

# VIBREX 2000 PLUS (V2K+)

THE COST-EFFECTIVE BALANCER/ANALYZER WITH SUPERIOR ENANCED PERFORMANCE FOR FIXED-WING OR ROTORCRAFT

Whether you have a fixed-wing aircraft, helicopter, turbine engine or reciprocating engine, the Vibrex 2000 Plus meets your needs.

The V2K+ is a vibration analysis and balancing tool that rapidly and accurately acquires and analyzes aircraft and engine vibration data. It uses that data to calculate balance solutions and to analyze aircraft vibration levels across a broad frequency range.

This balancer/analyzer acquires accurate plane and helicopter vibration readings and allows you to balance the propellers or blades using the integrated display –without the use of paper charts, or you can use any of the 150 available Honeywell or factory – paper charts. Beyond that, the unit is also capable of balancing shafts and blowers, making the Vibrex 2000 Plus a complete balancing tool system.

The spectrum analyzer provides the operator with an overview of rotor and drive train vibration.

## THE MODEL TO FIT YOUR NEEDS

The V2K+ is applicable to aircraft and engines with component frequencies of 600,000 rpm or less and balance speeds below 30,000 rpm. For reciprocating engine powered aircraft, the V2K+ basic model is a sure fit.



## V2K+ FEATURES:

- Propeller balance
- Helicopter track & balance
- Vibration analysis
- Multiple channel input for multiple balance jobs
- Automatic weight sensitivity correction
- RS232 interface for connection to printer and/or personal computer
- Uses common rechargeable or disposable D-cell batteries
- Strobex for helicopter blade track

## CUSTOMIZED KITS AND UPGRADES AVAILABLE

The V2K+ comes as a complete kit, with all the software, accessories and instructions for your particular application in a rugged, portable carrying case.

With more than 50 years of experience on more than 300 different applications, Honeywell products are proven and reliable.

As new aircraft come into the market Honeywell is always there developing new applications for your customized needs.





### FOUR EASY STEPS TO FAA-APPROVED PROP BALANCE

The easy-to-understand manuals enable the user to initiate and complete up to four different balancing jobs at one time. The instrument automatically corrects for the propeller response to weight changes and these corrections can be saved for future balancing exercises.

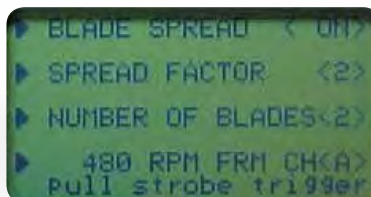
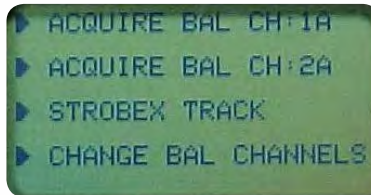
A "first round hit" solution means less vibration, even on the first adjustment. Two channels allow the user to measure the propeller and rear of the engine during balancing.

All measurements, sensitivities, solutions, and annotations are stored in memory and can be reviewed on the instrument, printed on the optional portable thermal printer, or downloaded to a personal computer.

Use the V2K+ with Honeywell's FAA approved "The Smooth Propeller" publication to lower vibration and improve ride quality.

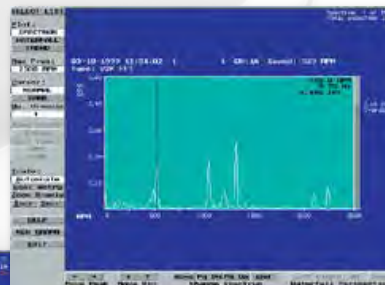
### PINPOINT PROBLEM COMPONENTS

Spectrum Analysis - Use spectrum analysis to pinpoint problem components with ease. The "List Peaks" spectrum printout identifies the highest peaks quickly. Use the harmonic and order features to identify misalignment, mechanical looseness, or imbalance to guide your maintenance action.



### BETTER THAN A CRYSTAL BALL

Data can be viewed and saved using Honeywell's ground-based software packages.



Spectral Plot lets you integrate and differentiate into any units-mils, IPS, g's, etc.



Use the Polar Plot to manually or automatically plot balance points.



Use the "Waterfall" to Trend & Predict Component failures

Diagnostic Solutions International LLC is a veteran owned small business registered with the Small Business Administration and Central Contracting.

With more than 300+ years combined experience diagnosing and solving complex vibration, rotor track and balance, and engine performance issues, Diagnostic Solutions International LLC offers an extensive knowledge base and expertise, yielding reduced down time, repair costs, and reactive maintenance. We specialize in providing on-site technical support, training, and health and usage monitoring system data management and analysis.

Diagnostic Solutions International LLC is the Premiere Worldwide CBM HUMS Distributor.

**Honeywell**  
DISTRIBUTOR

Specifications	
<b>Physical</b>	
Dimensions	7.38"H x 7.25"W x 1.81"D 18.75 cm x 18.42 cm x 4.6 cm
Weight	3.5 lbs. (with batteries) nominal
Power requirement	3-6.4 VDC 250mA
<b>Interfaces</b>	
Vibration sensor	2 ea. Velocimeter, (19 mV/IPS sensitivity)
Mag pickup / tach.	2 ea. Pulse input, Magnetic Pickup or logic type
Accessory power	4 ea. D-Cell batteries Reverse polarity circuit protected and fused
Portable Computer or Printer	1 Serial, RS-232, 9600 baud
<b>Balance Measurements</b>	
Phase accuracy	± 15°
Balance frequency range	240 to 10,000 RPM (Basic), 120 to 30,000 RPM (Plus)
Phase resolution	2 minutes or 1 degree
<b>Spectrum Analysis (F<sub>max</sub>' RPM)</b>	
Vibrex 2000 / Vibrex 2000 Plus	1500-24,000 / 1200-600,000
FFT resolution	400 Lines
<b>Performance</b>	
Memory	1 MB
Firmware	Programmable Flash Memory
Accuracy (Basic)	± 5% from 5 Hz to 333 Hz
Accuracy (Plus)	± .5dB from 4 Hz to 500 Hz ± 1dB from 501 Hz to 10 KHz
Spurious free dyn. range	>50dB
Velocimeter input ranges	0 to 380mV peak (20 ips)
Velocimeter input sensitivity	19mV/IPS peak
Mag p/u, input freq. range	100 - 50,000 RPM
Mag p/u, RPM accuracy	0.15%
Mag p/u, input voltage range	0.5 to 12 Volts peak nominal
<b>Environmental</b>	
Temperature	0°C to 50°C, or 32°F to 120°F
EMI susceptibility and radiated emissions standards	
Industrial Electronic Control Equipment Class	CE certified to: Standard EN50081-2; Standard EN50082-2
<b>Ground Software</b>	
Vibrex 2000 Download	Included with all models
Vibrex 2000 Plot	Included with 2000 Plus, optional with the Basic

Specifications subject to change without notice