Director Mini

User Manual, Reference and FAQs

TABLE OF CONTENTS

Introduction

Director Mini – Your All-in-One Video Companion

Meet the Director Mini: your compact solution for all things video. Whether you're directing, editing, or streaming, the Director Mini has got you covered. With its intuitive interface, capturing from various video sources becomes a breeze. And the best part? You can craft and share captivating content in real time, be it live streaming or recording.

Benefits

Diverse Video Inputs: From HDMI and webcams to NDI® HX2/NDI® HX3streams, RTMP/SRT streams, phone cameras, and even video clips, you can effortlessly bring multiple perspectives into your content.
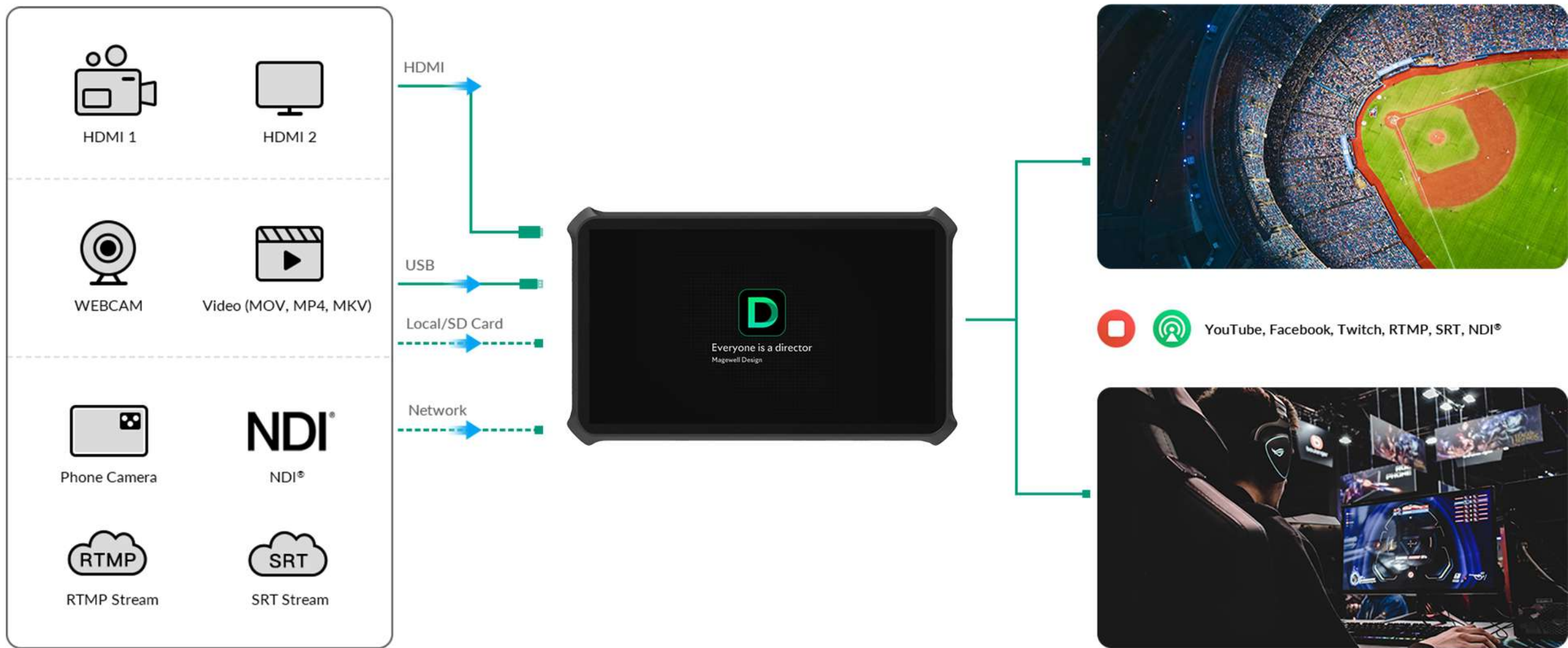
Always Catch the Action: With the ability to use multiple cameras, you're guaranteed not to miss a moment. The result? A richer and more engaging viewing experience.

Enhance Your Streaming: Show off your brand, keep score, or add any overlay you like with GFX support. Real-time control ensures your content stays fresh and professional-looking.

Portability and Versatility: Its compact design, dual hot-swappable battery support, and multi-network compatibility mean you can take Director Mini to diverse events. From sports games and weddings to outdoor live broadcasts, you're set to record and stream whenever inspiration strikes.

Director Utility App: Gain remote control over the Director Mini and even use your mobile device as an additional camera. Your multi-camera setup just got more dynamic.

Embrace the freedom and flexibility of the Director Mini, and let your creativity shine anywhere, anytime.

HDMI 1

HDMI 2

WEBCAM

Video (MOV, MP4, MKV)

Phone Camera

NDI®

RTMP Stream

SRT Stream

HDMI

USB

Local/SD Card

Network

Everyone is a director
Magewell Design

YouTube, Facebook, Twitch, RTMP, SRT, NDI®

Key Features of Director Mini

- Supports multiple input sources, including 2x HDMI input, 2x USB 3.0 input, Phone Camera, SRT stream, RTMP stream, NDI® HX2/NDI® HX3 stream, video clips, and pictures

- Produces shows consisting of scenes with compositions of various sources, which can be edited with diverse powerful tools, such as keyer, flip and crop

- Natively supports streaming to YouTube, Twitch and Facebook Live, supports streaming via SRT and RTMP, and supports two NDI® HX3 outputs

- Supports streaming to two destinations simultaneously, up to 1080p60 30Mbps

- Supports showing live comments when streaming to social media platforms

- Supports GFX function with rich templates, and supports real-time control of scoreboard, timer and stopwatch

- Supports the ability to switch scenes directly, or preview first and then program, and supports setting switch effect

- Supports more interactive functions such as background music, annotation and FTB

- Supports PTZ control for HDMI, WEBCAM (UVC Camera), SRT, RTMP and NDI PTZ cameras

- Supports landscape and portrait modes of device screen and external screen

- Device has one USB-C output to connect the external screen for monitor, or connect to a computer to import and export files

- Records and takes screenshots to local storage or SD card, and exports to USB flash diver, SD card and computer

- Supports wired and wireless networks as well as Bluetooth 5.0

- Supports two hot-swappable NP-F battery packs

- Supports Web UI for more settings and registering to Magewell Control Hub for centralized management. For details, please refer to the *Director Mini Web UI User Manual.*

Owners Guide
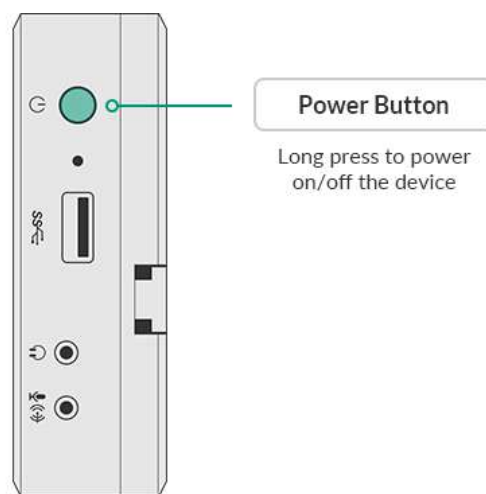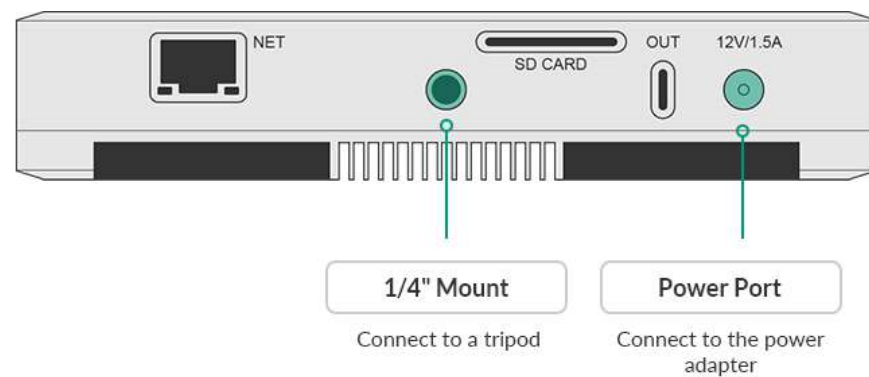
Thumb Screws

2   1

Sunhood
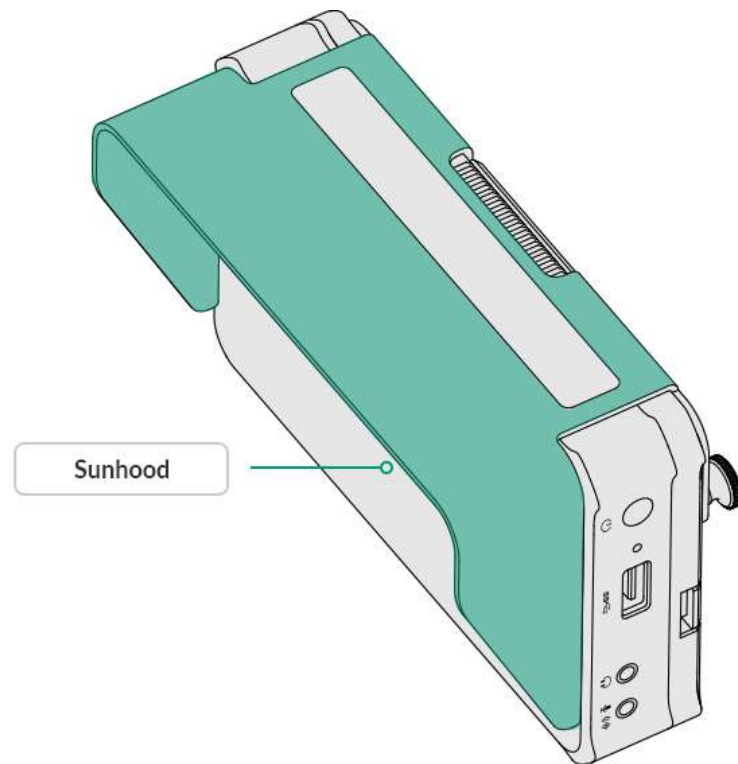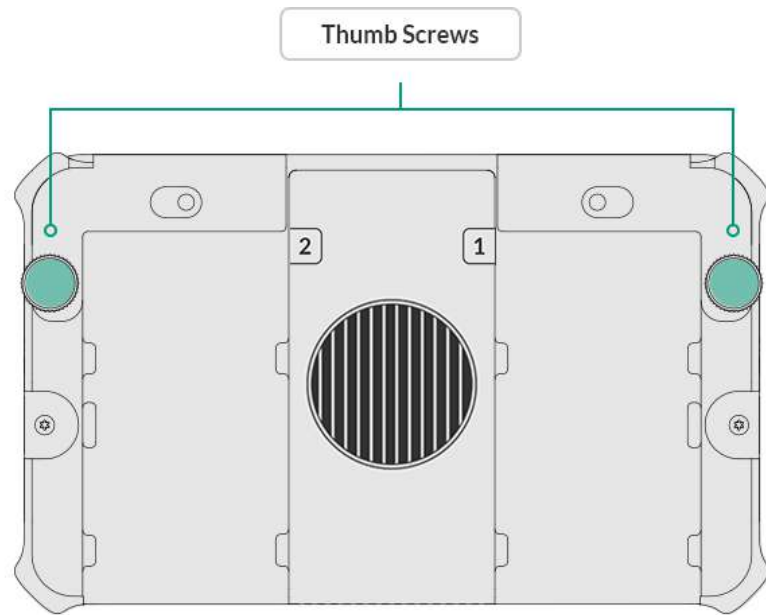
Getting Started

Make sure Director Mini is mounted safely before using it.

- Place the device on a flat and stable surface. Director Mini provides two detachable foldable stands for better heat dissipation and convenient operation. You can use the stands as needed.

    - **Install**: press the lock button first and put the stand into the slots until it is locked in the correct position.

    - **Remove**: press the lock button first and remove the stand.

- Mount the device with a tripod or camera through the 1/4" mount hole.
  The screw should be less than 5.5 mm (7/32 inches) long. Otherwise, you cannot firmly secure the device, and damage may occur.

- When using outdoors, you can use the sunhood to prevent glare on the screen by blocking out ambient light.

    1. Slide down the sunhood till the mounting holes line up with the mounting holds on the back of the device.

    2. Tighten the two thumb screws.

NET

SD CARD   OUT   12V/1.5A

1/4" Mount	Power Port
Connect to a tripod	Connect to the power adapter

Power Button

Long press to power on/off the device

Connect to Power and Turn on the Device

Use the supplied power adapter to connect the power port.

☼ Director Mini also supports optional two hot-swappable NP-F battery packs. For more information, refer to Battery.

Power Button Actions

Power on

Long-press the power button for 3 seconds to power on.

Power off

Long-press the power button till a menu bar pops up, and tap **Power off**.

Restart

Long-press the power button till a menu bar pops up, and tap **Restart**.

Screenshot

Long-press the power button till a menu bar pops up, and tap **Screenshot**, so that you take a screenshot which saves all the information on the screen and is stored in "\Director Mini\Internal shared storage\Pictures\Screenshots".

Turn off the screen

Short-press the power button to turn off the screen, and press it again to turn on the screen.

Complete Initial Settings

The first time you power on your Director Mini device or after you reset the device, you will be prompted to select your language, set your device name and read End User License Agreement (EULA). Please follow the guide step by step to complete the initial settings.

Next, you can select to load a show in landscape or portrait mode.
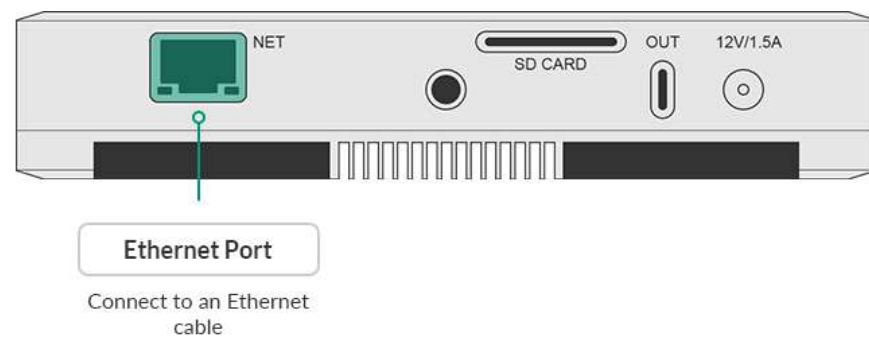
Then, you can follow the on-screen guide to know the functions of buttons on the screen. After that, you enters the the default show, which consists of 5 scenes, a default picture, HDMI 1, HDMI 2, webcam, and phone camera.

Then, you can connect HDMI and webcam sources.

Meanwhile, you can use your phone to download the Director Utility App, and then try to connect Phone Camera. For details, please refer to *Director Utility App User Manual.*

NET   SD CARD   OUT   12V/1.5A

Ethernet Port

Connect to an Ethernet cable

Connect to Network

Director Mini supports wired and Wi-Fi networks. These networks can be connected at the same time. The priority order for the device selecting network connection is Ethernet > Wi-Fi.
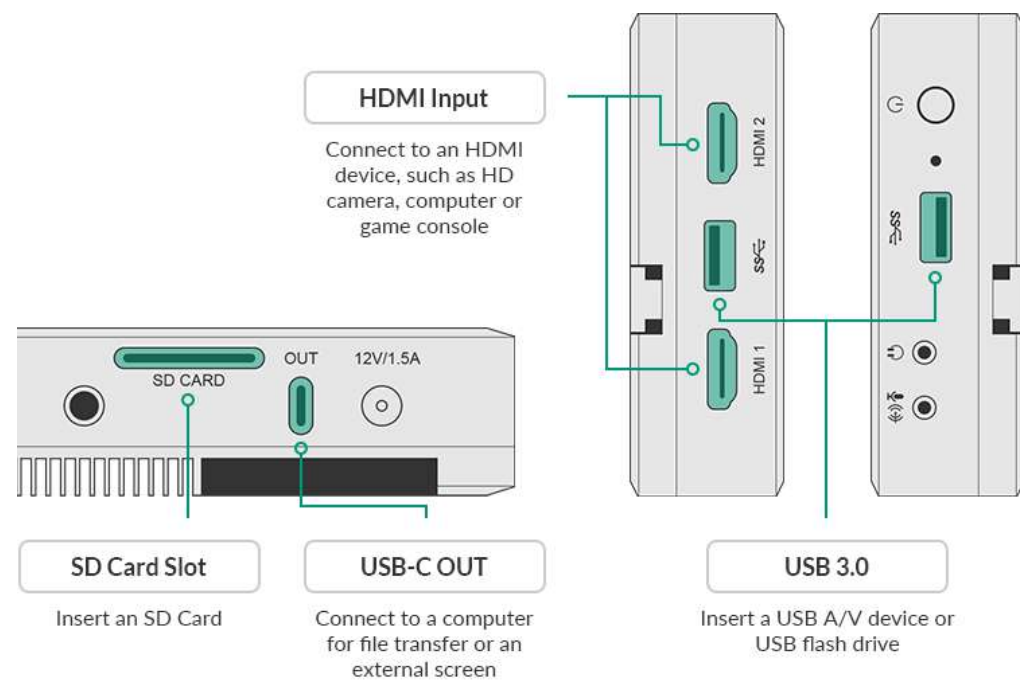
▪ **Connect to Ethernet**

Use an Ethernet cable to connect the Ethernet port.

▪ **Connect to Wi-Fi**

Tap ⊜ > **Settings** > **Network** to connect Wi-Fi. For details, please refer to Network.

HDMI Input

Connect to an HDMI device, such as HD camera, computer or game console

HDMI 2

SS←◦

SS←◦

HDMI 1

OUT   12V/1.5A

SD CARD

SD Card Slot

Insert an SD Card

USB-C OUT

Connect to a computer for file transfer or an external screen

USB 3.0

Insert a USB A/V device or USB flash drive

Connect to Input Devices

Director Mini supports various sources, including HDMI sources, webcam, stream, Phone Camera, video clips and pictures. You can connect one or more sources to Director Mini according to the following introductions.

> ☼ For how to connect to stream and Phone Camera source, please refer to:
>
> - Add RTMP Stream
>
> - Add SRT Stream
>
> - Add NDI Stream
>
> - Add Phone Camera

- **Connect to HDMI source**

  Connect one or two HDMI devices, such as HD camera, computer and game console, to the HDMI ports of Director Mini. It supports to capture signals from the two HDMI ports at the same time. The thumbnail of the corresponding input signal appears in the scene list of default show.

  Supported typical HDMI inputs include:

  - 4096x2160p/3840x2160p 23.98/24/25/29.97/30/59.94/60

  - 1920x1080p 23.98/24/25/29.97/30/50/59.94/60

  - 1920x1080i 25/29.97/30

  - 1280x720p 23.98/24/25/29.97/30/50/59.94/60

  - 720x576p 50/100

  - 720x576i 25/50

  - 720x480p 59.94/60

  - 720x480i 29.97/30

When you connect a PC as the HDMI source, you need to select Director Mini as the audio output device on the PC. For example, on Windows 10, click > ⚙ > System > Sound. In the Output section, choose **Director Mini (********)** from the drop-down list box of **Choose your output device**, such as **Director Mini (Intel(R) Display Audio)**.

▪ **Connect to WEBCAM**

Connect one or two webcams to the USB ports of Director Mini.

Supported webcam specifications include:

- ▪ Formats: YUYV, MJPG, NV12

- ▪ Resolution: up to 1920x1080

- ▪ Frame rate: up to 60fps

▪ **Connect to media source**

Insert a SD card or USB flash drive to import picture, video and audio files.

The supported file system types include: FAT32 (The maximum file size is 4GB.), exFAT, and NTFS.

Director Mini also supports transferring files through the computer. For more details, refer to How to import/export files.

As there are only two USB ports, a USB Hub may help you to add more USB devices.

Headphone Jack
Insert headphones

Mic/Line In Jack
Insert a microphone or line in device
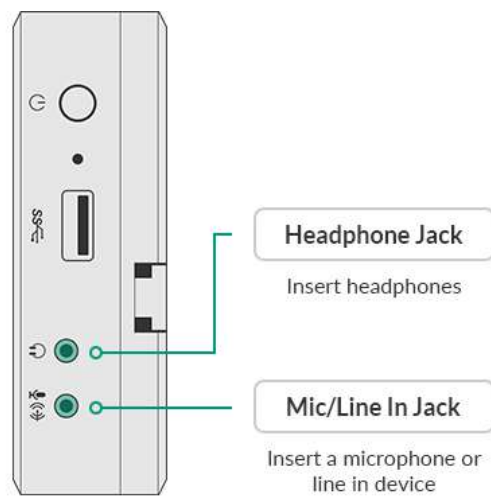
Connect to Audio Devices

- **Connect microphone or line in device**

  Connect an active microphone or line in device to the Mic/Line In jack on Director Mini, and select the device type according to the prompt.

  For MIC device, the system will automatically provide 20dB gain.

  It also supports HDMI microphone or USB microphone.

- **Connect headphones**

  Connect your headphones to the Headphone jack on Director Mini to monitor the audio.

  It also supports USB audio playback device.

  You can also use a Bluetooth device for audio monitoring, and please refer to Bluetooth.

NET SD CARD OUT 12V/1.5A

USB-C OUT

Connect to a computer for file transfer or an external screen
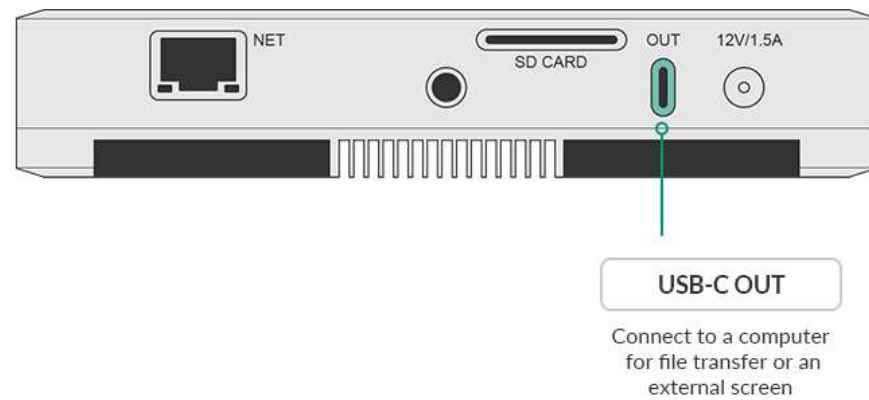
(Optional) Connect to External Screen

Director Mini can be connected to an external screen through the USB-C OUT port.

1. Use a Type-C to HDMI / VGA / DP adapter to connect a monitor, HDTV or other devices to the USB-C OUT port of Director Mini. The external screen setting page will pop up on the device.

2. Select the content to be displayed on the external screen.

   ▪ Clean Program: output a clean program signal.

   ▪ Duplicate Screen: duplicate all the elements on the device screen of Director Mini.

   ▪ Loop HDMI 1: loop out the signal from HDMI 1.

   ▪ Loop HDMI 2: loop out the signal from HDMI 2.

3. Select the rotation angle to fit for the external screen: rotate 90° to left, or rotate 90° to right.

4. Tap the device screen to go back.

5. To change the settings of the external screen, swipe down from the top of the device screen, and then tap 🖥 on the Control Center to open the external screen setting window.

Main Screen

Director Mini provides lots of easy-to-use buttons on the main screen, and supports landscape mode and portrait mode. You can produce and stream your show very easily.
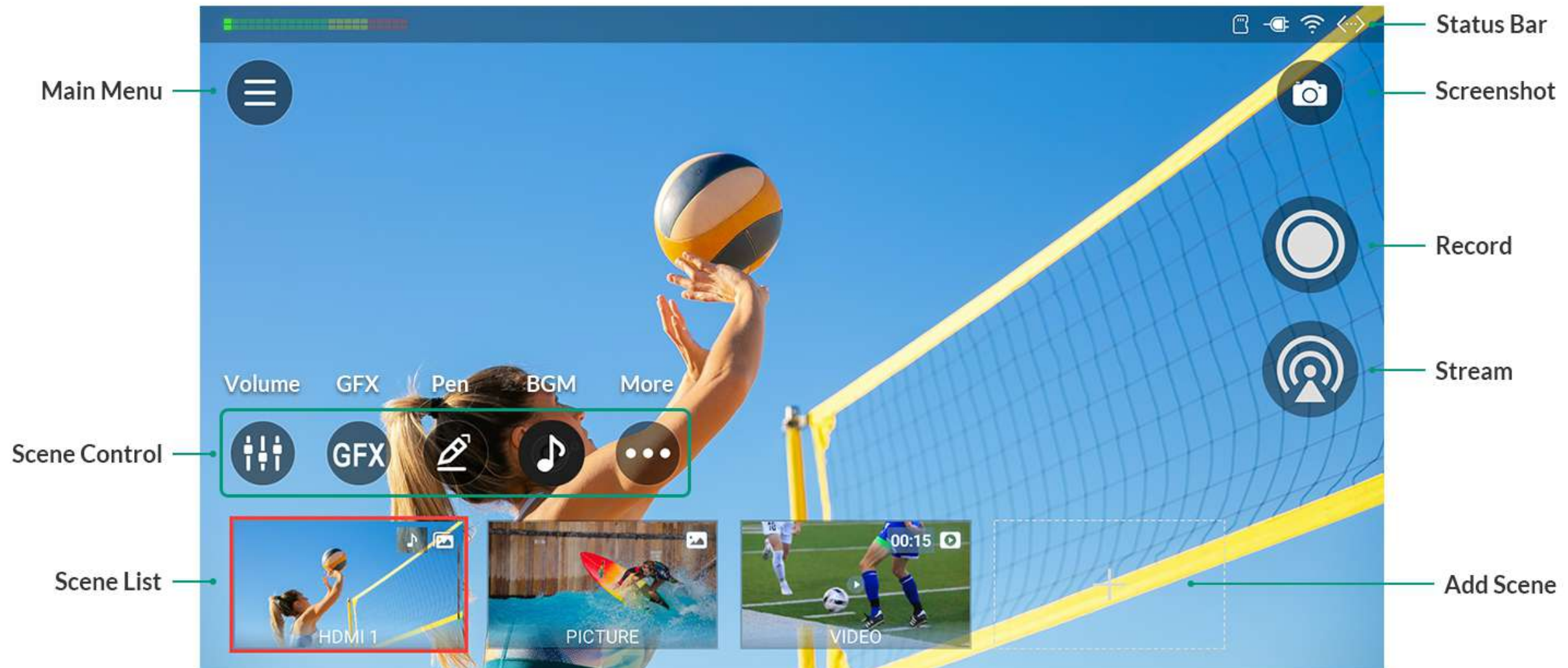
Main Screen

Status Bar

The status bar helps you know the working status of the device.

Headphone	Bluetooth Device

Wi-Fi	Cellular	Ethernet	No Network

● 04:12 **R** 1.63 Mbps **S** 7.43 Mbps

Audio Meter   Recording Status   Streaming Status   SD Card

Status Bar

75% - 100%	50% - 75%
25% - 50%	< 25%

Battery Status

Power Cable
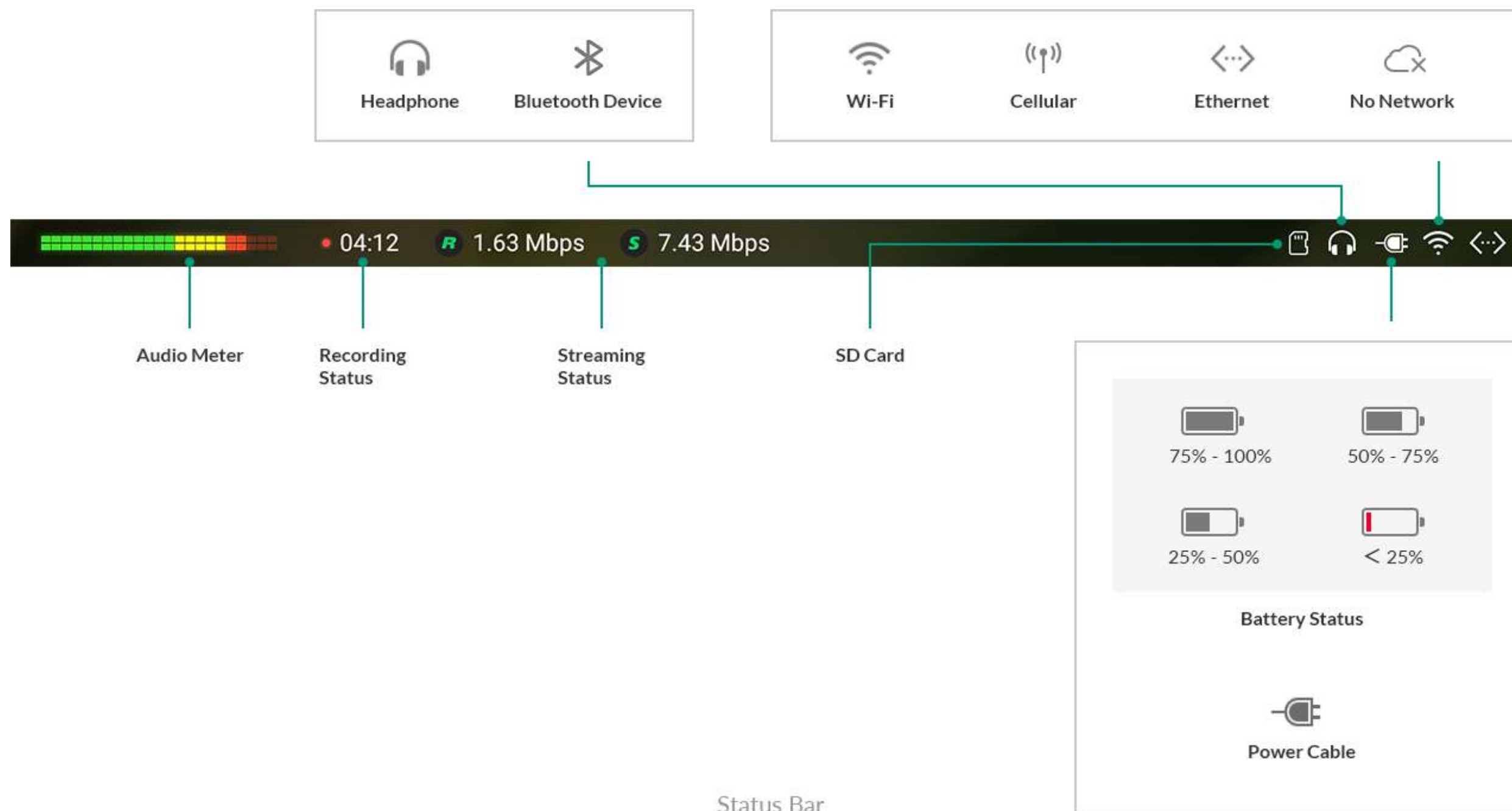
Control Center

The control center provides more information of the device and enables quick settings.

Swipe down the status bar to open the control center. To close the control center, swipe up on the screen.

The control center provides the following functions and information.
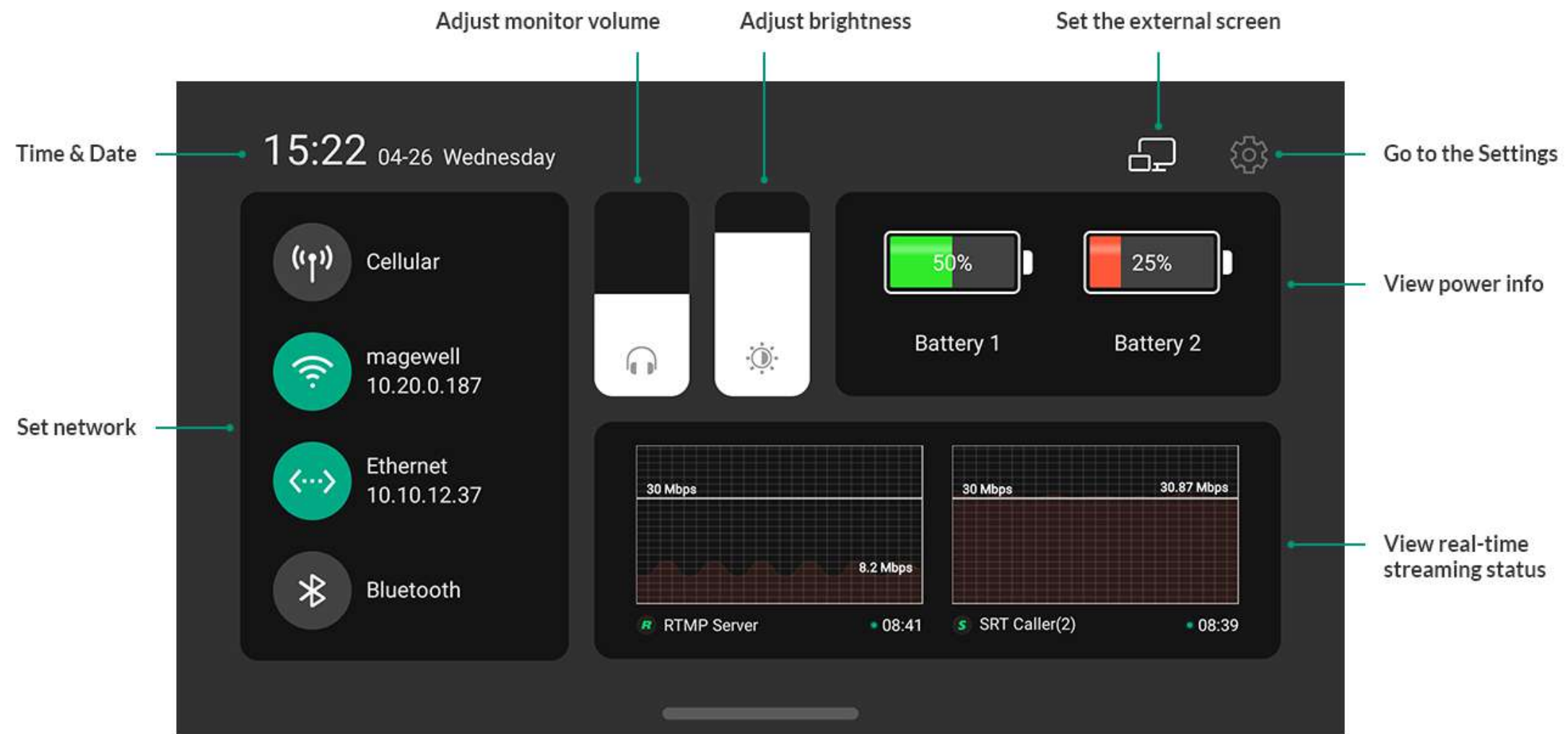
Control Center

Tutorials

The following tutorials will enable you to produce your first show and start to stream and record quickly.
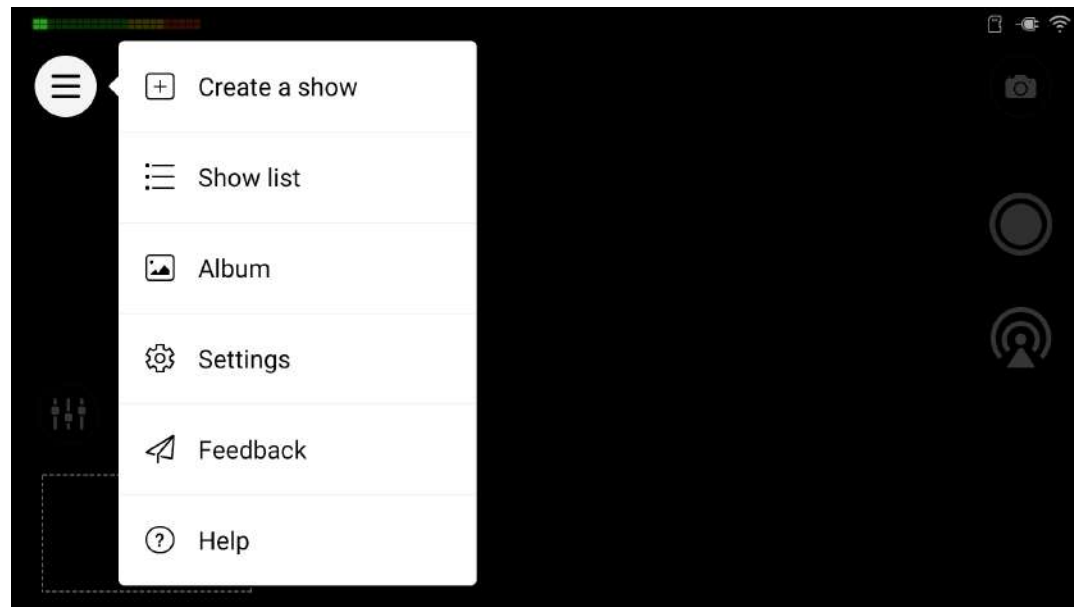
Create Show

1. Tap ☰ > **Create a show**.
2. Specify the **Show Name**, and select the **Orientation** (16:9 or 9:16).
3. Tap **Create**.
   You will enter the new show.
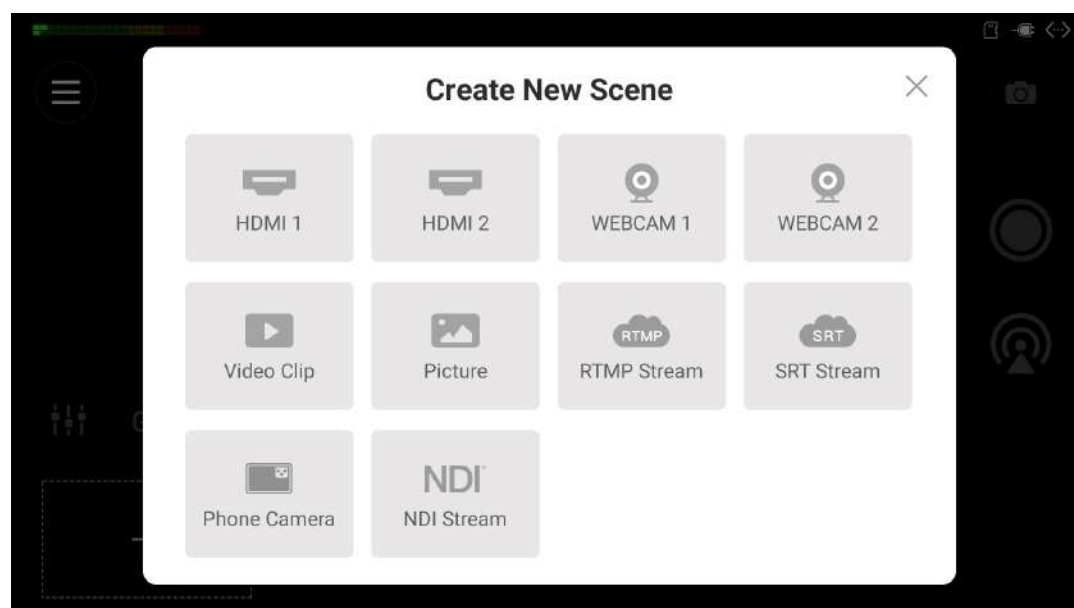
Create Scenes

1. Tap ✛ on the screen.
2. In the **Create New Scene** window, select a source that you want to put into the new scene, and follow the popup to go on operating.
3. Edit the scene in the **Scene Editor.**
4. Save the changes you have made, and then the thumbnail of the new scene will be added to the end of the scene list.
5. Tap ✛ to create more scenes.

Switch Scenes

- Swipe the scene list to left or right to browse scenes, and tap thumbnails to switch scenes.

- Tap any empty area of the screen to view the scene in full-screen mode, and tap any empty area again to exit the full-screen mode.

- If a scene contains a video clip source, you can tap the the play and pause buttons to control the video.

- Swipe the scene list down to the bottom hide it, and then you can tap ⊗ or swipe up from bottom to expand it.
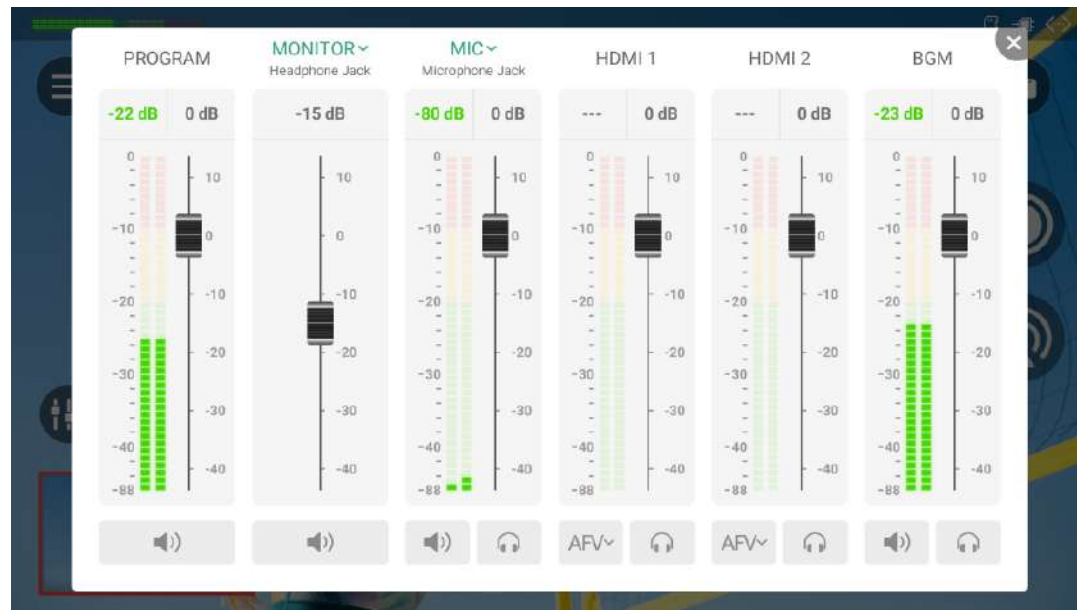
Adjust Volume

Tap ⚏ to open the audio mixer.

- Swipe left and right to view the connected audio sources and external audio sources. When the current scene contains video or BGM, they will also be displayed.

- Move the fader to adjust the audio level.

- Set audio mixing mode by clicking the icons.

  - **AFV** : Audio-follow-video. The audio will only be sent to the program output when the input is on air.

  - ◀)) : Always ON. An audio input will be permanently mixed into the program output.

  - ◀ : Always OFF. An audio input will be permanently not mixed into the program output.

- Tap 🎧 to only monitor this audio, and tap 🎧 to cancel.

- Tap **MONITOR** to select a monitor device, and set whether to monitor microphone input.

- Tap **MIC** to select a microphone device.

GFX

1. Tap (GFX) and then tap ╋ to open the **Create New** GFX window.

2. Select a GFX type to create a GFX.

3. Tap ╋ to create more GFXs.

4. Select one or more GFXs in the GFX list to display in the show.

5. If ▦ scoreboard, ⏱ timer or ⏱ stopwatch is applied, you can tap the icon or long-press the GFX thumbnail and select **Control** to open the control panel for controlling. (For portrait mode, you may need to tap ⋯ and then tap the icon.)

6. Tap (GFX) to go back to the scene list.
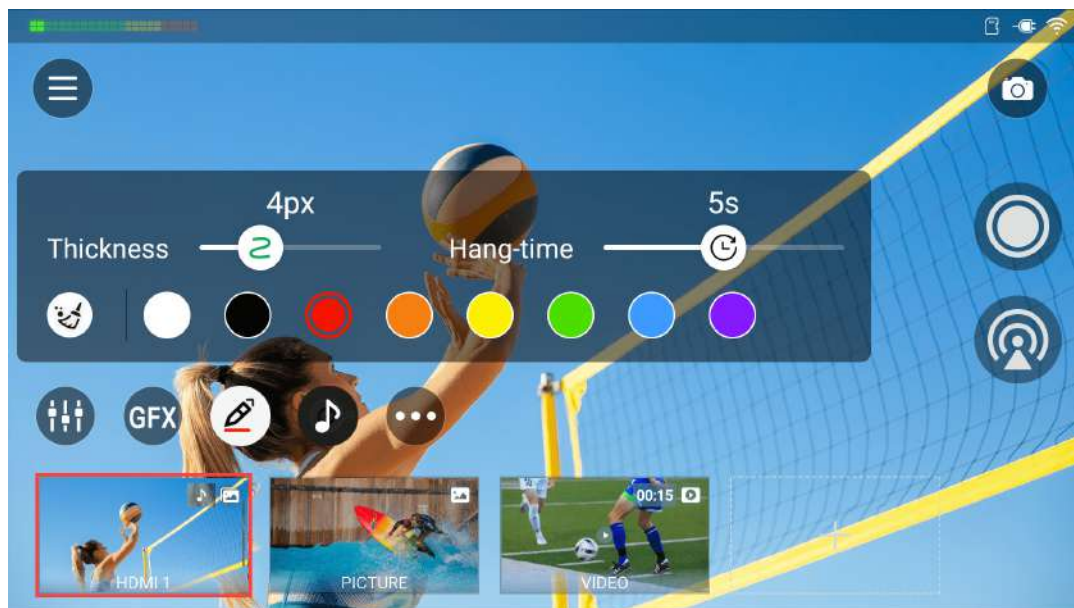
Annotate on Screen

1. Tap ✐ , and then draw or write on the current scene to annotate.

2. Long press ✐ to set pen properties, including color, thickness and hang-time.

3. Clear the annotations.

   ▪ The annotations will disappear automatically after your specified hang-time.

   ▪ Switch to another scene to clear the annotations.

   ▪ Manually clear all the annotations: Tap the screen, long press ✐ , and tap 🖌 .

4. Tap the ✐ button to exit.
   This will also clear annotations.
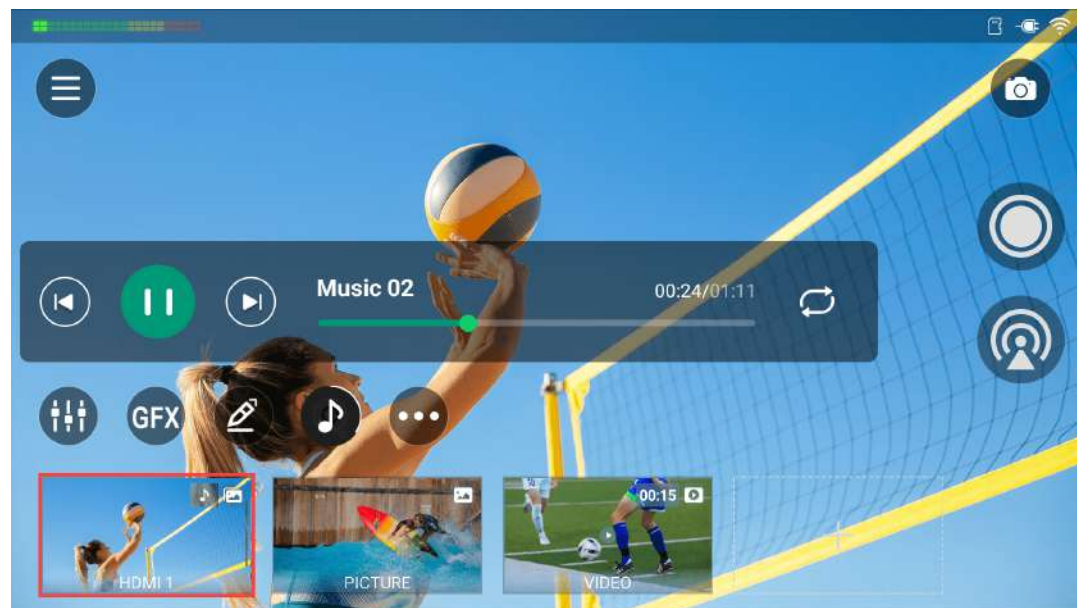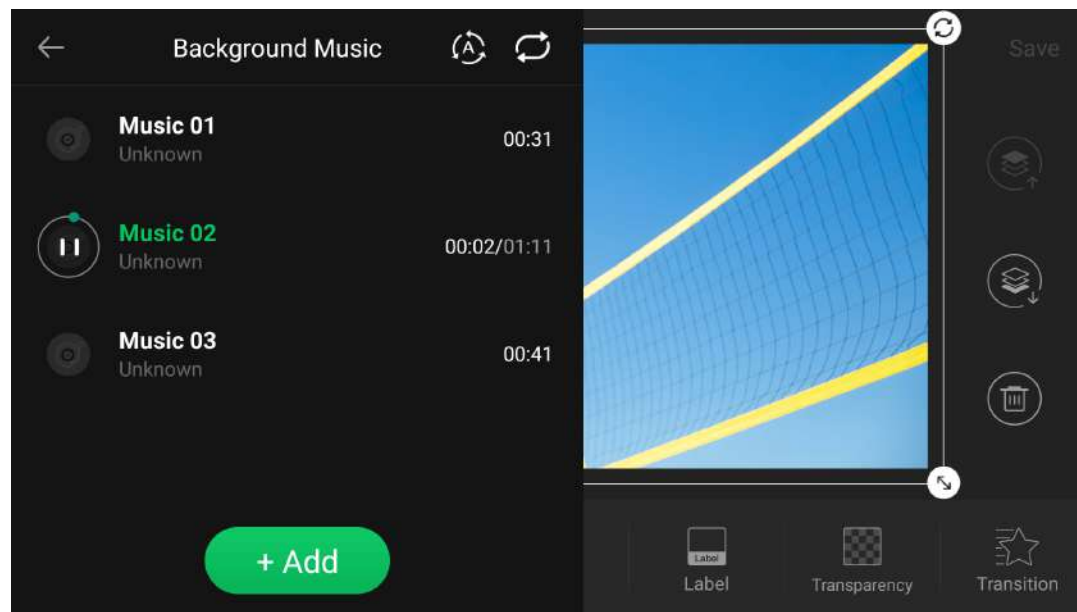
Background Music

Add BGM

1. Long-press a scene thumbnail, and tap **Edit**.

2. In the Scene Editor, tap ⊙ to select a song from a storage path.

3. On the **Background Music** page, add more music and set start and playback policy.

   - Ⓐ↝ : Automatically start (default policy)

   - ◉ : Manually start

   - ⭯ : Repeat the playlist. (default policy)

   - ⭯❶ : Repeat the selected song.

   - ⤭ : Shuffle the playlist.

Control BGM

1. On the main screen, tap ⊙ to reveal the BGM playback bar.

2. Tap the buttons on the playback bar to control the BGM playback. You can:

   - Start or stop BGM playback.

   - Play the previous or next song.

   - Drag the playhead to a desired time point.

   - Change the playback policies.

     - ⭯ : Repeat the playlist. (default policy)

     - ⭯❶ : Repeat the selected song.

     - ⤭ : Shuffle the playlist.
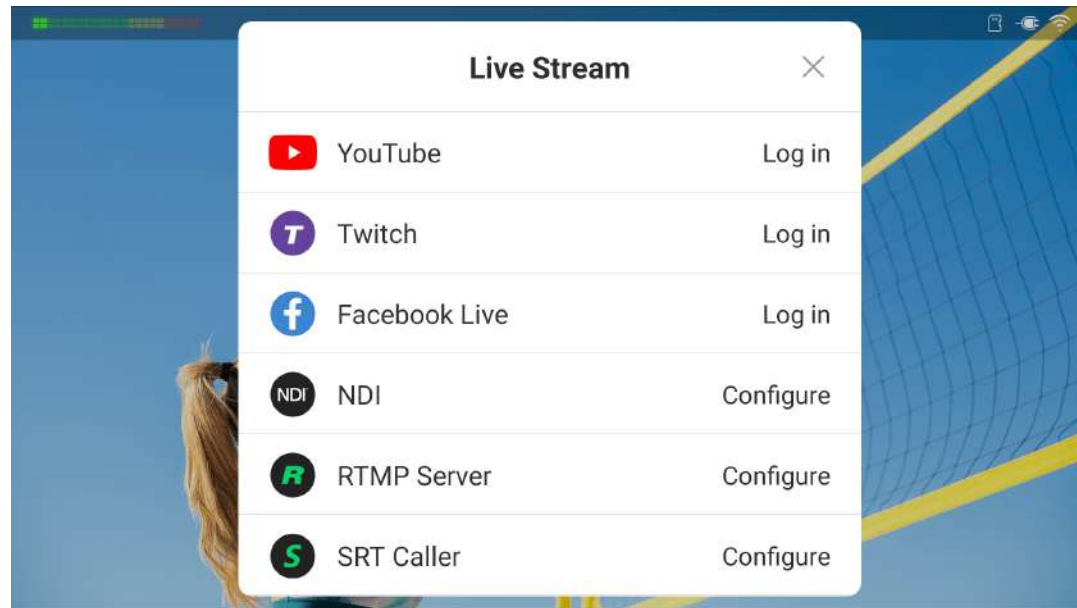
Live Stream, Record and Screenshot

1. Tap ⊙ and select a target platform to configure, such as RTMP, and then tap ⬅ to go back.

2. Tap ⊙ to start streaming, tap ◎ to start recording, and tap 📷 to take screenshots.

3. Tap ⊙ to set and show live comments when streaming to YouTube, Twitch or Facebook.

4. Tap ⊙ to stop streaming, and tap ⬛ to stop recording.

Produce Your Show

Director Mini enables simple video production by allowing you to build a run of shows which contain a series of scenes, while each scene consists of live sources, video clips, images, text, etc.

Create and Manage Shows

You can create and manage multiple shows in Director Mini.
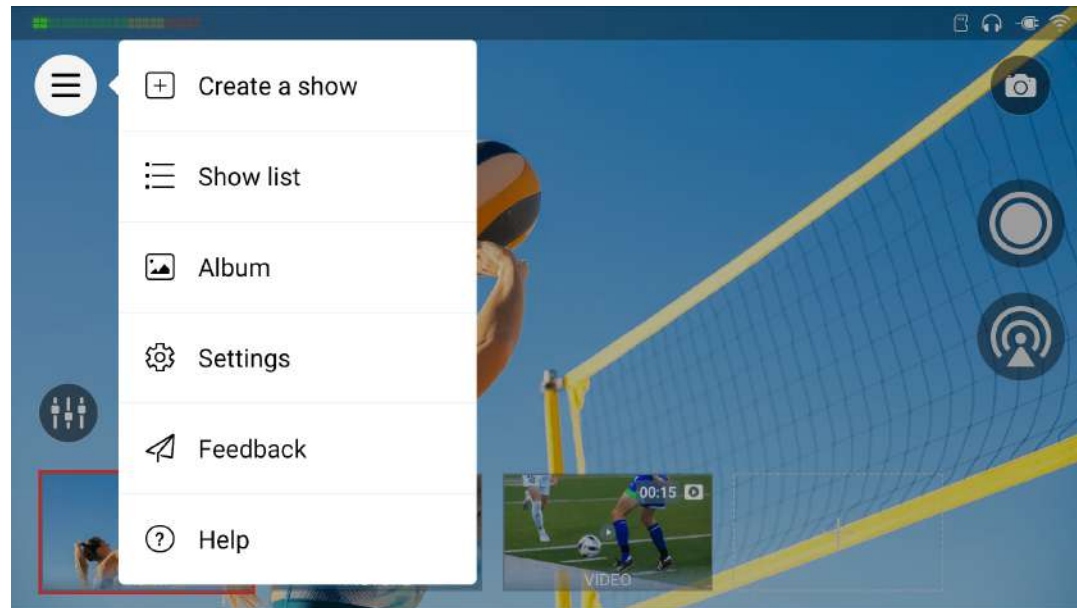
Create Show

1. Tap ▤ > **Create a show**.

2. Enter your show name, and then tap **Save**.

3. Choose the screen orientation: 16:9 (landscape), 9:16 (portrait).

4. Tap **Create**.

> After you create a show, the show is opened as the current show.
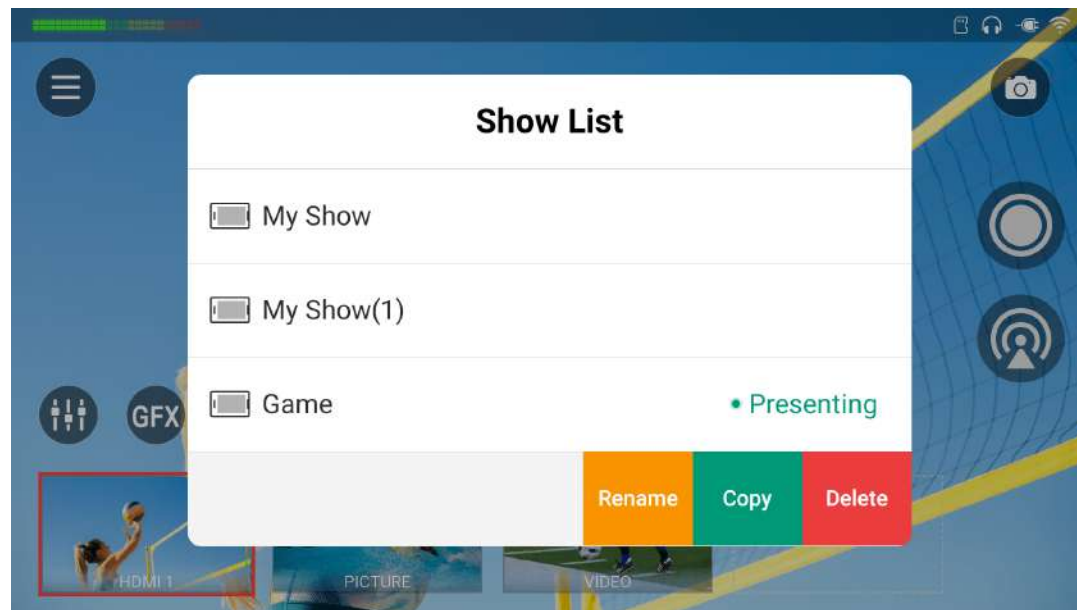
Switch Show

1. Tap ☰ > **Show list**.

2. Tap a show name to switch to the show.

Rename Show

1. Tap ☰ > **Show list**.

2. Swipe a show to the left.

3. Tap **Rename**.

4. Enter a new name, and tap **Save**.

Copy Show

1. Tap ☰ > **Show list**.

2. Swipe a show to the left.

3. Tap **Copy**.

4. Enter a new name, and tap **Copy**.

   The new show you created inherits everything from the original show.

Delete Show

1. Tap ☰ > **Show list**.

2. Swipe a show to the left.

3. Tap **Delete**, and confirm to delete on the popup.

> ☼ The current presenting show cannot be deleted.

Create and Manage Scenes

A show consists of one or more scenes, while a scene contains various sources, including HDMI input signal, webcam input signal, phone camera input signal, video clips, pictures, RTMP streaming signal, SRT streaming signal, NDI® HX2/NDI® HX3 Input signal, etc.
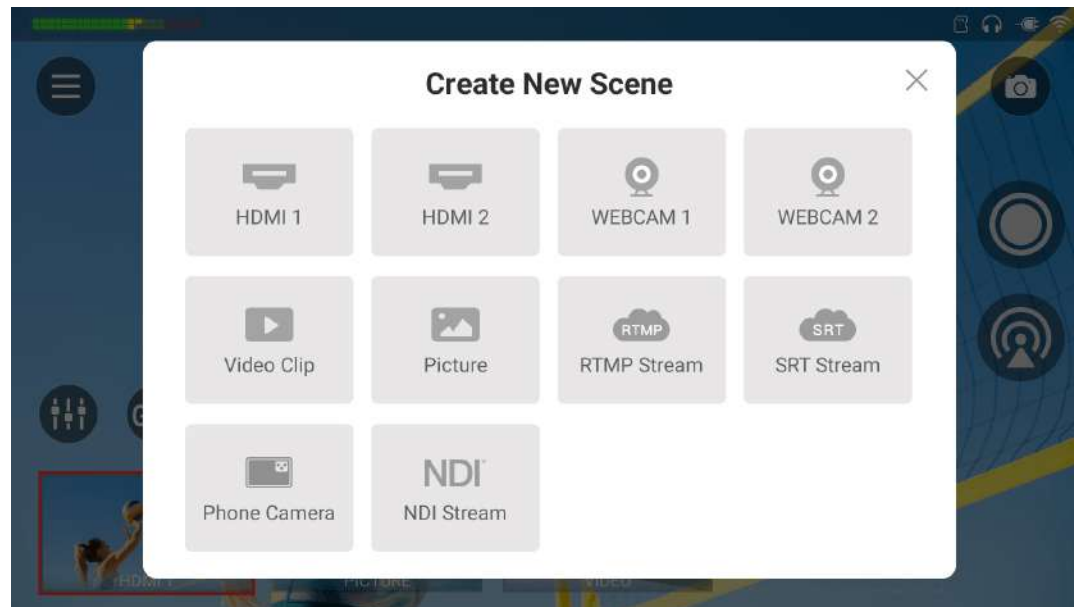
Create Scene

1. Tap ➕ on the main screen.

2. Select a source in the **Create New Scene** window to add, and then it enters the Scene Editor page. For details about how to add different sources, see Add Source.

3. Edit the scene in the Scene Editor.
   Many tools are available for you to edit your scene, such as position, size, crop, transition. For details, see Edit Scenes.

4. Tap 🎚 in the Scene Editor to set audio. For details, see Volume Control.

5. Tap 🎵 in the Scene Editor to add background music (BGM). For details, see Background Music

6. Tap **Save** at the upper right corner.
   The scene thumbnail appears in the scene list.

7. Repeat the above steps to create more scenes.

Scenes

The scene list is displayed at the bottom of the main screen, and each scene has a corresponding thumbnail in the scene list.

The following information will be displayed on the thumbnail.

- A red box indicates which scene is in Program view.

- The scene name is displayed at the bottom.

- The layer type icon is displayed at the upper right corner: when there is only one layer in the scene, the type icon of the current layer is displayed; when there are multiple layers in the scene, an icon stack is displayed, and the icon at the front represents the uppermost layer.

- When the background music icon is displayed, it means that the scene has added background music.

- When the duration information is displayed, it means that the scene contains video. You can tap the play/pause button to control the video. Then, the progress bar of the video will appear on the top of the scene thumbnail.

With the scene list, you can browse, switch, view the scene, and even edit and manage the scenes.

- Swipe the scene list left and right to browse the scenes.

- Swipe the scene list to the far right, and tap ╋ to create a scene.

- Tap a thumbnail in the scene list to switch scenes. It supports quick mode and manual mode, please refer to Switch Scenes.

- Tap any blank area of the screen to view the full-screen mode, and then tap any area to exit the full-screen mode.
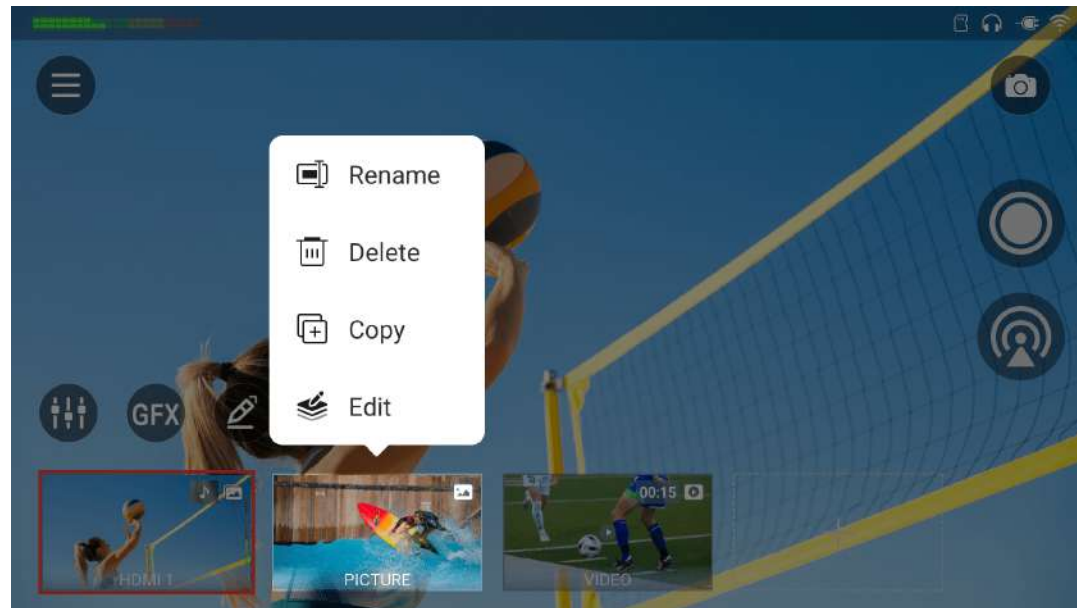
Rename Scene

1. Long press a scene thumbnail.

2. Tap **Rename** on the popup menu.

3. Enter new scene name, and tap **Save**.

Delete Scene

You can delete a scene through the following ways.

Method 1

1. Long press a scene thumbnail.

2. Tap **Delete** on the popup menu.

3. Confirm to delete on the popup.

Method 2

1. Tap ⊙ on the main screen.

2. Select **Advanced** on the popup menu.

3. Tap the ⊗ button on a thumbnail, and then tap **Delete**.

4. Tap **Done** at the upper right corner.

> A scene that is in Program view cannot be deleted. Switch to a different scene and then you can delete the desired scene.

Copy Scene

You can also copy an existing scene to create a new scene by the following two ways.

Method 1:

1. Long press a scene thumbnail.

2. Tap **Copy** on the popup menu.

3. Enter new scene name, and tap **Copy**.

Method 2:

1. Tap ⊙ on the main screen.

2. Select **Advanced** on the popup menu.

3. Tap ⊞ on the thumbnail of the scene you want to copy.
   The new scene will appear next to the copied scene, name as "The original scene name + (No.)", such as Video (1).

4. Tap **Done** at the upper right corner to go back to the main screen.

Edit Scene

1. Long press a scene thumbnail.

2. Tap **Edit** on the popup menu.

3. Edit the scene in the scene editor.

Zoom Scene List

1. Tap ⊙ on the main screen.
2. Select **Advanced** on the popup menu.
3. Tap ⊖ or ⊕ button on the right to change the size of thumbnails.
   By default, the Scene List uses large thumbnails.
4. Tap **Done** at the upper right corner.

Rearrange Scene Order

1. Tap ⊙ on the main screen.
2. Select **Advanced** on the popup menu.
3. Long press a thumbnail and then drag it to a desired position in the scene list.
4. Tap **Done** at the upper right corner.

Show or Hide the Scene List

- When the Scene List is visible, swipe down to the bottom of the screen to hide it.

- When the Scene List is hidden, tap ⊛ or swipe up from bottom to expand it.

> You can show or hide the GFX list through the same way.

Edit Scenes

Sources are the building blocks of scenes. You can fill a scene with a combination of various sources such as HDMI, WEBCAM, RTMP stream, SRT stream, NDI®
HX2/NDI® HX3 stream, Video, Picture and Text. With the rich sources on hand, creativity is unlimited. You will use the Scene Editor to plan out your scene and add eye-catching effects to your sources.

The following picture illustrates the elements on the Scene Editor. This picture is in landscape mode, and some buttons will change positions in portrait mode.

Scene Editor
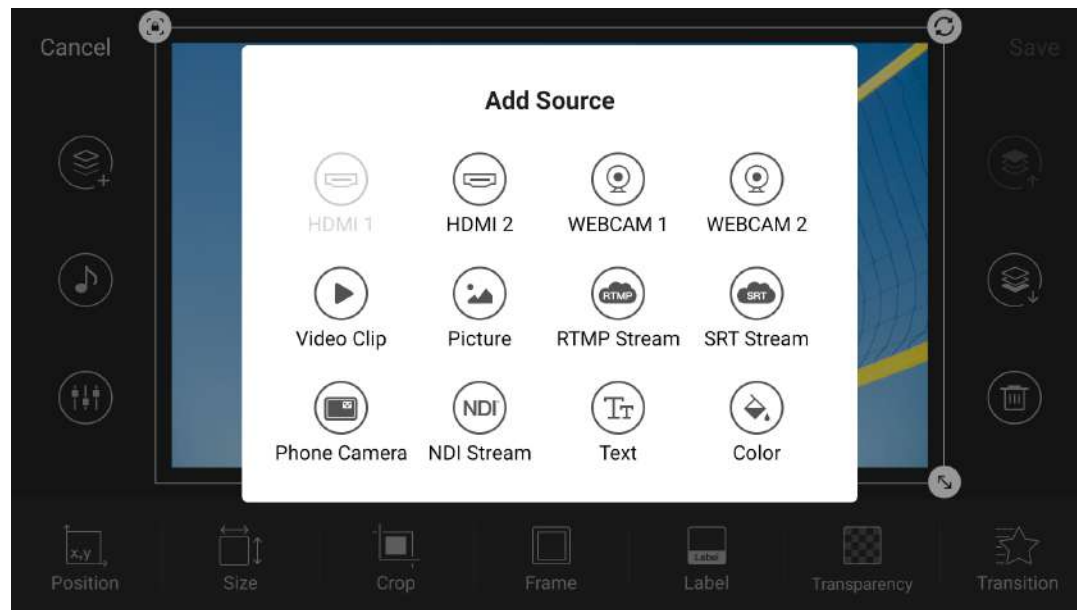
Add Source

You can add multiple sources in one scene, and then you can arrange the layout to look the way that you want.

1. Long press a scene thumbnail and then tap **Edit** to open the Scene Editor.

2. Tap ⊜⁺ in the Scene Editor.

3. Tap a source in the **Add Source** window:

   ▪ **HDMI**

   A high-quality external signal from a professional camera, computer, game console, etc. Up to 4K signal input is supported.

   ▪ **WEBCAM**

   A high-quality external signal from a USB device, such as webcam. Up to 1080p60 signal input is supported. For details, refer to Add WEBCAM

   ▪ **Video Clip**

   A video file selected from the internal storage, SD card or USB flash drive, which can be up to 4K, encoded in H.264, and in MOV, MP4, or MKV format.

   > To select files from the internal storage, you should import files to Director Mini device at first. Please refer to How to import/export files.

   ▪ **Picture**

   A picture file selected from the internal storage, SD card or USB flash drive, which can be JPG, PNG or BMP.

> To select files from the internal storage, you should import files to Director Mini device at first. Please refer to How to import/export files.

- **RTMP Stream**

  A streaming source pulled via RTMP. Please refer to Add RTMP Stream.

- **SRT Stream**

  A streaming source pulled via SRT. Please refer to Add SRT Stream.

- **Phone Camera**

  A camera signal from the phone installed with the Director Utility App. You can Add Phone Camera at first, and then use your phone to connect the device.

- **NDI Stream**

  A streaming source pulled via NDI® HX2 or NDI® HX3. Please refer to Add NDI Stream.

- **Text**

  Static annotations and crawling messages.

  Tap the text frame to enter content, and tap Save to return to the Scene Editor.

  > A maximum of 1024 characters are supported. The more text, the smaller the font appears. The font size also changes automatically with the text box size.

- **Color**

  A solid color source. It is white by default.

Notice:

- **In the same scene**, you can add a maximum of three sources, including HDMI, WEBCAM, RTMP/SRT/NDI Stream, Phone Camera and video clips, in which:

    - Each HDMI source and the WEBCAM can only be added once.

    - You can only add one video clip.

- **In the same show**, you can create up to 3 streams, including up to 2 NDI® HX2/NDI® HX3 streams.

- **In the same show**, you can create up to 3 Phone Cameras.
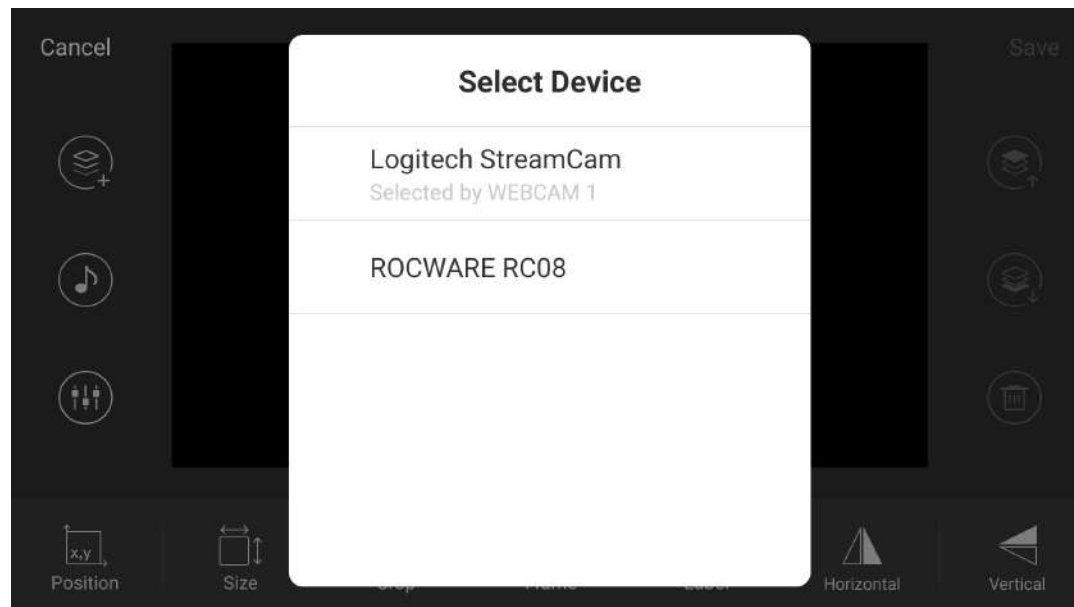
Add WEBCAM

1. Tap (icon) in the scene editor.

2. Select **WEBCAM 1** or **WEBCAM 2**.

3. Bind a webcam device to WEBCAM 1 or WEBCAM 2 occording to the following situations.

    - If one USB device is connected, choose **WEBCAM 1**, then the device will be bound with WEBCAM 1 automatically. When you add **WEBCAM 2**, no-signal screen will be displayed, vice versa.

    - If two or more USB devices are connected, when adding **WEBCAM 1** or **WEBCAM 2**, please select a device on the popup to bind.

You can refer to Changing WEBCAM's Properties to select or change the USB device bound to WEBCAM 1 or WEBCAM 2.

> When a USB AV device is added to the scene as a WEBCAM, the device only capture its video. To use the audio, tap (icon) > **MIC**, and then select the USB device as the microphone. For details, please refer to Volume Control.

Add RTMP Stream

1. Tap in the Scene Editor.

2. Tap **RTMP Stream**.

3. Enter the following information.

    ▪ **Name**: Specify an alias name for your convenience of multi-item management.

    ▪ **URL**: Enter the RTMP URL of then sender. To add a video stream from a live platform, you can get the RTMP URL from the platform.

    ▪ **Key**: Enter the key set on the sender.

4. (Optional) Tap **Advanced** to set the following parameters.

    ▪ **Buffer duration**: It ranges from 20ms to 8000ms, and the default value is 60ms. You can set a short duration when low latency matters.

    ▪ **Authentication**: If the RTMP sender requires authentication, toggle on **Authentication** and enter **Username** and **Password** provided by the RTMP sender.

5. Tap **Create**.

6. To add more RTMP streams, repeat step 1 and 2, tap **Create Stream**, and operate as step 3 to 5 to finish creation.

7. After a stream is added, its URL is recorded in the show. You can select an existing URL when you create a new scene or add a source to a scene.

8. To edit a stream URL, you can use the **URL** tool in the scene editor. For details, please refer to URL.

9. To delete a stream URL, you can delete all the scenes containing this stream, or delete the stream source in all the relative scenes.

Add SRT Stream

1. Tap ⬡ in the Scene Editor.

2. Tap **SRT Stream**.

3. Enter the following information.

   - **Name**: Specify an alias name for your convenience of multi-item management.

   - **Address**: Enter the IP address of domain name of the SRT sender.

   - **Port**: Enter the port of the sender. It ranges from 1 to 65535.

   - **Stream ID**: Enter the stream ID of the sender, which can contain 0 to 256 characters. You can leave it empty if the sender has no stream ID.

4. (Optional) Tap **Advanced** to set the following parameters.

   - **Latency**: Enter a number between 20 to 8000. The default value is 120. It is recommended that the latency is configured the same as that of the sender.

   - **Buffer duration**: The value ranges from 20ms to 8000ms. The default value is 60ms. You can set a short duration when low latency matters.

   - **Encrypted**: If the stream from the sender is encrypted, toggle on **Encrypted**, select the encryption mode, which can be AES 128, AES 192 or AES 256, and then enter the **Passphrase**.

5. Tap **Create**.

6. To add more SRT streams, repeat step 1 and 2, tap **Create Stream**, and operate as step 3 to 5 to finish creation.

7. After a stream is added, its URL is recorded in the show. You can select an existing URL when you create a new scene or add a source to a scene.

8. To edit a stream URL, you can use the **URL** tool in the scene editor. For details, please refer to URL.

9. To delete a stream URL, you can delete all the scenes containing this stream, or delete the stream source in all the relative scenes.
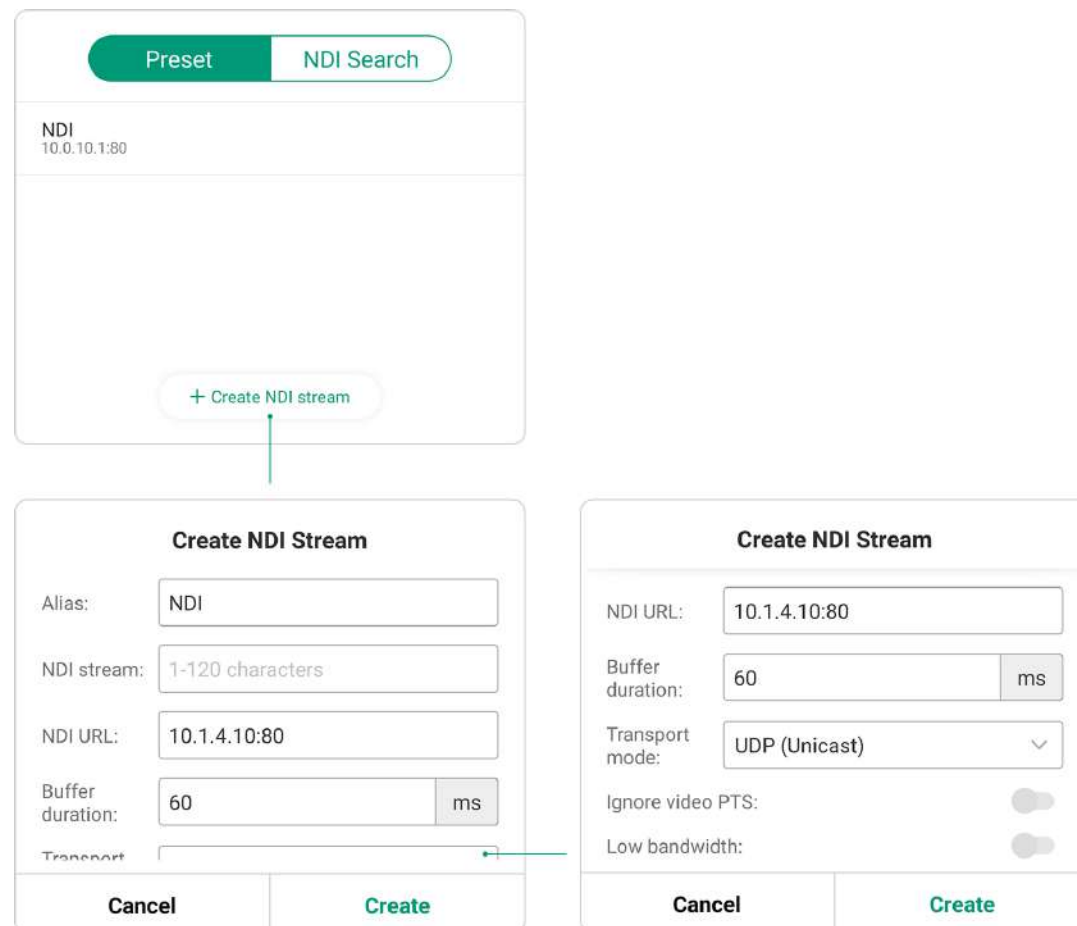
Add NDI Stream

Add NDI Stream Manually

1. Tap 🗇 in the Scene Editor.

2. Tap **NDI Stream**.

3. Tap the **Preset** tab, and then tap **Create NDI stream.**.

4. Enter the following information.

    -   **Alias**: Specify an alias name for your convenience of multi-item management.

    -   **NDI stream**: Enter the stream name of NDI source, which is case-insensitive.

    -   **NDI URL**: Enter the stream address of NDI source formed like "ip address:port". For example, if you want to add a source named PRO CONVERT (#00 (A409200420003)) 192.168.1.1:5961, fill in the parameter with 192.168.1.1:5961.

    > Either a name or a URL is required when adding a new NDI source.

> Ensure that the two properties are those of the same unit when you are filling in them both.

- **Buffer duration**: The value ranges from 20ms to 8000ms. The default value is 60ms. You can set a short duration when low latency matters.

- **Transport mode**: Options include UDP (Unicast), UDP (Multicast), RUDP (Unicast), TCP (Uni-connection) and TCP (Multi-connection).

- **Ignore video PTS**: For some video streams with wrong timestamps, toggle on this function to ensure smooth video output.

- **Low bandwidth**: It is recommended to enable this function when the connected network speed is too low to output smooth video. When toggled on, the video stream drops to medium quality and uses significantly less bandwidth.

5. Tap **Create** to add the stream to the scene.

6. Repeat the steps above to create more NDI streams.
   When multiple NDI streams are created, you can select one to add to a scene.

7. To edit an existing NDI stream, swipe the stream to the left, and tap **Edit**.

8. To delete an existing NDI stream, swipe the stream to the left, an tap **Delete**.
   If a NDI stream is in one or more scenes, it cannot be deleted. Please delete the source in relative scenes at first, and then delete it.
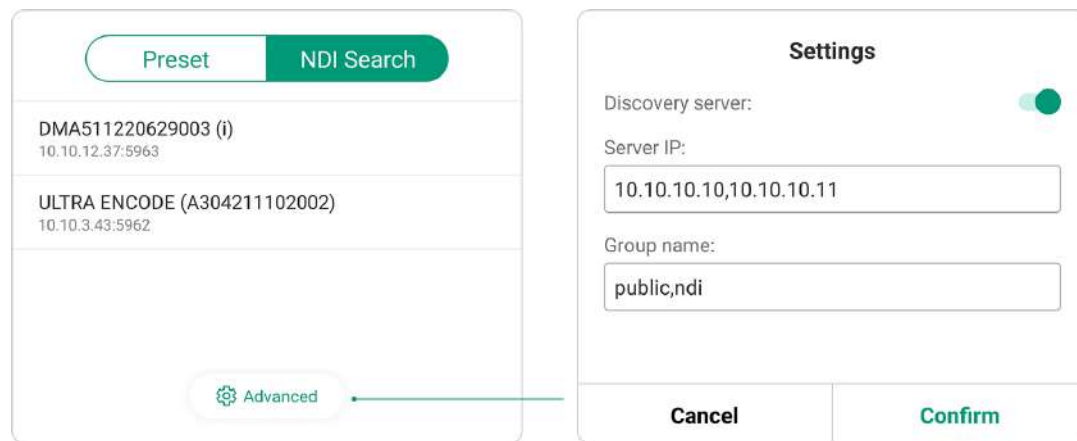
Search NDI Stream Automatically

1. Tap ⊕ in the Scene Editor.

2. Tap **NDI Stream**.

3. Tap **NDI Search**, and it starts searching NDI sources in the same LAN. By default, it searches NDI sources of the public group.

4. Tap **Advanced**, enter **Group name**, and tap **Confirm**. Then it starts searching sources in corresponding group(s).
   Group name is case-insensitive, and should contain A to Z, a to z, 0 to 9 and special characters like _-. The group name entry can contain comma-separated values, allowing the device search all the groups listed here.

5. If you toggle on **Discovery server**, it can auto-detect a source sender in different network segment but be able to ping. And the Server IP should be the IP address of the server running discovery server software.

6. Select a detected NDI source in the list to add to the scene. And it is added to the **Preset** list at the same time.
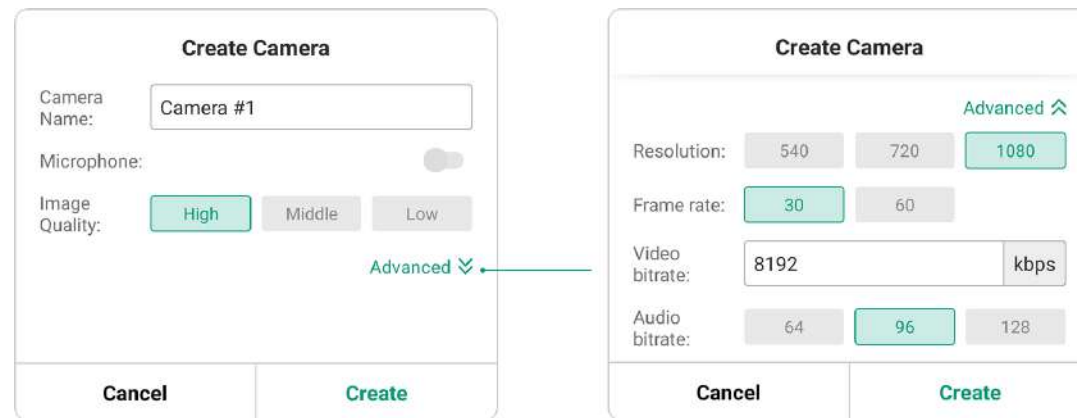
Add Phone Camera

To use the image from your phone's camera as a source, you have to create Phone Camera on the device at first.

1. Tap in the Scene Editor, and then select **Phone Camera**.

2. Enter the camera name (1 - 32 bytes).

3. Toggle on Microphone, so that the Director Mini device can capture audio from your phone's microphone.

4. Select the image quality: High, Middle, Low.

5. (Optional) Tap **Advanced** to set relative properties.

   - Resolution: 540, 720, 1080

   - Frame rate: 30, 60

   - Video bitrate: enter your preferred value.

   - Audio bitrate: 64, 96, 128

6. Tap **Create**.

7. To create more cameras, repeat step 1, and then tap **Create camera** in the **Select Phone Camera** window to add a new camera.

   You can create up to three cameras in a show.

After you have created Phone Cameras on the device, you can use your phone installed with the Director Utility App to connect to device and control the camera. Please refer to the *Director Utility App User Manual.*

Change Z-Order

Z-order is an ordering of overlapping sources. You can change the z-order to have a source appearing in front of other sources.

1. In the Scene Editor, tap a source to select it.
2. Tap ⬙ to move the selected source to an upper layer.
3. Or tap ⬙ to move the selected source to a lower layer.

Delete a Source

1. In the Scene Editor, tap a source to select it.
2. Tap 🗑 to delete the selected source.

Editing Tools

When a source is selected, editing tools for that source appear in the bottom toolbar. The table below lists all the editing tools for each type of source.

Tool	HDMI	WEBCAM	Phone Camera	SRT/RTMP Stream	NDI Stream	Video Clip	Picture	Text	Color
Select, Move, Resize & Rotate	✪	✪	✪	✪	✪	✪	✪	✪	✪
Position	✪	✪	✪	✪	✪	✪	✪	✪	✪
Size	✪	✪	✪	✪	✪	✪	✪	✪	✪
Frame	✪	✪	✪	✪	✪	✪	✪	✪	✪
Crop	✪	✪	✪	✪	✪	✪	✪	–	–
Label	✪	✪	✪	✪	✪	✪	✪	–	–
Transition	✪	✪	✪	✪	✪	✪	✪	✪	✪
Format	✪	✪	✪	✪	✪	✪	✪	✪	✪
Text	–	–	–	–	–	–	–	✪	–
Background	–	–	–	–	–	–	–	✪	–
Flip	✪	✪	–	–	–	–	–	–	–
Keyer	✪	✪	✪	✪	✪	✪	–	–	–
Play Range	–	–	–	–	–	✪	–	–	–
Action	–	–	–	–	–	✪	–	–	–
Property	–	✪	✪	–	–	–	–	–	–
URL	–	–	–	✪	✪	–	–	–	–
Browse	–	–	–	–	–	✪	✪	–	–
Color	–	–	–	–	–	–	–	–	✪
Transparency	–	–	–	–	–	–	✪	–	✪
PTZ Control	✪	✪	–	✪	✪	–	–	–	–
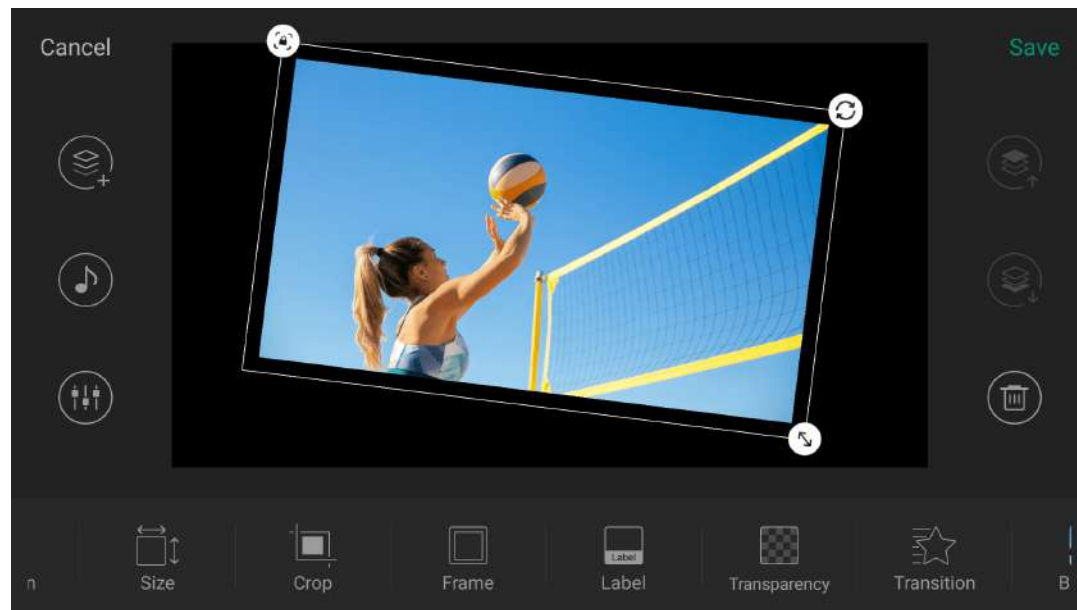
Select, Move, Resize & Rotate

All kinds of sources can be selected, moved, resized and rotated.

To select a source:

Tap a source so that it will be selected with a white frame surrounded.

To move a source:

Drag and move the selected source to a new position.

When dragging a source around, guidelines will appear for you to align the source with other sources and the Scene Editor.

To control the position more precisely, see Position.

To resize a source:

1. (Optional) Tap [icon] or [icon] on the selected source's frame to unlock/lock the aspect ratio of the selected source.

    This operation is not available for a Text source.

2. Drag [icon] (for locked aspect ratio) or [icon] (for unlocked aspect ratio) on the source's frame to scale it up and down.

    After you tap [icon] to unlock the aspect ratio and drag [icon] to freely resize a source, you can tap [icon] to restore to the original aspect ratio.

When resizing a source, smart guides will appear for you to scale the source in reference to other sources and the Scene Editor.

To control the size more precisely, see Size.

To rotate a source:

Press and rotate ⟳ on the selected source's frame.

To control the rotation more precisely:

1. Tap **Position** or **Size** at the bottom bar.

2. Tap the X or Y number (on the **Position** control), or the W or H number (on the **Size** control).

3. On the page displayed, set **Angle**.

4. Tap **Save**.

Position

Apart from dragging and moving a source to change position, you can also tap **Position** to set position more precisely.

- **X, Y:** Tap the number to specify the X and Y coordinates of the source's center. Or tap or long-press an arrow button to move the source horizontally/vertically.

- **Auto:** Automatically move a source to a specified position. Nine positions are available, as shown in the image on the left.

Size

Apart from dragging ⊘ on a source's frame to scale it up and down, you can also use the **Size** control to set size more precisely.

- **W, H:** Tap the W or H number to specify the width and height in pixels of the source. Or tap +/- to scale up/down the source.

> The value ranges for W and H are as follows:
>
> **When the aspect ratio is locked (indicated by the ⊙ icon on the source frame):**
>
> - W: 0 to 1280 or 1920 pixels, depending on the resolution of your show
>
> - H: 0 to 720 or 1080 pixels, depending on the resolution of your show
>
> - When the value of W changes, the value of H changes accordingly, or vice versa.
>
> **When the aspect ratio is unlocked (indicated by the ⊙ icon on the source frame):**
>
> - W: 0 to 1280 or 1920 pixels, depending on the resolution of your show
>
> - H: 0 to 1280 or 1920 pixels, depending on the resolution of your show

- **Full Screen:** Tap this button to expand the source to full screen.

    - When you lock the aspect ratio, a source is expanded to full screen when either its width or height reaches that of the canvas.

    - When you do not lock the aspect ratio, a source is stretched to fill the whole canvas, in which case the source can be distorted.

- **More:** You can tap or long-press one of the buttons to scale up/down the source towards the corresponding direction. Tapping changes the size by one pixel while long-pressing changes the size continuously.

    - [icon] [icon] [icon] [icon] : Scales up a source to a specified direction, as indicated by the arrow in the icon.
      The buttons are unavailable when your source is already at the largest size.

    - [icon] [icon] [icon] [icon] : Scales down a source to a specified direction, as indicated by the arrow in the icon.
      The buttons are unavailable when your source is already at the smallest size.
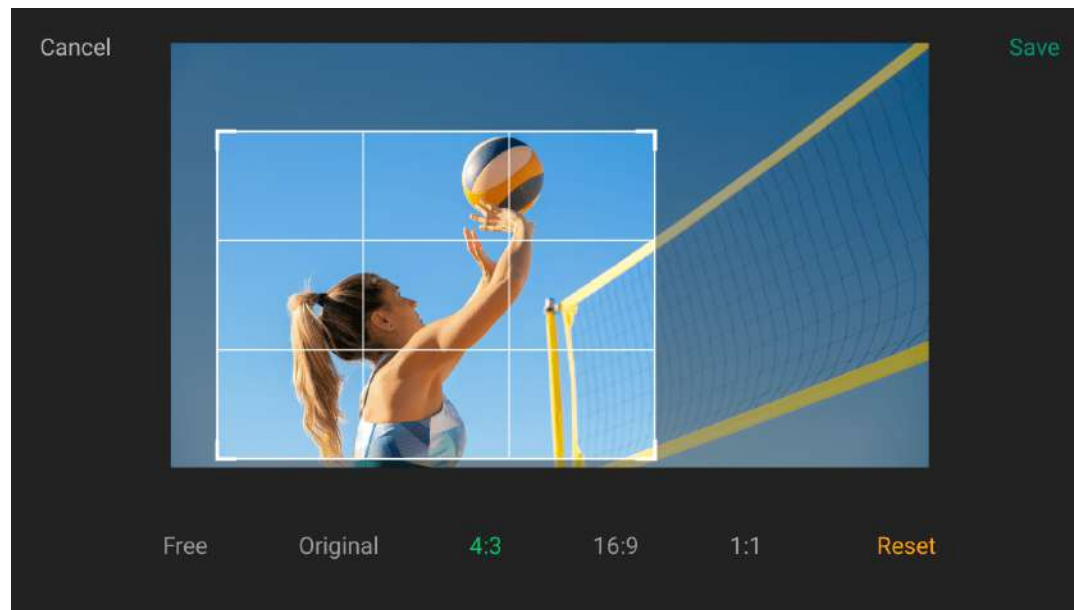
Crop

Cropping allows only part of the source to be rendered in the scene. All sources except text and color can be cropped.

1. Tap **Crop** in the toolbar.

2. Select a cropping ratio.

3. Drag the corner handles to specify the crop boundaries.

> Tap **Reset** to revert to the original size and aspect ratio of the source.

4. Tap **Save** to save changes and go back to Scene Editor.
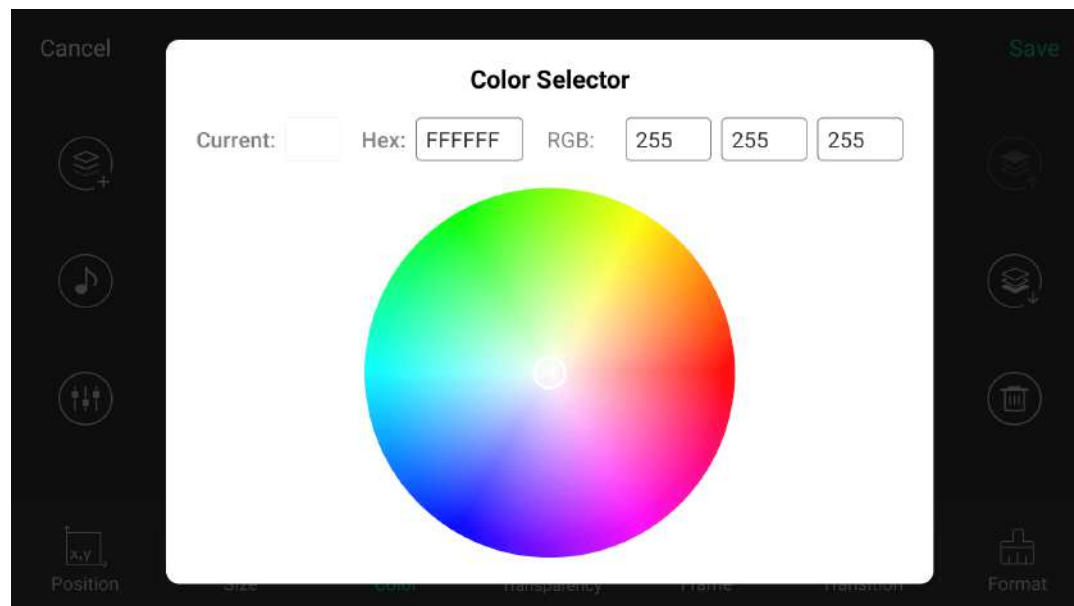
Color

This function works with the color source. It is also a sub-function of other tools, such as text and background.

1. Tap **Color**.

2. Swipe the color bar to the left or right to choose a color.

3. If the color provided by the system cannot meet the needs, swipe the color bar to the far right, tap ⬤ to open the color selector.

- Tap to select a color in the color wheel.

- Or enter the HEX code or RGB value.

Transparency

This feature works with the color and picture source. It is also a sub-function of other tools, such as text and background.

Tap **Transparency** and move the slider to adjust the transparency. It ranges from 0 (solid) to 100 (completely invisible).

Frame

You can decorate a source with a **Frame**.

A frame is defined by the following properties:

- **Weight:** Sets the frame's border weight. It ranges from 0 to 50 pixels, with 0 indicating no frame.

- **Color:** Sets the frame's color, with white as the default.

- **Corners:** Sets the frame's corner radius, which can range from 0 to 100. When the **Round** value is zero, all corners are squared; otherwise, all corners are rounded accordingly.

- **Position:** Sets the frame's position to be inside or outside the source. It is inside the source by default, which means that the frame overlaps the source.

- **Reset**: Erases the frame.

> ☼ When you tap **Frame**, a basic white frame is instantly added on the source.

Label

When you tap **Label**, the source is instantly labeled by its type name or file name. You can change the text and its properties to make a special mark.

This tool is available for all sources except text and color.

1. Tap the text area and then change the text.

> A maximum of 1024 characters are supported in total. The more text that is input, the smaller the font will appear. The font size also changes automatically with the label size.

2. Set properties of label.

-   **Theme:** Sets the label's theme color, with white as the default. If the theme provided by the system cannot meet your needs, swipe the theme bar to the far right, tap **Custom**, and then tap **Text** and **Background** to set the color of text and background.

-   **Dock:** Sets the label's direction (bottom, top, left or right).

-   **Position:** Sets the label's position (inside or outside the source). The default position is inside the source, which means that the label and source are overlapped.

-   **Size:** Sets the label's height, ranging from 0 to 45, which indicates the proportion of the label height to the source height. The default value is 30.

-   **Font:** Sets the label text's font.

-   **Alignment:** Sets the alignment (left, center or right) of the label text.

-   **Reset**: Removes the label.

Transition

Tap **Transition** to add dynamic effects to your sources.

This tool is available for all sources.

Add entrance transition:

Tap **In** and select an entrance effect from the **All** tab or any other category tab.

-

  None: No entrance transition (default).

-

  Fade: Fade in.

-

  Fly: Fly in from 4 directions, as indicated by the arrows.

-

  Expand: Expand in from 6 directions, as indicated by the arrows.

-

  Zoom: Zoom in from 9 directions, as indicated by the arrows.

After you select an entrance transition for the first time, Director Mini automatically sets the corresponding exit transition for you. For example, when you set the entrance transition as , the exit transition is set to . You can change the exit transition effect.

Add exit transition:

Tap **Out** and select an exit effect from the **All** tab or any other category tab.

-

  None: No exit transition (default)

-

  Fade: Fade out.

-

  Fly: Fly out to 4 directions, as indicated by the arrows.

-

  Collapse: Collapse out to 6 directions, as indicated by the arrows.

-

  Zoom: Zoom out to 9 directions, as indicated by the arrows.

> After you manually change the exit transition, the entrance transition will not change accordingly. The exit transition will not change along with the entrance transition thereafter.

Change transition speed:

Tap **Duration** and move the slider.

It applies to both the entrance transition and exit transition. A longer duration means a slower transition.

Erase transition:

Tap **Reset** to erase transition effects.

You can check the transition effect on second screen, recording video or streaming target.

Text

This tool applies to the Text source.

Tap **Text** at the toolbar to define the following properties:

- **Color:** Sets text color.

- **Font:** Sets text font.

- **Case:** Sets text to all uppercase or lowercase.

- **Alignment:** Sets text alignment (left, center or right).

- **Transparency:** Sets text transparency.

- **Shadow:** Applies a shadow to the text. 0 indicates no shadow.

- **Crawl:** Makes the text crawling on the screen by specifying the crawling speed and direction. Speed 0 means no crawling.

- **Reset:** Reverts to the original properties.

Background

This function applies to the Text source.

Tap **Background** to define the following properties:

- **Color:** Specifies a solid color as the text background.

- **Gradient:** Specifies a gradient color as the text background.

- **Picture:** Specifies a picture as the text background. The picture format can be JPG or PNG.

- **Transparency:** Sets the transparency of text background.

- **Reset:** Clears the background.

> Color, Gradient and Picture are mutually exclusive. Applying one will overwrite the other.

Flip

This tool applies to HDMI and webcam sources.

- Tap ◺ **Horizontal** to flip the source from left to right.

- Tap ◺ **Vertical** to flip the source from top to bottom.

Keyer

Keyer can remove the background of HDMI, WEBCAM, SRT/RTMP stream, NDI$^{®}$ HX2/NDI$^{®}$ HX3 stream, Phone Camera and Video sources.

1. Tap **Keyer**, and the system implements keying with an auto algorithm.

2. Tap **Key color**, and select a color to key.
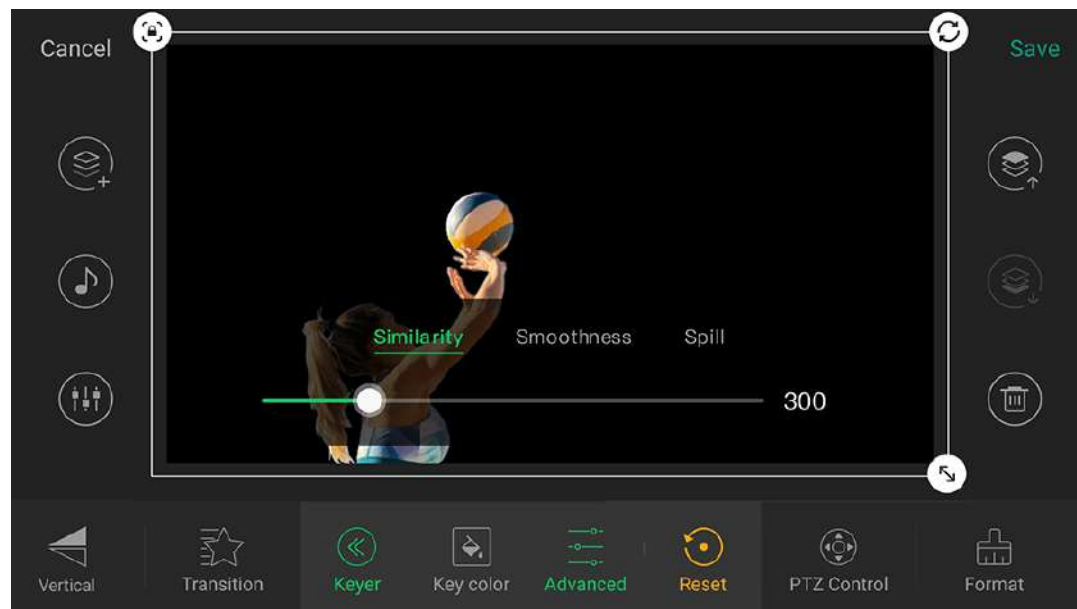
3. If you want to key other color, tap ![pen] to open the color setting page, tap on the preview image to select a color, or enter RGB value at the bottom, and then tap **Save**.

4. With ![pen] selected, you can tap **Advanced** to adjust Similarity, Smoothness and Spill.

5. To cancel keying, tap **Reset**.

To get a good effect, you can build the background as follows.

- Use a bright green or blue screen. The contrast in colors makes it easier to distinguish you in the foreground from the bright background. Professional physical green screens are recommended.

- Make sure the background is flat without any wrinkles or seams, avoiding shadows and uneven lighting.

- Use higher quality cameras.

- Ensure that your background color does not match your shirt, hair, or eye color.

- Adjust your distance from the background to avoid color spill due to getting too close.

- Use uniform lighting to make the background receive light evenly, and avoid your shadow falling on the background. It is recommended to use a 3-point lighting setup.
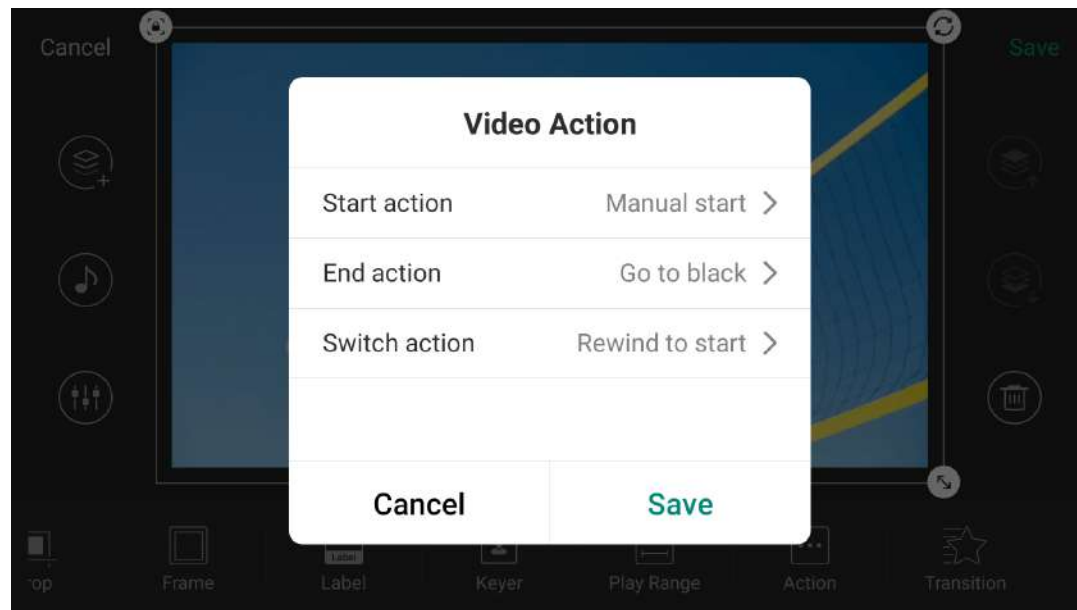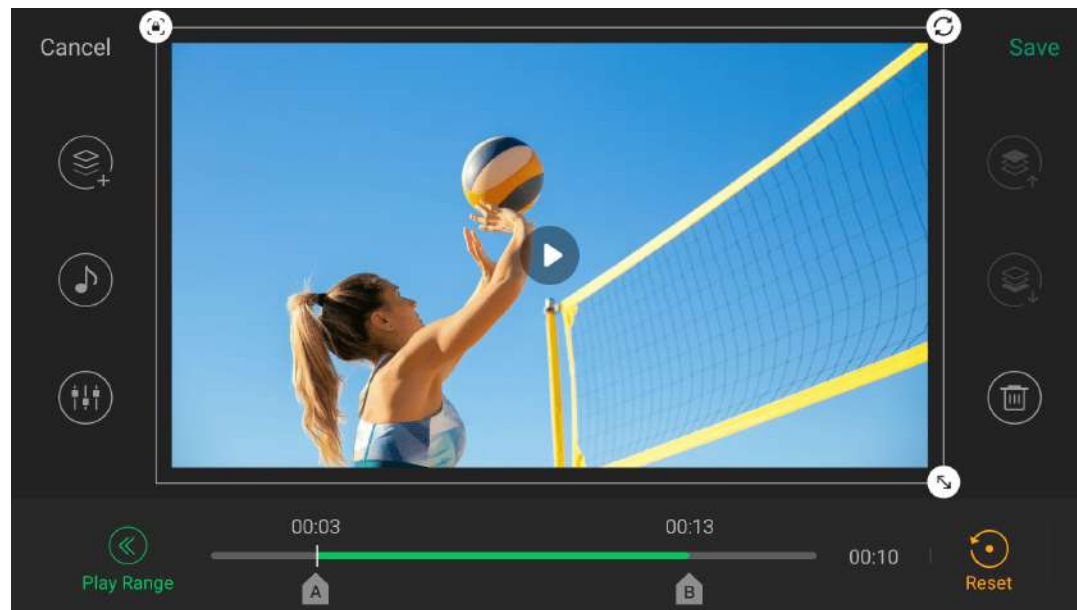
Action

This function applies to the Video Clip source.

Action define how a video source is played.

- **Start action:** Defines how video playback is started.

    - **Auto start:** Starts to play the video automatically.

    - **Manual start:** Starts to play or pause the video by tapping the Play/Pause button on the scene thumbnail.

- **End action:** Defines the action to take when the video playback is over.

    - **Go to black:** Video area turns black.

    - **Repeat video:** Plays the video repeatedly.

    - **Show last frame:** Stops the video and displays the last frame.

    - **Show first frame:** Stops the video and displays the first frame.

    - **Hide video:** Hides the video, which makes the video disappear from the screen.

    - **Switch to scene xx:** Switches to scene xx automatically. When the video is playing back, the scene to switch to will be highlighted with a flashing yellow frame, a LIVE SOON mark and a countdown clock during the last 10s of the current video.

- **Switch action:** Defines how the video is continued if the scene is switched out to another scene and then back before the video playback ends.

    - **Rewind to start:** Replays the video from the beginning.

    - **Pause video:** Pauses the video when the scene is switched out, and resumes when the scene is switched back.

Play Range

This function applies to the Video Clip source.

An entire video will be played by default, but you can specify a start and end point if you wish to only play part of a video.

As shown in the figure on the left, you can drag and move A and B tags on the video's progress bar to define start and end points.

Browse

This function applies to the Video Clip and Picture sources.

Tap **Browse** to open the storage, where you can select an image or a video clip to replace the current image or video.

The replacement will not change the configured properties of the Video or Picture source except its size and position.
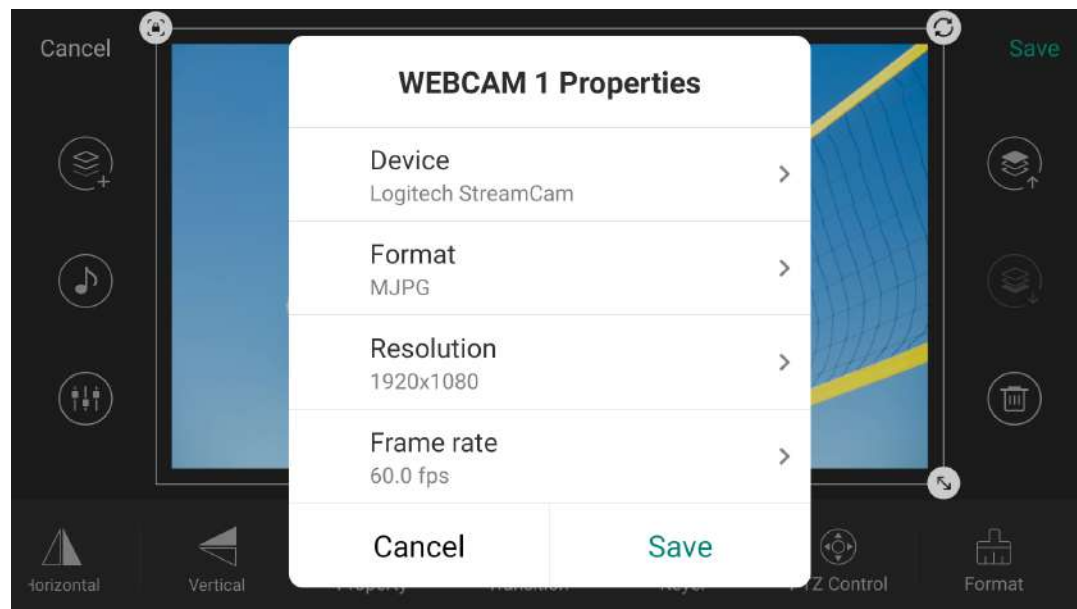
Property

This tool applies to the WEBCAM and Phone Camera.

Change WEBCAM's Properties

1. Ensure that a WEBCAM is connected to the device.

2. Select the WEBCAM source.

3. Tap to open the WEBCAM Properties window.

4. View and select properties of the WEBCAM.

   - **Device**: the information of current WEBCAM. Tap **Device**, and it lists all the connected WEBCAM devices. You can select one to switch. If one device is bound with the other WEBCAM, you need to confirm the selection after you tap Save.

   - **Format**: the current format. Tap **Format**, and it lists all the available format options. You can select one to switch.
   Supported formats: YUYV, MJPG, NV12

   - **Resolution**: the current resolution. Tap **Resolution**, and it lists all the available resolution options. You can select one to switch.
   Supported resolution: up to 1920x1080

   - **Frame rate**: the current frame rate. Tap **Frame rate**, and it lists all the available frame rate options. You can select one to switch.
   Supported frame rate: up to 60fps

   > The changeable properties and parameters of different WEBCAM devices may differ.

5. Tap **Save** after you change properties.
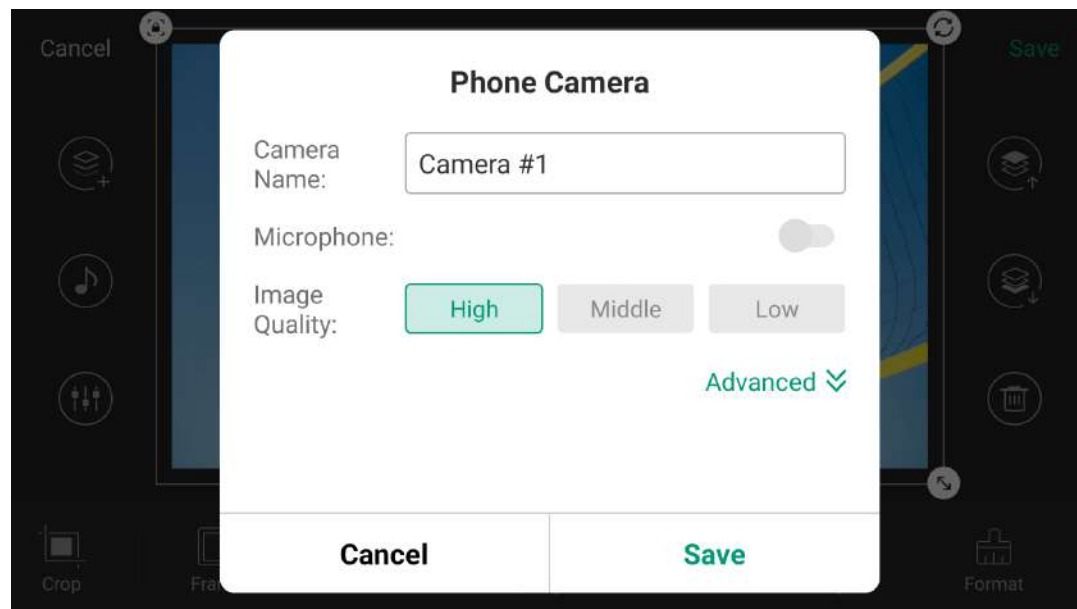
Change Phone Camera's Properties

1. Select a Phone Camera source.

2. Tap ⌗ to open the Phone Camera window.

3. Change properties as needed. For details, please refer to Create Phone Camera.

4. Tap **Save** after you change properties.
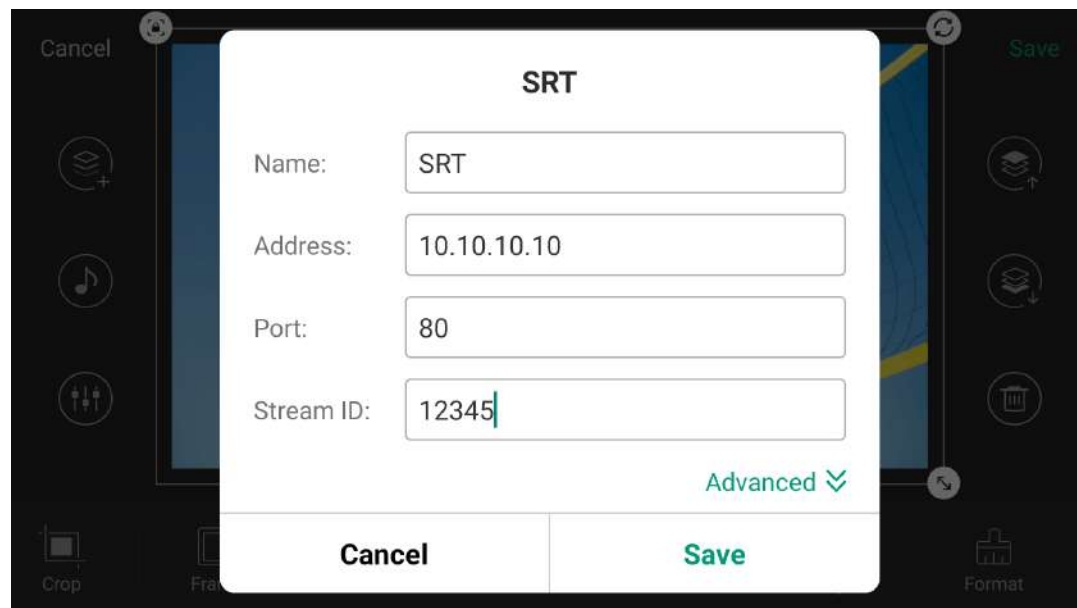
URL

This tool applies to the SRT/RTMP stream and NDI® HX2/NDI® HX3 stream.

1. Tap 🌐 URL to open the stream's property window.

2. Change properties as needed. For details please refer to Add RTMP Stream, Add SRT Stream and Add NDI Stream.

3. Tap **Save**.
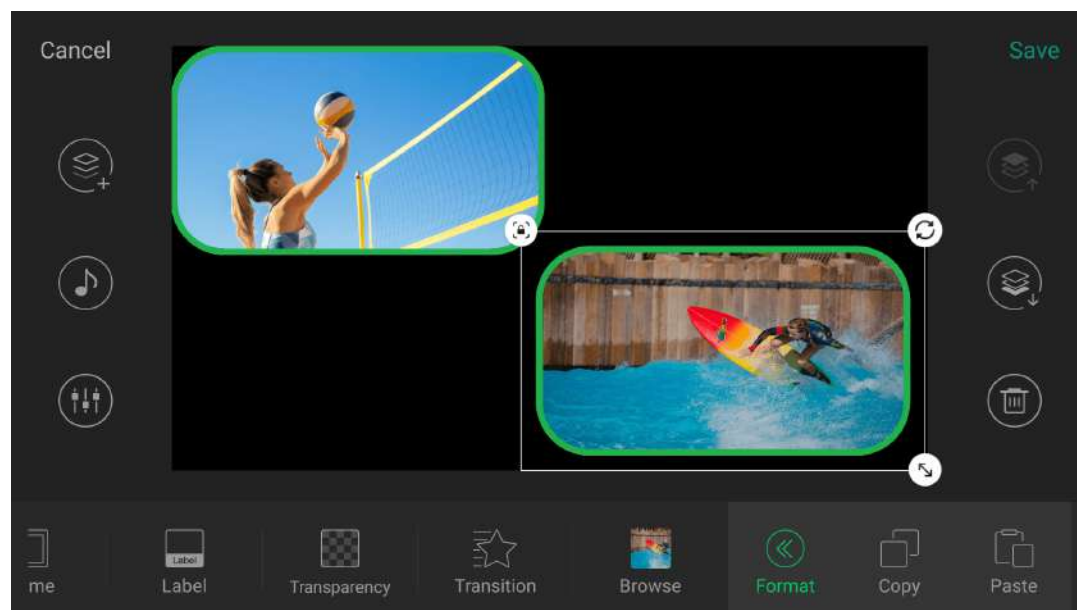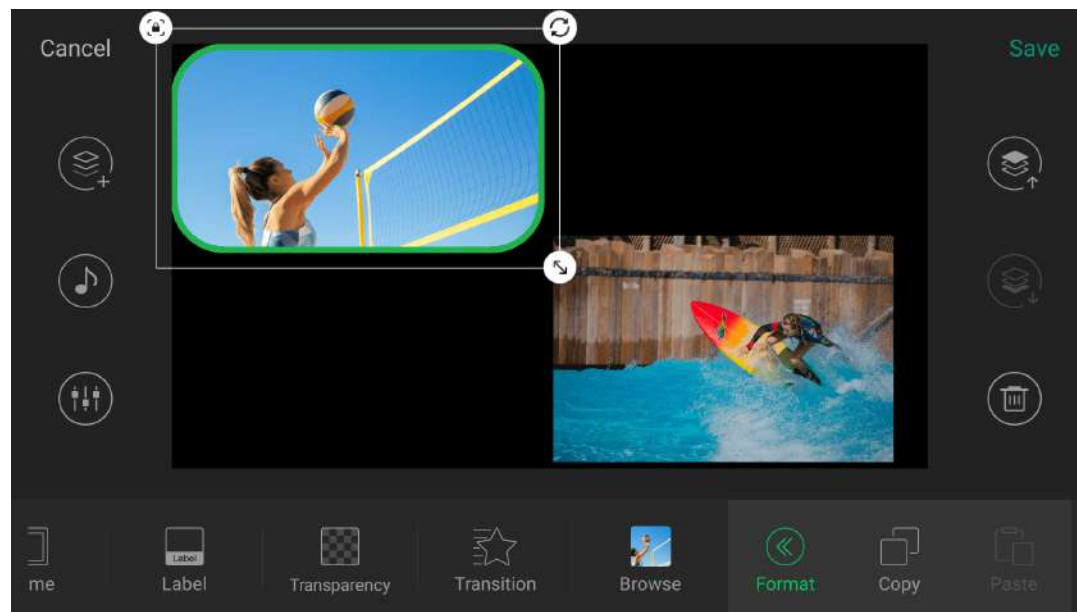
Format

This function can copy the format of one source and past to another source.

This tool is available for all sources. The format function of text source takes effect independently, that is, the format of a text source can only be pasted to another text source.

1. Select a source, tap **Format**, and then tap **Copy**. The format of current source is copied.

2. Select another source, tap **Format**, and then tap **Paste**. The copies format is pasted to the current source.
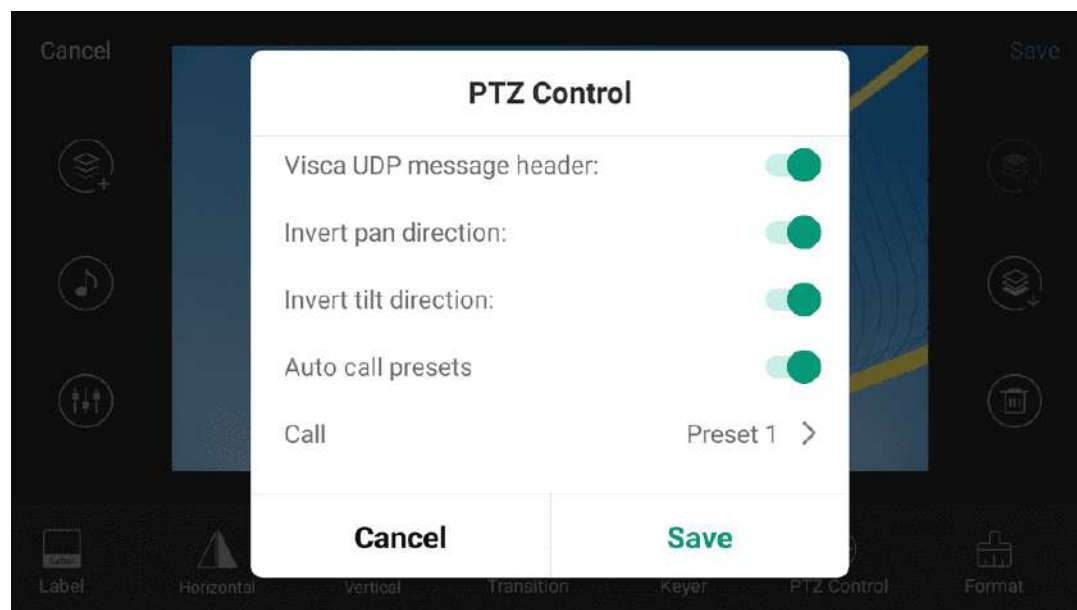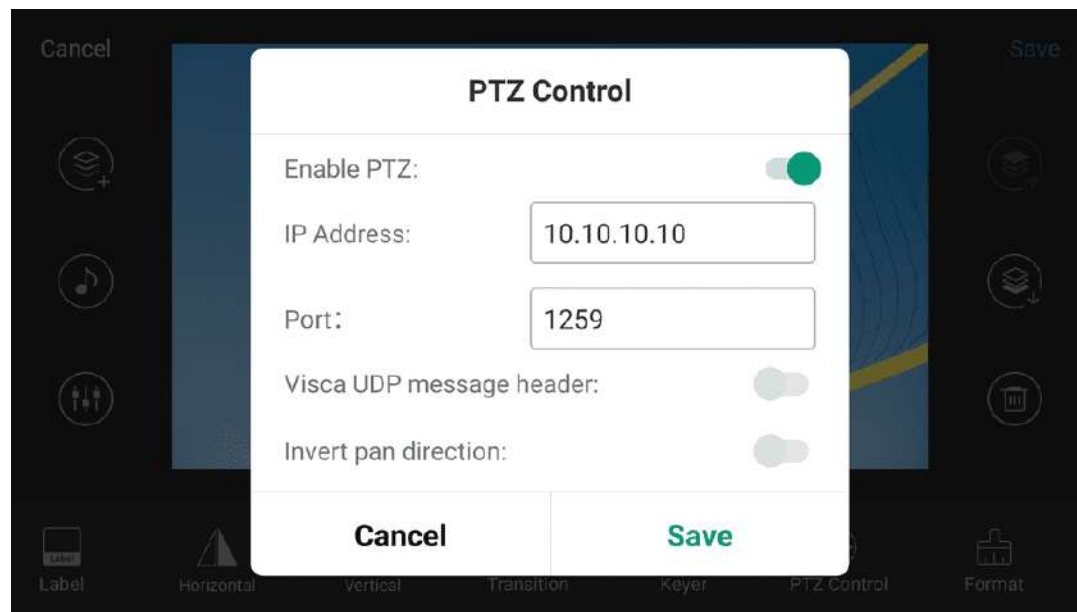
PTZ Control

When a source is connected with a PTZ camera supporting Visca UDP, you can enable this function to control the PTZ camera through the network. The PTZ camera and Director device must be able to ping each other. Supported sources include HDMI, WEBCAM, SRT and RTMP.

When the NDI source is connected with a PTZ camera, you can also setting relative properties.

- **Enable PTZ**: Toggle on to enable PTZ control. (Not available for NDI)

- **IP Address**: The IP address of your camera. (Not available for NDI)

- **Port**: Your camera's Visca protocol network port (Check the user manual of the camera or contact the manufacturer to get it). (Not available for NDI)

- **Visca UDP message header**: Toggle on this option if your camera's (e.g. SONY camera) communication protocol contains the Visca UDP header. Or else, the Director device may not be able to control the PTZ camera. (Not available for NDI)

- **Invert pan direction**: Toggle on to reverse the pan-direction movement. You can enable this option to make control more intuitive when the camera is not installed in the normal position.

- **Invert tilt direction**: Toggle on to reverse the tilt-direction movement. You can enable this option to make control more intuitive when the camera is not installed in the normal position.

- **Auto call presets**: Toggle on and select a preset. When the scene is switched to program, the camera moves to the selected preset position automatically. For how to set presets, please refer to PTZ Control.

Background Music

You can add background music to a scene to enrich your show.
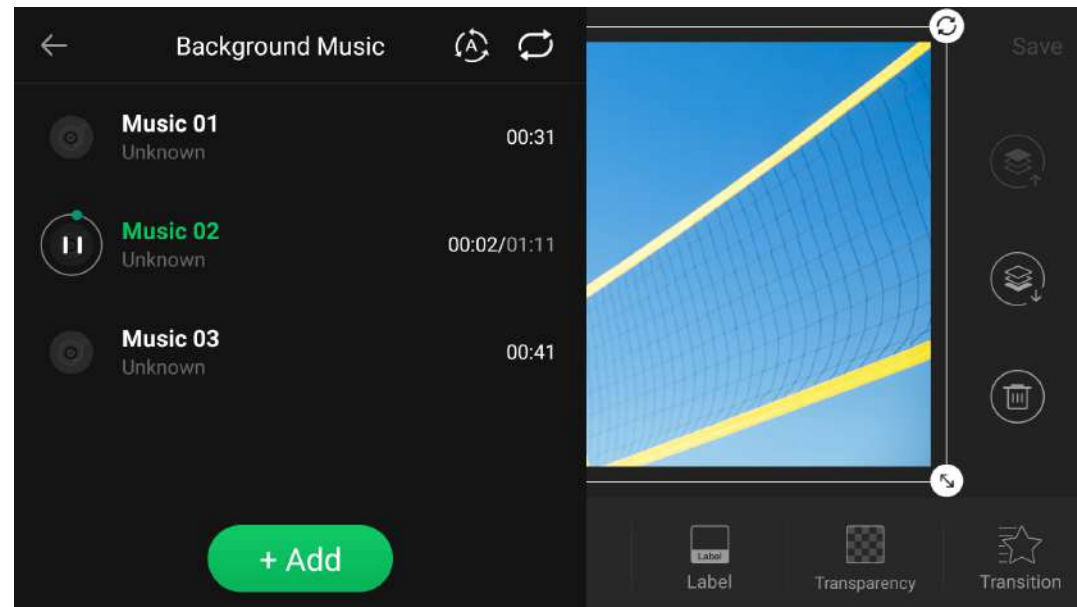
1. On the main screen, long press a scene thumbnail and tap **Edit** to open the Scene Editor.

2. Tap [♪], select a storage path, and then select an audio file to add. Supported formats are MP3, M4A, WAV files.

3. The **Background Music** page pops out, and you can:

    ▪ Add more songs by tapping **+ Add**.

    ▪ Start or pause a song by tapping on the song.

    ▪ Delete a song by swiping the song to the left and tapping [🗑] .

    ▪ Set the music start policy at the upper right corner.

        ○ [Ⓐ] : automatically start (default policy)

        ○ [↻] : manually start

    ▪ Set the music playback policy at the upper right corner.

        ○ [↻] : Repeat the playlist. (default policy)

        ○ [↻①] : Repeat the selected song.

        ○ [⤫] : Shuffle the playlist.

4. Exit the **Background Music** page by tapping [←] or taping other area on the screen.

Present Your Show

Director Mini provides lots of tools for conveniently presenting your show and adding eye-catching effects, making your show more professional and attractive.
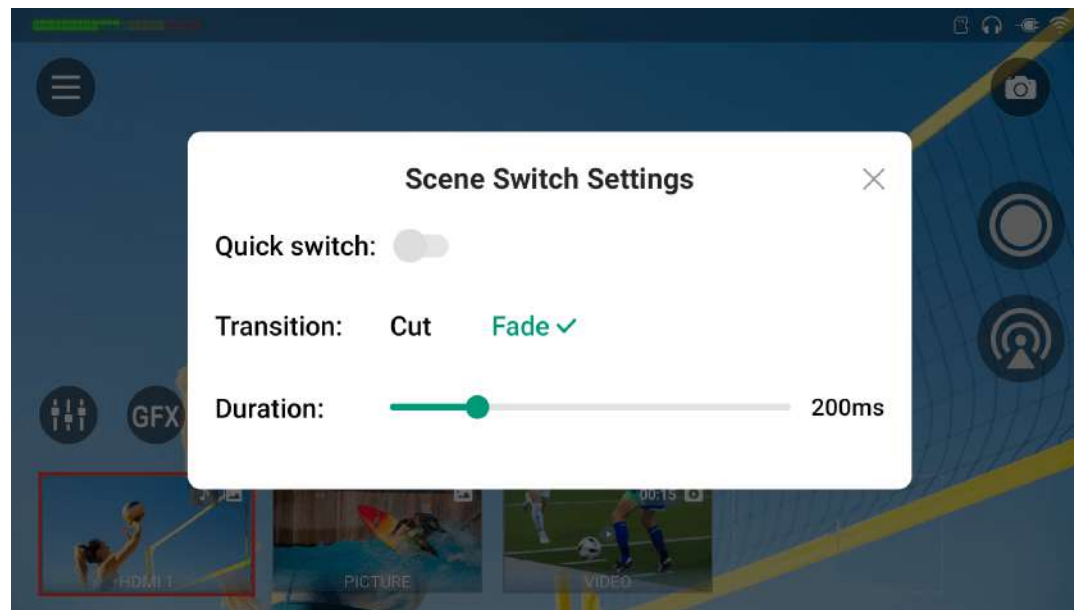
Switch Scenes

Director Mini supports switching scenes with quick mode or manual mode, and supports setting transition effect.

Quick Switch

Tap thumbnails in the scene list to switch scenes directly.

Manual Switch

With manual switch, you can set and preview the content to program. After you confirm everything is OK, you can program the scene.

1. Tap , and select **Scene Switch Settings**.

2. Toggle off the switch of **Quick switch**, it goes to the manual switch mode. To enable the quick switch mode, toggle on the switch.

3. Tap the thumbnail of next scene to program in the scene list. The main screen displays the preview content. The program scene thumbnail has a red frame, while the preview scene thumbnail has a white frame and a Switch button.

> The output image is the scene in Program view.

4. Adjust the audio volume, select elements to go with the preview scene to program, such as a GFX, and check everything is OK.

> If a video clip is contained in the preview view, it will execute the configured start action and end action. Here are two actions differing from that in the program view.

- If it is set to "Manual start", you can tap the Play button in the center of the video clip to start to play while tap the center again to pause.

- If it is set to "Switch to scene x", it does not switch when the video clip ends, but displays the last frame.

5. Tap the Switch button on the preview scene thumbnail, and the scene goes to program.

> If a video clip is contained in the scene, after going to program, it re-executes the configured actions. The play progress in the preview view will not take effect.

Set Transition Effect

You can set transition effect for fluent scene transition.

1. Tap ⊙ , and select **Scene Switch Settings**.

2. Tap **Cut**, and images switches directly when you switch scenes. (Default)

3. Or tap **Fade**, and set **Duration**, ranging from 50ms to 1000ms with the default value as 200ms. Then, it switches scenes with the fade effect.

You can also change scene switch settings in the **Settings**. For details, see Scene Switch.

FTB

The FTB (Fade to Black) function allows your show to fade into black during streaming or recording, with no video nor audio output. This function is most often used at the end of a scene or show.

- Tap ⓧ, and select FTB.

    Your audio/video output will be stopped. Your audience can only see a silent black screen.

- To continue your show, tap ⓧ > FTB.

    Your show will go back to the screen and continue.

Freeze Scene

You can freeze dynamic images while streaming or recording.

- To freeze the scene, tap ⊙ and select **Freeze**.

- To unfreeze the scene, tap ⊙ and select **Unfreeze**.
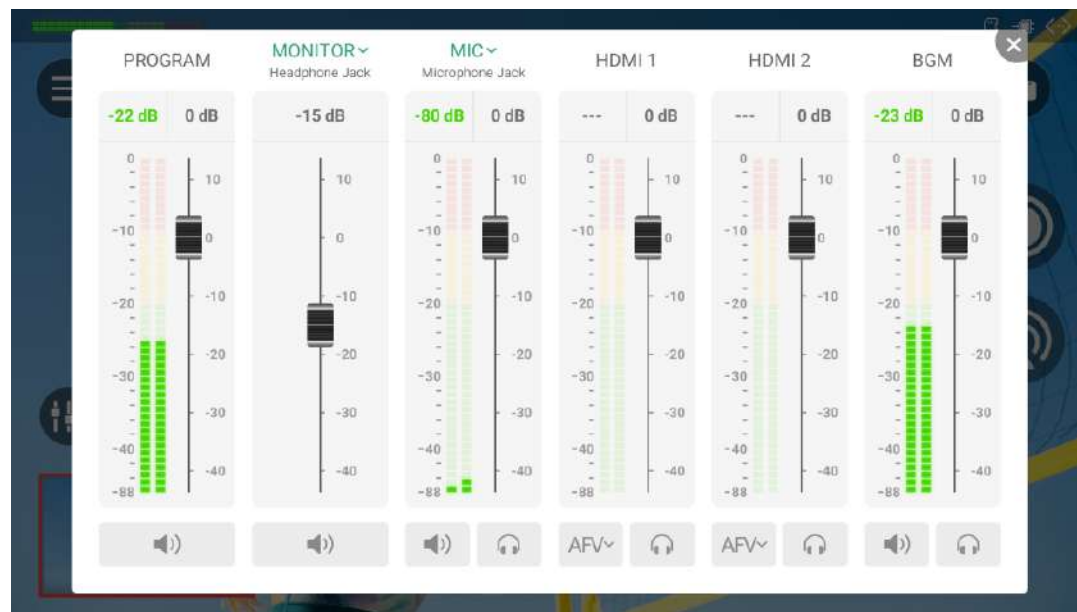
Volume Control

The audio mixer is used to mix connected audio sources, external audio sources and built-in audio from BGM and video clips. You can access the audio mixer by the following ways.

- Tap ⊞ on the main screen.

- Long-press a thumbnail on the scene list, select **Edit** on the popup to enter the scene editor, and then tap ⊞ .

Audio Type

Scroll the audio mixer to view all the audio sources.

- **PROGRAM**: Output audio of the program scene, for streaming or recording.

- **PREVIEW**: Output audio of current previewing scene, only displayed during manual switch.

- **MONITOR**: Audio output for monitoring. Tap **MONITOR** to set the following properties.

  - **Select Device**: select a device as the monitor.

    - Headphone Jack: device connected to the headphone jack.

    - Bluetooth Device: device connected through BT

    - *USB device*: device(s) connected to the USB 3.0 port(s). The system automatically lists device name(s).

  - **Monitor Options**:
    Toggle on/off the switch of **MIC Input** to set whether to monitor the microphone. It is toggled on by default.

- **MIC**: Audio of global microphone. Tap **MIC** to select a microphone device.

- Microphone Jack: device connected to the microphone jack.

- HDMI 1: device connected to the HDMI 1 port.

- HDMI 2: device connected to the HDMI 2 port.

- USB device：device(s) connected to the USB 3.0 port(s). The system automatically lists device name(s).

- SRT stream: audio from the SRT stream, displayed with the self-defined name.

- RTMP stream: audio from the RTMP stream,displayed with the self-defined name.

- NDI stream: audio from the NDI stream, displayed with the self-defined alias.

- Phone Camera: audio from the phone's microphone, displayed with the self-defined name.

- **HDMI**: Audio from an HDMI source.

- **RTMP Stream**: Audio from the RTMP stream source, displayed with the self-defined name.

- **SRT Stream**: Audio from the SRT stream source, displayed with the self-defined name.

- **NDI Stream**: Audio from the NDI stream, displayed with the self-defined alias.

- **Phone Camera**: Audio from the phone, displayed with the self-defined name.

- **Video**: Audio embedded in the video clip source, which appears when the video clip is in program or preview view.

- **BGM**: Audio from the background music, which appears when the scene containing BGM is in program or preview view.

If a source is selected as MIC, it does not display the corresponding audio. You can also select audio properties through " ⊜ > Settings > Audio". For details, see Audio.

Audio Meter

Except monitor, each audio has its audio meter showing the real-time level. An audio meter of program is also displayed at the upper left corner of the home screen.

The range of the Audio Meter is –88 dB to 0 dB. It displays the peak value at the top of the audio meter (in portrait mode, on the right). Colored blocks and scales indicate the danger of clipping, as shown in the table below.

Color	Scale Range	Description
Green	-88 ~ -40	Audio device is connected.
Green	-40 ~ -20	Audio volume is low.
Yellow	-20 ~ -10	Audio is at normal levels.
Red	-10 ~ 0	Audio is in danger of clipping.

Control Audio

- Adjust audio level

  Each audio has a fader for adjusting the maximum level.

  - Move the fader to adjust the audio level. The range is from -40dB to 10dB.

  - The current adjusted value is displayed at the top of the fader. Double-click the value to restore the fader to 0dB. (In portrait mode, it is displayed on the right)

    > Adjustment to monitor audio does not affect other audio.

- **Set audio mixing mode**: Click the icon to select a mode.

  - **AFV** : Audio-follow-video. The audio will only be sent to the program output when the input is in program view.

  - 🔊 : Always ON. An audio input will be permanently mixed into the program output.

    > For BGM and video clip, the icon means the audio will only be sent to the program output when the scene containing the audio is in program view.

  - 🔇 : Always OFF. An audio input will be permanently not mixed into the program output.

- Solo monitor

  Tap 🎧 to only monitor this audio. Tap 🎧 to cancel.
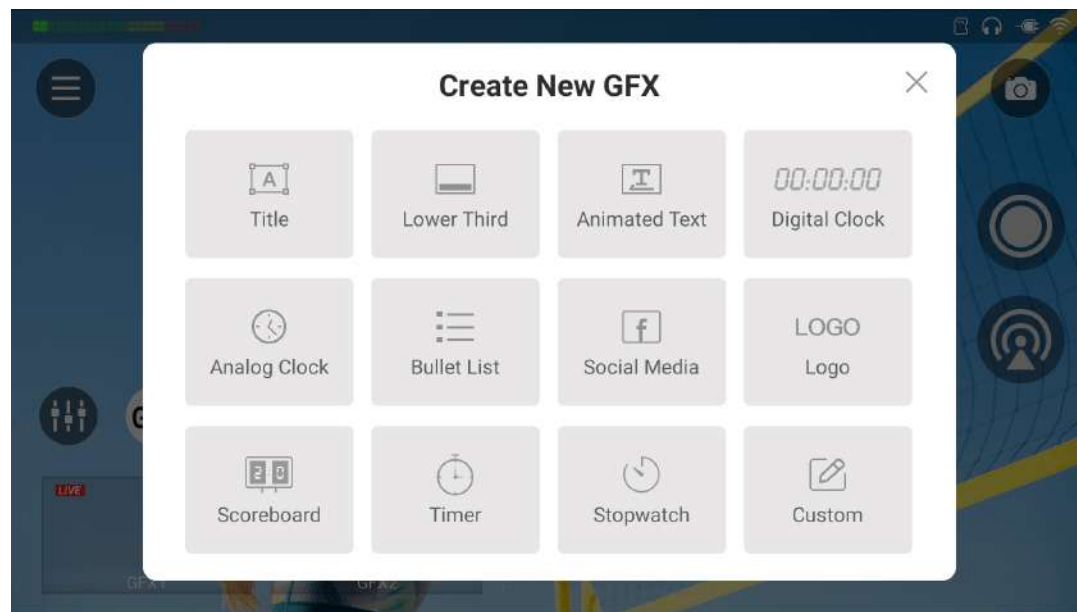
Use GFX

Graphic Overlay (GFX) enables a predefined logo, picture and text combination to show on the scene during recording and streaming. It is useful when you want to add lower thirds or a company logo to your show. It adds a professional touch to your show, making it more interactive. Rich GFX templates help you create GFX quickly and easily, and you can also create GFX from scratch.

Create GFX with Template

1. Tap ⓖⒻⓍ to open the GFX list.

2. Tap ➕ to open the **Create New GFX** interface.

3. Select a GFX type. Options include title, lower third, animated text, digital clock, analog clock, bullet list, social media, logo, scoreboard, timer and stopwatch.

4. Select a template to enter the editor.

5. Tap ▦ at the left to change template.

6. Edit the GFX by referring to GFX Templates.

7. Adjust the GFX size, rotation and position. For details, refer to editing tools.

8. Tap **Save**, and the GFX thumbnail appears in the GFX list.
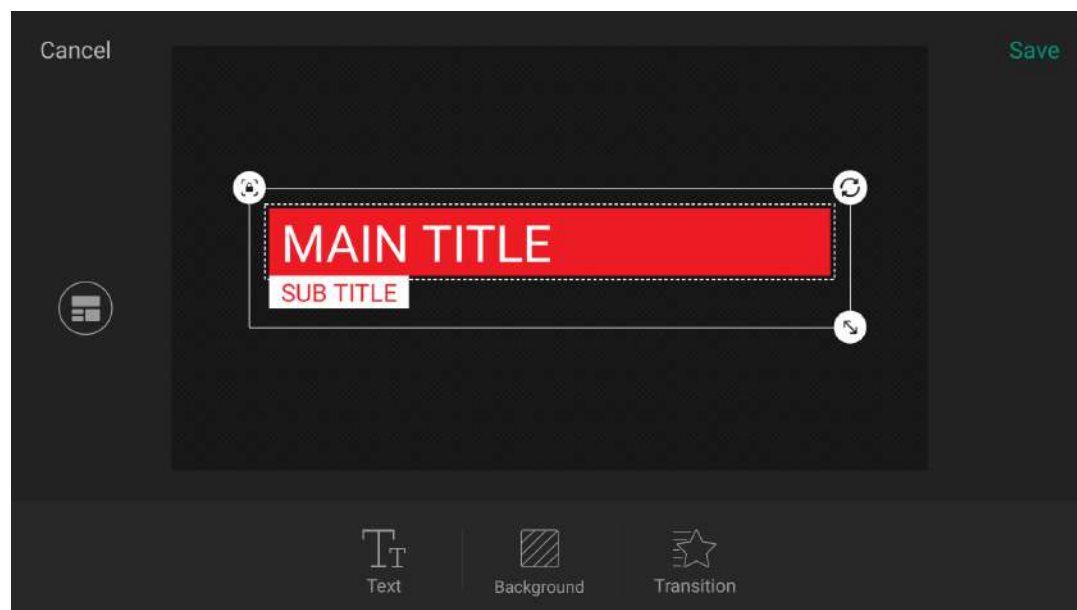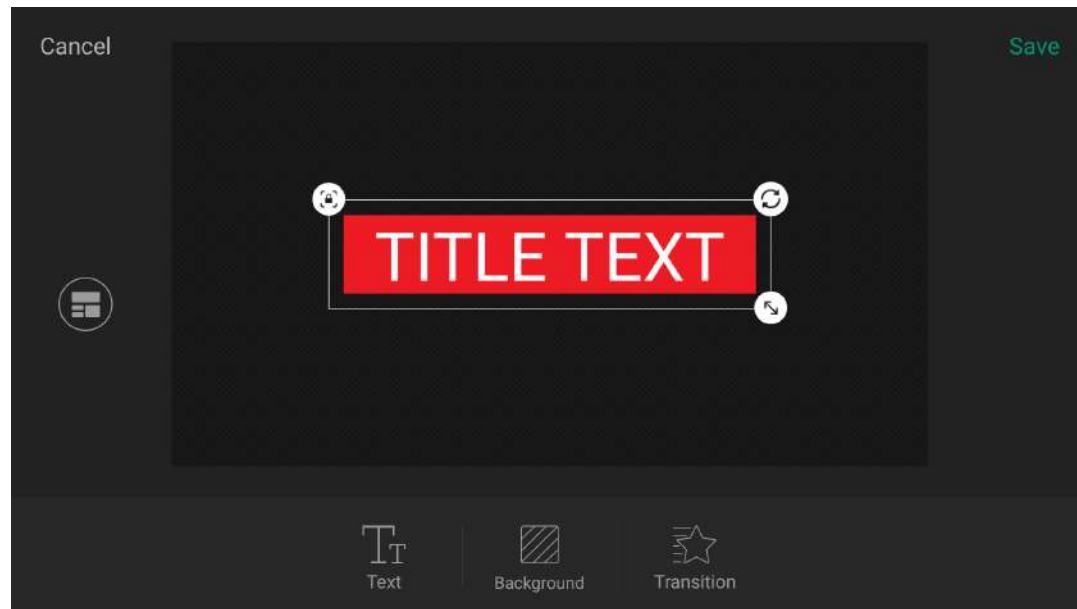
GFX Templates

Director Mini provides various GFX templates helping you display more information during program.

Title

A title shows the theme of your show, and a good title will make your show more engaging.

1. Tap text boxes and enter content.

2. Set text format, background and transition effect. See Editing Tools for details.

Lower Third

Lower third is often used show the name of who is talking or to give vital information about an event.

1. Tap text boxes and enter content.

2. Set text format, background and transition effect. See Editing Tools for details.
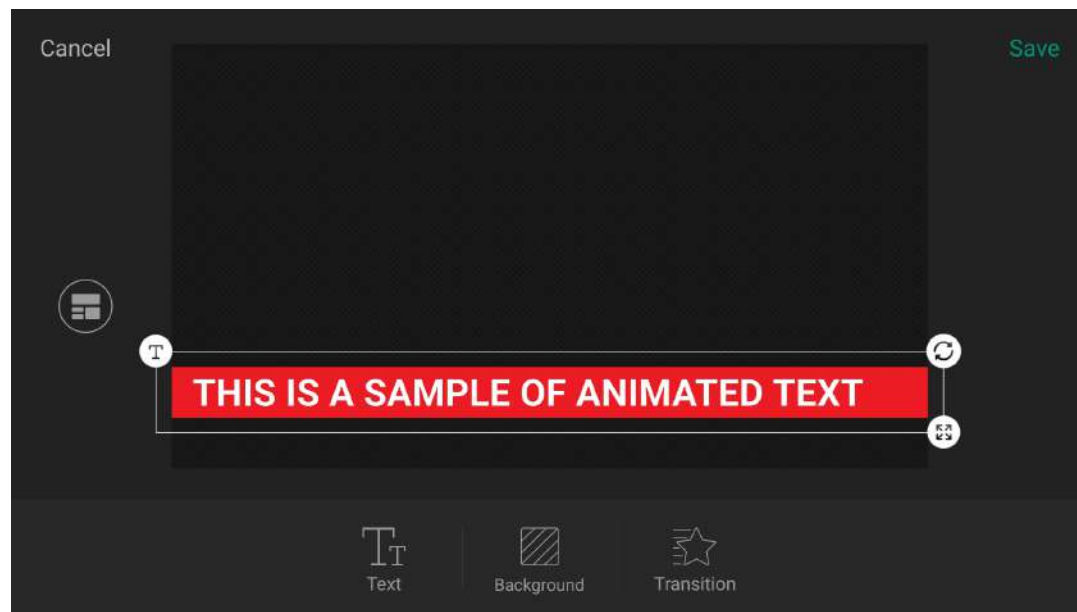
Animated Text

Animated text craws horizontally for displaying sports news, breaking news, weather report, etc.

1. Tap the text box, and then enter content, or tap **Import** at the upper right corner to import from a txt or rtf file. It supports up to 1024 characters. If the imported text has line breaks, you can select to import the first paragraph or import all paragraphs with line breaks being deleted automatically.

2. Set text format, background and transition effect. See Editing Tools for details.
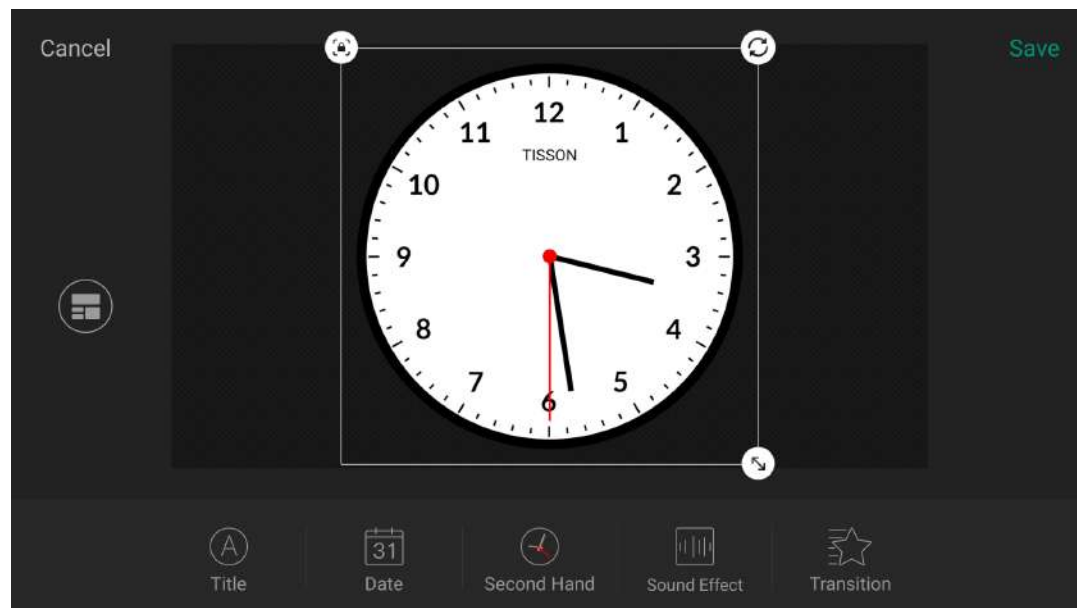
Analog Clock

Analog Clock displays a clock, which can be embedded with date and other information.

- **Title**: Set whether to show the title, and edits the title's name, font, size, and transparency.

- **Date**: Set whether to show date and selects date format.

- **Second Hand**: Set the second hand mode. Options include No second, Sweeping second and Jumping second.

- **Transition**: Set transition effect.
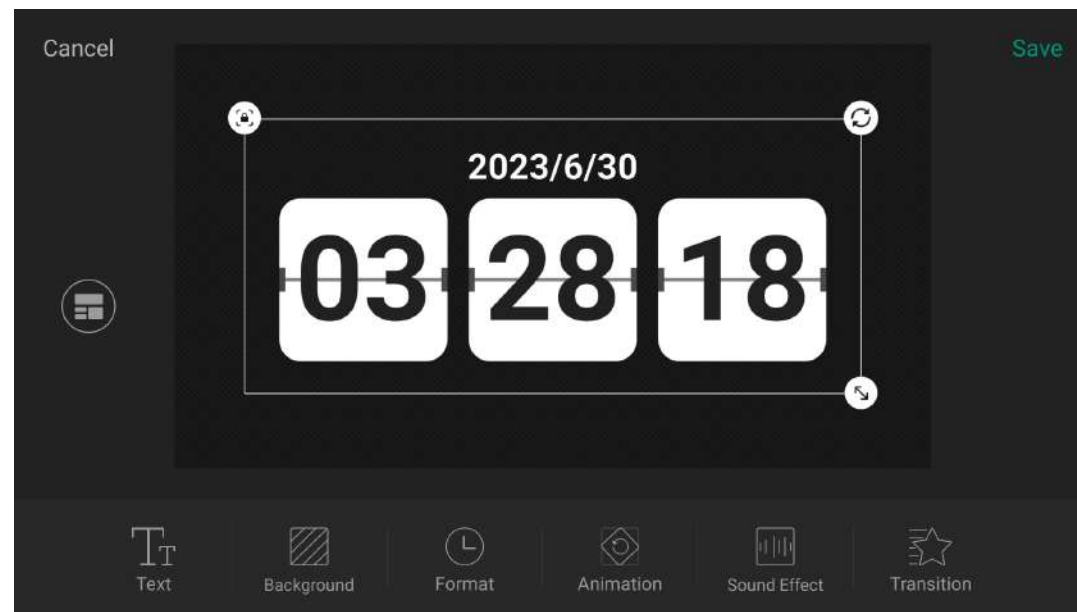
Digital Clock

Digital Clock displays digital date and time, which are synchronized with the system.

- **Text**: Set the number's color, size, font and transparency.

- **Background**: Specify a solid color, gradient color or picture as the clock's background, and sets the transparency.

- **Format**: Toggle on/off the switches to enable or disable the following properties, and then tap Save.

  - 24 hour clock

  - Show seconds

  - Show colon

- **Animation**: Set the clock's animation effect. Options include Classic, Flip, Gradient, Drop and Swivel.

- **Sound Effect**: Set the clock's sound effect. Options include: None (default), Modern, Old, Crisp, Ticktock and Tradition.

- **Transition**: Set transition effect.
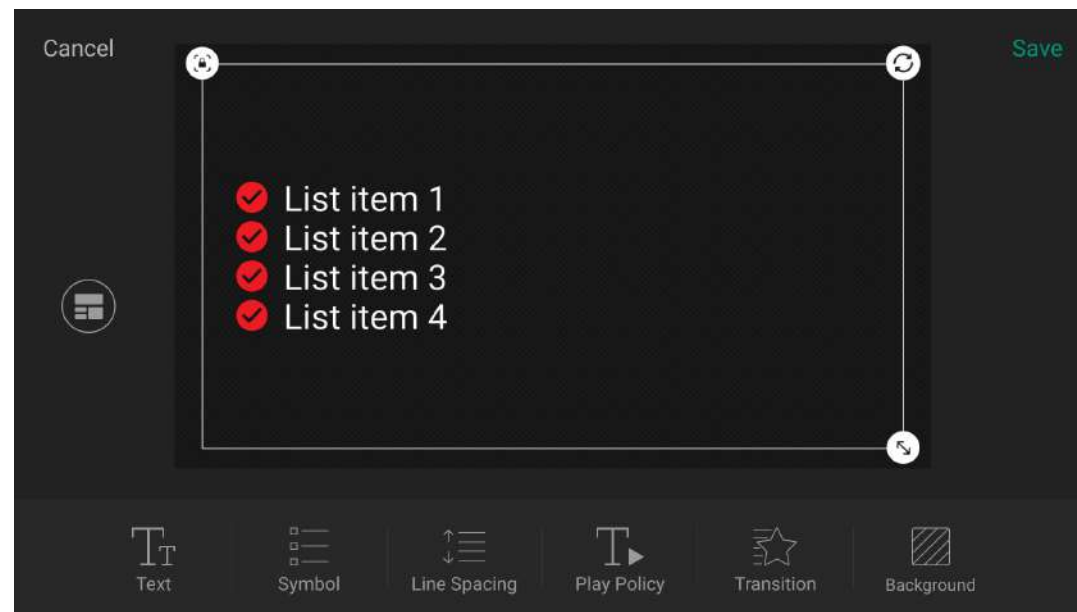
Bullet List

Bullet List can list important information clearly.

1. Tap the text box, enter your content, and tap Enter to add a new item.
   To delete one list item, delete all the content of this item.

2. Set properties of the bullet list.

   - **Text**: Set the text's format, including font, size, color, case, transparency and shadow.

   - **Symbol**: Set the symbol's style, size and color.

   - **Line Spacing**: Set the vertical space between the lines.

   - **Play Policy**: Set how to play list items when the list is displayed.

     - **Play policy**: You can set to play "All at once", that is, all list items appear together; or play "By paragraph", that is, list items appear one by one.

     - **Play mode**: When playing by paragraph, you can choose "Auto Play", that is, the list items will be played automatically according to the set "Play speed"; or choose "Manual Play", that is, after the list is applied, you can tap the screen to display list items one by one.

     - **Play speed**: Set the play speed for auto play. Options include very slow, slow, medium, fast and very fast.

     - **Play effect**: Set the play effect of list items appearing by paragraph. Options include none, fade, fly in, expand, zoom in, and typewriter.

   - **Transition**: Set transition effect.

   - **Background**: Specify a solid color, gradient color or picture as the bullet list's background, and set the transparency.
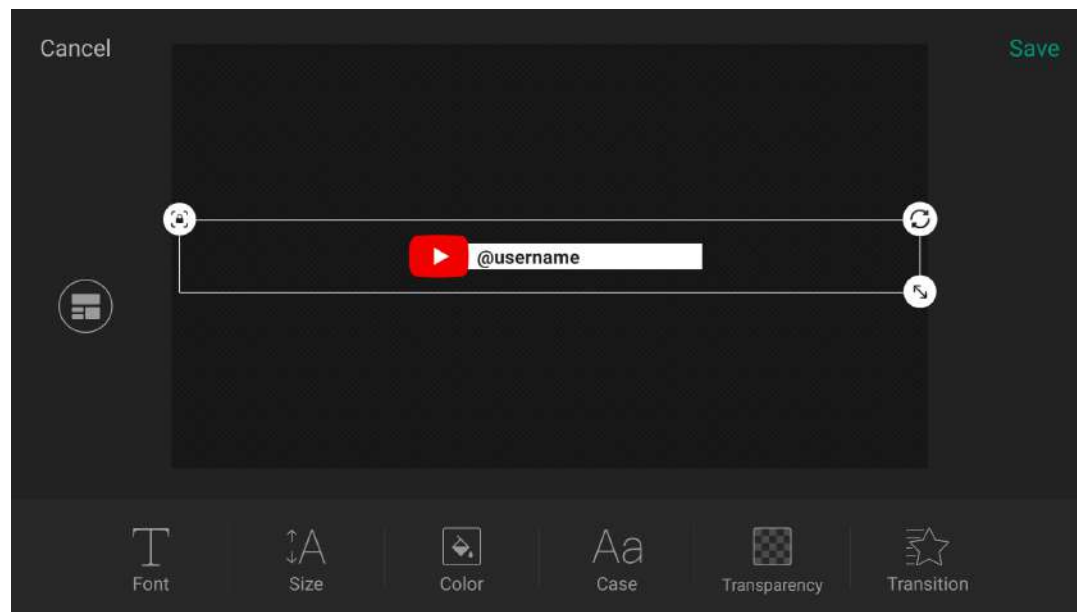
Social Media

Social Media displays your account to attract more followers.

1. Tap text box and enter content.

2. Set text format and transition effect. See Editing Tools for details.

> The logo cannot be changed. You can switch by changing the template.
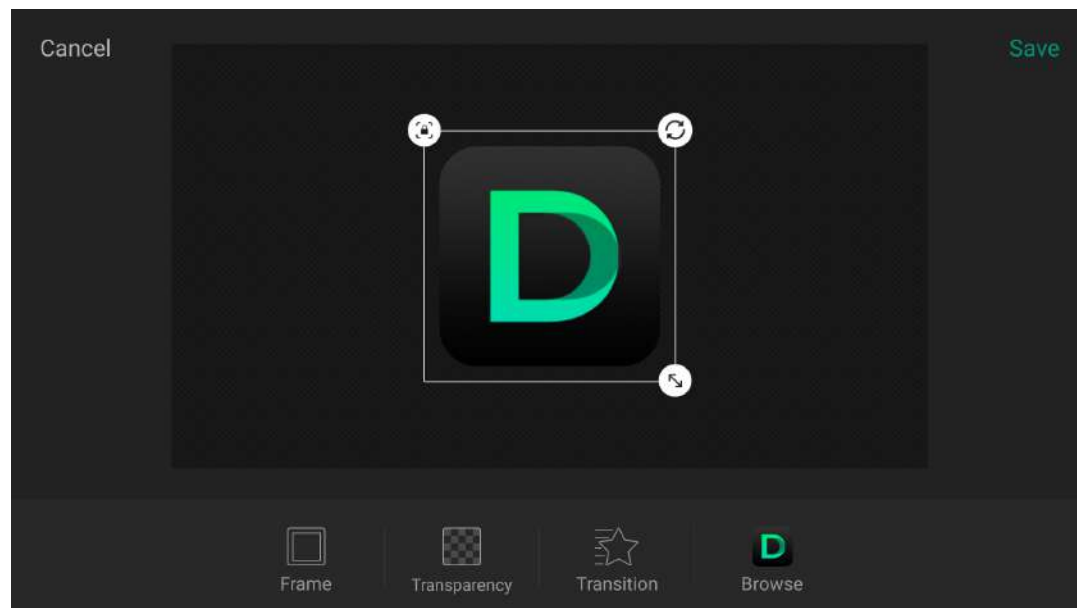
Logo

Logo supports to import one picture, such as a company logo and brand logo. The supported formats include JPG, PNG and BMP.

1. Select a picture from the storage.

2. Set the picture's frame, transparency and transition effect. See Editing Tools for details.
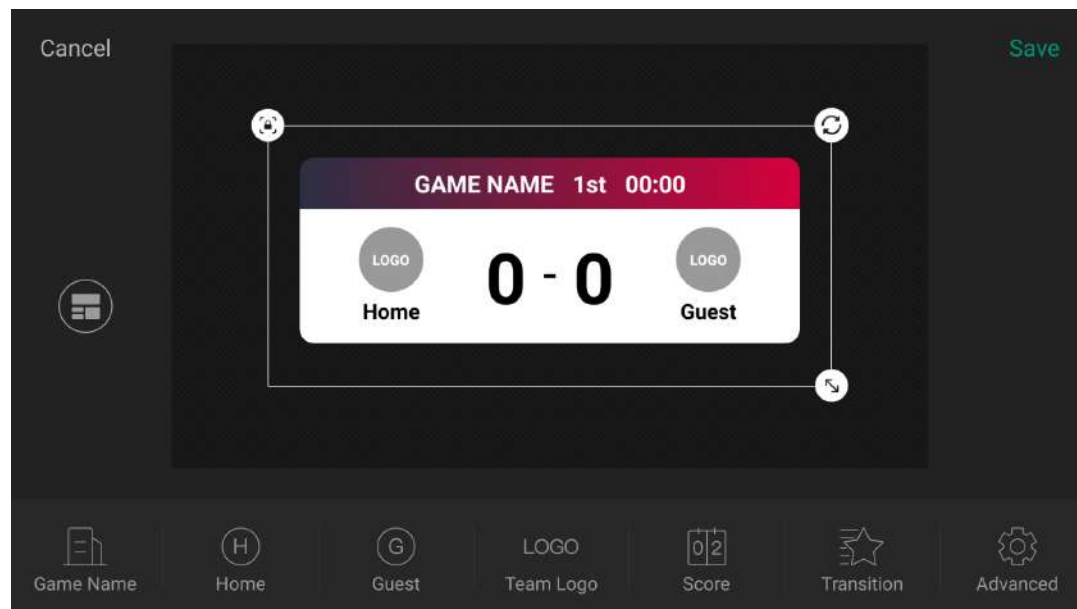
Scoreboard

Scoreboard displays the scores of a game. It only supports to create one scoreboard.

Basic Settings

- Game Name

  - Toggle on/off the switch of **Show Name** to set whether to show the game name.

  - Set game name's content, font, size, color, transparency, and background.

- **Home**: Set the home team's name, text font, size, color, transparency and background.

- **Guest**: Set the guest team's name, text font, size, color, transparency and background.

- Team Logo

  - Toggle on/off the switch of **Show Logo** to set whether to show team logos.

  - Set the home logo and guest logo, and adjust their size.

- **Score**: Set the score's font, size, color, transparency and background. Whether the score background can be set is determined by the template.

- **Transition**: Set transition effect.

Advanced Settings

Tap **Advanced** to further customize the scoreboard.

- **Show game name**: Toggle on/off the switch to set whether to show game name.

- **Show game time**: Toggle on/off the switch to set whether to show game time. When it is toggled on, the Countdown option appears, and you can make the following settings.

  1. Toggle on/off the switch to set whether to enable countdown.

  2. Tap the number and scroll hour, minute and second options to set the duration.

- **Show period**: Toggle on/off the switch to set whether to show period. When the switch is toggled on, the **Period name** option appears, tap to open the period list and make the following settings.

  - Add period: Tap "+ Add", enter the period name, and tap "Save".

  - Select period: Tap any period as the current period. The default periods include 1st, 2nd and 3rd.

  - Delete period: Swipe a period to the left, and then tap "Delete".

- **Score added**: Tap "+" or "-" to set the add score each time. The default value is 1.

- **Allow negative score**: Tap on/off the switch to set whether to allow the score being lower than 0.
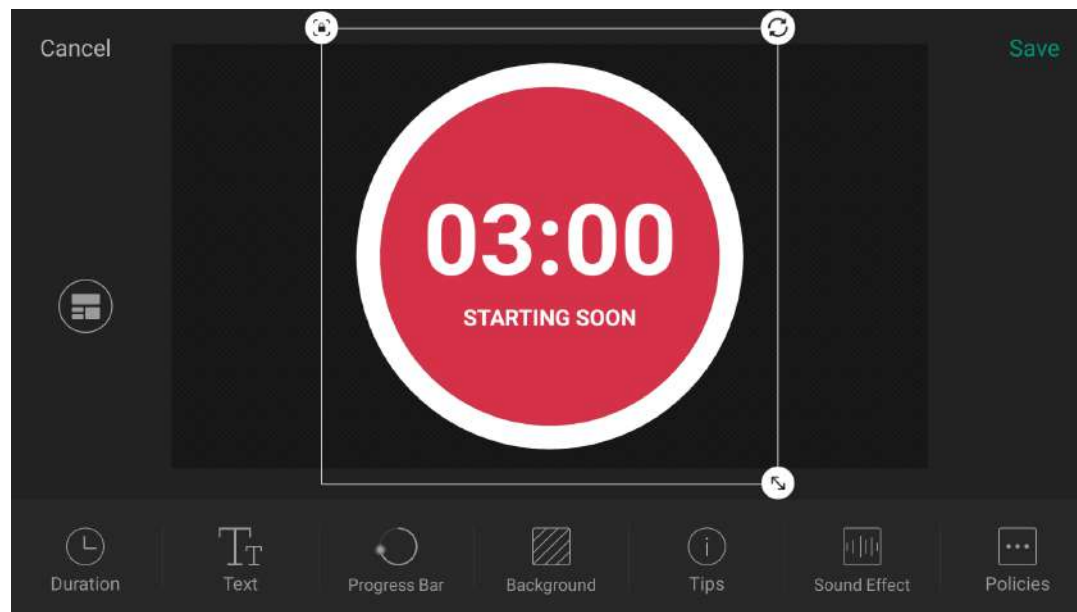
Timer

You can use Timer to countdown. It only supports to create one timer.

- **Duration**: Scroll hour, minute and second options to set the duration.

- **Text**: Set the font, size, color, and transparency of numbers.

- **Progress Bar**: Set the color of progress bar.

- **Background**: Set the color and transparency of background.

- **Tips**: add some custom tips under the numbers.

  - Toggle on/off the switch of **Show** to set whether to show tips.

  - Set the content, font, size, color and transparency of tips.

- **Sound Effect**: Set the timer's sound effect. Options include: None (default), Modern, Old, Crisp, Ticktock and Tradition.

- **Policies**: Set the policies of timer.

  - When the timer is displayed, you can set "Manual start" or "Auto start".

  - When the timer is hidden, you can select one policy.

    - Auto pause: If the timer is counting, it pauses.

    - Ignore: If the timer is counting, it continues counting; if the timer is not counting, it does not count.

    - Reset: The timer is restored to the set duration.

  - When the timer reaches zero, you can set to hide the timer.

  - When the timer reaches zero, you can also set to switch to another scene. After toggling on the switch, tap "Switch to", and select a scene. When the timer counts down to the last 10s, the scene to switch to will be highlighted with a flashing yellow frame, a LIVE SOON mark and a countdown clock.
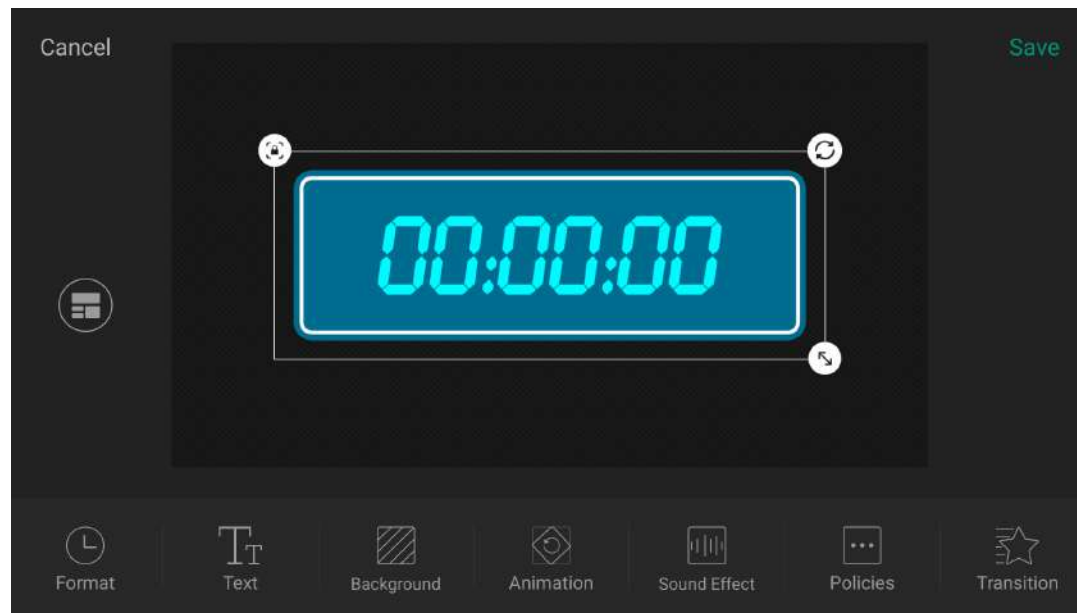
- **Transition**: Set transition effect.

Stopwatch

You can use Stopwatch to count up. It only supports to create one stopwatch.

- **Format**: Select one stopwatch format. Options include H:M and H:M:S.

- **Text**: Set the font, size, color, and transparency of numbers.

- **Background**: Specify a solid color, gradient color or picture as the background, and sets the transparency.

- **Animation**: Select an animation effect for the numbers. Options include classic, flip, gradient, drop, and swivel. After you select an effect, the stopwatch will count three seconds to show the effect for preview.

- **Sound Effect**: Set the stopwatch's sound effect. Options include: None (default), Modern, Old, Crisp, Ticktock and Tradition.

- **Policies**: Set the policies of stopwatch.

  - When the stopwatch is displayed, you can set "Manual start" or "Auto start".

  - When the stopwatch is hidden, you can select one policy.

    - Auto pause: If the stopwatch is counting, it pauses.

    - Ignore: If the stopwatch is counting, it continues counting; if the stopwatch is not counting, it does not count.

    - Reset: The stopwatch is restored to zero.

- **Transition**: Set transition effect.
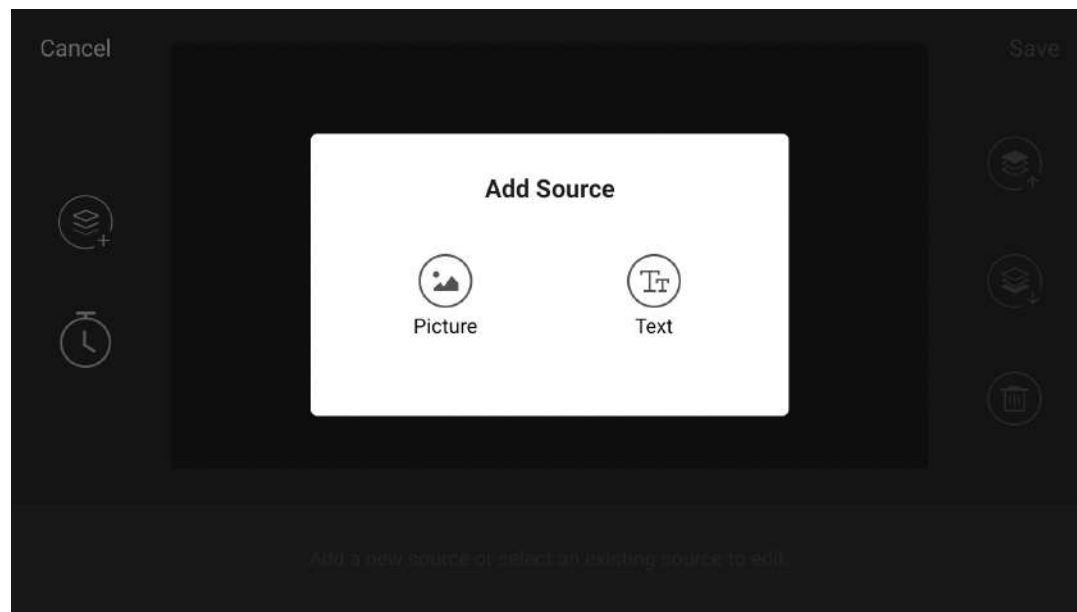
Create Custom GFX

1. Tap (GFX) to open the GFX list.

2. Tap ✛ to open the **Create New GFX** interface.

3. Choose **Custom** to enter the GFX editor.

4. Tap ⊜, choose Picture to add a picture, or choose Text to add text content.

5. Edit the picture and text. See editing tools for details.

6. (Optional) Set timing, which makes the GFX disappearing automatically.

   a. Tap 🕐 on the left.

   b. Toggle on Timing.

   c. Scroll time options to set the duration.

   d. Tap Confirm.

7. Tap **Save**, and the GFX thumbnail appears in the GFX list.

Apply GFX

You can apply up to 8 GFXs in a show at the same time.

1. Tap GFX to open the GFX list.

2. Tap one GFX thumbnail, and then the GFX is displayed in the scene. A √ appears on the selected thumbnail.

3. If a bullet list is applied, and it is set as manual play mode, you can tap the text content on the screen to display the next line. (Only working in the program scene)

4. To cancel, tap one selected thumbnail, the GFX disappears.

If you select or unselect a GFX in the preview scene, your choice only takes effect after you switch the preview to program. If you do not tap the Switch button but tap the program scene again, your choice will be discarded.

For the application of GFX in different switch mode, see GFX Application Example.

> For the time counting related polices of some GFXs, including the policies of timer and stopwatch, and the timing of a custom GFX,
>
> ▪ In the program scene, when the GFX is selected, polices execute normally.
>
> ▪ In the preview scene, when the GFX is selected, policed do not execute; only when you switch the preview to program, polices start executing.
>
> ▪ If a GFX is applied in the program scene, in the preview scene, polices will go on executing.

GFX Application Example

To help you better understand how GFX is shown or undisplayed in your show, we'll give you some examples. In the examples below, GFX1 is the live icon at the upper left corner of the screen, and GFX2 is the analog clock at the upper right corner.

Example 1: apply GFX in the program scene

1. The current scene is the program scene.

2. Tap GFX to open GFX list, and select GFX1.

3. The output scene of the show after GFX 1 is applied.

4. The output scene of the show after switching the scene.

Example 2: undisplay GFX in the program scene

1. The current scene is the program scene with GFX1 applied.
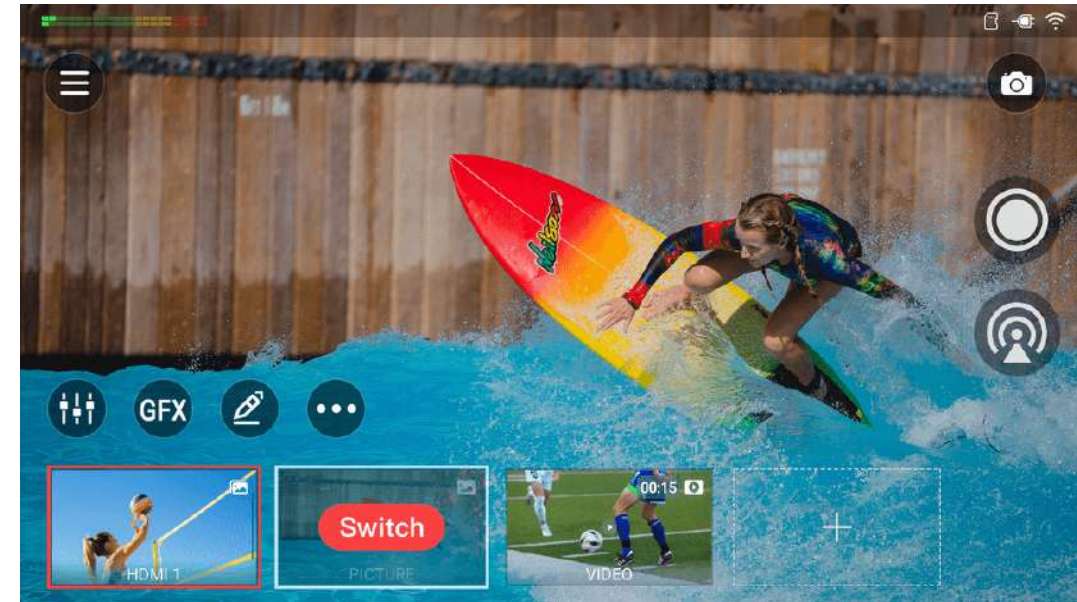

2. Tap GFX to open GFX list, and unselect GFX1.

3. The output scene of the show after GFX1 is unselected.

Example 3: apply GFX in the preview scene

1. The current scene is the program scene.

2. Tap a scene to preview in manual switch mode.

3. Tap [GFX] to open GFX list, and select GFX1.

4. Tap [GFX] > "Switch". The output scene of the show is as above.

Example 4: apply more GFXs in the preview scene

1. The current scene is the program scene with GFX1 applied.

2. Tap a scene to preview in manual switch mode.

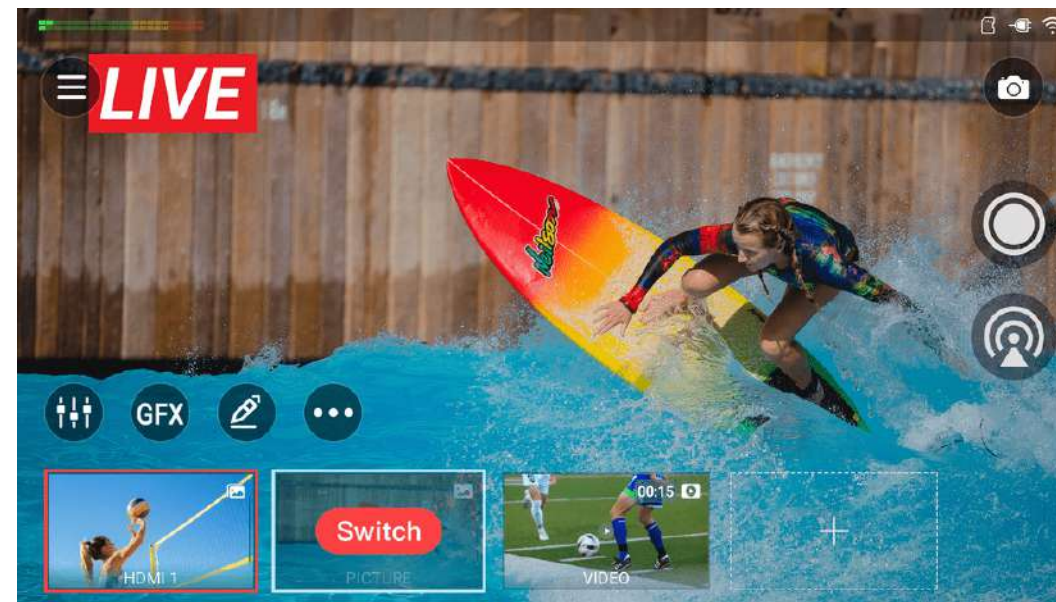3. Tap **GFX** to open GFX list, and select GFX2.

4. Tap **GFX** > "Switch". The output scene of the show is as above.

Example 5: undisplay GFX in the preview scene

1. The current scene is the program scene with GFX1 and GFX2 applied.
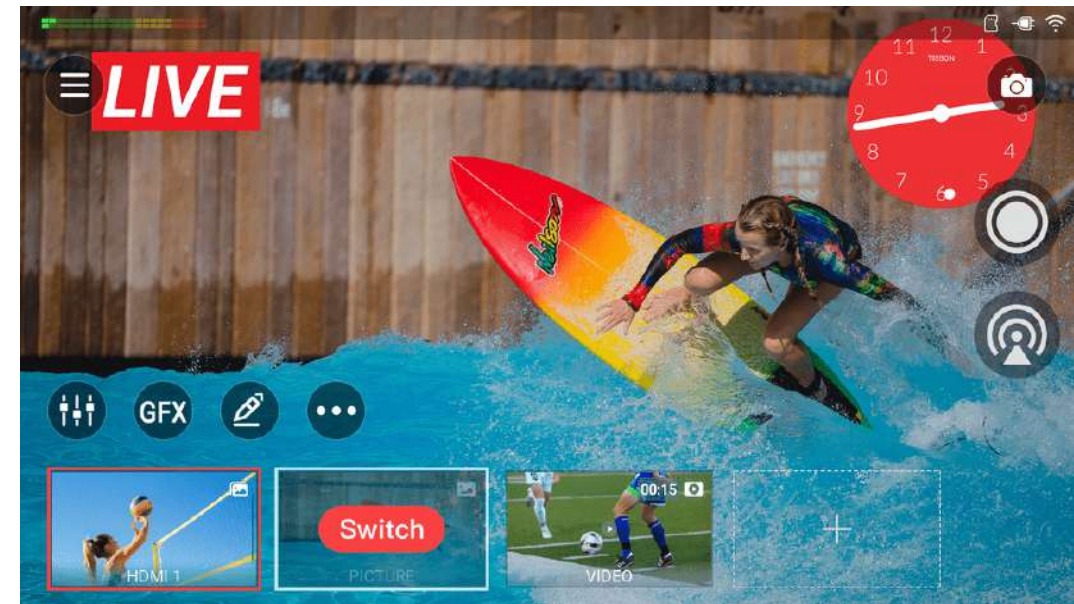
2. Tap a scene to preview in manual switch mode.
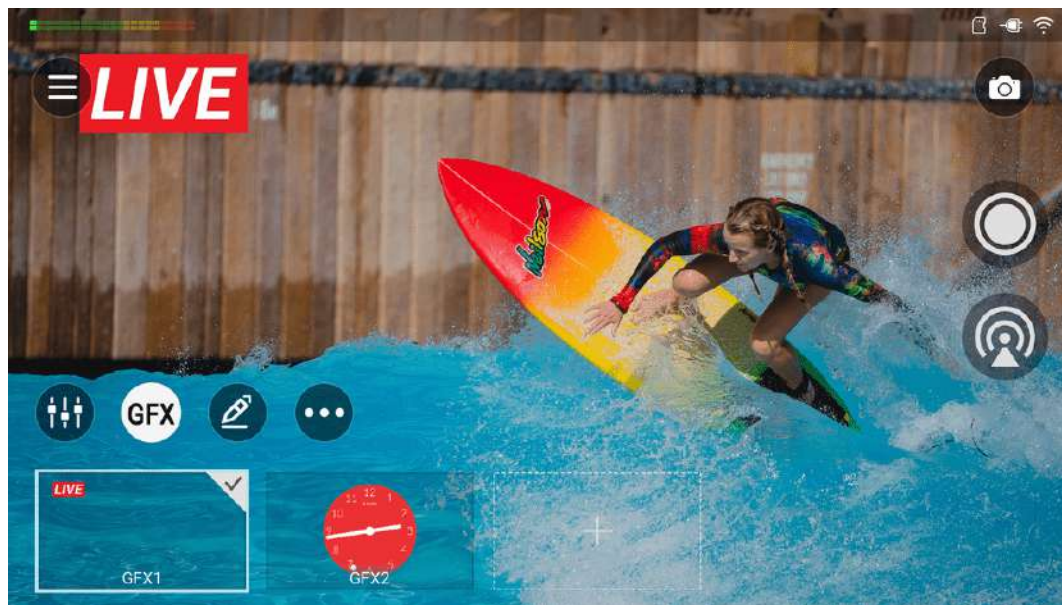
3. Tap (GFX) to open GFX list, and unselect GFX2.

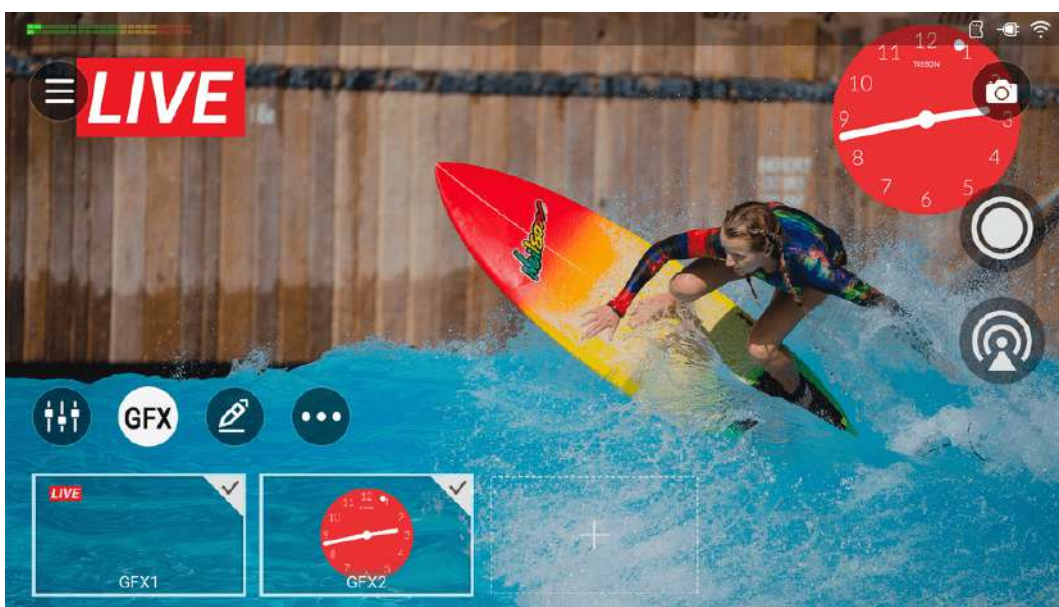4. Tap (GFX) > "Switch". The output scene of the show is as above.

Example 6: GFX application for switching preview scenes
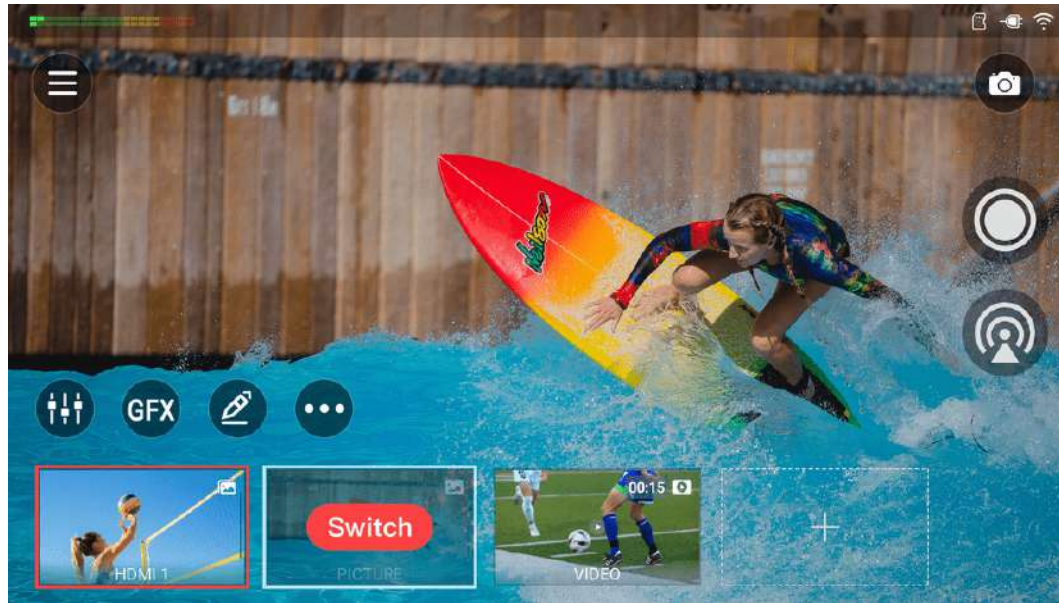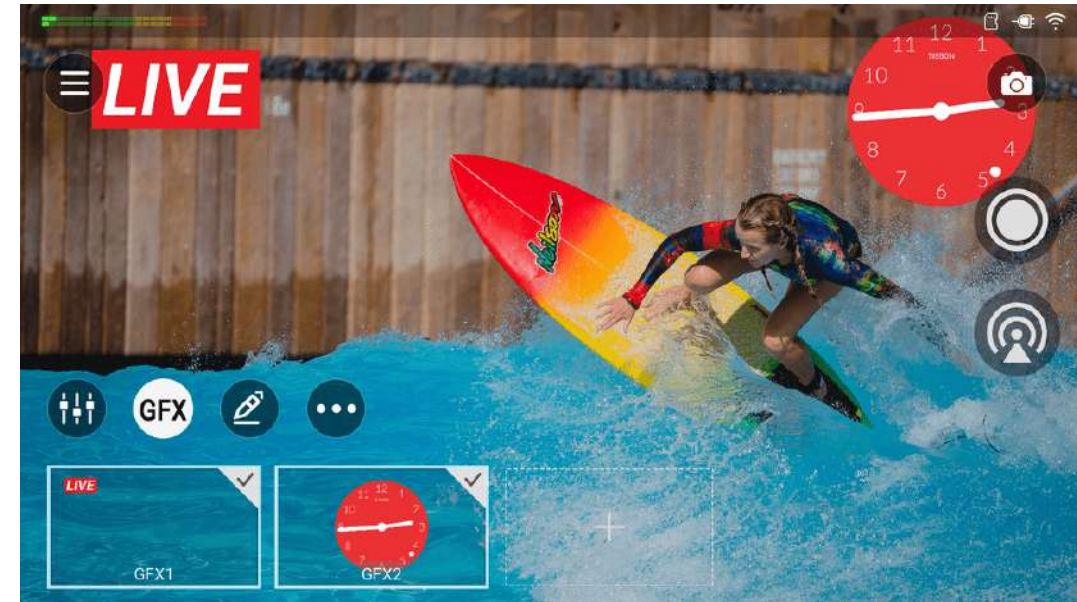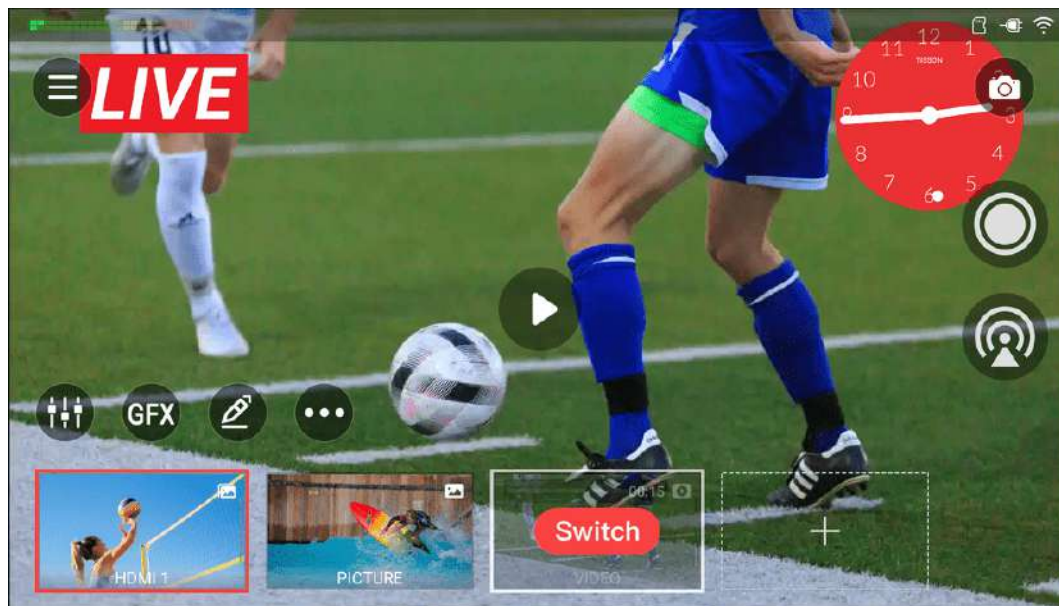

1. The current scene is the preview scene.

2. Tap (GFX) to open GFX list, and select GFX1 and GFX2.

3. Tap (GFX) , and select another scene to preview.

4. Tap "Switch". The output scene of the show is as above.
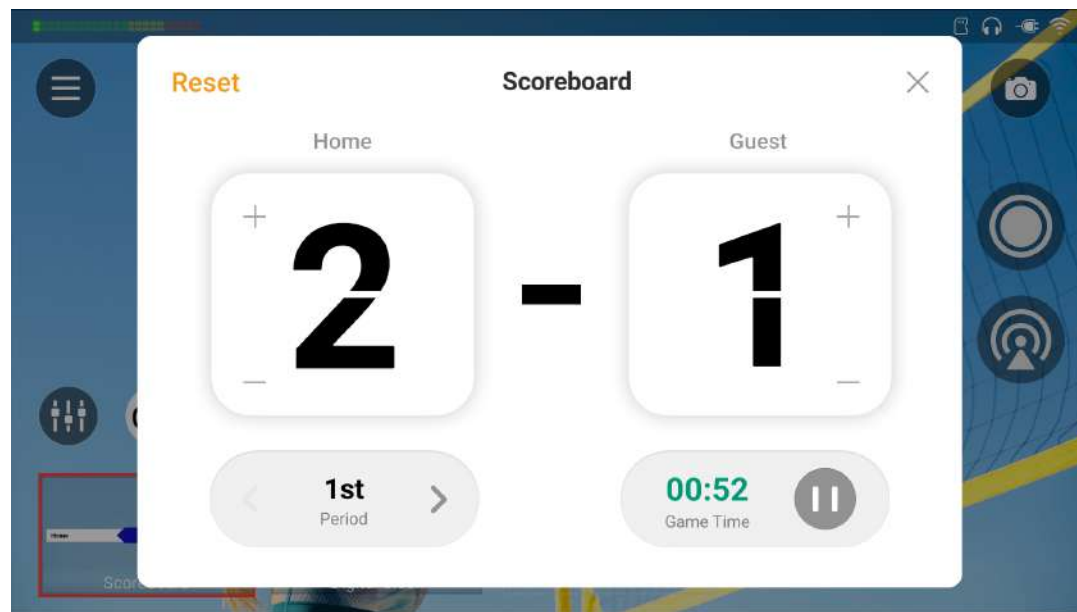
Control Scoreboard

You can open the scoreboard control panel through the following ways.

Way 1: When the scoreboard is applied, tap ⊞ on the screen.

> In portrait mode, you may need to tap ⋯ and select Scoreboard.

Way 2: Tap ⒼⒻⓍ to open the GFX list, long-press the scoreboard thumbnail and tap **Control** on the popup.

- Adjust score: Tap the upper part of the number to increase the score, and tap the lower part of the number to decrease the score.

- Select period: Tap the left or right arrow at the bottom left to select a period. If the period is not set to be shown, you can tap "Show" to display it.

- Control game time:

  - Tap ▶ at the bottom right to start counting; tap ⏸ to pause counting.

  - If the game time is not set to be shown, you can tap "Show" to display it.

  - Tap the time number, and scroll time options to adjust.

- Reset: Tap "Reset" to restore the score to 0:0, reset the game time to zero or reset to the set duration.

- Tap "x" to return to the main screen.
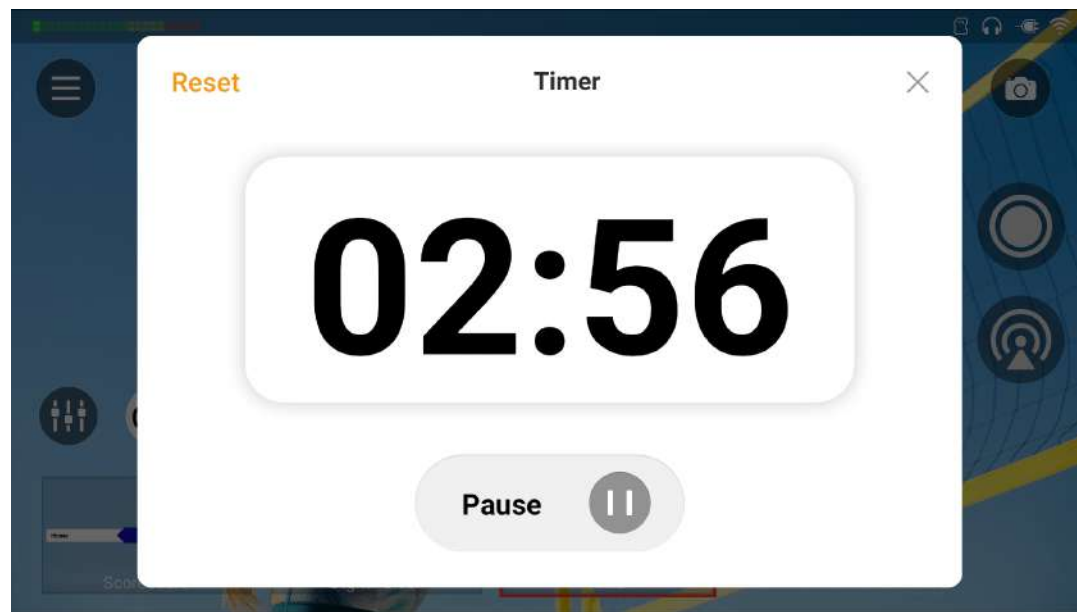
Control Timer

You can open the timer control panel through the following ways.

Way 1: When the scoreboard is applied, tap ⊙ on the screen.

In portrait mode, you may need to tap ⋯ and select Timer.

Way 2: Tap GFX to open the GFX list, long-press the timer thumbnail and tap Control on the popup.

- Adjust duration: scroll hour, minute or second options to reset duration.
- Control counting: Tap ▶ to start counting, tap ‖ to pause counting, tap ▶ again to resume counting.
- Reset: Tap Reset to restore the timer to the set duration, and you can re-select the duration.
- Tap "x" to return to the main screen.
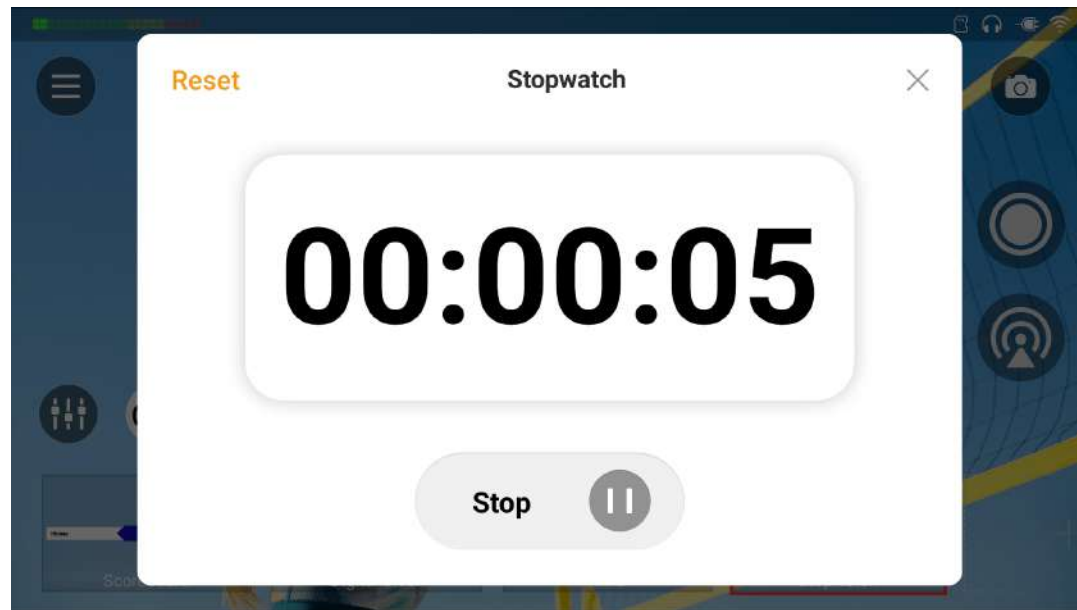
Control Stopwatch

You can open the stopwatch control panel through the following ways.

Way 1: Tap 🕐 on the screen.

> In portrait mode, you may need to tap ⋯ and select Stopwatch.

Way 2: Tap **GFX** to open the GFX list, long-press the stopwatch thumbnail and tap **Control** on the popup.

- Control counting: Tap ▶ to start counting, tap ⏸ to pause counting, tap ▶ again to resume counting.

- Reset: Tap **Reset** to reset the timer to zero.

- Tap "x" to return to the main screen.
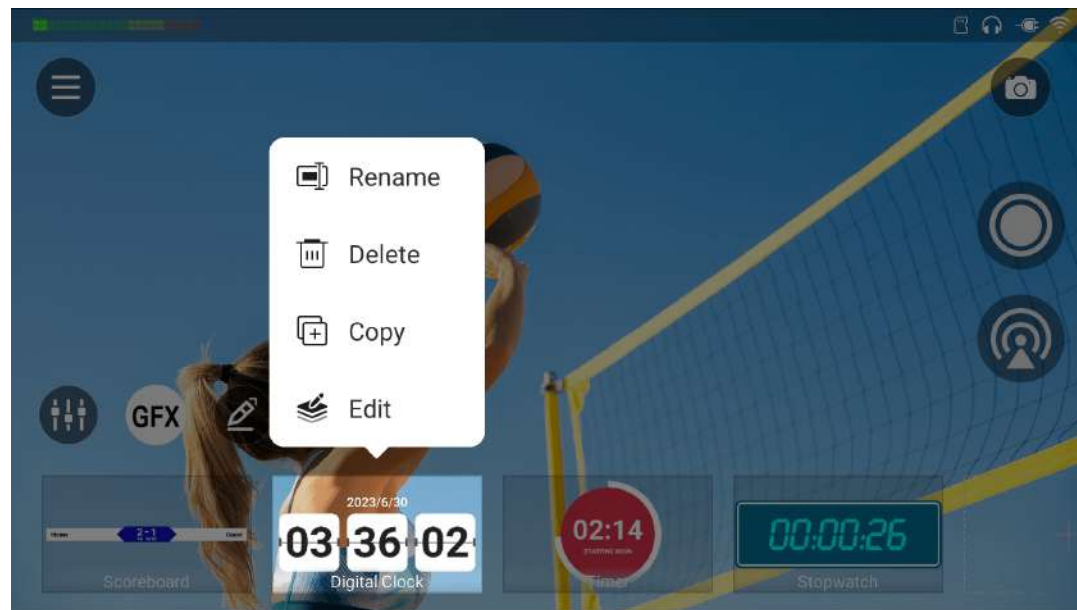
Rename GFX

Each GFX is named as the GFX type by default. You can rename the GFX.

1. Tap GFX to open the GFX list.

2. Long-press one GFX thumbnail.

3. Tap **Rename**, enter the new name and tap **Save**.

Copy GFX

You can copy an existing GFX to create a new GFX.

> You cannot copy the scoreboard, timer or stopwatch.

1. Tap GFX to open the GFX list.

2. Long-press one GFX thumbnail.

3. Tap **Copy**, and the copied GFX appears last in the GFX list.

Edit GFX

You can edit the existing GFX.

1. Tap GFX to open the GFX list.

2. Long-press one GFX thumbnail.

3. Tap **Edit** to open the editor and then start to edit.

Delete GFX

1. Tap GFX to open the GFX list.

2. Long-press one GFX thumbnail.

3. Tap **Delete**, and then confirm to delete in the popup.
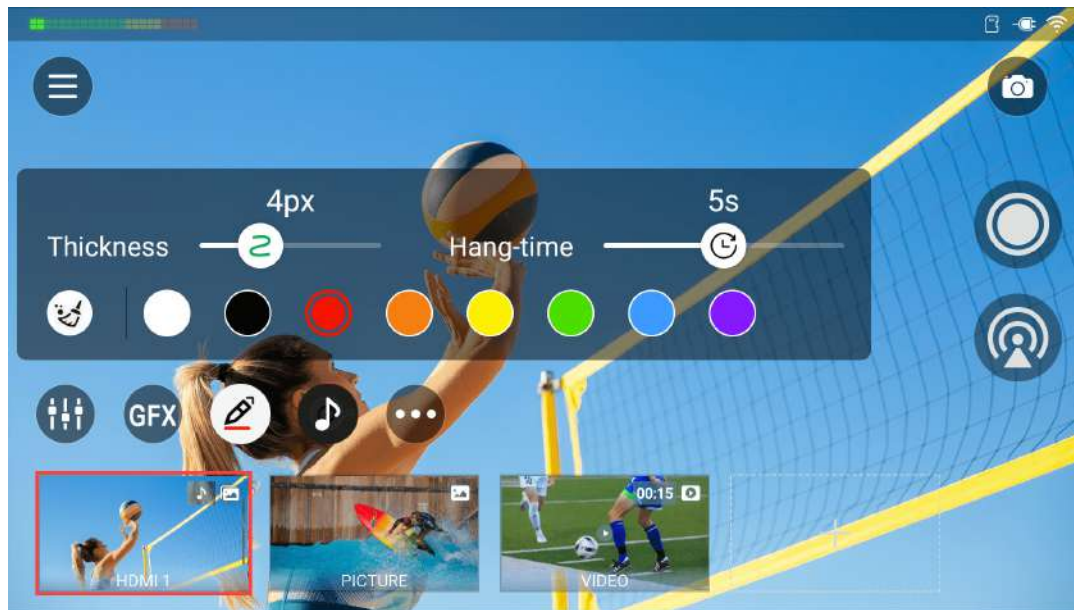
Use Pen

Director Mini provides the **Pen** to annotate on your show.

1. Tap [pen icon] to enter the annotation mode.

2. Draw or write on the screen to annotate.

3. Clear the annotations.

    ▪ The annotations will disappear automatically after 5 seconds by default. You can refer to Set pen properties to set the hang-time.

    ▪ Tap the screen, and then switch to another scene to clear the annotations.

    ▪ Manually clear all the annotations: Tap the screen, long press [pen icon], and tap [eraser icon].

4. Tap the screen, and then tap [pen icon] to exit the annotation mode. This operation will also clear annotations.

Set pen properties

To set pen properties, long press [pen icon] to enter the pen editing window, on which you can:

▪ Select a color for annotating. The default color is red.

▪ Drag the **Thickness** slider to define the pen width. The default width is 4 pixels.

▪ Drag the **Hang-time** slider to define the time for each annotation to remain on the screen. The default time is 5 seconds. The range is 0-10s. 0 indicates that the annotation will not disappear unless you manually clear it.

Pan/Tilt Control   Zoom

Set and Call Presets   Auto Focus   Focus
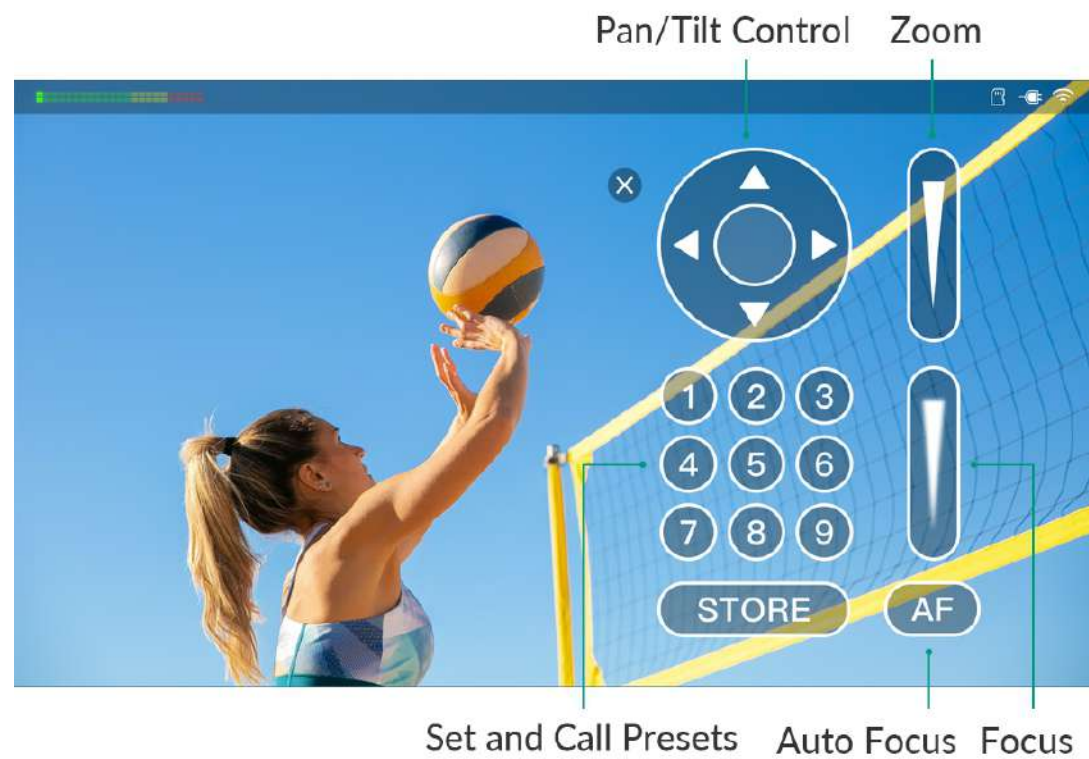
PTZ Control

When a source is connected with a PTZ camera and has enabled PTZ control, or the NDI source supports PTZ, you can tap ⊕ to open the PTZ control center. If there are multiple PTZ sources in the scene, select a source on the popup.

Pan/Tilt Control

- On the Pan/Tilt Control panel, tap the center of the circle and slide your finger across the screen to move the camera. The closer to the center of the circle, the slower the camera moves; The farther away from the center of the circle, the faster the camera moves.

- Long-press the arrows to pan/tilt the camera.

Zoom

Slide on the slide bar at the upper right to zoom.

- Slide up, and the lens zooms in.

- Slide down, and the lens zooms out.

Focus

Slide on the slide bar at the lower right to focus.

- Slide up, and then the lens focuses near and the nearby object gets clear.

- Slide down, and then the lens focuses far and the distant object gets clear.

You can also tap (AF) for auto focus.

Presets

A preset is a predefined image position which contains information of pan, tilt, zoom, etc. After the preset is configured, you can move the camera to your desired position quickly by calling the preset.

1. Move the camera to your desired position and adjust zoom and focus.

2. Tap (STORE) and then tap a number to save. For example, if you tap No.1, it will be saved as Preset 1.

3. Repeat the steps above to add more presets.

4. Tap a preset No. to call the preset.

Move the PTZ Control Center

Long-press any blank area on the PTZ control center window and drag it to the desired position.
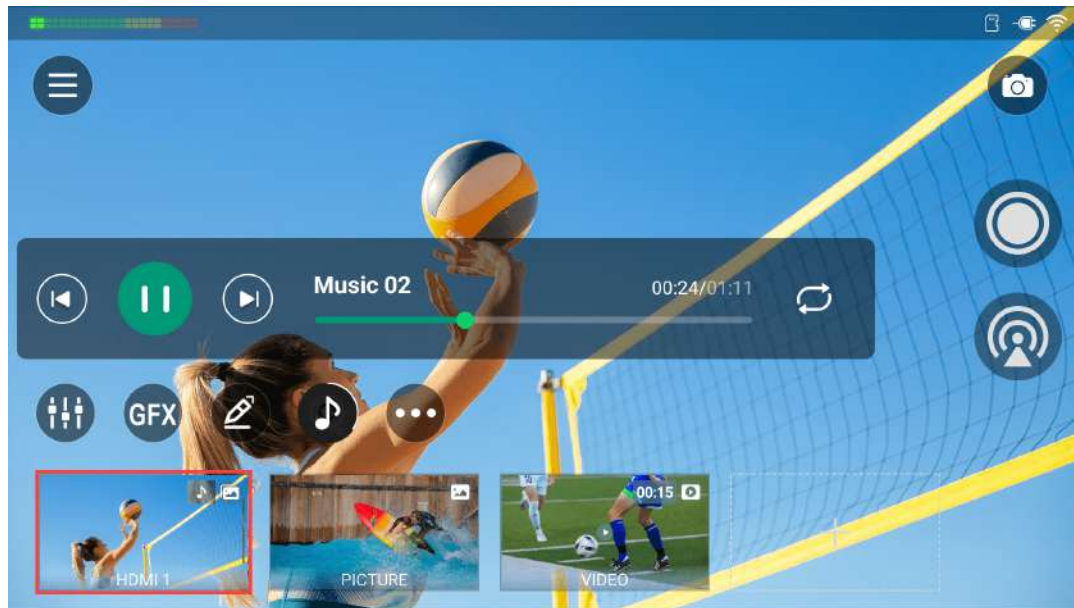
Control BGM

After you have added background music to a scene, the BGM icon will be displayed on the scene thumbnail and main screen. You can control the playback of the background music.

1. On the screen, tap a scene thumbnail with the BGM icon.

2. Tap ⬤ to reveal the BGM playback bar.

3. Tap the buttons on the playback bar to control the BGM playback.

   - Tap ▶ to play or ⏸ to pause.

   - Tap ⏮ to play the previous song or ⏭ to play the next song.

   - Drag the playhead to a specified position.

   - Set the loop policy:

     - ↻ : Repeat the playlist

     - ↻① : Repeat the song

     - ⤬ : Shuffle the playlist

Start Streaming and Recording

Director Mini can stream to multiple platforms, and supports recording the show for later use. You can stream and record separately or simultaneously, and implement interactive operations to attract your audience.

Live Streaming

You can stream to two platforms with different encoding formats at the same time. It natively supports streaming to YouTube, Twitch, and Facebook live, and also supports streaming via RTMP or SRT. Besides, it supports two-channel NDI® HX3 streaming.
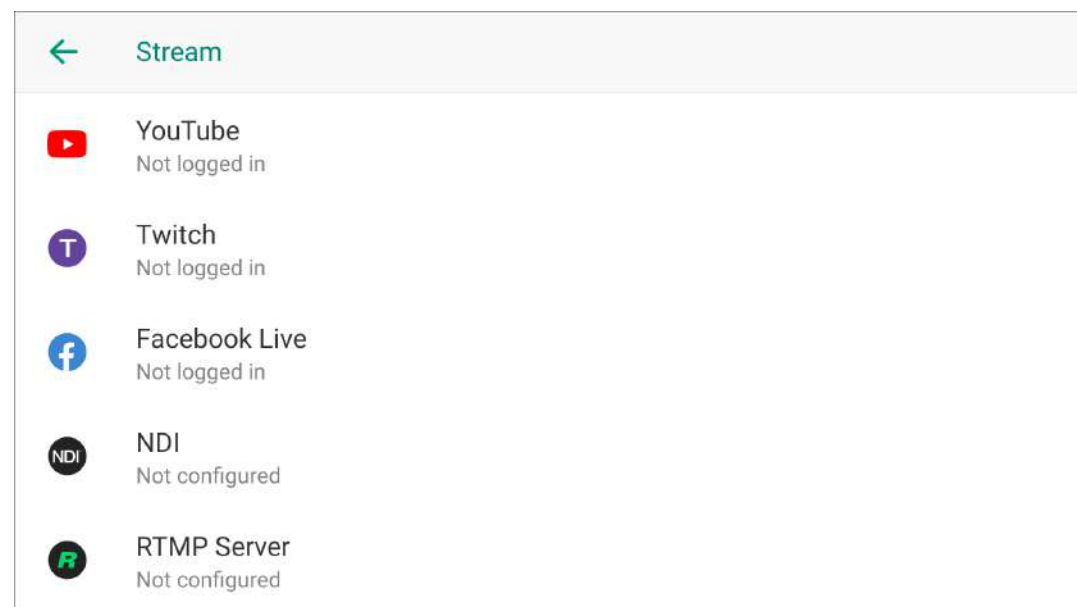
Configure Streaming Server

Before streaming your show, you need to configure the destinations you want to stream to.

To configure a server, please tap ⊜ > **Settings** > **Stream** to open the stream setting page, and then select a server.

Then follow the steps below to configure the streaming server.

> ♀ If no auto stream is enabled for any server, you can also tap ◉ on the main screen and then select a server to enter its configuration page.

Configure YouTube Server

1. Select **YouTube** in the stream setting page.

2. Tap **Name** to enter an alias name for your convenience of multi-item management.

3. Tap **Encode**, and select a stream scheme. Options are as follows.

   - Main stream: Program, 1080p, 60FPS, 6.0Mbps (default)

   - Sub stream: Program, 720p, 30FPS, 2.5Mbps (default)

   > You can customize encode parameters and sources as needed. For details, please refer to Encode.

4. Tap **Log In** under **Authentication**, and then follow the instructions to log into your account.

   Your username and profile image will be displayed after login.

   Your nickname, user avatar images and authorization token will be stored encrypted in Director Mini device after a successful authorization. When you delete the YouTube server or remove Director Mini from trusted apps from your Google account's security setting, we will follow the policies of Google to clear saved data in 0 to 24 hours.

   > If you have not enabled live streaming for your YouTube account, your YouTube login will fail. Also note that you need to have live streaming enabled 24 hours before starting streaming. For details, see Why can't I log in to my YouTube account.

5. Set the **Ingest Server**.

You can select **Primary server (**rtmp**)**, **Primary server (rtmps)**, **Backup server (**rtmp**)**, or **Backup server (rtmps)**.

6. Tap **Post to**, and select a channel, event, or **New stream**.

    If you select **New stream**, you need to set **Title** (mandatory), **Description**, and **Privacy**.

    - **Privacy** options are:

        - **Public**: The stream is visible to all people.

        - **Private**: The stream is visible only to you and people selected by you.

        - **Unlisted**: The stream is visible only through a link.

7. (Optional) Tap on **Auto Stream**. When it is enabled, you can start streaming quickly on the main screen.

8. Tap **Test** to test whether the previous configurations are working properly.

9. Tap ← to return to the previous menu.
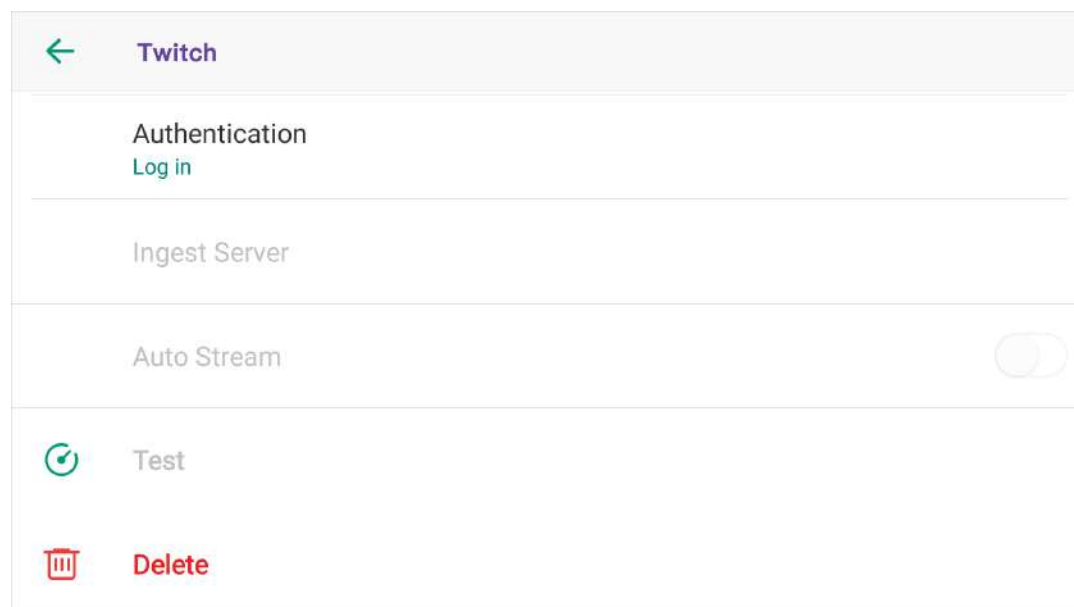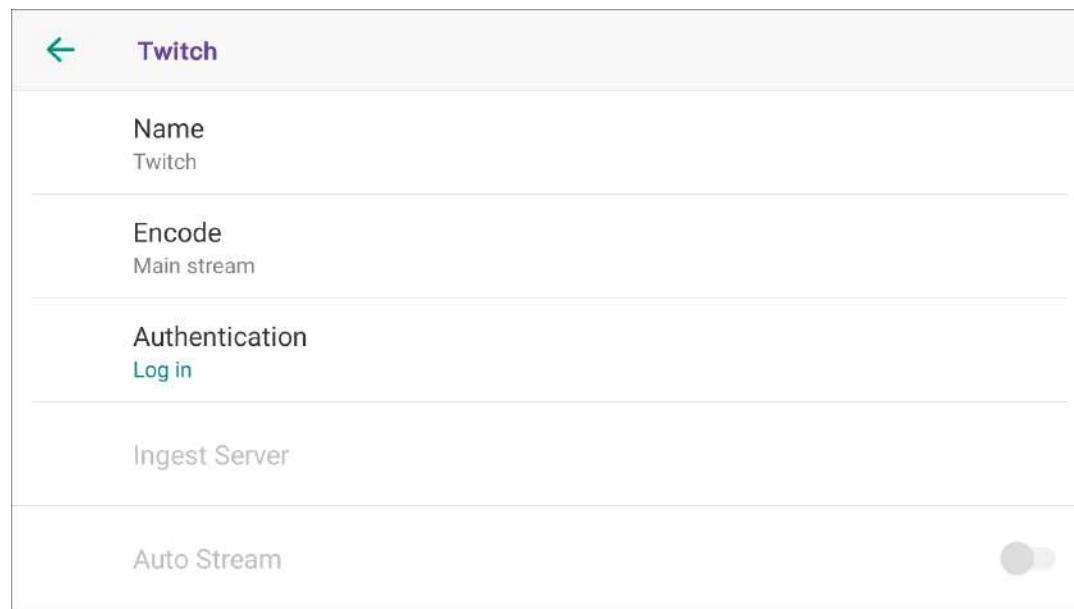
Configure Twitch Server

1. Select **Twitch** in the stream setting page.

2. Tap **Name** to enter an alias name for your convenience of multi-item management.

3. Tap **Encode**, and select a stream scheme. Options are as follows.

   ▪ Main stream: Program, 1080p, 60FPS, 6.0Mbps (default)

   ▪ Sub stream: Program, 720p, 30FPS, 2.5Mbps (default)

   > You can customize encode parameters and sources as needed. For details, please refer to Encode.

4. Tap **Log In** under **Authentication**, and then follow the instructions to log into your account.

5. Set the **Ingest Server**.
   The system lists available servers. You can select a nearby server for an optimal network path.

6. (Optional) Toggle on **Auto Stream**. When it is enabled, you can start streaming quickly on the main screen.

7. Tap **Test** to test whether the previous configurations are working properly.

8. Tap ← to return to the previous menu.

Configure Facebook Live Server

1. Select **Facebook** in the stream setting page.

2. Tap **Name** to enter an alias name for your convenience of multi-item management.

3. Tap **Encode**, and select a stream scheme. Options are as follows.

   - Main stream: Program, 1080p, 60FPS, 6.0Mbps (default)

   - Sub stream: Program, 720p, 30FPS, 2.5Mbps (default)

   > You can customize encode parameters and sources as needed. For details, please refer to Encode.

4. Tap **Log In** under **Authentication**, and then follow the instructions to log into your account.
   After you log in successfully, the system automatically selects a ingest server for you, which you cannot change.

5. Tap **Post to** to access the list of Timeline and Page, and then select Timeline or a Page as the streaming destination.

6. (Optional) Set **Title** and **Description**.

   > **Title** supports a maximum of 255 bytes.

7. (Optional) Toggle on **Auto Stream**. When it is enabled, you can start streaming quickly on the main screen.

8. Tap **Test** to test whether the previous configurations are working properly.

9. Tap ← to return to the previous menu.

Configure NDI® Server

1. Select **NDI**® in the stream setting page.

2. Tap **Alias** to enter an alias name for your convenience of multi-item management.

3. Tap **Source Name** to enter a name, which is the name of the output NDI® stream for the receiver to recognize. It supports 1-30 characters, which contain A-Z, a-z, 0-9 and _-#()%.

4. Tap **Group Name** to enter a name to specify the client group receiving the NDI® stream. It supports 1-64 characters, contain A-Z, a-z, 0-9 and _-#()%. Multiple group names can be comma-separated. The default group name is public. If you do not want other devices on the network to be able to search for it at will, you can set a private group name, and other devices need to use the private group name to search for this device.

5. Tap **Main Stream** to set the following parameters.

   - **Resolution**: Options include 640x360, 960x540, 1280x720, 1920x1080.
   - **FPS**: Options include 15fps, 30fps, 60fps.
   - **Bitrate**: It automatically changes according to resolution and FPS options.
   - **Profile**: Options include Baseline Profile, Main Profile, High Profile.
   - **Bitrate Mode**: It is fixed at CBR.

6. Tap **Sub Stream** to set the following parameters.

   - **Resolution**: It is fixed at 640x360.
   - **FPS**: It is fixed at 30fps.
   - **Bitrate**: It automatically changes according to the settings of main stream.
   - **Profile**: Options include Baseline Profile, Main Profile, High Profile.

- **Bitrate Mode**: It is fixed at CBR.

7. Tap **Encoding Source** to select the source to encode. Options include Program, HDMI 1 and HDMI 2.

8. Tap **Transport Mode**, select a mode and set parameters if needed.

   - **UDP (Unicast)**: The device sends a UDP stream directly to the receiver. It is used where lower latency matters. And multiple simultaneous streams will work independently for multiple receivers.

   - **UDP (Multicast)**: The device sends the UDP stream to a multicast group. It is used for one-to-many broadcast for lower CPU usage. Parameters in a multicast configuration include:

     - **Multicast IP**: IP ranges from 224.0.0.0 to 239.255.255.255.

     - **Subnet Mask**: The legitimate value ranges from 255.0.0.0 to 255.255.255.252.

     - **Time to live**: It ranges from 1 to 255. The default value is 4.

   - **RUDP (Unicast)**: Reliable User Datagram Protocol, is a connection-oriented and unicast protocol. RUDP helps to maintain the flow control and reliability of data transfer. The transmission control algorithms on both sending and receiving sides guarantee the RUDP capable of recovering from data loss, duplication, delay and reordering.

   - **TCP (Uni-Connection)**: It indicates to establish single TCP connection between the device and the receiver, and transfer all A/V packets via one port. Compared with UDP (Unicast) or TCP (Multi-Connection), it has lower CPU usage. It is used where reliable data transfer matters, which makes it suitable for 4K NDI streams.

   - **TCP (Multi-Connection)**: It indicates to establish multiple TCP connections

between the device and receivers, but transfer audio packet and video packet via different ports. It usually works in a complicated networking studio. It is used where reliable transmission of data matters, which makes it suitable for 4K NDI streams.

9. (Optional)Toggle on **Discovery Server**, and then the device can only be received by the specified receiver, and the mDNS auto-discovery function is unavailable.

   i. Ensure that the receiver and device can ping each other.
      This function works between device and receiver that can ping each other even from differential network segment. After setting, the output stream of your device can be received by specified server.

   ii. Specify the **Server IP** to the IP address of the discovery server.

   iii. Launch the **NDI Access Manager** tool installed in the reception computer, enter the **Advanced** tab, uncheck **Multicast Sending Enabled**, and check **Use Discovery Server**, and then specify **Server IP** to the IP address of the receiver server running discovery service function.
      Note: The Server IP of NDI Access Manager and Director device should be the same.
      Download the NDI Access Manager from the NewTek official site www.newtek.com/ndi/tools for free.

10. (Optional) Toggle on **Failover** to protect your NDI transmission from failure. If the source video fails, the backup device begins to provide a service. The initial source will be restored after it recovers.

   ▪ **Source name** shows the backup NDI channel name.
      Tap **Change** and select the failover (backup) video device within the same NDI group as the initial source.

- **IP address** shows the IP Address of the backup NDI channel, which is automatically obtained after you select the backup NDI source.

11. Tap **Test** to test whether the previous configurations are working properly.

12. Tap ← to return to the previous menu.

RTMP

Name
RTMP Server

Encode
Main stream

URL

Stream Key

Authentication

RTMP

Authentication

Username

Password

Auto Stream

Test

Configure RTMP Server

1. Select RTMP in the stream setting page.

2. Tap **Name** to enter an alias name for your convenience of multi-item management.

3. Tap **Encode**, and select a stream scheme. Options are as follows.

   ▪ Main stream: Program, 1080p, 60FPS, 6.0Mbps (default)

   ▪ Sub stream: Program, 720p, 30FPS, 2.5Mbps (default)

   > You can customize encode parameters and sources as needed. For details, please refer to Encode.

4. Tap **URL**, and enter the URL of the stream destination.

5. Tap **Steam Key**, and enter the key got from the stream destination.

6. (Optional) Turn on **Authentication** if needed, and then enter your **Username** and **Password** at the third-party live streaming platform.

7. (Optional) Toggle on **Auto Stream**. When it is enabled, you can start streaming quickly on the main screen.

8. Tap **Test** to test whether the previous configurations are working properly.

9. Tap ← to return to the previous menu.

Configure SRT Caller

1. Select SRT in the stream setting page.

2. Tap **Name** to enter an alias name for your convenience of multi-item management.

3. Tap **Encode**, and select a stream scheme. Options are as follows.

    ▪ Main stream: Program, 1080p, 60FPS, 6.0Mbps (default)

    ▪ Sub stream: Program, 720p, 30FPS, 2.5Mbps (default)

    > You can customize encode parameters and sources as needed. For details, please refer to Encode.

4. Tap **Address**, and enter the address of receiver.

5. Tap **Port**, and enter the port number of receiver. Value ranges from 1 to 65535.

6. Tap **Stream ID**, and enter a custom ID, which can contain 0-256 characters.

7. Tap **Latency**, enter a number between 20 and 8000. The default value is 120ms. We recommend that the latency is configured the same as that of the receiver.

8. (Optional) Toggle on **Encryption**, and then select an encryption algorithm, which can be AES 128, AES 192 or AES 256. And enter the Password, which can contain 10 to 79 characters.

9. (Optional) Toggle on **Auto Stream**. When it is enabled, you can start streaming quickly on the main screen.

10. Tap **Test** to test whether the previous configurations are working properly.

11. Tap ← to return to the previous menu.
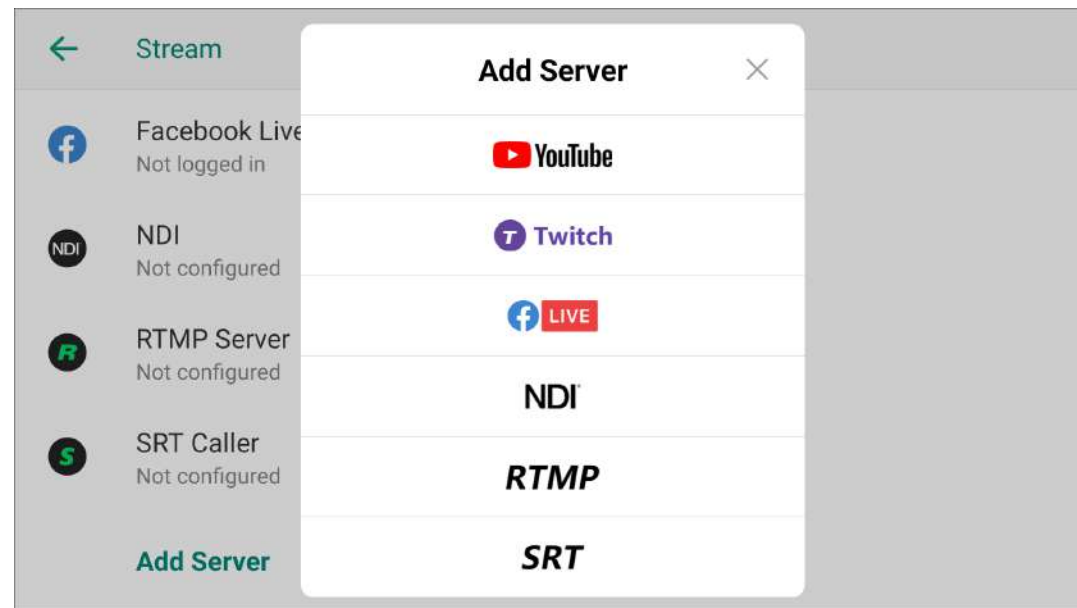
Add More Servers

1. Select **Add Server** in the stream setting page.

2. Select one server, and operate as the previous steps.

Edit Server

1. Tap a sever in the stream setting page.

2. Modify the server's properties.

Delete Server

- In the stream setting page, swipe a server to the left, and then tap 🗑 .

- Or tap a server to enter its configuration page, and then tap **Delete** at the bottom.
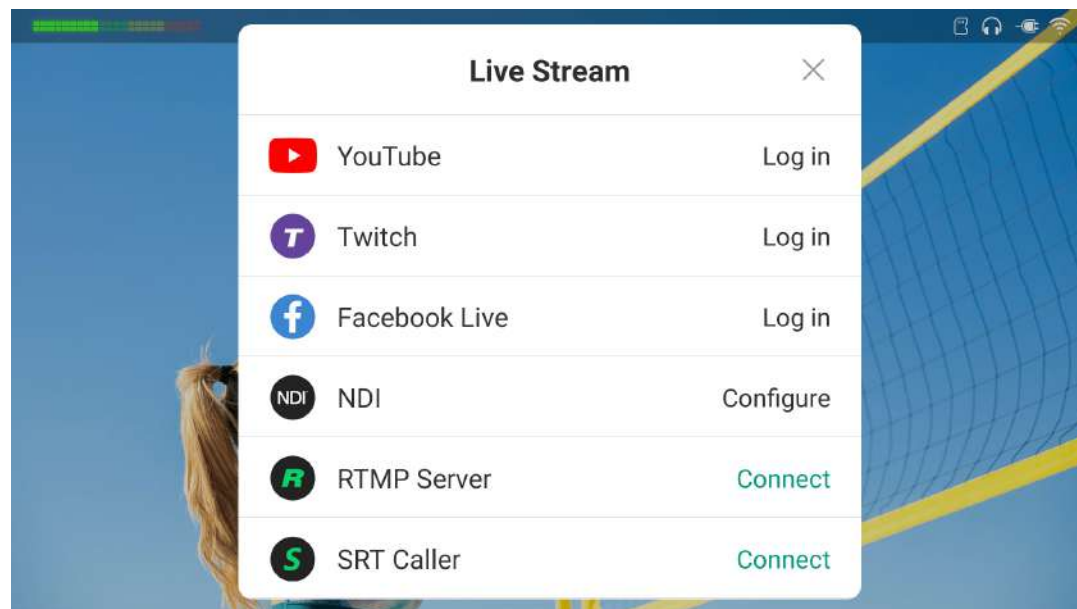
Start Live Streaming

Director Mini supports streaming to two servers at the same time. When NDI® HX3 streaming is ongoing, you cannot stream to other kind of destinations, vice versa. You can start live streaming through two methods: Manual Stream and Auto Stream. Manual Stream requires you to manually connect and stream to configured servers individually. Auto Stream allows you to specify up to two configured servers and automatically connect and stream to these servers at the same time.

Manual Stream

1. Ensure your Director Mini is connected to the Internet.

2. Ensure you have configured streaming sever.

3. Start streaming:

   a. Tap 📡 on the main screen.

   b. Tap **Connect** next to a configured server in the **Live Stream** window.

   > If you have not configured the server, tap the server, and it will go to the configuration page.

   c. (Optional) Repeat the above steps to stream to another server at the same time.

   - The maximum number of servers you can simultaneously connect to is two. This limit is set to ensure stream performance.

   - If you have not configured any other server, you cannot stream to another server, and it will not go to the configuration page when you tapping another server.

4. Stop streaming:
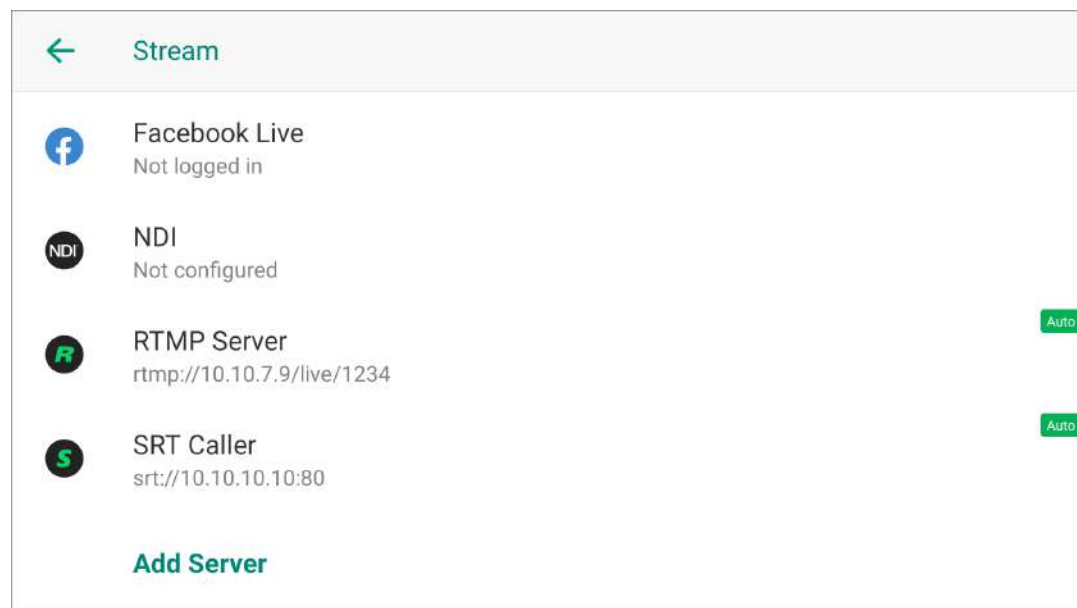
a. Tap 🔘 on the main screen.

b. In the Live Stream window, tap **Disconnect** of a working server to stop streaming to the server.

c. (Optional) Repeat the above steps to stop streaming to the other server.

Auto Stream

1. Ensure your Director Mini device is connected to the Internet.

2. Ensure you have turned on **Auto Stream** when you configure streaming sever.

    ▪ You can enable **Auto Stream** for two servers at most. This limit is set to ensure stream performance.

    ▪ You can check which server is enabled with Auto Stream by tapping ☰ > **Settings** > **Stream**, and the server is marked with "Auto".

3. Tap 🔘 on the main screen to start streaming.

4. Tap 🔘 on the main screen to stop streaming.

> The NDI server does not support auto stream.

Technical tips for a successful stream event:

▪ Test your stream before you go live.

▪ Check your network connectivity and encoding settings.

← **Stream**

f **Facebook Live**
Not logged in

NDI **NDI**
Not configured

R **RTMP Server** `Auto`
rtmp://10.10.7.9/live/1234

S **SRT Caller** `Auto`
srt://10.10.10.10:80

Add Server
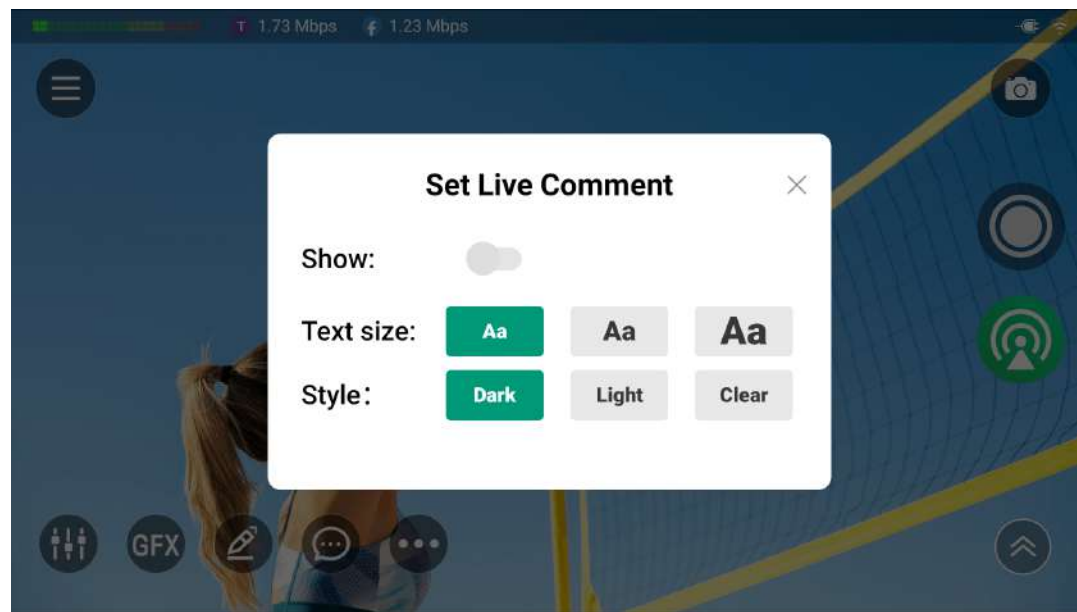
Live Comment

You can show live comments when streaming to YouTube, Twitch or Facebook.

1. Tap ⊙ to set live comments.

2. Toggle on **Show** to display live comments in the show.

3. Set text size.

4. Set the style of comment box.

5. Tap "x" to go back to the main screen.

The comment box will display real-time comments in chronological order, and the icon of the platform will be displayed on the profile picture to mark it. You can:

- Scroll up to view earlier comments, and scroll down to view the most current comments.

- Long-press the comment box to move to the desired position.

- Drag ⬎ to scale it up and down.

- Tap "x" to close the comment box.

Record and Screenshot

You can record a show during live streaming or independently, and you can take screenshots at any time.
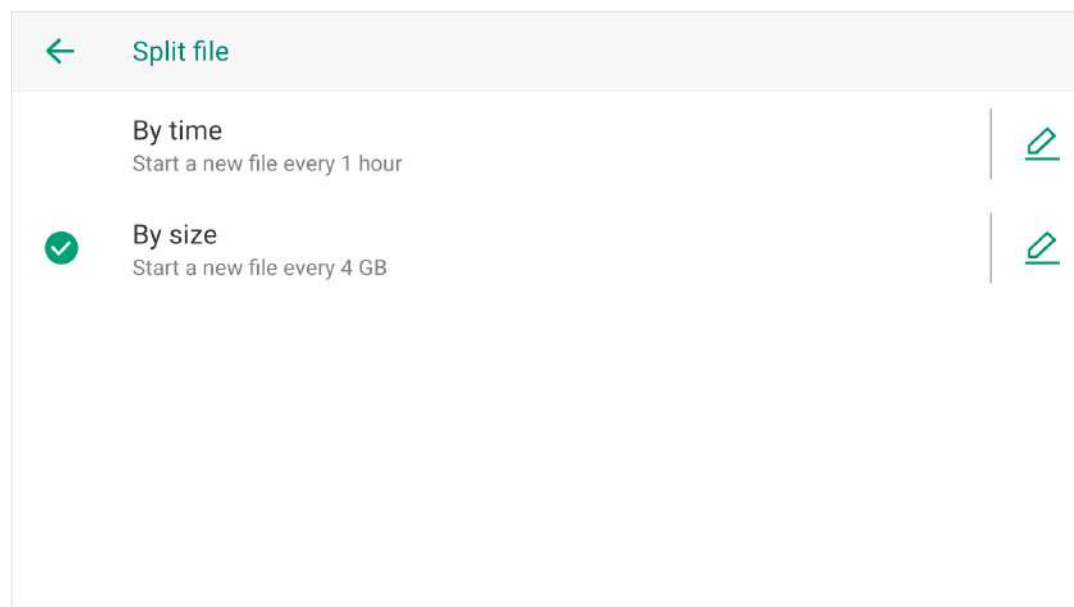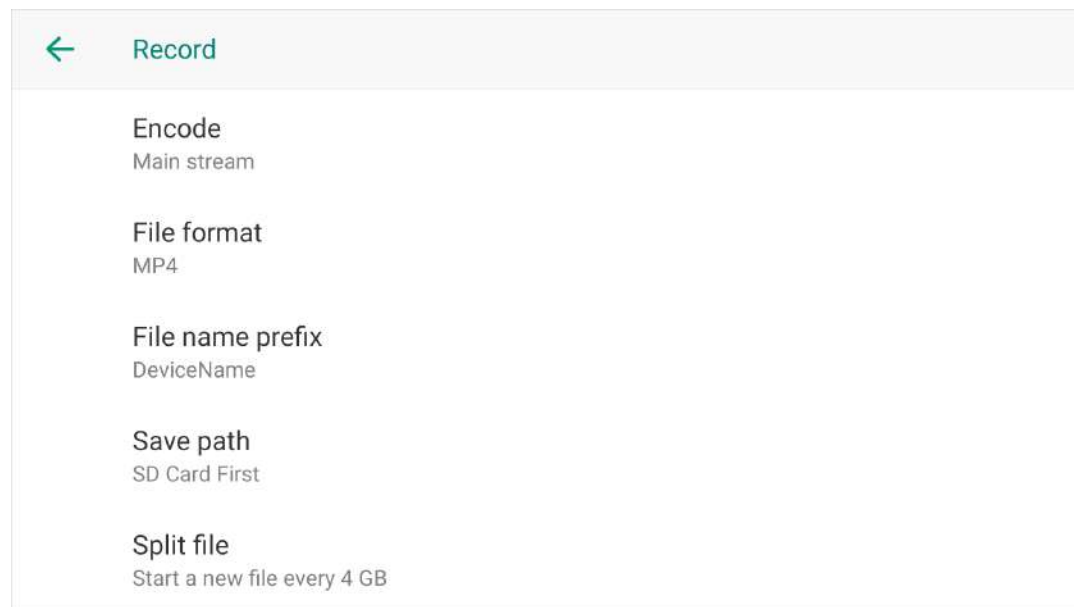
Set Recording Properties

Before recording, you may need to set recording properties. Otherwise, it will use the default settings to record.

1. Tap ☰ > **Settings** > **Record**.

2. Tap **Encode**, and select a stream scheme. Options are as follows.

   - Main stream: Program, 1080p, 60FPS, 6.0Mbps (default)

   - Sub stream: Program,720p, 30FPS, 2.5Mbps (default)

   > You can customize encoding parameters and sources as needed. For details, please refer to Encode.

3. Tap **File format** to set the format of recording file. Options include MP4 and MOV. By default, the format is MP4.

4. Tap **File name prefix**, and select a prefix type.

   - DeviceName

   - ShowName

   - DeviceName_ShowName

   - Self-defined name: tap **Add**, enter a name, and tap **Save**.

5. Tap **Save path**, and then select your preferred path, **Internal Storage First** or **SD Card First**.

   > You can also set storage path in Storage.

6. Tap **Split file**, and then you can choose to split your recording file by time or by size. By default, it starts a new file every 4 GB.

- **By time**: start a new file by every x minutes or x hours. Tap ✎ to set as your preference.

  Options include 10 minutes, 20 minutes, 30 minutes, 1 hour, 1.5 hours, and 2 hours.

  > The first file will start from the current time and end on the hour, and then the second file will start, so that it is more convenient for you to view your video clips. For example, when you choose to start a new file every 1 hour, if the first file starts at 8:30:03 am, it will end at 9:00:00 am. Then the second file will start at 9:00:00 am.
  >
  > It also takes effect for x minutes. For example, when you choose to start a new file every 10 minutes, if the first file starts at 8:08:03 am, it will end at 8:10:00 am, and the second file will start at 8:10:00 am.

- **By size**: start a new file by every x MB or x GB. Tap ✎ to set as your preference.

  Options include 100 MB, 200 MB, 500 MB, 1 GB, 1.5 GB, 2 GB, 2.5 GB, 3 GB, 3.5 GB, and 4 GB.

7. Tap ← at the upper left corner to go back.

Start Recording

1. On the main screen, tap ⊚ to start recording.

2. Tap 🔴 to stop recording.

> ☼ When the recording time is less than 1s, the recording file will not be saved.
>
> When NDI® HX3 streaming is ongoing, you cannot record, vice versa.

Take Screenshots

Tap 📷 to take a screenshot.

Screenshots are saved as .PNG files in the internal storage by default. If you want to change the save path, please refer to Storage.

Check Streaming/Recording Status

Recording status

Once you start recording, the recording status will be displayed on the status bar. It is marked by a flashing red dot, showing the recording duration. When the time left for record is less than 1 hour, it displays "Time left: xx:xx" in red text.

> When the remaining free space is insufficient, the device will stop recording automatically. The recording status disappears from the status bar.

Streaming status

Once you start streaming, the streaming status will be displayed on the status bar. It is marked by the logo of streaming server, showing the streaming rate. When you stream to two servers at the same time, it displays information of the two.

- **Orange streaming text:** The upload speed is not enough to support bandwidth.

- **Red streaming text:** Director Mini is trying to reconnect to the streaming server.

You can also view streaming status on the Control Center.

Album

The Album displays the screenshots you have taken or videos you have recorded which are stored in the internal storage or SD card, categorized into All, Video, and Image, and sorted by time.

In the album, you can preview, export, and delete the images or video clips.
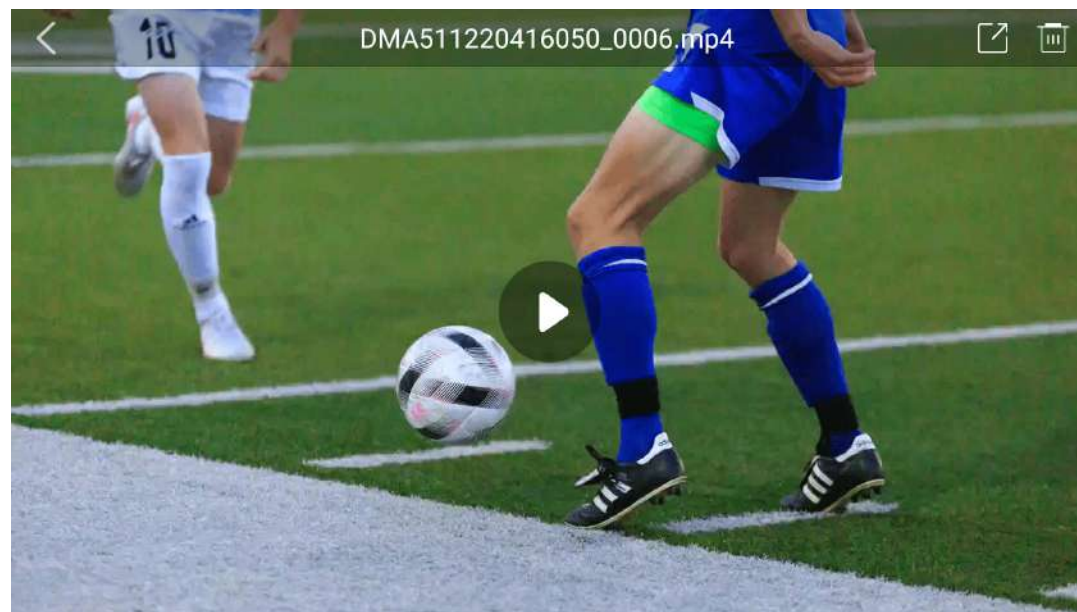
Preview Video Clips & Images

1. Tap ⊜ > **Album** to open the Album.

2. Tap a video clip or an image to preview it in full screen.

3. While previewing, you can

   - Tap ⬀ or 🗑 in the upper right corner to export or delete the video or image.

   - Tap ▶ to play the video, or tap the screen, and then tap the play or pause button to control video playback.

4. Tap ‹ to go back.
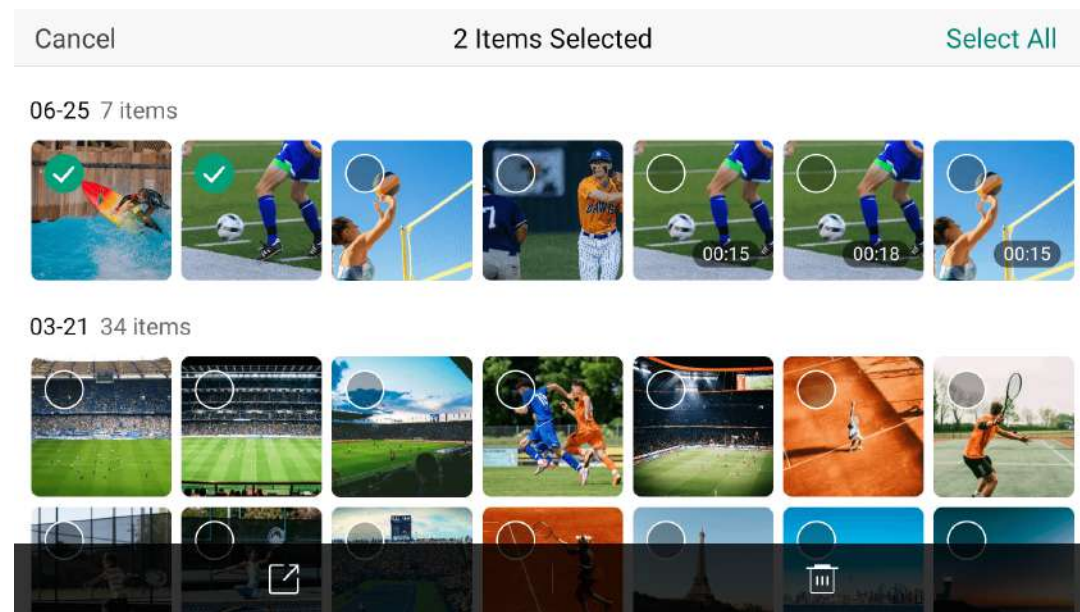
Export or Delete Video Clips & Images

1. Tap ⊜ > **Album** to open the Album.

2. Tap **Select**, and then select some video clips and images.

3. Tap ⬈ at the bottom, then select USB or SD Card to export the selected items.

4. Or tap 🗑 at the bottom to delete the selected items.

> If you export a file in the internal storage to the SD card, two same files will be displayed in the album.

Settings

Tap ☰ > **Settings** to open the settings page, where you can customize the properties of the device, configure encode parameters, set audio, etc.
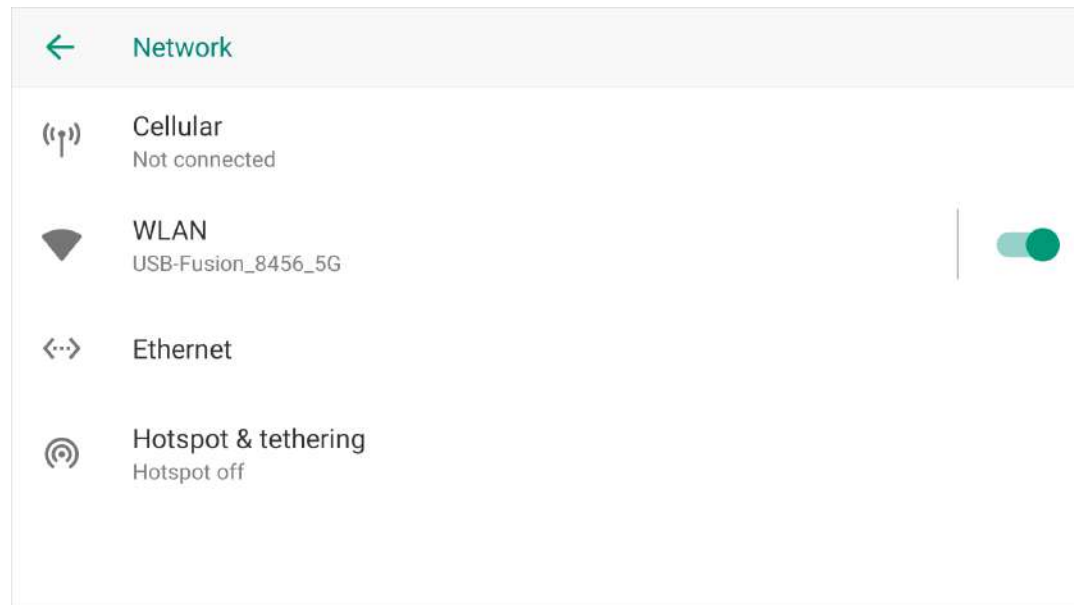
Network

Director Mini supports multiple network connections, including wired, Wi-Fi and cellular network. These networks can be connected at the same time. The priority order for the device selecting network connection is wired > Wi-Fi > Cellular network.

Tap **Network** in the settings page, and you can configure cellular, Wi-Fi, Ethernet, hotspot and tethering.

Cellular

If a USB Modem is connected, tap **Cellular** to check network connection information.

Wi-Fi

You can connect your device to a Wi-Fi network to access the Internet and other devices.

Connect to a Wi-Fi network

1. Tap **WLAN**, and then toggle on the switch to enable Wi-Fi.

2. Select a Wi-Fi in the displayed list to connect. (The Wi-Fi with a lock icon requires password.)

3. You can tap the connected Wi-Fi to check more network details, such as signal strength, frequency, security, MAC address, IP address, Gateway, Subnet mask,

DNS, and link speed.

4. To delete a Wi-Fi, you can tap the connected Wi-Fi and then tap FORGET. Or you can tap **Saved networks** at the bottom, and tap a Wi-Fi to delete, and then tap FORGET.

> After adding the network, to turn off/on the Wi-Fi network, toggle the switch after **WLAN**.

Add a Wi-Fi network

When the router's SSID (wireless signal name) is hidden, the device cannot search for the router's wireless signal. It needs to manually enter the router's SSID, wireless password and other parameters to connect to the router's wireless signal.

1. Tap **WLAN**, and then toggle on the switch to enable Wi-Fi.
2. Scroll the network list to the bottom, and tap **Add network**.
3. Enter SSID, and set Security by selecting the same encryption mode as the router and entering the password if needed.
4. Tap **Save**.

Wi-Fi Direct

Wi-Fi Direct uses Wi-Fi to share data between devices.

1. Tap **WLAN**, and then toggle on the switch to enable Wi-Fi.
2. Scroll the network list to the bottom, tap **Wi-Fi preferences** > **Wi-Fi Direct**. It lists all the detected devices.
3. Tap a device, and then follow the prompts to connect. To disconnect from Wi-Fi Direct, tap a connected device to disconnect it.
4. (Optional) Tap **RENAME DEVICE**, enter a new name, and tap **OK**.

Ethernet

Ethernet is enabled by default. If you want to disable the Ethernet connection when it is in bad status, tap **Ethernet**, and then toggle off the switch. To enable the Ethernet connection, toggle on the switch.

You can tap **Ethernet configuration** to check and set more information, including connection type (DHCP or Static IP), IP address, network prefix length, DNS address and gateway address.

Hotspot & Tethering

This function uses your device as a mobile hotspot to share your network connections with other devices.

1. Tap **Hotspot & tethering** > **Wi-Fi hotspot**, and toggle on the switch to enable hotspot.

2. Set the hotspot name.

3. Set security. If you select WPA2 PSK, set the hotspot password.

4. Tap **Advanced** to set whether to turn off hotspot automatically and select AP Band. Please refer to Which AP band should I choose for hotspot.

> To ensure the connection effect, when 5G is selected, the recommended optimal connection distance is within 5 meters, and a maximum of 5 devices can be connected. When 2.4G is selected, the recommended optimal connection distance is within 5 meters, and a maximum of 2 devices can be connected.

←	Connected devices
	Available media devices
🎧	Philips TAT1205 Active, 100% battery ⚙
+	Pair new device
⌨	Previously connected devices
ⓘ	Visible as "Director-BT" to other devices
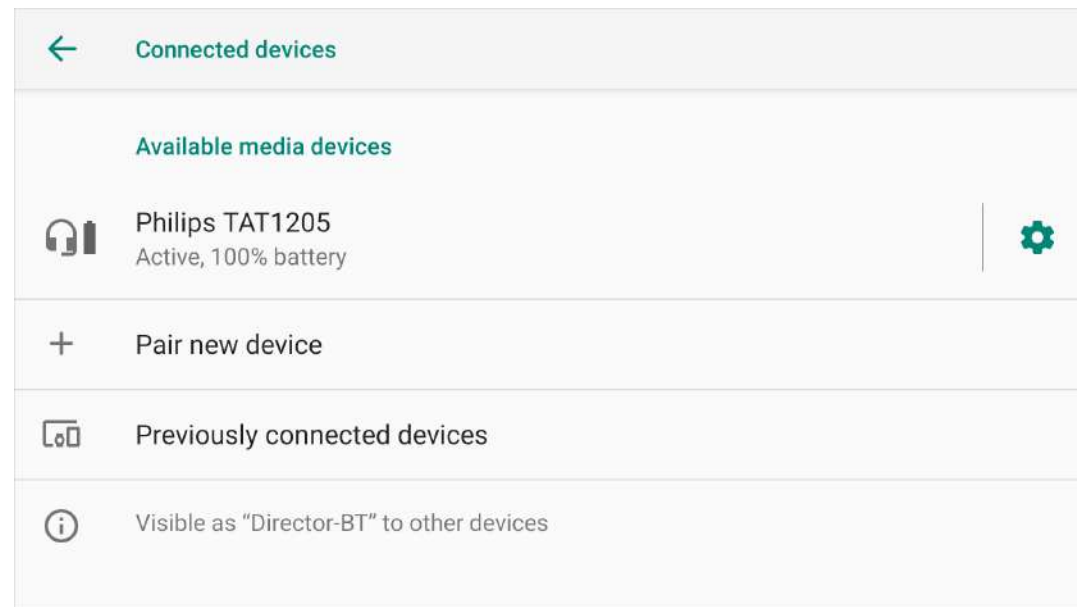
Bluetooth

You can pair your device to a Bluetooth device.

1. Tap **Bluetooth** in the settings page.

2. Tap **Pair new device**.

3. (Optional) Tap **Device name** to rename the device name for Bluetooth pairing.

4. Select a Bluetooth device from the list of Available devices.

5. Go back to the previous page, and the device is listed in **Available media devices**.
   After the Bluetooth device is connected, you can select it as the monitor. For details, please refer to Volume Control.

6. To disconnect the Bluetooth device, tap ⚙ > **DISCONNECT**, and return to the previous page.

7. To reconnect a device, tap **Previously connected devices**, select the device to reconnect, and tap ⚙ > **CONNECT**.

8. To delete the Bluetooth device, tap ⚙ > **FORGET** > **FORGET DEVICE**.

The relative pages may differ with BT device of different brands, vendors and types. Please operate according to the page prompts.
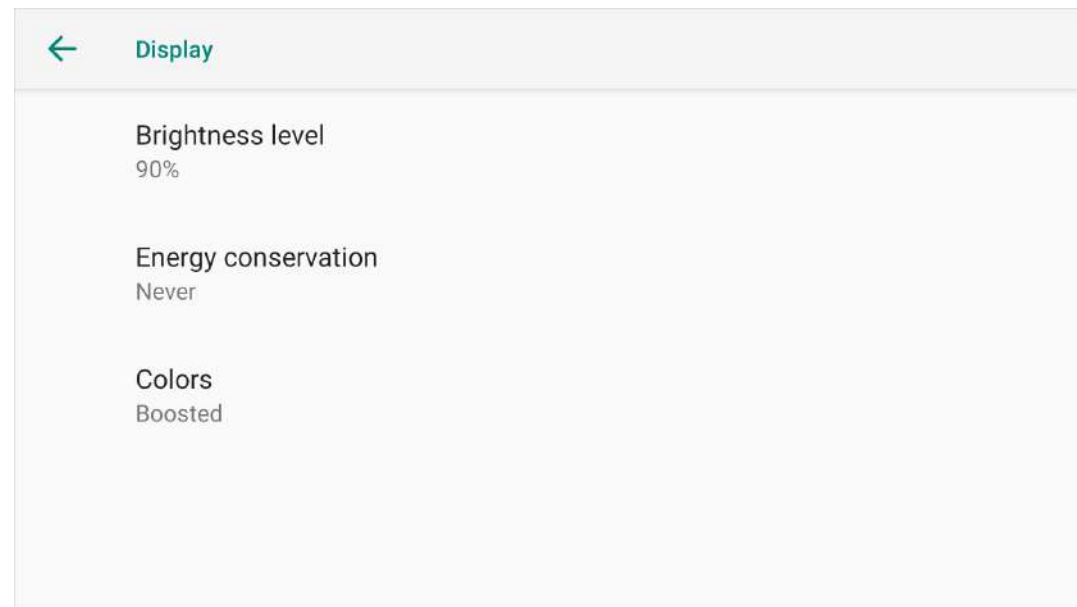
Display

Tap **Display** in the settings page to configure the screen display properties.

- **Brightness level**: Move the Brightness slider to right or left to adjust the brightness.

- **Energy conservation**: Choose the amount of time you want to activate energy conservation. The screen will turn dark after the set time when there is no activity. It is not enabled by default.

- **Colors**: Choose one color mode you like. Options include Natural, Boosted, Saturated, and Adaptive.
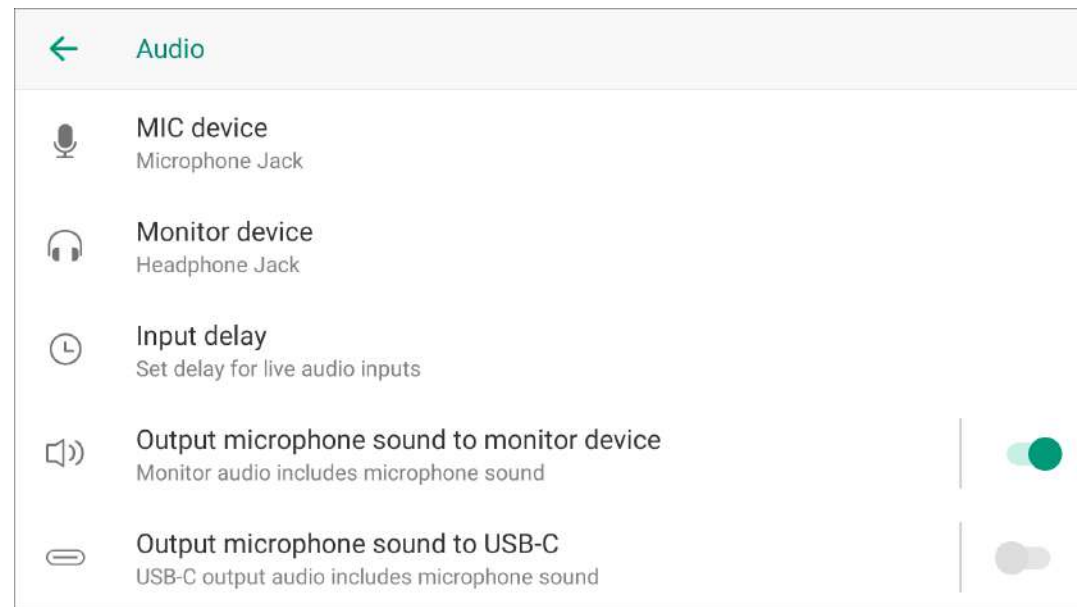
Audio

Tap **Audio** in the settings page, to set the properties of audio.

- **Mic device**: select a microphone device.
  - Microphone jack: device connected to the microphone jack
  - HDMI 1: device connected to the HDMI 1 port
  - HDMI 2: device connected to the HDMI 2 port
  - *USB device*: device(s) connected to the the USB 3.0 port(s). The system automatically lists device name(s).
  - SRT stream: audio from the SRT stream, displayed with the self-defined name.
  - RTMP stream: audio from the RTMP stream,displayed with the self-defined name.
  - NDI stream: audio from the NDI stream, displayed with the self-defined alias.
  - Phone Camera: audio from the phone's microphone, displayed with the self-defined name.
- **Monitor device**: select a monitor device.
  - Headphone Jack: device connected to the headphone jack
  - Bluetooth Device: device connected through BT
  - *USB device*: device(s) connected to the USB 3.0 port(s). The system automatically lists device name(s).
- **Input delay**: set delay for live audio inputs, to match up the audio and video tracks. You can set the delay for inputs from microphone jack, HDMI 1 and HDMI 2.

- **Output microphone sound to monitor device** (enabled by default): In some cases, you may want to input your own microphone using the 3.5mm mic/line input for narration while monitoring the other audio and video sources. To exclude your own microphone audio from only your headphones or Bluetooth connection, toggle the audio off. If you are using the 3.5mm mic/line input from a soundboard and need to monitor that audio source all the time, toggle the audio on.

- **Output microphone sound to monitor device** (disabled by default): For example, if you don't want microphone audio to play on a large-screen monitor, toggle the audio off. To play microphone audio in sync, toggle the audio on.

←	Storage
📦	**Internal storage** 15.3GB of 64.0GB used
💳	**SD Card** 0.6GB of 31.0GB used
📷	**Screenshot** Internal Storage First
◉	**Record** SD Card First
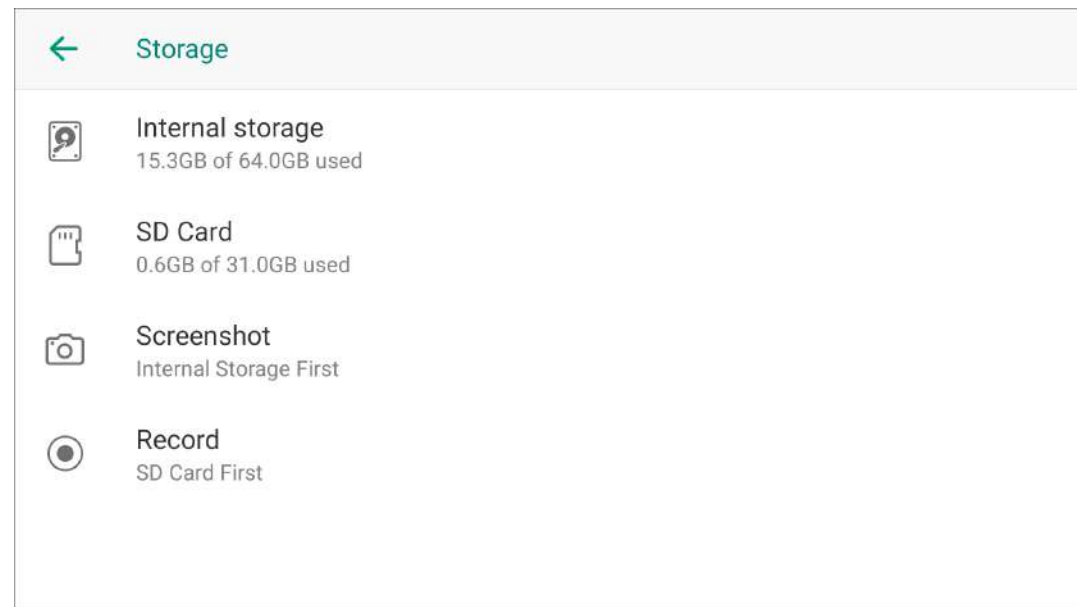
Storage

Tap **Storage** in the settings page, to check the storage status of internal storage and SD card, and set storage path for screenshot and record.

1. Tap **Internal storage**.
   - At the top, you'll see a color-coded bar showing how much space the device has left, how much is taken up, and what's taking it up.
   - Below there shows how much space is taken by **Show** and **Record and screenshot** respectively. You can tap on each item to view more details and delete files.
   - The last line shows the remained time for recording.

2. Tap **SD Card**
   - At the top, you'll see a color-coded bar showing how much space the SD card has left, how much is taken up, and what's taking it up.
   - Below there it shows how much space is taken by **Record and screenshot**. You can tap the item to view more details and delete files.
   - The following line shows the remained time for recording.
   - The last line is the Format function. Tap it to format the SD card.

3. Tap **Screenshot**, and then select your preferred path, **Internal Storage First** or **SD Card First**.

4. Tap **Record**, and then select your preferred path, **Internal Storage First** or **SD Card First**.
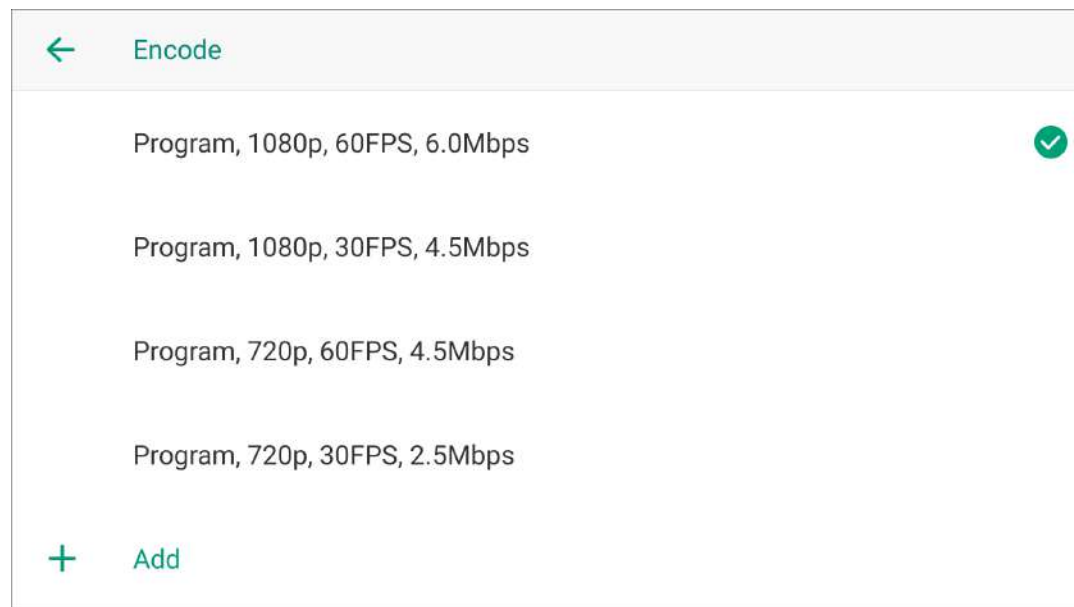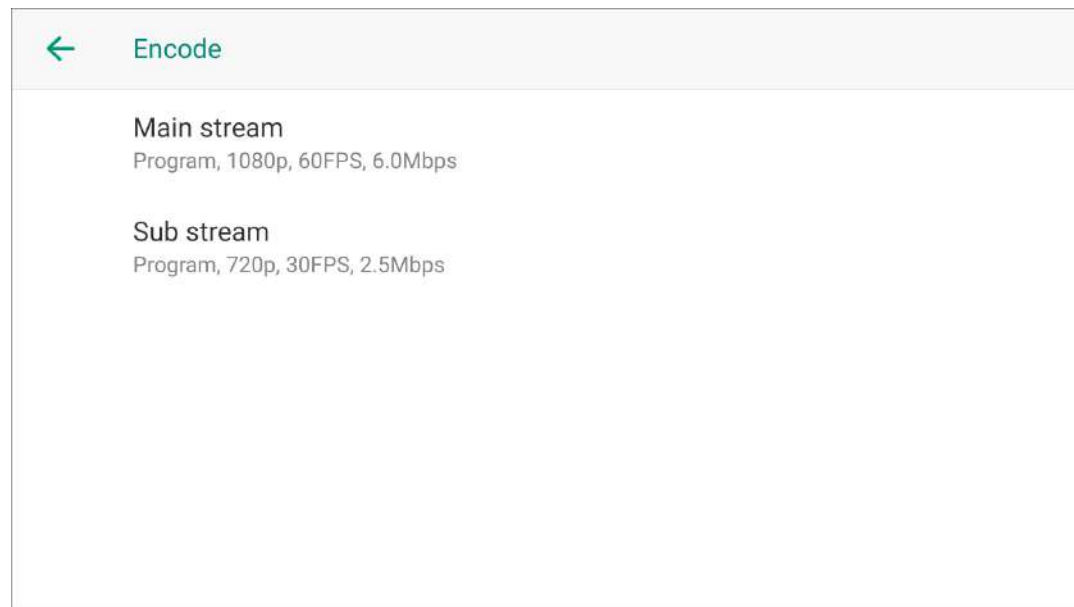
Encode

The system provides two encoders for selection when you configure stream servers and record parameters. You can customize encoding parameters and select encoding source for main stream and sub stream.

1. Tap **Encode** on the settings page.

2. Tap **Main stream** or **Sub stream**.

3. (Optional) Tap **+ Add** to customize a stream scheme with the following parameters, and then tap **Add**.

   ▪ Encoding source: Program, HDMI 1, HDMI 2.

   ▪ Resolution: 540, 720, 1080

   ▪ Frame rate: 15, 30, 60

   ▪ Video bitrate: enter a custom value

   ▪ Audio bitrate: 64, 96, 128

   ▪ Advanced:

     ▪ Key frame interval: tap + or - to set

     ▪ Encode level: Baseline, Main, High

     ▪ Bitrate mode: VBR, CBR

4. Select a stream scheme from system options or custom options. System options include:

   ▪ Program, 1080p, 60FPS, 6.0Mbps

   ▪ Program, 1080p, 30FPS, 4.5Mbps

   ▪ Program, 720p, 60FPS, 4.5Mbps

   ▪ Program, 720p, 30FPS, 2.5Mbps
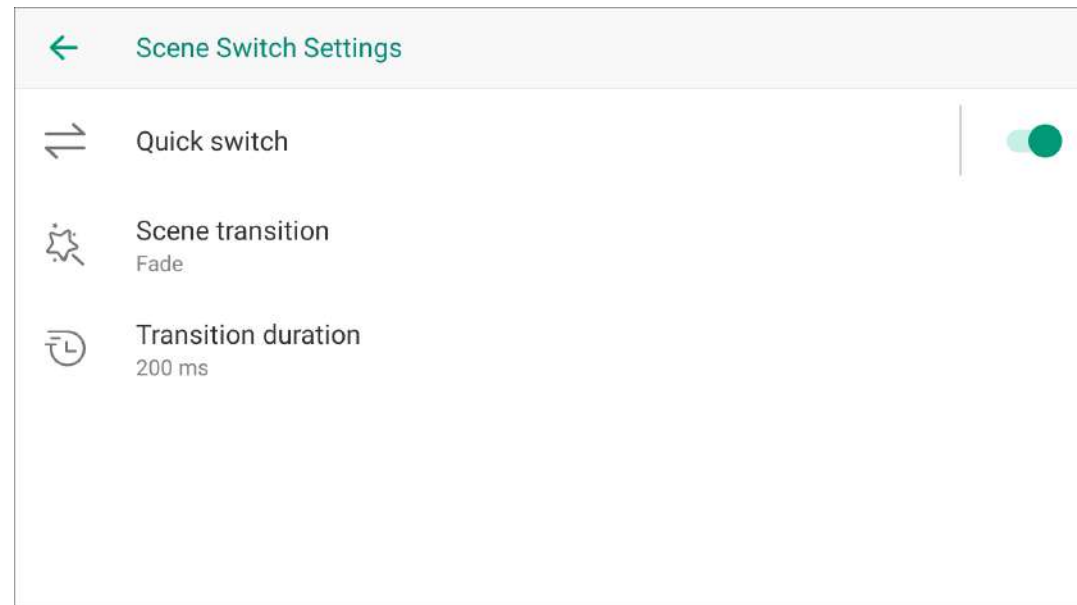
5. To edit an exiting stream scheme, swipe it left and tap **Edit**.

6. To delete an exiting stream scheme, swipe it left and tap **Delete**.

Scene Switch

Tap **Scene Switch** on the settings page to set switch mode and transition effect.

- **Quick switch**: set scene switch mode.

  - Toggle on the switch to enable quick switch mode (default). When you tap thumbnails in the scene list, it switch scenes directly.

  - Toggle off the switch to enable manual switch mode. When you tap a thumbnail in the scene, you can preview the scene, and then tap the **Switch** button to switch the scene into the Program view.

- **Scene transition**: set transition effect for switching scenes.

  - Cut: scenes switch directly.

  - Fade: scenes switch with a fade effect.

- **Transition duration**: set transition duration for the fade effect.

  - Enter the value, ranging from 50ms to 1000ms, and then tap Save.

System

Tap **System** on the settings page to set the system related items.

Language

Director Mini supports English and Chinese.

1. Tap **Language** in the system page.

2. Tap a language.

3. Tap **Continue**. The device will restart and change to the selected language.

← Language

English (United States) ✓

简体中文 (中国)
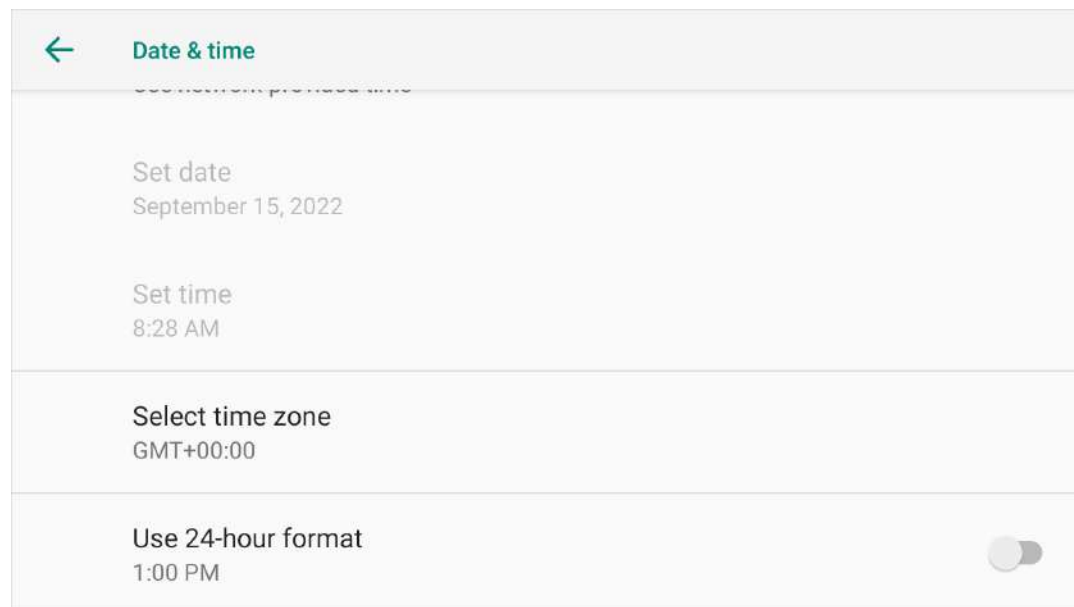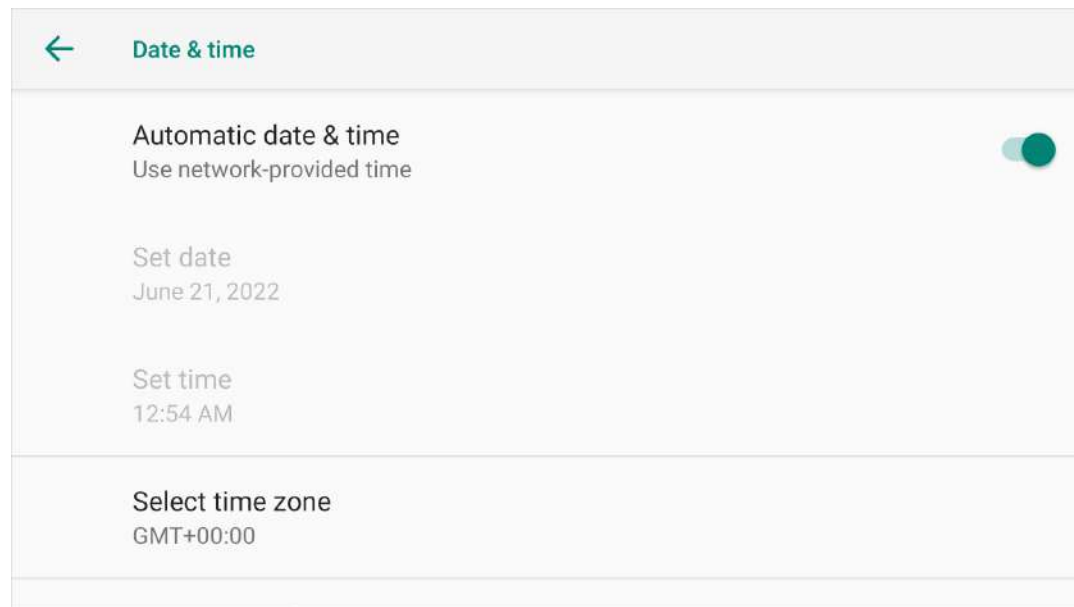
Date and Time

By default, your device receives date and time information from the network.

Tap **Date & Time** in the system page, and then you can set manually.

- Automatic date and time: Use the date and time provided by the network. When it is disabled, you can set date and time respectively.

- Select time zone: Tap it to select time zone by region, or tap ⋮ at the upper right corner to select by UTC offset.

- Use 24-hour format: Use 12-hour format by default. You can turn it on to switch to 24-hour format.
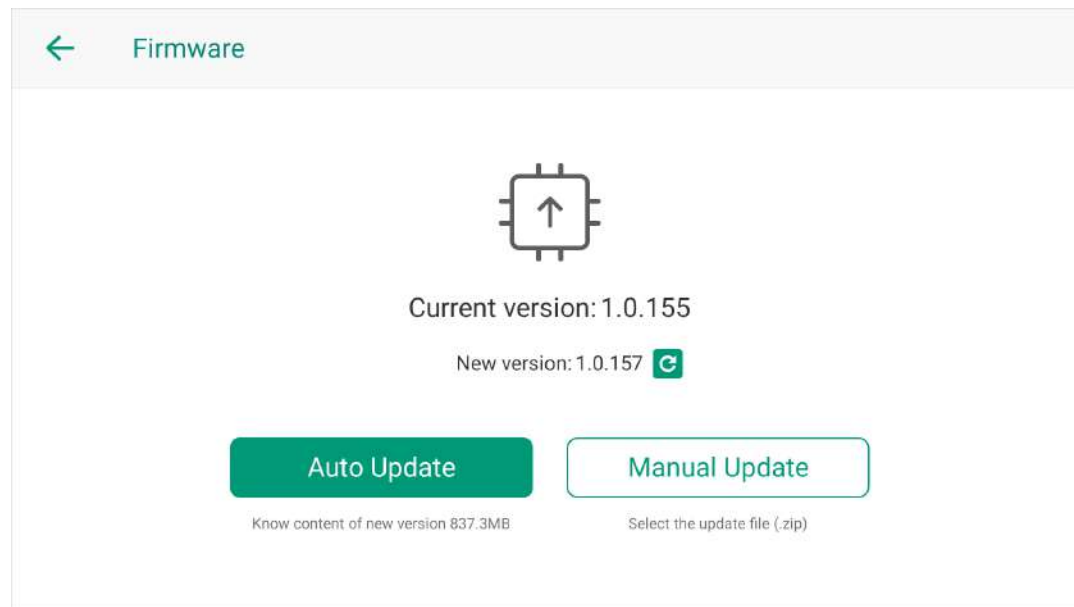
Update Firmware

Director Mini supports automatically and manually updating firmware. Manual update can update to any firmware version, while auto update can only update to the online latest version.

Auto Update

1. Ensure your device is connected with network.

2. Tap **Firmware** on the system page.

3. Check the information of current version and new version.
    You can tap the [C] button to refresh the information of new version.

4. If a new version is available, tap **Auto Update**.
    The size of the update file will be displayed under the button.

5. Read the release notes of the new version on the popup to decide whether to update to this version.

6. Tap **Update**. The device starts downloading the update file and implementing update automatically. Please wait and do not exit.

    > ⚠ During the upgrade process, do not power off or restart your device. This may cause irreversible damage to your device.

7. When the firmware update is completed, tap the **Reboot** button to restart your Director Mini device.

    > If it accidentally exits or the network is disconnected during update file downloading, Director Mini supports resuming from the break point.

Manual Update

Please down load the firmware update file on Magewell official website, and then follow the steps below to update your Director Mini device.

1. Import the update file to the internal storage of the device, or import it to an SD card / USB flash driver, and insert the SD card or USB flash driver to the device.

2. Tap **Firmware** on the system page to enter the Firmware page which displays the information of current version and new version.

3. Tap **Manual Update**, and then select the update file.

4. Director Mini will then upgrade automatically. Please wait and do not exit.

> ⚠ During the upgrade process, do not power off or restart your device. This may cause irreversible damage to your device.

5. When the firmware update is completed, tap the **Reboot** button to restart your Director Mini device.

If the firmware update fails, refer to What to do when firmware update fails.

← **Reset?**

Reset will erase all the shows and their assets, system settings and local stored media files. It will NOT affect the SD Card and USB flash drive.
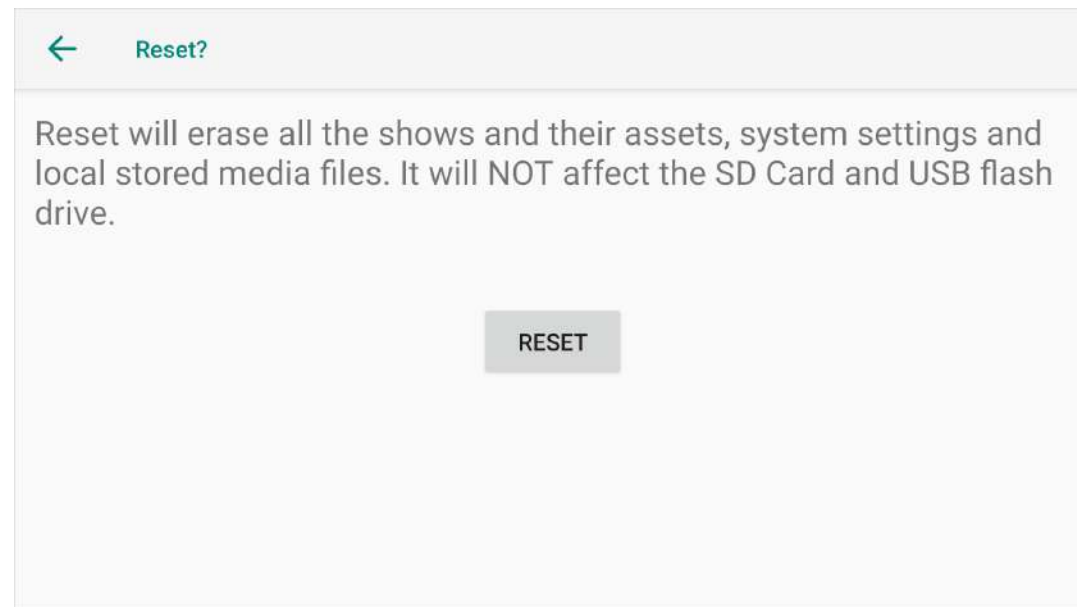
RESET

Reset

⚠ This function is going to reset the device. Before resetting, make sure that you have backed up all the files you need.

1. Tap **Reset** in the system page.

2. Tap the **Reset** button. The device will be rebooted with all the shows and their assets, system settings and local stored media files being deleted.
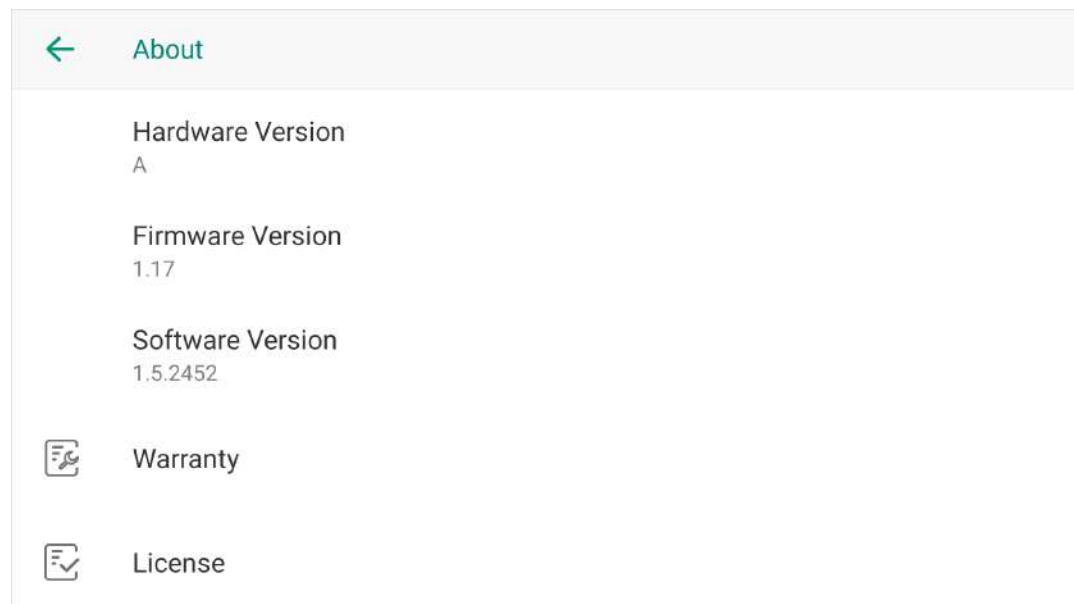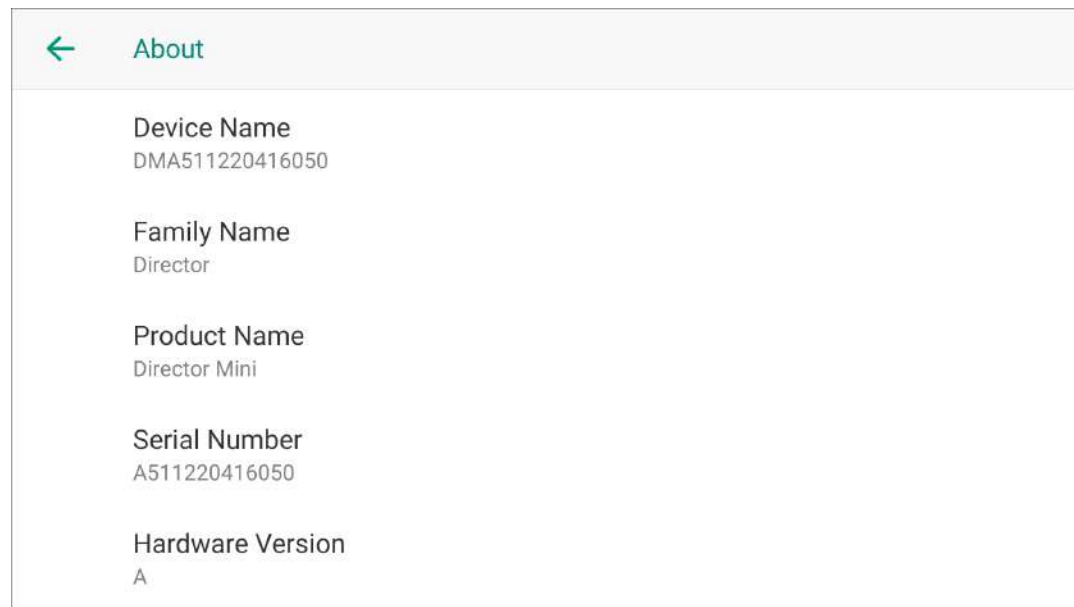
About

Tap **About** in the system page, and it shows the information of the device, including its device name, family name, product name, serial number, hardware version, firmware version, software version, warranty, and license.

Rename the device

You can rename the device.

1. Tap **Device Name**, and enter a new name.

2. Tap **Save**

Battery

Director Mini supports two hot-swappable NP-F battery packs, which allows for device operation without the need for a physical power connection.

You can insert battery and power adapter separately or simultaneously. When they are both inserted, Director Mini uses the power supplied by the power adapter as the priority.

Caution

If the battery pack is mishandled, the battery pack can burst, cause a fire or even chemical burns. Please read the following cautions before installing batteries.

- Do not disassemble the battery pack.
- Do not crush and do not expose the battery pack to any shock or force such as hammering, dropping or stepping on it.
- Do not short circuit and do not allow metal objects to come into contact with the battery terminals.
- Do not expose to high temperature above 60°C (140°F) such as in direct sunlight or in a car parked in the sun.
- Do not incinerate or dispose of in fire.
- Do not use damaged or leaking batteries.
- Be sure to charge the battery pack with a qualified charger.
- Keep the battery pack out of the reach of children.
- Keep the battery pack dry.

Battery Indicator

2   1

Battery Lock Button
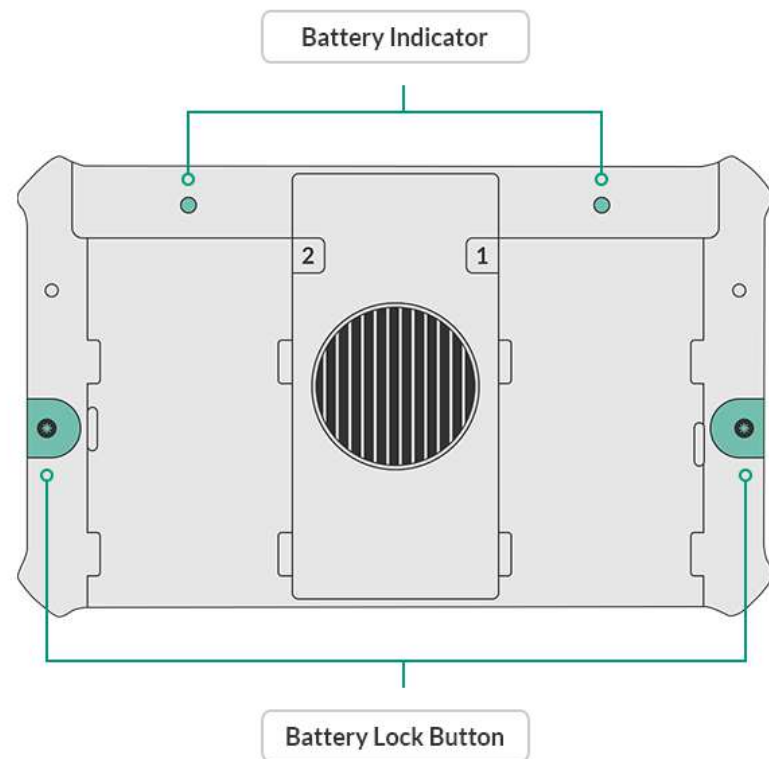
Battery Installation

Director Mini supports 7.4V NP-F type battery packs, such as Sony NP-F550 and Sony NP-F750. You can use the same or equivalent types.

- **Install:** press the lock button first and put the battery into the slots until it is locked in the correct position.

- **Remove:** press the lock button first and remove the battery.

Battery Indicator

Power on the device. On the back of the device, the battery indicator corresponds to the battery lights up. The indicator has three colors to indicate the battery percentage.

- **Green**: 50% - 100%

- **Orange**: 25% - 50%

- **Red**: <25%

When the battery is depleted, the corresponding indicator lights off.
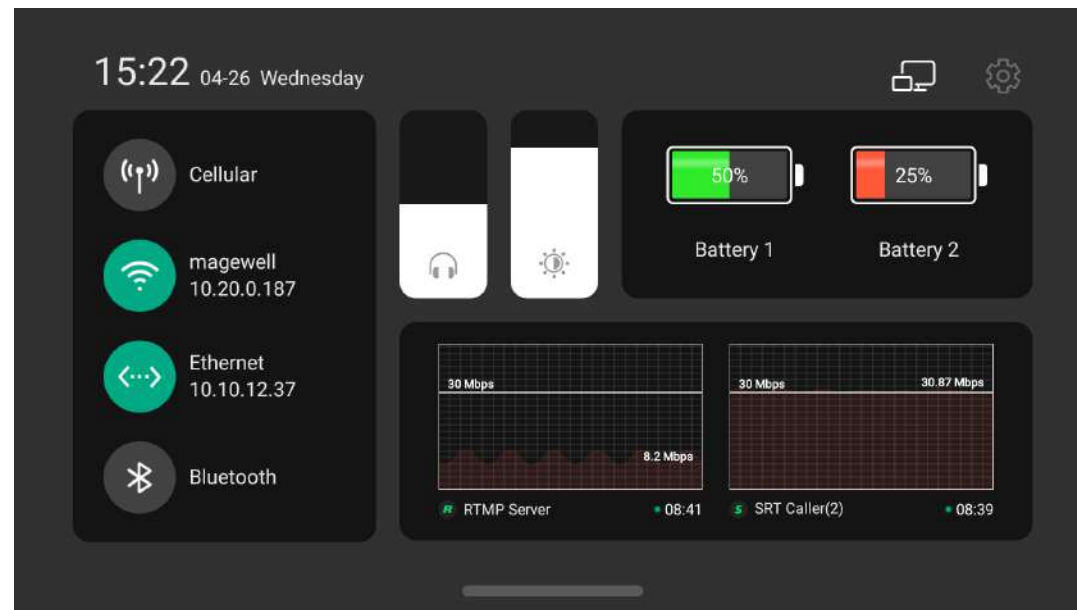
Battery Status

On the screen, you can also see the battery status icon on the status bar. When there are two batteries installed, it shows the two battery status icons.

- ▪ 🔋 : 75% - 100%.

- ▪ 🔋 : 50% - 75%

- ▪ 🔋 : 25% - 50%

- ▪ 🔋 : < 25%

You can also check battery status on the Control Center by swiping down from the top of the screen.

> If the power adapter is also connected, the device uses power adapter in priority and it does not show the battery status icon.

During operation, your Director Mini will use the battery with the lower charge, then swap over to the other when the battery is depleted without interruption.

As Director Mini supports hot swapping, you can replace the depleted battery without any interruption to your show.

Typical Battery Working Time

The following is what you can expect for a single battery.

Capacity	Working Condition	Working Hours
7800mAh	Displaying, streaming and recording a multi-view scene consisting of HDMI, Video and WEBCAM sources	3 hours 30 minutes
2200mAh	Displaying and streaming an HDMI scene	2 hours 20 minutes

* Based on ideal conditions.

FAQs

General

Notice for connecting the USB-C OUT port to the computer

1. Please connect the device with power cable or battery and power on at first, and then connect to the computer.

2. To power off the device, disconnect the USB-C OUT port from the computer at first, and then press the power button to power off.

3. When the USB-C OUT port is connected to the computer, after creating a file to the internal storage on the device, such as long-pressing the power button to take a screenshot or recording a video, the computer may not recognize the file just created or a pop-up window prompts that the device is not available, you need to reconnect the USB-C OUT port.

How to create a show?

1. Tap ☰ > **Create a show**.

2. Enter your show name, and choose the screen orientation.

3. Tap **Create**.

How to create a new scene?

1. Tap ＋ on the main screen.

2. In the **Create New Scene** window, select a source that you want to put into the new scene.

3. Edit the scene in the Scene Editor.

4. Save the changes you have made in the Scene Editor, and then the thumbnail of the new scene will be added to the end of the Scene List.

How to edit a scene?

1. Long press a thumbnail in the scene list on the main screen.

2. Tap **Edit** to open the Scene Editor.

3. You can add more sources, resize the source, add transition effects, etc. For details, please refer to Edit Scenes.

How to configure live stream servers?

Configure the stream server on the Director Mini device:

1. Tap ☰ > Settings > Stream, and select a sever to enter the configuration page.

2. Or tap 📡 on the main screen, tap a server not configured to enter the configuration page.

> Only when you have not configured Auto Stream for any server, you can tap 📡 to configure a server; otherwise, it will start streaming.

3. Configure the server according to the introductions on the page. For details, please refer to Configure Streaming Server.

How to start and stop live streaming?

Manual Stream

1. Start streaming:

   a. Tap ⦿ on the main screen.

   b. Tap **Connect** next to a configured server in the **Live Stream** window.

   c. (Optional) Repeat the above steps to stream to another server at the same time.

   > The maximum number of servers you can simultaneously connect to is two. This limit is set to ensure stream performance.
   >
   > When the NDI streaming is on going, you cannot stream to other server. Vice versa.
   >
   > If you have not configured any other server, you cannot stream to another server. During the live streaming, the Configure or Log in button of the unconfigured server is unavailable.

2. Stop streaming:

   a. Tap ⦿ on the main screen.

   b. In the Live Stream window, tap **Disconnect** of a working server to stop streaming to the server.

   c. (Optional) Repeat the above steps to stop streaming to the other server.

Auto Stream

If you have turned on **Auto Stream** when you Configure Streaming Server, you can start stream automatically.

1. Tap ⦿ on the main screen to start streaming.

2. Tap ⦿ on the main screen to stop streaming.

How to check whether a sever is enabled with Auto Stream?

Tap ☰ > Settings > Stream, and then if you can see a server is marked with an "Auto" tag, it means this server is enabled with Auto Stream.

How many sources with video signal can I add to one scene/show?

In the same scene

You can add a maximum of three sources, including HDMI, WEBCAM, SRT stream, RTMP stream, NDI stream, Phone Camera and video clips, in which:

- Each HDMI source and WEBCAM can only be added once.

- You can only add one video clip.

In the same show

- You can add up to 3 streams, including up to 2 NDI streams.

- You can add up to 3 Phone Cameras.

How do I confirm the video inputs are successfully connected?

Add a video source into a scene. If it displays the image normally, such source is connected successfully. For a Phone Camera, after your connect the phone with device, if the image taken by the phone displays in the scene, it is connected successfully.

How to use the keyboard to enter in Chinese?

To enter in Chinese, please connect your device with the Internet, it will download the language package automatically.

How to import and export files?

Use USB flash drive and SD card

The supported file system types include: FAT32 (The maximum file size is 4 GB), exFAT, and NTFS.

- To import:

  When you add a video clip or picture source to a scene, add BGM, or add GFX, you can directly select files from the USB flash driver or SD card. These files are stored into the internal storage automatically. When you delete all the scenes or shows using these files, they will also be deleted from the internal storage.

- To export:

  1. Open the album.

  2. Tap **Select**, and then select one or more items.

3. Tap ✐ at the bottom, and then select USB or SD Card to export the selected items.

> In this way, you can only export recorded video clips and screenshots.
>
> Please insert only one USB flash drive for exporting files.

- An SD card can be used to store recorded video clips and screenshots directly.

  - Tap ☰ > Settings > Record > Save path, and select SD Card First. (Default)

  - Or tap ☰ > Settings > Storage > Record or Screenshot, and then select SD Card First.

Use computer

- Use a Type-C cable to connect the USB-C OUT port of the device and the computer. The device is recognized as Director Mini, which may differ with the OS. Then you can import and export files with the computer.

> Recorded video clips and screenshots are stored in "\Director Mini\Internal shared storage\Director\Director".

- If an SD card is inserted into the device, the computer can also recognize it and perform read and write operations.

Use Web UI

1. Connect the device to the network.

2. Swipe down from the top of the screen to open the Control Center, and then you can view the connected network and its IP address.

3. Using a computer on the same network, open a browser and access the specified IP address.

4. Or, you can find the Director device in the "File Explorer > Network" on a Windows computer on the same network. Double-click the device to access Web UI.

5. Enter the user name Admin and password Admin to log in.

6. Upload pictures, videos, music on the "Media" page.

7. When you browse files, such as adding BGM, you can find the uploaded files in the "System Media" folder.

8. For the files added to the show on the device, you can view and download them on the "Media" page of the Web UI. For the recording files and screenshots, you can view and download them on the "Record" page of the Web UI.

Why are my recordings split into 4.0 GB clips?

Director Mini applies a default logic to prevent potential damage to the whole video to protect your content by breaking the recording into 4.0 GB clips. You can import video clips to the editing software, then merge them back together without any loss of data. You can also self-define to split recording files by time or by size, which has more options. For details, please refer to Set Recording Properties.

Why can't I log in to my YouTube account?

When you try to log in to your YouTube account, your login may fail with a message indicating that your account is not enabled for live streaming. In this case, you need to go to YouTube to enable live streaming for your account.

1. Log in to YouTube on your computer.

2. At the upper right corner on the YouTube home page, click ▣ > Go live.

3. If you haven't, follow the prompts to verify your account.

   You will be prompted to enter your country and phone number.

After your account is verified, it takes 24 hours to activate your account for live streaming.

Once live streaming is activated, you can then successfully log in to your YouTube account in Director Mini and stream to YouTube.

For other information such as what you can stream to YouTube, you can go to the YouTube official website.

How to use the USB 3.0 ports?

Director Mini provides two USB 3.0 ports, which can accommodate a variety of usage scenarios.

The USB 3.0 ports support video input of webcam, USB microphone or audio playback device, and file transfer with a USB flash drive. The two ports can also connect Magewell USB Capture devices, with which you can connect a wider range of video devices. Moreover, they also allow multiple devices to connect and work through a USB Hub.

Notice: When a USB AV device is added to a scene as a WEBCAM source, Director Mini only captures the video. To use the audio, you can select the USB device as the microphone. Please refer to Volume Control.

What can the USB-C OUT port be used for?

The USB-C OUT port is a USB 3.0 Type-C port. It can be connected to the computer to export and import files.

It is also a display port to connect to an external screen, such as a monitor and HDTV, supporting 1920x1080@60hz. You can use a Type-C to HDMI / VGA / DP adapter to connect the USB-C OUT port to the external screen, and select content to display on the external screen according to the prompt. It supports displaying clear program, duplicating the device screen, looping HDMI 1 or HDMI 2.

How to optimize encoding settings

Encoding parameters directly affects your final video output. Setting encoding parameters can be a tricky job, always a balancing act, a tradeoff between quality and bandwidth.

You will want to optimize each of the encoding parameters to deliver the best possible video quality.

Resolution

Selecting a resolution is relatively easy. 1280x720 is considered HD resolution and 1920x1080 Full HD. 1920x1080 looks sharper but also requires more processing power and bandwidth.

Frame rates

A wide range of frame rates are available for different use cases. For example, 25fps is usually used for PAL television systems, 29.97fps applies to NTSC television systems, while 24fps is mostly used when shooting and displaying movies.

Generally a higher frame rate provides smoother motion and crisper details. Videos with a lot of motions, such as sports events, will often need a higher frame rate. On the flipside, a high frame rate can put a lot of pressure on your device and network.

A lower frame rate can result in choppy or broken movement, but it puts less stress on your device and network, so it can also be a good choice in some cases, such as when no fast moving objects are present.

High-definition video generally employs 30fps/60fps. To start out, 30fps is a safe choice to get a nice, clean, and stable video.

Bitrate

A higher bitrate can carry more data and often means better video quality, but you must have the bandwidth to accommodate it. Insufficient bandwidth in this case can result in dropped video frames, which can make the video choppy. Moreover, when the bitrate is already high enough for your video, increasing it further will not make an obvious difference for your video quality.

To set the bitrate properly, you have to factor in your network upload speed, device performance, resolution, and frame rate.

If your upload speed allows, you might want to set a bitrate that accommodates both high resolution and high frame rate to make your video look as sharp and smooth as possible. But if you have a limited upload speed, you may have to balance the resolution and frame rate. You need to make your choice based on your specific use case. For example, when your video features less motion but more detail, you might want a resolution of 1920x1080 and a frame rate of 30fps under limited bandwidth. When fast motions come first, streaming at 1280x720 and 60fps makes sense.

Different platforms also have their own recommendations for bitrates. You can click Facebook, Twitch, or YouTube to view the corresponding official guidelines.

Key frame interval

A longer key frame interval means there will be less complete pictures, which can increase compression efficiency and reduce bandwidth consumption. However, it can also result in longer time for switchover between different bit rates at the player side. For live streaming, 2 seconds is generally recommended for the right balance of quality and performance. For action-packed streams, you may want to try the interval of 1 second.

Audio

Audio format includes sampling rate, codec format and bitrate. The suggested streaming format is 48khz, aac, 128kbps.

Profile

Profiles are a "family" of encoding techniques targeted for specific application scenarios. The three most commonly applied H.264 profiles are:

- Baseline: it includes I- and P-frames. This profile is designed for progressive video and supports CAVLC entropy coding. It is used primarily in low-cost applications or those needing extra fault tolerance, for instant messaging scenarios such as video call, and mobile video.

- Main: it includes I-, P-, and B- frames. This profile is for progressive and interlaced videos, and supports CAVLC and CABAC entropy coding. It is used in videos for mainstream consumer electronic devices, such as MP4 with relatively low decoding rate, portable video player, PSP and iPod.

- High: it adds 8x8 internal prediction, custom quantification, lossless video encoding and more YUV formats (e.g., 4:4:4) on the basis of main profile. High profile is used for broadcast and video disc storage (Blu-ray movies), and HDTV applications.

Bitrate mode

Among the different bitrate modes, CBR is the most predictable but generally yields videos of less satisfying quality. VBR involves more complex processing and can be slower, but it usually produces higher quality streams at similar bitrates.

Generally, it is recommended to use VBR for encoding. It gives you the best balance between quality and bandwidth consumption.

Audio

What audio inputs/outputs does Director Mini support?

Director Mini supports the following audio inputs and outputs:

Audio Input

- Mic/line in: 1x 3.5mm jack, 2-channel, 48 KHz, 16-bit

- Audio input from HDMI 1 and HDMI 2 ports: 2-channel, 48 KHz, 16-bit

- Audio input from USB-A port: 2-channel, 48 KHz, 16-bit (Only support microphone)

- Audio input from Phone Camera's microphone

- Audio from SRT streams

- Audio from RTMP streams

- Audio from NDI streams

- Audio embedded in video files

- Background music (BGM): MP3, M4A and WAV files

Audio Output

- Streaming and recording output: 2-channel, 48 KHz, 16 bit, aac format, 64/96/128kbps

- USB-C OUT port: 2-channel, 48 KHz, 16 bit

- Monitor output, selecting one of the follows as the monitor

  - Bluetooth device: 2-channel, 48 KHz, 16 bit

  - Headphone output: 1x 3.5mm jack, 2-channel, 48 KHz, 16 bit

  - USB-A port: 2-channel, 48 KHz, 16-bit

How do I adjust volume?

You can adjust audio volume when editing a scene, previewing the show and even during streaming and recording.

Tap (icon) on the main screen or in the Scene Editor, to open the audio mixer. For details, see Volume Control.

Why is there no audio from the HDMI input?

Check whether Director Mini is selected as the audio output device on the source computer connected to the HDMI port. Only when Director Mini is selected will the computer output audio to Director Mini. The configuration varies depending on the OS.

For example, on Windows 10, click (icon) > (icon) > System > Sound. In the Output section, choose **Director Mini (********)** from the drop-down list box of **Choose your output device**, such as **Director Mini (Intel(R) Display Audio)**.

Why can I not hear the audio from my phone?

Please check by the following steps.

1. Tap (icon) on the main screen or in the Scene Editor, and then check whether the audio of Phone Camera is set to (icon) . If yes, set it to AFV or (icon) .

2. In the Scene Editor, select the Phone Camera source. Tap **Property** on the bottom bar, and then check whether the **Microphone** is toggled on. If not, toggle it on.

3. Tap (icon) on the Phone Camera screen of your phone, and it will turn to (icon) , which means the microphone is on.

Settings

Which AP band should I choose for hotspot?

1. The advantage of 2.4GHz is that it has a wider coverage area and stronger capability to penetrate solid objects. The main advantage of 5.0GHz is that the transmission rate is faster, which is 2~3 times that of the traditional 2.4GHz. And its anti-interference ability is stronger, which can avoid the interference of various electromagnetic waves in the daily environment.

2. Since most wireless devices currently use the 2.4GHz frequency band, they are often interfered in the daily environment. The signal will not be as good as 5.0GHz, and the network speed will also be affected. At present, most devices already support 5.0GHz. It is recommended to turn on 5.0GHz, so that it is not easy to be interfered, but at the same time, the power consumption of the device will be accelerated.

3. However, if your devices are separated by a distance, it is recommended to choose 2.4GHz, so that you can receive a better signal even across obstacles.

Note: When the Wi-Fi connected to the Director Mini device is 5.0GHz, the AP band can only be selected as 2.4GHz; when the Wi-Fi is 2.4GHz, the AP band can only be selected as 5.0GHz.

What to do when firmware update fails

Possible causes:

1. The device is powered off or rebooted during the update.

2. The network is disconnected when the device is downloading the update file for auto update.

3. The device is out of storage space when downloading the update file for auto update.

4. The update file for manual update is not the correct file.

Troubleshooting procedure:

1. Check whether Director Mini is powered off. Connect Director Mini with a power supply or install a fully charged battery.

2. For auto update, check whether the network connection is normal.

3. For auto update, check whether the storage space of the device is sufficient, and delete some files if necessary.

4. Check whether you have downloaded the right update file of Director Mini. Go to (https://www.magewell.com/downloads) to download the update file of Director Mini.

5. Update the firmware again.

> DO NOT power off or reboot your device during the update.

If your issue is not solved, please submit your questions in the online Ticket System: tickets.magewell.com, or contact the Magewell Technical Support Team at support@magewell.net.

Support

If you have problems or questions during using Director Mini, you can find support and help through the following ways.

View Help

Tap ⊜ > **Help**, to get help information, which will tell you how to use Director Mini and give answers to some frequently asked questions.

Feedback

You can use the feedback feature to ask technical questions, make suggestions and complaints.

Submit New Feedback

1. Tap ⊜ > **Feedback** > **Submit new feedback**.

2. Select an Inquiry type: Technical question for product, Suggestion for a new feature, or Complaint.

3. Enter your personal information, such as First name (required), Last name, Email (required), Phone number, and Location.

4. Describe your problem with as many details as possible.

5. Add an attachment file.

> A log file can help the support team analyze your problem. For how to get the log file, please refer to Generate Log File.

6. Tick to agree privacy statements.

7. Enter the verification code.

8. Tap **Submit**, and then you will see a message saying Question Submitted Successfully.

Generate Log File

1. Tap ⊜ > **Feedback** > **Generate log file**.

2. Tap **Start**.

3. Agree the privacy policy.

4. Tap **Go to home screen** to reproduce the issue you've encountered.

5. After you have finished reproducing the issue, tap ⊜ > **Feedback** to go back to the *Generate log file* page.

6. Tap **Stop**, and then a .zip file is generated in the internal storage.

7. (Optional) Tap **Export** to export it to the SD card or USB flash drive for more use.

Check Submitted Feedback

1. Tap ⊜ > **Feedback** > **Submitted feedback**.

2. Enter your Email and tap **Track**.

3. Then you can see the feedback list, tap one feedback to check its status.

Get the Latest Information

If you have any problems using Magewell products or need more technical information, please visit the official website for product introduction, user manual, and more.

Technical Support

- Go to the Knowledge Base to find answers to your problem. If you cannot find an answer, click **Contact Us** at the bottom to contact the support team.

- Submit your questions in the online Ticket System: tickets.magewell.com, or contact the Magewell Technical Support Team at support@magewell.net.

Glossary and Abbreviations

AAC

AAC (Advanced Audio Coding) refers to digital audio coding standard that represent audio files based on lossy audio compression. It was launched as successor of MP3 file format keeping in view that the lateral faced issues for the implementation of new ideas in the encoding process based on the development of methods for data compression. AAC achieves better sound quality as compared to MP3 at the same bit rate.

AES

Advanced Encryption Standard (AES) is a specification for the encryption of electronic data.

CBR

Constant bit rate. It means that your stream will be encoded using the selected bit rate over all the time.

FTB

Fade to black. FTB allows your show to slowly disappear into a black, usually indicating the end of a scene or show.

GFX

Graphic overlays. Graphics overlay are text and graphics that are displayed in a stream over the actual content (such as game or video) during a live stream.

RTMP

RTMP stands for "Real-Time Messaging Protocol". It is an efficient way to transmit large chunks of audio, video, and data from a server to the Internet via an encoder. Most live video streaming relies on RTMP to deliver smooth, real-time playback.

SRT

SRT stands for "Secure Reliable Transport". It is an open source video transport protocol that utilizes the UDP transport protocol. It supports packet recovery while maintaining low latency. SRT also supports encryption using AES.

SSID

SSID stands for "Service Set Identifier". Under the IEEE 802.11 wireless networking standard, a "service set" refers to a collection of wireless networking devices with the same parameters. So, the SSID is the identifier (name) that tells you which service set (or network) to join.

USB Hub

USB hub refers to a device that expands one Universal Serial Bus (USB) port into several and enables those ports can be used at the same time. With this device, you don't have to worry about the port is not enough anymore.

VBR

Variable bit rate. In this mode, the encoder dynamically increases or decreases the bit rate based on the image bitrate needs. VBR is preferred to CBR when you expect better image quality.

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