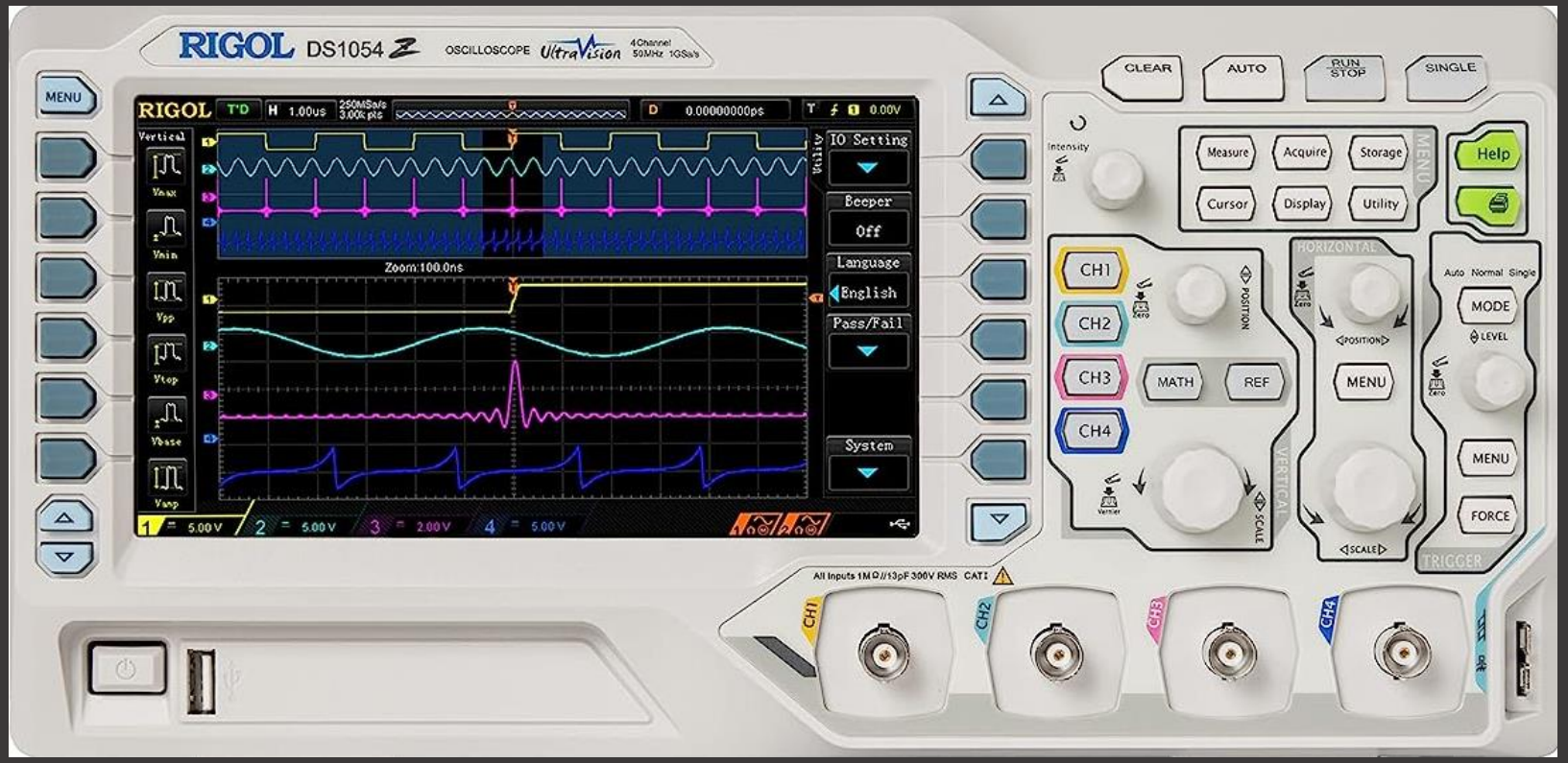
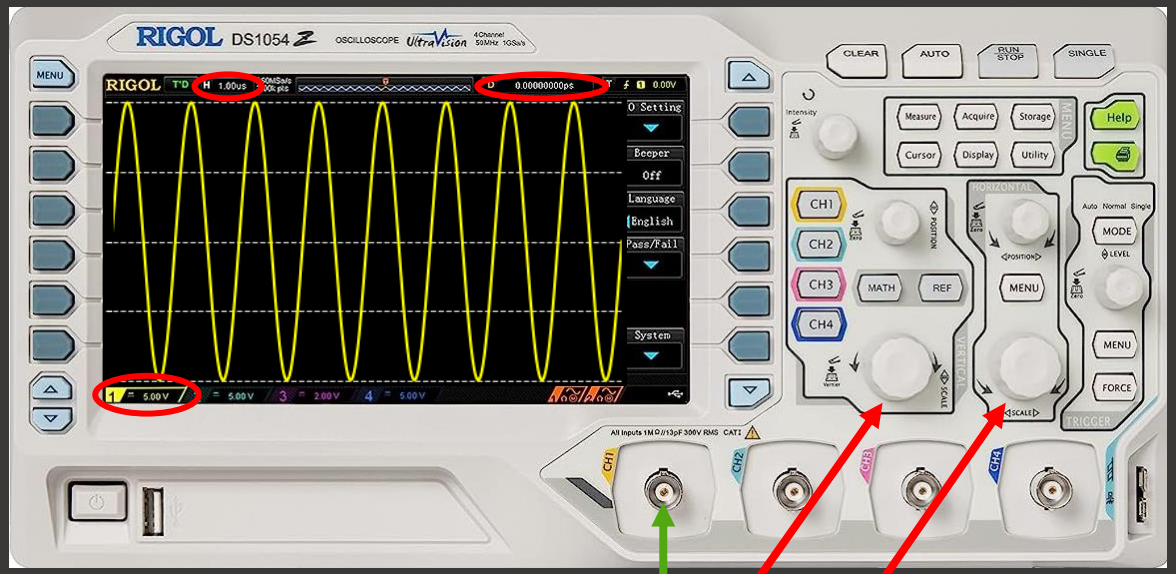
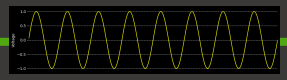
Intro to Oscilloscopes

July 2023



Play with these two knobs

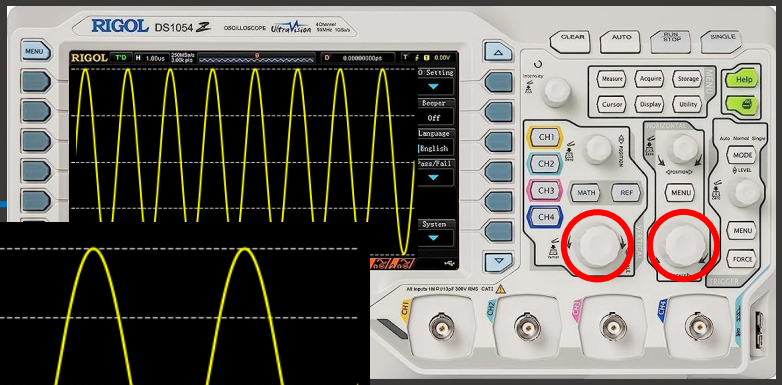


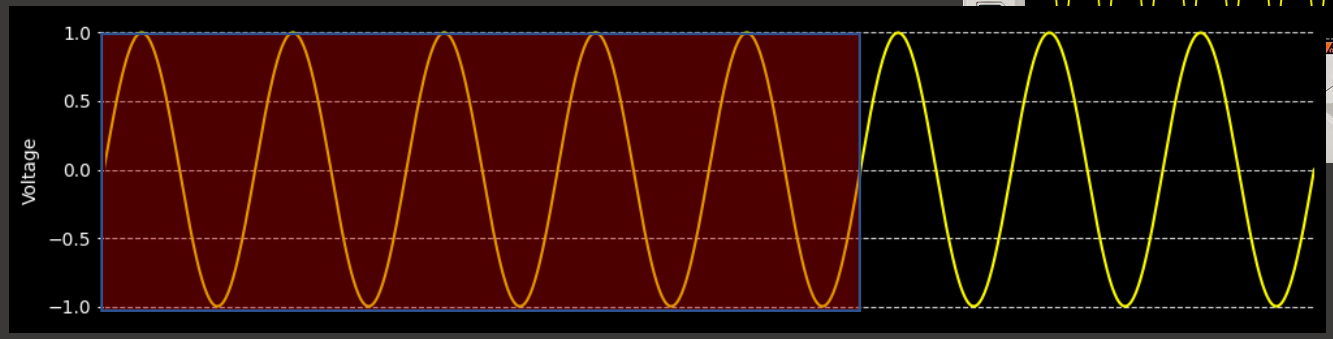


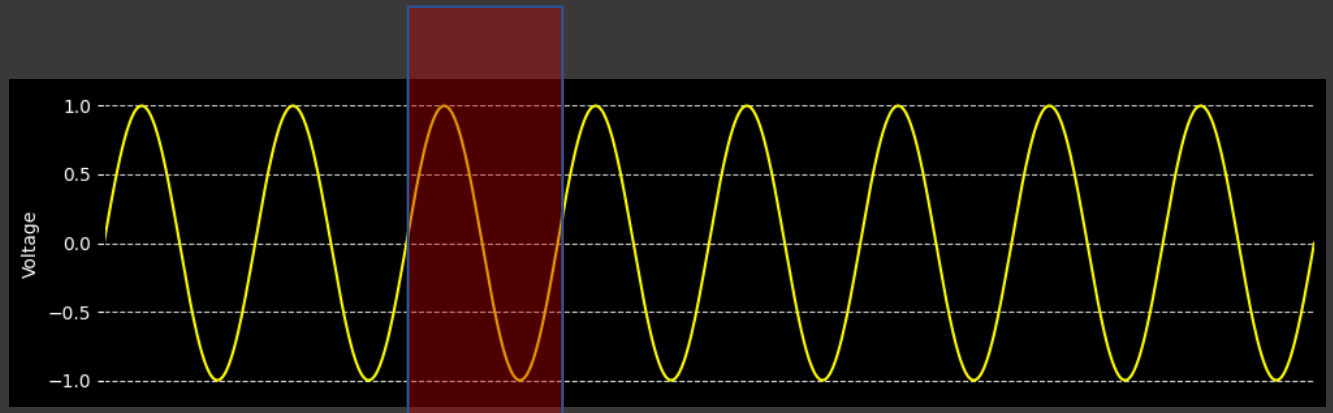
Vertical Range

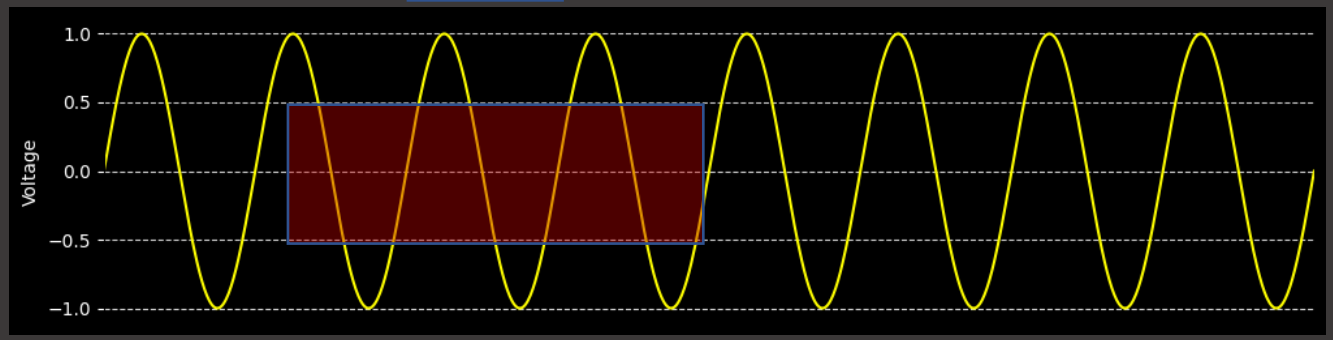
Horizontal Range

What's happening?

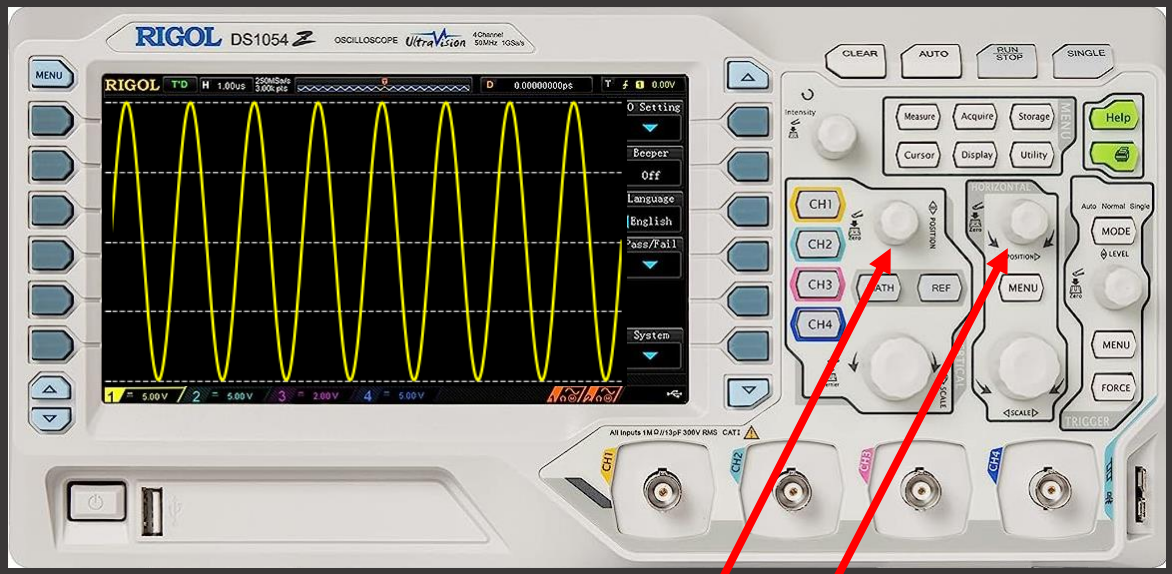








Play with the position knobs

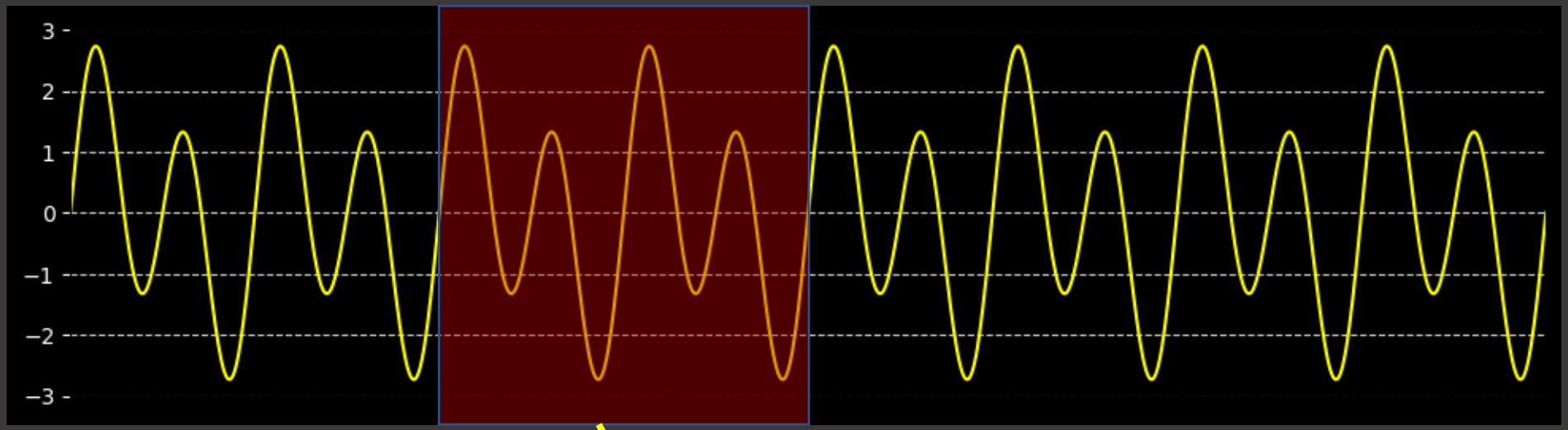


Vertical Position

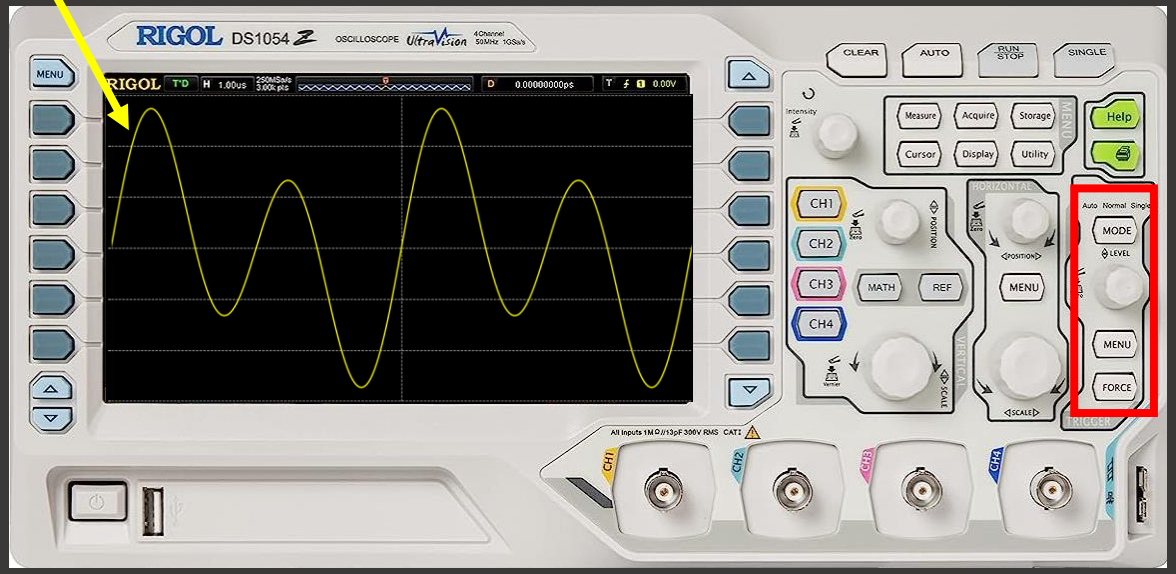
Horizontal Position

Push knob in to “zero”

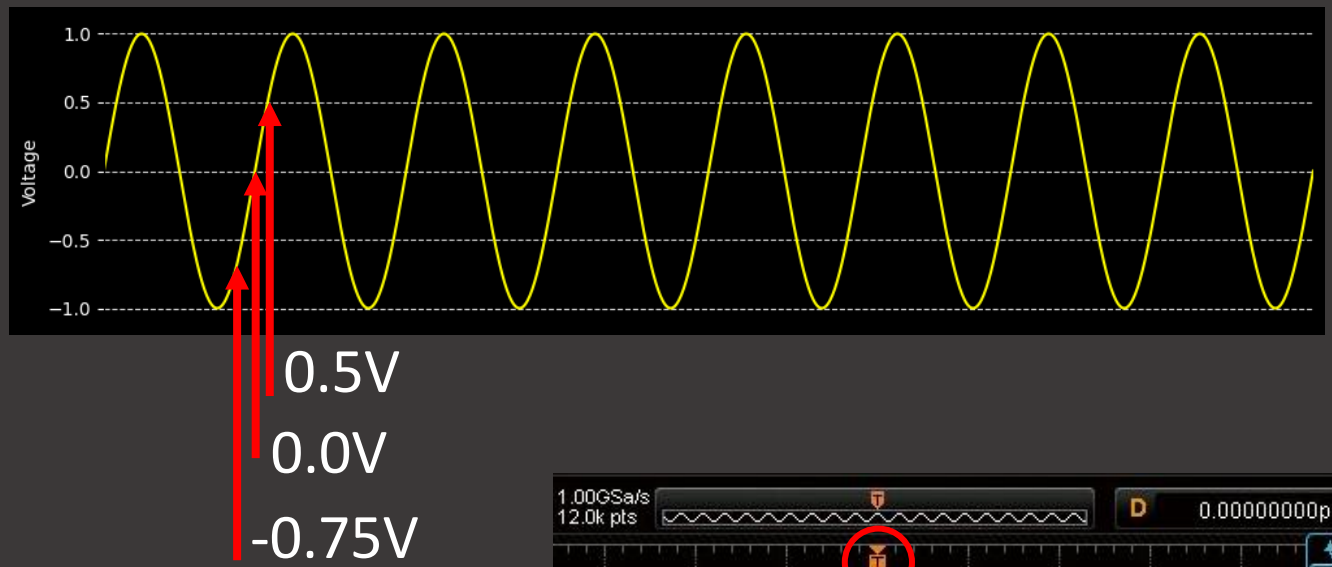
“Triggering” is often the tricky part

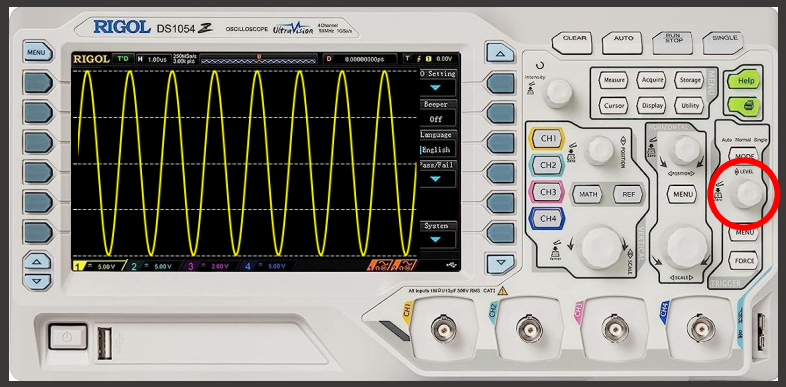


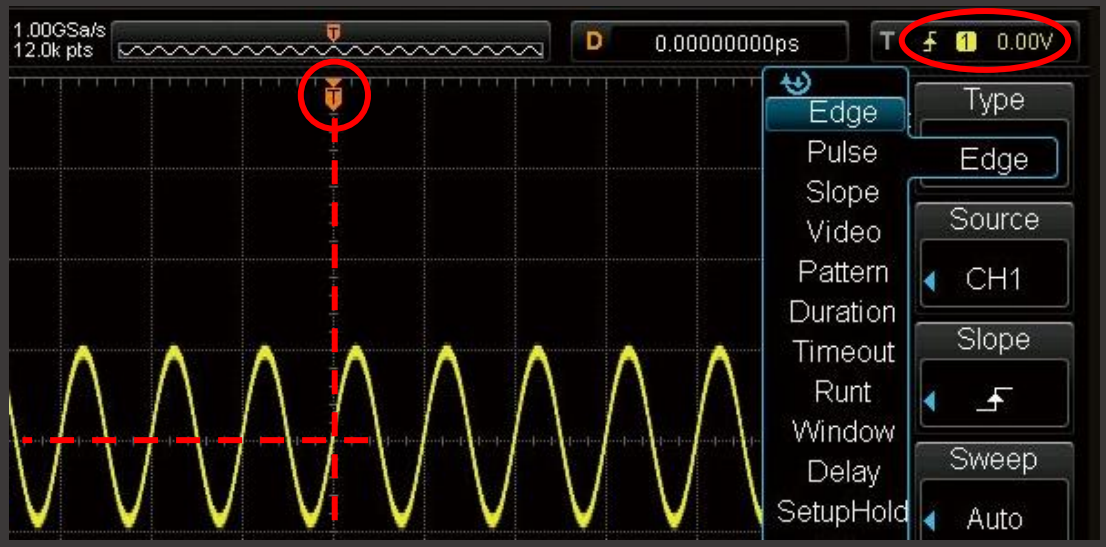
Scope chooses a portion of the waveform to display, *based on your settings*



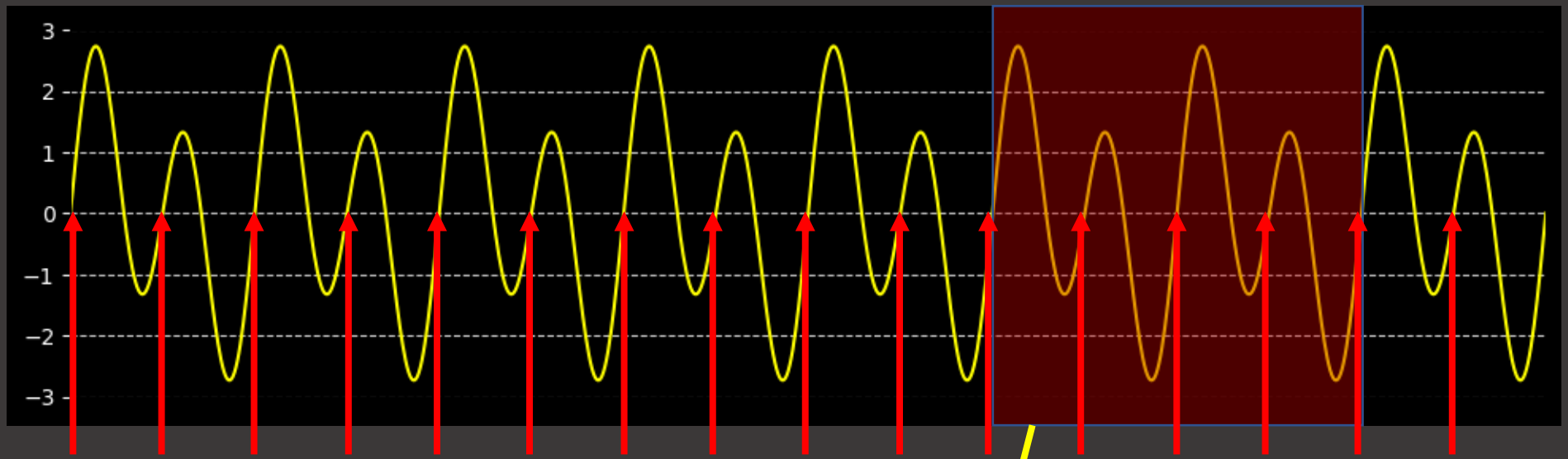
Adjust “Trigger Level”



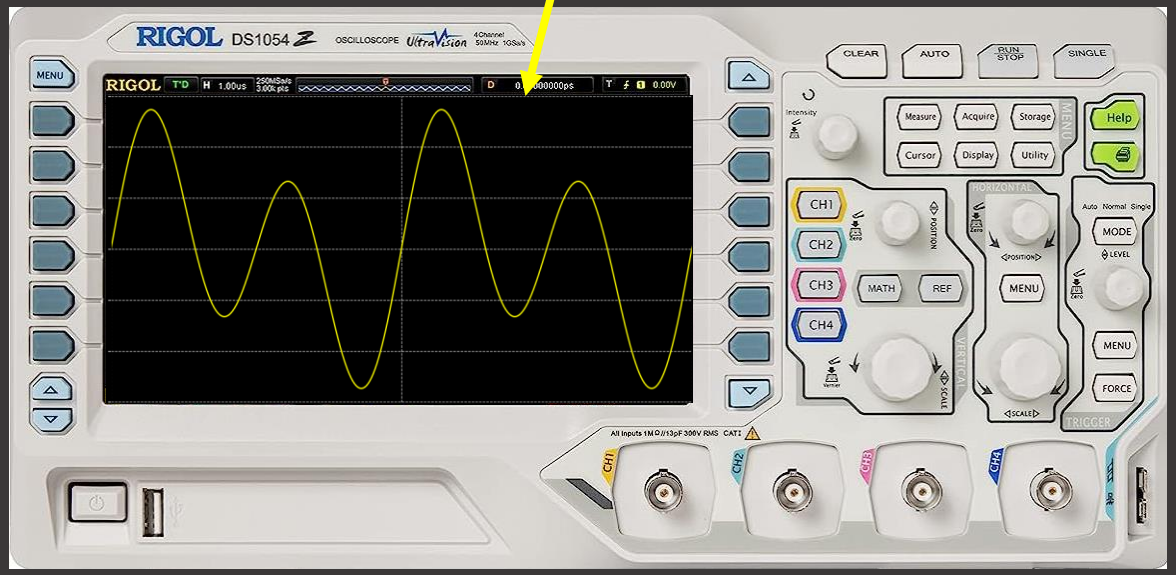




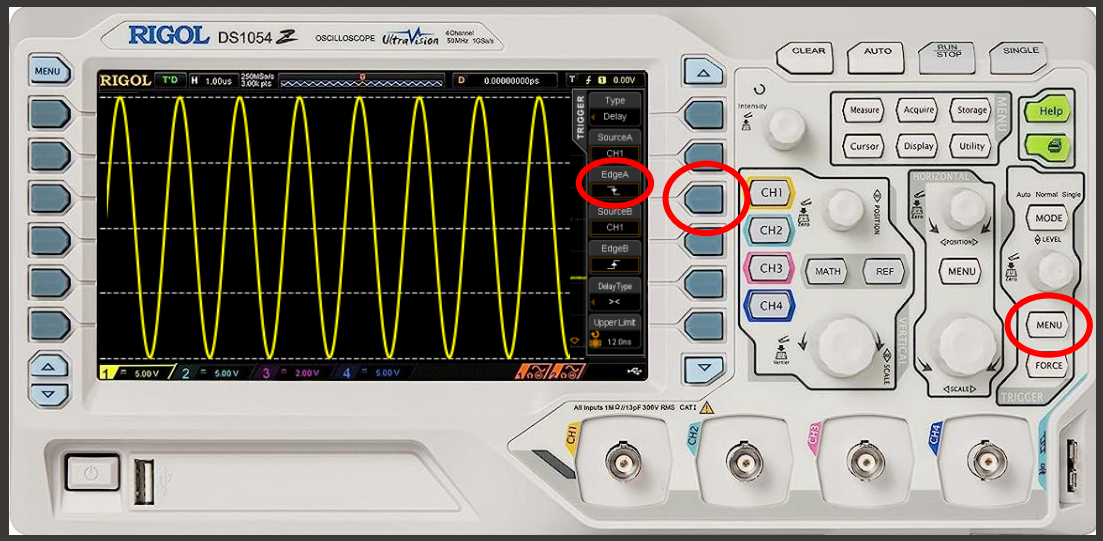
Must decide when to “trigger”

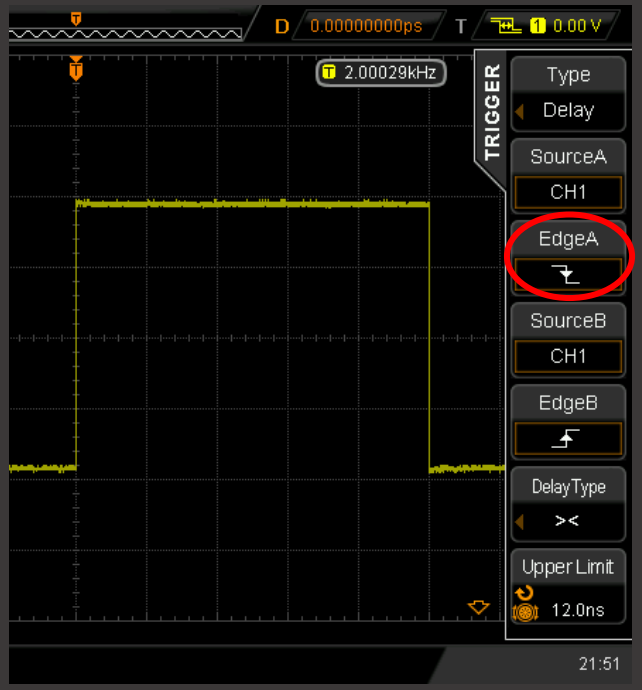


Each arrow is a valid trigger point!

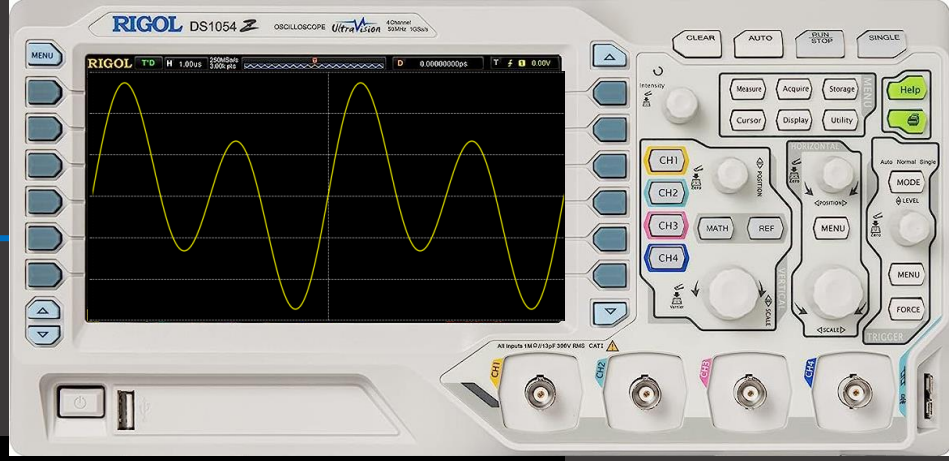


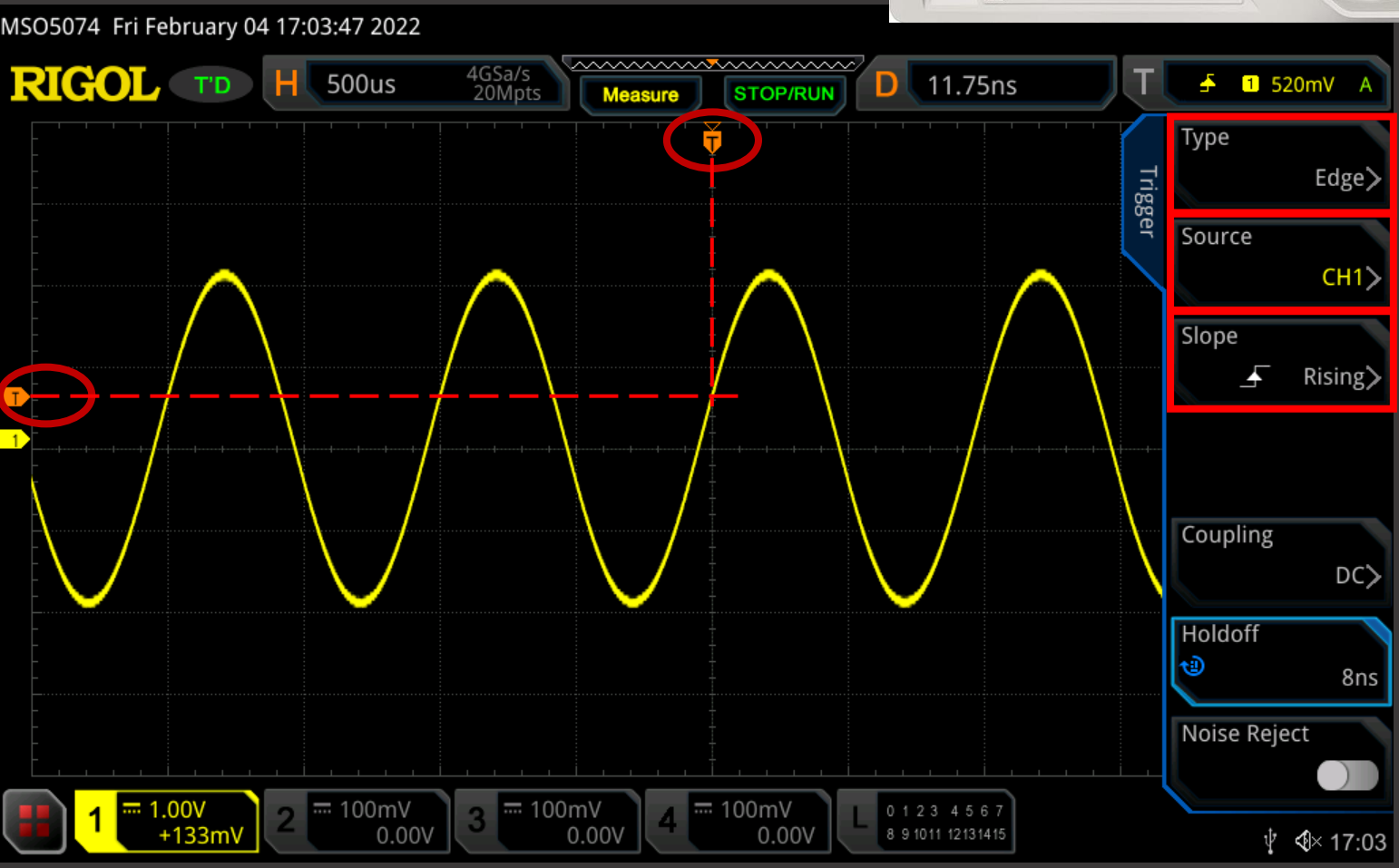
Adjust Trigger “Slope”



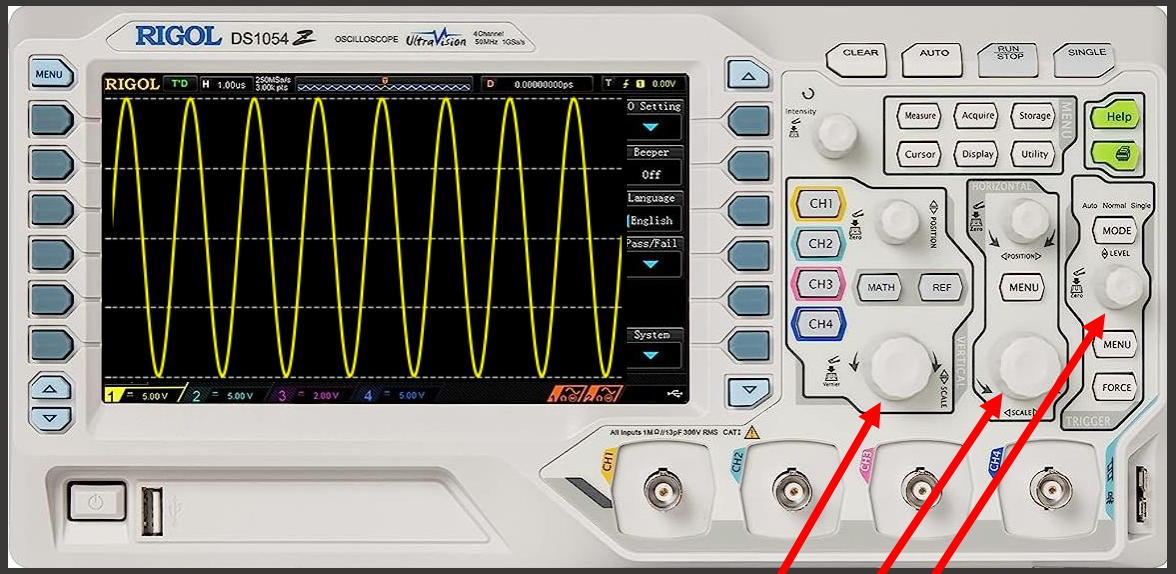


Trigger Setup





Typical adjustments to “see” a signal

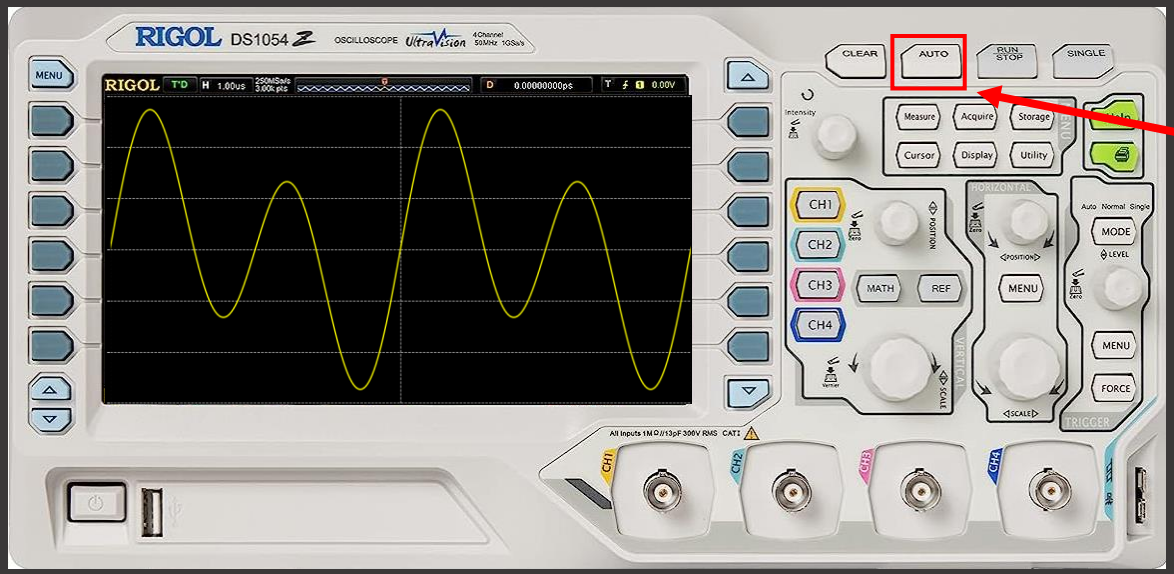


Vertical Range/Position

Horizontal Range/Position

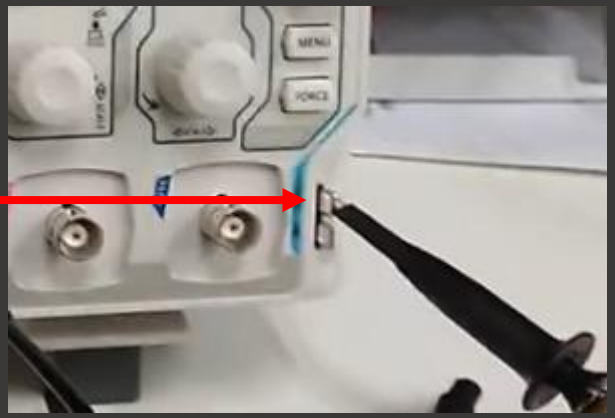
Trigger Level

There’s no shame in mashing AUTO

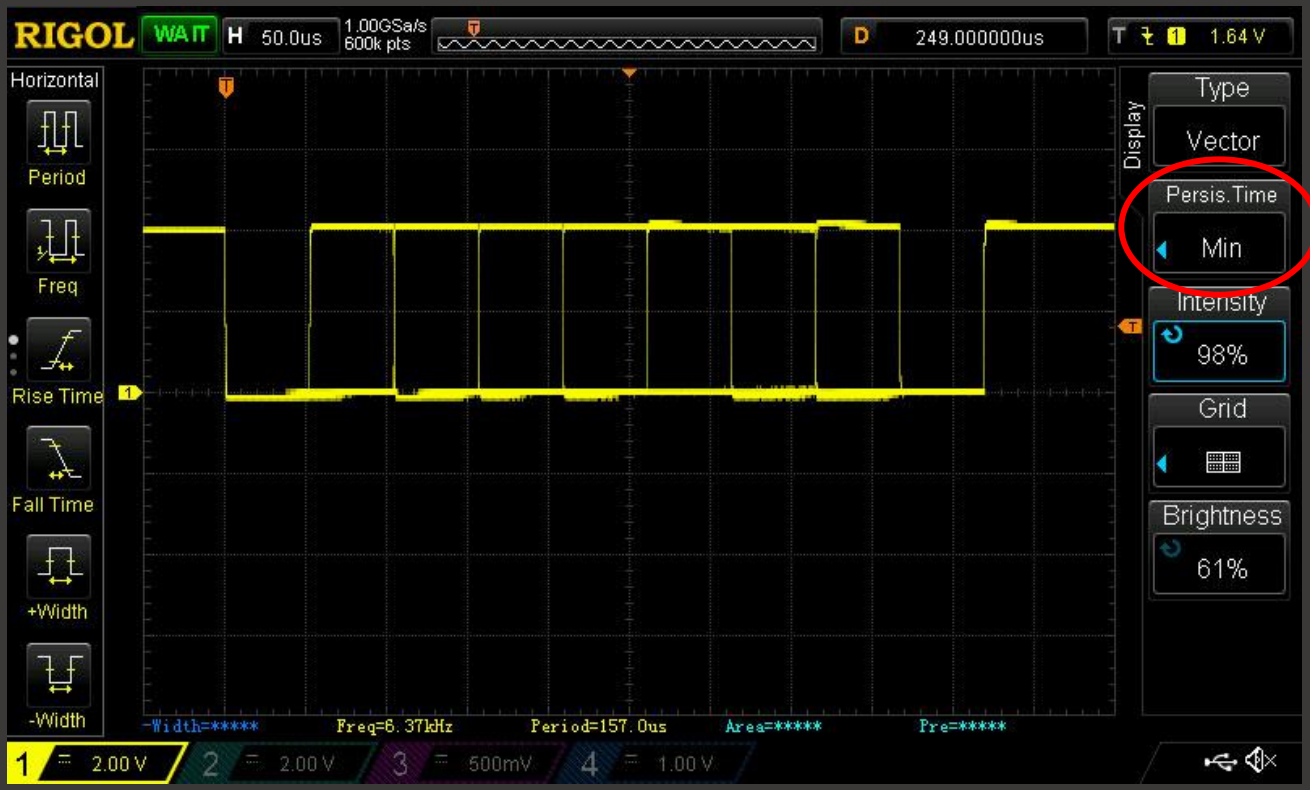


AUTO
Can be hit or miss

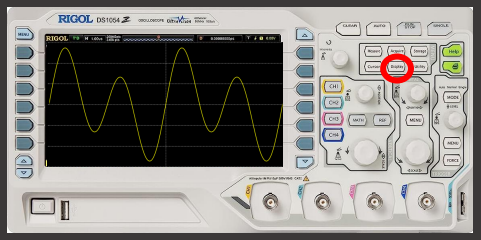
Can also try calibration signal



Multiple captures can be shown at one time

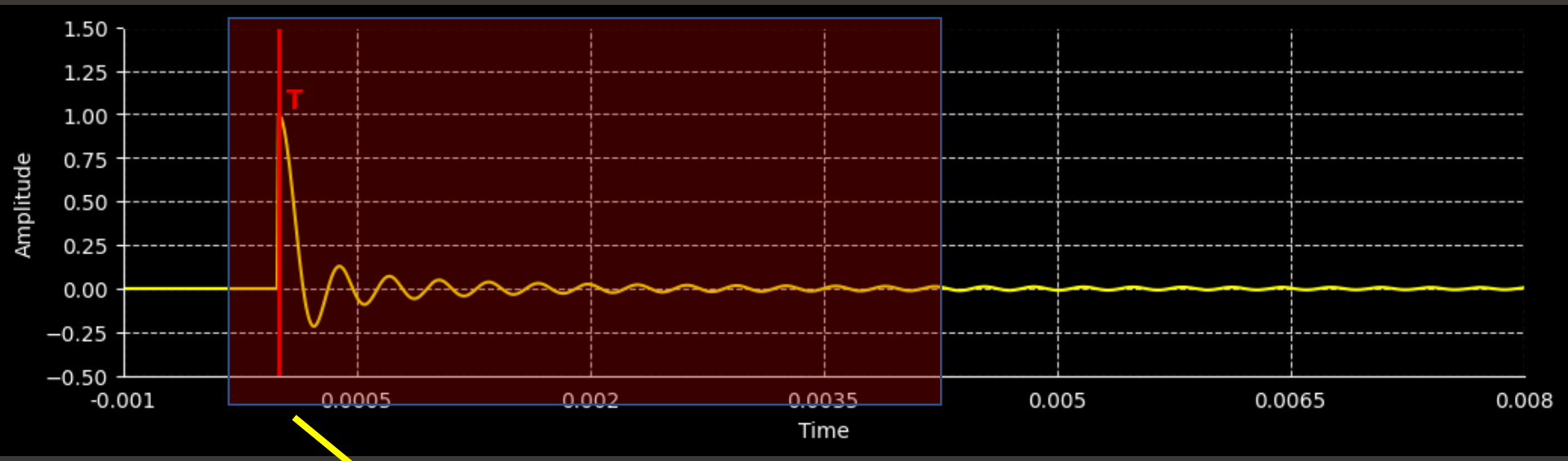


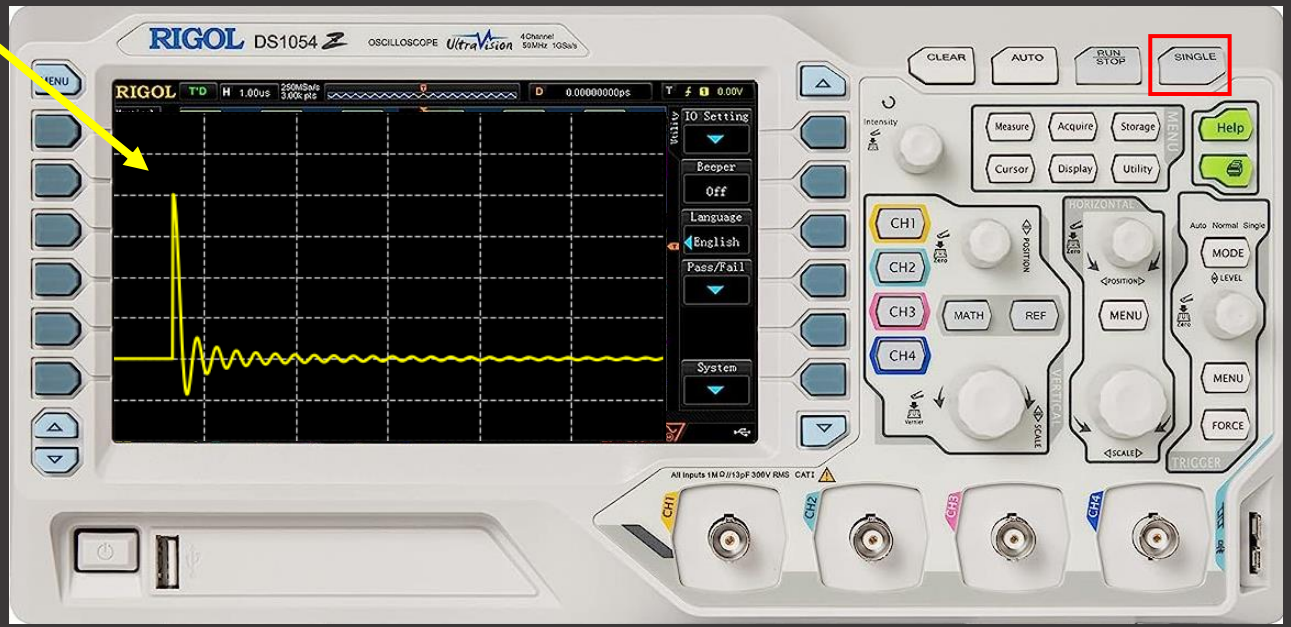
Display ->
Persis. Time



Scopes have *persistence*, where a trace remains on the screen for a period of time. Sometimes this causes multiple traces to be displayed simultaneously.

“Single Shot” capture can be handy

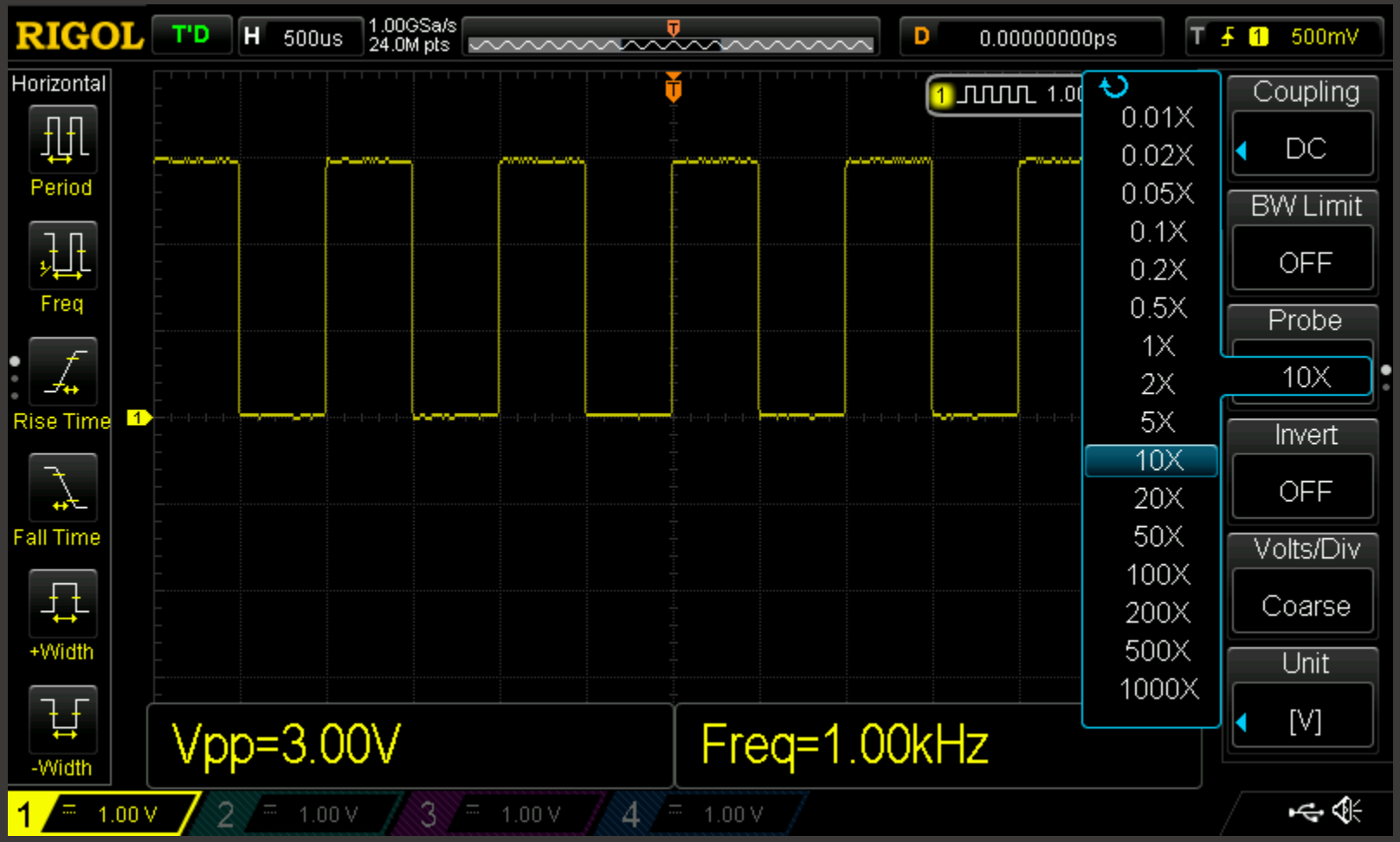




1x vs 10x Probe Setting

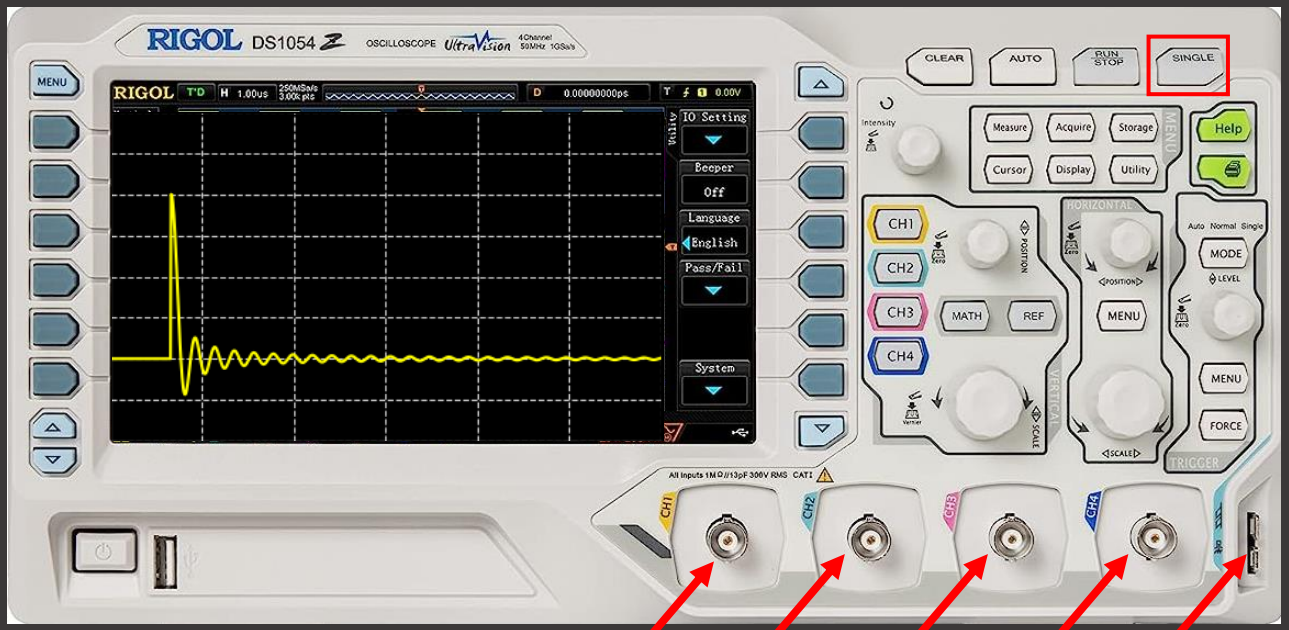
Use 10x unless the signal is buried in noise, then try 1x

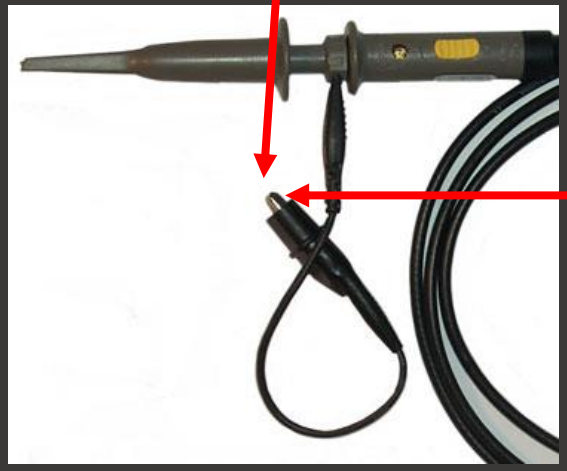
Scope setting for 1x vs 10x Probe

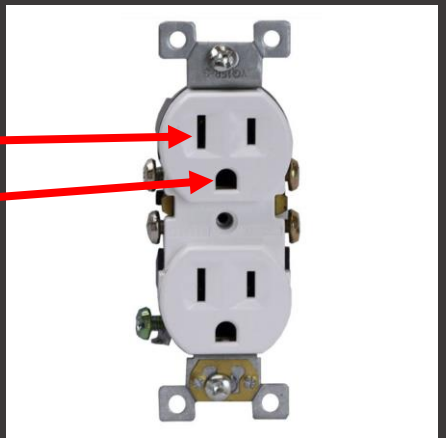


Scope Ground = AC Ground
(for plug-in scopes)

Careful where you attach the alligator clip







Probe tip shroud