PicoScope 3000 Series overview

The PicoScope 3000 Series PC Oscilloscopes all feature a high-speed USB 2.0 interface, together with fast sampling rates, high bandwidths and large buffer memories. PicoScope oscilloscopes simply connect to the USB port on any standard Windows-based PC.

PicoScope oscilloscopes are supplied with the PicoScope and PicoLog software and software drivers, which are described below.

PicoScope software

The PicoScope software turns your PC into an oscilloscope (with XY mode), spectrum analyser and multimeter.

- 20 automatic measurements, including min, max, frequency, standard deviation, pass/fail limits, X and Y cursors.
- Auto setup button.
- Signal generator setup (for 3204/5/6 only).
- Multiple display modes inc. Digital Colour, average, analog persistence and more.
- Save data as text file, BMP or JPG.

PicoLog software

PicoLog is a powerful and flexible data acquisition program for collecting, analysing and displaying data over long or short periods of time. You can view data both during and after data collection in spreadsheet or graphical format. You can also export the data to other applications such as Excel.

Software drivers

If you wish to write your own software or use our products with third-party software, we provide a range of software drivers and examples free of charge. These include drivers for Windows 98SE, ME, 2000 and XP; programming examples for C, Delphi and Visual Basic; and support for third-party packages including LabVIEW, Agilent VEE and Excel.

For more information

You can find the latest detailed instructions for installing and using the PicoScope 3000 Series PC Oscilloscopes and PicoScope and PicoLog software on our web site at: www.picotech.com/download.html.
You can also find copies of the manuals on your Pico Software CD – click the "User Manuals" button, then select "PicoScope 3000" for the oscilloscope manual or "PicoScope" or "PicoLog" for the software manuals.

For further assistance, you can contact our technical support team at the address below.

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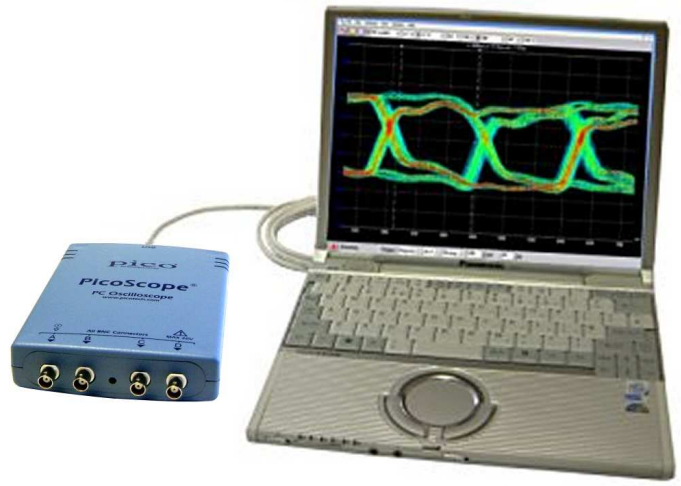
pico® Technology Limited

PicoScope® 3000 Series
PC Oscilloscopes
Quick Start Guide



Included with your PicoScope

Please check that your PicoScope 3000 Series PC Oscilloscope package contains the following items:

- 1 PicoScope 3000 Series PC Oscilloscope
- 1 USB cable
- 1 Pico Software CD
- 1 Power adapter
  (3204/5/6 oscilloscopes only; UK, EU or US model selected at time of ordering)
- 1 Installation guide
- 1 Quick start guide

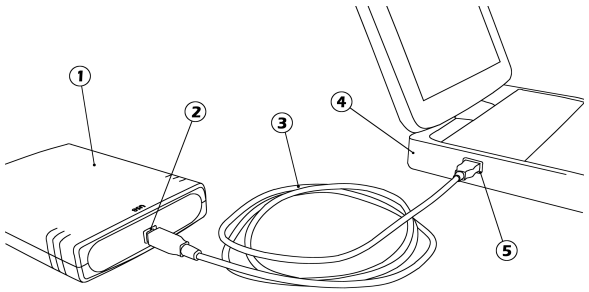
System requirements

Please verify that your computer meets the following requirements.

- Pentium or equivalent PC with at least 32 MB RAM, 10 MB disk space
- Microsoft Windows 98SE, ME, 2000, XP or later.
- USB 1.1 compliant port minimum. USB 2.0 compliant port recommended. Free USB port on PC or powered USB hub. Will not work on a passive hub.

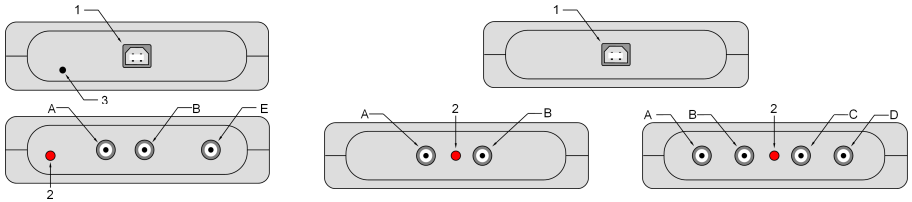
Installing PicoScope

1) Do not connect the oscilloscope to the PC yet!
2) Insert the Pico Software CD. The Pico installation application should automatically start.
3) Follow the links to install the software.
4) Follow the instructions on the screen to install PicoScope.
5) Restart the PC.
6) Connect the PicoScope 3000 Series PC Oscilloscope to the PC (see Connection Drawing). Ignore any warnings that appear such as "This device can perform faster" or "USB2 device connected to USB1 hub".
7) The "New Hardware Found Wizard" will run. Follow the instructions, and if the wizard asks to connect to Windows Update, select "No". If a warning about Windows Logo testing appears, click "Continue Anyway".
8) With some products, the "New Hardware Found Wizard" will run again. If so, repeat the previous step.
9) Click the Windows Start button, go to "Programs" and then "Pico Technology", then select "PicoScope" to begin using the PicoScope 3000.
10) If you have an oscilloscope probe connected to the oscilloscope, you should see a small 50 Hz or 60 Hz mains signal in the oscilloscope window when you touch the probe tip with your finger.



Key:
1) PicoScope 3000 Series PC Oscilloscope
2) PicoScope's USB port
3) USB cable
4) PC
5) PC's USB port

Connector diagrams



Key:
1) USB port.
2) LED. Indicates that the oscilloscope is sampling data.
3) 12 V DC 500 mA power input.

A-D) Input channels A to D.
E) External trigger input / signal generator output.

Powering the PicoScope 3204/5/6 PC Oscilloscopes

The PicoScope 3204/5/6 PC Oscilloscopes are normally powered from the USB port of the computer. However, in some circumstances, a "ground loop" may be created that degrades DC accuracy and noise performance when measuring small signals. This problem can be solved by using the mains adaptor supplied with every oscilloscope. For more details, please see the online manual supplied on your software CD.

PicoScope 3000 series specifications

PicoScope	3204	3205	3206	3224	3424
Channels	2 + Ext trigger			2	4
Sampling rate[1] Repetitive signals Single shot	2.5 GS/s 50 MS/s	5 GS/s 100 MS/s	10 GS/s 200 MS/s	20 MS/s 20 MS/s	
Bandwidth	50 MHz	100 MHz	200 MHz	10 MHz	
Buffer size (samples)[1]	256 K	512 K	1 M	512 K	
Resolution	8 bits			12 bits	
Voltage accuracy	±3%			±1%	
Timebase accuracy	50 ppm			100 ppm	
Scope timebases	5 ns to 50 s/div	2 ns to 50 s/div	1 ns to 20 s/div	500 ns to 20 s/div	
Spectrum ranges	DC to 25 MHz	DC to 50 MHz	DC to 100 MHz	DC to 10 MHz	
Signal generator	Fixed[2]	Variable[3]		None	
Trigger modes	Free Run, Auto, Repeat, Single, Save To Disk On Trigger				
Pre/post trigger	-100% to +100%				
Voltage ranges	±100 mV to ±20 V			±20 mV to ±20 V	
Input impedance	1 MΩ				
PC connection	USB 2.0 (and compatible with USB 1.1)				
Power supply	Either from USB port or power supply			USB port	

[1]Sampling rate and buffer size are reduced when more than one channel is in use.
[2]1 kHz square wave.
[3]Fixed amplitude, variable frequency sine/square/triangle wave with single/dual slope sweep options. Maximum frequency 1 MHz.