August 22, 2011

Thank you for purchasing our fine products for your motorized project. Please review our documentation on our website www.excitron.com, where you will find the motor/controller User Manual and related documentation.

Here are some notes for proper installation, setup, and operation. We have new part controller part numbers, and all documentation is viewable online, see **Documentation** link on home page lower left.

Power Supply hookup:

It is very important that you provide an ***Emergency Power Off Switch*** for safety reasons. An inline fuse is recommended. Excitron's motors, controllers, power supplies may not be used for life support equipment.

Due to manufacturing, small scratches may be present on the controller or motor. We assert that your controller and motor is absolutely new, so please ignore any scratches.

Pay special attention to the new **T** (Trq%) value, which is a percent of full rated torque, 100% being full rated torque. We suggest you run at T =050 to 080 for optimum torque vs. noise and heat. Please read all instructions first. The Tqnum value displayed with the **i** command is an internal value based on the motor amperage, resistance, and inductance, and is not adjustable.

AC voltages are high and very dangerous; always seek competent help in wiring your power supply. A grounded 3 wire AC power cord or a 2 prong cord is included. Use an AC rated power switch to turn the power supply off and on—do not plug and unplug the Controller cable with power on.

Most of our encapsulated power supplies have a black jacketed 2 conductor cable, the white wire is +V, and the outside shield is ground (-V). Check your DC grounds, so that no item is "floating". If proper grounding does not exist, then serial communications, input/output pins, and the controller itself may not function, and could be damaged. We ship our 320 watt power supplies with a ground strap between the AC ground and the DC ground. Always seek professional help.

Keep the DC power supply wires short--no longer than 2', 8 inches is ideal. A 3-4' length may create up to +_10 volt electrical noise, and switching power supplies may not regulate well.

All stepper motors require a filter capacitor to reduce electrical noise and for smooth stepping. We add an external capacitor close to the Au Controller and it is wired to +V and ground, 330 uF to 2,200 uF depending on motor size, and are rated at 25v, 35v peak.

Warning! Use caution when operating, severe injury can result from the motor rotating. Long wires act like antennas and may cause erratic dangerous motion.

Cables

The Au controllers have one Power/RS232 connector and one I/O connector (Au86 and Au110 Controllers have 2 Power/RS232 connectors, use the one in the middle). See Au_Controllercoder_Pins.jpg for the pin out and description.

If you ordered a power supply along with your Au Controller/motor, then we pre-solder the wires, assemble, and test for you at no charge.

A simple Loop-back test DB9 connector is provided as a tool for checking your PC serial port for correct transmission, if you have an issue with Windows, etc. It has pins 2 & 3 shorted together so that your typed characters appear on your screen. This DB9 tester is not needed for normal use.

Complete User Manual is not included in the shipping box since customers already have a printed copy from our website.

333 N Snowmass Cir
Superior, CO USA 80027
www.excitron.com
info@excitron.com
303-859-9476

Quick Setup for Excitron Controllers

Excitron's *Faster Than Fast*[R] stepper motor **Controllers** make your motion control simple. They contain all the electronics and power for thousands of motorized applications—and they run right out of the box by simply typing "**w**" then a "**G**".

Stepper motors rotate one small step at a time, and are special because both position and speed can be precisely controlled, unlike any other type of motor. Our motors can run continuously for 30 years.

Our part number system indicates the stepper motor size, and every Au controller has at least one RS232 serial port for communication to any computer. No TTL serial port adapters are needed since the serial port electronics are inside the Au Controller.

Our experts are happy to assist you in selecting the best controller, stepper motor, and accessories for your project.

Remember to check out our Belt Sliders, Wire Sliders, and Rotary Tables for your motorized projects.

For a quick start:

- Make sure the AC-DC power supply is off or unplugged.
- Connect the stepper motor connector to the **Controller** (if your controller is integrated, there are no motor wires).
- Connect the Power supply/RS232 connector (this is a 2 x 4 pin , 2mm pitch female black housing) to the Au **Controller**.
- Turn on your power supply. The Au Controller LED should be ON. It blinks when typing commands.
- Start Hyperterminal (or any equivalent program) with 57.K baud, 8 bits, no hardware handshaking.
- Type a little **w** to wake the **Controller** and it displays:

  Excitron Corp 01/14/11 v4.12 Au86-118
  Controllercodermotor +Vs=12.77
  >

  (controller name and voltage varies)

- Type **G** to run the stepper motor.
- Type little **i** to see all **Controller** information and the motion profile #01 values.
- Change direction (**C** or **W**), **V**sps, or number of steps **N**, type **G**, and see the difference.
- Type **?** for a brief command help list.
- The **Controller** is in Command Mode on power-up, and will respond to any serial command. Input Profile, Motion Profile, and Driver Modes create standalone functionality, whereupon no PC is needed.
- Note that any Motion Profile with D=1 (under DU column) will only change direction according to the input pin. If you do not need this feature, then make sure D=0.

Enjoy! Feel free to contact us at info@excitron.com.

…make it a great day!

Excitron's Engineering Team