Test Writer: Kimball S. Davis						
Test Case Name:		TCU Unit Test #1			Test ID#:	TCU-UT-01
Description:		Checks the power supply output. Confirms when device is plugged in that voltage regulator supplies approximately +5V and +12V to the circuit.			Type:	Black Box
Tester Information						
Name of Tester:					Date:	
Hardware Version:		Temperature Control Unit - Version 01			Time:	
Setup:		Test point jumpers 12VTPJ, and 5VTPJ should be removed. The 12V wall wart should be connected to the TCU module through power jack J3, and plugged in to a 120V 60 Hz power outlet.				
Step	Action	Expected Result	Pass	Fail	N/A	Comments
1	Measure voltage at 12VTPJ pin 1 with oscilloscope	The measured voltage should be 12 V +/- 5% with a ripple voltage of < 120 mV.				
2	Measure voltage at Light Jumper pin 1 with oscilloscope	The measured voltage should be 12 V +/- 5% with a ripple voltage of < 120 mV.				
3	Measure voltage at Fan Jumper pin 1 with oscilloscope	The measured voltage should be 12 V +/- 5% with a ripple voltage of < 120 mV.				
4	Measure voltage at Programming Jumpers pin 1 with oscilloscope	The measured voltage should be 12 V +/- 5% with a ripple voltage of < 120 mV.				
5	Connect jumper 12VTPJ to supply voltage to 7805 regulator	Voltage at 12VTPJ pin 1 should remain 12 V +/- 5% with a ripple voltage of < 120 mV				
6	Measure Voltage at 5VTPJ pin 1 with oscilloscope	The measured voltage should be 5 V +/- 5% with a ripple voltage of < 50 mV.				
7	Connect jumper 5VTPJ to supply voltage to TCU circuit	Voltage at 5VTPJ pin 1 should remain 5 V +/- 5% with a ripple voltage of < 50 mV				
8	Measure voltage at Pin 38 of AT89S52 with oscilloscope	The measured voltage should be 5 V +/- 5% with a ripple voltage of < 50 mV.				
9	Measure voltage at pin 8 of DS1621 with oscilloscope	The measured voltage should be 5 V +/- 5% with a ripple voltage of < 50 mV.				
Overall Test Results:						