# PTrAn



## OVERVIEW

PTrAn combines industry-standard computations with exceptional graphical capabilities to maximize the benefits and productivity of your combustion analysis. PTrAn unlocks the power of in-cylinder measurement in a low-cost, easy-to-use Windows™ environment.

## FLEXIBILITY

PTrAn has been developed with flexibility of data source and type an utmost priority.

- Compatible with 2-stroke, 4-stroke, Spark or Compression Ignition engines
- Analyze ASCII or Binary data in many different file formats
- **NEW!** Direct DSP & Nicolet readers available
- Multi-cylinder with all conventional or user-definable firing sequences
- **NEW!** Convert analogue and digital signals to engineering units (S.I., Imperial, English etc.)

**PTrAn** is a powerful and user-friendly software package developed by engineers for complete analysis of measured pressure traces from Internal Combustion Engines. PTrAn has been designed to meet the demands of today's automotive engineers by providing industry standard analysis for the Windows™ PC.

## POWER

In-cylinder pressure measurement is an invaluable tool in engine design and development. PTrAn is a powerful complement to any data acquisition system.
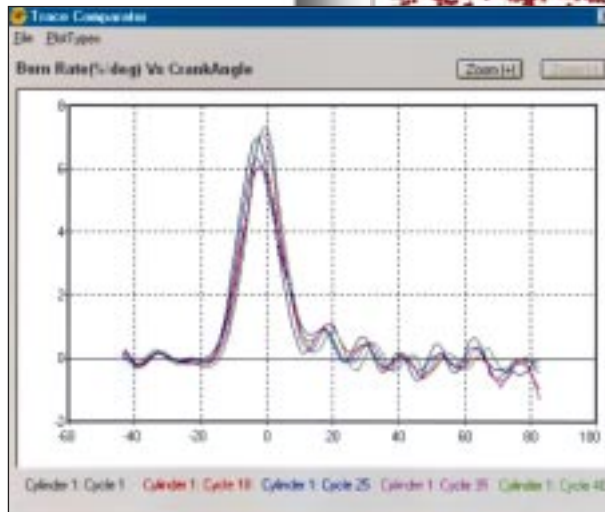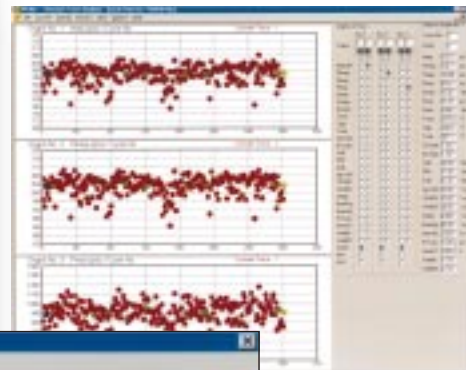
- Process up to 20 traces, each containing 2000 cycles, including non-cylinder traces
- Calculate a wide range of combustion parameters for each and every cycle
- Apply robust and proven computational methods for dependable results
- Characterize engine performance on many different and conflicting requirements
- Compare calculated average cycle against typical and special cycles for accurate assessment on any basis (e.g. IMEP, Angle of Peak Pressure, Combustion events etc.)

## OPTIMUM
### P O W E R  T E C H N O L O G Y

**PTrAn**



## ANALYSIS

The value of data analysis is often compromised by poor or inadequate visual aids and displays. PTrAn sets a new standard in data interpretation.

➤ User configurable display includes many options — Log P-Log V, burn events, burn rate, mass fraction burned etc. for any cycle

➤ **NEW!** Superior plotting capabilities allow direct cylinder-to-cylinder comparison, overlay plotting onto a single graph, curve-fitting etc.

➤ Cycle-to-cycle variability of all combustion and performance characteristics easily displayed

➤ **NEW!** Compare cylinder-to-cylinder variability

➤ Statistical analysis for each cylinder including CoV and LNV

➤ Scripting utility included for processing multiple tests results in a single step

➤ **NEW!** Analyze tests with variable rpm (Transients)

## ACCURACY

Successful combustion analysis relies on the acquisition and referencing of measured data. The quality of this data can be compromised by transducer effects including noise interfacing and thermal distortion. Successful combustion analysis in PTrAn is aided by:

➤ **NEW!** Auto-detect of Thermal Shock and Thermal Drift which can severely compromise the validity of your data

➤ In-built, user-definable software filtering for noise removal.

➤ **NEW!** Effect of filtering can be assessed on any plot.

➤ Remove hardware filter offsets from data

Different referencing techniques must be applied to in-cylinder pressure measurements depending on several factors:

➤ 2-stroke or 4-stroke engine

➤ Highly tuned intake system

➤ Availability of reference trace

PTrAn includes several alternative referencing techniques which provide the user with full control over reference period and location.





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OPTIMUM
POWER TECHNOLOGY
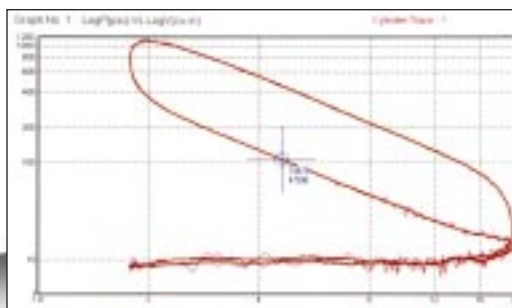
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