

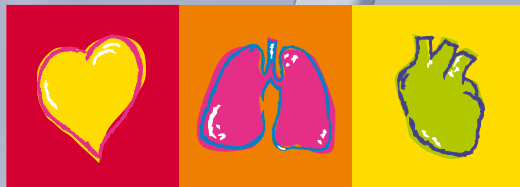


# CARDIOVIT AT-10 plus

## THE BEST OF ITS CLASS !

Unmatched world-wide:

The CARDIOVIT AT-10 plus combines resting ECG, exercise ECG, pacemaker measurement, HRV analysis, signal averaged ECG analysis, thrombolysis software and spirometry in a single system - like its legendary predecessor, the CARDIOVIT AT-10.



# SCHILLER

The Art of Diagnostics

# CARDIOVIT AT-10 plus

The AT-10 plus is made by SCHILLER, a world-leading manufacturer of cardiopulmonary diagnostic systems. Combining high quality and easy operation, the unit can be used wherever ECG and spirometry data must meet highest demands. There is a reason why its famous predecessor, the CARDIOVIT AT-10, is used in many clinics and practices and even in the international space station ISS and its control centres. NATO armies also place their trust in SCHILLER's quality. They use more than 20,000 units world-wide.

## CARDIOVIT AT-10 plus unmatched:

- Resting ECG
- Exercise ECG (ergometry)
- Pacemaker measurement
- Heart rate variability (HRV)
- Signal averaged ECG analysis (SAECG)
- Thrombolysis software
- Vector cardiography (combined with SEMA)
- Serial ECG comparison (combined with SEMA)
- Complete spirometry tests

All this at the touch of a button – and even networkable!



### Top Performance!

The CARDIOVIT AT-10 plus is ready to use at any time! Direct function keys and on-screen menus allow for quick, simple and reliable operation. Pre-programmed settings are activated at the touch of a button. You can define your preferred settings for monitor and paper outputs once and store them at the press of a key. This speeds up both the learning and operation.

### ECG Applications

SCHILLER offers you several standard programs. You can thus complement

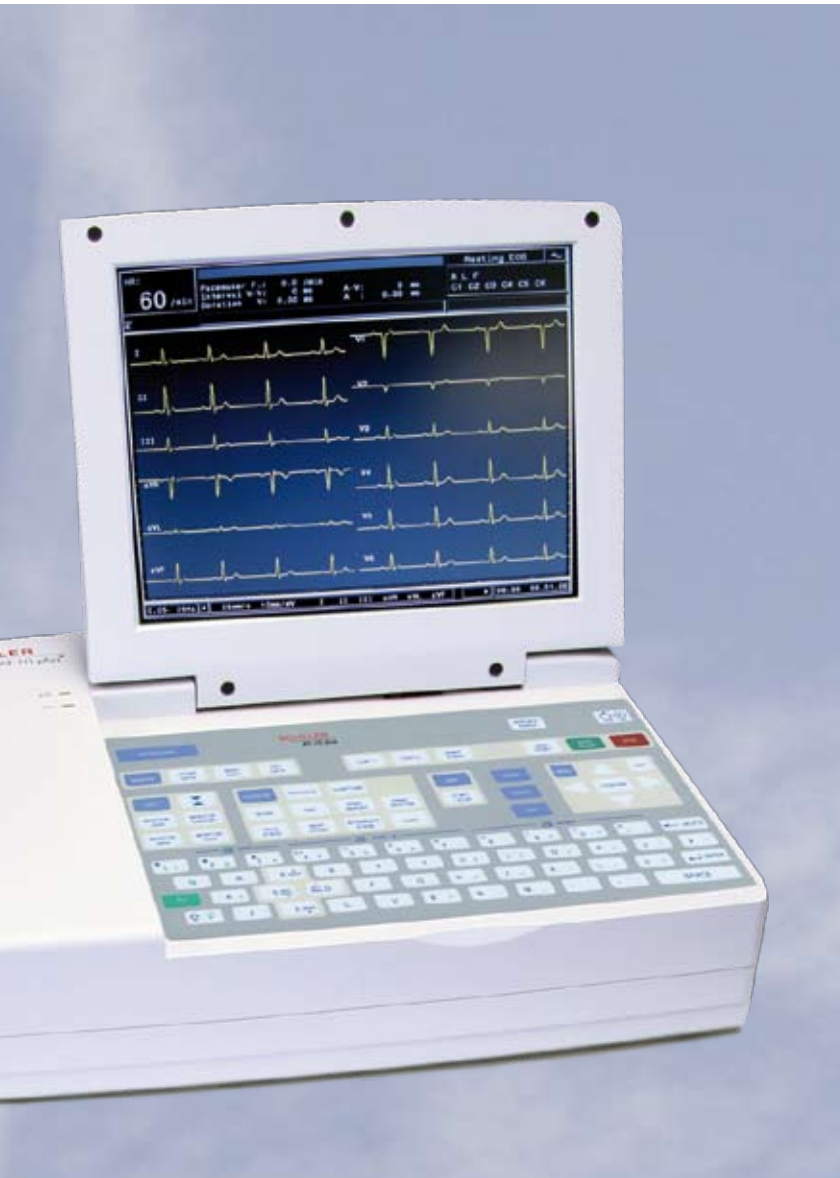
the CARDIOVIT AT-10 plus by proven software options according to your individual needs.

### Measurement and Average Complexes

The SCHILLER ECG measurement program generates precise average complexes, determines the beginning and end points of P waves, QRS complexes and T waves, and provides accurate time and amplitude measurements.

### ECG Interpretation (Option)

With the SCHILLER ECG interpretation program, one of the best-documented existing algorithms, you have at your disposal a broad range of diagnostic information with regard to rhythm, electrical axis, QRS morphology changes, QRS blocks, hypertrophy characteristics, ST or T changes, myocardial infarction characteristics etc. With an analysis time of less than 5 seconds, the SCHILLER ECG interpretation software ranks among the fastest and most accurate programs on the market!

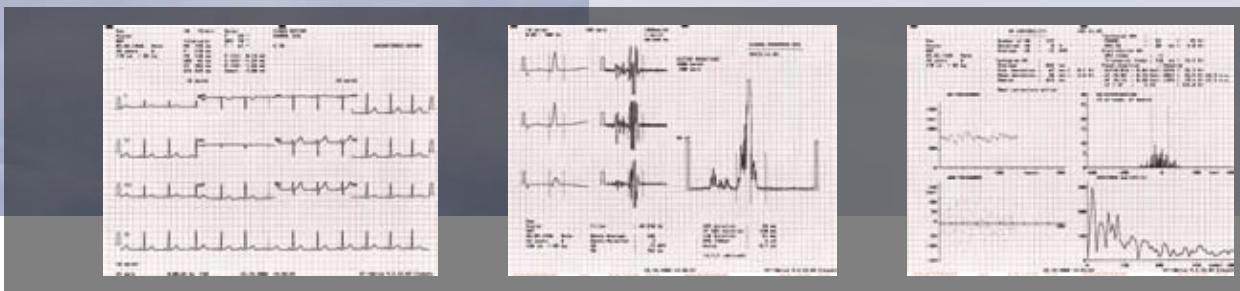


## Rhythm ECG Recording

The CARDIOVIT AT-10 plus records the signals of all 12 ECG channels over the past 5 minutes. This reduces the risk that important rhythm data might be overlooked. To save paper, you can transmit the full-disclosure view of a 5-minute recording to the SCHILLER SEMA-200 data-management system on your PC for editing or printout.

## Convincing Performance:

- 12-/16-channel resting and exercise ECG
- High-resolution 10.4" TFT colour screen
- Built-in thermal printer with A4 printing paper
- Easy operation
- Optimum integrability with data management systems
- Comprehensive network functions (Ethernet and WLAN)
- Modem
- Optional barcode scanner
- Internal memory for up to 350 ECG recordings
- Complete integration with the SEMA-200 cardiology data management system
- Data export and archiving in XML format
- Extendable to a complete ergometry and spirometry station



### Pacemaker Measurement (Option)

This advanced program measures the pacing frequency, performs individual measurement of pulse width for atrial and ventricular stimulation, and determines the AV intervals.

### Heart Rate Variability/HRV (Option)

With this SCHILLER program, you can determine the risks (e.g. of sudden cardiac death) for a cardiopathic patient – after a recording time of only 1 to 60 minutes. In addition to the graphic display of RR tachograms and histograms, numerous statisti-

cal parameters are calculated (e.g. standard deviation, mean deviation, mean value, BB50 value). All parameters are shown in relation to the mean RR interval – absolutely unique!

### Signal averaged ECG Analysis/SAECG (Option)

The signal averaged ECG analysis makes it possible to detect micropotentials after a QRS complex. Such signal averaged ECGs may be an indicator of ventricular tachycardia or even sudden cardiac death – in particular for patients who have suf-

fered cardiac infarction. This program option offers a handy alternative to more common invasive techniques.

### Thrombolysis Program (Option)

This option creates a numerical assessment of the ECG measurement, to help determine the probability of acute cardiac ischaemia. It gives you important additional diagnostic information for patients with chest pain.

# ERGOMETRY



BP-200 plus



## ERGOMETRY

The most commonly used test protocols are already programmed in your CARDIOVIT AT-10 plus. Five (treadmill) or four (bicycle) user definable protocols allow you to store or modify programs exactly as you wish. The exercise testing program controls a bicycle ergometer or treadmill. Non-invasive blood pressure measurement is taken automatically at the beginning of every load stage or at freely definable intervals, and indicated on the monitor and on printouts. The blood pressure can be measured us-

ing the BP-200 plus or the BP recorder integrated with the ERG 911 (optional). Continuously updated ECG information, including the heart rate, stage number and duration, exercise period, load and METs are displayed on-screen and documented on the printout. A comprehensive final report is printed out at the end of each exercise test. The advanced evaluation program EXEC provides you with continuous 12-lead ST information during the test and a comprehensive final report.



# SPIROMETRY

## THE FLEXIBLE QUICK-CHANGE ARTIST!

### Spirometry:

#### Measured values:

Slow spirometry:  $SVC_{in}$ ,  $SVC_{ex}$ ,  $SVC_{max}$ , ERV, IC, IRV ...

Forced Spirometry: FVC,  $FEV_1$ ,  $FEV_6$ ,  $FEV_1/FVC$ ,  $FEV_1/FEV_6$ ,  $FEF_{25-75\%}$ , PEF,  $MEF_{75\%}$ ,  $MEF_{50\%}$ ,  $MEF_{25\%}$ ,  $FEF_{25\%}$ ,  $FEF_{50\%}$ ,  $FEF_{75\%}$ ,  $FEF_{0.2-1.2}$ , FMFT, FVC, PIF ...

MVV: MVV, RR, TV

#### Presentation:

- Flow/volume loop
- Flow/loop curve
- Volume/time curve
- Measurements table
- Interpretation programs

#### Predicted values (standard values):

- Adults: ECCS, Forche97, Berglund, Finland, Indien, Hankinson (NHANES III), Knudson/ITS, Knudson76/ITS, Crapo 1981, Morris/ITS, Composite, Polgar
- Paediatric: Quanjer & Tammeling, Forche97, Indien, Knudson/ITS, Knudson76/ITS, Polgar, Hankinson (NHANES III)
- Comparison pre/post medication possible
- Extrapolated predicted values

Standards: ATS, ERS

SPIROVIT SP-250/SP-260 pneumotach flow sensor for spirometry tests:

Dimensions: 118 x 36 x 28 mm, approx. 120 g

Measuring method: Pneumotach sensor

#### Measuring range:

- Flow: 0 to +/- 14 l/s
- Volume: 0 to +/- 11 l

Measurement accuracy: in accordance with ATS/ERS

Flow impedance: < 0.2 mbar \* s/l at 12 l/s



### BREATHTAKING PERFORMANCE

ECG and spirometry in one unit – this is unique world-wide! The CARDIOVIT AT-10 plus can be transformed into a proven table spirometer for the measurement, recording and assessment of the flow-volume and volume-time curves and the corresponding parameters. Several expiratory and inspiratory tests can be performed and compared with country specific normal values. Pre/post measurements and interpretation are standard. Two flow sensors are available for the portable all-rounder. You decide whether

you prefer working with the proven pneumotachograph SP-250 or SP-260.

### SPIROVIT SP-250, with Disposable Sensor

The SP-250 flow sensor sets a new hygiene standard, reducing the risk of cross contamination to its minimum. It is small, lightweight, inexpensive and easy to operate. You are ready for the next test within seconds. Insert the new sensor – done. Safe and convenient for you and your patients.

### SPIROVIT SP-260, Reusable Sensor

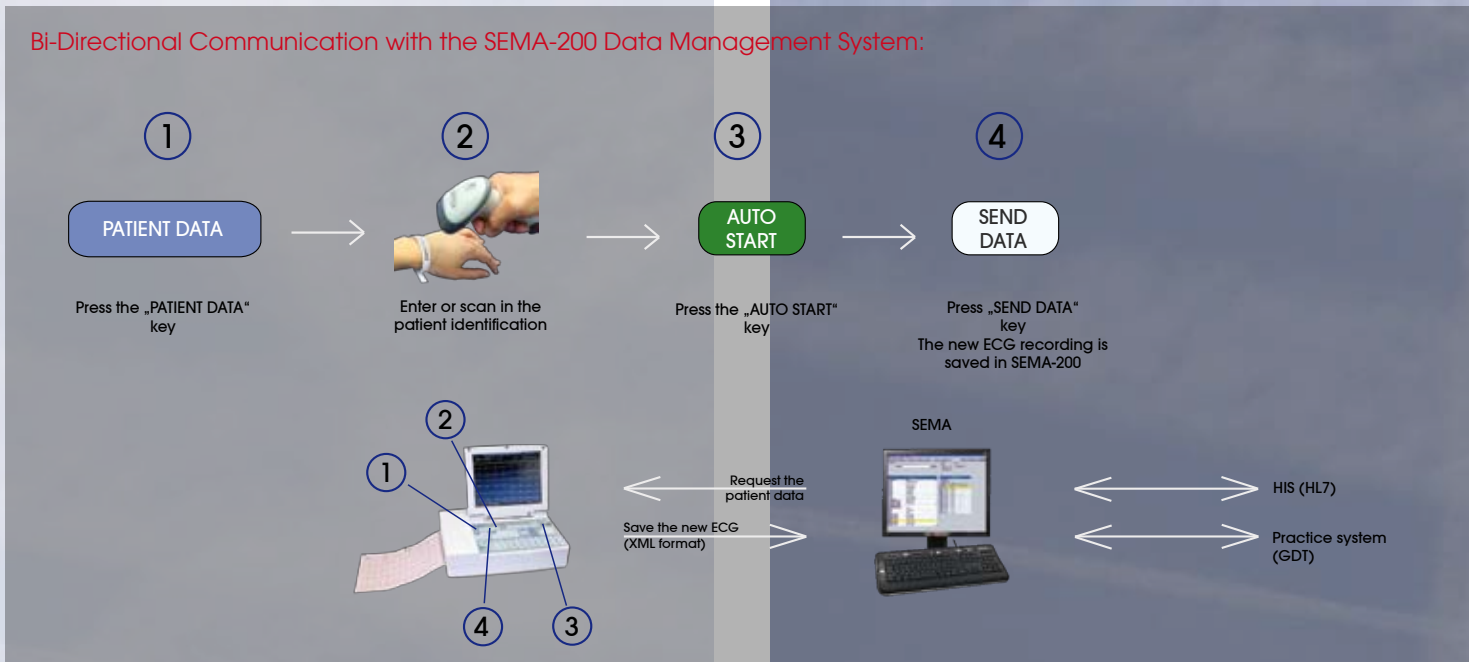
The Sensor can easily be disassembled to clean the parts. It is reassembled and ready for the next patient in no time.

# DATA MANAGEMENT

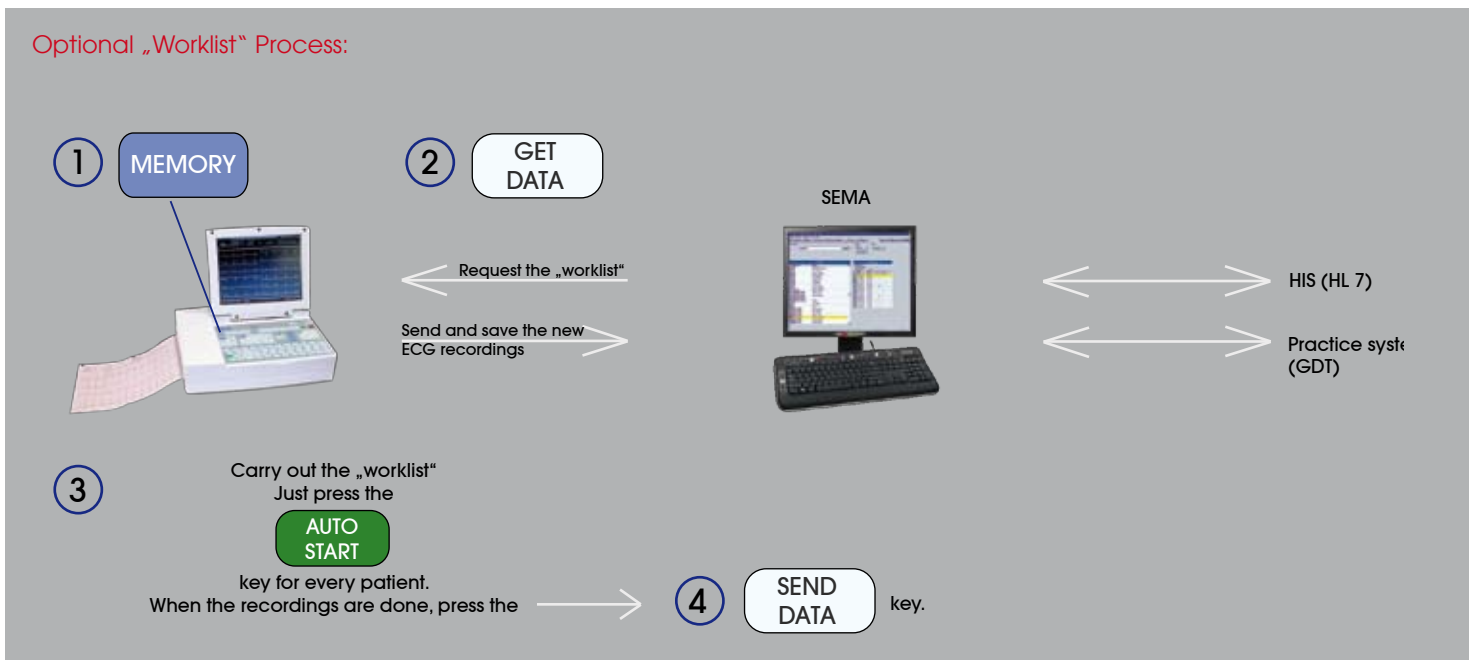
## SCHILLER Data Management System SEMA-200 and Integration with Hospital Information System

Via SEMA-200, the CARDIOVIT AT-10 plus can easily be integrated with existing hospital information systems (HIS) to enable an optimum workflow. In only four steps, you can record and archive a new ECG.

### Bi-Directional Communication with the SEMA-200 Data Management System:



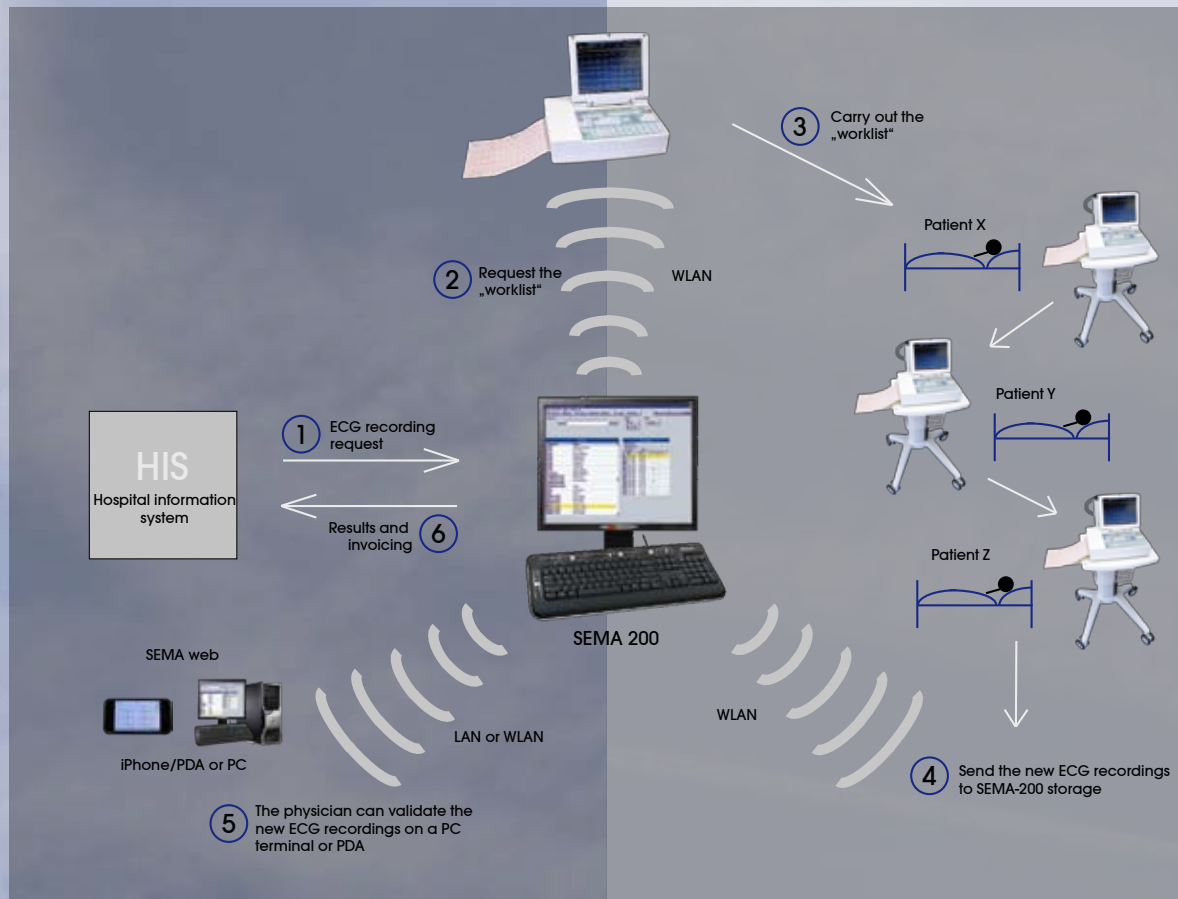
### Optional „Worklist“ Process:



# WIRELESS NETWORK INTERCONNECTION

## WLAN Module (Option)

The built-in WLAN module enables the wireless network interconnection of the CARDIOVIT AT-10 plus. For mobile application in the clinic.



## SCHILLER - THE ART OF CONNECTIVITY

### CARDIOVIT AT-10 PLUS – THE COMMUNICATIVE GENIUS

Since 1987, SCHILLER has connected its ECG units to the IT world in numerous clinics and practices, and is known as a pioneer in this area. The CARDIOVIT AT-10 plus features all required modules to communicate with its environment, be it via Ethernet, modem or WLAN.

### WLAN Module (Option)

Comprehensive network interconnection gives you access to the SCHILLER SEMA-200 cardiology information system, optimising the workflow and enhancing the unit's functionality. By using the network, you can work more efficiently and receive additional support for your clinical decisions.

With the worklist option, you can directly access a patient's ECG recordings at any time, which gives you more flexibility in your examination

and treatment.

The optional WLAN function enables the bi-directional communication with SEMA-200. You can quickly and easily view, edit and archive patient data, reducing the risk of data entry errors.



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