

## Sleep Mode



Press **MODE** for 10 seconds to activate Sleep Mode.

The PowerControl VI will not enter Sleep Mode while it is receiving data from any of the sensors.

The PC VI shows the date of the firmware release being used (11.12.2008).

Press **MODE** to wake up the PC VI.

## Main Menu: PowerControl VI

The main menu shows real-time data as the athlete trains.

Press **MODE** to change between the different information modes on your display.

### Real-time Training Data Menu:



- Top Line: Total training time, training time cadence > 0, distance [miles or km], ascending altitude [feet or m] or all four alternating (Setting can be changed in the SRM Windows Software).
- Middle Line: Power [Watt] (> 1000W, 1.0 = 1000W), heart rate [bpm].
- Bottom Line: Training zone, speed [km/h or miles/h], cadence [rpm].

If no signal from a sensor is picked up, the display shows “-” for this data instead of a number (for example “-” speed if the speed sensor is not working).



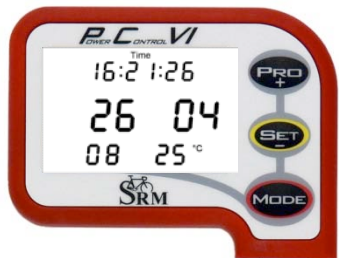
### Average Training Data Menu:

- Top Line: Total training time, training time cadence > 0, distance, altitude or all four alternating.
- Middle Line: Power, heart rate.
- Bottom Line: Speed, cadence.



### Maximum Training Data Menu:

- Top Line: Mechanical energy uptake in kilojoules [kJ] (Estimating an efficiency of 25% riding the bike, this is approximately the same as the total energy burned by the athlete in kcal).
- Middle Line: Power, heart rate.
- Bottom Line: Speed, cadence.



### Time/Date Menu

- Top Line: Time of day.
- Middle Line: Day, month.
- Bottom Line: Year, temperature in Celsius or Fahrenheit.



**Schoberer Rad Messtechnik GmbH**  
Rudolf Schulten Str. 6  
D-52428 Jülich  
Tel.: +49 (2461) 69123-0  
Fax: +49 (2461) 69123-17

**SRM Service Center Inc.**  
720 West Monument Street  
Colorado Springs, CO 80904  
USA  
Tel.: +1 (719) 266 4127  
Fax: +1 (719) 266 4284

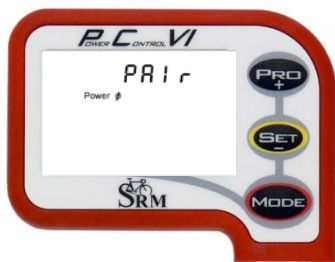
## Sensor Pairing

You need to pair the PowerControl VI with the power, speed and heartrate sensors. If you don't do this, no data will be received by the PowerControl VI for any of the sensors that you want to use on your bike.



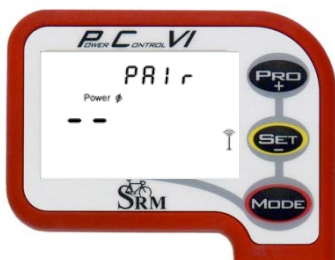
Pairing the sensors with the PowerControl VI will only be possible if they are switched on.


- Switch on the PowerMeter by pedaling the crank forward a few times (it will switch on when the sensor in the PowerMeter passes the magnet attached to the bottom bracket).
- Switch on the speed sensor by spinning the wheel.
- Switch on heartrate sensor by putting the belt on your chest. Please moisten the electrodes to improve contact.
- Switch on the PowerControl by pressing the **MODE** button.



Hold **PRO** for about 3 seconds to enter Sensor Pairing mode.

Press **MODE** once quickly to select the device you want to pair and press **SET** once quickly to tell the PC VI to start searching.

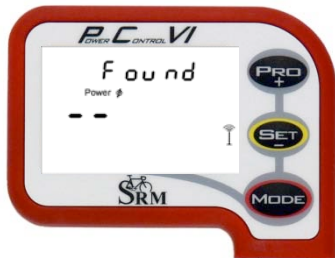


The Antenna symbol  blinking on the right of the display shows that the searching process has started.

The search bar in the middle of the display shows the progress of the search.

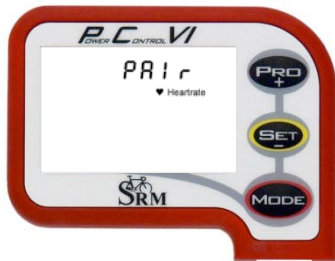
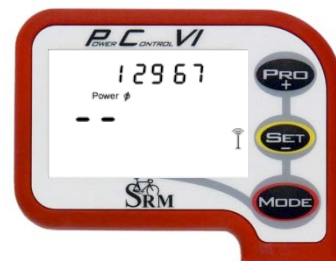
If no signal is picked up, please check:

- If the sensor is switched on.
- The position of the magnet.
- Depending on the total miles/km your PowerMeter battery might be empty.
- If it is still not working, please get in touch with the SRM Service Center.



When a sensor is found, the PC VI will show "Found" in the top line, alternating with the sensor's serial number.

If the pairing fails, please repeat pairing from the beginning.



To pair another sensor, press **MODE** once quickly to get back to the device selection Menu. Continue with pairing the heart rate sensor and speed sensor.

Hold **MODE** for about 3 seconds to leave the device pairing menu and go back to the main menu.

It is also possible to program the sensor identification numbers in the SRM Windows Software. Then manual pairing is not necessary.



**Schoberer Rad Messtechnik GmbH**  
Rudolf Schulten Str. 6  
D-52428 Jülich  
Tel.: +49 (2461) 69123-0  
Fax: +49 (2461) 69123-17

**SRM Service Center Inc.**  
720 West Monument Street  
Colorado Springs, CO 80904  
USA  
Tel.: +1 (719) 266 4127  
Fax: +1 (719) 266 4284

## Setting the Zero Offset Automatically

When you weigh something on a scale, you have to be sure to that the scale shows zero before you put anything on it, so that the final weight will be accurate. Most scales have a reset button, which allows you to set the zero before you weigh whatever it is that you want to weigh. Your PowerMeter has a baseline too, called the “zero offset” - when the PowerMeter is on but there’s no pressure on the pedals. You can check and set it manually or automatically using your PowerControl.

The reason you need to do this at the start of every ride is that the parts measuring your power are mounted on metal. Metal shrinks and expands with changes in temperature, as well as tension from the chain ring and crank arm bolts. So the zero offset changes with temperature and tension, too.

1. The “Auto” zero offset works only while riding – when the speed is not zero. Please take care that the speed sensor is paired!
2. Cadence has to be zero for at least 5 seconds, for example on a downhill.
3. The measured zero offset fluctuates max +/- 4 Hz

If the points above are all met, the average of the 5 second-zero offset is stored as the new zero offset and will be the base of the power calculation. It will remain the zero offset up until the moment the next automatically calculated zero offset is stored.

Setting the zero offset never changes the power values that have already been measured; it only affects the power readings from when you set it onwards. You can’t see on the PowerControl when a new zero offset is stored and you also can’t see it in the file after downloading in the SRM Win software.

Even if the “Auto” zero offset is activated we recommend setting the zero offset manually before every ride to have correct data until the first “Auto” zero offset.



Press **MODE** and **SET** at the same time to enter the Zero Offset Menu.

To activate or deactivate “Auto” press **PRO**

## Setting the Zero Offset Manually

If you do not select the “Auto” zero offset it is very important to set the zero offset before each ride, so the PowerControl knows the frequency output of the PowerMeter with **no load on the chain**.

Without a pre-ride zeroing, the measured power may be wrong.

Please pair the PowerMeter before, so that the signal is picked up!

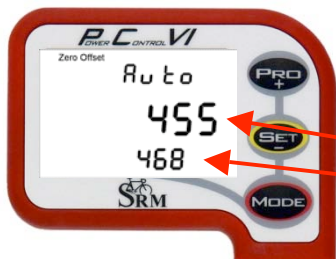


Schoberer Rad Messtechnik GmbH  
Rudolf Schulten Str. 6  
D-52428 Jülich  
Tel.: +49 (2461) 69123-0  
Fax: +49 (2461) 69123-17

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Colorado Springs, CO 80904  
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Press **MODE** and **SET** at the same time to enter the Zero Offset Menu.



The first screen shows the Zero Offset Menu for the PowerMeter.

To deactivate "Auto" press **PRO +**

There are two numbers on the display:

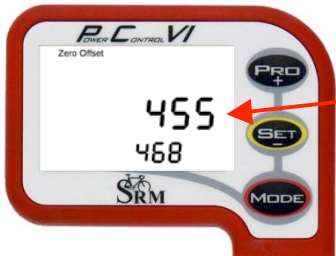
- The top number is the real-time frequency output of the PowerMeter.
- The bottom number is the stored Zero Offset.



If the top number is zero, turn the PowerMeter on by pedaling forward. Then, **let go of the crank and make sure nothing is touching it.**

If the top number is still Zero, please check:

- If the sensor is paired (see page 2).
- The position of the magnet.
- Depending on the total miles/km your PowerMeter battery might be empty.
- If it is still not working, please get in touch with the SRM Service Center.



After the top number stabilizes, press **SET** to store the new **Zero Offset** of the PowerMeter.

Press **MODE** to exit.



After you have completed your Zero Offset you can adjust the altitude.

## Setting the Altitude



You can adjust the altitude by pressing **PRO +** or **SET**. **MODE** will bring you back to main menu.

The altitude measurement depends on the current weather conditions (barometric pressure) and temperature, so it has to be calibrated before every ride. HINT: Google Earth may help to find the exact altitude for calibration.

In the SRM Windows Software, you can switch between feet or meters for measuring the altitude.



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Fax: +1 (719) 266 4284



## Start New Training Without Previous Download

It is possible to start a new training without downloading the previous training. Time and distance of the training can be reset to zero.

Previous training data will not be overwritten but stored in your Powercontrol VI for future download.



Press **MODE** to wake up the PC VI

Previous training data (time, distance, as well as average and max values) are still visible.



You can start a new training and zero your training time and distance by pressing

**PRO +** and **SET -** at the same time.

## Set Markers during Training Rides / Interval Training

The Set Marker option is available to show data during intervals, to set file markers during a training session, and for lap times.

After downloading the data to your PC with SRM Windows Software, you can see and edit the sections where you have set markers, and review the data in detail.



Press **SET -** to start the interval.



Time on the display will start with zero.

A blinking stopwatch icon  appears.

The number of the interval is shown on the left below the stopwatch icon.

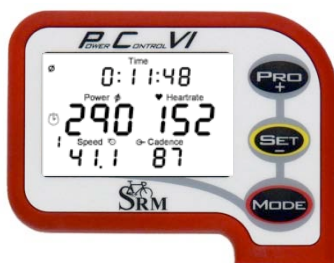
The maximum amount of markers shown on the display is 20, but more markers can be stored and shown after downloading.

Press **SET -** to stop the interval.



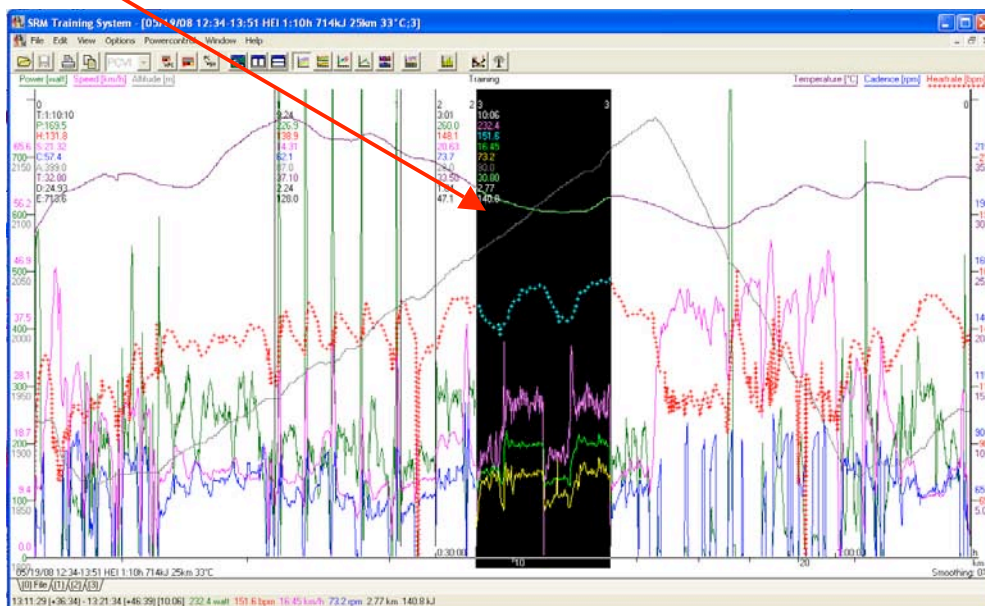
**Schoberer Rad Messtechnik GmbH**  
Rudolf Schulten Str. 6  
D-52428 Jülich  
Tel.: +49 (2461) 69123-0  
Fax: +49 (2461) 69123-17

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Colorado Springs, CO 80904  
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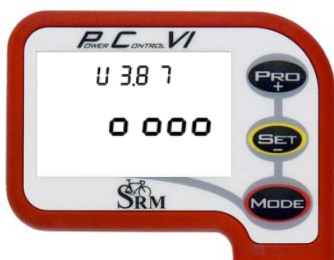
For 10 seconds, the display will show the average data from last interval.  
Press **MODE** to see the maximum data of the interval.  
After 10 seconds, the display will switch back to main menu.

An interval or marker as shown after download with your SRM Windows Software



### Mode – Pro Menu

The PowerControl VI can be charged through the USB adapter or the charging device.  
The battery has no memory effect, and it can (and should) be charged regularly.



Press **MODE** and **PRO** at the same time to enter the Battery Status Menu.

The first screen shows the charge status of the battery.  
The top line shows the voltage.  
The second line shows a graph of the charge status (□□□□□□ = max charge).



Press **MODE** to see the total amount of training.

- Total distance [km or miles]
- Total training hours
- Total mechanical energy uptake [MJoule or Kcal]

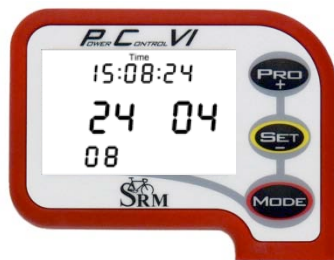
**MODE** will bring you back to main menu.



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Colorado Springs, CO 80904  
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## Setup Menu

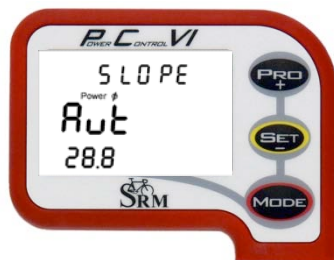


Hold **SET** for about 3 seconds to enter the Setup mode.  
The first screen shows the setup menu to change the time and date.

Blinking numbers show what can be changed (first seconds, then minutes, hours, ...)

Press **PRO** to increase or **SET** to decrease the shown number.

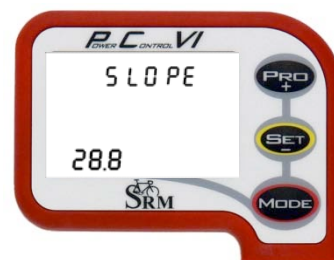
Press **MODE** to select the next step.



The second screen shows the setup menu for the slope.  
"Aut" (short for Automatic) sets the slope to the preset value the PowerMeter sends to the PowerControl VI.  
The value is shown below "Aut".

It is also possible to change the slope manually (for example after recalibration).

From "Aut" press **PRO** to change the slope from 50.0 Hz/Nm downward or **SET** from 15.0 Hz/Nm upward.



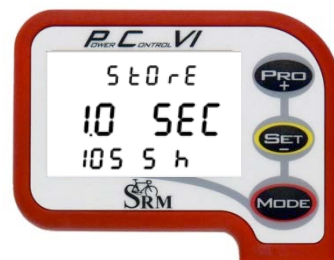
Press **MODE** to select the next step.



The third screen shows the setup menu for the wheel circumference in Millimeter [mm].

Press **PRO** to increase or **SET** to decrease the value shown.

Press **MODE** to select the next step.



The fourth screen shows the setup menu for data storage.

The storage interval can be set between 0.5 and 5.0 sec.

By increasing or decreasing the storage interval, you will also increase or decrease the amount of memory available.

For example, at a storage interval of 1 second storage capacity is 1054 hours, at a storage interval of 2 seconds storage capacity is 2108 hours.



The fifth screen offers the possibility to choose the settings for training zones defined with heart rate [bpm] or power [watts].

These can also be set through the SRM Windows Software.

Threshold values from exercise tests (lab or field tests) can be used to define these training zones and increase quality of your individual training.



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The sixth to tenth screen shows the setup for training zone 1 to 5.

Press **PRO +** to increase or **SET -** to decrease the value shown.

Press **MODE** to select the next step.

Hold **MODE** for about 3 seconds to leave the setup menu and go back to the main menu.

## SRM Windows Software

Please download the new SRM Windows Software version to download your training and setup the PowerControl VI on your Computer (see [www.srm.de](http://www.srm.de) > Support > Downloads > SRM Trainings System Software).

Start the software and plug in the PowerControl VI with the USB adapter cable.

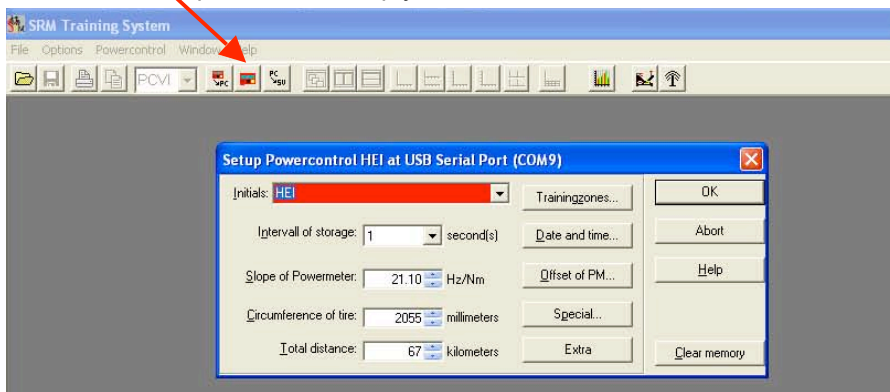
Once the PC VI is attached to USB, the PC VI box will go from black to grey indicating the software recognizes the PC VI and the USB cable.



Press the download button to download your training.



Press the setup button to setup your PowerControl VI.



Please setup:

- your initials (up to 20 characters).
- the interval of storage [seconds].

The slope of the PowerMeter can be set up manually or automatically (if you set the slope to 0.00 Hz/Nm, the PowerControl will pick up the preprogrammed slope of the PowerMeter).



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**FCC Compliance**

This device complies with part 15 of the FCC Rules. 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 GPS 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.



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