REV	ECN	Revision History	Date	Editor
A03	DMR00692	Software updates to V5.0.4.0	2020-03-9	Zhuang Yusha
A02	D00059408	Change address of manufacturer	2019-04-8	Zhuang Yusha
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Title	E1V Technical Specifications

Specifications for E1V Digital Color Doppler Ultrasound System

SonoScape

SonoScape Medical Corp

1 General Specifications

1.1 Applications

- Pet (feline, canine)
- Animal husbandry
- Laboratory
- Horse race

1.2 Available Probes

- Convex array probe
- Linear array probe

1.3 Imaging Modes

- B
- M
- PW

1.4 Function and Configuration

- 5-band adjustable frequency in B mode (fundamental wave and harmonic wave)
- μ-scan
- Compound imaging
- LGC (8 bands)
- Tissue specific index
- Image rotation
- Widescan
- HPRF
- Simultaneous mode (Triplex)
- PW auto trace
- Auto IMT
- Scr-Zoom
- B mode panoramic imaging
- Biopsy guide
- Vis-needle
- ECG
- Show gallery
- Standby mode

1.5 Available Languages

- Software: English, Simplified Chinese, Spanish, Russian and German
- Key panel: English, Simplified Chinese, Spanish, Russian and German
- User manual: Simplified Chinese and English

2 Physical Specifications

2.1 Size and Weight

- Size: approx. 378 mm (W) ×352 mm (H) ×114 mm (D)
- Weight: approx. 6.5 kg (at most, including battery)

2.2 Monitor

- 15.6 inch medical high resolution monitor
- Resolution: 1920×1080
- Viewing angle: 178 °(horizontal), 178 °(vertical)
- Up/down angle: 0 °to 45 °

2.3 Control Panel

- User-oriented design
- Backlight design: panel buttons
- Multiple defined-keys
- TGC: 8 segment sliders
- Trackball sensitivity: adjustable
- Keyboard on the control panel

2.4 Speaker

Hi-Fi Speaker

2.5 Probe Port

- Probe port: 2
- Probe holder: 3

2.6 Trolley

- Model: ST-200
- Width: approx. 455 mm
- Depth: approx. 610 mm
- Height: approx. 780 mm (adjusted to the lowest position)
- Lifting height: 0 - 100 mm, 3 levels
- Casters
  - ✓ Diameter: 5 inch
  - ✓ Specification: all the 4 casters can be independently locked
- Front handle: 1
- Cable hook: 1
- Document basket: 1
- Printer compartment: 1

2.7 Power

- Power supply: 100 - 240V～, 1.5 - 0.75A
- Frequency: 50 - 60 HZ
- Power consumption: 100VA

- System noise: < 45 dB

2.8 Working Environment

- Temperature: 0 ℃ to +40 ℃
- Relative humidity: 30% -85% RH (no condensation)
- Atmospheric pressure: 700 hPa - 1060 hPa

2.9 Storage and Transportation Environment

- Temperature: -20 ℃ to +55 ℃
- Relative humidity: 20% - 90% RH (no condensation)
- Atmospheric pressure: 700 hPa - 1060 hPa

3 Annotation and Body Mark

- Annotation can be selected and input in the library
- All exam applications included
- Annotation: text annotation and arrow annotation
- Annotation can be edited and arranged
- User-defined annotation
- Text font size and arrow size: adjustable
- Body marks: ≥ 46
- Body marks classified by specific exam types, and position adjustable

4 Monitor Information

- Manufacturer logo
- Hospital name
- System date and time
- Probe and exam item
- MI and TIS
- Operator
- Animal ID, animal name and date of birth
- Tissue temperature display (specified probe)
- Depth scale and focus position
- Image parameter
- Thumbnail
- Clipboard
- Screen saver

5 Image Parameter

5.1 Description

- System boot up: approx. 29 s
- System shut down: approx. 14 s
- Grayscale: 256 levels
- Transducer element: up to 128
- Volume: 0 - 100%, 10 levels, 10% each step

5.2 B mode

- Gain: 0 - 255 adjustable
- Scan depth: ≥ 40 cm
- Compound imaging: Off, 1, 2, 3, 4 adjustable, 5 levels
- Frequency: 5 bands adjustable (fundamental wave and harmonic wave)
- Chroma: Off and 12 types selectable, 13 levels
- μScan: Off, 1, 2, 3, 4, 5, 6 levels
- Line density: Low, Med, High, 3 levels for general probe
- Persistence: Off, Low, Med, High, Max, 5 levels
- Focus: focus position and range adjustable, 21 levels adjustable; 1 represents single focus and 2 - 21 represent focus span control.
- Dynamic range: 20 - 320
- Gray map: 1 - 16, 16 levels
- Power%: 1 - 100% adjustable, 5% each step
- TSI: adipose, muscle, fluid tissue and normal tissue, 4 levels
- TGC: 8 segment sliders
- LGC: 8 bands adjustable
- Image reverse: left/right, up/down
- Rotation: 0 °, 90 °, 180 °, 270 °, 4 levels
- Sector width: 5 levels adjustable
- B steer: 0, ±2 °, ± 4 °, ±6 °, 7 levels, linear array image steer
- Widescan: On/Off (linear and convex array probe)
- Auto optimization

5.3 M Mode

- Gain: 0 - 255 adjustable, 5 each step
- Chroma: 13 levels
- Display format: FULL, H1/1, V1/2, V1/1, V2/1
- Sweep speed: Min, Slow, Med, Fast, Max, 5 levels
- Power%: 1% - 100% (associated with B mode)

5.4 PW Mode

- Power%: 1 - 100%, 5% each step
- Gain: 0 - 255 adjustable, 5 each step
- Display format: FULL, H1/1, V1/2, V1/1, V2/1, 5 levels

- Simultaneous mode (Triplex)
- PW sample volume: 0.5 - 24.0 mm
- PW sample position: adjustable
- Invert: On/Off
- Quick angle correction: 0 °, 60 °, -60 °
- Angle correction range: -88 °to 88 °, 2 °each step
- Steer angle: 0, ±8 °, ±12 °, ±16 °adjustable (linear array probe)
- Doppler auto trace: achievable in real-time mode and frozen mode
- Baseline: 9 levels selectable
- Frequency: 3 levels adjustable
- Wall filter: Min, Low, Med, High, Max, 5 levels
- PRF: 1 - 16 KHz
- HPRF
- Max. velocity range: 0 - 11.2 m/s (C322, PRF=16 KHz, θ=60°, frequency= 2.2 MHz, the lowest baseline)
- Sweep speed: Min, Slow, Med, Fast, Max, 5 levels
- Chroma: 13 levels

5.5 Panoramic Imaging

- Available probes: L741, 10I2, C613, L746, C361, C322V, L741V, L761V
- B mode panoramic imaging
- Rotation: 180 °to -180 °
- Zoom ratio: 8.0 times
- Maximum available length: 1000 mm

5.6 Biopsy Guide

- Biopsy line angle: adjustable
- Biopsy line dot size: adjustable
- Biopsy line angle calibration
- Biopsy line offset calibration
- Biopsy line calibration parameter storage and loading default
- User-defined biopsy line angle

5.7 Vis-needle

- Available probe: L741
- Steer angle: 20 °to 50 °, 10 °each step, 4 levels
- Biopsy depth: adjustable
- Dual live

5.8 Widescan

- Widescan: Off, On
- Available probe: linear array probe, convex array probe

5.9 Zoom

- Zoom ratio: 0.8 - 10.0
- Scr-Zoom
- HD Zoom

5.10 Preset Exam

- Preset optimal exam mode and parameter for different probes and exam types
- Preset order: adjustable
- Import or export preset
- After normal update, the preset parameters are not cleared.

6 Measurement/Analysis and Report

6.1 Measurement Settings

- Cross cursor size: Large, Medium, Small
- Line ID display: On, Off
- Measure line size: Large, Medium, Small
- Distance dash line display: On, Off
- Velocity cross line display: On, Off
- Ellipse cross line display: On, Off
- Flow volume method: TAmean, TAmax
- Volume flow compensation with TAmax: 0.5 - 1.0
- Result font size: Large, Medium, Small
- Result font color: White, Yellow
- Keep result window: On, Off
- Result position: Top Right, Top Left, Bottom Left and Bottom Right adjustable in 2D or M+D mode

6.2 Application-specific Measurement Package

- Small parts measurement package
- Gynecology measurement package
- Vascular measurement package
- Abdominal measurement package
- Cardiac measurement package
- Urology measurement package
- Veterinary reproduction measurement package
- Tendon measurement package

6.3 Report

- Application-specific measurement report
- Measurement values: editable
- Value method: single value switch achievable
- Image insertion
- Report preview
- Report logo (170 ×60 Pixel, bmp): changeable
- Report font size and color settings
- Background color settings
- Display item settings
- Export format: TXT, PDF, HTML

6.4 Auto Measurement

Auto IMT

7 Storage and Data Management

7.1 Storage

- Hard disk storage: 500G
- 2D cine storage time setting:
  - ✓ Retrospective storage: 1 - 120 s
  - ✓ Prospective storage: 1 - 480 s
  - ✓ Freeze storage: 1 - 170 s

7.2 Data Management

- Image sharing service (Samba)
- Export data to USB drive or DVD
- Export format:
  - ✓ System format
  - ✓ PC format
  - ✓ Image format: BMP, JPG, TIF
  - ✓ Cine format: AVI, WMV
  - ✓ Report format: PDF, TXT, HTML
  - ✓ DICOM format
- Clipboard: thumbnail display, delete, export
- Create exam, suspend exam, resume suspended exam
- Query/Retrieve service
- Review current exam and history exam
- Post-processing and post-measurement
- Backstage storage: quick switch of DICOM cine

8 Cine Review

- Cine review: manual play frame by frame and auto play with adjustable speed
- Skip from first frame to last frame
- Auto play by using trackball

9 System Input and Output

9.1 I/O Port

- USB port: 3
- Video output port: 3
  - ✓ VIDEO OUT
  - ✓ S-VIDEO OUT
  - ✓ HDMI OUT
- Audio output port: 1
  - ✓ AUDIO OUT (headphone)
- Foot switch input: 1
- Ethernet port: 1
- Video print port: 1

9.2 Network Connection

- Local network
  - ✓ Local network: Enable/Disable
  - ✓ DHCP or static IP
  - ✓ Static IP: IP, netmask and default gateway settings
  - ✓ MAC address check
- Ping IP Address
- Wireless network
  - ✓ Wireless network: Enable/Disable
  - ✓ Authentication method: open authentication, WEP, WPA-PSK
  - ✓ DHCP or static IP
  - ✓ Static IP: IP, netmask and default gateway settings
  - ✓ MAC address check

10 DICOM 3.0

- DICOM storage
- DICOM storage commitment
- DICOM Worklist
- DICOM MPPS
- DICOM print
- DICOM Q/R list

11 Probe

11.1 Convex Array Probe

- C361
  - ✓ Applications: Abdominal, Veterinary Reproduction
  - ✓ Frequency range: 2.0 - 6.0 MHz
  - ✓ Central frequency: 3.5 MHz
  - ✓ Curvature radius: 60 mm
  - ✓ Transducer element: 96
  - ✓ Acoustic lens: 82 mm×18 mm
  - ✓ Biopsy bracket: NGBC361 27.6 °, disinfectable

  - ✓ Field of view: 71.5 °
  - ✓ Widescan: 15 °
  - ✓ Depth: ≥ 30 cm
- C613
  - ✓ Applications: Cardiology, Abdominal
  - ✓ Frequency range: 4.0 - 13.0 MHz
  - ✓ Central frequency: 6.0 MHz
  - ✓ Curvature radius: 14 mm
  - ✓ Transducer element: 128
  - ✓ Acoustic lens: 30 mm×10 mm
  - ✓ Biopsy bracket: NGBC613, 12 ?18 ?30 °, disinfectable
  - ✓ Field of view: 92 °
  - ✓ Widescan: 15 °
  - ✓ Depth: ≥ 15 cm
- C322V
  - ✓ Applications: Abdominal
  - ✓ Frequency range: 2.0 - 7.0 MHz
  - ✓ Central frequency: 3.5 MHz
  - ✓ Curvature radius: 20 mm
  - ✓ Transducer element: 72
  - ✓ Acoustic lens: 32 mm×11 mm
  - ✓ Biopsy bracket: NGBC322, 5 ?25 °, disinfectable
  - ✓ Field of view: 68 °
  - ✓ Widescan: 15 °
  - ✓ Depth: 30 cm

11.2 Linear Array Probe

- L741
  - ✓ Applications: Tendon, Superficial, Abdominal
  - ✓ Frequency range: 4.0 - 16.0 MHz
  - ✓ Central frequency: 7.5 MHz
  - ✓ Transducer element: 128
  - ✓ Acoustic lens: 49 mm×10 mm
  - ✓ Biopsy bracket: NGBL741, 45 ?55 ?63 °, disinfectable
  - ✓ Width of view: 46 mm
  - ✓ Depth: ≥ 11 cm
  - ✓ B steer: 0 ?±2 ?±4 ?±6 °, 7 levels
  - ✓ ROI/sample line steer: 0 ?±8 ?±12 ?±16 °
  - ✓ Widescan: 10 °
- 10I2
  - ✓ Applications: Superficial
  - ✓ Frequency range: 4.0 - 16.0 MHz
  - ✓ Central frequency: 7.5 MHz
  - ✓ Transducer element: 96
  - ✓ Acoustic lens: 28 mm×10 mm
  - ✓ Width of view: 25 mm
  - ✓ Depth: ≥ 11 cm
  - ✓ B steer: 0 ?±2 ?±4 ?±6 °, 7 levels
  - ✓ ROI/sample line steer: 0 ?±8 ?±12 ?±16 °
  - ✓ Trapezoid imaging: 10 °
- L746
  - ✓ Applications: Tendon, Superficial, Abdominal
  - ✓ Frequency range: 4.0 - 16.0 MHz
  - ✓ Central frequency: 7.5 MHz
  - ✓ Transducer element: 96
  - ✓ Acoustic lens: 52 mm×10 mm
  - ✓ Biopsy bracket: NGBL746, 45 °, disinfectable
  - ✓ Width of view: 50 mm
  - ✓ Depth: 11 cm
  - ✓ B steer: 0 ?±2 ?±4 ?±6 °, 7 levels
  - ✓ ROI/sample line steer: 0 ?±8 ?±12 ?±16 °
  - ✓ Widescan: 10 °
- L741V
  - ✓ Applications: Veterinary Reproduction
  - ✓ Frequency range: 4.0 - 16.0 MHz
  - ✓ Central frequency: 7.5 MHz
  - ✓ Transducer element: 128
  - ✓ Acoustic lens: 66 mm×10 mm
  - ✓ Width of view: 46 mm
  - ✓ Depth: 11 cm
  - ✓ B steer: 0 ?±2 ?±4 ?±6 °, 7 levels
  - ✓ ROI/sample line steer: 0 ?±8 ?±12 ?±16 °
  - ✓ Widescan: 10 °
- L761V
  - ✓ Applications: Veterinary Reproduction
  - ✓ Frequency range: 4.0 - 16.0 MHz
  - ✓ Central frequency: 7.5 MHz
  - ✓ Transducer element: 128
  - ✓ Acoustic lens: 66 mm×10 mm
  - ✓ Width of view: 62 mm
  - ✓ Depth: 11 cm
  - ✓ B steer: 0 ?±2 ?±4 ?±6 °, 7 levels
  - ✓ ROI/sample line steer: 0 ?±8 ?±12 ?±16 °
  - ✓ Widescan: 10 °

12 Accessories

12.1 Printer

- Printer types
  - ✓ Color ink jet printer
  - ✓ B/W video printer
  - ✓ Color video printer
- Print type
  - ✓ Video print
  - ✓ USB print
  - ✓ Windows print
- Add printer

12.2 Foot Switch

- 2 pedals
- USB port and round port connection
- User-defined short-cut keys

12.3 USB Bar Code Scanner

- Bar code scanning input
- Bar code scanning search
- Export patient data to DVD drive
- Import patient data from DVD drive

12.4 Built-in Battery

13 Safety and Certification

- Comply with:
  - ✓ IEC 60601-1, Class I BF
  - ✓ IEC 60601-1-2, Group 1, Class B
  - ✓ IEC 60601-2-37

NOTE:

- The specifications of this system may change without any prior notification.
- Some products or features may not be available in some countries.
- Please contact your local SonoScape sales representative for more information.

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