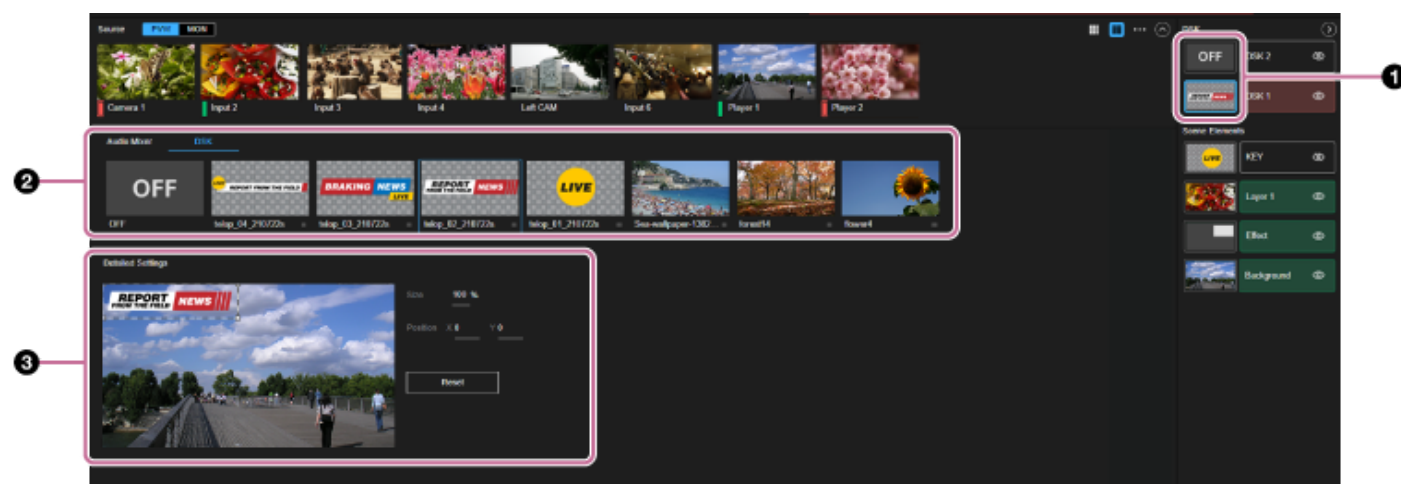
Related Topic

- [Adjusting Composited Content](#)

Setting a DSK

A DSK composites an image directly on the upper-most layer of the program output video. You can configure a total of two images, one each for the [DSK 1] and [DSK 2] layers. Compositing input from an external graphics system is also supported.

In the [Layer] pane, you can switch the show/hide state for the program output (transition effects cannot be applied). To set an image in a DSK, the image must be uploaded to this service using the [File Manager] screen or an external graphics system must be configured beforehand.



- 1 Select the thumbnail for the [DSK 1] or [DSK 2] layer in the [Layer] pane.

The [DSK] tab and its setup items are displayed in the Edit/Control pane.

- 2 Select the image to set in the DSK from the images uploaded to this service or the input from an external graphics system.

When an external graphics system is configured, [HTML5 Input] is displayed as the name.

If the layer selected in step 1 is being displayed in the output video, the image composited against the background video is displayed in both the [PVW] pane and [PGM] pane.

Hint

- When [OFF] is selected, the image assignment is released. If the layer selected in step 1 is being displayed in the output video, it will be hidden.

- 3 Make adjustments to the DSK image as required.

For details about adjustment, see "Adjusting Composited Content."

Hint

- When an external graphics system is selected as the DSK image, the size and position of the image cannot be adjusted using this service. Adjust the image on the external graphics system side.

Related Topic

- [Setting an External Graphics System](#)

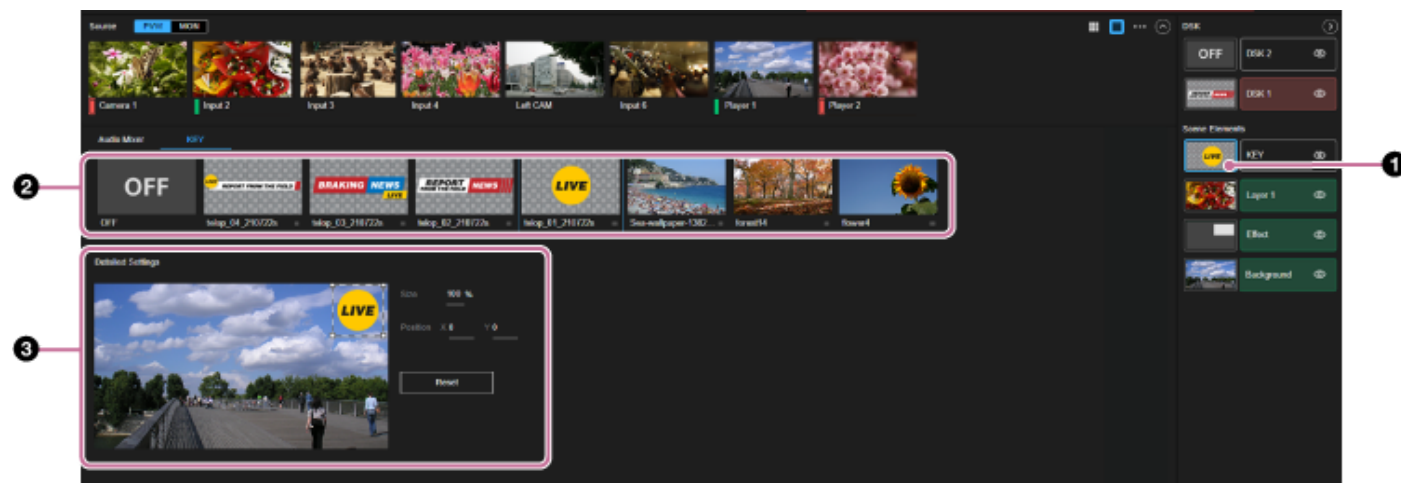
- [Adjusting Composited Content](#)
- [Showing/Hiding Composited Content](#)

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Setting a KEY

A KEY is used when you want to manually show/hide a composited image against a video. Only one image can be set for the [KEY] layer.

To set an image in the KEY, the image must be uploaded to this service using the [File Manager] screen beforehand.



- 1 Select the thumbnail for the [KEY] layer in the [Layer] pane.

The [KEY] tab and its setup items are displayed in the Edit/Control pane.

- 2 Select the image to set in the KEY from the images uploaded to this service.

If the [KEY] layer is displayed in the preview output, the selected image is composited against the background video and is displayed in the [PVW] pane.

Hint

- When [OFF] is selected, the image assignment is released. If the [KEY] layer is being displayed in the output video, it will be hidden.

- 3 Make adjustments to the KEY image as required.

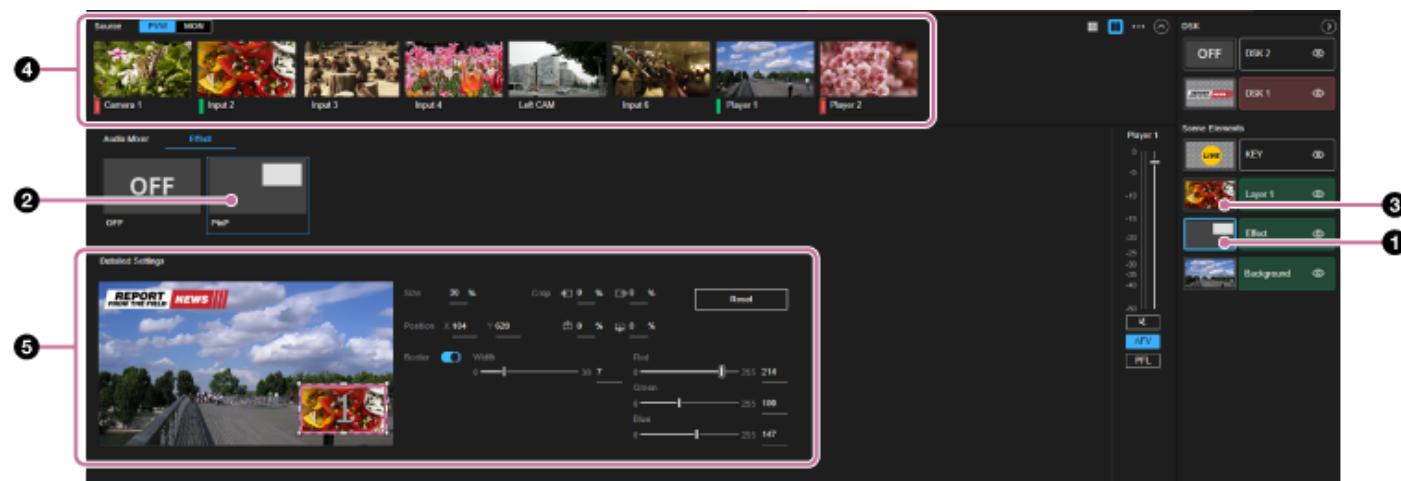
For details about adjustment, see “Adjusting Composited Content.”

Related Topic

- [Adjusting Composited Content](#)
- [Showing/Hiding Composited Content](#)

Setting PinP

PinP is a function for compositing another video as a subscreen on a video. One subscreen can be composited against the background video.



- 1 Select the thumbnail for the [Effect] layer in the [Layer] pane.

The [Effect] tab and its setup items are displayed in the Edit/Control pane.

- 2 Select [PinP] from the list of presets.

The thumbnail on the [Effect] layer in the [Layer] pane changes to the image of the selected preset. The [Layer 1] layer appears above the [Effect] layer.

Hint

- When [OFF] is selected in the list of presets, the preset selection is released and the [Layer 1] layer is closed in the [Layer] pane. If the [Layer 1] layer content is being displayed in the output video, it will be hidden.

- 3 Select the thumbnail for the [Layer 1] layer in the [Layer] pane.

- 4 Select the video source to composite as the subscreen in the [Source] pane.

If the [Layer 1] layer is being displayed in the output video, the selected image is composited against the background video and is displayed in the [PVW] pane.

- 5 You can make adjustments to the subscreen as required.

For details about adjustment, see “Adjusting Composited Content.”

Related Topic

- Adjusting Composited Content
- Showing/Hiding Composited Content

Adjusting Composited Content

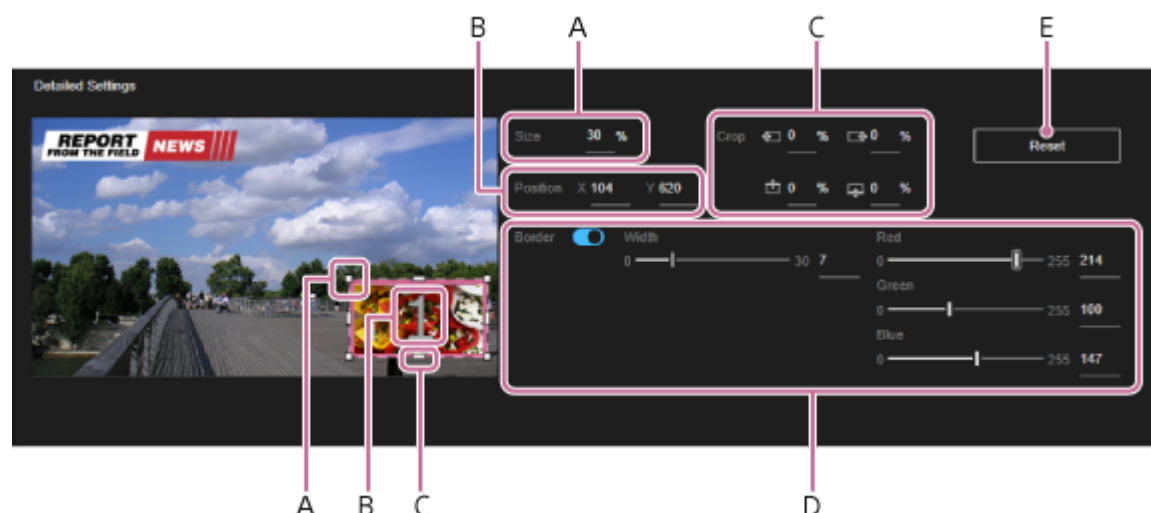
When compositing videos/images, you can adjust the size and position of the composited content, as required. For PinP, you can also adjust cropping and the border. You can make adjustments by dragging the image or specifying numeric values under [Detailed Settings] in the Edit/Control pane.

When a numeric value is specified, press the [Enter] key on the keyboard or move the focus away from the entry field to apply the value. Press the [Esc] key before applying a value to return to the previous entered value.

If a layer for which composited content is set is for preview output, any content adjustments will be reflected in the video in the [PVW] pane in real time.

Hint

- If [Direct Mode] is enabled, adjustments will also be reflected in the video in the [PGM] pane in real time.
- For a [DSK] layer, adjustments will also be reflected in the video in the [PGM] pane in real time.



A: Adjusting the size

To adjust by dragging composited content

Drag the squares at the four corners of the dotted lines that indicate the composited image to change it to the desired size.

To adjust by specifying numeric values

Enter the display magnification in the [Size] field. The valid range of values is 0 to 200 (%).

B: Adjusting the position

To adjust by dragging composited content

Drag inside the dotted lines that indicate the composited image (not the squares at the four corners) to move it to the desired position.

To adjust by specifying numeric values

Enter an X coordinate (horizontal position) and Y coordinate (vertical position) in the [Position] fields. The coordinates indicate the position of the top left corner of the composited content. The valid range of values is -1920 to +1920 (px) for the X coordinate and -1080 to +1080 (px) for the Y coordinate.

C: Adjusting the crop range (PinP only)

To adjust by dragging composited content

Drag the squares at the center of the four sides of the dotted lines that indicate the composited content to change it to the desired range.

To adjust by specifying numeric values

Enter the top/bottom/left/right crop range values in the [Crop] entry fields. The valid range of values is 0 to 100 (%).

D: Adjusting the border (PinP only)

To add a border around the PinP subscreen, enable [Border]. You can set the thickness using [Width] and set the color of the border using a combination of [Red], [Green], and [Blue].

To adjust by dragging the slider bar

Change to the desired numeric value by dragging the slider bars.

To adjust by specifying numeric values

Enter numeric values in each field. The range of configurable values for [Width] is 0 to 30, and for [Red]/[Green]/[Blue] is 0 to 255.

E: Resetting

Press the [Reset] button to restore the size, position, and crop range of the composited content to the initial state. The border settings are not changed.

Showing/Hiding Composited Content

Press the name of the layer in the [Layer] pane for which you want to switch the display state (show/hide) of the composited content in the output video. Each time you press the name of the layer, the display state of the layer switches (show/hide).

Hint

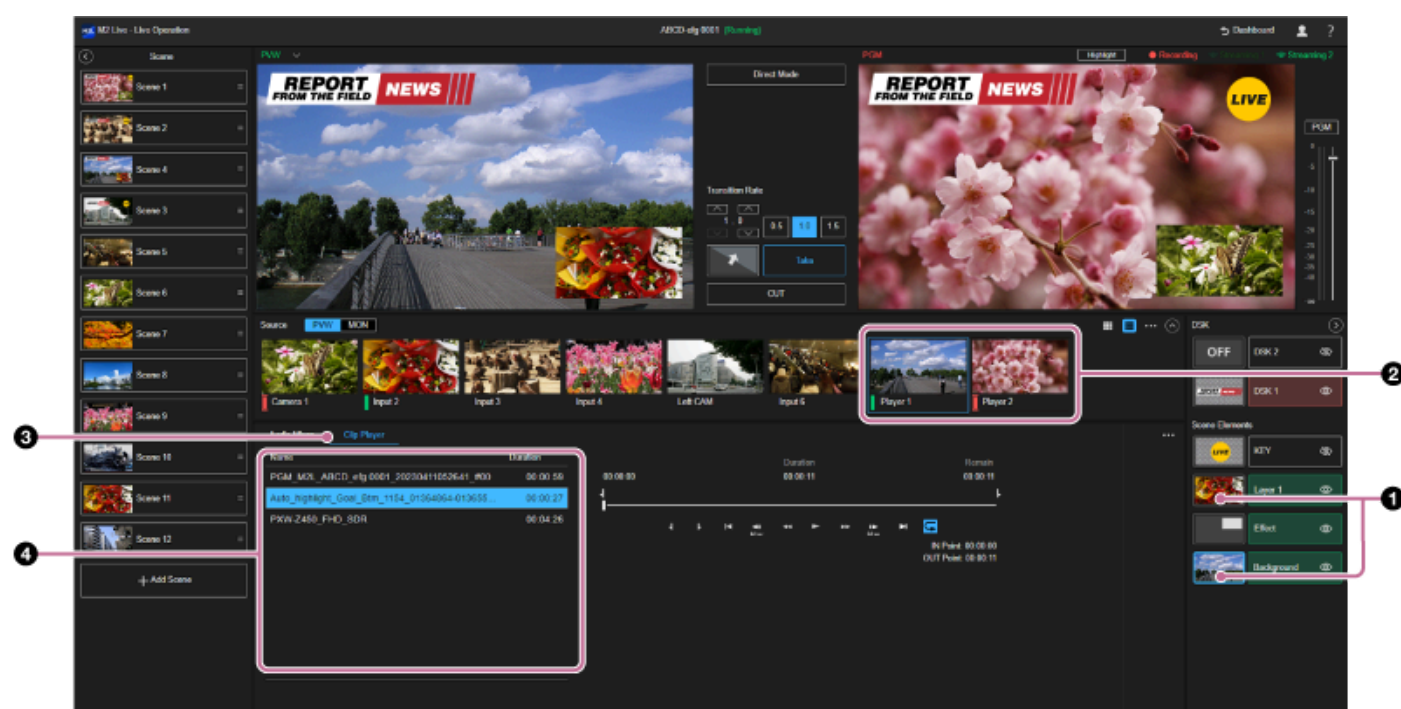
- The USK is associated with the [Background] layer, so it is not possible to switch the show/hide state for the output video independently. If you want to hide the USK image, change the USK image setting to [OFF] to release the image assignment.
- The [DSK] layers are composited directly with the program output, so the show/hide state switches simultaneously in both the [PVW] pane and [PGM] pane.
- The [KEY] layer and [Layer 1] layer show/hide state switches only in the [PVW] pane when [Direct Mode] is disabled, or switches simultaneously in both the [PVW] pane and [PGM] pane when [Direct Mode] is enabled.

Assigning Video to a Clip Player

You can assign a video clip to a clip player ([Player 1] and [Player 2]) in the [Source] pane. Only video clips that have been uploaded/recorded/automatically created (highlight video) to the event beforehand can be assigned.

Note

- Content for use in a clip player comprises the video clips displayed on the [Clip] tab of the [File Manager] screen. To use a recorded output or input content file, execute [Copy to Clip Folder] on the [Recording] tab to copy it to the [Clip] tab.
- When the instant replay function is enabled, [Player 2] is replaced by [Replay], which is used for instant replay. Video clips can be assigned to [Player 1] only.



- 1 Select the thumbnail for the [Background] layer or [Layer 1] layer in the [Layer] pane.

Hint

- The [Layer 1] layer is displayed only when a preset is selected on the [Effect] layer.

- 2 Select [Player 1] or [Player 2] in the [Source] pane.
- 3 Select the [Clip Player] tab in the Edit/Control pane.
- 4 Select the video to assign from the list of video clips.

The [Clip Player] tab setup items are displayed.

The selected video is assigned to the clip player and the selected video is displayed on the [Player 1] or [Player 2] thumbnail in the [Source] pane.

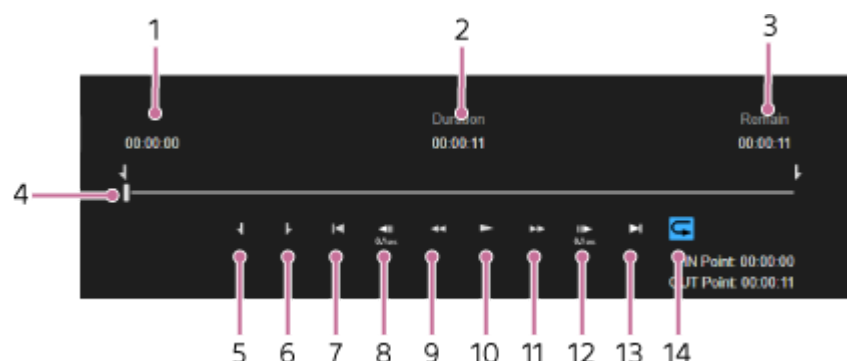
You can monitor the operation and playback position of the selected video clip on the [Clip Player] tab.

Related Topic

- [Uploading/Downloading/Deleting Files](#)
- [Starting/Stopping Recording](#)
- [Creating Highlights Automatically \(when using Professional ID\)](#)
- [Setting PinP](#)
- [Clip Player Operations](#)





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Clip Player Operations



You can control playback of the video assigned to a clip player using the control buttons on the [Clip Player] tab in the Edit/Control pane. The duration, current playback position, and remaining time of a video, and a progress bar are also displayed.

The function of each part is described below.

1. Playback position indicator: Displays the current playback position.
2. [Duration]: Displays the duration between the IN point and OUT point.
3. [Remain]: Displays the remaining time until the OUT point.
4. Slider bar: Displays the playback position of the clip. You can select any position along the slider bar or you can move the slider using drag-and-drop to move to any position in the clip. Also,  (IN point) is displayed at the IN point, and  (OUT point) is displayed at the OUT point.
5. IN point set button: Sets the IN point at the current playback position. The configured IN point is stored when saving the scene. The IN point is automatically cued up when the saved scene is recalled.
6. OUT point set button: Sets the OUT point at the current playback position. The configured OUT point is stored when saving the scene. The clip playback will stop at the OUT point.
7. Jump to start position button: Jumps to the start of the clip or the IN point. If the current playback position is after the IN point, it jumps to the IN point. If the playback position is before the IN point, it jumps to the start of the clip.
8. Jump to previous frame button: Jumps back from the current playback position by approximately 0.1 seconds.
9. Fast reverse: Rewinds the video. If you press the button again during fast reverse, the fast reverse speed changes in the order of 1× speed → 5× speed → 10× speed. The speed is displayed above the button.
10. Play/stop button: Plays/stops the video.  (Stop) is displayed during playback, and  (Play) is displayed when stopped.
11. Fast forward: Fast forwards the video. If you press the button again during fast forward, the fast forward speed changes in the order of 2× speed → 5× speed → 10× speed. The speed is displayed above the button.
12. Jump to next frame button: Jumps forward from the current playback position by approximately 0.1 seconds.
13. Jump to end position button: Jumps to the end of the clip or the OUT point. If the current playback position is before the OUT point, it jumps to the OUT point. If the playback position is after the OUT point, it jumps to the end of the clip.
14. Loop playback button: Enables/disables loop playback. The button is lit when enabled, and repeated playback between the IN point and OUT point continues until stopped manually. The loop playback function cannot be used during fast forward/reverse.

Related Topic

- [Assigning Video to a Clip Player](#)

Scenes

Description

You can save various content composited with the preview output video and related settings together as a “scene” on this service. Saved scenes are displayed in list view in the [Scene] pane.

You can instantly apply multiple elements to the program output by recalling a saved scene and executing a transition on the preview output. After recalling a scene, you can also change settings to include elements not saved as part of the scene.

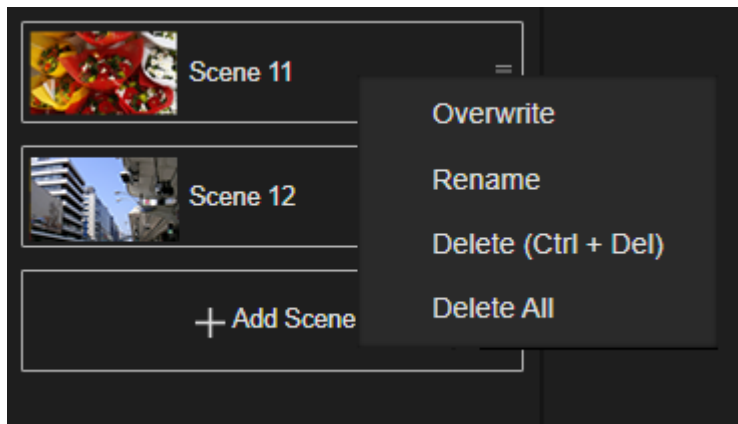
Hint

- Elements saved as a scene are principally the content related to the preview output. Elements not linked to the preview output, like USK/DSK and audio settings are not saved.

Elements saved as a scene

- **Transition control pane**
 - Selected transition effect
 - Configured transition duration
- **[Layer] pane**
 - Selected layer
 - Show/hide state of [KEY] layer
 - Show/hide state of [Layer 1] layer
 - Show/hide state of [Effect] layer
- **[Source] pane**
 - Video used on the [Layer 1] layer
 - Video used on the [Background] layer
- **Edit/Control pane**
 - Selected tab
 - [Clip Player] tab
 - Assigned video clip file, IN point/OUT point, loop playback enable/disable state
 - [KEY] tab
 - File and adjustment values of the image configured as a KEY
 - [Effect] tab
 - Selected preset and adjustment values
 - [Transition] tab
 - Selected transition effect, configured animation for transition, and adjustment values

Creating/Overwriting/Renaming/Deleting a Scene



Creating a scene

Press the [+ Add Scene] button at the bottom of the [Scene] pane to save the current content as a new scene. The new scene is added above the [+ Add Scene] button and is highlighted.

Hint

- The scene thumbnail shows the content displayed in the [PVW] pane at the moment the scene was created.
- The scene name is assigned automatically. You can rename a scene using [Rename].
- Up to 99 scenes can be created.

Overwriting a scene

Recall a scene by selecting the scene from the list in the [Scene] pane. Make any required changes to the recalled scene, right-click the scene you want to overwrite in the list in the [Scene] pane, and select [Overwrite] from the displayed context menu.

Renaming a scene

Right-click the scene you want to rename in the list in the [Scene] pane, and select [Rename] from the displayed context menu. Enter a new file name in the dialog that appears and press the [Apply] button to rename the scene.

Deleting a scene


Right-click the scene you want to delete in the list in the [Scene] pane, and select [Delete (Ctrl + Del)] from the displayed context menu. Press [YES] in the confirmation dialog to delete the scene.

You can also delete a selected scene by pressing [Ctrl] + [Del] on the keyboard. Note that the target scene must have keyboard focus.

To delete all scenes registered in the event, select [Delete All] in the displayed context menu and press [YES] in the confirmation dialog.

Sorting Scenes

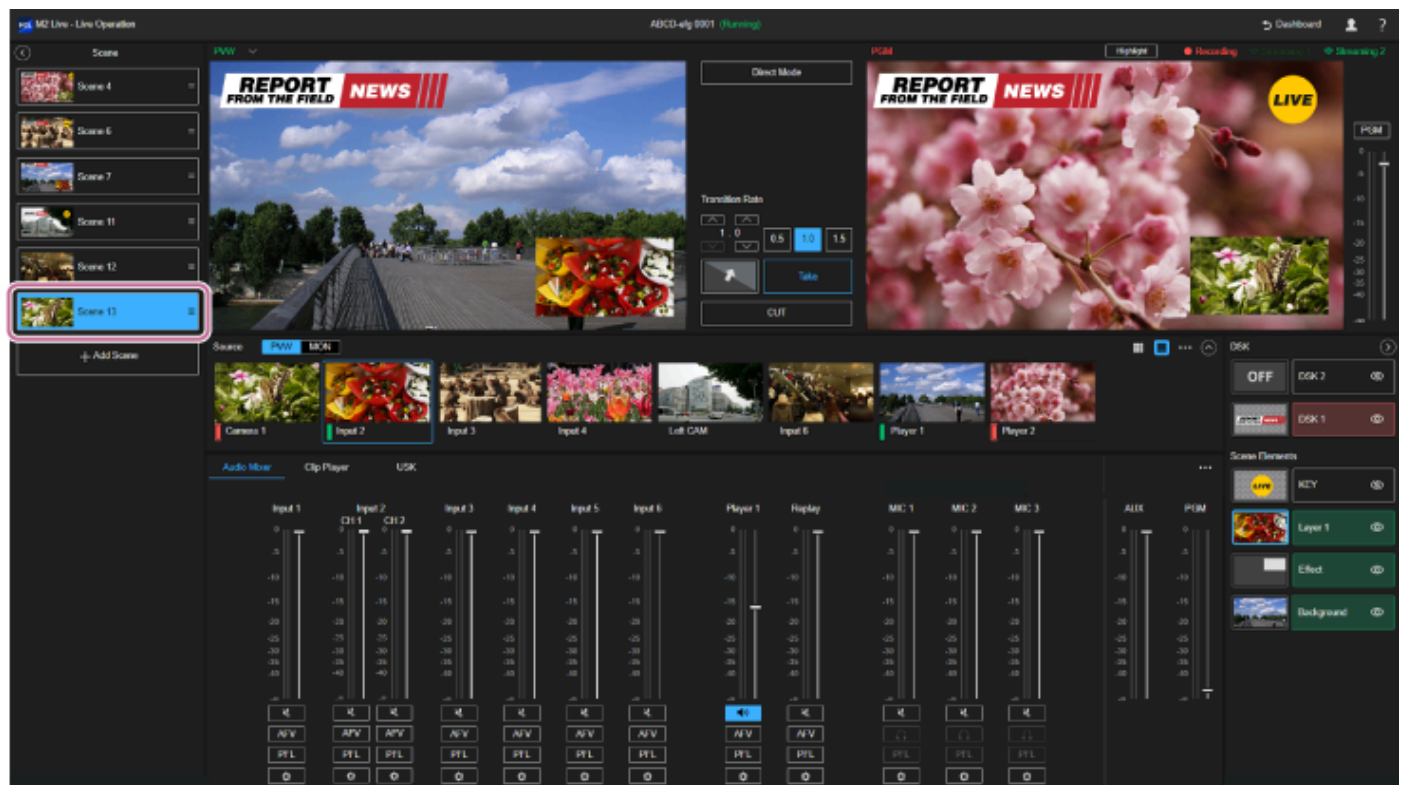


To change the display order of scenes, drag & drop the  handle on the right of each scene or press the [Ctrl] + up/down arrow keys for the scene that has keyboard focus to move the scenes.

Hint

- The scene sorting order is stored for each user. This does not affect the list of other users using the same event.

Recalling and Executing a Scene



Recalling a scene

Recall a scene by selecting the scene from the list in the [Scene] pane. The recalled scene is highlighted and the content of the scene is reflected in the [PVW] pane and other places.

Hint

- When a scene is recalled, it is not reflected in the [PGM] pane, even when [Direct Mode] is enabled.
- If content contained within a scene is deleted from an event, the scene will be recalled with no content selected.

Executing a recalled scene (program output)

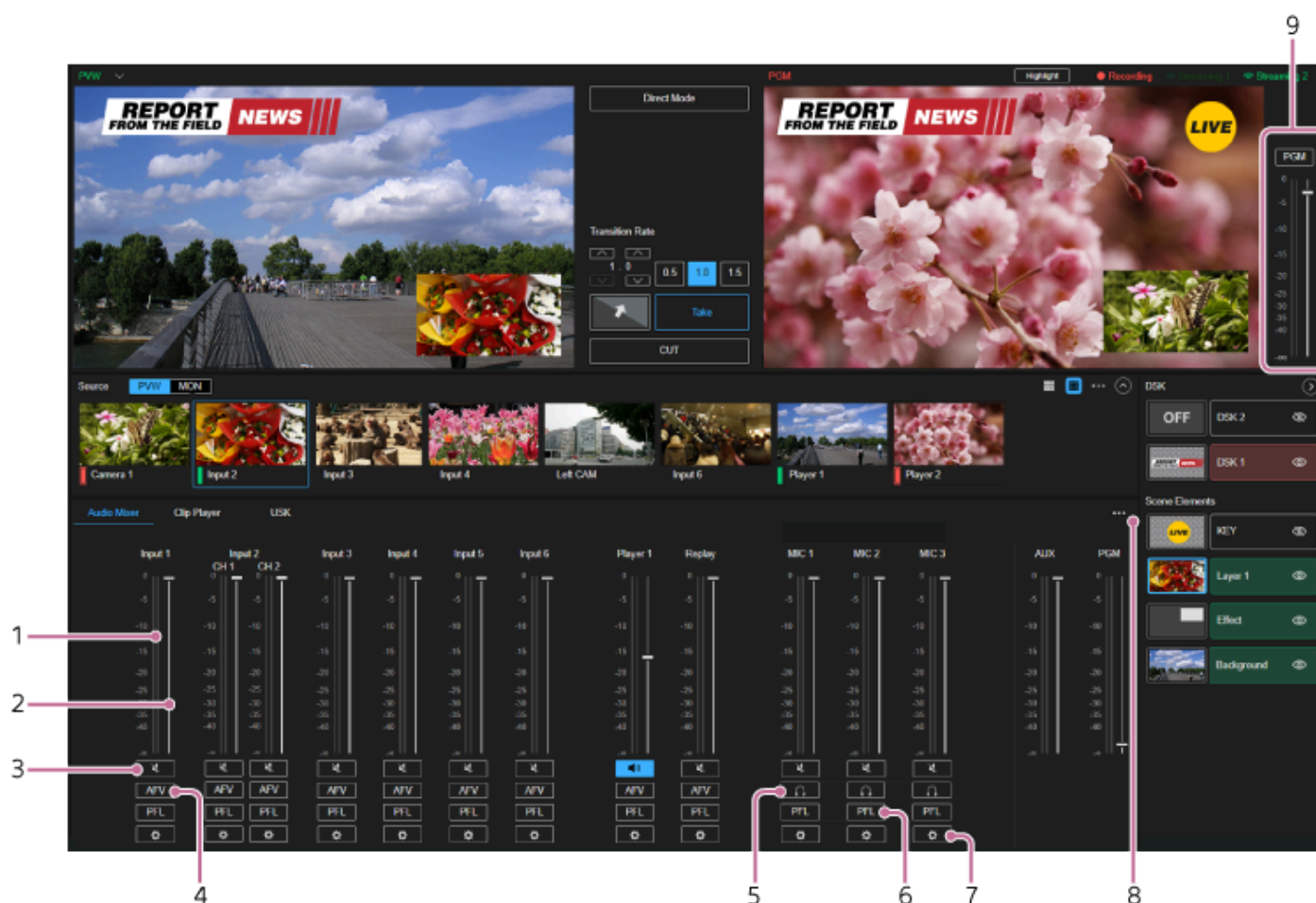
Check the content of the recalled scene in the [PVW] pane and perform any required tasks before switching to program output. For example, switch the show/hide state of the KEY image.

To set the recalled scene as the program output, execute a transition using the [CUT] button or [Take] button. When the transition is executed, the IN point of the video assigned to the clip player is cued up and playback starts automatically.

Related Topic

- [Switching Using the Cut Effect](#)
- [Switching Using a Configured Effect](#)

Adjusting the Audio



You can adjust the volume and check the audio level of each input on the [Audio Mixer] tab in the Edit/Control pane. Also, if a source with audio is selected in the [Source] pane, you can also adjust the volume and monitor the audio level for that source on other tabs (excluding the [USK] tab).

You can adjust the volume and monitor the audio level of the program output and AUX output in the audio adjustment pane of the [PGM] pane.

Hint

- The AUX output in this service refers to the program output without the audio commentary microphone audio.


- 1. Audio level meter:** Displays the left/right audio levels.
- 2. Volume fader:** Adjust the volume by dragging the fader bar.
- 3. [Speaker icon] (Audio on)/ [Mute icon] (Audio off):** Press to toggle the audio channel on/off.
- 4. [AFV] (Audio Follow Video) button:** When you press the button, the button lights up and the audio of the linked video is output. When the video is the program output, the audio is output. When the program output is switched to another video, the audio automatically switches to the muted state. When the button is not lit, the audio is output according to the [Speaker icon] (Audio on)/ [Mute icon] (Audio off) setting.
- 5. [Monitor icon] (audio monitor on)/ [Mute icon] (audio monitor off) (audio channels for audio commentary only):** Each time the button is pressed, microphone audio monitoring switches between enabled and disabled. If the audio is difficult to hear when monitoring the microphone you are using, for example because of a delay, you can turn monitoring off. Only the button for the microphone you are using is available.


Hint


- The audio monitoring on/off preferences are stored for each user. This does not affect other users using the same event.

6. **[PFL] (Pre-Fader Listen) button:** You can monitor the audio for only the corresponding channel while the button is pressed. It does not affect the program output or AUX output.

Note

- When adjustment is performed using  (Adjust), the settings of items other than [Trim] and [Delay] are not applied to the monitor audio.

7.  **(Adjust):** Displays the settings screen for adjusting each channel.

8.  **(Options):**

- [Input Settings]: Select to display the [Input Settings] dialog. If different audio is input on the two channels of stereo input content, the two channels can be handled and used as separate monaural content. The volume can be adjusted separately on [CH 1] and [CH 2] for input devices with [2CH Mono] selected in the [Input Settings] dialog.
- [MIC Settings]: Select to display the [MIC Settings] dialog. Use when you want to assign a microphone for audio commentary use.

9. **[PGM]/[AUX] button:** Each time you press the button, the monitor target switches between the program output and AUX output.

Hint

- The monitor target setting is stored for each user. This does not affect other users using the same event.

Handling 2-Channel Monaural Content

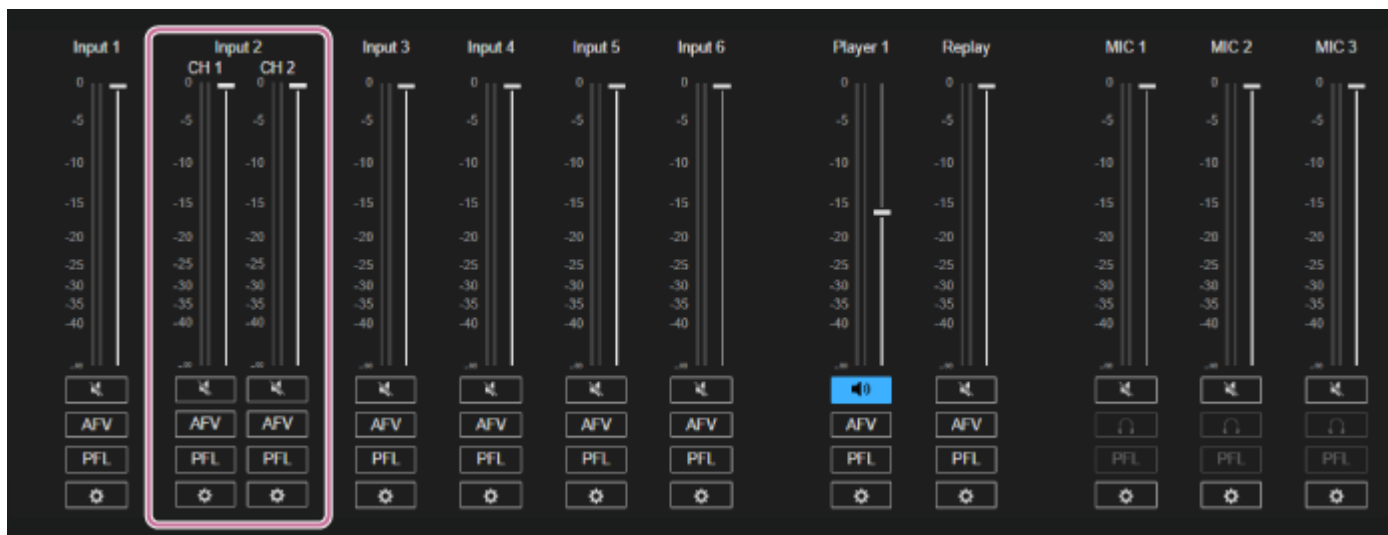


For input content with different input audio on two stereo channels (2-channel monaural content), you can adjust the audio of the two channels separately. Use this when you want to input ambient audio on one channel and input microphone audio on the other channel and adjust the audio of both channels separately.


Configuration method

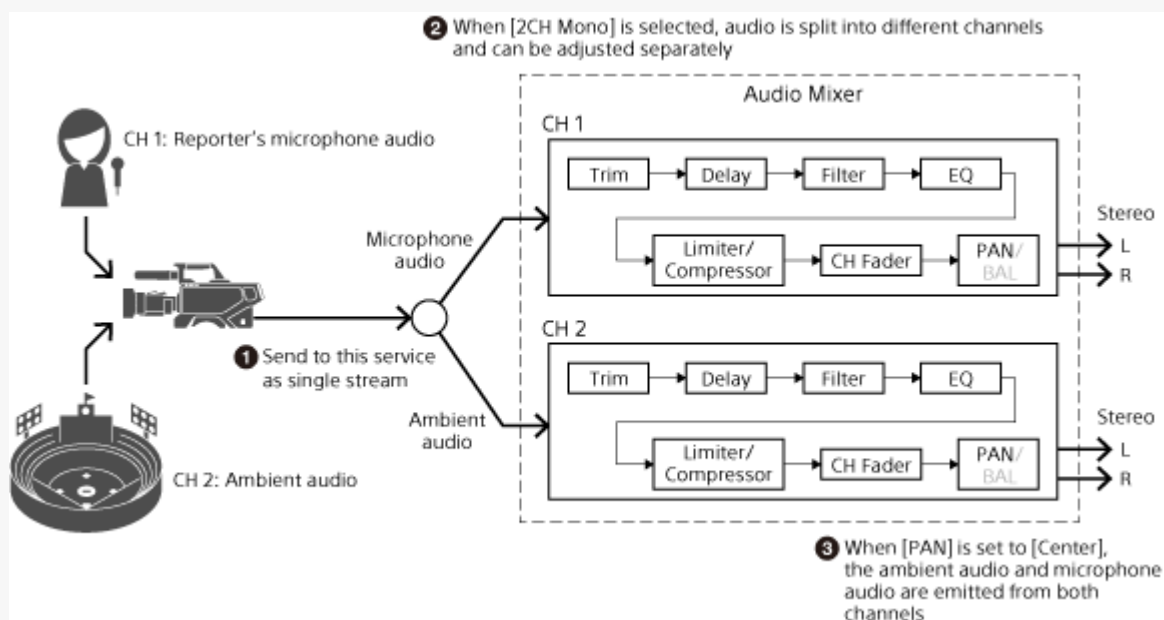
Configure the settings in the [Input Settings] dialog.

Click **...** (Options) at the top right of the [Audio Mixer] tab and select [Input Settings] to display the [Input Settings] dialog. In the [Input Settings] dialog, select [2CH Mono] in the pull-down list for the input content whose two channels of audio you want to adjust separately. Press the [Apply] button to close the [Input Settings] dialog. The items for the input content for which [2CH Mono] is selected are displayed separately as [CH1] and [CH2] on the [Audio Mixer] tab.

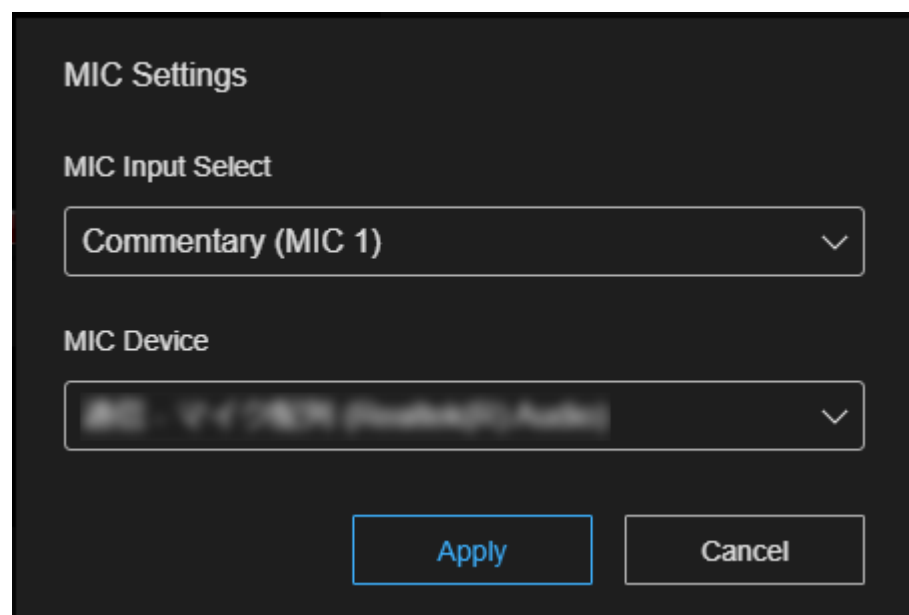


Hint

- By setting [PAN] to [Center] for both [CH1] and [CH2], both [CH1] and [CH2] can be output equally to both stereo channels. The [PAN] settings are configured on the settings screen displayed by pressing  (Adjust) on the [Audio Mixer] tab.



Audio Commentary Function




You can assign the microphone of the computer used to operate this service for audio commentary use for [MIC 1] to [MIC 3].

Hint

- The [MIC Settings] dialog settings are stored for each user. This does not affect other users using the same event.

To assign a microphone



Specify the microphone to use for audio commentary using the [MIC Settings] dialog.

Click  (Options) at the top right of the [Audio Mixer] tab and select [MIC Settings] to display the [MIC Settings] dialog. In the [MIC Settings] dialog, select the channel to use in the [MIC Input Select] list and select the microphone to assign in the [MIC Device] list. Press the [Apply] button to close the [MIC Settings] dialog. The [Audio Mixer] tab switches to a state for operating only the selected microphone (however, volume fader operation is not available).

Hint

- When [Display Name] is configured for each audio input on the [Audio Input] tab of the [System Settings] screen, the name is also displayed in the [MIC Input Select] list. Naming each audio input using [Display Name] is recommended so that commentary personnel know to which channel the microphone should be assigned.

To release a microphone assignment



Select [Not Assigned] in the [MIC Input Select] list in the [MIC Settings] dialog and press the [Apply] button. The [MIC Settings] dialog closes and the [Audio Mixer] tab switches back to the state where audio for all channels can be adjusted (however,  (audio monitor on)/ (audio monitor off) is not available).

Hint

- The microphone assignment can also be released using the [Clear] button on the [Audio Input] tab of the [System Settings] screen. If microphones are assigned to each audio input, you can release the assignment by pressing the [Clear] button in the corresponding row. When you cannot release a microphone assignment in the [MIC Settings] dialog or when a person other than

the user of the microphone (such as the director) wants to change the microphone assignment, release the assignment on the [System Settings] screen.

To remove the audio of your microphone from the monitor target


You can select whether to monitor the audio from your microphone using  (audio monitor on)/ (audio monitor off) on the [Audio Mixer] tab. The default setting is to monitor the audio. If the audio is difficult to hear when monitoring the microphone you are using, for example because of a delay, turn monitoring off.

Related Topic

- [Configuring Microphone Audio Input for Audio Commentary](#)

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Adjusting the Input Audio

You can press the  (Adjust) button on the [Audio Mixer] tab to switch from the [Audio Mixer] tab to the settings screen and adjust the audio for the corresponding input channel. The items that can be adjusted vary depending on the input content, clip player (or [Replay]), and audio channel for audio commentary. When finished adjusting items, press the [Apply] button to apply the adjustments.



Setup items

[Input Trim]

Adjusts the input level in the range -20 dB to 20 dB.

Hint

- Adjust the level so that the volume is at an appropriate level when the volume fader is at the 0 dB position (top).

[Balance] ([PAN] for input content with [2CH Mono] enabled)

Sets the position [L] – [Center] – [R] within a stereo pair where the input audio is localized.

Hint

- For input content with [2CH Mono] enabled, you can output both [CH1] and [CH2] on both stereo channels by setting [PAN] to [Center] for both [CH1] and [CH2].

[Delay] (audio channel for audio commentary only)

Sets the delay in the range 0 msec to 2000 msec for the audio channel used for audio commentary. Use this to synchronize the audio channel for audio commentary with the input audio of other channels.

[Limiter/Compressor]

Use when inputting audio signals with large differential in level. Select [Limiter] or [Compressor] from the list and set [Threshold] in the range -60 dB to 0 dB.

Hint

- Select [Limiter] if you want to suppress peak components and prevent excessive output, or select [Compressor] if you want to compress and average sounds above a certain level.
- The following values cannot be adjusted using this service (fixed values).

- **Ratio:** ∞ :1 when [Limiter] is selected, 2:1 when [Compressor] is selected
- **Attack time:** 1.5 msec when [Limiter] is selected, 10 msec when [Compressor] is selected
- **Release time:** 25 msec when [Limiter] is selected, 100 msec when [Compressor] is selected

[Filter]

Enable when you want to reduce the volume at high frequencies and/or low frequencies. Use this to suppress noise. When [High Cut (8kHz)] is enabled, high frequencies (8 kHz and higher) are cut. When [Low Cut (100Hz)] is enabled, low frequencies (100 Hz and lower) are cut. The cutoff characteristics for both are 12 dB/oct.

[EQ]

You can adjust the volume by adjusting the levels independently for high frequencies, mid frequencies, and low frequencies.

To adjust, enable [EQ] and set values for the following items.

- **[High Freq.]**: Displays the frequency of the high-frequency band. This is set to [12 kHz] (fixed) and cannot be modified.
- **[High Level]**: Adjust the level of the high-frequency band in the range -15 dB to 15 dB.
- **[Middle Freq.]**: Sets the center frequency of the mid-frequency band in the range 100 Hz to 8000 Hz.
- **[Middle Level]**: Adjust the level of the mid-frequency band in the range -15 dB to 15 dB.
- **[Low Freq.]**: Displays the frequency of the low-frequency band. This is set to [80 Hz] (fixed) and cannot be modified.
- **[Low Level]**: Adjust the level of the low-frequency band in the range -15 dB to 15 dB.

Instant Replay Function

The instant replay function is a simple replay function that reproduces the previous play during, for example, a live sports broadcast.

Up to three of the input video sources must be configured as instant replay channels beforehand for internal video recording. When actually using instant replay, specify the IN point to start playback for one of the instant replay channels. An IN point is specified in “current point – x seconds” format.


Note

- Up to approximately 2 hours of internal recording is supported. If internal recording continues for more than 2 hours, the recorded content will be overwritten and erased starting from the oldest part.

Instant Replay Operation Flow

This topic describes the process from preparing to use instant replay to actual operation.

1 Prepare for instant replay operation.

1. Configure the channel to use for instant replay on the [Input] tab of the [System Settings] screen.
Up to three input sources can be specified as channels used for instant replay.
For details, see “Configuring a Streaming Input Source.”
2. Change the screen display, as required.
For details, see “Tailoring Operations According to Desired Task.”
3. Switch to [MON] mode and select [Replay] in the [Source] pane.
4. Select the [Replay] tab in the Edit/Control pane.
The [Replay] tab setup items are displayed.
5. Press  (Start recording) on the [Replay] tab.
Internal recording for instant replay starts.
6. Select the channel you want to check for instant replay.
If live video is not displayed for the channel selected in the monitor on the [Replay] tab, press the [Live] button.

2 When the key moment you want to replay occurs, press one of [TAG 1] to [TAG 3].

The point in the video corresponding to the pressed button is cued up to the IN point, and the playback video is displayed in the monitor on the [Replay] tab.

3 Correct the IN point, change channel (for example, to view a different angle of view), and adjust the playback speed, as required.

4 Set the replay video as the preview output (switcher operation).

The replay video becomes the preview output and a green frame is displayed around the monitor on the [Replay] tab.

Hint

- It is recommended that you use scenes when previewing replay video. Using scenes can help reduce the operating load when using the clip transition function, for example.

5 Press (Play).

Playback starts at the configured speed.

6 Set the replay video as the program output (switcher operation).

The replay video becomes the program output and a red frame is displayed around the monitor on the [Replay] tab.

Hint

- If playback of the replay video was not started in step 5, the replay video will start playing automatically at the same time as the program output.

7 Change the playback speed, as required.

8 Stop the replay video program output (switcher operation).

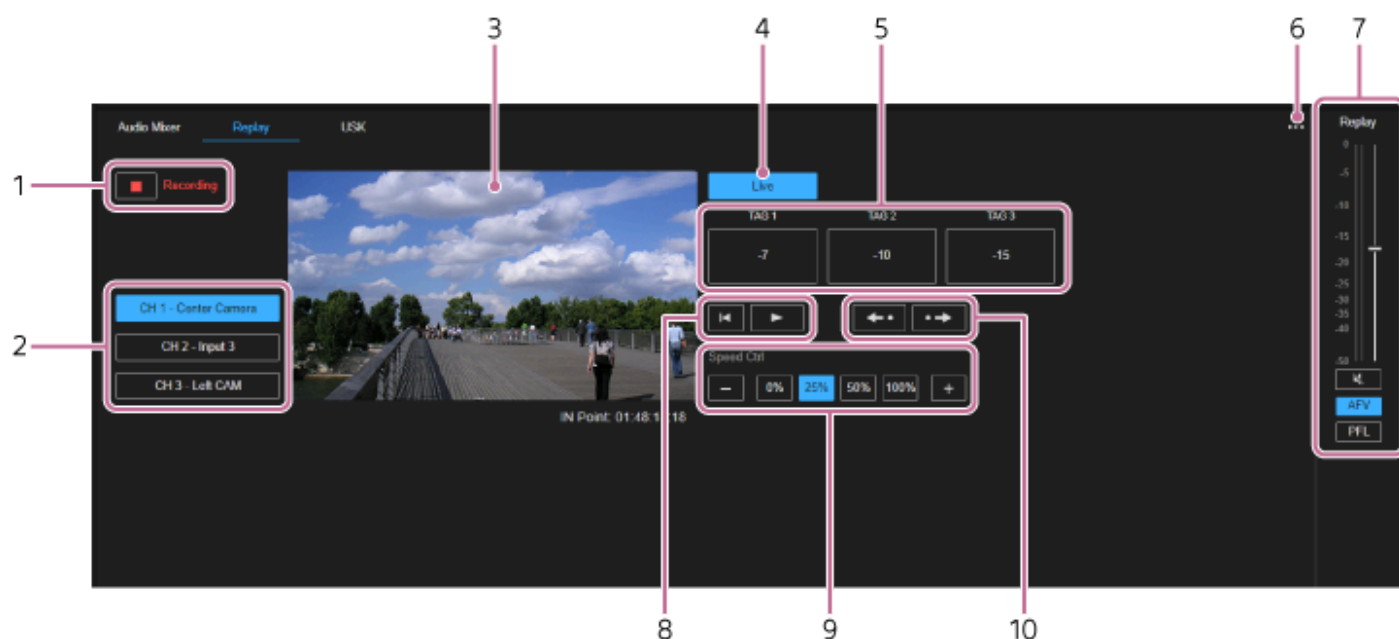
The replay video is removed from the program output and the red frame is removed from around the monitor on the [Replay] tab.

Related Topic

- [Configuring a Streaming Input Source](#)
- [Tailoring Operations According to Desired Task](#)
- [Structure of the \[Replay\] Tab](#)

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Structure of the [Replay] Tab



1. **[Start recording]/[Stop recording]** : Press **[Start recording]** to start internal recording for instant replay. During recording, the button changes to **[Stop recording]** and "Recording" is displayed on the right side. Various operations are also enabled for instant replay. Press **[Stop recording]** to stop recording.



Note

- During ISO recording, **[Stop recording]** is disabled.

2. **Channel selection buttons**: Selects the channel to display in the monitor. The channel to use for instant replay must be configured beforehand on the [System Settings] screen.
3. **Monitor**: Displays live video or playback video for the selected channel. Live video is automatically displayed when internal recording for instant replay use is not taking place.
A green frame is displayed around the monitor when [Replay] is set as the preview output, and a red frame is displayed when [Replay] is set as the program output.
4. **[Live] button**: Selects live video for the selected channel for display in the monitor.
5. **[TAG 1] to [TAG 3] buttons**: Sets the IN point for the video displayed in the monitor. The IN point is set to the point in time after skipping back by the number of seconds displayed on each button at the time the button is pressed. You can change the number of seconds configured for each button.
6. **[Options]**:
 - [TAG Presets]: Select to display the [TAG Presets] dialog. You can register IN point positions to set when the [TAG 1] to [TAG 3] buttons are pressed.
7. **Audio adjustment pane**: Use to adjust the volume and monitor the audio level of the instant replay. Audio is only available with instant replay when the playback speed is 100%.
8. **Video control buttons**: Press **[Move to IN point]** to cue up the video of the selected channel to the IN point and then pause.
Press **[Play]** to play the video of the selected channel at the configured playback speed. The button changes to **[Pause]**. Press **[Pause]** to pause.
9. **Playback speed adjustment buttons**: Specify the instant replay playback speed using the [0%], [25%], [50%], and [100%] buttons. You can also increase/decrease the playback speed in 1% increments using the [+]/[-] buttons.

Hint

- During instant replay playback, changes to the playback speed are applied immediately. If an instant replay is not being played, the change is stored and applied during the next playback.

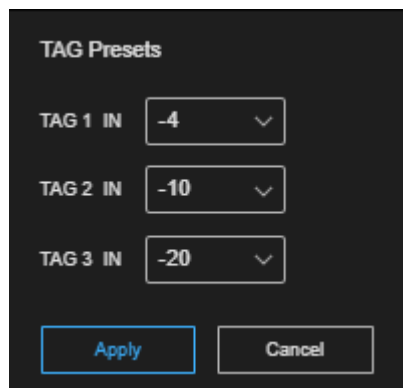
10. IN point control buttons: Press  (Move IN point back) to move the IN point back by approximately 1 second, cue up the video at the IN point, and then pause. Press  (Move IN point forward) to move the IN point forward by approximately 1 second, cue up the video at the IN point, and then pause.


Related Topic

- [Adjusting the Audio](#)

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Changing the Settings of the [TAG 1] to [TAG 3] Buttons



You can change the number of seconds to skip back when you press the [TAG 1] to [TAG 3] buttons to set an IN point. To change a setting, select [TAG Presets] in  (Options) at the top right of the [Replay] tab to display the [TAG Presets] dialog. Specify the number of seconds to skip back for each button and press the [Apply] button. Specify a value in the range -20 to -4.

When the set value is changed, the display on the [TAG 1] to [TAG 3] buttons also changes.

Hint

- The settings of the [TAG 1] to [TAG 3] buttons are stored for each user. This does not affect other users using the same event.

Creating Highlights Automatically (when using Professional ID)

Note

- A separate A2 Production subscription is required for auto highlight creation. Also, the output destination with [ID] of 1 must be configured on the [Output] tab of the [System Settings] screen beforehand and the sending of video for auto highlight creation must be started. The [Highlight] button on the [Live Operation] screen becomes enabled when auto highlight creation operation is ready.

- 1 Press the [Highlight] button on the [Live Operation] screen.



The [Auto Highlight] dialog appears.

Hint

- Highlights can be created until the event stops, even if sending video for highlight creation is stopped.

- 2 Set the period for extracting highlights.

Auto Highlight

Create a clip for Highlight.
Specify the target period.
Press the [Mark] button to set the current time.

IN: : OUT: :



Hint


- Highlight scenes are extracted from the video between the IN point and OUT point configured here based on the analysis rule selected beforehand.

- Set times (hh:mm format) for the IN point and OUT point values. The current time is set when you press the [Mark] button for an IN point or OUT point. You can also specify previous times or the current time for IN points and OUT points.
- Highlights can be created until the event stops, even after sending video for highlight creation is stopped.

3 Press the [Create] button.

The dialog closes and highlight file creation starts from the video in the specified range.

During highlight file creation,  (creating) is displayed on the right side of the [Highlight] button. When highlight file creation is finished, it changes to  (finished).

If highlight file creation fails or the target video for highlight is not available,  (failed) is displayed.

Hint

- To set an IN point and OUT point only and perform highlight creation at a later time, press the [Close] button. The IN point and OUT point settings are saved and the dialog closes.

Created highlight files

Files are saved automatically with a file name in the following format.

HLT_"Event Name"_YYYYMMDDhhmmss (creation start date and time).mp4

Hint

- The creation start date and time uses universal standard time (UTC).

Extracted highlight scenes are displayed on the [Clip] tab of the [File Manager] screen and can be assigned to a clip player.

Hint

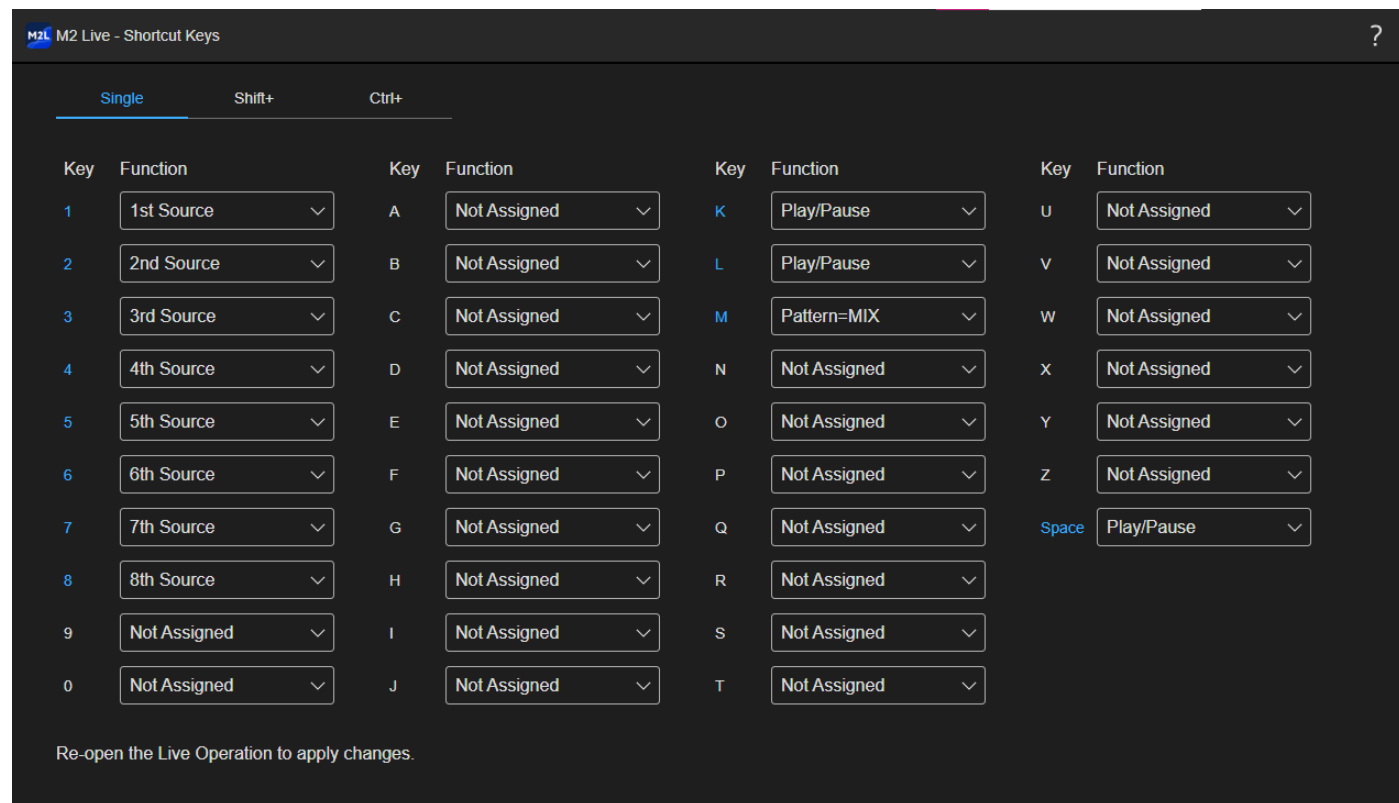
- Created highlight files are not displayed on the [Clip player] tab until the [Live Operation] has been updated. Update the [Live Operation] screen, as required. Note that highlight files that are currently being created or being written to a server are not displayed on the [Clip player] tab.

Related Topic

- [Starting/Stopping the Sending of Video for Auto Highlight Creation](#)

Configuring Shortcut Keys

You can set shortcuts for operations on the [Live Operation] screen using combinations of the [0] to [9]/[A] to [Z]/[Space] keys and [Shift]/[Ctrl] keys on the keyboard.



Single		Shift+		Ctrl+	
Key	Function	Key	Function	Key	Function
1	1st Source	A	Not Assigned	K	Play/Pause
2	2nd Source	B	Not Assigned	L	Play/Pause
3	3rd Source	C	Not Assigned	M	Pattern=MIX
4	4th Source	D	Not Assigned	N	Not Assigned
5	5th Source	E	Not Assigned	O	Not Assigned
6	6th Source	F	Not Assigned	P	Not Assigned
7	7th Source	G	Not Assigned	Q	Not Assigned
8	8th Source	H	Not Assigned	R	Not Assigned
9	Not Assigned	I	Not Assigned	S	Not Assigned
0	Not Assigned	J	Not Assigned	T	Not Assigned
				U	Not Assigned
				V	Not Assigned
				W	Not Assigned
				X	Not Assigned
				Y	Not Assigned
				Z	Not Assigned
				Space	Play/Pause

Re-open the Live Operation to apply changes.

- 1 On the [Dashboard] screen or [Live Operation] screen, select  (Account) > [Preferences] > [Shortcut Keys].

The [Shortcut Keys] screen will appear in a separate tab.

- 2 Select the function you want to assign from the pull-down list for the key you want to configure the shortcut.

Hint

- Select [Not Assigned] to cancel a shortcut assignment.

- 3 Open the [Live Operation] screen again.

Changes to the shortcut key settings take effect at the moment the [Live Operation] screen is opened again.

Hint

- The shortcut key settings are stored for each user. This does not affect other users using the same event.

M2 Live

Specifications

Video switching

Configuration

Input: Primary video × 6, clip player × 2

Output: Program, clean

Composited layers

Background, USK, KEY, PinP, DSK × 2

Video effects

CUT, MIX, WIPE × 6

PinP

Audio mixer

Configuration

Input: Embedded audio × 6 (stereo^{*}), clip player × 2 (stereo), microphone for commentary × 3 (stereo)

Output: Program (stereo), AUX (stereo)

^{*} 2-channel monaural input supported.

Functions

Output level adjustment, AFV (Audio Follow Video)^{*1}, channel muting, PFL, Input Trim, PAN/Balance, Limiter/Compressor, Filter, EQ, Delay^{*2}

^{*1} Excluding MIC 1 to MIC 3.

^{*2} MIC 1 to MIC 3 only.

Streaming

Supported input formats

- Video + audio
 - Protocol: SRT/RTMP/RTMPS/SonyQoS
 - Video codec: H.265/HEVC, H.264/AVC
 - Resolution: 1920×1080, 1280×720
 - Frequency/scan method: 60p, 59.94p, 59.94i, 30p, 29.97p, 50p, 50i, 25p
 - Video bit rate: 3000 kbps to 20000 kbps (SRT/RTMP/RTMPS not supported)
 - Buffer: 0 msec to 10000 msec (RTMP/RTMPS not supported)
 - Audio codec: AAC
 - Sample rate: 44100 Hz, 48000 Hz
 - Audio bit rate: 64 kbps to 384 kbps (SRT/RTMP/RTMPS not supported)

Supported output formats

- Video + audio
 - Protocol: SRT/RTMP/RTMPS
 - Video codec: H.265/HEVC, H.264/AVC
 - Resolution: 1920×1080
 - Frequency/scan method: 60p, 59.94p, 59.94i, 30p, 29.97p, 50p, 50i, 25p

- Video bit rate: 3000 kbps to 25000 kbps
- Buffer: 0 msec to 10000 msec (RTMP/RTMPS not supported)
- Audio codec: AAC
- Sample rate: 44100 Hz, 48000 Hz
- Audio bit rate: 64 kbps to 384 kbps

* Interlaced output can be selected for only one of the two output destinations.

Supported files

Images

- File format: RGB 24-bit (32-bit with alpha channel) JPEG or PNG format
- Image size: 1920×1080 (max)

Animations for transitions

- File format: Series of RGB 24-bit (32-bit with alpha channel) PNG images compressed in ZIP format*
- File size: 500 MB (max)
- Number of images: 2 to 300
- Image size: 1920×1080
- Frequency: 25 fps, 30 fps, 50 fps, 60 fps

* A transition animation is created by displaying ZIP-compressed PNG images consecutively in numerical order.

Video

- File format: MP4
- Video + audio
 - Video codec: H.264/AVC
 - Resolution: 1920×1080
 - Frequency/scan method: 60p, 59.94p, 50p, 30p, 29.97p, 25p
 - Color depth: 8 bits
 - Color space: YCbCr 4:2:0
 - Color gamut: Rec. 709
 - Audio codec: AAC
 - Sample rate: 48000 Hz
 - Number of quantization bits: 16 bits, 24 bits
 - Monaural audio, stereo audio
- Maximum bit rate: 25 Mbps
- File size: Unlimited

Supported graphics input

HTML5

Output recording

Supported formats

- File format: MP4
- Video + audio
 - Protocols: SRT, RTMP, RTMPS
 - Video codec: H.264/AVC
 - Resolution: 1920×1080
 - Frequency/scan method*: 60p, 59.94p, 59.94i, 30p, 29.97p, 50p, 50i, 25p
 - Buffer: 0 msec to 10000 msec
 - Video bit rate: 3000 kbps to 25000 kbps
 - Audio codec: AAC
 - Sample rate: 48000 Hz

* Progressive scan method can be configured for clean output only.

Input content recording

Supported formats

- File format: MP4
- Video codec: H.264/AVC
- Resolution: 1920×1080
- Scan method: Progressive
- Other: Conforms to streaming input

Highlight recording

Supported formats

- Protocol: RTMP/RTMPS
- File format: MP4
- Video
 - Codec: H.264/AVC
 - Resolution: 1920×1080
 - Frequency/scan method: 60p, 59.94p, 30p, 29.97p, 50p, 25p
- Audio
 - Codec: AAC
 - Sample rate: 44100 Hz, 48000 Hz

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