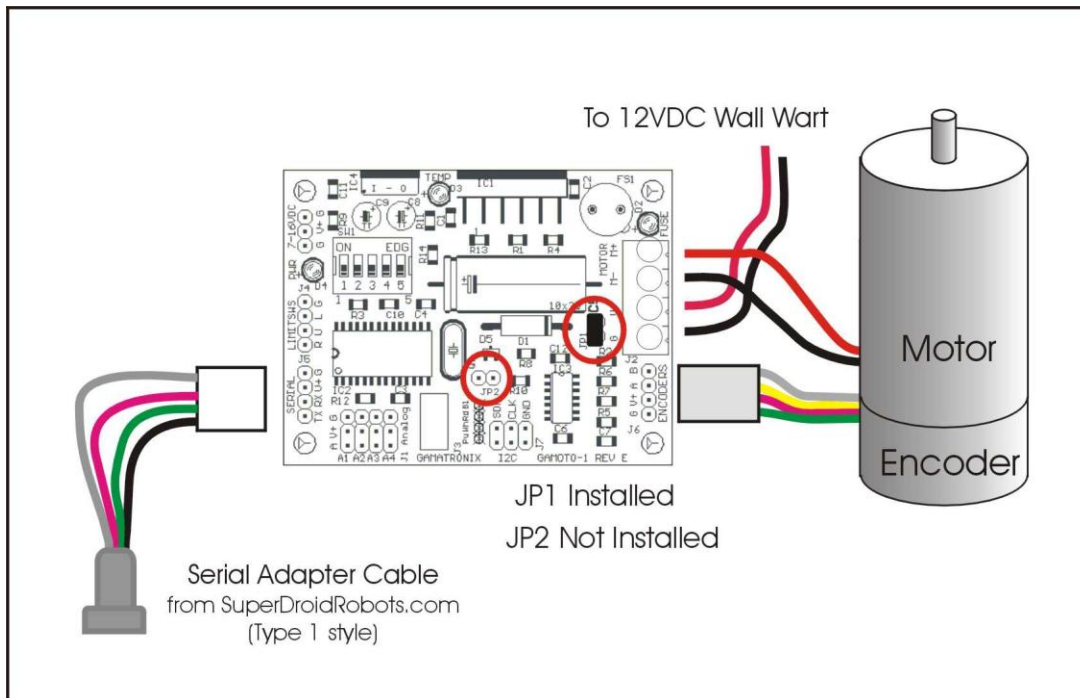


Quick-Start Guide for the Gamoto

1. Remove Gamoto board from the packing. Inspect, ensuring all connector pins are aligned and straight. If any of the vertical pins appear bent, simply straighten them with a small screwdriver
2. Check the DIP-Switch settings. They should all be in the OFF position.
3. Download the MotoView software from the Gamatronix website, to a Windows-based PC.
4. To connect to the Gamoto using a PC, a serial port adapter must be used. The easiest solution to this is to use a Type 1 RS-232 Converter from SuperDroidRobots.com, but any similar device can be used. The PC's 12V signals must be inverted and converted to "TTL" compatible signals, at 5VDC. If you want to build your own, an example chip is the Maxim MAX232. NOTE: The "V+" pin on the J5 serial connector is a 5VDC OUTPUT, in case your serial converter needs power. Do not SUPPLY power to this pin!
5. Next, connect the quadrature encoders to J6. Refer to the documentation with the motor or encoder to find out which leads are +V, Gnd, A, and B. If you have no information, assume the black or green wire is GND, and red is V+, and connect the others to A and B. The difference between A and B doesn't matter at this point. If you have no black, red, or green wires, then just try one combination and cross your fingers. It's unlikely that any damage can be done – they just won't work if connected incorrectly.
6. Next, connect the two motor coil wires to J2, to the terminals labeled M+ and M-. For now, don't worry which wire goes to M+, and which to M-, you will soon find out if you need to swap them.
7. The other requirement is a power supply. The simplest method to get the board up and running is to use a 12VDC power supply, such as a "wall wart" or battery. Connect to either J2 or J8, and install a jumper (included with the Gamoto board) onto the JP1 position of the board. If you want to use separate supplies for motor and logic, then you must remove jumper JP1. Note that the motor supply must be at least 12VDC!
8. Before applying power, make sure the motor shaft is free to turn, and that the motor body itself is in a safe position – it may jump or roll around violently when powered on.
9. The final setup should look similar to the figure below:
10. IMPORTANT NOTE ABOUT THE FUSE: The fuse is only in the circuit when you supply power from the motor terminals, J2. For temporarily getting the motor working, connecting to J8 (as shown in the diagram) will work fine, but be aware that the board is not protected by the fuse in this configuration.
11. After applying power, you may find that the motor immediately starts running full speed. Or it may be stopped until you turn the shaft slightly by hand (as always, be very careful when holding a motor shaft with your bare hands!), and then start running full speed. In either case, it most likely means you need to swap either the motor coil connections (M+, M-), or encoder channels A and B. Pick one pair, and swap them. Don't do both.
12. Now the motor should be idle when powered on, and when you try to turn the shaft, you should feel some resistance. It should always try to drive back to its original position.
13. Next is to test the communication, and begin configuring the controller. Connect the serial cable, and start the MotoView software.



14. In the Communications menu, select Settings. Configure to the COM port you desire, and make sure it is set to 19200 baud. If desired, check the box to automatically connect when starting MotoView. Close that window, then choose Communications, and then choose Connect. If Connect is grayed out, then you are already connected to the COM port.
15. Now open the Tools – PID Settings window. If you get an error at this point, then the board is not communicating. Re-check you cable connections and COM port settings.
16. When this window opens, it reads all of the shown parameters, and displays them. They are editable by typing new values in each field, and clicking the Enter button or pressing Enter on the keyboard.
17. To interactively control the motor, try clicking on the Start button in the lower left area of the window. Then move the mouse over the slide control. The motor should turn along with the motion of the mouse.

For more information on using MotoView to configure and tune your Gamoto motor controller, refer to the MotoView Users Guide, available on the Gamatronix web site at <http://www.gamatronix.com>.

For support on this product, e-mail to support@gamatronix.com