

# **HeartView**<sup>™</sup>

# HeartView™ P12/8 Mobile

High Resolution 12 or 8 Lead ECG Recorder/Transmitter for Personal Use

The HeartView P12/8 Mobile is a 12 (or 8) lead ECG event Recorder/Transmitter. It is a small yet very powerful device with high resolution 12-Lead ECG recording technology. The HeartView P12/8 Mobile is designed for patient use by its unique method of recording. The HeartView P12/8 Mobile enables the transmission of comprehensive ECG data from any place, at any time. The recorded ECG is automatically transmitted via cellular network to a cardiac call center for immediate diagnosis by using Aerotel's HeartLine Receiving Station (HRS) or any other compatible system.



# HeartView™ P12/8 Mobile

High Resolution 12 or 8 Lead ECG Recorder/Transmitter for Personal Use

#### The HeartView P12/8 Mobile allows

- Diagnosis of cardiac symptoms
- Remote monitoring of Chronic Heart patients
- Recording and Transmission of an ECG by patient or qualified person to a cardiac call center
- Cardiac analysis for clinical studies

#### **Product Highlights**

- Simplified recording procedure using 3-wire and 4 embedded electrodes
- Audio Instructions from the device's built-in speaker makes it easy to use
- · High resolution ECG
- Records 12 or 8 Lead ECG (selectable)
- Records 10 seconds per lead, up to ten events
- Direct ECG data transmission over Cellular network
- ST segment recording capable
- · Small, hand-held, battery powered





#### Aerotel Medical Systems (1998) Ltd.

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## **Technical Data**

#### Input Amplifier

Frequency Response: 0.05 - 150Hz CMRR Ratio: >90dB (@ 50Hz/60Hz)

Input Range: ± 5mV

DC Offset Correction: ± 300mV ECG Channel: 8 Leads or 12 Leads

Pacemaker Detection: Yes

Input Source: 3 wire patient cable + 4 chest electrodes

#### Sampling & Memory

A/D Sampling: 24 Bit @ 1000 Samples/Sec

Recorded ECG Resolution: 500 Samples/Sec; 16bit

Lead Recording Length: 10 sec for each lead

Storage Capacity: Up to 10 events

Memory Type: Flash

Real Time Clock: Time stamp for every event

ECG Indicator: Green LED

#### **Signal Processing**

High Pass Filter: 0.05Hz Low Pass Filter: 150 Hz Baseline correction: Yes

#### **Cellular Transmission**

Technology: HSPA/UMTS/EDGE/GPRS/GSM

Supported Bands:

FUR Version

- 2 Bands GSM/GPRS/EDGE 900/1800 MHz
- 2 Bands UMTS/HSPA 900/2100 MHz

US Version

- 2 Bands GSM/GPRS/EDGE 850/1900 MHz
- 2 Bands UMTS/HSPA 850/1900 MHz

SIM Type: Micro SIM

Antenna: Integrated 5 Band antenna

Indicator: Blue LED

#### Power

Battery Type: Lithium Ion 3.7V/850mAH Charging: External charger (supplied)

Input: 100-240VAC, 50-60Hz, 0.2A Output: 5VDC, 2A

Low Battery Indicator: Yellow LED

#### **Operating Conditions**

Temperature: 5°C to 40°C Humidity: 15% to 93% RH

Atmospheric Pressure: 700 hPa to 1060 hPa

#### Physical Specifications

Length: 109 mm Width: 64 mm Thickness: 34 mm Weight: 130 gr.













HeartView<sup>™</sup>

**NEW** 

High Resolution
Wireless ECG

# HeartView<sup>™</sup> 12L

High Resolution 12-Lead ECG Recorder/Transmitter for Professional Use



One of the world's smallest ECG event Recorder/Transmitters, a small yet very powerful device with high resolution 12-Lead ECG recording technology. The HeartView 12L enables the transmission of comprehensive ECG data from any place, at any time. The recorded ECG is transmitted automatically via Bluetooth to Aerotel's Mobile CliniQ App installed in your mobile device. The ECG data is then automatically sent from your mobile device to your cardiac call center for immediate diagnosis by using Aerotel's HeartLine Receiving Station (HRS) or any other compatible system. When necessary, it can also be transmitted acoustically, via a land line phone, directly to your cardiac call center.



# HeartView<sup>™</sup> 12 L

High Resolution 12-Lead ECG Recorder/Transmitter for Professional Use

#### The HeartView 12L allows

- Diagnosis of cardiac symptoms
- Remote monitoring of Chronic Heart patients
- Recording and Transmission of an ECG by a qualified person to a cardiac call center
- Cardiac analysis for clinical studies

#### **Product Highlights**

- High resolution ECG
- Simultaneous recording of a 12-lead ECG
- Records up to 10 seconds per lead
- Bluetooth enabled for ECG data transmission
- Acoustic transmission capable via a land line phone
- ST segment recording capable
- · Small, hand-held, battery powered





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## **Technical Data**

#### **Input Amplifier**

Frequency Response: 0.05 - 150Hz CMRR Ratio: >90dB (@ 50Hz/60Hz)

Input Range: ± 5mV

DC Offset Correction: ± 300mV

ECG Channel: 12 Leads

Pacemaker Detection: Yes

Input Source: 10 wire patient cable

Lead Off detection: Yes

#### Sampling & Memory

A/D Sampling: 24 Bit @ 1000 Samples/Sec Recorded ECG Resolution: 500 Samples/Sec; 16bit Lead Recording Length: 10 sec for each lead

Storage Capacity: Single event

Memory Type: Flash

Real Time Clock: Time stamp for every event

ECG Indicator: Green LED flashes when event is stored in memory

#### **Signal Processing**

High Pass Filter: 0.05Hz Low Pass Filter: 150 Hz Baseline correction: Yes

#### Wireless Transmission

Technology: Bluetooth (Version 2.1 + EDR)

Type: Class II Bluetooth Module: Bluegiga WT12 Range: Up to 10 meters Indicator: Blue LED

#### **Acoustic Transmission**

Modulation: FM Tone Center Frequency: 1900 Hz Frequency Deviation: 100Hz / 1mV Transmission Speed: x2

#### Power

Battery Type: 3 x 1.5V AAA batteries

Low Battery Indicator: Yellow LED flashes when battery voltage is low

#### **Operating Conditions**

Temperature: 5°C to 40°C Humidity: 15% to 93% RH

Atmospheric Pressure: 700 hPa to 1060 hPa

#### **Physical Specifications**

Length: 129 mm Width: 65 mm Thickness: 30 mm

Weight: 131 gr. (Including batteries)













# **HeartView**<sup>™</sup>

# HeartView™ P12/8i

High Resolution 12 or 8 Lead ECG Recorder/Transmitter for Personal Use



The HeartView P12/8i is a 12 (or 8) lead ECG event Recorder/Transmitter. It is a small yet very powerful device with high resolution 12-Lead ECG recording technology. The HeartView P12/8i is designed for patient use by its unique method of recording. The HeartView P12/8i enables the transmission of comprehensive ECG data from any place, at any time. The recorded ECG is automatically transmitted via Bluetooth to Aerotel's Mobile CliniQ App installed in your mobile device. The ECG data is then automatically sent from your mobile device to your cardiac call center for immediate diagnosis by using Aerotel's HeartLine Receiving Station (HRS) or any other compatible system. When necessary, it can also be transmitted acoustically, via a land line phone, directly to your cardiac call center.



# HeartView™ P-12/8 i

High Resolution 12 or 8 Lead ECG Recorder/Transmitter for Personal Use

#### The HeartView P12/8i allows

- Diagnosis of cardiac symptoms
- Remote monitoring of Chronic Heart patients
- Recording and Transmission of an ECG by patient or qualified person to a cardiac call center
- Cardiac analysis for clinical studies

#### **Product Highlights**

- Simplified recording procedure using 3-wire and 4 embedded electrodes
- High resolution ECG
- Records 12 or 8 Lead ECG (selectable)
- Records up to 10 seconds per lead
- Bluetooth enabled for ECG data transmission
- Acoustic transmission capable via a land line phone
- ST segment recording capable
- Small, hand-held, battery powered





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## **Technical Data**

#### **Input Amplifier**

Frequency Response: 0.05 - 150Hz CMRR Ratio: >90dB (@ 50Hz/60Hz)

Input Range: ± 5mV

DC Offset Correction: ± 300mV ECG Channel: 8 Leads or 12 Leads

Pacemaker Detection: Yes

Input Source: 3 wire patient cable + 4 chest electrodes

#### Sampling & Memory

A/D Sampling: 24 Bit @ 1000 Samples/Sec

Recorded ECG Resolution: 500 Samples/Sec; 16bit Lead Recording Length: 10 sec for each lead

Storage Capacity: Single event

Memory Type: Flash

Real Time Clock: Time stamp for every event

ECG Indicator: Green LED flashes when event is stored in memory

#### **Signal Processing**

High Pass Filter: 0.05Hz Low Pass Filter: 150 Hz Baseline correction: Yes

#### Wireless Transmission

Technology: Bluetooth (Version 2.1 + EDR)

Type: Class II Bluetooth Module: Bluegiga WT12 Range: Up to 10 meters Indicator: Blue LED

#### **Acoustic Transmission**

Modulation: FM Tone Center Frequency: 1900 Hz Frequency Deviation: 100Hz / 1mV Transmission Speed: x2

#### Power

Battery Type: 2 x 1.5V AAA batteries

Low Battery Indicator: Yellow LED flashes when battery voltage is low

#### **Operating Conditions**

Temperature: 5°C to 40°C Humidity: 15% to 93% RH

Atmospheric Pressure: 700 hPa to 1060 hPa

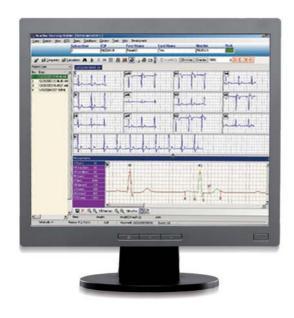
#### **Physical Specifications**

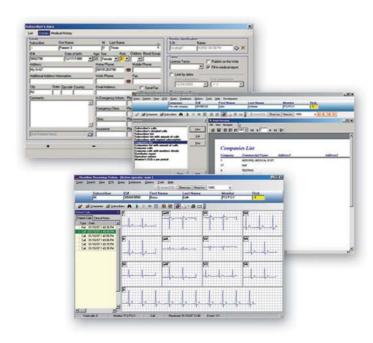
Length: 109 mm Width: 64 mm Thickness: 34 mm

Weight: 140 gr. (Including batteries)









# **HeartLine**

# HeartLine<sup>™</sup> Receiving Station (HRS<sup>™</sup>) HRS-Net<sup>™</sup> - Remote Access to HRS<sup>™</sup> Data

Remote Monitoring Applications

# **HeartLine Receiving Station (HRS™)**

# Cutting-Edge Technology for ECG Data Acquisition, Disease Management, Diagnostics & ECG Monitoring Center

HRS is Aerotel's ECG core acquisition and management center. It is a flexible, modular platform designed to serve present & future needs. Easy to operate, it can be used with any standard PC equipment\*. Designed for long-term use, the system's database offers various access and management options. HRS supports Aerotel's entire line of HeartLine monitors. Additionally, several systems can be networked in order to support large-scale service operations.



## HeartLine Receiving Station (HRS™) Cont.

#### **Applications**

- Enables ECG monitoring of individuals and mass screening
- Allows remote ECG analysis
- Call center applications for immediate diagnosis of subscribed patients
- Outpatient follow-up by hospitals
- Facilitates early patient discharge from hospitals
- Enables pharmaceutical companies to perform drug compliance studies

#### **Features**

- Flexible and modular
- Oracle® database with full patient data management capabilities
- Stand-alone or network operation options
- Supports remote access and split database options New!
- Supports SCP/Open ECG format New!
- Import tool of external documents
- Automatic monitor recognition based on patient's code in the HRS system
- Full ECG comparing function for detecting changes in ECG pattern of same patient
- Full medical history including symptoms, diagnosis, medication, referrals, etc.
- Administrative tool for managing monitors available at the call center
- Possibility to limit a monitor or patient with a pre-assigned number of calls or subscription dates
- Full reporting capabilities (e.g. detailed ECG report with the ECG segment measurement data)
- Security Manager to control access authorization of various user groups at the call center
- Interpreting physician secure access with ECG referral audit control
- Database report generator via built-in report building tool
- Direct emailing of ECG to a predefined destination
- Digital ECG receiving capability
- Allows Internet accessibility via interface and Remote Manager
- Measurment tool
- Automatic editing
- Audio alert for incoming ECGs
- Interactive Voice Respons option (HRS-VRM)

#### **Benefits**

- Flexible and modular platform
- Short training period
- Easy to implement and use
- Cost-effective
- Low operational costs

#### HRS-Net™

#### Web-Based Access to HRS Data

Aerotel's HRS-Net system is an essential add-on to the HRS system enabling remote access of authorized users (patients, physicians, or companies) to view ECG data via the Web.

HRS-Net is a bidirectional system, enabling remote interpretation or second opinion by specialized cardiologists.

#### **Applications**

- Remote monitoring of chronic heart patients
- Primary care tele-cardiology system for remote areas

#### **Features**

- Secure remote access to HRS ECG data via the Web
- Remote viewing of incoming ECG traces
- ECG data is instantly available for viewing over the Web to authorized users
- Second opinion consultation with physicians in other locations

#### **Benefits**

- Patients are monitored in the comfort of their own homes and physicians can access patient data from anywhere anytime
- Increase patient's quality of care
- Improve patient compliance by enabling the patient to view data
- User friendly and easy to use
- Remote ECG interpretation by cardiologists via secure web access.
- Enables unmanned receiving center for remote monitoring of heart patients
- Reduces operational costs of receiving center

FDA Cleared

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