

General recommendations when borrowing video cameras from the CDA depot

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If you are shooting video, then first try to borrow a video camera, not a still camera that can shoot video. Some of the following cameras record HD video and others record 4K as well. I don't recommend shooting in 4K with any of these cameras, so I have left out that variable in these recommendations. Please contact me if you have questions about a 4K workflow.

Here are the video cameras at the CDA in order of best to worst image quality:

CAMERA OPTION ONE: Video Cameras:

Sony FS5

Sony Z90

Sony EX 3

Sony EX 1

JVC GY-HM 150u

JVC GY-HM 100u

If you know that a low light situation will be unavoidable then don't borrow the Sony EX or JVC video cameras. Go to the second option of a Sony mirrorless still camera instead.

All of the video cameras come with a detachable short directional microphone and/or built-in microphone. The built-in microphones should not be used and the short directional microphones are useful if the speaker is close to the camera. In addition, there are the following microphone options to plug directly into the camera. All of these video cameras have proper XLR inputs for microphones and pre-amplifiers that are powerful enough to get a clean audio recording.

Always do a test recording for audio. Record a short clip and then listen to the clip in a quiet environment on the headphones. Make sure the audio levels are correct and that there is no noise in the signal. The Sennheiser HD 280 headphones from the depot are good. Monitor the audio signal through headphones while recording.

Microphone options for plugging directly into a video camera:

1. AVX wireless kit: There is a clip-on microphone and a handheld microphone in the kit. When the AVX receiver is plugged into the XLR inputs on any of those cameras, or any other camera, the volume control level on the camera should be on MANUAL not AUTO

level control. Failure to do this may cause distorted audio. The CDA has older Sennheiser EW wireless kits as well but they are not as good.

2. Sennheiser MKH 416: This a directional microphone mounted directly on the camera, on a stand or held on a pole by a sound recordist. It is the best option for shooting video outside with the accompanying Field Kit.
3. Dynamic microphones: if the situation is really noisy, a handheld dynamic microphone, if appropriate, is a good choice. The depot has Shure SM58 and Sennheiser MD 421 dynamic microphones. The SM58 can be used outdoors. These microphones require a lot of amplification so it may be better to use them with an external audio recorder.
4. Other condenser microphones: the Neuman KM 184s are good for recording instruments in a studio or concert setting.

CAMERA OPTION TWO: Sony mirrorless cameras

If there are no video cameras available (or if you need to shoot in a low light situation and the Sony FS5 and Z90 video cameras are not available) then the Sony mirrorless cameras become the second best option for shooting video. The depot has some Sony a7s and Sony a7r cameras. The video image quality is similar to the Sony FS5 camera. Both cameras have less image noise in low light than the FS5 but they have image problems due to rolling shutter issues.

Audio options with the Sony mirrorless cameras:

The Sony mirrorless cameras, like all still cameras, do not have XLR microphone inputs. They have a smaller 1/8" audio input and a weak pre-amplifier that will add noise to your signal if you are not careful.

Here are the best to worst options for recording audio with the Sony mirrorless cameras:

The Sony XLR K2M hot shoe audio adapter is the best audio option. It is essentially the same audio input that is on the Sony Z90 video camera. It has a short directional microphone and XLR inputs for all the microphones mentioned above. The input is clean. Once again, when using the AVX wireless microphones, the input level must be set to MANUAL.

The second best option is recording audio to an external Zoom or Sound Devices recorder. These recorders come with differing amounts of inputs and the Zooms also have a built-in stereo microphone (which I don't recommend using for any crucial recordings). The depot has number of Zoom H6N recorders. These have four XLR inputs and if you wish to have a backup recording to the camera, you can send the signal out from the Zoom to the Sony via the Sony's 1/8th audio input. The audio files from the recorder will have to be synchronized to the video files later on, so it is important to slate. The depot has some proper slates.

The third option is the microphone input on the Sony. It will be noisier than the other two options but will work fine as long as the input volume control on the camera is low, below 10. You can also mount a short directional Rode microphone on the camera that goes into the mic input. These appear in the Patron Portal booking system as DSLR shotgun microphones. Once again, the input must be low on the camera. The audio signal from the Rode is OK if the speaker is close to the camera but these are not high quality microphones.

CAMERA OPTION THREE: Canon DSLR cameras

The CDA depot has professional **Canon 5D** cameras of varying vintages. I have not tried out the video options in the new 5D models but based on the specifications, they are an inferior choice for video than the Sony mirrorless cameras. I will update this document with some detailed comments on these cameras later. Use an external audio recorder with this camera.

The CDA depot has many **Canon Rebel** cameras, mostly of the T2i (EOS 550 D) vintage. It would be the last camera choice for video, below all the other video cameras and all the other still cameras. When using any of the Canon Rebel cameras for video, the audio should be recorded to an external recorder like the Zoom. It is useless to output a signal from the Zoom to the T2i microphone input. The Rode microphone can also be used directly into the camera, but the signal will be noisy due to the T2i camera's automatic audio compression.