Honeywell

CARRY-ON VXP

English

VIBRATECH

THE STANDARD IN AIRCRAFT VIBRATION ANALYSIS & CONTROL

CARRY-ON VXP

We deliver high performance and high reliability through component, sub-system, and platform-level solutions for existing and new military applications.

SYSTEM COMPONENTS

The Honeywell VXP System consists of the VXP Acquisition Unit (AU), VXP Display Unit (DU), software, and associated carry-on kit and sensors. The VXP System interfaces to vibration and tachometer sensors located throughout the aircraft and additionally to the optional FasTrak™ Optical Tracker for Main Rotor blade tracking. VXP software is divided into two major systems. The first is the Operational Program, which resides permanently in EPROM memory of the VXP AU and the second is the support software that resides on the VXP DU, such as VXP Display Program, Vib Review™ trending software, and the VibraLog™ advanced predictive maintenance software. All data is datetime stamped and can be correlated to other aircraft data systems (i.e., FDR / HFDM). The VXP System has two main components – the Display Unit (DU) hand held computer and the Acquisition Unit (AU). The VXP meets MIL Specs for environment and EMI. The fully ruggedized design means greater reliability and trouble free operation in the harshest flight line conditions. Additional EMI hardening for shipboard operation is available as an option.

ACQUISITION UNIT (AU)

The VXP AU acquires and processes signals from a wide range of sensor types. The Acquisition Unit uses the latest signal conditioning, digital signal processing (DSP) data conversion, and memory technologies. An expansion connector allows a quick single cable connection to pre-wired aircraft.

DISPLAY UNIT (DU)

The DU is a ruggedized, portable Panasonic computer. It displays menu selections, acquired data calculated solutions and other information. The internal disk drive provides vast data storage capacity. Bright clear displays and graphics are presented on a active-matrix display. The computer works with Windows application programs and standard PC peripherals.

ACCESSORIES

The Carry-On VXP kit uses FasTrak™, velocimeters, and our other sensors, cables and accessories and also interfaces directly to a wide range of other sensors used in the industry.

GROWTH & EXPANSION

As platforms and technology continue to evolve, frequent changes to comply with these rapidly changing protocols, mandates and requirements are typically necessary. The VXP AU has been specifically designed to support technology upgrades as they occur, as has the DU's capability to support more robust and user-friendly ground support equipment and software tools.

CAPABILITIES

The VXP is focused on the collection, processing, and interpretation of data generated by the various components within an aircraft's drive train, including engines, gearboxes, shafts, fans, rotor systems, and other dynamic components. In all cases, vibration spectra can be viewed in the field at the engine, within the test cell or any other platform location. These data are collected and retained to allow for a more detailed analysis by any skilled technician.

vibratech.fr | vibratech-intl.cn

CARRY-ON VXP

We deliver high performance and high reliability through component, sub-system, and platform-level solutions for existing and new military applications.

VXP FEATURES

- Crisp, sunlight readable, active-matrix color display
- Easy to use touch screen interface
- Fast six channel simultaneous data acquisition
- Expanded Smart Chart™ capabilities for balancing and analysis procedures
- Comprehensive input capabilities with 48 vibration, 6 photocell/mag, FasTrak™ and accessory channels
- Portable, on-board, commercial and military configurations available
- Performance of 75 kHz frequency range, resolution to 51,200 lines and >90 dB dynamic range
- Instant feedback of maintenance actions with on-aircraft printer
- Clear on-screen help with graphics and troubleshooting procedures.

Balance solution screen,
Use the Polar Plot to manually or automatically plot balance points.

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

SMART CHART™ SOFTWARE

As with Honeywell's previous generation of balancers/analyzes (such as the 8500 series), the VXP's AU data acquisition is straightforward and the DU's maintenance solutions are clear and unambiguous. The AU adds flexibility to data acquisition and solution editing while DU's ull-color graphics give excellent Track Trend Plots, Polar Plots and solution/option displays. Additionally, the DU shows all vibration limit exceedances, instantly.

ROUTES & SPECTRUM

An aircraft "route" program in the VXP AU automates the vibration survey process and saves precious flight time. Go/No-Go limit checking is performed automatically and out of limit components are displayed to speed aircraft troubleshooting. With the VXP's 75 kHz frequency range and high resolution FFT's, gear and bearing vibrations can be analyzed to detect problems before costly failures occur. Complex aircraft surveys with multiple sensors are performed accurately and quickly.
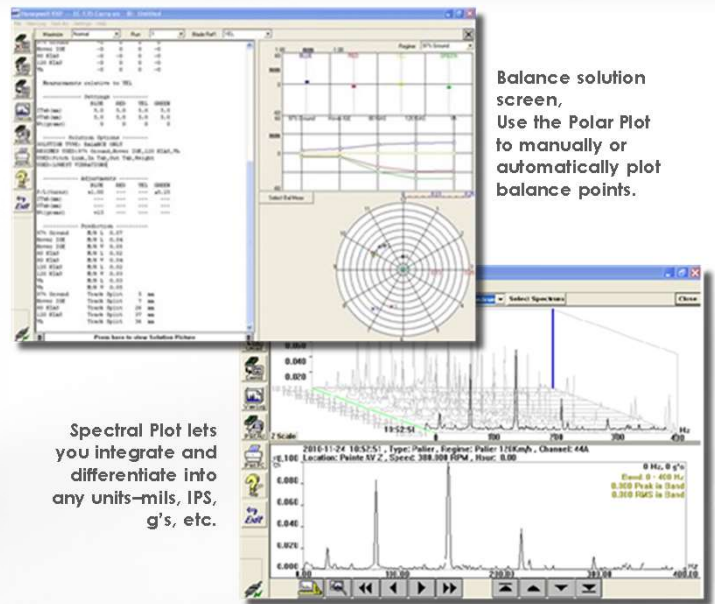
ENGINE VIBRATION

The VXP performs engine acceleration and deceleration tests with unmatched flexibility, simplicity and accuracy. It implements broadband and narrow-band tracking filters using precise digital signal processing techniques. It's compatible with both high voltage tachometers and low voltage phonic wheels.

TOUCH SCREEN SPEED DATA ENTRY

The heart of the VXP system is a ruggedized laptop PC, that hosts all of the software necessary to acquire data, perform vibration analysis and store the results.

MONITOR: THE INVISIBLE CREWMAN

Using its monitor function, the VXP AU acquires, processes and records data from sensors at prescribed intervals, all without user intervention. The recorded and processed data can be used for real-time flight crew information or downloaded for post-flight analysis. The AU's large internal memory and optional PCMCIA memory card stores several days of typical flight data.

vibratech.fr | vibratech-intl.cn

CARRY-ON VXP

We deliver high performance and high reliability through component, sub-system, and platform-level solutions for existing and new military applications.

TECHNICAL SPECIFICATIONS				
Acquisition Unit Balance Measurements		**Interfaces**		
Amplitude Accuracy	+/- 2%	• Magnetic Pickup/Photocell, 4 ea / Tachometer, 4 ea		
Phase Resolution	1 degree	• Photoprobe (high speed), 2 ea / Velocimeter, 16 ea		
Frequency Range	180 to 60,000 RPM	• Accelerometer, 26 ea / Accelerometer (charge), 6 ea		
Harmonics	1 to 5	• Discrete Signal I/O, 6 ea / Strobex, 1 ea / FasTrak™, 1 ea		
Simultaneous Channels	4 vib., 1 azimuth, 1 FasTrak™	• Serial Interface, 3 ea / Cockpit Control Unit, 1 ea		
Vector Operations	A, (A+B)/2, (A-B)/2	• PCMCIA Type 1, 2 Card Slot / USB		
Track Measurements with FasTrak™		• Internal aircraft databus interface slot		
Track Height Accuracy	+/- 2 mm	**Physical**		
Lead Lag Accuracy	+/- 0.5 mm	Dimensions	7.1 W x 4.6 H x 10.2 D (in) 180 W x 117 H x 259 D (mm)	
Spectrum		Weight	6.5 lbs., 2.95 kg	
Frequency Ranges	0-20 Hz to 0-75 kHz	Power Requirement	18 to 32 VDC	
Frequency Resolution	400 to 51,000 lines	Operating Temperature Range	-30 to +60°C	
Zoom	Yes	Storage Temperature Range	-55 to +85°C Carry-On	
Window Types	Flat-top, Hanning, Kaiser-Bessel, Uniform	**VXP Display Unit**		
Simultaneous Channels	4 vib., 1 azimuth	Dimensions	10.7 W x 1.9 H x 8.5 D (in) 272 W x 48 H x 233 D (mm)	
Dynamic Range	>90 dB	Weight	4 lbs., 1.8 kg	
Averaging	Linear, Peak hold	Display	WUXGA IPS Active Matrix, Sunlight readable tablet PC	
Filters				
1 to 8 simultaneous filters (any combination of broadband and tracking filters allowed)		Pointing Devices	Touch pad and touch screen	
Processing		Storage Capacity	500 GB SSD	
32 Bit Microprocessor (CPU) Digital Signal Processor (DSP) RISC based Time Processor Unit (TPU)		Memory	16 GB RAM	
		Interfaces	RS-232, USB, HDMI, RJ45, SD	

vibratech.fr | vibratech-intl.cn