



## 4830B accelerometer simulator

### Product overview

2015

MEGGITT



# Product overview

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- » Simulates the electrical output signals generated by common measurement transducers (vibration, pressure, acoustics, etc.)
- » Portable, battery powered, ergonomic
  - Ideal for field or lab use
- » Highly configurable, advanced tool for troubleshooting, verification, and calibration processes for test systems
  - Simulates almost any scenario to troubleshoot and verify the measurement chain
  - Provides confidence in system setups before running expensive tests
- » FFT input to provides feedback on fundamental frequency and order of magnitude
- » 40 custom simulation profiles can be saved and stored
- » Built in vibration calculator



# Uses and applications

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## Uses

Calibration, adjustment and fault detection in complete measurement chains

- vibration
- pressure
- acoustics

Basic frequency analysis of test equipment output

- signal conditioning
- low impedance voltage sources

## Applications

General laboratory and T&M vibration testing

Aerospace engine ground testing

Testing and commissioning of condition monitoring systems

- aircraft and UAV
- industrial gas turbine



# Key specifications

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<b>Outputs</b>	- Single-ended charge (pC) - Differential charge (pc) - Single-ended voltage (mV)	- Tachometer (TTL) - Isotron® (mV), current sinking
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## Frequency range

Signal outputs	1 Hz to 20 kHz, resolution 0.5 Hz.
Tachometer output	1 Hz to 25 kHz

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<b>Amplitude</b>	Adjustable up to 10,000 pC or mV pk
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<b>FFT input</b>	Max 5 V pk
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## Transfer characteristics

Amplitude accuracy	+/-1.0%: SE voltage, SE charge, Isotron, differential charge
Frequency response	+/-1.0%: 1-10kHz +/-2.0%: 10KHz-20kHz

Noise	<2mV or 2 pc rms
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<b>Battery</b>	Rechargeable Lithium-ion battery, 8 hours min
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<b>Output connectors</b>	3x BNC, 1 twinax BNC
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<b>Input connectors</b>	BNC (FFT), 2.5mm barrel jack (charger), mini USB
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# Keypad, outputs and base panel

## Front panel key pad

- A** HOME
- B** PROFILES
- C** TOOLS
- D** ENTER
- E** Arrows: up, down, left, right

## Connections

- F** mV / IEPE out (BNC)
- G** Tacho out / FFT in (BNC)
- H** Single-ended charge out (BNC)
- I** Differential charge out (twinax)
- J** mV / IEPE selection indicator

## Base panel

- K** Mini USB connector
- L** 2.5mm charger input socket
- M** Fast / full charge indicator
- N** On / off switch





# Features and benefits

Benefits	Features
<b>Simulate any situation</b> Select from a wide variety of commonly available transducer outputs and of adjustable parameters	<ul style="list-style-type: none"><li>- Transducer outputs: single-ended charge, differential charge, single-ended voltage, Isotron, tachometer</li><li>- Adjustable parameters: waveform type (sine wave, square wave, etc.), frequency, sensitivity, acceleration (g), tacho ratio</li><li>- Vibration calculator – can adjust parameters in terms of displacement &amp; velocity</li></ul>
<b>Improve productivity</b> Perform repetitive verifications/calibrations with minimal inputs	<ul style="list-style-type: none"><li>- Custom profiles (simulation settings) can be created via front keypad or PC and recalled at the click of a button</li></ul>
<b>Troubleshoot measurement chains</b> Analyze unknown frequency content	<ul style="list-style-type: none"><li>- Accepts FFT input and provides feedback on fundamental frequency and order of magnitude</li></ul>
<b>Set up quickly and easily</b> View data, create profiles and navigate options with improved interface tools	<ul style="list-style-type: none"><li>- Improved user interface on a backlit LCD</li><li>- 3 function keys for fast navigation</li><li>- PC interface to create complex user profiles</li></ul>
<b>No need to generate an external, real time tachometer signal</b> Allows operators of conditioning monitoring systems to set signal conditioning tracking filter center frequencies	<ul style="list-style-type: none"><li>- TTL-based tachometer output</li></ul>

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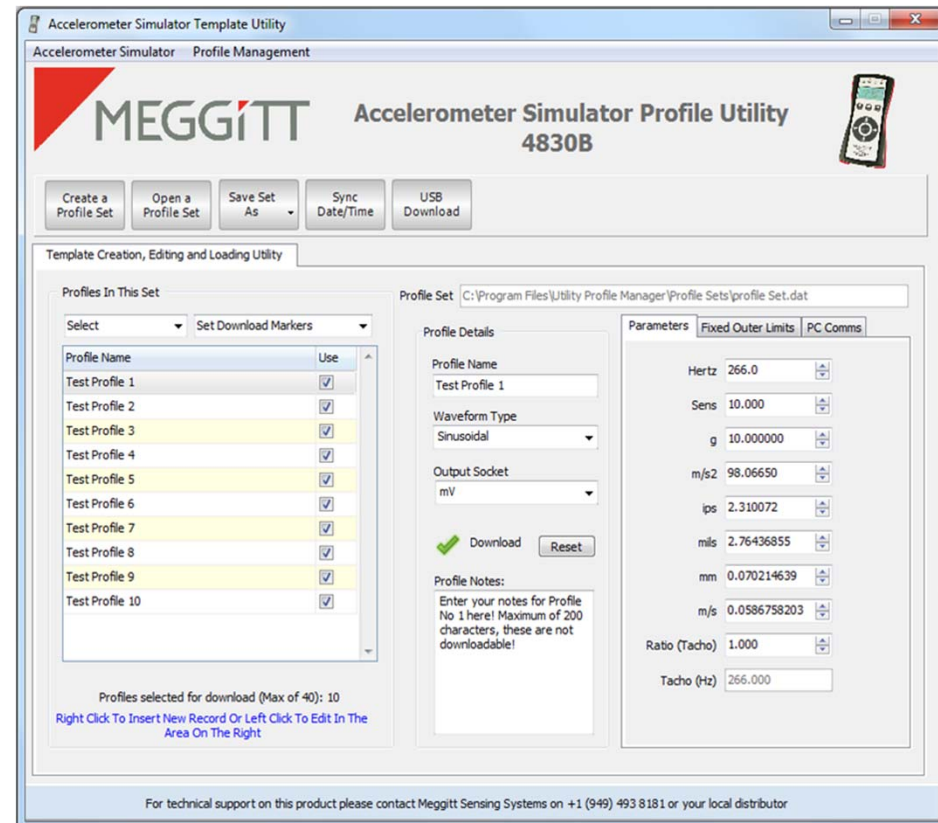
## Other features

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- » Backlit LCD
  - For use in low light areas
- » Calibration performed via front panel key pad
  - No need to open up the unit
  - Last calibration date stored in memory
- » Field upgradeable firmware
  - Firmware updates without sending unit into factory
- » Protective rubber boot
- » USB interface

# Application software

- » Provided standard
- » Used to manage custom profiles
  - quickly and efficiently create, save, and edit profiles
  - download profiles to the 4830B via USB connection





# Accessories Included

P/N	Description
QSG4830B	Quick start guide
IM4830B	Instruction manual Utility software
EP316	Twinax BNC Plug
EP695	10-32 to BNC Adaptor
EHM2107	Universal power supply, supplied with adaptors for USA, UK, EURO, Japan, and Australia
EHM2108	Soft carrying case with cable pouch and shoulder strap
EW1400	USB interface cable (mini B to USB)

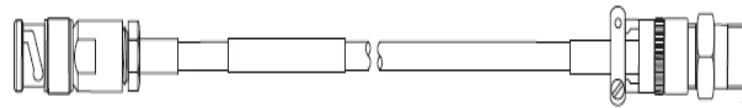


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# Accessories

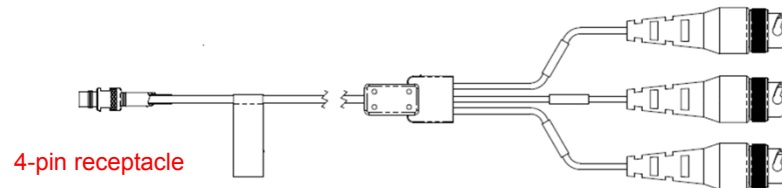
## Optional

P/N	Description
43664-XXX	Differential Cable Assembly Adaptor (2 Pin 7/16-27 to Twinax BNC). -XXX defines cable length
43655-XXX	Triaxial Cable Assembly Adaptor (Female 4 pin to 3x male BNC). -XXX defines cable length



Twinax BNC

7/16 UNS-2B  
receptacle



4-pin receptacle

3x BNC