

*Status Analysis Monitor*

*SAM 2*



**SAM 2**

**Instruction Manual**

# Content

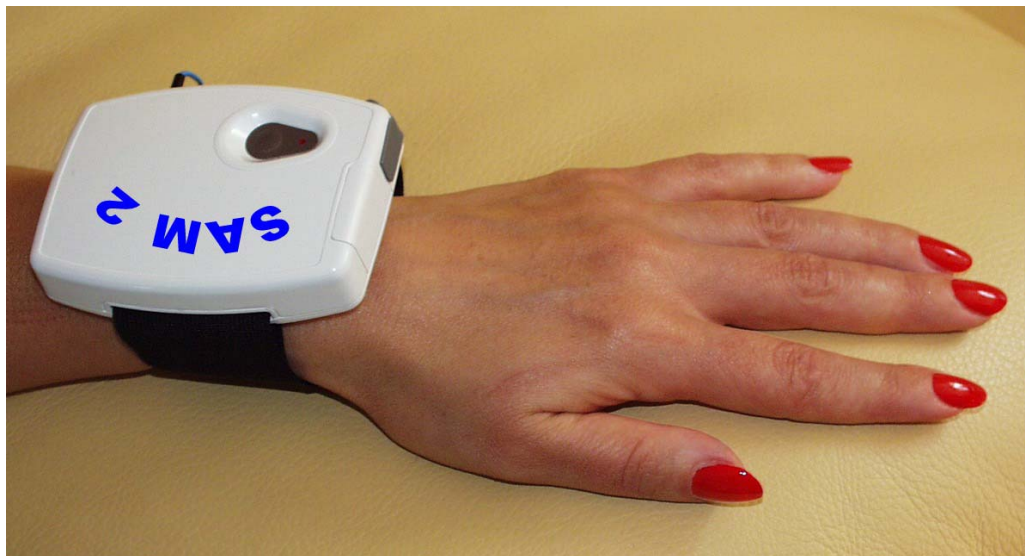
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## 1. How to install SAM 2

Usually SAM 2 is fixed around the wrist just like a wrist watch. No jewellery or watch should be carried on the same arm during measurement as they might influence the operation.

Where the pins and the counter electrode touch the skin, some moisture or even glycerine should be used to increase the conductivity of skin.

Fix the tape so the pins and electrode have close contact with the skin. One should feel some pressure where the pins touch the skin.



You may check if SAM 2 is correctly attached by soft ware help titled SAM 2 device configuration / test of value limits.

## 2. Measurement

There are two methods available:

- Online measuring
- Offline measuring
- 

### 2.1. Online Measurement

When measuring online, the measurement values are directly transferred to a connected PC. SAM 2 has to be connected with a PC by a connecting cable.

As soon as the cable is connected, the software program of SAM 2 is started and the online screen is to be mouse clicked. Using the dialog method you may set the number of measurements and the time interval between individual measurements. Then you may start the procedure. (For details see the software instruction manual).

During online measuring the results can directly be seen on the screen of the PC. Afterwards they can be analysed and demonstrated using the SAM 2 software.

## 2.2. Offline Measurement

When measuring offline, the measurement values are stored in the SAM 2 instrument for later transfer and evaluation in the PC.

The settings in the instrument are installed via PC:

- Number of Measurements,
- time interval between measurements,
- high and low voltage limits for acceptance of measurement values,
- minimum number of pins which must have valid skin connection.

(For details see the software instruction manual).

To start the measurement procedure you have to press the on/off button for minimum 2 seconds. The start of the measurement is acoustically indicated (three long beeps).



To interrupt the measurement procedure you may press the on/off button again for minimum two seconds. This act is answered by a long beep. The

procedure can be continued by again pressing the on/off button for at least two seconds.

A long beep indicates the end of the measurement procedure.

By a short time pressing of the on/off button during the measurement procedure the instrument LED shows a blinking signal for indication of procedure ongoing.

To indicate any problem during measurement a special acoustic signal is sent: three times short, one long tune.

Problems can be:

- on earlier measurement range is still loaded in SAM 2,
- SAM 2 accepted values beyond limits set,
- defective instrument.

For evaluation of the measurement data, SAM 2 has to be connected to the PC, to transfers the values to the PC for storage.

A new measurement procedure can only be started after the old values are cancelled in SAM 2 and SAM 2 received a new configuration setting, or after the old values have been transmitted to the PC and have been cancelled in SAM 2.

## **3. Maintenance**

The housing of SAM 2 is not completely water-tight. So please don't clean SAM 2 under running water.

You may clean SAM 2 using a moist cloth.

After measuring possible remainders of glycerine should be cleaned off the pins.

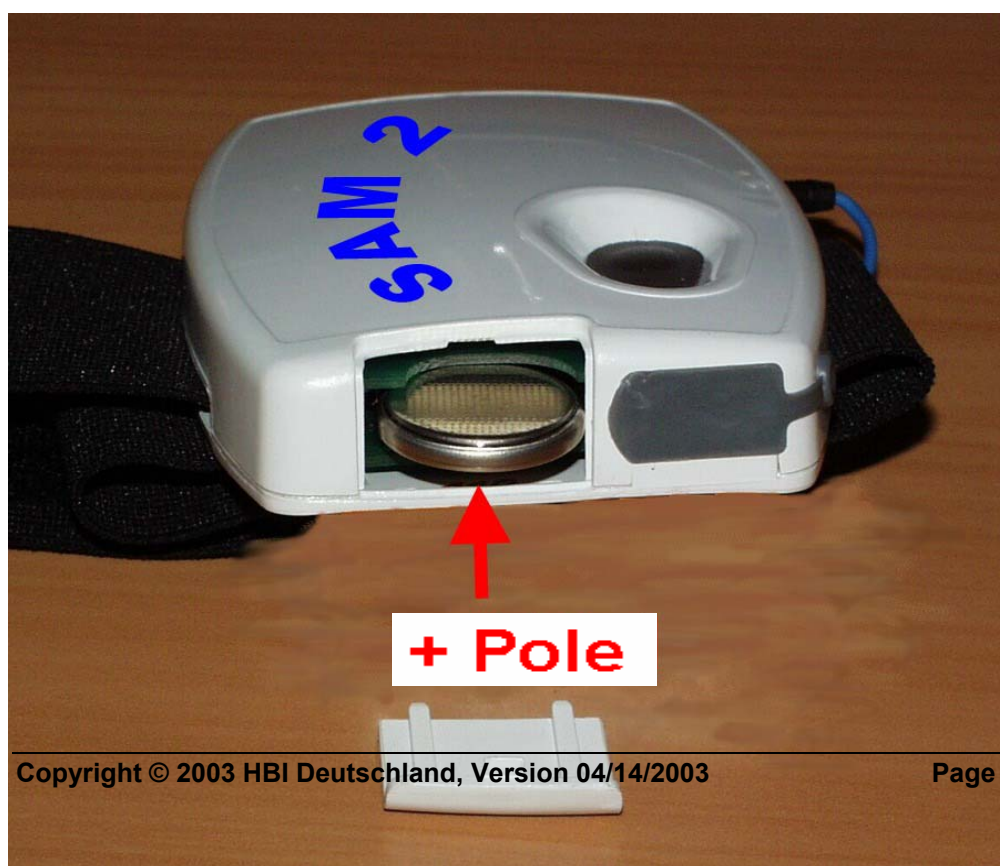
## 4. Exchange of Batteries

Only 3V Lithium batteries may be used.



For battery change open the little flap on one side of SAM 2 housing, exchange batteries with help of little plastic sticks or tongs – please use no metal here.

Please watch the correct position of poles.



## 5. How to connect SAM 2 with PC

Use the cable enclosed in the shipment for connection of SAM 2 with your PC.

A little dark flap has to be opened to show the female connector in SAM 2. The smaller rectangular connector of the cable is to be fixed to SAM 2 instrument, the other green connector is attached to the PC. Use a serial port!



## 6. Acoustic Signals

There are three different signals available from SAM 2:

3 times short beep-beep-beep	Means start of measurement
1 long beeeep	Means finish or interruption of measurement
3 times short, one long beep	Means a failure has been produced

The LED of SAM 2 is blinking synchronous to these signals.

## 7. General View



### Elements of SAM 2:

- 1 On/Off Button
- 2 LED Signal Lamp
- 3 Battery Flap
- 4 Flap for PC connecting Cable
- 5 Wristlet
- 6 Connector to counter Electrode
- 7 Counter Electrode