



Helitune

Engineering Rotortuner Solutions

General System Data Sheet

Rotortuner 2000

Portable Rotor Track & Balance and Vibration Monitoring Equipment

Designed by Aircraft Engineers for Aircraft Engineers

Description

The Rotortuner 2000 (RT-2000) is a portable or semi-permanently installed Rotor Track and Balance and Vibration Analysis (RTBVA) system for use on helicopters and fixed wing turbo-prop aircraft.

Comprehensive RTB solutions, unique advanced vibration analysis capabilities and user-friendly interface make the RT- 2000 the engineer's favourite Rotor Track and Balance equipment.

FEATURES

System Control

Overall control of the RT-2000 is through an ergonomically designed hand-held terminal with a touch sensitive membrane over a high-resolution back-lit LCD display. Robust and easily readable it's ideally suited to the demands of the flight deck or cockpit environment, and is powered from the Data Collection Unit. All data and solutions may be viewed in flight and hard copies obtained from the integral printer. The unit currently supports three user-selectable languages; English, French or German.

Data Input and Storage

Data from the proven Line-Scan Camera, 8 or 16 accelerometers and 4 or 8 tachometer channels are integrated in the Data Collection Unit to provide data viewable as polar balance plots, vibration signatures and rotor track height and lead/lag displays. All data is stored to a removable data transfer medium for data transfer and subsequent detailed off-line analysis in the Ground Support Station.

Data Analysis

The advanced algorithms produce accurate track and balance solutions reducing the number of flights required to a minimum. Live track data can be viewed at any rotor speeds and displayed in a variety of formats to assist with rotor fault diagnostics. A 'snap shot' can be stored at any time. Vibration signatures up to 30,000 Hz (model dependent) and 6400 lines resolution are available.



Unique 'windowed' vibration ranges may be configured to create very high resolution FFT's. This facilitates discrimination between closely matched frequency sources for specific aircraft diagnostic requirements. Supplementary techniques include a dedicated vibration absorber-tuning programme.

Firmware Upgrade Options

The system is designed so that future improvements and upgrades to the overall system functionality, as well as refinements to aircraft information, may be incorporated through the use of Firmware Upgrade Cards or Aircraft Data Cards supplied on PC cards.

Performance Data

Sensor Inputs	<i>Up to 16 accelerometers, 8 reference, 1 tracker.</i>
Frequency Ranges	<i>Up to 30kHz in windowed ranges set to suit specific aircraft and operator requirements.</i>
FFT Analysis	<i>Up to 6400 lines resolution</i>

Electrical Specification

Connectors	<i>MIL C 38999 Series III</i>
Power Supply	<i>21 - 32V DC at 4 Amp maximum. Protected against over-voltage, reverse polarity and power loss. Max. power consumption 100W.</i>

Physical Specification

Data Collection Unit	
Dimensions (H x W x D)	<i>150 mm x 230 mm x 320 mm (361mm with front and rear handles)</i>
Weight	<i>5.8 Kg</i>
Operating Temperature	<i>-20 to +55 °C</i>

Hand-held Terminal	
Dimensions (H x W x D)	<i>70 mm x 147 mm x 273 mm</i>
Weight	<i>1.25 Kg</i>
Operating Temperature	<i>-20 to +55 °C</i>

Data Collection Accuracy

Vibration	<i>+/- 0.2% of scale range</i>
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Rotortuner 2000 is fully compliant with the appropriate sections of Mil.Std.810E, DIN 40 050 IP44 and RTCA DO-160C

Customer Support.

The team members are experienced aircraft engineers with a wealth of experience in aviation maintenance and Rotor Track and Balance, and can be contacted directly by telephone, fax, e-mail or through the website. Helitune promotes a personal service and is happy to create bespoke configurations to suit customer's personal requirements.



This document is not contractual. Helitune maintain a policy of continuous product development and improvement. This specification may change without notice.

Helitune is registered to BS EN ISO 9001 / AS9100

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