

# Short Manual

## SRM - Ergometer



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## **1 General preparation**

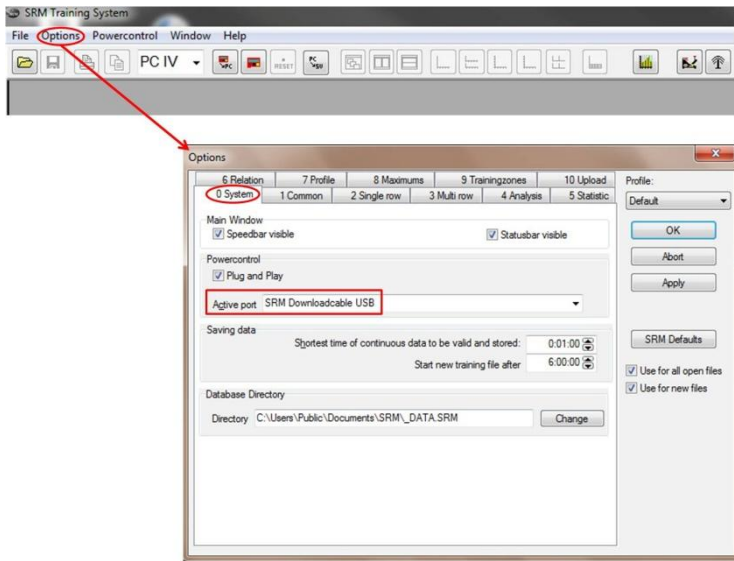
- Power-on spiroergometry (30min before beginning of test)
- Power-on ergometer's power supply
- Preparation diagnostic devices (Lactate analysis, etc.) 30min beginning of test
- Room temperature (18 – 24°C) should be measured
- Relative air humidity should be measured (30 – 60%) in room
- Check position of ventilator

## **2 Settings USB/Serial Converter**

- The installation of the USB/Serial Converter is mandatory for the data recording
- Check the activation of the USB/Serial Converter at the Active port ("SRM Downloadable USB")

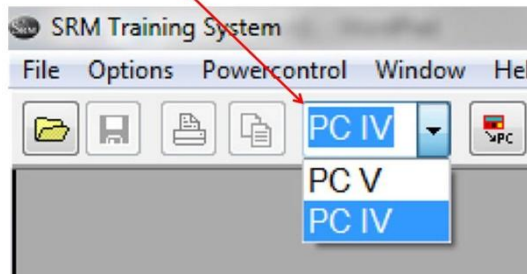
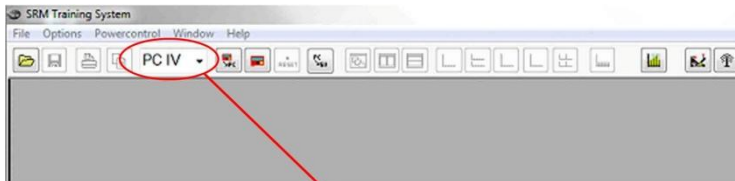
We recommend the use of the following USB/Serial Converter:

- ATEN USB-to-Serial-(RS 232) Converter, (Model: UC-232A), (Windows 7)
- Plugable USB to RS-232 D89 Serial Adapter, (Windows 8)

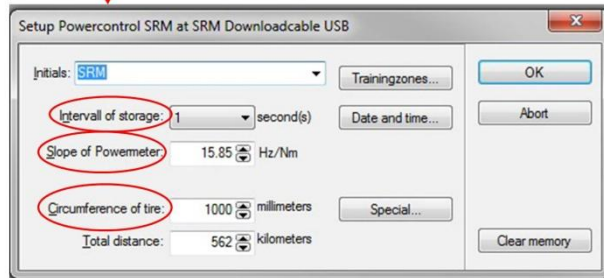


### 3 Settings Powercontrol IV

- SRMWin-Software: On menu bar choose *PC IV* (Drop-down)



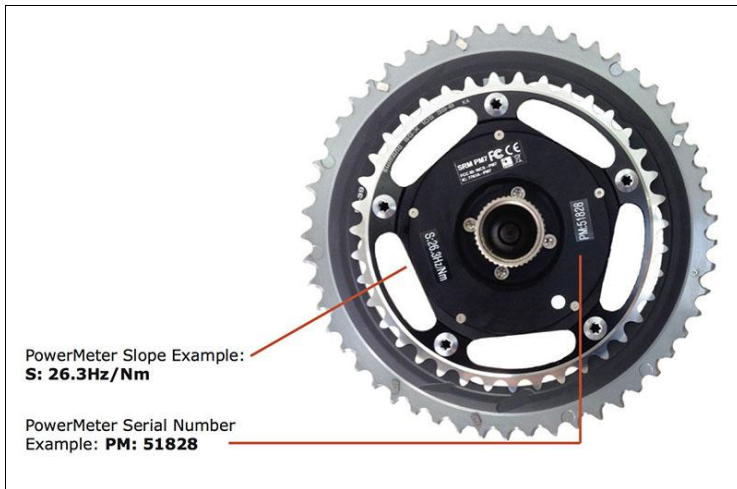
- SRMWin-Software: Powercontrol – Setup



- Interval of storage: 1 second
- Slope of Powermeter: see „Verify Slope“ (page 7)
- Circumference of tire: 1000 mm

- Verify slope (Slope of PowerMeter)




Verify the slope before every test-day.  
The slope in the PowerControl and in the SRMWin-Software should correspond to the slope of the PowerMeter.



You can find the correct PowerMeter slope located-at:

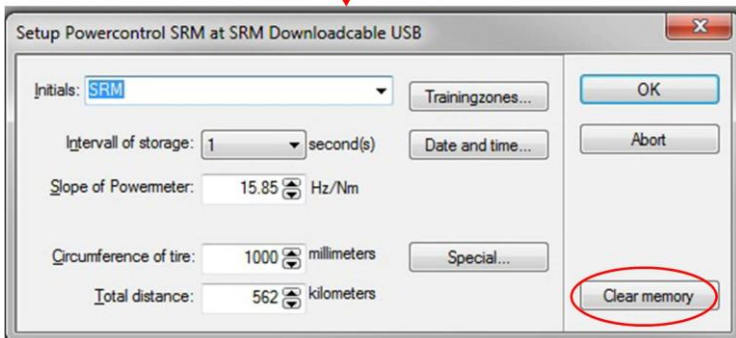
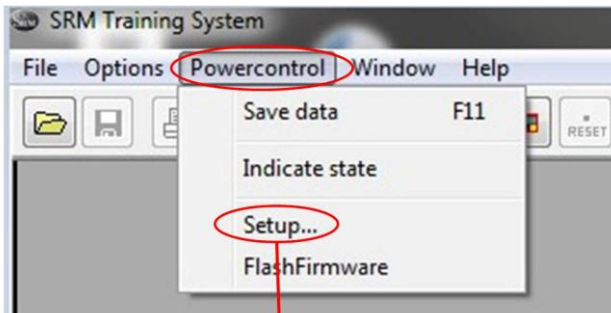
1. little sticker at the rear of the PowerMeter
2. on the handlebar or on the front of the ergometer

- Verify Zero Offset

|   |  |
|---|--|
|    | <p>Push, simultaneously, <b>MODE</b> and <b>SET</b> to switch the PowerMeter's display to calibration mode</p>   |
|    | <p>For a manual comparison turn the unloaded crank in a clockwise direction to switch the PowerMeter on.<br/>Wait a few seconds until the value stabilizes on the right side of the display.</p> |
|  | <p>Press <b>SET</b> to apply the Zero Offset. (MANU) Value of Pro will be taken automatically and is important for the measurement.</p>  |

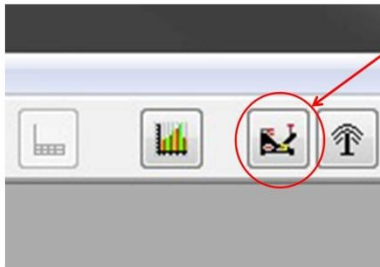


- Verify memory capacity and charge of battery of the PowerControl  
PowerControl: Push simultaneously **MODE** and **PRO**
- If the memory capacity is full clear memory by:  
→ SRMWin-Software – Powercontrol – Setup – Clear memory

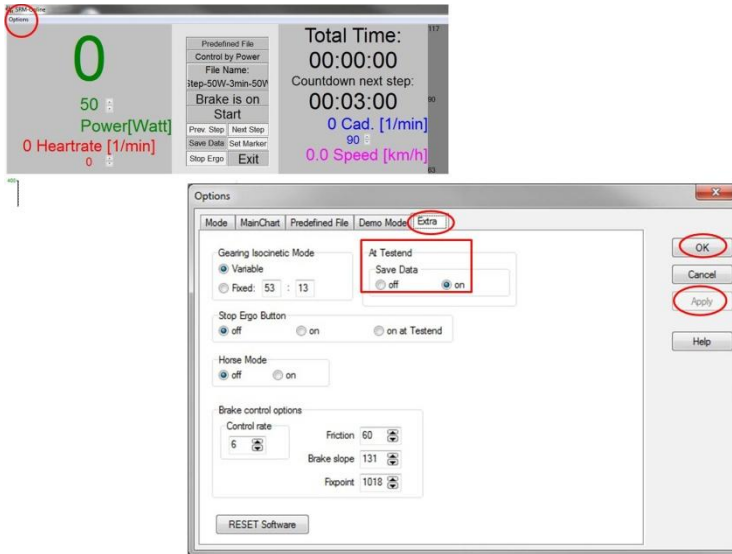


#### 4 SRM Online-Mode

- Change to the online mode by clicking on the icon ergometer



- Data storing of the SRM to automatically save test data at the end of the test
- SRM – ergometer - software: Options – Extra – At Testend – Save Data – on
- Click on Apply to save your settings

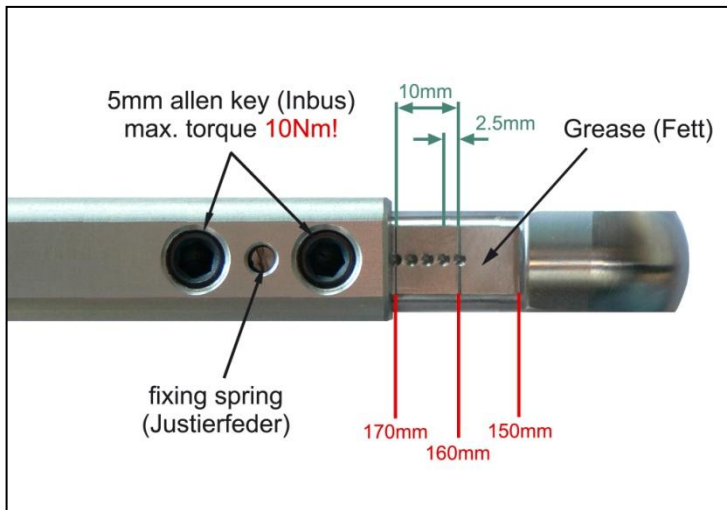


## 5 Client / Test person

- Welcoming
- Clients prepare for test - put on the heartrate strap
- Documentation of personal data of client (height, weight, etc.)
- Completion questionnaire / exclusion of liability
- Discussion of the data and test procedure

## 6 Settings SRM - Ergometer

- Verify gear (gear 9 red point corresponding)
- Mount client's pedals
- Crank length set-up:  
Recommendation: if possible use same crank length as on client's bicycle
- Please consider maximum torque of the crank 10Nm



- Bike fitting: transfer settings of client's own bike to the sitting position



### **Saddle height**

The heel with the extended leg should reach the lowest position in the pedaling cycle.



### **Saddle setback**

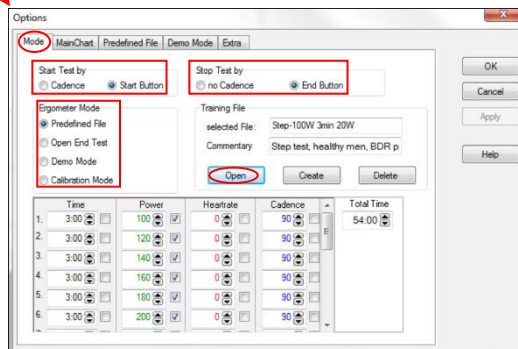
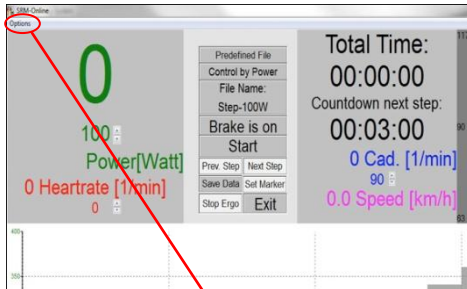
In the horizontal position of the crank the knee (patella) should be perpendicular to the pedals axle.

## **7 Warm-up**

- Recommendation of at least 3 - 4 min with a low workload (e.g. 75-100W)  
→ predefined warm-up
- Check the correct settings for:
  - Heartrate
  - Cadence
  - Power
  - Speed

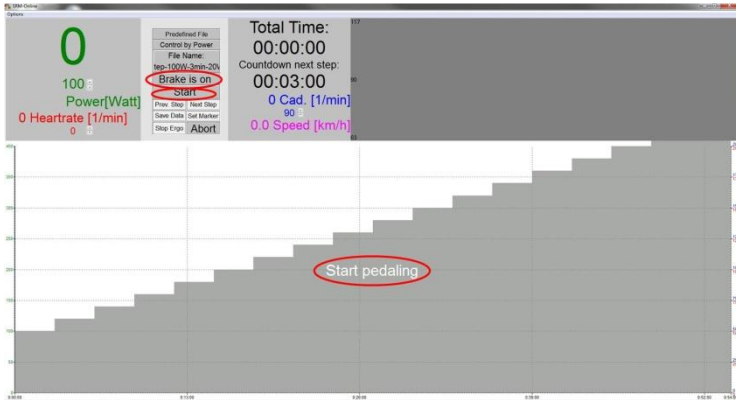
## 8 Setup of test protocol

- Determine the test protocol  
 SRM – ergometer - software: Options - Mode  
 Start Test by: Start Button or cadence  
 Ergometer Mode: Predefined File  
 Stop Test by: End Button or no cadence  
 Training File: Open – select the correct test – OK



## 9 Start performance diagnostics

- Start by beginning to pedal or pushing the Start Button
- Check the values displayed on the computer screen





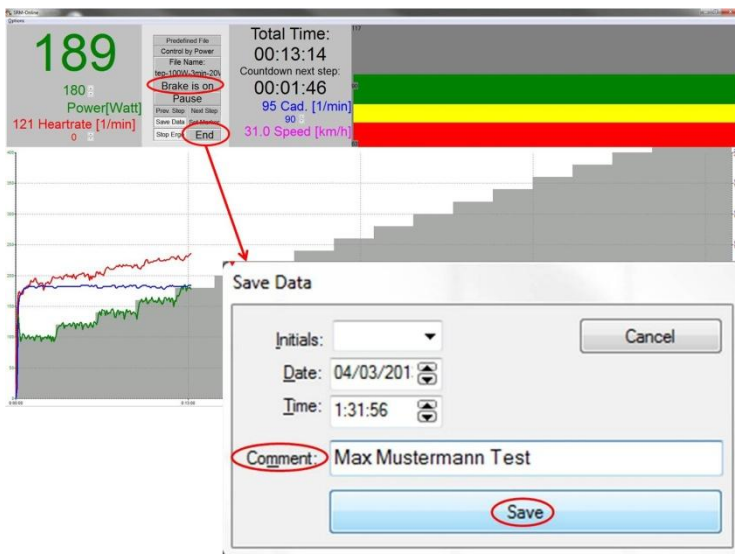
## 10 End of the test

- Stop the test

SRM - ergometer - software: hit "Brake is on" button (continuous recording of the heartrate - client can continue pedaling without resistance and cool down)

or

SRM – ergometer - software: End Button  
Comment: entry file name then press Save



- Recommended cool – down - protocol with lower workload
- **Clean the ergometer (!)**

## **11 Service**

Recommendation:

- crank: send in for service every two years
  - ergometer: send in for service every four years
- 

## **12 FAQ**

1. Could not found PowerControl at Computer
  - check that the USB Driver is correctly installed and working
  - make sure the correct USB cable is selected (see page 3)
  - check PowerControl IV settings (see page 5)
2. No resistance from ergometer
  - check speed
  - check 'Brake is on'
  - check PowerControl → Cadence, Power
  - check slope, zero offset, circumference (see page 6)
  - check power supply (green light)

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