Progwhiz.Com

Developer Kits

Startup Guide

Contents

Introduction

The following document will illustrate how to start using each of the developer kits both from the Hardware and Software Perspectives.
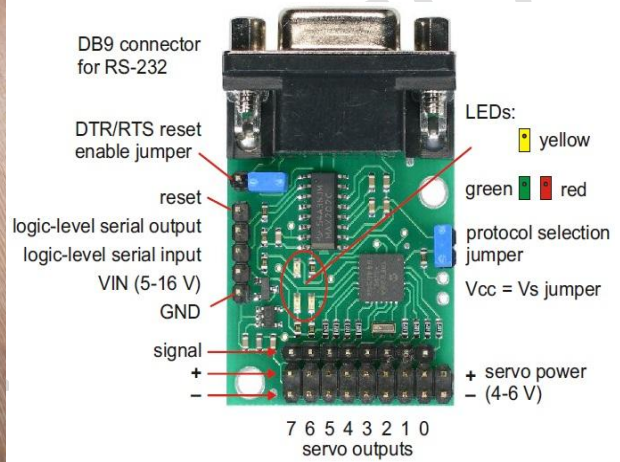
- ❖ **Developer Kit – Beginner**
- ❖ **Developer Kit – Intermediate (Wired)**
- ❖ **Developer Kit – Intermediate (Wireless)**

Developer Kit Beginner

Setup Hardware

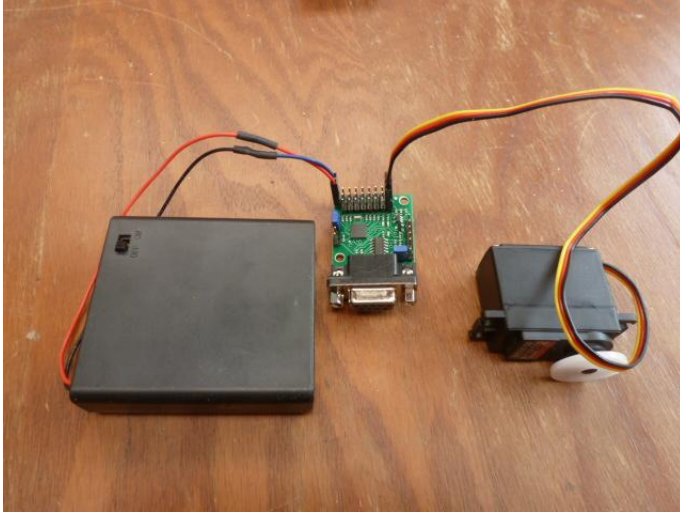### Step 1

Controller Pins Layout

Step 2

Connecting the power source, note the ground is on the edge of the controller
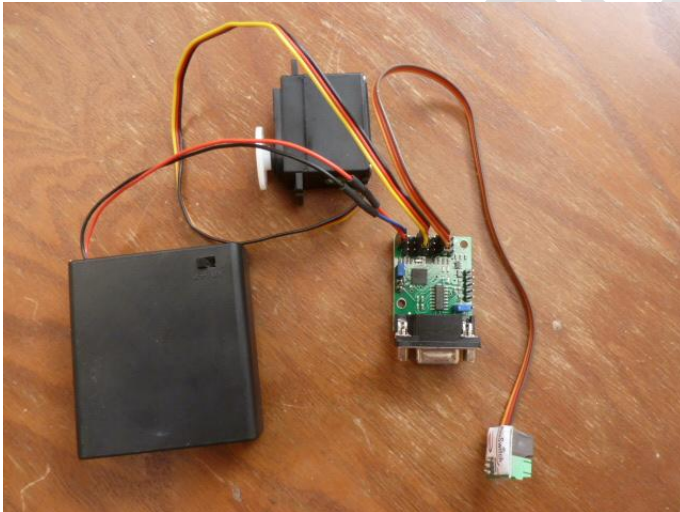
Step 3

Connecting the servo. Please see software GUI to know which pins are assigned to the Servo. The ground is also the pin closest to the edge of the controller.
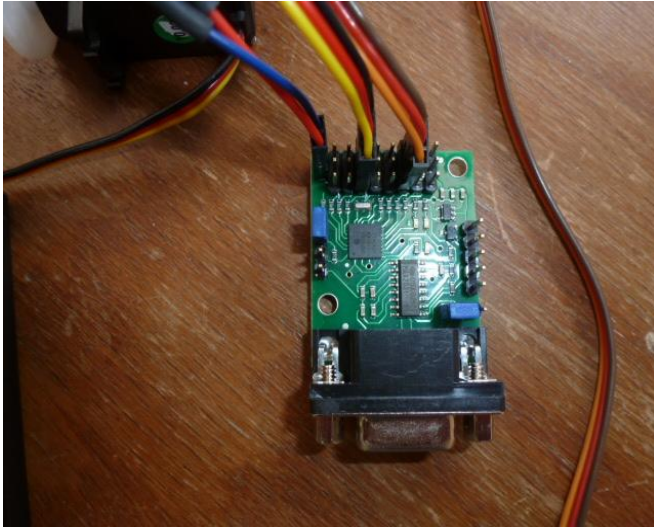

Step 4

Connecting the switch relay. Please see software guide which pins are assigned to the switch

Step 5

Controller and Peripherals attached   Connect Controller to PC via COM Port Cable
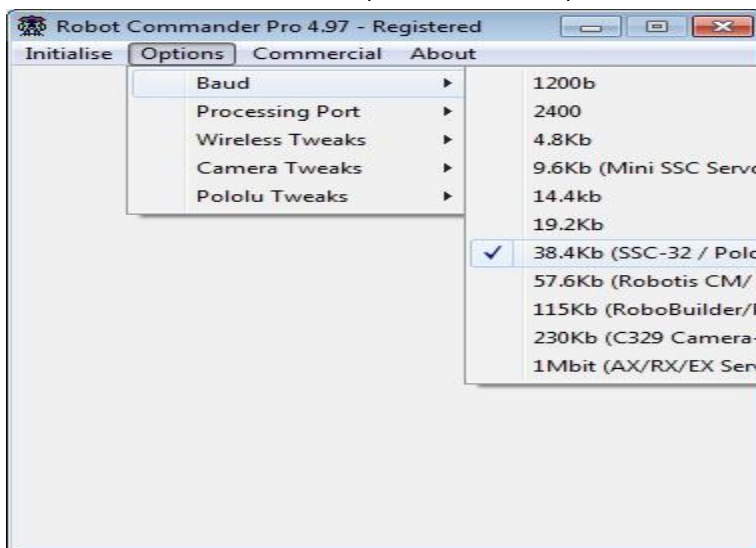
Setup Software

Start

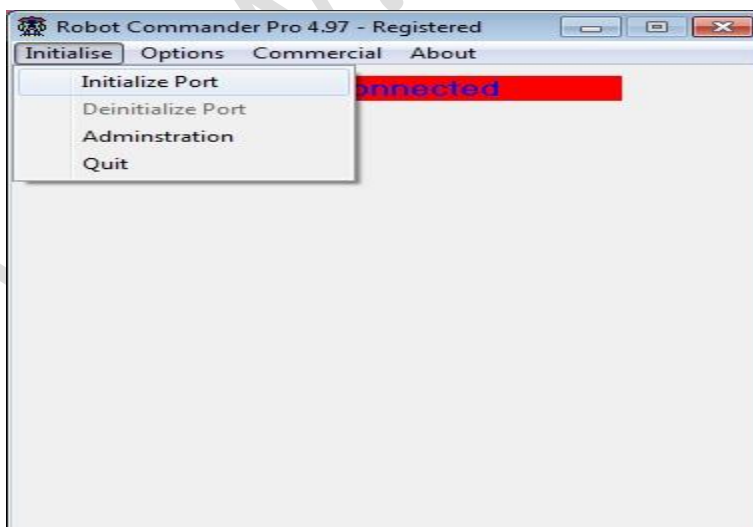Double click on the shortcut to the Robot Commander Software

Set Delay Polulu Modules ▼ Ok

Step 1

Select the Port and Baud Rate (38k or 56k Baud)
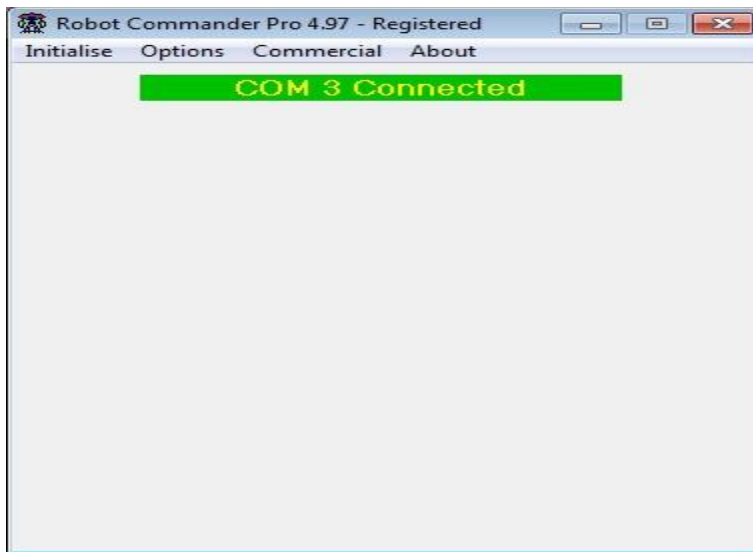

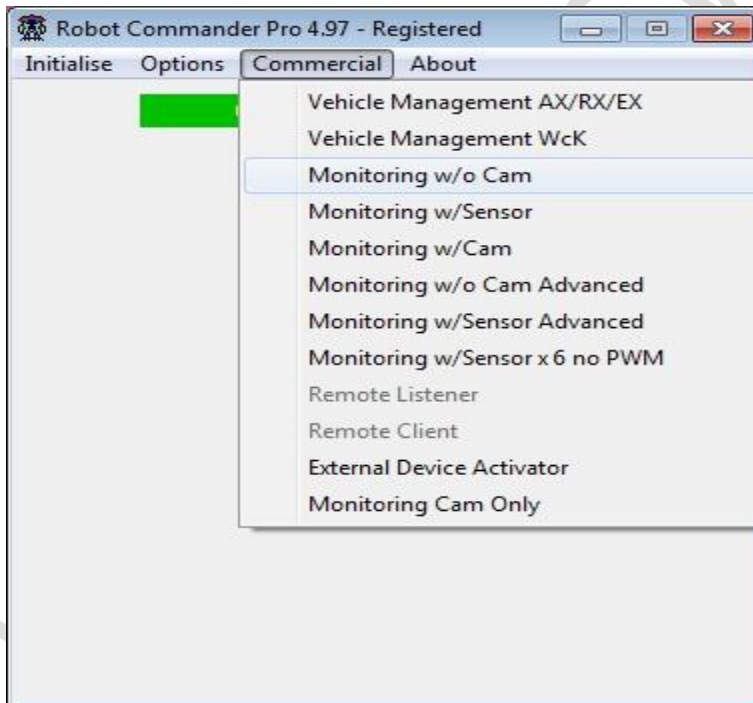### Step 2

Initialise connection to the COM Port

Step 3

Connected

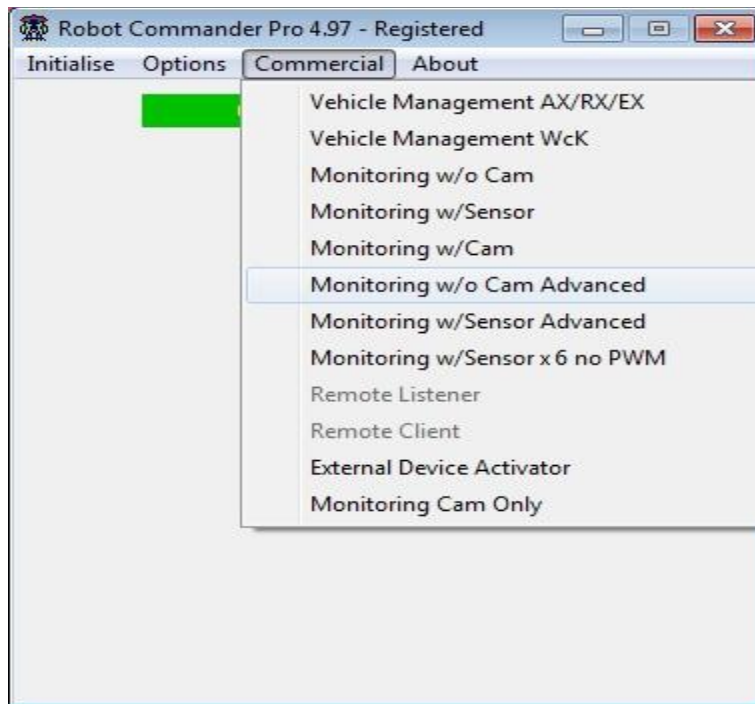## Step 4 (2 Servo Version)

Select Monitoring w/o/ Cam

Step 5

Verify hardware pins connected with the diagrammatic representation shown in the Robot Commander
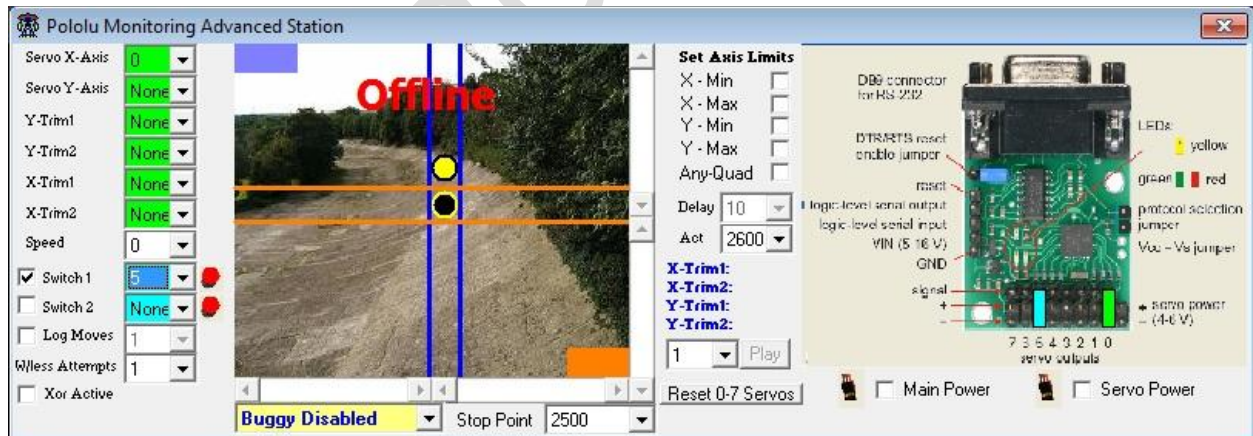
Step 6 (6 Servo Version)

Select Monitoring w/o Cam Advanced

Step 7

Verify hardware pins connected with the diagrammatic representation shown in the Robot Commander

Developer Kit Intermediate

Setup Hardware

Step 1 (Wired)

Step 2

You can connect power with a Single power connector or with Dual power connectors.

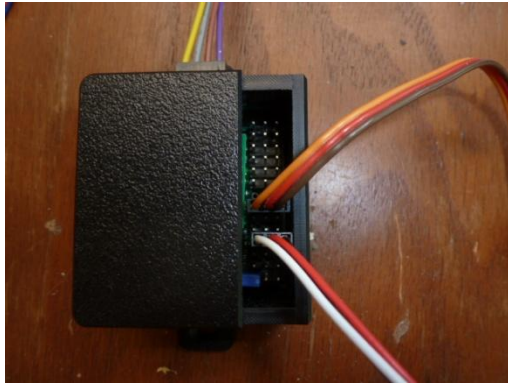**Single Power Source**: Jumper is Closed as seen in Fig I. Power is connected as shown in Fig II,III,IV

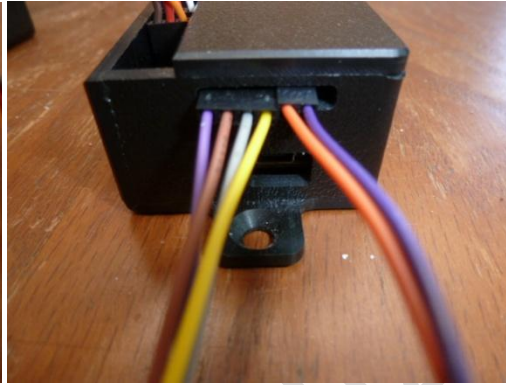

Fig I	Fig II
Connector Type 1	Connector Type 2

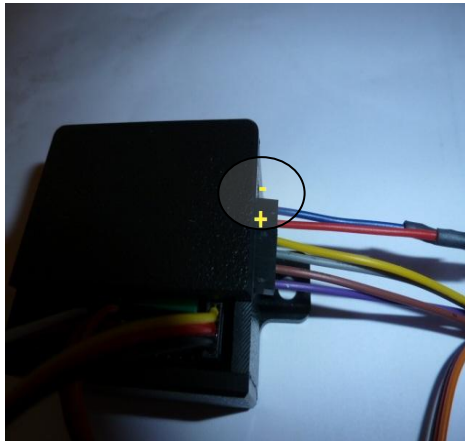
Fig III	Fig IV

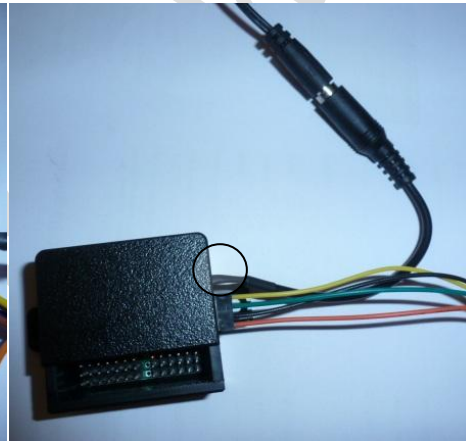**Dual Power Source**: Jumper is Opened/Removed. Power is connected as shown in Fig VI, VII
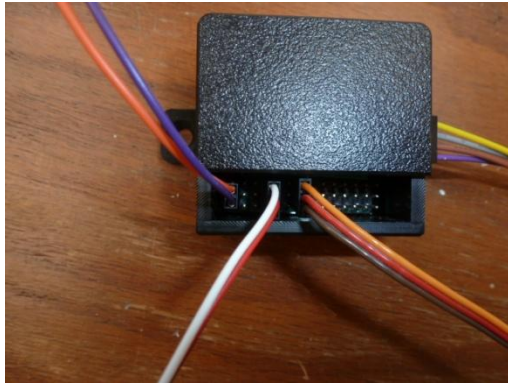

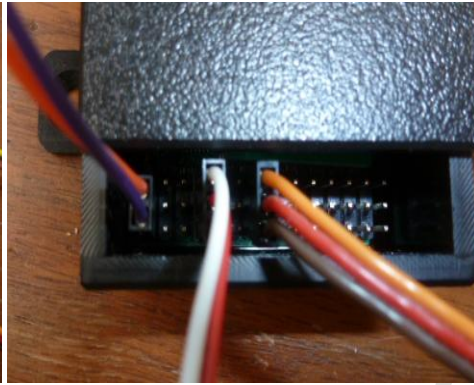Fig V   Fig VI   Fig VII
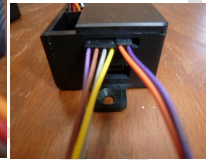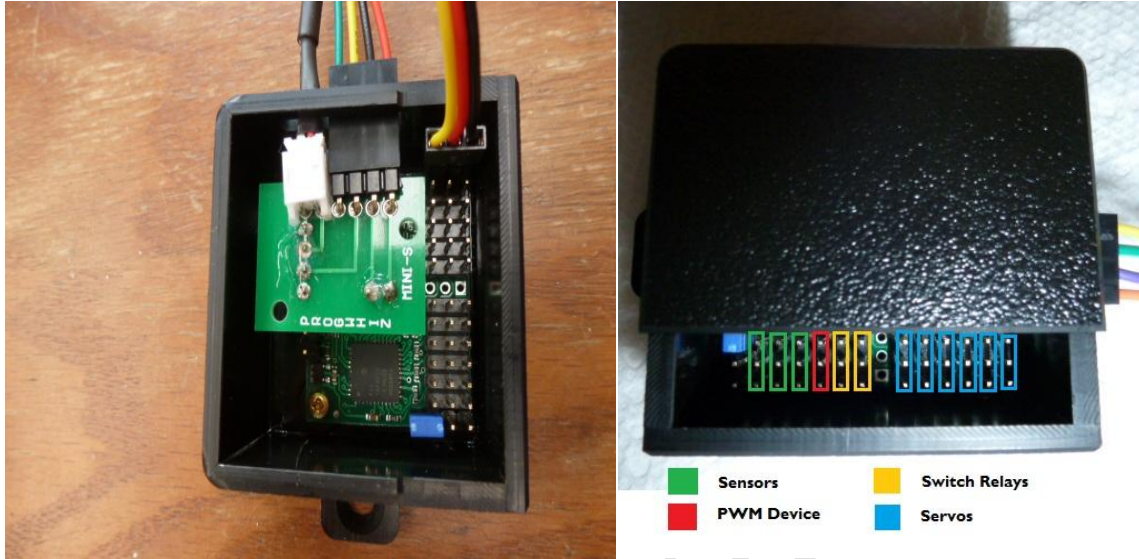
Connecting the Power Source. Make sure the unit is powered before you attempt to connect via the software application 'Robot Commander'.
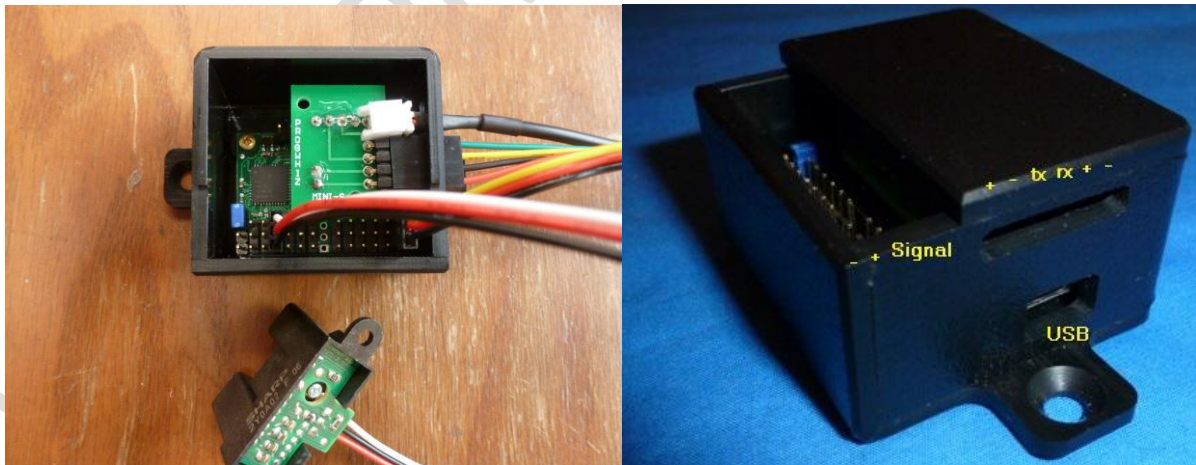
Step 3

Connecting the servo. Please see software GUI to know which pins are assigned to the Servo. The ground is also the pin closest to the edge of the controller.

🟩 Sensors	🟨 Switch Relays
🟥 PWM Device	🟦 Servos

Step 4

Connecting the Sensor. Please see software GUI to know which pins are assigned to the Sensor. The ground is also the pin closest to the edge of the controller.
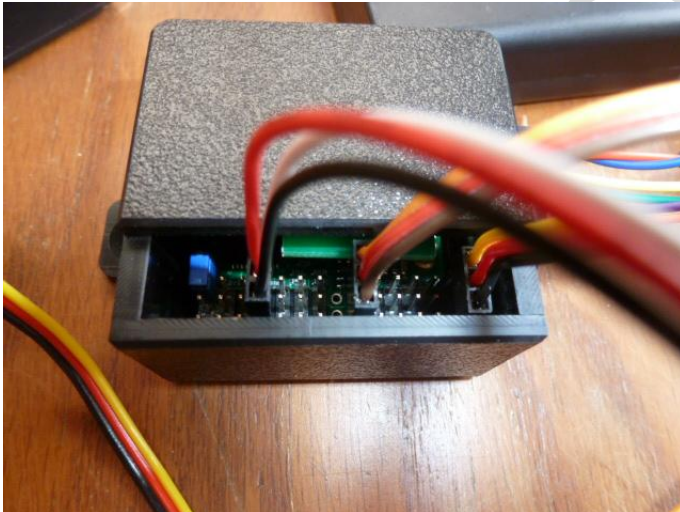
Step 5

Connecting the Switch Relay. Please see software GUI to know which pins are assigned to the Switch. The ground is also the pin closest to the edge of the controller.
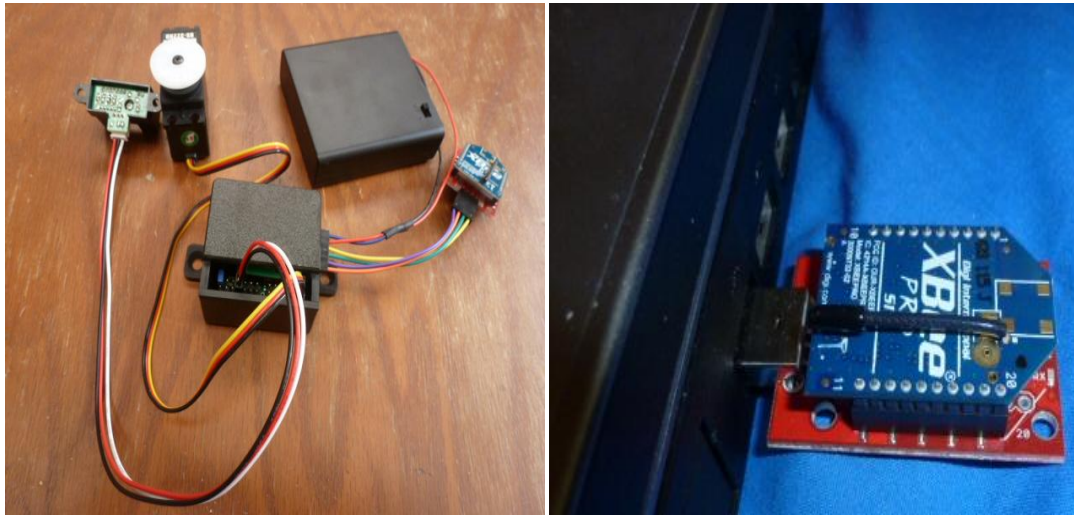

Step 5b

Step 6 (Wireless)

Top view of the Wireless Configuration

Ensure to install the wireless drivers for windows prior at:

Windows 7 – 32 bit http://www.progwhiz.com/files/support/CDM20808_32.zip

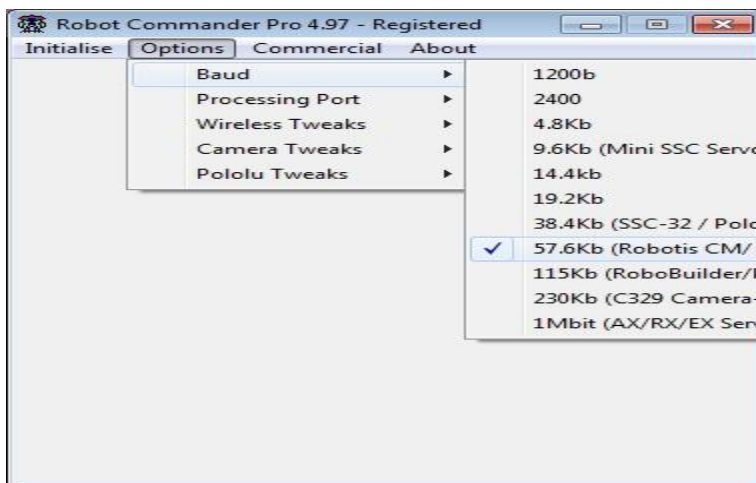Windows 7 – 64 bit http://www.progwhiz.com/files/support/CDM20808_64.zip

Setup Software

Start

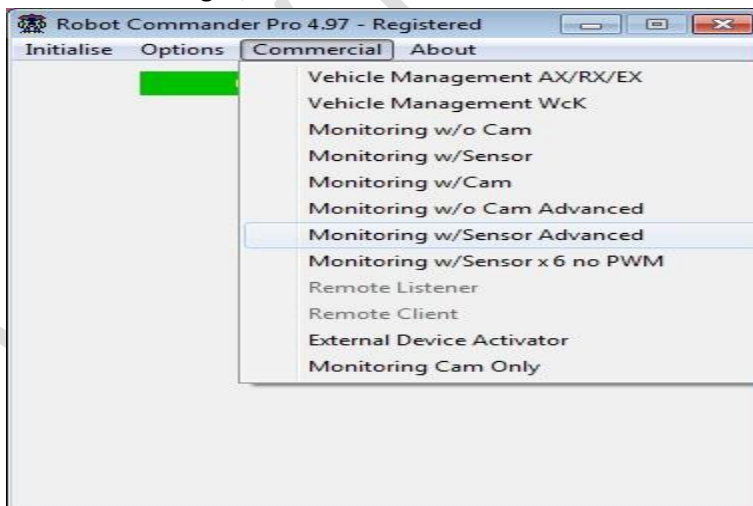Double click on the shortcut to the Robot Commander Software

Step 1

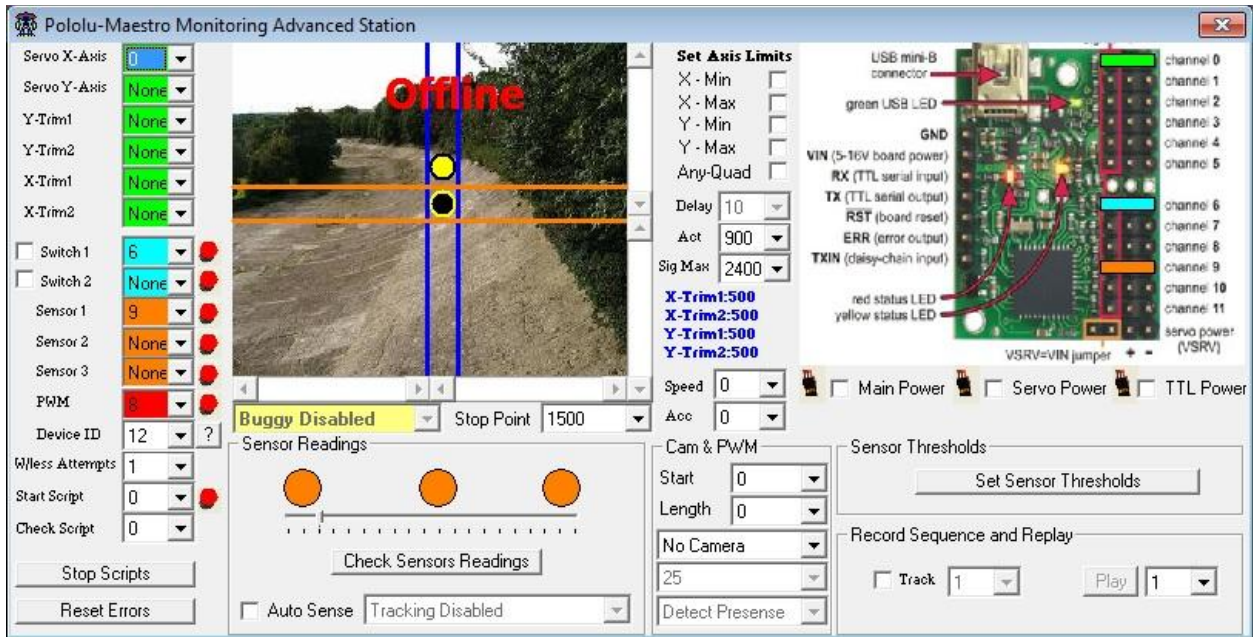Select the Port and Baud Rate. Baud to use is 56k.

Step 2 (Intermediate Option 1)

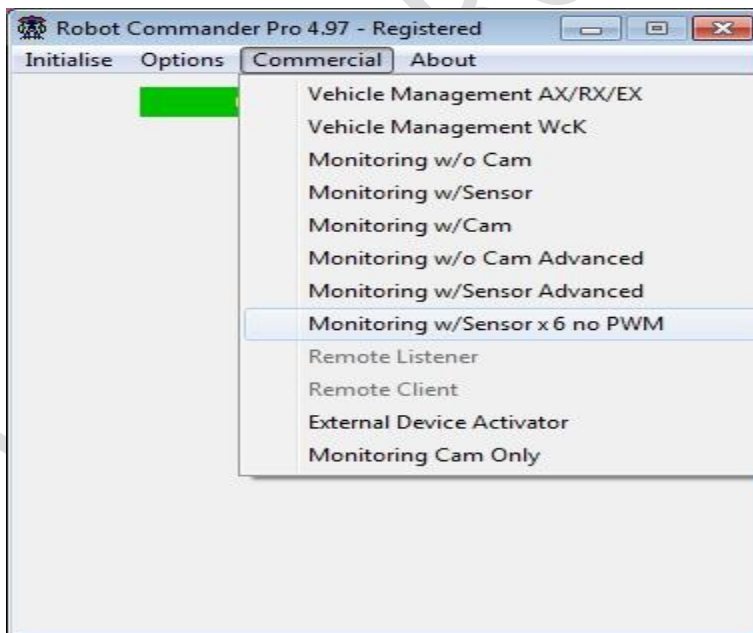Select Monitoring w/Sensor Advanced

Step 3

Verify hardware pins connected with the diagrammatic representation shown in the Robot Commander

Step 4 (Intermediate Option 2)

Select Monitoring w/Sensor x 6 no PWM

Step 5

Verify hardware pins connected with the diagrammatic representation shown in the Robot Commander

Getting Started Videos

The following are videos of how to configure the software for each type of hardware/kit.

1) [Startup Guide 8 Port Controller](#)
2) [Startup Guide 8 Port Controller Advanced](#)
3) [Startup Guide for 12 Port Controller Intermediate Option 1](#)
4) [Startup Guide for 12 Port Controller Intermediate Option 2](#)
5) [Server/Client Software Module](#)

Demonstration Videos

The following are videos of simple prototypes showing some of the capabilities and flexibilities of the Kits:

1) [Simple Turret with Sensor detection enabled](#)
2) [Gripper/Claw 1 Axis of Motion](#)
3) [Gripper/Claw 1 Axis of Motion with Sensor](#)
4) [Gripper/Claw two Axis of Motion](#)
5) [Image Capture Capability with Image Detection/Tracking – Basic Camera GUI](#)
6) [Image Capture Intermediate GUI](#)
7) [RC Car Demo](#)
8) [RC Car Demo Driving](#)
9) [RC Car 2 Demo Turret](#)
10) [RC Car 3 Demo Driving](#)
11) [RC Tank Demo](#)
12) [RC Tank2 Demo](#)