

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:

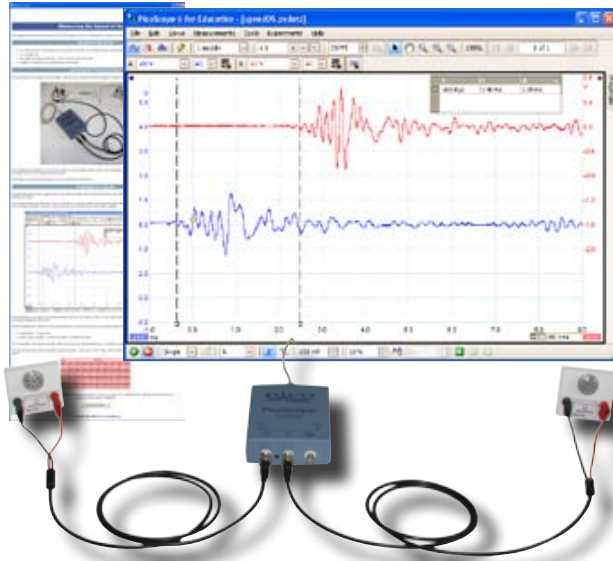
Speed of sound
Faraday's Law
AC dynamo

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

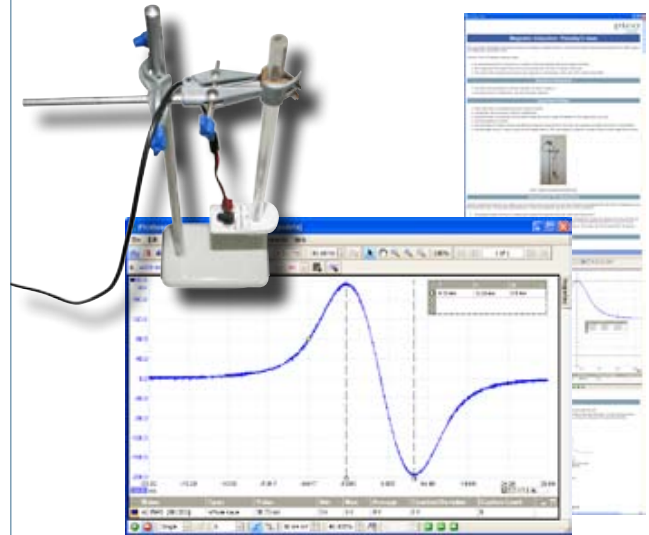
Speed of sound

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

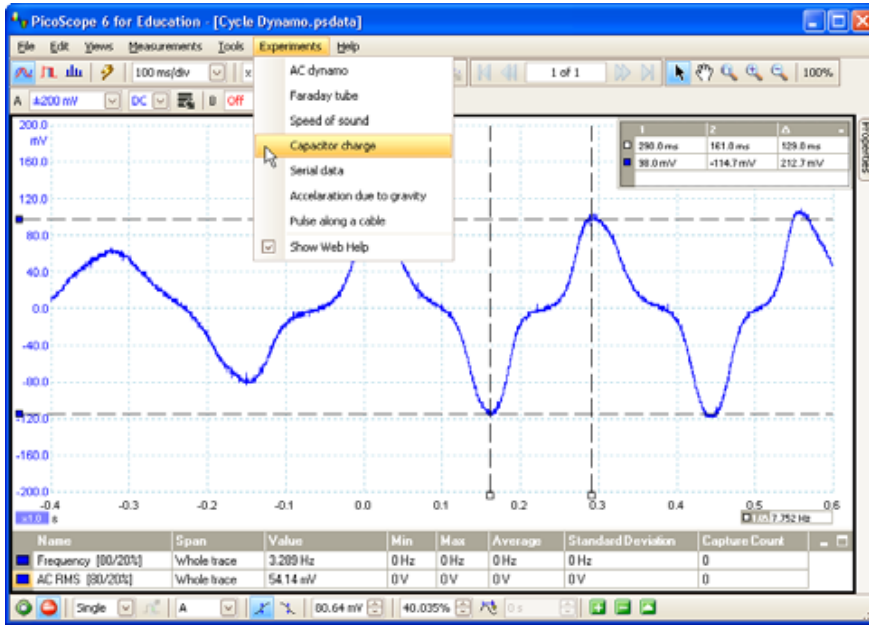
- Measuring the value of a capacitor
- Serial data
- Speed of a pulse along a cable
- Acceleration due to gravity

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



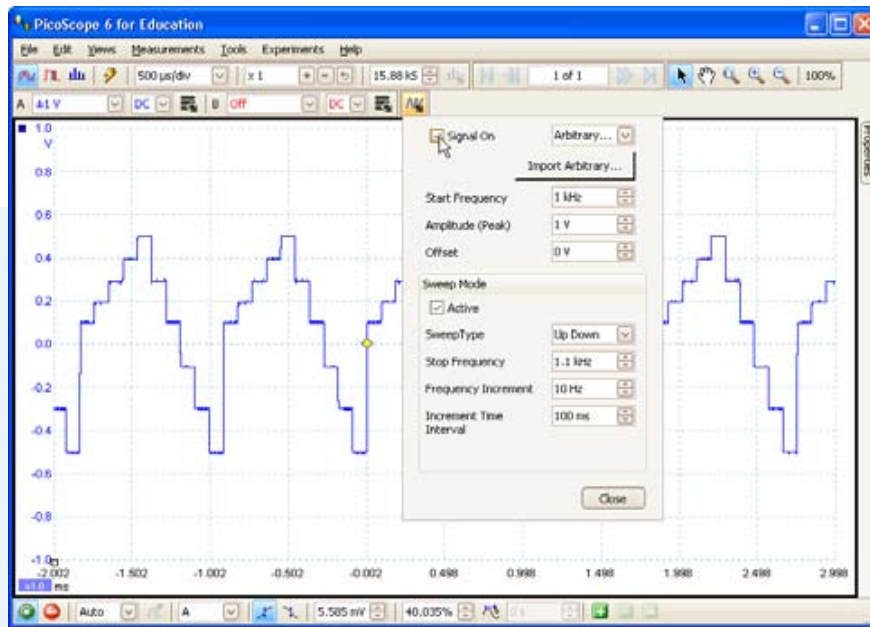
Starting an experiment is as easy as selecting an item the drop-down menu.

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 M Ω 20 pF
Overload protection		\pm 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		\pm 250 mV to \pm 2 V
Offset		\pm 1 V within \pm 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		\pm 250 mV to \pm 2 V
Offset		\pm 1 V within \pm 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 $^{\circ}$ C to +45 $^{\circ}$ 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	395	790*	585*

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

www.picotech.com

