F9 Series Fetal&Maternal Monitor

■ Specification

Physical Characteristics
Dimensions: 347mm x 330mm x 126mm
Weight: approximate 6 kg

Performance Specifications
Display: 12- inch color TFT-LCD
Resolution: 800（H）×480（V）
Recorder: 1/2/3/ cm/min real-time printing speed
　　　　　Fast print speed (stored traces) up to 25mm/sec
Paper: 150/152 mm, Z-fold, thermosensitive
　　　　American/International standard

Ultrasound
Technique: Ultrasound Pulse Doppler with autocorrelation
Pulse repetition rate: 2 KHz
Ultrasound frequency: 1.0MHz±10%
FHR measurement range: 50bpm – 240bpm
Resolution: 1bpm
Accuracy: ±1 bpm

DECG
Technique: Peak – Peak detection technique
DFHR measurement range: 30bpm – 240bpm
Resolution: 1 bpm
Accuracy: ±1bpm
Input Impedance: > 10M (Differential)
Input Impedance: > 20M (Common Mode)

TOCO
TOCO measurement range: 0-100 Relative (%)
Resolution: 1 count
Zero mode: Auto/Manual
Non-linear error: 10%

IUP
Pressure measurement range: 0 – 100 mmHg
Resolution: 1%
Zero mode: Automatic / Manual
Non-linear error: ±3mmHg

Auto Fetal Movement (AFM)

Technique: Pulsed Doppler ultrasound
Measurement Range: 0-100 (%)
Resolution: 1%

Marking
Manual fetal movement mark

ECG
ECG Waveform: Manual control ECG waveform display
ECG falls off: Detect automatically

HR
Measurement Range: 30-240 bpm
Accuracy: ±2 bpm

SpO₂
Measurement Range: 50%-100%
Resolution: 1%
Accuracy: 90%-100%: ±2%
　　　　　70% -90%: ±4%
　　　　　＜70%: unspecified

PR
Measurement Range: 30-240 bpm
Accuracy: ±2 bpm

NIBP (for adult)
Systolic pressure: 40mmHg-270mmHg
Mean pressure: 10mmHg-215mmHg
Diastolic pressure: 20mmHg-235mmHg
Resolution: 1mmHg

Temperature (TEMP)
Measurement range: $0^{\circ}C$-$50^{\circ}C$
Accuracy: $\pm 0.2^{\circ}C$

Battery
14.8 V rechargeable Lithium-ion battery
Continual working time: 2-4 hours

Signal Interface
DB9 network interface, RJ45 interface

Configuration	F9	F9 Express
Dual-FHR	√	√
TOCO	√	√
FM	√	√
AFM	√	√
DECG/IUP	Opt	Opt
MECG	x	√
NIBP	x	√
MSPO₂	x	√
TEMP	x	Opt
Fetal Stimulator	Opt	Opt
Lithium-ion Battery	Opt	Opt

Features

Simple operation: Foldable screen, probe rack and wall mounting rack, handle for easy carrying, user-friendly GUI with 2 displaying modes and 4 color schemes

Powerful functions: 24 hours CTG storage, fast print for stored traces, Signals Overlap Verification alerts when two FHR probes process the heart rate signal from the same source

Outstanding performance: 12-inch color screen, excellent algorithm, 12-crystal and 1MHz water-proof transducer for accurate detection

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F9 Series Fetal & Maternal Monitor

Probe rack

12-crystal water-proof transducer for FHR detection

F9 is a high-tech fetal & maternal monitor; it offers the most advanced integrated monitoring for the delivery room in big hospital; Private obstetrician's office; Antepartum clinic. F9 is designed for moving situation which covers the entire continuum of antepartum, intrapartum and postpartum applications.

F9 integrates twin's fetal heart rate, uterine activity, fetal movement, intrauterine pressure, fetal direct ECG, Maternal NIBP, SpO2, and ECG, TEMP monitoring.

Our new 12-crystal waterproof ultrasound transducer provides broad beam pulsed wave, it makes signal better, and the smooth TOCO transducer makes the pregnant woman more comfortable.

Its rechargeable Lithium-ion battery can sustain 4-hour continuous working; this makes the characteristic of portable come true.

Data from F9 can be automatically transmitted to the MFM-CNS or Insight software.

Communication

F9 provides abundant communication functions and interfaces.

MFM-CNS: An Ethernet interface is built in the monitor. Via it and data bus, the data collected by the monitor can be transferred to the MFM-CNS central monitoring system. The monitor can also connect to a wireless network module, which will fulfill the data transference between the monitor and the MFM-CNS.

Insight Software: Data can be transferred to PC for display and storage.

External Monitoring

F9 offers non-invasive ultrasound, external TOCO facilities measurements and automatic fetal movement.

DECG and IUP

Simultaneous monitoring of twins using two ultrasound channels or using one ultrasound channel and the DECG (during labor) channel; The range of DECG can be 30bpm-240bpm (American Standard) or 50bpm-210bpm (International Standard); Using IUP to detect the maternal intrauterine pressure, it will provide more accurate data.

Vibrating stimulator

Event can be displayed and recorded on CTG trends when connected with a fetal stimulator by an audio cable.

Monitoring

With fetal external parameters (Twins monitoring, external uterine contraction), fetal internal parameters (DECG, IUP), and maternal parameters (NIBP ECG TEMP SpO2), F9 can meet the needs of antepartum, intrapartum, postpartum.

Storage

24 hours waveforms storage and playback makes monitoring convenient.

SOV

Signals Overlap Verification: a smart design to reduce the risk of miscollecting fetal heart signal and will alert when more than one heart rate signal come from the same source.

Display

There are four options of color for F9 screen background: green, blue, black and orange. Details such as baseline, acceleration, deceleration, long-term variability, short-term variability of FHR can be shown vividly on any background.

F9 offers the most advanced integrated monitoring for the mother and fetus, It is tailored to the needs of moving situation which covers the entire continuum of antepartum, intrapartum and postpartum applications.

Printer

Built-in long life thermal array printer, the system will print a test baseline for ten seconds or so for self-testing before the system enters the monitoring screen. It's compatible with 152/150mm paper and supports American/International standard paper. For real-time data, 1/ 2/ 3 cm/min recording speed are selectable. In addition, it provides fast printing for stored traces with a high speed up to 25mm/sec.

Caching function: when the record paper runs out, the recorder stops printing; the data from this time on will be saved in the memory, it will resume printing when the paper is loaded.

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