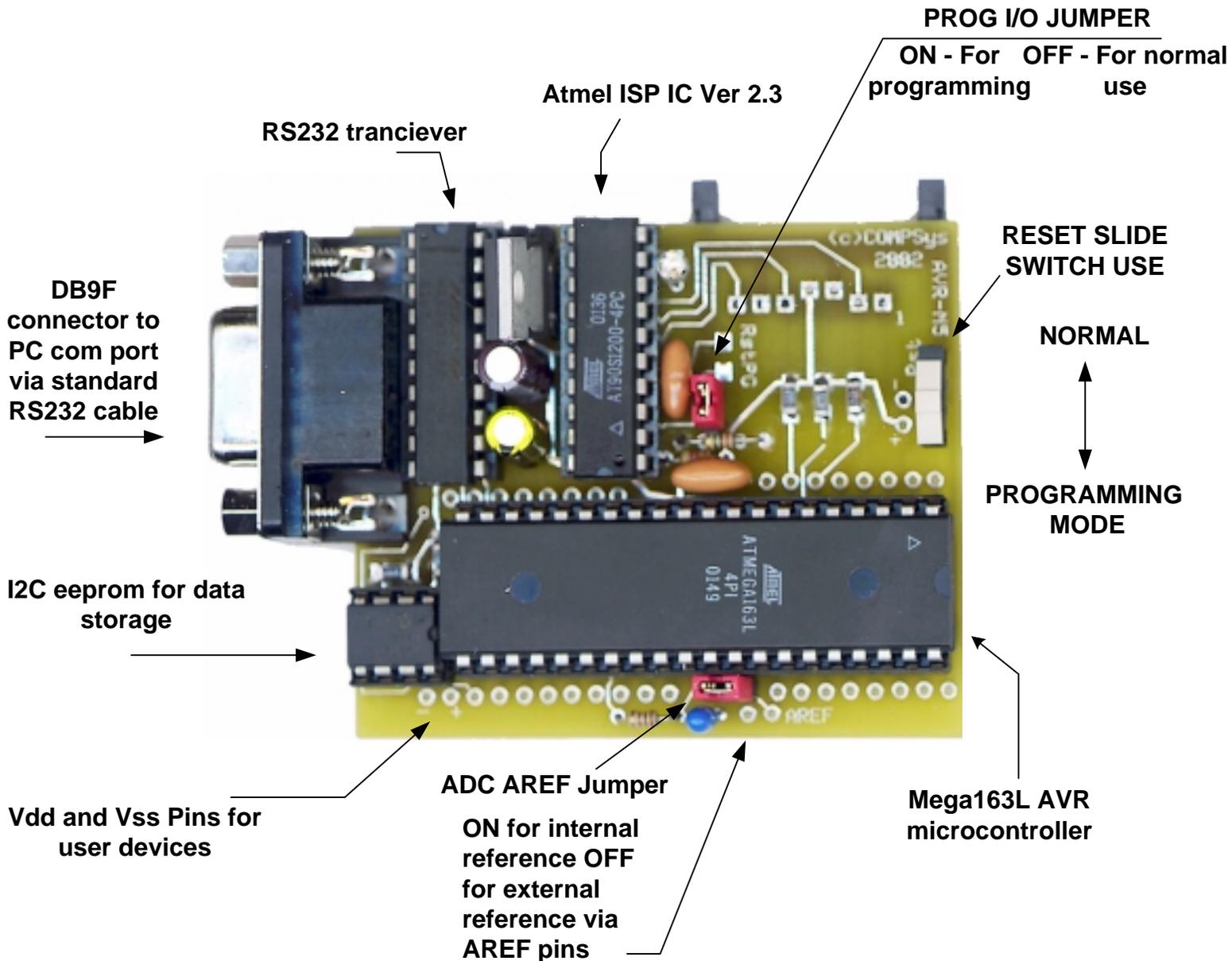


# Programming with the AVR-M 4Mhz controller board



## Software Required:

AVRProg.exe from Atmel Corp.

Microsoft Windows (tm) AVR ISP programming software APROGWIN.EXE available free from Atmel Corp. at <http://www.atmel.com/atmel/products/prod203.htm>

## IMPORTANT

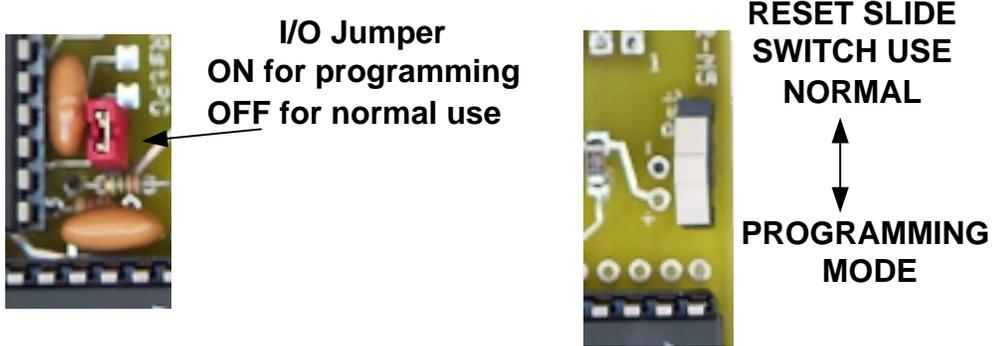
If the AVR to be programmed has a clock fuse it must be set to **External Xtal or Resonator**, else you may experience problems while attempting to program the chip. Any standard LPT programmer can be used to set fuses. The AVRProx application cannot set chip fuses. The Mega163L supplied with the kit already has this fuse set correctly.

# Programming Example

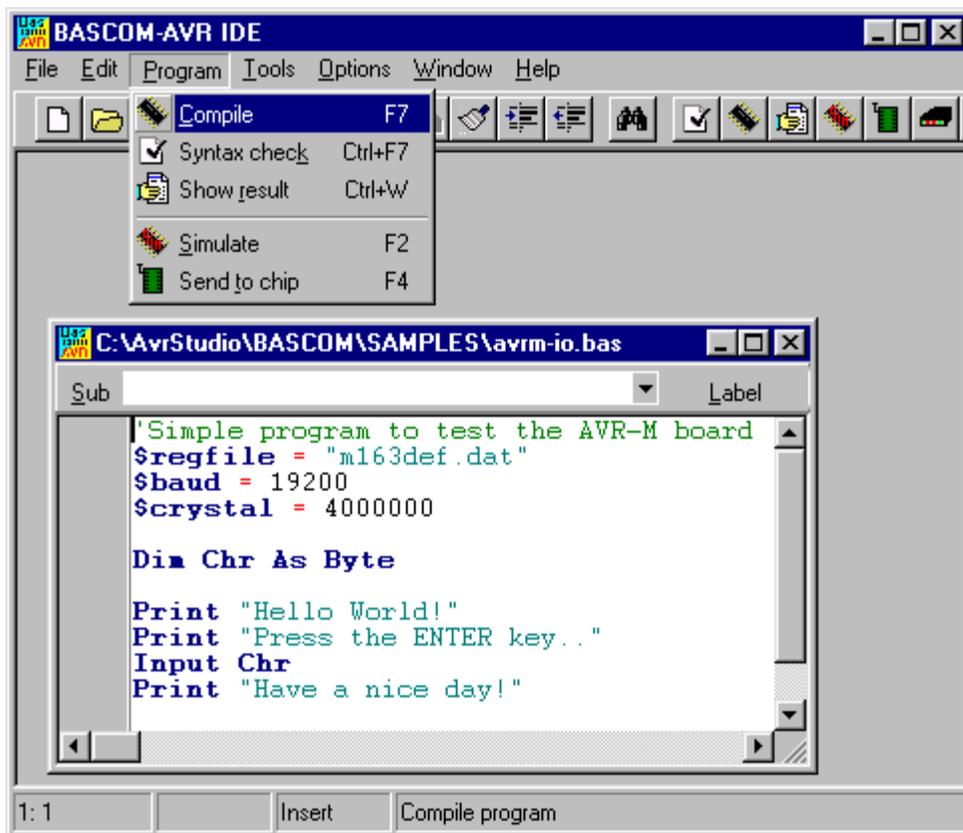
**Compiler:** BascomAVR 1.11.66 from MCSElec (<http://www.mcselec.com>)

**Programmer:** AVRProg 1.33 by Atmel (<http://www.atmel.com> )

- Connect a standard RS232 cable to the DB9 female connector on the board and the other end to your PC's com port
- Slide the RESET SLIDE SWITCH toward the AVR chip and place a jumper on the I/O 2 pin header next to the AT90S1200 chip

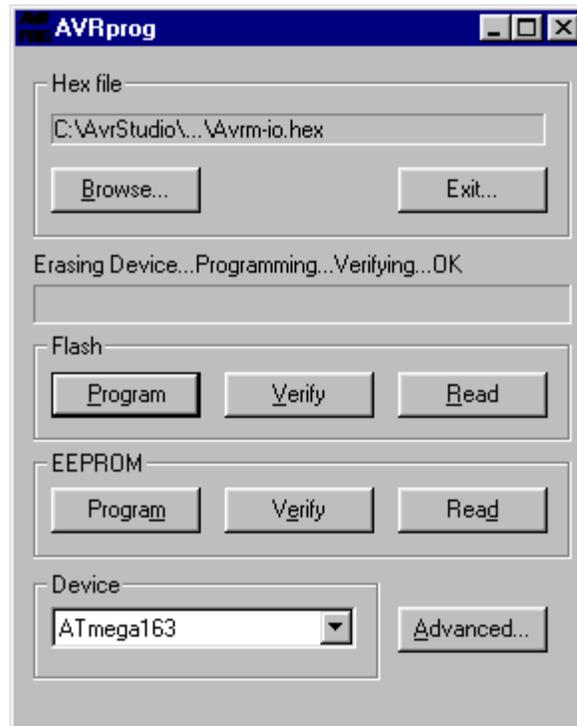


- Next, in BascomAVR check in the options to make sure that you have the correct chip and programmer. Then, write a short program and compile it. After it is compiled, press F4 or click on the green chip icon to evoke the AVRProg.



# Programming Example (cont)

- The AVRProg application will open. Double check to make sure that the correct chip and hex file are selected. Then press the Program button. The AVRProg will erase, program and verify the code sent to the AVR.



- Close the AVRProg by clicking the X in the top right corner. The 'exit' button doesn't work.
- The Mega163 is now programmed
- To test the program, in BascomAVR open the Terminal window and make sure that its baud rate is set to 19200, No parity, 1 stop bit, No handshake
- Next, slide the AVR-M slide switch to the Normal position. The AVR will then run the program as seen in the image below.

