pico® Technology

PicoScope Education Kit

PC Oscilloscope experiments for secondary schools, colleges and universities

Now every classroom can obtain world-class equipment at an affordable price

Supplied with equipment for three experiments:

Speed of sound
Faraday's Law
AC dynamo

and includes guidance for four more experiments:

Value of a capacitor
Serial data waveform
Speed of a pulse along a cable
Acceleration due to gravity

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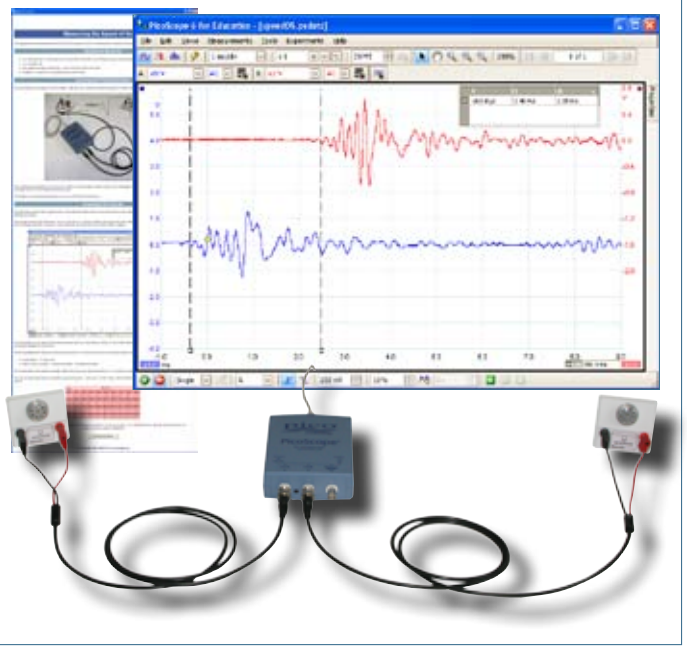
PicoScope Education Kit

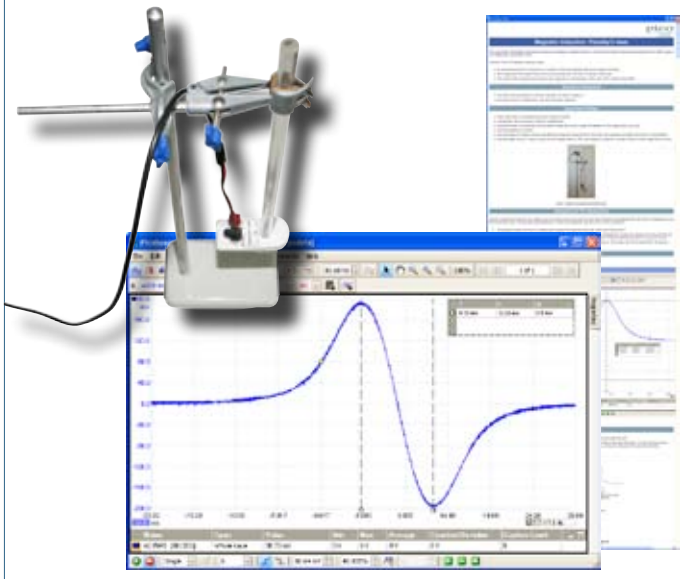
Speed of sound

The speed of sound experiment uses two microphones (included) to measure the speed of sound.



Faraday's Law

The Faraday's Law experiment demonstrates that the EMF induced in a conductor linked by a changing magnetic flux is proportional to the rate of change of the flux.



AC dynamo

The AC dynamo experiment builds on the results of the Faraday's Law experiment. Repeated pulses of EMF are induced in a coil by a rotating magnet, resulting in an AC voltage output.

Additional experiments

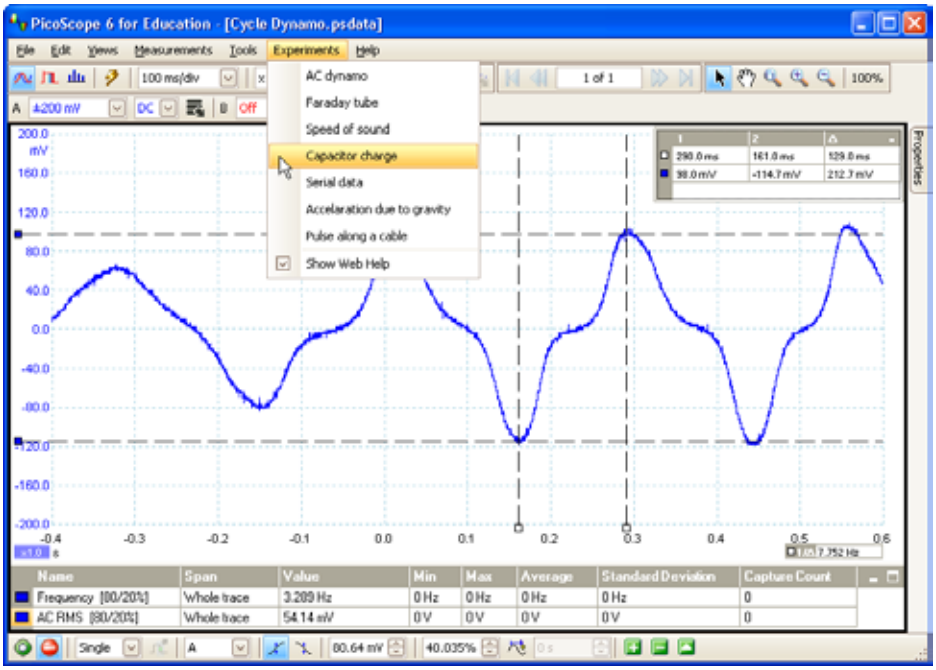
- Measuring the value of a capacitor
- Serial data
- Speed of a pulse along a cable
- Acceleration due to gravity

These four experiments are fully documented, with instructions and automatic setups built in to the software. You just need to supply the apparatus!

Kit contents

- PicoScope 2205 Sampling PC Oscilloscope
- Speed of sound apparatus
- Faraday's Law apparatus
- AC dynamo apparatus
- PicoScope Education Kit Software CD
- Installation Guide
- BNC to 4-mm plug cables (2)
- BNC to crocodile clip cable
- USB cable
- Durable carry case

PicoScope for Education



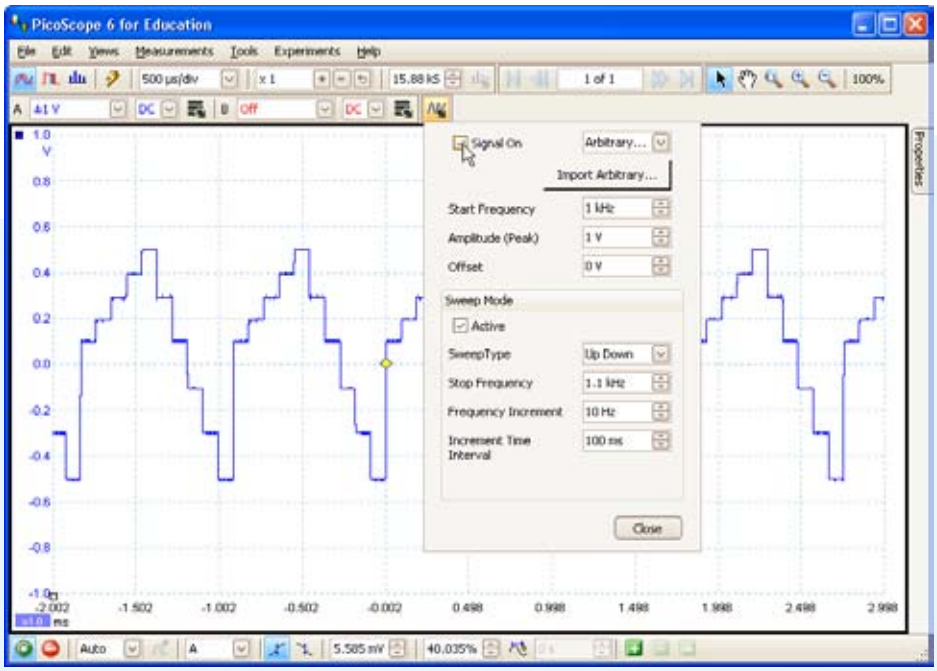
Starting an experiment is as easy as selecting an item the drop-down menu.

Features built in to the software include:

- X and Y rulers
- automatic measurements
- digital colour and analogue intensity persistence display modes
- spectrum analyser

Built-in signal generator

The built-in function generator and arbitrary waveform generator can replace several bulky pieces of equipment on your workbench. Generate standard waveforms such as sine, square and triangle, or load your own custom waveform from a text file.



PicoScope 2205 PC Oscilloscope

Channels (vertical)	
Number of channels	2
Bandwidth	25 MHz
Sensitivity	10 mV/div to 4 V/div
Accuracy	3%
Nominal input impedance	1 MΩ || 20 pF
Overload protection	±100 V on single input
Input coupling	AC or DC, software-controlled
Input connectors	BNC
Timebase (horizontal)	
Timebases	500 ns/div to 200 s/div
Timebase accuracy	100 ppm with 3 ps jitter
Trigger	
Trigger sources	Ch A or Ch B
Modes	Rising edge, falling edge, edge with hysteresis, pulse width, dropout, windowed, logic
Acquisition	
ADC resolution	8 bits (up to 12 bits with resolution enhance mode)
Sampling rate	200 MS/s (4 GS/s with equivalent-time sampling)
Buffer size	8000 samples in block mode, 2 M samples in streaming mode
Display	
Display resolution	Up to 4000 points horizontally. Number displayed subject to screen size.
Display styles	Real-time, digital colour, analogue intensity
Measurements and analysis	
Rulers	2 per channel on Y axis + 2 on X axis
Automatic measurements	26 automatic measurements in time and frequency domains
FFT	Spectrum view built in
Signal generator	
Connector type	BNC (shared with arbitrary waveform generator)
Built-in signal types	Sine, square, triangle, ramp up, ramp down, DC voltage
Output range	±250 mV to ±2 V
Offset	±1 V within ±2 V output range
Output resistance	600 Ω
Frequency range	DC to 100 kHz
Frequency sweep	Up, Down, Up-Down, Down-Up
Arbitrary waveform generator	
Connector type	BNC (shared with signal generator)
Vertical resolution	8 bits
Buffer size	4 K samples
Output range	±250 mV to ±2 V
Offset	±1 V within ±2 V output range
Output resistance	600 Ω
Sample rate	DC to 2 MS/s
Frequency sweep	Up, Down, Up-Down, Down-Up
Input waveform format	Normalised CSV file format (comma-separated values, compatible with Microsoft Excel)
General	
Operating temperature range	+5 °C to +45 °C
Power	Powered from USB port
PC connection	USB 2.0 (compatible with USB 1.1)
PC requirements	Windows XP (SP2) or Vista, 32-bit versions
Dimensions	100 mm x 135 mm x 45 mm
Weight	210 g
Approvals	FCC, CE

Ordering information			
PP471 PicoScope Education Kit			

* Dollar and euro prices are subject to exchange rate fluctuations. Please contact Pico Technology for the latest prices before ordering.
Errors & omissions excepted.

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