SRM

Training System

www.SRM.de

PowerMeter 7
PowerControl 7
Short Manual

SRM Training System
Wireless PowerMeter 7
Wireless PowerControl 7
Quick Start Guide
Version: Nov 16, 2010

A complete manual is available at http://www.srm.de

TABLE OF CONTENTS

BUTTONS AND VIEWS

| **PRO**	**MODE**	**SET**
short key press:	*short key press:*	*short key press:*
· go to training zones	· awake from sleep	· start/end interval
· "+" in setup mode	· change screen/item	· "-" in setup mode
long key press:	*long key press:*	*in pairing mode:*
· enter pairing mode	· back to main screen	· search sensors
	very long key press:	*long key press:*
	· enter sleep mode	· enter setup mode

Note:

Long key press is over 3 seconds, very long key press over 10 seconds

INSTALLATION OF THE SRM TRAINING SYSTEM

CADENCE MAGNET
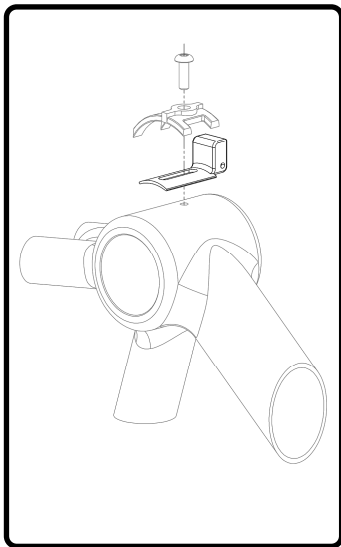
1. Remove your old cranks.

2. Remove the allen bolt for the cable guide, leaving the cables in place. Some guides are riveted or glued, or are not present. Consult a technican or get your system installed if you are uncertain.

3. Loosen the cables so you can slide the cadence magnet under the guide. Make sure the magnet faces the lid on the back of the PowerMeter

4. Align the magnet and cable guide to reinstall the bolt. Do not fully tighten. You will need to adjust it when testing the PowerControl (see page 8).

INSTALLATION OF THE SRM TRAINING SYSTEM

POWERMETER AND SENSOR ALIGNMENT
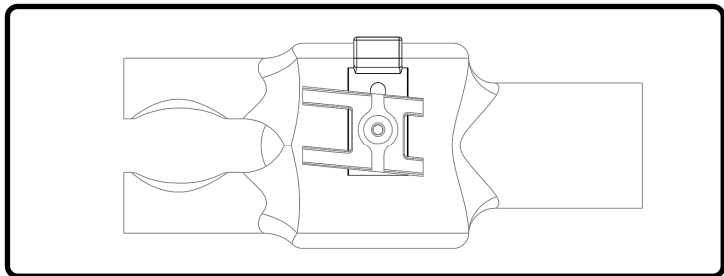
1. Install your new PowerMeter and cranks according to the original manufacturer instructions. If a bottom bracket came with your new PowerMeter you must install that.

2. Adjust the cadence magnet so it is 3-5mm from the lid on the back of the PowerMeter.

3. Tighten the cable guide bolt to fix the cadence magnet.

4. The PowerMeter is ready to pair.

INSTALLATION OF THE SRM TRAINING SYSTEM

SPEED TRANSMITTER

1. Install front wheel skewer or fork mounted pod.
2. Install the provided magnet on your spokes so it passes within 3-5mm of the speed transmitter.
3. Speed sensor is ready to pair.

HANDLEBAR CLIP

1. SRM provides handlebar clips to mount PowerControls to various handlebars.
2. Mount the handlebar clip to the right of the stem so the balls point forward and the screw point upwards (aluminium model downwards).
3. Secure the handlebar clip with the bolt. Do not overtight.

WAKE UP FROM SLEEP MODE

```
 5 L E E P

 2 1   0 6

 1 0
```
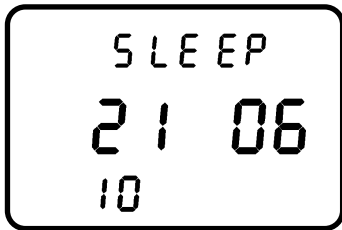
In Sleep Mode the PowerControl shows the version of the firmware installed.

In this example the firmware version is June 21, 2010.

Press **MODE** once to awake the PowerControl from Sleep Mode. Starting with generation 7, the PowerControl has an integrated motion sensor that activates the unit when motion is detected. The PowerControl switches off into Sleep Mode automatically after three minutes (can be changed through the computer software). The integrated motion sensor switches the unit on as long as it is not switched off manually (see below). The PowerControl will not enter Sleep Mode while it is receiving data from any of the sensors.

Press **MODE** longer than 10 seconds to manually enter Sleep Mode and deactivate the integrated motion sensor. This is useful during transport. Press **MODE** once to awake the PowerControl from Sleep Mode and reactivate the integrated motion sensor.
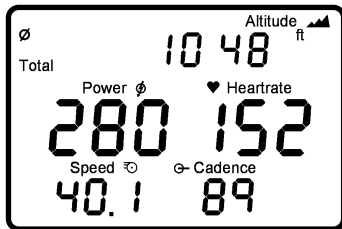
REAL-TIME TRAINING DATA MENU
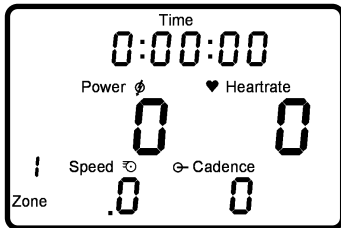
The real time training menu shows real time data as the athlete trains.

- Top Line: Training Time, Distance [miles or km], Ascending Altitude [feet or m], Pedaling Time or all four alternating. These can be changed using the provided SRM Software.

- Middle Line: Power [Watt; kW >1000], Heartrate [bpm].

- Bottom Line: Training Zone or Intervall if started, Speed [km/h or miles/h], Cadence [rpm] .

If no signal from a sensor is picked up, the display shows "-" for this sensor instead of a number (i.e. "-" under speed if the speed sensor is not working).

Press **MODE** to change from real time to average training data menu.
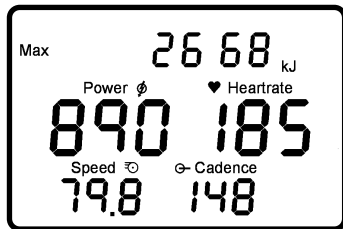
AVERAGE TRAINING DATA MENU

The average training data menu shows average data over the current training file.

- Top Line: Training Time, Distance, Actual Altitude, Pedaling Time or all four alternating.
- Middle Line: Power, Heartrate.
- Bottom Line: Speed, Cadence.

Press **MODE** to change from average to maximum training data menu.

MAXIMUM TRAINING DATA MENU

The maximum training data menu shows the maximum values recorded during a training session.

- Top Line: Total mechanical energy expenditure in kilojoules [kJ] (Estimating an efficiency of 25% riding the bike and a 4:1 ratio of kilojoules to kilocalories [Cal] this is approximately equivalent to the total energy burned by the athlete in kilocalories = Cal).

- Middle Line: Maximum Power, Maximum Heartrate.

- Bottom Line: Maximum Speed, Maximum Cadence.

Press **MODE** to change from Maximum Training Data Menu to Time/Date Menu.

TIME/DATE MENU
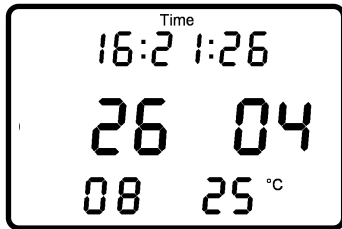
The Time/Date menu shows the time and date the PowerControl will use to store the data.

• Top Line: Time of Day: Hours, Minutes, Seconds.

• Middle Line: Day, Month.

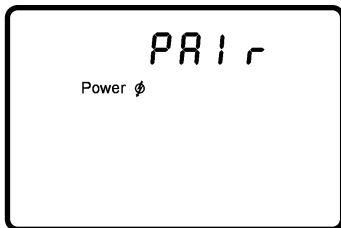• Bottom Line: Year, Temperature in Celsius or Fahrenheit.

Setting can be changed using the SRM Software.

SENSOR PAIRING

The PowerControl needs to be paired with the PowerMeter, Speed Sensor and Heartrate strap. The PowerControl will not receive data until it is paired. Pairing the sensors with the PowerControl is only possible if the sensors are switched on.

1. Switch on the PowerMeter by pedaling the crank forwards a few times (it will switch on when the magnet passes by).
2. Switch on the speed sensor by spinning the wheel.
3. Switch on heartrate sensor by putting the belt on your chest. Please moisten the electrodes to improve contact.
4. Switch on the PowerControl by pressing the **MODE** button.

Hold **PRO** for about 3 seconds to enter Sensor Pairing Mode. Press **SET**

```
┌──────────────────────┐
│                      │
│      PAI r           │
│   Power ∅            │
│                      │
│                      │
│                      │
│                      │
└──────────────────────┘
```
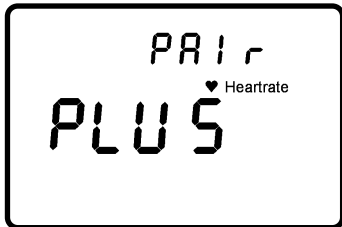
to start searching for the PowerMeter. The antenna symbol blinking on the right of the display shows that the searching process has started. The search bar in the middle of the display shows the progress of the search. If no signal is picked up, make sure if the PowerMeter is switched on (turn the crank) and the cadence magnet is 3-5mm away from the PowerMeter lid. When the PowerMeter is found, the PowerControl will show "Found" on the top line, alternating with the serial number. Press **MODE** then to confirm the PowerMeter.

Press **MODE** to select the next device (heartrate sensor).
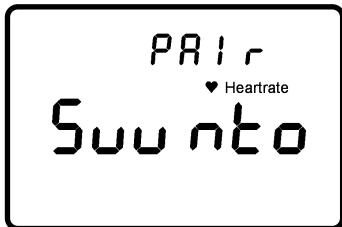
The PowerControl is initially set to "Suunto" heartrate sensors. If necessary, press **MODE** to select "ANT+ Sport" compatible sensors ("PLUS" in the display) and press **SET** to start searching for it.

The antenna symbol blinking on the right of the display shows that the searching process has started. The search bar in the middle of the display shows the progress of the search.
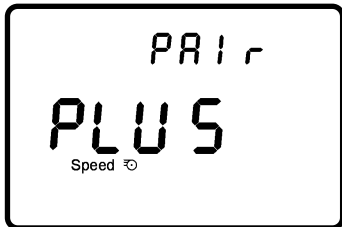
If no signal is picked up, check if the sensor pads are well placed around your chest and moistened. When the heartrate belt is found, the PowerControl will show "Found" on the top line, alternating with the serial number. Press **MODE** then to confirm this sensor. If the serial number of a sensor is known, this can be entered in the SRM software in the setup menu under "special/hardware".

Press **MODE** to select the next device (speed sensor).

```
    PRIr
 Suunto
Speed ⏱
```

Turn the wheel with the magnet. The PowerControl is initially set to "Suunto" sensors. If necessary, press **MODE** to select "ANT+ Sport" compatible sensors ("PLUS" in the display) and press **SET** to start searching for it.

```
    PRIr
  PLUS
Speed ⏱
```

The antenna symbol blinking on the right of the display shows that the searching process has started. The search bar in the middle of the display shows the progress of the search.

If no signal is picked up, check if the pod is switched on and the wheel magnet is 3-5mm away from the pod. When the sensor is found, the PowerControl will show "Found" on the top line, alternating with the serial number. Press **MODE** then to confirm this sensor. If the serial number of a sensor is known, this can be entered in the SRM software in the setup menu under "special/hardware".

Press **MODE** switch to the pairing of a combined cadence / speed sensor (Garmin GSC10/Trek Duotrap).

PAIr
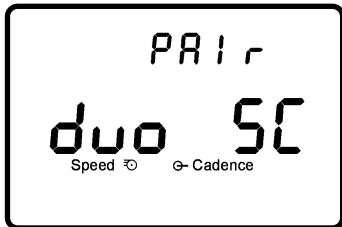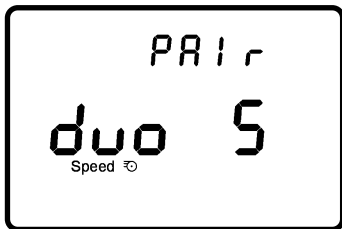
duo S

Speed ⟳

Turn the wheel or the crank with the magnet. The PowerControl is initially to speed only measurement ("duo S"). If necessary, press **MODE** to select combined speed and cadence ("duo SC") and press **SET** to start searching for it. The PowerMeter is disabled in this case. The antenna symbol blinking on the right of the display shows that the searching process has started. The search bar in the middle of the display shows the progress of the search.

PAIr

duo SC

Speed ⟳   ⊙ Cadence

If no signal is picked up, check if the pod is switched on and the wheel magnet is 3-5mm away from the pod. When the sensor is found, the PowerControl will show "Found" on the top line, alternating with the serial number. Press **MODE** then to confirm this sensor. If the serial number of a sensor is known, this can be entered in the SRM software in the setup menu under "special/hardware".

Press **MODE** for 3 seconds to return to the main menu.

SETTING THE ZERO OFFSET

It is important to use the SRM Training System with a correct zero offset, if not the measured power may be wrong. The zero offset can be set manually or automatically (by default). Turn the crank forward to switch on the PowerMeter. Make sure there is no force on the crank. Press **MODE** and **SET** at the same time to enter the zero offset mode.

The screen shows the real-time zero offset value on the middle line. The bottom line shows the previously stored zero offset. After the top number stabilizes, press **SET** to store the new zero offset. If it remains zero, the PowerControl is not receiving any signal from the Power-Meter. Make sure the PowerMeter is turned on and paired correctly.

SETTING THE ALTITUDE

Pressing **MODE** once more shows the altitude menu where the absolute altitude can be set using **PRO** (+) and **SET** (-). Pressing **MODE** again returns to the main screen. You can select metric or English units using the SRM Software for both Altitude and Speed.

CLEAR POWERCONTROL DISPLAY

To clear the PowerControl display and start a new training press **PRO** and **SET** simultaneously**.** The stored data of previous rides will not be lost and can still be downloaded with the SRM Software.

BATTERY STATUS MENU

```
U 3.8 7

0 000
```
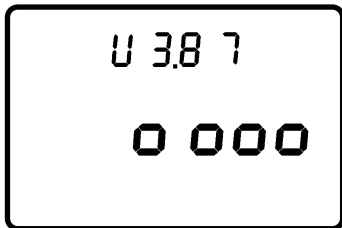
The PowerControl can be charged using the supplied charger or any USB port. The battery has no memory effect and can be charged regularly. Press **MODE** and **PRO** simultaneously to check battery status. It is full with a voltage over 4.00V and empty under 3.60V.

TOTAL TRAINING MENU

```
Total        9 98 km

             38

22.8 906 MJoule
```
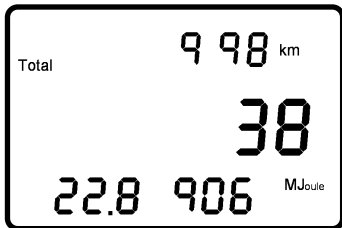
Press **MODE** again to see the total amount of training:

• Total distance (e.g. 998 km)

• Total training hours (e.g. 38 h)

• Total energy expenditure (e.g. 22,8906 Megajoule)

**MODE** will bring you back to main menu.

SETUP MENU

Hold **SET** for about 3 seconds to enter the Setup mode. The first screen shows the setup menu to change the time and date.

```
      Time
 15:08:24

  24   04

  08
```

The blinking digit can be changed (seconds, minutes, hours, day, month, year). Press **PRO (+)** to increase or **SET (-)** to decrease the shown digit. Press **MODE** to proceed to the next digit until year.

After the last digit (year) the next screen shows the manual setup menu for the slope which is a unique value for each PowerMeter.

```
    SLOPE
    Power ϕ
   Aut

   28.8
```
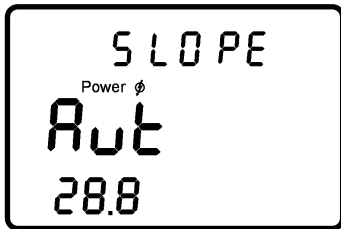
"Aut" tells the PowerControl to pick up the slope automatically from the PowerMeter.

Press **PRO** or **SET** during this screen to manually enter a slope between 15.0 and 50.0 Hz/Nm.

To set the slope to "Aut" go to 15.0 and hit **SET (-)** or go to 50.0 and hit **PRO (+)** once.

$C \, i \, r \, c$

$2 \, 0 \, 9 \, 5$

$S \, t \, o \, r \, E$

$1.0 \quad SEC$

$1 \, 1 \, 8 \, h$

Power φ

$0 \quad 100$

1

Zone

The third screen shows the setup menu for the wheel circumference in millimeters [mm]. Press **PRO** to increase or **SET** to decrease the value of the flashing digit. Press **MODE** to select each of the next 3 digits, then proceed to the next screen. The fourth screen shows the setup menu for data storage interval. The storage interval can be set between 0.5 and 5.0 sec. By increasing **(PRO)** or decreasing **(SET)** the storage interval, the available memory shown on the bottom line changes from 65 to 655 hours.

The fifth screen sets the variable to be used for training zones: heart rate [bpm] or power [watts]. The sixth to tenth screens define the limits for each training zone. Hold **MENU** for more than three seconds to return to the main menu.

SRM SOFTWARE
To download your training files and setup the PowerControl using your computer, use the supplied CD or download the SRM Software at www.srm.de and install it at Windows 2000, XP, Vista and Windows 7 computer. The SRM software installer will offer the following choices:
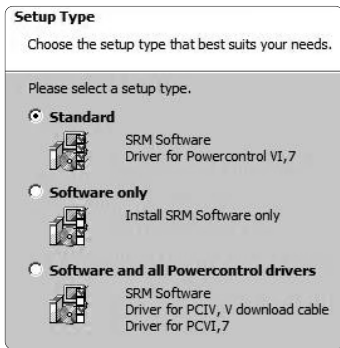

1. Standard setup
   Will install the SRM Software with drivers for PC VI and 7.

2. Software only (for Updates)
   Will install only the SRM Software without drivers.

3. Software and all drivers
   Will install the SRM Software with drivers for PC IV, V and PC VI, 7.

If needed, the software and drivers are also available separately on the supplied CD or at www.srm.de.

Plug in the PowerControl with the Mini USB cable. Once the PC7 is attached and recognized, the drop-down box with PC7 will grey out.

To setup your PowerControl press the Setup Button.

Enter your name or initials, interval of storage (seconds). Make sure the "automatic" box is checked, so the PowerControl will pick up preprogrammed slope from the PowerMeter automatically. To manually enter the slope, uncheck the "automatic" box. Enter circumference of tire (2095mm is the default). To make your speed and distance accurate, do a roll-out and enter this number in millimeters. Clicking the "Special" button, will allow you to customize your top line display, turn on or off Training Zones and change units from metric to English.

To download your training press the download button.
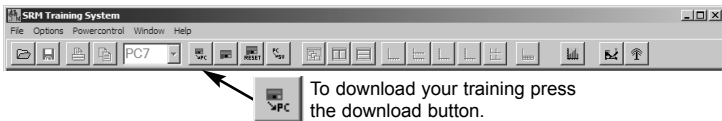
FCC COMPLIANCE DECLARATION

Regulatory Compliance FCC ID: WCS-PM7 IC: 7761A-PM7
Regulatory Compliance FCC ID: WCS-PC7 IC: 7761A-PC7

This device complies with part 15 of the FCC Rules, Industry
Canada RSS-210, and ICES-003. Operation is subject
to the following two conditions:

1. this device may not cause harmful interference, and
2. this device must accept any interference received, including
   interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits
for a Class B digital device, pursuant to part 15 of the FCC rules.
These limits are designed to provide reasonable protection against
harmful interference in a residential installation. This equipment
generates, uses, and can radiate radio frequency energy and may
cause harmful interference to radio communications if not installed
and used in accordance with the instructions.

However, there is no guarantee that interference will not occur in a
particular installation. If this equipment does cause harmful
interference to radio or television reception, which can be
determined by turning the equipment off and on, the user is

encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet that is on a different circuit from unit.
- Consult the dealer or an experienced radio/TV technician for help.

This product does not contain any user-serviceable parts. Repairs should only be made by an authorized SRM service center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and void your warranty and your authority to operate this device under Part 15 regulations.