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### SONOACE 9900 The True Multi-specialty Ultrasound

The SONOACE 9900 from Medison offers full range of applications specially designed for your practice. Providing crystal-clear B/W and color images with a higher frame rate and versatile new applications based on full range of 3D functions, the SONOACE 9900 demonstrates the value of the future of ultrasound technology. The SONOACE 9900 offers full range of applications specially designed for your practice.

> Radiology Obstetrics & Gynecology Cardiology Musculoskeletal Imaging Oncology Urology Internal Medicine

### The True Multi-specialty Ultrasound, SONOACE 9900

The SONOACE 9900 offers premium values that include superior 2D & 3D image quality, powerful Doppler sensitivity, advanced 3D capabilities and special cardiac functions. With the SONOACE 9900, you can realize the true benefits of advanced ultrasound imaging today.









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### Advanced 2D & Color Image Quality

The SONOACE 9900 offers exceptional B/W image clarity by newly developed FINE<sup>™</sup> Filter technology, which contributes to edge enhancement and average filtering in real-time. OSIO<sup>™</sup> (Organ Specified Image Optimization) sets the best diagnosis environment with minimum manual operation and increases patient throughput. Also, color images are improved with better color Doppler performance, high color sensitivity, fine pixel image, and reduced flash artifact across all probes.

#### ■ \*FINE<sup>™</sup> Filter

FINE™ Filter technology provides excellent clear 2D images by accepting two filtering methods: edge enhancement and noise reduction filtering. FINE™ Filter is applied in real-time for better image resolution.

### ■ \*CAFE<sup>™</sup> Plus

CAFE™ Plus eliminates noise that occurs from flash artifact and delivers clear color Doppler image by mode-specific nonlinear filtering.



Hepatic veins are better visualized with edge enhancement \*FINE Filter(Filtered Image for Noise reduction and Edge enhancement)

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Organ Specified Image Optimization combines various manual operation procedures by simple automatic optimizing function with enhancement of productivity. Pattern recognition technology recognizes each specific organ and applies optimum parameter for accurate diagnosis in obstetrics and abdomen imaging.



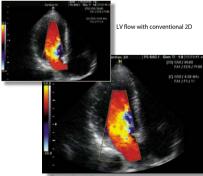
Fetus kidney by OSIO™

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Hepatic Vein with CAFE<sup>™</sup> Plus \*CAFE<sup>™</sup>(Compound Artifact Flash Elimination)

### Multi-beam

Multi-beam processing provides excellent clear image with a fast frame rate even in moving organs as it transmits and receives four sound pulses at a time.



LV flow with multi-beam 2D

# Live 3D<sup>™</sup> Imaging

The clinical applications of Live 3D are myriad and run the gamut from obstetrics and gynecology to interventional applications. This includes enhanced maternal fetal bonding and improved assessment for fetus at risk for specific anomalies especially in confirming normalcy of the fetus. Live 3D also offers accurate 3D biopsy. especially in breast scanning. Live 3D on SONOACE 9900 performs innovative 3D motion of the moving fetus and organs by dramatically improved 3D volume data acquisition and rendering speed.

### **Extended 3D Applications**

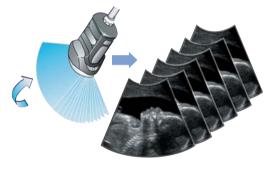
The SONOACE 9900 expands the clinical diagnosis in 3-dimensional view with the true volume data added. Live 3D<sup>™</sup> imaging available on abdominal, linear, and transvaginal 3D volume probes provides clinical utilities to obstetrics and radiological applications by quick reconstruction of volume data.

The world's only software – VOCAL™ (automatic volume measurement), Shell™ Imaging – will enhance clinical value by providing accurate volume calculation and analysis of the extent of vascularization.

### Volume 3D Probe

■ \*VOCAL<sup>™</sup>

An accurate 3D volume image is realized by the world's only volume 3D probe from Medison. Elements of the probe slice the mass in volume to set precise 3 dimensional data. Particularly, the transvaginal 3D volume probe overcomes the limited acoustic window of 2D transvaginal sonography and enables more accurate measurement of fetal Nuchal Translucency(NT), and better delineation of the entire anatomic struture of the uterus than conventional 2D transvaginal sonography.



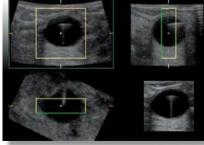
VOCAL<sup>™</sup> is software designed for automatic volume

measurement that automatically detects the contour of



### Multiplanar View

SONOACE 9900 displays volume data in 3 orthogonal planes: sagittal, transverse and coronal views. The multiplanar views give morphologic and multisectional information on interventional applications for better and more accurate diagnosis.



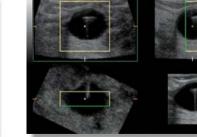
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Volume Measurement of Cystademoma by VOCAL \* VOCAL<sup>™</sup> (Virtual Organ Computer Aided anaLysis<sup>™</sup>

structures such as prostate, cysts and lesions, as well as calculating their volume. VOCAL<sup>™</sup> gives the exact volume measurement of masses even in an asymmetric structure.





#### Pulse Inversion Harmonics

Pulse Inversion Harmonics provides reinforced pure harmonic image. It works by sending an ultrasound pulse into the body, then digitally storing the received fundamental signal as well as harmonic signal. Simultaneously, a pulse that is the inversion of the original fundamental signal is sent into the body and repeats digitally storing both inverse fundamental and harmonic signal. Finally, these two pulses are summed so that the fundamental signals are cancelled and the pure harmonic signals combines to provide exceptionally high spatial resolution. Pulse Inversion Harmonics allows confident assessment of cardiac imaging.



Parasternal long axis view

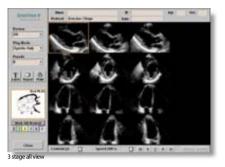
#### Contrast Harmomic Imaging

Contrast harmonic imaging improves the clinical image maximizing visualization of contrast agents and avoids additional different imaging techniques.



#### Digital Stress Echocardiography

Digital stress echocardiography is fully integrated on the SONOACE 9900. The system provides digital image quality, user-definable protocols and digital image archiving that offers the physician direct control over the diagnostic procedure and his patient.



#### Multi-plane TEE probe

Phased array multi-plane TEE probe performs 4.0-7.0 MHz exceptional clear 2D imaging. Newly designed smaller tip array rotated 0 to 180 degree, smooth and round-shaped probe makes intubation easier, allowing greater patient comfort. The multi-plane TEE probe combines triple frequency image, steered CW/PW, 2D harmonic image and Pulse Inversion Harmonics.



# **Special Cardiac Functions**

The SONOACE 9900 supports shared service applications with special cardiac functions. The system provides Pulse Inversion Harmonics and contrast harmonic imaging that delivers enhanced resolution in cardiac imaging. Fully integrated, on-board digital stress echo capabilities and new MPTEE probe increase the effectiveness of the procedures and reduce the need to repeat operation. The system also offers ECG trigger mode, high sensitivity color Doppler mode, and cardiac software package that attributes to full cardiac applications.



# **Ultrasound with No Boundaries**

Medison's advanced networking and multi-media technology frees the physician from many of the boundaries often associated with conventional ultrasound.





MO Disk

Removable Hard Disk

### **Digital Connectivity**

The SONOACE 9900 supports digital connectivity environment by digital storage and exporting clinical information through DICOM 3.0 network. Digital image management software SonoView II™ and SonoView Pro™, available on SONOACE 9900 and personal computer respectively, enable remote diagnosis anywhere, anytime.

### SonoView II<sup>™</sup>

SonoView II<sup>TM</sup>, optional software for digital image management on ultrasound system, stores and transfers ultrasound image without any loss of image guality. Easier management of patient images results in cost savings and an increase of patient throughput.

#### SonoView Pro<sup>™</sup>

SonoView Pro™ is software for PC that enables to view and even to measure 3D images as well as 2D images in remote area improving clinical workflow.

### Anywhere, Anytime, Any view



### **SonoView II**<sup>™</sup>

•Digital image archiving

- Preview of archived images
- Image export/backup
- Image filing hotkey
- Voice recording

### **SonoView Pro**<sup>™</sup>

• Image sending, receiving and printing via DICOM network •Ultrasound image review and measuring of 2D, Cine and 3D volume data •Measuring tools (Distance and ellips available) Voice annotation • Direct e-mail sending function with image attachment

• Advanced 3D functions: VOCAL<sup>™</sup>, Shell<sup>™</sup> Imaging



The SONOACE 9900 optional probes provide exceptional imaging performance in all applications. Advanced technology of automatic 3D volume reconstructing and expanded functional bandwidth delivers increased amount of clinical information and qualified diagnosis.

C2-5IR BPC-C2-SIR		C3-7IM BP-KIT-005		L4-7EV		L5-12IR BP-KIT-004		L5-9ER BPL-L5-9ER		L8-15EV		EC4-9ES BP-KIT-003		MPT4-7AL		Р2-ЗАС		P2-5AC	
Array Type	Curved Linear	Phased	Curved Linear	Linear	Linear	Curved Linear	Linear	Curved Linear / 3D	Linear	Linear / 3D	Linear	Curved Linear EC/3D	Curved Linear EC	Curved Linear / 3D	Phased	CW	Phased	CW	Phased
Applications	General, Abdomen, OB, Gynecology, Renal, Fetal Heart	General, Pediatric, Cardiac, Neonatal	General, Abdomen, OB, Gynecology, Renal, Fetal Heart	General, Abdomen, Small parts	General, Vascular, Small parts, Breast	General, Abdomen, Small parts	General, Vascular, Small parts, Breast	General, First trimester, Abdomen, OB, Gynecology, Renal, Fetal Heart	General, Vascular, Small parts, Breast	General, Vascular, Small parts, Breast	General, Vascular, Small parts, Breast	General, OB, Gynecology, Urology	General, OB, Gynecology, Urology	General, Neonatal	General, Cardiac	Pediatric, Cardiac	General, Abdomen, Pediatric, Cardiac, TCD	Pediatric, Cardiac	General, Abdomen, Pediatric, Cardiac, TCD, Contrast Agent
Frequency Range(MHz)	2.0 - 5.0	3.0 - 7.0	3.0 - 5.0	5.0 - 9.0	4.0 - 7.0	4.0 - 8.0	5.0 - 12.0	4.0 - 7.0	5.0 - 9.0	6.0 - 12	8.0 - 15	5.0 - 8.0	4.0 - 9.0	5.0 - 8.0	4.0 - 7.0	2.0	2.0 - 3.0	4.0	2.0 - 5.0
Radius of Curvature	40mm	Flat	50mm	Flat	Flat	40mm	Flat	40mm	Flat	Flat	Flat	10mm	10mm	10mm	Flat	Flat	Flat	Flat	Flat
Field of View	85°	14mm	77°	10mm	40mm	64°	40mm	69°	50mm	40mm	26mm	128°	150°	128°	10mm		19mm		19mm
Biopsy Guide Available	Single Angle Reusable		Single Angle Reusable				Single Angle Reusable	Single Angle Reusable	Single Angle Reusable	Single Angle Reusable		Single Angle Reusable							



## SONOACE 9900 Image Gallery

### **OB/GYN**







\*MagiCut<sup>™</sup> Plus is electronic editing software that removes unwanted portion of the image and also removes the image slice tomographically

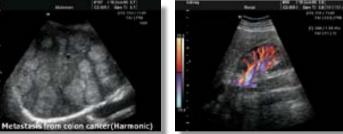




3D Surface Image of ovary cyst



Liver Metastasis



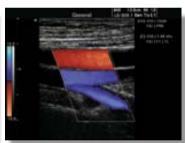
Kidney by color Doppler



Renal vasculature by 3D power Doppler



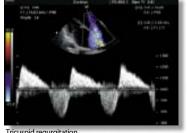
Thyroid gland in trapezoidal image display



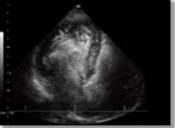
Carotidbifercation

### Cardiology





Tricuspid regurgitation



Contrast agent image



Pleural effusion



Hypertrophic cardiomyopathy