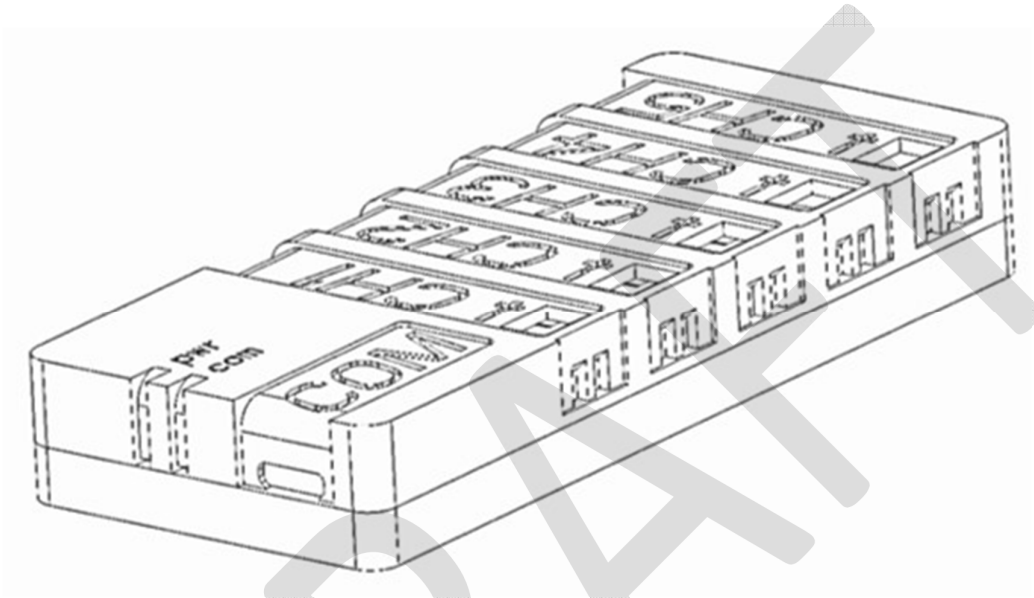
qb robotics






# qbdummy

# USER MANUAL

www.qbrobotics.com

## Summary

# Installation procedure

- **Mac:**
  If not already installed, it is necessary to install the FTDI serial drivers to make possible the device is seen as a serial port.

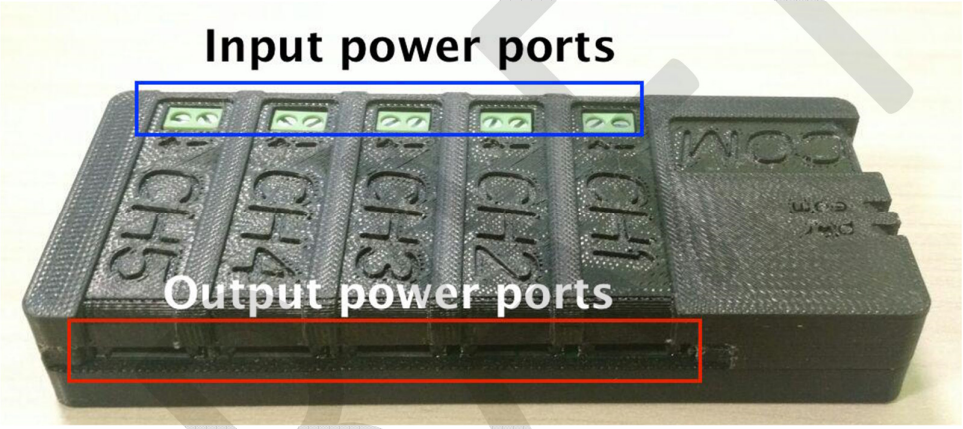
- **Windows:**
  If not already installed, it is necessary to install the FTDI serial drivers to make possible the device is seen as a serial port. It is possible that the system has recognized the COM port with a high COM number. If this happens, the software used to control the device cannot recognize the serial port correctly. The supported serial ports are from COM1 to COM9.
  To change the port number, go under Control Panel > Hardware and Sound > Device Manager. Open the Ports (COM & LPT) drop down menu, right click on the COM port and select Proprieties.
  Select the Port Settings tab and then click on Advanced. Once in Advanced menu select from the drop down menu a COM number between COM1 and COM9 and click on OK.
  The device should now be recognized properly.

- **Unix:**
  There is no need to install any driver.

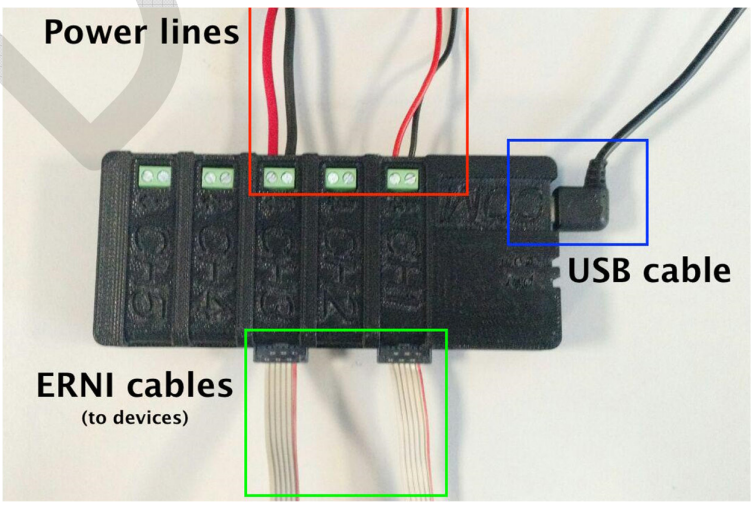
# Basic Usage

The dummy box is used to communicate with devices that need to be away from the computer (e.g.: a hand used as end-effector for a robot arm).
It has an USB connector to communicate through serial port, 5 power inputs ports, 5 output power ports. The power input ports are used to connect different supply tensions on each channel, the output ports are used to connect the device and give power to those.
The first channel, CH1, is connected to the serial communication board of the device. **It must be powered in order to communicate with the device.**

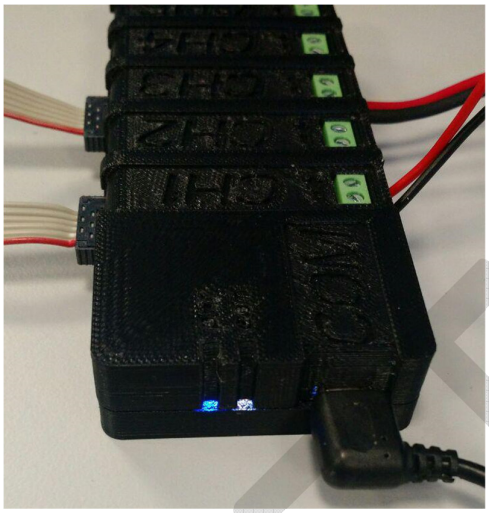
The several supply channels are all disconnected from one another.
If the supply tension is connected **only** to the first channel and a device is connected to another




channel, the device **won't receive** the power supply and consequently it won't be possible to communicate with the above mentioned device.
In the following picture is possible to see a correct configuration of the connections for the dummy box.



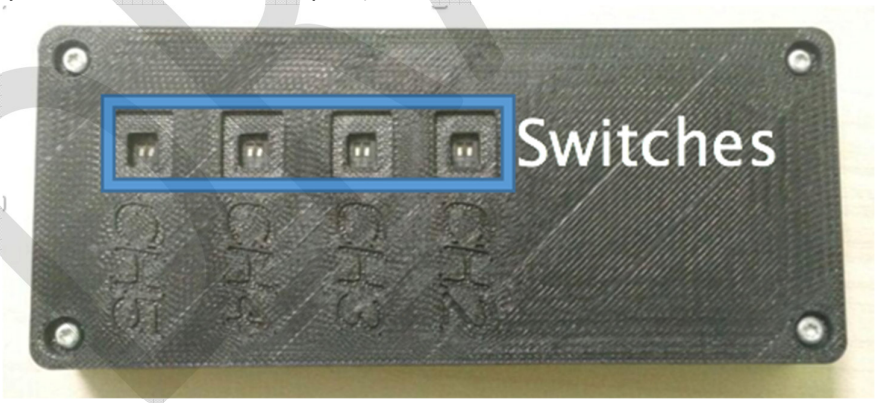
The red and black cables connected to the power input ports give the supply power to their respective channels. The supply tension can be different from channel to channel. A maximum of



24 V for each channel is supported.
**The supply power for the hand is 12V.**
**The power supply for each hand should be at least of 70W**

If the device is correctly powered up, a white and a blue led, sited near the USB connector, should turn on.

Below the dummy box there are several switches, by default are all set up on Off. If one or more or the switches are switched to On, it will be possible to communicate from the first channel (which is always connected to the USB port) to all the channels that are switched On.




**<u>This will not allow the sharing of power supply through the channels.</u>**

The power supply is physically disconnected from channel to channel. If a channel has the switch in On position, but is not powered, the devices connected to that channel will not be powered and thus it won't be possible to communicate with those devices.