

Test Writer: Kimball S. Davis						
Test Case Name:		TCU Unit Test #2			Test ID#:	TCU-UT-02
Description:		Checks the function of the user interface circuitry. Verifies no opens/shorts and operation of LED's and switches.			Type:	Black Box
Tester Information						
Name of Tester:					Date:	
Hardware Version:		User Interface - Version 005			Time:	
Setup:		9-pin ribbon connector from user interface should be connected according to the pin assignments below. Pin 9: +5V Pin 8: Connect to normally open switch to ground Pin 7: Connect to normally open switch to ground Pin 6-2: Connect each pin to individual test point for volt meter Pin 1: Connect to ground				
Step	Action	Expected Result	Pass	Fail	N/A	Comments
1	Apply +5V to User Interface	Green power led should light up				
2	Measure voltage at pin 8. Depress normally open switch, measure voltage while switch is closed	Intital voltage at pin 8 should measure 0V, when switch is closed voltage should measure +5V +/-5% Red LED (heat indicator) should be on				
3	Measure voltage at pin 7. Depress normally open switch, measure voltage while switch is closed	Initial voltage at pin 7 should measure 0V, when switch is closed voltage should measure +5V +/-5%, Blue LED (Cooling Indicator) should be on				
4	Measure voltage at pin 6. Depress Red switch (Reset) on user interface, measure voltage at pin 6 while switch is closed	The measured voltage at pin 6 should be +5V +/-5% with the switch open, and 0V with the switch closed				
5	Measure voltage at pin 5. Depress White switch (Up) on user interface, measure voltage at pin 5 while switch is closed	The measured voltage at pin 5 should be +5V +/-5% with the switch open, and 0V with the switch closed				
6	Measure voltage at pin 4. Depress Black switch (Down) on user interface, measure voltage at pin 4 while switch is closed	The measured voltage at pin 4 should be +5V +/-5% with the switch open, and 0V with the switch closed				
7	Measure voltage at pin 3. Depress Blue switch (Set) on user interface, measure voltage at pin 3 while switch is closed	The measured voltage at pin 3 should be +5V +/-5% with the switch open, and 0V with the switch closed				
8	Measure voltage at pin 2. Depress Green switch (Normal) on user interface, measure voltage at pin 2 while switch is closed	The measured voltage at pin 2 should be +5V +/-5% with the switch open, and 0V with the switch closed				
Overall Test Results:						