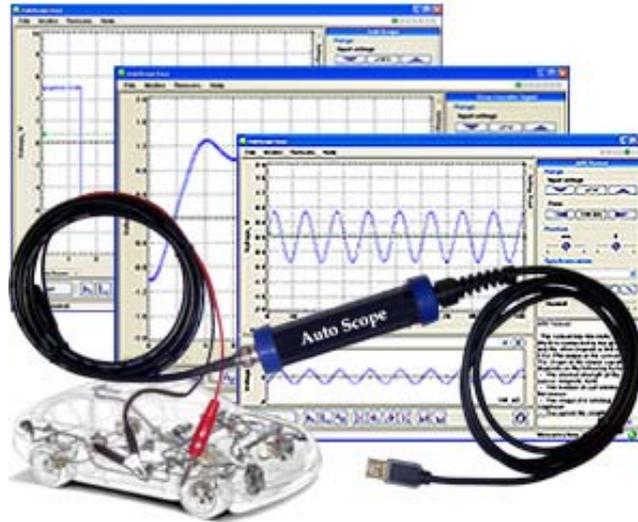


❖ Image**❖ Introduction**

- Today, the new generation cars & motorcycles are controlled by microcontroller technology. Therefore, measuring, checking and fault determining is more difficult because this technology use more fast varying signal pulses that can not check by analog meter.
Example:

+ Measuring, checking, fault diagnosing of generator, stator, rotor, rectification diode

+ Surveying, checking signal pulse of crankshaft position sensor, camshaft position sensor, vehicle speed sensor, ABS sensor, knock sensor ...

+ Surveying, checking ignition control signal as Ne, Igt, Igf, Ig, G... and fuel injection control signal as Ti, Ro, Ks...

+ Measuring, checking communication signal in Integrated Chip (IC), power stage control signal in ECU, CAN bus signal and other signals.

- **AUTO SCOPE** – Tool measures electric pulse on cars & motorcycles with software is installed on computer. This is a cheap spend, reliable and easy solution to measure, check, repair electronic on cars & motorcycles.

❖ Application range

- Used for repairing electric, electronic of cars and motorcycles and other electronic device
- Being educational tools for automobile/motorcycle electronic vocational

❖ Function

- Survey electric pulse value and signal waveforms of sensor on cars, motorcycles:

- + Crankshaft position sensor (CKP)
- + Camshaft position sensor (CMP)
- + Engine coolant temperature sensor (ECT)
- + Knock sensor (KS)

- + Mass airflow sensor (*MAF*)
- + Manifold absolute pressure sensor (*MAP*)
- + Oxy sensor (*O2S*)
- + RPM sensor (*Ne*)
- + Vehicle speed sensor (*VSS*) vv...
- Record the results of all measurements
- It allows the users to add signal waveform of sensors to database
- Software integrated standard waveforms of signals and operating principle information of basic pulse sensors on cars, motorcycles. Users have known about sensors, compare current signal width standard signal to diagnose and repair.
- Device integrated memory can storage data as USB.

❖ Technician Specification

- Signal channel: 1
- Input voltage ranges: $\pm 0.5V$; $\pm 1V$; $\pm 2V$; $\pm 5V$; $\pm 10V$; $\pm 15V$
- Overload protection: $\pm 300V$
- Connect to PC via USB 2.0 port
- Power: Powered from USB port
- Vertical resolution: 8 bits
- Bandwidth: DC to 100 kHz (*real 10 μ s/div*)
- Maximum sampling: 200 000 samples/sec
- Dimensions: Diameter: 25 mm, Length: 100mm
- Operating systems: Window: 2000(*SP3*), XP(*SP2*), Vista, 7

❖ PC Requirements

- Processor: 1GHz Pentium III
- Memory: 128 MB (*XP*)
- Free hard disk space: 700 MB
- Computer has USB 2.0 port

❖ Package

- 01 Main unit with USB cable
- 01 CD with licensed software
- 01 User guide

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