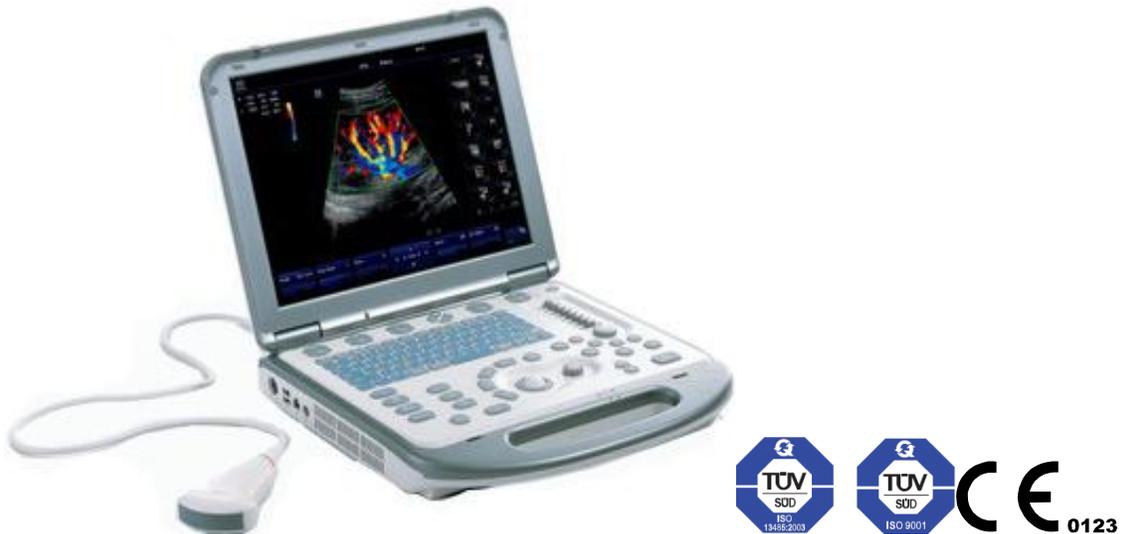


M5 Diagnostic Ultrasound System



Mindray's ultrasound family is now introducing a new member, M5 hand-carried color Doppler system. M5, coming in a laptop size with comprehensive ergonomic design, has no compromise on image quality or clinical functions. Besides traditional sonography applications, M5 can also be used in some emerging fields such as regional anesthesia, urology, physiotherapy, as well as in ICU, ER and sports field, etc.

High performance

M5 integrates a series of advanced imaging technologies to insure excellent image quality for diagnosis with performance comparable to trolley systems. Various special imaging modes are included to meet more professional clinical applications. CW presents for more accurate cardiac diagnosis; Smart3D™ leads to vivid ultrasound healthcare and iScape™ View expands to a wider field of view.

- Standard imaging and display modes
 - * B, dual B, quad B, B+M, M
 - * Color
 - * Power and directional power Doppler
 - * PW, HPRF
 - * Tissue harmonic imaging
 - * Trapezoidal imaging
- CW- continuous wave Doppler. Used to measure high velocity of blood deep in human body to meet more professional cardiac application requirements
- iScape™ View- panoramic imaging. Extending field of view to show the

whole structure within one image.

- Smart3D™- freehand 3D. Available on all convex, linear and phased array transducers, showing 3D structure with all-round view. Free rotation and cut function enabling user to observe at will, providing more intuitive information in exams.
- Abundant clinical measurement and analysis packages
 - * Abdomen
 - * Obstetrics
 - * Cardiology
 - * Gynecology
 - * Small parts
 - * Urology
 - * Orthopedics
 - * Peripheral vascular

Laptop design

4500mAh li-ion batteries support continuous scanning for more than 1 hour. With its 6kg net weight, users could perform diagnostic exams in more places, such as ER, ICU ambulances or in sports field.

Specially designed trolley case and backpack extend the usage of medical ultrasound.

- Dimensions: 75mm x 361mm x 357mm
- Weight: less than 6kg (main unit)
- Exchangeable li-ion batteries (4500mAh)
- 15-inch medical LCD monitor with integrated stereo speakers
- Mini-socket transducers

Efficient workflow

Ergonomic design and short boot-up time make M5 the perfect choice for surgery, emergency, military and sports medicine. Intuitive soft keys and navigation function help users to get familiar with operation immediately. iStation patient information management system facilitates to search, review, edit and export patients' images and measurement reports. And with powerful user-define function users could customize M5 for any exam mode at their will.

- Multi-language interface: English, French, German, Italian, Spanish, Portuguese, Russian and Chinese.
- For each exam mode, users could define items including but not limited to
 - * Exam mode name
 - * Imaging parameters
 - * General measurement items for each imaging mode

- ✱ Applied measurement and calculation items for each measurement package
 - ✱ Obstetric formula
 - ✱ Comment library
 - ✱ Body mark library
 - ✱ Lay out of soft keys and menu items
- Synchronous navigation: On-screen instructions for manual-free operations
 - Control panel: home based design with multifunctional Knob
 - Q-click™: click and adjust on-screen parameters directly
 - Thumbnail: easy review during live scanning
 - Editable report and print preview

Configuration

Standard configuration

- High resolution 15 inch LCD display
- Pulse Wave Doppler
- HPRF
- Color Doppler Flow Imaging
- Power Doppler Flow Imaging
- Directional Power Doppler Flow Imaging
- Tissue Harmonic Imaging
- Trapezoidal Imaging
- Spatial compound imaging for linear probes
- iTouch™
- 80G integrated hard disk
- iStation™
- USB ports
- Ethernet port
- S-video out port and cable
- Measurement & calculation software packages
- Multi-language screen display
- Convex array transducer 3C5s (2.5/3.5/5.0/H5.0/H 6.0MHz)
- Trolley case

Transducer options

- Linear array transducer 7L4s (5.0/7.5/10.0MHz)
- Linear array transducer 10L4s (8.0/10.0/12.0MHz)
- Linear array transducer 7L6s (5.0/7.5/10.0MHz)
- Biplanar transducer 6LB7s (5.0/6.5/8.0MHz)
- Convex array transducer 6CV1s (5.0/6.5/8.0MHz)
- Endorectal array transducer 6LE7s (5.0/6.5/8.0MHz)
- *Intraoperative T-shaped transducer 7LT4s (5.0/7.5/10.0MHz)
- Convex array transducer 6C2s (5.0/6.5/8.0MHz)

- Phased array transducer 2P2s (2.5/3.0/3.5/H3.5/H4.0MHz)

Software options

- DICOM 3.0 software
- iScape™ View (Panoramic imaging)
- Smart3D™ (Freehand 3D)

Hardware options

- Additional transducer connector (3 sockets)
- CW
- Transducers
- Needle guide brackets
- I/O module for data transportation
- USB V/A module for VCR connection
- USB ECG module with electrodes and cables (AHA/IEC)
- External USB DVD-R/W
- Spare battery
- Foot switch with programmable functionality
- Trolley
- Hand carried bag

Technical specification

Imaging modes

- B mode
- M mode
- CDFI (Color Doppler Flow Imaging, Color)
- Power (Power Doppler Flow Imaging, including DirPower, directional power Doppler)
- Pulse Wave Doppler (PW)
- Continuous Wave Doppler (CW, optional)

Special imaging features

- Tissue harmonic imaging
- Steer scanning
- Trapezoidal imaging
- HPRF for PW

Imaging parameters

- Displayed depth
 - Maximum: 30.8 mm, transducer dependent
- Wideband processing technology
 - B mode frequencies: up to 5 steps
 - Doppler frequencies: 2 steps
- Transducer frequency: 2.0~12.0MHz
- Gray scale: 256 levels

- Display: 15-inch medical LCD monitor

B mode

- Acoustic power
- Gain
- TGC
- Frame Rate
- Focus number
- Focus position
- FOV
- Line density
- Steer
- TSI (tissue specific imaging)
- Display dynamic range
- Frame average
- Noise rejection
- Edge enhancement
- IP (image processing)
- Colorize
- Gray map
- Gray Transform
- Gray Rejection
- γ correction
- Rotate
- Flip

M mode

- Display mode: scroll
- Sweep speed (1, 2, 4, 8 s/screen)
- Gain
- Display dynamic range
- MIP
- M soften
- Gray map
- Colorize
- Time mark
- Display format

Color mode

- Gain
- Frequency (2 frequencies)
- Steer
- PRF
- Scale
- Color IP
- Baseline
- Color map
- Wall filter
- Line density

- Packet size
- Flow state
- Smooth
- Persistence
- Contrast
- Priority
- Map invert
- Focus position
- B/C wide (automatically adjust the 2D image size according to the color ROI)
- ROI color (off, red, green, blue, cyan, MAG, yellow, white)
- B/C dual live
- Image display

PW/CW mode

CW mode is available only with phased array transducers.

- PW frequency (2 frequencies)
- PRF
- Dynamic range
- Scale
- Baseline
- Sweep speed
- Sample volume
- Sample depth
- Steer
- Angle correlation
- Colorize
- Wall filter
- Auto Trace and auto calculation
- Duplex
- Triplex
- Threshold
- Trace Area
- Trace smooth
- Trace sensitivity
- Audio
- Full screen
- Time mark
- Display format
- HPRF

Power/ DirPower mode

- Display dynamic range
- Power IP
- Power Map
- Line density
- Flow state
- Packet size
- Wall filter
- Smooth
- Persistence

- Contrast
- Priority
- Invert
- B/C wide
- LVR (Low velocity resistance)
- Focus position
- ROI color
- B/C live
- Dual live
- Image display

iScape™ View (optional)

- iScape™ view is also called panoramic imaging.
- Available on all convex and linear array transducers
- Based on real-time imaging of 2D mode (not available in Color or Power mode)
- Displays up to 40cm in length (frame rate and scanning speed dependent)
- Rotate
- Zoom
- Colorize
- Store and review image capture process
- Store and review iScape™ images
- Post processing on stored images
- All 2D measurement items available, except depth, profile and histogram

Smart3D™ (optional)

- Smart3D™ is also called freehand 3D.
- Available on all convex, linear and phased array transducers without sensor
- Method
- Distance
- Angle
- Render method
- Smooth
- Gamma bias
- Gamma position
- Colorize
- Rotate
- Store and review Smart3D™ images
- Cut
- Adjust VOI

Functions

- Cineloop
 - 2D, Color, Power, DirPower: Maximum 1200 frames
 - M, Spectral Doppler: Over 131s
- Storage
 - 80 GB integrated hard drive
 - External DVD-R/W (optional)
 - USB ports
 - Still images storage format: BMP, JPG, DCM and FRM

- Cine loops storage format: AVI, DCM and CIN

Measurement and calculation

- B mode
 - Depth, Distance, Angle, Area, Volume, Cross Line, Parallel Line, Trace Length, Ratio, B Profile, B Histogram
- M mode
 - Distance, Time, Slope, Heart Rate
- PW/CW mode
 - Velocity, Acceleration, Resistance index, Spectrum trace, Heart rate
- Application packages
 - OB, GYN, Cardiac, Peripheral vascular, Small parts, Urology and Orthopedics

Others

- Dimensions: 75 mm (2.95 inch)X 361 mm (14.21 inch)X Depth: 357 mm (14.06 inch)
- Weight: less than 6 kg (13.23 lb.)
- AC adapter: 100VAC~240VAC, 50/60 Hz
- Battery: Exchangeable li-ion batteries

NOTE: specifications subject to change without prior notice.

* To be released soon