BZB GEAR®
Solutions to Amplify Your World™

# BG-CAP-HA

**1080P Full HD USB 3.0 powered HDMI Capture Device**

# User Manual

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## Statement

Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

## Safety Precaution

- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.
- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.
- Do not expose the product to rain or moisture.
- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.
- Do not use the product beyond the specified temperature, humidity, or power supply specifications.
- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGEAR is not covered under the warranty policy.
- Installation and use of this product must strictly comply with local electrical safety standards.
- Disconnect power cord by connector only. Do not pull on cable portion.
- Do not place or drop heavy or sharp-edged objects on power cord. A damaged cord can cause fire or electrical shock hazards. Regularly check power cord for excessive wear or damage to avoid possible fire / electrical hazards.
- Ensure unit is always properly grounded to prevent electrical shock hazard.
- Do not operate unit in hazardous or potentially explosive atmospheres. Doing so could result in fire, explosion, or other dangerous results.
- Handle with care to avoid shocks in transit. Shocks may cause malfunction. When you need to transport the unit, use the original packing materials, or alternate adequate packing.
- Turn off the unit if an abnormality or malfunction occurs. Disconnect everything before moving the unit.

**Note**: due to constant efforts to improve products and product features, specifications may change without notice.

## Introduction

The BG-CAP-HA is an HDMI to USB video capture device. The product is designed to capture video and audio signals from 4K source devices and convert the signal to 1080p. The content captured can be saved to the connected PC/Laptop using recording software such as OBS Studios, the Camera app, VLC, etc or streamed to various services such as YouTube, Twitch, Zoom, etc. The unit also features an HDMI loopout to connect and passthrough signal up to 4K@60Hz 4:4:4 to a compatible display device.

## Features

- Capture video and audio from HDMI sources.
- HDMI video resolution is up to 4K@60Hz 4:4:4, HDR10
- Supports HDMI loop output for display device connection.
- Capture resolutions up to 1080p@60 fps through the USB port.
- Compatible with multiple third-party applications, such as OBS, VLC, PotPlayer, Twitch, YouTube, Facebook
- Audio embedding and extraction through 3.5mm stereo mini ports.
- No external power supply required (powered via USB).

## Packing List

- 1x BG-CAP-HA
- 1x USB 3.0 HDMI Capture Device
- 1x User Manual
- 1x Quick Start Guide

## Technical Specifications

| **Model** | **BG-CAP-HA** | |
|---|---|---|
| Description | HDMI to USB Video Capture Device | |
| Input | (1) HDMI In,<br>(1) Audio In | |
| Input Connector | (1) Type-A HDMI,<br>(1) 3.5mm jack | |
| Output | (1) HDMI Out,<br>(1) USB,<br>(1) Audio Out | |
| Output Connector | (1) Type-A HDMI,<br>(1) Type-A USB,<br>(1) 3.5mm jack | |
| HDMI Standard | 2.0 | |
| HDMI Input Resolution | Up to 4K@60Hz 4:4:4, HDR10 | |
| HDMI Output Resolution | Up to 4K@60Hz 4:4:4, HDR10 | |
| USB Output Color Space | YUV2, RGB | |
| HDMI Audio Format | LPCM 7.1 audio, Dolby Atmos®, Dolby® TrueHD,<br>Dolby Digital® Plus, DTS:X™, and<br>DTS-HD® Master Audio™ pass-through | |
| Microphone Audio Format | PCM 2.0 | |
| Headphone Audio Format | PCM 2.0 | |
| OS Support | Windows, Mac OS X, Linux | |
| Compatible Media Player | OBS, PotPlayer, VLC and so on | |
| Video Capture Format | **HDMI Source** | **Captured Video by USB** |
| | 4K@60Hz 4:4:4 | 1080p@60Hz/720p |
| | 1080p@60Hz 4:4:4 | 1080p@60Hz/720p |
| | 720p | 720p |
| | 480 | 480 |
| | 576 | 576 |
| **General** | | |
| Operation Temperature | =+23° to +131°F / -5° to +55°C | |
| Storage Temperature | -13° to +158°F / -25° to +70°C | |
| Relative Humidity | 10% to 90%, Non-condensing | |
| Dimension (W*H*D) | 102 x 13 x 61mm | |
| Net Weight | 0.17 lbs [75g] | |

# Operation Controls and Functions

## Front panel

1. **HDMI Out**: HDMI loop output for HDMI display device connection.
2. **HDMI In**: Connects to HDMI source device.

## Rear panel

3. **USB**: Connects to laptop, PC or other recording device.
4. **Audio Out**: Extract HDMI source audio using a 3.5mm stereo mini cable.
5. **Audio In**: Embed audio using a 3.5mm stereo mini cable.

# System Connection

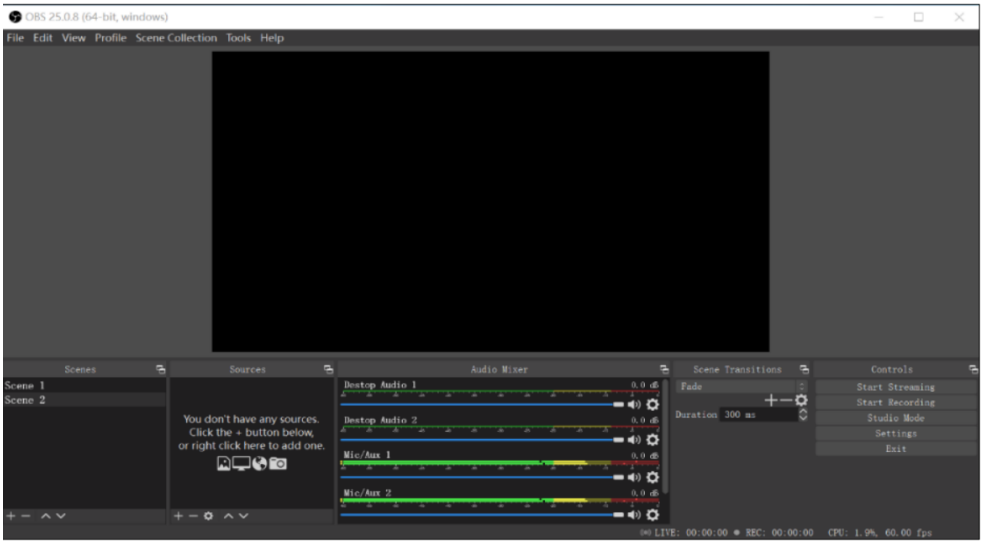
## System Requirement

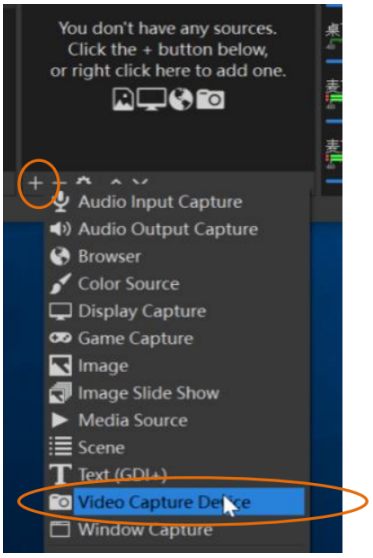
- A recording device with an available Type-A USB port.
- Microsoft Windows, Mac OS X, or Linux.
- HDMI audio/video source connected with an HDMI Cable (Camera, Xbox, PS4, DVD player, etc.).

## Recording in Windows using OBS

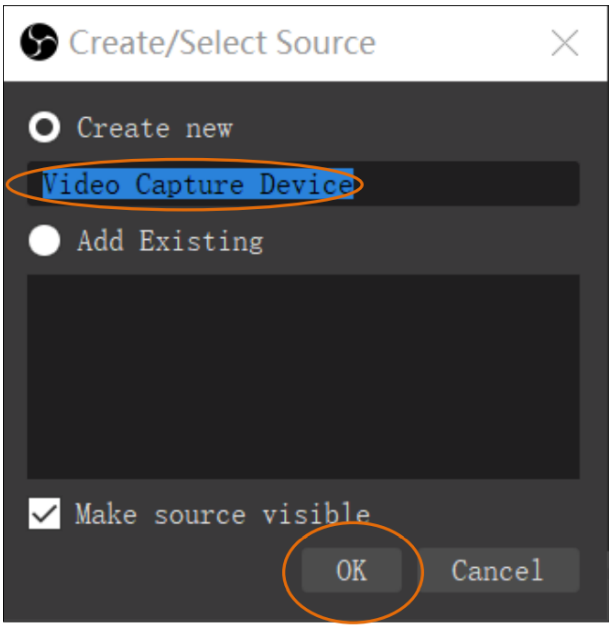
**Note**: The OBS Studio is the recommended software to be used for video capturing. Please visit https://obsproject.com/ to download the software for Windows, Mac OS X, or Linux.

1. Click the "+" icon under "Sources" and then click "Video Capture Device"

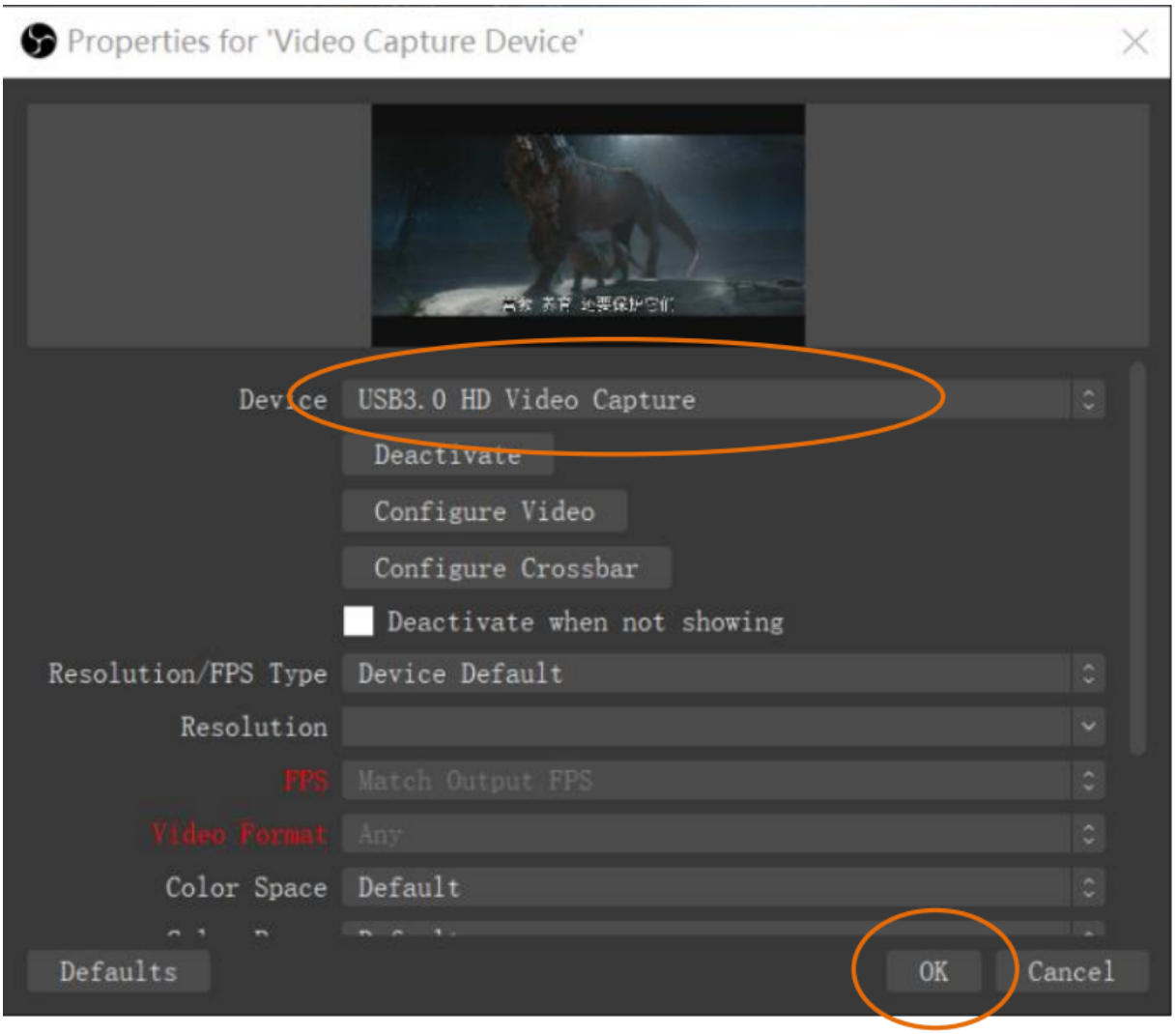



2. Type in a desired device name and then click "OK" to create a new source.

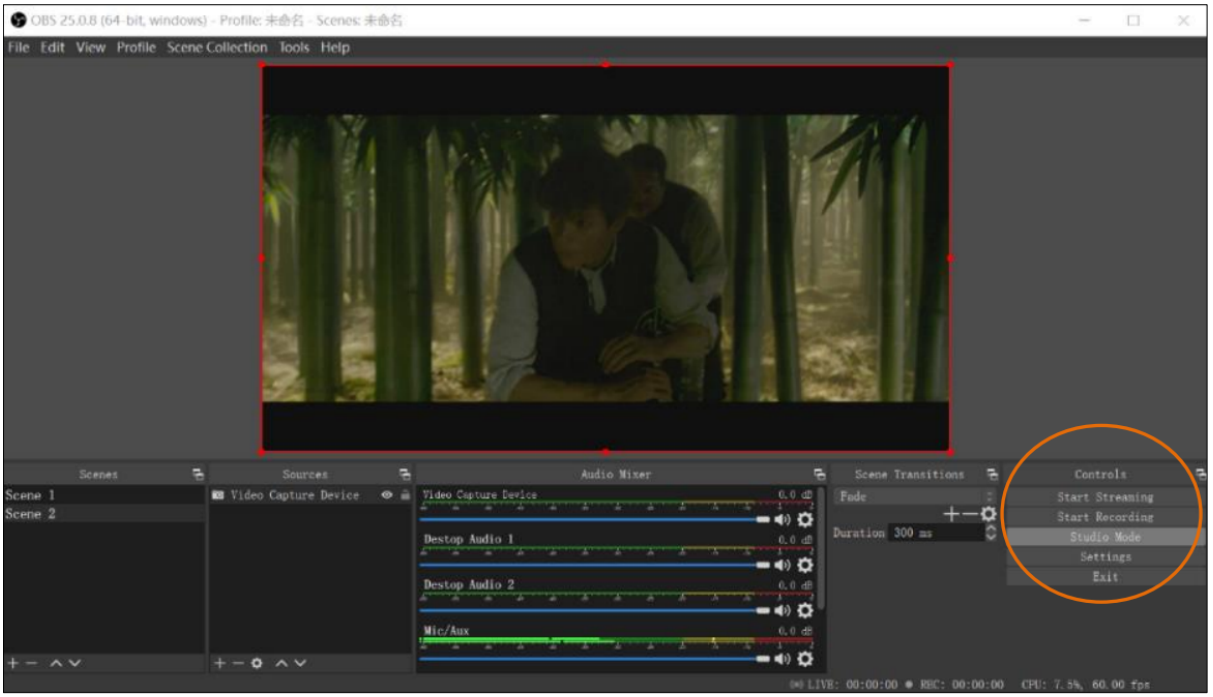


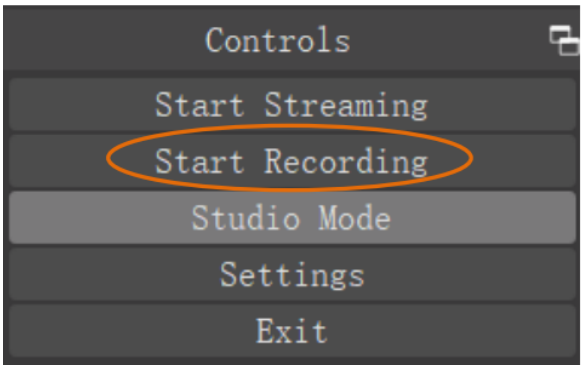

3. In the next pop-up window select the video capture device and configure the video parameters as desired and then click “OK”.

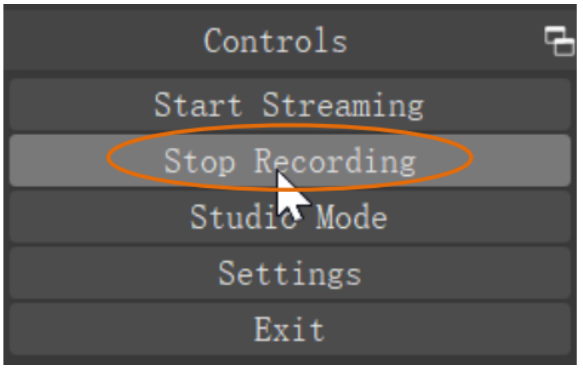



4. Click “Start Recording” in the “Controls” zone in the bottom right and the video and audio recording will start.

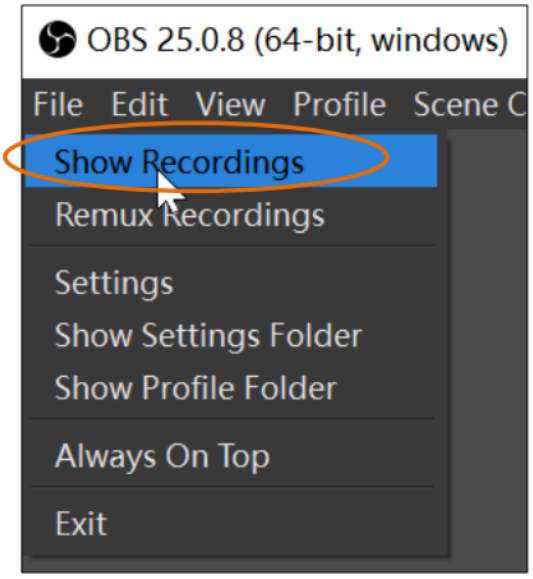
5. To stop recording, simply click the “Stop Recording”.



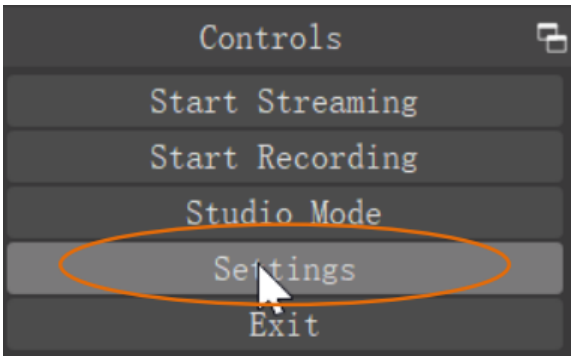



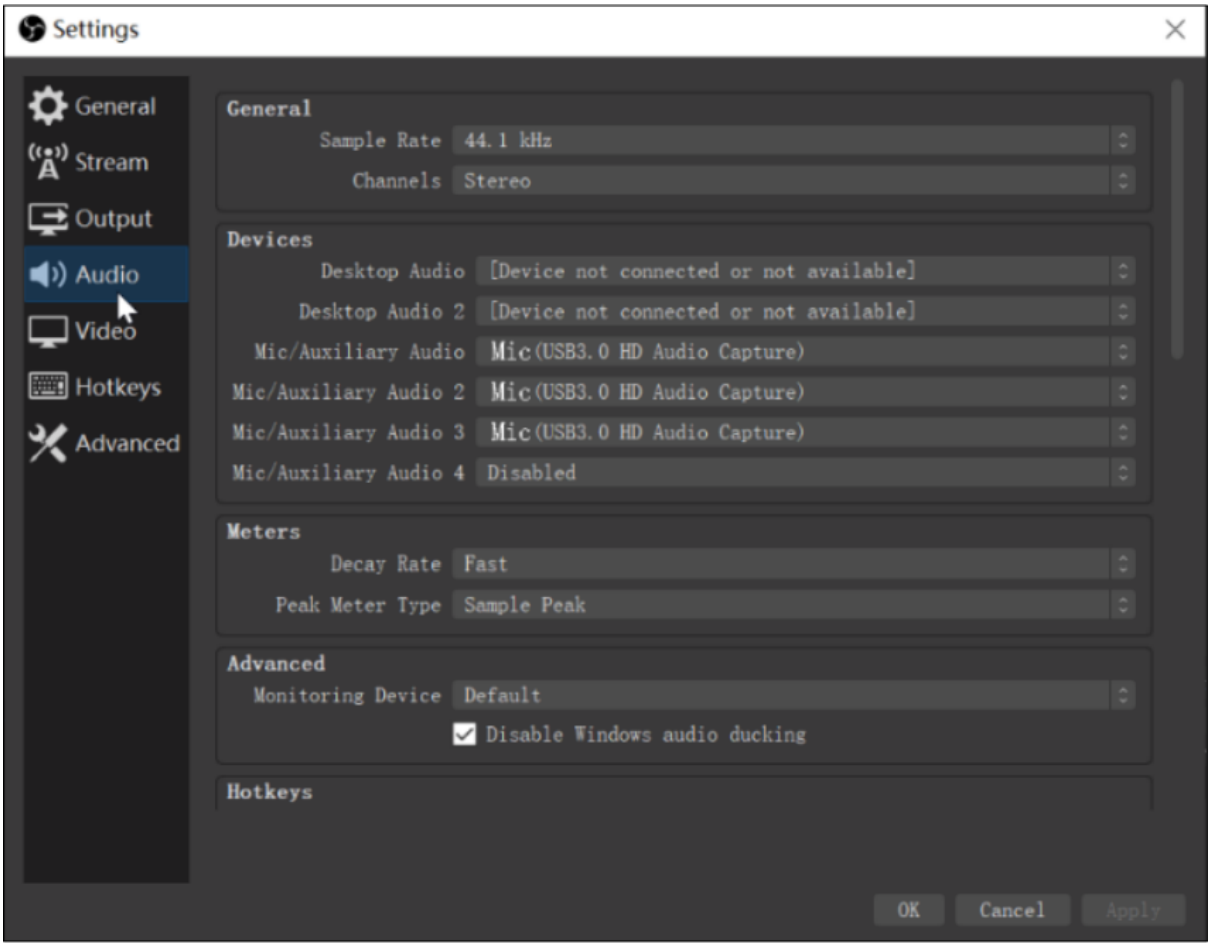



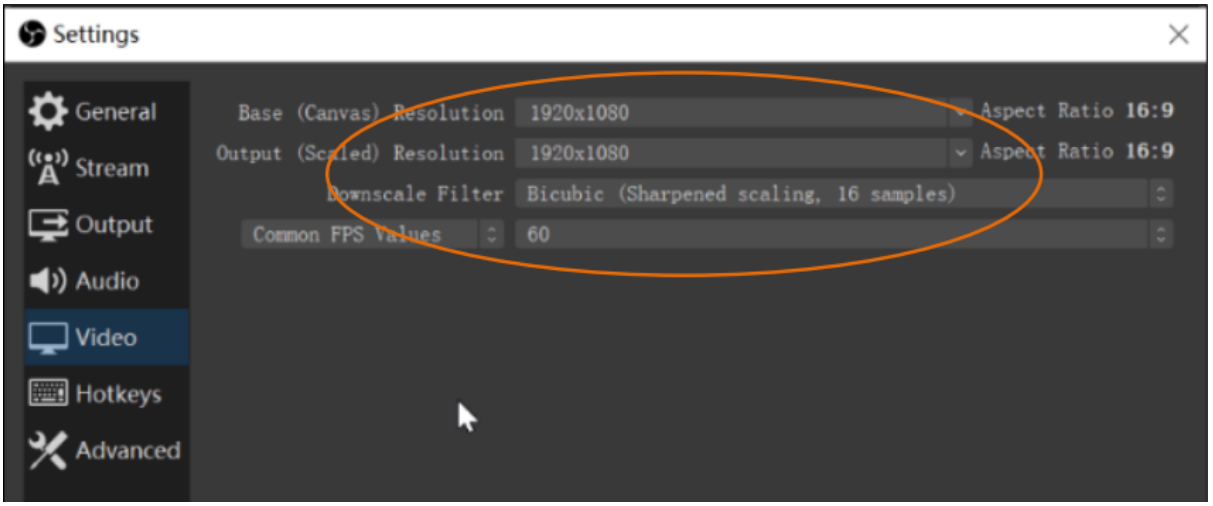

6. Select “File”, and then click “Show Recordings” in the drop down menu. The saved recordings will be shown in their folder location.




7. To configure audio and video parameters, click “Settings” in the “Controls” section.


Controls
Start Streaming
Start Recording
Studio Mode
Settings
Exit

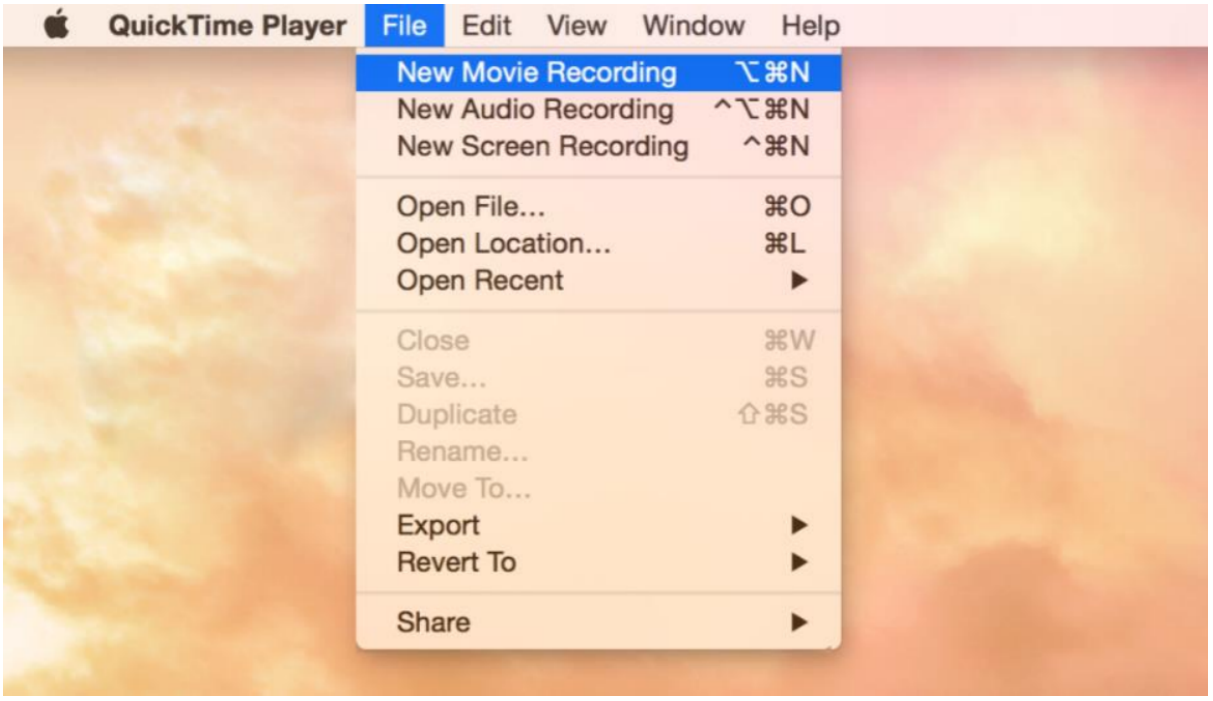

Settings
General
Stream
Output
Audio
Video
Hotkeys
Advanced
General
Sample Rate 44.1 kHz
Channels Stereo
Devices
Desktop Audio [Device not connected or not available]
Desktop Audio 2 [Device not connected or not available]
Mic/Auxiliary Audio Mic (USB3.0 HD Audio Capture)
Mic/Auxiliary Audio 2 Mic (USB3.0 HD Audio Capture)
Mic/Auxiliary Audio 3 Mic (USB3.0 HD Audio Capture)
Mic/Auxiliary Audio 4 Disabled
Meters
Decay Rate Fast
Peak Meter Type Sample Peak
Advanced
Monitoring Device Default
Disable Windows audio ducking
Hotkeys
OK
Cancel
Apply


Settings
General
Stream
Output
Audio
Video
Hotkeys
Advanced
Base (Canvas) Resolution 1920x1080
Aspect Ratio 16:9
Output (Scaled) Resolution 1920x1080
Aspect Ratio 16:9
Downscale Filter Bicubic (Sharpened scaling, 16 samples)
Common FPS Values 60

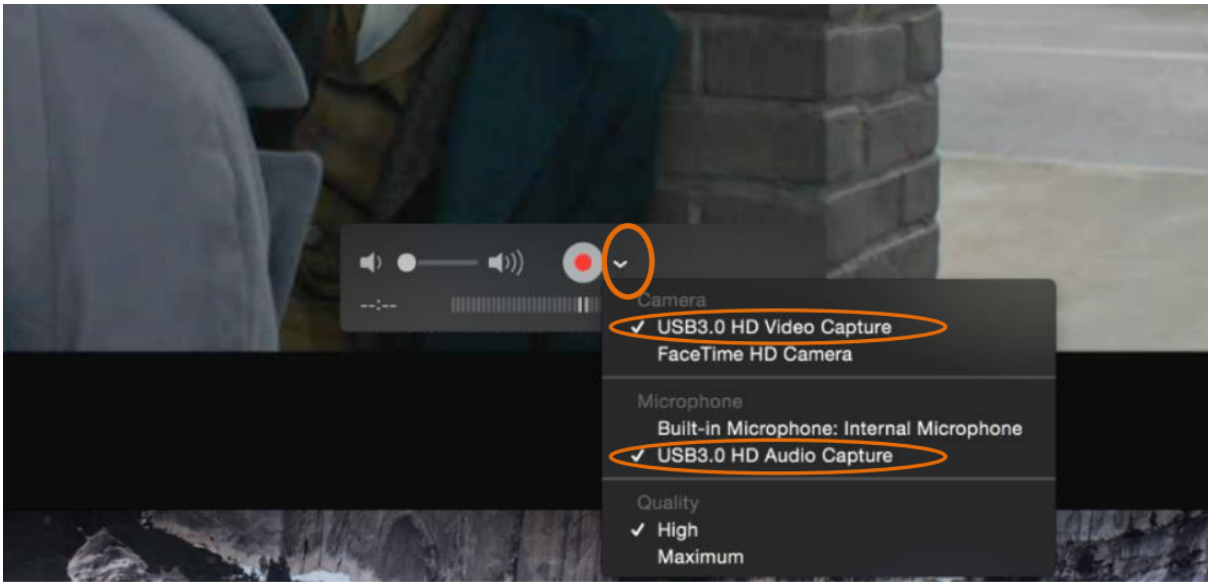
## Recording for Mac using QuickTime

The QuickTime Player is software that comes preinstalled in Mac OS and it can also be used for video recording.

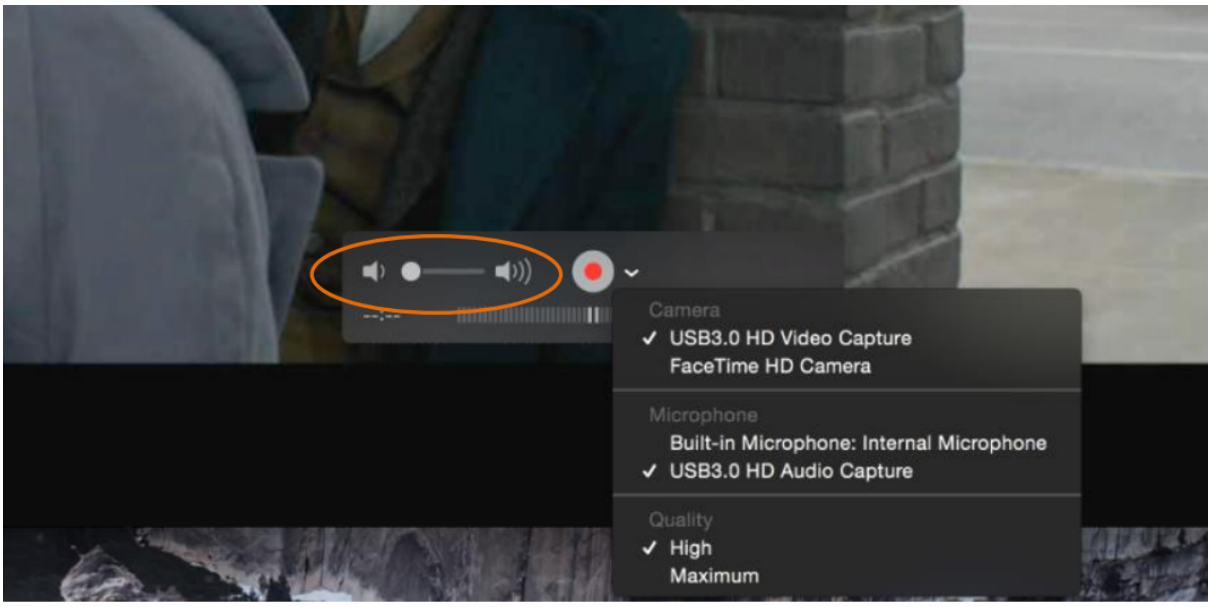
1. Launch QuickTime Player and then click “File” in the top menu bar. Select “New Movie Recording”.



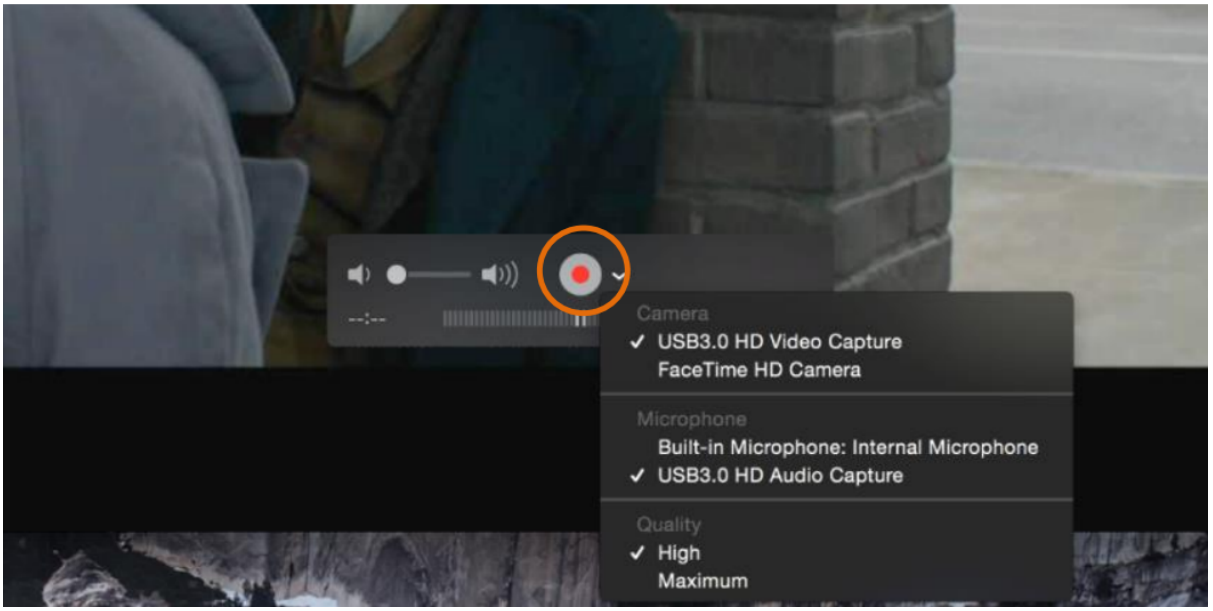

2. The recording control panel will appear on the screen. Click the “∨” symbol for the drop down menu.



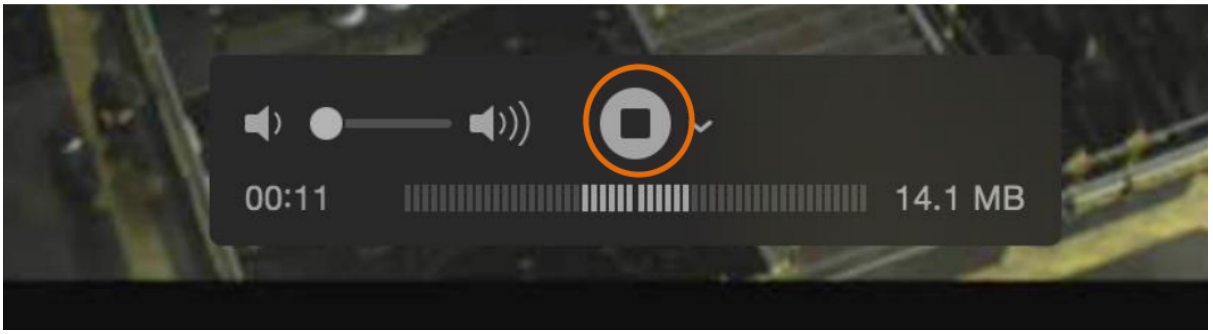
3. Select “USB3.0 HD Video Capture” under “Camera”, and select “USB3.0 HD Audio Capture” under “Microphone”. Then adjust to the desired volume for the speaker.



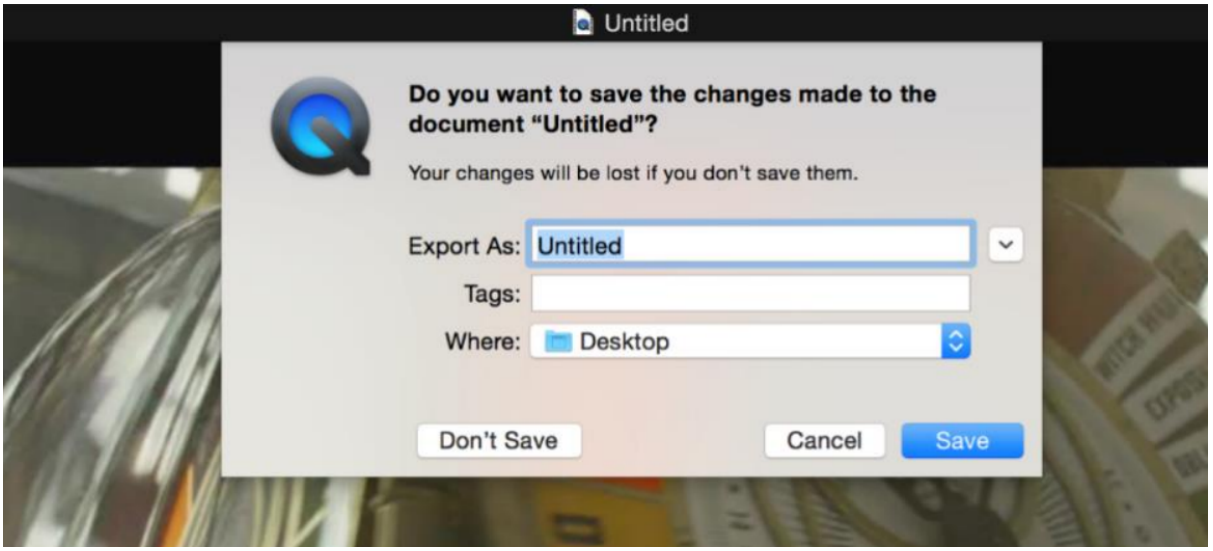

4. Click the “Record” button to start recording.




5. To stop recording, simply click the square “Stop” button.



6. Enter the recording file name and select where to save the file.



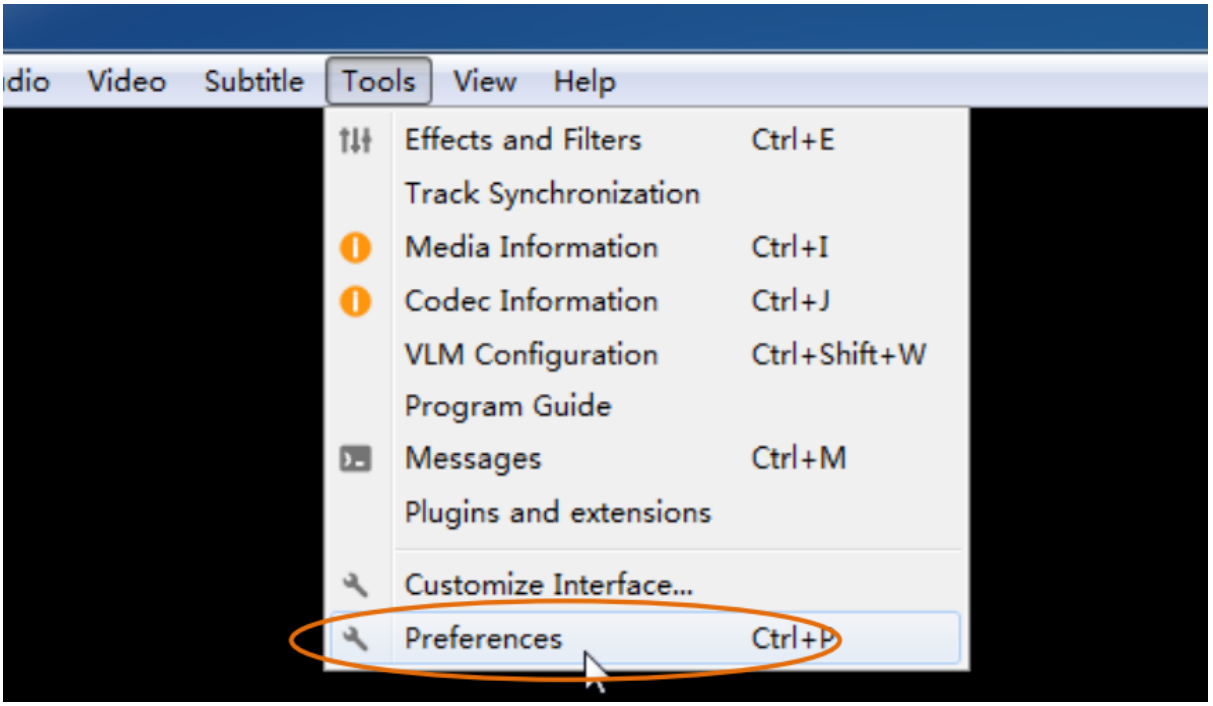

## Recording for Windows using VLC

- **VLC Media Player Initial Setting**

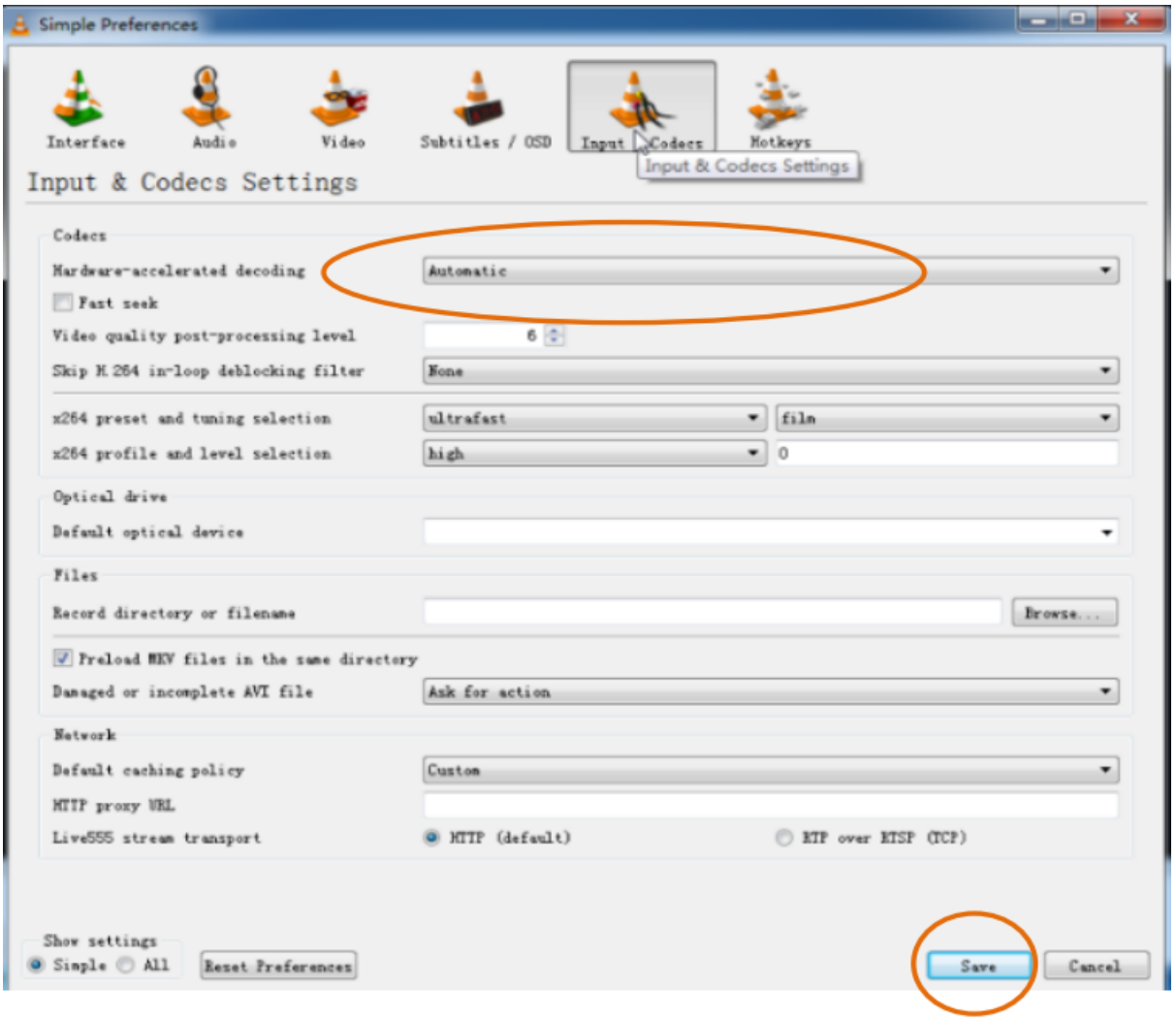
VLC Media Player also can be used for video capturing. Please visit www.videolan.org/vlc/ to download the VLC Media Player for Windows, Mac OS X, or Linux.

On initial use, the hardware accelerated decoding must be set at "Automatic" to ensure the best performance. Please use the following instructions to set the hardware accelerated decoding.

1. Select "Tools", and then click on "Preferences" in the drop down menu.

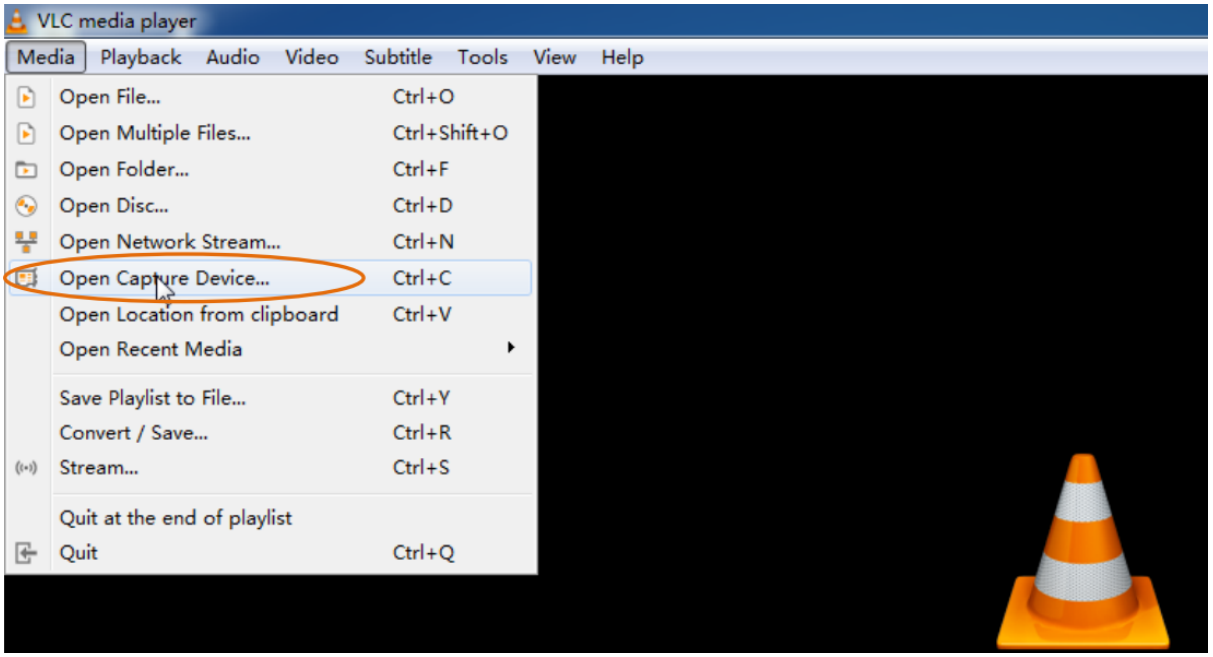


2. Click “Input/Codecs”, select “Automatic” in the drop down for Hardware-accelerated decoding, and then “Save” to finish changing VLC settings.

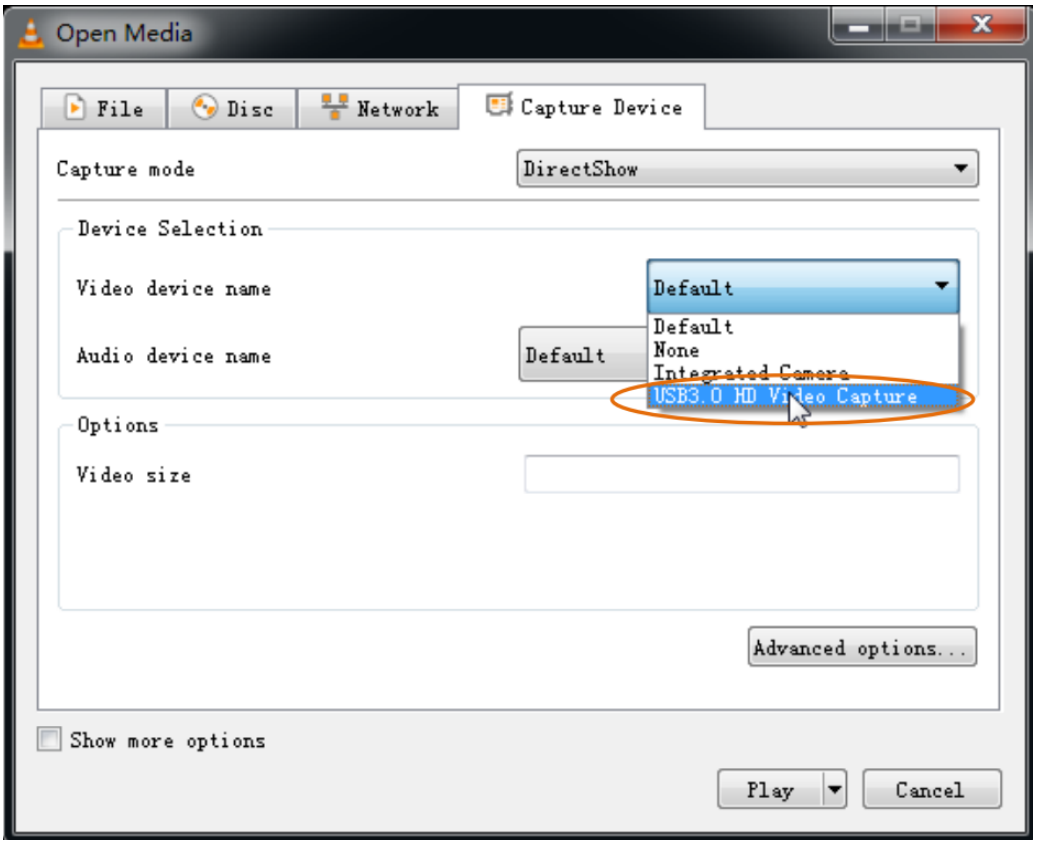



**VLC Media Player Direct Show**

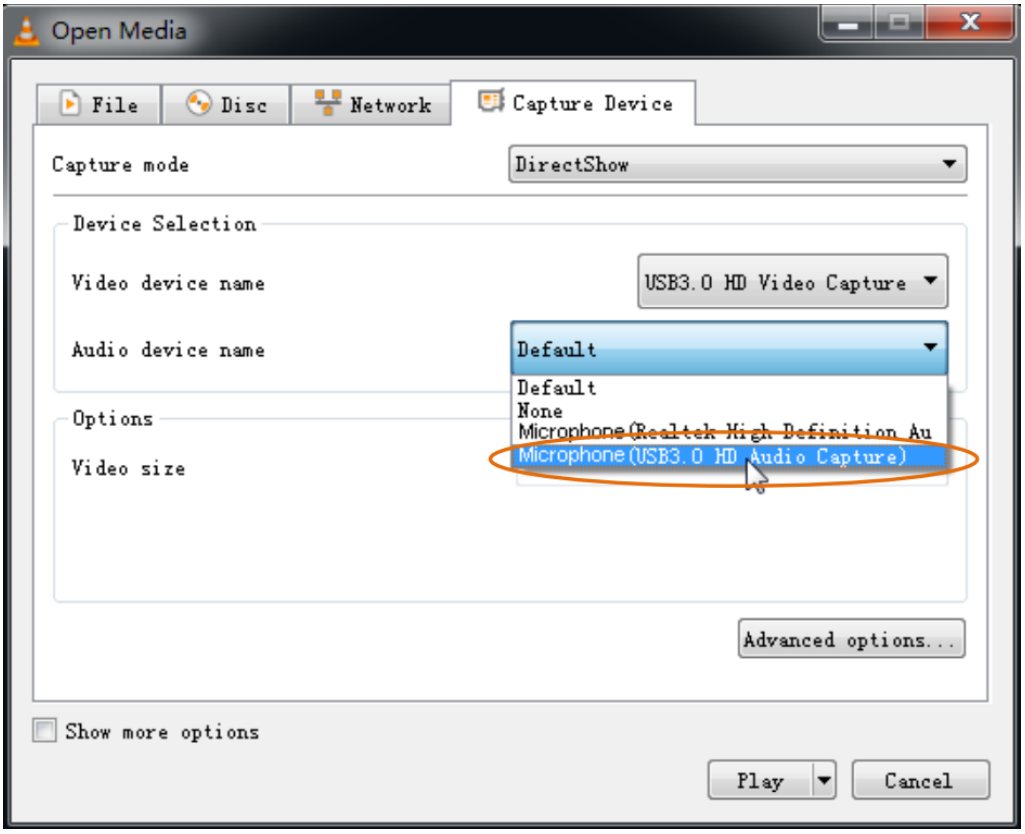
1. Select “Media” and then select “Open Capture Device” in the drop down menu.



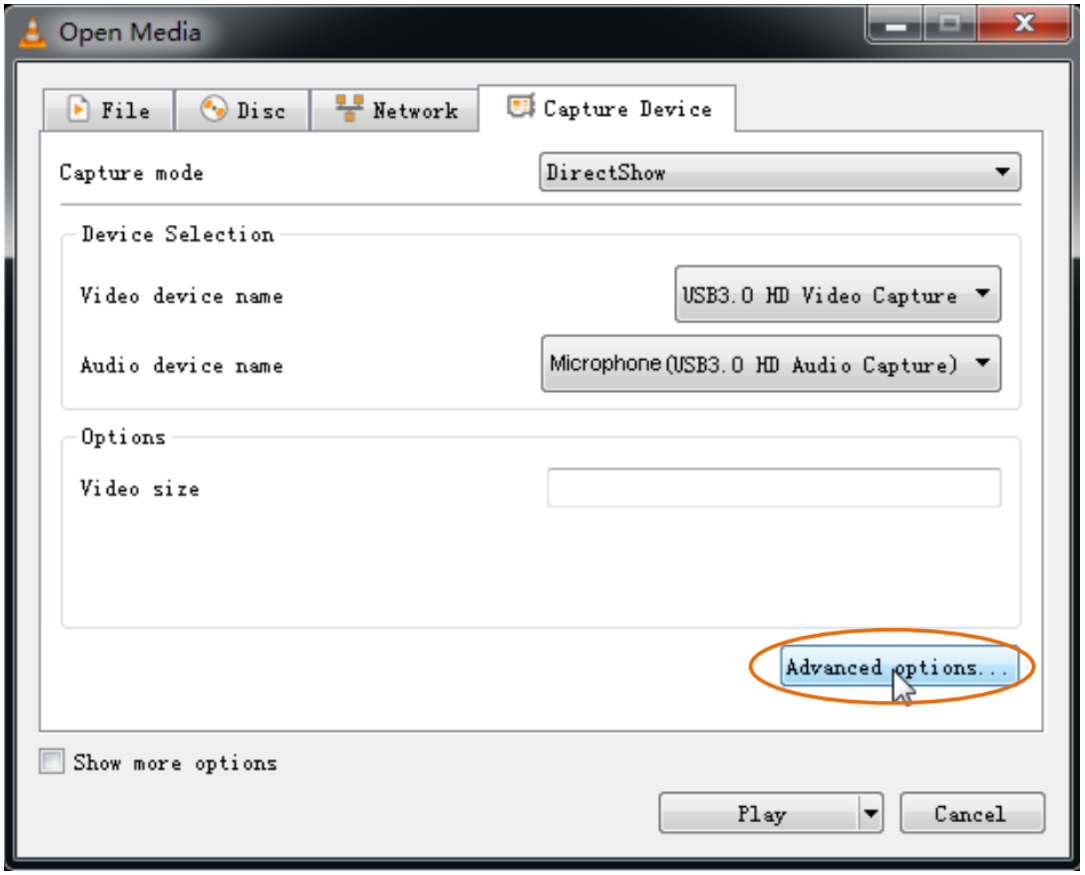
2. Click the dropdown for “Video device name” and select “USB3.0 HD Video Capture”.



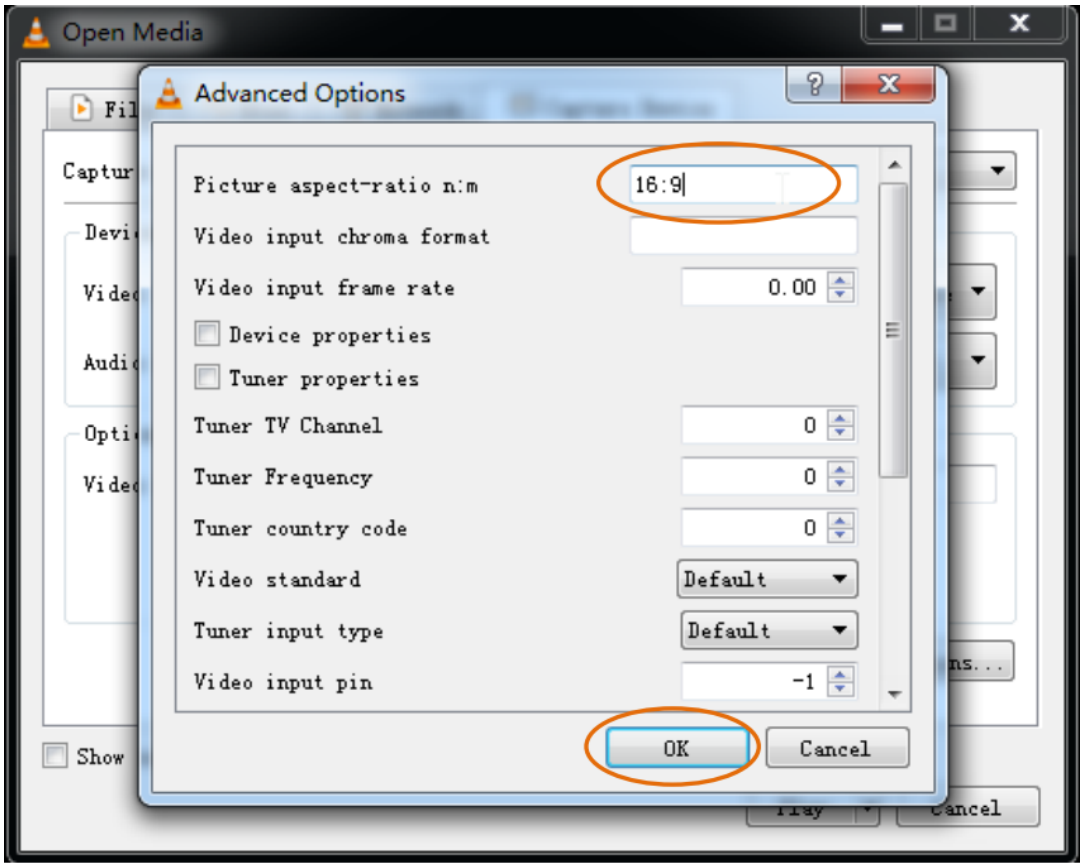

3. For audio device name, select “Microphone (USB3.0 HD Audio Capture)”.



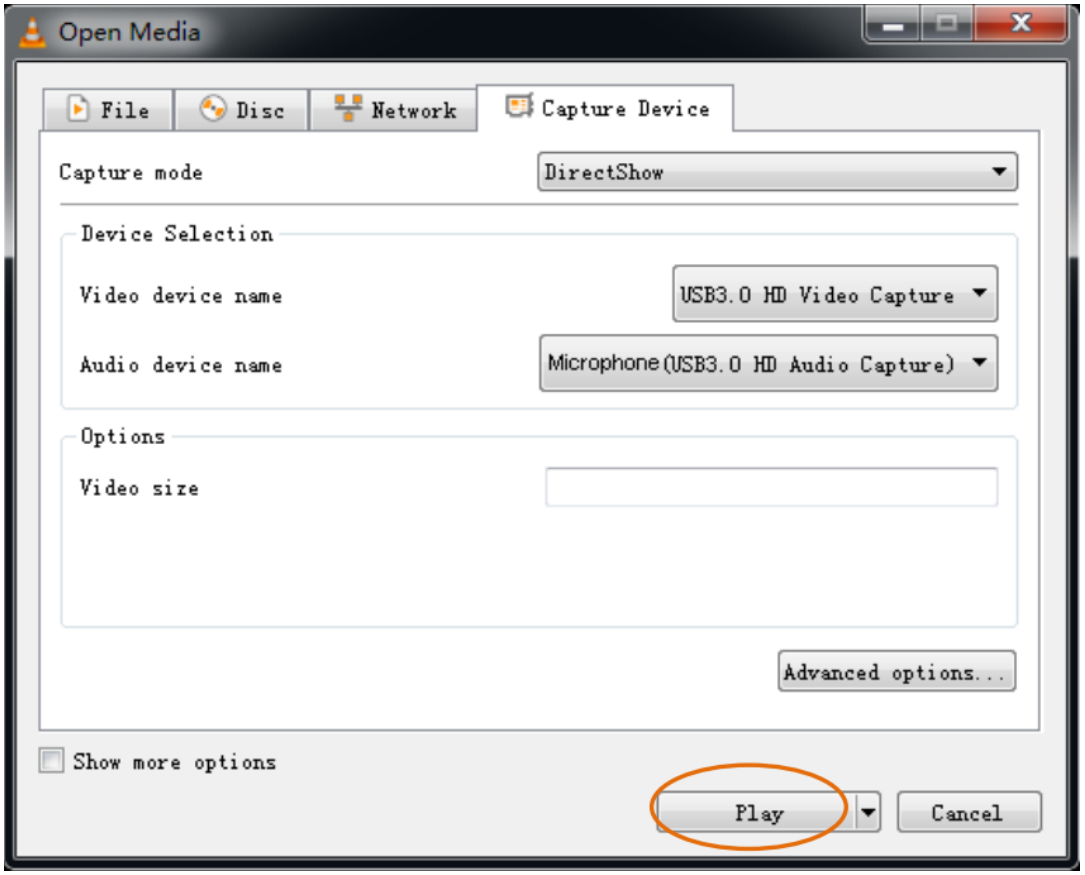
4. To set up the correct aspect ratio, click “Advanced options”.




5. Enter the aspect ratio for the video source (e.g. 16:9).
6. Click “OK” to exit the “Advanced options” menu.



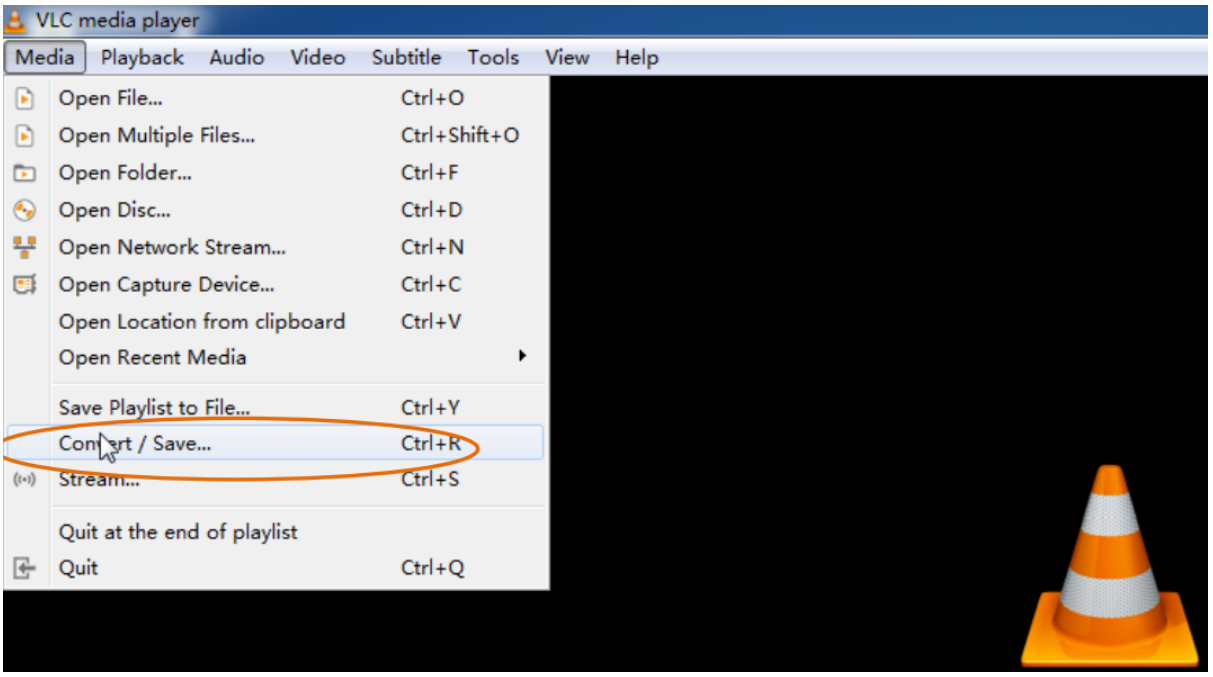
7. Click “Play”, the source screen will show in approximately several seconds.



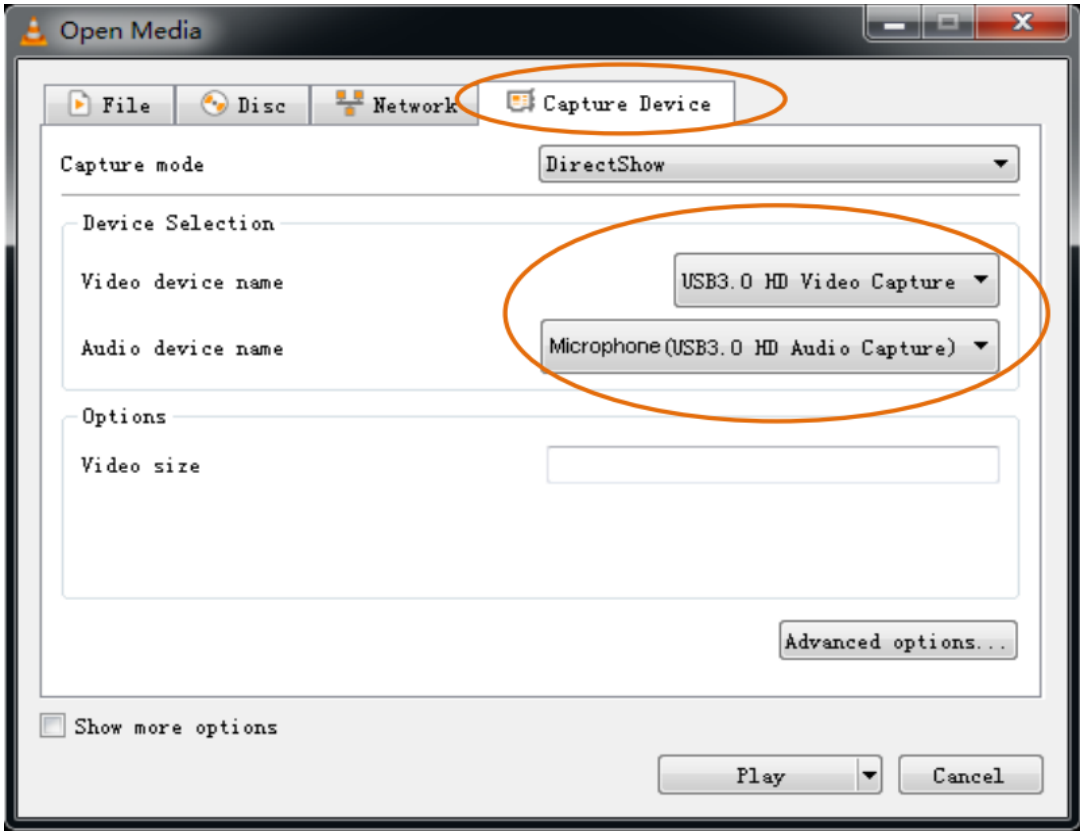

- **VLC Media Player Recording**

**Note**: We recommend using the “Convert/Save” method to record a video from the device for best performance.

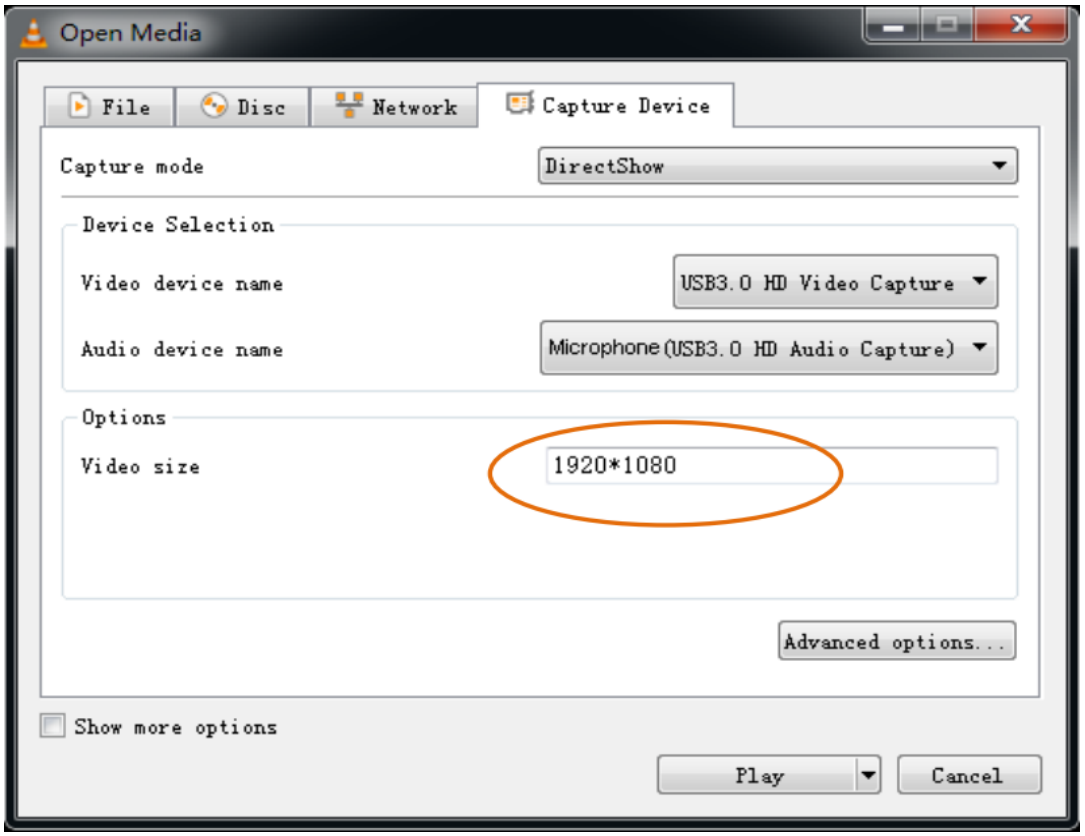
1. Select “Media”, and then select “Convert / Save” at the dropdown menu.



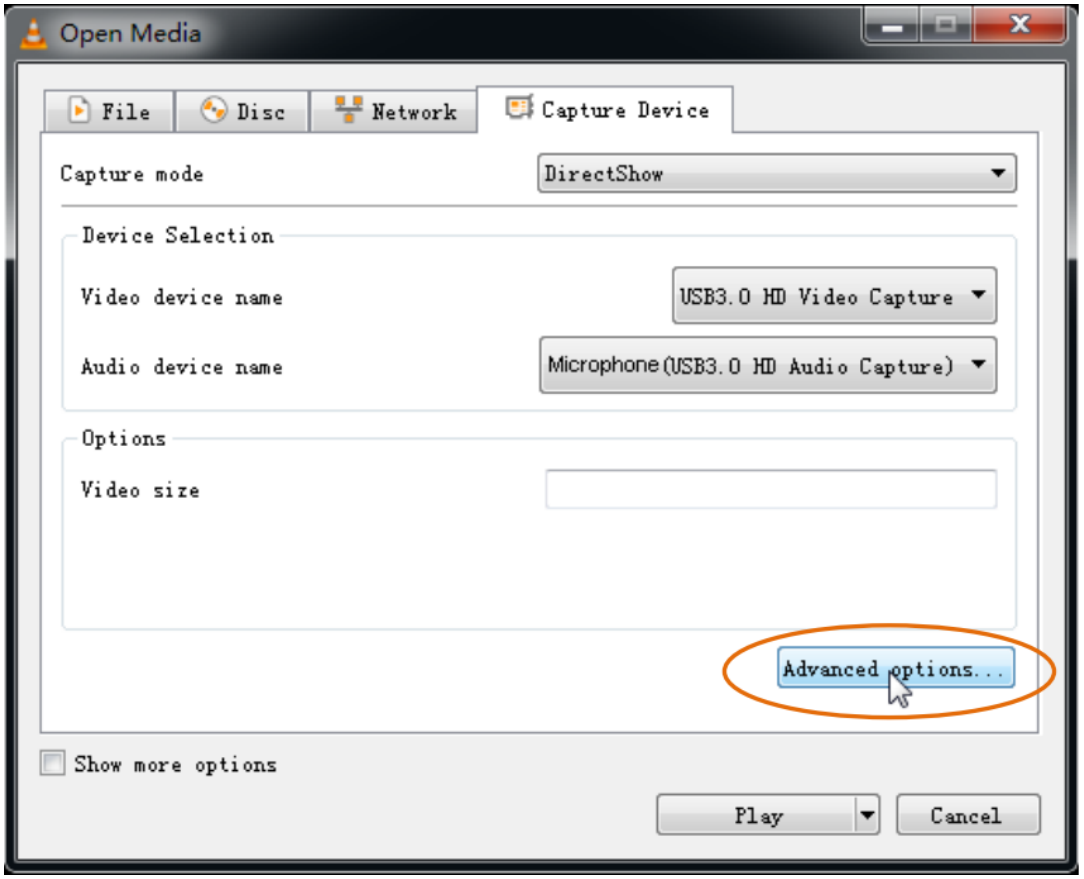
2. Click the “Capture Device” tab on the top right side.



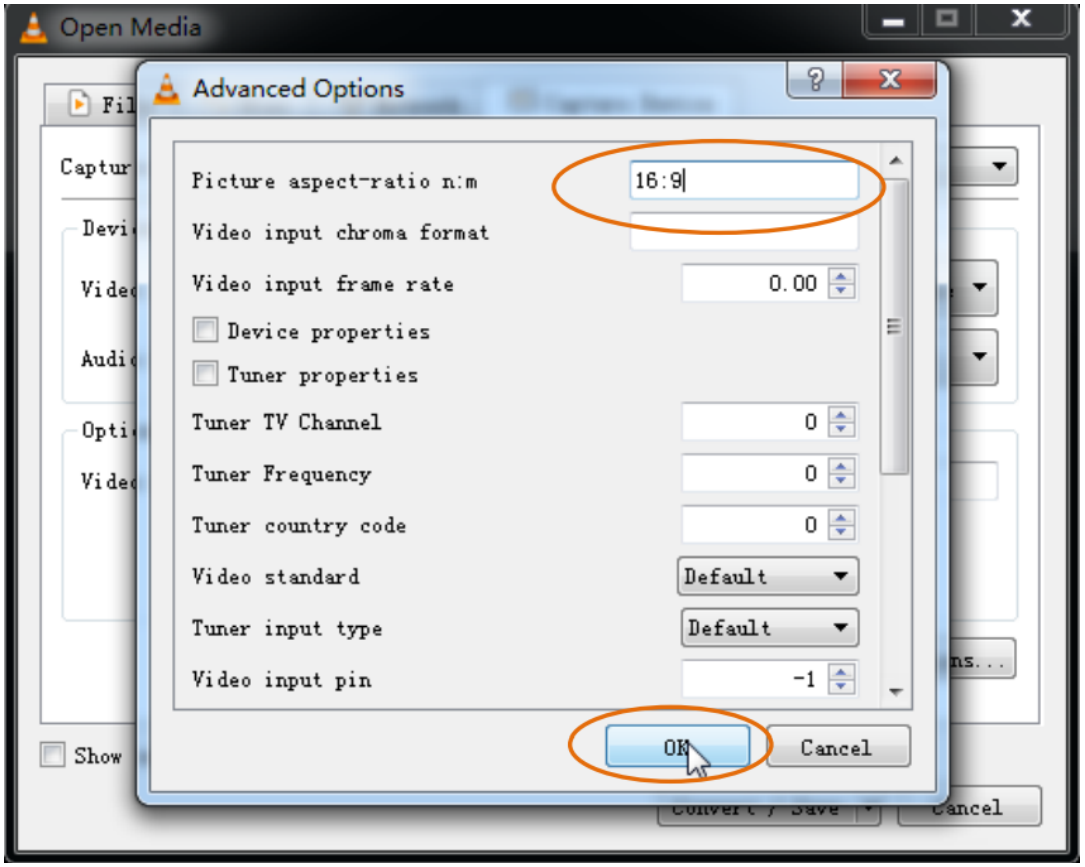

3. Video device name should be “USB3.0 HD Video Capture” and the audio device name should be “Microphone (USB3.0 HD Audio Capture)”.
4. To set the video resolution, type the resolution (e.g. 1920*1080) at “Video size” textbox.



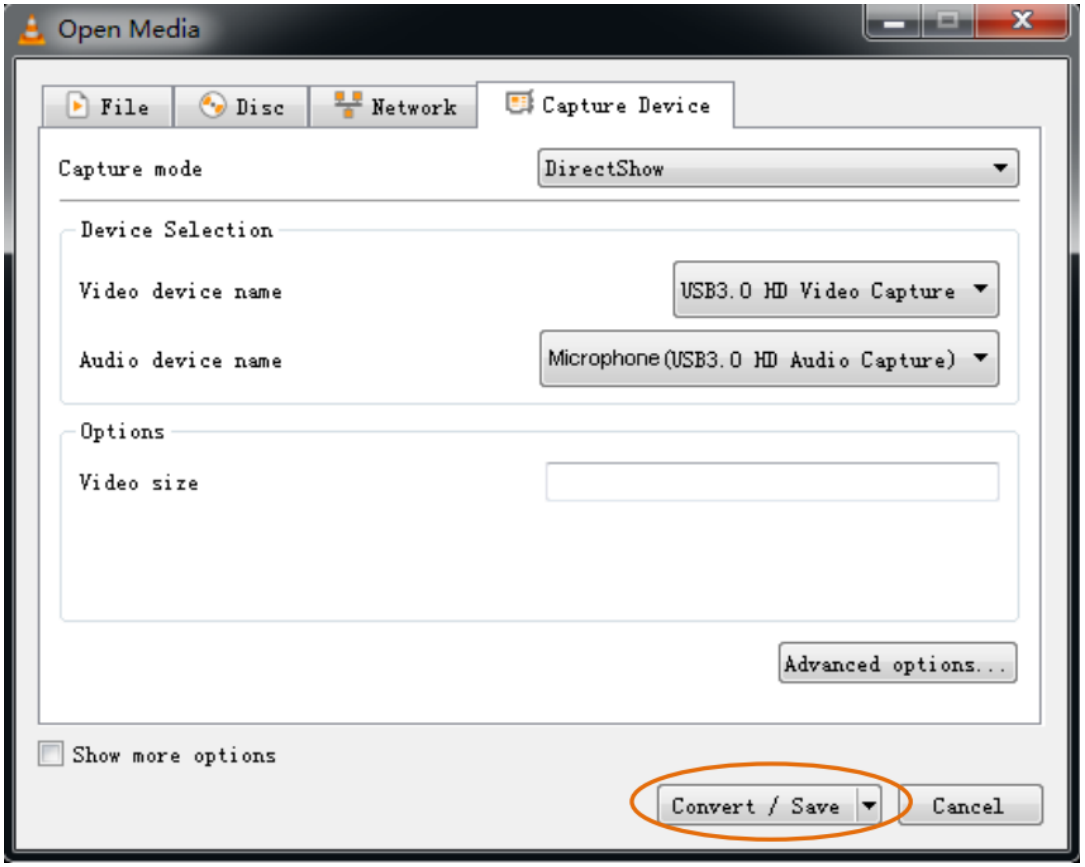
5. To set the aspect ratio, click “Advanced options”.



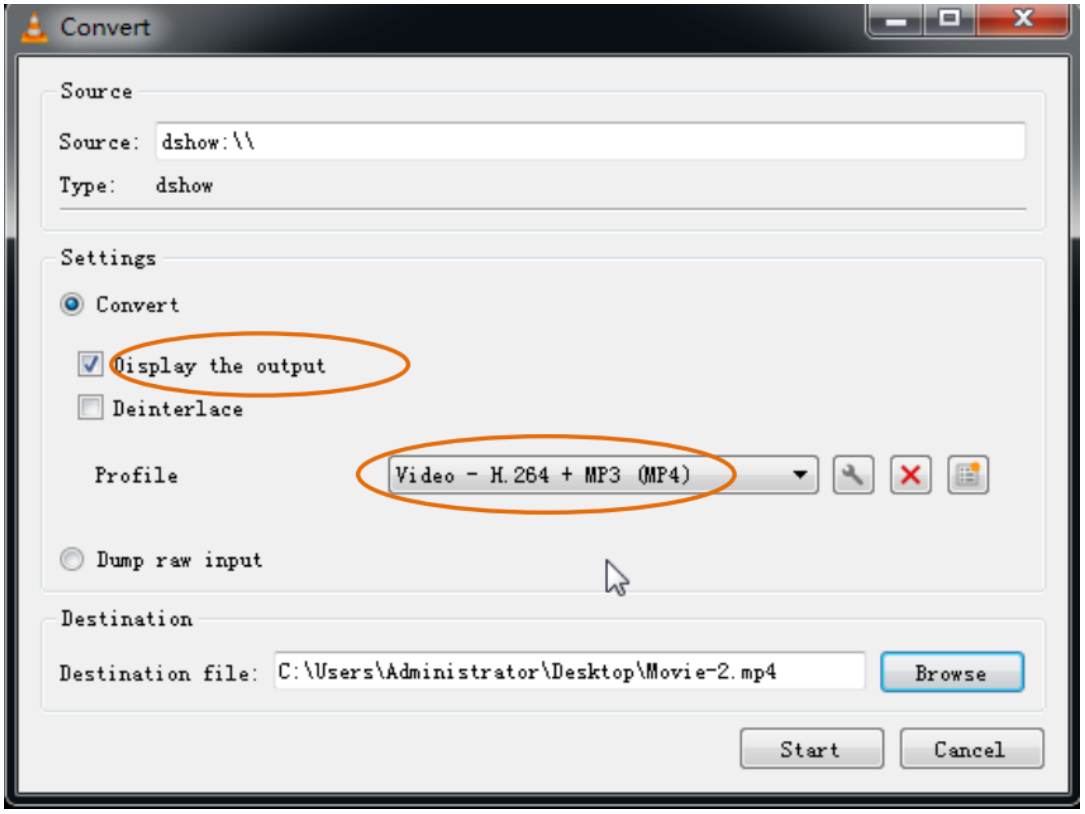

6. Enter the aspect ratio for the video source (e.g. 16:9).
7. Click “OK” to exit the “Advanced options” menu.



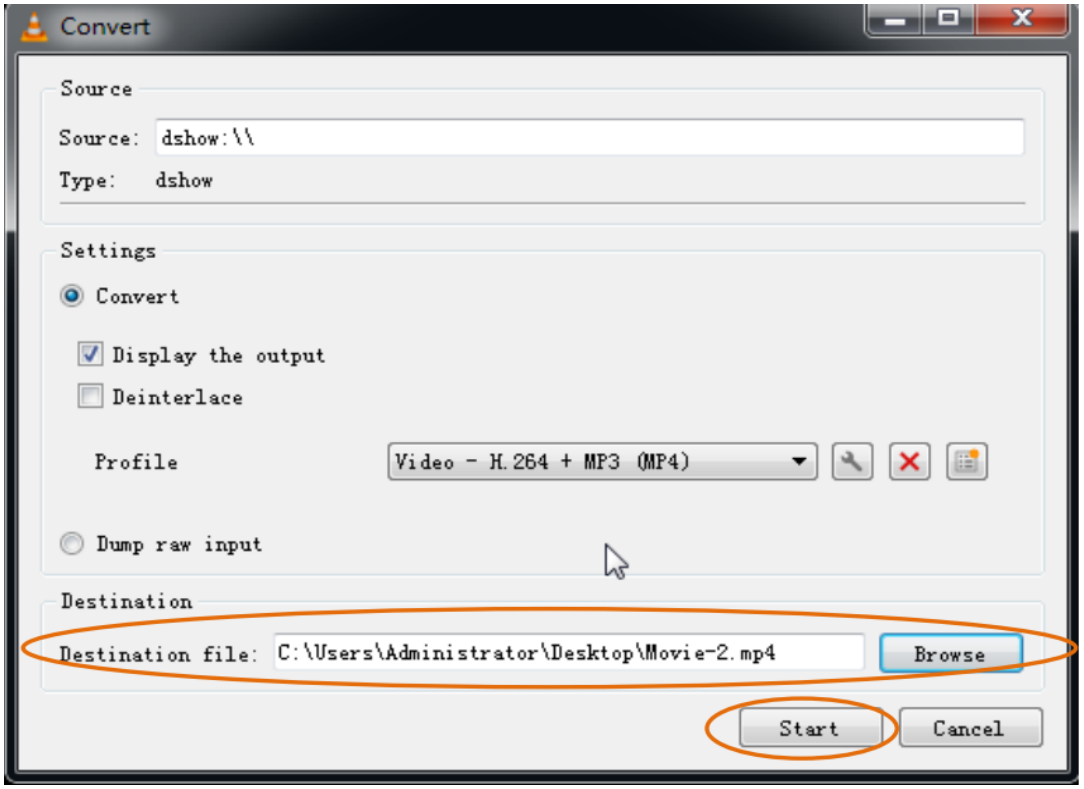
**8.** Click “Convert / Save”.




**9.** Select “Display the output” check-box, and set the video format.

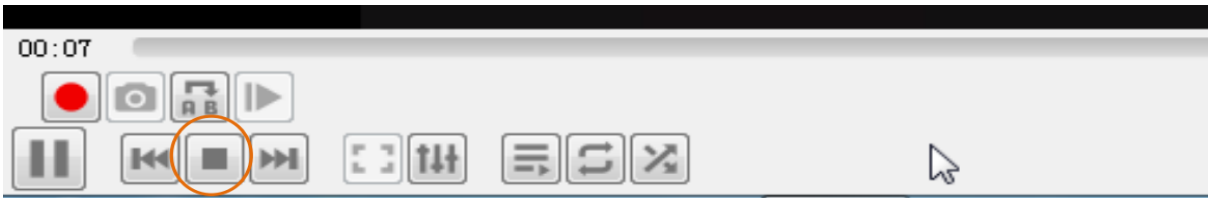


**10.** Then click “Browse” to choose where to save the file and enter the file name.

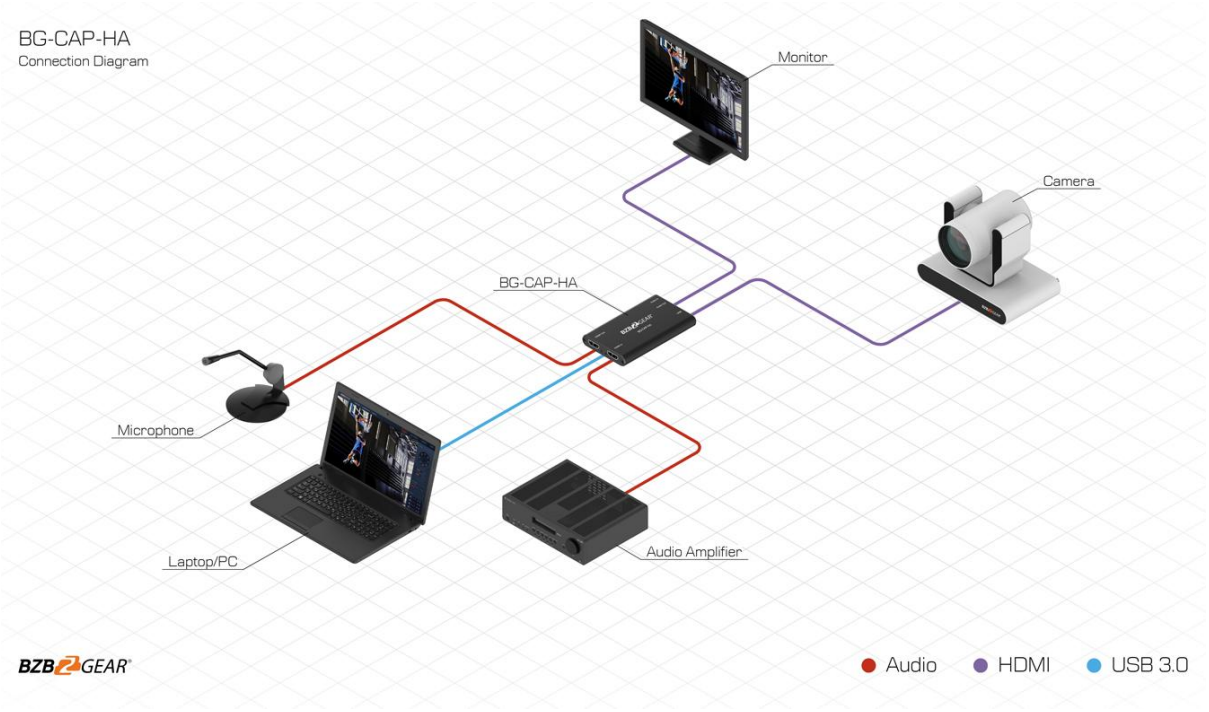



**11.** Click “Start”, and the video and audio recording will start.

**12.** To stop recording, simply click the square “Stop” button in the bottom control panel.



## Application Example



## Tech Support

Have technical questions? We may have answered them already!

Please visit BZBGEAR's support page (bzbgear.com/support) for helpful information and tips regarding our products. Here you will find our Knowledge Base (bzbgear.com/knowledge-base) with detailed tutorials, quick start guides, and step-by-step troubleshooting instructions. Or explore our YouTube channel, BZB TV (youtube.com/c/BZBTVchannel), for help setting up, configuring, and other helpful how-to videos about our gear.

Need more in-depth support? Connect with one of our technical specialists directly:

| **Phone** | **Email** | **Live Chat** |
|---|---|---|
| 1.888.499.9906 | support@bzbgear.com | bzbgear.com |

## Warranty

BZBGEAR Pro AV products and cameras come with a three-year warranty. An extended two-year warranty is available for our cameras upon registration for a total of five years.

For complete warranty information, please visit bzbgear.com/warranty.

For questions, please call 1.888.499.9906 or email support@bzbgear.com.

## Mission Statement

BZBGEAR is a breakthrough manufacturer of high-quality, innovative audiovisual equipment ranging from AVoIP, professional broadcasting, conferencing, home theater, to live streaming solutions. We pride ourselves on unparalleled customer support and services. Our team offers system design consultation, and highly reviewed technical support for all the products in our catalog. BZBGEAR delivers quality products designed with users in mind.

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