



## THE CR:465 GALACTUS NOISE MONITORS

The CR:465 Galactus instruments is a range of high performance noise monitors that has been designed to integrate with external data loggers and environmental measurement systems to provide a comprehensive set of acoustic data.

Comprising of a processor unit and a fully weather protected microphone system, the Galactus meets the Class 1 requirements of IEC 61672 and can provide a comprehensive set of user configurable acoustic data parameters via serial commands.

The Galactus instruments can provide the acoustic information required to calculate the parameters defined in ISO 20906:2009, making the units ideal for monitoring and measurement of unattended aircraft noise.

- Ideal for integration with external data loggers & environmental measurement systems
- Class 1 performance to IEC 61672
- RS232 data stream with user configurable parameters
- Data provided every 1 or 0.5 seconds
- Simultaneous measurement of A, C & Z frequency weightings
- Simultaneous measurement of F, S & I time weightings
- 1:1 octave bands from 31,5Hz to 16kHz & 1:3 octave bands from 6,3Hz to 20kHz
- Electrostatic calibration with 200mm dual layer windshield provides calibration check & verification functions
- Automatic GPS synchronisation with time, date & location information

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## SPECIFICATIONS

The CR:465 Galactus instruments are controlled by a set of commands.

This allows for full external control of all aspects of the instrument, including calibration and verification using the electrostatic actuator system. This allows the units to be integrated quickly and easily alongside other sensors and data sources.

Measurement data is returned as packets of information via the communication port with the packets available at a rate of either 1 second or 0,5 seconds. These packets contain any number of the acoustic measurement values, which can be configured to suit the application in which the instrument is being used.

To allow for the calculation of  $L_n$  values in accordance with ISO 20906:2009, the data packets can contain 1/8<sup>th</sup> second  $L_{AS}$  data points, allowing exceedence levels (%  $L_n$  values) to be calculated.

Specifications & Measurements	
Standards	Designed to meet the requirements of IEC 61672-1:2013 Class 1 1:1 & 1:3 Octave Band Filters to IEC 61260
Microphone	External weatherproof microphone unit with electrostatic actuator system
Calibration	Calibration check & verification via electrostatic actuator Acoustic calibration using external acoustic calibrator
Windshield	Dual layer 200mm windshield with hydrophobic coating
Total Measurement Range	20dB to 140dB RMS Single Range
Noise Floor	< 18dB(A)
Frequency Weightings	RMS: A, C, & Z Measured Simultaneously Peak: A, C, & Z Measured Simultaneously
Octave Band Filters	31,5Hz to 16kHz for 1:1 Octave Bands 6,3Hz to 20kHz for 1:3 Octave Bands
Time Weightings	Fast, Slow & Impulse Measured Simultaneously
Display	High resolution colour OLED display with system information, measurement data & diagnostics
Time & Date	Automatic synchronisation to GPS at startup & every subsequent 60 minutes
Keypad	4 button keypad
Data Buffer	Up to 5 minutes at 1 second data transmission
Power	15v DC
Connections	Microphone COMMS GPS – SME Connector External Power Input
Language Options	English only
Data Output	Realtime acoustic measurement data provided via RS232 1 second or 0.5 second data packets Real-time instrument status
Connectivity 2 x RS232 1X RS485	Reset of data gathering device

Specifications & Measurements	
Available Acoustic Measurement Values	<b>Simultaneous measurement of:</b> L <sub>xy</sub> – Sound Pressure Level (SPL) L <sub>xy</sub> MAX – Maximum SPL (1s) L <sub>x</sub> EQ – Equivalent Continuous Sound Level ( $L_{eq}$ ) L <sub>x</sub> EQ16MAX – Maximum $L_{eq,62.5ms}$ (1s) L <sub>x</sub> PEAK – Peak Sound Pressure  Where x is A, C or Z and y is F, S, or I  List of 62.5 ms Sound Pressure Levels Fast and Slow-Weighted  From 31,5Hz to 16kHz – 1:1-Octave band $L_{eq}$ From 6,3Hz to 20kHz – 1:3-Octave band $L_{eq}$
Available Instrument Status	Preamp Connection Preamp Tilt Windshield Removed Power Supply Calibration Result
GPS	Global positioning for accurate time synchronization and location



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