



# ESSE-30

Digital Portable  
Electrocardiograph



CARDIOLOGY



high-resolution & high-frequency data sampling realize that waveforms display accurately

• Compact. Portable •

Touch Screen make operation more simply and more rapidly



Features

- 4.3"color LCD touch screen
- high-resolution & high- frequency data sampling realize that waveforms display accurately
- Innovative digital filters ensure better performance
- high-precision data saving ensures the accuracy of follow-up data analysis
- Built in 80mm reel type thermal printing mechanism
- Support external printer and barcode scanner
- Automatic measurement and interpretation passed the test of authoritative CES database

Data saving

- Support data saving by internal memory, U disk
- Support data transferring & reviewing & reanalyzing

Data saving

- Adapt Innovative digital filters for better performance
- Fast-speed baseline correction algorithm rapidly stabilize baseline
- Adapt 24-bit high-resolution data sampling
- Adapt 1000Hz high-frequency
- 24-bit high-accuracy data saving ensure the accuracy of follow-up data analysis
- Synchronization analysis for 12 lead waveforms, supporting report preview & report format adjustment

## Function upgrading

- Multi report formats selectable
- Rhythm report realized synchronous display of multi-channel data
- Support Pre-sampling mode, Real-time sampling mode & Trigger sampling mode
- Automatic energy saving function
- The date dimension allows data file management to be summarized by date
- Built in high capability rechargeable lithium ion battery



Support multiple report formats, the length of recorded waveform is selectable



Support four kinds of filter setting: AC filter, baseline drift filter, EMG filter, lowpass filter  
High-speed baseline correction filter ensures rapidly correcting the baseline



Reports in multiple formats such as Auto (4×3, 3×4+1, 3×4, 2×6+1, 2×6, 3-2+1, 3-2), Manual (manual1, manual2, manual3, manual4), Rhythm (single-lead rhythm and 3-lead rhythm)

## Clinical mounting solution





## Specification

### Size and Weight:

- Size: 315mm × 215mm × 75mm
- Weight: 1.6 kg

### Display

- Type: 4.3", 480×272 TFT LCD

### Power Supply:

- Input voltage: AC:100V~240V, 50Hz/60Hz
- Input power: 80VA
- Standard: Comply with IEC 60601-1 and IEC 60601-1-2

### Battery

- Type: Rechargeable lithium-ion battery
- Rated Voltage: 11.1V
- Capability: 2000mAh
- Operating time: Used continuously for 4 hours (print 150 shares of cardiogram)
- Indication of battery capability: With

### Input/Output Specification

- Keyboard: 6 function keys, 4 direction keys, 1 confirm key, 1 power key
- Standard touch-screen connector (4 lines)
- USB connector: 1 x USB Host Support hot-swap, connects USB device

### Data Storage

- Fixed Memory: 200 groups of ECG data
- Optional Memory: U disk
- Storage mode: Background storage automatically
- Storage format: PDF, DAT

### Recorder

- Recording way: Thermal dot array
- Horizontal resolution: 40 dots/mm
- Vertical resolution: 8 dots/mm
- Recording speed: 5 mm/s, 6.25 mm/s, 10 mm/s, 12.5 mm/s, 25 mm/s, 50 mm/s, error: ±3%
- Record width: 80mm (effective record width is 72mm)
- Paper: 80mm×20m (reel)
- Paper type: Reel thermosensitive printing paper
- Recording precision: ±5% (X axes), ±5% (Y axes)
- Recording type: Auto (4×3, 3×4+1, 3×4, 2×6, 3-2+1, 3-2), Manual (Manual 1, Manual 2, Manual 3, Manual 4), Rhythm (single-lead rhythm, three-lead rhythm)

### Measure and Diagnosis of ECG Waveform

- HR range: 30bpm -300bpm
- HR precision: ±1bpm (10s average)
- Coefficient error: ≤5%, 0.333
- Measure info of ECG waveform: P time limit, PR interphase, QRS time limit, QT interphase, QTC interphase, RV5swing, SV1swing, RV6swing, SV2swing, RV5+SV1swing, P axis, QRS axis, T axis
- Diagnosis analyze: ≥140 kinds

### Display of ECG Collection

- Signal input: 12-lead, defibrillator-proof, Pacemaker, pulse rejection
- Degree of protection against electric shock: 4000V, Type CF applied part
- Electrode offset potential: ±500 mV
- Response to frequency: 0.05Hz-150Hz
- Baseline filter: On/Off (0.05Hz)
- ECG filter: Off, 25Hz, 35Hz, 45Hz
- Lowpass filter: 75Hz, 100Hz, 150Hz
- Gain selection: 2.5, 5, 10, 20 (mm/mV)
- Gain accuracy: ≤5%
- Time base selection: 5 mm/s, 6.25 mm/s, 10 mm/s, 12.5 mm/s, 25mm/s, 50mm/s
- Input impedance: ≥50MΩ (10Hz)
- Current of input loop: ≤15n A
- Patients leakage current: ≤10 μ A
- CMRR: ≥110 dB (with AC filter)
- Time for response to wave displaying: ≤5s
- Time for baseline recovered after switching leads: ≤1s
- Defibrillator-proof: 5000V 360J

### Environmental Specifications

- Operating:
  - Temperature: 5°C ~ 40°C
  - Relative humidity: ≤85% (non condensing)
  - Atmospheric pressure: 700hPa ~ 1060hPa
- Transportation and storage
  - Temperature: -20°C ~ +55°C
  - Relative humidity: ≤93% (non condensing)
  - Atmospheric pressure: 500hPa ~ 1060 hPa



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