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DSLR CAMERAS:

A VIDEO CAMERA STUCK IN A

PHOTOGRAPHY CAMERA'S BODY

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When I am shooting a project with my DSLR, I often times get a very confused look or question such as "are you shooting a movie on that camera?" Although DSLRs produce a phenomenal image quality and have changed the industry, they are first and foremost photography cameras. Because of this, there are some noticeable disadvantages, but a multitude of advantages to shooting video in live view mode. In this article, I will give an overview of these problems as well as accessories and workarounds that make shooting video on the DSLR easier and more ergonomically close to a video camera's needs. However, my guide is only my opinion and touches on the surface, so be sure to research other accessories and information online.

The sensor is a primary reason why DSLR footage looks so beautiful. As you can see by the

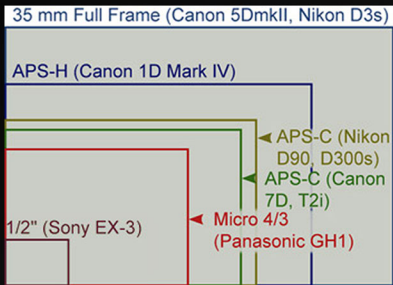
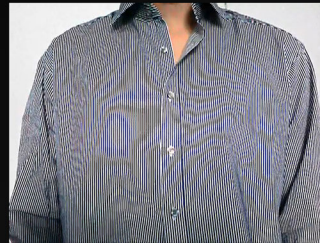


image above, DSLR sensors are much larger than a 3CCD sensor of the Sony EX-3, which is a \$9,000 professional camera. Although a larger sensor doesn't always mean better, it does allow for a greater dynamic range, shallower depth of field, and better low light shooting. You may have noticed that the Mark II 5D and the 7D differ in sensor size. When deciding on a camera, you must take note of this as the full-frame sensor of the 5D will allow you to have a larger angle of view. For example, if I were to put the same lens on a 5D and a 7D, the image on the 5D would be a wider view than the 7D.

Although these advantages are great in

comparison to professional cameras costing 5-10 times more than a DSLR, there are minor disadvantages to the camera that must be worked around. Rolling shutter is a drawback to the large CMOS sensor. If you are performing a quick pan or tilt, the image will either jitter or wobble. Another drawback is what we call aliasing or the moiré effect. Because DSLRs are made for still images primarily, the video mode is trying to compress the high resolution of 5616 x 3744 to 1920 x 1080. Because of this, the camera skips lines to compensate resulting in fine textures and patterns to appear



reflective and jagged. To give you a better idea, look at image above. To combat both of these problems, the user must be weary of the drawbacks and adjust accordingly. Whether the solution is performing slower pans or choosing different angles and costumes to compensate.

Lenses. There are many brands and types of lenses out there. If you are a poor college student like me, I look

for the best bang for my buck. Also, with adapter rings, you can basically purchase any brand of lens and fit it to your camera. I personally went with Nikon lenses as they have the best build for the price in my opinion. However, I don't have the pleasure of auto focus

for still images as the sensor doesn't recognize the Nikon lens, but as I shoot primarily video with my Mark II, it isn't much of a problem. The other factors to think about when purchasing lenses is prime or zoom. At first glance, you

you probably know the basic distinction between the two. Prime lenses have a fixed focal length, while zoom lenses can change focal lengths by zooming in or out. As a filmmaker, I suggest using prime lenses except for documentary shooting. What prime lenses benefit over zooms is the speed of the lens. When I say speed, I am referring to how wide the aperture can open. For example, when comparing two lenses costing around the same price, a 50mm prime lens will be able to open as far as an f/1.2. However, a 24-85mm zoom lens will only allow you to open up to an





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f/ 3.5 at the 24mm side and f/5.6 at the 85mm side. With the wider aperture, you will be able to shoot in lower light conditions and you will have a much shallower depth of field. Lastly, if you are looking to invest in only one lens, I would suggest a focal length of 50mm. This is the most versatile lens that I have in my kit. You can shoot many different types of shots and is my go-to lens.

Support System. When holding the camera directly, your hands produce a jitter that is noticeable. Koo over at nofilmschool.com says that support systems are used for two reasons, "One, add weight in order to increase mass and minimize jitter, which many of the add-ons discussed below will do. Two, add a third point of contact to stabilize the camera against your body (and relieve some of the burden from your arms)." Also, with a rail system, you will be able to attach different accessories that will help with the filmmaking process such as follow focus, external monitor, mattebox, etc. On the higher end of support systems RedRock, Zacuto, or Cavision range in price from \$400-\$2,000. However, you can save on this piece of gear by searching Ebay as many Indian manufacturers are selling good products. I personally have a gini made rail support system that I ordered off of Ebay.



Follow Focus. This piece of gear is vital to filmmaking. The follow focus allows you to rack and keep the subject in focus while not touching the camera directly. This is extremely important in DSLR filmmaking because the depth of field is so shallow. There are two types of follow focus systems, friction and gear based. Frictions based follow focuses



touch the lens directly while gear based systems attach a ring around the lens. Gear based systems are more reliable in that it is less likely for the follow focus to lose grip of the ring. Again, Redrock, Zacuto, and Cavision are the high end retailers of follow focuses. Their prices range from \$350 for a basic follow focus to \$850 for a complete package including gears, whip, and speed crank. However, you can find follow focuses from Indian sellers such as Cinecity. I purchased my follow focus from them and although the build quality is not as great, it get's the job done.

View Finder. This piece of gear has two main purposes. First, it creates a third point of contact like the shoulder mounted support systems. But more importantly, it allowed you to see a magnified image of what you are shooting. This makes it easier for you to keep focus while shooting. Unfortunately, if you have a director that wants to see what you are shooting on a field monitor, you will have to invest in some external field monitors. Redrock, Zacuto, and Cavision are on the top again priced around \$300-400. Another alternative is the LCDVF off of B & H PhotoVideo for \$130.



Matte Box/Filters. This will make your setup look more professional than any other piece of gear. But it isn't just for aesthetic purposes. The matte box is used to block out any light that would make lens flares. Additionally, you can drop in 4x4 or 4x6 filters that allow you to use ND, Gradient, Polarizing, Star, etc to do in camera manipulation. Redrock, Zacuto, and Cavision matte boxes are priced around \$1000. Cinecity and other lower cost brands are around \$300-400, but the build quality is definitely apparent. On top of the matte



box, filters are an additional \$150/filter. I have gotten away with not purchasing a matte box yet, but if you are planning on shooting outdoors, I would highly suggest it. An alternative route would be purchasing a variable ND filter that attaches to the lens. It allows you to manipulate a wide range of ND filters to darken your image. Prices range from \$200-400.

Audio. This is probably the biggest disadvantage to shooting on DSLRs. For professional productions, you want to have the best audio possible. However, there are no headphone inputs to monitor the audio and no XLR inputs to attach a microphone. There are two types of audio capturing routes that you can go with: single system and double system audio. Single system captures the audio directly to the camera which saves you time in post production. Double system captures audio onto an external recording device which allows you to be completely separate and away from the camera, but syncing will have to be done in post. Depending on the production, one or the other may be more beneficial, but here are some options for both. For single system, there are on-camera shotgun microphones that plug in directly into the mic input on the camera. Rode is the first brand that comes to mind, priced around \$250. Additionally, there are XLR adapters priced from \$200-400. such as the-





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Juicedlink Pro boxes which attach below the camera, which does add some height. In terms of double system audio, there are more options than I could name off ranging in cost up to thousands of dollars. However, as I am not an audio guy, for basic needs you can find an audio recorder with XLR inputs and pre-amp for around \$300. I suggest the Sony Zoom H4n as it is small, compact, but offers you a good amount



features. However, if you are working on a bigger project, invest in an audio technician that has a field set up designed specifically for capturing good audio.



Picture Style. On top of accessories that make shooting video on DSLRs easier and more to the needs of a professional, there are in camera settings that should be adjusted to make the image ready for post. Many people do

not know about the Picture Style settings that are available to DSLR users (I'm writing based on my own experience with a Mark II). If you are planning on color grading your footage in post, you want to have the flattest image that

gives you the most information to work with. The factory standard setting is extremely saturated, very contrasted, and crushed blacks. If you are planning on using a factory setting, set the camera to picture style Neutral and crank down the contrast. However, there are people online making user settings with the included Picture Style Editor software. Although these are great presets, each camera is unique so you should look at a tutorial on how to set the best picture style for



Standard Picture Profile



Neutral Picture Profile

Sharpness and contrast turned all the way down, saturation, 2 notches down

your camera.

As you can see, to make filmmaking with a DSLR easier and to the needs of video professionals, it can get a little bit pricey. But, in comparison to a \$10,000+ that won't give you the same image quality as DSLRs, the extra investment is worth it. Not to mention, these accessories will be interchangeable with most cameras. I have touched the surface of many of the advantages and disadvantages as well as solutions of DSLR shooting, but there are great resources online that you should utilize. I have spent days and days scouring the internet on online forums, guides, tutorials and websites to learn about making DSLR filmmaking as best as possible.

Check out these website for more information:

- www.nofilmschool.com
- www.cinema5d.com
- www.planed5d.com
- www.dvxuser.com
- www.creativecow.com

ABOUT ME



Ed Wu is a recent graduate of Indiana University in the spring of 2011 with a triple major in Telecommunications, Communications and Culture, and East Asian Studies, with a minor in Business. Growing up in Huntington Station, NY, Ed originally came to IU in hopes of studying music at Indiana University's world-renowned Jacobs School of Music. Upon arriving, however, Ed decided to pursue a different field of expertise and instantly fell in love with film and video production.

Through coursework, he was immediately drawn to operating hands-on with the camera and lighting, thereby developing a unique eye for cinematography. Realizing that coursework was not enough, he brought this passion outside of the classroom and started directing, shooting, and editing to enhance his vision.

He has worked on feature-length and short films, music videos, promos, and other video related projects, some of

which have received notable awards. This includes the first student made feature length to premier at the IU Cinema for the film "Nathan and the Luthier." For his films "Giggles" (2010) and "Sparks," (2011) he has won the prestigious National Golden Tripod Award in both editing and cinematography, respectively, as well as Best Picture Award for the Indiana University division in the nation-wide Campus Movie Festival in two consecutive years. Additionally, "Sparks" (2011) was accepted into the short film section of the world-renowned Cannes Film Festival. He has also been awarded Best Advanced Fiction Film for the annual MultiVisions conference at Indiana University for his short film "Two Juliets," (2010), and Best Open Film for the film "Vice Support" (2011).

On top of producing his own personal projects, he has worked extensively with professional production companies Blue Ace Media, on local and regional commercials, and Boston Productions, on a new multimillion-dollar exhibit on the Civil War for Connor Prairie. He is currently managing his own company, Wuhawk Productions LLC.