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. Objective: verify that the distance subsystem meets the distance requirements in the product specification.	**Type:**	White box
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

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