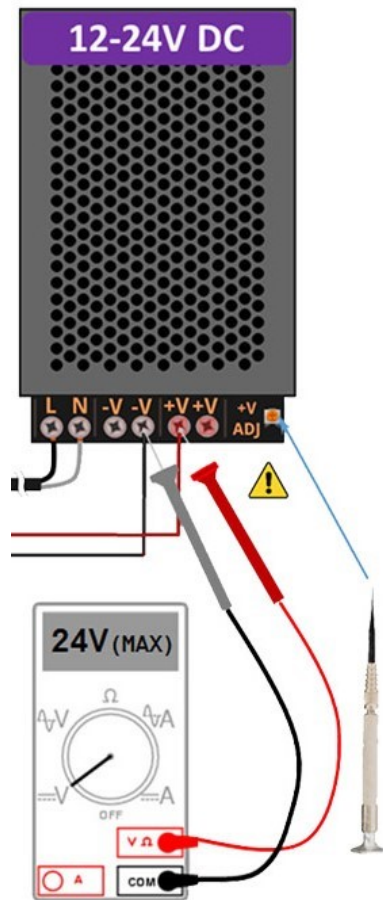


# CNC xPRO Troubleshooting Guide

## Motors not working/Gantry not moving

### 1. Confirm Wiring

- a. Check motor wiring
  - i. Typical Nema23 wiring
    1. **RED** -> **A1**
    2. **GREEN** -> **A2**
    3. **Yellow** -> **B2**
    4. **Blue** -> **B1**
- b. Check PSU voltage
  - i. Confirm PSU is between 12VDC and 24VDC (**24VDC is the max rating for the xPRO**)



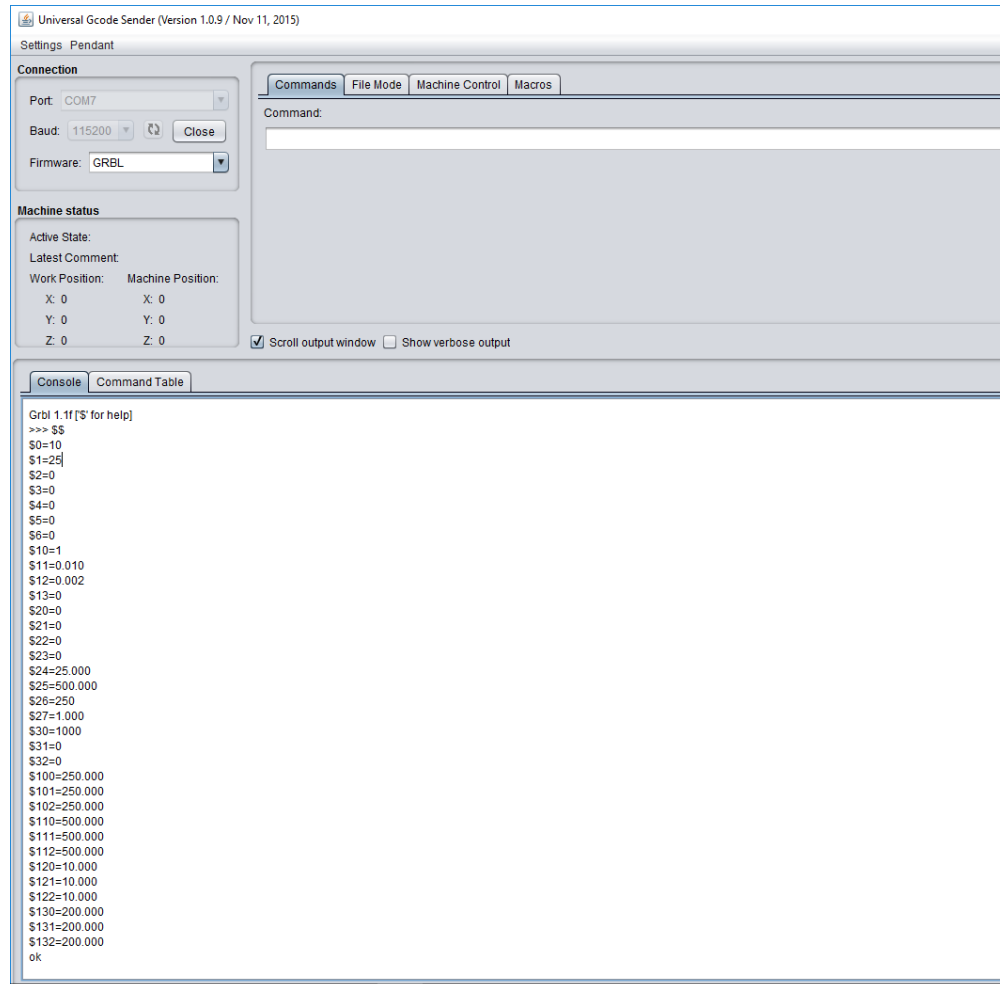
- c. Check PSU wiring into xPRO
  - i. **V+** -> **+**
  - ii. **V-** -> **GND**

## 2. Check for binding on the Axis

- a. Turn off power to the xPRO
- b. Axis should be able to move by hand by turning the leadscrew or pushing near the belts
  - i. If axis does not move, check pressure on belts, anti-backlash nuts, and eccentric V-wheels
  - ii.

## 3. Check GRBL settings

- a. In UGS send command '\$\$' to the board - you will receive a list of setting as below



- b. Confirm the following hardware specific settings:
  - i. \$0 = 10 (can be anything greater than 10 but never less)
  - ii. \$4 = 1 (For the V3.1 (gloss black board) )
  - iii. \$4 = 0 (For all other)
  - iv. \$100, \$101, \$102 set step per mm travel so they must be a positive non-zero number
  - v. \$120, \$121, \$122 should be between 10 and 100
- c. Retest motors