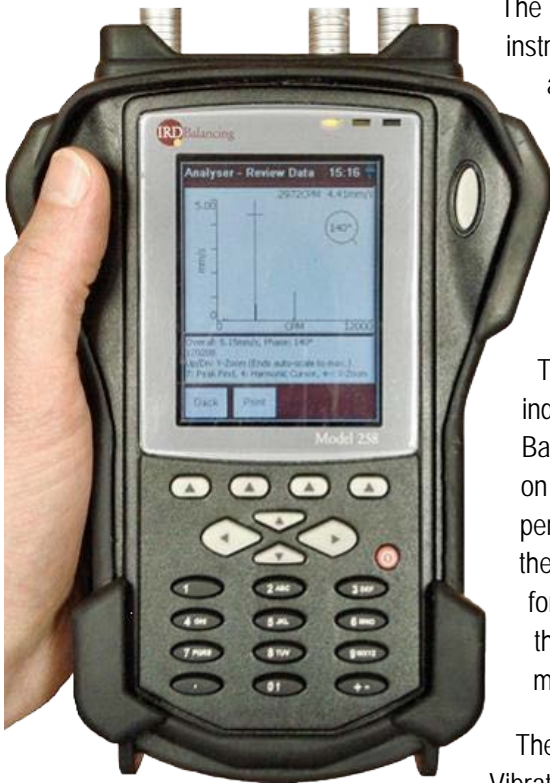


A single instrument for a range of service, maintenance & inspection applications.



The Model 258B Series II is a flexible, hand-held instrument platform designed to be a single tool for a range of maintenance, inspection, service, and diagnostic applications.

The Model 258B SII is a simple, easy to use instrument with an intuitive user interface that makes it ideal for expert and non-expert users alike.

This adaptable instrument system contains individual modules for FFT Vibration Analysis and Balancing applications as well as additional add on modules. This flexibility allows users to perform multiple tasks with a single tool. There is the option to add a Bump Test firmware module for increased productivity. These features make the Model 258B SII an excellent choice for machinery diagnostics or as a field service tool.

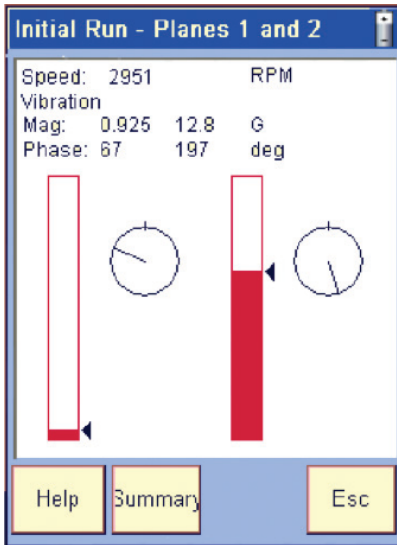
The Model 258B SII package includes the FFT Vibration Analysis and Balancing modules, 2 accelerometers, a laser speed sensor kit, precision scale and all other accessories necessary to use the 258B SII immediately.

The Model 258B SII's high level of performance, intuitive software and ruggedness make it the ideal analysis tool and balancing instrument for operations where both on site and shop based analysis and maintenance will be performed.

Key Features

- 1 & 2 plane dynamic balancing
- 1 & 2 channel vibration analysis
 - Optional 3rd channel with splitter cable
- Tri-axial measurement support
- ESP™ enveloping for detection of bearing failures
- Intuitive graphical user interface
- Store & review measurements for later comparisons
- Measurement export using USB
- On screen user assistance
- Right or left hand operation
- Rugged design & construction
 - CSA Class 1 Div 2 hazardous environment rated
 - 2 meter multiple drop
 - IP 65 rated for dust & water resistance
 - Protective rubber case
- Large color display with backlight designed for use in direct sunlight
- Simple to use for non-vibration experts
- Modular design enables expandability

Balancing Module



Key Features:

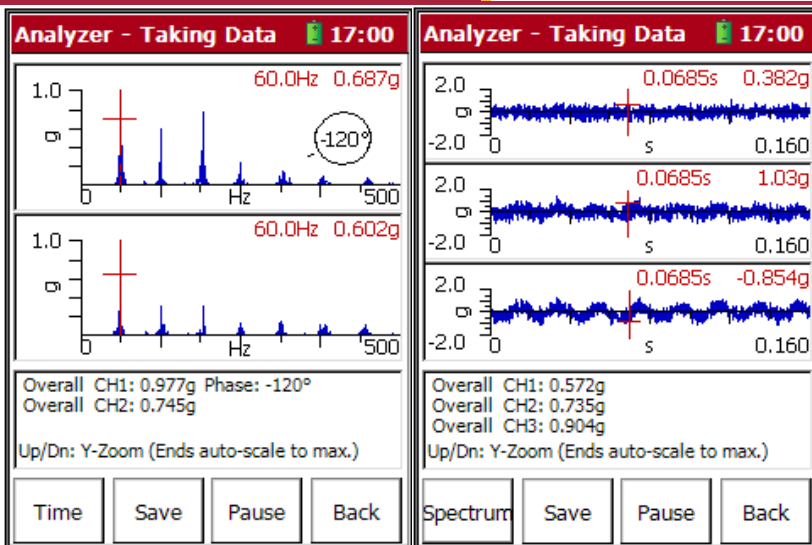
- High precision 1 or 2 plane Dynamic Balancing
- Dynamic L-R or Static-Couple display
- Ability to resolve balance weights & to estimate trial weights
- Easy to follow interface with graphical outputs
- Results displayed in summary table
- User definable external key-phasor support
- Acceptable imbalance threshold indication

Balancing Benefits

- **Minimize vibration** – Unbalance is the major source of machine vibration.
- **Minimize 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 personal safety** – Dangers associated with machine failure and exposure to high levels of vibration are minimized.
- **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.

The Model 258B SII balancing module is a simple to use application allowing users to measure the unbalance in a rotating component and to calculate the required correction.

FFT Vibration Analysis Module



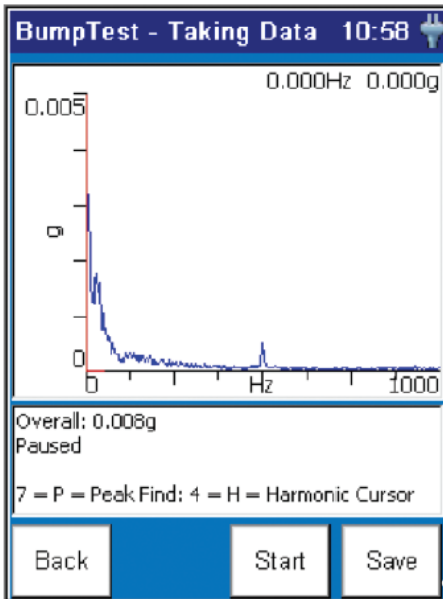
The FFT Analysis functionality of the Model 258B SII is a powerful and easy to use tool for measuring vibration signals, and breaking them down into their component frequencies.

The user friendly interface displays spectral data and phase information in a simple, easy to understand format. The module also makes it quick and easy for an operator to assess relative vibratory motion. Placing sensors, setting up and

taking measurements can all be done without the need to stop the machine.

- Single, dual, and tri spectrum and time display
- FFT spectrum display plus Phase vector – provide simplified interpretation of vibration data
- 0.02 Hz to 40 kHz, 100 – 25,600 lines of resolution and CPM unit display option
- Phase reading shown as a simple vector diagram – no need to stop a running machine saving time and increasing operation efficiency
- Overall vibration reading
- True Peak and True Peak-Peak detection
- Live display of signal spectrum
- ESP™ enveloping for detection of early bearing failure

Optional Bump Test



The Bump (Rap) Test module may be added to allow for 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 module software is pre-installed for ease of customer installation.

This test helps 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
- Anti-vibration mount testing – identifying the effectiveness of mountings or mounting failures before they can cause further damage.

FFT Vibration Analysis Module

- Frequency Range: 0.16 Hz to 40 kHz
- Vibration Input Channels: 2, 3 w/ optional purchase + keyphasor
- Vibration Input Type: ICP, AC, DC
- Amplitude readout: 0.01 to 1,000 mV/EU auto-ranging
- 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, g's or ESP
- 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 1000 balancing runs
- Additional storage on separate memory card, not included
- 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: 0.72 kg (1.6 lb) (no accessories)
 - Power: Rechargeable Lithium Ion Battery
 - Battery Usage: up to 8 hours on full charge
 - Sealing: IP 65 (Dust and Water Proof)
 - Drop Test: 2 meters (6.5 feet)
 - Temperature: Operating -10 to +50°C
- Rotor Memory storage for up to 1000 balancing runs
- Additional storage on separate memory card, not included
- Automatic Vector Splitting of unbalance corrections
- Processor: 806 MHz Marvell PXA320
- Operating System: Windows CE
- Battery: Li-Ion smart battery pack (battery is recharged via main power adapter)
- Communication Active Sync via USB
- Internal Storage: 128 Mb
- PC Cards: SDHC up to 8 Gb
- Display ¼ VGA Color TFT screen
- Data Entry Keypad and arrow keys
- On board language support: English, Spanish (Español), French (Français), German (Deutsch), Chinese (simplified), Italian (Italiano), Portuguese (Brasil)



E00350-1.2: Model 258B Vibration Analyzer and Balancer Kit Includes:

Qty	Description	Qty	Description
1	258B Vibration Analyzer & Balancer Kit	2	Adapter 544 to accelerometer cable
1	Laser Speed Sensor Kit	2	Accelerometer
1	Precision Portable Scale, 120g	2	Accelerometer Cable, 25 ft / 7.6 m
1	Power Cable, UK	2	Accelerometer Mounting Magnet
1	Power Cable, North America	1	Polymate Demonstration Software
1	Power Cable, Europe	1	Connector BNC fem/fem

Accessories for the Model 258B

Part Number	Description
E48901	Bump Test software module
E49715-1	Run Up – Coast Down module
E48974-1	Conformance Check module
E48930-3	Polymate V1.5 software analysis program. Allows users to download data from the Model 258B and perform spectral analysis
E21200	Reflective tape for use with speed sensor, 45.7m long x 6mm (150 ft x 0.25 in)
E45058	Spare battery for 258B instrument
E39581	Strobe light kit, 120VAC-240V
E49307	External battery charger
E41626	AC power cable for battery charger, Australian plug
E41952	AC power cable for battery charger, S. Africa/India plug
E48800/S/006	BNC to 6 pin vibration input cable for use with patch panel outputs, 1.8m (6 ft) long
E49771	2-way channel splitter cable to enable 3 channel analysis
E48946	USB/Power splitter cable
E48603	Power/Tacho splitter cable
E48947	Trigger cable (Fischer 103 type 7pin, 1m/3.3', trigger IP to BNC)

Sensors for the Model 258B

Part Number	Description
E48630	Laser speed sensor kit, steel body. Includes 5m (10ft) cable, magnetic flex arm and carrying case
E48624-5	Cable for laser speed sensor to Model 258B SII, 5m (16ft)
E48624-10	Cable for laser speed sensor to Model 258B SII, 10m (32ft)
E44445	High sensitivity velocity sensor, 25mm (1 in) diameter
E41529	Magnetic holder for E44445 sensor
E48617/S/025	Cable for E44445 sensor
E04526	Type 544 Velocity vibration sensor
E04332	Magnetic holder for use with 544 sensor

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