

Suitcase Multi-Magnetometer Facility



The Suitcase Multi-Magnetometer Facility is the ideal solution for magnetic cleanliness applications when maximum flexibility is required. It is a portable magnetic field measurement facility to facilitate in-situ magnetic field measurement of space EUTs, in order to model the magnetic behaviour based on Multiple Dipole Modelling methodology.

The facility fits in a cabin flight suitcase, which includes 2 magnetometers, along with their mechanical support, their Digital Acquisition devices, as well as smartphone software application with Graphical User Interface, and a laptop software application. It incorporates a unique method to completely automatically estimate the sensors positions.

The suitcase multi-magnetometer facility supports both DC and AC magnetic field measurements. Several magnetometers (combining many suitcase systems) can be interconnected and completely synchronized with each other, in order to acquire synchronous signal trains by all mags and ability to cancel any common noise source using post signal processing techniques.

Main Features

Fit in a cabin flightcase & includes all necessary elements to perform magnetic field measurements of an EUT

Two fluxgate or two search coil magnetometers are available for DC or AC magnetic field measurement respectively

EMTECH Space synchronous DAQ units for accurate magnetic field measurements

EMTECH unique algorithm to estimate the magnetometers position in the test volume based on photographs taken by a smartphone

EMTECH Software application for Facility control of operation



Portable Multi-Magnetometer Facility

for magnetic cleanliness applications

www.emtech.global

Specifications*

Magnetometers (in one case):
Type:

2

Fluxgate (DC field)
Search Coil (AC Field)

Range:

70 or 100 μ T, DC-3kHz (fluxgate)
2 μ T p-p, 1 mHz-50 kHz (search coil)
via EMTECH Space synchronous DAQ
2 tripods with suitable housings
0.48 - 1.22 m

Power Supply:

Mechanical Support:

Height Range:

DAQs (in one case):

Resolution:

Bandwidth:

Input ranges:

Interfaces:

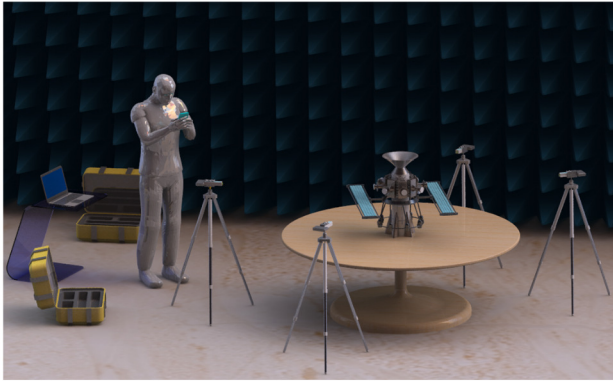
Data Storage:

Features:

2, one for each magnetometer
16 bit
200 kHz (min)
10, 5, 1, 0.2 V (as a minimum)
USB, Bluetooth
SD Card
Synchronous (with other DAQs also)
Several suitcases can be used in synchronous mode to increase accuracy
DC offset removal
Battery operated
DSP based
Interface to SW application

System Features:

Matlab/Scilab Interface with direct/inverse MDM solvers
Automatic magnetometers positioning estimation (photo based)
Software Application for the control of the facility



Elements

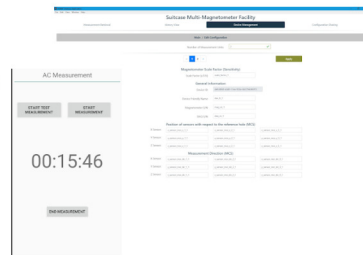
EMTECH
MAGNUS A.D
Synchronous
16 bit DAQ



Fluxgate or Search Coil
Magnetometers



EMTECH
Software
Application



*Specifications may be change without prior notice

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