

## CARDIOVIT AT-2 light



### Feature Rich – Economically Priced – SCHILLER Of Course!

CARDIOVIT AT-2 light – Why compromise performance and reliability when you can have it all in one affordable ECG-System?

SCHILLER's new AT-2 light offers the economics of a low cost unit with many of the high end features needed to care for your patients. The AT-2 light is a 12-channel ECG system offering battery operation of up to 6 hours, full size (8 1/2 x 11) reports to fit patient records, LCD screen and keyboard for easy entry of patient demographics and the option of Spirometry and interpretation. No matter what your budget requirements are, SCHILLER has the product for you!

#### World-renowned ECG technology

- Alphanumeric keyboard and big LCD for user friendly operation
- 6-channel print-out in realtime at 5, 25 or 50 mm/s
- Automatic print-out function for 6 and 12 channels on one or two sides of the paper
- Fast, reliable, computer-aided ECG interpretation program including complete measurement for adult and pediatric ECGs (optional).
- The repetition rate is cut to zero because the curve quality on the print-out is optimized using the SSF SCHILLER Smoothing Filter and the SBS SCHILLER Baseline Stabilizer.

#### Options:

- ECG interpretation program for adult and pediatric ECG
- Spirometry functions
- Trolley



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## Technical Data AT-2 light:

### System:

**Dimensions:** 400 x 330 x 101 mm; approximately 5 kg

### Built-in monitor:

- 120 x 90 mm effective display area
- 320 x 240 dots resolution

### On-screen status indicators:

- Battery status
- Date, time
- Power source

### Control panel and keyboard:

User-friendly, alphanumeric keyboard, LED indicator and monitor

**Power supply requirements:** 220 - 240 V (nominal), 50/60 Hz; 110 - 115V (nominal), 50/60 Hz; stand-alone operation with built-in rechargeable battery, LED indicator for mains operation, integrated power supply unit.

**Battery capacity:** Up to 3 hours of normal use

### Printer:

**Chart paper:** Thermo-reactive, Z-folded, 210 mm wide (A4), approx. 60 m, ready to file

**Printing process:** High-resolution thermal head printer, 8 dots / mm (amplitude axis), 40 dots/mm (time axis) @ 25 mm/s.

**Chart print-out speed:** 5 / 10 / 25 / 50 mm/s (manual printout)

**Sensitivity:** 5 / 10 / 20 mm/m, either automatically adjusted or manually selected

**Recording tracks:** 6/12-channel presentation, optimal positioning on a width of 200 mm, automatic baseline adjustment

### Automatic lead programs:

- 6/12-channel presentations of 12 simultaneously recorded standard leads on one or more A4 pages
- Numerous print-out formats can be selected

**Interface:** RS-232 interface to connect spirometry sensor, data transmission to PC (SEMA-200), and external modem connection.

### Safety standards:

#### Safety standard:

CF according to:

- CAN/CSA-C22.2 No 601.1-M90
- UL Std 2601.1

**Protection class:** I according to IEC 60601-1 (with internal battery)

**Conformity:** CSA/US

#### Environmental conditions:

- Temperature during operation: 10° to 40° C
- Temperature during storage: -10° to 50° C
- Relative humidity: 25 to 95 % (non-condensing)
- Pressure during operation: 700 to 1060 pHa

### ECG:

**Patient input circuit:** Fully floating and isolated, defibrillation-protected (only with original SCHILLER patient cable)

#### Monitor display:

- Filter status (on/off)
- Insufficient electrode contact
- Heart Frequency, HF

#### ECG amplifier:

- Simultaneous recording of all 9 active electrode signals (= 12 leads)
- Sampling frequency: 1000 Hz
- Pacemaker detection:  $\geq \pm 2 \text{ mV} / \geq 0.1 \text{ ms}$

**Leads:** 12 simultaneous leads: Standard / Cabrera

#### Data record:

- Patient data (name, age, height, weight, BP), user ID
- Listing of all ECG recording conditions (date, time, filter)
- With optional measurement (M) and interpretation (C) program: ECG measurement results (intervals, amplitudes, electrical axes), average complexes with optional measurement reference markings, guidance on interpreting adult and pediatric ECGs

### Filter:

**Myogram filter (muscle tremor filter):** 25 or 35 Hz, can be switched on/off

**Line frequency filter:** Distortion-free suppression of superimposed 50 Hz or 60 Hz sinusoidal interference by means of adaptive digital filtering.

**Frequency range of digital recording system:** 0.05 Hz to 150 Hz (IEC/AHA)

### Spirometry (Option):

#### Measured values:

**FVC:** FVC, FEV<sub>0.5</sub>, FEV<sub>1.0</sub>, FEV<sub>3.0</sub>, FEV<sub>0.5</sub> / FVC, FEV<sub>1.0</sub> / FVC, FEV<sub>3.0</sub> / FVC, FEF<sub>0.2-1.2</sub>, FEF<sub>25-75%</sub>, FEF<sub>75-85%</sub>, PEF, FEF<sub>25%</sub>, FEF<sub>50%</sub>, FEF<sub>75%</sub>, FIVC, FIV<sub>1.0</sub>, FIV<sub>1.0</sub> / FIVC, FIV<sub>1.0</sub> / FVC, PIF, FIF<sub>50%</sub>, FMFT

**SVC:** SVC, ERV, IRV, TV

**MVV:** MVV, RR, TV

#### Presentation possibilities (printout and screen):

- Flow/volume graph
- Volume/time graph
- Table of measured values
- Realtime flow curve

#### Data record:

- Patient data (name, age, height, weight), user ID
- Registration conditions (date, time, date of last calibration)
- Flow/volume graph and/or volume/time graph
- Table of measured values with PREDICTED/ACTUAL/ DIFFERENTIAL values
- Diagnosis guidance
- Memory for more than 60 ECGs or spirometry records

#### Prediction equation:

**Adults:** ECCS, Austria, Crapo, Morris, Knudson, Knudson76, Polgar, Berglund, Finland, India, Composita

**Children:** Quanjer & Tammeling, Austria, India, Knudson, Knudson76, Polgar.

#### Extrapolated predicted values

Comparison of PRE/POST medication is possible

**Standards Compliance:** ATS, OSHA, NIOSH

**SPIROVIT SP-250 Pneumotach Flowsensor for pulmonary function testing with disposable mouthpiece:**

**Dimensions of SP-250:** 118 x 36 x 28 mm; approx. 120 g; 4,6 x 1,4 x 1,1 in., approx 0,26 lbs

**Measuring method:** Pneumotachometer

**Measuring accuracy:** According ATS < 3 %

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

**SPIROVIT SP-260 Pneumotach Flowsensor for pulmonary function testing with reusable mouthpiece:**

**Dimensions of SP-260:** 125 x 36 x 28 mm; approx. 160 g; 4,9 x 1,4 x 1,1 in., approx 0,34 lbs

**Measuring method, Measuring accuracy, Flow impedance** same as SP-250

#### Scope of delivery:

- 1 pneumotach sensor; choice of SP-250 disposable (P/N 2.100022) or SP-260 reusable sensor (P/N 2.100551)
- Accessories: 2 noseclips and either 1 pack of disposable plastic mouthpieces for SP-250 (P/N 2.100077) or 1 pack of disposable filters for SP-260 (P/N 2.100123)
- 1 operating manual

### Scope of delivery for CARDIOVIT AT-2 light:

Quiescent ECG with 12 simultaneous leads, pacemaker detection

#### Accessories:

- 1 10-lead patient cable
- 1 set of electrodes or disposable electrodes
- 1 power cable
- 1 pack chart paper
- 1 operating manual

#### Software option:

- Interpreter (C): Automatic ECG measurement and computer-aided ECG interpretation for pediatric and adult ECGs
- SEMA-200 PC software to save, validate and archive ECG and spirometry data on a PC

#### Hardware option:

- Equipment trolley
- Calibration syringe

Subject to technical modifications due to continuous innovations.

