

GE Healthcare

Venue™ 40



an innovation of
healthymagination



Product Description

Venue 40 gives physicians precision and exceptional image quality in an intuitive and affordable ultrasound system. Venue is designed for Anesthesia, Musculoskeletal, Point of Care, Interventional and Vascular Access applications. Its intuitive touch interface makes the system easy to use. The sleek and portable design easily fits into tight spaces. High-resolution imaging and transducer options help physicians care for a broad spectrum of patients. The single-surface screen can be easily sanitized and cleaned with medical grade disinfectants. Flexible data management and connectivity options, with optional DICOM, help speed image storage and archiving for physicians at the point of care and patient bedside.

General Specification

Dimensions and Weight for Console

- Height: 282 mm console only
- Width: 274 mm console only
- Depth: 56 mm console only
- Weight: approx. 3.6 kg (8 lbs.) with probe

Electrical Power for Console and Docking

- Voltage: 100- 240 V AC
- Frequency: 50/60 Hz
- Power: Max. 180 VA

Console Design

- Tablet Style
- Lithium-Ion Battery Pack (standard)
- 1 probe port with SC-connector
- Speaker
- Docking station and docking cart are options
- Stylus

User Interface

Touch Screen

- Simplified layout
- Mode-specific controls
- Alphanumeric Keyboard
- Measurement
- Annotation
- Utility settings
- Patient information entry
- Touch and stylus user interface

Display Screen

- 10.4 inch High-Resolution Color LCD
 - Display: 800x600
- 170-degree wide angle view

Hard keys

- 10 Ergonomic Hard Key Operation (backlit)
- On/Off button

LED

- Battery life

System Overview

Packages

- Musculoskeletal
- Vascular Access
- Anesthesia
- Point of Care
- Interventional

Transducer Types

- Linear Array
- Phased Array
- Convex Array

Operating Modes

- B-Mode
- M-Mode
- Color Flow Mode (CFM)
- Power Doppler Imaging (PDI)

Standard Features

- High-resolution 10.4 inch Color LCD
- Standard CINE Memory (120MB)
- Removable secure digital storage (SD)
- Loops storage from memory
- Automatic Optimization
 - Auto Tissue Optimization: ATO
- Distance/Area Measurement

Software Features

- Applications
- Color
- M-Mode
- DICOM

Hardware Features

- Battery Pack
- Docking Cart
- Docking Station
- Probes

Media and Peripherals

- USB thermal B&W printer: Sony UPD-897 (option)
- Memory Stick (option)

Display Modes

- B-Mode
- M-Mode
- CFM
- PDI

Display Annotation

- Institution/Hospital Name
- Date: MM/DD/YY and DD/MM/YY
- Time: 24 hours or 12 hours configurable
- Patient Name: Last, First
- Patient Identification: 16 characters
- Power Output Readout
 - MI: Mechanical Index
 - TIS, TIB, TIC: Thermal Index
- System Status (real-time or frozen)
- Probe Orientation Marker: Coincides with a probe orientation marking on the probe
- Loop replay
- Measurement Results Window
- Probe Type
- Preset Name
- Imaging Parameters by Mode (current mode)
 - B-Mode:
 - Gain
 - Image Depth
 - Power Output: Low, Med, High
 - M-Mode:
 - Gain
 - Image Depth
 - Power Output: Low, Med, High
 - Color Flow Mode:
 - Color Gain
 - Image Depth
 - Power Output: Low, Med, High

- B Scale Markers: Depth
- System Messages Display
- Battery Status
- Biopsy Guide Line and Zone
- Primary Parameter Menu (depends on current mode)
 - B-Mode
 - ATO
 - M-Mode
 - Speed
 - Color Flow Mode
 - Angle Steer
 - PRF
 - Invert
 - CINE Mode
 - Previous Frame
 - Next Frame
 - Play/Pause

System Parameters

System Setup

Diagnostic Categories: Customer focused (ex. Anesthesiology)

- Factory Default Application Data
- Languages setup for UI: English, German, French, Italian, Spanish, Portuguese, Simplified Chinese, Swedish, Norwegian, Danish, Finnish, Greek, Russian, Dutch, Japanese
- Languages for Manuals: English, French, Spanish, German, Italian, Portuguese, Japanese, Chinese, Czech, Danish, Dutch, Estonian, Finnish, Greek, Hungarian, Latvian, Lithuanian, Norwegian, Polish, Russian, Slovakian, Swedish, Korean
- Operation Error: Error message display
- Patient Name Format: Last, First
- System Boot Up: < 17 sec
- Probe Loading: < 5 sec

Pre-Processing

- Acoustic Power Output
- Color Flow Mode
 - Gain
 - Steer
 - PRF

Post-Processing

- Auto Tissue Optimize (ATO)

Imaging Processing and Presentation

Software Intensive Ultrasound Imaging Platform

- Digital Beamformer
 - Displayed Imaging Depth: Minimum Depth of Field: 1 cm (Zoom and probe dependent); Maximum Depth of Field: 27 cm (probe dependent)
- Continuous Dynamic Receive Focus/Aperture
- Multi-Frequency/Wideband Technology
- Image Reverse: Right/Left

CINE Memory/Image Memory

- Standard CINE Memory (120MB)
- CINE Review: Frame-by-frame, Loop replay

Image Archive/Connectivity

- Image Browser: Archived images from past patient appear, as well as images stored for the current patient
 - Previewing an Image
- Image Management (removable media)
 - Delete Selected Image
 - Review in Full Image Area
- One Print (Recording) UI Keys to approved printer
 - Archiving Format:
 - JPEG
 - MPEG4
- Capture Area:
 - Image Area
- Archiving Image Frames:
 - Single: stores single frame while in Freeze mode
 - Multiple: stores image loops while in Live scan mode
 - Patient Information Window, and Search/Create Patient Window
 - Column header sorting in Image Review Screen by name, date, ID
 - Automatic generation of patient ID
 - Search by ID, First Name and Last Name
- DICOM
 - DICOM Store
 - Worklist Query
- Network Quicksave

Scanning Parameters

B-Mode

- B Acoustic Output: preset in 3 steps, toggle for Low, Med, High
- Thermal Index: TI
- Gain: preset in 3 steps, toggle for Low, Med, High
- Harmonics: defined by the application
- Depth: 1 – 27 cm, preset in 6 or less steps, probe dependent
- Frequency: defined by the application
- Grey Map: defined by the application

M-Mode

- B Acoustic Output: preset in 3 steps, toggle for Low, Med, High
- Thermal Index: TI
- Gain: preset in 3 steps, toggle for Low, Med, High
- Depth: 1 – 27 cm, preset in 4 steps or less, probe dependent
- Speed: 7 steps
- Frequency: defined by the application

Color Flow Mode

- Invert: On/Off
- CF Acoustic Output: preset in 3 steps, toggle for Low, Med, High
- PRF: preset in 3 steps, probe dependent
- Gain: preset in 3 steps, toggle for Low, Med, High
- Steer: preset in 3 steps, toggle for Right, Center, Left
- CF Vertical Size (mm): default preset
- CF Center Depth (mm): default preset
- CF Frequency: defined by the application
- Color Map: preset, defined by the application

PDI-Mode

- PDI Acoustic Output: preset in 3 steps, toggle for Low, Med, High
- PRF: preset in 3 steps, toggle for Low, Med, High, probe dependent
- Gain: preset in 3 steps, toggle for Low, Med, High
- Steer: preset in 3 steps, toggle for Right, Center, Left
- PDI Vertical Size (mm): default preset
- PDI Center Depth (mm): default preset
- PDI Frequency: defined by the application
- Color Map: defined by the application

Measurements and Calculations

- Distance
- Area
- Heart Rate/Time

Probes

- 12L-SC Wide Band Linear Probe
 - Applications: Vascular Access, Anesthesia, Point of Care, Interventional and Musculoskeletal
 - Number of Elements: 192
 - FOV(max): 39mm
 - B-Mode Imaging Frequency: 5-13 MHz, factory preset, non-configurable
 - CFM Imaging Frequency: 4-6 MHz, factory preset, defined by application
 - Steered Angle: +/-20
 - Biopsy Guide Available: Multi Angle
- 3S-SC Wide Band Phased Array Probe
 - Applications: Cardiac, Abdomen
 - Number of Elements: 64
 - FOV: 60°-90°, factory preset, non-configurable
 - B-Mode Imaging Frequency: 1.7 –4.0 MHz, factory preset, non-configurable
 - CFM Imaging Frequency: 1.4-2.5MHz, factory preset, non-configurable
 - Biopsy Guide Available: Multi Angle
- 4C-SC Wide Band Convex Probe
 - Applications: Abdomen, Musculoskeletal, Thoracic/Pleural
 - Number of Elements: 128
 - Convex Radius: 60mmR
 - FOV: 58°
 - B-Mode Imaging Frequency: 2.0-5.5 MHz, factory preset, non-configurable
 - CFM Imaging Frequency: 2.5-3.1 MHz, factory preset, non-configurable
 - Biopsy Guide Available: Multi Angle
- L8-18i-SC Wide Band Linear Probe
 - Applications: Vascular Access, Anesthesia, Point of Care, Interventional and Musculoskeletal
 - Number of Elements: 168
 - FOV(max): 25.2mm
 - B-Mode Imaging Frequency: 8-18 MHz, factory preset, non-configurable
 - CFM Imaging Frequency: 6-10 MHz, factory preset, defined by application
 - Steered Angle: +/-20

Inputs and Outputs

- Outputs
 - DVI-D interface on docking station and docking cart
- Connectors
 - USB interface on docking station and docking cart
 - Docking Connector
 - Removable SD card
 - Wireless LAN
 - Wired LAN

Safety Conformance

Venue 40 is:

Listed to UL 60601-1 by a Nationally Recognized Test Lab

- Certified to CAN/CSA-C 22.2 No. 601.1 by an SCC accredited Test Lab
- CE Marked to Council Directive 93/42/EEC on Medical Devices
- Conforms to the following standards for safety:
 - EN/IEC 60601-1 Electrical medical equipment
 - EN/IEC 60601-1-1 Electrical medical equipment
 - EN/IEC 60601-1-2 Electromagnetic compatibility
 - EN/IEC 60601-1-4 Programmable medical systems
 - EN/IEC60601-1-6 General requirements for safety – Collateral Standard: usability
 - EN/IEC 61157 Declaration of acoustic output
 - EN/IEC60601-2-37 Particular requirements for the safety of ultrasonic medical diagnostic and monitoring equipment
 - ISO 10993 Biological evaluation of medical devices
 - AIUM/NEMA UD3 Acoustic output display (MI, TIS, TIB, TIC)
- Compliant with DIRECTIVE 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) requirement.

Not all features or specifications described in this document may be available in all probes and/or modes.

General Electric Company reserves the right to make changes in specifications and features shown herein, or discontinue the product at any time without notice or obligation. Contact GE Representative for the most current information.

Safety Type: Class I

EMC Type: Class A Group 1

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About healthymagination

GE's "healthymagination" is about better health for more people. For more information about healthymagination, visit www.ge.com/healthymagination.

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