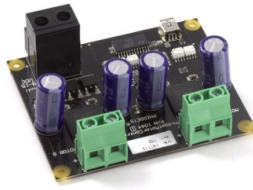# 1064 User Guide

Go to this device's product page [1]

Getting Started

### Checking the Contents

You should have received:

- A PhidgetMotorControl HC board
- A Mini-USB Cable

In order to test your new Phidget you will also need:

- A DC Motor
- A 6 to 15V DC Power Supply (If you use the barrel jack, make sure your power supply has **center positive** polarity)

Connecting the Pieces

1. Connect the motor to the PhidgetMotorControl board.
2. Connect the power supply to the terminal block on the PhidgetMotorControl board.
3. Connect the PhidgetMotorControl board to your PC using the USB cable.
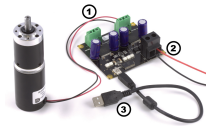
Testing Using Windows 2000 / XP / Vista / 7

Make sure you have the current version of the Phidget library installed on your PC. If you don't, follow these steps:

1. Go to the Quick Downloads section on the Windows page
2. Download and run the Phidget21 Installer (32-bit, or 64-bit, depending on your system)
3. You should see the Ph icon on the right hand corner of the Task Bar.

### Running Phidgets Sample Program

Double clicking on the Ph icon loads the Phidget Control Panel; we will use this program to ensure that your new Phidget works properly.

The source code for the **MotorControl-full** sample program can be found in the quick downloads section on the C# Language Page. If you'd like to see examples in other languages, you can visit our Languages page.

Updating Device Firmware

If an entry in this list is red, it means the firmware for that device is out of date. Double click on the entry to be given the option of updating the firmware. If you choose not to update the firmware, you can still run the example for that device after refusing.

Double Click on the ![Ph] icon to activate the Phidget Control Panel and make sure that **Phidget High Current Motor Controller 2-motor** is properly attached to your PC.
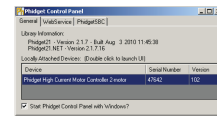
1. Double Click on **Phidget High Current Motor Controller 2-motor** in the Phidget Control Panel to bring up MotorControl-full and check that the box labelled Attached contains the word True.
2. Select the connected motor. If you have connected your motor at the same place as the one in the picture on page 3, it should be at position 0.
3. Move the position slider to set the maximum velocity. The maximum velocity is shown in the Maximum Velocity box, and the current motor velocity in the box above.
4. Change the acceleration by moving the slider. The value is displayed in the Acceleration box.
5. The electrical current flowing through the motor is displayed in the Current box.
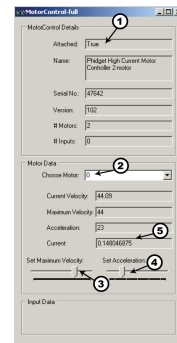
Testing Using Mac OS X

1. Go to the Quick Downloads section on the Mac OS X page
2. Download and run the Phidget OS X Installer
3. Click on System Preferences >> Phidgets (under Other) to activate the Preference Pane
4. Make sure that the Phidget High Current Motor Controller 2-motor is properly attached.
5. Double Click on Phidget High Current Motor Controller 2-motor in the Phidget Preference Pane to bring up the MotorControl-full Sample program. This program will function in a similar way as the Windows version.

Using Linux

For a step-by-step guide on getting Phidgets running on Linux, check the Linux page.

Using Windows Mobile / CE 5.0 / CE 6.0

For a step-by-step guide on getting Phidgets running on Windows CE, check the Windows CE page.

Technical Details

For more information about DC motors and how to control them, check the DC Motor and Controller Primer.

API

We document API Calls specific to this product in this section. Functions common to all Phidgets and functions not applicable to this device are not covered here. This section is deliberately generic. For calling conventions under a specific language, refer to the associated API manual in the Quick Downloads section for that language. For exact values, refer to the device specifications.

Functions

int MotorCount() [get] : Constant = 2

Returns the number of Motors that can be controlled by this PhidgetMotorControl.

double Velocity (int MotorIndex) [get,set]

Velocity is the pulse-width modulation duty cycle of the motor (the percentage of time the motor is being powered). The PhidgetMotorControl rapidly switches power to the motor on/off. Velocity can be set between −100 and +100. −100 corresponds to the motor being driven 100% of the time in reverse, +100 driven 100% of the time forward. 0 is off.

double Acceleration (int MotorIndex) [get,set]

Returns how fast a motor will be accelerated between given velocities. The valid range is between AccelerationMax and AccelerationMin. This parameter is currently measured in percent, where 100% is the fastest velocity ramping available.

double AccelerationMax (int MotorIndex) [get] : Constant

Returns the maximum acceleration that a motor will accept, or return.

double AccelerationMin (int MotorIndex) [get] : Constant

Returns the minimum acceleration that a motor will accept, or return.

double Current (int MotorIndex) [get] : Amps

Returns the current being consumed by a motor.

Events

OnMotorChange(int MotorIndex, double Velocity) [event]

An event issued when the velocity a motor is being driven at changes.

OnCurrentChange(int MotorIndex, double Current) [event]

An event issued when the current being conusmed by a motor changes.

Product History

Date	Board Revision	Device Version	Comment
October 2007	0 [2]	100	Product Release
May 2009	0A	101	Improved PWM Opto-isolators
July 2011	1 [3]	102	Switch to Mini-USB connector

References

[1] http://www.phidgets.com/products.php?product_id=1064

[2] http://www.phidgets.com/products.php?product_id=1064_0

[3] http://www.phidgets.com/products.php?product_id=1064_1

Article Sources and Contributors

1064 User Guide *Source*: http://www.phidgets.com/wiki/index.php?title=1064_User_Guide *Contributors*: Burley, Mparadis

Image Sources, Licenses and Contributors

Image:1064.jpg *Source*: http://www.phidgets.com/wiki/index.php?title=File:1064.jpg *License*: unknown *Contributors*: Burley

File:1064_1_Connecting_The_Hardware.jpg *Source*: http://www.phidgets.com/wiki/index.php?title=File:1064_1_Connecting_The_Hardware.jpg *License*: unknown *Contributors*: Mparadis

File:Ph.jpg *Source*: http://www.phidgets.com/wiki/index.php?title=File:Ph.jpg *License*: unknown *Contributors*: Mparadis

File:1064_1_Control_Panel_Screen.jpg *Source*: http://www.phidgets.com/wiki/index.php?title=File:1064_1_Control_Panel_Screen.jpg *License*: unknown *Contributors*: Mparadis

File:1064_1_MotorControl_Screen.jpg *Source*: http://www.phidgets.com/wiki/index.php?title=File:1064_1_MotorControl_Screen.jpg *License*: unknown *Contributors*: Mparadis