



# IG Electrocardiograph

EKG Series 12 channel



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# Engineering & Manufacturing Excellence

## 12-Channel Electrocardiograph EKG Series 12-CH

### R&D-Driven System Design

- Developed through a structured R&D process combining validated signal-acquisition algorithms with precision electronic design to ensure stable and accurate diagnostic performance.

### Scalable & Service-Oriented Architecture

- A modular system architecture allows flexible configuration, efficient servicing, and future upgrades across the product lifecycle.

### Precision Manufacturing

- Built using industrial-grade components and high-precision PCB assembly under controlled production conditions for long-term stability and durability.

### Quality & Performance Validation

- Each unit undergoes comprehensive functional testing to verify measurement accuracy, system stability, and reliable long-term operation.

### Clinical-Ready Diagnostic Platform

- Provides high-quality 12-lead ECG acquisition, advanced arrhythmia analysis, and automated reporting for hospitals, clinics, and emergency care.







### Reliable Daily Operation

- Stable signal processing, an intuitive user interface, and integrated workflow tools support confident and efficient clinical decision-making.









## FEATURES

|  |   |
|--|---|
|  <b>Touch-Screen Display</b><br>Auto & Manual Recording | 9" LCD touch screen for fast interaction and clear visualization.<br>Auto & manual recording modes for different clinical workflows |
|  <b>Long-Term Recording</b>                             | Up to 300 seconds of waveform analysis.<br>Supports extended monitoring and review  |
|  <b>Smart Arrhythmia Detection</b>                      | Automatic trigger on abnormal cardiac signals<br>Supports early clinical decision-making.   |
|  <b>Multi-Format Data Export</b><br>Wi-Fi / LAN / USB   | PDF, JPEG, DICOM, XML supported<br>Easy integration with HIS / EMR / PACS systems   |
|  <b>Waterproof Keyboard</b>                             | Reliable operation in clinical environments.<br>High accuracy for low-amplitude signals   |
|  <b>Pediatric &amp; Neonatal Support</b>                | Optimized for pediatric and neonatal ECG acquisition<br>High sensitivity for small and delicate signals                             |

## SIGNAL PROCESSING & GUIDANCE FEATURES

|  |   |
|--|---|
|  <b>Digital Filtering</b>             | Comprehensive digital filtering to eliminate baseline drift, AC interference, and EMG noise, ensuring stable and accurate ECG signals.          |
|  <b>High-Pass Filter</b><br>(0.05 Hz) | Extra-sensitive signal detection for low-amplitude ECG signals, enabling accurate and undistorted ST-segment measurement and analysis.          |
|  <b>Low-Pass Filter</b><br>(250 Hz)   | Optimized filtering for high-frequency noise reduction. Ensures reliable signal acquisition, including pediatric and neonatal ECG applications. |
|  <b>On-Screen Guidance</b>            | Intuitive on-screen operation guidance to assist users throughout the measurement and acquisition process.                                      |

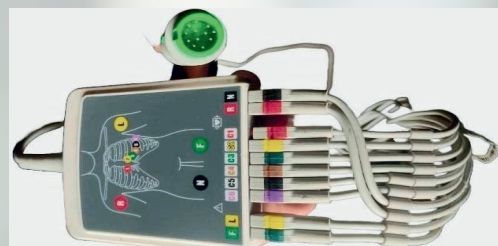


# STANDARD ACCESSORIES

## Specification



Patient Cable



Patient Cable (Optional )



Limb Electrode



Applied for children



Chest Electrode



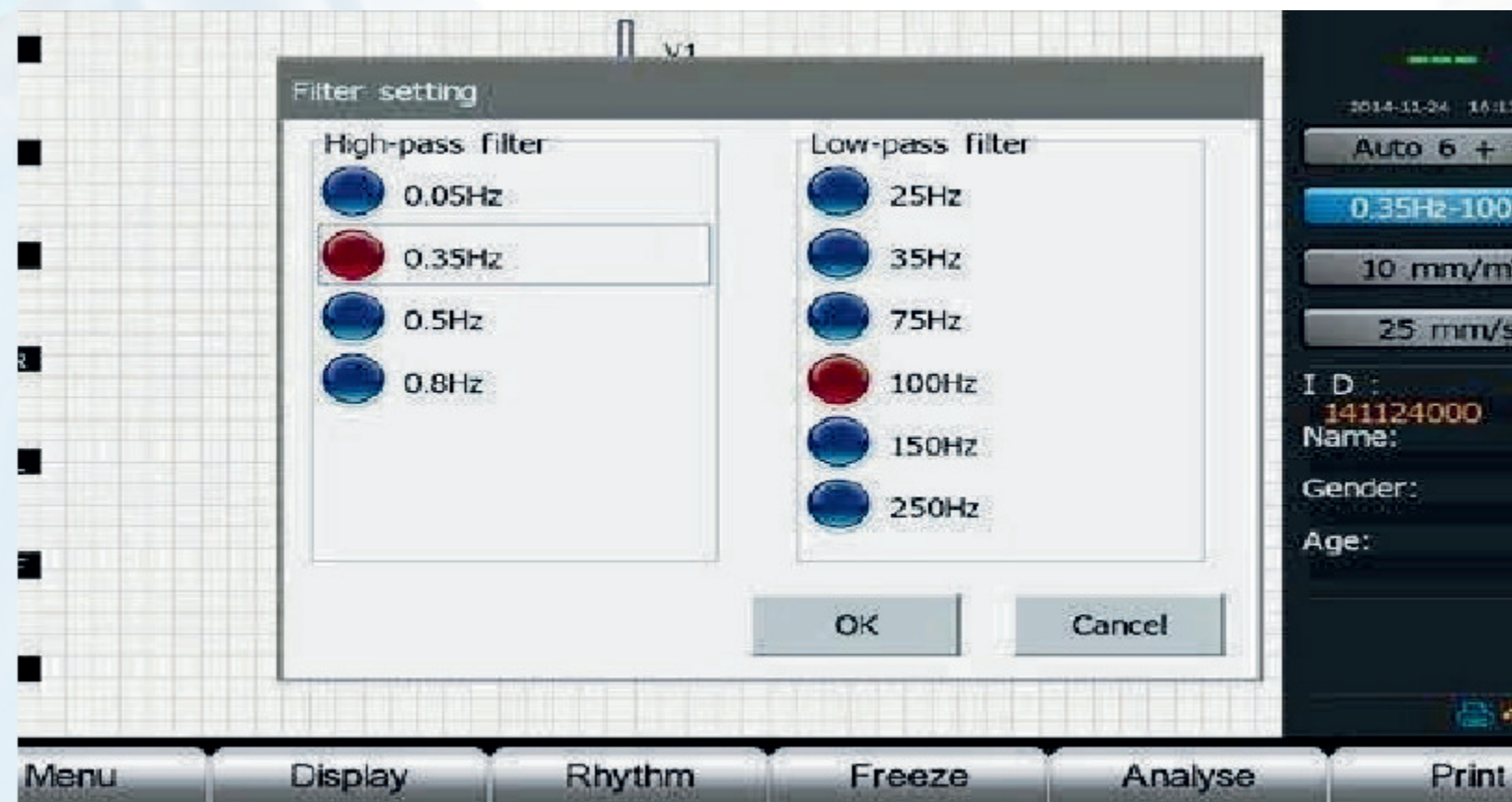
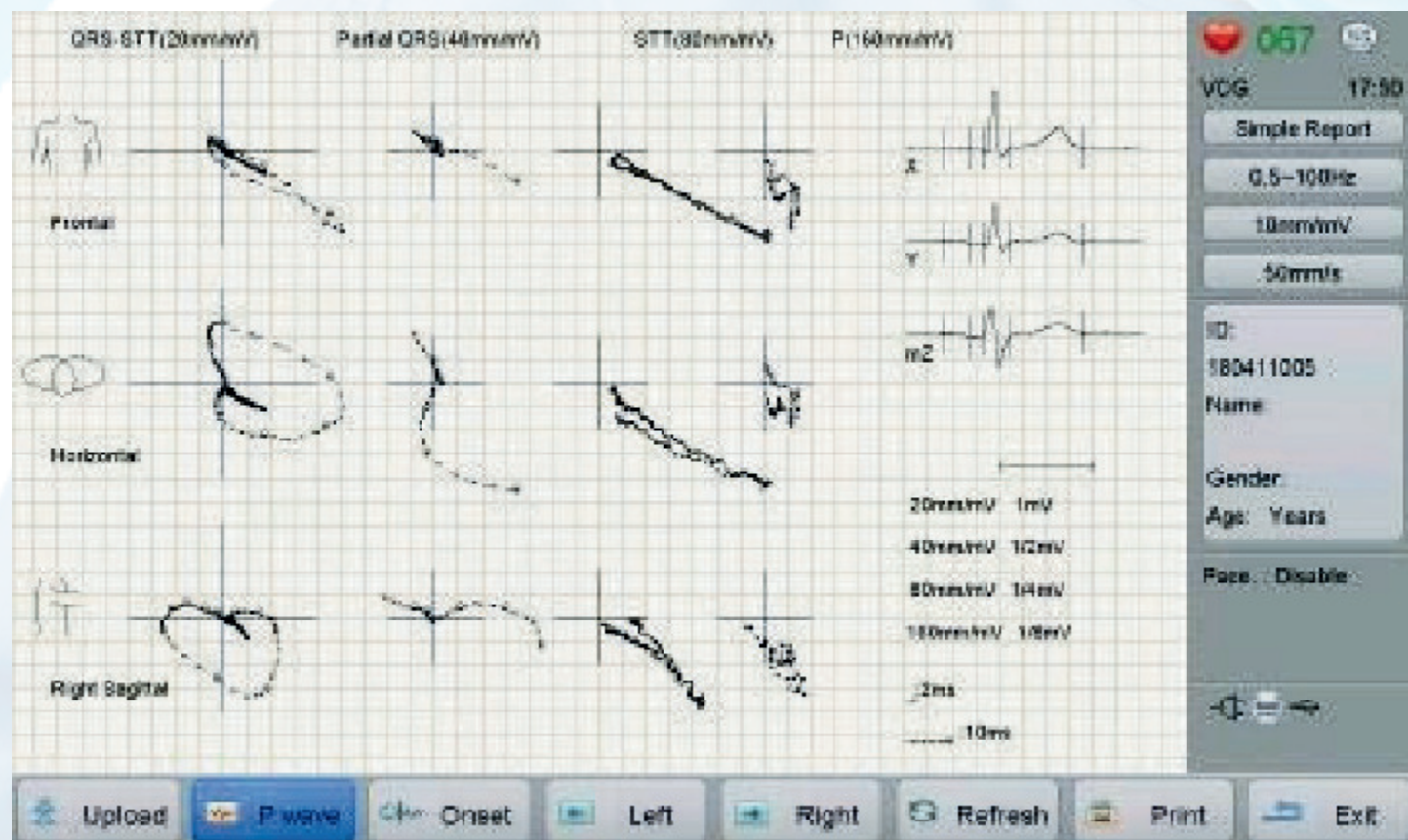
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| Parameter                   | Specification   |
|-----------------------------|---|
| Display                     | 9" LCD touchscreen  |
| Lead System                 | Standard 12-lead simultaneous acquisition   |
| Patient Cable               | ECG cable with defibrillation protection  |
| Recording Duration          | Long-term recording (30–300 s) and rhythm analysis  |
| Measurement Parameters      | Ventricular rate, PR interval, QRS duration, QT/QTc interval, P/QRS/T axis, R/S/V5 amplitude<br>AC, drift, and myoelectric interference filters |
| Filters                     | >122 dB (AC filter off); >144 dB (AC filter on)   |
| CMRR                        | >20 MΩ (at 10 Hz)   |
| Input Impedance             | 0.01 Hz – 40 Hz   |
| Frequency Response          | <10 μA  |
| Patient Leakage Current     | ≤0.1 μA   |
| Input Circuit Current       | ≥3.2 s  |
| Time Constant               | 0.625, 1, 1.25, 2.5, 5, 10, 20, 40 mm/mV, Auto gain   |
| Sensitivity                 | 5, 6.25, 10, 12.5, 25, 50 mm/s  |
| Paper Speed                 | 210 × 150 × 200 mm fan-fold (A4 width)  |
| Recording Paper             | Auto, Manual, Rhythm, Cabrera, PaperSave, Cycle Print   |
| Operation Modes             | 1 mV calibration, zero reset, auto baseline correction  |
| Calibration                 | 14.8 V rechargeable Li-ion battery (~6 h operation)   |
| Power Supply (DC)           | 100–240 V, 50/60 Hz, 110 V  |
| Power Supply (AC)           | IEC Class II, Type CF   |
| Safety Classification       | Temperature +5 °C to +40 °C   |
| Environmental Conditions    | Internal memory (3000 files), USB, supports external laser printers   |
| Data Storage & Connectivity |   |

- **Electrocardiography (ECG) remains one of the most reliable methods for assessing cardiac function.**
- **The EKG II-12 delivers precise, high-definition 12-lead ECG acquisition, supporting advanced arrhythmia detection and automatic interpretation to assist clinicians in accurate diagnosis.**
- **Its compact form factor, intuitive touchscreen interface, and intelligent workflow features make it well-suited for hospitals, clinics, and emergency medical environments—where speed, reliability, and ease of operation are essential.**

## Pediatric & Neonatal ECG Analysis

- **The EKG II-12 supports ECG analysis for adults, children, and newborns, ensuring reliable**
- **performance across all patient groups. Equipped with comprehensive digital filtering, the system effectively eliminates baseline drift, AC interference, and EMG noise, ensuring the acquisition of clean and**
- **accurate signals. A 0.05 Hz high-pass filter enhances sensitivity to low-amplitude ECG signals, enabling precise and undistorted ST-**
- **segment measurement and analysis. For pediatric and neonatal use, a 250 Hz low-pass filter module is specifically optimized to support accurate ECG acquisition in children and newborns, even with weak**
- **cardiac signals. An on-screen operation guide supports intuitive workflow and ease of use in clinical environments.**





**ADVANCED ECG PERFORMANCE FEATURES**

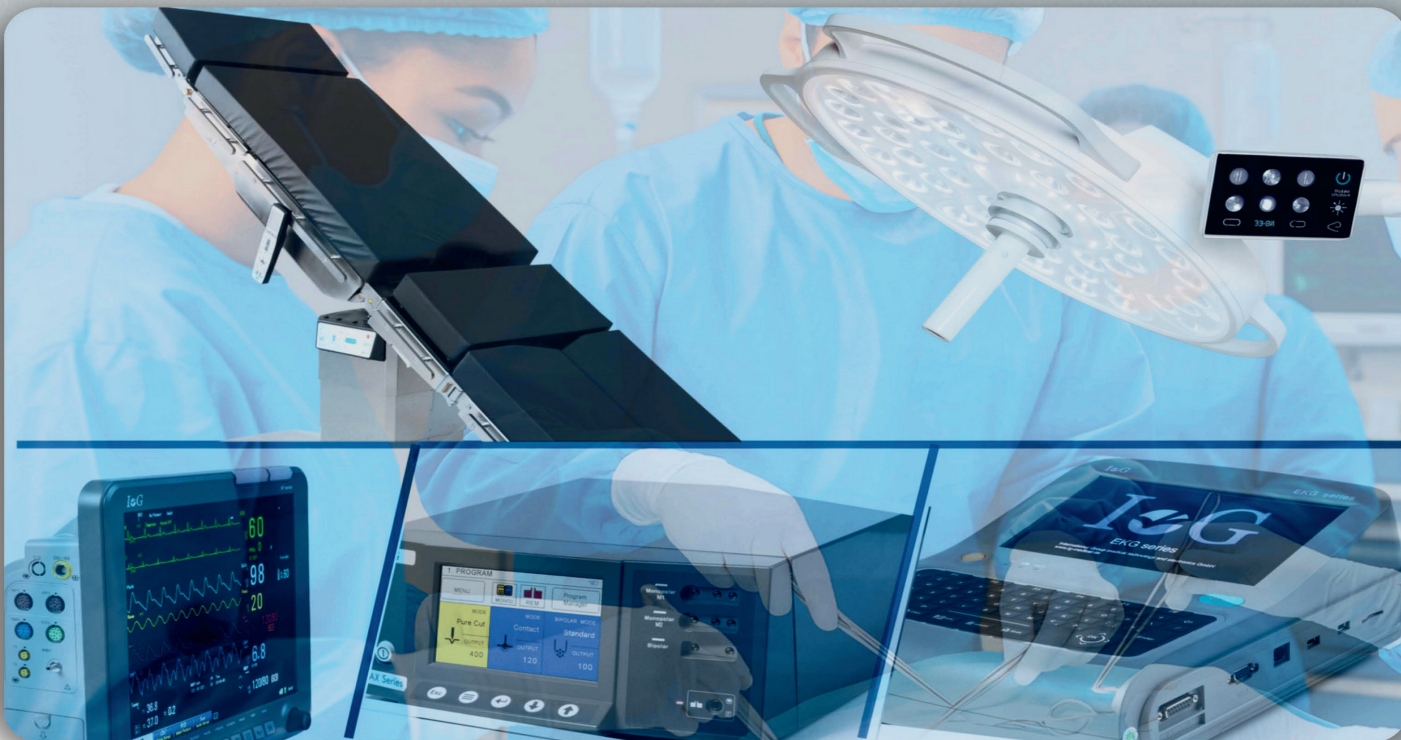
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|-------------------------------------|---|
| Ultra-High Sampling Rate<br>128 kHz | 128 kHz ultra-high sampling rate, four times higher than standard ECG devices, enabling precise pacemaker spike detection, polarization analysis, and signal acquisition up to $\pm 1350$ mV. |
| High Noise Immunity<br>144 dB CMRR  | 144 dB Common Mode Rejection Ratio (CMRR) ensures clean ECG signals in ICU and operating room environments with heavy electrical interference.  |
| Automatic Arrhythmia Event Capture  | Automatically records five seconds before and after each rhythm change, ensuring no arrhythmic events are missed.   |
| Integrated 12-Lead Vector ECG Mode  | Provides three-dimensional cardiac vector mapping directly from standard 12-lead ECG acquisition without external modules.  |
| Pharmacological Stress ECG Support  | Supports atropine and pharmacological stress protocols, extending usage beyond standard resting ECG examinations.   |

- The EKG II-12 integrates seamlessly into hospital and clinical information systems via USB, LAN, and Wi-Fi connections.
- It supports HL7, DICOM, and encoded FTP protocols for secure, bidirectional data exchange, enabling efficient workflow integration with HIS, LIS, and PACS environments.
- All patient data is stored in full compliance with GDPR standards, featuring multi-user access control and password-protected security.

**Highlights:**

- **Standards:** HL7, DICOM, and encoded FTP support
- **Connectivity:** LAN, Wi-Fi, and USB bidirectional communication
- **Data Access:** Multi-user access with role-based permissions
- **Security:** Encrypted internal storage with user-defined password protection
- **Peripheral Support:** Direct USB connection to external laser printers for on-demand
- **ECG report printing**





IG Medical is a German manufacturer of high-quality medical equipment based in Bremen. From here, we design and manufacture advanced solutions for operating rooms and intensive care units with Hanseatic diligence and technical precision. Our long-standing expertise in medical technology ensures reliable performance and adaptability to the evolving needs of healthcare systems worldwide. Guided by German quality and safety standards, we are ISO 13485-certified, compliant with the EU MDR 2017/745, and all our products carry the CE marking, a testament to the highest levels of quality, safety, and efficiency.

**Sectors of our enterprise**  
Operation Room and ICU Equipment

IG Medical ist ein deutscher Hersteller hochwertiger Medizintechnik mit Sitz in Bremen. Von hier aus entwickeln und fertigen wir mit hanseatischer Sorgfalt und technischer Präzision fortschrittliche Lösungen für Operationssäle und Intensivstationen. Unsere langjährige Erfahrung in der Medizintechnik garantiert zuverlässige Leistung und die Anpassung an die wachsenden Anforderungen des Gesundheitswesens weltweit. Geleitet von deutschen Qualitäts- und Sicherheitsstandards sind wir nach ISO 13485 zertifiziert, konform mit der EU-MDR 2017/745, und alle unsere Produkte tragen die CE-Kennzeichnung – ein Beleg für höchste Qualität, Sicherheit und Effizienz.

**Bereiche unseres Unternehmens**  
OP-Raum und Intensivstation



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