

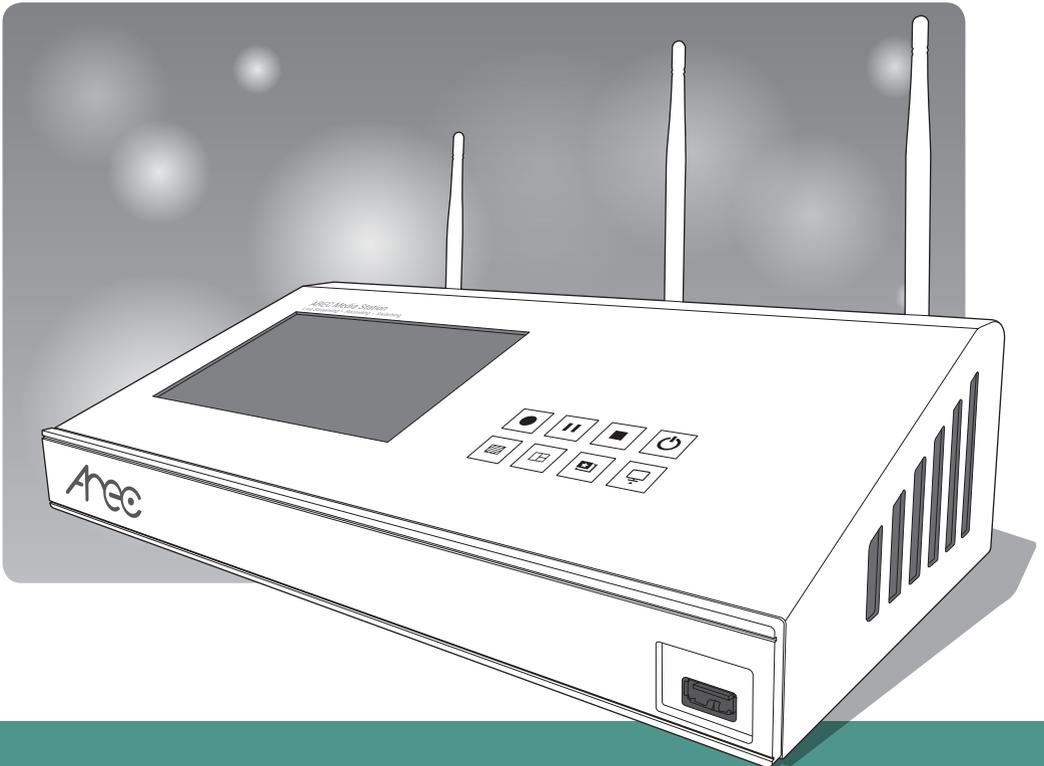


# KL-3W

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## Media Station

User Manual | English



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## Introduction

Featuring a compact and stand-alone design, AREC KL-3W 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.

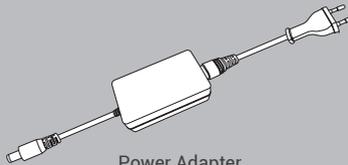
## Specifications

Product Name	Media Station
Model Name	KL-3W
Dimension	354mm(L) x 188.2mm(W) x 97mm(H)
Weight	2692g
Power Requirement	12V/3A
Power Consumption (Max.)	36W (Max.)
Operating Temperature / Humidity	0°C ~ 40°C / 90%
Maximum normal load description	Insert 2 IP CAM to LAN port and 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.

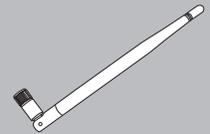
## Package Contents



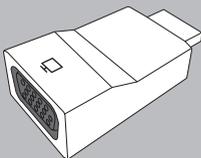
Quick Installation Guide



Power Adapter



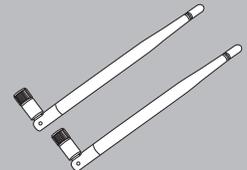
Wireless Mic. Antenna



HDMI-to-VGA converter



KL-3W



WiFi Module Antenna



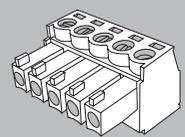
VGA Line



HDMI Line



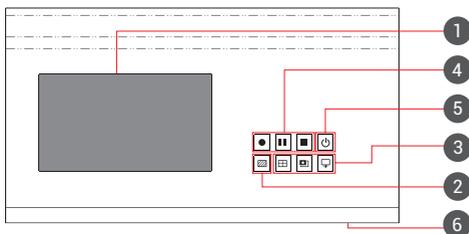
RJ-45 Line



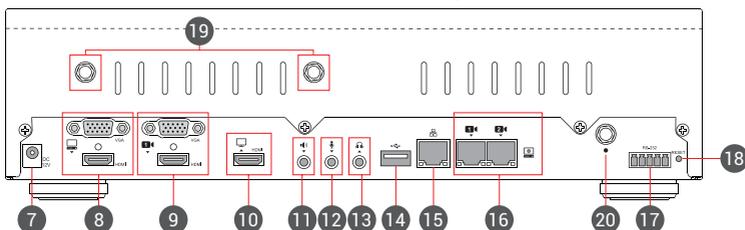
Terminal Block

## Product Appearance

Front



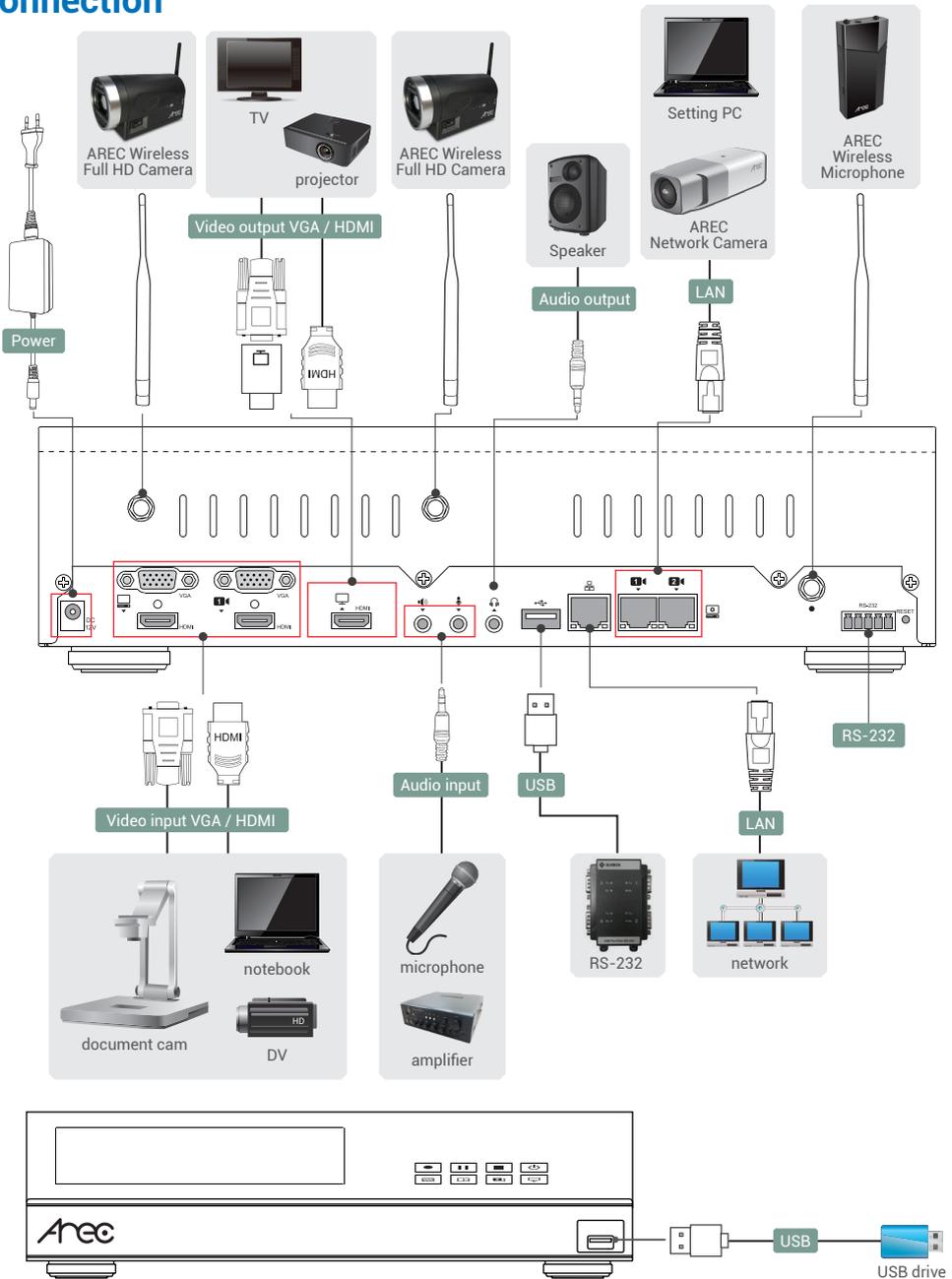
Back



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

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

# Connection



## Front Panel Buttons and Indicators

Button	Display method of indicator	Product status
 Background switch	Solid green.	Image background in the video.
 Single / Dual / Triple Layout switch	Green light of these three buttons flashes alternately.	Device booting up.
	Green light of any Single/ Dual/ Triple layout button glows continuously.	Boot up completed; One of the Single/ Dual/ Triple layout is selected
	Green light of all layout buttons flashes rapidly at the same pace.	Device shutting down.
 Record/ Pause/ Stop	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.
 Power	Solid red.	Device is powered, yet not booted up.
	Fast flashing red.	Firmware update in progress
	Slow flashing red.	Fan abnormal.

## 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 KL-3W system Administrator webpages.

## Overview of the KL-3W Web Interface

KL-3W web interface has three user types, which are described in detail in the following chapters :

 <p>Online Director</p>	<p>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.</p>
 <p>Administrator</p>	<p>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.</p>
 <p>Video Manager</p>	<p>If you only need to access to the recordings, log in Video Manager with default username video and password video</p>

### Online Director

---

Username

Password

save the username and password

Log in

### Administrator

---

Username

Password

Save the username and password

Log in

### Video Manager

---

Username

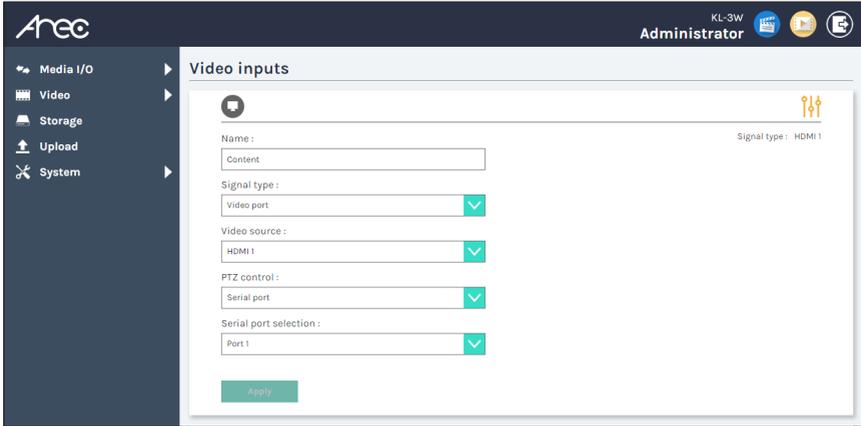
Password

Save the username and password

Log in

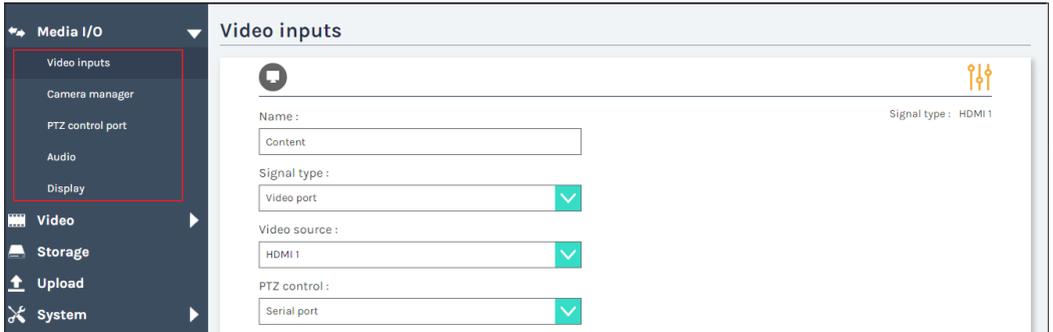
# Chapter 1 Administrator

The Administrator web pages provide a system administration interface of the KL-3W : it can perform **Media I/O, Video, Storage, 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.
Camera manager	List out all the connected network cameras.
PTZ control port	Set KL-3W back USB-to-RS-232 serial port to drive PTZ cameras.
Audio	Adjust the volume and select the audio input source.
Display	Set the KL-3W on screen display language.

### 1.1.1 Video inputs

The KL-3W is capable to process up to three video inputs. The name of these inputs are user configurable; by default are Content, Cam 1 and Cam 2.

#### 1.1.1.1 Content 1 / Cam 1 2 / Cam 2 3

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

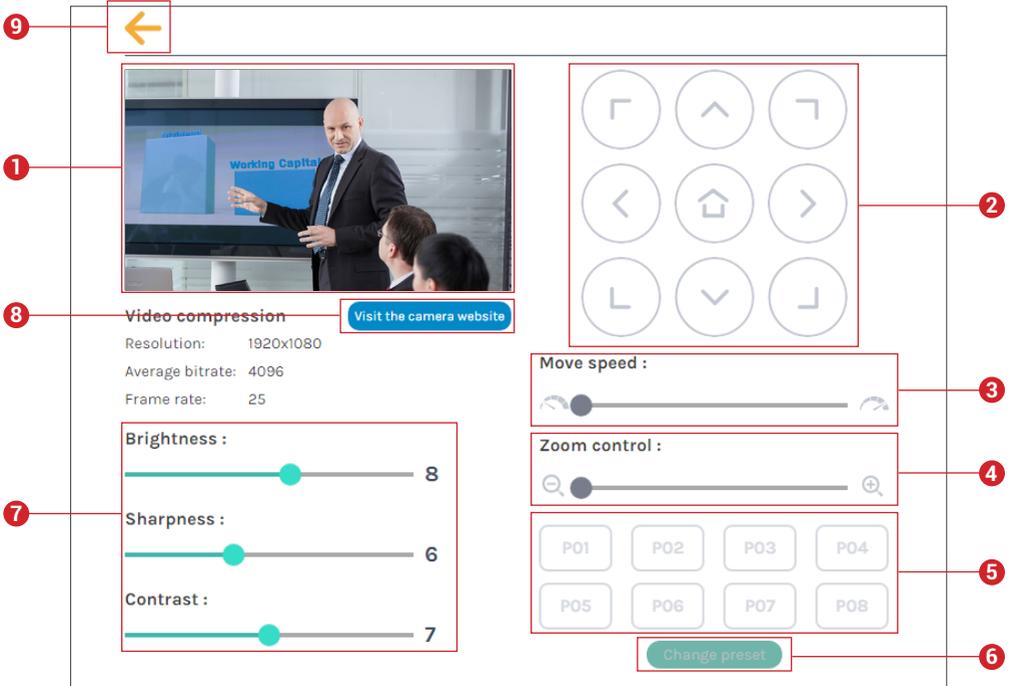
Video port	Select Video source: The KL-3W provides VGA and HDMI input options for video port. If only one of those is connected, the system would detect and automatically switch to source of signal. If both options are connected, select one in between.
Network Camera	Select IP address: Select from the 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 KL-3W 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.

### 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.
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 Camera manager

The system automatically scans and lists the network cameras connected to the Media Station once entering the [ Camera 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 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.

The screenshot shows the Arec web interface with the 'Camera manager' page selected. The interface includes a sidebar with navigation options like 'Media I/O', 'Video', 'Storage', and 'System'. The main content area displays a 'Network Camera' table with columns for Host name, IP address, MAC, Manufacturer, and Status. A 'Refresh' button is located above the table. The table lists several cameras, including 'ipnc', 'Sony', 'AREC', 'CI-200', 'In', 'VIVOTEK', and 'AREC' with their respective IP addresses and MAC addresses. Some cameras have a 'Login' button and a trash icon next to them.

Host name	IP address	MAC	Manufacturer	Status
ipnc	10.2.50.133	E4:77:D4:00:D6:38	CIPNC	OK
Sony	10.2.50.172	AC:9B:0A:EE:1F:85		Login
AREC	10.2.50.143	00:D0:89:0E:51:64	AREC	OK
CI-200	10.2.50.139	BC:BA:E1:A0:00:30	CI-200	OK
CI-200	10.2.50.138	00:D0:89:14:EF:6B	CI-200	OK
In	10.2.50.135	F9:FC:D5:8C:D5:01		Login
VIVOTEK	10.2.50.115	B0:AA:5A:DF:6S:4F		Login
VIVOTEK	10.2.50.154	3E:AE:9A:59:AE:A4		Login
AREC	192.168.11.75	BC:BA:E1:A0:00:1B	AREC	OK
AREC	10.2.50.157	00:D0:89:0D:0A:14		Login

This screenshot shows the same 'Camera manager' page as above, but with a 'Login authentication' dialog box open in the foreground. The dialog box has a title bar with a close button (X) and contains two input fields: 'User name:' and 'Password:'. Below the input fields is a green 'Authentication' button. The background content, including the camera list table, is dimmed.

### 1.1.3 PTZ control port

The KL-3W facilitate the web-based users control PTZ cameras using RS-232 protocol. Connect an USB-to-RS-232 adapter to the KL-3W 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.

The screenshot shows the 'PTZ control port' configuration page. On the left is a dark sidebar menu with options: Media I/O, Video inputs, Camera manager, PTZ control port (selected), Audio, Display, Video, and Storage. The main content area is titled 'PTZ control port' and contains a 'Port 1' section with the following settings:

- Protocol: VISCA (selected from a dropdown menu)
- Address: 1 (entered in a text field)
- Baud rate: 9600 (selected from a dropdown menu)

### 1.1.4 Audio

Adjust volume and select the audio input source.

The screenshot shows the 'Audio' configuration page. On the left is a dark sidebar menu with options: Media I/O, Video inputs, Camera manager, PTZ control port, Audio (selected), Display, Video, Storage, Upload, and System. The main content area is titled 'Audio' and contains two sections:

**Volume control** (Default button):

- Content (Line in/ HDMI): Volume slider set to 100.
- Mic in: Volume slider set to 100.
- Wireless Mic: Volume slider set to 14.
- Output: Volume slider set to 100.

A 'Current volume' indicator is shown on the right with a vertical bar chart.

**Audio settings**:

- Audio shift: Slider set to 200 ms.
- Audio input (Content): Line in and HDMI 1 (selected from a dropdown menu).

An 'Apply' button is located at the bottom of the settings section.

Volume control- Tune the recorded volume from each audio input and adjust the audio output volume. Configurable range of sound input is 0-125, of AREC wireless microphone 0~15. The nearby volume meter indicates the encoded audio volume.

Audio settings- Set AV synchronization and configure the source from each audio input.

- Audio shift: Adjust the delay of sound after video transmission. Synchronize the video and audio with consistency.
- Audio input selection: Select among Line in / HDMI 1 / Line in and HDMI 1 to set the source for audio input 1(Content).

## 1.1.5 Display

Set the KL-3W on screen display language.

The screenshot shows the Arec web interface. On the left, a dark sidebar contains a menu with 'Media I/O' expanded, showing options like 'Video inputs', 'Camera manager', 'PTZ control port', 'Audio', and 'Display'. Below these are 'Video', 'Storage', 'Upload', and 'System'. The main content area is titled 'Display' and contains a 'Display settings' section. Under 'Display settings', there is a label 'On-screen language:' followed by a dropdown menu currently showing 'English' and a green checkmark. Below the dropdown is a green 'Apply' button.

## 1.2 Video

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

The screenshot shows the Arec web interface. On the left, a dark sidebar contains a menu with 'Media I/O' expanded, showing options like 'Video inputs', 'Camera manager', 'PTZ control port', 'Audio', and 'Display'. Below these are 'Video', 'Storage', 'Upload', and 'System'. The 'Video' section is expanded, showing 'Recording', 'Streaming', 'Content', and 'Logo and background'. The 'Recording' option is highlighted. The main content area is titled 'Recording' and contains two sections: 'Encoder settings' and 'Bookmark settings'.  
 Under 'Encoder settings', there are two dropdown menus. The first is 'Recording mode:' set to 'MP4 Mixed video/ Original source' with a green checkmark. The second is 'Video compression:' set to 'Full HD' with a green checkmark. To the right of these dropdowns, technical specifications are listed: Full HD, Resolution: 1920x1080, Average bitrate: 6 Mbps, FPS: 30, GOP: 30, H.264 profile: high profile, Audio bitrate: 256 Kbps, and Audio sample rate: 44 KHz. Below the dropdowns is a green 'Apply' button.  
 Under 'Bookmark settings', there is a dropdown menu for 'Add automatically:' set to 'OFF' with a green checkmark. Below it is a green 'Apply' button.

**Recording** Configure Encoder settings and Bookmark settings for recording.

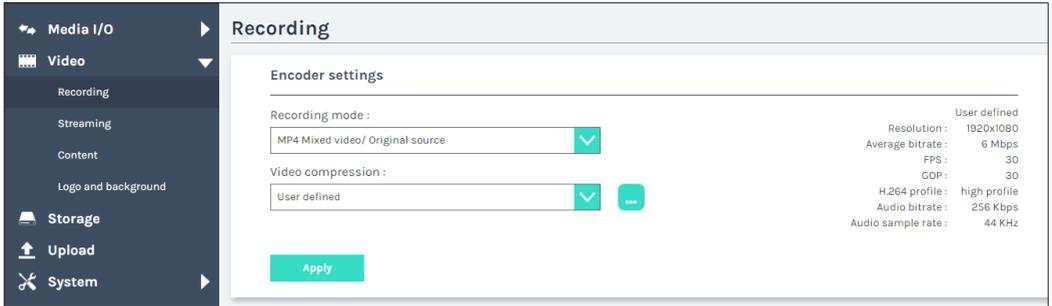
**Streaming** Configure Encoder settings for streaming.

**Content** Edit the information of the content that will be recorded.

**Logo and background** Set the logo file and background images.

## 1.2.1 Recording

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



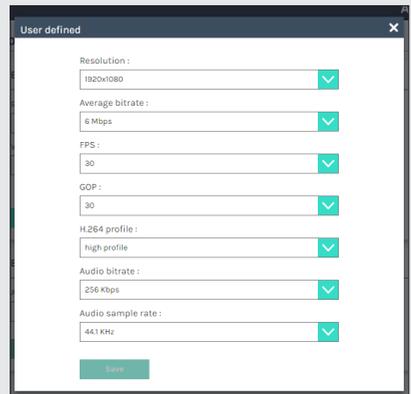
### Encoder settings

- 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.

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/ 1Mbps	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

## 1.2.2 Streaming

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.

**Encoder settings**

Live streaming :  on

Protocol :

Video compression :  ✓ ⋮

User defined	
Resolution :	1280x720
Average bitrate :	1 Mbps
H.264 profile :	high profile
Audio bitrate :	256 Kbps
Audio sample rate :	44 KHz

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

Protocol – The available protocol on the KL-3W are RTP and RTMP.

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>

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 :  ✓

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 KL-3W streaming protocol setting field.

**Create Live Video** ✕

This will create a live video, streamed directly from your professional video equipment or encoding software. This is not for creating live videos from your computer's webcam.

**Secure connection (SSL)**  
A secure connection is better, but it may not work with all encoders.

Depending on your streaming software, you will use either the Single Field or Separate Fields option below. Copy the contents of these text fields into your video streaming software's set-up fields. [Learn more about live video](#)

**Single Field**

Server or Stream URL

Streaming to Ustream

Combine the contents of both fields: RTMP URL and Stream Key, insert a slash between them. Paste this string into the KL-3W streaming protocol setting field. For example: rtmp:1.15059865.fme.stream.tv/ustreamVideo/15059865/5gmbz4RCa2Hgt9SwtCYuCct6qS137Nar

**Flash Media Encoder**

Import this file when using...

[Download the Flash Media Encoder...](#)

### 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 KL-3W streaming protocol setting field.

### Streaming to a media player on a PC in the same LAN with the KL-3W

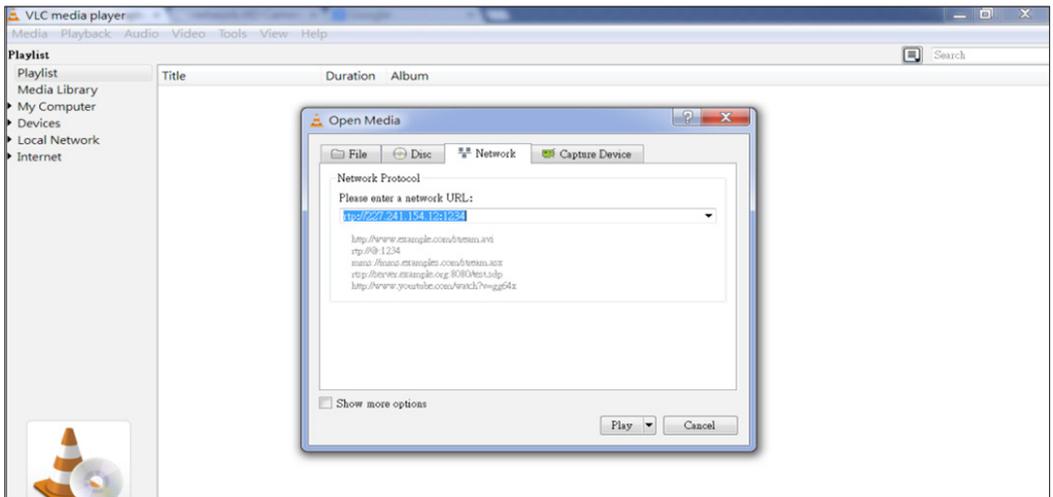
Enter the destination IP address and the port number where the streaming is played in the format `rtp://@ip:port`.

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 KL-3W 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 KL-3W contains up to 15 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.

**Content**

Content settings

Title :

Organization :

Department :

Event's Date :

Semester :

Topic :

Level :

Audience :

### 1.2.4 Logo and background

KL-3W by factory default provides one logo, one plain black background and three user-configurable backgrounds.

Logo settings –

- Insert logo: select where to insert the pre-configured logo or not insert the logo to the video.
- Change the logo image: Click Browse 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 **Cancel** Cancel to give it up. Note: The logo file must be in BMP format, maximum size 360x240px.

**Logo and background**

Logo settings

Insert logo :

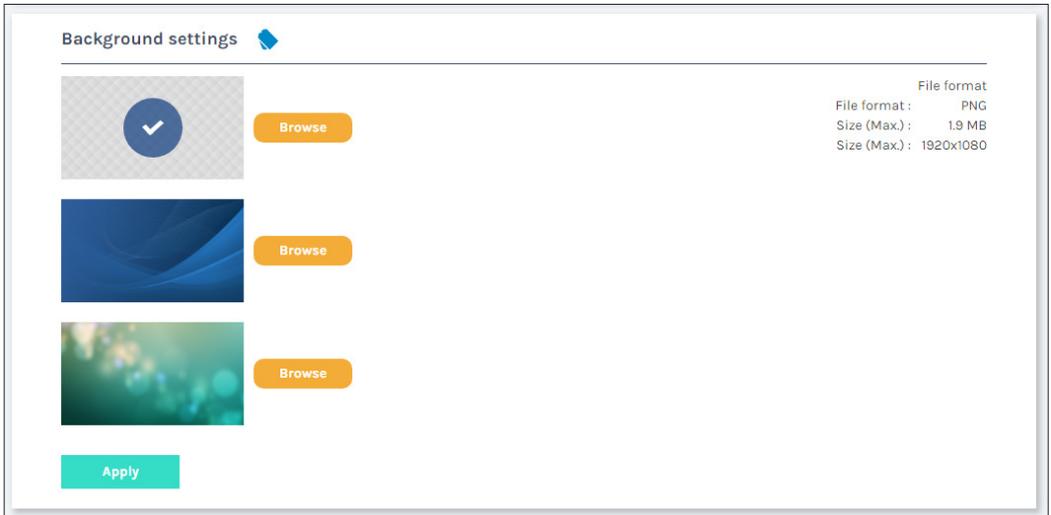
File format : BMP  
 Size (Max.) : 360x240  
 Color key RGB : 0xFF,0x00,0xFF



**Background settings –**

- Click the background thumbnail you want to use to the video and follow by “Apply” to apply the settings. To use a plain black background instead of an image, un-tick the selection by double clicking on the picture.
- Change the background image: 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 **✖ Cancel** Cancel to give it up.

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



## 1.3 Storage

The recording files produced by the KL-3W are stored on its own internal hard drive. This page provides user to set loop recording of internal storage drive 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 KL-3W is preset for storing the recorded files.
- Front USB recording: Set ON/OFF to enable/disable KL-3W 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 allow/prevent that the device automatically delete the oldest recordings to make enough space for new recordings.

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 Upload

The KL-3W 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.

The screenshot shows the 'Upload' settings page. On the left is a navigation menu with 'Media I/O', 'Video', 'Storage', 'Upload', and 'System'. The 'Upload' section is active. The 'Upload settings' form includes:

- Auto upload:** A dropdown menu set to 'After recording is completed' with a green checkmark.
- Mode:** A dropdown menu set to 'FTP' with a green checkmark.
- IP address:** A text input field containing '10.2.50.188'.
- Port:** A text input field containing '21'.
- Folder:** A text input field containing 'KL3W' with a clear button (X).
- Authentication:** A dropdown menu set to 'Normal' with a green checkmark.
- User name:** A text input field containing 'admin'.
- Password:** A text input field with masked characters '\*\*\*\*\*'.
- Apply:** A green button at the bottom left.
- Connection test:** A blue button with a cloud and server icon and the text 'Connection test'.

**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.

## 1.5 System

The pages within System include the following:

<b>System</b>		
System settings	System settings	Contains device identification, date and time configuration, and booting settings.
Network	Network	The device IP assignment in the networking.
WiFi module	WiFi module	The KL-3W build in WiFi module, provides quick and easy way to enable WiFi connectivity for all kinds of products (such as AREC Wireless Full HD Camera and NB).
Firmware	Firmware	Displays the current firmware version, and provides web-based user a way to update firmware for the device.

## 1.5.1 System settings

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

The screenshot displays the Arec web interface for the KL-3W device, accessed by an Administrator. The left sidebar shows navigation options: Media I/O, Video, Storage, Upload, System, System settings (selected), Network, WiFi module, and Firmware. The main content area is titled 'System settings' and is divided into three sections:

- Device identification:**
  - Device name: KL-3W (with a note: Device name follows RFC-952 internet host table specification.)
  - Manufacturer: AREC Inc.
  - Model: KL-3W
  - Serial number: TBBF11029168
  - MAC: BC:BA:E1:02:10:46
  - Apply button
- Date and time:**
  - Device current date and time: 2017-06-05 15:28:41
  - Time zone: Asia/Taipei (dropdown menu with a green checkmark)
  - Setting mode: NTP service (dropdown menu with a green checkmark)
  - Apply button
- Boot settings:**
  - Image preview: Arec logo on a blue background.
  - Browse button (orange)
  - Apply button

Device identification – Set the name (host name) 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 settings – 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 **Cancel** Cancel to give it up.

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

## 1.5.2 Network

By default KL-3W 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.

The screenshot shows the 'Network' settings page. On the left is a dark sidebar with navigation options: Media I/O, Video, Storage, Upload, System (expanded), System settings, Network, WiFi module, and Firmware. The main content area is titled 'Network' and contains 'Network settings'. A warning message states: 'The system will reboot after changing the network settings. Please re-login.' Below this are several input fields: 'IP assignment' with a dropdown menu showing 'DHCP' and a green checkmark; 'IP address' with the value '10.2.50.141'; 'Subnet mask' with '255.255.255.0'; 'Default gateway' with '10.2.50.254'; 'DNS server' section with 'Primary DNS' set to '10.100.0.1' and an empty 'Secondary DNS' field. A green 'Apply' button is located at the bottom left of the settings area.

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.

### 1.5.3 WiFi module

The module provides quick and easy way to enable WiFi connectivity for all kinds of products (such as AREC Wireless Full HD Camera and NB).

#### 1.5.3.1 System information

The module supports Access Point mode of wireless operation. The basic wireless settings used for Access Point mode are listed below.

Setting	Description	Default
SSID	This is the name of your wireless network. The "name" can be up to 32 characters in length, and contain letters and numbers.	CBOX-WiFi
Wireless Mode	Support 802.11b, 802.11g, 802.11n HT20 and 802.11n HT40 modes.	IEEE 802.11g/n HT20
Wireless Security	In the security mode option, there are WEP, WPA-PSK, WPA2-PSK, WPA-PSK Mixed, WPA,WPA2 andWPA Mixed listed.	WPA-PSK Mixed

1. Change settings:Modify the Wireless network name (SSID)

Rule : This is the name of your wireless network. The name can be up to 32 characters in length, and contain letters and numbers.

2. Change password:Modify the Passphrase of Security mode

Rule : Enter a new passphrase between 8 and 32 characters long, using any combination of printable characters.

Note : When the Video inputs use CW-210 (AREC Wireless Full HD Camera), the module needs to set the SSID & Passphrase of security

### 1.5.3.2 Management

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



1. Advanced settings : Visit the module website; you can modify the other configuration and management.  
Note : Log in the Web Interface, please enter the correct user name and password and click OK / Yes to proceed. The default use name is Admin and no password.
2. Reset (Restore to factory defaults) : Restoring the unit to the factory default settings will erase all settings, including any rules you have created.

Setting	Default
IP Address	192.168.11.200
Default Gateway	192.168.11.254
Device Name	CBOX WiFi Module
DHCP Server	Disable
SSID	CBOX-WiFi
Wireless Mode	IEEE 802.11g/n HT20
Security Mode	WPA-PSK Mixed
Passphrase of Security	12345678

### 1.5.4 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.



## Chapter 2 Online Director

The KL-3W 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.

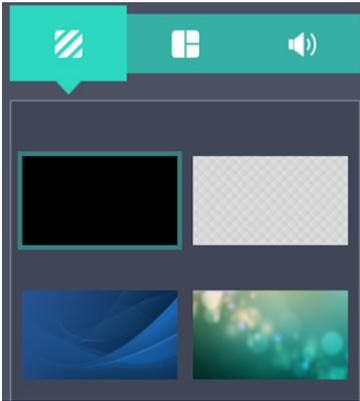


These Web pages provide the following features and information about:

1. A live view window and a control panel of the KL-3W 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 KL-3W.
5. Device description, which is configurable for system Administrator, indicates the device location...etc.
6. Title of the content that is being/ or going to be recorded and streamed.
7. Storage capacity which is converted into remaining time for recording.
8. Recording/ Streaming status and timer.
9. Webcast URL displayed in this section is configured in the setup page for live streaming service.
10. Audio volume meter indicates the audio volume of the content being recorded and streamed.

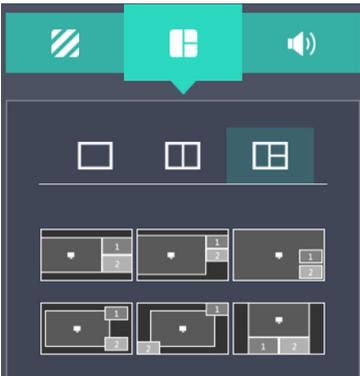
## 2.1 Recording controls panel

There are three tab panels for quickly switching recording background, layout, and adjusting volume.



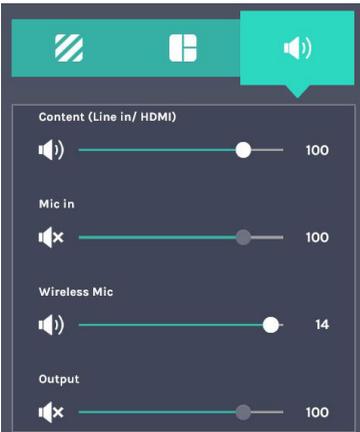
### 2.1.1 Background

Display the available background images for Online Director controlling. Click the background thumbnail to apply it to the video. KL-3W by factory default provides one plain black background and three user-configurable backgrounds. See Administrator\ Video\ Logo and background for more details.



### 2.1.2 Layout

There are 21 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 Volume control

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

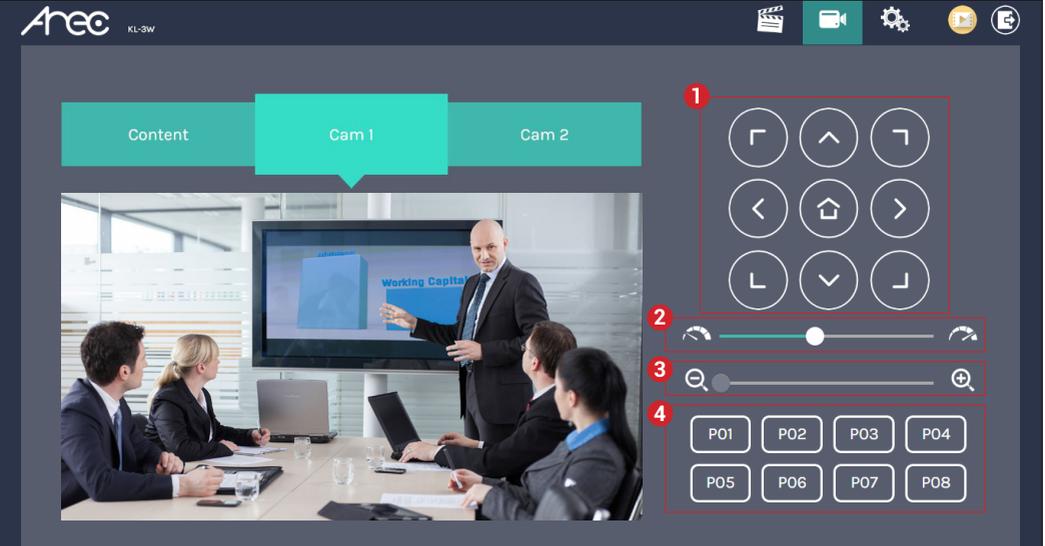
## 2.1.4 Recording control buttons

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.



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 KL-3W settings interface. It is divided into three main sections: Recording settings, Streaming settings, and Content settings. There are also icons for a clapperboard, a video camera, a gear (settings), a play button, and a user profile.

**Recording settings**

- Recording mode: MP4 Mixed video/ Original source
- Video compression: Full HD
- Record storage: Auto

**Streaming settings**

- Live streaming: OFF
- Video compression: Internet HD
- Protocol: rtmp://0.0.0.0

**Other settings**

- Bookmark settings (Auto): OFF
- Insert logo: No

**Content settings**

- Title: [Empty field]
- Organization: [Empty field]
- Department: [Empty field]

A dropdown menu for video compression is open, showing the following options:

Full HD	1080p@6 Mbps
Internet Full HD	1080p@4 Mbps
HD	720p@3 Mbps
Internet HD	720p@1 Mbps
Internet	480p@800 Kbps
Mobile	480p@500 Kbps
User defined	720p@1 Mbps

Buttons for "more ..." and "Apply" are also visible.

### 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](#).
- Record storage: The internal hard drive of KL-3W is preset for the record storage. Select "Internal drive only" for storing the recorded files; or select "Auto" which means the files will be stored in both the internal storage and the external front USB drive.  
Note: Make sure the front USB drive is properly connected and with enough space for the recorded files.

### 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.
- Protocol: Copy and paste the destination Server URL and Stream name provided by your CDN or server administrator, in the format rtmp://serverurl/streamname.

### 2.3.3 Other settings

- Bookmark settings (Auto): Add bookmark automatically at a regular period of time, or whenever the layout is changed during recording.
- Insert logo: select where to insert the pre-configured logo or not insert the logo to the video.

### 2.3.4 Content settings

The KL-3W contains up to 15 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). A vertical scrollbar is visible on the right side of the dialog box. In the background, a 'more ...' button is visible on the right, and an 'Apply' button is visible at the bottom right of the interface.

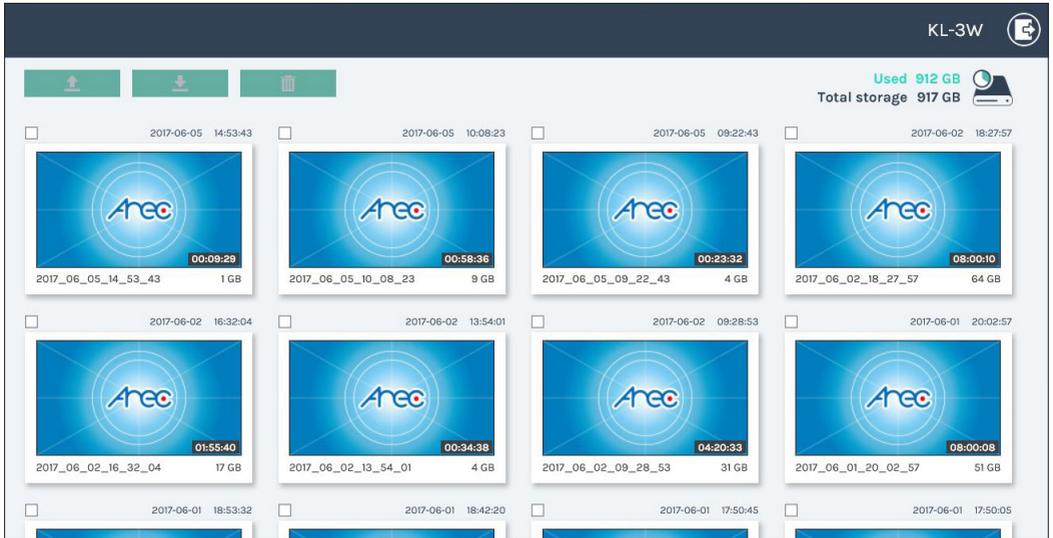
Note: These updates do not apply to the existing recordings. To edit the existing recording information, see Video Manager. Click **Apply** button at the bottom corner when finished to apply the settings.

## Chapter 3 Video Manager

The KL-3W embedded Video Manager provides access to recordings produced by KL-3W itself and stored in the internal storage drive. 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 KL-3W arranges the upload sequence automatically and indicates the upload status/result on the corresponding recordings. The following indicators are used:



	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.

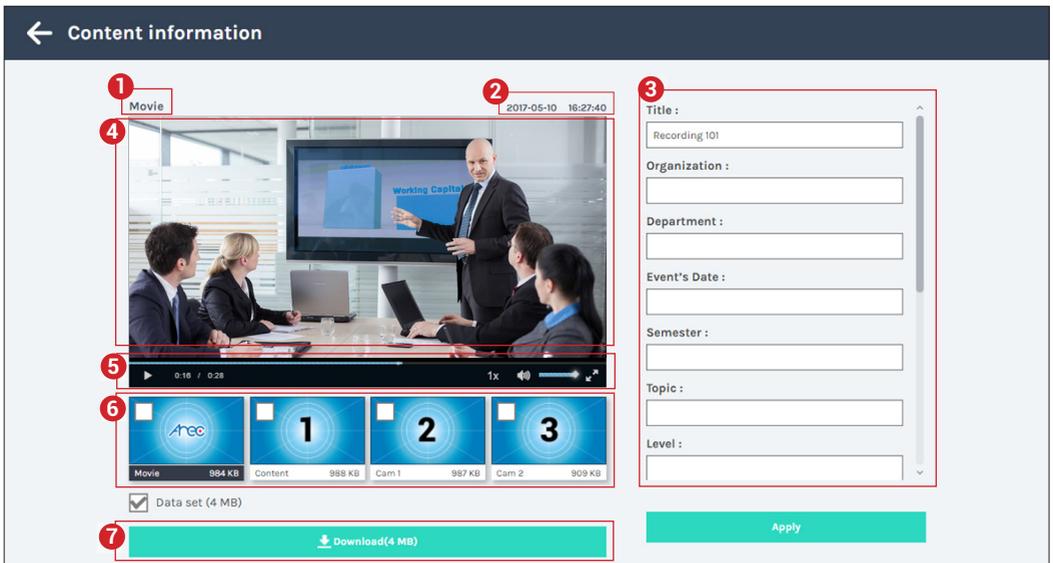
Select the recording and click . A confirmation dialog box opens asking you to confirm the deletion. Click Confirm to permanently remove the recording packages. The list may not update immediately. Refresh the list by reloading this webpage.

### 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 and Cam 2. 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 meeting scene with a man pointing at a screen displaying 'Working Capital'. The player has a progress bar at 0:16 / 0:28 and a volume icon. Below the player are four video thumbnails: 'Arec' (984 KB), '1' (988 KB), '2' (987 KB), and '3' (909 KB). A 'Data set (4 MB)' checkbox is checked. At the bottom left, a green 'Download (4 MB)' button is highlighted with a red box and the number 7. On the right, a form with a red border and the number 3 contains fields for: Title (Recording101), Organization, Department, Event's Date, Semester, Topic, and Level. A green 'Apply' button is at the bottom right. Red boxes and numbers 1-6 highlight specific elements: 1 (Title field), 2 (Recording date and time), 3 (Form title), 4 (Video player), 5 (Playback controls), and 6 (Video thumbnails).

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

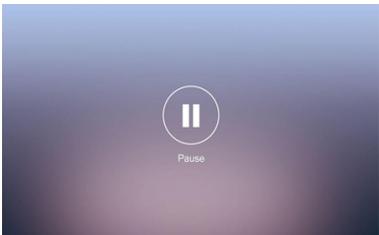
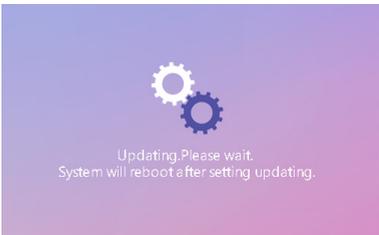
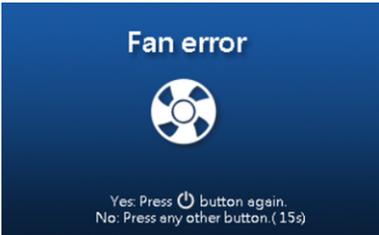
If you require to edit the information of a recording, click on the desired recording and you will be directed to the content information page. Replace the existing text or enter new information in the content fields. Click APPLY to save the changes.

## Table of On Screen Display Icons

The KL-3W provides a 7" LCD Display for recording monitoring. On screen display there are recording/streaming indicators, event icons and sometimes the error operation warnings.

			
 <p>Recording/ Streaming timer</p>	 <p>Device WAN IP Address</p>	 <p>Audio volume meter</p>	
 <p>Recording in progress</p>	 <p>Manually add Bookmark</p>	 <p>Disk full</p>	 <p>Network connection failure</p>
 <p>Live Streaming and recording in progress</p>	 <p>Auto add Bookmark</p>	 <p>Wireless microphone connected</p>	 <p>Display failure</p>
 <p>Live Streaming</p>	 <p>Live Streaming error</p>	 <p>Audio output mute</p>	 <p>Recording is paused</p>

 <p>Front USB recording error</p>	 <p>HDCP protected source</p>	 <p>Operation is denied</p>	 <p>Front USB recording</p>
 <p>Display 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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