Quick start guide

This script requires avisynth (free); it can be installed automatically by request on the first execution or manually downloaded at:

https://github.com/AviSynth/AviSynthPlus/releases/download/v3.7.0/AviSynthPlus_3.7.0_20210111.exe

You are going to need a good source video file to use, **ideally recorded at the same frame rate the game is running on your VR device, so avoid using Nvidia Shadowplay** (it records at just 60fps). The regular refresh rates for VR devices are in the range of 72hz (low end) to 144hz (high end).

A second consideration is that a **wider field of view capture (FOV) is often better**, because for the video to be deshaken it needs some spare room to be "zoomed in". The simplest solution is to record using OBS with the SteamVR plugin, but it won't work in some cases. You can also record your VR game in a window that you can resize and reshape to create a 4:3 display. Not all games play along well recording directly from the window and some may require .ini tweaks or alt+enter to run windowed.

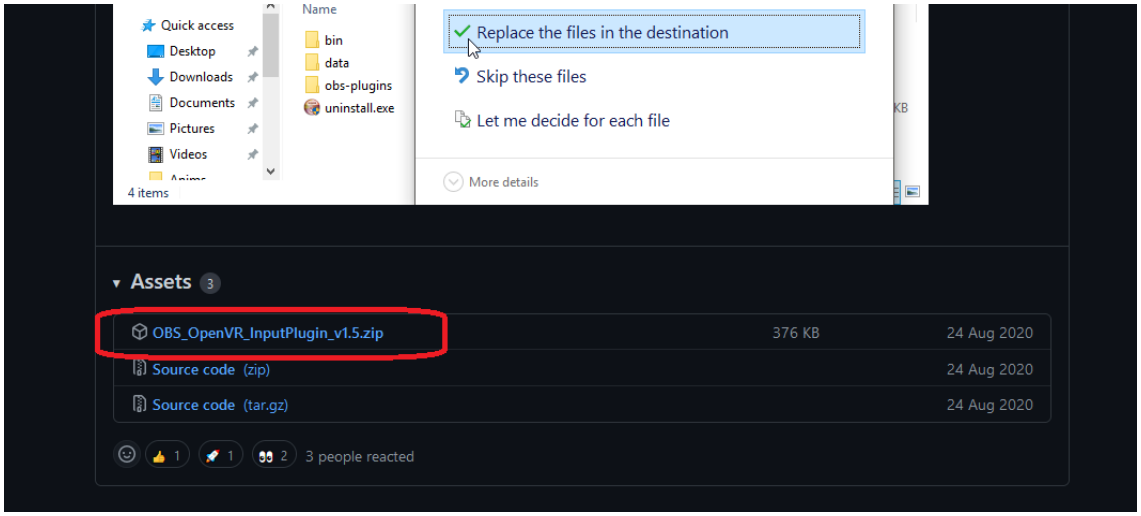
With OBS (Open Broadcaster Software), you have two base options to record the footage.

1) Using the OBS OpenVR input plugin, works only with OpenVR compatible games, gives the best result.
2) Use screen, window or game capture to record the game as shown in your monitor, mixed results.

Guide using OBS OpenVR input plugin

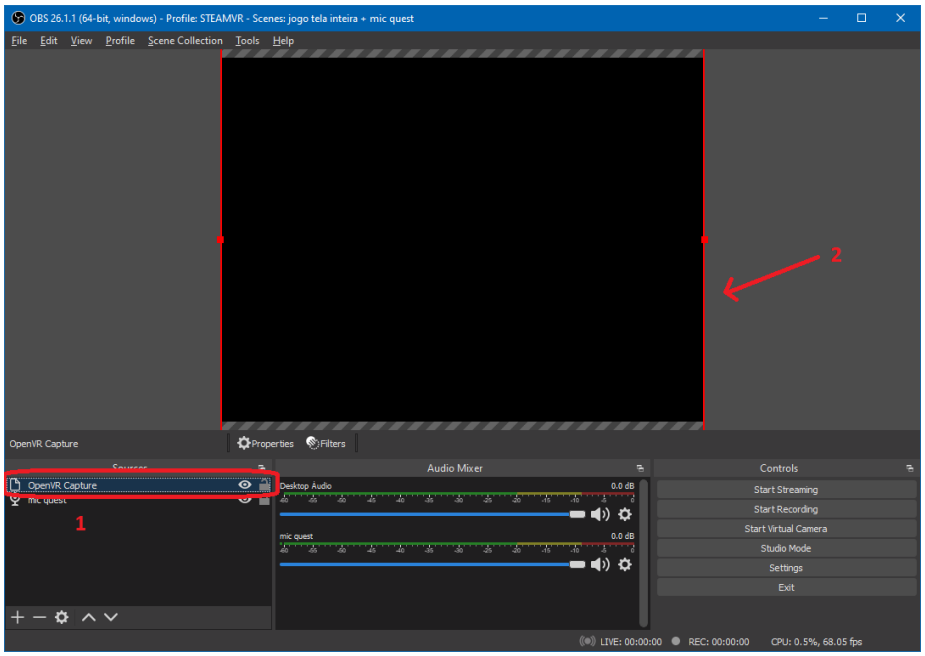
Download and install OBS as needed. Link: https://obsproject.com

The first suggestion is to use the **OBS OpenVR input plugin** (free, https://github.com/baffler/OBS-OpenVR-Input-Plugin/releases) following this link and their bundled instructions to install.

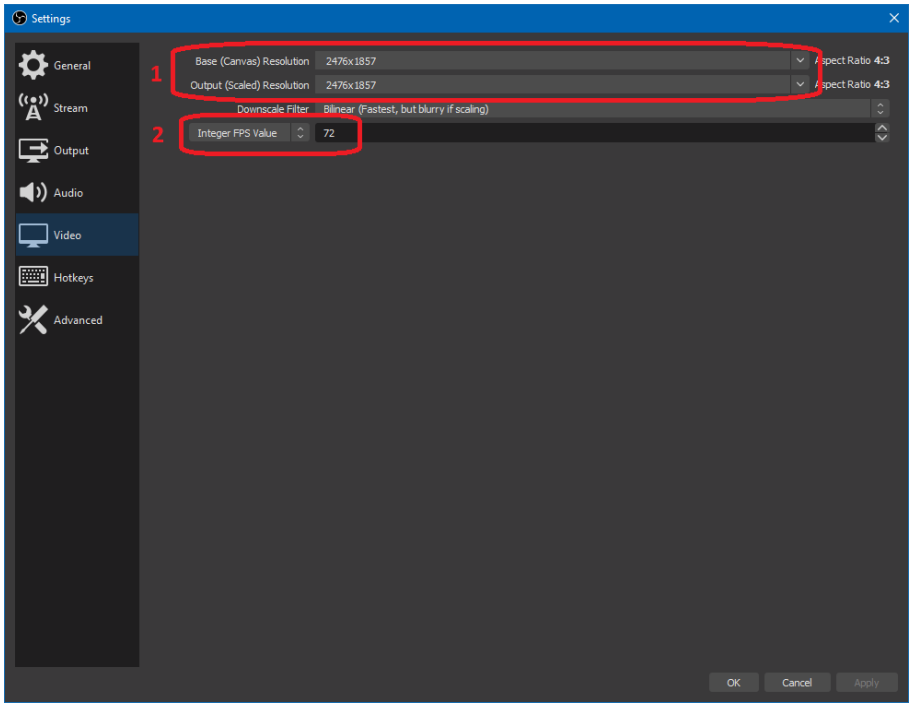


The download link you are looking for is similar to the one above.

It will only work with games running on "SteamVR" or "OpenVR" mode, so some purchases made under the oculus store are not compatible unfortunately, but as an advantage you can capture the all the pixels of the steamvr output of your gameplay. (best FOV and sharpness)

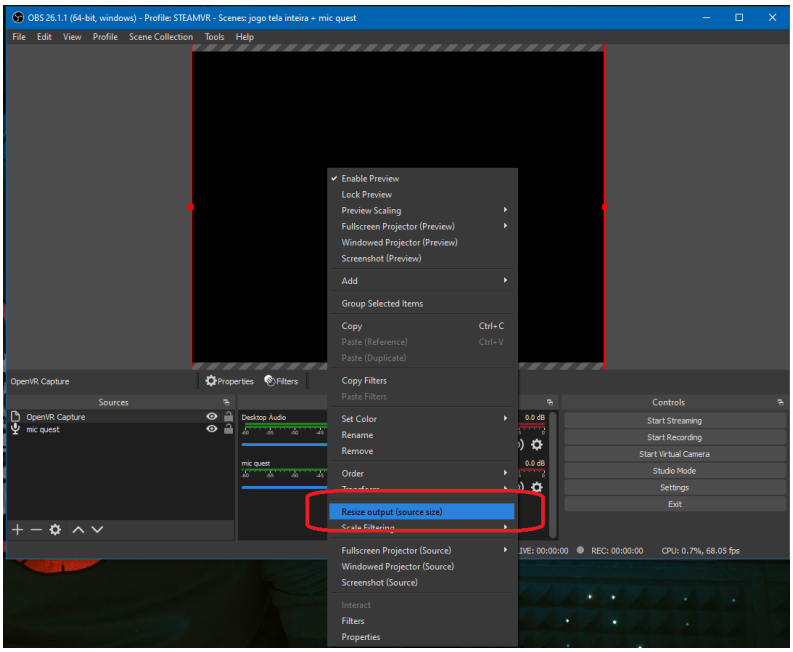


With the OBS OpenVR input plugin installed, you want to use an OpenVR capture source for your video (note 1), also confirm that the red square that frames the video covers the whole screen of your captured video (note 2), drag and resize as needed.

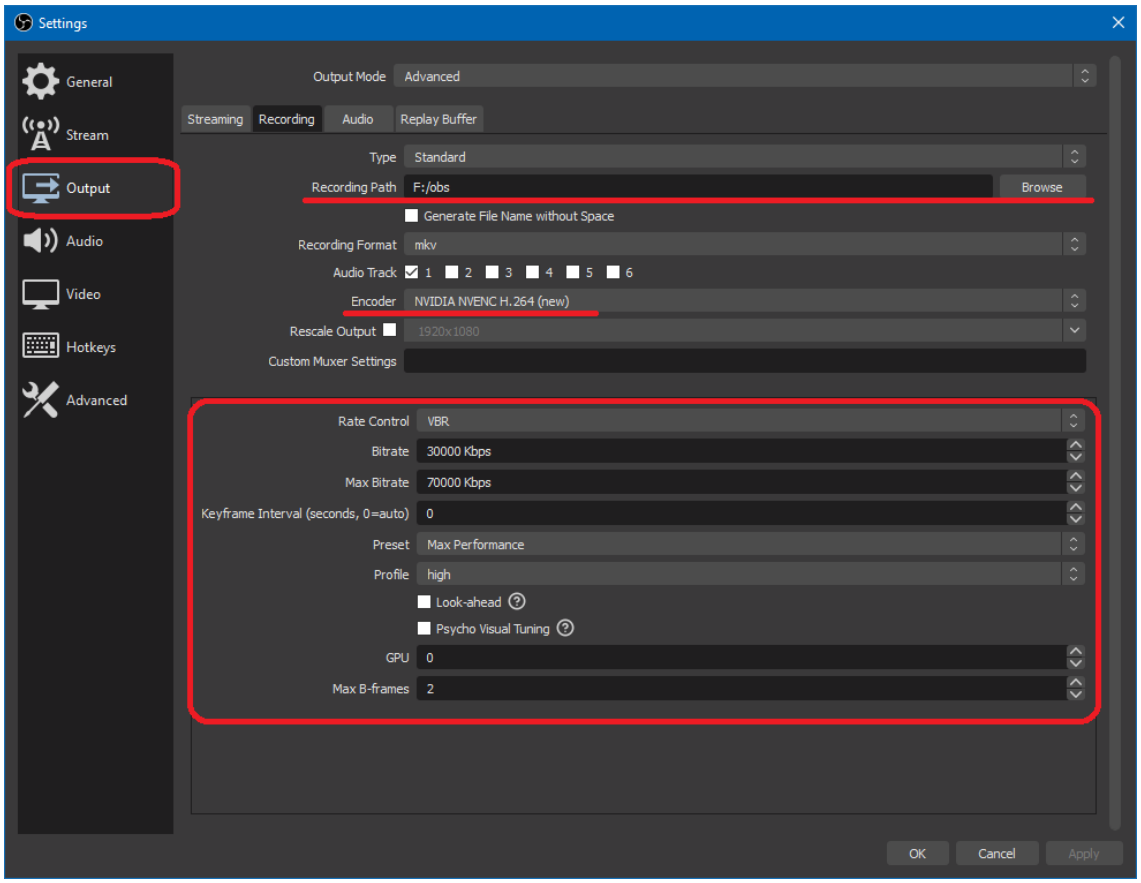


In the settings, under VIDEO, verify if the record resolution and FPS value are correct accordingly to what SteamVR is running at. If your VR HMD is at 90hz, you want 90fps.

In this example, it is set to record at a 4:3 resolution (Note 1, 2476x1857 pixels) and at 72fps (note 2, quest running at 72hz)



If you are in doubt of what resolution to pick for the best result, you can select your OpenVR capture input, right click on the red rectangle frame and select “Resize output (source size)”. Keep in mind this will generate a big frame. The script will crop to the final aspect ratio automatically during processing if needed.



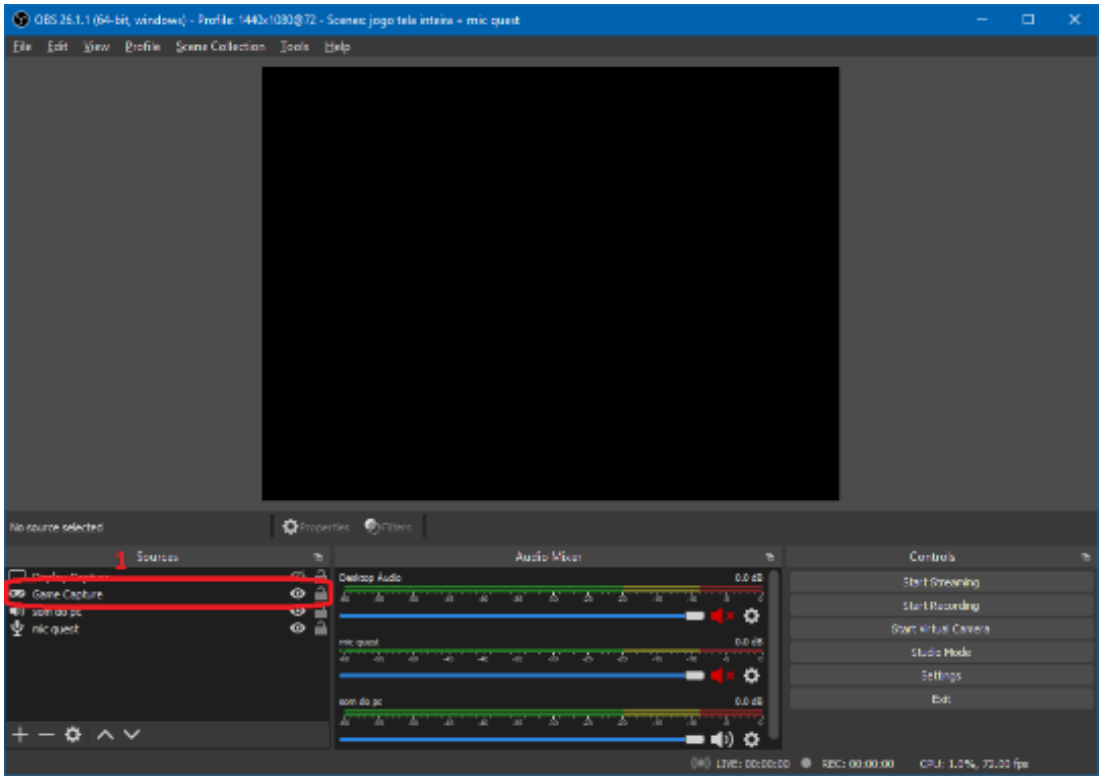
If you are not already familiar with OBS, in this tab you will select your local record settings like bitrate, what encoder to use (nvenc h264 if you have an nvidia card) and some other tweaks covered in detail by other guides on the internet.

Keep in mind while capturing that you need to capture at a resolution bigger than the final file output resolution to maintain the best results. The final image will be zoomed and cropped due to the deshaking post processing applied by the script.

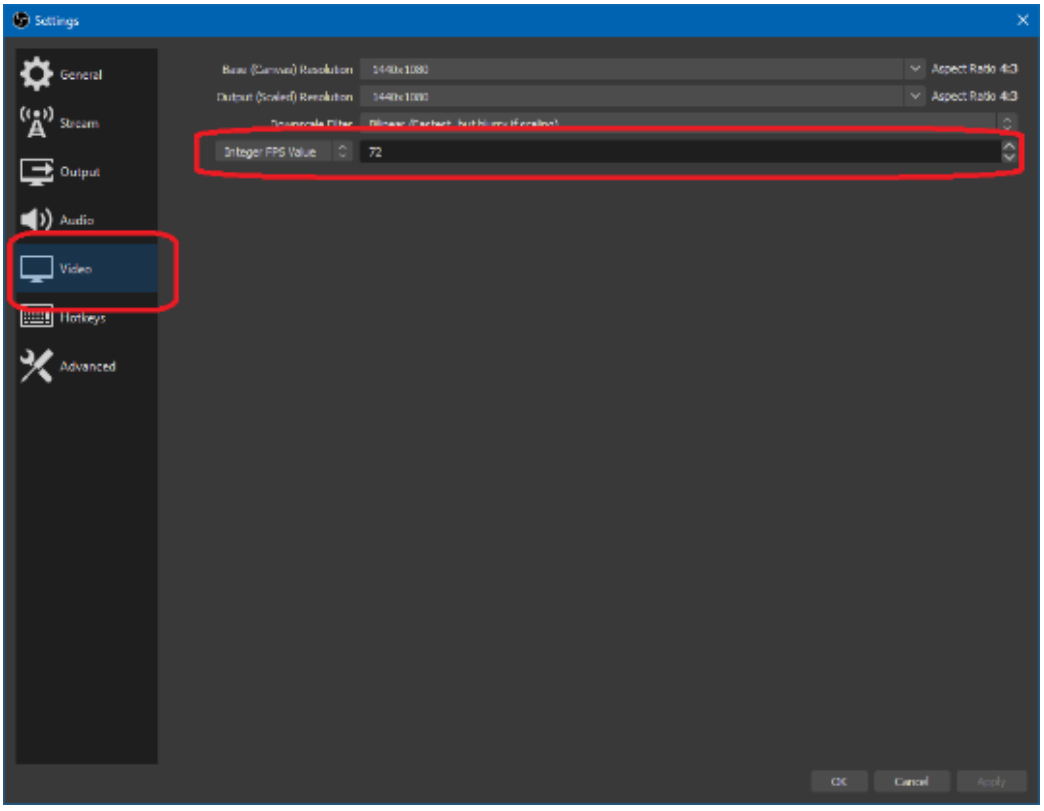
Also, keep in mind that a stable framerate gives the best results while generating the final 60fps or 30fps file. If your game can run at 90fps with drops, but stable at 72fps, it is wiser to pick the stable 72fps for capturing purposes. Dropped frames may show as a stutter in the final video.

Guide using “Screen capture”

Download and install OBS as needed. Link: https://obsproject.com

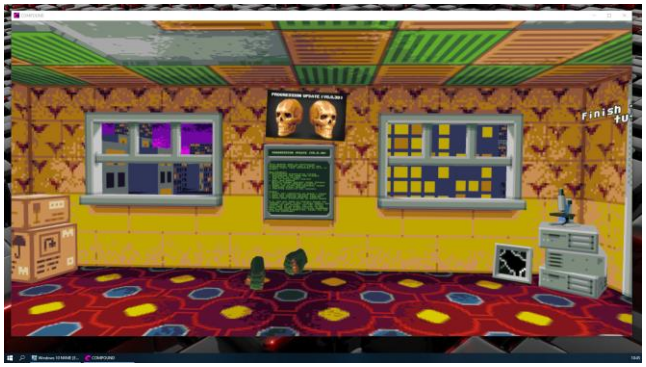


Use a **Game Capture source** (note1) if you are going to record directly from the game window. Desktop capture might be limited by the refresh rate of your monitor (60hz?) and will cause “bad framepacing” in the video. If your monitor is capable, consider matching its refresh rate to your VR HMD refresh rate during the capture. (i.e. 144hz monitor set to 72hz for 72fps capture)



Remember: Capturing the game at the **same frame rate your VR device screen Hz is running** is very important for fluid motion in the result!

Game window shape and its relation with field of view (FOV)



On the left we have a narrow regular sized 16:9 FOV, and in the right a wide vertical FOV. If you record your video in the 16:9 format (left) you might lose visible detail that is being cut out of the frame on the top and bottom. You might want to fiddle with the window size (if possible) to figure out what works best for you. My recommendation is “wider vertical, 4:3 ratio”.

In case you are recording through the OBS SteamVR input plugin, your monitor and refresh rate don’t need adjustments and you have full flexibility of the “shape” of the frame to record

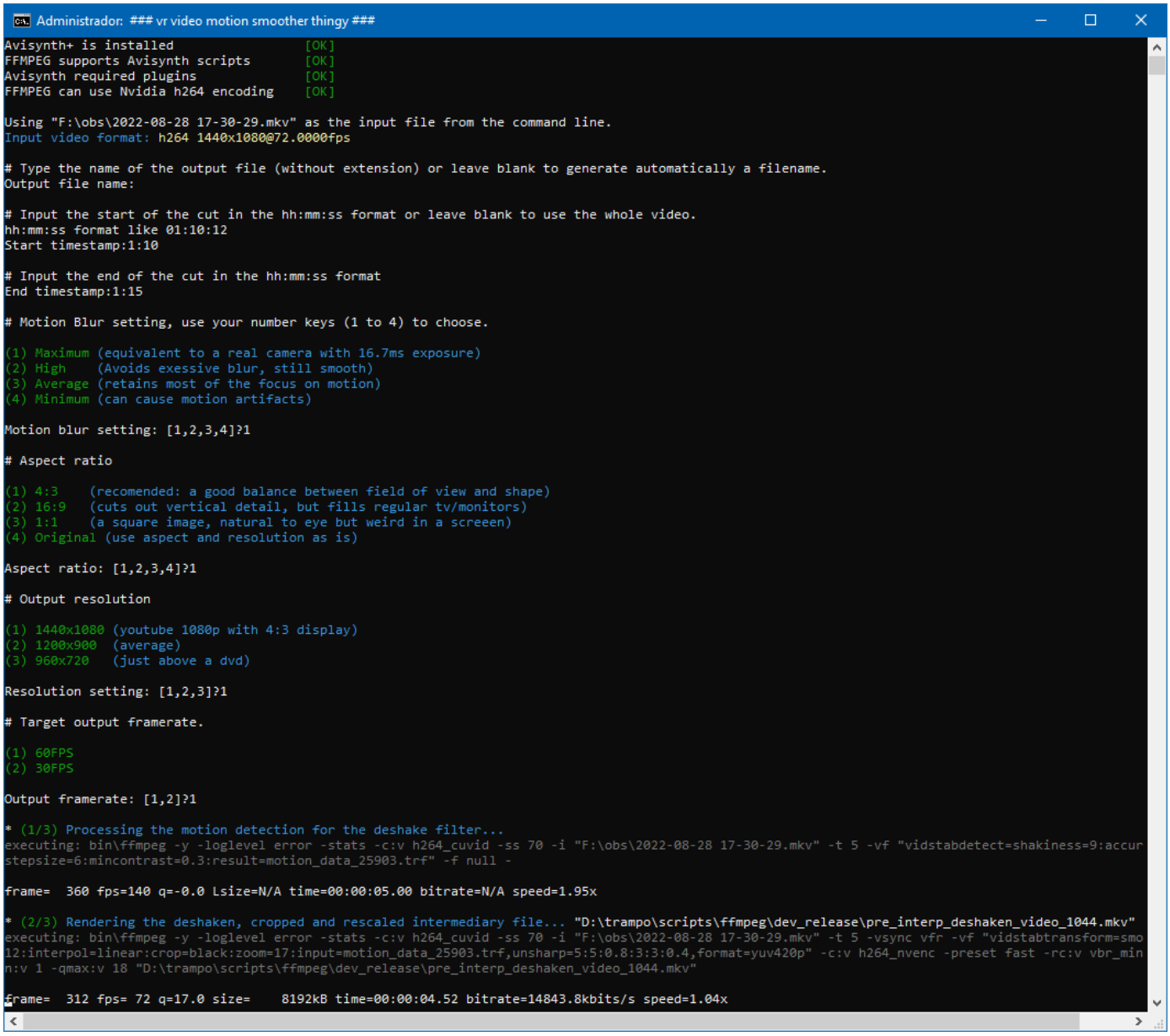
Sample using **16:9**, some detail missing on the top and bottom (but fills a tv frame)

Sample using **4:3**, extra details on the top and bottom (but will have lateral black borders on many screens)

Running the video conversion tool

Double click the script or drag and drop a video file into “vr_video_processing.bat” to start.

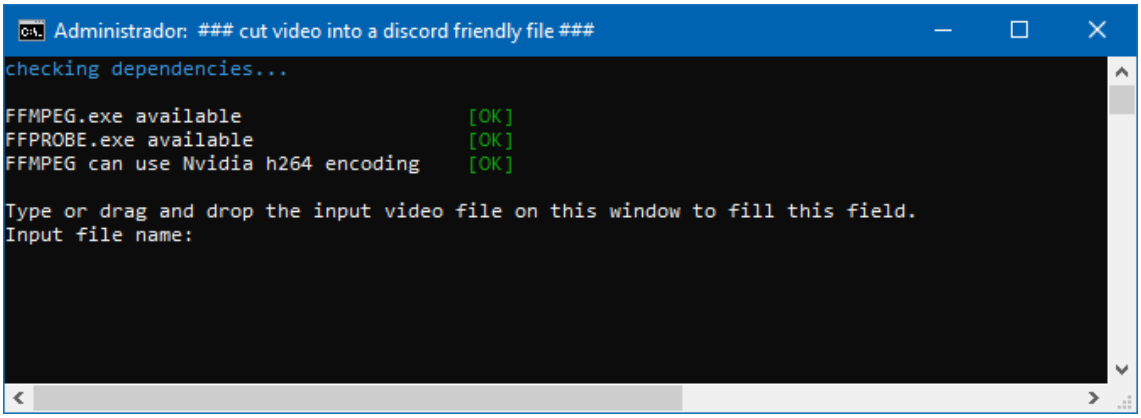
The script when executed looks like this, it is straightforward to use and will ask for your preferences.



- It will ask you for the input file, I recommend dragging the file to the window to autofill this field and then press enter. You can also drag the video file onto the video script .bat file.
- Then it will ask for an output file name to save the result, you can leave it blank to auto generate a filename on the same folder as the script.
- It will ask for the time frame cut of the main video, something like from 01:03:40 to 01:05:00 in the hh:mm:ss format. You can leave this blank to use the whole file.
    - WARNING: if your whole file is long, this may take a **LONG TIME** to process, the ideal usage is to process only the bits you are interested on sharing with others.
- The motion blur setting is to select an intensity preset (1-4), maximum (1) is recommended for a more filmic look and average (3) may be useful for those who dislike excessive blur.
    - Sample video with the different motion blur presets: https://youtu.be/nvJiFCg2ZMY
- The desired aspect ratio of the final video, the balanced choice would be 4:3, the most common is 16:9.
- The output resolution, actual numbers depend on aspect ratio. Higher values take longer to render.
- Target framerate, **60fps is recommended,** but some sites like reddit only use 30fps.

Bonus tool: quickly cut a video segment for discord

Double click or drag a file into discord_video_cut.bat to start



Not much to explain, usage is about the same and it does all the work to create a good video file **within the discord 8mb file limit,** it can be VERY useful because the files created by the vr_video_processing.bat are very big and intended for Youtube or video editing software.

So using this you can also cut your “vr smooth motion videos” into small discord ready pieces!

The 8mb file limit does imply that your videos are rather short, try to keep your cuts under 60 seconds for the best results! Longer durations means lower video quality for the same size!

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