ProSound Alpha 7 Overview

Recognized for our superior image quality, outstanding system reliability and intuitive use of cutting edge technology, Hitachi Aloka remains the standard in the field of Neurosurgery.

Hitachi Aloka’s premium level systems provide:

- Extraordinary high-resolution digital imaging of cranial and spinal structures with specifically designed neurosurgery transducers
- Real-time imaging that immediately provides valuable information necessary to assist in surgical planning and execution
- Guidance of biopsy procedures for more accurate placements of needles
- Real-time guidance to optimize shunt placements
- Instant feedback on tumor margin delineation
- Valuable information to guide tumor resections
- Assistance in achieving complete tumor resection
- Ability to visualize and account for blood flow
- Minimally invasive micro-surgery imaging
- Cervical spine evaluations
- Localization and orientation of relative anatomy
- Neuro navigation integration - blending and overlaying of CT/MR images
  - Medtronic
  - Brainlab

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Compound Pulse Wave Generator (CPWG)
The most advanced broadband beam-forming technology combined with high speed image processing that allows for higher definition ultrasound imaging than ever before.

Broadband Harmonics™ (BbH)
Provides high quality imaging using an expanded range of harmonic signals. This technology results in excellent image resolution and sensitivity and improved penetration.

Adaptive Image Processing (AIP)
Clearly displays differences in tissues, reducing speckle noise while maintaining the frame rate. It can also display outlines more clearly by selectively emphasizing boundaries.

Spatial Compound Imaging (SCI)
The ultrasound beam is transmitted and received in real time and in the multiple directions resulting in a reduction of speckle noise, suppression of artifacts, and improvement of contrast resolution allowing lesions to be clearly observed.

Image Optimizer
At the touch of a button the B-mode image is instantly optimized to the user’s preference. This technology continually monitors the user’s typical settings to optimally adjust the image when pressed resulting in less manual adjustments and more efficient examinations.

SmartProbes
The new high-efficiency probes are very lightweight and designed to be high in energy conversion to transmit high-quality ultrasound beams.
ProSound Alpha 7 Features

**Real Time Elastography**
An innovative diagnostic tool that provides real-time color display of tissue elasticity.

**D-eFlow**
Displays blood flow with directional information at higher frame rates and spatial resolution compared to conventional methods. Detail and accuracy of blood flow information is greatly increased with reduced blooming of color.

**Dual Dynamic Display (DDD)**
Real-time side-by-side display of a B-mode image and Color Doppler image assisting in easy anatomical interpretation of blood flow.

**Trapezoid**
Trapezoidal display on linear transducers provides a wider diagnostic field of view.

**High-Definition Extended Field of View (HD-EFV)**
Provides an extended field-of-view image created from a series of real-time images. As the user moves the transducer across the area of interest a larger image is created that provides clearer spatial relationship information of anatomy and structures. This is especially helpful in assessing structures that are larger than the transducer field of view.

**Contrast Harmonic Echo (CHE) * **
To improve understanding of blood flow information, Hitachi-Aloka offers harmonics enhanced imaging specifically designed for use with contrast agents. The low MI contrast imaging obtained improves signal-to-noise ratio.

* In the USA, contrast-enhanced ultrasound has not been market cleared by the FDA for all imaging applications.
ProSound Alpha 7 - Burr Hole Guidance - Brain Mass
ProSound Alpha 7 - Cranial Guidance - Brain Tumor with Blood Flow
ProSound Alpha 7 - Pituitary Guidance - Prior to Debulking
ProSound Alpha 7 - Spine Guidance - Spinal Cord Tumor
Surgical Ultrasound System
For Neurosurgery

UST-52114P
UST-5311
UST-533
UST-534

UST-534

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**Directions**