

PBS eXpress For Business and Regional Jets

Vibration Measurement and Engine Rotor Balancing

Built on our industry-leading engine vibration and balancing solutions and optimized for small-frame turbofan and turboprop engines used extensively in the regional jet, business jet, and general aviation markets.



Product Overview

The MTI PBS eXpress is designed to optimize the small-frame turbofan and turboprop engines used extensively in the regional jet, business jet, and general aviation markets.

The design objective of the *PBS eXpress* is fast vibration assessment for your power plant with rapid, one-shot balance if the engine measures an exceedance.

The *PBS eXpress* was designed using the PBS-4100+ family DNA – the most respected turbine engine vibration and balancing solution in the market today. The system contains the technology DNA of PBS in a lightweight, easy to learn and use package to provide vibration measurement and engine rotor balancing.

Perfect for MROs and operators with small to mid-sized corporate jets, the PBS eXpress provides many of the powerful features that can be found in upmarket portable balancing products, designed to meet the requirements and price point of corporate aviation.

Key Features

Simplicity

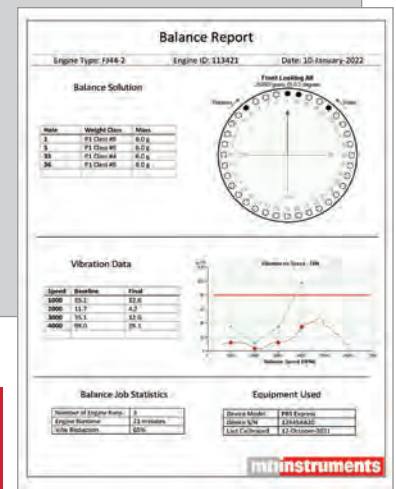
- Easy to Setup: Preconfigured engine parameters. Just connect cables and begin testing.
- Intuitive Touch-based User Interface
- Works with existing cable sets for enhanced migration capabilities
- Compatible with odd-tooth tachometer sensors (including short/long/offset tooth types)

Trim Balance Wizard

- Guides even 1st time users to success in as little as two engine runs.
- Configurable balance speed points and associated bias/weighting
- Transient Balance
- Influence Coefficients

Powerful Visualization

- Vibration Surveys with exceedance limits shown on the plot.
- Order tracking for accessories such as starter generators and fuel pumps.
- Review/Export Saved Data:
 - Create reports with integrated plots and tables.



Supported Engine Platforms

Honeywell TFE731 family
Honeywell HTF7xxx
Honeywell ALF500 series
Honeywell ATF3
Rolls-Royce BR700 series, non-717
Rolls-Royce/Allison 250 family

GE CF34
GE HondaJet HF120
PWC PT6 family
PWC 100 family
PWC 300, 500, and 600 series
PWC JT15D

Williams FJ33 family
Williams FJ44 family
APU: Honeywell 131, 331, 36 series
APU: PW900 series
APU: PW APS series

Product Overview

Balancing Capabilities

User Selectable	<ul style="list-style-type: none"> One Shot (stored influence coefficient) Trial Weight (baseline run and trial weight run)
Speeds	1-20 speeds simultaneously (configurable speed points)
Channels	1 to 4 channels simultaneously
Planes	1 or 2 balance planes simultaneously
Weights	Up to 20 standard weight classes, user configurable
Types	Transient Balancing and Fixed Speed Point

Speed

Input Channels	2 standard, up to 4 optional
Input Voltage Range	200V Pk-Pk
Speed Range	150 to 75,000 RPM
Speed Accuracy	Better than 0.02%
Phase Accuracy	1° typical
Types	Any 1/REV or embedded odd-tooth type signal (N/REV) (including short/long/offset tooth, optical, and tach ratio types)

Vibration

Input Channels	2 standard, up to 4 optional
Input Voltage Range	20V Pk-Pk
Frequency Range	5 to 30 kHz
Tracked Amplitude Accuracy	Better than +/- 1%
Tracked Components	N1, N2, N3 + up to 4 customizable tracked orders

Additional Specifications

Connectors	Industry compatible MS-type cannon plugs, universally compatible.
Through-put	4 spectra/sec
Power	Li-Ion Battery, up to 5 hr run time, 2.5 hr charge time. Able to operate while charging
Display	8.4" Color TFT display with Capacitive Touchscreen
Operating Temperature	0-50°C operation (battery charging stops at 45°C)

Applications

Optimized for Business, Regional, and General Aviation aircraft engines, PBS Express performs these functions:

- Vibration Survey
- Spectral Analysis
- Fan/Turbine Balance
- Transient Balance
- Propeller Balance





mti instruments

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325 WASHINGTON AVENUE EXTENSION
ALBANY, NY 12205-5505
PH. +1-518-218-2550
OR USA TOLL FREE: 1-800-342-2203

FAX: +1-518-218-2506
EMAIL: SALES@MTIINSTRUMENTS.COM
WWW.MTIINSTRUMENTS.COM