FUJIFILM
Value from Innovation

ARIETTA 850
PREMIUM ULTRASOUND SCANNER

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PREMIUM ULTRASOUND SCANNER

SENSE AND
VISUALIZE
ULTRASOUND

THE NEXT
EVOLUTION
IN ULTRASOUND

THE
NEXT
EVOLUTION
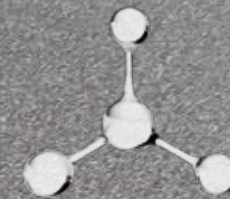IN
ULTRASOUND

Evolved To Fit
Your Sight

PURE IMAGE

Further refinement of technologies that
hone the high quality"sound"gives rise to
our highest premium class performance yet.

Evolved To Fit
Your Touch

Evolved To Fit
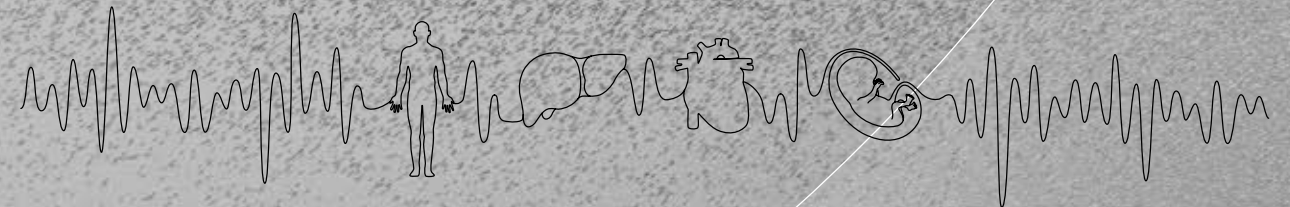### Your Process

SEAMLESS
WORKFLOW

YOUR
APPLICATION

Designed with sophisticated ergonomics
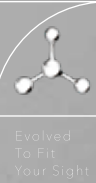and multiple new tools that streamline
your workflow.

An extensive variety of unique
applications that create new clinical
value are on offer across all specialties.

## ARIETTA 850 designed for high expectations

Greater examination precision, greater comfort, and a wider range of applications are
now possible with ultrasound imaging. In response to the ever increasing expectations of
the medical profession, diagnostic equipment continuously evolves."Image quality,"Work-
flow,"and "Applications"are three key functional areas where we have made a determined
effort to refine fundamental performance, with the goal of creating the ultimate
ultrasound platform. Flexibly responding to users'individual needs across the range of
clinical disciplines, the ARIETTA 850 brings diagnostic imaging without compromise.

ARIETTA 850

PURE SYMPHONIC ARCHITECTURE

Transducers/Frontend → Variable Beamformer → Active Backend Plus → OLED Monitor
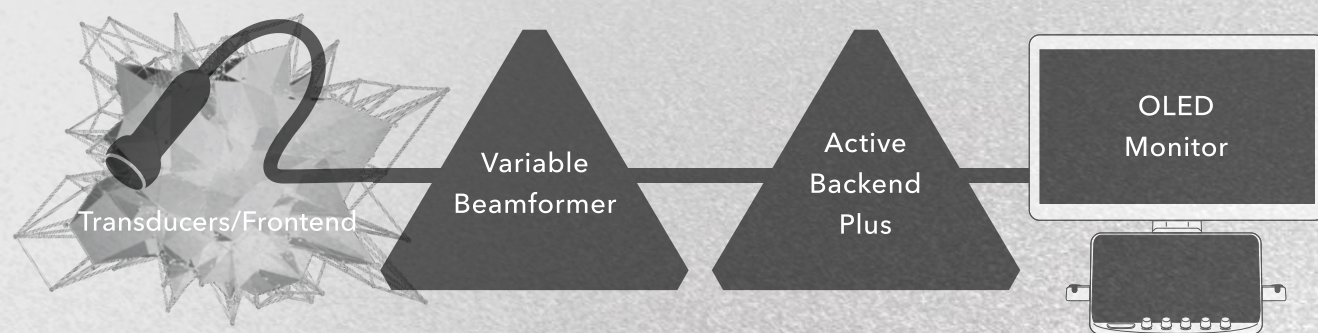
The technologies to hone the high quality "sound" have evolved further giving life to Pure Symphonic Architecture.

The combination of Transducers / Frontend, Variable Beamformer, Active Backend Plus, and OLED monitor: all technologies working together to realize the highest level of premium class performance.

Variable Beamformer

[*e*Focusing]

The *e*Focusing transmission and reception technology newly developed for ARIETTA 850, significantly improves S/N and reduces focal dependency. Outstanding clarity of imaging from near to far field with less patient dependency is achieved.
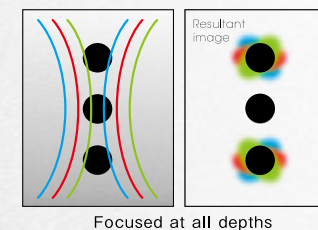
Focused at all depths

Active Backend Plus

[Carving Imaging]

Advanced image technology producing images with "Clearer Visibility". Stable imaging with less patient dependency helps you achieve clearer images with less noise, made possible by our new image processing technology that enhances tissue structure visibility.

"Clearer Visibility" due to noise reduction and improved completeness and continuity of tissue boundaries.

OFF

ON

Transducers / Frontend

[4G CMUT]

The evolution of CMUT(Capacitive Micro-machined Ultrasound Transducers), using next generation silicon wafer technology has brought the full complement of ultrasound examination modes into practical use. With super wide frequency bandwidth and high sensitivity the enhanced resolution is maintained in the far field. CMUT can deliver a one probe solution for a wide range of ultrasound examinations.

OLED Monitor

The ARIETTA 850 has adopted the latest technology, 22 inch wide OLED Monitor for an optimum image display. Without requiring backlighting to function, the OLED Monitor displays true black so a previously unattainable contrast resolution can be achieved. It is the ideal monitor choice for diagnostic ultrasound, producing the highest quality grayscale display.

Raised diagnostic confidence for lesion detection.
Achieving a premium level of performance,
the ARIETTA 850 supports the offer of improved precision for diagnosis and treatment,
creating new clinical value.
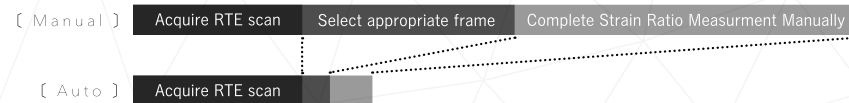
SEAMLESS WORKFLOW

Protocol Assistant

Prior registration of routine protocols significantly reduces the operation steps necessary during the examination. Prompts for image store, alerts of mistaken image store repeats, all contribute to increased examination efficiency, accuracy and throughput.

Combined Setting of AFS/ASR

Auto Frame Selection (AFS) picks out the appropriate frame for measurement in Real-time Tissue Elastography. Assist Strain Ratio (ASR) automatically locates the measurement ROI. Complex, repetitive measurement steps can now be completed using a single button.

[Manual]	Acquire RTE scan	Select appropriate frame	Complete Strain Ratio Measurment Manually

[Auto]	Acquire RTE scan	

YOUR APPLICATION

Elastography

[Real-time Tissue Elastography (RTE)]

RTE assesses tissue strain in real time and displays the measured differences in tissue stiffness as a color map. Its application has been validated in a wide variety of clinical fields: for the breast, thyroid gland, and urinary structures.
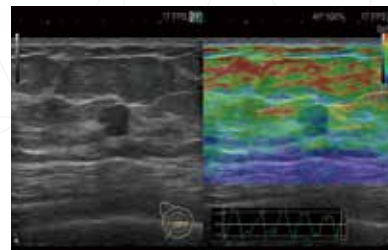
[Shear Wave Measurement (SWM)/Shear Wave Elastography (SWE)]

Shear waves are generated using a 'push pulse' to excite the tissues. SWM provides an assessment of tissue stiffness by calculating Vs, the propagation velocity of the shear waves. SWM provides an additional reliability indicator, VsN, as an objective evaluation of the Vs measurement. SWE color-codes tissue sttifness based on the propagation velocity of shear waves. SWE can be used to evaluate liver visually and non-invasively.

[Combi-Elasto]

By integrating the two non-invasive methods for evaluation of liver tissue stiffness, namely RTE and SWM, it is possible to assess the chronological progression of liver inflammation and fibrosis with greater accuracy. A combined simultaneous estimation of the degree of steatosis (ATT index) makes Combi-Elasto a comprehensive tool for the differential diagnosis of liver disease.

Contrast Harmonic Imaging (CHI)

Contrast enhanced ultrasound is used widely for clinical diagnosis. Benefitting from its Variable Beamformer and high density transducers, ARIETTA 850 achieves a new level of performance in contrast agent detection.
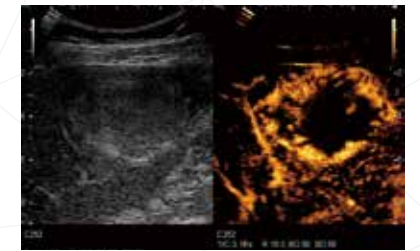
Linear Transducer L35

Matrix array single crystal Linear transducer delivering clearer visibility of tissue structure with high contrast resolution and wide field of view. High penetration and visibility have been achieved by adopting a single crystal and a matrix structure. The L35 supports a wide range of clinical scenes from detailed examination to treatment.

Microconvex Transducer C23RV / C23

Basic performance and operability are optimized to achieve high image quality equivalent to a normal convex transducer. Wide Scanning can secure a wide scanning angle while maintaining high image quality in examinations. The C23RV supports a built-in Real-time Virtual Sonography (RVS) sensor.

Real-time Virtual Sonography (RVS)

[3D Sim-Navigator]

Provides simulation of single or multiple needle paths during navigation to a target with Real-time Virtual Sonography (RVS). The positional relationship between the marked target and needle paths can be assessed in real time using the 3D body mark, reconstructed from the virtual CT volume data, with additional C-plane display orthogonal to the needle path.
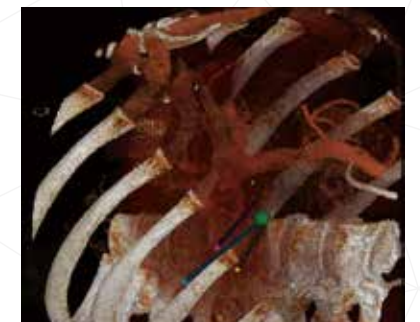
[E-field Simulator]

A color map superimposed on the CT image simulates the distribution of the electric field (E-field) from the given location of multiple electrodes during RFA treatment. The simulation can be made with different positions of the multiple electrodes to determine the optimal arrangement. This flexibility in planning the needle path can bring significant improvement to the treatment technique.
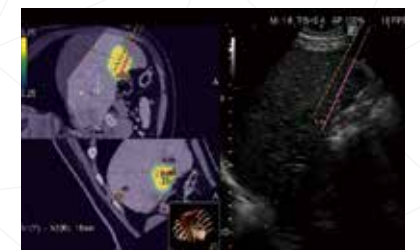
CARDIOVASCULAR

Achieved maximum advances in fundamental image quality performance.
An ideal workflow employing machine learning technology brings efficiency, accuracy, and ease-of-use to examination of flow dynamics.

SEAMLESS WORKFLOW

Cardiac Function

A wide range of automated functions are offered, including the automatic selection and dual display of ED/ES, the setting of the Doppler sample gate, and recognition of the endocardial border of LV/LA/RA to enable automatic volume measurements.

Intelligent Series

The Intelligent Series offers advanced work flow fusing automated functions.
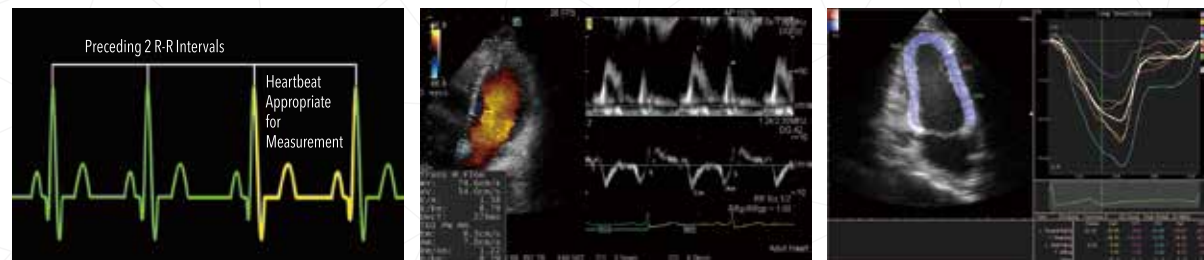
〔 iDGD 〕

Dual Gate Doppler is used to measures E/e', one of the key LV diastolic performance indices, in the same heartbeat. By using in combination with R-R Navigation, iDGD detects a stable R-R interval after the image freeze is activated for automatic E/e' measurement.

〔 i2DTT 〕

Global Longitudinal Strain (GLS) is sensitive measurement to assess cardiac funciton. i2DTT allows to calculate GLS by a single click operation and contribute to be efficient examination.

iVascular

Settings like the color ROI position and the sample gate position/size/angle can be adjusted by single click of a button, The iVascular can be expected to shorten the examination time not only for a carotid artery but also for a lower limb vessel.

YOUR APPLICATION

Mini Multi TEE Transducer S3ESCLS

It is suitable for preoperative examinations, intraoperative monitoring and postoperative examinations in pediatrics due to its small tip diameter and thin insertion tube. Even in adults, the S3ESCLS can be used for purposes such as a thrombus evaluation for a patient with a narrow esophagus.

EyeballEF

EF(Ejection Fraction) is automatically measured from real time analysis of the B mode image. Frame selection and tracking can be semiautomated, with resultant reduction in examination time
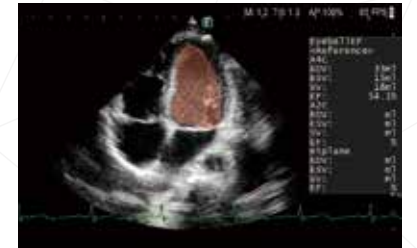
eTRACKING

Automatic tracking of the pulsation of the vessel wall allows measurement of vessel diameter change in real time. Among the parameters calculated, Stiffness Parameter β provides a numerical evaluation of the arterial wall stiffness.
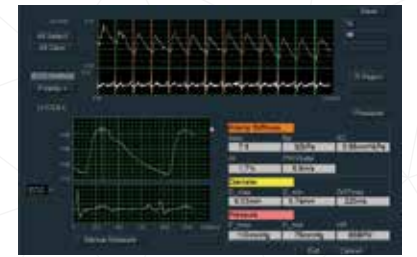
WOMEN'S HEALTH

In addition to the conventional morphological examination, the ARIETTA 850 offers tools for accurate physiological assessment that support early detection and treatment for high risk pregnancy, and contributes to maternal-fetal bonding.

SEAMLESS WORKFLOW

Auto EFW

By analyzing the characteristics of the target and providing automatic setting of the measurement point, Auto EFW (Estimated Fetal Weight) facilitates measurement of one of the routine parameters for fetal growth evaluation.

YOUR APPLICATION

Fetal 3D/4D

〔 4Dshading Flow/4Dtranslucence 〕

The 4Dshading technology gives a more realistic appearance to the rendered surface of the fetus in the 3D display. 4Dshading Flow is its Doppler blood flow mode optimized to offer a better understanding of complex vascular flows. 4Dtranslucence enables evaluation of fetal structures providing a display of the fetal body surface and internal organ boundaries with a translucency.
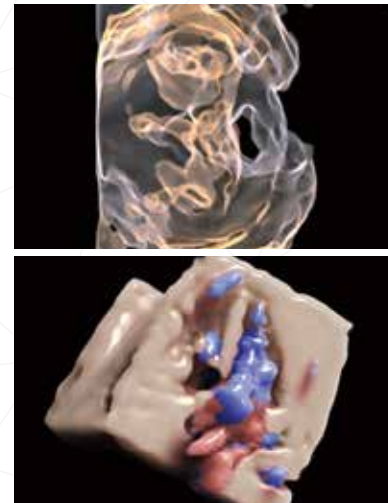
〔 Spatio-temporal Image Correlation（STIC）〕

Multi-slice display in an arbitrary orientation of one cardiac cycle detected automatically. It enables a better understanding of the anatomy and function of the fetal heart, aiding decisions for patient management.

Fetal heart examination

〔 AutoFHR+ 〕

The fetal heart rate can be automatically calculated using a tracking ROI placed over the fetal heart on the B mode image in real time. This offers a safer and more objective measurement compared to conventional Doppler or M-mode methods. Furthermore, as this function is also available on a transvaginal transducer, assessment can be made from early gestation onwards.

〔 AutoFS 〕

Automatic tracking of fetal heart movement from the B mode image follows the displacement of the heart wall in the apical direction for measurement of %Fractional Shortening (%FS). Measurement accuracy is unaffected by a change in the fetal position or by the mother's breathing.

〔 Dual Gate Doppler 〕

Enables observation of Doppler waveforms from two different locations during the same heart cycle. Simple measurements from two different waveforms can also be useful in the diagnosis of fetal arrhythmia.


SURGERY

A diverse variety of transducers together with advanced functions contribute to improved lesion detection and support for the appropriate treatment, offering possible radical cures.

SEAMLESS WORKFLOW

Intraoperative transducers

Versatile selection of transducers for multiple approaches.

Real-time Virtual Sonography (RVS)

〔 Volume Data Extension 〕

Liver resection planning simulation data reconstructed by 3D image analysis software can be displayed simultaneously with the real-time intra-operative ultrasound image providing easy recognition of the 3D positional relationship between a tumor and vessels.
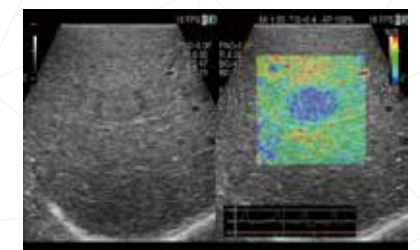
Contrast Harmonic Imaging (CHI)

Intraoperative contrast enhanced ultrasound is useful not only for lesion detection, but also to achieve the surgical margin, and to image areas of avascularity.

Courtesy of: Norihiro Kokudo, M.D.,National Center for Global Health and Medicine

Real-time Tissue Elastography (RTE)

The Elastography mode on intraoperative transducers offers an additional qualitative assessment of tumor stiffness.

Courtesy of: Norihiro Kokudo, M.D.,National Center for Global Health and Medicine