

PicoScope Education Kit

PC Oscilloscope experiments for secondary schools, colleges and universities



Now every classroom can obtain worldclass 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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Speed of sound

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



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.





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.



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. pico

Techno

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 Bandwidth Sensitivity Accuracy Nominal input impedance Overload protection Input coupling Input connectors Timebase (horizontal)	2 25 MHz 10 mV/div to 4 V/div 3% 1 M Ω 20 pF ±100 V on single input AC or DC, software-controlled BNC			
Timebases	500 ns/div to 200 s/div			
Trigger				
Trigger sources Modes	Ch A or Ch B Biging edge falling edge edge with hysteresis pulse width dro	pout windowe		
Acquisition	Trising cage, failing cage, cage with hysteresis, pulse width, aro	pout, windowed	J, IOSIC	
ADC resolution Sampling rate Buffer size	8 bits (up to 12 bits with resolution enhance mode) 200 MS/s (4 GS/s with equivalent-time sampling) 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			
Rulers Automatic measurements FFT	2 per channel on Y axis + 2 on X axis 26 automatic measurements in time and frequency domains Spectrum view built in			
Signal generator				
Connector type Built-in signal types Output range Offset Output resistance Frequency range Frequency sweep	 BNC (shared with arbitrary waveform generator) Sine, square, triangle, ramp up, ramp down, DC voltage ±250 mV to ±2 V ±1 V within ±2 V output range 600 Ω DC to 100 kHz Up, Down, Up-Down, Down-Up 			
Arbitrary waveform generator	DNIC (showed with simple execution)			
Connector type Vertical resolution Buffer size Output range Offset Output resistance Sample rate Frequency sweep Input waveform format	BINC (shared with signal generator) 8 bits 4 K samples ±250 mV to ±2 V ±1 V within ±2 V output range 600 Ω DC to 2 MS/s Up, Down, Up-Down, Down-Up Normalised CSV file format (comma-separated values, compat	ible with Micros	oft Excel)	
General	$+5 \circ C + 45 \circ C$			
Power POVer PC connection PC requirements Dimensions Weight Approvals	Powered from USB port USB 2.0 (compatible with USB 1.1) Windows XP (SP2) or Vista, 32-bit versions 100 mm x 135 mm x 45 mm 210 g FCC, CE			
Ordering information		f	\$	€
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.

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