

Acoustic Intensity Measurement System

AIMS III with Soniq Software

AIMS III is the latest generation hydrophone scanning system that enhances acoustic measurement productivity to map acoustic fields in liquids. User workflow is improved by productivity enhancements that save time in the measurement set-up, scanning, and reporting. These enhancements are based on decades of scanning technology development. Combined with *SonIQ* software, the user benefits from real-time plotting, automated FDA reporting, and improved positioning performance. AIMS III continues to be the de facto standard scanning tank for hydrophone-based measurements.

Features:

- Productivity enhancements to measurement set-up, scanning, and reporting
- Compatible with Windows 7 (32 or 64 bit)
- Real-time plotting to confirm optimal measurement set-up early
- Automated diagnostic and physiotherapy reporting tables compliant with the latest IEC standards and FDA guidance documents
- Mechanical improvements to advance the positioning accuracy and reliability
- Automatic temperature readings with USB temperature probe
- .dll interface for external software control
- SmartSCAN to enable forward and reverse scanning to reduce scanning time
- Angular positioner to accommodate various orientations including “shoot down”
- Over 100 measurement parameters available

Applications:

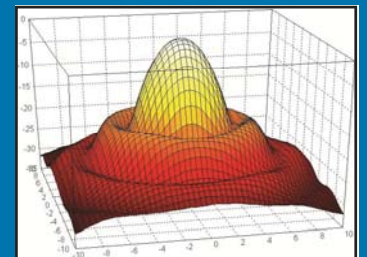
The AIMS III offers the right balance between versatility and easy-to-use operations to meet the most advanced requirements in R&D characterization, regulatory testing, and production QC.

The system is commonly used to characterize and validate transducer designs. Features such as the 5 axis motion, various firing/measuring orientations, and real-time plotting make it the tool of choice to meet the most stringent environments.

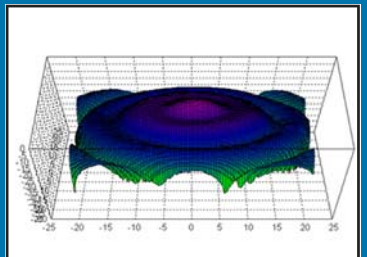
The AIMS platform has also established itself as the premier instrument in the regulatory community. The system allows for automatic reporting compliant with standards for diagnostic equipment (AIUM-NEMA UD-2/UD-3 and IEC 60601-2-37, 61217-1, and 62359) as well as for physiotherapy (US 21 CFR1050.10 and IEC 60601-2-5 and 61689).



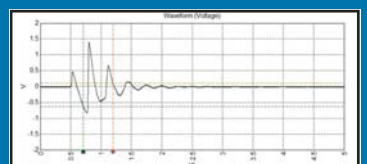
AIMS III System



2D Beam Intensity Plot



2D transaxial planar scan of a 1 MHz physiotherapy probe



Waveform

Technical Specifications

Tank:

- Acrylic tank with water circulation connections
- Large viewing area
- Compatible with AQUAS water conditioner
- Inside Dimensions:
 - Small: 0.73 m X 0.36 m X 0.44 m
 - Large: 0.89 m X 0.51 m X 0.58 m

Motion:

- Positioning repeatability: < 5 μm
- X, Y, Z step size: 5.5 μm
- Rotary step size: 0.025 $^\circ$
- Max speed: 11 mm per second
- Travel range (with standard HW fixtures):
 - Small: 380 mm x 265 mm x 330 mm vertical
 - Large: 575 mm x 425 mm x 495 mm vertical
- 3-axis scanning (standard); 2-rotational axis (optional)

Temperature:

- Temperature Probe , 3 meter cable with USB connection

Soniq Software:

- Mapping of acoustic fields in 1, 2, or 3D
- Acquisition of waveform data for analysis
- Real-time plotting of data acquisition
- Over 100 calculated parameters including Prms, Pii, Ispta, TI, and MI.
- Compliant with AIUM-NEMA and IEC standards.
- Waveform deconvolution
- Automatic temperature measurements

Recommended PC Requirements:

- PC: Windows 7 (32 and 64 bit), Intel Core i3, dual core 3.6 GHz, 4 GB RAM, 500 GB HD, DVD drive, 7 available USB ports
- Software:
 - Required: Adobe Reader, PicoScope.
 - Optional: Microsoft Excel and web browser.

Oscilloscope:

- Support for PicoScope 5244A

Simple Measurement Set-up

[Not to scale]

