

DYNAMIC INSTRUMENTS

Tracking Analyzer
Balancer System

DI-137

FEATURES

Fast, Four Channel
Simultaneous Data
Collection

Large, easy-to-read
Color Display

Compact,
Lightweight, Rugged
Construction

Flight Line Viewable
in Direct Sunlight

Time proven VATS/
VBAS Operator
Interface

Supports Night Time
Operations

Built in Self Test

The DI-137, Tracking Analyzer Balancer System (TABS) is a compact and rugged tool, simplifying helicopter and fixed wing maintenance tasks while increasing aircraft performance. TABS employs the time proven VATS/VBAS operator displays and keypad controls for easy-to-use, straight forward, operation and most VATS/VBAS peripherals and accessories are supported by the DI-137. TABS ... a complete solution to portable vibration analysis!!!



Product Description

TABS is intended for use in harsh and demanding environments and has been designed to meet:

- ★ Environmental Requirements of MIL-STD-810D
- ★ Shock and Vibration Requirements of MIL-STD-810D
- ★ EMI Requirements of MIL-STD-461C

Automatic test programs are created on your PC and downloaded to the TABS. Pilots and technicians are guided through the data collection procedures by instructions displayed on the large, easy to read screen.

When data collection is completed, test results are displayed enabling the pilot or technician to quickly identify problem areas and the corrective actions necessary to solve them.

TABS supports all three Aircraft Maintenance Modes:

Rotor Blade Tracking - Rotor blade tip path corrections and lead/lag characteristics can be measured either day or night, using the optional line scan camera.

Balancing - Single and dual plane balancing can quickly be performed. A Discrete Fourier Transform (DFT) calculates phase angle and amplitude of the imbalance and rotor smoothing algorithms provide simultaneous, multiple maintenance adjustments.

Vibration Signature - A Fast Fourier Transform (FFT) and four channel *simultaneous* data acquisition capabilities are employed to yield fast, accurate vibration analysis results.

DI-137 Specifications

Modes Of Operation

FFT Vibration Signature

Frequency
Order Tracking

Blade Tracking

Blade Tip Path
Lead/lag Characteristics

Balancing

Single & Multi Plane

Inputs

5 Triaxial or 15 Single Axis Accelerometers
(10 mV/g - 100 mV/g)
1 Hand Held Camera
(day/night or cloudy)
2 Rotor Blade Tachometers
(Optical or Magnetic Pickup)
2 RS-232C Serial Ports
1 Parallel Port

Memory

28 MB of Memory

Software

MSDOS compatible supporting Depot, Recall,
Generic, and Erase Utilities

Front Panel

Color, TFT LCD with backlight
Large Viewing Area: 8.3" X 6.2"
High Resolution: 640 x 480 pixels
Tactile Feel Keypad

Physical Characteristics

Height: 13" • Width 13" • Depth 4"
Weight: 16 lbs

Power Requirement

+28 VDC - Direct Connection
115 VAC - 115 VAC to 28 VDC converter

Printer Interface

Parallel

Built In Self Test

Go-No/Go testing with fault isolation

Data Acquisition

1-4 channels of *simultaneous* data acquisition

Optional Accessories

Transducers

Triaxial - Model DI-103
Single Axis - Model DI-108

Speed Reference

Optical - Model DI-204
Magnetic - 3030AN

Blade Tracking

Model DI-206 Solid State CCD
Line Scan Camera

115 VAC 50/400Hz to 28 VDC Converter

Model DI-219

Printer

COTS Parallel/Serial Printer
Part# 1901-0067

Cables

Single Axis Accelerometers
Triaxial Accelerometers
Optical Tachometers
Magnetic Pickups
Power
Camera Data