Debug Guide

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Debug Guide

- Development
  - Comment, comment, comment
  - Break your code into sections
    - FILES
    - Functions
    - ISRs
  - Start simple, then get complicated
    - Use fixed values – then switch to parameters
    - Do it 4 times – then do it 4000 times – then do it N times
  - Code and test each section
  - Verify interfaces often
  - Comment, comment, comment

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- Debugging
  1. Check the compile/make messages
  2. Use Debugger
     - Breakpoints / single step
     - Watch program flow
     - Verify intermediate variable values
  3. Bring out intermediate signals
  4. Check the assembly code
  5. Ask someone else to look at it
     - This is where comments will help you or kill you
  6. When you don't have a scope probe or DMM use an LED to test signal levels
     - Slow things down so you can see them

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- Hardware Issues
  1. Check/recheck the wiring
  2. Try tying MSP output wires to VCC and GND to test LED operation
  3. Try tying MSP input wires to VCC and GND to test digital and Analog inputs
  4. If your MSP power light turns off – you have shorted VCC to GND

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- Debugger Review