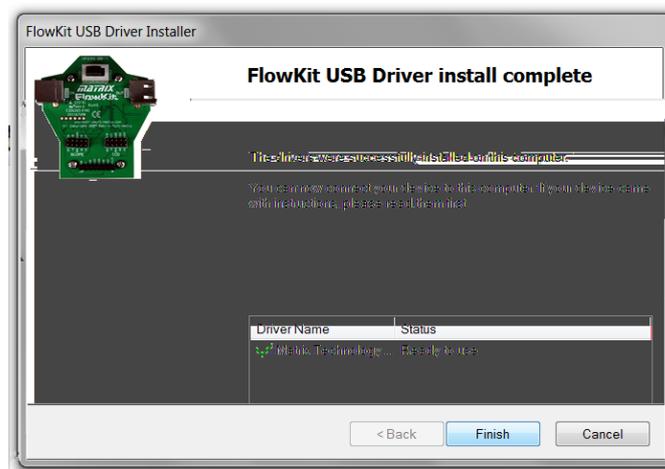


Setup Instructions

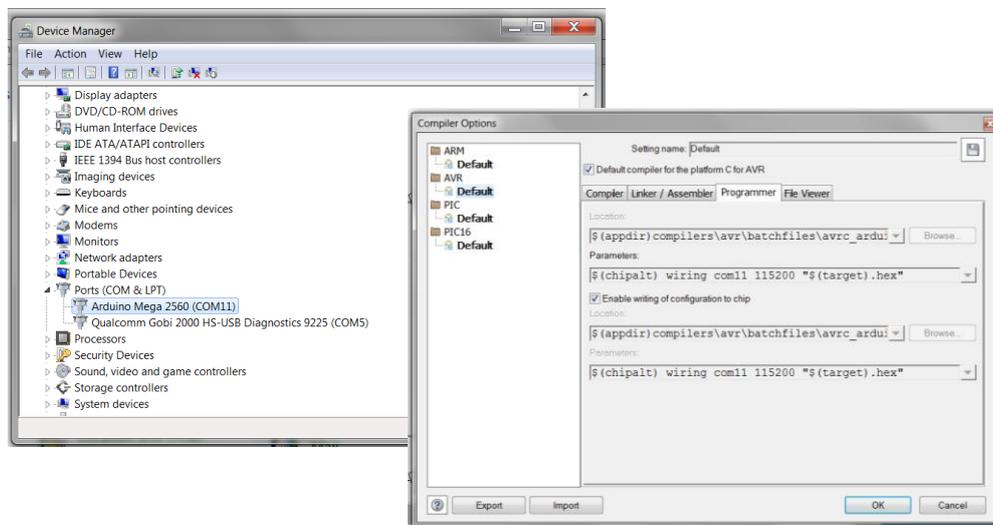
Flowkit (V1) and Arduino Mega R3 with Flowcode V6

It is intended that this guide is used in conjunction with the official Matrix instructions for version 1 of the flowkit debugging tool, part No.HP299. It is assumed that communication has previously been established between Flowcode V6 and the Arduino Mega R3 2560 device and that the Arduino can be successfully programmed using Flowcode or alternatively via Xloader.

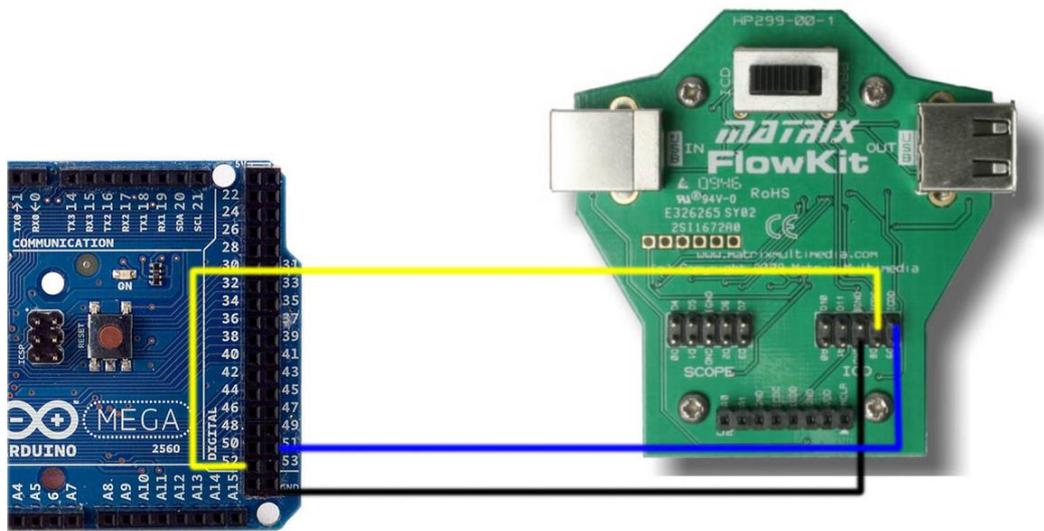
- 1) Before opening the Flowcode V6 application ensure that the Flowkit USB Driver is correctly installed. (*the Flowkit USB Driver can be downloaded from www.matrixsl.com*).



- 2) Connect the Arduino Mega to the Host PC (or Laptop) prior to starting Flowcode V6. This will ensure that Flowcode will detect the serial port of the Arduino Mega. Check the COM port number under the 'Build' menu followed by the 'Programmer' tab in Flowcode. The example below shows COM11 has been chosen.

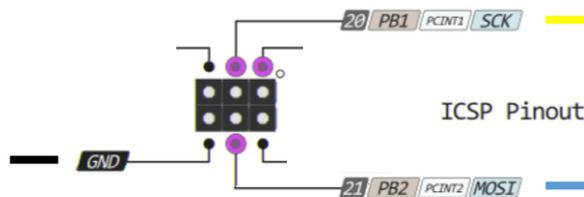


- 3) Start Flowcode V6 and load your project.
- 4) Wire the Flowkit to the Arduino Mega.



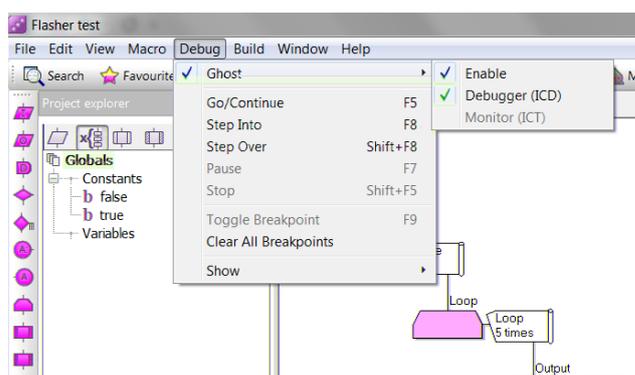
Interconnection	Arduino Mega R3	FlowKit ICD
	Pin 51 [PB2] MOSI	ICD D (data)
	Pin 52 [PB1] SCK	ICD C (clk)
	GND	GND

The example above shows connections to Pin 51 and Pin 52 of the Arduino, but alternatively the ICSP pins of the Arduino can be used.

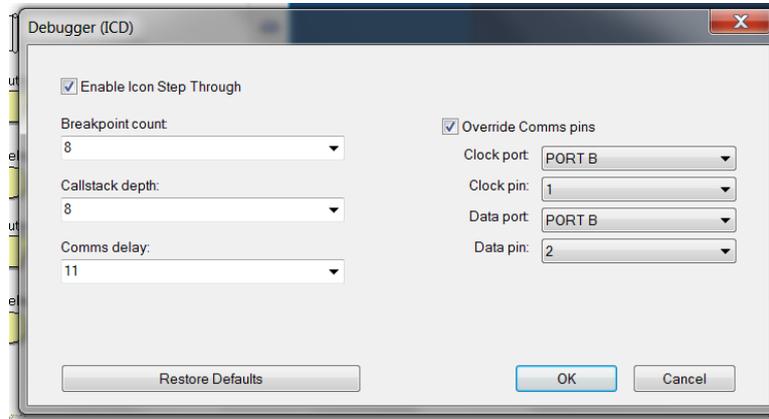


Connect the 'USB in' of the Flowkit to the USB of the Host PC (or laptop). Note: Experience has shown that it is often better to connect Arduino to a USB port on the Host PC that is different from that used by Flowkit. (i.e. not the 'USB out' on Flowkit).

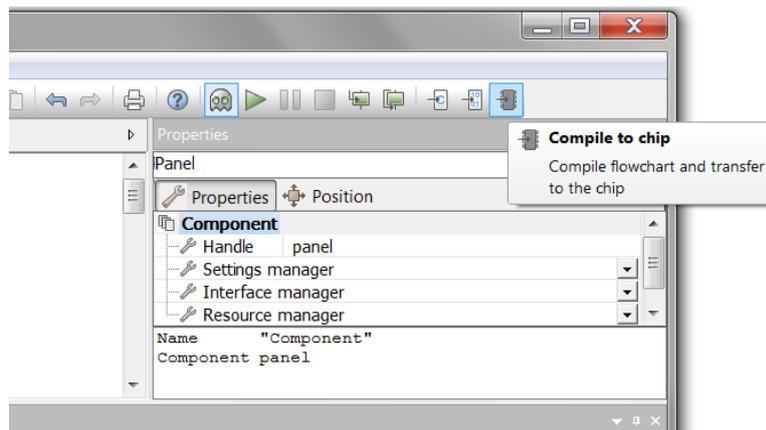
- 5) Enable 'Debugger (ICD)' from the Debug Ghost menu in FlowCode.



- 6) Re-open the Debug menu and select 'Debugger (ICD)'. This will display the Debugger (ICD) Properties. Set the Clock and Data lines of the Flowkit to **PORT B Pin 1** and **PORT B Pin 2** respectively.



- 7) Select '**Compile to chip**' to send the debugger enabled program to the Arduino.



- 8) With the Ghost Debugger (ICD) enabled, select GO/Continue [F5] or STEP INTO [F8] or STEP OVER [Shift + F8] to run the program under the control of Flowcode via Flowkit.
- 9) Experience has shown that Flowkit is not particularly tolerant of the action of taking the USB plug in and out of the USB socket. If communication with Flowkit stops and cannot be reinstated by simply disabling and re-enabling Debugger (ICD) mode, a Windows restart is recommended.