Soigeneris SSENC-x

SmoothStepper Enclosure System

User's Manual V2.0

Soigeneris
Your Resource for Hi-Tech Hobbies

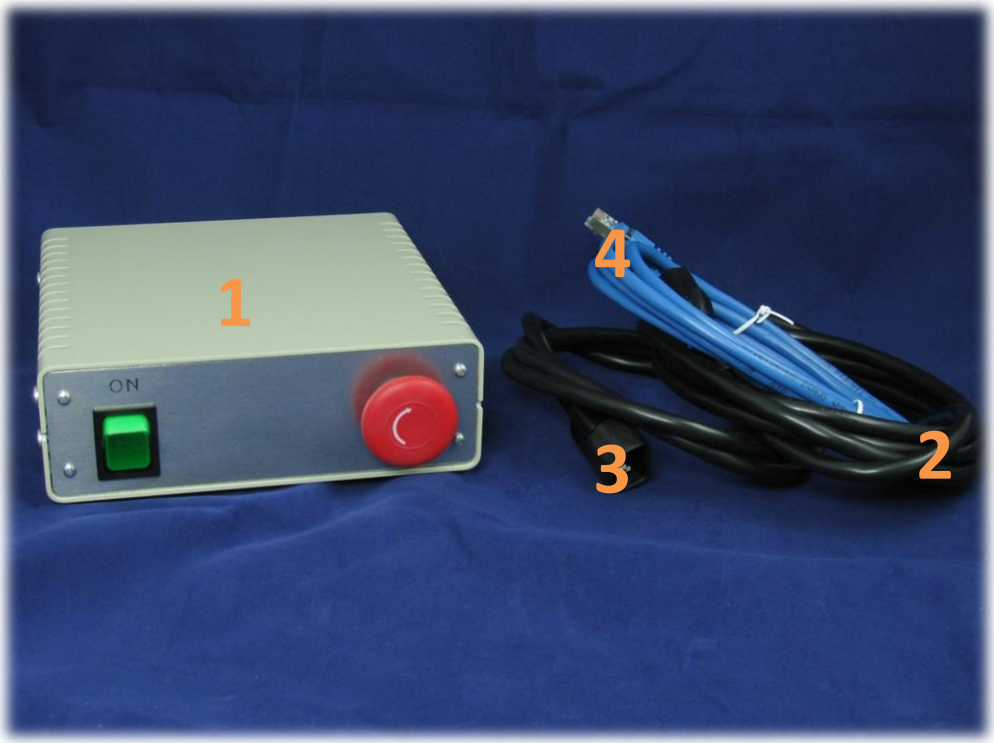
304 Fox Creek Road
Rolla, MO 65401 US
573-647-9294

A word about safety

We at Soigeneris take pride in providing high quality components for small scale CNC systems. While we make every effort to provide in depth and accurate technical information we cannot make any guarantees about their applicability to your particular application. In reality the only person who can keep you safe is you. We strongly suggest that you avail yourself of all the information available for the components you're putting into your CNC system and understand how they will all interact.

What's Included

1) Enclosure (Includes SmoothStepper, 5V power supply, etc)
2) Power Cable
3) Power Outlet Cable
4) Ethernet or USB Cable



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Introduction

While the SmoothStepper is available as a bare board this is often not a very convenient way to add one to an existing system. Proper installation typically involves things like rewiring, panel modifications, etc. This can lead to a lot of downtime and frustration while getting things hooked up correctly. For this very reason we designed the Soigeneris SSENC to make the process a simple 'plug-and-play' procedure that allows you to be up and running quickly.

We have recently improved upon our original design by using a slightly deeper enclosure. The extra room allowed us to optimize the internal layout and make room to support Port 3 on the Ethernet SmoothStepper. The new enclosure also freed up access to the unused portion of the front panel so the unit can be customized if desired.

The Soigeneris SSENC is a small, heavy duty, aluminum enclosure that houses a USB or Ethernet SmoothStepper, a 5V power supply and associated parts. Ports 1, 2 & 3 from the SmoothStepper board are brought out to the rear panel in the form of DB25 'parallel port' style connectors, and the Ethernet/USB connector is readily available. You simply need to connect a Male to Male parallel port style cable between the SSENC port and your machine's control.

Power for the SSENC is provided by way of an AC inlet jack and an AC outlet is also provided. More information on the AC outlet is provided in this manual. Please study it in detail before making use of this feature.

Please read through this entire manual as well as the documents linked to below before attempting installation. None of them is lengthy and a bit of time spent in advance reading the documentation will make the subsequent job of hooking this up much easier.

1) USB SmoothStepper Manual
2) USB SmoothStepper Installation Tips
3) USB SmoothStepper Driver and Plug-in
4) Ethernet SmoothStepper Installation Tips
5) Ethernet SmoothStepper Troubleshooting Guide
6) Ethernet SmoothStepper Plug-in

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Hooking things up

Hooking up the SSENC is a straightforward process. Please refer to the diagrams on Pages 5&6 for the location and name of each connector. We will discuss some important points for each connector below.

AC Power (#4) – AC input power is connected with the included power cord by plugging it into the connection labeled #4. The unit can run on 120V or 240V AC. A power cord with a US type 110V plug is provided. The unit can run on 120V or 240V AC. A power cord with a US type 110V plug is provided. You can change the plug to match your countries style or use an adapter. Be cautious with an adapter as some of the cheaper ones do not carry the ground wire through which is dangerous.

AC Outlet (#5) is an AC outlet; when the Main Power Switch is turned on and the Emergency Stop switch is released AC power will be available at this outlet. Up to 9 amps can be supplied which is enough to power many small bench top machines. Please exercise caution when using this feature and only do so if you are confident about your machines AC power usage.

Note: When using the AC outlet to power your machine's control if the Emergency Stop Switch is pushed in it will deactivate the AC outlet and remove power from your machine. The SmoothStepper and communication with Mach 3 will remain active however. If your machine receives power from another source, say for a spindle drive, the Emergency Stop Switch may not cause the spindle to stop turning. Proper machine wiring is beyond the scope of this manual so please ask if you have any questions.

Port 1, 2 & 3 – These two connectors behave like the parallel port connectors on a PC. A standard Male to Male parallel port style cable can be used to connect between the SSENC and your machine's control. A suitable cable can be ordered as an option with your SSENC. NOTE: Port 3 is available on the Ethernet version only.

Ethernet / USB – This is a very straight forward connection, connect the included Ethernet or USB cable between the SSENC and your PC. Take care to avoid routing the cable along with your stepper cables or high voltage lines. NOTE: Type of cable depends on if you purchased the USB of Ethernet version of the SSENC.

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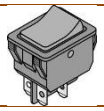
The Front Panel

1 Main Power Switch



Controls power to SmoothStepper and AC Outlet. Switch illuminated when on.

2 Emergency Stop (Optional)

Controls power to AC Outlet, SmoothStepper remains powered. Push to trigger, twist to release.

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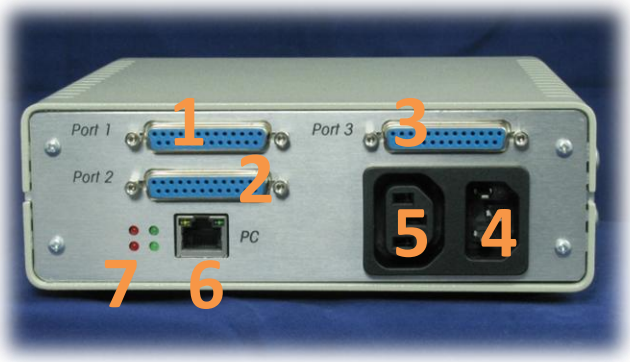
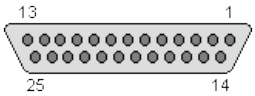
The Rear Panel

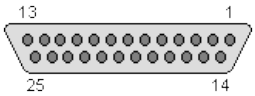


1 SmoothStepper Port 1 DB25



Pins 1:	Outputs
Pins 2-9:	Inputs
Pins 10-13 & 15:	Inputs
Pins 14, 16 & 17:	Outputs
Pins 18-25:	DC Common (Gnd)

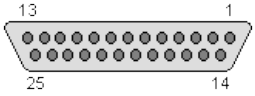
2 SmoothStepper Port 2 DB25



Pins 1:	Outputs
Pins 2-9:	Inputs or Outputs
Pins 10-13 & 15:	Inputs
Pins 14, 16 & 17:	Outputs
Pins 18-25:	DC Common (Gnd)

3 SmoothStepper Port 3 DB25

Ethernet Version Only



Pins 1:	Outputs
Pins 2-9:	Inputs or Outputs
Pins 10-13 & 15:	Inputs
Pins 14, 16 & 17:	Outputs
Pins 18-25:	DC Common (Gnd)

4 AC In

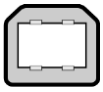
10A Max, 6' Cord Included

It is recommended that a dedicated outlet be used to power your control and CNC machine.

5 AC Outlet

9A max, 4' cord included

6 Ethernet or USB Connector



Standard Ethernet or USB 'B' Style connector connects SmoothStepper to PC.

7 Status LEDs

The Ethernet version has four status LEDs that protrude through the back cover. The USB version has two board mounted LEDs that are visible through the holes. See the user's manual for the respective board version for details about the LEDs.

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Specifications

- Weight: 4 pounds
- Dimensions: 7" x 8" x 2.5"
- Power Requirements: 120VAC~240VAC, 1A
- Power Outlet: Maximum 9A

Links

1) http://www.soigeneris.com/Document/Warp9/SmoothStepperUserManualV1.0.pdf
2) http://www.soigeneris.com/Document/Warp9/Installing_and_Configuring_the_SmoothStepper.pdf
3) http://www.soigeneris.com/Document/Warp9/USB_SmoothStepper.zip
4) http://www.soigeneris.com/Document/Warp9/Installing_and_Configuring_the_Ethernet_SmoothStepper.pdf
5) http://www.soigeneris.com/Document/Warp9/ESS-TroubleshootingGuide%5b1%5d.pdf
6) http://www.soigeneris.com/Document/Warp9/Ethernet_SmoothStepper.zip