



# PicoScope® 7

Available on Windows, macOS and Linux.

SUPPORTS ALL PICO TECHNOLOGY REAL-TIME  
OSCILLOSCOPES AND IS AVAILABLE TO DOWNLOAD  
WITH FREE SOFTWARE UPDATES AND LIFETIME SUPPORT.

## TIMEBASE/SAMPLING CONTROLS:

Used to set the timing of an acquisition using the seconds/division control. **Sampling** controls provide a choice of time base operating modes: **Buffer memory** priority adjusts the sampling rate to maintain a fixed capture memory depth. **Sample rate** priority adjusts memory depth to maintain a fixed sampling rate.

## CHANNEL CONTROLS:

Each channel corresponds to one of the PicoScope input connectors. The channel controls are used to manage probe types, assign channel names, set vertical scaling, offset, input coupling, and other signal conditioning parameters before making measurements on the DUT.

## RUNNING/STOP CONTROL:

Click to start displaying waveforms. Click again to stop. The keyboard space bar also has the same function.

## CHANNEL AXIS:

Each channel has a color-coded axis. Drag it up or down to position the channel.

## DIGITAL CHANNEL CONTROLS:

Digital channels, on MSO models, display a digital signal as either a logic high or logic low, depending on whether the voltage on that channel is above or below a set threshold.

## MIXED-SIGNAL OSCILLOSCOPES:

PicoScope MSOs can measure up to 8 analog and 16 digital channels at once. Dual logic thresholds allow you to operate with mixed logic families, and advanced triggering can be activated for analog or digital inputs or a combination of both.

## TIME DOMAIN VIEW

## SIGNAL GENERATOR:

Most PicoScope PC oscilloscopes include an integrated signal generator. Signal generator functions include **Sine wave**, **Square wave**, **Triangle wave**, **Ramp up**, **Ramp down**, **sin(x)/x**, **Gaussian**, **Half sine**, **White noise**, **PRBS**, **DC voltage** and **AWG waveforms**.

## MEASUREMENTS:

Click to add an automatic measurement to the measurements table, or to delete or edit one. The measurements table lists dynamically updated automatic measurements. Choose from dozens of time-domain and frequency-domain measurement types.

## DEEPMASURE:

DeepMeasure delivers automatic measurements of important waveform parameters on up to a million waveform cycles with each triggered acquisition.

## REFERENCE WAVEFORMS:

Waveforms can be saved and displayed for comparison with live data.

## RULERS:

Rulers help to make on-screen waveform measurements without having to count graticule marks.

## NOTES:

The **Notes** panel can be used to record information about test results and other observations when using PicoScope. Notes are stored as part of the standard PSDATA file format and can be shared with other users who are running their own copy of PicoScope 7.

## TRIGGER CONTROLS - CLICK HERE TO CHANGE THE FOLLOWING:

**TRIGGER MODE** - Choose from Auto, None, Single, Repeat, Rapid or ETS

**TRIGGER SOURCE** - Choose which channel to trigger on.

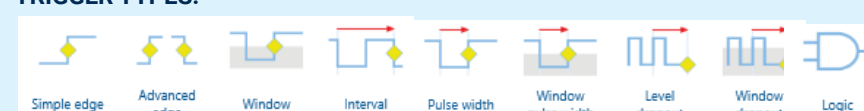
**PRE-TRIGGER** - How much of the waveform is captured before the trigger event.

**TRIGGER DELAY** - Specifies the time to start capturing after the trigger event occurs.

**THRESHOLD** - Set the voltage at which the trigger operates, or drag the trigger marker.

**EDGE SELECT** - Trigger on rising or falling edges

## TRIGGER TYPES:



## WAVEFORM BUFFER NAVIGATOR:

PicoScope can store the last ten thousand oscilloscope or spectrum waveform in its circular waveform buffer. The buffer navigator provides an efficient way of navigating and searching through waveforms effectively letting you turn back time.

## FLEXIBLE RESOLUTION:

The PicoScope 4444, 5000 Series and 6000 Series allows you to select vertical hardware resolution.

## INSTRUMENTS - Switches between modes:

**SCOPE MODE** - Sets the instrument up as a conventional oscilloscope for making time-domain waveform measurements  
**SPECTRUM MODE** - Configures the instrument using an FFT algorithm to display waveforms in the frequency domain and make spectral measurements.

**XY MODE** - Switches PicoScope to a volts versus volts display using two input channels. Channel A can be set as the X-axis input and Channel B as the Y-axis input.

**PERSISTENCE MODE** - A time-domain display mode, where the waveform traces can be set to remain on the display for a period of time after the initial capture.

## AUTO SETUP:

Click this first to find your signal, then adjust using the other controls.

## CHANNEL RULERS:

Drag a colored handle from the top of the window to the level you want to measure. The ruler legend shows the measurement.

## ZOOM BUTTON:

Click to pan and zoom around the entire view.

## FREQUENCY DOMAIN VIEW

## TRIGGER MARKER:

Shows the channel, signal level and time of the trigger event. Drag to adjust.

## TOOL PARK:

Functions such as **Measurements**, **Math channels**, **Serial decoding**, **Rulers**, **Masks**, and **Actions** are just one touch away in the "Toolpark" and can be favorited to create a custom UI layout.

## ACTIONS:

Actions are things that PicoScope can be programmed to do when certain events occur. Actions include: **Stop capture**, **Save waveform to disk**, **Play sound**, **Trigger signal generator**, **Run application**.

## MASKS:

Mask limit testing allows the comparison of live signals against known good signals and is designed for production and debugging environments. Simply capture a known good signal, generate a mask around it, and then monitor the device under test.

## SERIAL DECODING:

PicoScope has over 30 built-in serial protocol decoders which are included as standard, at no extra cost. These include the recently introduced **CAN XL**, **BroadR-Reach (100BASE-T1)**, and **I3C** standards for automotive and embedded system applications respectively.

## TIME/FREQUENCY RULERS:

Drag the white ruler handle from left to right to mark a point on the axis. The ruler legend shows the time/frequency at each ruler and the difference between them.

## MATH CHANNELS:

Advanced math functions: multiplication, division, and integration as well as basic functions like addition and subtraction.

## VIEWS:

Waveforms can be saved and displayed for comparison with live data.

## TOUCHSCREEN FRIENDLY:

Easily interact with the software using a touchscreen or mouse.

## THE PICO SCOPE RANGE



**PicoScope 2000 Series**  
Benchtop performance in a pocket-sized scope



**PicoScope 3000 Series**  
Fast sampling with deep memory 2 or 4 channels and MSO



**PicoScope 4444**  
differential oscilloscope



**PicoScope 4000A**  
2, 4 or 8 channels



**PicoScope 5000D Series**  
with FlexRes®



**PicoScope 6000 Series**  
High-performance PC scopes

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