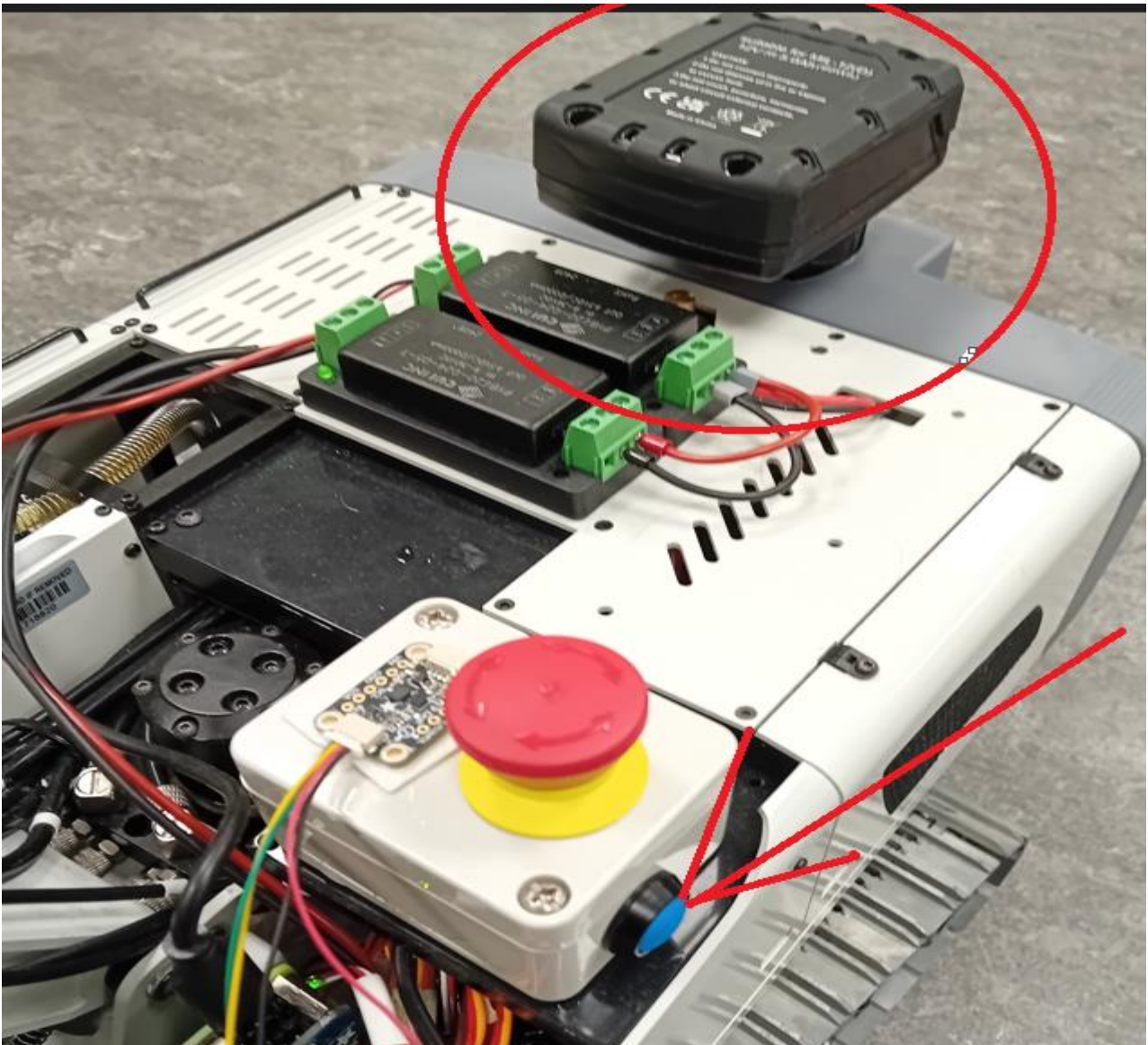# Excavator Remote Driving With Orientation Mirroring Usage Guide

READ THESE INSTRUCTIONS VERY CAREFULLY BEFORE DOING ANYTHING. WRONG ACTIONS CAN CAUSE HARM TO YOU OR TO OTHERS!

Step 1: Put a battery on the excavator
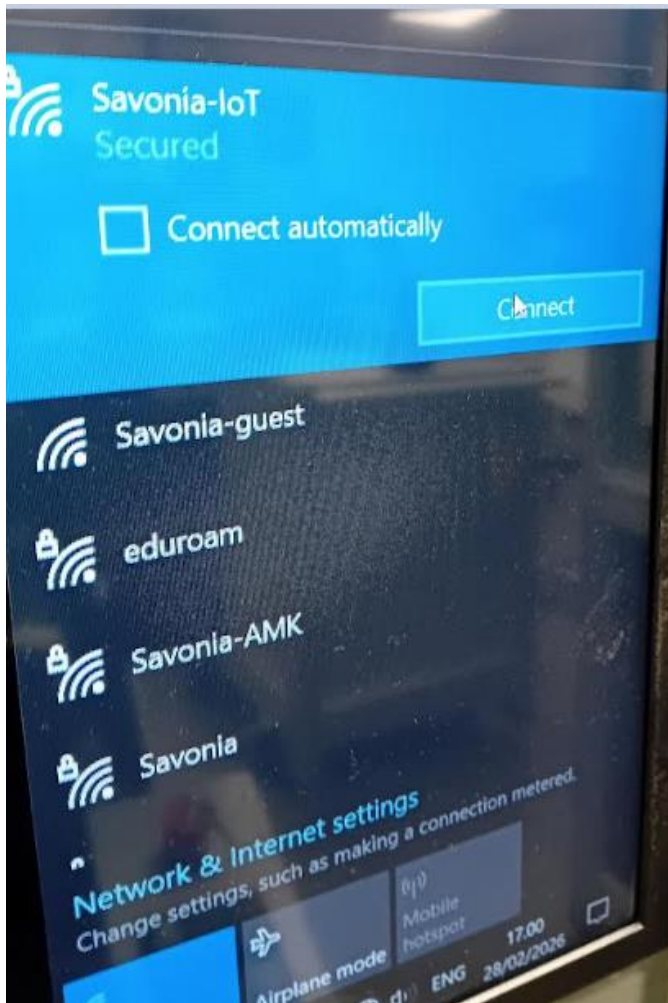


Step 2: Power on the excavator

Step 3: Power on the motion platforms computer

Step 4:!!! IMPORTANT !!! Wait at least 60 seconds for the Mevea app to launch before doing ANYTHING. Once you see the Mevea window below you can proceed safely.



Step 5: Connect the motion platforms computer to the same networks as you can see on the excavators OLED screen. Default is Savonia-IoT network. If the connection is not automatic, ask for the password from a teacher.
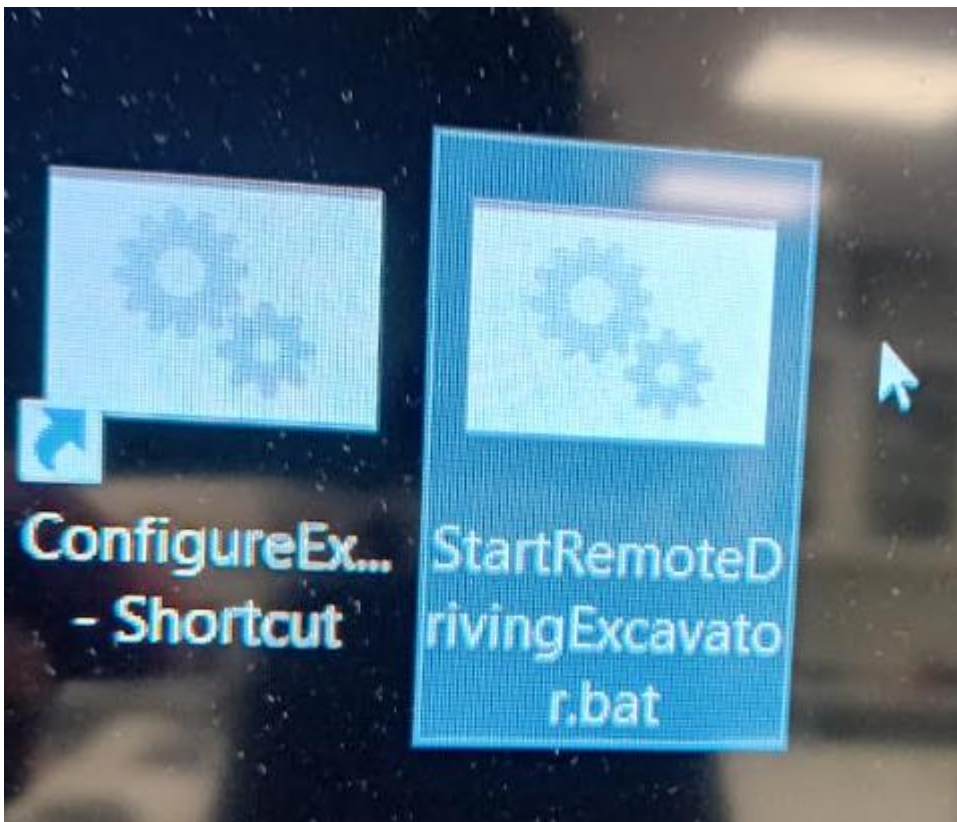
!!! IMPORTANT !!! BEFORE DOING STEP 6 make sure NOBODY has their hands close to the motors. They will potentially start moving momentarily.
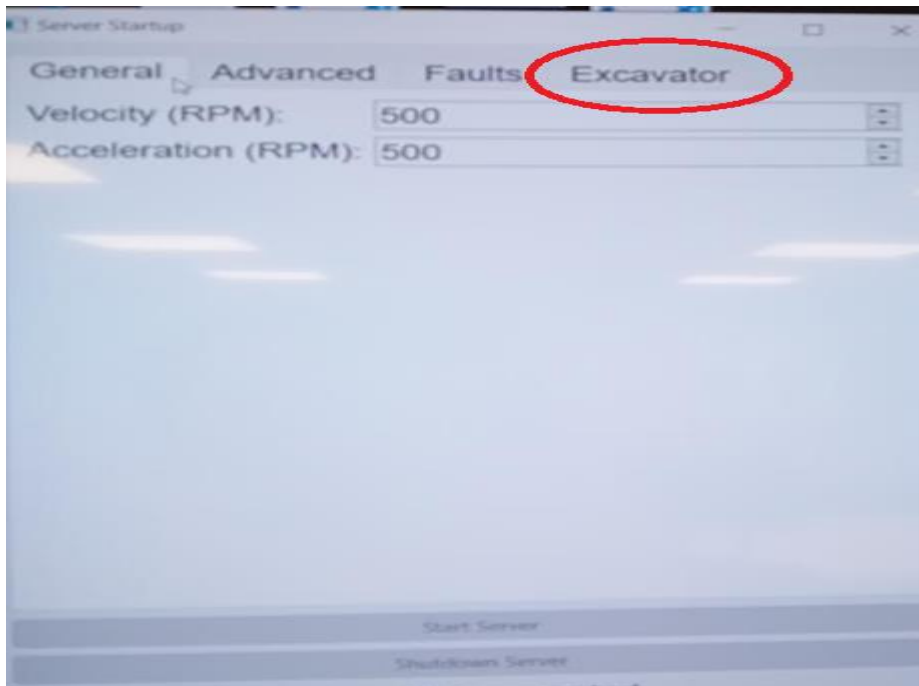
Step 6: Find this device below and make sure emergency stop is not pressed down. Set enable switch on and press emergency stop reset. Keep this device close to you so you can press emergency stop at moments notice if you feel the need to do so. (It will prevent the motion platform motors from moving)
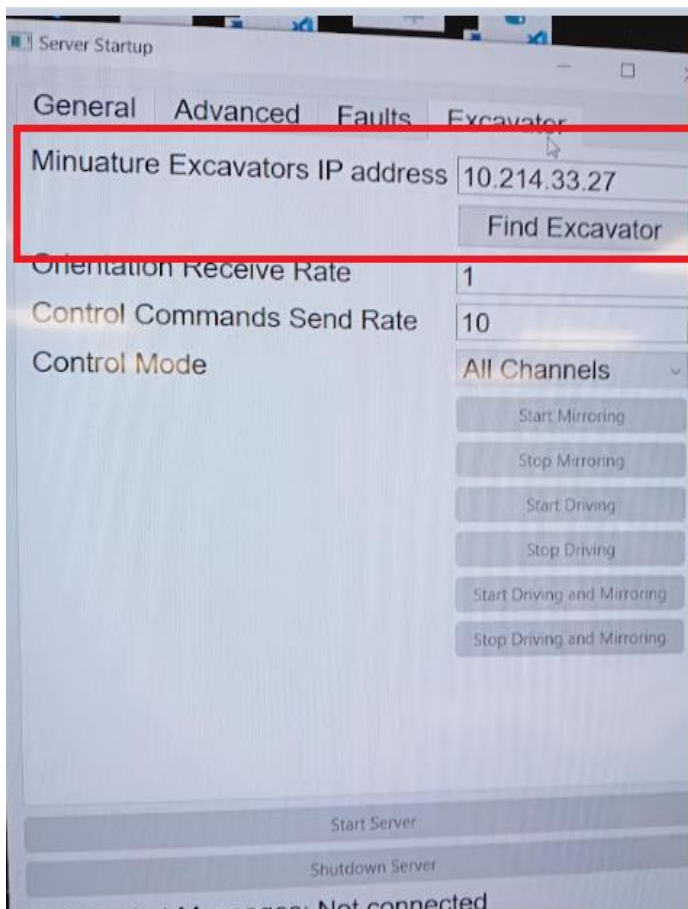
Step 7: Open up the desktop and double click StartRemoteDrivingExcavator.bat file.



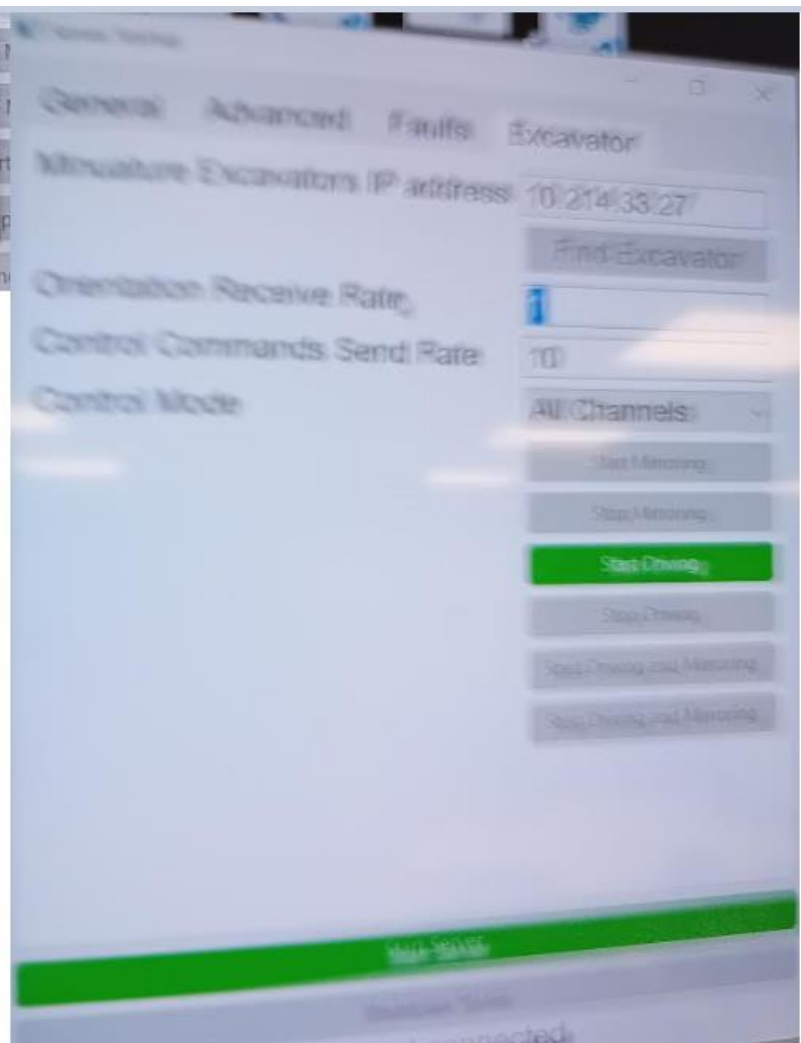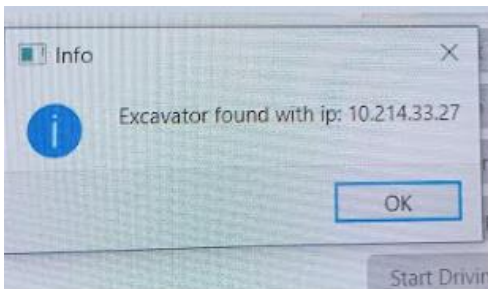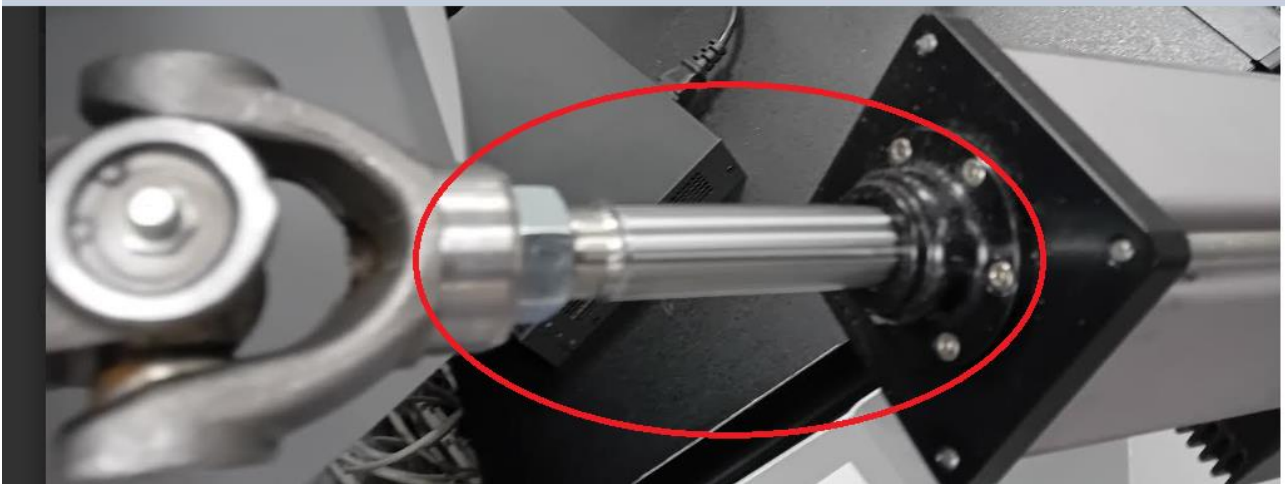Step 8: Once the GUI opens up press the excavator tab.

Step 9: Input the miniature excavators IP address that you see on the excavators OLED screen and press find excavator.
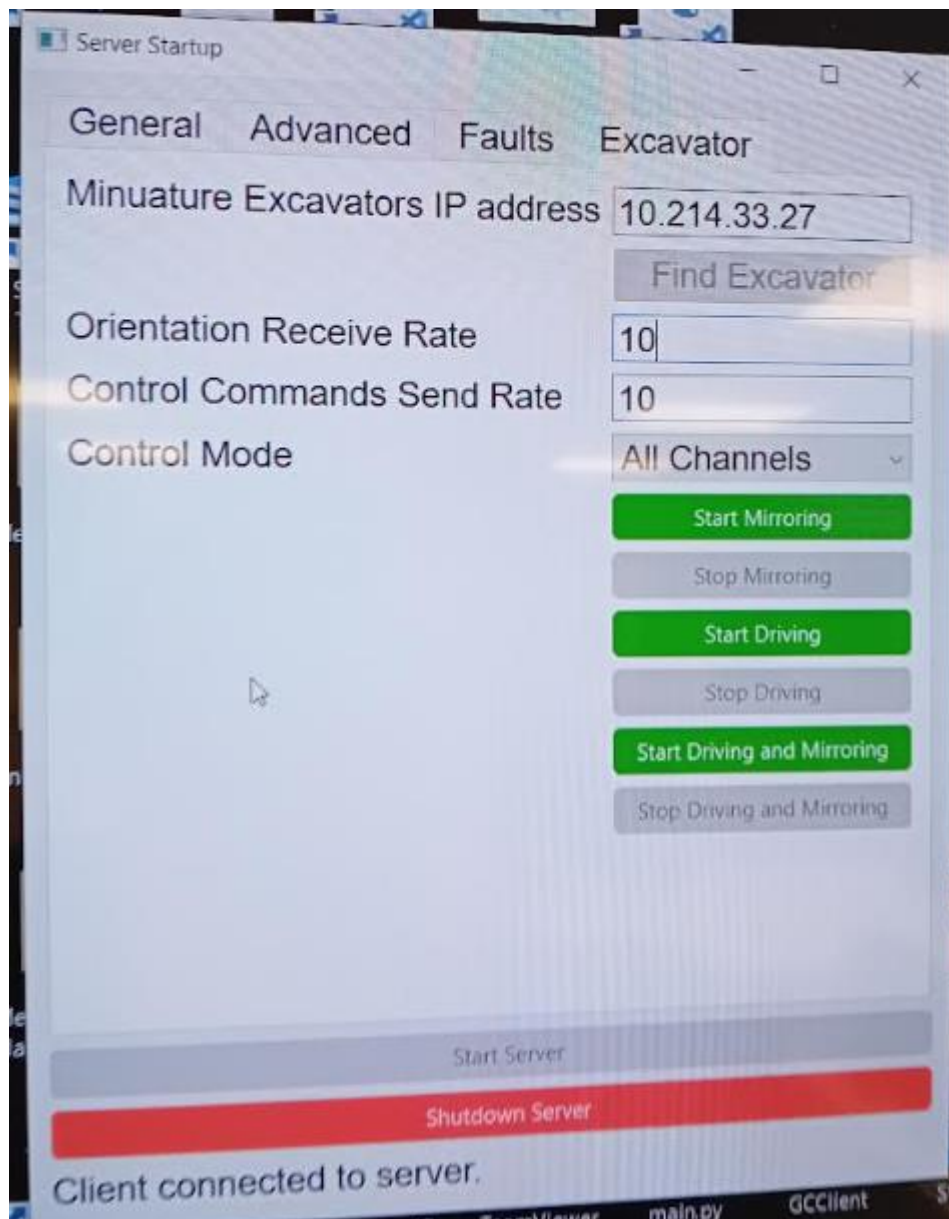


!!! IMPORTANT !!! Before pressing the Start Server button make sure no one has their hands in between the motors because they will start moving IMMEDIATELY.
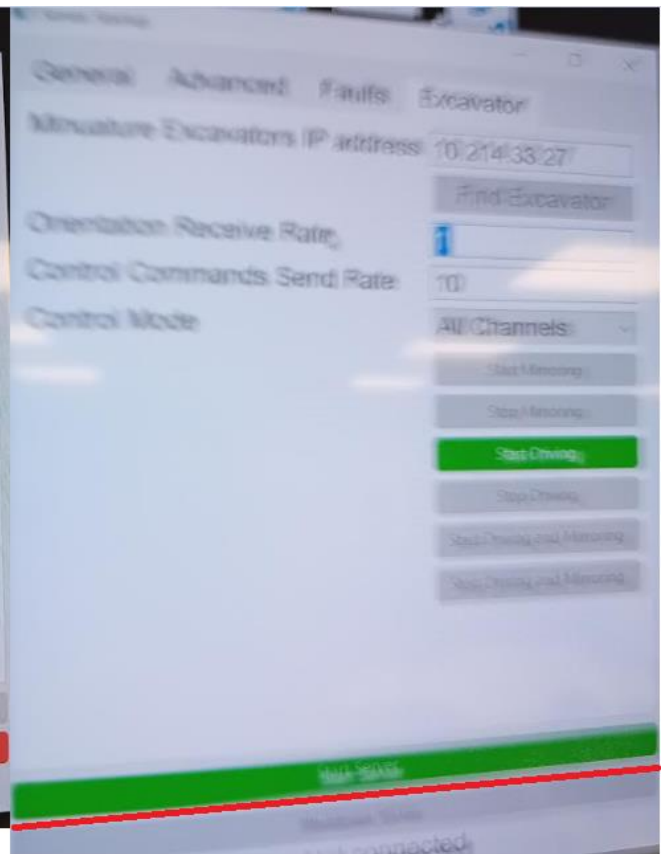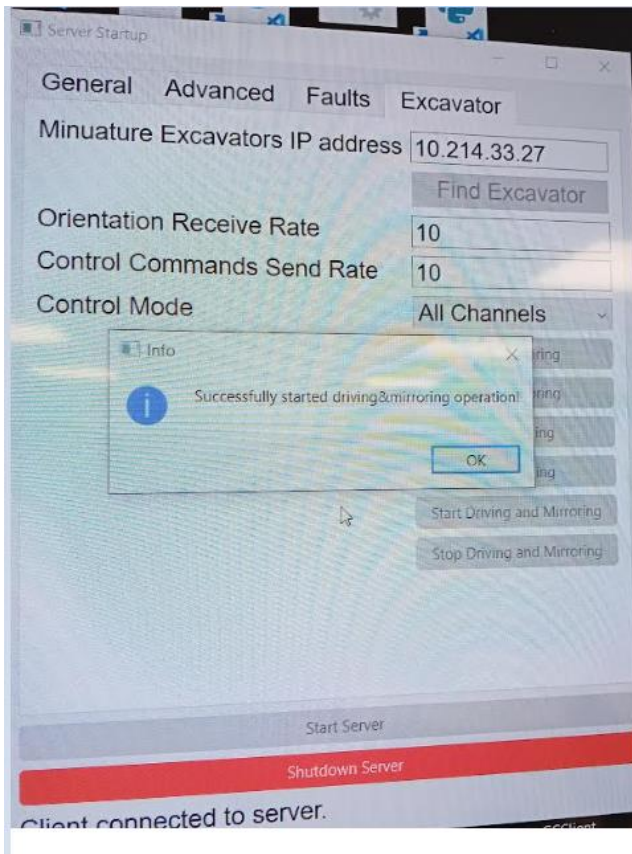
Step 10: After successfully connecting to the excavator you can now start performing different kind of operations. Set desired operation parameters and press start operation button.

!!! IMPORTANT !!! Before pressing any mirroring operations make sure NOBODY is close to the motion platform. (You can obviously sit on it) Failure to do so can cause harm.
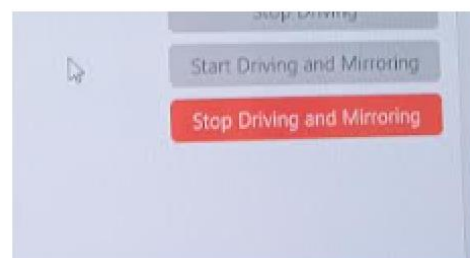
NOTE: If you want to mirror or mirror and drive you have to press Start Server button. This will enable the motion platforms motors.
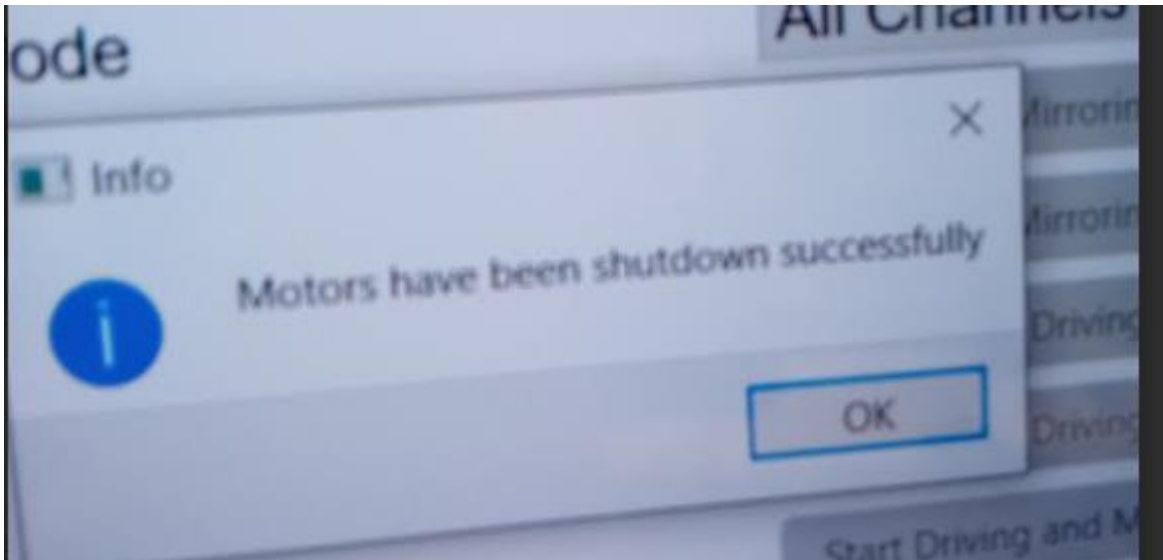
Step 11: Shutdown the operation when you no longer want to perform it. This can be done by pressing the stop operation button or by pressing the button on the right joystick.



Step 11: Once you want to stop completely make sure to stop all operations and press Shutdown Server button if you started it for mirroring. Wait ~30-45 seconds and once you get notification that the motors have been shutdown you can safely shutdown the motion

platforms computer. ( even if shutting down the motors is not successful you can freely just shutdown the computer)



SUMMARY: There is not much of any danger if you read these instructions clearly, but if you want to be extra safe I recommend not starting the motors and only remote driving the excavator instead.