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<http://www.avionteq.com/Honeywell-Chadwick-Helmuth-8500C-Plus-Balancer-Analyzer.aspx>



Honeywell 8500C+ Balancer/Analyzer



Helicopter Applications

- Smart Chart™ main rotor track & balance
- Tail rotor track & balance
- Engine vibration analysis
- High speed shaft balance
- Vibration absorber check & adjustment
- Vibration surveys for up to 36 channels
- Data collection for trend monitoring
- Predictive maintenance with VibraLog™ and Vib Review™ software tools
- Stand alone operation for “random” balance point, spectrum or other measurements

Fixed Wing Applications

- Propeller dynamic balance
- Turbofan dynamic balance
- Engine vibration analysis
- Data collection for trend monitoring
- Predictive maintenance with Vibralog™ and Vib Review™ software tools
- Stand alone operation for “random” balance point, spectrum or other measurements
- Vibration surveys for up to 36 channels

Design and Field Service Engineers

Our design and field service engineers are positioned throughout the world to provide consulting, training, and new application development. In addition to that, and located in over 160 countries across the globe, we have an extensive number of factory-trained distributors who provide the full range of sales, service and support for our 8500-series products. Customized consulting and training are available in our California factory, or can also be provided at your facility.

Specifications

Instrument specifications for the Honeywell Model 8500C+

Dimensions	10.8 x 7.5 x 4.0 in. (27.4 x 19.1 x 10.2 cm)
Weight	7.1 lbs. (3.22 kg)
Vibration Amplitude accuracy	± 0.2 dB (for balance)
Phase accuracy	± 2 degrees
Spectrum max frequency	200 to 600,000 rmp in arbitrary user selected steps
Spectrum resolution	461 lines up to 7.5 kHz, 400 lines up to 10 kHz
Printer	integral thermal printer
Data storage/transfer	integral 1.44 meg 3.5" disk drive, PC/MS-DOS compatible
Display	backlit and heated LCD display 1.4" x 5.3", 64 x 256 pixels
Memory	up to 2 MB SRAM, 1 MB flash EPROM
Strobex connector	allows use of Strobex for visual track observation/phase measurement

System specifications for the Honeywell Model 8500C+

Vibration channels	36
Phase input channels	4
FasTrak™ Optical Tracker accuracy	± 1mm ± 5% of reading
Power requirements	12 to 28 VDC (28 VDC nominal), battery option available for self-contained operation
Temperature range:	-40°C to +55°C (-10°C for printer/disk drive)

System specifications for the 8500C militarized version VASE

Same applications as Model 8500C+ except for:	EMI-hardened and certified to 200 volts/meter Qualified to Mil-Std-810E and Mil-Std-461D (with no waivers) up to 6 vibration channels 3 phase input channels
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One Balancer/Analyzer for all your needs

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Honeywell 8500C+ Balancer/Analyzer for Superior Performance

Since 1986, Honeywell has fielded thousands of our 8500-series Balancer/Analyzer systems, many of which still remain in service today, due in large part to their robust durability and our world renowned customer support. The current version in this successful line of vibration analysis tools is the Model 8500C+.

The 8500C+

The Model 8500C+ performs helicopter rotor track & balance, fixed wing propeller track & balance, helicopter and fixed wing vibration surveys, and vibration analysis/trend analysis.

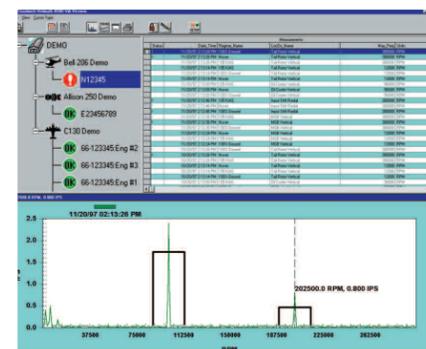
This digital computer/FFT analyzer uses a bright, backlit display, integral printer, built-in help, and Smart Chart™ technology enabling anyone from the trainee to the experienced dynamics engineer to realize optimal maintenance solutions for all vibration-related maintenance tasks.

Providing the analytical tools and the ability to interface with a variety of sensors for vibration and phase measurement, the 8500C+ Balancer/Analyzer comes flight-line ready as a complete kit, with all of the accessories and instructions necessary to support your one single-type aircraft or your entire diverse fleet. The 8500C+ system contains everything you'll need, including our Strobex or FasTrak™ optical blade tracker for helicopter rotor blade tracking, within a single, ruggedized, portable carrying case.

It interfaces to a variety of sensors for vibration and phase measurement. With the 8500C+, you'll be able to perform the following vibration analysis tasks:

Smart Charts™

Honeywell Smart Charts™ represent custom-designed application software that is dedicated to optimizing helicopter Rotor & Track & Balance (RT&B). The Smart Charts™ walks the user through equipment installation, operation, data acquisition, and ultimately provides the optimum rotor smoothing solution. This action blends the proper interaction between mass balancing and blade tracking which results in a solution that not only minimizes vibrations across the flight envelope but also minimizes blade track spread. The flight crew and aircraft are rewarded with lower vibrations, optimum aircraft performance and an overall improvement in ride quality. This is all accomplished in a minimum amount of time and fewer engine starts.



Balance Charts

Embedded software algorithms provide balancing solutions for everything other than the helicopter's main rotors, including tail rotors, fixed wing propellers, shafts or any rotating component.

VibraLog™ and Vib Review™

Data from vibration surveys can be archived and analyzed on a PC with our VibraLog™ or Vib Review™ software. This data is used for troubleshooting, advanced trend monitoring and predictive maintenance programs.

Route Disks

With the 8500C+, vibration checks and surveys are accomplished quickly and reliably with a "route disk". The route disk converts the 8500C+ into a menu-driven data collector, acquiring spectral data, balance points and other data from a variety of sensors on the aircraft.

VASE for Military Service

The 8500C+ is also available in a militarized version, the 8500C VASE, which was developed for the US Marines and is fully qualified to harsh environmental and EMI Standards (Mil-Std-810E, Mil-Std-461D and Mil-Std-462D).

Customer Support

For more than 50 years, aircraft manufacturers, and civilian and military operators worldwide have relied on our systems, and our support of their aviation vibration control programs.

Everything you need fits in one suitcase

The 8500C+ comes as a complete kit, with all the accessories, software, and instructions for your particular type of aircraft in a rugged, portable carrying case.

Worried about adding new aircraft or modifying your fleet? No problem. Your 8500 System will grow with you. It interfaces to a variety of sensors for vibration and phase measurement for over 300 types of aircraft around the world. If you add one we don't have the application for, we'll create the software for you.



Built-in printer

Provides the technician with a permanent record of what is seen on the LCD. Removing any requirement to write anything down or hook up to an external printer.

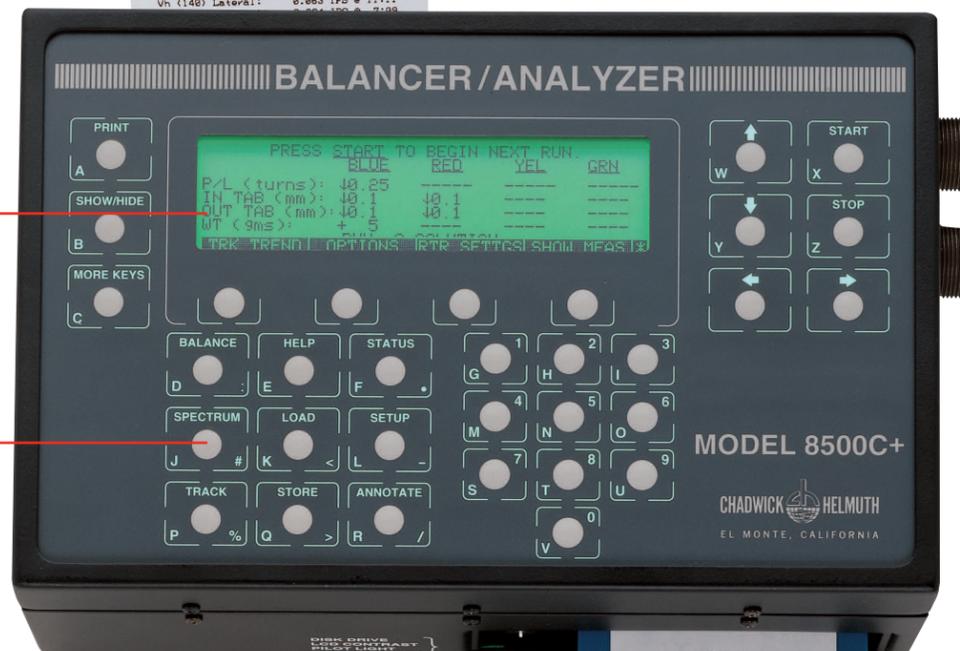
Printed output from the device showing technical data and a table of vibration measurements.

Easy-to-read, backlit

Displays user-friendly, step-by-step instructions.

Positive-click buttons

Your fingers will appreciate the tactile feedback.



1 Current Solution Options:
Use P/L: YES Tab: YES Weight: YES
Solve for: VIB + TRACK

2 Iterations: 6
Good improvement predicted
Ground Goal: 0.056 IPS
Flight Goal: 0.056 IPS

3 Current weight (grams) and tab configuration for each blade:

Blade	BLUE	RED	YEL	GRN
INB TAB	3.7	5.0	5.4	7.2
OUT TAB	3.7	5.0	5.4	7.2
WEIGHT	224	50	0	0

1 Solution options

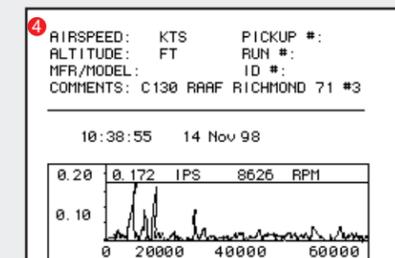
Solution options are shown here. Options can be changed to allow flexibility. With any options change, a new solution will be generated.

2 Solution quality information

The iterations and vibration goals shown are relative indications of the solution's anticipated performance. This information is used to select the appropriate solution options.

3 Configuration

Current rotor settings are entered manually at the beginning of each exercise and updated automatically as changes are made. The solution will use this information to minimize overall changes and respect manufacturers' weight and tab limits as applicable.



4 Spectrum data

The spectrum data shown allows the user to quickly identify mechanical discrepancies. The eight highest amplitude peaks are itemized for fast analysis.