

# Time Lapse Photography

# What is Time Lapse

- A series of still photos put together to play as a movie clip.
- Usually fairly short, ranging in time from a few seconds to a few minutes.



210 shots - 3 minute interval - 10 ½ hours of shooting time

# Equipment

- A Camera with either a built in intervalometer or with a cable release socket
- An intervalometer
- A Tripod
- A ND Filter (optional)
- A Slider (expensive and optional)

# The Intervalometer

- Provides a way to automatically produce a series of shots at a regular interval.



# Intervalometer Settings

- Delay – How long after you start it that it will start taking pictures
- Long – Basically the shutter speed
- Interval – length of time between shots
- N – Number of shots

Important: Interval > Shutter Speed

# Setting Up The Shot

There are many subjects that can make an interesting time lapse. Here are a few guides to help in making a time lapse. Keep in mind they are not hard and fast rules.

- Choose a scene with slow and consistent movement.
- A wide angle is usually better at capturing movement.
- Try to drag the shutter, get a longer exposure like 1/30th or longer. This will give you some motion blur, and a smoother less choppy video.
- Shoot in all manual mode. Choose a white balance other than Auto, so that you don't risk the white balance changing during the shoot. Also focus the shot and then switch to manual focus, so your camera doesn't try to autofocus and possibly change your focus because of something moving through the scene. Similarly using a consistent shutter speed and aperture will give you a more consistent video and reduce flicker.
- Since you are taking a longer exposure in many instances you'll probably want to cover the eye piece if you can. This will stop light leaking into your exposure.
- For all the same reasons (post processing latitude) that you would shoot a regular shot in RAW you'll also want to shoot your time lapse in RAW.
- Lastly before you start your time lapse program, take a test shot and make sure you have the composition that will capture the scene you're interested in, and that you're getting the exposure you want.



Flicker can occur when you don't use manual mode, and the camera makes exposure adjustments.



# Editing Your Images In Lightroom

- Import all of them into a single folder
- You may want to get rid of some images. You may have a period of time where nothing happened, or where an unintended subject went through you shot. You may have had a multi-day shot and want to get rid of the night shots.
- After editing your first shot synch your edits to the other photos by highlighting all of them and then clicking on 'Synch Settings' (You could do the same thing in Photoshop by creating an action to record your edits.)

## Synchronize Settings

- |   |   |   |  |
|---|---|---|--|
| <input checked="" type="checkbox"/> White Balance | <input checked="" type="checkbox"/> Treatment (Color) | <input type="checkbox"/> Lens Corrections         | <input type="checkbox"/> Spot Removal                |
| <input checked="" type="checkbox"/> Basic Tone    | <input checked="" type="checkbox"/> Color             | <input type="checkbox"/> Lens Profile Corrections | <input checked="" type="checkbox"/> Crop             |
| <input checked="" type="checkbox"/> Exposure      | <input type="checkbox"/> Saturation                   | <input type="checkbox"/> Chromatic Aberration     | <input checked="" type="checkbox"/> Straighten Angle |
| <input type="checkbox"/> Contrast                 | <input checked="" type="checkbox"/> Vibrance          | <input type="checkbox"/> Upright Mode             | <input checked="" type="checkbox"/> Aspect Ratio     |
| <input type="checkbox"/> Highlights               | <input type="checkbox"/> Color Adjustments            | <input type="checkbox"/> Upright Transforms       |  |
| <input type="checkbox"/> Shadows                  | <input type="checkbox"/> Split Toning                 | <input type="checkbox"/> Transform                |  |
| <input type="checkbox"/> White Clipping           | <input type="checkbox"/> Local Adjustments            | <input type="checkbox"/> Lens Vignetting          |  |
| <input type="checkbox"/> Black Clipping           | <input type="checkbox"/> Brush                        | <input type="checkbox"/> Effects                  |  |
| <input type="checkbox"/> Tone Curve               | <input type="checkbox"/> Graduated Filters            | <input type="checkbox"/> Post-Crop Vignetting     |  |
| <input checked="" type="checkbox"/> Clarity       | <input type="checkbox"/> Radial Filters               | <input type="checkbox"/> Grain                    |  |
| <input type="checkbox"/> Sharpening               | <input type="checkbox"/> Noise Reduction              | <input type="checkbox"/> Process Version !        |  |
|   | <input type="checkbox"/> Luminance                    | <input type="checkbox"/> Calibration              |  |
|   | <input type="checkbox"/> Color                        |   |  |

! Settings that do not specify a process version may produce different visual results when they are transferred to photos with a different process version applied.

Check All

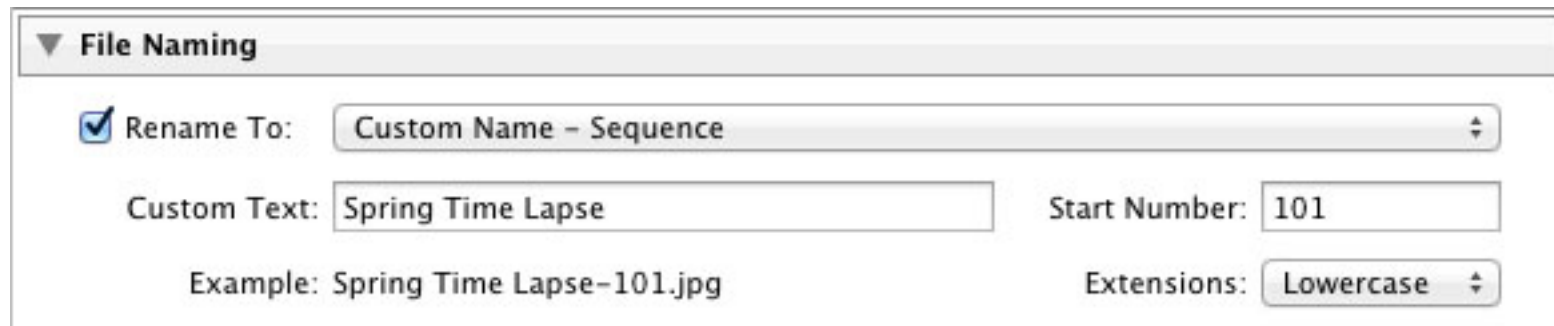
Check None

Cancel

Synchronize

# Exporting The Shots

- It is **ESSENTIAL** in making a timelapse that the files be sequentially numbered.
- Lightroom can easily accomplish this during it's export function.



The screenshot shows the 'File Naming' panel in Adobe Lightroom's export dialog. It features a checked 'Rename To' checkbox with a dropdown menu set to 'Custom Name - Sequence'. Below this, the 'Custom Text' field contains 'Spring Time Lapse', and the 'Start Number' field is set to '101'. An 'Example' label shows the resulting filename 'Spring Time Lapse-101.jpg'. To the right, the 'Extensions' dropdown is set to 'Lowercase'.

▼ File Naming

☒ Rename To: Custom Name - Sequence

Custom Text: Spring Time Lapse      Start Number: 101

Example: Spring Time Lapse-101.jpg      Extensions: Lowercase

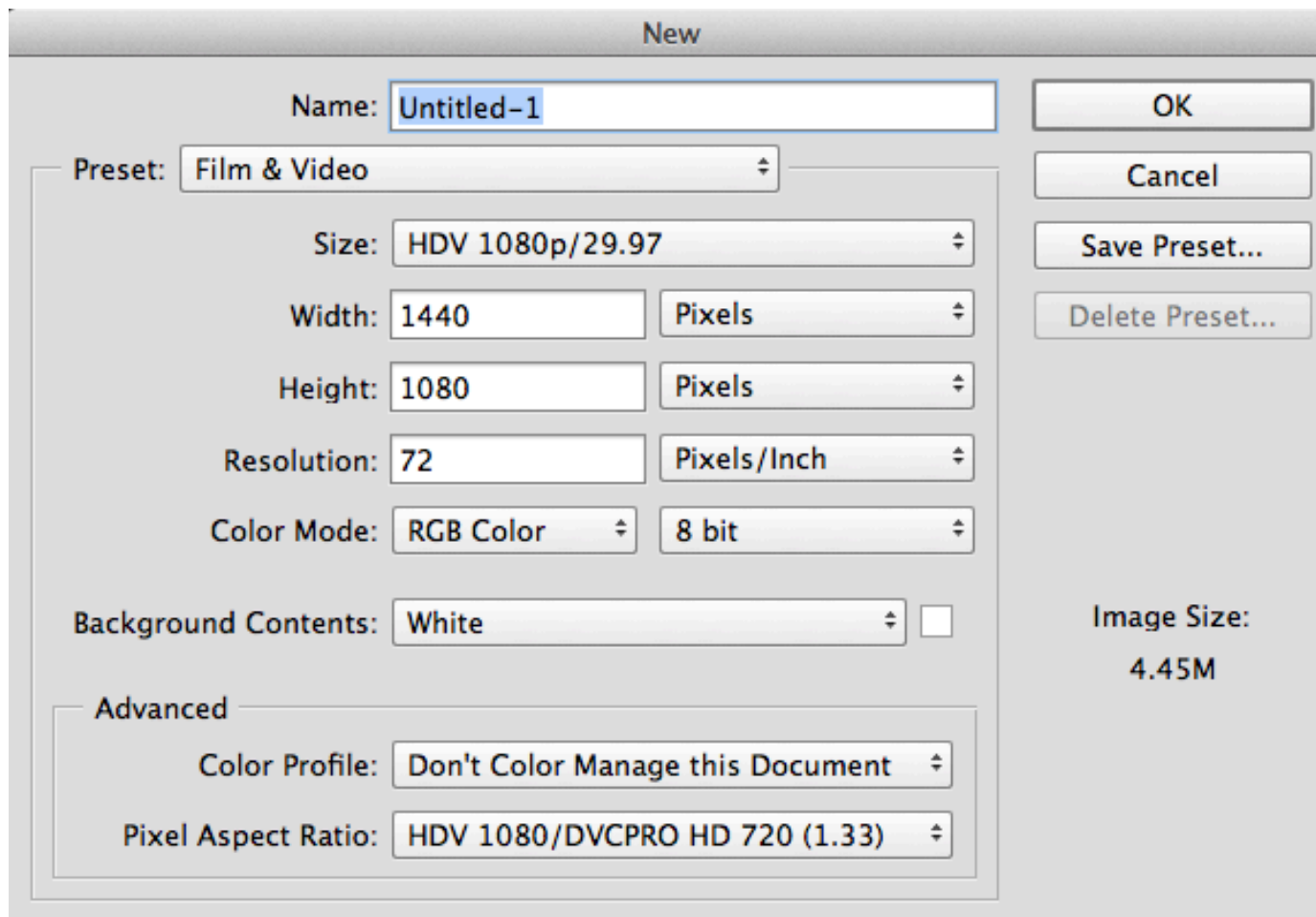
# Creating The Video

## **QuickTime Pro**

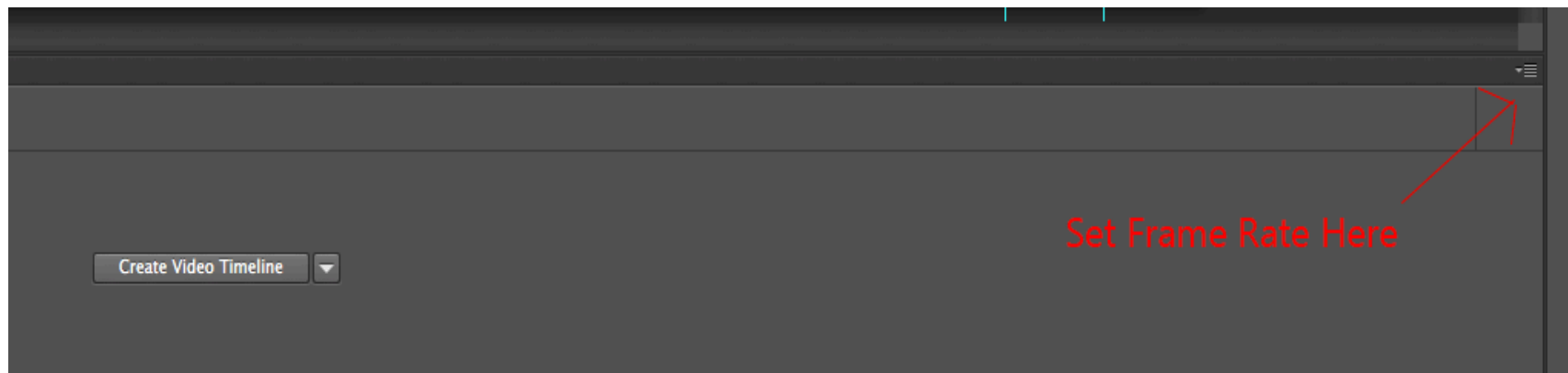
- One popular option is to use QuickTime Pro. In QuickTime use File>Open Image Sequence then navigate to your time lapse folder and select the first image only. After you hit okay QuickTime will ask you what frame-rate you want to use. Once you save it you can export it to the web as is or add music, titles and other effects with programs like iMovie or Movie Maker.

# Using Photoshop

- Start by creating a new file, File>New.... Since your final result is meant to be a video you may find it useful to use one of the Film & Video presets that Photoshop has. Just choose one that has the output resolution you are aiming for.



- If you don't already have the TimeLine panel open, bring it up by choosing Window>Timeline. Then in the middle of the Timeline panel click on the button that says 'Create Video Timeline'. If it says 'Create Frame Animation' then use the drop down to change it to Video Timeline. Next you can click on the timeline menu button in the upper right corner of the panel and choose Set Timeline Frame Rate, to set the frame-rate of your movie.



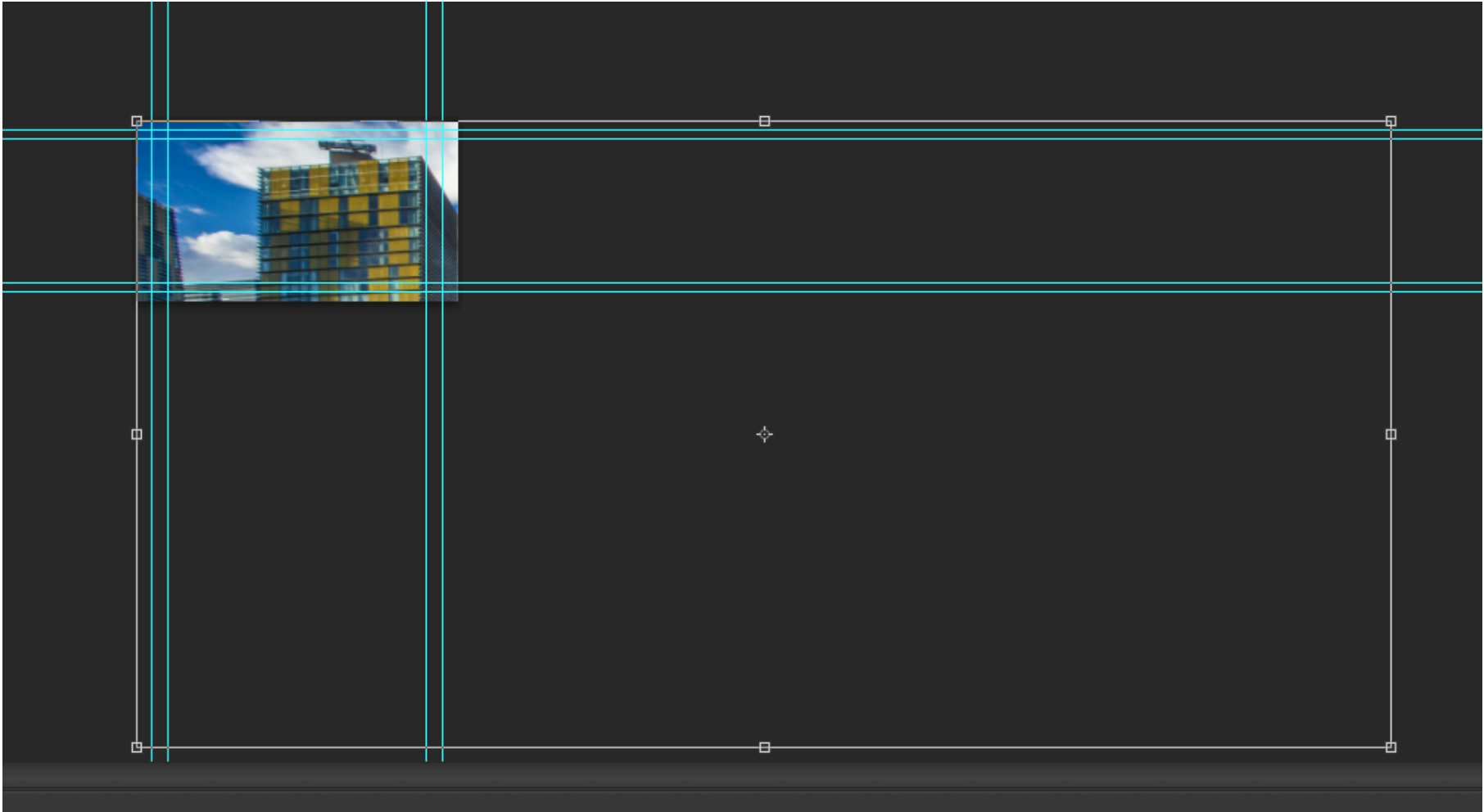
Now you can load in your files by going to Layer>Video Layers>New Video Layer from File.... Navigate to the first image in the folder that has your time lapse photos, select the first image and click open. Once your layer opens, right click on it and choose Convert to Smart Object.

- Now unless you resized your photos to your desired resolution you need to do that at this point. Use Command +T (Control + T in Windows) to bring up Transform window. If the entire outline of the image isn't visible on screen you can use Command + 0 (Control + 0 on Windows) to scale the image. Now drag one or more of the corners in to resize and compose your video frames.

Portion of frame that is lost on an APS sensor when converted to 1440 x 1080.

Black Line = Typical APS Sensor

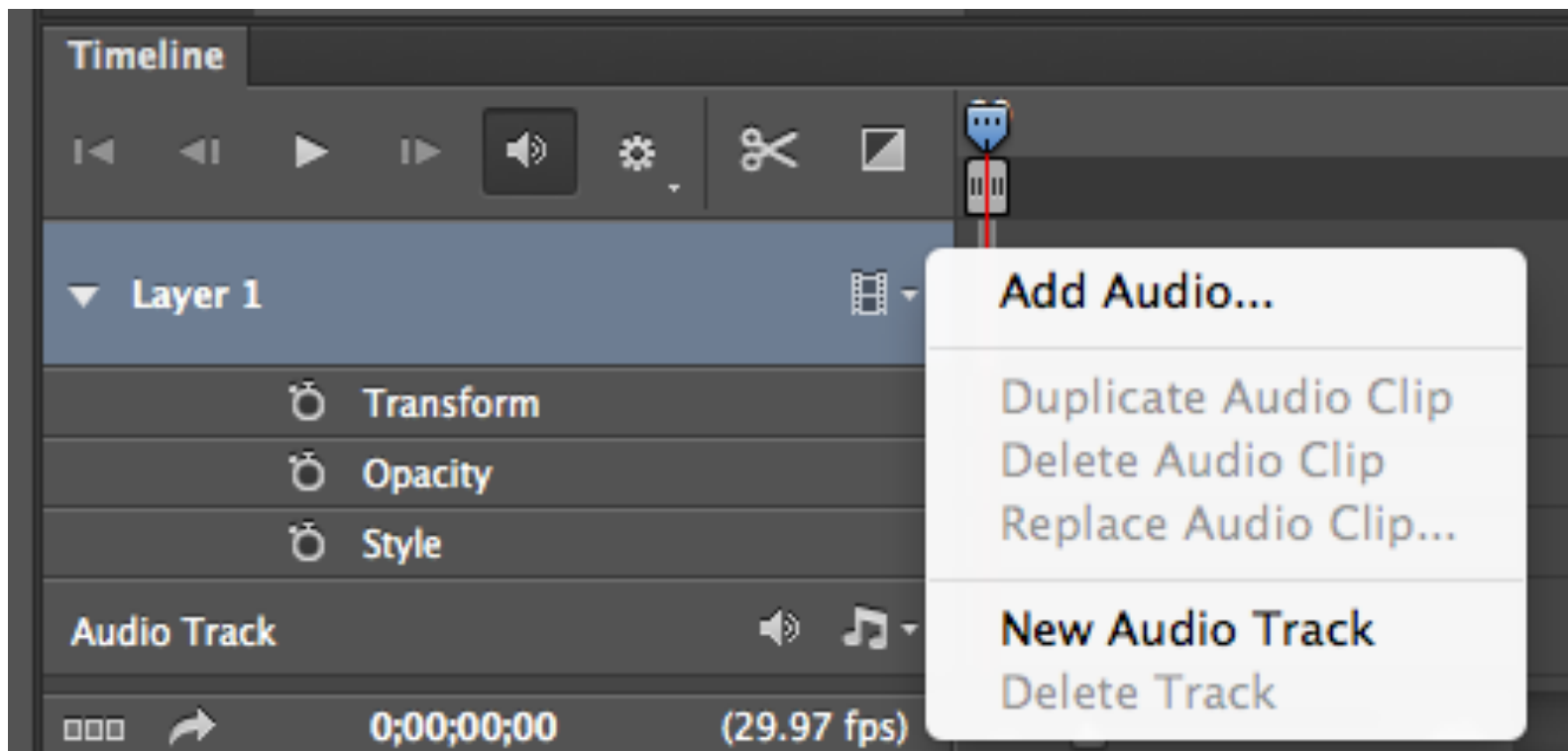
Yellow Line = APS sensor scaled to 1440 px wide







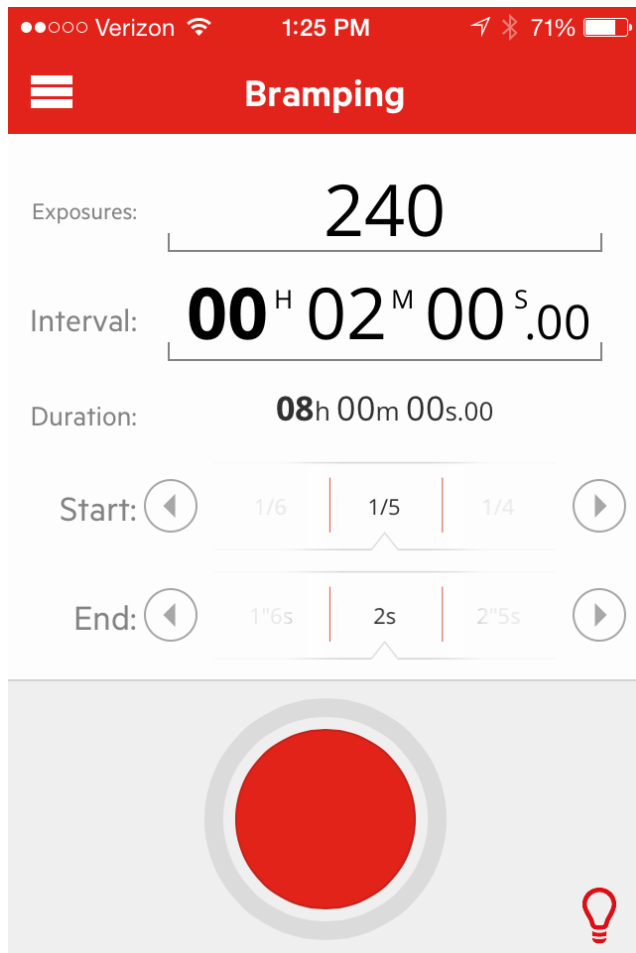
- If you want to add an audio or music track to your video you can do that by clicking on the drop down arrow on the Audio Track layer and choose Add Audio... and browse to your audio track. You may need to change the length of either the video or audio track to get them to be the same length.
- To create your video choose File>Export>Render Video.. Choose a the format and quality you want it at. The H.264 format is a popular one for the web.



# Other Software for Timelapse

- LRTimelapse ([lrtimelapse.com](http://lrtimelapse.com)) It has many very advanced editing controls including a de-flicker mode. Free evaluation trial, Licenses range from 99-249 Euros (about \$130 – 325).
- Premier Pro
- After Effects (GBDeflicker plugin \$99-198)
- Lapseit – iOS and Android (\$1.99 for pro). [Lapseit.com](http://Lapseit.com) Pro can capture 1080p, no restrictions on capture length or frames.
- TriggerTrap (Software free, Dongle \$12-\$25 on Amazon)

# Trigger Trap



Distance Lapse – uses the GPS in your device to trigger a shot at a regular distance interval.

Time Warp – uses an acceleration mode to run the time lapse faster at the beginning and slows down at the end.

Star Trail Mode – long exposure control

HDR Time Lapse – time lapse w/ HDR detail

Bramping – Bulb Ramping. Used to slowly and steadily change exposure over a time interval.

Other Sensors

Sound Sensor

Vibration Sensor

Motion Sensor

Facial Recognition

# Other Uses of Interval Shooting

- Selfies – instead of the 10 second timer you can allow how ever much time you need to get into a shot, and shot several exposures.
- Lighting Trigger – if in an active lightning area, you could set it up to take several long exposures one after another all night if needed.
- Multiple Exposure – i.e. Moonrise