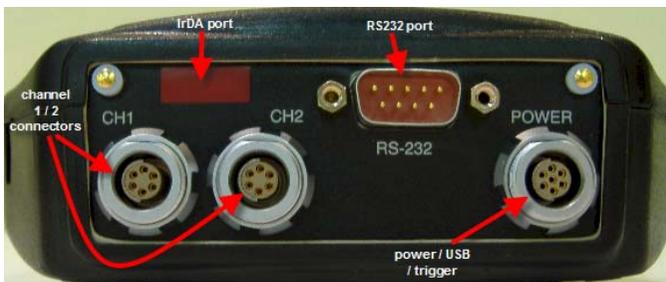


IRD Model 258

Portable Dynamic Balancer/Vibration Analyzer

DESCRIPTION:

The Model 258 is a portable, battery operated, two channel, palm-sized Dynamic Balancer and Vibration Analyzer. It is intended to be used for analysis and balancing of rotating equipment. Anyone can use the 258 to balance machines with only very basic training. The small size and light weight of the model 258 makes it very easy to hand carry to the job site. Accelerometers and set of scales for correction weights are included.



A single instrument for a range of service, maintenance and inspection applications!

Key Features:

- Rugged design (IP65 dust & waterproof) reduces downtime and increases productivity.
- Windows CE Operating System.
- Color screen suitable for indoor and outdoor.
- Simple to use for non-vibration experts.
- On screen user assistance.
- Modular design enables expandability.
- Ability to print direct from the instrument while in the field.
- Printer output is PCL compliant.
- Communications: USB, IrDA & RS232.
- Easy data transfer and seamless storage using MS Excel.

IRD Model 258



General Specifications:

- Balancing Speed Range: 15 to 2,400,000 RPM
- Vibration Input Channels: 2
- Vibration Input Type: ICP, AC, DC.
- Windows CE Operating System with 400 MHz processor.
- Operating System: Windows CE.
- Amount Readout: Auto-Ranges between 0.01 to 1,000 mV/EU.
- Detection: Peak, RMS, Peak to Peak.
- Filter: Dual, narrow band digital tracking filters with averaging.
- Number of Balance Planes: 1 or 2.
- Calibration Method: Trial Weights.
- Unbalance Readout: grams, ounces, pounds or Engineering units
- Vibration Readout: micrometers, mils, millimeters/second, inches/second, g's or gSE
- Display of Dynamic (Left/Right) Unbalance or Static/Couple Unbalance
- Display of correction angles for adding or removing rotor balance weights
- Unbalance Display in Digital and Polar Format .
- Rotor Memory storage for up to 500 different rotors internally.
- Additional storage on external PCMCIA card.
- Automatic Vector Splitting of unbalance corrections.
- Vector Addition of unbalance corrections for combining weights.
- Handheld configuration:
 - 190 x 134 x 50 mm (Length x Width x Height).
 - Weight: 0.72kg (1.6lb) (no accessories).
 - Power: Rechargeable Lithium Ion Battery.
 - Battery Usage: 4 to 6 hours on full charge.
 - Sealing: IP 65 (Dust & Water Proof).
 - Drop Test: 2 Meters (6.5 feet).
 - Temperature: Operating -10 to +50° C.
- Processor: 400 MHz X-scale.
- Operating System: Windows CE .
- Battery: Li-Ion smart battery pack (battery is recharged via main power adapter).
- Communication: Active Sync via USB, IrDA, or RS232.
- Internal Storage: 64 Mb.
- PC Card: PCMCIA
- Display 1/4 VGA Color TFT screen.
- Data Entry: Keypad and arrow keys.
- Printer Output: PCL / Pentax PocketJet.
- Language Support: English .

Balancing Module

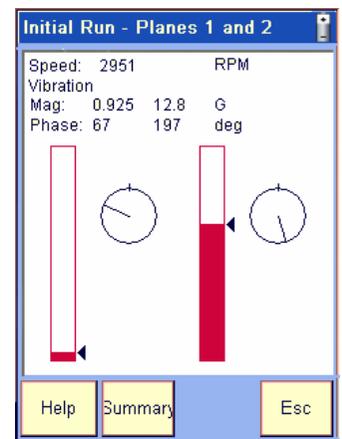
The Model 258 balancing module is a simple to use application allowing users to assess whether a rotating component is in a state of balance, correct balance, and therefore to ensure smooth running & operation.

Key Features

- **High precision 1 or 2 plane Dynamic Balancing**
- **Static or Couple balancing**
- **Ability to resolve balance weights & to estimate trial weights**
- **Easy to follow interface with graphical outputs**
- **Results displayed in summary table**

Some of the benefits associated with a well balanced, smooth running rotor are:

- **Minimise vibration** - Unbalance is still the major source of machine vibration.
- **Minimise structural stress** - The forces produced by unbalance have to be absorbed by the surrounding structure.
- **Increase machine & bearing life** - The time between outages can be extended if the machine is running smoothly.
- **Increase product quality** - Minimum vibration, especially on machine tools, produces better parts.
- **Increase personnel safety** - Dangers associated with machine failure and exposure to high levels of vibration are minimised.
- **Increase productivity** - Machines running smoothly have more "uptime" availability
- **Lower operating costs** - Extra machines are not required "just in case" of breakdowns. Spare capacity is kept to a minimum. Energy consumption is reduced.



Basic FFT Analysis Module

The analysis test functionality transforms the Model 258 into a powerful, yet easy to use tool for measuring vibration signals, and breaking them down into their component frequencies.

The user friendly interface displays spectrum & phase information in a simple, easy to understand format. Allowing you to quickly characterise your machinery and make a first pass diagnosis or identify areas for further diagnosis.

The module also makes it quick and easy for an operator to assess relative vibratory motion.

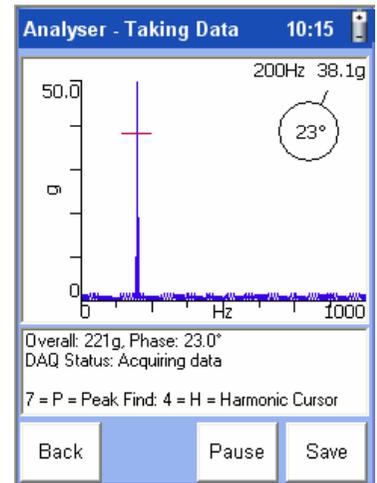
By providing a 'phase vector' reading (needed for diagnosis of some machine faults) an operator can build a picture of the relative vibratory motion.

Placing sensors, setting up and taking measurements can all be done without the need to stop the machine.

A key benefit of this module is that it allows non-experts to carry out checks for common machine faults, including:

Key Features

- **Single FFT spectrum display plus Phase vector** – provides a simplified interpretation of vibration data
- **0 – 2 Hz to 40 kHz , 100 – 12,800 lines of resolution**
- **Phase reading shown as a simple vector diagram** - no need to stop a running machine saving time & increasing operation efficiency.
- **Overall vibration severity reading**
- **True Peak & True Peak-Peak Detection**
- **Live display of signal spectrum**
- **Bump (Rap) Test** – identify resonant frequencies that can cause excessive noise or vibration
- **Transfer data direct to MS Excel™ or other spread sheet packages.**



Basic Bump Test Module

Bump Test

The Bump (Rap) Test functionality is also included with this module. It allows you to carry out tests for the identification of the natural resonant frequencies of a mechanical structure. In some cases the presence of a resonance can cause excessive levels of vibration and / or noise.

This test helps you to identify the source of spectral components using data gathered from an accelerometer or other sensors. Build quality and some mechanical faults such as cracking can sometimes be identified by a shift in the natural frequency. As such this module can also be applied to applications like:

- **Turbine Blade Testing** – ensuring turbine blades do not have any major natural frequencies that coincide with the operating speeds of the turbine or its integer multiples.
- **Structural Mechanical Integrity** – identifying weak or unstable structures prior to failure.
- **Crack Detection in Metallic Components** - cracked or poorly bonded products will have less stiffness resulting in a change in natural frequency.



IRD Model 258



Portable Dynamic Balancer/Vibration Analyzer

The Model 258 package is available in three different configurations. Choose the package that best fits your requirements.

The Model 258 basic Analysis kit includes the Model 258 instrument with (2) accelerometers, (2) magnetic accelerometer holders, portable mass scale, instrument charger, Trigger input/BNC, interconnect cables, (2) 544/546 velocity sensor adapter cables, manual and hard shell carrying case.

E00351 Model 258 Kit includes:	
E00348	Model 258 instrument
E48618	Operation manual for 258 Instrument-English
n/a	Instrument hand strap and belt clip
n/a	Instrument rubber boot
n/a	Instrument USB communications cable
n/a	Instrument BNC reference input cable
n/a	Instrument power supply/battery charger
n/a	Hard shell carrying case for 258 and accessories
E43781I	Accelerometer, 100mv/g (2 in kit)

E41717	Magnet for accelerometer (2 in kit)
E48217/S/025	Cable for accelerometer (2 in kit)
E47182	Velocity P/U cable for 544/546 sensors (2 in kit)
E47165	Portable scale – 120g capacity
E48414	Serial cable for use with optional E46968 portable printer kit or optional E47309 PCL printer adapter
E44088	BNC Adapter to connect optional strobe kits
E19643	AC Power Cable, US, 120VAC, 3 m
E41874	AC Power Cable, UK plug,220VAC,3 m
E41554	AC Power Cable, Euro plug,220VAC,3 m

The Model 258 complete Balancing/Analysis kit that includes the Model 258 instrument with a Laser Speed Sensor and 2 m cable, (2) accelerometers, (2) magnetic accelerometer holders, reflective tape for speed sensor, , portable mass scale, instrument charger, Trigger input/BNC, interconnect cables, (2) 544/546 velocity sensor adapter cables, manual and hard shell carrying case.

E00349 Model 258 Kit includes:	
E00351	Model 258 Analyzer basic kit
E48625	Plastic bodied Laser speed sensor kit for Model 258 Balancer: Includes
E48645	Laser speed sensor, 5Vdc, reflective tape trigger, 100-2000 mm range, M24 plastic body, integral 2 m cable
E26383	Magnetic flex arm holder for speed sensor
E48626	M24 Mounting adapter for E48645 laser sensor
E21200	Reflective tape for use with speed sensor,45.7m long x 6mm wide (150' x 0.25") qty. 1 roll
E47408	Hard shell carrying case for the sensor kit

E00350 Model 258 Balancer/Analyzer Kit with stainless steel bodied speed sensor and separate 5 m cable - includes:	
E00351	Model 258 Analyzer basic kit
E48630	Steel bodied Laser speed sensor kit for Model 258 Balancer: Includes
E47240	Laser speed sensor, 5Vdc, reflective tape trigger, 100-2000 mm range, stainless steel body with 4 pin connector
E26383	Magnetic flex arm holder for speed sensor
E48624-05	Cable for laser sensor to Model 258, 5m
E21200	Reflective tape for use with speed sensor,45.7m long x 6mm wide (150' x 0.25") qty. 1 roll
E47408	Hard shell carrying case for the sensor kit

Options, Accessories, and Supplies:	
E46969	Thermal printer paper, 8 1/2 x 11 inch – 100 sheets
E45058	Spare battery for 258 instrument
E45073	External battery charger for instrument
E46968	Portable Printer Kit-An external printer kit for the 258 that includes portable printer, serial to parallel interface printer cable, power adapter (100-240V/50-60Hz input), battery, and a box of thermal printer paper (100 sheets).
E41626	AC Power Cable for instrument charger, Australian plug
E41952	AC Power Cable for instrument charger, S.Africa/India plug
E48624-10	Cable for laser sensor to Model 258 Balancer, 10m
E21200	Reflective tape for use with speed sensor, 45.7m long x 6mm wide (150'x0.25") qty. 1 roll
E44445	High Sensitivity compact velocity sensor 9100V-H02,25mm/1" diameter. Qty. 2 required each.
E41529	Magnetic holder for us with 9100V0 sensor, 38mm/1.5" diameter, 1080 mv/in/s, qty. 2 required each.
E04526	544 Velocity Vibration sensor for field balancing
E04332	Magnetic holder for use with 544 vibration sensor
E39581	Strobe light kit for 120VAC
E47309	Printer cable, serial to parallel interface cable. Used to connect 258 serial port directly to any parallel PCL printer.

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