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 upgrades can be downloaded free of charge.

Main functions:	Features:

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1. **Oscilloscope**
2. **Spectrum Analyser**
3. **XY Scope**
4. **Meter**
5. **Measurements**

Features:

- Multiple views of the same signal (scope, analyzer, 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
- English, French, German, Italian, Spanish and Swedish versions
- On line manual and tutorial
- Free upgrades available from our website
- Compatible with Windows (3.x, 95/98, NT/2000) and DOS

Oscilloscope

The real time digital storage oscilloscope (DSO) combines all the functionality of a conventional '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.
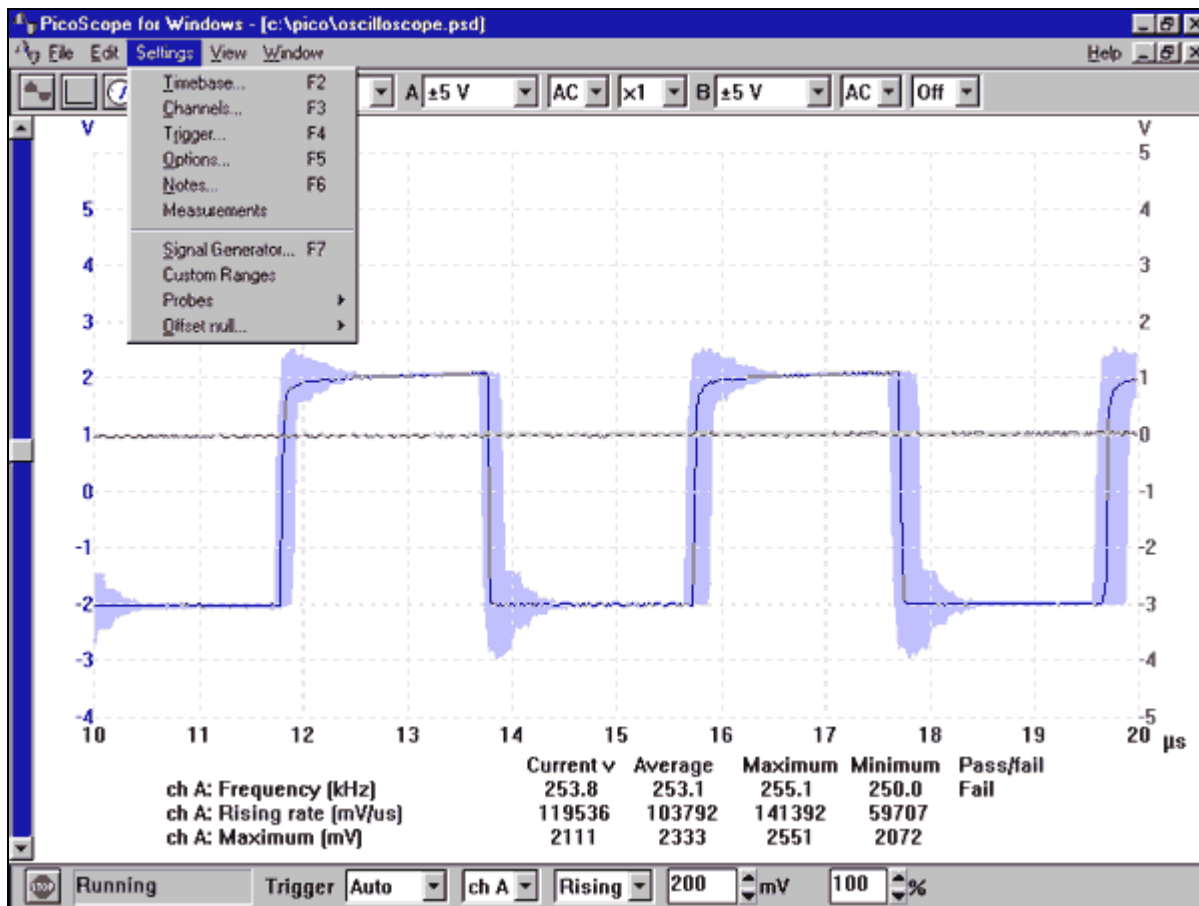
Summary of main features: Auto, repeat and single shot trigger modes. Selectable timeout and save to disk trigger options. Selectable trigger source, level, slope and pre / post trigger delay. X and Y multipliers to 'zoom in' on signals. Rulers to show amplitude and time information. User defined scaling ranges. Support for Pico signal conditioning products. Display options: current, accumulate, average, min & max and more...

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 plots 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 60Hz 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.
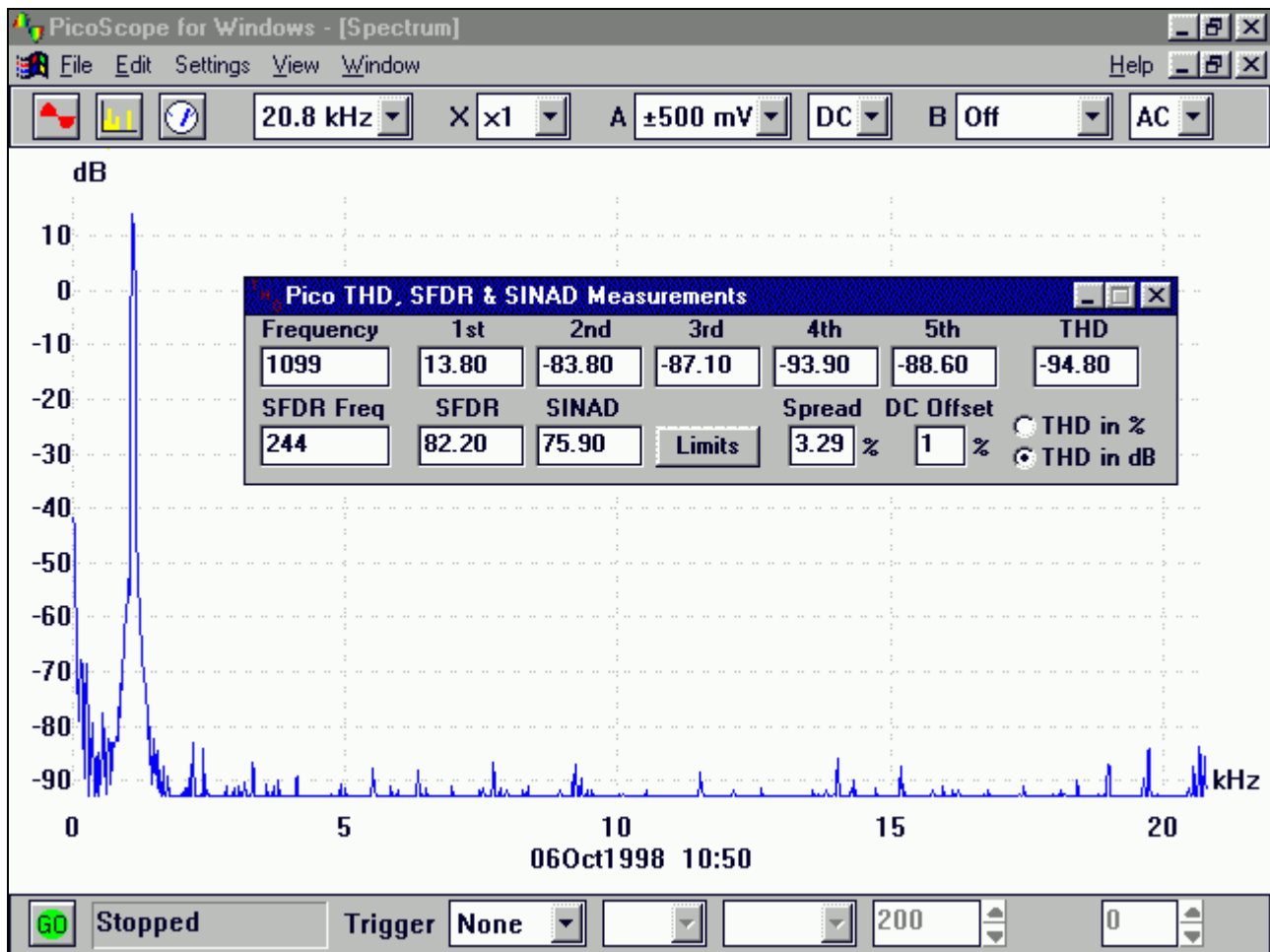
Summary of main features: FFT based spectrum analyser. Normal, average and peak detect modes. Linear/Log scales for both amplitude and frequency. Rulers to show amplitude, frequency and phase. Seven window types. Variable number of spectrum bands. Same trigger functions as oscilloscope.

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.
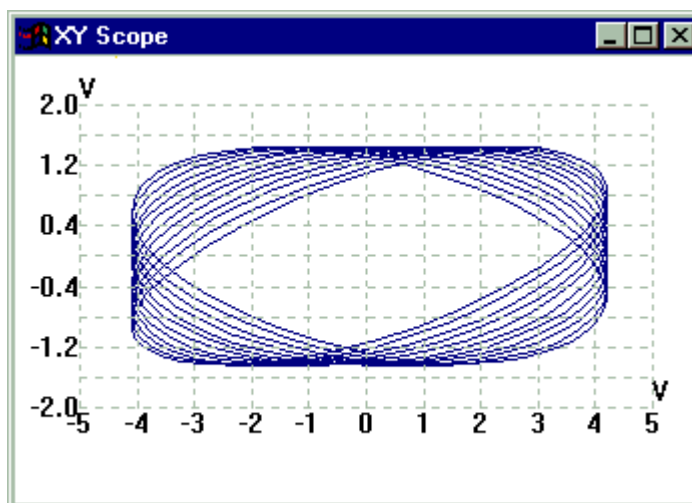

Meter

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 (e.g. pressure or acceleration) by adding custom ranges.
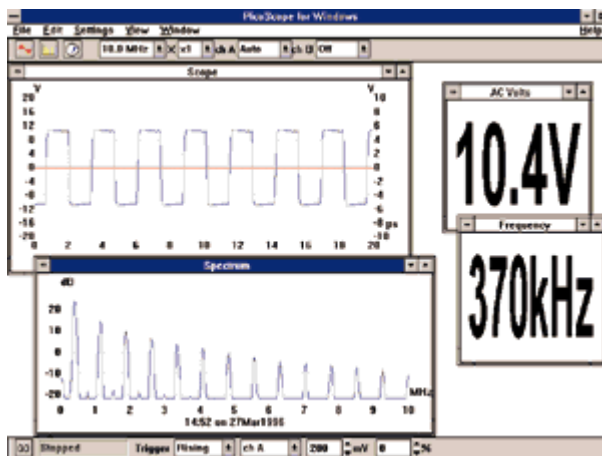
Measurements

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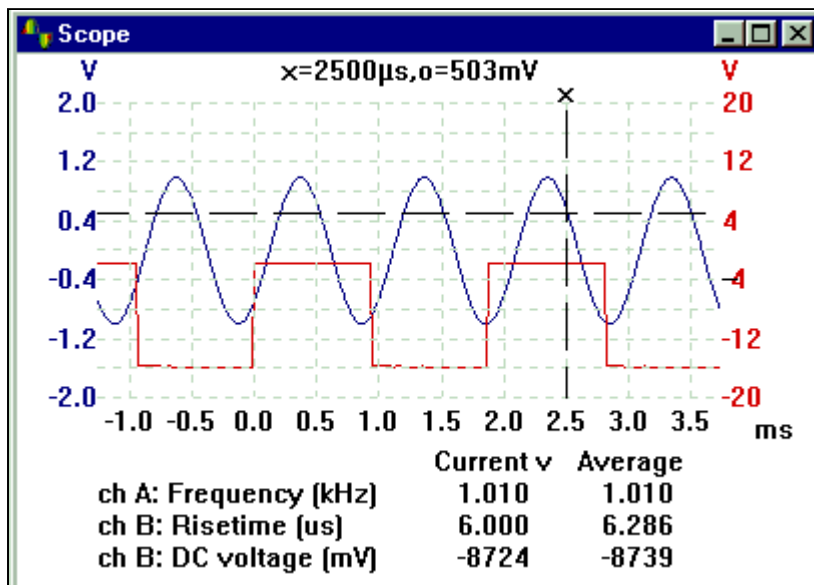
Available measurements: Frequency, High pulse width, Low pulse width, Duty cycle, Cycle time, DC voltage, AC voltage, Peak to peak, Crest factor, Minimum, Maximum, Risetime, Falltime, Rising rate, Falling rate, Voltage at X cursor, Voltage at 0 cursor, Time at X cursor, Time at 0 cursor.