

GUI Interface for Driver Products  
R525, Silverpak 23D, 34D

***Lin Driver***

User Manual  
Version 1.0



Used with Products:

- R525-RO Driver
- Silverpak 23D Plus (integrated NEMA 23 motor + drive)
- Silverpak 34D (integrated NEMA 34 motor + drive)

Programming Software & License

- Development Language : Visual C++ 2005 express
- Software license : Free version

<http://msdn.microsoft.com/vstudio/express/support/faq/#compat>



Select your product from the list above.

## **Silverpak 23D Plus and R525:**

Note that the Silverpak 23D Plus contains an R525 driver on the back of the motor, and the GUI's are identical:

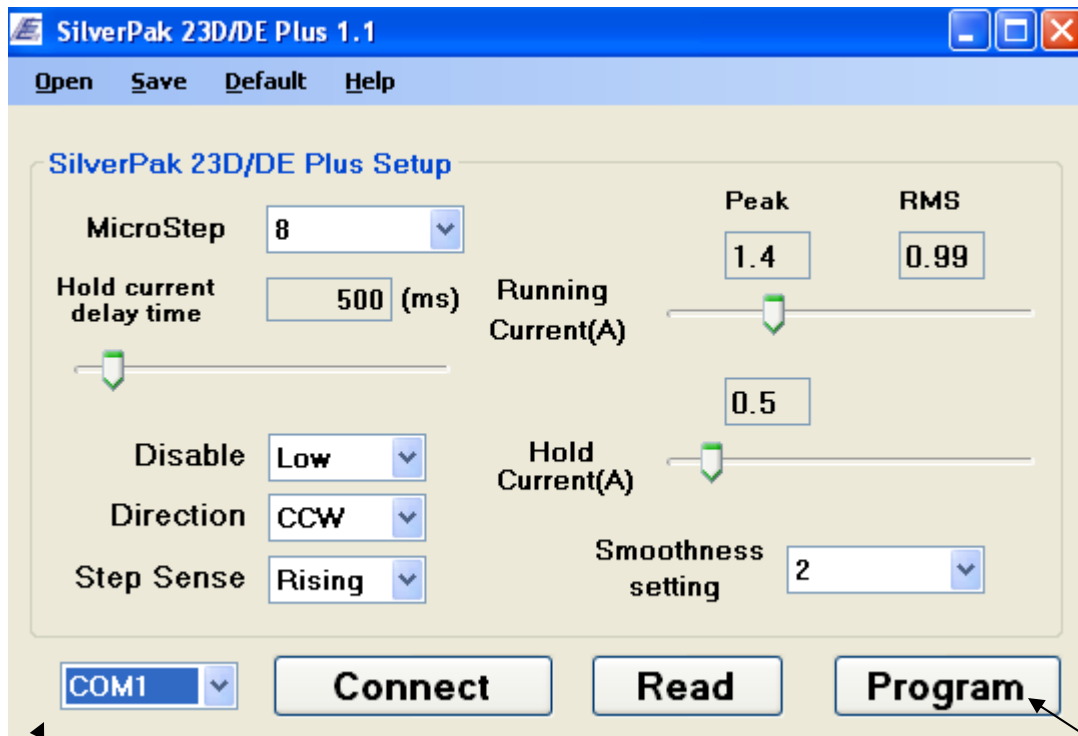
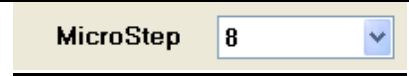
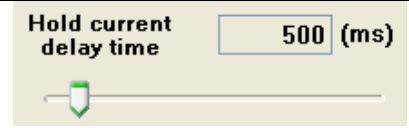

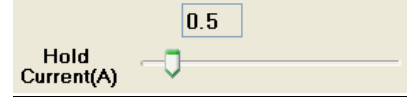


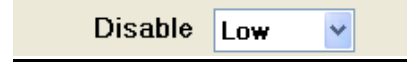
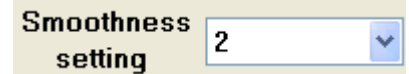


Figure 1 Lin Driver for 23D Plus

- ① Select the COM port and click "Connect"
- ② Make changes to current, microstepping, etc.
- ③ Click "Program" to store the settings.

Setting	Values	Description
	Full step, 2x, 4x, 5x, 8x, 10x, 16x, 25x, 32x, 50x, 64x, 125x, 128x, 250x, or 256x.	<b>Microstep:</b> Changes the step resolution such that the motor will step in smaller increments. This helps with smooth and quiet operation.
	0 to 6350 msec, in 50 msec increments  1000 msec = 1 sec	<b>Hold current delay time:</b> This setting is a time delay in milliseconds. After the last step pulse is sent to the motor, there will be a delay time for when the motor switches from run to hold current. This can be beneficial if moving a large load that needs high current during 1 or 2 seconds after a move is completed, but beyond this, you may want to hold the unit using less power.
	0.5 Amps to 5.0 Amps, in 0.05 increments	<b>Running Current:</b> This changes the amount of current (Amps Peak) going into the motor. <b>Do not exceed 1.4 times the motor's current.</b> Every motor is labeled with a current rating. Going beyond 1.4 times this value can burn the motor. Increasing this value provides more torque. The Peak and corresponding RMS or Amps/Phase value is displayed above the scroll bar.
	0.0 Amps to 5.0 Amps, in 0.05 increments	<b>Hold Current:</b> This changes the amount of holding current used when the motor is not in motion. <b>Do not exceed the motor's current rating.</b> Increasing this value provides the ability to hold a heavy or large object in place.
	Detects step pulses on rising or falling edge	<b>Step rising detect:</b> Step pulses can be read using the pulse's rising (or positive) edge, or the falling (negative) edge. If you notice irregular stepping patterns, try changing this value.
	Motor will initially rotate CCW.	<b>Direction:</b> Upon power on, the motor will rotate counter-clockwise. If you desire that the initial direction of rotation be changed, choose "CW" for the motor to initially run clockwise.
	Disables the motor with a high (5V) or low signal (0V).	<b>Disable:</b> The disable pin is used to stop the motor. By default, it searches for a low signal in order to stop motion. By changing it to "high", the disable pin will search for a 5V signal to stop motion.
	0, 1, 2, 3	<b>Smoothness setting:</b> Changes the current waveform for smoother motion. Run motor at your desired operating speed while connected to a PC. Change smoothness setting to various values and audibly listen for quieter operation.

**Save:** To save your desired settings to a text file, click on “Save” at the top bar.

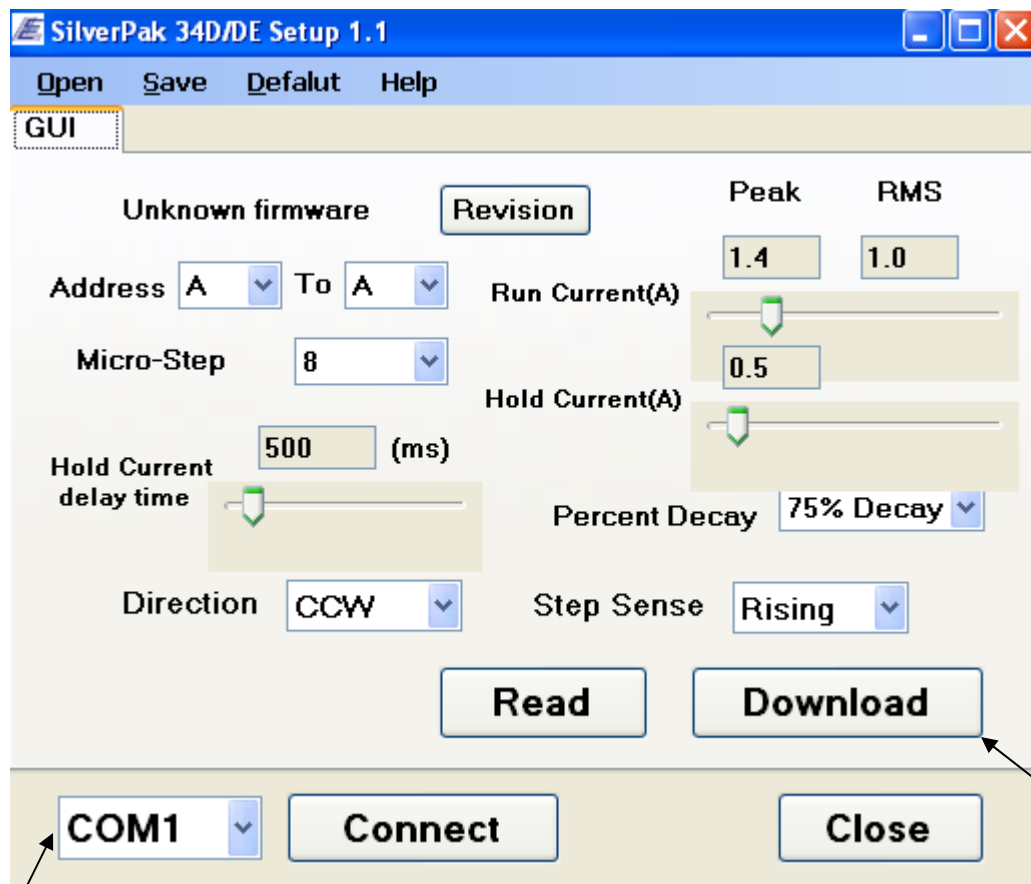
**Open:** Open an existing file that you previously saved. You must click on “Program” for it to be stored to the driver.

**Default:** When selecting the corresponding motor winding, all parameters will change to the default values and current is updated to the peak current of the motor winding.

**Upon viewing the changed settings, you must click “Program” in order to save these settings to the unit.**

## Silverpak 34D:

The Silverpak 34D is a NEMA 34 motor with a driver.



- 1 Select the COM port and click “Connect”
- 2 Make changes to current, microstepping, etc.
- 3 Click “Download” to store the settings.

Click “READ” to read what is currently stored on your unit.

**Save:** To save your desired settings to a text file, click on “Save” at the top bar.

**Open:** Open an existing file that you previously saved. You must click on “Program” for it to be stored to the driver.

**Default:** When selecting the corresponding motor winding, all parameters will change to the default values and current is updated to the peak current of the motor winding.

Upon viewing the changed settings, you must click “Program” in order to save these settings to the unit.

Setting	Values	Description
Direction <input type="text" value="CCW"/>	CCW or CW	<b>Direction of Rotation.</b> Changes direction of rotation. By default, motor will rotate CCW.
Revision <input type="text"/>	n/a	<b>Firmware Revision.</b> Displays the existing firmware revision.
Hold Current(A) <input type="text" value="0.5"/>	0 – 7.0 Amps Peak	<b>Holding Current.</b> Changes the amount of current supplied to the motor while holding in place (during which no step pulses are input to the drive). Units are in Amps/Phase.
Hold Current delay time <input type="text" value="500"/> (ms)	500 – 6000 msec	<b>Hold Timeout.</b> Sets the length of time unit will go from running current to hold current (in milliseconds). After the last step pulse is seen, it will switch from run to hold current.
Address <input type="text" value="A"/> To <input type="text" value="A"/>	A – Z	<b>Address.</b> Changes the address of the unit. Default is address “A”. Change the 2 <sup>nd</sup> value to your desired new address.
Percent Decay <input type="text" value="75% Decay"/>	0%, 25%, 75%	<b>Percent Fast Decay.</b> Changes the decay mode at which the current depletes after each step is issued. It can be used for smoothing out the motor vibration and resonance. General rule is to use 0 for slow speeds, 1 and 2 for medium and fast speeds, respectively.
Run Current(A) <input type="text" value="1.4"/> <input type="text" value="1.0"/>	0 – 7.0 Amp Peak	<b>Run Current.</b> Changes amount of peak current supplied to motor during running (when step pulses are input to the drive). Units are in Amps Peak.
Micro-Step <input type="text" value="8"/>	Full step, 2, 4, 8, 16, 32, 64, 128, and 256	<b>Step Resolution.</b> Sets the microstep resolution of motor where 2 = 2x, 4 = 4x, etc.
Step Sense <input type="text" value="Rising"/>	Rising, Falling	<b>Step Sensing.</b> Senses each step pulse on the falling or rising edge of the pulse.