

**KEE HING CHEUNG KEE CO., LTD.
DLFTZ CHANG HING KEE
INT'L INDUSTRY & TRADE CO., LTD.**



Ultrasound imaging system



KHCK in the field of Medical Industry

----- **Medical imaging system**

Ultrasound imaging system

Portable Ultrasound scanner.....	01
Trolley Ultrasound Scanner.....	11
Smartbook Ultrasound Scanner.....	16
Palm Handle Ultrasound Scanner.....	18

Portable Ultrasound scanner

KHCK-A -01

Advantages:

- Application of advanced technology of micro computer, Digital Scanning Converter (DSC), variable aperture, multi-section dynamic focusing, high dynamic, low noise, wide band pre-amplifier, log compression, TGC control, dynamic filtering, edge enhancement and frame correlation to get high resolution and sharp images
- Four display mode: B, B+B, B+M, M. Gray scales: 256 grades
- The image can be displayed in real time, frozen, amplified, black- white reversed, up and down conversed and upgraded in depth in real time
- Standard PAL-D and VGA video output, available to access to the large screen monitor, videocassette recorder and video image printer, etc. Optional probes and build-in color coding module
- General gain control, near field and far field (T.G.C) control, brightness and contrast adjustment
- Foldaway keyboard and trackball are equipped to get fast, convenient and flexible operation
- The device is portable structured with plastic cover. Switch power is used without working frequency transformer. Various programmable devices and SMT in the device make the device high integrated, small volume and light weighted
- 186 frames of Cine-loop and 32 frames of permanent images storage
- USB 2.0 interface ensures real-time image transfer to PC
- Passed clinical verification of safety and diagnosis validity Specifications



Technical Specifications

Dimension	353mm×315mm×253mm
Weight	approx.8kgs (including probe)
Temperature	+5°C~+40°C
Humidity	<80%
Atmospheric pressure	800hpa~1060pha
Power supply	AC 160V-260V 50Hz or AC 90V-120V 60Hz
Application scope	abdominal, OB/GYN, bladder, uterus, urology and small parts etc
Scanning mode	electronic convex array
Probe	3.5 MHz electronic convex (standard) 3.5MHz electronic linear(optional) 6.5MHz transvaginal convex(optional)

	7.5MHz electronic linear (optional)
Display mode	B,B+B,B+M,M (Under B and B+B mode, upgraded in depth in real time)
Detectable depth	≥160mm
Display depth (max)	200mm
Resolution	longitudinal≤2mm (depth≤80mm), longitudinal≤3mm(80mm<depth≤130mm) lateral≤3mm (depth≤80mm), lateral≤4mm(80mm<depth≤130mm)
Dead zone	≤5mm
Geometrical position error	longitudinal ≤10%, lateral ≤15%
Zoom	×1.0, ×1.2, ×1.5, ×2.0
Focus	4-sectored focusing with variable aperture
Gray scales	256 grades
Local amplified	2 times
Monitor	7/10 inches CRT
Image reversal	White-black, up-down, left-right reversal
Body marks	≥7 kinds
Comments	Date, patient ID, age, sex, frame correlation
Measurement	
B mode	Distance, girth, area, volume, pregnant week, EDD
M mode	Heart rate, time, EF

KHCK-A-02

Features

- Full digital beam-forming and dynamic aperture technology ensure excellent image quality
- 96 element, 32 channels, dual socket
- scanning angle 8-16 level adjustable
- gamma correction, 8-segment GTC
- automatic report generation (normal/OB)
- abundant software packages for full clinic applications such as abdominal, obstetric, gynecology, cardiology, urology, small parts, etc.
- ergonomic design, user-friendly
- direct printout on A4 paper for long-time record storage

Specifications

Scanning:	electronic convex, linear and micro-convex
Display:	B, B/B, B/M, 4B
Image conversion:	up/down, right/left, black/white
Notation:	real-time clock, date, ID, gender, age, focus, hospital, doctor
Scanning depth:	220mm(max)



Gray Scale:	256
Display:	10"SVGA
Video output:	PAL-D
Body marks:	15
Cine-loop:	829 frames(max)
Permanent image storage:	32 frames
Image magnification:	×1.0, ×1.2, ×1.5, ×2.0
Picture in picture:	1:2
Preset color code:	0-7
Measurement of distance, circumference, area, volume, HR, EF, EDD	
USB2.0 interface	

KHCK-A-03

Advantages:

KHCK-A-05 portable ultrasonic diagnostic system, which combines manifold innovating technologies of 256 gray scale and high density, broad band, big angle multi-frequency probe, is suitable for work in low, middle, high frequency, as well as examination and diagnosis of abdomen, gynecology, OB/GYN, heart and small parts.

Features

- Plentiful probe group including six probes, 2.5MHz – 8.5MHz work frequency can meet kinds of clinic diagnostic requirement sufficiently.
- The type of probes can be identified automatically.
- With high performance piezoelectricity material and multi-layer acoustic permeated matching and excellent sound absorption liner material, probes have the advantage of broad band and higher sensitivity to improve the detection depth, distinguish and shorten scotoma.
- In image processing: eliminating ultrasound cluster, advancing the available signal is from the double return processing technology adopted. Clear image, high stability and distinguish benefit from advanced technology including dynamic band and low noise in band pre-amplifier, dynamic multi-focus, dynamic variable aperture, dynamic filter, TGC, frame correlation, DSC change and repeat processing.

Main Function

Scanning mode:
B, B/B, B/M, M, varied magnifications and the image is scrollable.

Focus

Electronic focus



Acoustic lens focus, single focus and mutple focus are provided.

Cine-Loop

256 frames

Image processing

Part zoom in real time, gray curve control, STC curve, edge enhancement, dynamic range, frame correlation, 256 gray

scale, 256 frames cine loop and 16 images storage, image reverse function

Body Mark

60 kinds

OB Table

Tokyo, Hadlock, Hansmann

Measurement & Calculation

Distance, circumference, area, volume, heart rate, depth, time, velocity, LV (Left Ventricle), AO (Aorta), MV (Mitral Valve), RV/LV, GS, BPD, CRL, FL, GL,TAD, LV, OFD, AC, HC, pregnant week and fetal weight. OB table (Tokyo, Hadlock, Hansmann), LMP functions.

Video Out

PAL-D,SVGA

Character Display

ID, date, time, focus, guage, hospital name, measuring value, gray scale, probe type and frequency, probe position, display mode, scanning direction, multiple-ratio, puncture guide line, 60 body marks, image process information and notes.

Other Function

Software update function, OB Report

Standard Configuration

Main unit with SVGA, a 2.5 – 5MHz convex probe, 256 Frames cine loop, 16-32 images storage card.

Options

2.5-5MHz convex heart probe

5-7.5MHz convex vaginal probe

2.5-5MHz linear abdominal probe

3.5-6.5MHz linear rectal probe

6.5-8.5MHz linear facial probe

Trolley, B/W video printer.

KHCK-A-04

Technical Data

- Scanning mode: linear array scanning, convex array scanning
- Nominal frequency of the probe: 3.5MHz/6.5 MHz /7.5 MHz
- Grey scale: 256
- 10.4"SVGA display
- Main power supply: AC110/230V, 50/60Hz
- Power consumption: ≤100VA



- Overall dimension for main unit: approx. 387×319×270 mm(L×H×M)
- Weight of main unit: approx. 11 kg (exclusive of accessories)

Primary functions

- Display mode: B, B/B, B/M, M, 4B
- Speed in M mode: 1s, 2s, 3s, 4s, 5s, 6s, 7s, 8s.
- Magnification: ×0.8, ×1.0, ×1.2, ×1.5, ×1.6, ×2.0, ×2.4 , ×3.0
- Depth enhancement/pan function
- Local zoom
- Adjustment and display of near field, far field, total gain and dynamic range.
- Single-point, multi-point focusing.
- Frequency conversion
- Angle change.
- Frame correlation function
- Gamma correction and edge enhancement for image after-processing.
- Image freeze/unfreeze.
- Vertical, horizontal flip and B/W conversion.
- Case information, image annotation and auto time display.
- Body marks
- Measurement of distance, circumference, area, volume, slope, heart rate and cycle.
- OB package including 10 tables, automatic calculation of EDD and fetus weight
- Energy-saving.
- 120 frames built-in image storage.
- 256 frames cine loop
- PAL-NTSC switchable.
- Chinese-English interconversion.
- OB report.
- Image transfer computer by USB interface

Standard Configuration:

- Main unit 1PC
- 3.5MHz convex probe 1PC
- Two probe connectors

Optional:

- 6.5MHz intra-vaginal convex probe
- 7.5MHz high frequency linear probe
- 5.0MHz micro-convex probe for pediatric
- trolley
- thermal printer
- USB data line & software

KHCK-A-05

Technical Data

- Scanning mode: linear array scanning, convex array scanning
- Nominal frequency of the probe: 3.5MHz/5.0 MHz /6.5 MHz /7.5 MHz
- Grey scale: 256
- 10.4"SVGA display
- Main power supply: AC110/230V, 50/60Hz
- Power consumption: $\leq 100VA$
- Overall dimension for main unit: approx. 387×319×270 mm(L×H×M)
- Weight of main unit: approx. 11 kg (exclusive of accessories)

Primary functions

- Display mode: B, B/B, B/M, M, or 4B
- Speed in M mode: 1s, 2s, 3s, 4s, 5s, 6s, 7s and 8s.
- Magnification: $\times 0.8$, $\times 1.0$, $\times 1.2$, $\times 1.5$, $\times 1.6$, $\times 2.0$, $\times 2.4$, $\times 3.0$
- Depth enhancement/pan function
- Local zoom
- 8 stages TGC adjustment.
- Single-point, multi-point or dynamic focusing.
- Frequency conversion
- Angle change.
- Frame correlation function
- Gamma correction and edge enhancement for image after-processing.
- Image freeze/unfreeze.
- Vertical, horizontal flip and B/W conversion.
- Case information, image annotation and auto time display.
- Body marks
- Measurement of distance, circumference, area, volume, slope, heart rate and cycle.
- OB package including 10 tables, automatic calculation of EDD and fetus weight
- Energy-saving.
- 120 frames image storage.
- 256 frames cine loop
- PAL-NTSC switchable.
- Chinese-English interconversion.
- OB report.
- Image transfer computer by USB interface

Standard Configuration

- Main unit 1PC
- 3.5MHz convex probe 1PC
- Two probe connectors
- pseudo color

Optional

- 5.0MHz micro-convex probe for pediatric
- 6.5MHz intra-vaginal convex probe
- 7.5MHz high frequency linear probe
- trolley



- thermal printer
- USB data line & software

KHCK-A-06

Technical Data

- Scanning mode: linear array scanning, convex array scanning
- Nominal frequency of the probe: 3.5MHz/5.0 MHz /7.5 MHz
- Grey scale: 256
- 10"SVGA display
- Main power supply: AC110/230V, 50/60Hz
- Power consumption: ≤100VA
- Overall dimension for main unit: approx. 395×310×280 mm(L×H×M)

Primary functions

- Display mode: B, B/B, B/M, M, 4B
- Speed in M mode: 1s, 2s, 4s, and 8s / frame
- Magnification: 6 kinds of different magnification according to different probes
- Depth enhancement function
- 7 stages TGC and total gain adjustment
- Single-point, multi-point focusing.
- Frequency conversion
- Frame correlation function
- Gamma correction and edge enhancement for image after-processing.
- Image freeze/unfreeze.
- Vertical, horizontal flip and B/W conversion.
- Case information, image annotation and auto time display.
- 30 kinds body mark
- Measurement of distance, circumference, area, volume, slope, heart rate, cycle and angle.
- Obstetric, cardiological and urological measurement and calculation
- Puncture guide
- 32 frames built-in image storage & 64 frames cine loop
- OB report
- Cardiological report
- Image transfer computer by USB interface

Standard Configuration

- Main unit 1PC
- 3.5MHz convex probe 1PC
- Two probe connectors

Optional

- 3.5MHz micro-convex probe
- 5.0MHz transvaginal probe
- 7.5MHz high frequency linear probe
- 7.5MHz linear rectal probe for human use
- USB data line & software
- trolley
- thermal printer



KHCK-A-07

Specification:

- Scanning mode: linear array/convex array/slight convex array
- Standard probe frequency: 3.5MHz, 6.5MHz, 7.5MHz
- Gray scale: 256
- Scanning line: 512
- Depth scope: 0—240mm
- Resolution: lateral ≤ 2 , axial ≤ 1
- Geometric position precision: $\leq 5\%$
- Frame frequency: ≥ 30 frames/sec
- Digital scanning converter: 512 \times 512 \times 8 bit
- Video output: Standard PAL_D
- Power consumption: ≤ 100 VA

Main Functions:

- Speed under M mode: 1s, 2s, 3s, 4s, 5s, 6s, 7s, 8s/frame
- Display mode: B, B/B, 4B, B/M, M.
- Magnification: $\times 0.8$, $\times 1.0$, $\times 1.2$, $\times 1.5$, $\times 1.6$, $\times 2.0$, $\times 2.4$, $\times 3.0$.
- Depth shift ; Up/Down, Left and Right, Black-white Reverse
- Local zooming
- Changeable angle
- Frame correlation
- Freeze/Unfreeze
- Changeable Probe
- Single point focus, multi-point focus, and dynamic focusing.
- Image post processing, Gamma correction and Image enhancement
- Auto- input/display of the date, patient's ID, age, sex and Image note
- 32 kinds of body marks with probe mark
- Puncture guide & Calculus positioning
- Measurement of distance, circumference, area, slope, heart rate, cycle, pregnant weeks, EDD, fetus age, fetus weight, etc
- Power saving and self-check
- Chinese/English menu Alternative

Basic Configuration

- Main unit:
- 3.5MHz broadband frequency convex array probe



Optional

<u>·1024 frames Cine loop</u>	<u>·Trolley</u>
<u>·Thermal printer</u>	
<u>·6.5MHz intra-cavity probe / 3.5MHz linear array probe</u>	
<u>·7.5MHz high frequency linear array probe</u>	
<u>·8 sets of pseudo color</u>	<u>·Cine Loop: 1024 frames</u>

KHCK-A-08

·High Definition Monitor

High-precision digital imaging technology

·Digital beam forming Technology

Digital image acquisition and processing ensure images with high quality and system with higher reliability and stability.

·Multi-frequency, High density Probes

Different adjustable frequency ranges are available for each probe on different clinical requirements, which reduced the complicated work for varies changes.

·Abundant Display Mode

Different kinds of display mode provide the most suitable checking mode.

·Complete range of Measurement and Calculation Software

Increase the obstetric calculation on the base of the basic measurement, which can widen the application.

·Wide Clinical Applications

This instrument is applicable for obstetric, gynecology, urology, surgery, pediatrics, etc

·Vivid body design

A vivid body design brings pleasant visual effect and ergonomics into harmony



Trolley Ultrasound Scanner

KHCK-B-01

Advantages:

- Application of Filed Programmable Gate Array (FPGA) & Surface Mounting Technology(SMT), brief circuits with reliable performance
- Four kinds of adjustable dynamic focuses produce a symmetrical image, easy to distinguish pathological changes
- Flexible and convenient operation contributed by keyboard and trackball
- Application of wide band transducer technology satisfies different requirements
- Advanced measurement & calculate software ensure more exact diagnosis results

Specifications

Scanning mode	Electronic convex array
Display modes	B, B/B, B/M, M
Scanner depth	200mm
Gray scale	256
Image magnification	×1.0,×1.2,×1.5,×2.0
Cine-loop	maximum 186 frames
Image storage	20 frames
Image conversion	up/down, left/right, black/white
Local zoom	2 (can be used at frozen/real-time)
Frame correlation	selectable 3 levels
Depth shift	B, B+B real time shift
Resolution	lateral≤2mm, axial≤1mm
Body marks	≥10
Pseudo color processor	7 colors
Video output	PAL-D, VGA
Monitor	12 inches high resolution CRT (optional 15 inches)
Measurement	Distance, circumference, area, volume, heart rate, pregnant week, fetal weight, EDD
Comments	Eal-time clock, date, scanning depth, model of probes, parameter of frame correlation, combination of focus, patient's ID, ender, age
Power consumption	50VA(standard); 100VA (with all options)
Power supply	220V±10% 50 Hz/AC110V±10% 60Hz
Weight	55kgs (including probe)
Dimension	658*415*1065mm
Probes	2.5/3.5/5.0 multi frequency convex array probe (standard) 5.0/7.5MHz multi frequency linear arrayprob (option) 5.0/6.5MHzmulti frequency convex transvaginal probe (option)



KHCK-B-02

Advantages:

KHCK-B-04 is a kind of new type B/W ultrasonic diagnostic system with unique refined style, design and multi- function that provides the ultrasonic image of high definition and high resolution. Non-interleaved technology can eliminate flicker that caused by TV display mode. Users can enjoy the image like B/W image of color ultrasound scanner. VIDEO port makes it convenient for users to connect the video printer and TV monitor. Friendly colorful English interface provides a relaxed working environment.

Features

Broadband Technology and Frequency Conversion

Support variable probe frequency. Adjust the depth of detection at well via conversion or probe frequency to satisfy the diagnosis demand of the patients for different figure.

Scanning with Large-angle

Scanning with large-angle to enlarge visual area effectively.

Scientific Matching

Scientific matching to avoid waste of ultrasound energy effectively, improve detecting performance of probe greatly and assure the definition of image.

Cine Loop of Large Capacity

128 frames film review for large capacity is benefit for doctor to choose the satisfied image.

VGA None-interlaced High-definition Display

VGA line by line scanning display eliminate the flicker feeling of common line-skipping display and the image is clear, stable, soft and realistic.

2 Grade Image Process

Processing: Dynamic wave-filter, Gain compensation and adjustment.

Post processing

The speed of scan, frame correlation, γ correlative line and choice of window curve.



Main Function

Scanning mode: B, B/B, B/M, M, 4M

Focusing: Continuous dynamic focusing, 16-stage focus for super selection and 4-stages focus in a time

Zoom: 8 grades zoom. 2.5cm per grade fore convex, 1.25cm per grade for vaginal and heart (9cm-25cm).

Gray scale:256

Detectable depth:240mm

Angle on the probe:60° on 3.5MHz convex probe

90° on 3.5MHz heart probe

120° on 6.5MHz transvaginal probe

Measuring: Distance, area, volume, focus, circumference, heart rate, speed, fetal weight, pregnant week

6-EDD tables: BPD,CRL,GS,FL,HC,AC

Character display: ID number, date, body mark, probe position, time, focus, gray scale, puncture guide line, frame rate, zoom, menu of image processing.

Standard Configuration

Main unit, VGA monitor

3.5MHzR60 convex probe (2.5-5MHz)

A bottle of gel, User's manual, Service manual

Options

B/W video printer

7.5MHz linear probe - facial (6.5-8.5MHz)

6.5MHzR12 convex probe - transvaginal (5-7.5MHz)

3.5MHzR20 convex probe - heart (2.5-5MHz)

KHCK-B-03

Technical Data

- Scanning mode: linear array scanning, convex array scanning
- Nominal frequency of the probe: 3.5MHz/6.5 MHz/7.5 MHz
- Grey scale: 256
- 14" SVGA display
- Main power supply: AC110/230V, 50/60Hz
- Power consumption: ≤180VA
- Overall dimension for main unit: approx. 725×445×890 mm(L×H×M)
- Weight of main unit: approx. 39 kg

Primary functions

- Display mode: B, B/B, B/M, M, 4B
- Speed in M mode: 1s, 2s, 3s, 4s, 5s, 6s, 7s and 8s.
- Magnification: ×0.8, ×1.0, ×1.2, ×1.5, ×1.6, 2.0, ×2.4 and ×3.0
- Depth enhancement/pan function.
- Local zoom.
- Adjustment and display of 8 stages STC, total gain and dynamic range.
- Single-point, multi-point or dynamic focusing.
- Frequency conversion.
- Angle change.
- Frame correlation function.
- Gamma correction and edge enhancement for image after-processing.
- Image freeze/unfreeze.
- Vertical, horizontal flip and B/W conversion.
- Case information, image annotation and auto time display.
- 64 body marks
- Measurement of distance, circumference, area, volume, slope, heart rate and cycle.
- OB package including 10 tables, automatic calculation of EDD and fetus weight
- Energy-saving.
- 120-frame image storage.
- 256-frame cine loop
- PAL-NTSC switchable.
- Chinese-English interconversion.
- OB report.
- Image transfer computer by USB interface.



Standard Configuration

- Main unit 1 PC
- 3.5MHz convex probe 1PC
- Two probe connectors

Optional

- 6.5MHz intra-vaginal convex probe
- 7.5MHz high frequency linear probe
- 5.0MHz micro-convex probe for pediatric
- thermal printer
- USB data line & software

KHCK-B-04

Features:

- 14" high resolution non-interlace monitor
- Ergonomic design backlight keyboard
- 96 elements, and 32 channel multi-frequency convex probe as standard
- 8 gamma correction and 6 slides TGC control
- Software package for obstetrics, gynecology, urology and cardiology
- 365 frames bidirectional cine-loop
- 29 frames permanent image storage

Specifications:

- Display Mode: B; B/B; M; B/M
- Probes: 96 elements 2.5/3.5/5.0MHz Convex probe (standard)
128 elements 2.5/3.5/5.0MHz Convex probe (optional)
96 elements 5.0/6.5/7.5MHz Linear probe (optional)
80 elements 5.0/6.5/7.5MHz Transvaginal probe (optional)
- Probes Ports: Three
- Monitor: 14" SVGA high resolution non-interlace monitor
- Gray Scales: 256
- Max. Measurement Depth: 250mm
- Resolution: Lateral: $\leq 2\text{mm}$ Axial: $\leq 1\text{mm}$
- Zoom: $\times 1.0$, $\times 1.2$, $\times 1.5$, $\times 2.0$ and partial zoom
- Measurement: Distance, Area/Circumference, Volume (Ellipse Method), Angle, Heart Rate, EF Slope, Interval, Fetal Age, Fetal Weight and Expected Date of Child Birth calculated in various Ways Including GS, CRL, BPD, OFD, HC, AC, FL, Womb, Left/Right Ovary, Endometrium, Bladder, Left/Right Kidney, Prostate, Left/Right Ventricle, Left Atrium, Mitral Valve and Pulmonary Valve
- Display: Date, Week, Time, Probe Frequency, Frame Rate, Patient Record NO., Doctor's Name, Hospital ID, Zoom, Values, Body Marks, Annotation, Probe Position (Able to be rotated), Full-screen Edit
- Body mark: 38 types
- Focusing: 4-sector dynamic focusing, four focus points can be operated independently and combined freely to change the focus position.
- Image Processing: 32 channels, Edge Enhancement, 8 Gamma correction curves, Transitional Frame, Image Up/Down Conversion, Left/Right Conversion, Black/White Conversion image, Depth Scroll, Pre-processing, Digital Scanning (DSC), Post-processing, etc
- Gain control: 6 slide TGC control and 1 main gain control
- Software package and report: Obstetrics, Gynecology, Urology and Cardiology
- Cine-loop: 365 frames bidirectional cine-loop
- Image storage: 29 frames permanent image storage
- USB ports: Support image transferring to USB flash disk and connecting with laser printer
- Upgrade: Support USB flash disk for upgrade
- Biopsy guide: Optional
- External ports: Support video printer, Laser printer, Workstation, Flash disk, Footswitch



Smartbook Ultrasound Scanner

KHCK-C-01

Technical Data

- Scanning mode: linear array scanning, convex array scanning
- Nominal frequency of the probe: 3.5MHz/5.0 MHz /6.5 MHz /7.5 MHz
- Grey scale: 256
- 10.4"SVGA display
- Main power supply: 100-240V~, 50-60Hz
- Power consumption: ≤40VA
- Overall dimension for main unit: approx. 290×245×50 mm (L×H×M)
- Weight of main unit: approx. 2.25 kg (exclusive of accessories)



Primary functions

- Display mode: B, B/B, B/M, M, 4B
- Speed in M mode: 1s, 2s, 3s, 4s, 5s, 6s, 7s , 8s.
- Magnification: ×0.8, ×1.0, ×1.2, ×1.5, ×1.6, ×2.0, ×2.4 ,×3.0
- Depth enhancement/pan function
- Local zoom
- Adjustment and display of near field, far field, total gain and dynamic range.
- Single-point, multi-point focusing.
- Frequency conversion
- Angle change.
- Frame correlation function
- Gamma correction and edge enhancement for image after-processing.
- Image freeze/unfreeze.
- Vertical, horizontal flip and B/W conversion.
- Case information, image annotation and auto time display.
- 64 kinds of body marks
- Measurement of distance, circumference, area, volume, slope, heart rate and cycle.
- OB package including 10 tables, automatic calculation of EDD and fetus weight
- Energy-saving.
- 120 frames built-in image storage.
- 256 frames cine loop
- PAL-NTSC switchable.
- Chinese-English interconversion.
- OB report.

Standard Configuration

- Main unit 1PC
- 3.5MHz convex probe 1PC
- One probe connector
- pseudo color

Optional

- 5.0MHz micro-convex probe for pediatric
- 6.5MHz intra-vaginal convex probe
- 7.5MHz high frequency linear probe
- trolley
- thermal printer

KHCK-C-02

Main features

This versatile linear/convex ultrasound system is ideal for mixed practice. It is designed for bedside use and emergency scanning (triage ultrasound) either on site or in a rescue situation. Smartbook KHCK-S-01, weight only 2kg, is distinguishable by its bright and clear image quality. The probes offer a wide range of diagnostic applications, This scanner is a cost effective solution for family doctors, veterinary scanning. The complete software package, the multi-step zoom, and the high product versatility are available in it.

Specification:

- Scanning Method: Convex, linear multi-frequency with wide band.
- Display Mode: B,B+B,B+M,M
- Gray Scale:256 levels
- Monitor Size:10.4" TFT color LCD
- Image Procession: DFS,DRF,RDA,VGA/DSC and image pre & post
- Cine-memory:206 frames
- 32 image permanent storage
- Image magnification: ×1.0,×1.2,×1.5,×2.0 times
- Multi-step Zoom (1:2) in both real-time and frozen modes
- Focusing selectable
- Depth adjustable in real-time of B and B+B mode
- Image Conversion is U/D,L/R and B/W.
- 8 different coded-color on a external color monitor
- 15 different kinds of body marks
- Measurement is in Distance ,Circumference/Area, Heart Rate, EF rate for heart, and GS,CRL,BPD,HC,FL,AC for OB/GY measurement, and Gestational Age, Fetal weight, EDD calculation.
- Characteristic showing in real-time clock, ID, Sex, Age, Focusing info and Hospital Name



Standard configuration:

- main unit + one 3.5MHz convex probe

Options

- L40/7.5MHz linear probe
- R13/ 6.5MHz transvaginal probe
- I40/ 7.5MHz endorectal linear probe

Palm Handle Ultrasound Scanner

KHCK-D-01

Technical Parameter

- Gray Scale: 256;
- 6.4LCD Display;
- Main Power Supply: 100-240V ~Frequency: 50-60Hz;
- Power Consumption: $\leq 40VA$;
- Main Unit Size: approx. 326×162×47mm (L×H×D)
- Main Unit Weight: approx 1.5kg (excluding accessories) .

Primary Function

- Display Mode: B, B/B, B/M, M, 4B;
- Speed: 1s, 2s, 3s, 4s, 5s, 6s, 7s, 8s;
- Magnification: $\times 0.8$, $\times 1.0$, $\times 1.2$, $\times 1.5$, $\times 1.6$, $\times 2.0$, $\times 2.4$, $\times 3.0$;
- Depth enhancement/pan function;
- Local Zoom;
- Adjustment and display of near field, far field, total gain and dynamic range;
- Single-point, multi-point focusing;
- Frequency conversion;
- Angle change;
- Frame correlation function;
- Gamma correction and edge enhancement for image post-processing;
- Image freeze/unfreeze;
- Vertical, horizontal flip and B/W conversion;
- Pseudo color display;
- Case information, image annotation and auto time display;
- 64 body marks with probe mark;
- Measurement of distance, circumference, area, volume, slope, heart rate and cycle;
- Obstetric package including 10 tables, automatic calculation of EDD and fetus weight;
- Puncture guide;
- Energy saving;
- 120 frames built-in image storage;
- 256 frames cine loop;
- Obstetric report;
- PAL-NTSC convertible
- Image transfer computer by USB interface;



Standard Configuration

- Main unit 1PC
- 3.5MHz convex probe 1PC
- One probe connector
- pseudo color

Optional

- 5.0MHz micro-convex probe for pediatric
- 6.5MHz intra-vaginal convex probe
- 7.5MHz high frequency linear probe
- trolley
- thermal printer
- USB data line & software
- mouse

KHCK-D-02

Main Features

Palm Handle KHCK-D-02 is enjoying a great success in global market by its innovative in design. It is distinguishable by the lightweight, easy hand carrying, accurate imaging and simple interface. The selectable two difference kinds of probe, dual frequencies, offer more widely range of applications. It is really the most ideal for doctors, vet, even the farmer who can easily carry out quick and easy diagnosis for Uterine, Ovarian examination, Pregnancy detection and sexing.



Technical Specification

- Monitor:5.0 inch TFT LCD
- Weight: 750g
- Probes:3.5MHz/5.0MHz Mechanical Sector Selectable
- Battery: Rechargeable & internal, back-up for 4hrs
- Display Mode: B,B+B,B+M,M
- Image magnification in four levels: $\times 1.0, \times 1.2, \times 1.5, \times 2.0$ times
- Gray Scale:256 levels
- Text Annotation: Patient ID, Sex, Age
- Software: For human or veterinary, selectable
- Measurement: Distance, length, Area/ Circumference, Time/Heart Rate/EF rate for heart
- Stander Accessories: AC Adapter, internal Battery, Gel, Mouse
- Optional:5.0MHz Sector Probe, Car Charger, Extra Battery with charging cable
- Case Color of Scanner: For human--Gray color For veterinary--Black color

Probes

- (suggested for human use)
- 3.5MHz probe with FREEZE key built-in
- (suggested for vet use)
- 3.5MHz waterproof probe

Standard configuration

- (suggested for human use)
- main unit + 3.5MHz probe with FREEZE key built-in
- (suggested for vet use)
- main unit + 3.5MHz waterproof probe

Options

- 3.5MHz probe with FREEZE key built-in
- Extra rechargeable internal battery with the cable
- Car Charger

KHCK-D-03

KHCK-D-03 is the latest model, weighting only 1.3KG, is distinguishable by its bright and clear image quality. The interchangeable probes offer a wide range of diagnostic applications. This scanner is a cost effective solution for family doctors, veterinary scanning. The complete software and the high product versatility are available in it.



Technical Specification

- Scanning Method: Convex, Micro-convex, Linear, rectal
- Display Mode: B, B+B, B+M, M
- Gray Scale: 256 levels
- Monitor: 6.4 inch TFT color LCD
- Image Procession: DFS, DRF, RDA, VGA/DSC and Image Post Procession
- 128 frames for cine-memory
- 32 image permanent storage
- Image magnification: $\times 1.0$, $\times 1.2$, $\times 1.5$, $\times 2.0$ times
- 4 focusing combination selectable
- 4 different coded-color available
- 15 difference kinds of body marks with difference calipers.
- Measurement in Distance, Circumference/Area, Time/Heart Rate/EF rate for heart, and GS, CRL, BPD, HC, FL, AC for OB/GY measurement, and Gestational Age, Fetal weight, EDD calculation.
- Characteristic showing in real-time clock, ID, Sex, Age, Focusing Info and Gain (Near, Far, Overall) info.
- PAL-D output
- Mouse interface

Probes

- (for human use):
R40/3.5MHz multi-freq convex
- (for vet use):
L60/6.5MHz rectal linear

Standard configuration

- (for human use)
main unit + one 3.5MHz convex probe
- (for vet use)
main unit + 6.5MHz rectal linear probe

Options

- R40/3.5MHz convex probe
- R20/5.0MHz micro-convex probe
- L40/7.5MHz linear probe

KHCK-D-04

Features

- Sharp and clear image output
- Especially applicable for emergency center, ambulance, or fieldwork
- Applicable for both human being and veterinary purposes
- Low energy consumption
- Support stand for adjusting LCD view point
- Leather bag for fieldwork carriage
- Data-of-art design, handy and use friendly



Specifications

Standard probe	3.5/5.0MHz mechanical sector probe with freeze key for human being 3.5/5.0MHz mechanical sector probe waterproof for veterinary
Shell case color	Gray for human being, black for veterinary
Scanning depth	192 mm
Resolution	lateral ≤ 3 mm (depth ≤ 80 mm) ≤ 4 mm(80mm < depth ≤ 130 mm) axial ≤ 2 mm (depth ≤ 80 mm)
Monitor	TFT 5.0 inch LCD
Battery	built-in rechargeable, continuous working time 2 hours, standby 4 hours
Display modes	B, B+B, B+M, M
Gray scales	256
Image magnification	$\times 1.0$, $\times 1.2$, $\times 1.5$, $\times 2.0$
Measurement	Distance, circumference, area, heart rate & pregnant week
Comment	Patient's ID, age, gender
Power consumption	13VA
Power supply	10-12V battery / AC- adapter (110/220V, 50/60Hz)
Package	N.W.600g G.W. 6kgs Carton Size 480*190*380mm