

EC-1-12H Holter ECG System

Technical specification



TECHNICAL SPECIFICATIONS OF DIFFERENT HOLTER SYSTEMS				
Type of Holter Recorders	EC-1H	EC-2H	EC-3H	EC-12H
Bipolar ECG Channels	1	1, 2	1, 2, 3	1, 2, 3, 12
Other ECG Channels	Nehb	-	+PM, Nehb	+PM Classic 12 CH, Nehb, Frank
Number of snap type Leads	3, 5	3,5	3, 4, 5, 7	3, 4, 5, 7, 10
Recording duration (without battery changing)	168h	48h	48h	24h
The battery can be changed during recording	Yes			
Recording duration (with battery changing)	336h			
Dynamic Bandwidth (min)	±20 mV			
DC Offset Range (min)	±800 mV			
Frequency Response (max)	0.05 Hz ... 150Hz			
Sampling Rate	128, 256, 512, 1024 sample/second			
Recording Rate	128 Hz ... 1024 Hz			
Common Mode Rejection Ratio (min)	120dB			
A/D Resolution	16 bit			
Input impedance (min)	100 MΩ			
Power Source	2x1.2 V AA NiMH (or 2x1.5 V AA alkaline)	1x1.2 V AAA NiMH (or 1x1.5 V AAA alkaline)		
Battery Life (min)	min. 96 h, up to 168 h using a high-capacity battery	min. 24 h, up to 48 h using a high-capacity battery		
Storage Card Capacity	built-in 2GB (microSD)			
Internal Voltage (max)	3.3 V			
Display	LED	LCD (Grey Scale 160x100 pixels) or LED		
Movement detection-3D	Yes			
Patient Event button	Yes			
Monitoring ECG	On PC via Bluetooth and if available, on LCD as well			
Reading Record	via USB cable			
International Protection Rating Against Water: IPX4	Yes			
Size	105 x 60 x 22 mm	53 x 67.5 x 18.5 mm		
Weight	150 g	~ 50 g		

BASIC FUNCTIONS OF SOFTWARE**DATABASE FUNCTIONS**

• Common database for all Labtech system	• Record recycle bin function	• Search records
• Acquire Patient ID from barcode reader	• System log	• Local database, Network database: Microsoft SQL Server database, SQLite database
• Acquire Patient ID using magnetic card reader	• Filter records	• Different date format
• Medical record for patients	• Import – export records	• Password protected software starting
• Access control	• Import – export records by date	

BASIC FUNCTIONS

• Automatic update	• Normal and MSI install	• Full screen mode
• HIS integrations: GDT, DICOM MODALITY WORKLIST, Cardiospy SDK	• Two display mode	• Cubios HRV export
• FTP integration	• Email function	• AHA / IEC electrode placement

PRINT AND EXPORT FUNCTIONS

• Report printing and exporting	• Automatic print	• Selectable reports
• Color and Black and white reports	• Contrast settings	• Resizable resolution
• Customizable company logo	• Automatic diagnosis	• Custom report
• Adjustable paper speed and amplitude	• Import /Export settings	• Export ECG data to CSV, SCP, Dat format
• Export QRS data	• Export N-N intervals	• Export R-R intervals

HOLTER SOFTWARE FUNCTIONS

• Make new record using PC or recorder display	• Raw ECG visualization after reading to PC	• Visualization of evaluated record on PC
• Store the Indication and medication of the patient	• Awake, Asleep and special time	• Smoothing, baseline, mains filters
• Event Viewer	• Colour-coded event marking	• ST/ST slope diagrams
• QT – QTc – QT% diagrams	• QRS – PQ diagrams	• Atrial fibrillation and atrial flutter screen
• Battery stats	• Noisy detection and editor	• Lead of warnings
• Detailed ECG Visualization	• QRS Detection	• Adjustable parameters for analysis
• HR and ST Graphs	• Arrhythmia Analysis (N,S,V)	• Full ECG Visualization
• Measuring possibility on the ECG	• Insert and delete QRS	• Rename QRS
• Mark noisy intervals	• Delete single/group events	• Patient event view

ADDITIONAL FUNCTIONS OF DIFFERENT HOLTER SYSTEMS

	EC-2H	EC-1H, EC-3H	EC-12H
P-wave detection	+	+	+
Motion Detection	+	+	+
QRS Template Classification	+	+	+
QT Analysis	+	+	+
HRV Time Domain	+	+	+
AV block I-II-III Analysis	+	+	+
Atrial Flutter Analysis	+	+	+
HRV Frequency Domain		+	+
Pacemaker Analysis		+	+
Atrial Fibrillation Analysis		+	+
Vector cardiography		+	+
T Alternant			+
HR Turbulence Analysis			+

SOFTWARE MINIMUM CONFIGURATION

Processor	minimum: Core 2 Duo or better recommended: Intel® Core™ i3 or better (Sandy Bridge or newer architecture)
RAM	minimum: 2 GB; recommended: 6 GB
Graphics card	DirectX 10 compatible, min. 128 MB video memory
Display	minimum: min. 1280x800 resolution recommended: 22" monitor 1920 x 1080 resolution (Full HD)
HDD	200 GB (SATA II or newer recommended)
Interface	1 USB port for the EC-2H/3H/12H/ABP recorder 1 USB port for the USB-02 key 1 USB port for the printer
Printer	Laser (printing speed: 15-20 page/min, color printer recommended)
Operating system	Windows XP SP 3 (32-bit only) Windows Vista, Windows 7, Windows 8, Windows 8.1 (32-bit or 64-bit versions)

*Windows XP is no longer supported by Microsoft. Labtech provides only limited support for previously installed systems.