

T5-VET COLOR DOPPLER ULTRASOUND SCANNER

1. Veterinary Color Doppler Ultrasound System
1.1. Main structure: Trolley type, double screen
2. Applications and Report
2.1. To meet the examination and diagnosis needs of pet hospital and scientific research institutions in the digestive system, reproductive system, urinary system, physical examination, etc.
3. Main Specifications
3.1. Full Digital Color Doppler Ultrasonic Mainframe
3.2. Digital Beam Enhancer
3.3. Multiple-beam Synthesis
3.4. Full-Digital 2D Gray Scale Imaging
3.5. Tissue Harmonic Imaging (THI)
3.6. B/C Real-time Two Synchronous Imaging
3.7. M Mode Imaging
3.8. Anatomic M Mode Imaging (Sampling line \geq 3)
3.9. Color Doppler Imaging (C, PDI, DPDI)
3.10. Spectral Doppler Imaging (PW, HPRF PW, CW)
3.11. Tissue Doppler imaging (TVI, M-mode, Spectral Imaging, etc.)
3.12. Four-dimensional Supersonic Image Formation
3.13. ★Contrast Tuned Imaging (optional)
3.14. ★PView Wide Field Imaging (optional)
3.15. Space compound imaging (application to Abdominal, GYN, vessel, superficial small organs, can be dual image contrast display at same time)
3.16. Frequency & Focus Compound
3.17. Extended field-of-view (EFOV)
3.18. Real-time dual image contrast display
3.19. B/C/D Real-time three synchronous imaging

3.20. Speckle Reduce Imaging (SRI)

3.21. Elastography (optional)

4. ★Operation Interface: support 10 different languages

5. System Specification

5.1. Monitor: 21.5 inch high resolution medical LCD monitor, adjustable angle
13.3 inch touch screen, support multi-touch

5.2. ★Probe connectors: ≥ 4 active, support all probes

5.3. 2D Imaging Mode

- 1) Full Digital Beamformers
- 2) Digital full dynamic focusing, digital variable aperture and dynamic trace change, A/D ≥ 15 bit
- 3) Receiving mode: transmitting and receiving channel ≥ 1024 , multi-signal parallel processing
- 4) Line density: ≥ 512 , visible and adjustable
- 5) Under B mode, focus number ≥ 10 level, focus position continuously adjustable
- 6) TGC: 8 segment adjustable
- 7) Gain: B/M/D separately adjustable, ≥ 100 dB
- 8) ★Dynamic range: ≥ 180 dB
- 9) ★Max scanning depth: ≥ 360 mm
- 10) Grey scale: 0-67, visible and adjustable
- 11) Sound power: 1%-100%
- 12) Linear array probe two-dimensional independent deflection
- 13) ZoomPIP (1.5 / 2.0 / 2.5 / 3.0 / 3.5 / 4.0 / 4.5 / 5.0 / 10 times)

5.4. Color Doppler Imaging Mode

- 1) Imaging: including velocity, velocity variance, energy, direction energy display, etc
- 2) Display mode: B/C, B/C/M, B/POWER, B/C/PW
- 3) Line density ≥ 3 level
- 4) Color hiding technology: without back to B mode can hide C mode, only color speed ruler display
- 5) Blood flow graph, color flow profile to measure intravascular velocity

5.5. Spectral Doppler Imaging

- 1) Display: full screen, duplex / triplex (PW only)
- 2) Gain: $\geq 100\text{dB}$
- 3) Velocity ≥ 4 level adjustable
- 4) Max scanning speed: PWD: Positive or negative blood flow velocity $\geq 7.6\text{m/s}$;
CWD: blood flow velocity $\geq 20.0\text{m/s}$, min: $\leq 5\text{ mm/s}$ (Nonnoise signal);
- 5) Zero shift adjustable ≥ 8 level
- 6) Display mode: B, PW, B/PW, B/C/PW, B/CW, B/C/CW, etc
- 7) Spectrum envelope function, Manual Measurement
- 8) Display control: reverse, zero shift, B refresh, D extension, B/D extension, etc
- 9) Smart Doppler technology: freely switch between real-time B+CFM mode and real-time PW mode

5.6. ★PView wide field imaging (optional)

- 1) High-resolution display, length can up to 50cm
- 2) Imaging support forward erasure, no need to re-imaging
- 3) With two dimensional wide view imaging mode and color wide view imaging mode

5.7. **Probe:** wideband with frequency conversion, independent frequency conversion under B and CFM

- 1) Fundamental Frequency Conversion ≥ 3 level;

2) 1. **Convex probe**

Fundamental frequency: nine levels frequency conversion

2.0MHz/2.3MHz/2.5MHz/3.0MHz/3.5MHz/4.0MHz/4.6MHz/5.0MHz/5.4MHz,

Harmonic Frequency: 4.0MHz/4.6MHz/5.0MHz, three levels frequency conversion

2. **Linear probe**

Fundamental frequency: nine levels frequency conversion

4.0MHz/4.6MHz/5.0MHz/6.0MHz/7.0MHz/8.0MHz/9.2MHz/10.0MHz/12.0MHz/13.3MHz

Harmonic Frequency: 8.0MHz/9.2MHz/10.0MHz, three levels frequency conversion

3. **Phased array probe**

Fundamental frequency: nine levels frequency conversion

1.7MHz/1.9MHz/2.1MHz/2.5MHz/3.0MHz/3.4MHz/3.8MHz/4.2MHz/5.0MHz

Harmonic Frequency: 3.4MHz/3.8MHz/4.2MHz, three levels frequency conversion

4. **High frequency phased array probe**

Fundamental frequency: eight levels frequency conversion:

3.0MHz/3.5MHz/4MHz/5MHz/5.4MHz/6MHz/7MHz/8MHz,

Harmonic Frequency: 6MHz/7MHz/8MHz, three levels frequency conversion

5. Micro-convex probe

Fundamental frequency: eight levels frequency conversion

3.0MHz/3.5MHz/4.0MHz/5.0MHz/5.4MHz/6.0MHz/7.0MHz/8.0MHz

Harmonic Frequency: 6.0MHz/7.0MHz/8.0MHz, three levels frequency conversion

5.8. Technical requirements for electronic convex probe:

Frequency: 2.0-5.4 MHz, lateral resolution: ≤ 2 (depth ≤ 80), ≤ 3 mm (80 $<$ depth ≤ 130)

axial resolution: ≤ 1 (depth ≤ 80), ≤ 1 mm (80 $<$ depth ≤ 130)

dead zone: ≤ 3 mm; Geometric position accuracy: broadwise: $\leq 5\%$; lengthwise: $\leq 5\%$

detecting depth ≥ 240 mm

5.9. Technical requirements for electronic linear probe

Frequency: 4.0-13.3MHz, lateral resolution: ≤ 1 (depth ≤ 40), axial resolution: ≤ 0.5 (深度 ≤ 50), dead zone: ≤ 3 mm, Geometric position accuracy: broadwise: $\leq 4\%$; lengthwise: $\leq 2\%$

detecting depth ≥ 100 mm

6. Measurement / Analysis and Reports

6.1. General measurement: distance, area, ellipse, cross line, angle, distance ratio, volume, Volume (ellipse), area ratio, diameter, joint angle.

6.2. Specialized Measurement

- 1) Cardiac: Automatic spectrum envelope, LV, Main Pulmonary artery diameter, RVEDd, RVEDs, LVM, LAV, HR, MVF, AO, AR, LVOT, TVF, Pulmonic valve, Pulmonary vein, RV, Doppler fetal heart sound, LVET, LVM, LVMI, AV
- 2) Vascular: carotid intima (IMT), length stenosis ratio, area stenosis ratio, IMT (back wall), IMT (front wall)
- 3) ★OB: Canine: GSD, CRL, HD, BD; Feline: BD, HD; Swine: HLA, SLA;
Bovine: CRL, BTd, BUD; Ovine: SCRL; Equine: GSD(H), ESD (V)
- 4) Urinary measurement: Prostate, residual urine, left kidney, right kidney, left adrenal gland, right adrenal gland, left testis, right testis, left seminal vesicle, right seminal vesicle.

5) Abdomen measurement: liver, common hepatic duct, diameter of portal vein, gallbladder, common bile duct, pancreas, spleen, abdomen aortic diameter, kidney.

6) Organella.

7. Peripherals Section

7.1. Configured ultrasonic graphic work station, the work station software equipped with registration certificate, supports black and white digits, simulation B/W, digit color, simulation color, text and video printer, and foot switch

7.2. Support Internet connection

7.3. Support DICOM 3.0, report of DICOM Obstetrics and Gynecology / Heart / Blood Vessel

7.4. Video/Audio Input Output

7.5. Main unit comes with USB port

7.6. Support ultrasonic system directly sent clinical images and reports through internet

7.7. Coupling heater (optional)

8. Cine Loop and Original Data Processing

8.1. Cine Loop ≥ 3061 frames, support manual and auto operation

8.2. Original Data Processing, can conduct offline parameters analysis on static files and replay dynamic images. Such as Gain, Pseudo Color, Grey Scale Curve, ect.

8.3. Digitalization Hard Drive Capacity $\geq 256G$, support permanent store static, dynamic images, can be consulted, transferred, deleted freely

8.4. Multiple Image Export Modes: Dynamic Image, Static Image and exported in PC format, Images can be seen on regular PC devices, no need of specific software.

can process diagnosis, export and backup image data at the same time without affecting the inspection operation

8.5. Support DVD R/W drive

8.6. Professional probe holder ≥ 5 (coupling holder not included), each holder can change placement

9. After-Sale Service

9.1. Main unit warranty ≥ 2 years

9.2. Lifelong maintenance after warranty, lifelong free updates service of software

9.3. Free regular return visit for maintenance

9.4. If any repair reported, we will reply and propose solution within 24 hours