Input Output testing of Arduino Nano

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| TXD | Not communicating to GSM |
| RXD | Not communicating to GSM |
| DMUX0 | Output voltage Correct. 74HC154 not properly receiving voltage |
| DMUX1 | Output voltage Correct. 74HC154 not properly receiving voltage |
| DMUX2 | Output voltage Correct. 74HC154 not properly receiving voltage |
| DMUX3 | Output voltage Correct. 74HC154 not properly receiving voltage |
| BG0 | Read Correctly. Appropriate software response |
| BG1 | Read Correctly. Appropriate software response |
| 0X0 | Read Correctly. Appropriate software response |
| 0X1 | Read Correctly. Appropriate software response |
| 0T0 | Read Correctly. Appropriate software response |
| 0T1 | Read Correctly. Appropriate software response |
| SCL | All addresses appropriately reading and writing. |
| SDA | All addresses appropriately reading and writing. |
| CV4 | Read Correctly. Appropriate software response |
| TEMP1 | Read Correctly. Appropriate software response |
| CIV | Read Correctly. Inappropriate software response. Baseline for voltage needs calibrating for proper amperage reading |
| SW4X | Read Correctly. Appropriate software response |

Discussion:

Certain probes were unable to be tested due to the board requiring further fabrication.

Tested GUI screen

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| Analog Button Inputs | Workable. Depending on Power source (i.e laptop via usb or 12 Battery source) the button analog value changes causing a slow response when pushing buttons. |
| Main menu. | Responsiveness is slow when switching from main menu to language select and back. When switching to select other menus responsiveness is perfect |
| Language Select | Operation is responsive and correctly reads languages from the fram. To note: The spanish selection has issues displaying to the screen such as “ñ”. This is believed to be a problem of the lcd Display |
| Left alone after 10 Minutes. | LCD display will display all black squares. Will reset when input pressed but cursor will display on line 4 where last displayed on screen. |

Testing Disinfection Cycles

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| Selecting Disinfection from GUI Screen: | Selection operates correctly |
| Testing Disinfection Cycle: | Testing could not be completed as testing various ports at the same time was extremely difficult. However, each input could be tested individually and was confirmed to work directly. |
| Error alarms: | Alarm 2 was able to be triggered and the correct action was taken recording the error, reporting what went wrong, and exiting the disinfection cycle. |

Testing Error Messages

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| Alarm 2: | Alarm 2 was correctly tested by oxidant tanks receiving no input. Alarm message was correctly triggered, and disinfection was stopped. |
| Clear all Messages: | All messages were cleared from the fram. |