Questions?
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CERT #3678.01

PBSExpressSpec 2026.03

BUSINESS AND REGIONAL JETS



mtiinstruments

PBS eXpress™

Advanced Vibration & Engine Rotor Balancing

Versions available for both portable on-wing testing and MRO rack configurations

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The **PBS eXpress™** saves money by enabling you to get your aircraft back in service faster and use less fuel.

The PBS eXpress integrates four instruments in one system and features automatic data collection with a guided Balancing Wizard to deliver precise results with minimal engine run time.

Both the rack-mount and portable versions enable vibration surveys that also indicate where rebalancing is needed. Our portable on-wing tester features a back-lit graphical touchscreen interface that requires less training to operate.

PBS eXpress technology is based on the PBS-4100+, the leading turbine engine vibration and balancing solution for commercial airlines and military jets around the world.

This technology is optimized for smaller engines, it is designed to exceed the prevailing performance requirements and price-points in the corporate jet engine MRO market.

Key Features

Simplicity

- Pre-configured engine parameters. Just connect cables and begin testing.
- Intuitive touch-based user interface (portable model)
- Works with existing cable sets for enhanced migration capabilities (portable model)
- Compatible with odd-tooth tachometer sensors (including short/long/offset tooth types)

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
  - Save raw data to CSV files

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

Data System Integration

- The PBS eXpress R+ easily integrates with test cell data systems
- Remote control and data transfer achieved using the Ethernet-based digital data interface
- Optional analog output channels can be configured to correspond to any measured parameter, including vibration, speed, and phase

Supported Engine Platforms

Honeywell TFE731 family	GE CF34	Williams FJ33 family
Honeywell HTF7xxx	GE HondaJet HF120	Williams FJ44 family
Honeywell ALF500 series	PWC PT6 family	APU: Honeywell 131, 331, 36 series
Honeywell ATF3	PWC PW100 family	APU: PW900 series
Rolls-Royce BR700 series	PWC 300, 500, and 600 series	APU: PW APS series
Rolls-Royce/Allison 250 family	PWC JT15D	

* Additional engines and engine families added continuously, contact factory for additional information.

Specifications

Balancing Capabilities

User Selectable	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 Inputs

Input Channels	2 standard for rack-mount configurations
Input Voltage Range	200V Pk-Pk
Speed Range	150 to 100,000 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 Inputs

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

Additional Specifications for Portable

Connectors	Industry compatible MS-type cannon plugs, universally compatible
Power	Li-Ion Battery, up to 6-8 hr run time, 2.5 hr charge time. Able to operate while charging
Display	8.4" Color TFT display with Capacitive Touchscreen

Additional Specifications for Rack Mount

Connectors	Both BNC and D-SUB available
Power	115/230 VAC 50/60Hz**Display** 8.4" Color TFT display with Capacitive Touchscreen
Display	Requires external DVI monitor and USB keyboard.



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