

CARDIOLOGY & SPIROMETRY





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INTRODUCTION

Based on many years of standing experience in manufacturing, design and sale of safe and reliable equipment, BTL offers its customers the broadest range of cardiology, spirometry and physiotherapy products. This catalogue presents a complete line of products for cardiology & spirometry:

- ◇ 1, 3, 6 and 12-channel electrocardiographs
- ◇ Stress-test systems
- ◇ ECG Holter monitors
- ◇ Ambulatory blood pressure monitors
- ◇ Spirometers

The BTL-08 cardiology & spirometry products stand out for their fast and easy operation, top parameters, modern functional design, and reliability. Reflecting the latest trends in medicine and providing an excellent price/performance ratio, the units are an ideal investment for medical professionals. The product line contributes to our goal: manufacturing highly competitive yet affordable products and providing excellent customer care support to our customers world-wide.

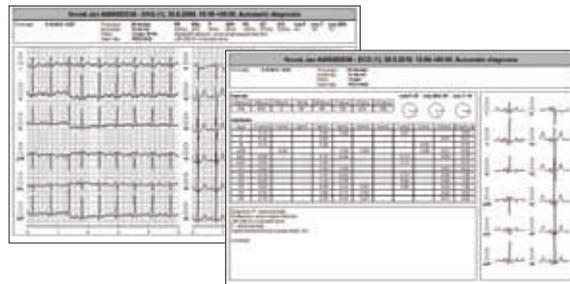
All of the BTL electrocardiographs were designed especially for fast and simple operation. They also offer a variety of extra features and multiple upgrades that can be applied. Finally, they fully comply with the latest requirements for modern electrocardiography equipment. All the manufactured models are grouped into three product lines according to their size and the features that they offer.



- ◇ **THE L-LINE:** Has a large touch-screen, wide printouts and plenty of possible upgrades
- ◇ **THE M-LINE:** Combines the outstanding features of the L-Line with a lighter design
- ◇ **THE S-LINE:** Features portability & long-term battery operation

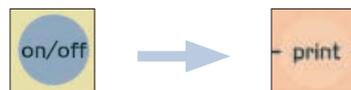
HIGH QUALITY PRINTOUTS & POWERFUL DIAGNOSTICS

Supreme signal processing and advanced filtration methods result in clear and stabilized ECG waveforms. The diagnostics module offers waveforms analysis and text interpretation.



EASY-TO-USE OPERATION

Only two clicks are required to perform an ECG printout. Simplicity is a key factor for comfortable operation.



UPGRADES & ACCESSORIES

Multiple upgrades such as the Spirometry Module, which creates a unique combination of a cardio-pulmonary device, are available. With these upgrades, a professional cardiology workplace can be created.



6 L-LINE ECG RECORDERS

BTL-08 LC & LC PLUS

12-CHANNEL ECG WITH 8.4" COLOUR TOUCH SCREEN

BTL-08 LT & LT PLUS

12-CHANNEL ECG WITH 5.7" COLOUR TOUCH SCREEN

The L-Line 12-channel ECGs are professional electrocardiographs designed especially for cardiology departments and clinics. Manufactured by using the latest technologies available, the products stand out because of their modern design, functionality, and easy operation. The large colour touch-screen, high quality printouts and possibility to combine with the Spirometry Module, make it a suitable device for even most demanding experts.



BTL-08 LC/LC Plus ECG

KEY FEATURES

- ◇ 8.4" (LC models)/5.7" (LT models) large color touch-screen
- ◇ A4 print (LC Plus & LT Plus models) on Z-fold thermal paper
- ◇ Battery & mains powered

FUNCTIONALITY

- ◇ Auto-adaptive filters for outstanding signal quality
- ◇ Loose leads indicator
- ◇ Auto, manual and user-defined profiles
- ◇ Alpha-numeric keyboard
- ◇ Pacemaker detection

CONNECTIONS & UPGRADES

- ◇ Connection to PC software (BTL-08 Win upgrade & ERGO II upgrade)
- ◇ Direct USB connection to external printer
- ◇ Possibility to combine with the Spirometry Module
- ◇ Connection to vacuum electrode system
- ◇ Diagnostics upgrade (includes analysis and text interpretation)



BTL-08 LT/LT Plus ECG

Available models:

BTL-08 LC ECG / Ordering No. C08LC.001v110
 BTL-08 LC ECG with diagnostics / Ordering No. C08LC.002v110
 BTL-08 LC Plus ECG / Ordering No. C08LC.003v110
 BTL-08 LC Plus ECG with diagnostics / Ordering No. C08LC.004v110
 BTL-08 LT ECG / Ordering No. C08LT.001v300
 BTL-08 LT ECG with diagnostics / Ordering No. C08LT.002v300
 BTL-08 LT Plus ECG / Ordering No. C08LT.003v300
 BTL-08 LT Plus ECG with diagnostics / Ordering No. C08LT.004v300

Standard accessories:

Set of electrodes, ECG gel, patient cable, power cord, paper roll (210 mm/25 m), A5 Z-fold paper (333 sheets (only LC & LT models)), A4 Z-fold paper (250 sheets (only LC Plus & LT Plus models)) and USB

For all of the BTL-08 ECG accessories, please refer to page 34.

Available upgrades:

Upgrade Module of BTL-08 LT/LC ECG to BTL-08 LT/LC ECG with diagnostics / Ordering No. C008.141v100
 BTL-08 Win upgrade for BTL-08 ECGs (includes: Win software and serial communication cable) / Ordering No. C008.063
 BTL-08 Ergo upgrade for BTL-08 ECGs (includes: Ergo software, patient cable for self-adhesive disposable electrodes, 210 pcs self-adhesive disposable electrodes, serial communication cable) / Ordering No. C008.099v303
 BTL-08 Ergo II upgrade for BTL-08 ECGs (Includes: PC interface serial cable, USB serial reduction, ergo patient cable, 210x self-adhesive disposable electrodes, software, hardware key) / Ordering No. C008.202v100

BTL-08 MT PLUS**12-CHANNEL ECG WITH 5.7" COLOUR TOUCH SCREEN**

All of the advanced features of the L-Line models but in a smaller and lighter design; that's the BTL-08 MT Plus. This is the ECG device suitable for a broad spectrum of users. Color touch-screen, high-quality printouts and the spirometry option make it a powerful, yet still easily-operated device.



BTL-08 MT Plus ECG

KEY FEATURES

- ◇ 5.7" color touch-screen
- ◇ 112mm printouts
- ◇ Battery & mains powered

FUNCTIONALITY

- ◇ Auto-adaptive filters for outstanding signal quality
- ◇ Loose leads indicator
- ◇ Auto, manual and user-defined profiles
- ◇ Alpha-numeric keyboard
- ◇ Pacemaker detection

CONNECTIONS & UPGRADES

- ◇ Connection to computer software (BTL-08 Win upgrade & ERGO II upgrade)
- ◇ Direct USB connection to external printer
- ◇ Possibility to combine with the Spirometry Module
- ◇ Connection to vacuum electrode system
- ◇ Diagnostics upgrade (includes analysis and text interpretation)

Available models:

BTL-08 MT Plus ECG: Ordering No. C08MT.001V300
 BTL-08 MT Plus ECG with diagnostics: Ordering No. C08MT.002V300

Standard accessories

Set of electrodes, ECG gel, patient cable, power cord and paper roll (112 mm/25 m)

For all BTL-08 ECG accessories, please refer to page 34.

Available upgrades

Upgrade Module of BTL-08 MT Plus ECG to BTL-08 MT Plus ECG with diagnostics: Ordering No. C008.135V200
 BTL-08 Win upgrade for BTL-08 ECGs (includes: Win software and serial communication cable) / Ordering No. C008.063
 BTL-08 Ergo upgrade for BTL-08 ECGs (includes: Ergo software, patient cable for self-adhesive disposable electrodes, 210 pcs self-adhesive disposable electrodes, serial communication cable) / Ordering No. C008.099v303
 BTL-08 Ergo II upgrade for BTL-08 ECGs (Includes: PC interface serial cable, USB serial reduction, ergo patient cable, 210x self-adhesive disposable electrodes, software, hardware key) / Ordering No. C008.202v100

BTL-08 MD3 & MD 3 & 12-CHANNEL ECG WITH GRAPHIC DISPLAY

BTL-08 MD models are clearly distinguished by the alpha-numeric keyboard allowing simple and comfortable entry of the patients' data. The display shows one selected ECG channel together with all the important information about chosen profile, applied filters, etc. Future diagnostics upgrade are possible.



BTL-08 MD/MD3 ECG

KEY FEATURES

- ◇ 1-channel LCD display
- ◇ Alpha-numeric keyboard
- ◇ 112mm printouts

FUNCTIONALITY

- ◇ Auto-adaptive filters for outstanding signal quality
- ◇ Loose leads indicator
- ◇ Auto, manual and user-defined profiles
- ◇ Battery & mains powered

CONNECTIONS & UPGRADES

- ◇ Connection to computer software (BTL-08 Win upgrade & ERGO II upgrade)
- ◇ Connection to vacuum electrode system
- ◇ Diagnostics upgrade (includes analysis and interpretation via on-screen text)

Available models:

BTL-08 MD3 ECG: Ordering No. C08MD3.001V120
 BTL-08 MD3 ECG with diagnostics: Ordering No. C08MD3.002V120
 BTL-08 MD ECG: Ordering No. C08MD.001V120
 BTL-08 MD ECG with diagnostics: Ordering No. C08MD.002V120

Standard accessories

Set of electrodes, ECG gel, patient cable, power cord and paper roll (112 mm/25 m)

For all BTL-08 ECG accessories, please refer to page 34.

Available upgrades

Upgrade Module of BTL-08 MD3 ECG to BTL-08 MD3 ECG with diagnostics: Ordering No. C008.132v100
 Upgrade Module of BTL-08 MD ECG to BTL-08 MD ECG with diagnostics: Ordering No. CB008.170v100
 BTL-08 Win upgrade for BTL-08 ECGs (includes: Win software and serial communication cable) / Ordering No. C008.063
 BTL-08 Ergo upgrade for BTL-08 ECGs (includes: Ergo software, patient cable for self-adhesive disposable electrodes, 210 pcs self-adhesive disposable electrodes, serial communication cable) / Ordering No. C008.099v303
 BTL-08 Ergo II upgrade for BTL-08 ECGs (Includes: PC interface serial cable, USB serial reduction, ergo patient cable, 210x self-adhesive disposable electrodes, software, hardware key) / Ordering No. C008.202v100

BTL-08 SD3 & SD6

3 & 6-CHANNEL ECG WITH GRAPHIC DISPLAY

The BTL-08 S-Line ECGs are best known for their portability and long-term operation under battery mode. The LCD display allows to observe one selected channel and other related information, such as paper speed, amplitude, etc. As with all of the BTL ECGs, user comfort is ensured by the one-touch operation and the easy-to-use menu.



BTL-08 SD3 & SD6 ECG

KEY FEATURES

- ◇ 1-channel LCD display
- ◇ 58mm printouts
- ◇ Battery & mains powered
- ◇ Portable

FUNCTIONALITY

- ◇ Auto-adaptive filters for outstanding signal quality
- ◇ Loose leads indicator
- ◇ Auto, manual and user-defined profiles
- ◇ Alpha-numeric keyboard
- ◇ Pacemaker detection

CONNECTIONS & UPGRADES

- ◇ Connection to PC software (BTL-08 Win upgrade & ERGO II upgrade)
- ◇ Connection to vacuum electrode system
- ◇ Diagnostics upgrade (includes analysis and text interpretation)

For features-overview of BTL-08 ECGs, please refer to pages 16-17.

Available models

BTL-08 SD3 ECG: Ordering No. C08SD3.001v120
 BTL-08 SD3 ECG with diagnostics: Ordering No. C08SD3.002v120
 BTL-08 SD6 ECG: Ordering No. C08SD.001v120
 BTL-08 SD6 ECG with diagnostics: Ordering No. C08SD.002v120

Standard accessories

Set of electrodes, ECG gel, patient cable, power cord and paper roll (58mm/25m)

For all of the BTL-08 ECG accessories, please refer to page 34.

Available upgrades

Upgrade Module of BTL-08 SD3 ECG to BTL-08 SD3 ECG with diagnostics: Ordering No. CB008.168v120
 Upgrade Module of BTL-08 SD6 ECG to BTL-08 SD6 ECG with diagnostics: Ordering No. CB008.169v120
 BTL-08 Win upgrade for BTL-08 ECGs (includes: Win software and serial communication cable) / Ordering No. C008.063
 BTL-08 Ergo upgrade for BTL-08 ECGs (includes: Ergo software, patient cable for self-adhesive disposable electrodes, 210 pcs self-adhesive disposable electrodes, serial communication cable) / Ordering No. C008.099v303
 BTL-08 Ergo II upgrade for BTL-08 ECGs (Includes: PC interface serial cable, USB serial reduction, ergo patient cable, 210x self-adhesive disposable electrodes, software, hardware key) / Ordering No. C008.202v100

BTL-08 SD1**1-CHANNEL ECG WITH GRAPHIC DISPLAY**

The BTL-08 SD1 ECG is the simplified version of SD3 model. It features the same lightweight design making it highly portable. 1-channel LCD display allows checking the signal quality and applied settings (profile, filters, etc.). By upgrading this ECG to SD3 model, it is also possible to connect it to supported PC software.



BTL-08 SD1

KEY FEATURES

- ◇ 1-channel LCD display
- ◇ 58mm printouts
- ◇ Battery & mains powered
- ◇ Portable

FUNCTIONALITY

- ◇ Auto-adaptive filters for outstanding signal quality
- ◇ Loose leads indicator
- ◇ Auto, manual and user-defined profiles
- ◇ Alpha-numeric keyboard
- ◇ Pacemaker detection

For features-overview of BTL-08 ECGs, please refer to pages 16-17.

Available models

BTL-08 SD1 ECG: Ordering No. C08SD1.001v120

Standard accessories

Set of electrodes, ECG gel, patient cable, power cord and paper roll (58mm/25m)

For all of the BTL-08 ECG accessories, please refer to page 34.

Available upgrades

Upgrade Module of BTL-08 SD1 ECG to BTL-08 SD3 ECG: Ordering No. C008.148v120

BTL-08 WIN & ERGO DATA MANAGEMENT & DIAGNOSTICS SOFTWARE

The BTL-08 Win software is a great addition to any of the BTL ECGs, especially for users who prefer to work with a computer. It acquires the signal online, does an automatic analysis and allows the user to create and modify the final reports. Furthermore, it is suitable for examination record archiving and overall patient data management. The software can be extended to ergometry system, in such case it is fully suitable for professional and comfortable stress testing.



USER-FRIENDLY OPERATION

- ◇ 12-channel ECG monitoring
- ◇ One click operation
- ◇ Easy connection to any of the BTL ECGs*

EDITABLE DIAGNOSTICS

- ◇ Automatic analysis and text interpretation
- ◇ Possibility to edit the analysis
- ◇ Comparison of ECG waveforms

DATA MANAGEMENT

- ◇ Well-arranged database of patients and their record(s)
- ◇ Possibility to export, import and archive ECG examinations
- ◇ Network operation

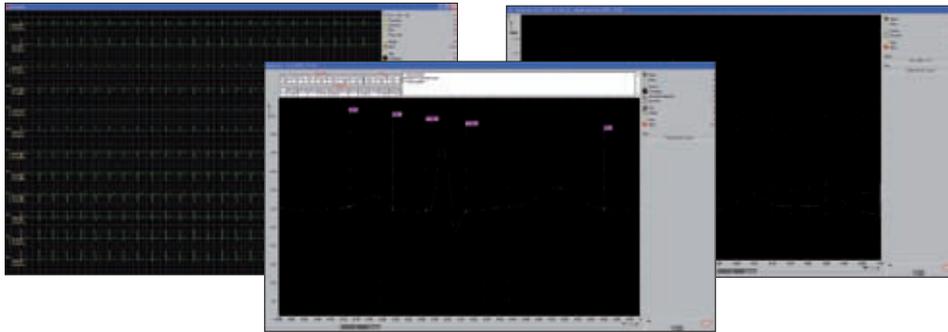
MONITORING THE ECG COMFORTABLY AND QUICKLY

Only one click is required to start monitoring. During recording, waveform layout and all the other common settings such as amplitude, speed or filters can be changed by using the keyboard shortcuts. During a single examination, multiple ECG strips can be made. Moreover, the recording mode can be switched to “Long” mode which will record up to 9-minute strip for heart arrhythmia monitoring.

*Except the BTL-08 SD1 ECG.

EDITABLE DIAGNOSTICS & TEXT INTERPRETATION

The software automatically analyzes ECG waveforms and offers its result in form of tables and text interpretation. All the results can be modified by changing the position of the diagnostics point on the averaged beat. In case artefacts appear in the record, the average beat can be calculated only from non-damaged beats by quick artefact removal. The ECG waveforms from different records can be overlapped and compared.



CONFIGURABLE FINAL REPORTS

Depending on user's preferences, all the ECG strips, tables and interpretation can be add or removed from final reports. The text interpretation, as well as analysis results, can be manually adjusted.



ERGOMETRY UPGRADE

Special ergometry upgrade allows the software to be used for stress tests. This upgrade communicates with various bikes and treadmills, allows creation of individual ergometry protocols and offers powerful after-test analysis. The final reports can be arbitrarily modified, only selected ECG strips will be printed.



Available models:

BTL-08 Win System: Ordering No. CB008.093v303
BTL-08 ERGO System: Ordering No. CB008.100v303

Standard Accessories for BTL-08 Win system:

BTL-08 SD3, communication cable, patient cable with banana plugs, extremity chest electrodes and software CD

Standard Accessories for BTL-08 ERGO system:

BTL-08 SD3 ECG, ergometry patient cable, pack of self-adhesive disposable electrodes, PC interface serial cable, 2x USB converter, adapter, software CD

BTL-08 ERGO II COMPUTERIZED STRESS TEST SYSTEM

The BTL-08 Ergo II is a modern ergometry system. Intuitive and easy-to-use operation make it suitable for everyday use in hospitals and private cardiology centers. The system is fully compatible with ergometry bikes and treadmills from world-leading manufacturers and all the BTL electrocardiographs*. Special arrhythmia module allows to monitor and analyze various arrhythmias in a separate window even during online monitoring.



COMFORTABLE & PROFESSIONAL STRESS TESTING

- ◇ 12-channel full-disclosure recording
- ◇ Automatic & manual load control
- ◇ Automatic blood pressure measurement
- ◇ Predefined ergometry protocols & protocol customization
- ◇ Electrode application indicator
- ◇ Configurable final reports

COMPATIBILITY

- ◇ Compatible with wide range of ergometry bikes and treadmills
- ◇ Compatible with external blood pressure monitors
- ◇ Compatible with all BTL ECGs*

STRESS TEST MONITORING

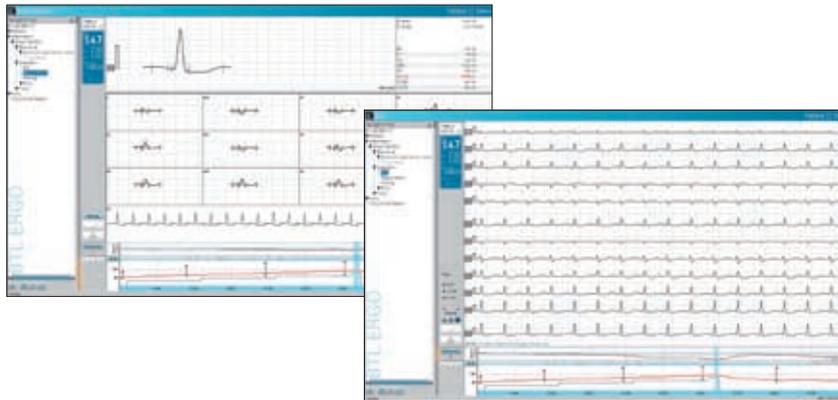
All important control elements and information necessary for ergometry examination are clearly displayed on the monitor. This makes the operation very easy and intuitive. Unique filters guarantee the ECG waveforms remain stabilized even in hard conditions.



* Except for the BTL-08 SD1

STRESS TEST EVALUATION

For detailed analysis and evaluation, the user can immediately after stress test preview all the important diagrams and calculated parameters. This means continuous ECG record of the full stress test, trend diagrams (HR, load, ST, BP), histogram of the arrhythmia occurrence (R-R), averaged complexes, calculated intervals and other information and parameters are available.



FINAL REPORTS

It is completely up to the user which part of final report will be printed. The software offers to print the summary, ST segment trends, average complexes, individual ECG strips as well as the whole ECG record.



COMPATIBILITY

The stress-test system communicates with a wide range of bikes (Elmed, Ergofit, Ergoline, Ergoselect, Ergosana, Seca) and treadmills (HP Cosmos, Lode, Ergofit, Parker, RAM, Trackmaster, Woodway).



Available models:

BTL-08 ERGO II System: Ordering No. C008.200v100

BTL-08 ERGO II Plus System (features review and arrhythmia module): Ordering No. C008.201v100

Standard Accessories:

BTL-08 SD3 ECG, PC interface serial cable, 2x USB convertor, ergometry patient cable, 210x self-adhesive disposable electrodes, software CD, hardware key

BTL-08 ECGs: OVERVIEW OF FUNCTIONS

	BTL-08 LC Plus	BTL-08 LC	BTL-08 LT Plus	BTL-08 LT	
External Unit	Display	colour touch screen 8.4"	colour touch screen 8.4"	colour touch screen 5.7"	colour touch screen 5.7"
	Dimensions of display (mm)	171 × 128	171 × 128	120 × 89	120 × 89
	Screen resolution (dots)	640 × 480	640 × 480	320 × 240	320 × 240
	Keyboard	combined alphanumeric and functional, touch screen buttons			
	Electrode contact control	indication of contact of each electrode			
	Interface	RS 232, USB	RS 232, USB	RS 232, USB	RS 232, USB
	Dimensions (mm)	407 × 312 × 150	407 × 312 × 125	407 × 312 × 150	407 × 312 × 125
	Weight Approx. (kg)	7.4	5.9	7.2	5.7
Printer	Paper width (mm)	210	210	210	210
	Paper type	roll, fax, A5 z-folded, A4 z-folded / A4-office paper	roll, fax, A5 z-folded / A4-office paper	roll, fax, A5 z-folded, A4 z-folded / A4-office paper	roll, fax, A5 z-folded / A4-office paper
	Print type	thermal / external laser or ink. printer			
	Paper speed (mm/s)	5, 10, 25, 50	5, 10, 25, 50	5, 10, 25, 50	5, 10, 25, 50
Signal processing	Number of channels	12	12	12	12
	Number of leads	12	12	12	12
	Displayed leads	3, 6, 12	3, 6, 12	3, 6, 12	3, 6, 12
	Printed leads	3, 4, 6, 12, 3×4+1, 3×4+2, 3×4+3, 4×3+1, 6×2+1, 6×2+2	3, 4, 6, 12, 3×4+1, 3×4+2, 3×4+3, 4×3+1, 6×2+1, 6×2+2	3, 4, 6, 12, 3×4+1, 3×4+2, 3×4+3, 4×3+1, 6×2+1, 6×2+2	3, 4, 6, 12, 3×4+1, 3×4+2, 3×4+3, 4×3+1, 6×2+1, 6×2+2
	Transmission in automatic mode	real-time, synchronic	real-time, synchronic	real-time, synchronic	real-time, synchronic
	Pacemaker detection	yes	yes	yes	yes
	Sensitivity (mm/mV)	2.5, 5, 10, 20	2.5, 5, 10, 20	2.5, 5, 10, 20	2.5, 5, 10, 20
	Stored records (10-sec long strips)	120	120	120	120
	Long ECG recording 1 lead / 2 leads (min)	10/10	10/10	10/10	10/10
Digital Filters	Adaptable mains filter (Hz)	50–60	50–60	50–60	50–60
	Muscle tremor filters (Hz)	35, 25	35, 25	35, 25	35, 25
	Baseline filters (Hz)	0.05 (3.2 s), 0.11 (1.5 s), 0.25 (0.6 s), 0.50 (0.3 s), 1.50 (0.1 s), splines			
	Automatic	auto-adaptive	auto-adaptive	auto-adaptive	auto-adaptive
User-defined profiles	No. of profiles for auto. and man. mode	unlimited	unlimited	unlimited	unlimited
	No. of profiles for long ECG recording	unlimited	unlimited	unlimited	unlimited
Summary of available options	Extension of channels	–	–	–	–
	Averaging of ECG curves	optional	optional	optional	optional
	Analysis	optional	optional	optional	optional
	Interpretation in words	optional	optional	optional	optional
	PC connection with software BTL-08 Win	optional	optional	optional	optional
	Ergometry with software BTL-08 Ergo	optional	optional	optional	optional
Technical specifications	BTL-08 L line				
	Mains supply	100 V–230 V, 50–60 Hz			
	Frequency response	0.04 Hz–150 Hz			
	Digital resolution	3.9 µV			
	A/D conversion	13 bits			
	Sampling frequency	2000 Hz			
	Dynamic range	15.9 mV			
	Polarisation voltage	± 400 mV			
	Max. consistent voltage	± 5 V			
	Input impedance	> 20 MOhm			
	Common mode rejection	> 100 dB			
	Safety standards	IEC 601-1, IEC 601-2-25, IEC 601-1-2, IEC 601-1-4, ISO 14971			
	Accumulator capacity	approx. 37-46min continuous recording 55m continuous printing			
	Charging time	approx. 4-6 hours (if completely discharged)			
Protection class	II according to IEC 536				

	BTL-08 MT Plus	BTL-08 MD3/MD	BTL-08 SD6	BTL-08 SD1/SD3	
External Unit	Display	colour touch screen 5.7"	graphic display	graphic display	
	Dimensions of display (mm)	118 × 90	70 × 36	70 × 36	
	Screen resolution (dots)	320 × 240	128 × 64	128 × 64	
	Keyboard	combined alphanumeric and functional touch screen buttons	combined alphanumeric and functional	combined alphanumeric and functional	combined alphanumeric and functional
	Electrode contact control	indication of contact of each electrode	indication of contact of each electrode	indication of contact of each electrode	indication of contact of each electrode
	Interface	RS 232, USB	RS232, USB reduction	RS232, USB reduction	RS232, USB reduction
	Dimensions (mm)	330 × 270 × 70	330 × 270 × 70	276 × 168 × 74	276 × 168 × 74
	Weight Approx. (kg)	3.2	3.2	2	2
	Printer	Paper width (mm)	112	112	58
Paper type		roll / A4-office paper	roll	roll	roll
Print type		thermal / external laser or ink. printer	thermal	thermal	thermal
Paper speed (mm/s)		5, 10, 25, 50	5, 10, 25, 50	5, 10, 25, 50	5, 10, 25, 50
Signal processing	Number of channels	3, 6, 12	3/6, 12	3, 6	1/3
	Number of leads	12	12	12	12
	Displayed leads	3, 6, 12	1	1	1
	Printed leads	3, 4, 6, 12, 3x4+1, 3x4+2, 3x4+3, 4x3+1, 6x2+1, 6x2+2	3/3, 6, 12	1, 3, 6	1/1, 3
	Transmission in automatic mode	real-time, synchronic	real-time, synchronic	real-time, synchronic	real-time, synchronic
	Pacemaker detection	yes	yes	yes	yes
	Sensitivity (mm/mV)	2.5, 5, 10, 20	2.5, 5, 10, 20	2.5, 5, 10, 20	2.5, 5, 10, 20
	Stored records (10-sec long strips)	100	—/15	6	6
	Long ECG recording 1 lead / 2 leads (min)	10/10	9/no	9/no	9/no
Digital Filters	Adaptable mains filter (Hz)	50–60	50–60	50–60	50–60
	Muscle tremor filters (Hz)	35, 25	35, 25	35, 25	35, 25
	Baseline filters (Hz)	0.05 (3.2s), 0.11 (1.5s), 0.25 (0.6s), 0.50 (0.3s), 1.50 (0.1s), splines	0.05 (3.2s), 0.11 (1.5s), 0.25 (0.6s), 0.50 (0.3s), 1.50 (0.1s)	0.05 (3.2s), 0.11 (1.5s), 0.25 (0.6s), 0.50 (0.3s), 1.50 (0.1s)	0.05 (3.2 s), 0.11 (1.5 s), 0.25 (0.6 s), 0.50 (0.3 s), 1.50 (0.1 s)
	Automatic	auto-adaptive	—	—	—
User-defined profiles	No. of profiles for auto. and man. mode	unlimited	1/5	3	3
	No. of profiles for long ECG recording	unlimited	—/5	3	3
Summary of available options	Extension of channels	—	3-12 / —	—	1-3-6 / 3-6
	Averaging of ECG curves	optional	optional	optional	—/optional
	Analysis	optional	optional	optional	—/optional
	Interpretation in words	optional	optional	optional	—/optional
	PC connection with software BTL-08 Win	optional	optional	optional	—/optional
	Ergometry with software BTL-08 Ergo	optional	optional	optional	—/optional
Technical specifications		BTL-08 M line		BTL-08 S line	
	Mains supply	115 V/230 V, 50–60 Hz		115 V/230 V, 50–60 Hz	
	Frequency response	0.04 Hz–150 Hz		0.04 Hz–150 Hz	
	Digital resolution	3.9 µV		3.9 µV	
	A/D conversion	13 bits		13 bits	
	Sampling frequency	2000Hz		2000 Hz	
	Dynamic range	15.9 mV		15.9 mV	
	Polarisation voltage	± 400 mV		± 400 mV	
	Max. consistent voltage	± 5 V		± 5 V	
	Input impedance	> 20 MOhm		> 20 MOhm	
	Common mode rejection	> 100 dB		> 100 dB	
	Safety standards	IEC 601-1, IEC 601-2-25, IEC 601-1-2, IEC 601-1-4, ISO 14971		IEC 601-1, IEC 601-2-25, IEC 601-1-2, IEC 601-1-4, ISO 14971	
	Accumulator capacity	180-240min continuous recording, 36m continuous printing		60-120min continuous recording, 10m continuous printing	
	Charging time	max. 4-6 hours (if completely discharged)		max. 3 hours (if completely discharged)	
	Protection class	II according to IEC 536		II according to IEC 536	

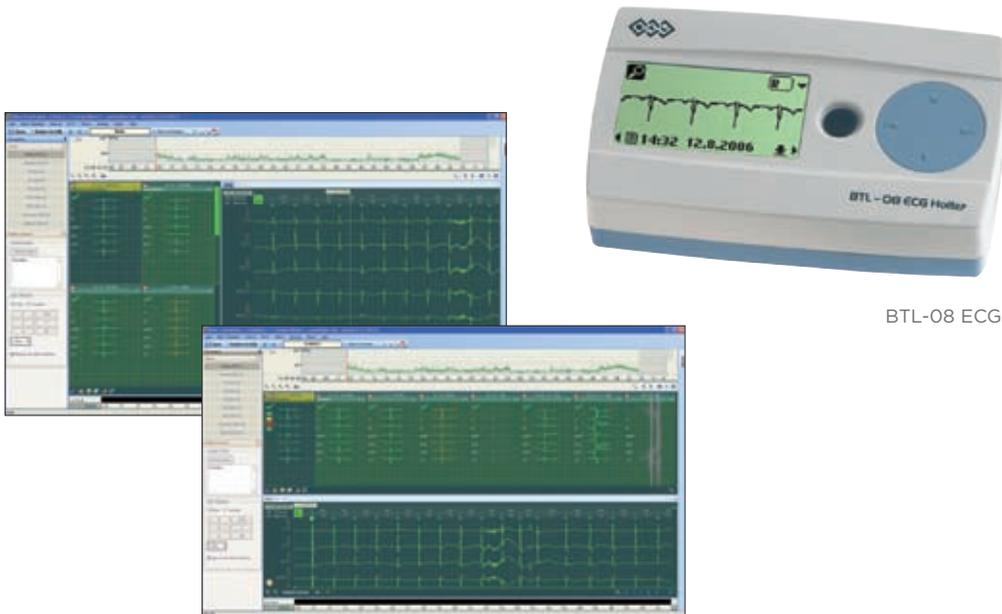
LONG-TERM MONITORING



BTL-08 ECG HOLTER

3/7/12-CHANNEL ECG HOLTER MONITOR

If there is one word that characterizes the BTL holter system the best, that word is “possibilities.” Choose whether you wish to record three, seven or all 12 ECG channels; select the way to start recording (USB, Bluetooth or SDcard) as well as modify the appearance of the software as you wish. These are just some examples of how can be the whole system customized. Thus, every user has the possibility to select the option that suits them best. Besides all of this, this software brings a completely new approach to Holter ECG examinations by processing the PQ intervals, precisely analyzing pacemaker operation and dealing with beat classifications all by using its special template split tool.



BTL-08 ECG Holter

COMFORTABLE & PROFESSIONAL ECG MONITORING

- ◇ 3/7/12 channels
- ◇ Only four leads for seven channels
- ◇ Up to seven days of recording
- ◇ Multiple ways to begin an examination

INTUITIVE & CUSTOMIZABLE USER INTERFACE

- ◇ Possible to customize the user-interface

ADVANCED DIAGNOSTICS TOOLS

- ◇ Patient activity monitor
- ◇ Advanced ST, PQ, QT and HRV analysis
- ◇ Pacemaker analysis
- ◇ Template split

HOLTER SOFTWARE IS PART OF MEW

- ◇ Patients & examinations data management
- ◇ Free customization of user-interface
- ◇ Network operation

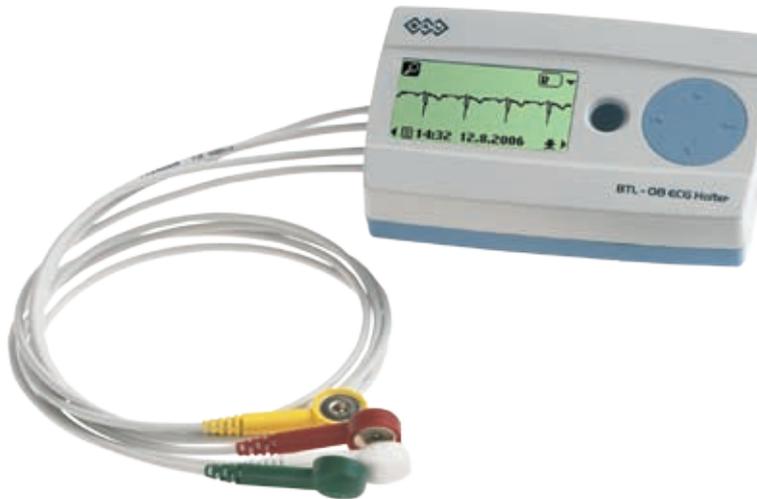
COMFORTABLE & PROFESSIONAL ECG MONITORING

3/7/12-CHANNEL MONITORING

The most advanced BTL Holter recorder is capable of recording a 3, 7 and even 12-channel ECG. It is true that the 12-channel offers the most comprehensive means of finding and tracking complex cardiac issues. The 3-channel recording is the classic, simplified Holter ECG recording. The 7-channel monitoring started a new approach to Holter examinations and its popularity stems mainly from the fact only four leads have to be used and that the ECG waveform shapes correspond to the standard resting ECG. Together, these innovations make the 7-channel BTL Holter the most common-sense choice for users already familiar with standard resting ECG devices, but new to Holter monitors.

ONLY FOUR LEADS FOR THREE OR SEVEN CHANNELS

BTL's unique way of making Holter monitoring more comfortable is to reduce the total number of leads. The BTL Holter only needs a 4-lead cable to record a 3 or 7-channel ECG, therefore it makes the examination much less unpleasant for the patient. The reduced number of leads also has a positive effect on signal quality.



UP TO SEVEN DAYS OF MONITORING

Most of the time the classic 24 or 48 hour monitoring period is enough. But sometimes it is essential to extend the period if more subtle arrhythmias are expected to occur. Thus, the BTL Holter allows you to monitor the ECG signal for up to seven (7) days!

MULTIPLE WAYS OF STARTING A RECORDING

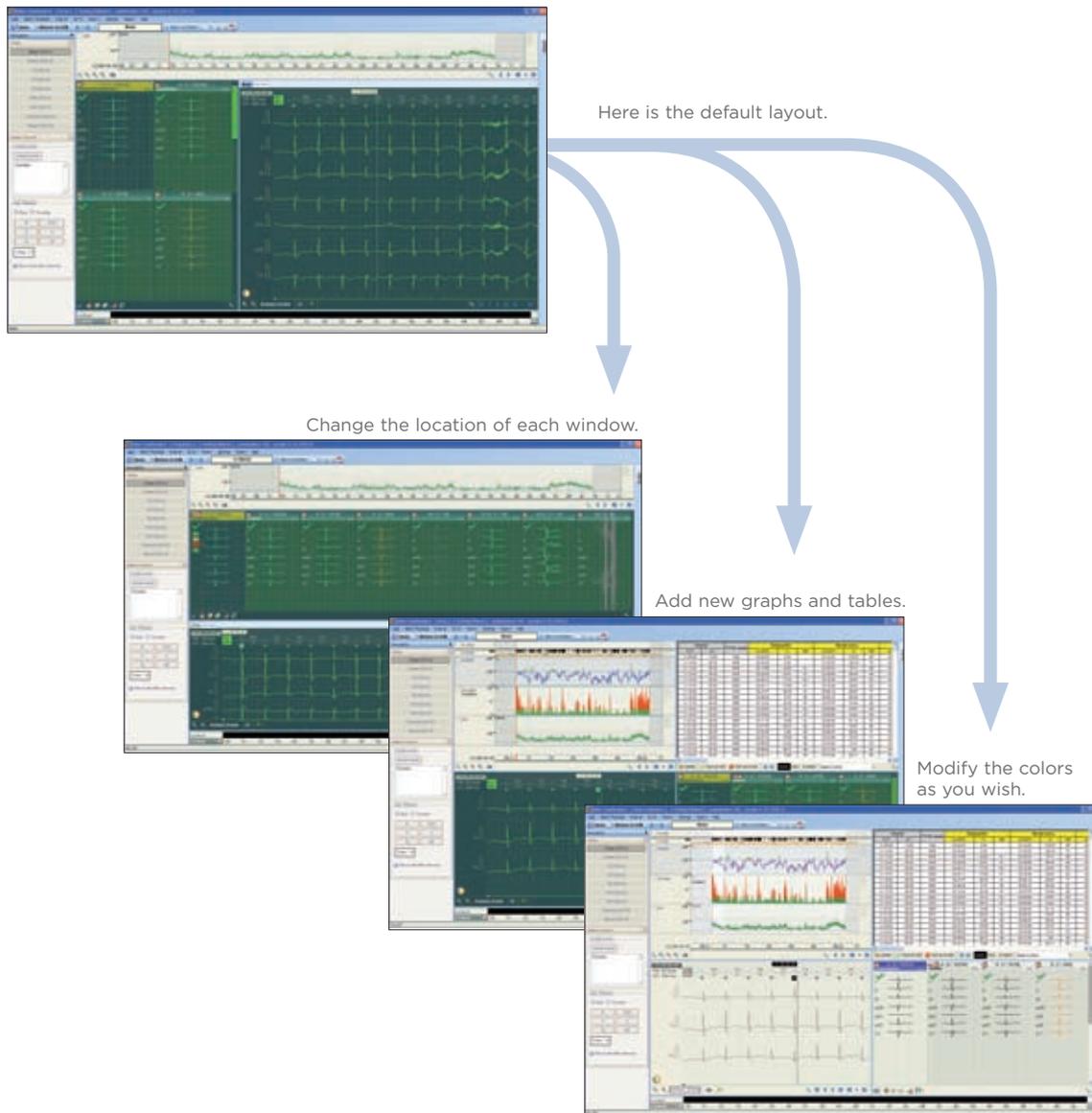
While attaching the electrodes to the patient's body, there is a question of how to check the signal quality and then start the process of recording. As usual for BTL Holter, there are more than one option available. You can use the USB, Bluetooth, SDcard together with a computer or without one by starting the recording using only the recorder. Every option has its advantages. The USB is the most simple and understandable for majority of users, while the Bluetooth allows the patient freedom of movement without being in proximity to a computer. Starting monitoring from the recorder itself is easier simply due to the fact that there is no need to connect the recorder with a computer. Thus, the BTL Holter can be used anywhere and anytime.



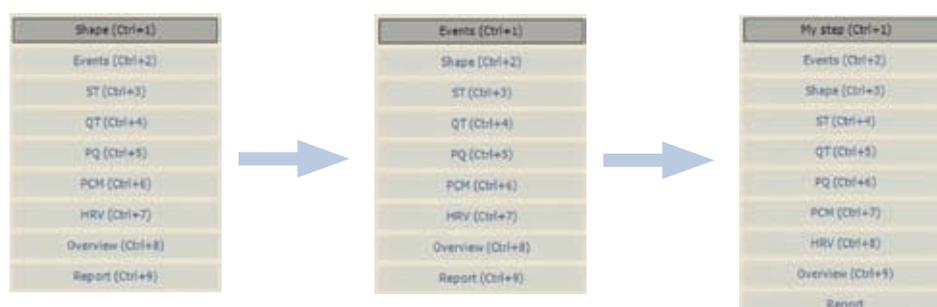
INTUITIVE & CUSTOMIZABLE USER INTERFACE

MODIFYING THE SOFTWARE APPEARANCE

An absolutely unique feature. Every user has the option to completely redesign the looks of the user-interface to his/her needs. Move any graph or window where you want it. Each user can create their own sequence of how they want to proceed during examination. Such modifications allow the user to adapt the software to his/her own needs and thus create a more user-friendly working environment.



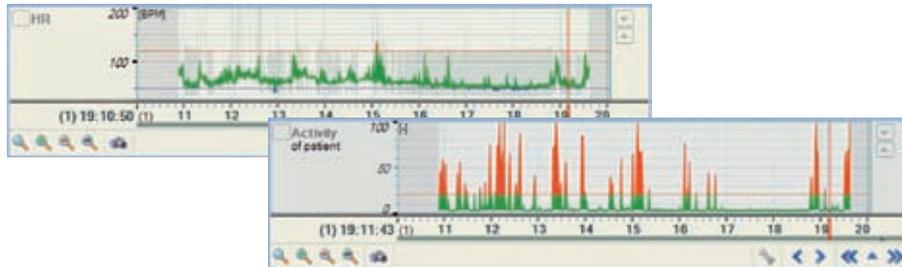
There is also the possibility of modifying the sequence of operation. By default, user starts with checking templates (Shape), afterwards goes to cardiac events (Events) and so on. However, if the physician prefers to see the overview of events first, directly after opening the examination, it is possible to do so. Moreover, each user can create his own steps.



ADVANCED DIAGNOSTICS TOOLS & REPORTS

PATIENT ACTIVITY MONITOR

Each BTL Holter recorder has a built-in motion sensor allowing the user to see exactly in which time periods the patient was performing physically-demanding activities. As a result, the graph of patient's activity can be directly correlated with the graph of patient's heart rate and other graphs as well.



PQ ANALYSIS

PQ analysis is a very special tool for analyzing the P-Wave characteristics. It points to certain ECG strips, where there is the possible appearance of various AV conduction blocks.



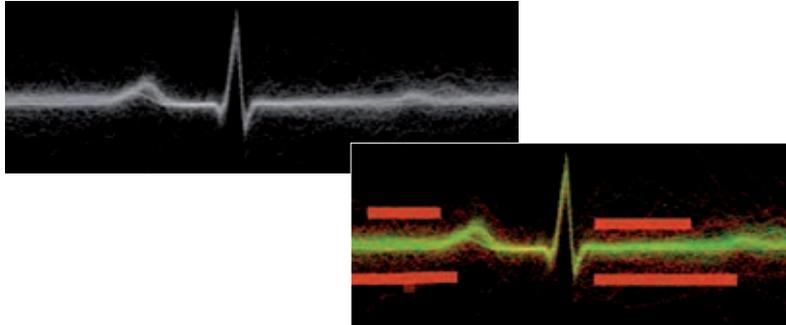
ADVANCED PEACEMAKER ANALYSIS

The software offers a clear overview of all paced heartbeats. Furthermore, it provides the user with the advanced analysis (such as fail to capture, fail to sense, etc.) and thus can be used for checking the correct functionality of the pacemaker.



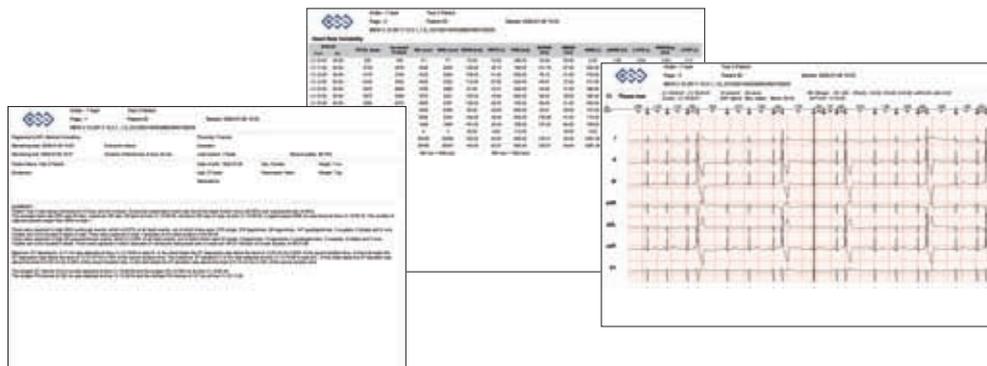
TEMPLATE SPLIT

Advanced tool for separating a large number of beats. Allows the very quickly and easily removal of noise from the signal and helps distinguish individual beat types by the simple marking of areas of interest.



MODIFYING THE REPORTS QUICKLY AND EASILY

The medical conclusion is generated automatically and it is possible to alter it. Furthermore all the tables and ECG strips related to important cardiac events (maximal heart rate, longest pause, etc.) can be printed. Additionally, every user has the possibility to put his own logo on the reports.



THE HOLTER SOFTWARE IS PART OF MEW

MEDICAL EMBEDDED WORKBENCH

MEW (Medical Embedded Workbench) is a software platform grouping individual modules for Holter, Stress-test, Rest ECG, Spiro and APBM examinations. Having only one database of patients, working with the same style of user-interface in all the modules, quick and easy archivals and networking are all major advantages of MEW. But MEW offers even more! The most absolutely extraordinary feature is the possibility to freely modify the user-interface. Graphs, tables, ECG strips and other windows can be added, moved to a desired position or removed as the user wishes. There is no longer any need adapt to the software, the software will adapt to you.



NETWORK OPERATION

MEW can be operated in a network also. The most typical situation of such networking is when one computer is used by the nurse or technician for starting the examination and downloading data, while the other computer is used by the physician, who analyses the record.



Available Models:

BTL-08 H100 Holter System:
 Ordering No. C08HOL.011v100 (Languages: EN, DE, ES & RU)
 Ordering No. C08HOL.111v100 (Languages: EN, FR, IT & PT)
 BTL-08 H300 Holter System:
 Ordering No. C08HOL.013v100 (Languages: EN, DE, ES & RU)
 Ordering No. C08HOL.113v100 (Languages: EN, FR, IT & PT)
 BTL-08 H600 Holter System:
 Ordering No. C08HOL.016v100 (Languages: EN, DE, ES & RU)
 Ordering No. C08HOL.116v100 (Languages: EN, FR, IT & PT)

Standard accessories:

Patient cable (4-lead), patient cable (10-lead for H600 system and additional 3/7/12ch recorder only), pouch with 3x belt strap, 4x accumulator, 2x SD card (2GB), 30x self-adhesive adult electrode, miniUSB cable, USB wireless module, USB 2.0 hub, accumulator charger, SDcard reader, user manual, portable case, software CD and hardware key

Additional Items:

Additional Recorder 3ch, 24 hours:

Ordering No. C08HOL.002v100 (Languages: EN, DE, ES & RU)
 Ordering No. C08HOL.102v100 (Languages: EN, FR, IT & PT)

Additional Recorder 3ch, 48 hours:

Ordering No. C08HOL.003v100 (Languages: EN, DE, ES & RU)
 Ordering No. C08HOL.103v100 (Languages: EN, FR, IT & PT)

Additional Recorder 3/7ch, 48 hours:

Ordering No. C08HOL.004v100 (Languages: EN, DE, ES & RU)
 Ordering No. C08HOL.104v100 (Languages: EN, FR, IT & PT)

Additional Recorder 3/7/12ch, 48 hours:

Ordering No. C08HOL.005v100 (Languages: EN, DE, ES & RU)
 Ordering No. C08HOL.105v100 (Languages: EN, FR, IT & PT)

Additional H100 Doctor HW Key: Ordering No. C08HOL.512v100
 Additional H300 Doctor HW Key: Ordering No. C08HOL.513v100
 Additional H600 Doctor HW Key: Ordering No. C08HOL.514v100

Additional H100 Nurse HW Key (Cannot create reports): Ordering No. C08HOL.518v100
 Additional H300 Nurse HW Key (Cannot create reports): Ordering No. C08HOL.519v100
 Additional H600 Nurse HW Key (Cannot create reports): Ordering No. C08HOL.520v100

FEATURES OVERVIEW & TECHNICAL SPECIFICATIONS

Holter system	BTL-08 H100	BTL-08 H300	BTL-08 H600
Data Recording	3-channel, 48 hours	3/7-channel, 1-7 days	3/7/12-channel, 1-7 days
Multi-level Templates	◇	◇	◇
Template Split			◇
Rhythm Analysis	◇	◇	◇
Pacemaker Detection and Analysis		◇	◇
Pacemaker Analysis Plus			◇
HRV	◇	◇	◇
HRV-plus		◇	◇
ST	◇	◇	◇
ST-plus			◇
QT QTc		◇	◇
PQ			◇
Activity monitor			◇
User-interface Customization	◇	◇	◇
Additional recorder	3-channel, 48 hours	3/7-channel, 1-7 days	3/7/12-channel, 1-7 days
Number of Channels	3	3/7	3/7/12
Recording Time	1 - 2 days	1 - 7 days	1 - 7 days
Patient Cable	4-lead	4-lead	4-lead / 10-lead
Data Transmission	USB, SDcard	USB, SDcard, Bluetooth	USB, SDcard, Bluetooth
LCD Screen Resolution	128 × 64 dots		
Storage Medium (SDcard)	2GB		
Dynamic Range	± 60mV		
Digital Resolution	1.8µV / 16 bit		
Sampling Frequency	2000Hz		
Frequency Range	0.05Hz – 150Hz		
Maximum Electrode Potential	± 400mV		
Common Mode Rejection	> 100dB		
Pacemaker Detection	≥ ± 2mV/± 0.1ms		
Batteries	Alkaline 2x AA 1.5V or 2x Ni-Cd or 1x NiMH 1.2V		
Dimensions	102 × 62 × 24mm (4" × 2.44" × 0.94")		
Weight	138g (4.88oz)		
Standards Compliance	IEC 601-1, 601-1-2, 601-2-25, 60 601-2-47		

AMBULATORY BLOOD PRESSURE MONITOR

BTL-08 ABPM II

24/48-HOUR BLOOD PRESSURE MONITOR

It is very clear why the BTL-08 ABPM II is among the world's most popular blood pressure monitoring devices. Quite simply, it meets all the present specifications for professional monitoring. It is a lightweight recorder, it has silent operation and comes with easy-to-use software. Furthermore, precise blood pressure measurement is guaranteed by our special "stepwise deflation" measuring method.



BTL-08 ABPM II

COMFORTABLE & PRECISE BLOOD PRESSURE MONITORING

- ◇ BTL's "stepwise deflation" process - giving more precise measurement results
- ◇ Lightweight recorder
- ◇ Silent operation
- ◇ 24, 27, 48 & 51-hour monitoring
- ◇ Large LCD display
- ◇ Complies with BHS and AAMI standards

BLOOD PRESSURE MONITORING

The BTL-08 ABPM II monitors blood pressure for up to 51 hours at regular intervals as set by the physician. Measurement intervals can be set with high level of flexibility. Extra measurements can be triggered manually. The day/night button allows the adjustment of measurements to the patient's lifestyle. Relevant events can be marked manually. The large internal memory has the capacity to record over 600 sets of measurements.

The device features a large, easy-to-read LCD display. It only needs two (2) AA batteries for a two-day recording. The operation is very quiet, lightweight (190g) and small size make the recorder comfortable for both the physician and the patient as well.



EXAMINATION EVALUATION & FINAL REPORTS

Once the monitoring has been finished, all the data is transferred from the recorder to computer via the fast optical cable connected to any standard USB port. The software performs automatic detailed analysis of blood pressure values with both complete graphic and tabular interpretations of the examination results. Presentation and reporting functions are straightforward and comprehensive. The accuracy of the algorithms used in the ABPM system were clinically tested to meet both the BHS and AAMI criteria.

The final printable report can be compiled as required. Default report content and appearance can be pre-set. Of course, it is possible to add a user's logo, if desired.

Available Models:

BTL-08 ABPM II: Ordering No. C604.104v100

Standard Accessories:

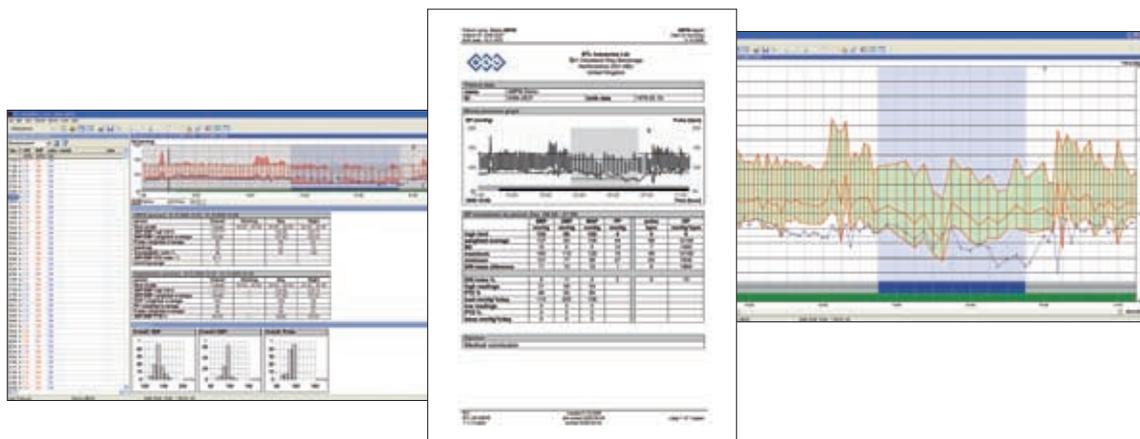
Standard-size cuff, pouch with belt, portable case with belt, set of accumulators, accumulator charger, USB/optical PC interface, software and user manual

Additional Recorders:

Additional recorder for BTL-08 ABPM II: Ordering No. C601.101v200

Additional Accessories:

Standard-size cuff, large cuff and small cuff



Technical Specifications

Blood Pressure Monitoring Duration	24, 27, 48 & 51 hours
Measurement Method	Oscillometric using stepwise deflation
Memory Capacity	600 positions
Accuracy	±3mm Hg or 2% of measured value
Applicable Cuffs	Standard-size, large, small
Data Transfer to PC	Via optical cable
Batteries	Rechargeable or alkaline 2x AA 1.5V
Dimensions	98 × 69 × 29mm
Weight	190g without batteries
Standards Compliance	BHS & AAMI

SPIROMETRY



BTL-08 SPIRO & SPIRO PC
DESKTOP SPIROMETER & PC SPIROMETRY SYSTEM

The BTL-08 Spiro is modern compact spirometer for performing noninvasive pulmonary function tests and managing patient records comfortably and quickly. Minimum operational costs are ensured by reusable sensor that can be easily disinfected or sterilized. The unit features in-built sensors for automatic BTPS correction of examination results. Results can be viewed on a large colour display and afterwards printed on a thermal paper or office paper.



BTL-08 Spiro

PROFESSIONAL PNEUMOTACHOGRAPH

- ◇ Plastic sensors & mouthpieces can be sterilized
- ◇ Built-in sensors for automatic BTPS correction
- ◇ Ergonomically-shaped
- ◇ Plastic reusable mouthpieces
- ◇ USB connection to computer
- ◇ Can be connected to selected BTL ECG recorders

PORTABLE SPIROMETER

- ◇ Possibility to connect to external printer
- ◇ Large colour touch-screen
- ◇ Portable
- ◇ Built-in accumulator

POWERFUL COMPUTER SOFTWARE

- ◇ Over 50 measured parameters
- ◇ Pediatric encouragement
- ◇ Trends for multiple parameters
- ◇ Easily visible and configurable reports

SPIROMETRY SOFTWARE IS A PART OF MEW

- ◇ Patients & examinations data management
- ◇ Free customization of user-interface
- ◇ Network operation

PROFESSIONAL PNEUMOTACHOGRAPH

The very basic advantage of the BTL pneumotachograph is its ergonomic shape which makes the examination much comfortable. It can be used with the plastic reusable or paper disposable mouthpieces and with or without an antibacterial filter. The plastic sensor and mouthpieces can be disinfected or sterilized. Automatic BTPS correction is performed prior to each examination by the built-in sensors. A common USB interface is used when connecting the pneumotachograph to a computer.



SPIRO UPGRADES

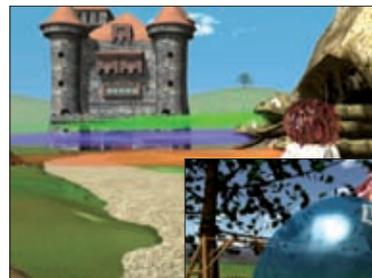
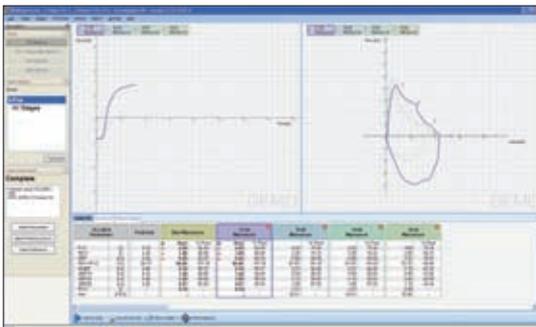
The BTL Spiro upgrade is a set of sensors, mouthpieces and other accessories which can be assembled and connected to MT Plus and L-line ECGs. In such a case, the ECG turns into multifunctional cardio-pulmonary system. The upgrade is offered in two versions: the basic BTL-08 Spiro Upgrade and the professional BTL-08 Spiro Pro Upgrade. The latter has advanced features such as performing bronchoprovocation/bronchodilatation tests. The BTL-08 Spiro PC Upgrade is intended for users who already own the BTL Desktop Pro Spirometry or the BTL Spirometry Pro Upgrade and wish to use it with the powerful computer software.



POWERFUL SOFTWARE

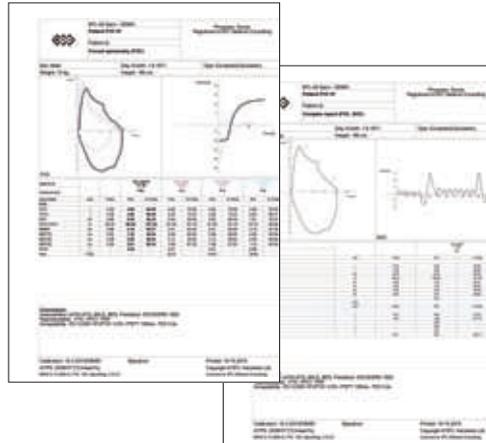
EASY-TO-USE CUSTOMIZABLE USER-INTERFACE

The user-interface was designed to give maximum comfort and simplicity. Calculated parameters, used predictive norms, windows layout; everything can be user-customized to offer maximum performance. Special cartoon animation can be used to encourage children during the examination.



CONFIGURABLE FINAL REPORTS

Automatic interpretation according to ATS / ERS / BTS is generated after each examination. Such interpretation can be completed by the physician's own medical conclusion. There is the possibility to select parameter and graphs to be printed and to add a user or company logo. These features will result in clear and comprehensible reports.



THE SPIROMETRY SOFTWARE IS A PART OF MEW

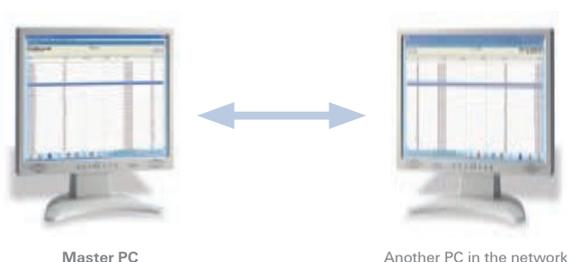
MEDICAL EMBEDDED WORKBENCH

MEW (Medical Embedded Workbench) is a software platform grouping individual modules for Holter, Stress-test, Rest ECG, Spiro and APBM examinations. Having only one database of patients, working with the same style of user-interface in all the modules, quick and easy archivations and networking are all major advantages of MEW. But MEW offers even more! The most absolutely extraordinary feature is the possibility to freely modify the user-interface. Graphs, tables, ECG strips and other windows can be added, moved to a desired position or removed as the user wishes. There is no longer any need adapt to the software, the software will adapt to you.



NETWORK OPERATION

MEW can be operated in a network also. The most typical situation of such networking is when one computer is used by the nurse or technician for starting the examination and downloading data, while the other computer is used by the physician, who analyses the record.





BTL-08 MT Plus Spiro Pro system

Available Models:

BTL-08 Spiro Pro: Ordering No. C08SP.002v100
BTL-08 Spiro PC: Ordering No. C08SP.001v100

Upgrades for BTL ECGs:

BTL-08 Spiro Upgrade: Ordering No. C08SP.004v100
BTL-08 Spiro Pro Upgrade: Ordering No. C08SP.003v100
BTL-08 Spiro PC Upgrade: Ordering No. C08SP.024v100

Standard accessories for BTL-08 Spiro Pro:

Pneumotachograph with communication cable, set of reusable sensors with plastic mouthpieces (4pcs), nose clip, thermal paper (112mm, roll 25mm) and table holder

Standard accessories for BTL-08 Spiro and Spiro Pro Upgrades:

Pneumotachograph with communication cable, set of reusable sensors with plastic mouthpieces (4pcs), nose clip and carrying case

Optional accessories:

Calibration syringe (3 litres), antibacterial filter, reusable sensor with plastic mouthpiece, plastic mouthpiece, paper disposable mouthpiece, nose clip, disinfectant (2 litres), thermal paper (112mm, roll 25mm), carry case, table holder and cart

FEATURES OVERVIEW & TECHNICAL SPECIFICATIONS

	BTL-08 Spiro Pro	BTL-08 Spiro
Ordering No.	C08SP.002v100 (spirometry system) C08SP.003v100 (upgrade for ECGs)	C08SP.004v100 (upgrade for ECGs)
External unit		
Display	colour LCD touch screen	colour LCD touch screen
Dimensions of display (mm)	120 × 89	120 × 89
Screen resolution (dots)	320 × 240 RGB	320 × 240 RGB
Keyboard	combined alphanumeric and functional, touch screen buttons	combined alphanumeric and functional, touch screen buttons
Interface	RS232, USB	RS232, USB
Dimensions (mm)	330 × 270 × 74	330 × 270 × 74
Weight approx. (kg)	3.2	3.2
Operating conditions		
Ambient temperature	+ 10°C to + 40°C	+ 10°C to + 40°C
Recommended ambient temperature	+ 17°C to + 28°C (to avoid any provocative bronchial reaction)	+ 17°C to + 28°C (to avoid any provocative bronchial reaction)
Relative humidity	25 % to 95 %	25 % to 95 %
Barometric pressure	700 hPa to 1100 hPa	700 hPa to 1100 hPa
Printer		
Paper width (mm)	112 / A4 trough USB	112 / A4 trough USB
Paper type	roll / A4 – office paper	roll / A4 – office paper
Printer type	thermal / external laser or ink. printer	thermal / external laser or ink. printer
Printer resolution (dpi)	200 / 500 in Y / X axis	200 / 500 in Y / X axis
Measurement parameters		
BTPS correction	automatic	automatic
Inspire / Expire	yes / yes	yes / yes
Forced spirometry	FVC, Best FVC, FEV0.75, FEV1, Best FEV1, FEV3, FEV6, PEF, FEV0.75/FVC, FEV1/FVC, FEV3/FVC, FEV6/FVC, FEV0.75/SVC, FEV1/SVC, FEV3/SVC, FEV6/SVC, PIF, FIVC, FIV1, MEF75, MEF50, MEF25, FEF75, FEF50, FEF25, MMEF, FET25, FET50, MIF75, MIF50, MIF25, PEFT, FIF50, FEF50/FIF50, FEF50/SVC, FEV0.75/ FEV6, FEV1/ FEV6, FIV1/FIVC, VEXT, Lung age	FVC, Best FVC, FEV1, Best FEV1, FEV6, PEF, FEV1/FVC, FEV6/FVC, FIVC, FIV1, PIF, MEF75, MEF50, MEF25, Lung age
PRE/POST broncho-challenge test	yes	-
Relaxed spirometry	SVC, ERV, IRV, TV, IC, IVC	-
Maximum voluntary ventilation	MVV, MVVf, MRf	-
Predictive values	ECCS/ERS 1993, ECCS 1983, NHANES III, Knudson 1983, Knudson 1976, Roca 1986, CRAPO 1981, ITS, Perreira – Brazil, LAM, Gore – Australia, Zapletal 1977	
Stored records	250	50
User-defined profiles	unlimited	-
Interpretation	Enright, ATS, BTS	Enright, ATS, BTS
Child incentive	yes	yes
Technical specifications		
Flow range (litres/s)	16 l/s (inspire / expire)	16 l/s (inspire / expire)
accuracy (50 ml/s to 16 l/s)	± 5 % or 50 ml/s (whichever is greater)	± 5 % or 50 ml/s (whichever is greater)
Volume range (litres)	0.025 to 8 litres	0.025 to 8 litres
accuracy (0.025 to 8 l)	± 3 % or 50 ml (whichever is greater)	± 3 % or 50 ml (whichever is greater)
Flow resistance	< 79 Pa / l/s	< 79 Pa / l/s
BTPS correction:		
Temperature sensor	+ 10°C to + 40°C	+ 10°C to + 40°C
accuracy	± 3 % for 25°C	± 3 % for 25°C
Barometric pressure sensor	700 – 1200 hPa	700 – 1200 hPa
accuracy	± 2 %	± 2 %
Relative humidity sensor	0 to 100 % RH	0 to 100 % RH
accuracy	± 4 % for 25°C, 30 – 80 % RH	± 4 % for 25°C, 30 – 80 % RH
Mains supply	115 V / 230 V, 50 – 60 Hz, 40 VA	115 V / 230 V, 50 – 60 Hz, 40 VA
Accumulator capacity	3 – 4 hours	3 – 4 hours
Charging time	10 hours (if completely discharged)	10 hours (if completely discharged)
ADC resolution	12 bits	12 bits
Sampling frequency	1000 Hz	1000 Hz
Classification		
Safety standards	IEC 601-1, IEC 601-1-2, IEC 601-1-4, ISO 14971	
Spirometry standards	EN 13826, ATS / ERS Standards 2005	
Electrical protection class	II according to IEC 536	
Applied part	BF according to IEC 601-1	



ACCESSORIES FOR BTL-08 ECG RECORDERS & BTL-08 ERGO II

Vacuum Systems for BTL-08 ECGs

ECG Vacuum System Decapus2: For resting ECG and stress tests (Includes: Basic unit, 10 ECG signal cables, 10 signal modules, arm, 128 filters for vacuum electrodes): Ordering No. C675.002v100

ECG Vacuum System Decapus2 Mobile: For resting ECG and stress tests (Includes: Basic unit, 10 ECG signal cables, 10 signal modules, arm, 128 filters for vacuum electrodes and battery): Ordering No. C675.003v100

Vacuum Electrode Filters: Replaceable, disposable filters for Squid and for Decapus2 (128 pcs): Ordering No. C675.004v100



Electrodes

Chest Electrodes (AgCl) (1 pc): Ordering No. C008.126

Chest Electrodes (for children) (1 pc): Ordering No. C008.001

Extremity Electrodes (AgCl) (4 pc): Ordering No. C008.124

Extremity Electrodes (for children) (4 pc): Ordering No. C008.002

Resting Tab Electrodes (disposable electrodes for resting ECG): Ordering No. C008.154

Rectangular Plate Ag/AgCl Electrode (for adults for use with electrode belts (35x35mm)) (1 pc): Ordering No. C008.122

Self-adhesive Disposable Electrodes (for adults (50 mm)) (1 pc): Ordering No. C008.118

Self-adhesive Disposable Electrodes (for children (40 mm)) (1 pc): Ordering No. C008.119



Patient Cables

Patient Cable for Resting ECG (for clamp electrodes): Ordering No. C008.160v112

Patient Cable for Ergometry (for self-adhesive disposable electrodes): Ordering No. C008.109

ECG Paper

58 mm Width (S-Line), roll 25 m (1 pc): Ordering No. C008.104v120

112 mm Width (M-Line), roll 25 m (1 pc): Ordering No. C008.105v120

210 mm Width (L-Line), roll 25 m (1 pc): Ordering No. C008.106v120

210 mm Width (L-Line), A5 size Z-fold, 333 sheets (1 pc): Ordering No. C008.108v120

210 mm Width (L-Line), A4 size Z-fold, 250 sheets (1 pc): Ordering No. C008.167v120



Belts

Chest Belt (10 × 135cm, for use with plate electrodes): Ordering No. C008.120

Belt for Extremities (Adult, 2.5 × 45cm, for use with plate electrodes): Ordering No. C008.121



Carrying Bag

Carrying Bag for BTL-08 SD1, SD3, SD, MD & MT : Ordering No. C008.123

Carrying Bag for BTL-08 MD, MT, LT & LC: Ordering No. C008.142v110



Other Accessories

USB Converter for BTL-08 ECG: Ordering No. C008.143v100

Communication Cable for BTL-08 Win and BTL-08 ECGs (2 m): Ordering No. C008.127

Communication Cable for BTL-08 Win and BTL-08 ECGs (5 m): Ordering No. C008.088v300

Communication Cable for BTL-08 Win and BTL-08 ECGs (10 m): Ordering No. C008.090v300

Converter for Resting ECG Patient Cable (from banana plug to resting tab electrode): Ordering No. C008.153

260 ml ECG Gel: Ordering No. C008.110v100

Cart with Castors

Cart for BTL-08 ECG S-line & M-line: Ordering No. P5002.010v100

Cart for BTL-08 ECG L-line: Ordering No. P5002.011v100

Cart for BTL-08 S-line, M-line, Vacuum System: Ordering No. P5002.136v100

Cart for BTL-08 L-line and Vacuum System: Ordering No. P5002.138v100

Cart for BTL-08 S-line, M-line, Vacuum System & BTL-08 Spiro: Ordering No. P5002.140v100

Cart for BTL-08 L-line, Vacuum System & BTL-08 Spiro: Ordering No. P5002.142v100



ACCESSORIES FOR BTL-08 ECG HOLTER

Patient Cables

Patient Cable (4-lead): Ordering No. C601.104v100
 Patient Cable (10-lead): Ordering No. C601.105v100

Other Accessories

Self-adhesive Adult Electrodes (35 x 41mm, 30 pcs): Ordering No. C008.118
 Pouch with 3x Belt Strap: Ordering No. C08HOL.103v100



ACCESSORIES FOR BTL-08 ABPM II

Cuffs

Standard-size Cuff: Ordering No. C601.104v100
 Large Cuff: Ordering No. C601.105v100
 Small Cuff: Ordering No. C601.106v100

Other Accessories

Pouch with straps: Ordering No. C601.106v100



ACCESSORIES FOR BTL-08 SPIROMETRY

Calibration Syringe (3 litres): Ordering No. C08SP.014v103
 Antibacterial Filter: Ordering No. C08SP.013
 Reusable Sensor with Plastic Mouthpiece: Ordering No. C08SP.015v100
 Plastic Mouthpiece: Ordering No. C08SP.011v100
 Paper Disposable Mouthpiece: Ordering No. C08SP.012
 Nose Clip: Ordering No. C08SP.019
 Disinfectant (2 litres): Ordering No. C08SP.018
 Thermal Paper (112mm, roll 25m): Ordering No. C008.105v120
 Carrying Case: Ordering No. C08SP.021v100
 Table Holder: Ordering No. C08SP.020v101
 Carts: Ordering No. P5002.125v100 (for BTL-08 Spiro Pro System)
 Ordering No. P5002.128v100 (for BTL-08 Spiro Upgrade for L-line ECGs)
 Ordering No. P5002.123v100 (for BTL-08 Spiro Upgrade for MT Plus ECG)



