Recommendations when reserving video cameras from the Fine Arts EV depot

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Unless you need to be discreet, a video camera is the better choice for shooting video rather than using a still camera with a video option. There are many benefits to the video camera: the controls are specifically designed for shooting video, they have built-in ND filters, they have proper XLR balanced audio inputs, and they exhibit fewer rolling shutter issues than the still cameras. The Sony FX6 video camera has a full frame 4K sensor, so the low light performance is very similar to the Sony full frame mirrorless cameras, although you have to be careful on your choice of ISO (read the CDA FX6 guide).

https://www.concordia.ca/cunews/finearts/digital-arts/audio-video/video/sony-fx6-cda-camera-guide.html?c=/finearts/cda/support/articles

For handheld tracking shots, the best solution in the EV depot is to use a full frame mirrorless Sony **a7r III** camera combined with the **DJI Ronin RS2** gimbal. Because you can shoot in Slog 3 in both the Sony FX6 and a7r III cameras, it is easy to match the video from each model. The Ronin gimbal does not support any of the video cameras in the depot. You must also use a shorter, lighter prime lens with the camera (read the CDA Ronin gimbal guide).

https://www.concordia.ca/cunews/finearts/digital-arts/audio-video/video/dji-ronin-rs-2-camera-gimbal.html?c=/finearts/cda/support/articles

All the CDA video and audio guides can be found on this page:

https://www.concordia.ca/finearts/cda/support/audio-video.html

OPTION ONE: Video Cameras

Here are the video cameras in the EV depot in order from best to worst quality. This assessment is based on quality of image. The Sony EX cameras are HD only.

Sony FX6 (4K and HD, full frame CMOS sensor, interchangeable lens Sony E mount)
Sony FS5 (4K and HD, super 35 CMOS sensor, interchangeable lens Sony E mount)
Sony Z90 (4K and HD, super 35 CMOS sensor, fixed lens)
Sony EX 3 (HD, 3 x ½ inch CMOS sensors, fixed lens)
Sony EX 1 (HD, 3x ½ inch CMOS sensors, interchangeable lens for ½ inch sensors)

Audio options with the video cameras:
All of the video cameras come with a built-in microphone and a detachable short directional microphone. The built-in microphone should only be used as a reference and the short directional microphone is useful if the speaker is close to the camera (6 to 8 ft). See the

microphone options below for other and better choices. All of these video cameras have proper XLR inputs for microphones and their pre-amplifiers are powerful enough to get a clean audio recording. Reserve the Sennheiser HD 280 headphones from the depot and monitor the audio signal through these headphones while recording.

Other microphone options (plugged directly into a video camera):

1. **Sennheiser AVX wireless kit**: There is a clip-on microphone and a handheld microphone in the kit. When the AVX receiver is plugged into a XLR input, 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 very directional microphone, a short shotgun interference tube microphone. Mount it directly on the camera, on a stand, or it can be held on a boom pole by a sound recordist. It is the best option for shooting outside when used with the accompanying Field Kit (Rycote blimp).

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 S**M58** 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 microphones**: the **Neuman KM 184** condenser microphones are good for recording instruments in a studio or concert setting. The **Shure SM57** dynamic microphones are also good for this purpose, especially louder instruments that would overpower a condenser. But typically, in concert situation the camera will be receiving a stereo signal from a sound mixing board.

OPTION TWO: Full Frame Still Cameras

The **Sony alpha series** mirrorless cameras have good low light performance. The video quality on the Sony alpha cameras is similar or better than the Sony FX6 camera but there can be more rolling shutter issues (breakup in fast motion or handheld motion). The Sony mirrorless cameras can be used as a second camera on a shoot with the Sony FX6. They both shoot in Slog 3. The XAVC codecs on all the Sony cameras (video and still) are Adobe Premiere friendly and easy to edit natively. The **Canon 5D** is a full frame DSLR camera that is also a good choice for video. It has two drawbacks in comparison with the Sony. The camera is heavier and it creates higher bitrate video files that are harder to edit. The video will be harder to match with the Sony FX6.

Gimbal option with the Still Cameras
The DJI Ronin RS 2 camera gimbal can only be used with still cameras and a short prime lens. This gimbal paired with a Sony alpha mirrorless camera is the best option for a handheld

tracking shot or any other complex camera hand held movement. The gimbal has other options as well, like automated movement during video and timelapse recording (read the CDA Ronin gimbal guide).
https://www.concordia.ca/cunews/finearts/digital-arts/audio-video/video/dji-ronin-rs-2-camera-gimbal.html?c=/finearts/cda/support/articles

Audio options with the Sony mirrorless cameras:
Never use the built-in camera microphone for anything other than a reference recording. Also, the built-in audio input on the Sony mirrorless cameras, similar to most still cameras, is a small 1/8" audio input jack with a weak pre-amplifier that may add noise to your signal. It is much better to use the hot shoe adapter (see option one below). Reserve the Sennheiser HD 280 headphones from the depot and monitor the audio signal through headphones while recording.

Option one: reserve the **Sony XLR K2M** hot shoe audio adapter. It is essentially the same audio input that is on the Sony Z90 video camera. It comes with a short directional microphone and two clean XLR inputs. Look at the microphone options above in the video camera audio options. When using the Sennheiser AVX wireless microphones or other wireless microphones, the input level must be set to MANUAL.

Option two: record 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 unless you want a more ambient stereo recording).
The depot has number of **Zoom H6N** recorders. These have four XLR inputs. The audio files from the recorder will have to synchronized to the video files later on, so it is important to slate and to clearly verbally identify each shot. The EV depot has a slate.

Option three: use a short directional **Rode microphone** mounted on the camera going into the 1/8" mic input. This will work OK as long as the input volume control on the camera is low, below ten. These Rode microphones are in the Patron Portal booking system as DSLR shotgun microphones. The audio signal from the Rode is OK if the speaker is close to the camera but these are not high-quality microphones. Use with caution.

OPTION THREE: Canon Rebel DSLR Cameras

The EV depot has many **Canon Rebel** DSLR cameras, of different vintages. These are the last choice for shooting HD 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. The audio inputs on these cameras are noisy and tend to use automatic compression. Only reserve these cameras if there is nothing else available. The video quality is not great but acceptable in situations with ample light. Very low dynamic range.