

HRV

1/2/3/12 Channel

Bluetooth

TWA

# Holter-ECG

GDT

Event recorder

Template



**CARDIOSPY PC Holter ECG**

The EC-CARDIOSPY EC-1H, EC-2H, EC-3H, EC-12H devices records 1, 2, 3 independent or 12 ECG channels with high precision.

The analysis program performs automatic QRS detection, classification, and rhythm analysis that can be interactively modified by the user.

The analyzing program performs time and frequency based HRV, pacemaker, QT, AF and ST analysis of the 24 hours recordings.

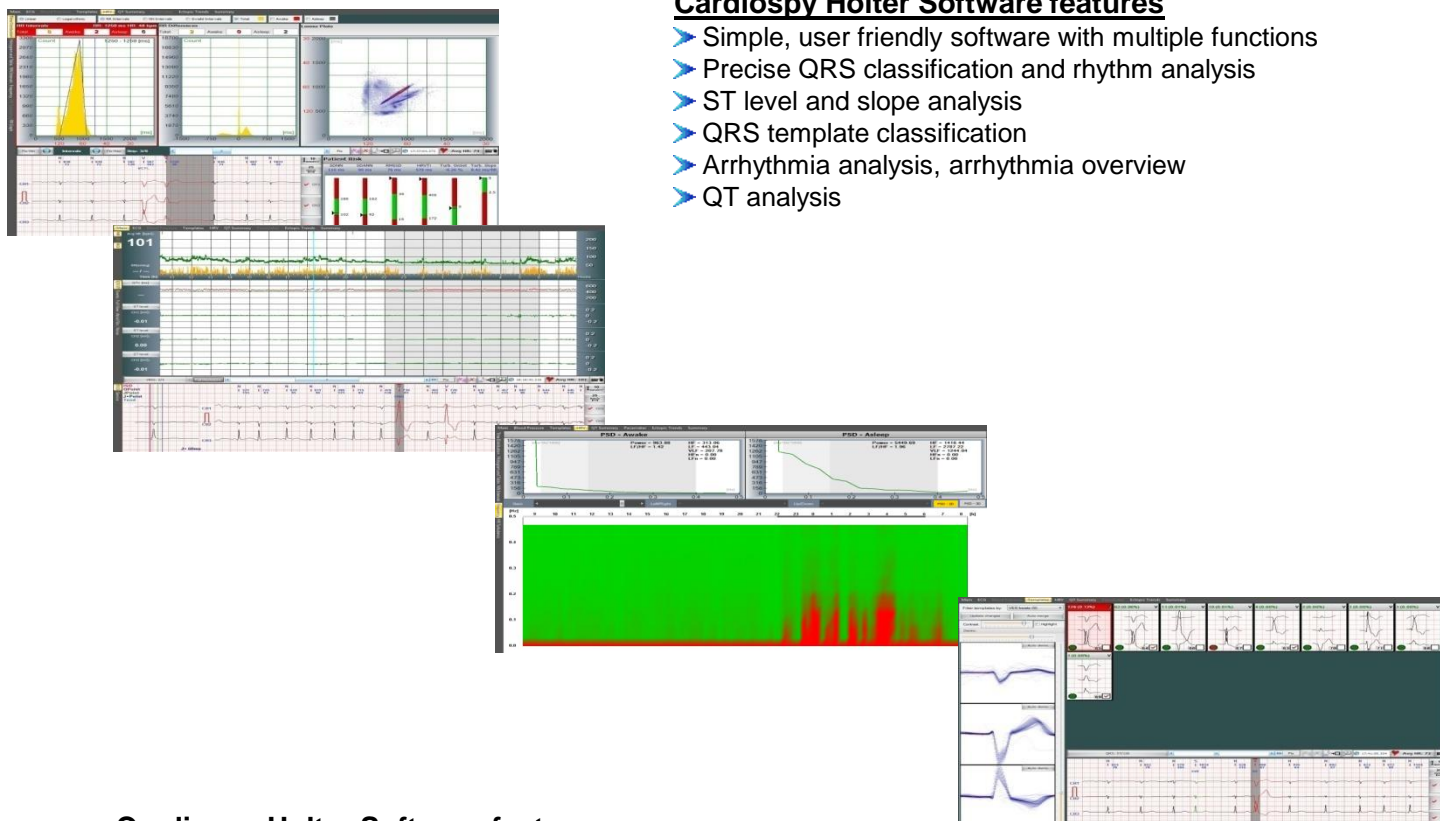
### **Holter recorder features**

- 1, 2, 3 independent channels or 12-CH ECG
- Compact size, light weight, convenient to wear
- Wireless (Bluetooth) communication with PC
- Integrated 3D accelerometer for motion detection
- Pacemaker detection
- Patient event button
- Low power consumption
- Operates with 1 pc of 1.2 V AAA NiMH accumulator or 1 pc 1.5 V AAA alkaline battery



### **Cardiospy Holter Software features**

- Simple, user friendly software with multiple functions
- Precise QRS classification and rhythm analysis
- ST level and slope analysis
- QRS template classification
- Arrhythmia analysis, arrhythmia overview
- QT analysis



### **Cardiospy Holter Software features**

- Heart Rate Variability analysis (Time and frequency domain)
- Heart Rate Turbulence analysis
- Pacemaker analysis
- Atrial Fibrillation analysis
- Time adjustment
- Various Holter reports
- DICOM, HL7, GDT

The transparency and the interpretation of the results are aided by the color coded graphs and tables. The decision criteria may be changed, the classified beats and event segments may be redefined.

The quick and precise evaluation of the recordings is helped by the efficient decision making algorithms, the availability of a native language version and the option for the generation of simple summarizing reports make the system easy to use.

	EC-1H	EC-2H	EC-3H	EC-12H
<b><u>System for operation in telemedicine</u></b>				
▪ Make new record using recorder display	Yes	Yes	Yes	Yes
▪ Raw ECG visualization after reading to PC	Yes	Yes	Yes	Yes
▪ Send Raw and receive evaluated record	Yes	Yes	Yes	Yes
▪ Visualization of evaluated record on PC	Yes	Yes	Yes	Yes
▪ Archival / Printing	Yes	Yes	Yes	Yes
<b><u>System for own evaluation</u></b> (In addition to the features of the system for operation in telemedicine)				
▪ Make new record and read record to PC	Yes	Yes	Yes	Yes
▪ ECG Filtering	Yes	Yes	Yes	Yes
▪ QRS Detection	Yes	Yes	Yes	Yes
▪ HR and ST Graphs	Yes	Yes	Yes	Yes
▪ Arrhythmia Analysis (N,S,V)	Yes	Yes	Yes	Yes
▪ Full ECG Visualization	Yes	Yes	Yes	Yes
▪ Event Viewer	Yes	Yes	Yes	Yes
▪ Colour-coded event marking	Yes	Yes	Yes	Yes
▪ Detailed ECG Visualization	Yes	Yes	Yes	Yes
▪ Adjustable parameters for analysis	Yes	Yes	Yes	Yes
▪ Report Edition	Yes	Yes	Yes	Yes
▪ Interfaces – GDT, DICOM, HL-7	Yes	Yes	Yes	Yes
▪ Several editing Option	Yes	Yes	Yes	Yes
<b><u>Additional functions of the various holter ECG systems</u></b> (in the analysis software)				
▪ Motion Detection	Yes	Yes	Yes	Yes
▪ QRS Template Classification		Yes	Yes	Yes
▪ QT Analysis		Yes	Yes	Yes
▪ HRV Time Domain		Yes	Yes	Yes
▪ HRV Frequency Domain			Yes	Yes
▪ Pacemaker Analysis			Yes	Yes
▪ Atrial Fibrillation Analysis			Yes	Yes
▪ T Alternant				Yes
▪ HR Turbulence Analysis				Yes
▪ Breathing Detection				Yes
▪ Vector cardiography				Yes

## SPECIFICATION TABLE OF HOLTER RECORDERS :

	EC-1H	EC-2H	EC-3H	EC-12H
▪ Bipolar ECG Channels	1	1, 2	1, 2, 3	1, 2, 3
▪ Other ECG Channels	-	-	PM, NEHB	PM, 12 CH, Frank, NEHB
▪ Number of snap type Leads	3	3, 5	3, 4, 5, 7	3, 4, 5, 7, 10
▪ Recording Period (hours)	24, 48, 72 h, 1 week	24, 48, 72 h, 1 week	24, 48, 72 h, 1 week	24, 48, 72 h
▪ The accumulator can be changed during recording	Yes	Yes	Yes	Yes
▪ Dynamic Bandwidth (min)	±20 mV	±20 mV	±20 mV	±20 mV
▪ DC Offset Range (min)	±800 mV	±800 mV	±800 mV	±800 mV
▪ Frequency Response (max)	0.05 Hz ... 150 Hz	0.05 Hz ... 150 Hz	0.05 Hz ... 150 Hz	0.05 Hz ... 150 Hz
▪ Sampling Rate	256 Hz ... 2048 Hz	256 Hz ... 2048 Hz	256 Hz ... 2048 Hz	256 Hz ... 2048 Hz
▪ Recording Rate	128 Hz ... 1024 Hz	128 Hz ... 1024 Hz	128 Hz ... 1024 Hz	128 Hz ... 1024 Hz
▪ Common Mode Rejection Ratio (min)	120 dB	120 dB	120 dB	120 dB
▪ A/D Resolution	16 bit	16 bit	16 bit	16 bit
▪ Input impedance (min)	100 MΩ	100 MΩ	100 MΩ	100 MΩ
▪ Power Source	1x1.2 V AAA NiMH accumulator (or 1x1.5 V AAA alkaline battery)	1x1.2 V AAA NiMH accumulator (or 1x1.5 V AAA alkaline battery)	1x1.2 V AAA NiMH accumulator (or 1x1.5 V AAA alkaline battery)	1x1.2 V AAA NiMH accumulator (or 1x1.5 V AAA alkaline battery)
▪ Battery Life (min)	24 hours	24 hours	24 hours	24 hours
▪ Storage Card Capacity	2 GB (μSD)	2 GB (μSD)	2 GB (μSD)	2 GB (μSD)
▪ Internal Voltage (max)	3,3V	3,3V	3,3V	3,3V
▪ LCD resolution	160x100 pixels (Grey Scale)	160x100 pixels (Grey Scale)	160x100 pixels (Grey Scale)	160x100 pixels (Grey Scale)
▪ Movement detection-3D	Yes	Yes	Yes	Yes
▪ Monitoring ECG	on LCD and on PC via Bluetooth (both)	on LCD and on PC via Bluetooth (both)	on LCD and on PC via Bluetooth (both)	on LCD and on PC via Bluetooth (both)
▪ Reading Record	via USB 2.0	via USB 2.0	via USB 2.0	via USB 2.0
▪ International Protection Rating Against Water	IPX4	IPX4	IPX4	IPX4
▪ Width x Height (without cable) x Length	53 x 67,5 x 18,5 mm	53 x 67,5 x 18,5 mm	53 x 67,5 x 18,5 mm	53 x 67,5 x 18,5 mm
▪ Weight	~ 50 g	~ 50 g	~ 50 g	~ 50 g

### PC requirements:

Operating system	Windows XP SP3, Vista SP2, 7	HDD	at least 500 GB
CPU	at least 1,6 GHz Dual Core	Interfaces	USB-Port
RAM	at least 2 GB RAM		



Our products are up from development to manufacturing subject to a certified Quality Management System in accordance to the EN ISO directives. The company is EN ISO certified. All products are labeled with CE mark and in accordance to the Medical Device Directives MDD 93/42/EEC.

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The illustrations within this brochure show some optional features. All informations represent the technical product status at date of printing. Changes due to technical advancement are subject to modification of amendment (Rev. A01-2012).

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