

PRODUCT OVERVIEW

The **TactileHead Pressure Measurement** System is a measurement system that can assess the pressures (and therefore the comfort) of a given headphone or hearing protection design or configuration.

For headset and hearing protection manufacturers who try in their design to balance the most effective product with the most comfortable fit, **the TactileHead** is a measurement instrument that can accurately capture and visualize the interaction between the headset and the complex shapes of the head by imaging the applied pressures.

Other competing tactile sensor systems do not have the sensitivity or resolution to measure very low pressures, which are characteristic of the different subtle pressures that headphone designs can exhibit.

The **TactileHead** sensors resolve to pressures lower than 10 Pa as required by this type of application, conforming to complex shapes around the ear without sacrificing accuracy or repeatability performance.

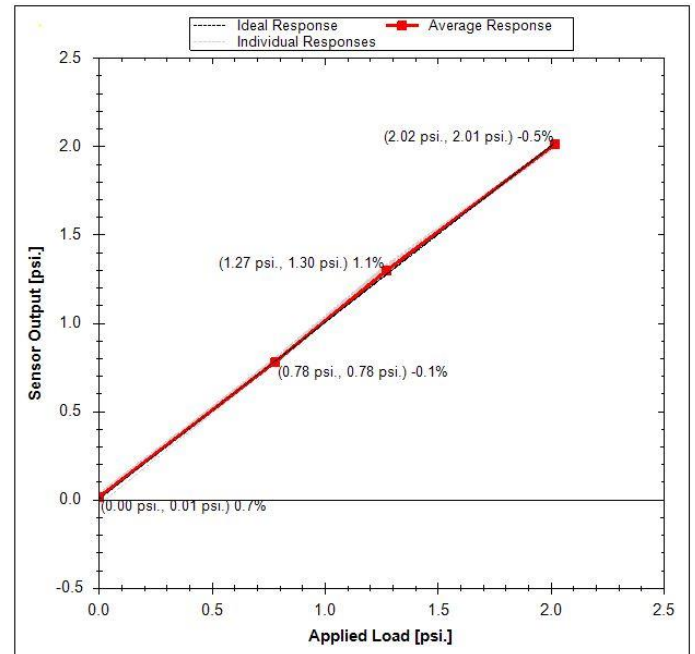
KEY SYSTEM FEATURES AND BENEFITS

- **Single un-mounted conformable sensor with an opening** to allow for installation over the ear or capture pressure distribution around the ear on actual human subjects.
- **Single un-mounted conformable sensor can capture pressure distribution on top of the head**, against the ear or at other areas of interest on actual human subjects.
- **Head/plate mannequin fixture** with adjustable width mechanisms can simulate different head sizes for broader scope of captured data.
- **One high-resolution sensor array** can be molded to the curved area around the ear of the mannequin, while **another high-resolution sensor** can be mounted to the mannequin's flat plate to provide a controlled comparison between flat and curved surfaces.
- **Chameleon Visualization Software** provides intuitive, easy to use, high-quality visualization and easy access to data for analysis and export to other applications.

SENSOR MODELS			
Model Number	3440	5766	6425
Total Sensor Area	138x138 mm	144x146 mm	80x80 mm
Active Sensing Area	122x122 mm	122x122 mm	64x64 mm
Element Count	1024 (32x32)	884	1024 (32x32)
Spatial Resolution	3.8x3.8 mm	3.8x3.8 mm	2x2 mm

SENSOR CHARACTERISTICS AND PERFORMANCE ¹	
Pressure Range	2 PSI
Pressure Sensitivity	0.2%
Signal to Noise Ratio (SNR)	400:1
Repeatability Error	0.4%
Linearity	99.8%
Accuracy Error ²	<=2%
Contact Surface Material	Conductive cloth
Sensor Thickness	0.04 in (1 mm)
Cable Length	59 in (1.5m)
Operating Temperature	-20°C to 100°C

ELECTRONICS SPECIFICATIONS	
Sample Rate	10Hz
Computer Interface	USB 2.0
ADC Resolution	12 bit
Input Voltage	5V
Input Power	2W
Enclosure Size	6.5x6.2x1 in. (16.5x15.8x2.5 cm)
Weight	1.43 lbs. (650 g)



SYSTEM CONFIGURATIONS	
System Number	Description
All Systems Include	<ul style="list-style-type: none"> - T4500 interface electronics with USB 2.0 - Chameleon Visualization Software - Synchronized video capture function & hardware - Remote Installation and Training
5751	Un-mounted conformable sensor (3440 or 6425)
5752	Un-mounted conformable sensor with an opening in the middle (sensor model 5766)
5753	Two un-mounted sensors, one with hole (5766) and one without hole (3440 or 6425)
5750	<ul style="list-style-type: none"> - Half head fixture with an adjustable mechanism and a flat plate - Two conformable sensors mounted on the half headform (sensors 3440 or 6425) - Second set of T4500 interface electronics
5749	<ul style="list-style-type: none"> - Half head fixture with an adjustable mechanism and a flat plate - Two conformable sensors mounted on half headform (sensors 3440 or 6425) - Un-mounted conformable sensor with hole in the middle (sensor model 5766) - Un-mounted conformable sensor (3440 or 6425) - Second set of T4500 interface electronics

¹ Performance numbers are for typical system response. Actual performance may vary.

² Measured using PPS standard calibration and test equipment – includes repeatability errors, noise and linearity