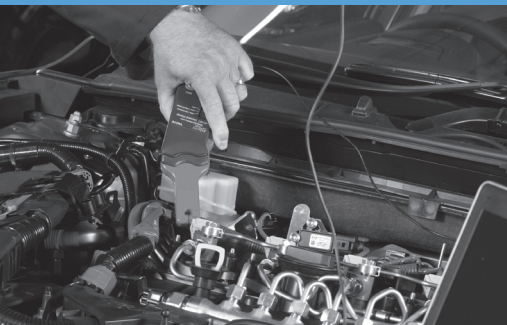




# PicoScope<sup>®</sup>

## Scope Diagnostics

The next generation of PicoScopes  
from the market-leading scope diagnostics company



# PICOSCOPE - THE ULTIMATE DIAGNOSTIC TOOL

A PC-based PicoScope is the ultimate workshop diagnostic tool. Alongside your scan tool, it adds the ability to analyze intermittent problems, test components before replacing them, and confirm a fix after fitting - retaining customers and increasing sales and profits.

Our PicoScope kits are designed to make diagnosis and testing of vehicle systems and components intuitive and logical. Take a look at the kits we offer and the multitude of tests available to you within our automotive software. In addition to the guided tests PicoScope can test any electrical sensors, circuits and components across all vehicle formats. PicoScope 6 Automotive offers unrivalled value for money with full PC-Scope capability and the power of PicoScope testing at your fingertips.



# STARTER KIT

Complete with 59 guided tests straight out of the box, including:

- Cylinder Balance
- Throttle Position
- SAW Signal
- Relative Compression
- LIN bus
- Amplifier Signal
- MAF Sensor
- CAN
- Primary Ignition
- Camshaft
- Stepper Motors
- Cam vs. Crank Position Sensors
- Temp Sensor
- Injectors
- Primary Ignition vs. Crank
- Crankshaft
- Pressure Regulator
- Primary Ignition vs. Injector
- Distributor Pick-Up
- Throttle Servo
- Fuel pressure
- Camshaft Adjuster
- Knock
- Valve Timing
- Lambda
- Primary Ignition
- MAP
- Amplified Earth
- Road Speed

£979 \$1615 €1375

PP921



All accessories are available separately as needed to perform additional tests

# STANDARD KIT

Complete with 88 guided tests straight out of the box, including:

- Cylinder Balance
- Battery/Alternator Test
- Relative Compression
- Starting Volts/Amps
- Alternator
- Smart Alternator
- ABS
- MAF Sensor
- Camshaft
- Temperature Sensor
- Crankshaft
- Distributor Pick-Up
- Fuel pressure
- Knock
- Pedal Sensor
- Lambda
- MAP
- Road Speed
- Throttle Position
- LIN bus
- CAN
- Stepper Motors
- Injectors
- Pressure Regulator
- Throttle Servo
- Camshaft Adjuster
- Valve Timing
- Solenoid Valve
- Glow Plugs
- EGR
- Fuel Pump
- Speed Control Valve
- Cooling Fan
- Primary Ignition
- Secondary HT
- Amplifier Earth
- SAW Signal
- Amplifier Signal
- Coil-on-Plug
- DIS Primary Current
- DIS Primary Voltage
- Cam vs. Crank Position Sensors
- Primary Ignition vs. Crank
- Primary Ignition vs. Injector

£1545 \$2545 €2165

PP923



# ADVANCED KIT

Complete with 114 guided tests straight out of the box, including:

- Compression Test
- Battery/Alternator Test
- Cylinder Balance
- Relative Compression
- Starting Volts/Amps
- Alternator
- Smart Alternator
- ABS
- Pedal Sensor
- MAF Sensor
- Camshaft
- Temperature Sensor
- Crankshaft
- Distributor Pick-Up
- Fuel pressure
- Knock
- Lambda
- MAP
- Road Speed
- Throttle Position
- LIN bus
- FlexRay
- CAN
- Solenoid Valve
- Glow Plugs
- EGR
- Fuel Pump
- Speed Control Valve
- Stepper Motors
- Injectors
- Pressure Regulator
- Throttle Servo
- Cooling Fan
- Camshaft Adjuster
- Valve Timing
- Amplifier Earth
- SAW Signal
- Amplifier Signal
- Primary ignition
- Primary vs. Secondary
- Secondary HT
- Coil-on-Plug
- Multi Coil On Plug
- DIS Ignition
- DIS Primary Current
- DIS Primary Voltage
- DIS Voltage vs. Current
- Cam vs. Crank Position Sensors
- Primary Ignition vs. Crank
- Primary Ignition vs. Injector

£2065

\$3405

€2895

PP925



# FROM HEALTH CHECKS TO PEAK PERFORMANCE

## SIMPLE TO USE

PicoScope 4225 and 4425 scopes connect to your PC using a simple, reliable USB cable. Our scopes also get their power through this cable, so there's no extra power adaptor, making everything as simple as possible. PicoScope makes communication easy by allowing you to simply send waveforms by email, print them or save them to your network, all within a familiar Windows environment.

## FIND INTERMITTENT AND PERFORMANCE FAULTS EASILY

By easily pinpointing connection and wiring faults, PicoSCOPE can save time and money by helping to avoid replacement of parts that are not faulty. In addition to testing complex engine management components, PicoScope is often the best way to check basic systems such as starting and charging, battery condition, and parasitic current draws that cause flat batteries.

## QUALITY GUARANTEED

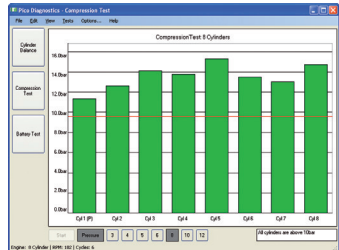
We have been refining and testing our PicoScope products for more than 20 years. Everything you get in a PicoScope Diagnostic kit has been selected by our own automotive experts. The result is a kit that is used by independent garages, vehicle manufacturers and dealer networks all over the world. For your peace of mind we provide a 2 year warranty with every Automotive PicoScope.

## PICODIAGNOSTICS®

PicoDiagnostics is a standalone software package for use with the PicoScope 4000 Series automotive scopes. With PicoDiagnostics you can quickly check the health of most petrol and diesel engines. There are no complicated procedures – simply connect one channel of your scope to the battery of the vehicle to be tested, run PicoDiagnostics, select your test and click a button. PicoDiagnostics includes a test of battery, alternator and starter saving you additional equipment.

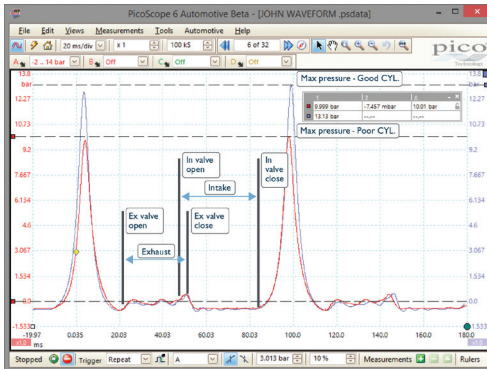
## PICODIAGNOSTICS COMPRESSION TESTER

Show relative compression with just a simple connection to the battery. Add an optional pressure transducer to measure absolute compression.



# WPS500X DIAGNOSTIC PRESSURE TRANSDUCER

In the same way that a multimeter cannot help you with changing signals and timing, so a pressure gauge will never reveal how your engine is actually performing. With the unbeatable resolution and accuracy of the WPS500X Automotive Pressure Transducer, you can perform quick and accurate analysis of many automotive systems, revealing their true performance. The WPS500X features an extremely fast 100  $\mu$ s response rate and sensitivity down to 0.07 psi (5 mbar), providing an accurate view of rapidly changing signals across a broad pressure range.



NOTHING COMPARES TO THE WPS500X

It is not unusual to require a different pressure transducer for each diagnostic test you want to run. The WPS500X high-resolution transducer can be used for a multitude of automotive diagnostic applications. With three pressure ranges, a zoom function, pressure relief valve and a rechargeable Li-Po battery all enclosed in a durable housing, the WPS500X is the cost-effective solution for pressure analysis.

When price, performance and versatility matter, there is nothing that compares to the WPS500X Automotive Pressure Transducer.

## THREE PRESSURE RANGES = PERFORMANCE AND VERSATILITY

The three pressure ranges of the WPS500X allow accurate measurement and analysis of many automotive pressures including cylinder compression, fuel pressure, airflow, valve timing intake manifold vacuum and even pulses from the exhaust.

Range	Pressure range	Accuracy
1	-15 to 500 psi -1 to 34.47 bar	1% of scale
2	-15 to 50 psi -1 to 3.45 bar	1% of scale
3	-5 to 5 psi -0.34 to 0.34 bar	5% of scale

WPS500X Pressure transducer PP652 £499 \$819 €699

WPS500X Pressure transducer kit PP939 £699 \$1155 €979

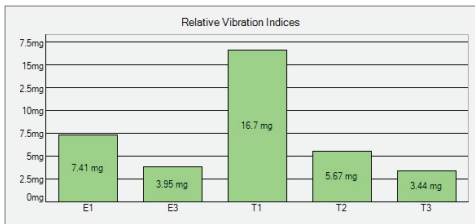


# PICODIAGNOSTICS NVH KIT

Vehicle noise, vibration and harshness (NVH) are significant reasons for customer dissatisfaction. Quickly identifying the cause of a vibration and finding its location can be a difficult task, even for the most experienced technician. Now, there's an easier solution for NVH diagnosis. The PicoScope Diagnostic Kit with NVH provides a more accurate analysis of vehicle noise, vibration and harshness conditions. Using the display of your existing laptop computer, this system combines fast capture and analysis of vehicle data with a clear easy-to-read presentation of results and diagnostic guidance.

The NVH Kit can be enhanced with additional accessories to provide on-vehicle driveline balancing. This includes automated procedures to give you exactly what is needed to rebalance without expensive equipment or propshaft removal. The accessories included in your NVH kit can be used with standard PicoScope software for flexible fault tracing.

- Simple bar charts display results for quick diagnosis and ease of use.
- Full analysis and advanced features (including waterfall and spectral displays) are at your fingertips
- Designed for road testing, workshop diagnosis and driveline balancing
- Detects and isolates multiple vibrations and noises providing help and advice on causes and fixes
- Use a J2534-compliant interface to acquire engine speed data, or signal input - particularly useful for older or non-compliant vehicles
- Customer report function to explain the diagnosis and repair
- Import WAV audio files, for example of vehicle noise recorded by a customer



Vibration	Frequency	Amplitude (g)
Engine Speed (1)	29.0 Hz	7.41 mg
Engine Speed (3)	87.1 Hz	3.95 mg
Tire Vibration (1)	9.8 Hz	16.7 mg
Tire Vibration (2)	20.1 Hz	5.67 mg
Tire Vibration (3)	35.2 Hz	3.44 mg



NVH kit PP986 £499 \$819 €699



## CAN TEST BOX

The CAN Test Box allows you to connect your PicoScope to the vehicle's 16-pin diagnostic connector enabling you to monitor any signals present, such as the CAN High and Low signals. The CAN Test Box terminal pin ports are accessible with standard 4 mm plugs.

CAN Test Box TA069 £149 \$249 €209



## DIFFERENTIAL PROBES

The active differential probes let you measure higher voltages and are ideal for hybrid and electric vehicles. These probes have a bandwidth of 25 MHz, with differential voltage ranges of 700 V or 1400 V and are CAT III rated.

700 V differential probe TA041 £229 \$379 €319

1400 V differential probe TA057 £229 \$379 €319



## WPS600 HYDRAULIC PRESSURE TRANSDUCER

With high accuracy and a wide measuring range, the WPS600 Hydraulic Pressure Transducer connects to your PicoScope for convenient analysis of heavy machinery hydraulic systems.

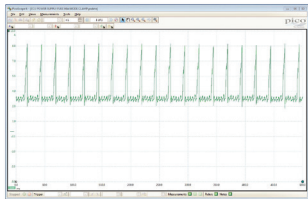
- Accurately measure up to 600 bar (8700 psi)
- Ultra-fast 100 microsecond response time (0% to 90% of full scale)
- Internal rechargeable LiPo battery
- Auto zeroing
- High noise immunity
- Temperature compensated

WPS600 Pressure transducer PP833 £619 \$1025 €869



# CURRENT CLAMPS

## 60 A / 20 A CURRENT CLAMP

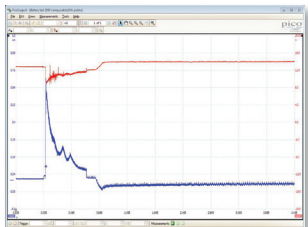


The 60 A current clamp has both 20 A and 60 A ranges and is ideal for measuring current waveforms from fuel pumps, injectors and ignition coils. When the correct preset test is selected, PicoScope shows current readings in amps.



BNC 60 A current clamp TA018 £99 \$159 €139

## 2000 A / 200 A CURRENT CLAMP

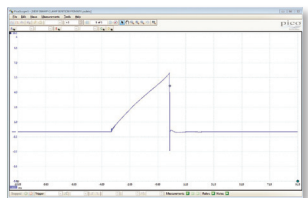


The 2000 A / 200 A heavy duty current clamp allows you to measure up to 2000 A without cutting, disconnecting or stripping the wire. It is ideal for measuring the high currents drawn by the starter motor of commercial vehicles and large-engine passenger cars.



BNC 2000 A current clamp TA167 £159 \$259 €219

## 30 A LARGE JAW CURRENT CLAMP

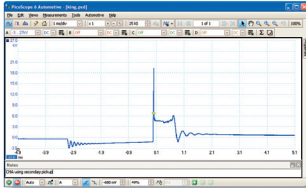


This 30 A current clamp allows you to measure from 5 mA up to 30 A, and is designed to handle the lower currents found in some modern vehicle sensors. Its larger 19 mm jaw size makes it ideal for measuring current directly at the battery cable such as battery drain during shutdown.



BNC 30 A current clamp TA234 £159 \$259 €219

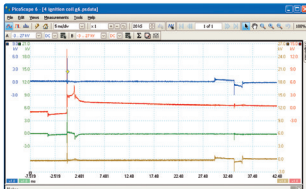
# COP & IGNITION



Secondary ignition pickup MI074 £35 \$58 €49

## SECONDARY IGNITION PICKUP

The secondary ignition pickup enables the PicoScope to measure high-tension (HT) voltages in secondary ignition circuits. It clips onto the HT lead with no need to disconnect.

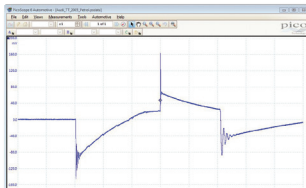


## HT EXTENSION LEADS

These HT Extension leads give access to the HT (secondary) ignition circuit in coil-over-plug engines. Fit the HT Extension Lead between the coil and the spark plug, then place a Secondary ignition Pickup on the HT Extension lead to pick up the HT pattern on your PicoScope.

HT extension leads each TA037 £25 \$42 €35

HT extension leads x4 & Earth wire PP400 £99 \$159 €139



## COIL-ON-PLUG (COP) PROBE

This flexible COP Probe can pick up secondary ignition waveforms from most coil-on-plug or coil-per-cylinder systems where there are no exposed HT leads. The signal is displayed in PicoScope as kilovolts (kVs).



Coil-on-plug probe kit (probe and cable) PP357 £109 \$179 €149

# BREAKOUT LEADS

## COMMON 2, 3 & 4-PIN CONNECTOR BREAKOUT LEADS

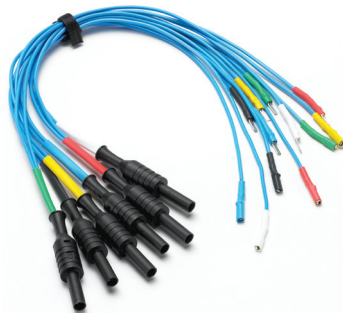
2-pin AMP breakout lead	TA012	£25	\$42	€35
2-pin ACS breakout lead	TA190	£39	\$65	€55
3-pin Kostal breakout lead	TA191	£45	\$75	€63
2-pin Deutsch breakout lead	TA192	£35	\$58	€49
4-pin Deutsch breakout lead	TA193	£49	\$81	€69
2-pin Kostal breakout lead	TA194	£35	\$58	€49



## 6-WAY UNIVERSAL BREAKOUT LEADS

No need to pierce insulation or back-pin connectors. Fully shrouded and insulated for safety, these breakout leads simply connect into the existing cable loom and enable voltage readings to be taken from numerous sensors in the engine compartment.

Micro 0.6 mm	TA063	£49	\$81	€69
Small 1.5 mm	TA024	£49	\$81	€69
Medium 2.3 mm	TA025	£49	\$81	€69
Large 2.8 mm	TA026	£49	\$81	€69
Kit of all 4 sizes	PP943	£189	\$309	€259



## FUSE EXTENSION LEADS

Avoid disturbing the wiring loom by fitting these extension leads between the fuse and fuseholder. Use with the Pico current clamps for fuse-based diagnosis and measurements.

Mini-ATC fuse extension lead	TA035	£20	\$33	€28
Standard ATC fuse extension lead	TA034	£20	\$33	€28
Maxi fuse extension lead	TA206	£45	\$75	€63
JCASE Fuse extension	TA168	£20	\$33	€28
Fuse extension lead kit (all 4)	PP967	£99	\$159	€139



## PROBES AND ADAPTORS

### MULTIMETER PROBES

(black) TA001 £4 \$7 €6

(red) TA002 £4 \$7 €6



### BACK-PINNING PROBES

TA008 £29 \$48 €41



### FLEXIBLE BACK-PINNING PROBES

(black) TA161 £4 \$7 €6

(red) TA162 £4 \$7 €6



### BNC PLUG TO 4 MM ADAPTOR

MI078 £12 \$20 €17



### BATTERY CLIPS

(black) TA158 £3 \$5 €5

(red) TA157 £3 \$5 €5



### LARGE DOLPHIN CLIPS

(black) TA005 £6 \$10 €9

(red) TA006 £6 \$10 €9



View our complete list of accessories at  
[www.picoauto.com/automotive-accessories.html](http://www.picoauto.com/automotive-accessories.html)

# PICOSCOPE - DON'T SETTLE FOR LESS

Before you buy any scope, compare it with a PicoScope. With full automotive protection, superior specification, and amazing price, PicoScope is the scope of choice for independent workshops and vehicle manufacturers worldwide. When you buy a PicoScope you get industry-leading performance that is both affordable and easy to use.

## FASTER SAMPLING

The latest PicoScopes can capture up to 400 million samples per second, making them fast enough to capture even the smallest problem with CAN and even FlexRay signals. Performance and intermittent problems are revealed in great detail, and intuitive trigger facilities mean you can be confident that PicoScope will capture the problem and everything leading up to it. Some scopes only have software triggers, so may never even catch the problem you are looking for.

## MORE MEMORY

Some scope manufacturers claim high sample rates for their scopes but have only a few thousand samples of memory - so you have to trade the number of engine revolutions against sampling rate limited by memory. PicoScope captures all the information needed for a fast and accurate diagnosis. The PicoScope 4225 and 4425 have a 250 million sample memory to ensure that you can capture even more information without sacrificing sampling rates - making it easier to reveal complex intermittent faults and rare events.

## HIGH INPUT RANGE

The  $\pm 200$  V input range of the PicoScope 4225 and 4425 removes the need for external attenuators when testing components such as injectors.

## FLOATING INPUTS

The inputs on the PicoScope 4225 and 4425 have their own ground reference, increasing the flexibility and allowing you to directly measure across non-grounded components.

## CONNECTDETECT®

This handy feature detects when you have made a good connection in those difficult-to-reach places, displaying the connection status on your big screen and on the front of the unit.



# OPEN YOUR EYES WITH PICOSCOPE SOFTWARE

## PICOSCOPE AUTOMOTIVE

PicoScope 6 is the most advanced automotive scope software available to date. With award-winning features and intuitive design, this software is designed to make sure you get to the heart of the problem, fast. Packed with easy to use features, PicoScope 6 really is the ultimate diagnostic software package, allowing you to focus on the vehicle systems and components.

## WAVEFORM LIBRARY

PicoScope Automotive includes a fantastic feature that allows you to search a global database of waveforms uploaded by PicoScope users around the world, and save yours securely. Once you are logged into the Waveform Library Browser, numerous search options allow you to locate a relevant waveform for a specific manufacturer or model. You can also search for a waveform using just the engine code, allowing you to locate a waveform that is applicable to other models or manufacturers using that engine.

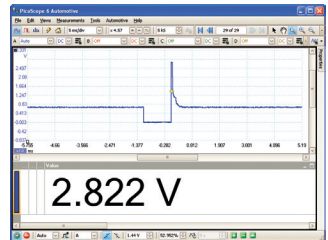
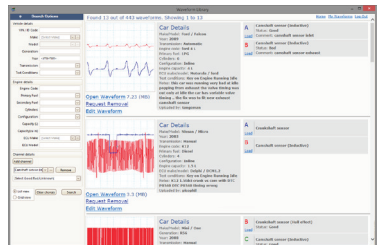
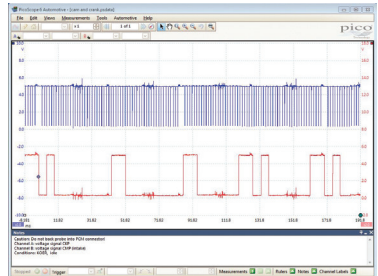
In addition to this extensive library, PicoScope Automotive includes a set of 150 Guided Tests that provide helpful information about the systems and components being tested, show an example waveform and automatically set up PicoScope ready to capture your signal.

## AUTOMATIC MEASUREMENTS

With PicoScope's automatic measurements, you can stack up as many measurements as you need on the screen and watch them change in real time. This feature can replace a whole collection of multimeters.

## FREE SOFTWARE UPDATES

PicoScope software updates are free for life and upgrading is easy. Try PicoScope Automotive before you purchase, by downloading the software for free from [www.picoauto.com](http://www.picoauto.com).



Pico Technology prides itself on giving the best customer support and satisfaction. We often get comments like this from our customers:

“If I had to give up all other diagnostic tools except one, the PicoScope is the one I would keep. PicoScope gives you real, actual readings, not a vague description allocated to a fault code.”

MB, Shropshire UK



\*All prices exclude delivery, taxes and VAT

Prices are correct at the time of publication. Errors and omissions excepted.

Please contact Pico Technology or your local distributor for the latest prices before ordering.

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