

**HITACHI**  
Inspire the Next



Diagnostic Ultrasound System MODEL:PROSOUND F75



**ALOKA**  
illuminate the change

# prosound F75

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- The standard components and optional items vary depending on the country.

**Hitachi Aloka Medical, Ltd.**

6-22-1, Mure, Mitaka-shi, Tokyo, 181-8622 Japan  
Telephone : +81 422 45 6049 Facsimile : +81 422 45 4058  
[www.hitachi-alka.com](http://www.hitachi-alka.com)



We strive to provide quality products and services for our customers.

We operate with regard for the environment.





# Look. Learn. Leverage. Scrutinize unseen intelligence to new depths.

Our <F> series gives the sonographer full control.

Ultrasound exams with truly unparalleled comfort and ease of use.

Sensitive and sensible — a gentler experience for every patient.

To see the unseen is to know. To know is to learn. To learn is to leverage every possible benefit for the patient. And to do so at the highest level is to illuminate the change.

The ProSound <F> series embodies our unwavering commitment to foreseeing future needs and providing technology concepts created with that foresight.

Our ProSound F75 is a true model of flexibility — adaptable to every technician's needs — making it a ready and capable system fit for a variety of exam conditions and requirements.

Designed from the start to our demanding <FIT to your specialty> concept, the ProSound F75 defines the vanguard of advanced ultrasound diagnostics for today and tomorrow.

## FIT to your specialty



# Making your work flow more comfortable

ProSound F75 enables you to obtain examination results with fewer user key strokes.

To improve examination throughput, the ProSound F75 features various functions from pre-examination settings to data management after examination. Operations are simple and intuitive, enabling you to capture the images you need for a quick and in-depth diagnosis. Quick Setter, Automated Sound Velocity Adjustment, and other image optimization functions support rapid examination in a broad range of applications.



Movement/Setup

Start

Image Display

Simple Operation

Save/Archive

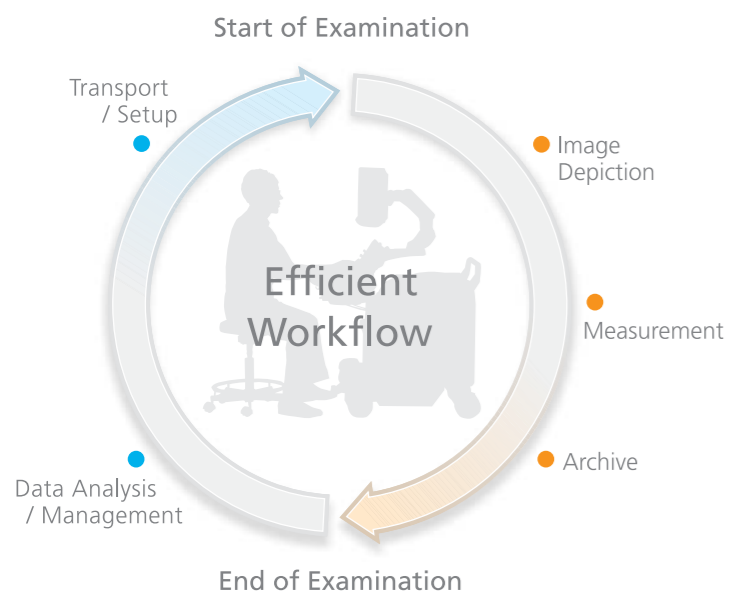
Data Analysis/Management

End of Examination





## Simple Operation



### Before Examination

- Compact and easy to move.
- Efficient acquisition of patient and examination reservation information from the work list.
- Automatic ID input for emergencies.
- Intuitive preset menu indicates the suitable preset for each attached probe.



### During Examination

Various image optimization functions swiftly depict the necessary images:

- Quick Setter
- Image Optimizer (B mode / Doppler mode)
- Automated Sound Velocity Adjustment

Various automated measuring functions are available:

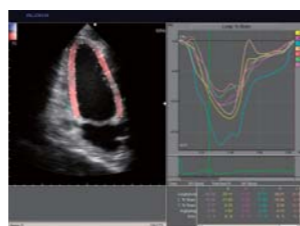
- eTRACKING, Automated IMT Measurement, Automated Volume Measurement, Automated Cavity Tracing, etc.

Easy recording, storing and retrieving:

- Automated search of past images.
- Simultaneous display of past and real-time images.
- Simultaneous transmission of stored images to multiple media and networks.

### After Examination

- Post analysis using raw data.
- Teaching File creating function with care for protection of patient information.



### QuickSetter

Imaging conditions you need are set at a single touch of a switch without interrupting the examination flow.

Preferred conditions can be registered on the spot according to different characteristics, such as:

- Physique and target areas of the patient.
- Examination purpose e.g. morphological observation and qualitative diagnosis.
- Blood flow velocity and range in vessel examinations.



### Image Optimizer

Images being scanned are quickly adjusted with a single action.

B mode: Brightness is continuously monitored and optimized to the user's preference.

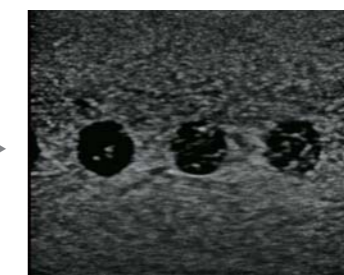
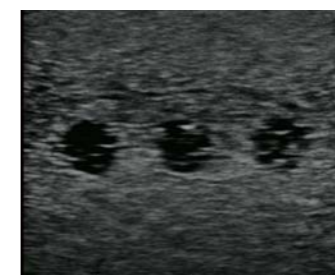
D mode: Instant optimization of velocity range, which normally requires frequent adjustments.

An automated base line shift function is also equipped.

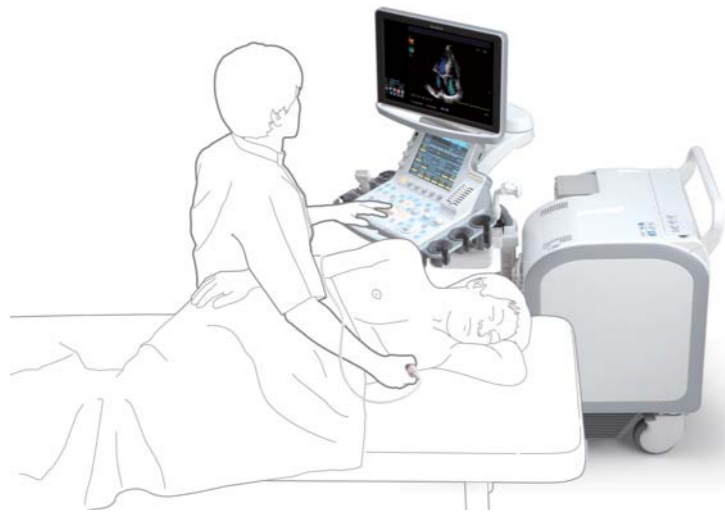


### Tissue Adaptive Technology

Technologies including Automated Sound Velocity Adjustment offer crisp images with enhanced resolution. In a single action, the target is focused with the optimum sound velocity setting.

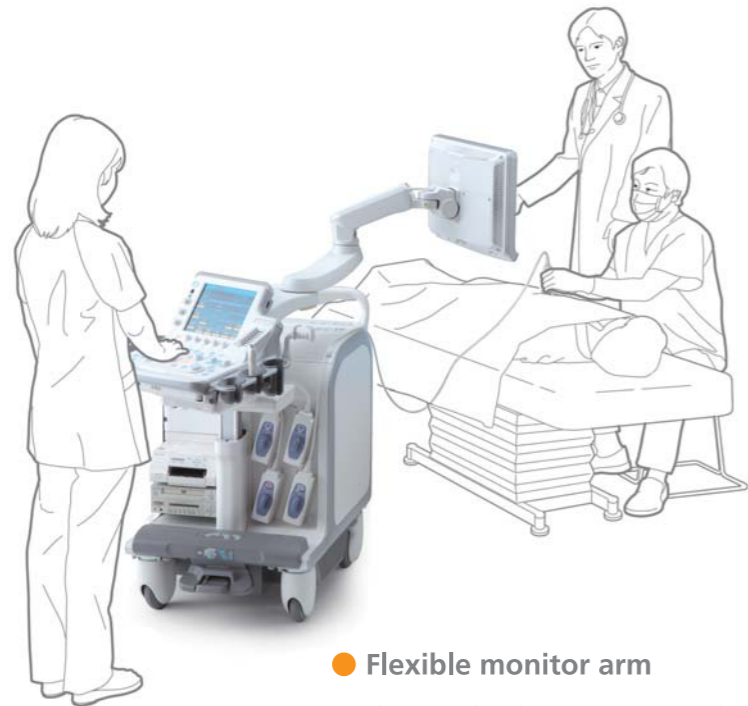


# Friendly for various clinical settings



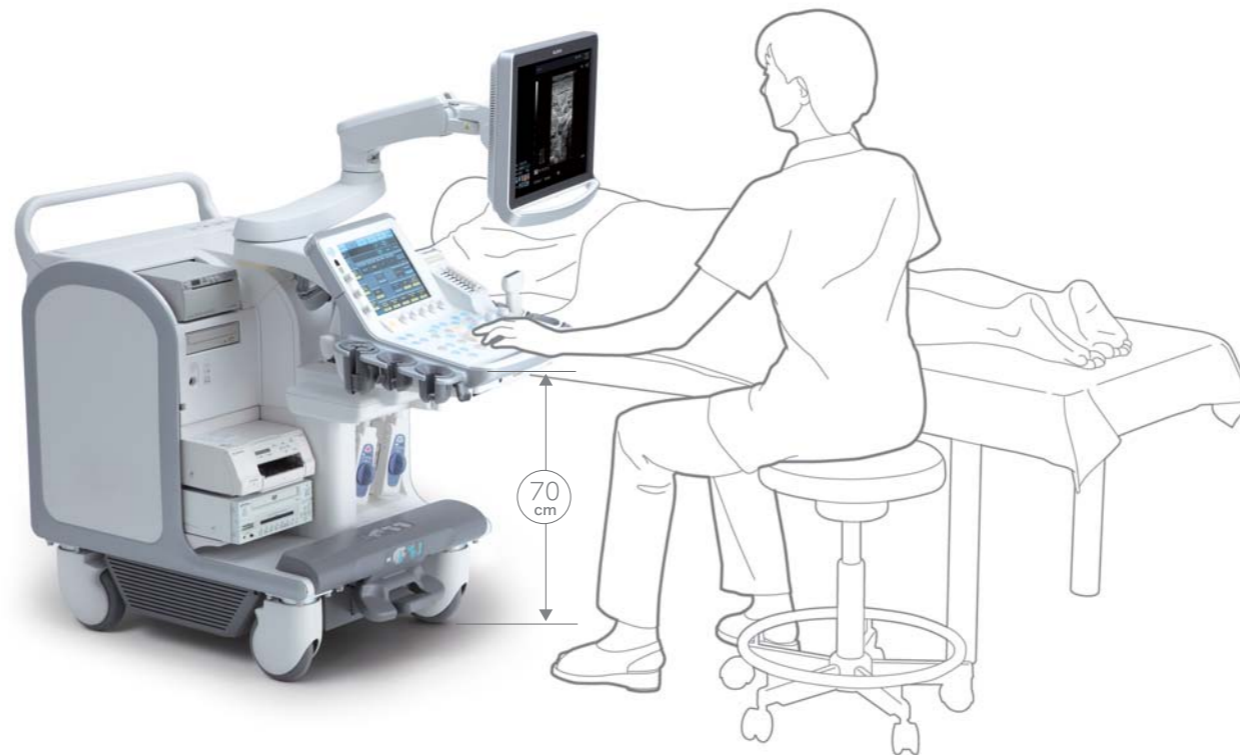
## ● 3-directional simultaneous adjustment of the control panel

The operation panel of the ProSound F 75 can be adjusted so that the switch layout matches the angle of the examiner's arm for comfortable examination. This panel moves sideways and back and forth, and can also be swiveled, fully adjusting to match the examiner's posture.



## ● Flexible monitor arm

The angle, height, and distance of the monitor can be optimized for the examiner even when they are far apart during surgery or ultrasound-guided treatment. The wide-view 19-inch high-resolution monitor is easy to view even from an acute angle. Remote control is also available for various operations including switching display modes and adjusting images.



## ● Operation panel is only 70 cm above the floor

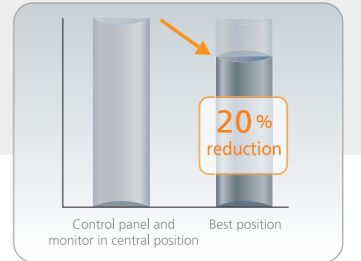
The height of the operation panel is a key point for comfortable examinations. That of the ProSound F 75 can be lowered down to 70 cm from the floor. For a wide-range scan such as when examining the lower limb vessel, the operation panel can be pulled toward the examiner easily to continue the examination comfortably.

## The proven ergonomic design reduces workload for the examiner.

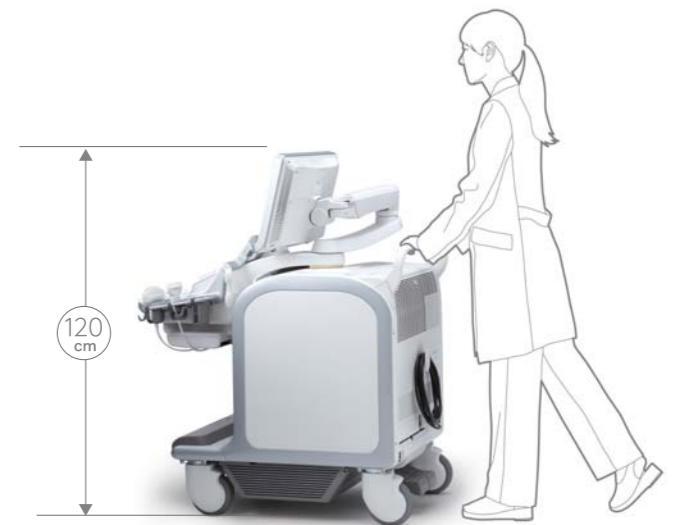
Examination in a natural and relaxed posture alleviates fatigue for the examiner and reduces the risk of musculoskeletal disorders. A large movable range is the key design concept of the ProSound F 75. The control panel and monitor are surprisingly flexible, making examinations easier for the examiner.

Individual examiners can easily keep the position comfortable for them. The ProSound F 75 ensures stress-free usability in various examination settings.

※Result of collaborative research between Graduate School of Chiba University and our Design Center. Comparison of muscular load between initial position (with the control panel, monitor, and body trunk at the center of the system) and the adjusted position selected by the examiner.



Sonographer's muscle load



## ● Beautifully compact

The main body is only 59 cm wide and 120 cm tall including the monitor, promising a good frontal view when moving the system without having to fold down the monitor. A wide back-handle, large wheels, and the monitor-lock mechanism to stabilize the monitor makes it easy and safe to move the system.

# Continuing to support the ever-expanding clinical applications

ProSound F 75 is versatile not only because of the wide variety of probes for particular organs.

This compact, specialized system is ideal in respective applications, and comes with measuring and reporting functions to assist diagnosis.



## | Specialization

Specialized functions for the unique needs of each examination field are incorporated in the compact body. The highly-functional architecture allows the operator to store raw data for research as well.



## | Versatility

A variety of probes cover a wide range of examination fields, while a wealth of tools and functions such as measuring and reporting functions support daily examination. The system has essential functions for hospitals such as DICOM compatibility including image storage and work list retrieval, making the system suitable for shared use.

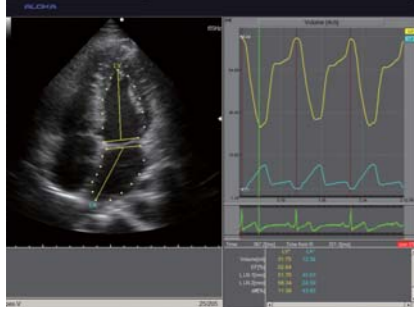


## | Sustainability

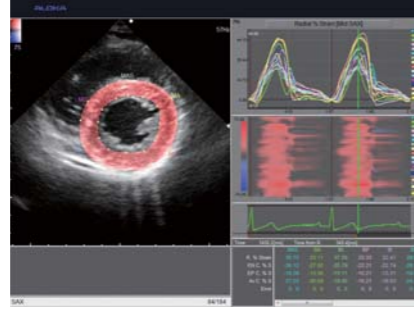
We are committed to reducing TCO (Total Cost of Ownership) for our customers and for the environment, offering a complete after-sale support system. Furthermore, the system is partially operated by software to ensure scalability and facilitate economic and simplified upgrades including addition and enhancement of functions. Environmental production features are fully embedded in the design to meet the requirements of the EU WEEE Directive.



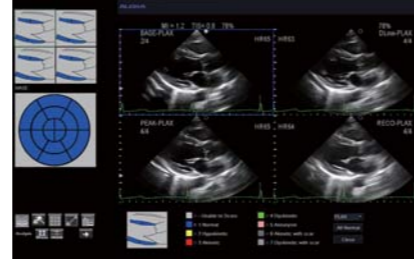
## Cardiac



**Quantification of intracardiac volume (2D TT):** Automatically calculates EF (Simpson's method). Simultaneously evaluates several locations (ventricular and atrial cavity, etc.) on the same plane at the same time phase.



**Quantitative assessment of local wall motion (2D TT):** Strain, twist angle, and various other parameters are provided. Supports simultaneous display of line and color graphs and bull's-eye display.

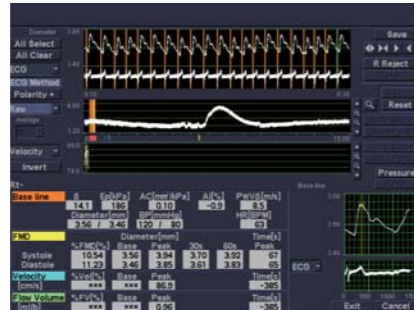


**Stress Echo:** The sequence assist function produces a stress echo with simple operation. Multiple moving images taken before and after stress are simultaneously reproduced for effective evaluation of the ischemic condition and viability of cardiac muscles.

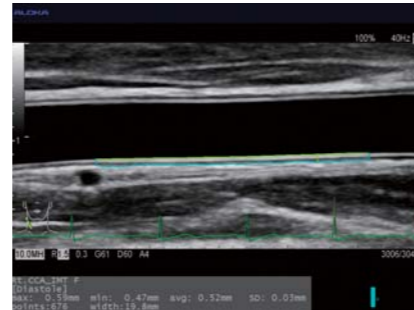
## Vessels



**Evaluation of early atherosclerosis (eTRACKING):** Tracks RF signal (raw signal) of arterial wall echoes to analyze changes in vessel diameter in real time. Measures multiple parameters to determine the stage of atherosclerosis.

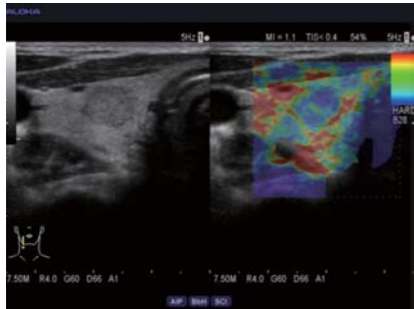


**FMD (Flow Mediated Dilatation) for studying endothelial function:** Evaluates endothelial function non-invasively.

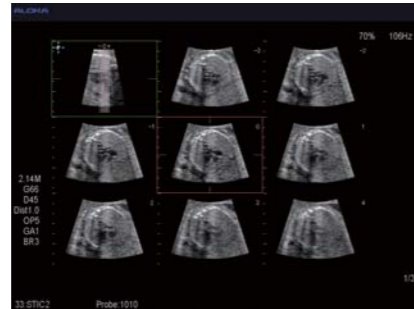


**Automated IMT (Intima-media Thickness) Measurement:** Maximum and mean IMTs are automatically extracted simply by setting the ROI on a vessel's long-axis view.

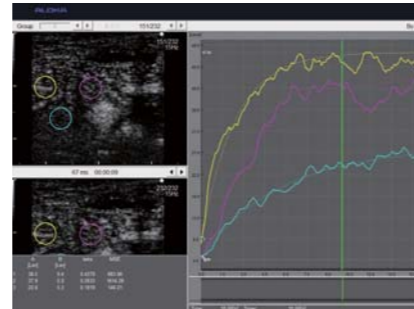
## Others



**Real-time Tissue Elastography:** Tissue distortion is identified by colors to provide stiffness information. Strain rate measurement is available.



**Spatio-temporal Image Correlation (STIC):** For the fast-moving fetal heart, 3D volume data sets for one heart beat is constructed to display images in MPR and Multi-slice Imaging.



**Contrast Echo Analysis:** Offers various analytical techniques including Time Intensity Curve and Subtraction. A-, B-, and β-values are calculated in approximation curve measurement by curve fitting.

## Functions and analyses to support specialist diagnoses

### ●Cardiac

- 2D Tissue Tracking (2D TT)
- TDI analysis
- Stress echo
- Free Angular M-mode (FAM)

### ●Vessels

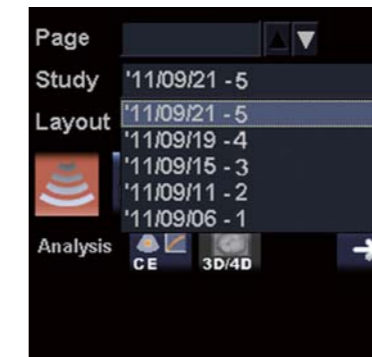
- eTRACKING (early atherosclerosis evaluation package)
- Arterial stiffness, FMD, Wave intensity
- Automated IMT Measurement
- CW Doppler by linear probe

### ●Abdomen

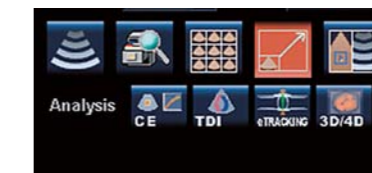
- Contrast Echo analysis
- RT-3D (4D), Freehand 3D
- Automated Volume Measurement
- FLOW 3D
- Multi slice imaging (MSI)
- Spatio-temporal Image Correlation (STIC)
- Contrast mode-compatible 3D probe

### ●Superficial Organs

- Real-time Tissue Elastography
- Extended Field of View (EFV)
- 3D probes with Contrast Echo function



When an examination is started, the system automatically searches through the patient's past data and holds in a standby state. Simply click on the date tab to access images taken in a previous examination.



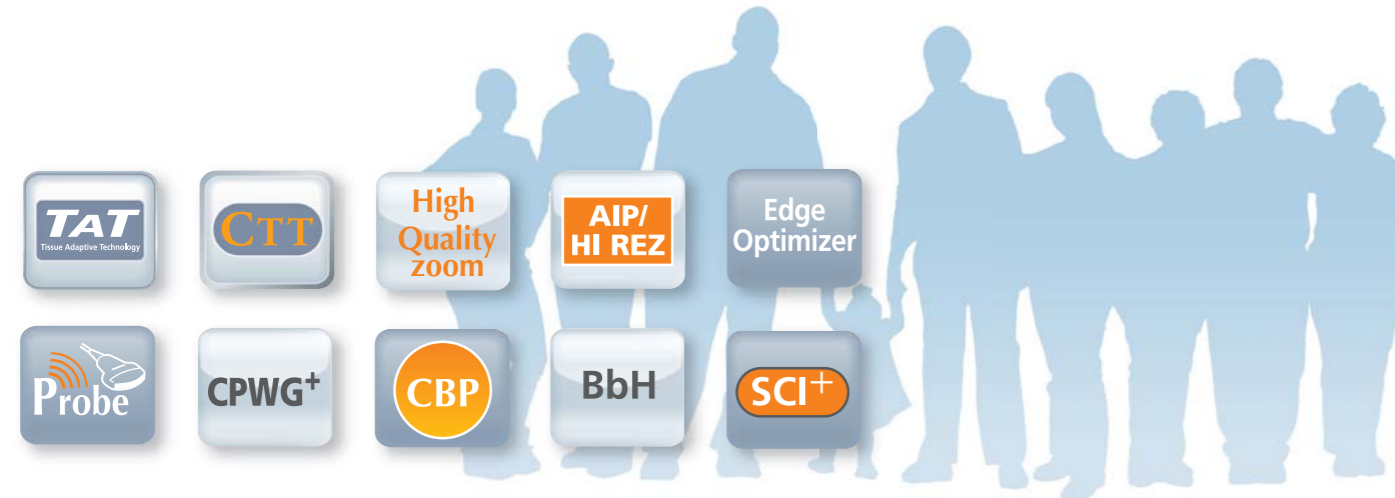
Analysis icons in the thumbnail area allow the user to start analysis at any time.



# For Smarter Diagnostic Imaging

## Features of ProSound F 75 to Reduce Patient Dependency.

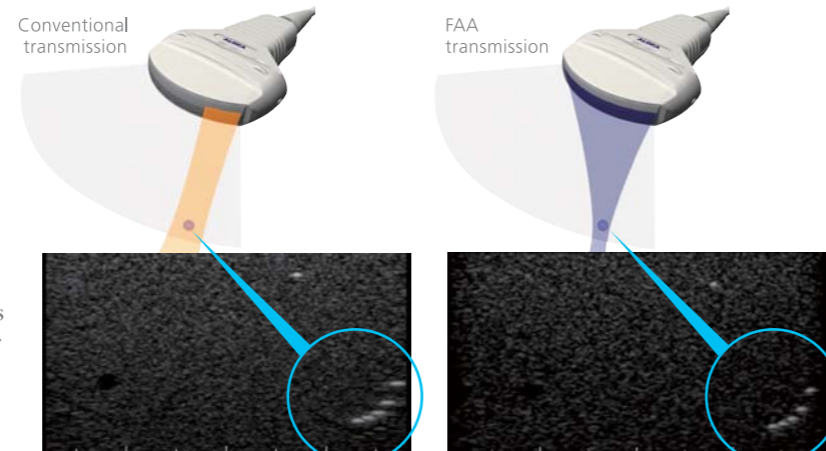
- Less dependency on patients' specific conditions including physique, age, and sex
- Offers images of high diagnostic performance
- Covers a wide range of clinical needs
- Provides high resolution, sensitivity, and uniformity simultaneously
- Supports efficient diagnosis with enhanced quality images



### FAA Full Aperture Apodization (FAA)

Full Aperture Apodization, enabling horizontally asymmetrical apodization, processes signals with all channels driven to remarkably enhance sensitivity for deeper areas and focusing accuracy at both ends of an image.

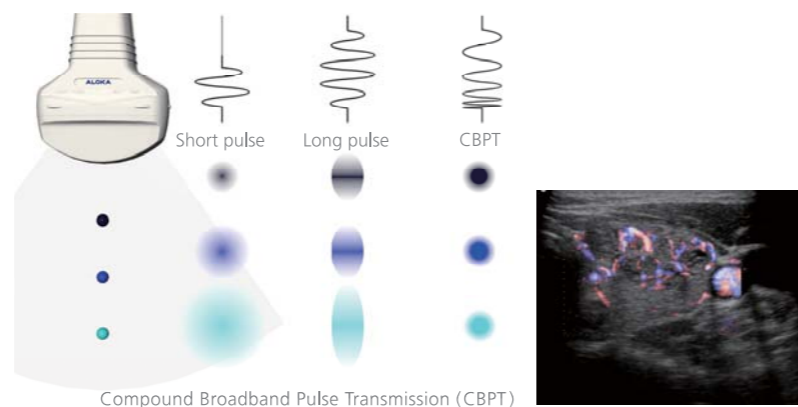
The system offers highly uniform and sharp images with improved sensitivity and resolution to all four corners of the image.



High uniformity (sensitivity and resolution) throughout the image on both ends

### eFLOW+ eFLOW+

High sensitivity and resolution are achieved at the same time without sacrificing each other with Compound Broadband Pulse Transmission (CBPT), the pulse compression technology. A wider range of blood flow velocities can be detected, depicting flows from low to high velocity faithfully.



Compound Broadband Pulse Transmission (CBPT)



High quality zoom (mitral valve)

Dedicated zoom algorithm generates high frame rate, high quality zoom images. Even a small structure is depicted with sharp edges.

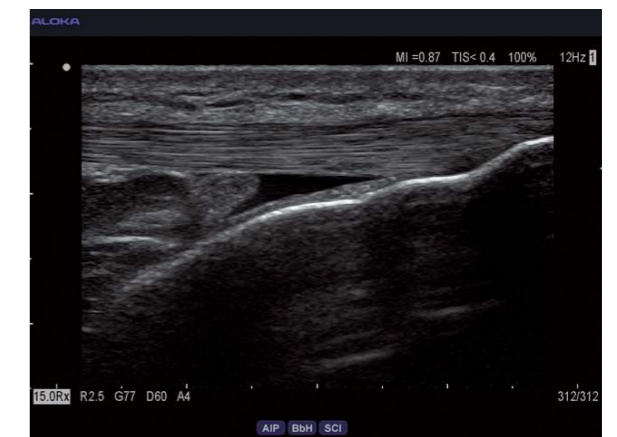


High quality zoom (gallbladder polyp)



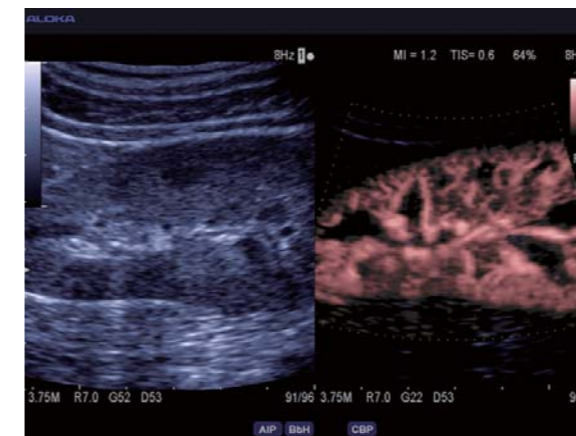
Wide field-of-view probe x FAA (cervix):

High quality images with uniformity throughout the image facilitate observation of the organ with a wide view angle.



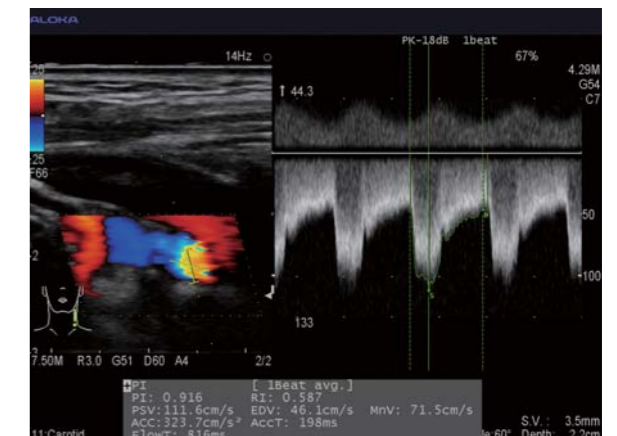
AIP/Hi REZ, SCI, BbH (tibial tuberosity):

A series of image processing functions suppress artifacts to help create easy-to-diagnose images.



eFLOW x Flow Emphasis x DDD (kidney):

The entire blood flow orientation is visible with eFLOW, without contrast agents, this vivid, as if in 3D. Applications include observation of various blood flows of low flow rate such as collaterals arising from stenosis and new blood vessels formed in a tumor.



Compound Gated Pulse Wave Doppler (carotid artery):

PW Doppler with multi-gated system generates sharp and high-contrast waveforms.

