

RC 360 Detector Proximity System Test Cases

Test Writer: Matt Whiteside, T08						
Test Case:		Proximity Sensor Subsystem			Test ID: RC360-t1	
Description		This test case verifies that the distance sensing sub-system, which consists of 3 LEDs and an IR proximity sensor, works properly.			Type: White box	
Objective:		Verify that the distance subsystem meets the distance requirements in the product specification. Acceptance test and functionality test.				
Tester Information						
Name of Tester:		Homer			Date:	
Hardware Ver:		1.0			Time:	
Setup:		the circuit board, assembled up to the point where the LED control and buzzer control signals are working				
Resources:		digital multimeter & test probes				
Step	Action	Expected Result	Pass	Fail	N/A	Comments
1	no object in range (over 30 cm)	green LED should be on, buzzer should be off				
2	object in medium range (30 cm)	yellow LED should be on, buzzer should be off				
3	object in close range (15 cm)	red LED should be on, buzzer should be on				
4	object goes back to medium range	red LED should turn off, buzzer should turn off, yellow LED should turn on				
5	object goes back out to far range	yellow LED should turn off, green LED should turn on, buzzer should still be off				
Overall Test Result:						

References

1) Button/proximity system state machine documentation: <https://github.com/RC360Detector/RC360Detector/blob/master/system-modeling/state-diagram.pdf>

2) schematic: https://github.com/RC360Detector/RC360Detector/blob/master/T08_rc360detector_final.sch

3) Product specification: <https://github.com/RC360Detector/RC360Detector/blob/master/RC%20Car%20360%20Degree%20Proximity%20Detection.pdf>

Test Version: 1.1

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