

Pico Technology

Oscilloscope and Spectrum Analyser Software

PicoScope software enables Pico Technology products to be used as a variety of instruments. It is supplied free of charge with Pico oscilloscope and data acquisition products, and updates can be downloaded for free.



Main functions

- Oscilloscope
- Spectrum Analyser
- XY Scope
- Meter
- Measurements

Features

PicoScope's features include:

- Multiple views of the same signal (scope, analyzer and meter)
- Add test menus to automate common tasks
- Save settings for multiple tests and experiments
- Waveforms can be annotated, saved and printed
- Data can be exported to other applications for further analysis
- Automated parameter measurements (rise time, duty cycle, etc)
- Advanced display and trigger modes capture infrequent events
- Zoom function for increased detail
- Custom ranges to display data in other units such as dB
- Add rulers to show exact values

- Autosetup function to automatically set up the scope to display any signals that it finds on the oscilloscope's inputs
- English, French, German, Italian, Spanish and Swedish versions
- Free updates available from our website
- Compatible with Microsoft Windows 98SE, ME, 2000 and XP
(a 16-bit version of PicoScope is available for Windows 3.1 and DOS users)

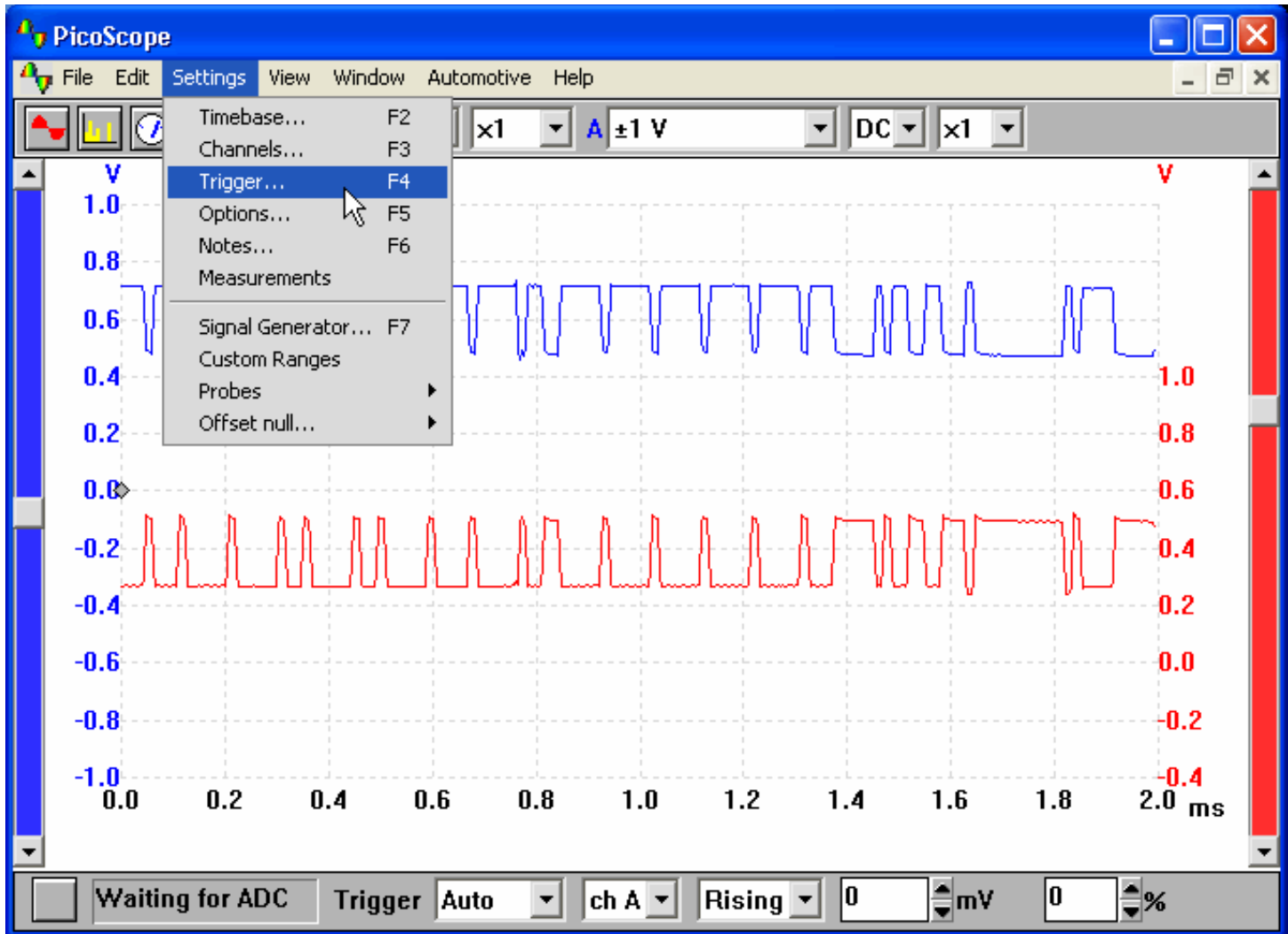
Download your free copy of PicoScope oscilloscope software to see for yourself just how good it is.

Oscilloscope

The real time digital storage oscilloscope (DSO) combines all the functionality of a traditional 'benchtop' scope with the benefits of a PC. Regular scope users will feel at home with the usual timebase, trigger options, etc, but will welcome the advantages of other useful features.

A number of display modes are available in PicoScope for reducing noise, capturing one-off glitches, and highlighting signal jitter. A chart recorder option is included to trend slowly changing signals.

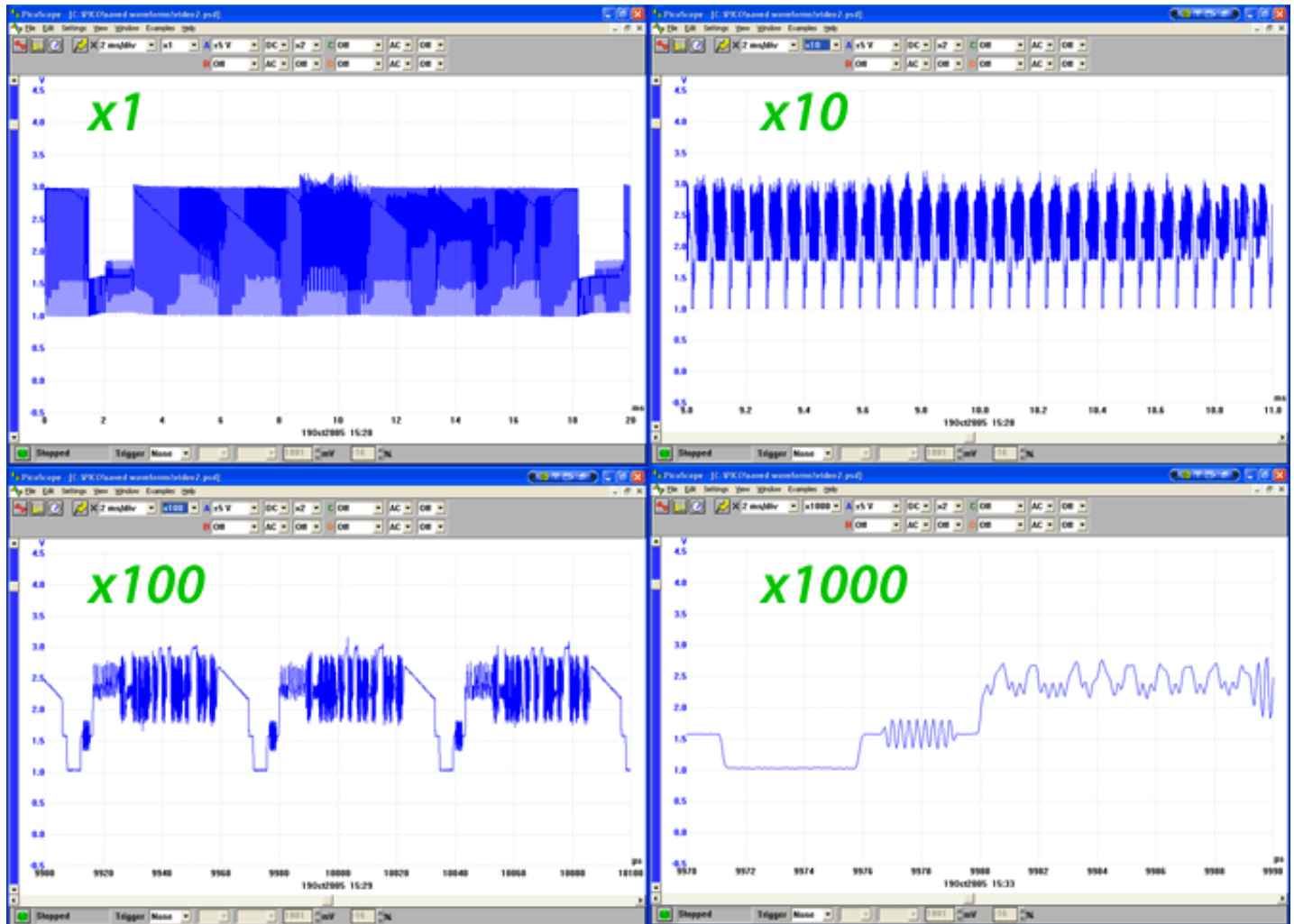
Trigger options include a 'save to disk' mode which makes tracking down elusive intermittent faults easy. The ability to save waveforms means service engineers can have a library of waveforms on disk showing working instruments and likely faults.



Summary of main features: Auto, repeat and single shot trigger modes. Selectable timeout and save to disk trigger options. Selectable trigger source, level, slope and pre / post trigger delay. X and Y multipliers to zoom-in on signals. Rulers to show amplitude and time information. User defined scaling ranges. Display options: current, accumulate, average, min and max, and more...

Zoom-in on signals

The PicoScope X and Y zoom functions make full use of the large buffer memory in the Pico range of PC oscilloscopes, allowing up to 2000 times zoom on many models. The waveform below show a 20 ms capture of a live video signal that was captured using the PicoScope 3424 4-channel oscilloscope. Capitalising on its 512 thousand sample buffer, the colour burst is clearly revealed at 1000 times zoom.

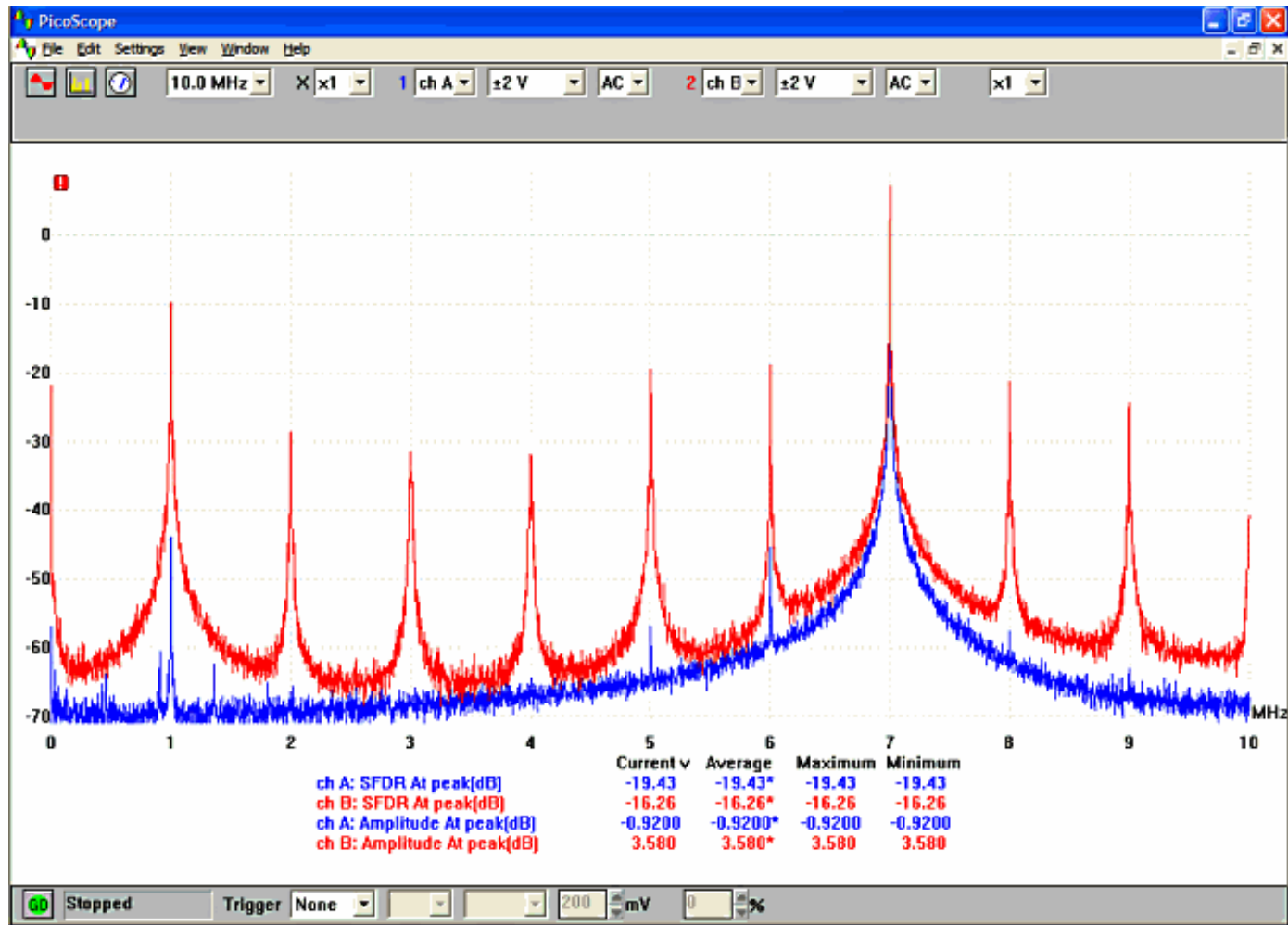


Spectrum Analyser

The spectrum analyser plots amplitude against frequency, in other words it shows signals in the frequency domain. (as opposed to the oscilloscope which shows signals in the time domain — amplitude against time). It is especially useful for tracking down the cause of noise or distortion in measured signals. As an example, a peak at 50 or 60 Hz would suggest noise due to mains pick up. Higher frequency peaks may be easily identified as switching noise from power supplies or noise from digital circuits. An averaging mode is provided to reduce the effects of random noise and a peak detect mode is useful for testing amplifier bandwidths.

The spectrum analyser has the same trigger options as the oscilloscope. This makes it possible to capture the spectrum of a ‘one off’ event such a single drum beat.

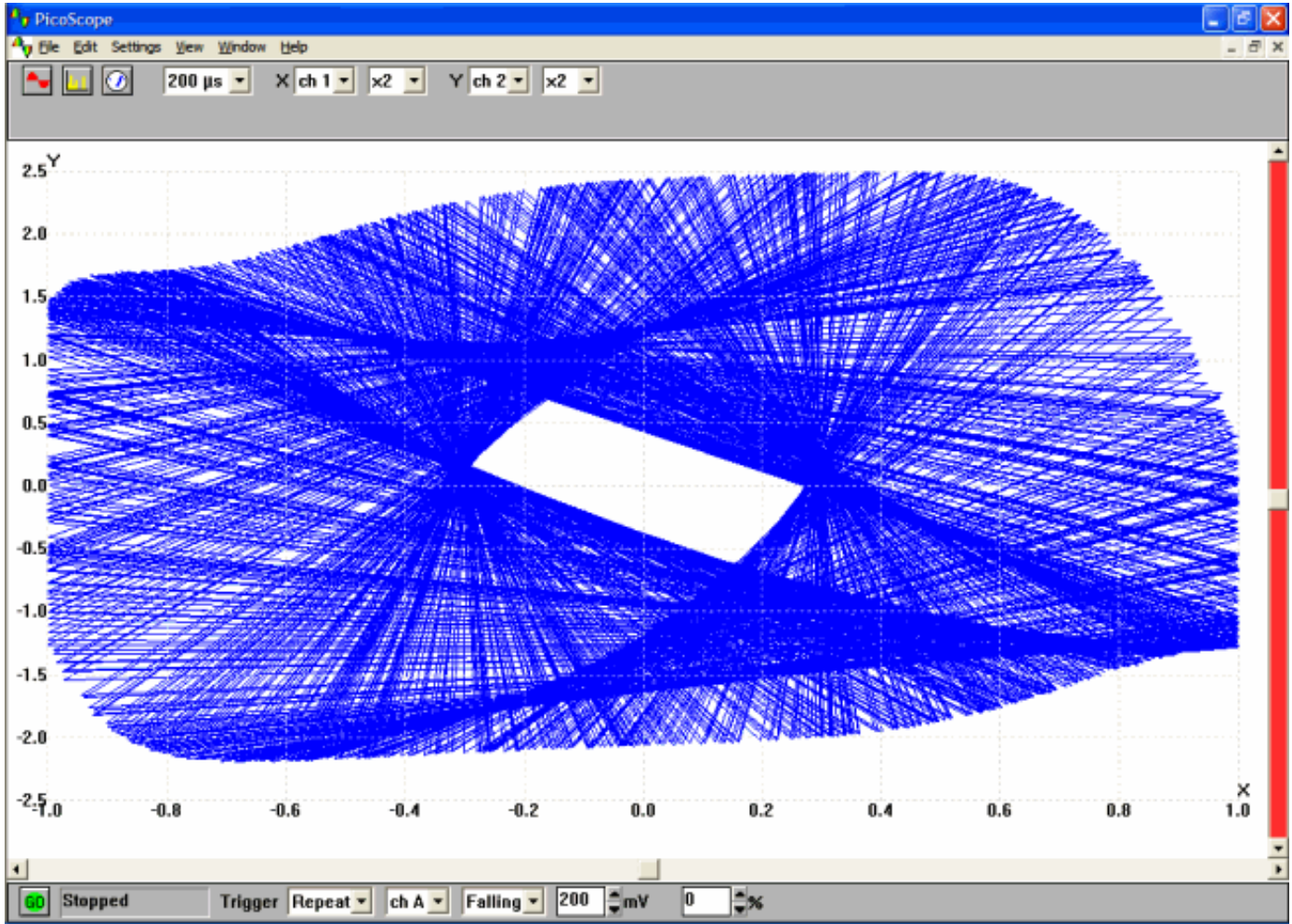
When used with a high resolution unit like the PicoScope 3224 or PicoScope 3424, it is ideal for audio spectrum analysis, and noise and vibration measurements.



Summary of main features: FFT based spectrum analyser. Normal, average and peak detect modes. Linear/Log scales for both amplitude and frequency. Rulers to show amplitude, frequency and phase. Seven window types. Variable number of spectrum bands. Same trigger functions as oscilloscope.

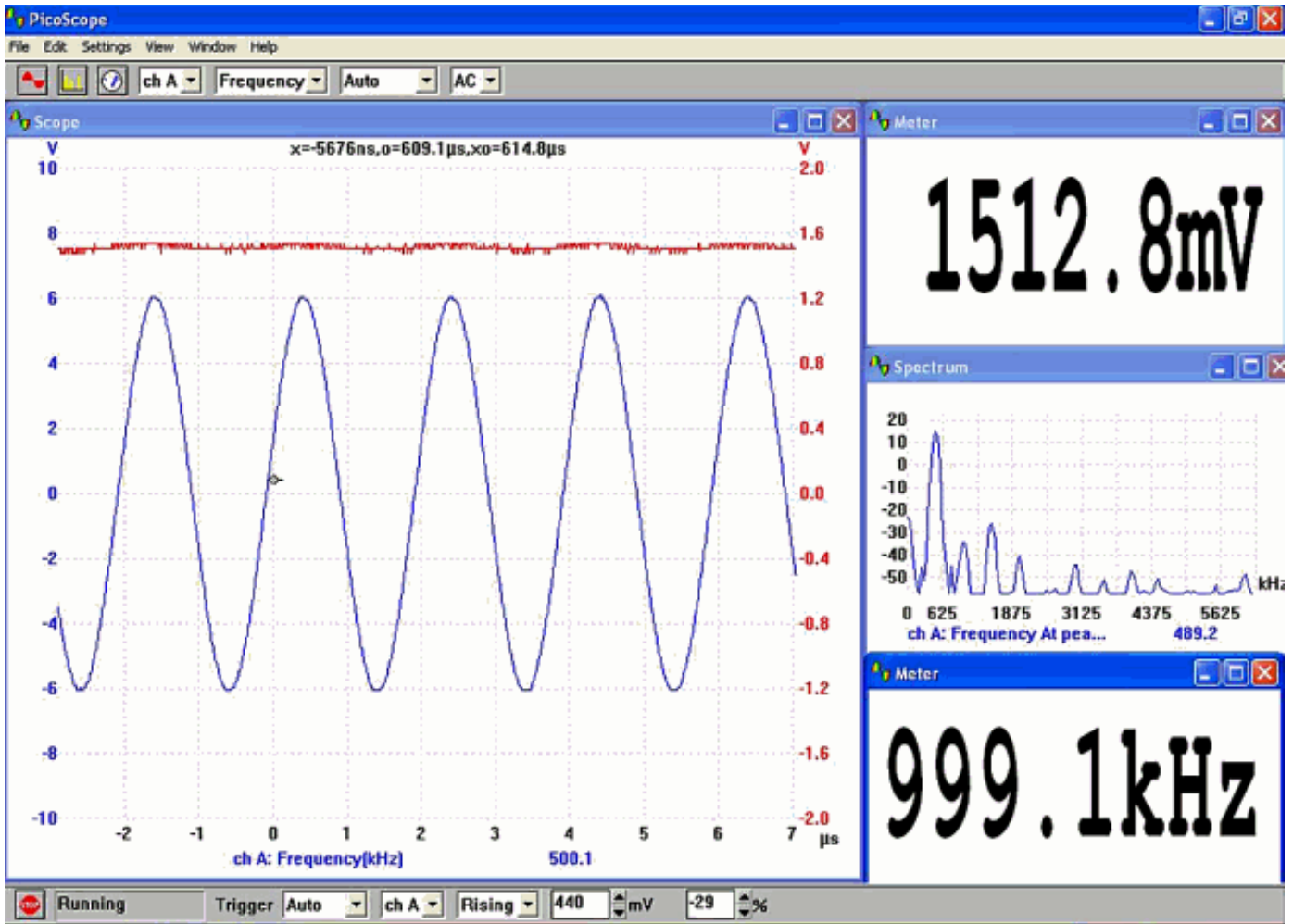
XY Scope

The XY scope is used to plot one parameter against another. This is useful when comparing the phase of two signals. The XY scope has the same trigger and timebase functions as described above. XY scope mode is only available on units with 2 or more channels.



Meter

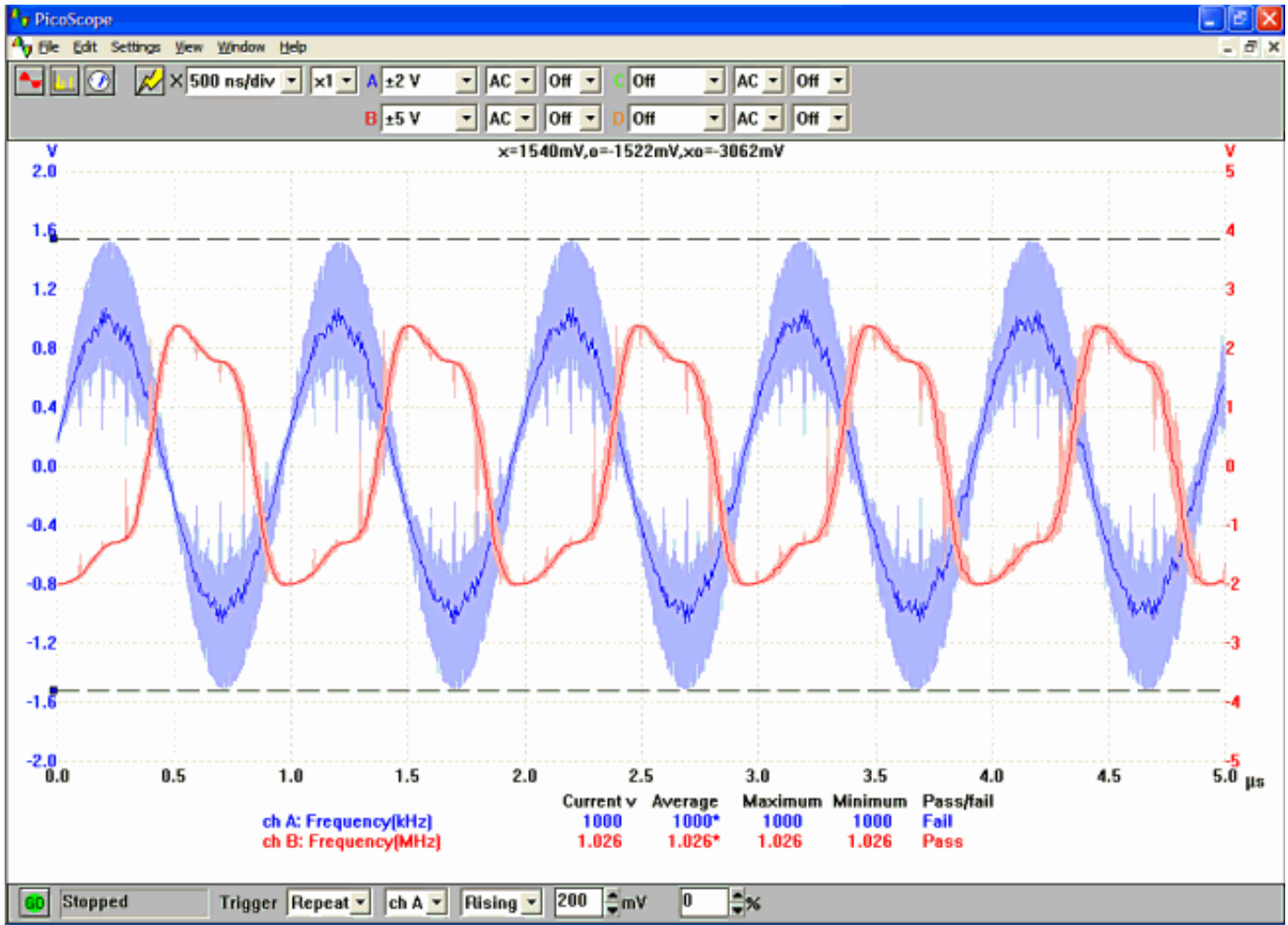
The meter displays one or more parameters as numbers, together with an optional bar graph. The multimeter displays AC volts (true RMS), DC volts, decibels or frequency. Other parameters can be displayed (for example pressure or acceleration) by adding custom ranges.



Measurements

Parameter measurements can be displayed at the foot of the trace, with a variety of statistical indicators. For each parameter it is possible to display: Current value, average value, standard deviation, minimum, maximum.

For production testing, pass / fail test limits can be added to each parameter.



Available measurements: Frequency, High pulse width, Low pulse width, Duty cycle, Cycle time, DC voltage, AC voltage, Peak to peak, Crest factor, Minimum, Maximum, Risetime, Falltime, Rising rate, Falling rate, Voltage at X cursor, Voltage at 0 cursor, Time at X cursor, Time at 0 cursor.