

# Videoining your work.

For my YouTube and Zoom videos, I use a pair of older model Canon Vixia R62 Camcorders. I like this camcorder for six distinct reasons:

- 1.) It will accept an external mic feed
- 2.) It has a manual focus setting
- 3.) There is a 'Spotlight' setting in the video mode
- 4.) It will accept a Neutral Density (ND) filter on the lens – 43mm thread
- 5.) They're cheap when purchased used
- 6.) It will shoot at a 60P rate

Filming hot work is like filming into a bright light. You can expose for the bright bulb and have a black background, or you can expose for the background and have the bulb look like a white blur. I try to level out the playing field somewhat and bring both extremes a little closer together.

## *On the camera:*

- ☒ Set the camcorder to 'Spotlight' mode – The hot steel is like a spot-lit singer: a bright object with a dark background, so why not treat it as such.
- ☒ Put a 'Neutral Density' (ND) filter on your camera lens or phone. This is rather akin to sunglasses for the camera. It will darken the light coming from the hot steel. I generally use NDx2 or NDx4 – or a variable ND filter For a phone, there are clip-on versions that work very well.
- ☒ You may need an adaptor to go from your camcorders screw-in filter size up to the available filter size. My camcorder has a 43 mm screw thread, and I can find filters to match that thread. Some camcorders require an adapter (for example 37 to 43mm). I also place a clear filter on the camera to protect the lens and other more costly filters from damage from sparks, scale, etc.
- ☒ Set the focus to manual. Auto focus gets very confused when you are zoomed in to the work and a hammer keeps coming in and out of the frame.
- ☒ Set the 'White Balance' on your camera. Consult your owner's manual on how to do this. It is well worth doing as it sets the camera up to read colors accurately when recording.
- ☒ Film quality set to 60P – the 'P' means that there are 60 full photographs per second. An 'I' rating means the photos are interlaced, with part of the photograph this frame and the remainder next frame. That makes for poor still frames (freeze frame) from your video.

## *In the forge:*

- ☒ Flood the filmed area with light. You cannot overexpose the hot steel, but you can better illuminate the (now darker with the ND filter) background. Doing so brings the background exposure levels closer to that of the hot material.

- ☒ I use daylight LED work-lights from Home Depot. These are daylight rated 6500K and come with a tripod for \$99.00. Of course, you get what you pay for... I use two lights, one near the heel and one near the bick.
- ☒ These lights can be used for your still photography as well. You have to tweak them a little to make them face downward, but nothing too major is required.
- ☒ Make sure that any background is not going to distract the viewer from the video content. Clean the shop.

*Sound:*

- ☒ I have an external mic for my videos (*AGK sports set – PT45 body pack, ST45 stationary receiver and a C544L headset mic*), but I don't think that is always necessary, especially with the camera on your phone or tablet.
- ☒ Don't compete with tools and equipment for attention, such as your power hammer or gas forge.
- ☒ Keep any descriptive dialogue separate from the work and turn the sound down on the forging sections when editing (-25db). If you are going to narrate the footage on a Zoom (or like) tutorial, then don't bother narrating when filming.

*Frame the video:*

- ☒ Get close to your work if that is what the video is about. Zoom out if you want to show a body position, technique or piece of equipment. Panoramas of someone forging in the distant background isn't going to help support your effort very much.
- ☒ Zooming in and out excessively can be distracting.
- ☒ I film from the bick-end predominantly, with the camera set up just above anvil height and slightly forward of the off-side edge. I find that this position shows the angle of the work in relation to the anvil, and the hammer angle. I change position as required by the project or technique being used – say drifting over the pritchel hole.

*Editing:*

- ☒ Give the film a title and credits.
- ☒ Don't use fancy transitions from one clip to the next – teddy bears somersaulting across the screen to bring in a new clip can be a bit distracting.
- ☒ I use an Apple/I-Mac computer with ADOBE Premiere Elements (\$100.00) video-editing software package. Other editing software sometimes comes with a camcorders, or is available online.

*Tripod for the camera.*

- ☒ I strongly encourage you to use a tripod when filming. There are adapters available to hold cell phones to the tripod – well worth the \$10.00 or so that they cost. A heavy tripod doesn't bounce as much as a light one when someone is forging. Extend the legs for height rather than the center pole from the pan head. The center pole can vibrate when someone is forging at the anvil.

# Photographing your work

First the disclaimer – I’m not a photographer by any stretch of the imagination, but I do take photographs.

I work in Black and White (Grayscale) when I produce the ‘how-to’ steps for my articles or books, but I photograph in color and convert the image in my software.

I feel that the B&W format is less busy, making it easier to point out the important take-aways from the shot.

I use SLR cameras –older NIKON models, a D40X and a D3000. I have a 16 to 85mm Zoom lens with a 3.5F aperture. I’m sure that newer cell phones and tablets will work fine, but that’s not what I have or use.

## *On the camera:*

- ☒ The camera is given ‘Speed Priority’. I try not to shoot slower than 1/80<sup>th</sup> second. Shooting faster shortens my depth of field – the things that are in-focus. Shooting slower risks camera shake, as my camera is hand-held.
- ☒ I like the automatic focus on the camera, as the camera’s eyes are much better than mine are these days. ...and, I can operate the camera with one hand, leaving the other spare to help in holding tools for out-of-position shots.

## *The photo booth:*

- ☒ The booth is made up of a base and backdrop, both made from plywood. The sides are left open for lighting purposes.
- ☒ Chromakey is very important. If you have ever watched how action movies etc. were filmed, with the actor in a trapeze harness turning summersault’s in front of a lime green or blue background – that colored background is a chromakey.
  - I prefer lime green, and I buy it as a paint from Home Depot – as a Flat or Matt finish.
  - The base and backdrop of my booth are both painted lime green. The lime green turns into a perfect neutral gray when I convert my color photograph into grayscale.
  - Why not just shoot in the B&W format on the camera – It’s sometimes not quite that easy. The way that a lot of cameras get B&W shots is to drain color photographs of all the color saturation – but they are still an RGB (Red, Green + Blue) or CYMK (Cyan, Magenta, Yellow, and Black) files.
  - For a Zoom or the like tutorial, I doubt that we would care, but professional printers care – so I shoot in color and change the file in my editing software to grayscale.

### *Holding the tools:*

- ☒ I use impact grips (for lighting) – two per ‘arm’ – on my two ‘arms’. One grip acts as the elbow or shoulder, and the other as the wrist. And, I use two arms. One for the tongs or hand tools, and the other for the hammer.
  - I have a block of wood to the side of the booth with 15 or so holes drilled in it. I can move the placement of the arms to match the anvil position and natural position of the smith as needed.
  - I use ‘Cold-Rolled’ 5/8-inch and 1/2-inch diameter bars for the ‘bones’ of the arms – cold rolled as it is smoother and true to dimension over hot rolled, and slides through the grips easier.
- ☒ I have a dedicated hammer for my photographs. The handle is drilled to accept the 1/2-inch diameter bar, which is glued in. Hose clamps would also serve to clamp the round bar to the handle, but after changing hammer position a few times, you’ll see the attraction of the unencumbered and smooth handle.
- ☒ The tong or tool arm has a pair of Vise-Grips welded to the 1/2-inch rod.
- ☒ I also have a variety of bricks, blocks and small spacers to rest the tongs on when I need to. These are stacked to the correct height and rest on the base of the booth, by the side of the anvil. Some short off-cuts of small section angle iron are also useful to have laying around.
- ☒ Magnets – the rare-earth type – great for propping up things that want to topple over on the anvil – I use 1/4-inch and 1/2-inch diameter – but endeavor to keep them well away from the camera!

### *The anvil:*

- ☒ The top and rolled edges of my anvil are painted in a light primer gray. My tools are painted in a darker primer gray for two reasons:
  - One, you can see the tool contrast with the top of the anvil in photographs where the two overlap.
  - Two, it more closely matches the steel piece being photographed, and therefore evens out the exposure extremes.
- ☒ I often must turn the anvil to get the desired camera or lighting position. Having something like a furniture dolly under your anvil goes a long way in making this an easier process for your back.

### *The vise:*

- ☒ Again, painted primer gray.
- ☒ The vise is held in a tripod bolted to the leg. This allows me to turn the vise as needed to get the shot.

*Lighting:*

- ☒ I use four, 500-watt (incandescent equivalent) lighting arrays rather than a flash. I like to see what the shadows are doing in any particular photograph. The bulbs are daylight (5-6000 kelvins) rated.
  - I suspect that four of the Home Depot Husky LED lights would serve just as well, but they were not available at the time I purchased my lights.
- ☒ I have a light in each corner of the booth. Take care not to have the rear lights set at a height that they reflect straight into your camera lens. The rear lights are usually fixed, and don't require any changing.
- ☒ The front lights are moved out of the way as I stage each photograph. The height is also changed quite often as needed.

*The work:*

- ☒ My step by step pieces reflect the completion of one step and the start of another – two photographs. The pieces are pickled in vinegar overnight and given a wax finish to both make them a little darker, and to protect them from rust.

I hope that these guidelines help you along as you develop your own method of capturing your work on both video and still shot.

I have written this article to help promote blacksmithing education on-line, during this period of COVID-19. Any feedback is appreciated.