

DI-440

More than just an Analyser

The Concept

The DI-440 is a flexible instrument platform, designed to be a single tool for a range of service, maintenance, inspection and diagnostic applications. This simple, easy to use instrument has been developed with an intuitive user interface, making it ideal for use by either expert or non-expert personnel.

The DI-440 adopts a modular approach to measurement with individual packages available for specific types of analysis. This flexibility allows you to select the exact combination of features you require, and provides the option to upgrade in the future should your needs change. The variety of analysis tools makes the DI-440 an ideal choice for use either as a field service tool, machinery diagnostics or production line quality testing.

The modular analysis package is based around a high performance handheld computer. The DI-440 handheld platform, with its Windows CE operating system, provides direct access to your PC environment for the seamless transfer of data. Key hardware features include a 400MHz XScale processor, large colour display, easy operation function keys and high speed data acquisition capability.

Key Features:

- Rugged ergonomic design
- Modular – choose your own analysis options
- Simple to use for non-vibration experts
- On screen user assistance
- Display real images of machinery & transducer positions
- Ability to print direct from the instrument while still in the field (A4 printout)
- Easy data transfer and seamless storage using MS Excel
- Communications: USB, IrDA & RS232

The DI-440 has been designed for ease of use, with step by step on-screen instructions for each test. Colour coding is used to highlight the status of a particular test, alert if invalid measurements are taken, and provide a grading of current machinery health. These features all combine to ensure that collection of VALID data can be done by a non-expert.



The DI-440 is an on the spot assessment tool ideal for personnel such as:

- Installation Engineers
- Commissioning Engineers
- Fitters
- Servicing Personnel
- Mechanics
- Maintenance Engineers
- Inspection Engineers
- Noise & Vibration Specialists

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Rugged Design

A field instrument needs to be durable. As such, the DI-440 platform has IP65 (dust & water) sealing and a 2 metre (Mil-Std 810 spec) multiple drop rating, ensuring it can withstand the daily knocks and abuse associated with use in an industrial environment. Data integrity is also assured through our unique approach to data storage. Internal flash memory is utilised to hold data securely, even in the event of a complete system re-set.

Data for Expert Analysis

Although the DI-440 is designed to allow non-expert personnel to collect data, sometimes this data may require specialist analysis and interpretation. The recorder module allows data to be stored as a .WAV file and sent to a veteran analyst.

Expand Functionality

The DI-440 is designed so that you can build functionality by adding new modules to enhance your analysis capabilities. Should a need arise to carry out an additional form of testing, simply choose the module required and upload it to the handheld.

In order to get the most from the DI-440 package you can select from the following modules:

Conformance Check

- General machine health check using vibration measurement to appropriate standards:
 - Choose from our pre-defined standards library (includes ISO, BS, ANSI)
 - Operator feedback given as actual values & health grading.
- Software module for custom conformance standards:
 - Create bespoke conformance tests
 - Select machine classes and alarm limits
 - Allow vibration limits to be set by your own vibration experts.

FFT Analyser

- Single spectrum display with absolute phase
- Bearing Analysis using ESP™
- Allows simplified checks for common machine faults
- Live display of single spectrum
- Phase reading shown as a simple vector diagram – no need for a tachometer signal

Balancing Module

- High precision 1 or 2 planes
- Static or dynamic couple balances
 - On screen step by step guide to balancing
- Balance Fans & Impellers

Recorder/Data Logger

- Record live vibration signatures e.g. run up, steady state & coast down
- Storage of two channel time data in industry standard (.WAV) format
- Log process variable over long time periods
- Email file (via PC) to base for play back, analysis & diagnosis

Bump Test

- Easy identification of a structure's natural frequency.
- Can be applied to:
 - Crack detection
 - Structural Mechanical Integrity
 - Determination of resonant (critical) frequencies
 - Turbine blade testing



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