Robot arm user instructions

Attach wires

To begin using the robot arm, start by ensuring that the wires from the power supply are attached to the positive and negative inputs of the voltage converter and to the positive and negative DC outputs of the power supply.

Power arm

Turn on the power supply and set the voltage to 12 V, refrain from touching the controller at this stage. Initially the motors will only draw minimal current until initialized by moving them. Ensure that the current limit has been set to at least 6 A to ensure that the motors can draw the required current.

Startup sequence

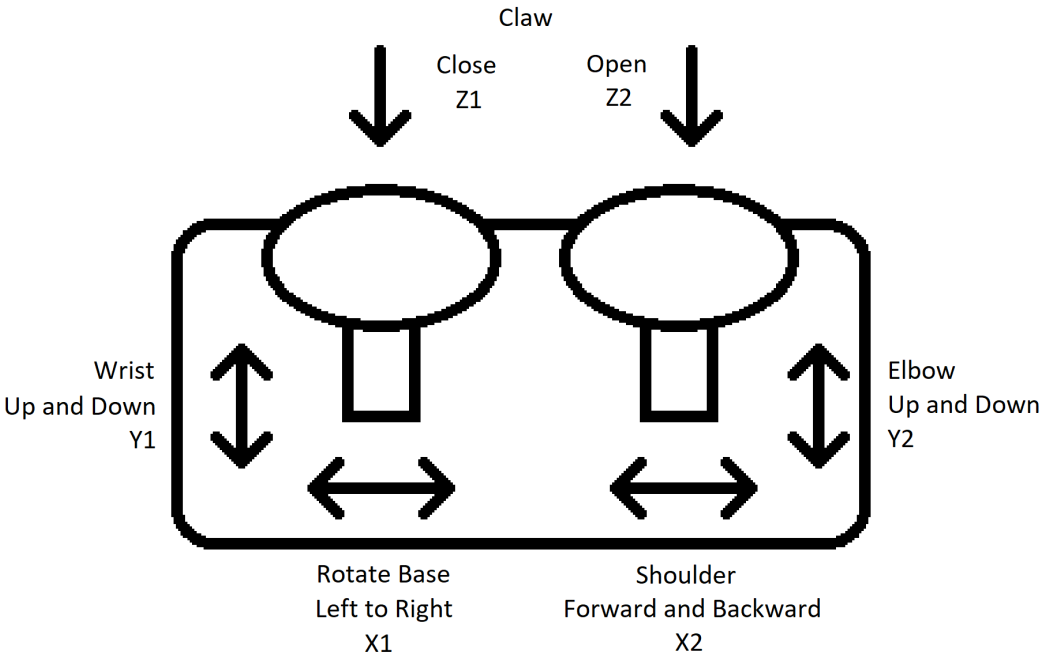
When the motors are first started they will often draw a very high current, sometimes going as high as 4 A for a single motor, after a second or two the current draw will stabilize at about 1-1,5 A. To avoid drawing too high of a current from the power supply we will “start” the motors one by one.

Start the first motor by moving the left joystick up or down and verify that that axis moves and that the motor works. Now move the left joystick left and right and verify that that axis moves and that the motor works. Now repeat the same process with the right joystick. Lastly, press either the left or right joystick to start the claw motor.

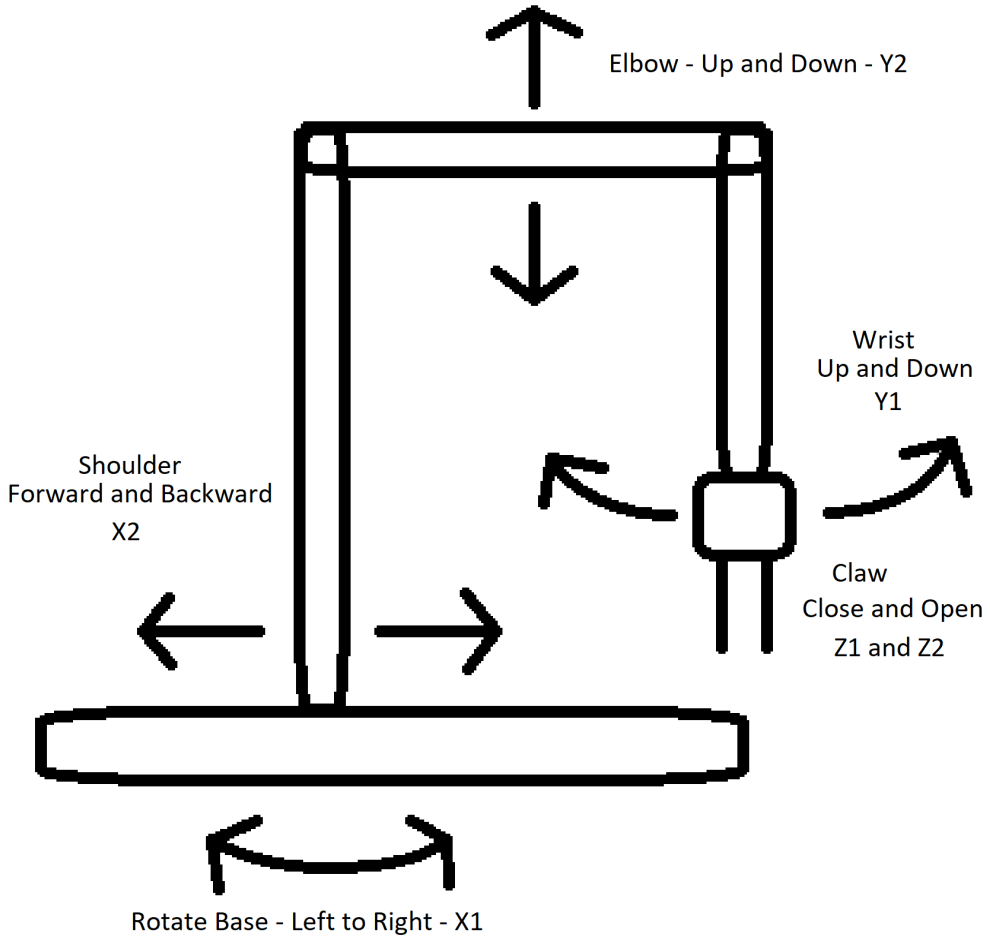
Ready to use

Once all motors have been initialized, the robot arm is ready for use. Use the joystick to maneuver all the five axes of the robot arm, pressing the joysticks to open or close the claw.

To avoid damaging the motors or the arm, refrain from lifting objects heavier than the motors can handle. This will vary depending on the position of the arm, but do not continue to attempt lifting an object if the motors struggle to lift it.



Robot arm controls



Robot arm axes