



## RT-EVA

Engine Vibration Analyser is a 6 channel parallel vibration monitoring system designed for use with aero gas turbine engines, precisely measuring steady state vibration either on the ground or in the air.

### Designed by Aircraft Engineers for Aircraft Engineers

#### Hardware

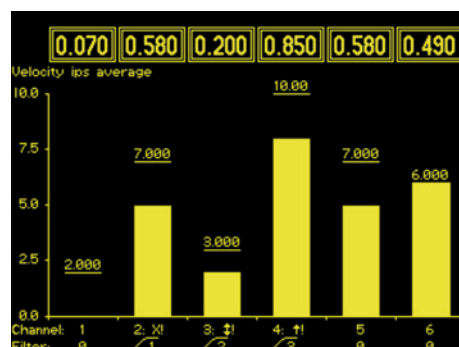
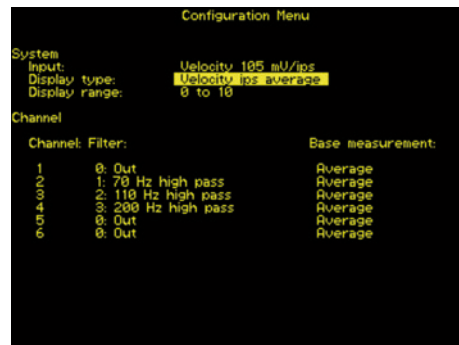
RT-EVA is a single lightweight unit, portable, rugged and suitable for use both in a laboratory or on-aircraft environment. The unit contains a high intensity electro-luminescent screen which provides interference free operation in an environment where high levels of ambient vibration exist and remain easily readable even in bright sunlight conditions.

#### Measurement Technique & Functionalities

The system will process measurements from all 6 channels simultaneously, using differential type self exciting transducers, applying a single stage of integration to the input signal to achieve a displacement output reading. These results are presented in the form of a bar chart and text format concurrently for ease of data interpretation. A 'Peak Level' marker on the bar chart indicates the maximum recorded vibration level from each input channel, allowing the easy identification of 'limit exceedances'. The 'Hold' facility permits the capture of rapidly changing information on the screen for more accurate data recording.

#### Configuration & Filter Application

Designed for total configuration flexibility, RT-EVA allows the individual channel signal condition filters to be either disabled or selected on to the correct frequency in accordance with the specific engine manufacturer test procedure. The system can also be configured to display results globally in either velocity units 'ips average' or displacement units 'mils pk-pk average'.



**RT-EVA**

Part Number	003178-01
NSN	6625-99-342-4169

**Input Channels**

No. of Channels	6
Input Sensitivity	105 mV/ips
Input Impedance	10,000Ω
Input CMMR @ 50Hz	>40 dB
Maximum Input	9 V RMS (85 ips average @ 105mV/ips)
Input Connector	XLR type III
Frequency Response	±10% (5 Hz – 20 kHz, Velocity, signals above 0.02 ips average) ±2% (20 Hz – 10 kHz, Velocity, signals above 0.02 ips average) ±2% (20 Hz – 2 kHz, Displacement, signals above 0.2 mils pk-pk)

**Signal Conditioning**

HP Filters	Disabled, 70 Hz, 110 Hz, 200 Hz (0 dB to -1 dB at specified frequency and < -26 dB at half specified frequency)
Integration	Velocity to Displacement

**Display**

Type	High Intensity Electro-Luminescent
Display Units	ips Average (Velocity) mils Peak-Peak Average (Displacement)
Display Ranges	0-1, 0-10, 0-100, 0-1000 units
Measurement Resolution	4 Digits
Display Functions	Display Hold, Peak Display, Peak Reset

**Electrical Specification**

Power Supply	+28 V DC MIL-STD-704C
Max Power	30 W

**Physical Specification**

Dimensions	(L) 272mm, (W) 228mm, (H) 160mm
Weight	4.0 Kg
Operating Temperature	-20°C to +55°C
Sealing	DIN 40 050 IP44
EMC	DO-160E
Environmental	Mil-Std-801F
European Conformity	93/ 68/ EEC



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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