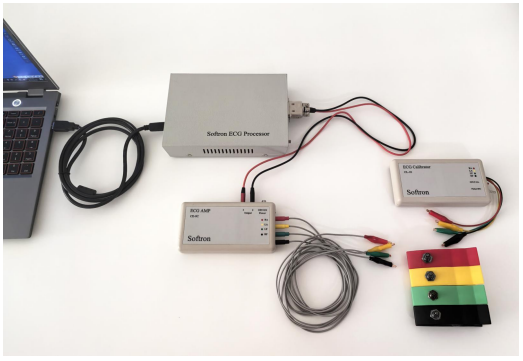
ECG Acquisition and Analysis System SP2006



The SP2006 ECG Acquisition and Analysis System is a high-precision device designed for recording and analyzing electrocardiographic signals in various laboratory animals, including rats, mice, dogs, monkeys, pigs, rabbits, cattle, and horses. Utilizing advanced signal processing technology, this system delivers accurate and clear ECG waveforms while offering multiple automated analysis functions. It is ideal for scientific research in fundamental medicine, life sciences, and pharmaceutical development, supporting both experimental studies and regulatory submissions.

Compatible with Multiple Laboratory Animals, Easy Operation

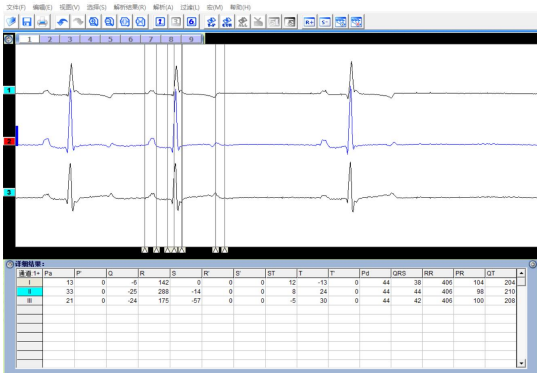
- Supports a wide range of laboratory animals; users can select the corresponding parameters and analysis methods within the software without changing hardware.
- ECG signals are collected via limb-lead electrodes. Rats, mice, and rabbits typically require anesthesia, while dogs, monkeys, and pigs can be monitored using a suspension bed or restraint chair while conscious.
- USB connection to a computer, allowing multi-channel simultaneous acquisition, with real-time monitoring of up to 8 animals at once.

High-Precision Waveform Acquisition and Real-Time Monitoring

- Ensures precise waveform acquisition, even for mice, where signals are prone to interference.
- Features "Electromyogram Filtering" and "Power Line Noise Filtering" functions to enhance waveform quality.
- Real-time analysis of Leads I and II, with the ability to review results during data collection.
- Events such as drug administration or stimulation can be marked during acquisition for later playback and analysis.

Advanced Data Analysis Capabilities

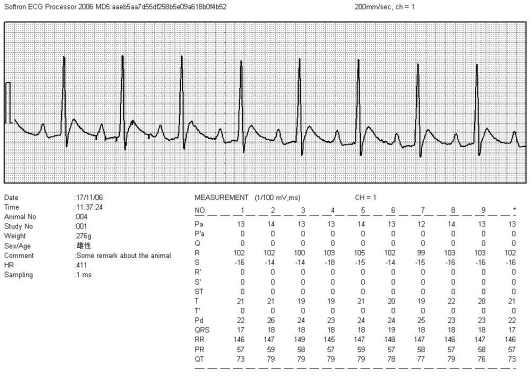
- Supports playback and re-analysis of stored ECG data, with customizable analysis periods and parameters.
- Provides multiple QTc calculation methods, including Bazett, Frederica, Van der Water, Matsunaga, and Oguchi formulas.
- Offers four ST-segment calculation methods (QQ-line, ST-J, S ST-index, R ST-index), applicable to different animal species.
- Fast processing speed with automatic ECG wave detection, ensuring precise location of P-wave onset, P-wave end, Q-wave onset, R-wave reference, S-wave onset, T-wave peak, and ST junction.



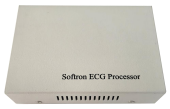
- Comprehensive analysis parameters, including heart rate, wave amplitudes (P, P', Q, R, S, R', S', ST, T, T'), and segment durations (P, QRS, RR, PR, QT).
- Derives three-lead (I, II, III) or six-lead (I, II, III, aVL, aVR, aVF) ECG data from Leads I and II.

Data Storage, Export, and Printing

- Supports waveform data storage, editing, and printing, compliant with GLP (Good Laboratory Practice) standards. Data is secured with an MD5 digital fingerprint for traceability.
- Generates customizable ECG analysis reports, allowing selection of 1, 3, or 6-lead waveforms. Reports can be exported to Excel for in-depth analysis.



System Components



ECG Processor
(Model: DS-8CH)

Analog Signal Cables
(Model: EP-C2)

Pre-Amplifier
(Model: CE-0C)

Clamp Electrode Leads
(Model: CAT4)

ECG Calibrator
(Model: CL-10)

Limb Lead Clamps

Technical Specifications

ECG Processor

- Sampling Frequency: 250–2000 Hz
- Channels: 1–8 CH
- Resolution: 12-bit
- Communication Interface: USB
- Analog Signal Output: BNC interface

Pre-Amplifier

- Amplification Levels: 1×, 2×, 10×
- Applicable Heart Rate Range: 0–1000 BPM
- Battery: 3.7V rechargeable battery
- Lead Type: Limb-lead electrodes

ECG Calibrator

- Pulse Output: 1 mV
- Battery: 4.5V (3×AA batteries)
- Connection Type: Clamp electrodes