General System Parameters *(cont.)*

Controls Available on "Freeze" or Recall *(cont.)*
Color flow
Overall gain (loops and stills)
Color map
Transparency map
Frame averaging (loops only)
Flash suppression
CFM display threshold
Spectral invert for Color/Doppler
Anatomical M-Mode on Cine loop

Measurements/Calculations

General B-Mode
Depth and distance
Circumference (ellipse/trace)
Area (ellipse/trace)
Volume (ellipsoid)
% Stenosis (area or diameter)
Angle between two lines

General M-Mode
M-Depth
Distance
Time
Slope
Heart rate

General Doppler Measurements/Calculations
Velocity
Time
A/B ratio (velocities/frequency ratio)
PS (Peak Systole)
ED (End Diastole)
PS/ED (PS/ED ratio)
ED/PS (ED/PS ratio)
AT (Acceleration Time)

General Doppler Measurements/Calculations *(cont.)*
ACCEL (Acceleration)
TAMAX (Time Averaged Maximum Velocity)
Volume Flow (TAMEAN and vessel area)
Heart rate
PI (Pulsatility Index)
RI (Resistivity Index)

Real-time Doppler Auto Measurements/Calculations
PS (Peak Systole)
ED (End Diastole)
MD (Minimum Diastole)
PI (Pulsatility Index)
RI (Resistivity Index)
AT (Acceleration Time)
ACC (Acceleration)
PS/ED (PS/ED ratio)
ED/PS (ED/PS ratio)
HR (Heart Rate)
TAMAX (Time Averaged Maximum Velocity)
PVAL (Peak Velocity Value)
Volume Flow (TAMEAN and vessel area)

OB Measurements/Calculations	
Gestational age by	• GS (Gestational Sac) • CRL (Crown Rump Length) • FL (Femur Length) • BPD (Biparietal Diameter) • AC (Abdominal Circumference) • HC (Head Circumference) • APTD x TTD (Anterior/Posterior Trunk Diameter by Transverse Trunk Diameter) • FTA (Fetal Trunk cross-sectional Area) • BD (Binocular Distance) • HL (Humerus Length) • FT (Foot Length) • OFD (Occipital Frontal Diameter) • TAD (Transverse Abdominal Diameter) • TCD (Transverse Cerebellum Diameter) • THD (Thorax Transverse Diameter) • TIB (Tibia Length) • ULNA (Ulna Length)

Measurements/Calculations *(cont.)*

OB Measurements/Calculations *(cont.)*

Estimated fetal weight (EFW) by	• AC, BPD • AC, BPD, FL, HC • AC, FL, HC • BPD, APTD, TTD, FL	• AC, BPD, FL • AC, FL • AC, HC • BPD, APTD, TTD, SL
Calculations and ratios	• FL/BPD • FL/AC • FL/HC • HC/AC • CI (Cephalic Index) • AFI (Amniotic Fluid Index) • CTAR (Cardio-Thoracic Area Ratio) • MCA PS (Middle Cerebral Artery Peak Systolic Velocity) • MCA CP (Middle Cerebral Artery Pulsatility Index Over Umbilical Artery Pulsatility Index Ratio) • MCA PI (Middle Cerebral PI) • MCA RI (Middle Cerebral RI) • UmbArt PI (Umbilical artery PI) • UmbArt RI (Umbilical artery RI) • UtArt PI (Uterine artery PI) • UtArt RI (Uterine artery RI)	

Measurements/calculations by: ASUM, ASUM 2001, Berkowitz, Bertagnoli, Brenner, Campbell, CFEF, Chitty, Eik-Nes, Ericksen, Goldstein, Hadlock, Hansmann, Hellman, Hill, Hohler, Jeanty, JSUM, Kurtz, Mayden, Mercer, Merz, Moore, Nelson, Osaka University, Paris, Rempen, Robinson, Shepard, Shepard/Warsoff, Tokyo University, Tokyo/Shinozuka, Yarkoni

Fetal graphical trending

Growth percentiles

Multi-gestational calculations (4)

Fetal qualitative description (anatomical survey)

Fetal environmental description (biophysical profile)

Programmable OB tables

Over 20 selectable OB calculations

Expanded worksheets

GYN Measurements/Calculations

Right ovary length, width, height

Left ovary length, width, height

Uterus length, width, height

Cervix length, trace

Ovarian volume

ENDO (Endometrial Thickness)

Ovarian RI

GYN Measurements/Calculations *(cont.)*

Uterine RI

Follicular measurements

Summary reports

IOTA (International Ovarian Tumor Analysis) LR2 worksheet

Vascular Measurements/Calculations

SYS DCCA (Systolic Distal Common Carotid Artery)

DIAS DCCA (Diastolic Distal Common Carotid Artery)

SYS MCCA (Systolic Mid Common Carotid Artery)

DIAS MCCA (Diastolic Mid Common Carotid Artery)

SYS PCCA (Systolic Proximal Common Carotid Artery)

DIAS PCCA (Diastolic Proximal Common Carotid Artery)

SYS DICA (Systolic Distal Internal Carotid Artery)

DIAS DICA (Systolic Distal Internal Carotid Artery)

SYS MICA (Systolic Mid Internal Carotid Artery)

DIAS MICA (Diastolic Mid Internal Carotid Artery)

SYS PICA (Systolic Proximal Internal Carotid Artery)

DIAS PICA (Diastolic Proximal Internal Carotid Artery)

SYS DECA (Systolic Distal External Carotid Artery)

DIAS DECA (Diastolic Distal External Carotid Artery)

SYS PECA (Systolic Proximal External Carotid Artery)

DIAS PECA (Diastolic Proximal External Carotid Artery)

VERT (Systolic Vertebral Velocity)

SUBCLAV (Systolic Subclavian Velocity)

Automatic IMT

Summary Reports

Urological Calculations

Bladder volume

Prostate volume

Left/right renal volume

Generic volume

Post-void bladder volume

Probes

LOGIQ P9

C1-5-RS, 8C-RS, E8C-RS, E8CS-RS, BE9CS-RS, 9L-RS, 12L-RS, L8-18i-RS, L6-12-RS, L4-12t-RS, L10-22-RS, L3-9i-RS, ML6-15-RS, L12n-RS, 3Sc-RS, 6S-RS, 12S-RS, RAB2-6-RS, RIC5-9A-RS, P6D, P8D, L3-12-RS, IC9-RS, 6Tc-RS, P2D

C1-5-RS

Convex probe

Applications	Abdomen, Vascular, OB/GYN, Urology
Biopsy guide	Multi-angle, disposable with a reusable bracket (H40432LE)

8C-RS

Micro convex probe

Applications	Neonatal, Pediatrics
Biopsy guide	No

E8C-RS

Endocavitory micro convex probe

Applications	OB/GYN, Urology, Transvaginal, Transrectal
Biopsy guide	Single-angle, disposable with a disposable bracket (E8385MJ, E8333JB), single-angle, reusable bracket (H40412LN)

E8CS-RS

Endocavitory micro convex probe

Applications	OB/GYN, Urology, Transvaginal, Transrectal
Biopsy guide	Single-angle, disposable with a disposable bracket (E8385MJ, E8333JB), single-angle, reusable bracket (H40412LN)

IC9-RS

Endocavitory micro convex probe

Applications	OB/GYN, Urology, Transvaginal, Transrectal)
Biopsy Guide	Single-angle, disposable with a disposable bracket (H48691YW), single-angle, reusable bracket (H48701MN)

BE9CS-RS

Endocavitory micro convex probe

Applications	Urology, Transrectal
Biopsy guide	Single-angle, disposable with a disposable bracket (E8387M, H42742LH, H42742LJ), single-angle, reusable bracket (E8387MA)

RAB2-6-RS

Convex volume probe

Applications	Abdomen, OB/GYN, Urology
Biopsy guide	Multi-angle, disposable with reusable bracket (H48681ML)

RIC5-9A-RS

Endocavitory micro convex volume probe

Applications	OB/GYN, Urology, Transvaginal, Transrectal
Biopsy guide	Single-angle, disposable with a disposable bracket (H48681GF), single-angle, reusable bracket (H46721R)

9L-RS

Linear probe

Applications	Vascular, Small Parts, Pediatric, Abdomen
Biopsy guide	Multi-angle, disposable with a reusable bracket (H4906BK)

12L-RS

Linear probe

Applications	Vascular, Small Parts, Neonatal, Pediatrics, Musculoskeletal
Biopsy guide	Multi-angle, disposable with a reusable bracket (H40432LC)

L8-18i-RS

Linear probe

Applications	Vascular, Small Parts, Neonatal, Pediatrics, Intraoperative
Biopsy guide	No

L6-12-RS

Linear probe

Applications	Abdomen, Vascular, Small Parts, Pediatrics, Neonatal, Musculoskeletal
Biopsy guide	Multi-angle, disposable with a reusable bracket (H40432LC)

Probes *(cont.)*

L12n-RS

Linear probe

Applications	Interventional Guidance, Vascular, Small Parts, Neonatal, Pediatrics, Musculoskeletal
Biopsy guide	Multi-angle, disposable with a reusable bracket. Infinite-angle (in plane biopsy kit), disposable with a reusable bracket. 4 configurable buttons to support various operation.

L4-12t-RS

Linear probe

Applications	Small Parts, Vascular, Pediatrics, Neonatal, Musculoskeletal
Biopsy guide	Multi-angle, disposable with a reusable bracket (H40432LC). Single-angle, disposable with a reusable bracket (H48392LT: free hand, H48392LL: transverse)

L10-22-RS

Linear probe

Applications	Small Parts, Musculoskeletal, Neonatal
Biopsy guide	N/A

L3-9i-RS

Linear probe

Applications	Small Parts, Vascular, Musculoskeletal , Intraoperative
Biopsy guide	N/A

ML6-15-RS

Matrix array linear probe

Applications	Small Parts, Vascular, Neonatal, Pediatrics, Musculoskeletal
Biopsy guide	Multi-angle, disposable with a reusable bracket (H40432LJ)

L3-12-RS

Linear Probe

Applications	Vascular, Small Parts, Neonatal, Pediatrics, Abdomen
Biopsy Guide	Multi-angle, disposable with a reusable bracket (H48302AA)

3Sc-RS

Phased array sector probe

Applications	Cardiac, Transcranial, Abdomen
Biopsy guide	Multi-angle, disposable with a reusable bracket (H46222LC)

6S-RS

Phased array sector probe

Applications	Cardiac Neonatal, Pediatrics
Biopsy guide	No

12S-RS

Phased array sector probe

Applications	Pediatrics, Neonatal
Biopsy guide	N/A

6Tc-RS

TEE Sector (Trans-esophageal) Probe

Applications	Cardiac (Transesophageal)
Biopsy Guide	None

P6D

CW split crystal probe

Applications	Cardiac, Vascular

P8D

CW split crystal probe

Applications	Cardiac, Vascular

P2D

CW Split Crystal Probe

Applications	Cardiac, Vascular

Inputs and Outputs

HDMI out

Ethernet network (RJ45)

S-video out

Composite video out

USB (2x in front (USB 3.0), 3x in rear, 2x monitor)

AC power input

Pinpoint™ GT Needle Guidance Technology

Needle Guidance Technology – Optional	
Accurate magnetic needle tracking (±1.45 mm)	
Pinpoint™ GT Needle Guidance Technology practice kit	
Application with Pinpoint™ GT Needle Guidance Technology	Anesthesia, Musculoskeletal, Nerve Block
Flexible needle selection	• From list manually • From label with Barcode Reader automatically
Comprehensive multi-view	• Front View • Side View • Top View

Safety Conformance

Classified to ANSI/AAMI ES60601-1 2005 R1 2012 Medical Electrical Equipment, Part 1: General Requirements for Safety by a Nationally Recognized Test Lab

Certified to CSA CAN/CSA-C22.2 NO. 60601-1:14 General requirements for safety

CE Marked to Council Directive 93/42/EEC on Medical Devices Conforms to the following standards for safety:

IEC/EN 60601-1 2nd Edition Medical electrical equipment – Part 1: General requirements for safety

IEC/EN 60601-1 3.1 Edition. Medical electrical equipment – Part 1: General requirements for basic safety and essential performance

IEC/EN 60601-1-1 Medical electrical equipment – Part 1-1: General requirements for safety – Collateral Standard: Safety requirements for medical electrical systems

IEC/EN 60601-1-2 Medial electrical equipment – Part 1-2: General requirements for safety – Collateral Standard: Electromagnetic compatibility – requirements and tests

IEC/EN 60601-1-4 Medical electrical equipment Part 1- 4: General requirements for safety – Collateral Standard: programmable electrical medical systems

IEC/EN 60601-1-6 Medical electrical equipment Part 1 -6: General requirements for basic safety and essential performance – Collateral Standard: Usability

IEC/EN 60601-2-18 Medical electrical equipment – Part 2-18: Particular requirements for the basic safety and essential performance of endoscopic equipment

IEC/EN 60601-2-37 Medical electrical equipment – Part 2-37: Particular requirements for the safety of ultrasonic medical diagnostic and monitoring equipment

IEC/EN 62366 Application of usability engineering to medical devices

IEC/EN 62304 Software Life Cycle Processes

IEC/EN 62359 Ultrasonic – Field characterization – Test methods for the determination of thermal and mechanical indices related to medical diagnostic ultrasonic fields

EN ISO 15223-1: Symbols to be used with medical device labels, labelling and information to be supplied

ISO 10993-1 Biological evaluation of medical devices – Part 1 Evaluation and testing

NEMA UD2 Acoustic output measurement standard for diagnostic ultrasound equipment

NEMA UD3 Standard for real time display of thermal and mechanical acoustic output indices on diagnostic ultrasound equipment (MI, TIS, TIB, TIC)

EMC Emissions Group 1, Class B device requirements as per Sub clause 4.2 of CISPR 11

WEEE (Waste Electrical and Electronic Equipment)

ROHS according to 2011/65/EU Including nationa deviations