

# PHANTOM MIRO C110 (HIGH-SPEED CAMERA) PROCEDURE

6/21/2022

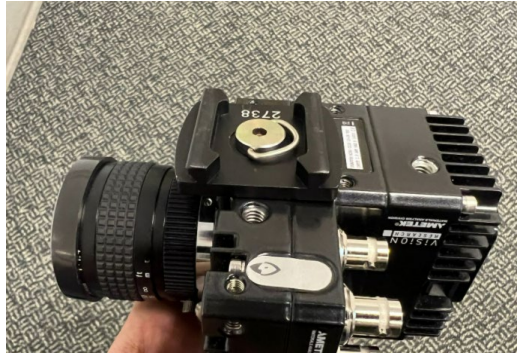
1. The high-speed camera can be found at Jonah Spicher's office in ECCE 167 (ITLL Electronic's Center) in the Pelican case pictured below.



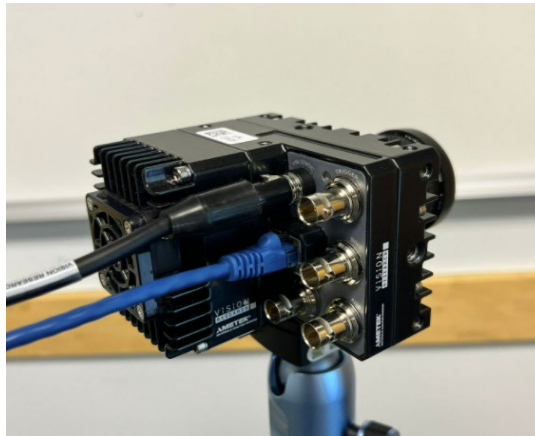
2. Set up the tripod, make sure that the legs are locked.



3. Attach the tripod mount to the camera and install it to the tripod.



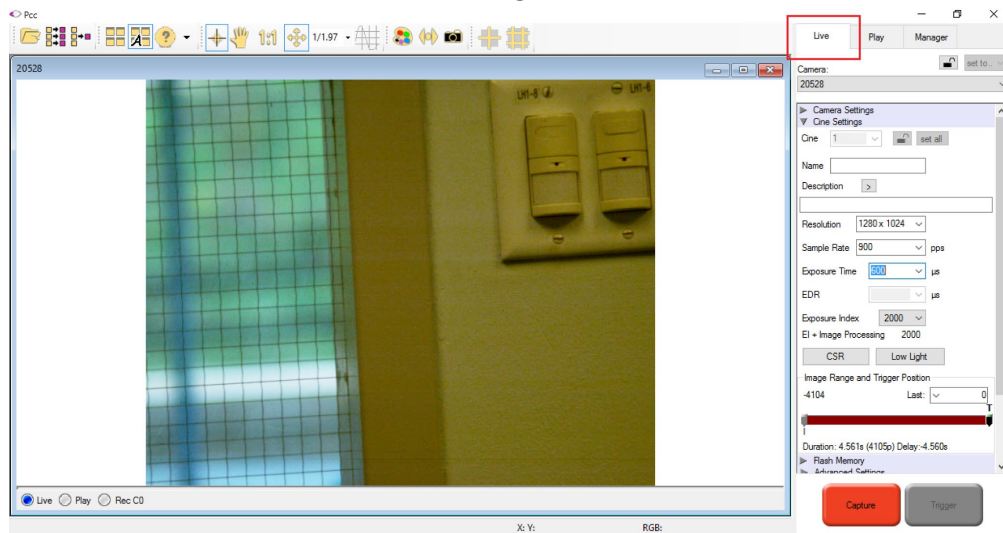
4. Take the Phantom power supply and the ethernet cable and attach them to the camera.



5. Turn on the HP laptop found on the Pelican case. Log in to the checkout account with the **PASSWORD: checkout**. Open the **PCC 2.8 software**.
6. Connect the Phantom power supply to an electrical outlet and connect the ethernet cable to the laptop. (If the camera is successfully connected to the laptop, the serial number will appear under the Manager tab and Cameras)

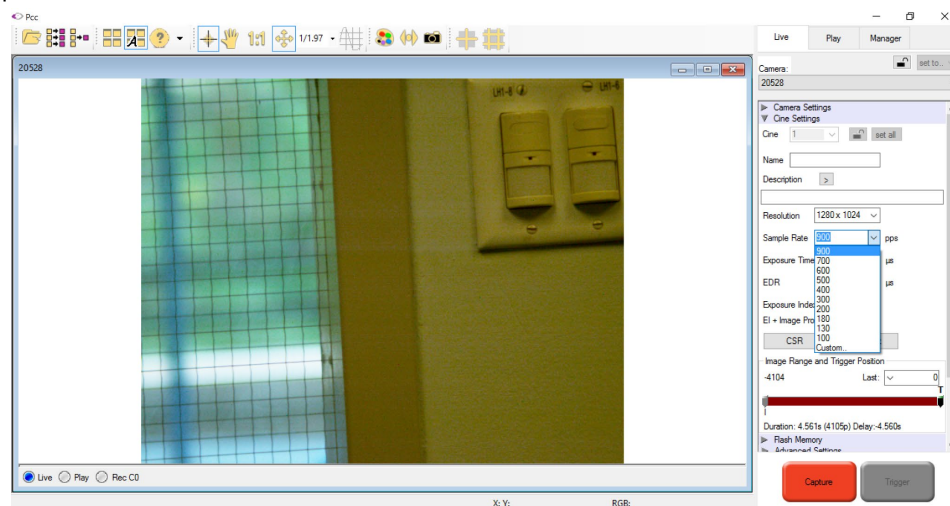


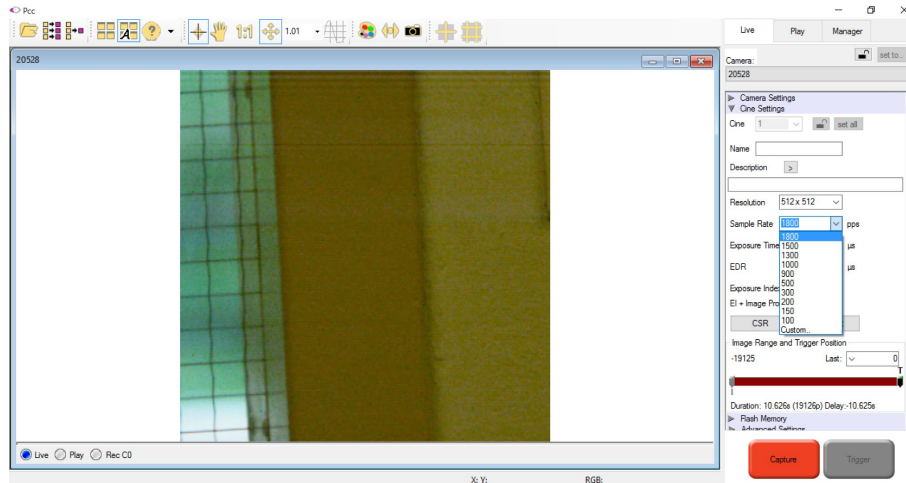
7. To see the live view of the camera change the tab to the Live tab.



8. Change the settings of the camera according to your needs. (Lower resolution will allow taking a higher frame per second videos. The highest frames per second for each resolution can be found when clicking the sample rate tab for each resolution). Exposure time can be set according to the light available in the set. The amount of time that can be recorded is shown below the image range and trigger position bar.

An example is shown below. With a 1280x1024 resolution, the highest frame rate is 900 frames per second, while if the resolution is 512x512, the highest frame rate is 1800 frames per second.

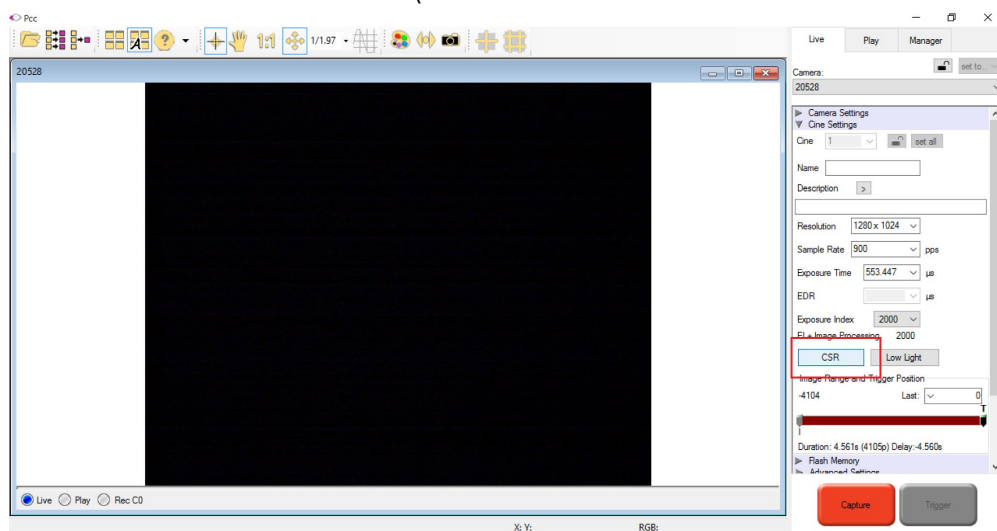




9. Do the CSR once the camera setting has been done. (CSR must always be done every time a setting is changed)  
To do the CSR, cover the lens of the camera so no light can pass through.

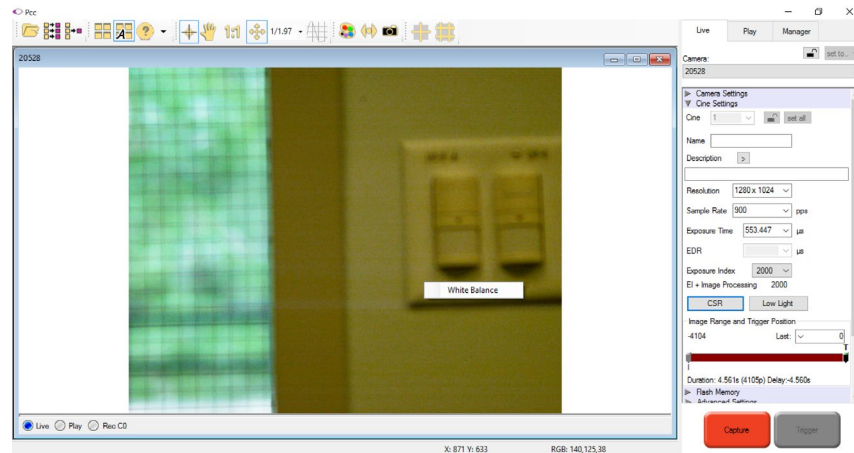


Press the CSR button and run the CSR. (Remove the lens cover when CSR is finished)

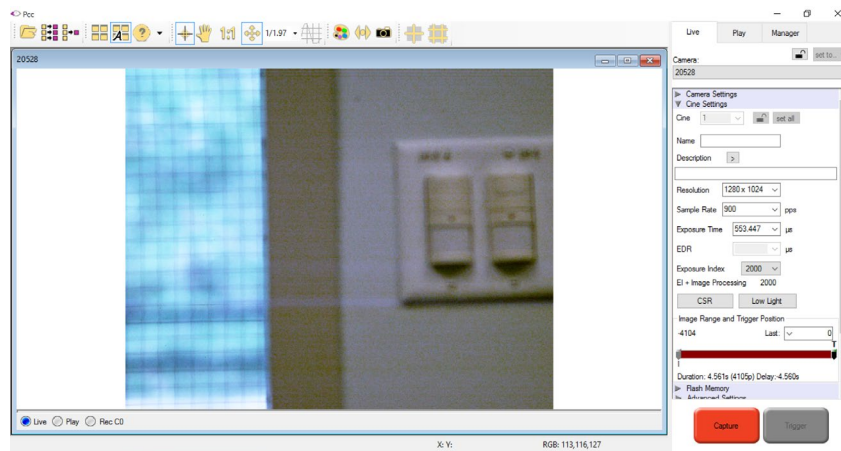


10. Do a white balance on the camera by right-clicking on a spot that has a white color and click the White-balance icon.

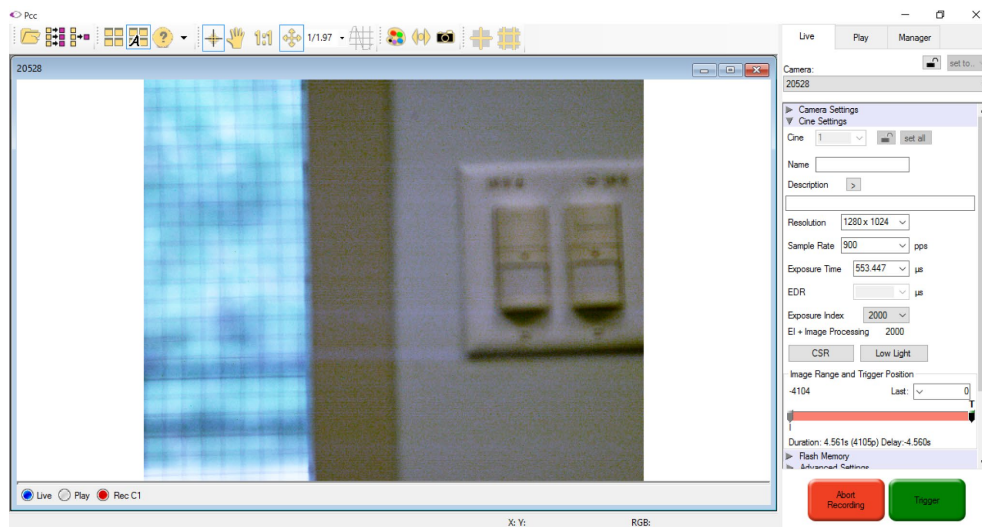




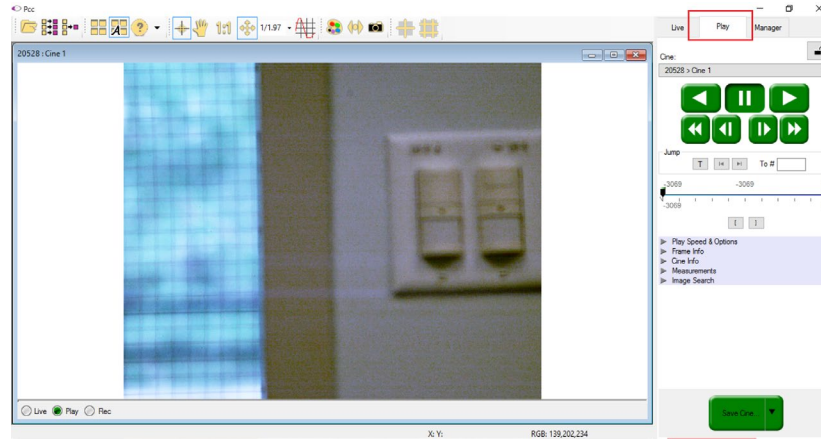
11. To start the recording, press the Capture button.



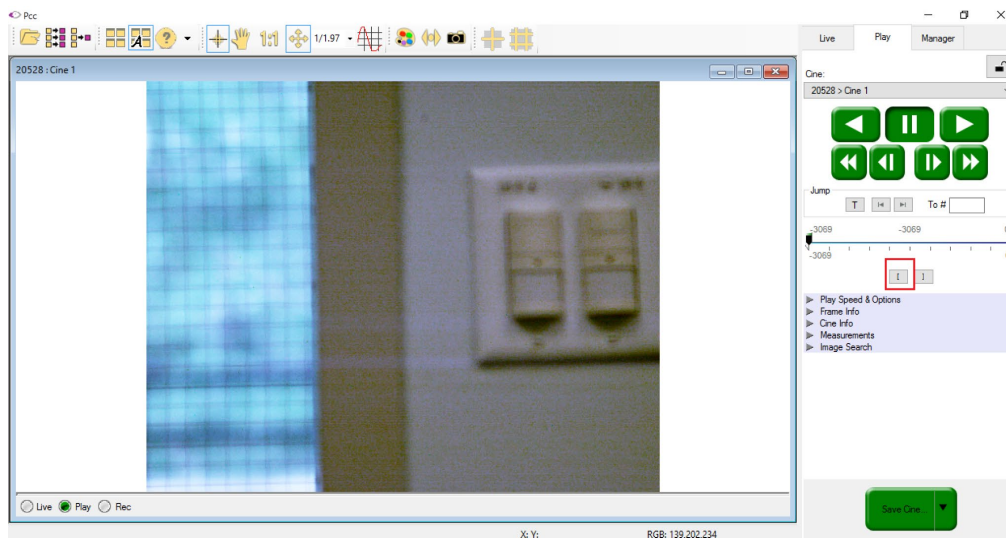
12. To stop the recording, press the Trigger button. (To cancel the recording, press the Abort Recording button)



13. To play the recording, go to the Play tab.

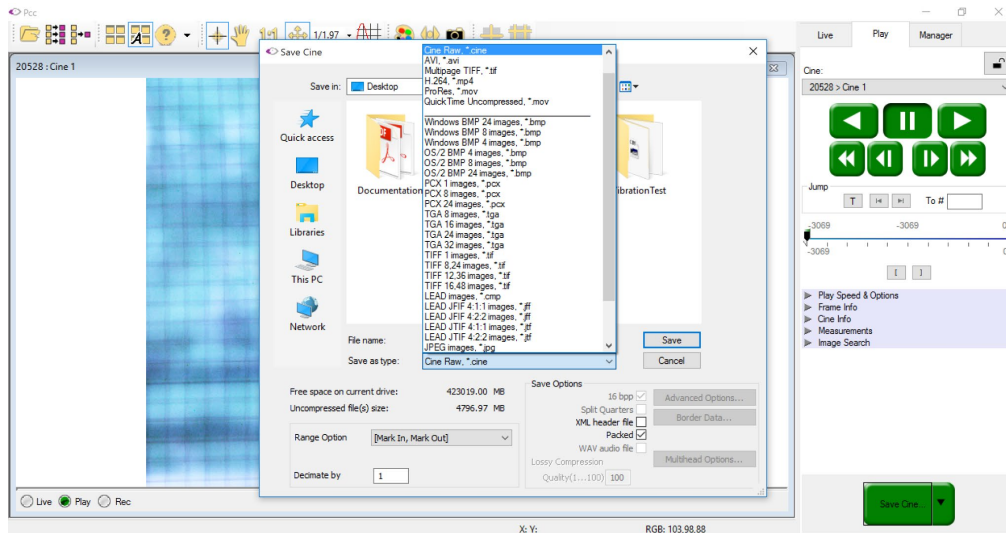


14. Play the recording, and pause when you want to have that frame to be the beginning of the exported video. Click the ( [ ] icon to have it as the starting frame. The same with the ending of the video by clicking the ( ] ) icon when you want to end the video at that frame.



15. To save the recording press the Save Cine button.

Name the file name, then choose the save as type as what is needed. Cine Raw type file will allow you to have the raw and high-quality file however the file is big and takes about 4GB per recording. The easiest way to have the video is to save it as H.264 or MP4 as it only takes about 25MB.



Recommendation:

Film at places where there is many light available if possible. Or use a light to shine the object if filming indoor or at night.

From Phantom Cameras website, these are the resolution versus the maximum frames per second the camera can do.

Resolution	FPS
1280 x 1024	900
1280 x 720	1,280
1024 x 768	1,200
768 x 576	1,600
768 x 480	1,910
512 x 512	1,800
256 x 256	3,530
128 x 128	6,810
128 x 64	12,700
64 x 32	22,300
64 x 8	52,200