

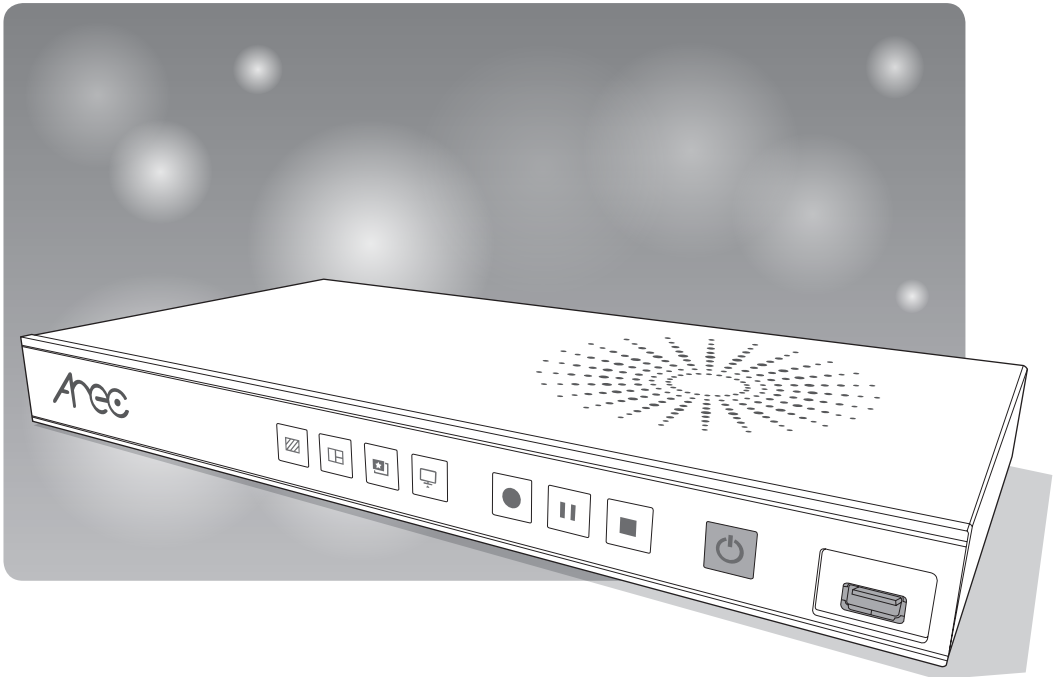


# LS-200

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## Media Station

User Manual | English



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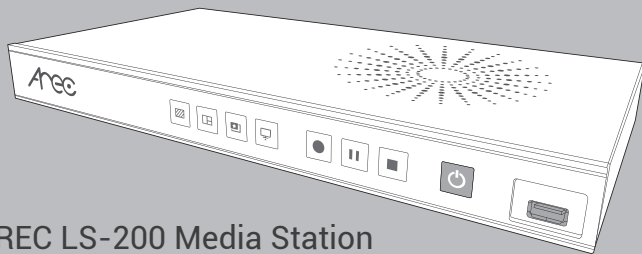
## Introduction

Featuring a compact and stand-alone design, AREC LS-200 Media Station consists of diverse features and functionality, including multi-signals capturing, recording synchronously, codec, streaming online, live broadcasting, and web-based monitor page, providing complete presentation or lecture capture solution.

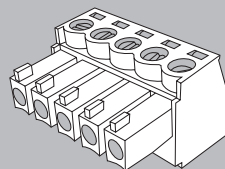
## Specifications

Product Name	Media Station
Model Name	LS-200
Dimension	354mm(L) x 188.2mm(W) x 46mm(H)
Weight	1710g
Power Requirement	12V/2A
Power Consumption (Max.)	24W (Max.)
Operating Temperature / Humidity	0°C ~ 40°C / 90%
Maximum normal load description	Insert 1 IP CAM to LAN port or insert 2 video signals (either HDMI or VGA input). Using external USB flash to record the transcoded video/audio. And output the transcoded video/audio to both HDMI and VGA port.

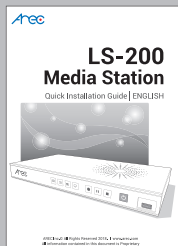
## Package Contents



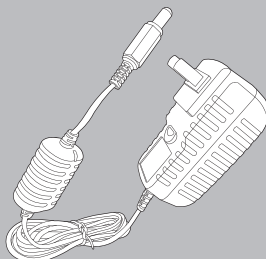
AREC LS-200 Media Station



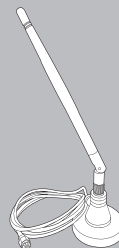
Terminal Block



Quick Installation Guide

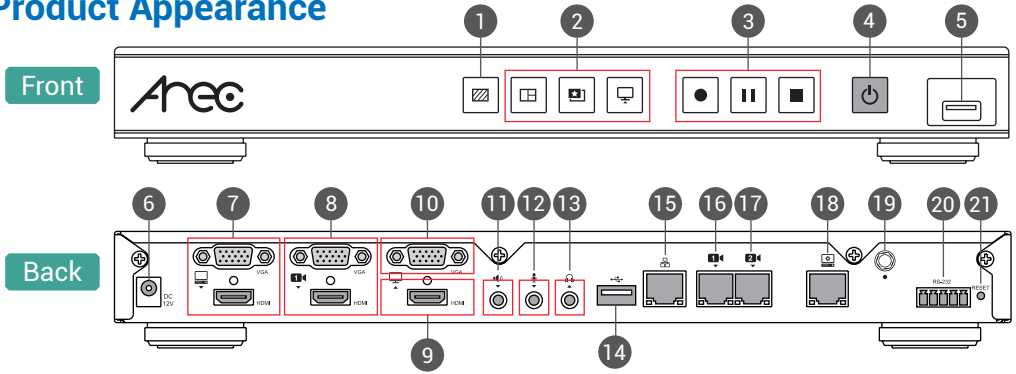





Power Adapter



Wireless Mic. Antenna

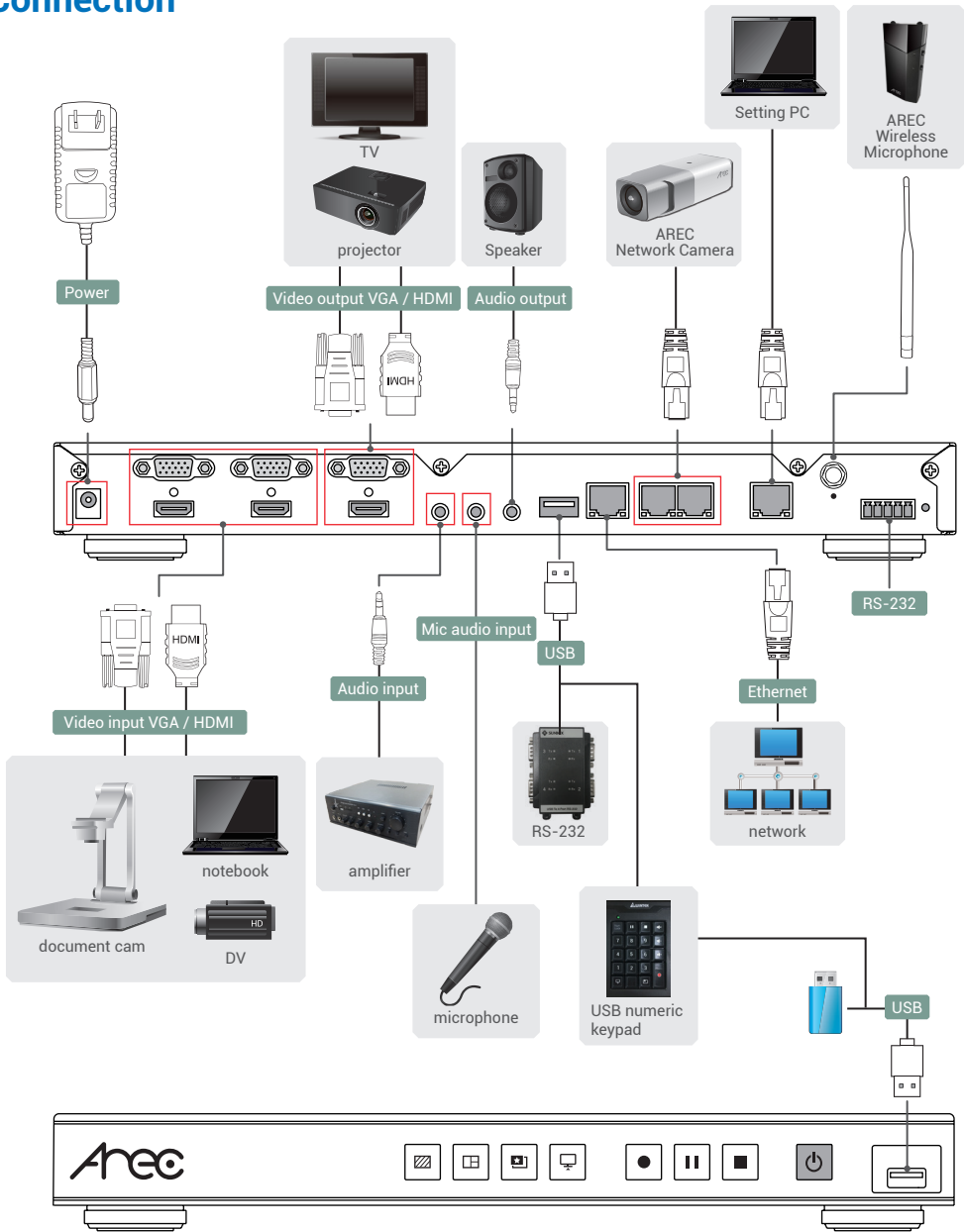
## Product Appearance





No.	Name	Brief introduction
1	Background function key	Control the Background function
2	Layout function keys	Control the Layout function
3	Record function keys	Control the Record, Pause, Stop function
4	Power	Power on/off the device
5	Front USB port	1. For external USB storage device* 2. Firmware update through USB disk 3. For USB numeric keypad
6	Power port	12V / 2A
7	Video input	VGA / HDMI input source for PC [  ]
8	Video input	VGA / HDMI input source for camera [  ]
9	Video output	HDMI preview output
10	Video output	VGA loop thru from input [  ]
11	Audio input	Line audio input
12	Audio input	Mic audio input
13	Audio output	Line audio output
14	Back USB port	1. USB interface for camera control over RS-232 2. For USB numeric keypad
15	Network port	RJ-45 Ethernet connector for network connection
16	Network camera input 1	RJ-45 Ethernet connector for network camera input source
17	Network camera input 2	RJ-45 Ethernet connector for network camera input source
18	Setting port	RJ-45 Ethernet connector for device configuration and control
19	Antenna port for Microphone	Connected to antenna for wireless microphone
20	RS-232	Captive screw connector for control over RS-232
21	Reset button	Restoring devices to its factory default state



NOTE: The LS-200 can detect and record to USB storage devices using FAT32, NTFS file systems.

# Connection



## Front Panel Buttons and Indicators

Button	Brief introduction
 <p>Background / Layout / Overlay</p>	Change Background / Layout / Overlay cycling.
 <p>Display</p>	Switch image sources to monitor individual image inputs.


Button	Display method of indicator	Product status
 <p>Record / Pause / Stop</p>	Record button glows red continuously.	Recording in progress.
	Record button flashes red rapidly.	Recording is paused.
	Record button flashes red slowly.	Recording is being finalized.
 <p>Power</p>	Solid red.	Device is powered, yet not booted up.
	Green and red light flash alternately.	Device is booting up.
	Solid green.	Boot up completed.
	Fast flashing red.	Device is shutting down.
	Fast flashing green.	Firmware updating.
	Slow flashing red.	Fan is abnormal.

## External Control via USB Numeric Keypad

Insert the keyboard into the Media Station's USB hole, let USB numeric keypad as function keys to control the Media Station.




Button	Brief introduction	Button	Brief introduction	Button	Brief introduction
1	Theme 1	7	Theme 7	.	Bookmark
2	Theme 2	8	Theme 8	Backspace	All volume mute
3	Theme 3	9	Theme 9	-	All volume down
4	Theme 4	/	Pause	+	All volume up
5	Theme 5	*	Stop	Enter	Record
6	Theme 6	0	Display		

## Getting start

Connect PC to the setting port of Media Station with standard network cable. Open up the browser, and input 192.168.11.254 in the browser page. Log in Administrator  with default username admin and password admin, then entering the LS-200 system Administrator webpages.

## Overview of the Web Interface

LS-200 web interface has three user types, which are described in detail in the following chapters :

 Online Director	For quick start recording, log in Online director from the initial login page with default username director and password director. This user also has access to Video Manager web pages.
 Administrator	To setup the device, log in Administrator with default username admin and password admin, then entering System Administrator webpages. The admin account provides the user all three type of privileges.
 Video Manager	If you only need to access to the recordings, log in Video Manager with default username video and password video

### Online Director

---

Username

Password

save the username and password

Log in

### Administrator

---

Username

Password

Save the username and password

Log in

### Video Manager

---

Username

Password

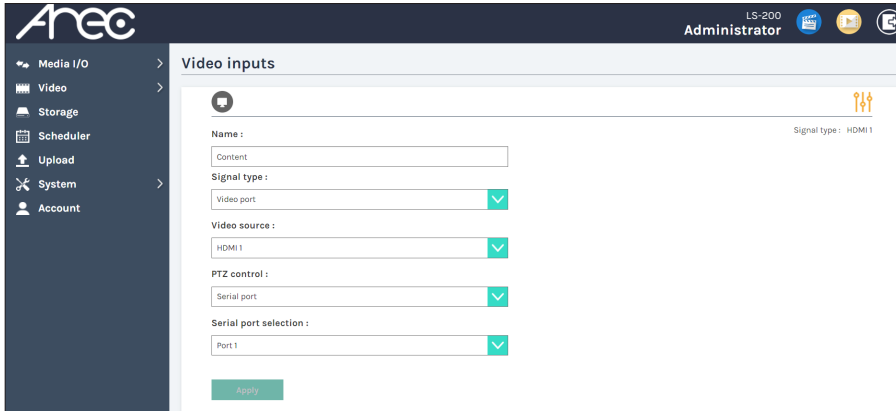
Save the username and password

Log in



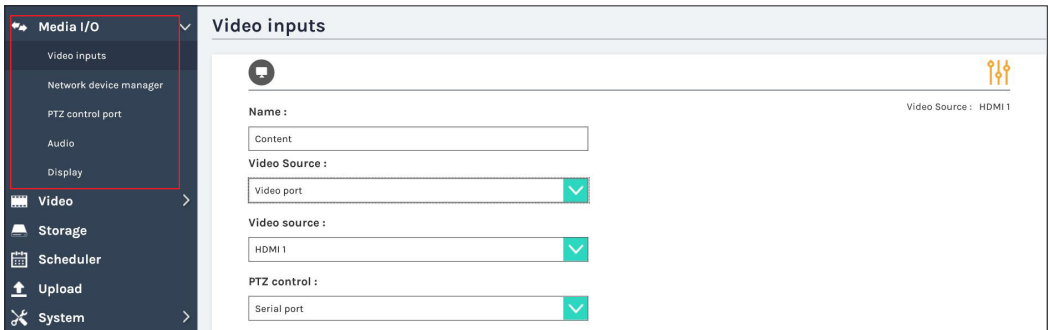
# Chapter 1 Administrator

The Administrator web pages provide a system administration interface of the LS-200: it can perform Media I/O, Video, Storage, Scheduler, Account, Upload, System settings and confirm operations. The [Media I/O](#) settings make sure each input source are properly connected, and adjust the audio volume. The [Video](#) setting pages configure the recording, streaming, and other functions which define the content being recorded. [System](#) are pages contain basic settings and information of this device.



## 1.1 Media I/O

The pages within [Media I/O](#) include the following :



Video inputs	Select the signal type, video source and PTZ control method for each input.
Network device manager	List out all the connected network cameras and Auto-Tracking Mount.
PTZ control port	Set LS-200 back USB-to-RS-232 serial port to drive PTZ cameras.
Audio	Adjust the volume and select the audio input source.
Display	Set the LS-200 on screen display language.

### 1.1.1 Video inputs

The LS-200 is capable to process up to three video inputs. The name of these inputs are user configurable; by default are Content, Cam 1.

#### 1.1.1.1 Content / Cam 1


- **Video Source** can be choose from **Network Camera**, **Encoder** or **Video port**. The last option is available only for the first two video inputs.

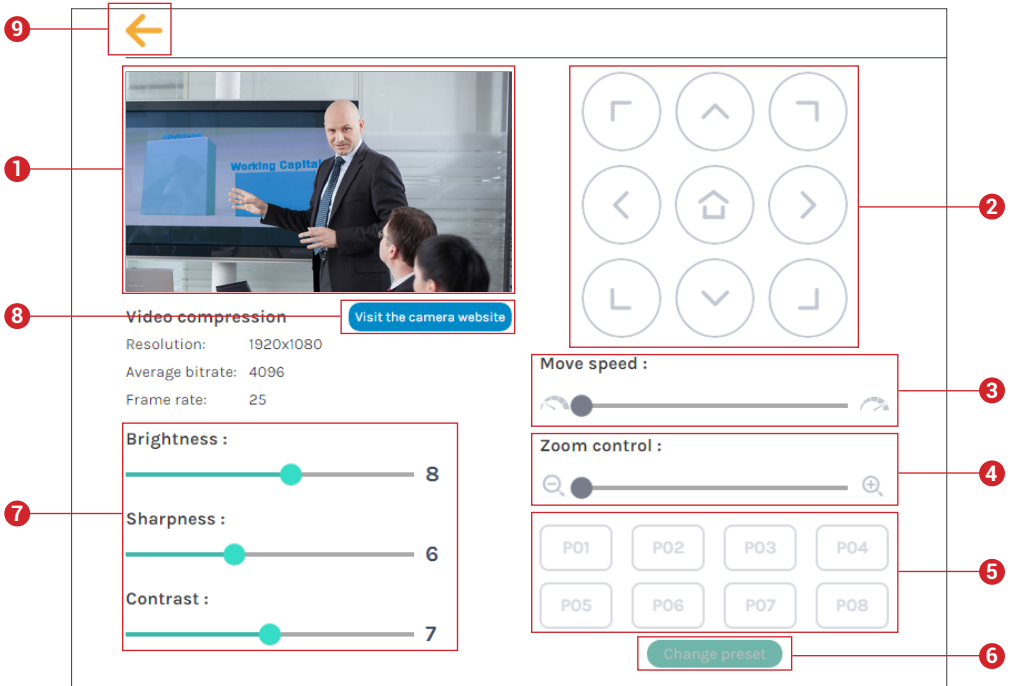
Video port	Select Video source: The LS-200 provides VGA and HDMI input options for video port. If only one of those is connected, the system would detect and automatically switch to source of signal. If both options are connected, select one in between.
Network Camera	Select IP address: Select from the camera ip address drop list of those available. Note: A login authentication with the camera might be required. See Media I/O\ Camera manager for more details.
Encoder	Select Protocol: The available options are UDP, RTP, RTSP, or RTMP. Enter the primary and secondary url/port number.


- **PTZ control** : The LS-200 is highly integrated with PTZ cameras and provides two control methods, Over IP or via Serial port.

Serial port	Select this option when the appointed camera uses RS-232 PTZ control protocol. Then complete the Serial port selection from drop list Port 1~4. See Media I/O\ PTZ control port for more details.
Over IP	The option is available when the specified signal type is a network camera. Select this option if that camera supports networking PTZ control.
Auto-Tracking Mount	Select IP address: Select from the TP-100 ip address drop list of those available. Select Tracking mode: off / Auto-Tracking / Auto-Tracking (pan only), the default is the Auto-Tracking. Note: A login authentication with the TP-100 might be required. See Media I/O\ Network device manager for more details.

### 1.1.1.2 Advanced configuration

A preview use and further configuration of the video input is provided. After the video input setting is successfully applied, click  to enter the advanced configuration page. In the case of a PTZ camera, the direction control panel, zoom in/out control bar, and up to 8 preset positions are enabled.



1. The video input preview.
2. Direction control panel: Click the arrow buttons to move the camera.
3. Movement speed: Move leftward or rightward to set slower or faster the camera is moving.
4. Zoom in/out: Click the buttons or drag on the control bar.
5. Preset positions: Click the buttons to command that the camera go to the preset position.
6. Change preset: Click the button to modify the preset positions. Select any of the P01~P08, move the camera to the desired position by using the direction control panel or using the zoom in/out control. Click Save button to complete the change or click Cancel button to give it up.  
Note: If you use AREC CI-xxx network camera with TP-100, you can change preset of TP-100's Home.
7. Brightness, sharpness, and contrast: Slide the adjust bar leftward or rightward to change the camera image settings.
8. Visit the camera website: Click this [Visit the camera website](#) button to enter the webcam management web site, input the verification code as prompted.
9. Click  button at upper left corner to return to the last page.

### 1.1.2 Network device manager

The system automatically scans and lists the network cameras and Auto-Tracking Mount connected to the Media Station once entering the [ Network device manager ] page. You may click Refresh button to scan again. Click Login button and the login authentication dialog pop out.

Enter the username and password of the camera or Auto-Tracking Mount to complete the authentication. Take AREC network camera for example, enter the default username and password admin/ admin. The status then changes to OK, which indicates it is available for video input selection.

Note : If you fail to find your camera by clicking on "Refresh", please select "Signal type" to "Encoder" in the "Video Inputs" and fill in your camera information.

The screenshot shows the 'Network device manager' page. On the left is a navigation menu with options: Media I/O, Video Inputs, Network device manager, PTZ control port, Audio, Display, Video, Storage, Scheduler, Upload, System, and Account. The main content area is titled 'Network device manager' and contains two sections: 'Network Camera' and 'Auto-Tracking Mount'. The 'Network Camera' section has a 'Refresh' button and a table with columns: Host name, IP address, MAC, Brand, and Status. The table lists four cameras: AREC (10.2.50.148), VC-ASOP (10.2.50.113), CI-200 (10.2.50.106), and CI-230 (10.2.50.153). The 'Auto-Tracking Mount' section also has a 'Refresh' button and a table that is currently empty, displaying the message 'No Auto-Tracking Mount(s)'.

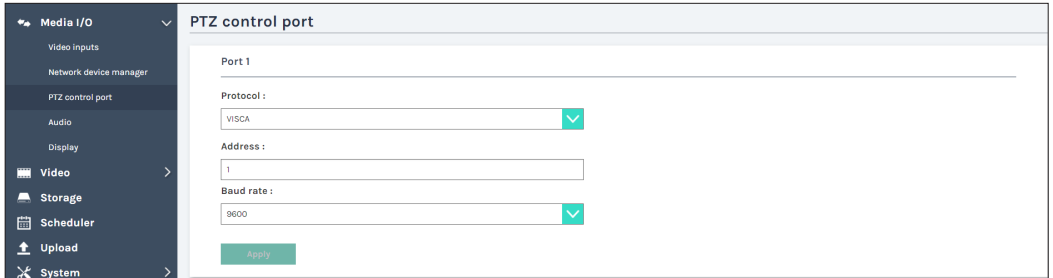
The screenshot shows a 'Login authentication' dialog box with a close button (X) in the top right corner. It contains two input fields: 'User name :' and 'Password :'. Below the input fields is a teal 'Authentication' button. The dialog is overlaid on a blurred background of the network device manager interface.

### 1.1.3 PTZ control port

The LS-200 facilitate the web-based users control PTZ cameras using RS-232 protocol. Connect an USB-to-RS-232 adapter to the LS-200 back USB port in advance. Before making any changes to this page, please get to know about the RS-232 settings of the desired PTZ camera. The following configurations must be identical to the external device settings.

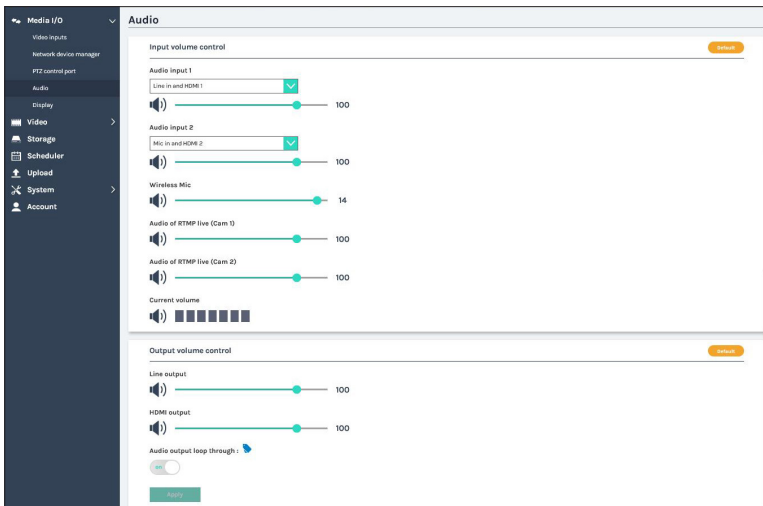
- Protocol : Available options are VISCA, PELCO-D, and PELCO-P;
- Address : Set according to the camera address for RS-232 communication. VISCA: 1-7, PELCO D/P: 1-255;
- Baud rate : 2400, 4800, 9600, and 115200

Note: Support USB to RS-232 serial port adapter with chip PL2303 or FT4232H.



### 1.1.4 Audio

Adjust volume and select the audio input source.



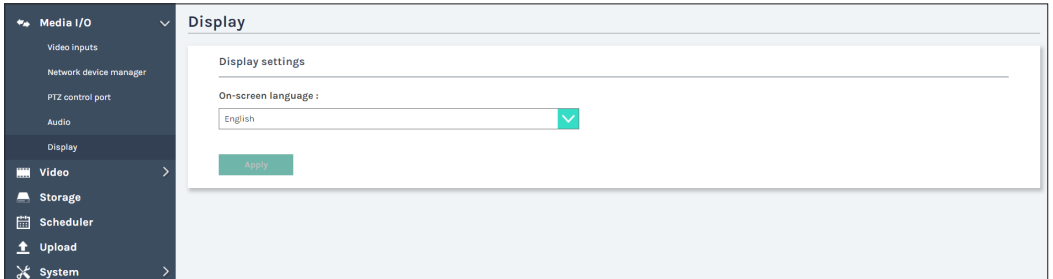
**Input volume control** - Users can select the sound source from the drop-down menu of Audio input 1 or Audio input 2. Tune the recorded volume from each audio input. Configurable range of sound input is 0~125, of AREC wireless microphone 0~15. The nearby volume meter indicates the encoded audio current volume.

**Output volume control** - Adjust the Line output or HDMI output volume.

Set Audio output loop through on/ off.

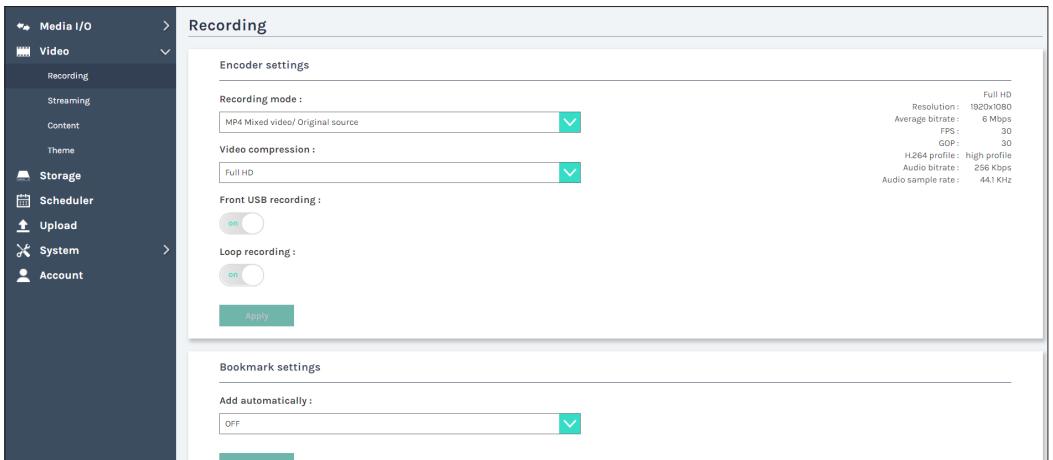
### 1.1.5 Display

Set the LS-200 on screen display language.



### 1.2 Video

The pages within Video construct a collection of settings that defines the operating characteristics for a streaming/recording, include:



Recording	Configure Encoder settings and Bookmark settings for recording.
Streaming	Configure Encoder settings for streaming.
Content	Edit the information of the content that will be recorded.
Theme	Set the overlay files, background images and theme types.

## 1.2.1 Recording

Set up the [Encoder settings](#) and [Bookmark settings](#) for recording.

### Encoder settings

- Recording mode: Available options are MP4 Mixed video and MP4 Mixed video/ Original source.
- Video compression: There are 7 preset recording video compression profiles for different resolution and bitrate. Select one to see the option details on the right side. You may customize your own user defined option.
- Front USB recording: Set ON/OFF to enable/disable LS-200 front USB recording function. Make sure the front USB drive connected can be normally read and written and have enough space for the recorded files.
- Loop recording: Set ON/OFF to enable/disable LS-200 local storage recording rule.

Click Apply button at the bottom corner when finished to apply the settings.

Profile name	Video Resolution/ Bitrate	Application description
Full HD	1080p/ 6Mbps	Dynamic scene and large local hard disk recording.
Internet Full HD	1080p/ 4Mbps	General scene and medium local hard disk recording.
HD	720p/ 3Mbps	Static scene and small local hard disk recording.
Internet HD	720p/ 1.2Mbps	Live broadcasting through the Internet.
Internet	480p/ 800kbps	Static scene for live broadcasting through the Internet.
Mobile	480p/ 500kbps	Live broadcasting for portable mobile devices watching.

Click button to open customization window as shown below, and click Save button to make the option changed.

User defined

Bookmark settings- Select to add bookmark automatically at a regular period of time, or whenever the layout is changed during recording.

Click Apply button at the bottom corner when finished to apply the settings.

**Bookmark settings**

---

Add automatically :

OFF ▼

Apply

Add prefix to video filename: Use this description is added to the Video filename as a prefix string for Download and Upload.

**Recording file name setting**

---

Prefix setting :

Apply

Audio shift- Adjust the delay of sound after video transmission. Synchronize the video and audio with consistency.

**Audio settings**

---

Audio shift :

100 ms

Apply

## 1.2.2 Streaming

AREC Media Station support two streaming address with same video compression. The page provides user to change streaming settings. It is essential that the configurations follow the streaming protocol and recommended settings your server system supports.

- Media I/O >
- Video** >
- Recording
- Streaming
- Content
- Theme
- Storage
- Scheduler
- Upload
- System >
- Account

**Streaming**

---

**Encoder settings**

Video compression :

Internet HD ▼

Internet HD  
 Resolution : 1280x720  
 Average bitrate : 12.3Mbps  
 H.264 profile : high profile  
 Audio bitrate : 256 Kbps  
 Audio sample rate : 44.1 KHz

Apply

---

**Streaming 1 settings**

Live streaming :

off

URL :

rtmp://0.0.0.0 ...

Apply


---

**Streaming 2 settings**

Live streaming :

off



**Video compression profile** – There are 7 streaming video compression profiles for different resolution and bitrate. Select one to see the option details on the right side. You may customize your own user defined option. Click  button to open customization window as shown below, and click Save button to make the option changed.

Click Apply button at the bottom corner when finished to apply the settings.

Note: The resolution for streaming cannot be larger than that for recording.

**User defined** ✕

Resolution :

 ▼


Average bitrate :

 ▼

H.264 profile :

 ▼

**Live streaming** : Select ON/OFF to enable/ disable live streaming ability.

Click  button to open customization window as shown below, RTMP username/password and test for Wowza. Click Save button to make the option change.

**Advanced settings** ✕

Username :

Password :

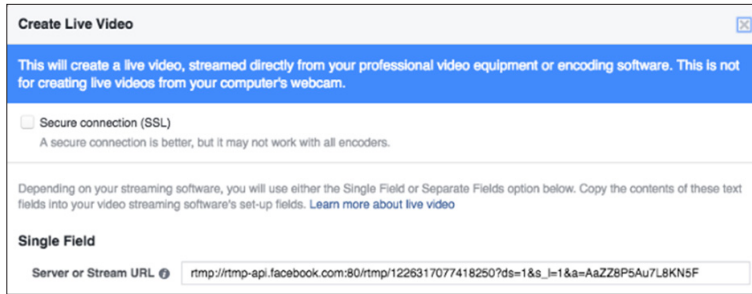
**URL** – The available protocol on the LS-200 are RTP and RTMP, the URL format is as follows :

RTMP	In the protocol setting field, copy and paste the Server or Stream URL and Stream name provided by you CDN or server administrator in the format <code>rtmp://serverurl/streamname</code> .
RTP	Enter the destination IP address and the port number where the streaming is played in the format <code>rtp://@ip:port</code> . For example, <code>rtp://@226.10.24.32:7000</code>

Followings are some popular examples for streaming settings.

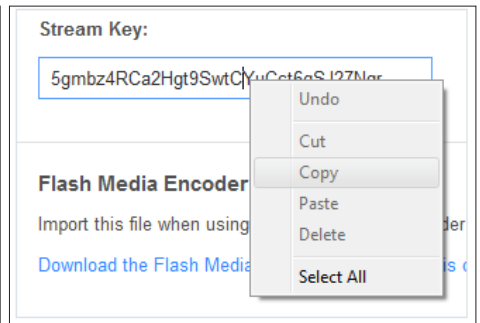
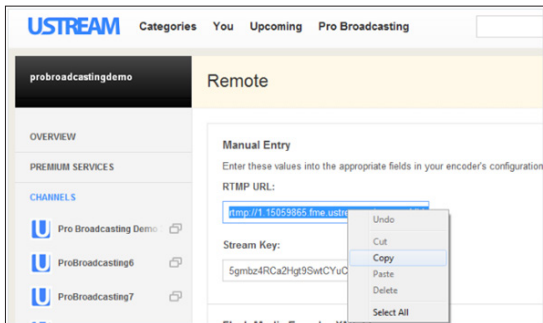
Streaming to Facebook Live

Copy the contents of the Single Field, Server or Stream URL, and paste in the LS-200 streaming protocol setting field.



Streaming to Ustream

Combine the contents of both fields: RTMP URL and Stream Key, insert a slash between them. Paste this string into the LS-200 streaming protocol setting field. For example: `rtmp:1.15059865.fme.stream.tv/ustreamVideo/15059865/5gmbz4RCa2Hgt9SWtCYuCct6qS137Nar`



Streaming to YouTube Live

Combine the contents of both fields: Primary Server URL and Stream Name, insert a slash between them. Paste this string into the LS-200 streaming protocol setting field.

Streaming to a media player on a PC in the same LAN with the LS-200

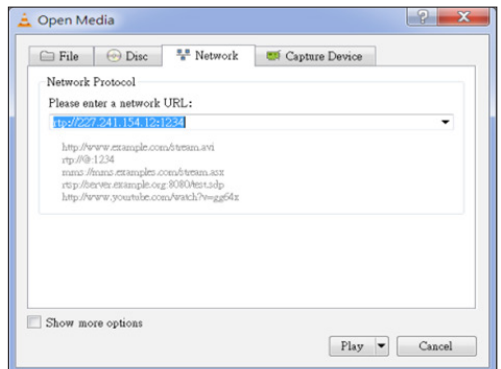
Enter the destination IP address and the port number where the streaming is played in the format `rtp://@ip:port`.

Unicast: For a single point connection, the destination IP must be set to the location where the stream is played.

Multicast: The destination IP must be multicast IP address where it can be shared with multiple viewers.

The LS-200 use IP address: 239.0.0.1 and port number: 5004 as the stream default. The available range of port number is 1024 to 65535.

To view the stream from a media player, open the URL in a media player, such as:




### 1.2.3 Content

The LS-200 contains up to 13 user-configurable elements for describing content. These elements and texts will be saved in the recording data of the newly created content. Enter text in the content settings fields if desired. Click Apply button at the bottom corner when finished to apply the settings.

Note: These updates do not apply to the existing recordings. To edit the existing recording information, see Video Manager.

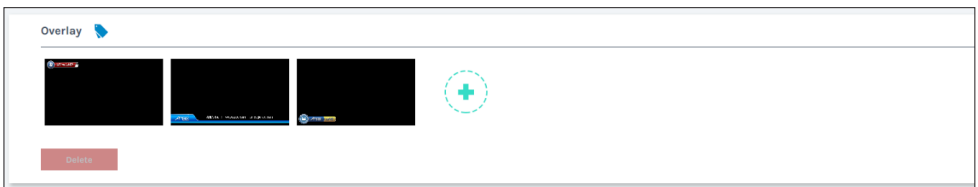
### 1.2.4 Theme


LS-200 by factory default provides three overlays, three backgrounds and four themes.

**Overlay :** Select and delete the overlay. Click [  ] button and select the desired file in the Open dialog box. The file name would appear with the newly uploaded image. Click Apply button at the bottom corner to apply the settings, or click [ **Delete** ] Cancel to give it up.

Note: The overlay file must be in PNG format, maximum size 1920px\*1080px.

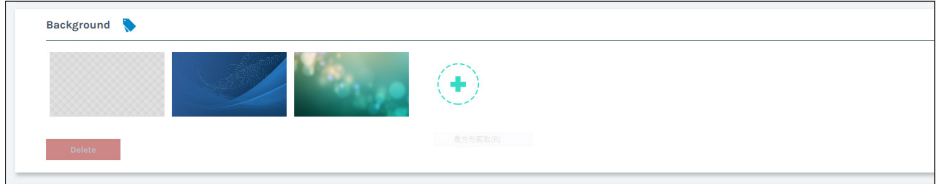
Note: The user can use the mouse to drag the order of the display.




**Background :** Select and delete the background. Click [  ] button and select the desired file in the Open dialog box. The file name would appears with the newly uploaded image. Click Apply button at the bottom corner to apply the settings, or click [ **Delete** ] Cancel to give it up.

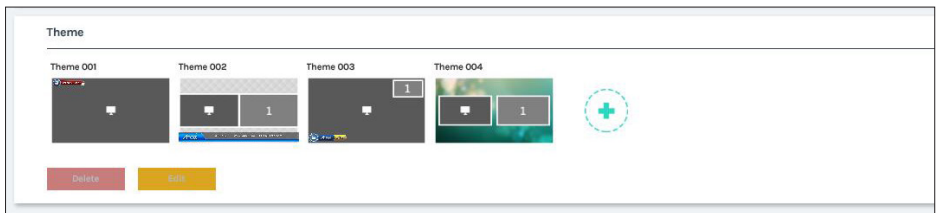
Note: The background file must be in PNG format, maximum size 1920px\*1080px.

Note: The user can use the mouse to drag the order of the display.



**Theme :** Theme is integrated with "Overlay", "Background" and "Layout". LS-200 by factory default provides four themes by different types of overlays, backgrounds and layouts. Click [  ] to set the theme type. Input the theme name, and select the desired type of overlay, layout and background. Click Apply button at the bottom corner to apply the settings.

Note: The user can use the mouse to drag the order of the display.



## 1.3 Storage

The recording files produced by the LS-200 are stored on its own internal hard drive. This page provides user to set local storage drive or USB and reveals the disk information in the lower section.

**Storage**

**Record disk settings**

Local storage :  
Internal

Front USB recording :  
 on

Loop recording :  
 on

Apply

**Disk information**

Interface	Disk name	Manufacturer	Capacity	Total	Format
SATA	Internal	ATA SAMSUNG HD160JJ	646.90 MB	146.71 GB	Format

**Record disk settings-**

**Local storage:** The internal hard drive of LS-200 is preset for storing the recorded files.

Click Apply after setup is completed. New setting takes effective from next recording being created.

**Disk information-** Displays disk information, available storage space and total capacity. Click "Format" to clean up the internal storage drive. A dialog box opens asking you to confirm the disk formatting. Click Confirm to permanently delete all recording packages.

## 1.4 Scheduler

The Schedule Settings page allows the administrator privileges to choose how to obtain presentation schedules and, if appropriate, import calendars or connect to an Opencast scheduling system. Start video recording automatically at the date and time specified in a calendar schedule.

Available options are Scheduling via Opencast server, Manual Calendar import, and Periodic Calendar import.

Scheduling via Opencast server : Centralized Scheduling via Opencast server

Manual Calendar import : Importing iCalendar files manually

Periodic Calendar import : Importing iCalendar files automatically

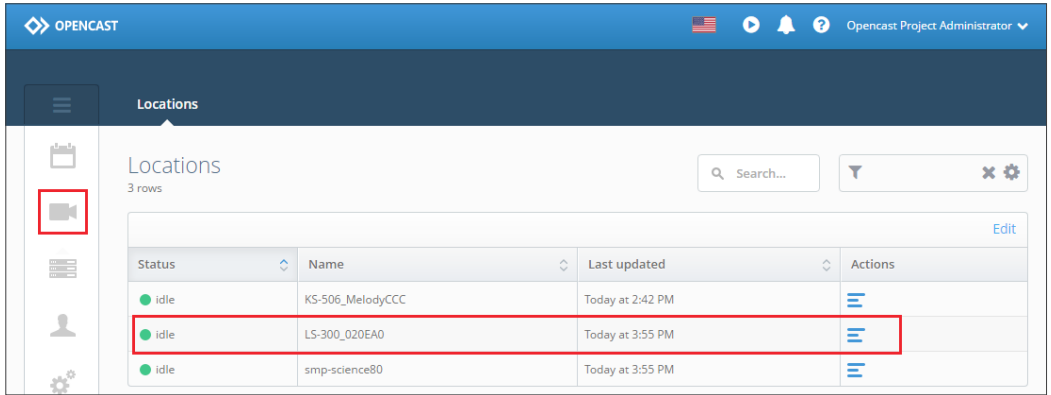
Scheduler		
Start time	End time	Summary
2018-06-07 14:00:00	2018-06-07 15:00:00	Busy
2020-05-26 10:00:00	2020-05-26 12:00:00	Busy
2020-05-29 09:00:00	2020-05-29 10:00:00	Busy
2020-05-29 10:00:00	2020-05-29 11:00:00	Busy

Click Open Scheduled Events page.

### Scheduling via Opencast server

- Enter the Capture agent name, Username, Password and iCalendar URL in these fields.
  - Capture agent name: the ID to recognize LS-200 on Opencast platform
  - Username: Opencast user account
  - Password: Opencast user password
- Click Apply. The event schedule is added and appears in the calendar on the Scheduled Events page.
- Go to Opencast admin, and check if the LS-200 is correctly registered on Opencast.

"Opencast Admin" -> "Capture" -> "Locations"



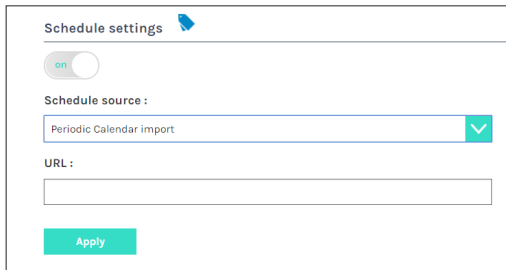
### Manual Calendar import

1. Click Import. An Open window opens.
2. Locate and select the iCalendar file for import. The file must have a .ics file extension.
3. Click Open. The Open window closes and the file name is displayed within the Manual Calendar Import panel area. The Import button is active.
4. Click Apply. The event schedule is added and appears in the calendar on the Scheduled Events page.



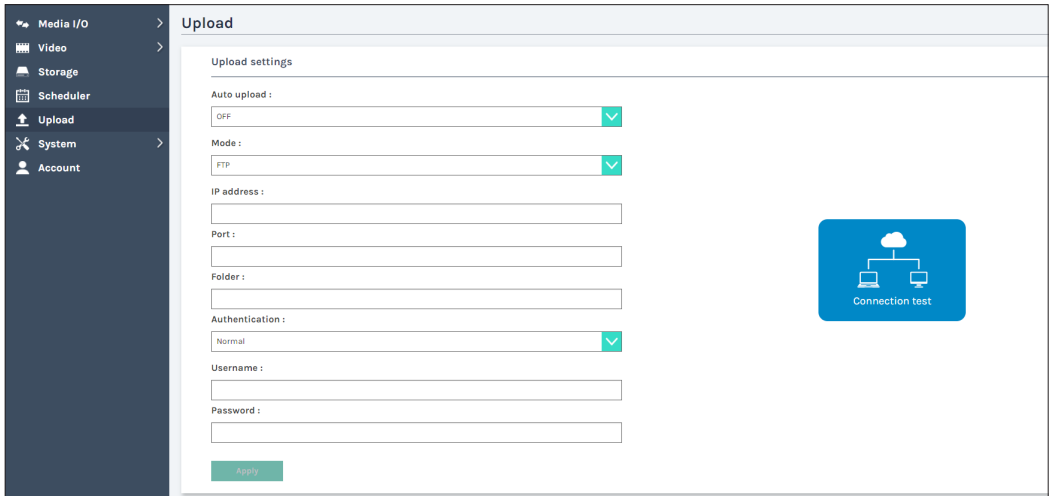
### Periodic Calendar import

1. Enter the iCalendar URL in this field.
  2. Click Apply. The event schedule is added and appears in the calendar on the Scheduled Events page.
- Note: iCalendar Schedule can not be set to cycle, only accept single. Cannot set more than 2 pens to start at the same time. When setting the time overlap, the start time whichever is earlier.



## 1.5 Upload

The LS-200 is able to automatically upload recordings from its internal drive to a network server. In this page, user can configure the upload destination and tests the connection.



**Auto upload-** Select from the drop-down list. Start uploading "after recording is completed", or turn "OFF" the function. Followings to be configured according to the upload destination.

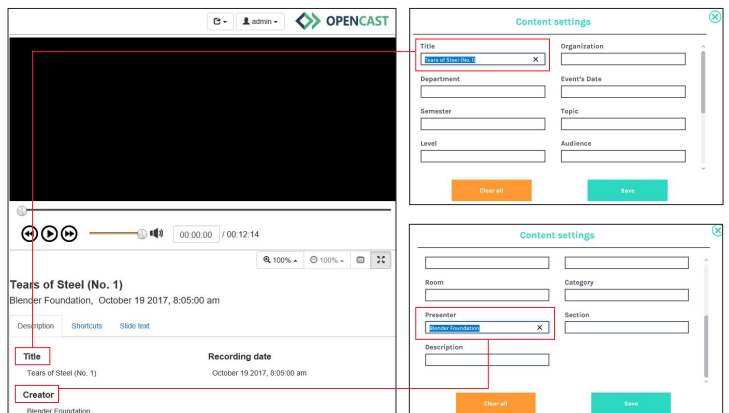
- Mode: Select network server type.
- IP address, port, or domain name: Configure these fields according to the upload destination.
- Folder: Enter the folder name of the upload destination.
- Authentication: Configure this section according to the upload destination authentication method.

**Connection test-** Click the Connection test button to validate upload settings.

Click Apply after setup is completed. New setting is effective from next recording being created.

The upload status/result of the corresponding recordings is denoted in the Video Manager web pages.

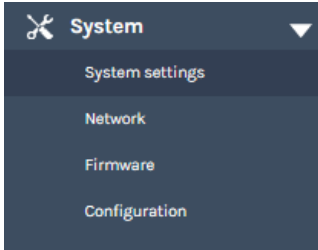
**Note :** If the web server is Opencast, the video title and the creator description are automatically filled with the title and presenter of the Director's content settings.





## 1.6 System

The pages within System include the following:



System settings	Contains device identification, date and time configuration, and booting settings.
Network	The device IP assignment in the networking.
Firmware	Displays the current firmware version, and provides web-based user a way to update firmware for the device.
Configuration	Export / Import the configuration.

### 1.6.1 System settings

The basic information and initial date/time of this device are configured here.

**System settings**

---

**Device identification**

Hostname :

Device description :

Brand : AREC INC.

Model : LS-200

Serial number :

MAC : BC:BA:E1:02:00:7C

---

**Date and time**

Device current date and time : 2018-09-10 19:12:14

Time zone :

Setting mode :

---

**Boot image**

---

**Power**

Power mode :

Device identification - Set the name (device description) for this device.

Date and Time - Set the device date, time, and time zone manually/ be synchronized to PC, or with an external NTP (network time protocol) server.

Boot image - Change the boot screen image. The boot screen is the image you will see when you boot up the device.

Click Browse button and select the desired file in the Open dialog box. The file name would appears with the newly uploaded image. Click Apply button at the bottom corner to apply the settings, or click **X Cancel** Cancel to give it up.

Power - Choose how to turn on the device.

Note: The boot screen file must be in PNG format, maximum size 1920x1080px.

## 1.6.2 Network

By default LS-200 uses DHCP to obtain an IP Address via a router or any DHCP server. To use a static IP address for your device, configure the network settings in this webpage.

**Network**

**Network settings**

The system will reboot after changing the network settings. Please re-login.

IP assignment :  
DHCP

IP address :  
10.2.50.151

Subnet mask :  
255.255.255.0

Default gateway :  
10.2.50.254

Primary DNS Server :  
10.100.0.1

Secondary DNS Server :

Apply

IP assignment – Select DHCP to have IP address be allocated by a router or any DHCP server being connected; or Select Static IP and enter the required network settings including IP address / subnet mask / default gateway/ DNS server.

Click Apply at lower right corner, click Confirm in popup dialog box.

Note: The system will automatically reboot to complete the network settings. Login the updated IP address after the system restarts.

## 1.6.3 Firmware

This page displays the device firmware version. To update the firmware, click "Update" and a dialog box opens asking you to select the file. Select the desired file and click "Open", the dialog box closes and the file name appears underneath. Click "Apply" to start firmware update. Click "Cancel" if the uploaded file is no longer wanted.

Note: System will reboot automatically when the firmware update is completed. It might takes a few minutes. Do not shutdown/ power off the system during firmware updating.

**Log** : Export the log file to your computer or upload it to the Customer Service Server. Input the file name, and then click "Export" or "Upload".

Note : The length of the string is 0~16 characters, allowing letters, numbers, symbols 11(~!@\$%^&\*+~\_).

**Reset** : Reset to factory default. Check if you want to keep your network settings, and click "Reset". The dialog pop out and ask you "System will reboot after setting update, continue?" Click "Confirm" to start reset.

## 1.6.4 Configuration

You can export or import the configuration in this page:

**Export** : Select the configuration to export and click "Export".

**Import** : Click "Import" to load a configuration.

## 1.7 Account

Users can set the system account password etc.

The screenshot displays the 'Account management' section of the Arec interface. On the left is a dark sidebar with navigation icons for Media I/O, Video, Storage, Scheduler, Upload, System, and Account. The main content area is titled 'Account management' and contains three distinct sections, each for a different user role:


- Administrator:** Username: admin; New password: [input]; Confirm password: [input]; Apply button.
- Online Director:** Username: director; New password: [input]; Confirm password: [input]; Apply button.
- Video Manager:** Username: video; New password: [input]; Confirm password: [input]; Apply button.

Changing username and password with Administration/ Online Director / Video Manager :

- (1) New User: Enter a user login name that you want.
- (2) New Password: Enter the user login password that you want.
- (3) Confirm Password: Requires you to enter your password again for confirmation.
- (4) Click Apply.

## Chapter 2 Online Director

The LS-200 embedded Online Director web pages allow user to control recording and have a live stream view of the output video. This director control panel makes it easy to apply layout, select background, and control the audio recorded during the recording process.

Entering the Online Director webpage via [Administrator] by clicking the  button and opening a new tab; or login Online Director from the initial login page with default username director and password director. Both ways lead to the Online Director control panel for web-based users.

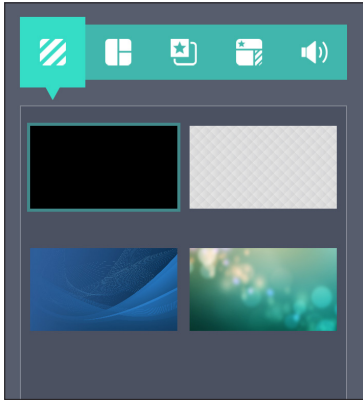


These Web pages provide the following features and information about:

1. A live view window and a control panel of the LS-200 recording and streaming.
2. A simplified setting page to configure the content that is going to be recorded and streamed.
3. A visual sources monitoring exclusive panel which allow user to control and monitor the cameras providing the video source.
4. A Video Manager hyperlink to manage the content stored in the LS-200.
5. Device description, which is configurable for system Administrator, indicates the device location...etc.
6. Storage capacity which is converted into remaining time for recording.
7. Recording/ Streaming status and timer.
8. Audio volume meter indicates the audio volume of the content being recorded and streamed.

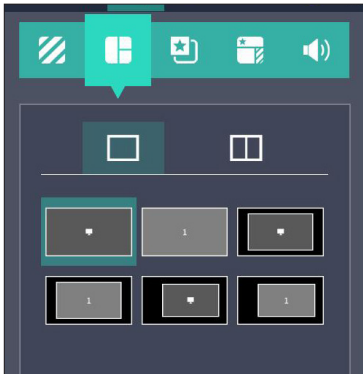
## 2.1 Recording controls panel

There are five tab panels for quickly switching recording background,layout,overlay,theme, and adjusting volume.



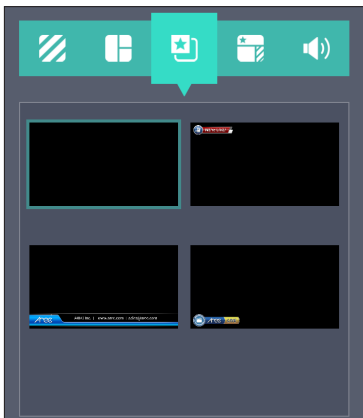
### 2.1.1 Background

Display the available background images for Online Director controlling. Click the background thumbnail to apply it to the video. LS-200 by factory default provides one plain black background and three user-configurable backgrounds. See Administrator \ Video \ Theme for more detail.



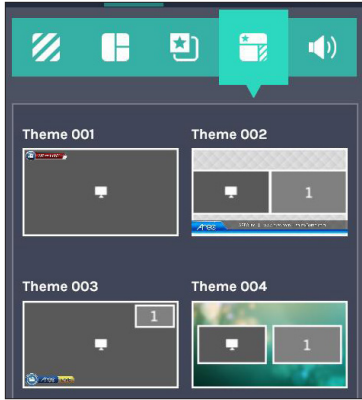
### 2.1.2 Layout

There are layout templates which are factory default layouts and pre-defined into three groups. User can apply layout to the live view window, recording session, and web streaming all at once. Click the layout template to select the desired layout.



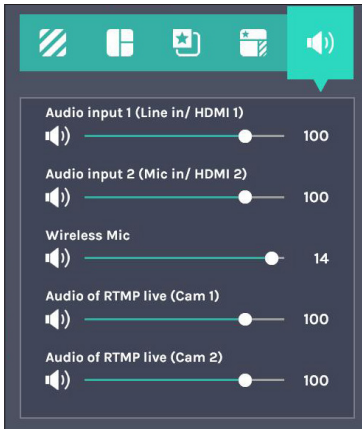
### 2.1.3 Overlay

LS-200 by factory default provides one plain black overlay and three user-configurable overlays. Click the overlay thumbnail to apply it to the video. See Administrator \ Video \ Theme for more details.



### 2.1.4 Theme

Theme is integrated with "Overlay", "Background" and "Layout". LS-200 by factory default provides themes by different overlays, backgrounds and layouts. See Administrator \ Video \ Theme for more details.







### 2.1.5 Volume control

The audio control bar is to adjust the recorded volume from each audio input. Adjustable range of sound input is 0-125, AREC wireless microphone 0~15.

## 2.1.6 Recording control buttons

Buttons are:

	Record	Click Record and recording begins. The Record button is red to indicate active recording.
	Pause	Click Pause to pause recording. The preview and the output video are also suspended while recording is paused. To resume recording, click Record.
	Stop	Click Stop to end a recording
	Bookmark	Click Bookmark to add bookmark during recording.

## 2.2 Visual Sources Monitoring

It makes easy for user to control and monitor each video input. Click the tab with the video input name on it to switch the monitoring window. In the case of a PTZ camera, the direction control panel, zoom in/out control bar, and up to 8 preset positions are enabled.



The screenshot shows the Arec LS-200 interface. At the top, there are tabs for 'Content' and 'Cam 1'. The main video feed shows a man presenting to a group of people in a meeting room. On the right side, there is a control panel with four numbered sections:

- 1. Direction control panel:** A 3x3 grid of arrow buttons for moving the camera in various directions.
- 2. Movement speed:** A horizontal slider with a central knob to adjust the camera's movement speed.
- 3. Zoom in/out:** A horizontal slider with a central knob and magnifying glass icons at the ends to adjust the zoom level.
- 4. Preset positions:** A grid of eight buttons labeled P01 through P08, used to command the camera to move to specific preset locations.

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1. Direction control panel: Click the arrow buttons to move the camera.
2. Movement speed: Move leftward or rightward to set slower or faster the camera is moving.
3. Zoom in/out: Click the buttons or drag on the control bar.
4. Preset positions: Click the buttons to command that the camera go to the preset position.



## 2.3 Recording/Streaming setup

The page provides user to change settings for recording, streaming, content, logo and bookmark adding.

The screenshot shows the Arec LS-200 settings interface. It is divided into three main sections: Recording settings, Streaming settings, and Content settings. The Recording settings section includes Recording mode (MP4 Mixed video/ Original source), Video compression (Full HD), and Bookmark settings (Auto) (OFF). The Streaming settings section includes Video compression (Internet HD), Live streaming 1 (OFF), and Live streaming 2 (OFF). The Content settings section includes Title, Organization, and Department. There are 'more...' buttons next to the Live streaming 1 and 2 sections, and an 'Apply' button at the bottom right.

### 2.3.1 Recording settings

- Recording mode: Available options are MP4 Mixed video and MP4 Mixed video/ Original source.
- Video compression: There are 7 preset recording video compression profiles for different resolution and bitrate. Click ⓘ to see the details. The user defined profile can be configured by system Administrator only. See [Administrator \ Video \ Recording for more details](#).
- Bookmark settings (Auto): Add bookmark automatically at a regular period of time, or whenever the layout is changed during recording.

### 2.3.2 Streaming settings

- Live streaming: Select ON/OFF to enable/ disable live streaming ability.
- Video compression: There are 7 preset recording video compression profiles for different resolution and bitrate. Click ⓘ to see the details. The user defined profile can be configured by system Administrator only. See [Administrator \ Video \ Streaming](#) for more details. Note: The resolution for streaming cannot be larger than that for recording.
- URL: Copy and paste the destination Server URL and Stream name provided by your CDN or server administrator, in the format `rtmp://serverurl/streamname`.

Click ... button to open Advanced settings window, RTMP username/password and test for Wowza. Click Save button to make the option change.

### 2.3.3 Content settings


The LS-200 contains up to 13 user-configurable elements for describing content. These elements and texts will be saved in the recording data of the newly created content. Enter text in the content settings fields if desired. Click **more ...** to open more elements of content description. Click **Clear all**/ **Save** to temporarily erase/ preserve the texts in the field; These texts will not be validated until that the **Apply** button on the previous page is clicked and executed.

The screenshot shows a 'Content settings' dialog box overlaid on a dark background. The dialog box has a title bar with a close button (X) in the top right corner. It contains two columns of text input fields. The left column includes fields for 'Title', 'Department', 'Semester', and 'Level'. The right column includes fields for 'Organization', 'Event's Date', 'Topic', and 'Audience'. At the bottom of the dialog box, there are two buttons: 'Clear all' (orange) and 'Save' (teal). To the right of the dialog box, a 'more ...' button is visible on the background interface. At the bottom right of the background interface, an 'Apply' button is partially visible.

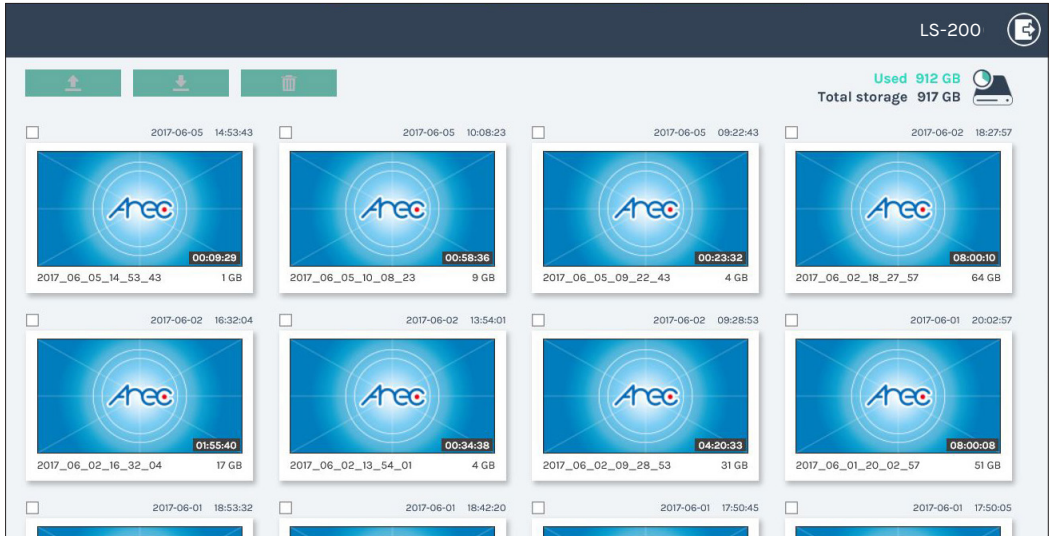
Note: These updates do not apply to the existing recordings. To edit the existing recording information, see Video Manager. Click **Apply** button at the bottom corner when finished to apply the settings.

## Chapter 3 Video Manager


The LS-200 embedded Video Manager provides access to recordings produced by LS-200 itself and stored in the internal storage drive or USB. The video list is in descending order by the time of occurrence.

Entering the Video Manager webpage via [Administrator] or [Online Director] by clicking the  button and opening a new tab; or log in Video Manager from the initial login page with default username video and password video.





The Video Manager includes the following features:upload, download, delete, playback the recording and edit the recording information.




### 3.1 Upload the recording

Select the desired recording and click  to add it in the upload queue. The upload destination is pre-configured by system administrator. See [Administrator\ Upload](#) for more details. The LS-200 arranges the upload sequence automatically and indicates the upload status/result on the corresponding recordings. The following indicators are used:



Icon	Upload Status
	The recording package are uploaded successfully.
	The recording upload is failed.
	The recording is in the upload queue.
	The recording is uploading at this moment.

### 3.2 Download the recording


Select the desired recording and click . Select Save if offered the choice to Open or to Save the package. The recording packages are downloaded to your computer in the form of a .mp4 file. These are typically saved to the default download location used by your browser.

The recording package may contain more than one .mp4 files if that is recorded in MP4 Mixed video/ Original source recording mode.

To separately download the files in the recording packages, click on the recording thumbnail and access those in the Content information page.

### 3.3 Delete the recording

Recording packages can be deleted manually to make room for new recordings.

Select the recording and click . A confirmation dialog box opens asking you to confirm the deletion. Click Confirm to permanently remove the recording packages. The list may not update immediately. Refresh the list by reloading this webpage.

### 3.4 Playback the recording

Click on the desired recording and you will be directed to the content information page. Use the player controls at the bottom of the window to watch the video.

There might be more than one files listed under the window if the content is recorded in MP4 Mixed video/ Original source recording mode. Select the video for playback by clicking on the image of the desired one.

The title used for Mixed video is "Movie", and those for Original source(s) are the name of the corresponding video input(s); by default are Content, Cam 1. To separately download MP4 Mixed video/ Original source files, select the desired file and click Download. The file size being download is shown within the button.

The screenshot displays the 'Content information' interface. At the top left, there is a back arrow and the title 'Content information'. The main area is divided into two sections. On the left, a video player shows a man presenting to a group of people. The video title is 'Movie' (1), the recording date and time is '2017-05-10 16:27:40' (2), and the video is playing in a window (4). Below the video player are playback controls (5) showing a progress bar at 0:16 / 0:28, 1x speed, and volume. Below the controls are thumbnails for 'Movie' (984 KB), 'Content' (988 KB), and 'Cam 1' (987 KB) (6). A 'Data set (4 MB)' checkbox is checked. At the bottom left is a 'Download(4 MB)' button (7). On the right, a form (3) allows editing the content fields: Title (Recording101), Organization, Department, Event's Date, Semester, Topic, and Level. An 'Apply' button is at the bottom right of the form.

1. Title of the video file being played
2. Recording date and time
3. Edit the content fields
4. Playback window
5. Playback controls
6. Video files and data set (files containing metadata, thumbnail images, and bookmarks.)
7. Download button

### 3.5 Edit the recording information

If you require to edit the information of a recording, click on the desired recording and you will be directed to the content information page. Replace the existing text or enter new information in the content fields. Click APPLY to save the changes.

## Table of On Screen Display Icons

The LS-200 provides a HDMI preview output for recording monitoring. On screen display there are recording/streaming indicators, event icons and sometimes the error operation warnings.



**00:00:15**  
Recording/ Streaming timer

**IP address**  
Device WAN IP Address

  
Audio volume meter

Recording in progress



Manually add Bookmark



Disk full



Network connection failure



Live Streaming and recording in progress



Auto add Bookmark



Wireless microphone connected



Display failure



Live Streaming










Live Streaming error

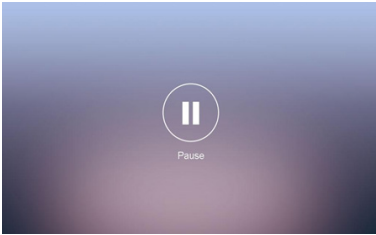
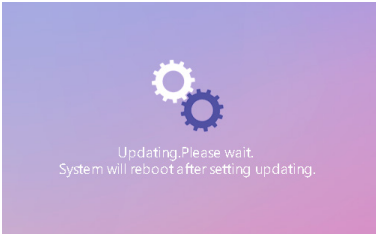
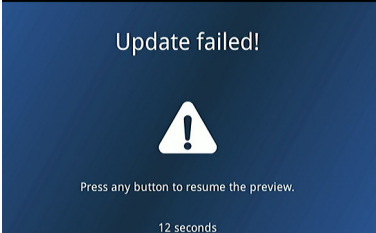
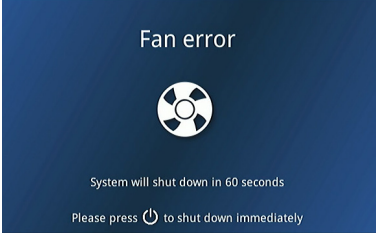
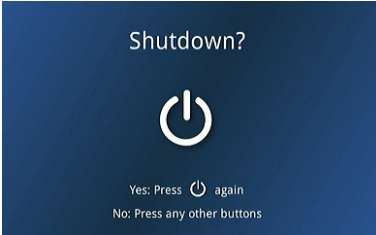


Audio output mute



Recording is paused

 <p>Front USB recording error</p>	 <p>HDCP protected source</p>	 <p>Operation is denied</p>	 <p>Front USB recording</p>
 <p>Disk failure</p>	 <p>Uploading</p>	 <p>Front USB drive mount</p>	

 <p>Recording is paused</p>	 <p>Firmware updating</p>
 <p>Firmware update failure</p>	 <p>Fan failure</p>
 <p>Shutdown confirmation</p>	



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