

# Using an Oscilloscope's Record & Playback Capabilities

Application Notes  
Comparison Guides  
FAQs

## How-To Guides

Programming Manuals  
Quick Start Guides  
Support Information  
User's Guides



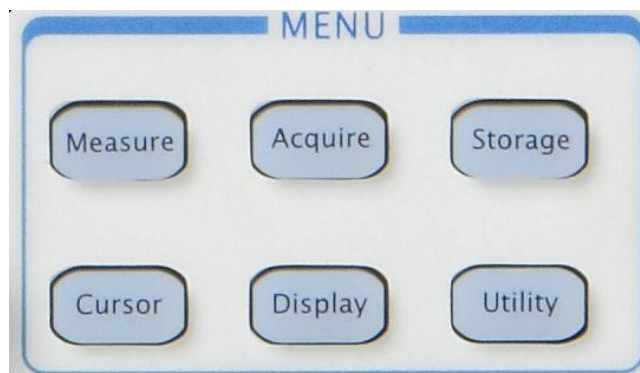
## Waveform Recording with Rigol Oscilloscopes

The waveform recorder records waveforms from any input channel of an oscilloscope. On the DS1000D/E Series oscilloscopes up to 1000 frames can be recorded at a time. This feature can also be activated by the Pass/Fail test output which makes this function especially useful to capture abnormal signals over a long period of acquisition without the need for constant monitoring. This function offers three modes: Record, Playback and Storage.

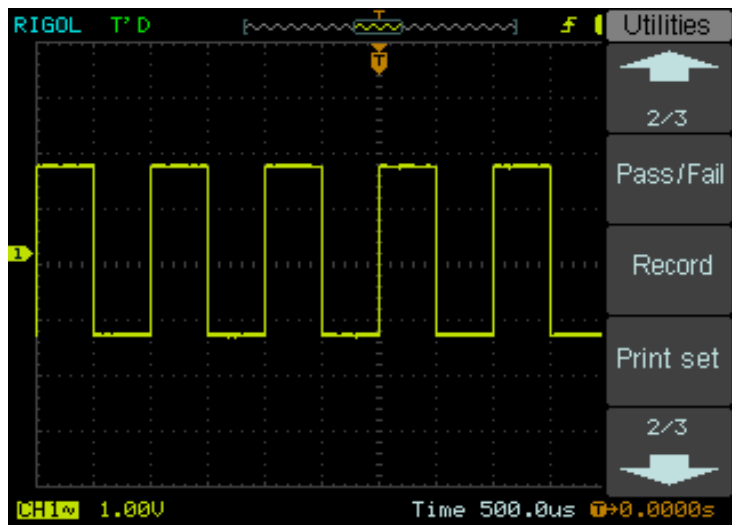
Waveform recording is a feature in Rigol oscilloscopes that allows dynamic waveforms to be recorded over time so they can be played back at a later time for offline analysis. While a standard reference trace allows users to compare single waveforms, a recording allows you to view and analyze how the signal changes over time beyond a single capture.

### How to Record a waveform?

- Press the utility button

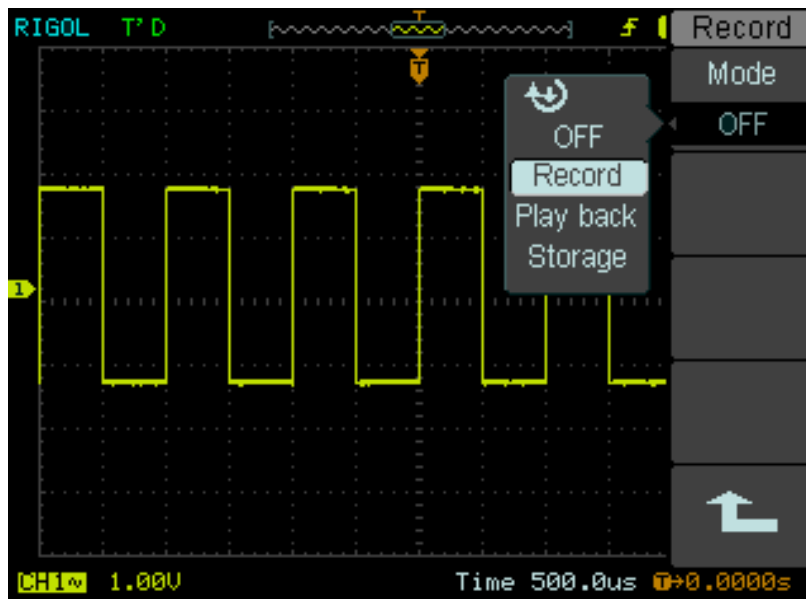


The Utility side menu will appear, scroll to the next page



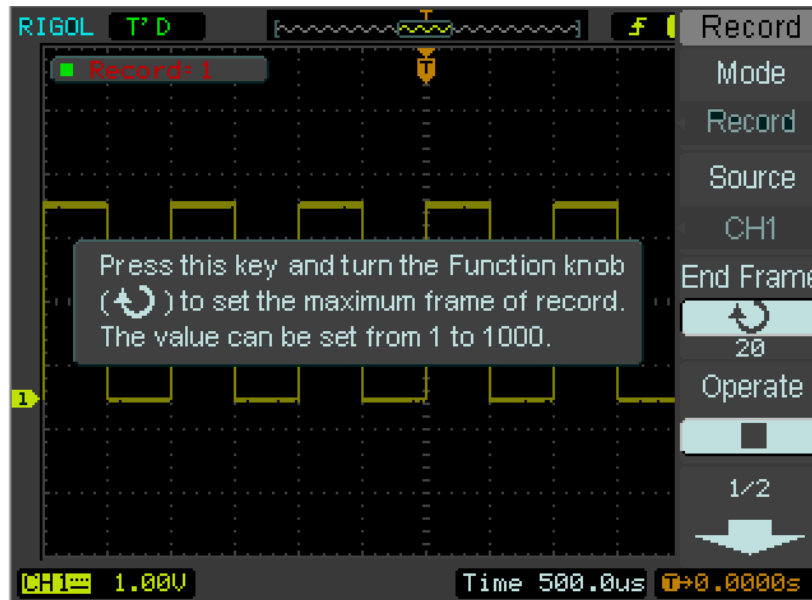
Select the "Record" function

- Set mode to "Record"

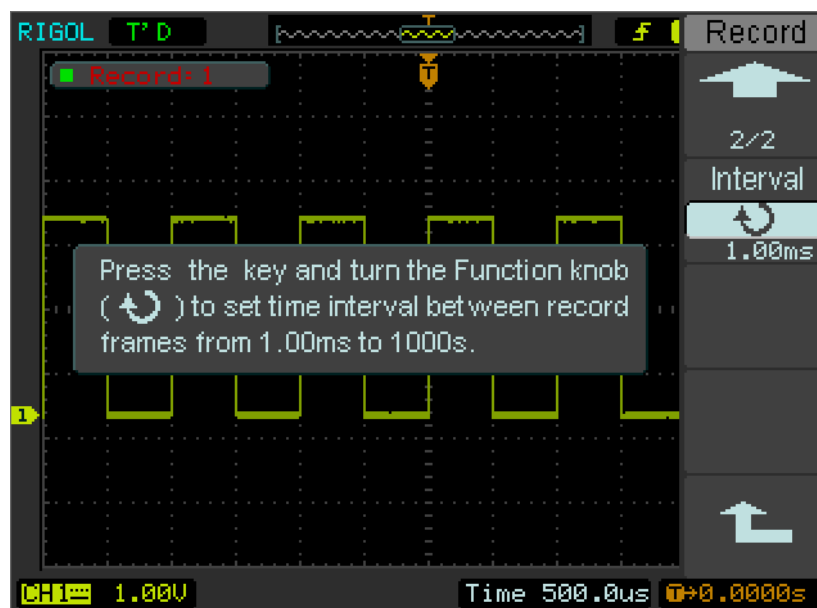




- Set the source to the channel to record and the maximum number of frames to record. To record only failure states during a pass/fail test set the source to P/F.



- On the next page set the desired interval in between recorded frames

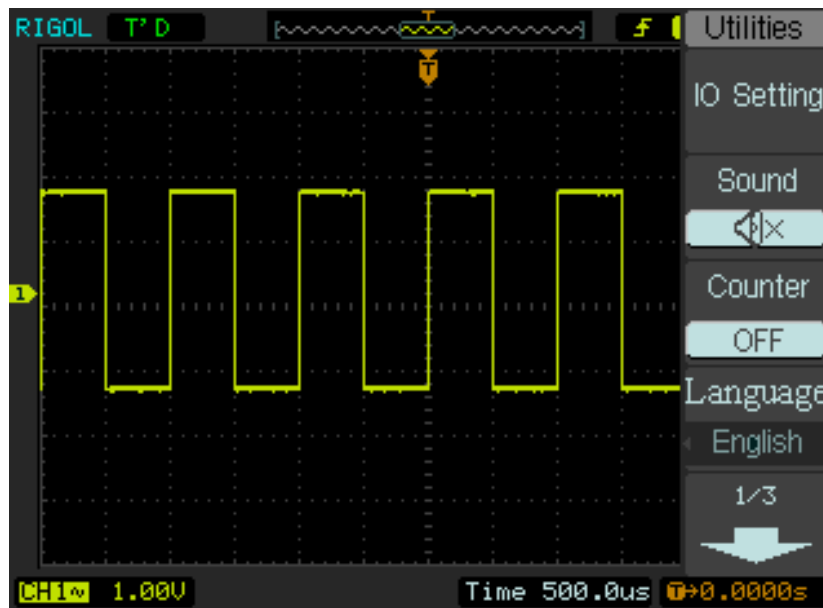




- Once the record configuration is complete, press the “Operate” side button to start recording.

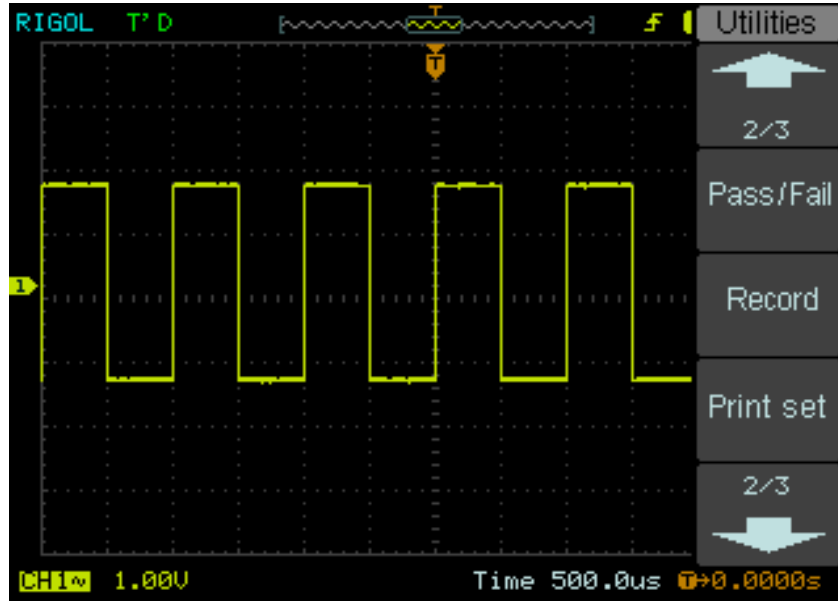
### How to playback a recorded waveform?

- Press the Utility button
- The Utility side menu will appear, scroll to the next page

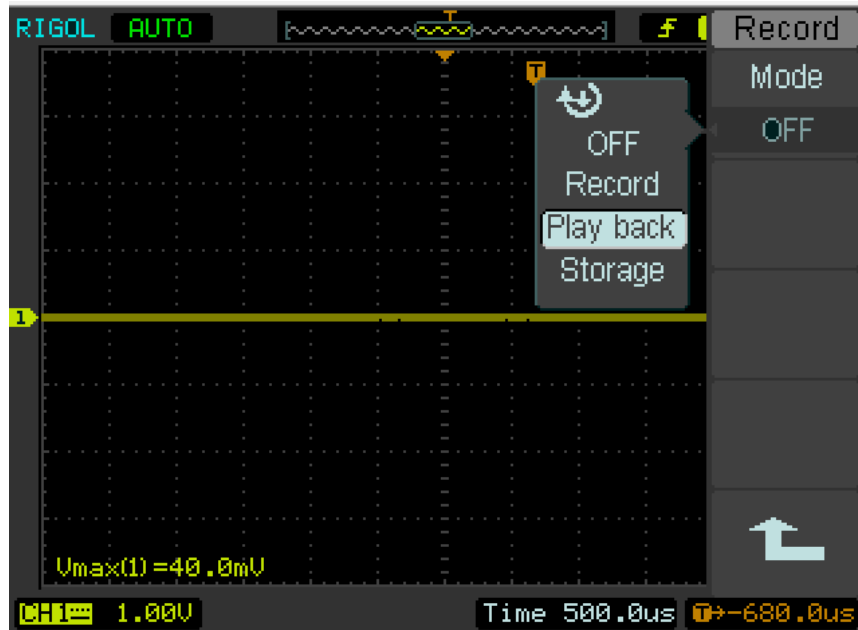




- Select the “Record” function

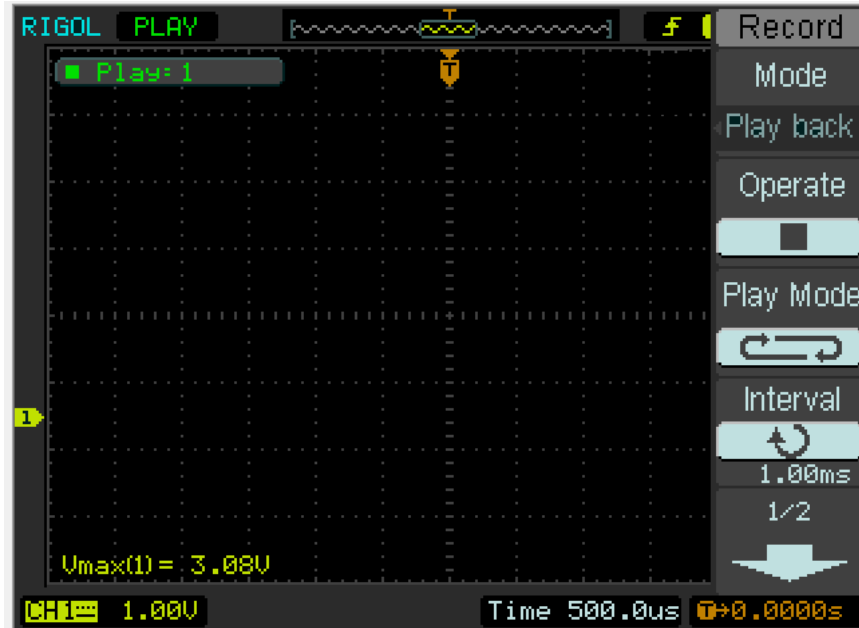


- Then select the Playback function from the drop down menu

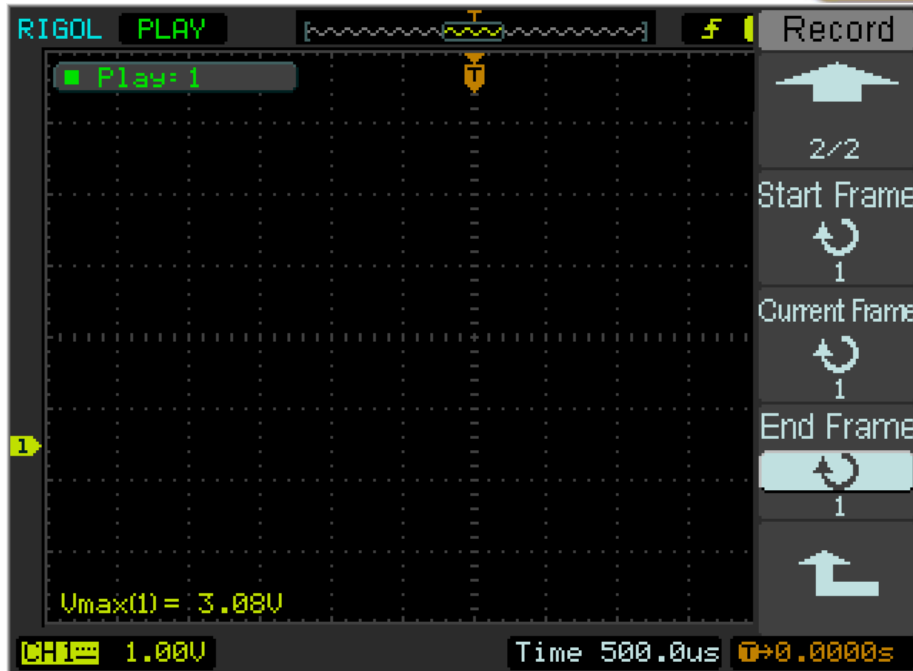




- The Playback menu will appear



- “Play Mode” can be switched between continuous or single play mode while Interval determines the time interval between frames
- On the next page we see the following settings. Start frame determines which frame playback starts from; Current frame selects the frame playback position; End frame determines which frame playback stops at.



Use storage mode in the record menu to storage and recall recordings from either an external USB memory stick or the internal storage.

In conclusion, waveform recording, playback, and storage can be a valuable tool for analyzing, monitoring, and reporting on signal characteristics that occur outside of a single waveform's length. When selecting an oscilloscope verify the record and playback capabilities including the amount of frames, acquisition rates, and whether pass/fail information can be used to trigger the recording.



RIGOL TECHNOLOGIES USA INC

**877-4-RIGOL-1**

[info@rigol.com](mailto:info@rigol.com)

[www.rigolna.com](http://www.rigolna.com)

## How-To Guide



For more information or questions contact us directly at:

Rigol Technologies USA  
7401 First Place  
Suite N  
Oakwood Village, OH 44146

You can reach us directly at:

(440) 232-4488

877-4-RIGOL-1

[info@rigol.com](mailto:info@rigol.com)

[www.rigolna.com](http://www.rigolna.com) (Rigol North America website)