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 measured
- Relative air humidity should measure (30 60%) in room
- Check position of ventilator

2 Settings USB/Serial Converter

- The installation of the of USB/Serial Converter is mandatory for the data recording
- Check the activation of the USB/Serial Converter at the Active port ("SRM Downloadcable 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 Adatper, (Windows 8)



SRM Training System							<u> </u>
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5							2



3 Settings Powercontrol IV

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



• SRMWin-Software: Powercontrol – Setup



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SRM Training S	ystem
File Options P	owercontrol Window Help
Com (Save data F11 Indicate state Setup FlashFirmware
	Interval of storage 1 second(s) Date and time OK Slope of Powermeter 15.85 Hz/Nm Abort Qrounference of tire 1000 millimeters Special Iotal distance: 562 kilometers Clear memory

- Interval of storage: 1 second
- Slope of Powermeter: see ,,Verify Slop" (page 5)
- *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

Power Ontrol IV Time Heartrate D D D D D D D Speed Distance Hence Mode Sector Set	Push, simultaneously, MODE and SET to switch the PowerMeter's display to calibration mode
Power Time Heartrate MANU Pro Set 626 626 Speed Distance Cadence Mode	For a manual comparison turn the unloaded crank in a clockwise direction to switch the PowerMeter on. Wait a few seconds until the value stabilizes on the right side of the display.
Powercontrol IV Power Time Heartrate Pro Set 626 Speed Distance Cedence Mode SRM Pro Set	Press SET to apply the Zero Offset. (MANU) Value of Pro will be taken automatically and is important for the measurement.



- 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

SRM Training S	System		
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Slope of Powermeter: 15.	v second(s) Dat	te and time	non
<u>Circumference of tire:</u> 100 <u>T</u> otal distance: 50	0 millimeters	Special	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

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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 (continous 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*

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Save Data		
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Comment:	Max Mustermann Tes	t

- 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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