

Control Systems Test

Date Completed: _____

Performed By: _____

Specifications Tested

#	Specification	Unit of Measure	Target Value	Comments
S12	Joystick Control	Binary	1	
S15	GUI Control	Binary	1	

Document History

Revision	Description	Date
1	Document Created	10/30/12

Equipment

- ___ Computer to receive signals and send to microcontroller
- ___ Appropriate software
- ___ Oscilloscope and scope probes
- ___ Freescale development board kit
- ___ Digital multimeter

Sections (Can be completed and combined as necessary)

- Part I: Verify Electrical Connections
- Part II: Joystick and GUI Control Functional

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Part I: Verify Electrical Connections

- _____ 1. Connect microcontroller to DB25 breakout board
- _____ 2. Connect DB25 cable to the break out board port
- _____ 3. Test resistance from microcontroller pin to output DB25 cable for connectivity between points that are supposed to be connected
- _____ 4. Test resistance from microcontroller pin to output DB25 cable for connectivity between adjacent points (points that are close proximity but not supposed to be connected). Pay close attention to CLK lines

Measurement	Units	Value
Max resistance pins that are connected	Ohms	
Min resistance between pins that are NOT connected	Ohms	

Sign off on section completion before continuing: _____

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Part II: Joystick and GUI Control Function

- _____ 1. Make appropriate connects between Joystick, CPU, Microcontroller and Breakout board.
- _____ 2. Attach scope probe to one output
- _____ 3. Using the joystick, generate all potential control signals for the scoped output and observe the signal.
- _____ 4. Using the GUI, generate all potential control signals for the scoped output and observe the signal.
- _____ 5. Repeat 3 and 4 for all control nodes going to the control board (9 total)

Measurement	Units	Value (works as expected – yes or no)
Enable X	Binary	
Clk X	Binary	
Dir X	Binary	
Enable Y	Binary	
Clk Y	Binary	
Dir Y	Binary	
Enable Z	Binary	
Clk Z	Binary	
Dir Z	Binary	

Sign off on section completion before continuing: _____