

To: Team 04

From: Eric Taylor

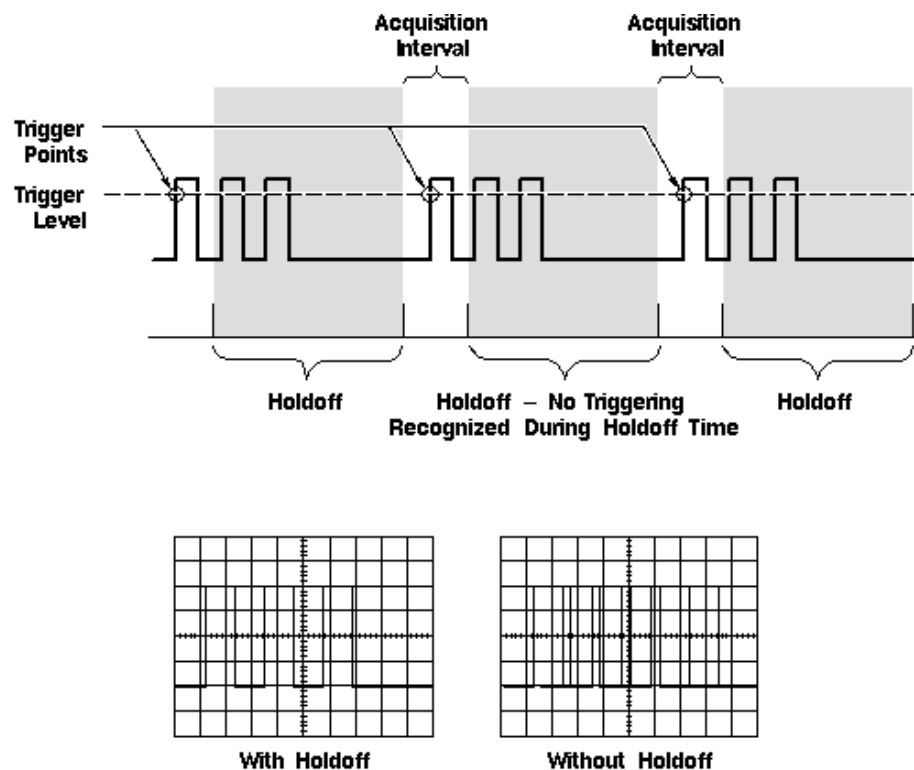
Date: 9/28/2014

Subject: Hold Off Triggering

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The reason I looked into hold off triggering was because it was explicitly stated as a feature we should look into, and it would be a great feature for both teams' scopes to have. This feature would give our scopes the ability to measure more types of digital signals.

Hold off triggering delays the trigger by a certain amount of time after it has been already triggered. This can be used when trying to read digital signals with packets of data. Without hold off the scope does not know which rising edge is the proper rising edge to trigger off of. With hold off you can trigger off the first rising edge of the packet and delay the trigger until the start of the next packet so none of the packets rising edge trigger the scope again.



As you can see in the figure above, if there was no hold off you would trigger on each peak. However with the gray hold off area you can ignore the other peaks in the packet and be able to trigger at the start of each packet. There is an ideal range of hold off between the end of the packet and the start of the next packet so it will have to be manually adjusted for each signal.

Sources

[1] [http://www.hobbyprojects.com/oscilloscope\\_tutorial/oscilloscope\\_trigger\\_controls.html](http://www.hobbyprojects.com/oscilloscope_tutorial/oscilloscope_trigger_controls.html)

[2] <https://www.youtube.com/watch?v=ta096oBzSac>