VIMEDIX™ Ultrasound Simulator

Visionary Technology

Ultrasound imaging so advanced, the anatomy is clear. When it comes to simulation, ultrasound imaging doesn't have to be just black and white. That's why CAE Healthcare engineered VIMEDIX with a stunning 3D augmented reality display. The high resolution, color display is a work of art that provides an extraordinary view of what's behind the scenes in ultrasound scanning. The vivid, life-like anatomy is a reference image that works in unison with a traditional 2D ultrasound image. This accelerates the learning curve, giving learners a clear cut view of probe positioning in relation to anatomy.

Brilliance in design is met by ultimate performance in CAE Healthcare's ultrasound simulator. VIMEDIX is the only ultrasound simulator that supports the following on one platform: transthoracic echocardiography (TTE), transesophogeal echocardiography (TEE) and abdominal/pelvic scanning, including Focused Assessment with Sonography for Trauma (FAST). VIMEDIX is also the most flexible and advanced educational system with numerous self-training features and a variety of objective performance assessment tools: Trainees can practice ultrasound techniques independently while the software provides real time assessments and feedback. This versatility along with CAE Healthcare's extensive pathology library makes VIMEDIX the most comprehensive training tool for ultrasound imaging in multiple specialties.

CAE Healthcare

Technical Specifications

Standard Equipment
- Male Mannequin (TTE or TEE platform)
- TTE or TEE transducer
- 4 cases: normal heart, dilated cardiomyopathy – severe biventricular systolic dysfunction, hyperdynamic left ventricular systolic function, recent anterior myocardial infarction with pericardial effusion
- Computer with mouse and keyboard
- HD screen
- Cables
- Electronic user guide
- CAE Assurance plan with software updates

Optional Equipment
- TEE or TTE module, including TEE or TTE probe
- TEE module includes head to be mounted on mannequin
- Abdominal module (FAST Based Pathologies). Includes curvilinear transducer and 3 FAST Based Pathologies with free fluid in different locations: splenal-renal reflection, Pouch of Douglas, Morrison's Pouch
- Abdominal module (Normal Based Pathologies). Includes 3 pathologies: hydatid cyst of the liver, multilocular intra-abdominal abscess, liver hepatocellular carcinoma (hypoechoic)
- 4 Cardiac Packages
- Advanced Cardiac Pathology Package developed with the Montreal Heart Institute that includes patient history, physical findings, EKG, blood chemistries and relevant lab results as well as data sets from other medical imaging modalities when appropriate
- Cardiac Mix and Match Package
- 4 Abdominal Packages
- FAST Package
- FAST Mix and Match Package

Ob/Gyn Upgrade
Option to add the Ob/Gyn simulator at a discount
Institute can utilize the Ob/Gyn simulator on the computer provided with the cardiac simulator

Mannequin
Size: 31"x17" (78 cm x 43 cm)
Weight: 72 lbs (32.7 kg)

Electrical
Operate at 110/240V 50/60Hz

Ambient Temperature Range
5°C-35°C (41°F-95°F)

Humidity
40-80%

Key Features

- The most realistic imaging and accurate anatomy on the market created by leaders in the field of ultrasound imaging from real imaging data sets
- The most validated ultrasound simulator with scientific publications written by opinion leaders in peer-reviewed journals
- Supports TTE, TEE and abdominal/pelvic scanning, including FAST, on one platform
- Realistic mannequin with tactile features: depressible abdomen plus palpable thoracic and pelvic bony landmarks
- 3D augmented reality displays anatomy, organs, and surrounding structures in real time
- 2D ultrasound imaging, M-Mode and color Doppler available on all valvular pathologies
- Ability to obtain deep transgastric view with TEE module
- Ability to utilize the 3D augmented reality display as the main screen view or split screen view with ultrasound imaging
- Ability to disable 3D augmented reality display to alter level of difficulty
- Ability to disable lung, rib and abdominal artifacts on ultrasound view
- Ability to toggle on-off each and every structure on the 3D augmented reality display
- Ability to adjust level of noise on ultrasound view to alter image quality and level of difficulty
- More than 100 cardiac and abdominal pathologies with ability to load pathologies in stealth mode
- Tutorial feature identifies and labels anatomical structures on 3D augmented reality display
- Target Cut Planes provide reference views to aid learners in correct probe positioning. These views consist of a reference ultrasound beam, reference probe, and reference ultrasound image in relation to the learner's live ultrasound beam, probe position, and ultrasound image
- Comprehensive metrics record target cut planes so learners can practice in the absence of an instructor. The metrics feature tracks the time it takes to achieve a TCP as well as records the coordinates and other parameters from the learner's probe use
- Ability to create reports as you scan, identical to a real ultrasound device, with automated calculations, drop-down menus and a flow consistent with a typical scanning protocol
- Ability to capture images, videos, reports and metrics with export to USB key
- Ability to connect the simulator to a projector and give great interactive presentations by scanning live on the VIMEDIX Ultrasound Simulator

Learners can access CAE Healthcare's e-Learning ultrasound curriculum, from the VIMEDIX computer. ICCU provides didactic content and multimedia tutorials to enhance ultrasound training.

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