In use

CATEYE
VELO 9 / VELO 7

CYCLOCOMPUTER
CC-VL820 / CC-VL520

Before using the computer, please thoroughly read this manual and keep it for future reference.

Warning / Caution

• Do not concentrate on the computer while riding. Ride safely!
• Install the magnet, sensor, and bracket securely. Check these periodically.
• If a child swallows a battery, consult a doctor immediately.
• Do not leave the computer in direct sunlight for a long period of time.
• Do not disassemble the computer.
• Do not drop the computer to avoid malfunction or damage.
• When cleaning the computer, bracket and sensor, do not use thinners, benzene, or alcohol.
• Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to local regulations.
• LCD screen may be distorted when viewed through polarized sunglass lenses.

Maintenance

• To clean the computer or accessories, use diluted neutral detergent on a soft cloth, and wipe it off with a dry cloth.
• If the gaps between the buttons and the unit get clogged with mud or sand, wash them away with water.

Replacing the battery

When the display becomes dim, replace the battery. Install a new lithium battery (CR2032) with the (+) side facing upward.

* After replacing the battery, be sure to set the unit again according to the procedure specified in “Preparing the computer” (page 3).

Troubleshooting

No display

Is battery in the computer run down?

Replace with new batteries according to the procedure specified in the section “Replacing the battery.”

Incorrect data appear.

Follow the procedure described “Preparing the computer” (page 3).

Current speed does not appear.

(First, short-circuit the contact of the computer a few times with a piece of metal. If current speed appears, the computer is working fine and the cause should be attributed to the bracket or the sensor.)

Is the wire broken?

Even if the outside of the wire looks normal, there could be damage. Replace the bracket sensor kit with a new one.

Is the clearance between the sensor and the magnet too large?

Are the magnet’s center and the sensor’s marking line aligned?

Re-adjust the positions of the magnet and the sensor.

(The clearance should be less than 5 mm.)

Is there anything sticking on the contact of the computer or the bracket?

Clean the contact with a cloth.

Specification

Battery / Battery life
Lithium battery (CR2032) x 1 / Approx. 3 year

* The factory-loaded battery life might be shorter than the above-mentioned specification.

Controller
4-bit, 1-chip microcomputer (Crystal controlled oscillator)

Display
Liquid crystal display

Sensor
No contact magnetic sensor

Tire size to be selected
26”, 700C, 27”, 16”, 18”, 20”, 22” and 24”, or tire circumference of 100 cm - 299 cm (initial value: 25 inch)

Working temperature
32°F – 104°F (0°C – 40°C) (This product will not display appropriately when exceeding the Working Temperature range. Slow response or black LCD at lower or higher temperature may happen respectively.)

Dimensions/weight
2-3/16” x 1-15/32” x 5/32” (55.5 x 37.5 x 18.5 mm) / 1.08 oz (30 g)

* The specifications and design are subject to change without notice.

Limited warranty

2-Year: Computer only

(Accessories/Bracket sensor and Battery Consumption excluded)

CatEye cycle computers are warranted to be free of defects from materials and workmanship for a period of two years from original purchase. If the product fails to work during normal use, CatEye will repair or replace the defect at no charge. Service must be performed by CatEye or an authorized retailer. To return the product, pack it carefully and enclose the warranty certificate (proof of purchase) with instruction for repair. Please write or type your name and address clearly on the warranty certificate. Insurance, handling and transportation charges to CatEye shall be borne by person desiring service. For UK and REPUBLIC OF IRELAND consumers, please return to the place of purchase. This does not affect your statutory rights.

Please register your CatEye product on the website.

Spare accessories

Standard accessories

1603390
Parts kit
1603391
Bracket sensor kit
1699691N
Wheel magnet
1665150
CR2032
Lithium battery

Optional accessories

1603491
Heavy duty bracket sensor kit
1. **Attach the bracket to the stem or handlebar**

The FlexTight™ bracket can be attached to either the stem or the handlebar, depending on how the bracket fits into the bracket band.

When attaching the FlexTight™ bracket to the stem:

- Attach the bracket to the stem or handlebar.
- Install the sensor and magnet.
- Route the wire.

When attaching the FlexTight™ bracket to the handlebar:

- Attach the bracket to the stem or handlebar.
- Install the sensor and magnet.
- Route the wire.

Caution: Adjust the wire length so that it may not be pulled when the handle is operated.

2. **Install the sensor and magnet**

- The magnet passes through the sensor zone.
- The clearance between the sensor and magnet is 5 mm (3/16") or less.

A

B

SENSOR ZONE

SENSOR ZONE

3. **Route the wire**

Remove/Install the computer
Preparing the computer
Perform the clear all data operation as shown below, when you use the unit for the first time or restore the unit to the condition checked at the factory.

1 Clear all data (initialization)
Press the AC button on the back of the computer.

2 Select the speed unit
Select “km/h” or “mph”.

3 Set the tire size
Set the tire size by either one of the following methods.

Simple setting (select from the tire size)
Pressing the MODE button changes 26" → 700c → 27" → 205[1] → 16" → 18" → 20" → 22" → 24" → 26" in order. Select the tire size (inch) of your bicycle, and then press the SET button.

Detailed setting (enter the numeric value of the tire circumference)
* Entering the tire circumference ensures more accurate measurements.

With 205[1] displayed on the screen, press and hold the MODE button.
Pressing the MODE button increases the numeric value flashing, whereas pressing and holding the MODE button moves the digit. Enter any value of the circumference in cm, and then press the SET button.

* Use “Tire circumference reference table” as a guide.

4 Set the Clock
Pressing and holding the MODE button switches the display to “Display format”, “Hour”, and “Minute” in order.

12h ↔ 24h, or increases the value
Switch the screen or move digits

5 Press the SET button to complete setting
Press the SET button with the current clock displayed. Then, the unit setting is completed, and the unit changes to the Measuring screen.

Operation test
After installed, check that the computer displays the speed by turning the front wheel. When it is not displayed, check the installation conditions 11 and 11 again (page 2).

Tire circumference
You can find the tire circumference (L) of your tire size in the chart below, or actually measure the tire circumference (L) of your bicycle.

- How to measure the tire circumference (L)
For the most accurate measurement, do a wheel roll out. With the tires under proper pressure, place the valve stem at the bottom. Mark the spot on the floor and with the rider’s weight on the bike, roll exactly one wheel revolution in a straight line (until the valve comes around again to the bottom). Mark where the valve stem is and measure the distance.

- Tire circumference reference table
* Generally, the tire size or ETRTO is indicated on the side of the tire.

<table>
<thead>
<tr>
<th>ETRTO</th>
<th>Tire size</th>
<th>L (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-254</td>
<td>14x1.50</td>
<td>102</td>
</tr>
<tr>
<td>47-254</td>
<td>14x1.75</td>
<td>110</td>
</tr>
<tr>
<td>40-305</td>
<td>16x1.50</td>
<td>119</td>
</tr>
<tr>
<td>47-305</td>
<td>16x1.75</td>
<td>120</td>
</tr>
<tr>
<td>54-305</td>
<td>18x2.00</td>
<td>125</td>
</tr>
<tr>
<td>28-349</td>
<td>18x1.50</td>
<td>129</td>
</tr>
<tr>
<td>37-349</td>
<td>18x1.50</td>
<td>130</td>
</tr>
<tr>
<td>32-369</td>
<td>20x1.25</td>
<td>145</td>
</tr>
<tr>
<td>35-384</td>
<td>20x1.35</td>
<td>146</td>
</tr>
<tr>
<td>40-395</td>
<td>20x1.50</td>
<td>149</td>
</tr>
<tr>
<td>47-406</td>
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<td>50-406</td>
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<td>28-451</td>
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<td>155</td>
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<td>1625</td>
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<td>50-451</td>
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<td>40-497</td>
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<td>50-507</td>
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<td>32-559</td>
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<td>57-569</td>
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</tr>
<tr>
<td>75-569</td>
<td>26x3.00</td>
<td>217</td>
</tr>
<tr>
<td>28-590</td>
<td>26x1.50</td>
<td>197</td>
</tr>
</tbody>
</table>
Power-saving function
If the computer has not received a signal for 10 minutes, power-saving screen will activate and only the clock will be displayed. When the computer receives a sensor signal, the measuring screen reappears.

Calorie Consumption (VL820) *2
This computer measures the calorie consumption by integrating the value calculated from the speed in every second. Check it as a reference value.

<table>
<thead>
<tr>
<th>Speed</th>
<th>Kcal per hour</th>
<th>Kcal per hour</th>
<th>Kcal per hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 km/h</td>
<td>67.3 kcal</td>
<td>[155.2 kcal]</td>
<td>641.6 kcal</td>
</tr>
<tr>
<td>20 km/h</td>
<td>244.5 kcal</td>
<td>[768.2 kcal]</td>
<td></td>
</tr>
<tr>
<td>30 km/h</td>
<td>641.6 kcal</td>
<td>[2297.2 kcal]</td>
<td></td>
</tr>
</tbody>
</table>

How to calculate the Carbon offset (VL820) *3
The Carbon offset are calculated as follows.
Trip distance (km) x 0.15 = Carbon offset (kg)
* This factor of 0.15 is determined by applying the average value of the overall gasoline-powered passenger cars in 2008 to the equation of the “Carbon offset from 1 km drive of a gasoline-powered car” described on the website of the Ministry of Land, Infrastructure and Transport and Tourism.

How to change tire size
Display the Total Distance (ODO) and press the SET button to change the tire size.
The setting method is the same as for “Preparing the computer-3” (page 3).

How to set clock
In the clock mode, press SET button on the back, and the display enters clock setting mode.
The setting method is the same as for “Preparing the computer-4” (page 3).