

YI HALO User Manual

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Safety Instructions

To prevent damage to YI HALO Camera or injury to yourself or others, please carefully read the following safety precautions before using this device.

WARNINGS

1. Do not use YI HALO near water.
This product is not waterproof, or water resistant so contact with water could result in permanent damage to the product as well as electric shock and injury to people. If the camera or accessories are exposed to moisture, please immediately disconnect the power supply.
2. Only use a dry cloth to clean. Do not rinse or immerse any element of the camera. Do not use soaps, detergents, ammonia, alkaline cleaners, bleach and/or abrasive cleaning compounds or solvents as these substances may damage electronic circuitry.
3. Avoid exposure to excessive vibration.
Be careful when carrying or moving this product. Do not drop. The internal mechanism is likely to be damaged by severe shock.

4. Maintain sufficient ventilation.
Do not block any ventilation openings.
5. Do not operate or store near any heat source.
Keep this product away from heat sources like radiators, heat registers, stoves, or any other apparatus that produce heat. Remove any batteries before storage. Avoid storing in places under extreme temperature, severe vibration, strong magnetic fields, direct sunlight, damp areas and heat sources.
Recommended operation temperature for YI HALO:
 - Operating range: 0°C~35°C, 32°F ~95°F
6. Handle the battery carefully.
 - Only use batteries approved for use in this product.
 - Do not disassemble the battery. Do not expose the battery to flame or excessive heat.
 - Do not use near or expose the battery to any chemicals.
 - Keep the battery dry.
 - Do not handle the battery if it is damaged or leaking. Battery disposal must be in accordance with local environmental regulations.
 - Do not charge the YI internal battery with anything except the included AC Adapter.
 - Storing the battery fully charged or in very high or cold temperature conditions may reduce the battery life.
7. It is recommended to be used at least 20cm/8 inches away from the user.

1. Introduction

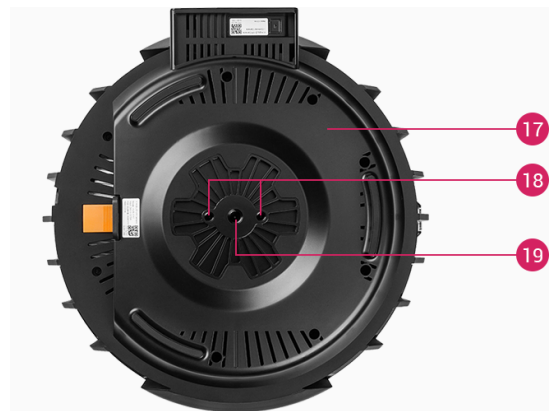
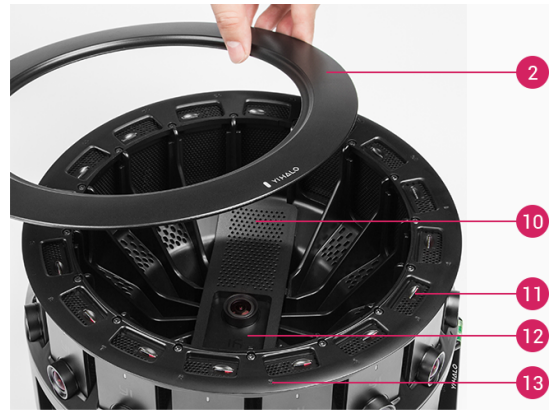
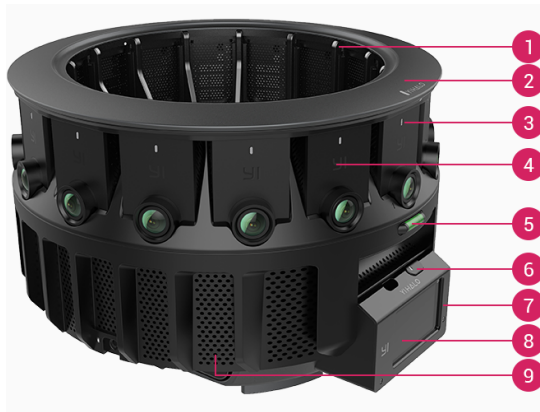
1.1 Overview

Thank you for using YI HALO - the newest Google Jump stereoscopic 360 VR Camera, built by YI. This manual is intended to help you get the most of this camera. Please read it thoroughly and keep it for further use.

1.2 Getting to Know the Camera

YI HALO consists of 17 hardware clock synchronized unit cameras (including 1 up view camera) and 1 controller. *Controller* refers to the camera on the side of YI HALO that is used to control all cameras for these functions:

- Displays all unit cameras' status
- Connects to the mobile phone or the Bluetooth remote so that all cameras can be controlled remotely
- Synchronizes the settings among all cameras



1. Frame
2. Removable top cover
3. Status light
4. Unit camera
5. Bubble level
6. Shutter/Power button
7. Controller cover
8. Controller
9. Ventilation openings
10. Up camera panel
11. MicroSD card slot
12. Up camera
13. Position indicator (Camera ID)
14. Power light
15. Power terminal
16. Battery compartment
17. Bottom panel
18. 1/4 Tripod socket
19. 3/8 Tripod socket

1.3 Package Contents



YI HALO



Backup Camera x 2



Battery



MicroSD Card Case



Bluetooth Remote



Power Cable



AC Adapter & Power Cable



Backup Cable Pack



Screwdriver x 2

2. Getting Started

YI HALO ships with all cameras pre-installed.

2.1 Inserting Memory Cards

YI HALO does not ship with microSD cards. The first time you use it you need to insert a microSD card that is formatted to exFat format into each camera. MicroSD cards formatted to Fat32 format on a Mac computer is also supported, but only Master Boot Record (MBR) partitions will work in the camera. The cards listed below are highly recommended:

MicroSD card Brand	MicroSD card Type	MicroSD card Volume
Lexar	1000x U3 (LSDMI64GCBNL1000R LSDMI32GCBNL1000R LSDMI64GCBAS1000R LSDMI32GCBAS1000R LSDMI64GCBEU1000R LSDMI32GCBEU1000R LSDMI64GCBANZ1000R LSDMI32GCBANZ1000R LSDMI64GCBJP1000R LSDMI32GCBJP1000R)	64GB/32GB
Sandisk	Extreme Pro U3 V30(SDSQXXG-064G-GN6MA or SDSQXXG-032G-GN6MA)	64GB/32GB
Sandisk	Industrial	64GB



Note:

It is recommended to power off YI HALO first before inserting/removing the microSD cards. Hot inserting/removing the microSD cards may cause recognition issue or unintended consequences to the microSD cards.

1. Ring Cameras

Remove the top cover, insert the microSD cards into their counterparts from above.



2. Up Camera

Uncover the up camera's panel, gently lift up the up camera and insert an microSD card into the camera.



3. Controller

Slide to open the controller's battery door from the bottom, and insert a microSD card into the controller.



Notes:

- All microSD cards should be identical for better synchronization.
- Carefully handle the microSD cards. Avoid liquids, dust and debris.
- Power off the rig before inserting or removing the card.
- The microSD cards status is displayed on the control panel. If the microSD card is full or an error occurs when recording, the icon for the affected camera will turn to red. You can check what the problem is by tapping the red icon.

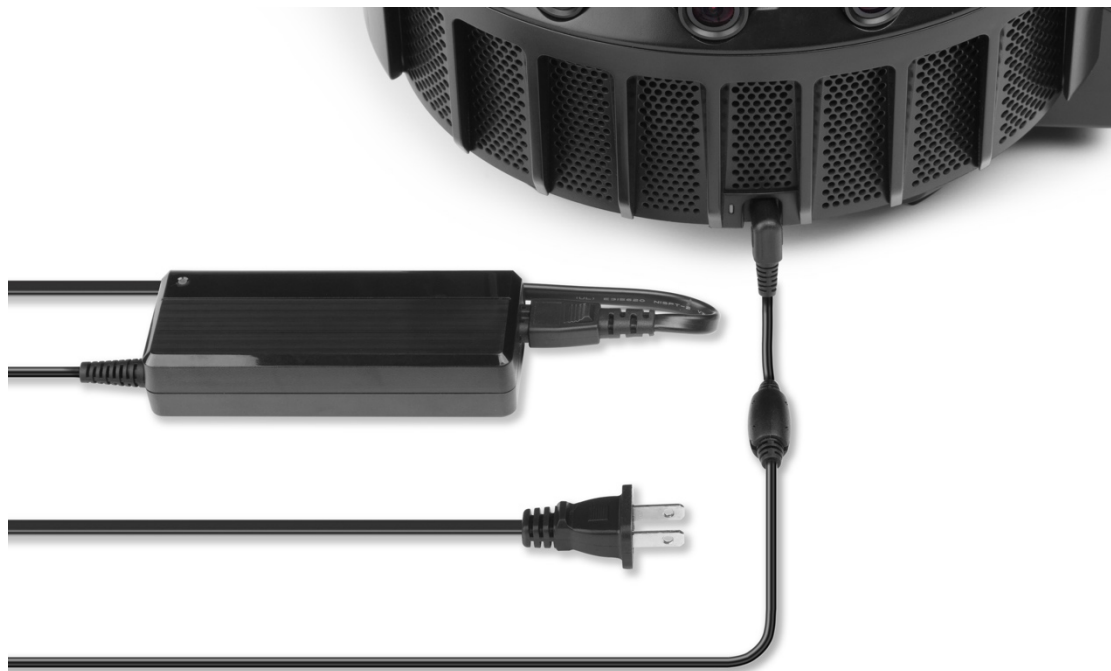
2.2 Supplying Power

You can power YI HALO using either the portable battery or the AC adapter. The adapter can also be connected directly to the battery and simultaneously charge it while the camera is running.

The power light located just above the barrel input on the rig, should be red when supplying power. YI HALO draws approximately 50 watts when recording in 2.5K resolution. Under typical operating conditions, a fully charged supplied portable battery will run YI HALO for over 100 minutes.

2.2.1 Power YI HALO from the AC adapter

1. Connect the power adapter's DC plug to the power terminal on the rig.
2. Connect the power cord to the AC adapter and plug it into a power outlet.



2.2.2 Powering YI HALO with the Portable Battery

1. Long press the power button on the battery to turn it on.
2. Check the remaining battery charge by observing the status lights on the side of the battery. 4 lights on indicates that the battery is fully charged.

	0-25%
	26-50%
	51-75%
	76-100%

3. Slide the battery into the compartment.
4. Plug the power cord to connect the mobile battery with YI HALO.

Notes:

- Keep the battery in dry and cool place.
- When the battery has not been used for a long time, charge the battery fully and then use it until it fully discharges again.
- Do not charge the YI internal battery with anything except the included AC power supply.
- Repeatedly charging and discharging the battery will eventually shorten its battery life.





If you want to remove the battery, press the button at the bottom of the rig and pull the battery out.



2.2.3 Powering YI HALO with the External Battery

1. Make sure the external battery is on.
2. Plug the power cord to connect the external battery with YI HALO.

Note:

When turning YI HALO on, you may see the pop-up window below on the controller; if you do, please press 'Yes'.

Are you using external battery?

Yes	No
-----	----

The external battery listed below are recommended:

IDX Li-ion V-Mount battery CUE-D150 & IDX V-Mount Chargers VL-2SPLUS (which provides simultaneous 2-battery charging)



Core SWX HyperCore 98Wh 14.8V V-Mount Battery



CAME-TV D-Tap Cable With Male 2.1 DC Connector



2.3 Mounting YI HALO

You can mount YI HALO on a tripod with screw threads located on the bottom of the rig. The middle one is a 3/8-16 UNC thread while the other two are 1/4-20 UNC threads.



Note:

When removing YI HALO from a tripod or other mounting solutions, disconnect the power source first to avoid damage.

2.4 Turning YI HALO ON/OFF

The rig's power button is located on the top of the controller. Press and hold the power button for 2 seconds to turn YI HALO on, then the controller's speaker emits startup sound and unit cameras' status lights flash once. The screen is blank for 10~15 seconds. After that, a 'YI HALO' logo will appear on the screen and will stay for 15 seconds.




Press and hold the power button for 2 seconds to turn off the rig.

2.5 Auto Check

After 'YI HALO' logo disappears, the rig will check itself automatically. This process takes about 20 seconds normally. If there is no error occurs, the screen will display unit cameras' status as 'Ready' in blue color.

Checking unit cameras' settings... 				
01	02	03	04	05
Processing	Processing	Processing	Processing	Processing
06	07	08	09	10
Processing	Processing	Processing	Processing	Processing
11	12	13	14	15
Processing	Processing	Processing	Processing	Processing
16	17			
Processing	Processing			
📹 00:30:43/01:23:20		Video 40 		
01	02	03	04	05
Ready	Ready	Ready	Ready	Ready
06	07	08	09	10
Ready	Ready	Ready	Ready	Ready
11	12	13	14	15
Ready	Ready	Ready	Ready	Ready
16	17			
Ready	Ready	^		

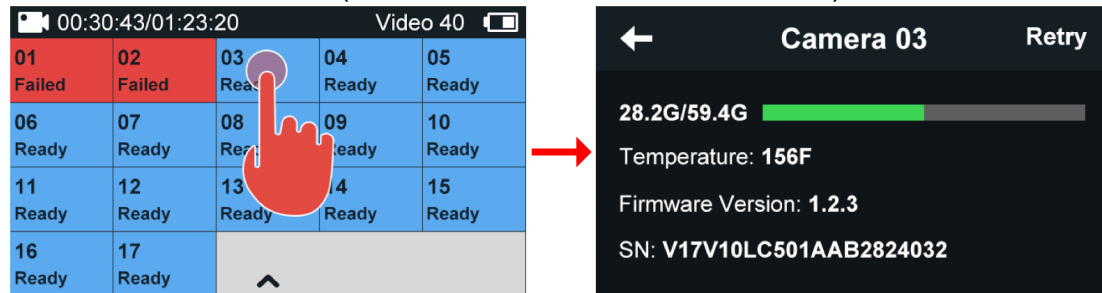
If an exception happens to a unit camera(s), including but not limited to: no SD card/unable to read the SD card/fail to turn on the unit camera/fail to connect to the controller, the unit camera's status will be displayed as 'Failed' with a red background.

📹 00:30:43/01:23:20		Video 40 		
01	02	03	04	05
Failed	Failed	Ready	Ready	Ready
06	07	08	09	10
Ready	Ready	Ready	Ready	Ready
11	12	13	14	15
Ready	Ready	Ready	Ready	Ready
16	17			
Ready	Ready	^		

2.6 Camera Status Screen

Tap the rectangle icon marked with camera ID on the control panel, the screen will display the following information:

1. Storage Condition
2. Temperature
3. Firmware Version
4. Serial No.
5. Cause of the Failure (if the unit camera status is 'Failed')



2.7 Replacing the Cameras

YI HALO ships with all cameras pre-installed. If you need to replace the controller or unit camera with backup camera, please follow the steps below:

2.7.1 Hardware Update

- Replacing the controller
 1. Use the small screwdriver provided to remove the controller cover.



2. Disconnect the controller from the USB cable, then remove the controller and set it aside.



3. Align the new controller's lens with the inner frame, reconnect the USB cable, then push the new controller into the controller holder with the screen facing out.
 4. Align the controller cover with the screen and re-insert the screws.
 5. Make sure that the backup controller's firmware version is the same as the unit cameras', otherwise update the backup controller's firmware to the same version.
- Replacing unit cameras on the ring
 1. Loosen screws beneath the top cover to unlock unit cameras. Mark problematic camera with a piece of tape.



2. Pull out the problematic unit and insert the new one.



3. Make sure that all unit cameras are using the same firmware version, or else update the unit camera's firmware version.

4. Assemble the rig.

Note:

- Be sure to line up camera 1 with the top ring marked 1. Camera 1 is unit camera directly above the controller. You can refer to the photo below, there is “1” mark on the ring and over the controller.



- Replacing the up camera
 1. Remove the up camera's panel from above.



2. Pull the up camera out of the camera holder.



3. Place the new camera in the correct orientation.
4. Make sure that the camera's firmware version is the same as the other unit cameras, otherwise update the new unit camera's firmware to the same version.
5. Reattach the panel to lock the camera.

2.7.2 Firmware Update

Backup/Single Unit Camera Firmware Update Procedure

Make sure that the battery be fully charged (or 50%) and the power adapter connected before updating.

- 1) Copy the 'firmware_slave.bin' to a microSD card.
- 2) Create a new '.txt' file and rename it to 'auto_update.script', copy the 'auto_update.script' file to the microSD card.
- 3) Insert the microSD card to the backup unit camera.
- 4) Install the unit camera, and then power the rig on.
- 5) After finish backup unit camera firmware updating, please restart the rig.

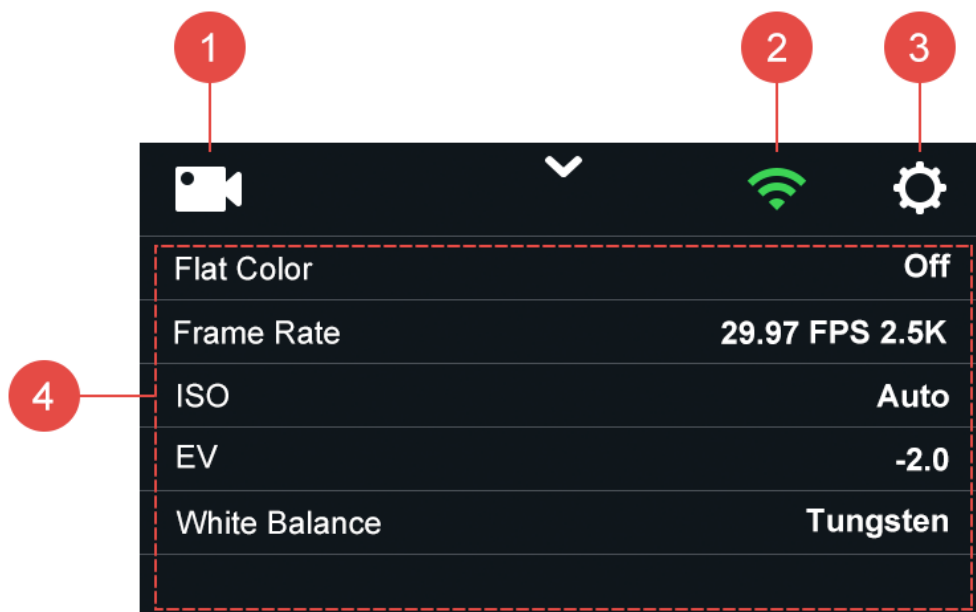
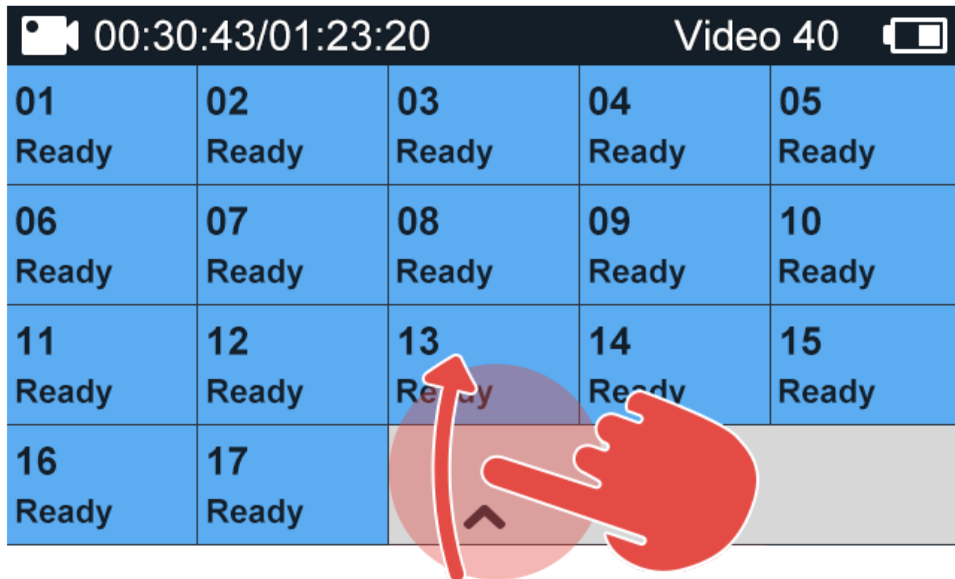
Backup Controller Firmware Update Procedure

Make sure that the battery be fully charged (or 50%) and the power adapter connected before updating.

- 1) Copy the 'firmware_master.bin' to a microSD card.
- 2) Create a new '.txt' file and rename it to 'auto_update.script', then copy the 'auto_update.script' file to the same microSD card.
- 3) Insert the microSD card to the backup controller.
- 4) Install the controller, and then power the rig on.

3. Camera Menus


Many of YI HALO's functions can be adjusted from the camera menu displayed on the control panel. To access the main menu, slide up or down on the touchscreen after the rig finishes its auto-check.



1. Display the current camera mode
2. Access Wi-Fi settings
3. Access setting menu
4. Display camera settings

3.1 Wi-Fi Setup

The rig connects to mobile app via Wi-Fi. For more information, see **5.1.1 Connecting**

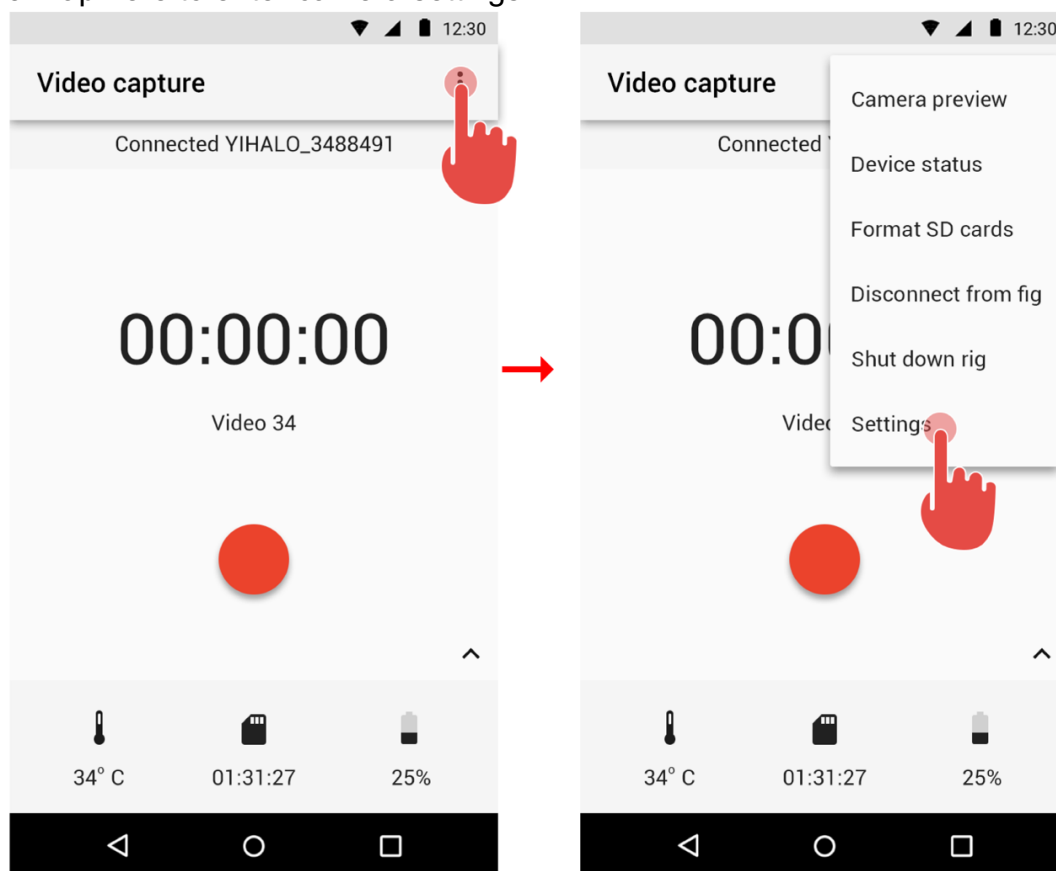
Tap the  icon on the main menu to toggle Wi-Fi on/off and view Wi-Fi info.



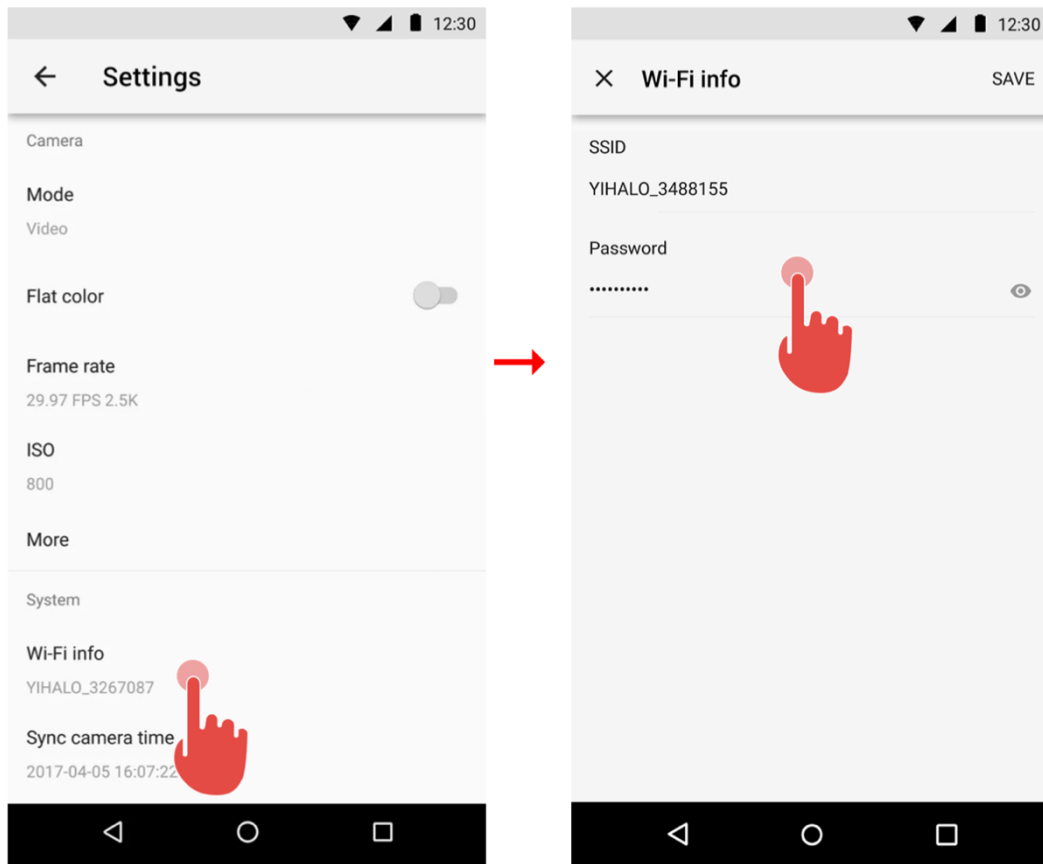
The default setting for Wi-Fi is on, and the default password is 1234567890. You can change Wi-Fi password from YI HALO app. Running a 'Factory Reset' will reset the Wi-Fi password back to the default.

Steps to change the Wi-Fi password:

1. Open YI HALO app
2. Connect the mobile phone with the rig
3. Tap here to enter camera settings



4. Tap 'Wi-Fi info' bar, then you can change Wi-Fi SSID and Wi-Fi password in the Wi-Fi info page.



3.2 Select Camera Mode

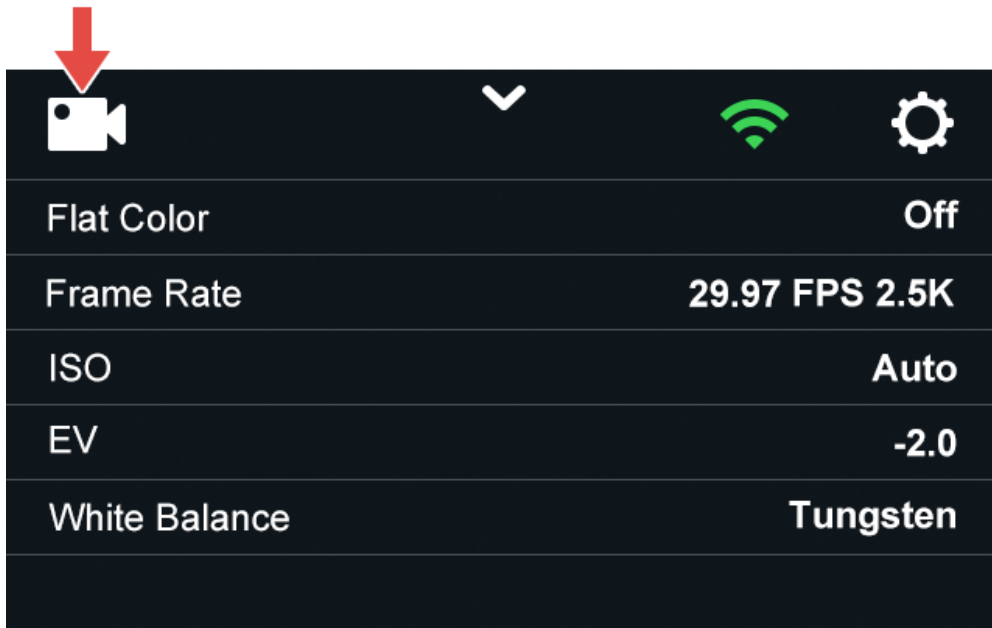
YI HALO provides three shooting options as below:

Video Mode: Record video

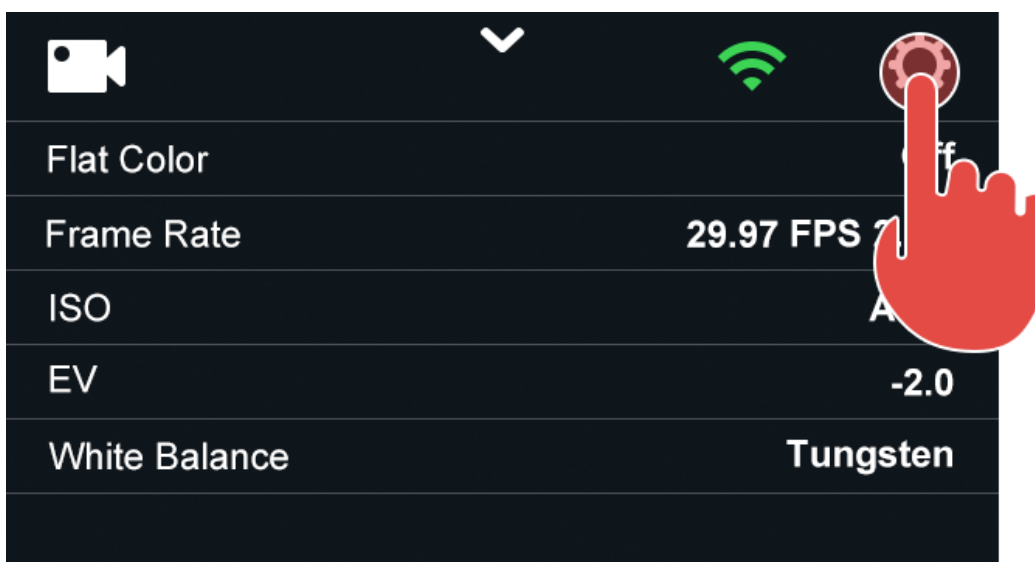
Photo Mode: Capture still image

Time Lapse Video Mode: Create video from frames captured at specific intervals

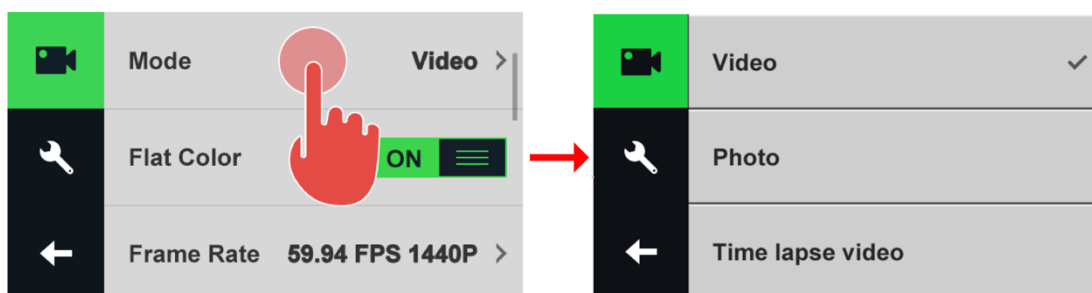
YI HALO is set to video mode by default. The icon at the top left corner on the main menu indicates the current camera mode you've selected.



To change the camera mode, tap this icon to enter the submenu.

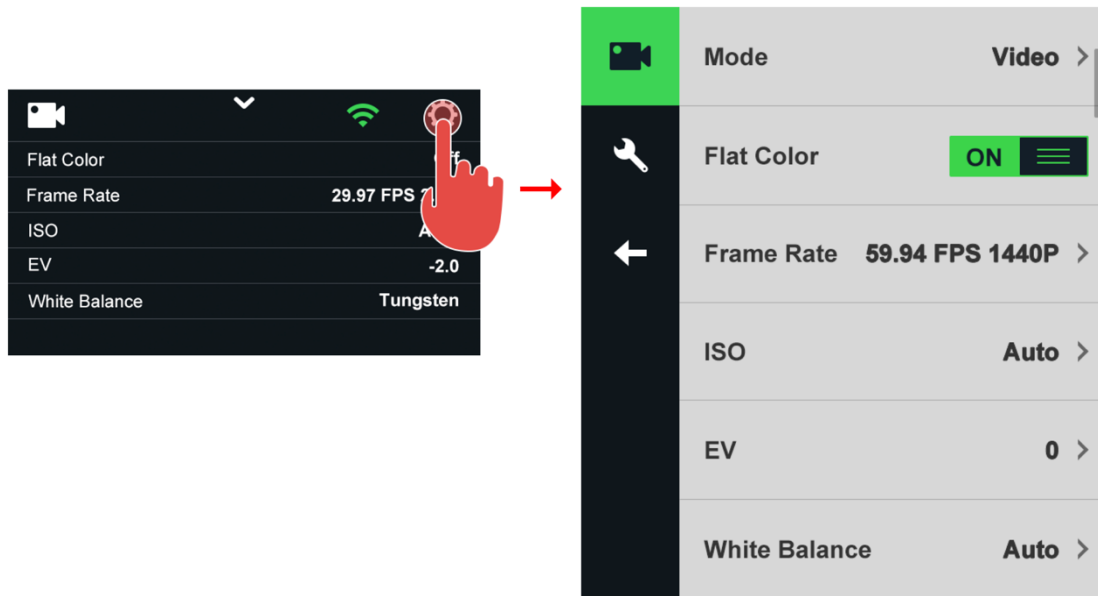


Once in the submenu, tap 'Mode' and choose the shooting mode.



3.3 Image Quality Settings

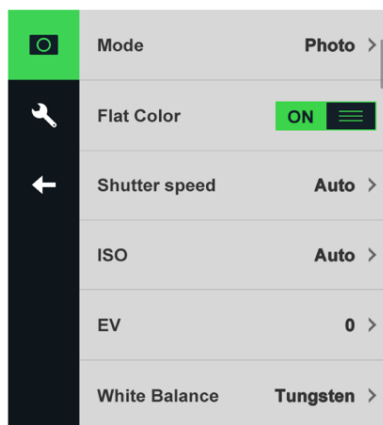
The current image quality settings are displayed on the main camera menu. Tap this icon on the main menu to access the setting menu.



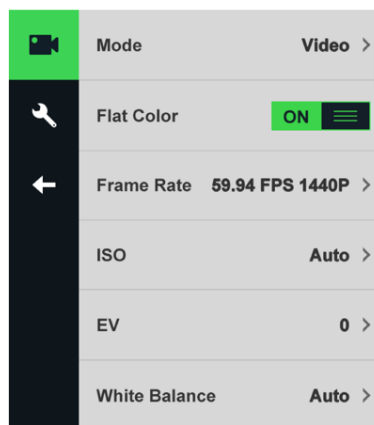
To go back to the previous screen or exit the submenu, tap the \leftarrow icon.

The settings menu has a slight difference between three camera modes.

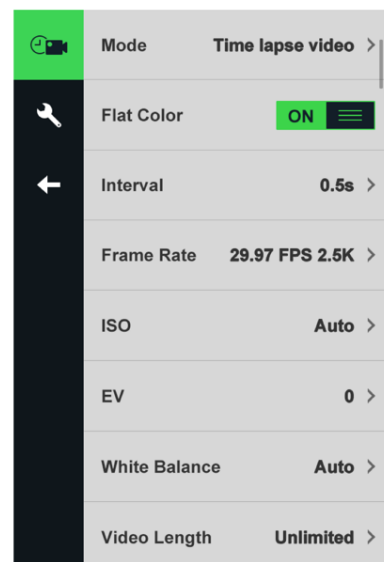
Photo mode



Video mode



Time lapse video mode



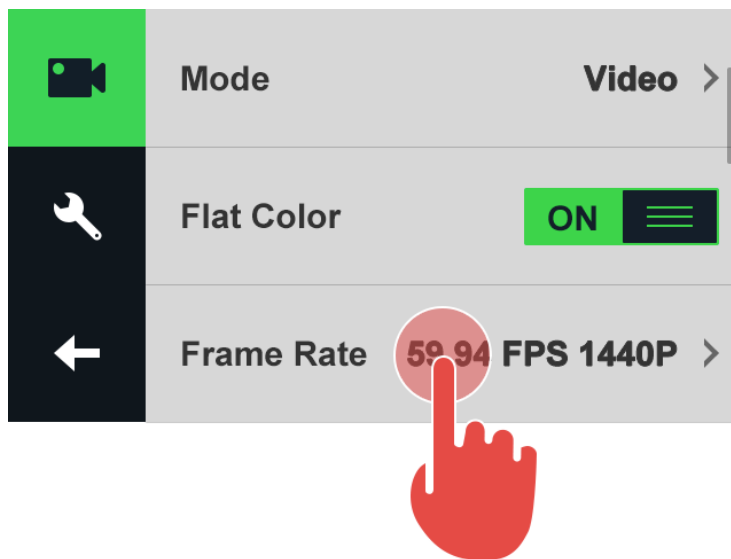
3.3.1 Video Settings

1. Frame Rate

YI HALO offers four frame rates:

- 29.97 FPS 2.5K
- 25 FPS 2.5K
- 59.94 FPS 1440P
- 50 FPS 1440P

YI HALO records in 29.97 FPS 2.5K by default. Tap the 'Frame Rate' bar to adjust the frame and resolution setting.



2. Flat Color

Flat Color provides minimal color enhancement while preserving the original color characteristics. Images shot with 'Flat' setting have minimal contrast, neutral saturation and minimal sharpening so you have more room to work in post-processing.

Here is a comparison between images with 'Flat Color' ON and OFF.



Flat color OFF



Flat color ON

This mode is recommended when you are shooting a scene with color correction in mind. It is 'OFF' by default.

3. ISO

ISO settings are helpful when you are under a variety of light conditions. For YI HALO, the ISO value is set to 'Auto' by default. In that mode, the rig can adjust the ISO automatically according to the surrounding light condition.

You can also set the ISO to a fixed value. YI HALO offers six options in video mode:

- Auto
- 400
- 800
- 1600
- 3200
- 6400

4. Exposure Value

You can set exposure value by tapping the 'EV' bar. The number ranges from +2.0 to -2.0 in 0.5 increments. Exposure Value is a way to represent the brightness of a scene in a numeric scale. Each exposure 'stop' is a doubling or halving of the amount of light.

5. White Balance

YI HALO includes 5 white balance presets for a variety of color temperature conditions. These are:

- Auto
- Native
- Tungsten Light: 3000K
- Daylight: 5500K
- Cloudy: 6500K

The white balance is set to 'Auto' by default. You can use Native to create a minimally color-corrected file from the image sensor that allows for more precise adjustments in post-production.

Tap the 'White Balance' bar to adjust the White Balance setting.

3.3.2 Photo Settings

Unit cameras of YI HALO capture photo at 12MP (4000x3000).

1. Flat Color

This setting in Photo mode is the same as that in Video mode.

2. Shutter Speed

The shutter speed options of YI HALO are as following:

Auto, 2s, 5s, 10s, 20s, 30s

It is set to 'Auto' by default. In that mode, the rig adjusts the shutter speed automatically. A longer shutter speed is set to capture movement, for example, capture light trails of car taillights.

Note:

The App preview may be too bright or too white. It is due to overexposure. This can be common during the day if the shutter is not set to Auto or the EV (exposure value) is too high (i.e. +2.0). You can resolve this by setting the shutter to Auto and the EV (exposure value) to 0.

3. ISO

YI HALO offers five ISO options in Photo mode:

- Auto
- 100
- 200
- 400

- 800

4. Exposure Value

This setting in Photo mode is the same as that in Video mode.

5. White Balance

This setting in Photo mode is the same as that in Video mode.

3.3.3 Time Lapse Video Settings

1. Flat Color

This setting in Time Lapse Video mode is the same as that in Video mode.

2. Interval

The interval setting only applies in Time Lapse Video mode. Interval determines the amount of time that passes between each captured frame. Available intervals range from 0.5 second (default) to 60 seconds _ 0.5s, 1s, 2s, 5s, 10s, 30s, 60s.

The interval you set depends on how fast the scene you would like to capture is changing. A slower changing scene can allow a longer interval to achieve smooth playback.

In normal video mode, recording in 2.5K resolution at 29.97 frames per second would take about 130 minutes to fill up a 64GB card. But in time lapse video mode, the time consumed would be much longer. Setting interval to 0.5s, the rig would capture 2 frames per second. Therefore, it would take 1920 minutes (32.5 hours) to fill up a 64GB card.

If accidental power outage or a recording fails during recording video, please do not remove the card. The video captured previous would recover automatically after powering on the rig.

Recommendations

Interval	Examples
0.5s	Driving
1s	Moving traffic
2s	Fast moving clouds
5s	Sunsets and sunrises
10s	Slow moving clouds
30s	Moving shadows
60s	Construction projects

3. Frame Rate

Time Lapse video is captured at 2.5K (2560 x 1920). YI HALO offers two frame rates:

- 29.97 FPS 2.5K
- 25 FPS 2.5K

4. ISO

This setting in Time Lapse Video mode is the same as that in Video mode.

5. Exposure Value

This setting in Time Lapse Video mode is the same as that in Video mode.

6. White Balance

This setting in Time Lapse Video mode is the same as that in Video mode.

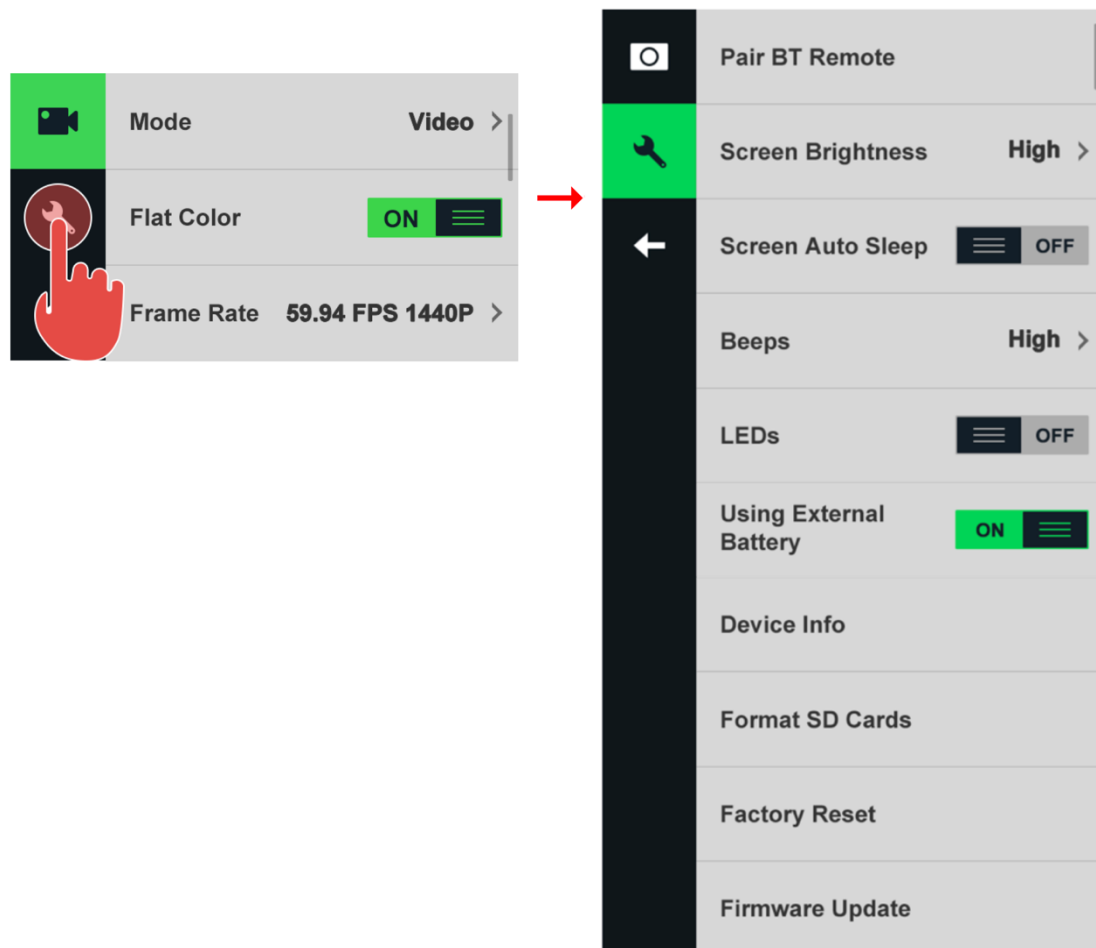
7. Video Length

This setting determines how long you want your time lapse compilation to be. The time lapse video length is unlimited by default. In that mode, the rig stops recording time lapse video by pressing the shutter button.

Fixed values are also available, ranging from 6 seconds to 120 seconds. If you set the video length to a fixed value, the rig will stop recording automatically when the frames captured reach the goal.

3.4 System Settings

Tap this icon to access system setup menu.



3.4.1 Pair BT Remote

Tap the 'Pair BT Remote' bar on the setting menu, the rig starts to search for the Bluetooth remote. Press any button on your remote to pair it to the rig.

After pairing successfully, you can operate the rig up to 10 meters away. You can use the Bluetooth remote to:

- Start recording
- End recording
- Shoot pictures

3.4.2 Screen Brightness

You can customize the brightness of the screen by tapping the 'Brightness' bar and select between *High*, *Middle* and *Low*.

3.4.3 Screen Auto Sleep

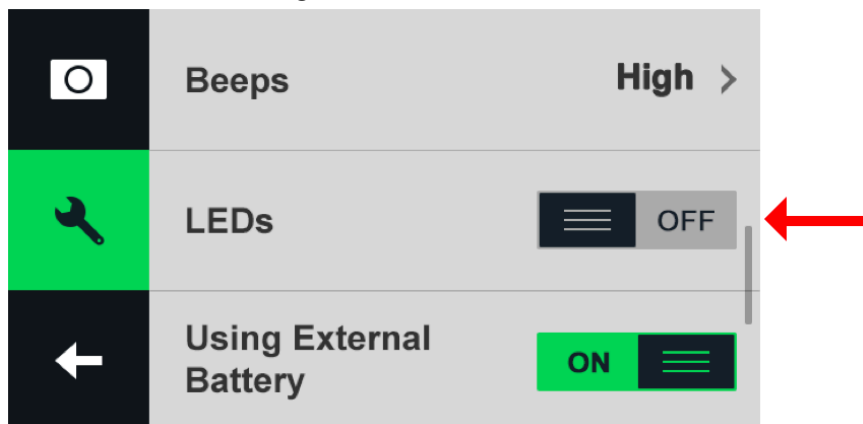
If you turn the 'Screen Auto Sleep' on, the screen will automatically turn off after one minute of inactivity. This is useful if you think recording cameras will be influenced by the screen light. Also, this is helpful for power saving.

3.4.4 Beeps

You can set the volume for the sound indicator to be High (default), Low or Mute

3.4.5 LEDs

You can switch the light indicator on/off with this icon.



If the switch is on (default), when unit cameras are recording, the status lights will be red and flash. When unit cameras are free, the red status lights are on.

3.4.6 Device Info

Tap the 'Device Info' bar to see the detailed information of your YI HALO, including the model, the serial number, the firmware version and the date and time of the rig. Tap the screen to back to the setting menu.

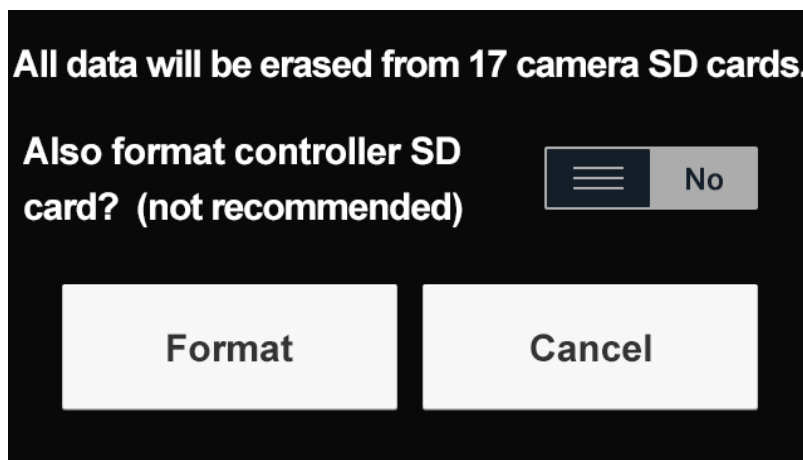
3.4.7 Format SD Cards

Tap the 'Format SD Cards' bar to format all unit cameras' SD cards.

Notes:

- You need to insert a microSD card that is formatted to exFat format into each camera. microSD cards formatted to Fat32 format on a Mac computer is also supported, but only Master Boot Record (MBR) partitions will work in the camera.
- Formatting SD cards permanently deletes any data they contain. Be sure to copy any files you want to keep to a computer before proceeding.

We offer an option to format the controller's SD card. If you switch on this button, the SD card in the controller will also be formatted, but this is not recommended in common use because it will cause the loss of log files in the controller. Logs are important because they provide information on how users operate the camera and the system running state. Developers check the logs to locate problems.



3.4.8 Factory Reset

With this setting, you can reset all cameras to their default settings. This also resets the shot counter.

3.4.9 Firmware Update Procedure

Please follow the steps below to update firmware:

- 1) Power off YI HALO and unplug the microSD card from the controller.
- 2) Copy the 'firmware_master.bin' and 'firmware_slave.bin' files to controller's MicroSD card root directory.
- 3) Insert the microSD card back to the controller.
- 4) Confirm that microSD cards in all unit cameras are available.
- 5) Power on the rig.
- 6) Navigate the setting menu, tap the 'Firmware Update' bar, confirm to update firmware on a pop-up, then the firmware updating will start.

Note: This process takes about 30 minutes normally. Make sure the power adapter connected before updating.

When the rig is updating the firmware, the screen displays the status of each unit camera and the blue status light is blinking.

Check the LED Status Light

Blinking blue: Updating goes on normally.

After firmware updating is done, the LED status lights turn to solid red again.

Exception Handling

- If the unit camera's status light is blue instead of red after updating
 - 1) Unplug the microSD card from the abnormal unit camera.
 - 2) Copy the 'firmware_slave.bin' file to the microSD card, and then rename it to 'firmware_force.bin'.
 - 3) Insert the microSD card back to the abnormal unit camera, and then the firmware updating starts. Updating goes on normally with LED status light blinking blue.
- If the rig shows firmware mismatch error, it means some unit cameras fail to update the firmware
 - 1) Create an empty file and name it to 'auto_update.script' on your computer.
 - 2) Unplug the microSD card from the abnormal unit camera. Copy the file together with the 'firmware_slave.bin' file to microSD card.
 - 3) Insert the microSD card back to the abnormal unit camera, and then the firmware updating starts. Updating goes on normally with LED status light blinking blue.

3.4.10 Using External Battery

When powering YI HALO with an external battery, please make sure this option is set to **ON**.

3.5 Sync Settings

Every time you change the unit camera related settings, the rig will automatically synchronize the settings between all cameras.

The controller screen will display unit camera status as 'Ready' in blue color, If there are errors, the screen will display unit camera status as 'Failed' in red color.

Notes: If 'Failed' appears on the screen, try to

- Tap the red rectangle to check the detailed failure cause.
- Tap the 'Retry' button in the upper right corner of the screen.
- Restart the rig.
- Remove the power supply and plug it again, then turn on the rig.
- Factory Reset. With this setting, you can reset all cameras to default settings, please be careful.

4. Recording

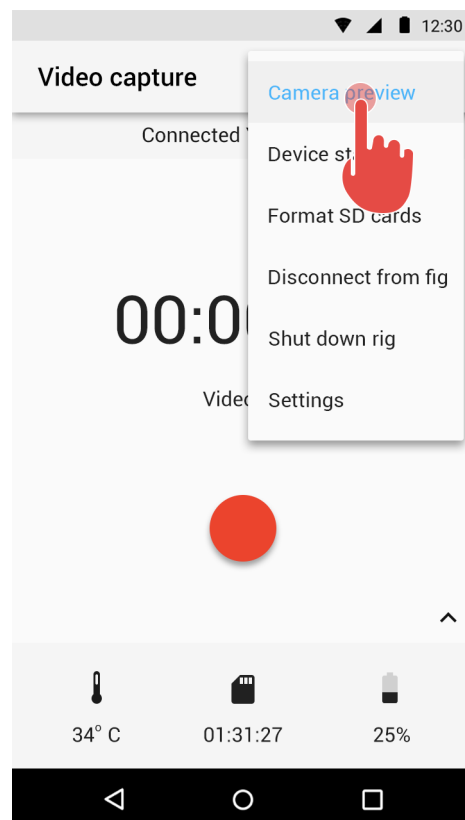
This section explains the recording basics.

4.1 Preparing to Record

1. Make sure microSD cards in unit cameras and the controller.
2. Power on the rig.
3. Be sure that all unit cameras are ready after the auto check.
4. Confirm the current camera mode.
5. Adjust settings.

4.2 Preview

The only way to see camera preview is viewing from YI HALO app. After connecting the app to the rig successfully over Wi-Fi, tap the icon in the upper right corner of the main page in the app, a popup menu is shown. Select 'Camera preview'.



There are three 3 views for preview. The number on each window is the camera ID.

- 4-CAM view so you can preview all directions at once.



- Side view which shows full height previews side-by-side with horizontal drag to pan, so you can see more details.



- Up view for the up camera.



4.3 Start Recording

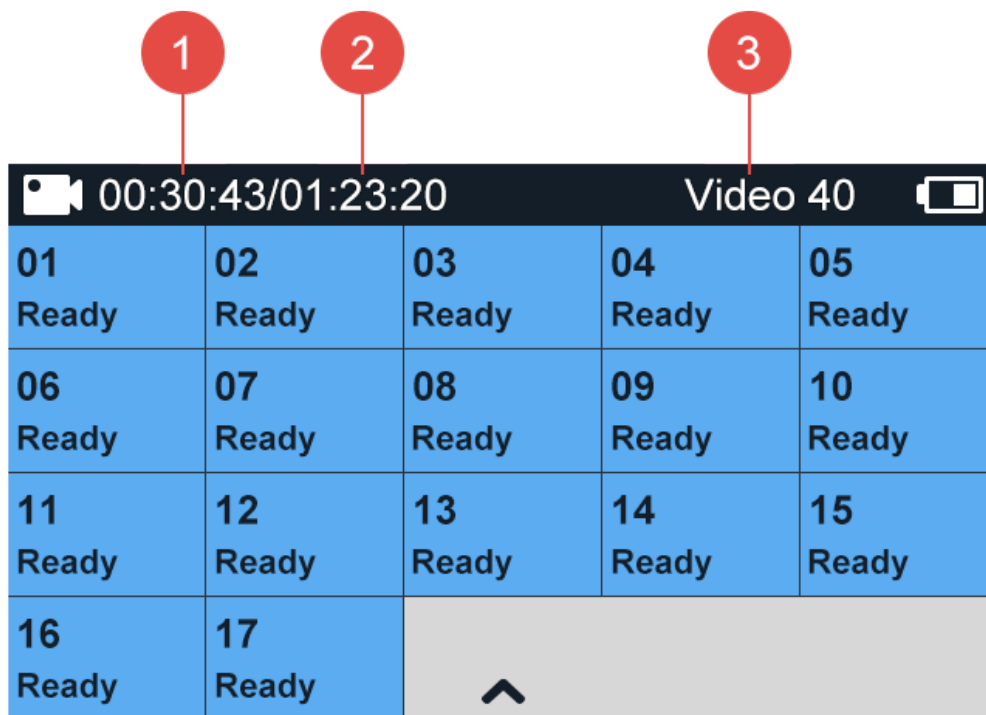
Press the button located on the top of the controller to begin recording. The status LEDs are red and flashing during recording.

Press the shutter button again to stop recording. The status LEDs flash once and the sound indicator emits one beep, and then the LEDs turn to solid red.

Notes:

- Do not remove microSD cards during recording. If any microSD card is removed, the rig will stop recording automatically within 30 seconds or less.
- Overheating _The rig stops recording automatically when any of the unit camera chips reach 212 °F.

4.4 Indicators Displayed during Recording



The screenshot shows a recording interface with a top status bar and a grid of indicators. Three red callout circles are positioned above the status bar: circle 1 points to the capture time, circle 2 points to the remaining capture time, and circle 3 points to the number of video shots. The status bar contains a video camera icon, the time '00:30:43/01:23:20', the text 'Video 40', and a battery icon. The grid below has 17 columns, each labeled with a number (01-17) and the word 'Ready'. The bottom right corner of the grid is a grey area with an upward-pointing arrow.

01	02	03	04	05
Ready	Ready	Ready	Ready	Ready
06	07	08	09	10
Ready	Ready	Ready	Ready	Ready
11	12	13	14	15
Ready	Ready	Ready	Ready	Ready
16	17			
Ready	Ready	^		

1. Capture time
2. Remaining capture time
3. Number of video shots (See **4.5.1 Naming Conventions**)

4.5 Exporting Files to a Computer

You can only play back the videos by exporting the files from each unit camera to a computer.

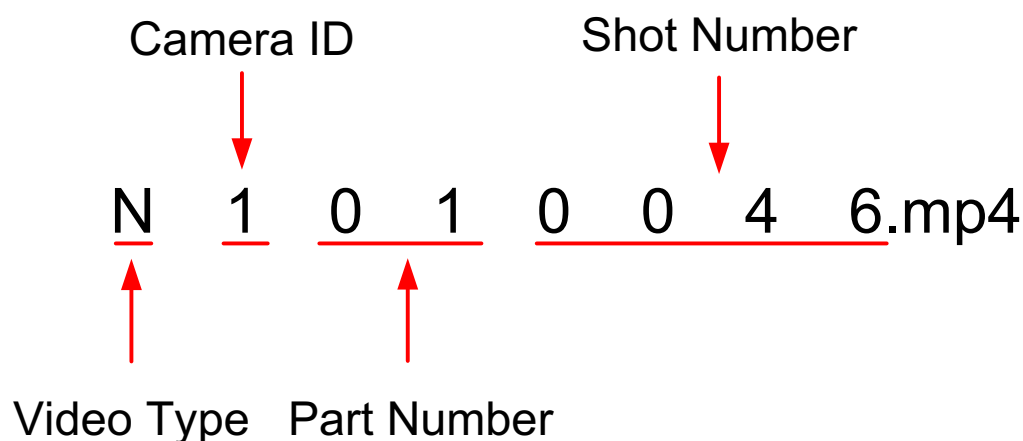
1. Power off YI HALO.
2. Remove the microSD cards from unit cameras.
3. Complete these steps for each microSD card.
 - Insert the card to a card reader.
 - Connect the card reader to your computer.
 - Transfer the files to your computer.
 - Delete the files from your card if needed.
4. Use Jump Manager to upload your media to the cloud for Jump Assembler to stitch into a seamless VR video or photo. (See **4.5.1 Naming Conventions**)

Notes:

- Before deleting the files, make sure to back them up.
- It is recommended to power off YI HALO first before inserting/removing the microSD cards. Hot inserting/removing the microSD cards may cause recognition issue or unintended consequences to the microSD cards.

4.5.1 Naming Conventions

YI HALO uses the following file naming convention when recording video.
[Video Type][Camera ID][Part Number][Shot Number].mp4



1. The first letter indicates the file type:
 - N: Video
 - T: Time Lapse Video
2. The second number indicates the camera ID.
 - The numbers 1~9 represents camera #1 ~ camera #9. The letters A~G represent camera #10~ camera #16. The letter H represents the up camera.

For example, file 'N1010046.MP4' in which the second letter **1** indicates that the video is captured by camera **#1**. File 'NA010046.MP4' indicates that the video is captured by camera **#10**.

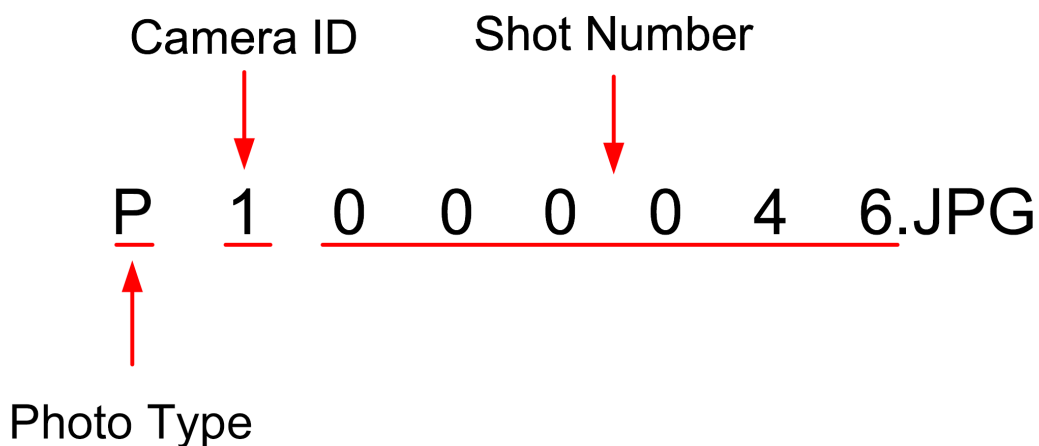
3. The third and fourth numbers indicate the "Part Number"
- If a video is less than 8 minutes, the third and fourth numbers in the name will be '00'. If a video is 8 minutes or longer, it will be divided into new parts every 8 minutes.

For example, file 'N1000046.MP4' in which the '00' shows that the video is less than 8 minutes. File 'N1020046.MP4' shows that it is the third part of the whole video.

4. The rest of the numbers indicate the number of shutter releases.

For example, file 'N1010046.MP4' in which the '0046' shows that the video was captured the 46th time you press the shutter button.

YI HALO uses the following file naming convention when taking still photos.
[Photo Type][Camera ID] [Shot Number].JPG



1. The first letter indicates the file type:
- P: Photo
2. The second number is the camera ID:
The Camera ID for Photo is the same as that for Video.
3. The rest of the numbers indicate the shot number.
The Shot Number for Photo is the same as that for Video.

4.5.2 Jump Manager

Jump manager is a Mac-only desktop application that is the interface between the YI HALO and Jump Assembler. Jump Assembler is a cloud-based system for converting the raw footage captured by a Jump compatible camera into a VR video.

To learn more about Jump Manager, see

https://support.google.com/jump/answer/6353511?hl=en&ref_topic=6353700



You can use Lexar Professional Workflow readers to transfer footage from multiple memory cards at once.



5. Remote Control

You can operate YI HALO remotely via an Android app or a Bluetooth remote.

5.1 YI HALO App for Android Phone

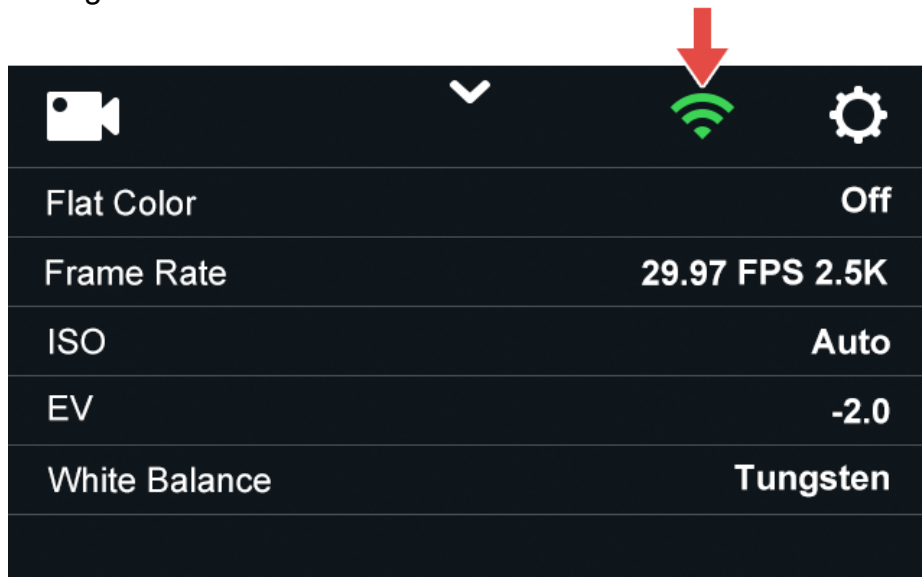
5.1.1 Connecting

1. Install the app

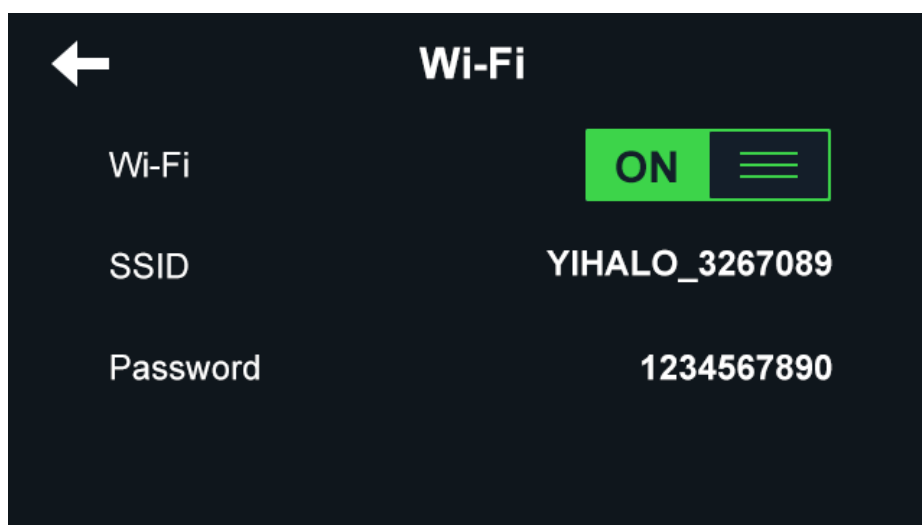
YI HALO app supports Android 4.4 and above.

2. Ensure Wi-Fi is ON and the camera is nearby.

Swipe up or down the control panel to view setup. Tap the icon for Wi-Fi settings



Tap the button to toggle Wi-Fi ON. The SSID and password are shown.



3. Open your app and scan for the camera

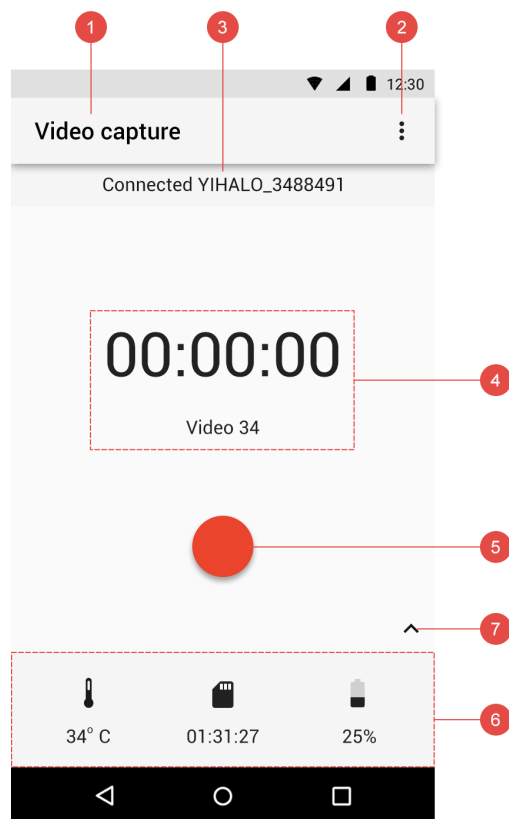
4. Enter Wi-Fi password

The default password is 1234567890. You can change it from the app after connecting successfully.

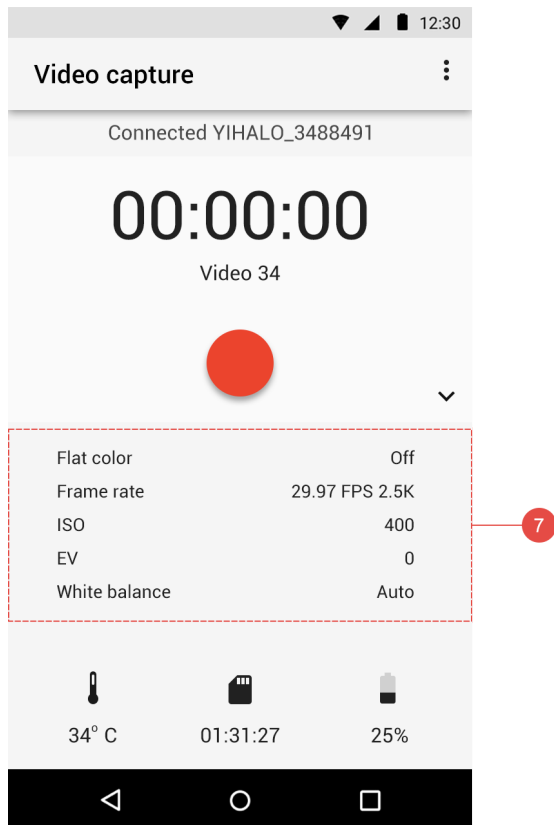
Notes:

- A rig can only be connected with one mobile phone. If you find the rig is in use by another device, disconnect the other device and try again.
- If you change the Wi-Fi password, the next time you connect your phone to the rig you need to firstly delete the previous Wi-Fi info from the phone system setting.

5.1.2 Menu Map



1. Capture mode
2. Action item menu
3. Connected device
4. Capture status
 - a. Capture time
 - b. Video/Photo count
5. Shutter button
6. Rig monitoring panel
 - a. Temperature
 - b. MicroSD card remaining space
 - c. Battery
7. More information

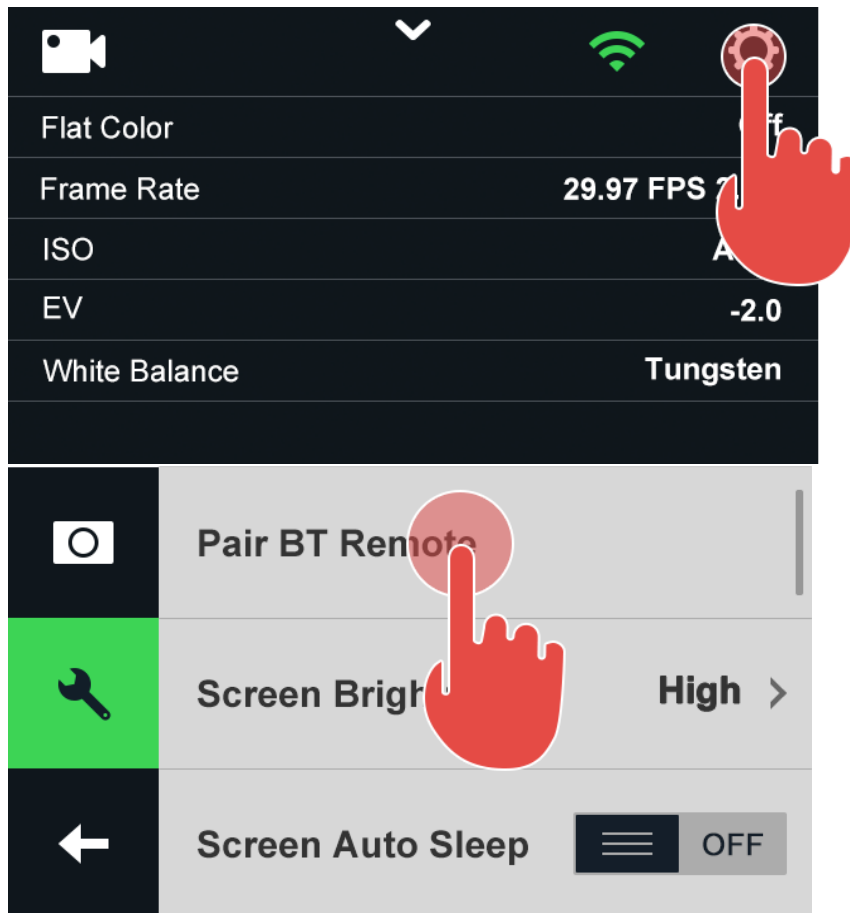


5.2 Bluetooth Remote

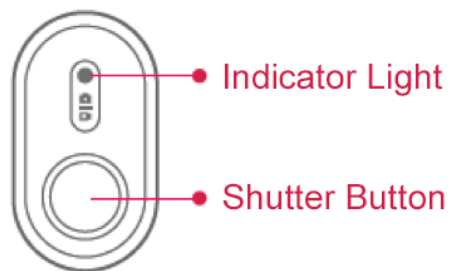


5.2.1 Pairing

1. Power on the rig.
2. Slide up the display to open the main menu after the auto-check.
3. Access the setting page by tapping this icon.
4. Find 'Pair BT Remote' bar and tap it.



5. Press the shutter button on the Bluetooth remote. The pairing is successful once you hear a beep and the indicator light turns blue.



5.2.2 Capturing

Video mode: Press the shutter button to start recording. Press it again to stop recording.

Photo mode: Press the shutter button to take a photo shot.

Note:

- The Photo/Video mode switch button on the Bluetooth remote is invalid. The current shooting mode depends on what you select on the rig or the app.

5.2.3 Battery Replacement

A 3V button cell battery is contained in the Bluetooth remote. Follow the steps to replace the battery if it is out of power.

1. Remove the rubber case



2. Rotate the battery cap on the back clockwise.



6. Additional Information

6.1 Troubleshooting

If you have problems with your YI HALO, refer to this section. If the problem persists, unplug the power supply and consult your device dealer.

My YI HALO won't power on.

- Make sure the rig is connected to a battery or AC power supply.

The shutter button is not responsive to start recording.

- The rig may be operating other tasks, for example, auto checking, syncing settings, updating firmware, etc. Check if all unit cameras are displayed as 'Ready'.
- The status of some unit cameras may be 'Failed'. (See **4.5.1 Naming Conventions**)

The shutter button is not responsive to end recording.

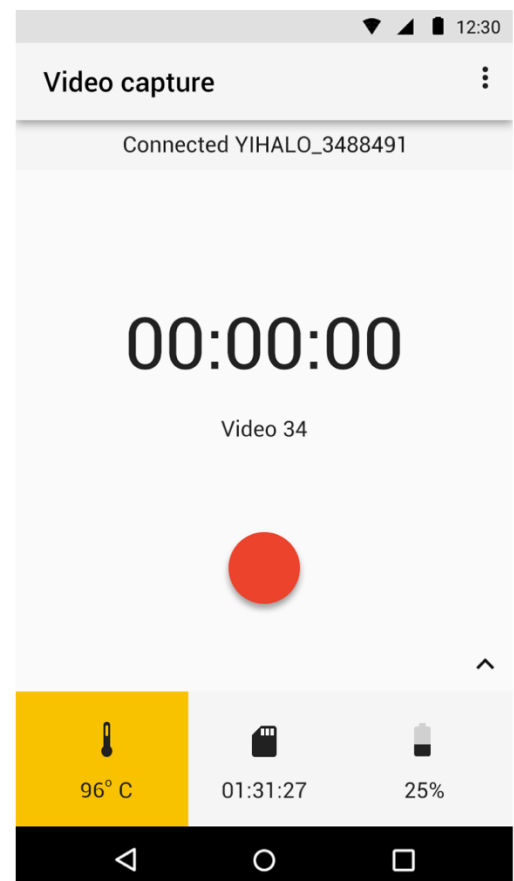
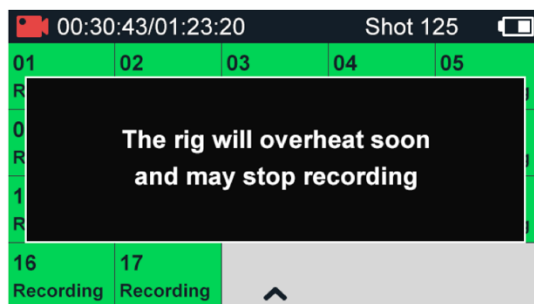
- Hold the shutter button to shut down the rig. If it still fails, unplug the power supply.

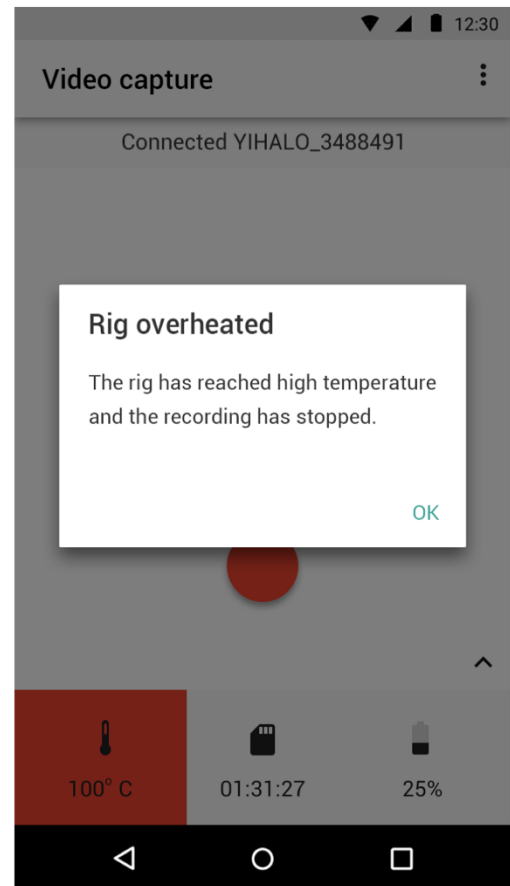
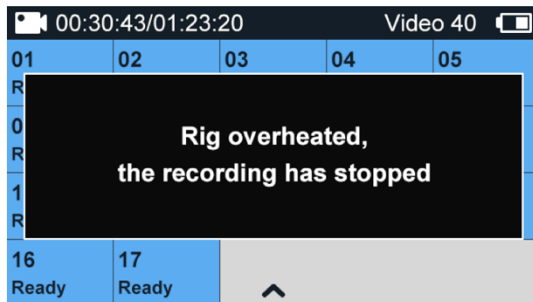
The rig stops recording automatically.

- The rig may be overheated. You need to shut down the rig for 10~30 minutes and put it in a cool place.
- The recording will be stopped when the available storage of any of the microSD cards is less than 500MB. You need to replace another set of microSD cards or free up space on the current set of microSD cards.
- The battery may run out of power and automatically shut off. Please recharge the battery or connect to AC power supply.
- If power is interrupted while recording, videos may not be played back. To recover those videos simply restore power and reboot the rig.

The rig becomes hot during use.

- It is normal that the rig becomes hot when shooting. The rig can work normally as long as the chip temperature does not reach 212°F(100°C). You will receive an overheat warning from controller when the temperature reaches 203°F (95°C), and the thermometer block on the app will turn yellow. If you keep using the rig, it will stop recording automatically when the temperature reaches 212°F (100°C).





Solution:

- Stop recording and shut down the rig when you receive the overheating warning. Put the rig to a cool place.
- Keep the rig away from direct sunlight and heat sources.

The app failed to find YI HALO camera.

- Check whether the Wi-Fi has been turned on.
- Your phone may be too far away from the camera. Take it closer.
- Check whether there are objects between camera and phone causing interference.
- Check whether there is high radio frequency interference.
- Check whether there are other YI HALO rigs causing interference.

No video/photo captured when pressing the Bluetooth remote shutter button.

- Check the light indicator on the remote. Red light indicates that the remote is not paired with the rig.
- Check if the battery in the Bluetooth remote is out of power. Replace the battery if it is.

Camera firmware version is not matched after firmware update.

- Reboot the rig
- If the problem is still there, it should be that some of the unit camera failed to update its firmware. Update the failed camera individually (See **2.7.2 Firmware Update**).

Error Messages

Refer to this part if a message appears on the screen. The messages listed here are in alphabetical order.

Bluetooth Pairing Timed Out

- You may not have pressed the shutter button on the Bluetooth remote to pair remote.
- The Bluetooth remote cannot work if it is broken or the battery is exhausted.
- The Bluetooth remote is too far away from the rig.

Camera Busy

- The camera is operating other tasks and cannot handle this command at this moment.

Firmware Verification Failed.

- The firmware bin files in the microSD card are corrupted.
- Firmware Version Mismatch. Please update the camera firmware to the latest version.
- The firmware version of one or several unit cameras are different from others.
- The firmware of controller and unit cameras are different. Update the mismatched camera individually (See **2.7.2 Firmware Update**).

Low Battery

- You need to charge the battery or power the rig from the AC adapter.

No Firmware in SD card

- Cannot find a firmware file in the microSD card for update.
- The name of the update firmware file is incorrect.

No SD Card

- No SD card is detected by the unit camera. Check whether the microSD card is inserted. Please use the recommended microSD card. (See **2.2 Inserting Memory Cards**).

Rig overheated, the recording has stopped.

- The chip temperature reaches 212°F (100°C). The rig stops recording to protect itself. Cool down the rig for 10~30 minutes.

SD Card Format Not Supported

- YI HALO only supports exFat or MS-Dos(Fat) file format (Mac computer). Formatting the card can solve the problem.

SD Card Error. Try to reinsert or format the SD card.

- The microSD card cannot be recognized or accessed. Check that if the card is inserted correctly and not malfunctioning. Check if it is formatted in a right file format. Use a recommended card.

SD Card Full

- Available storage of the microSD card is less than 500MB. The rig stops recording. Delete some clips to free up some space or replace an microSD card.

SD Card Almost Full

- Available storage of the microSD card is less than 1GB. You need to pay attention to the free space.

SD Card Slow

- The performance of microSD card is not good.
- Use a recommended card.

SD Card Formatting Failed

- The microSD card has some problems and cannot be formatted from the rig. You can try to use a computer to format it.

The rig will overheat soon and may stop recording.

- The chip temperature reaches 203°F (100°C). You can stop recording and shut down the rig when you receive the overheating warning. Put the rig to a cool place.

Unit camera ran into problems, please reboot.

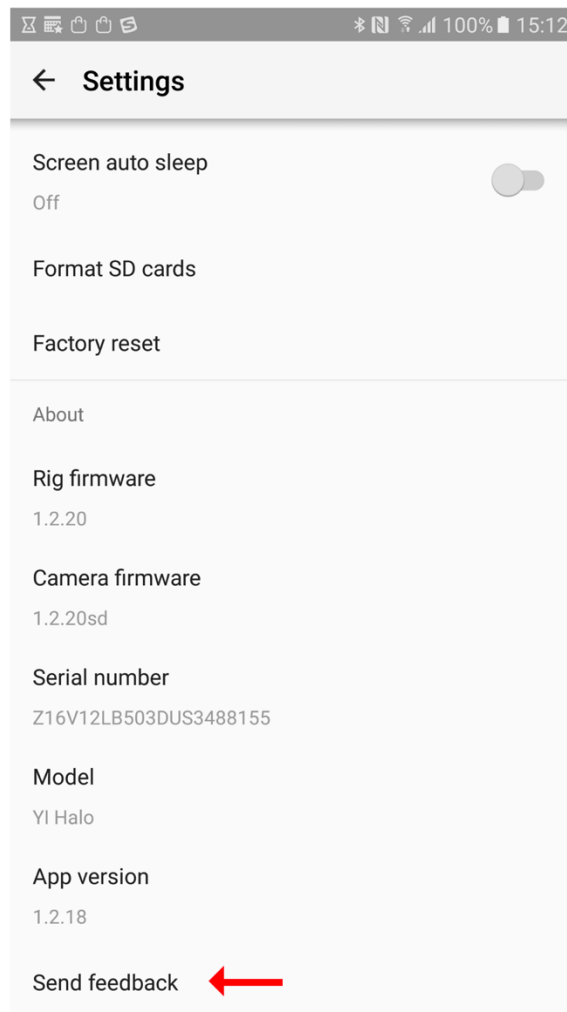
- Press the reboot button on the pop-up to reboot the rig.
- If the problem still exists, unplug the power supply and plug the power supply, then power on the rig.
- If the problem still exists, please reseal the unit camera, then power on the rig (please refer to **2.7 Replacing the Cameras** for the reseal methods).
- If the problem still exists, connect us at yihalo-help@yitechnology.com.

6.2 Logs and Submit Feedback Via the App

Log files are saved in the controller. Log files are important because they provide information on how the cameras operate and the system status. This helps our developers locate and solve problems.

When the YI HALO is connected to the App, tap 'Send feedback' in the bottom left corner of the system settings page; log files will be collected from

the controller and sent to YI via Email during idle time. No photos or videos will be sent to YI.



6.3 Customer Support

For further assistance, we are standing by for you at yihalo-help@yitechnology.com.

Product page: www.yitechnology.com/yi-halo-vr-camera

Telephone Technical Support: 1-425-454-0769

Service Hours: 9am - 5pm (Pacific Time)

6.4 Technical Specifications

6.4.1 Camera basics

Size	28.7cm X 28.7cm X19.2cm/11.3" x 11.3" x 7.6"
Weight	7.7lb/3.5kg with battery
Horizontal view unit camera	16
Up view unit camera	1
LCD control panel	Yes
Level	2 bubble levels placed orthogonally
Tripod mount	1 x 3/8"-20 and 2 x 1/4"-16 aluminum mounting points
Handle	Yes
Construction	PC/ABS
Color	Night Black
Protection case	Pelican 1610

6.4.2 Hardware

Main processor	18 Ambarella A9SE75 chipset
Image sensor	17xSONY IMX377, 1/2.3"Exmor R CMOS sensor, 12 Megapixel, Native ISO 100
Lens	Lens F2.8 aperture / 155° wide-angle lens, 7G, f=2.66±5%mm
Audio	Omni-directional microphone
Wi-Fi	Broadcom BCM43340
LCD screen	2.2", 640*360 resolution touch screen, 330PPI, 250cd/m2 brightness, 30FPS, 160° FOV, 16:9
Clock synchronization	Yes
Battery	93Wh high density lithium polymer battery, battery life 100 minutes in video recording
Power consumption	24V DC, 50W in video recording

6.4.3 Capture mode

Camera mode	Camera output resolution	Jump stitch output resolution
Video 2.5K 29.97fps	17 2560x1920x29.97fps	8192x8192x29.97fps
Video 2.5K 25fps	17 2560x1920x25fps	8192x8192x25fps
Video 1440p 59.94fps	17 1920x1440x59.94fps	5760x5760x59.94fps
Video 1440p 50fps	17 1920x1440x50fps	5760x5760x50fps
Time lapse video 2.5K 29.97fps	17 2560x1920x29.97fps	8192x8192x29.97fps
Time lapse video 2.5K 25fps	17 2560x1920x25fps	8192x8192x25fps
Time lapse video 1440p 59.94fps	17 1920x1440x59.94fps	5760x5760x59.94fps
Time lapse video 1440p 50fps	17 1920x1440x50fps	5760x5760x50fps
Photo 12MP	17 4000x3000	8192x8192

6.4.4 Video format

Video format	H.264 codec, .mp4 format
MP4 metadata	Jump compatible

6.4.5 Image quality settings

White balance	Auto, Native, Tungsten, Daylight, Cloudy
Video ISO	Auto, 400, 800, 1600, 3200, 6400
Photo ISO	Auto, 100, 200, 400, 800
EV	-2.0, -1.5, -1.0, -0.5, 0, 0.5, 1.0, 1.5, 2.0
Photo shutter	Auto, 2s, 5s, 10s, 20s, 30s
Color	YI Color, Flat Color
Metering	Center

6.4.6 Storage

Storage	microSD
Supported microSD cards	SanDisk Industrial 64GB Lexar 1000x U3 32GB/64GB SanDisk Extreme Pro U3 32GB/64GB

6.4.7 YI HALO App

Supported Android versions	Android 5.0 and above
Recommended smart phones	Google Pixel and Google Pixel XL

6.4.8 Thermal performance

Cooling system	Passive and fanless
Operating temperature	32°F-95°F
Storage temperature	-4°F-140°F

6.4.9 Others

Waterproof	No, please do not use YI HALO in wet environment
Dustproof	No, please do not use YI HALO in dusty environment
Warranty	12 Month

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNRd'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1)l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.



FCCID:2AFIB-YVR171