# Thinker1 Software Reference

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## What is Arduino?

*From the Arduino website www.arduino.cc*

Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. It's intended for artists, designers, hobbyists, and anyone interested in creating interactive objects or environments.

Arduino can sense the environment by receiving input from a variety of sensors and can affect its surroundings by controlling lights, motors, and other actuators. The microcontroller on the board is programmed using the Arduino programming language (based on Wiring) and the Arduino development environment (based on Processing). Arduino projects can be stand-alone or they can communicate with software running on a computer (e.g. Flash, Processing, MaxMSP).

## Installing the drivers

It is very important that you have the driver for the board installed on your computer, if this is not installed your board will not work.

Download the correct driver for your operating system from this website www.ftdichip.com/Drivers/VCP.htm and install as per the instructions.

There is some further information on how to install the drivers on this website www.sparkfun.com/tutorials/308

## Connecting the thinker1 to your computer

You will need an FTDI cable to connect the board to your computer and transfer the programs you write.

These are available from your local electronics supplier or can be purchased online

www.sparkfun.com/products/9718

## Selecting the right Serial Port

Finding out which serial port your thinker1 board is connected to can be a tricky business, here are some tips that will help you identify the right port.

- In most cases your board will be using COM3 or higher, as the lower numbered ports are usually reserved for hardware serial ports.

- You can use software on your computer such as System Profiler (on a Mac) or Device Manager from the Control Panel (on Windows) to identify which port the board is using.

- Try opening the Arduino software and check the list of available serial ports (in the Tools menu), then unplug your board and re-open the menu. The entry from the list that disappears is the correct serial port for your board.

# Arduino programming at a glance

This is a quick overview of the Arduino development enviroment, this is free software that allows you to program the micro-controller on your thinker1 board.

For more detailed information, check out the official Arduino website at www.arduino.cc