2.5A Stepper Phidget
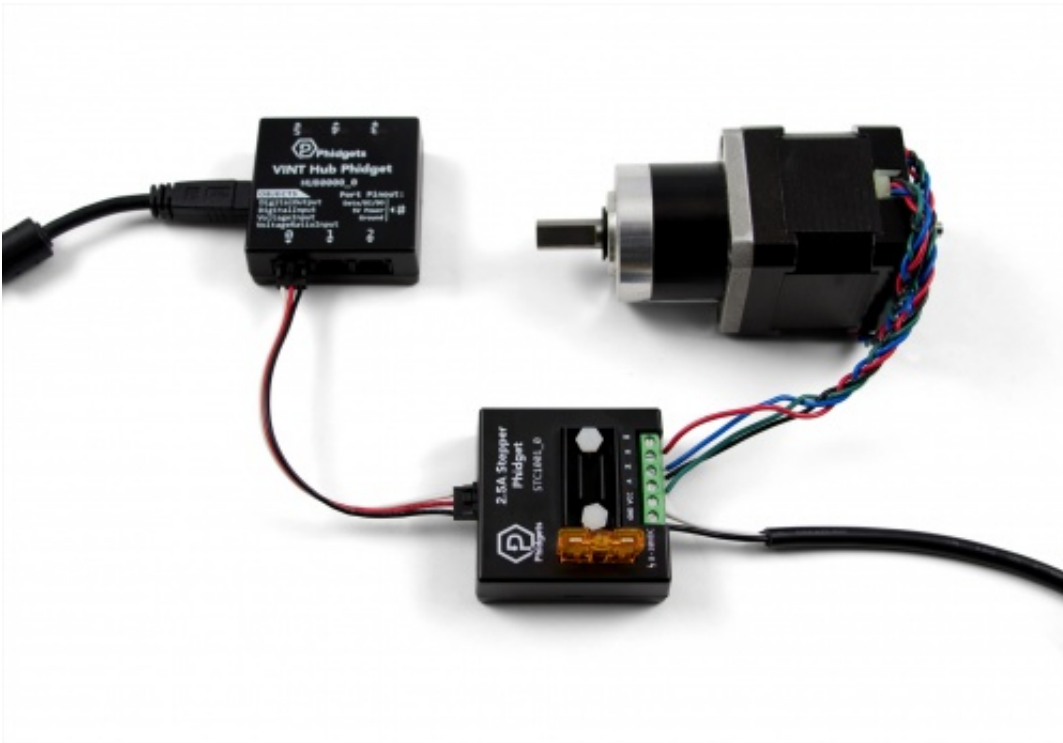
Contents

Getting Started

Welcome to the STC1001 user guide! In order to get started, make sure you have the following hardware on hand:

- STC1001 - 2.5A Stepper Phidget
- VINT Hub
- Phidget cable
- USB cable and computer
- Power supply (8-30V DC)
- 4-wire, 6-wire, or 8-wire stepper motor

Next, you will need to connect the pieces:

1. Connect the STC1001 to the VINT Hub using the Phidget cable.
2. Connect the stepper motor to the Phidget's output terminals. See your motor's data sheet or product page for wiring instructions.
3. Connect the VINT Hub to your computer with a USB cable.
4. Connect the power supply to the power terminals on the STC1001.

Now that you have everything together, let's start using the STC1001!

Using the STC1001

Phidget Control Panel

In order to demonstrate the functionality of the STC1001, the Phidget Control Panel running on a Windows machine will be used.

The Phidget Control Panel is available for use on both macOS and Windows machines.

Windows

To open the Phidget Control Panel on Windows, find the icon in the taskbar. If it is not there, open up the start menu and search for Phidget Control Panel
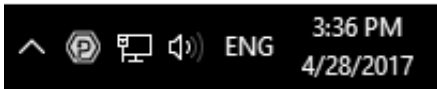
macOS

To open the Phidget Control Panel on macOS, open Finder and navigate to the Phidget Control Panel in the Applications list. Double click on the icon to bring up the Phidget Control Panel.

For more information, take a look at the getting started guide for your operating system:

- Getting started with Windows
- Getting started with macOS

Linux users can follow the getting started with Linux guide and continue reading here for more information about the STC1001.

First Look

After plugging the STC1001 into your computer and opening the Phidget Control Panel, you will see something like this:
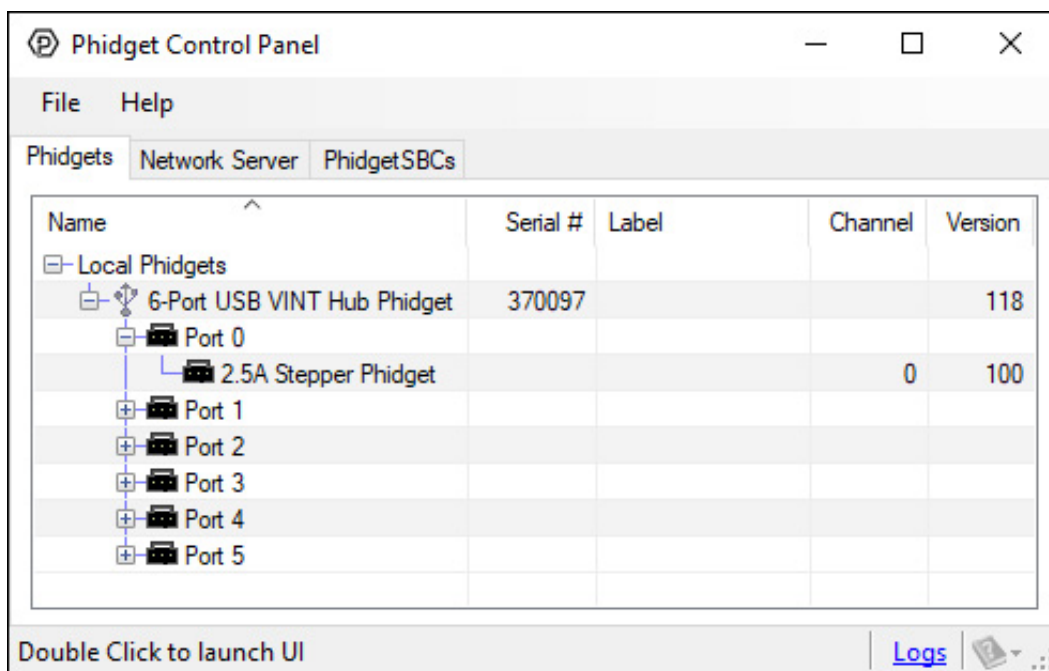

The Phidget Control Panel will list all connected Phidgets and associated objects, as well as the following information:

- **Serial number:** allows you to differentiate between similar Phidgets.
- **Channel:** allows you to differentiate between similar objects on a Phidget.
- **Version number:** corresponds to the firmware version your Phidget is running. If your Phidget is listed in red, your firmware is out of date. Update the firmware by double-clicking the entry.

The Phidget Control Panel can also be used to test your device. Double-clicking on an object will open an example.

Stepper Motor

Double-click on the Stepper object, labelled Stepper Phidget, in order to run the example:
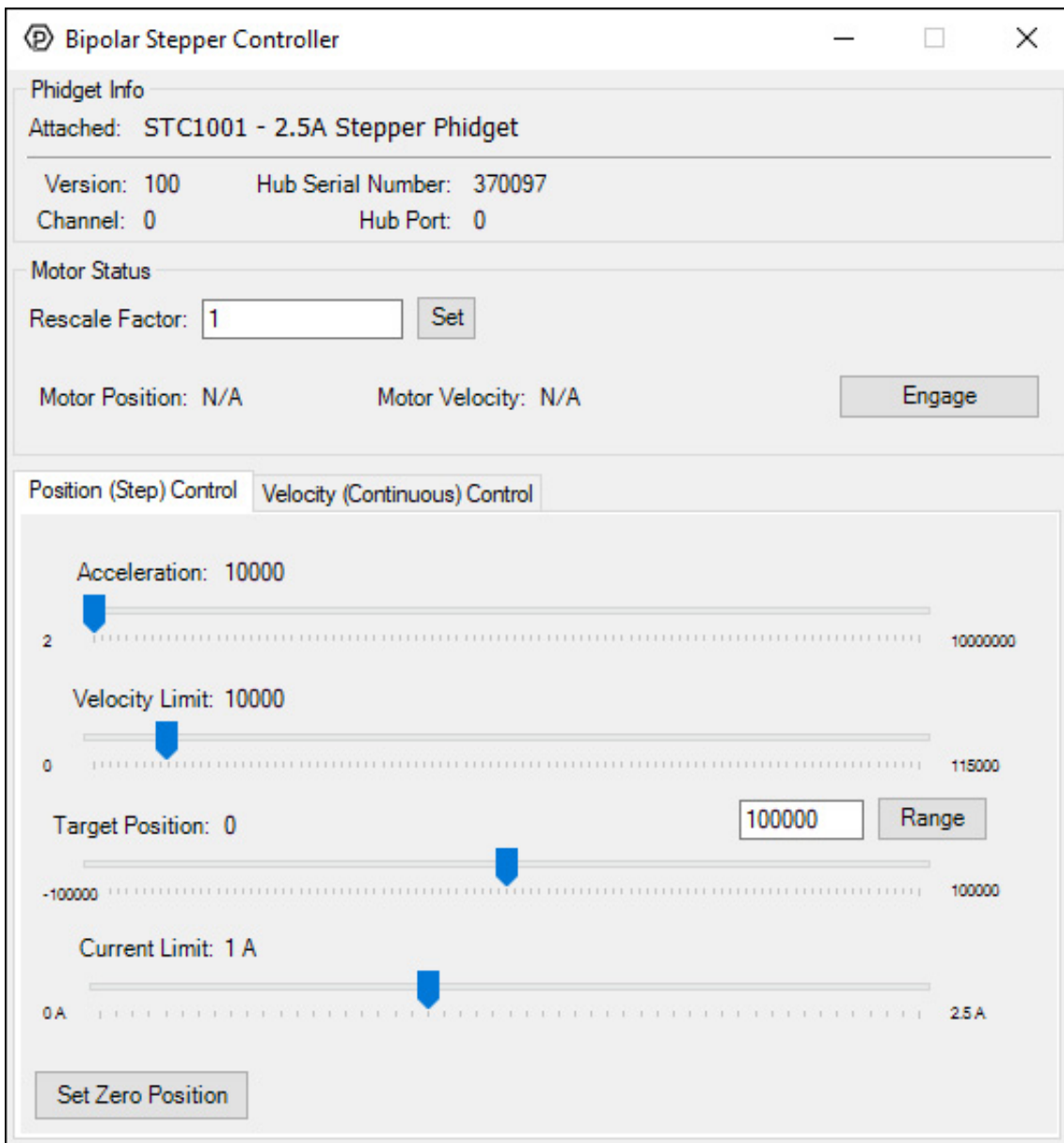
General information about the selected object will be displayed at the top of the window. You can also experiment with the following functionality:

- Toggle the Engage button to provide power to the motor coils.
- By default, motor position, velocity, and acceleration are measured in sixteenths of a step. If you want to use different units, change the value in the Rescale Factor textbox.
- Use the Target Position slider to set a new target position. Change the Acceleration and Velocity sliders to speed up or slow down the STC1001's approach.
- Select the Velocity (Continuous) Control tab for continuous rotation instead of specifiying a position.

Technical Details

Rescale Factor

Rescale Factor

Further Reading

For more information, have a look at the Stepper Motor and Controller Primer.

What to do Next

- Software Overview - Find your preferred programming language here to learn how to write your own code with Phidgets!
- General Phidget Programming - Read this general guide to the various aspects of programming with Phidgets. Learn how to log data into a spreadsheet, use Phidgets over the network, and much more.
- Phidget22 API - The API is a universal library of all functions and definitions for programming with Phidgets. Just select your language and device and it'll give you a complete list of all properties, methods, events, and enumerations that are at your disposal.