

## Example Test Case

Test Author: Aaron Carlson						
	<b>Test Case Name:</b>	Sniffer Learn & Trigger on Color			<b>Test ID #:</b>	
		Verify that the sniffer boots to idle, enters and exits learn mode with the switch, learns one input color, and only beeps when that learned color is present (and not for a different color).			<b>Type:</b>	<input type="checkbox"/> white box <input checked="" type="checkbox"/> black box <input type="checkbox"/> _____
Tester Information						
	<b>Name of Tester:</b>	Your mom			<b>Date:</b>	12/03/2025
	<b>HW/SW Version:</b>	Sniffer PCB Rev A, Firmware v0.1			<b>Time:</b>	10:36pm
	<b>Setup:</b>	Sniffer board powered from 5 V (USB or bench supply).  External NeoPixel controller (test fixture) connected to sniffer input and able to send: <ul style="list-style-type: none"> <li>• Learned color: solid green</li> <li>• Different color: solid red</li> </ul> Speaker, on-board LED, and NeoPixel on sniffer board are visible.  Sniffer is reset before starting the test.				
<b>S T E P</b>	<b>Action</b>	<b>Expected Result</b>	<b>P A S S</b>	<b>F A I L</b>	<b>N / A</b>	<b>Comments</b>
1	Apply 5 V power to the sniffer	Sniffer boots; LED/NeoPixel show idle state within 5 s	x			
2	Use the external controller to send green to the input	Sniffer remains idle (no beep yet)	x			
3	Press the switch once to enter learn mode, then release	LED/NeoPixel changes to learn indication, then returns to idle after learning	x			

4	Use the controller to send red for about 10 sec	No trigger indication and no beep while red is present.	x			
5	Use the controller to send green once	Within the response time, sniffer shows trigger indication and plays one beep	x			
6	Alternate green and red a few times	Beep only on green, never on red; sniffer returns to idle after each beep	x			
7						
8						
9						
<b>Overall test result:</b>						

### Example Matrix Test (for varying parameters)

Test Author: Aaron Carlson							
	<b>Test Case Name:</b>	Sniffer Color Trigger Reliability Matrix	<b>Test ID #:</b>	SNF-M01			
	<b>Description:</b>	Check that the sniffer reliably beeps for the learned color (green) and does not beep for a different color (red) over multiple trials.	<b>Type:</b>	<input type="checkbox"/> white box <input type="checkbox"/> black box <input type="checkbox"/> _____			
<b>Tester Information</b>							
	<b>Name of Tester:</b>	Your mom	<b>Date:</b>	12/3/2025			
	<b>HW/SW Version:</b>	1.0	<b>Time:</b>	12:01am			
	<b>Setup:</b>	<p>Sniffer has already learned green as the target color using the single-switch learn procedure (as in SNF-01).</p> <p>External NeoPixel controller can send either green (learned color) or red (different color) to the sniffer input.</p> <p>One trial = show a color for long enough that the sniffer could detect it, then observe whether it beeps</p>					
<b>T E S T</b>	<b>INPUTS</b>	<b>EXPECTED OUTPUTS</b>	<b>P A S S</b>	<b>F A I L</b>	<b>N / A</b>	<b>Comments</b>	
1	10 trials of green only	Sniffer beeps and shows trigger indication on all 10 green trials.	x				
2	10 trials of red only	Sniffer never beeps and never shows trigger indication (0/10).	x				

3	20 trials: random mix of 10 green, 10 red.	Sniffer beeps on all green trials and on no red trials (0 false).	x			
4						
5						
6						
	<b>Overall test result:</b>					