CATEYE VELO WIRELESS

CYCLOCOMPUTER CC-VT230W

- This instruction manual is subject to change without notice. See our website for the latest instruction manual (PDF).
- Please visit our website, where a detailed Quick Start manual containing videos can be downloaded.


Appendix

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Mounting the computer

2

Setting up the computer

3

Starting measurement

4

Changing settings

Warning/Caution

Product Warranty, etc.
Mounting the computer

1 Mount the bracket

- When mounting on stem

![Diagram of mounting on stem]

- When mounting on handlebar

![Diagram of mounting on handlebar]

When mounting the bracket on a handlebar, adjust the angle of the bracket so that the back of the computer faces the speed sensor when the computer is attached.
Mounting the computer

2 Mount the speed sensor

- Mounting on right front fork
- Mounting on left front fork

Mount the speed sensor in a position where the distance from the computer to the speed sensor is within the signal range.

Max. 70 cm (27”)

Mounting on left front fork

Sensor rubber pad

Cut

Pull tight

Nylon tie

Speed sensor

3 Mount the magnet

Mount the magnet

Magnet

Spoke

To sensor zone
Mounting the computer

4 Adjust the speed sensor and the magnet

The magnet passes through the speed sensor zone.

The clearance between the speed sensor and the magnet is within 5 mm (3/16”).

* The magnet may be mounted at any position on spoke as long as attachment conditions are satisfied.

5 Attach/detach computer

Click

Hold computer.

Push out so that front lifts up.

6 Test operation

After attaching the computer, rotate the front wheel gently to check that current speed is displayed on the computer.

If the speed is not displayed, refer to the attachment conditions in steps 1, 2, and 4 again.
Setting up the computer

When using the computer for the first time or resetting it to its factory default settings, clear all computer data following the procedure below.

1 Clear all data.
Press the AC button on the back of the computer.
* All data is deleted and the computer is reset to its factory default settings.

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

3 Select the tire size.
Simple setting:
When MODE is pressed, 26” → 700C → 27” → 27.5” → 29” → 205[] → 16” → 18” → 20” → 22” → 24” and 26” will appear, in this order.
Select the tire size (inch) of your bicycle.

Advanced settings
(For more accurate measurement):
Display 205[] on the screen, and press and hold MODE to enter the tire size of your bicycle in cm. Pressing MODE changes the value, and pressing and holding MODE moves to the next digit.
* For details on the tire circumference, see “Tire circumference” (page 7).
Setting up the computer

4 Set the clock.
Each time the MODE button is pressed and held, settings switch from time display mode, to hours, to minutes.
* When 12h is selected, A (AM) or P (PM) is displayed at the top of the screen.

5 Press MENU to complete setup.
Setup is completed and the computer switches to the measurement screen. For instructions on how to start measurement, refer to “Starting measurement” (page 8).
Setting up the computer

Tire circumference

Tire circumference can be determined by either of the following two methods:

- Measure the actual tire circumference (L)
  After ensuring that the tire pressure is appropriate, sit on your bike, roll it forward so that the tire makes one full revolution (use the valve or other marking as a reference), and measure the distance traveled on the road.

- Tire size chart

* The tire size or ETRTO code 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>28-590</td>
<td>26x1-1/8</td>
<td>197</td>
</tr>
<tr>
<td>37-590</td>
<td>26x1-3/8</td>
<td>207</td>
</tr>
<tr>
<td>37-584</td>
<td>26x1-1/2</td>
<td>210</td>
</tr>
<tr>
<td>20-571</td>
<td>650x20C</td>
<td>194</td>
</tr>
<tr>
<td>23-571</td>
<td>650x23C</td>
<td>194</td>
</tr>
<tr>
<td>25-571</td>
<td>650x25C 26x1(517)</td>
<td>195</td>
</tr>
<tr>
<td>40-590</td>
<td>650x38A</td>
<td>213</td>
</tr>
<tr>
<td>40-584</td>
<td>650x38B</td>
<td>211</td>
</tr>
<tr>
<td>25-630</td>
<td>27x1(630)</td>
<td>215</td>
</tr>
<tr>
<td>28-630</td>
<td>27x1-1/8</td>
<td>216</td>
</tr>
<tr>
<td>32-630</td>
<td>27x1-1/4</td>
<td>216</td>
</tr>
<tr>
<td>37-630</td>
<td>27x1-3/8</td>
<td>217</td>
</tr>
<tr>
<td>40-584</td>
<td>27.5x1.50</td>
<td>208</td>
</tr>
<tr>
<td>50-584</td>
<td>27.5x1.95</td>
<td>209</td>
</tr>
<tr>
<td>54-584</td>
<td>27.5x2.1</td>
<td>215</td>
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<tr>
<td>57-584</td>
<td>27.5x2.25</td>
<td>218</td>
</tr>
<tr>
<td>18-622</td>
<td>700x18C</td>
<td>207</td>
</tr>
<tr>
<td>19-622</td>
<td>700x19C</td>
<td>208</td>
</tr>
<tr>
<td>20-622</td>
<td>700x20C</td>
<td>209</td>
</tr>
<tr>
<td>23-622</td>
<td>700x23C</td>
<td>210</td>
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<td>25-622</td>
<td>700x25C</td>
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<td>28-630</td>
<td>27x1-1/8</td>
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<td>30-622</td>
<td>700x30C</td>
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<td>32-622</td>
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<td>700C Tubular</td>
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<td>47-622</td>
<td>700x47C</td>
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<td>54-622</td>
<td>29x2.1</td>
<td>229</td>
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<tr>
<td>56-622</td>
<td>29x2.2</td>
<td>230</td>
</tr>
<tr>
<td>60-622</td>
<td>29x2.3</td>
<td>233</td>
</tr>
</tbody>
</table>
Starting measurement [Measurement screen]

Sensor signal icon 🎫
Flashes in sync with a sensor signal.

Pace arrow
Indicates whether the current speed is faster (↑) or slower (↓) than the average speed.

Switching current function
Pressing MODE switches the current function displayed at the bottom of the screen.

On the measurement screen, press MENU to go to the menu screen. Various settings can be changed on the menu screen.

- **Elapsed Time**: 0:00'00" – 9:59'59"
- **Trip Distance**: 0.00 – 999.99 km [mile]
- **Average Speed (°1)**: 0.0 – 105.9 km/h [0.0 – 65.9 mph]
- **Clock**: 0:00 – 23:59 or 1:00 – 12:59
- **Total distance**: 0 – 99999 km [mile]
- **Calorie Consumption (°2)**: 0 – 99999 kcal
- **Maximum Speed**: 0.0 (4.0) – 105.9 km/h [0.0 (3.0) – 65.9 mph]

°1: **Av** (Average Speed) displays .E instead of the measurement value when Tm (Elapsed Time) exceeds approximately 27 hours or Dst (Trip Distance) exceeds 999.99 km. Reset the measurement data.

°2: Calorie consumption is a cumulative value based on speed calculated at one second intervals. Values for calorie consumption per hour are shown below.

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

Use the values in this chart as a reference.
Starting measurement [Measurement screen]

Starting/stopping measurement
Measurement starts automatically when the bicycle moves. During measurement the measurement unit (km/h or mph) flashes.

Resetting data
Pressing and holding the MODE button when on the measurement screen resets all measurement data to 0 (excluding Odo).

Power-saving function
If the computer does not receive any signal for 10 minutes, the power-saving screen is activated and only the clock is displayed. If MODE is pressed or a sensor signal is received while the power-saving screen is activated, the computer returns to the measurement screen.

* If the computer is left on the power-saving screen for 1 hour, SLEEP is displayed. When the computer is in this state, you can return to the measurement screen by pressing the MODE button.
Changing settings [Menu screen]

On the measurement screen, press **MENU** to go to the menu screen. Various settings can be changed on the menu screen.

* After changing settings, always press **MENU** to confirm changes.
* When the menu screen is left on for 1 minute, the computer returns to the measurement screen.

### Tire size selection
You can use the simple setting method (select the size in inches) or the advanced setting method (enter the tire circumference) to set the tire size.

**Simple setting**

1. **On the measurement screen**, press **MENU**
2. **Press and hold** **MODE**
3. **Up** to increase numbers
4. **Press and hold** **MODE**
5. **Select size**
6. **Press and hold** **MODE**
7. **Switch size**
8. **Press and hold** **MODE**
9. **Confirm**

**Advanced settings**

With this method, the measurements can be performed more accurately.

1. **On the measurement screen**, press **MENU**
2. **Press and hold** **MODE**
3. **Up** to increase numbers
4. **Move to next digit** (Press and hold)
5. **Increase numbers**
6. **Move to next digit** (Press and hold)
7. **Increase numbers**
8. **Move to next digit** (Press and hold)
9. **Increase numbers**

* For details on the tire circumference, see “Tire circumference” (page 7).
## Changing settings [Menu screen]

<table>
<thead>
<tr>
<th>Measurement screen</th>
<th>Menu screen</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![Menu screen](image) | ![Menu screen](image) | **Clock**  
Lets you set the clock.  
* When **12h** is selected, **A** (AM) or **P** (PM) is displayed at the top of the screen. |
| ![Menu screen](image) | ![Menu screen](image) | **Manual distance input**  
Lets you set total distance traveled manually. (0 - 99999 km [miles])  
* Setting an arbitrary value for total distance allows you to start from the value you entered. This is useful when you have just purchased a new bicycle or when replacing the computer battery. |
## Changing settings [Menu screen]

<table>
<thead>
<tr>
<th>Measurement screen</th>
<th>Menu screen</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Measurement screen" /></td>
<td><img src="image2" alt="Menu screen" /></td>
<td><strong>Select measurement unit</strong>&lt;br&gt;Lets you select the measurement unit (km/h or mph).&lt;br&gt;&lt;br&gt;<strong>Change setting</strong>&lt;br&gt;(Press and hold)&lt;br&gt;&lt;br&gt;<strong>Confirm</strong></td>
</tr>
</tbody>
</table>
Appendix

⚠️ Warning / Caution
• Do not concentrate on the computer while riding. Always ride safely.
• Mount the magnet, sensor, and bracket securely, and check them periodically to ensure that they are not loose.
• If a battery is swallowed accidentally, 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. Doing so may result in malfunction or damage.
• When cleaning the computer and accessories, do not use thinners, benzine, or alcohol.
• Risk of explosion if battery is replaced by an incorrect type.
  Dispose of used batteries according to local regulations.
• The LCD screen may be distorted when viewed through polarized sunglass lenses.

Wireless Sensor

The speed sensor is designed with a maximum signal range of 70 cm (27”), to reduce the chance of interference. (The signal range is intended to serve as a rough guide only.)

When handling the wireless sensor, note the following:
• Signals cannot be received if the distance between the speed sensor and the computer is too large.
• Signal range may be shortened due to low temperature and flat batteries.
• Signals can be received only when the back of the computer is facing the speed sensor.

Interference may occur, resulting in malfunction, if the computer is:
• Near a TV, PC, radio, or motor, or in a car or train.
• Close to a railroad crossing, railway tracks, TV transmitter station, or radar station.
• Used with other wireless devices or certain battery-powered lights.

Frequency Band: 19 kHz
Radiated Power: −31.7 dBm

Hereby, CATEYE Co., Ltd. declares that the radio equipment type CC-VT230W is in compliance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address:
cateye.com/doc

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.

Modifications
The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by CatEye Co., Ltd. May void the user’s authority to operate the equipment.

Canada 310
This device complies with Industry Canada’s RSS-310. Operation is subject to the condition that this device must not cause harmful interference and must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme au CNR-310 d’Industrie Canada. Son exploitation est autorisée à condition que l’appareil ne produise pas de brouillage préjudiciable et qu’il accepte tout brouillage, même celui susceptible d’en compromettre le fonctionnement.
CAN ICES-3 (B) / NMB-3 (B)
Appendix

Maintenance
If the computer or accessories become dirty, clean with a soft cloth which is moistened with mild soap.

Replacing the battery
- Computer
  When the display becomes dim, replace the battery. Insert a new lithium battery (CR2032) with the (+) side up.
  * After replacing the battery, always follow the procedure described in “Setting up the computer” (page 5).
  * If you make a note of the total distance value before replacing the battery, you will be able to continue from the same total distance by entering it after replacing the battery.

- Speed sensor
  When the speed is not displayed even after adjusting correctly, it is time to replace the battery. Insert a new lithium battery (CR2032) with the (+) side up and close the battery cover firmly.
  * After replacing the battery, adjust the position of the magnet relative to the speed sensor as described in “Mounting the computer” (page 4) step 4.

Troubleshooting

The sensor signal reception icon does not flash. (Speed is not displayed.)
- Is there too much clearance between the speed sensor and the magnet? (Clearance should be within 5 mm (3/16”).)
- Does the magnet pass through the sensor zone correctly?
  Adjust the position of the magnet and/or the speed sensor.
- Is the computer mounted at the correct angle?
  Ensure that the back of the computer faces the speed sensor.
- Are the computer and the speed sensor mounted at the correct distance apart? (Clearance should be from 20 to 70 cm (8” to 27”).)
  Ensure that the speed sensor is within range.
- Is the computer or speed sensor battery flat?
  * Battery performance diminishes in winter.
  If the computer reacts only when it is close to the speed sensor, the problem may be due to weak batteries.
  Replace the batteries with new ones as described in “Replacing the battery”.

The display remains blank when the button is pressed.
Replace the computer battery as described in “Replacing the battery”.

Incorrect data appear.
Clear all according to the procedure described in “Setting up the computer” (page 5).
Main specifications

<table>
<thead>
<tr>
<th>Batteries used</th>
<th>Battery life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td>Lithium battery (CR2032) x1 / Approx. 1 year</td>
</tr>
<tr>
<td></td>
<td>(If used for 1 hour a day; actual battery life will vary depending on usage conditions.)</td>
</tr>
<tr>
<td>Speed sensor</td>
<td>Lithium battery (CR2032) x1 /</td>
</tr>
<tr>
<td></td>
<td>Total distance approx. 10000 km [6,250 miles]</td>
</tr>
</tbody>
</table>

* Average value when used at temperature of 20 °C with computer and sensor mounted 65 cm apart.
* Life of pre-installed battery may be shorter than indicated above.

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

Display Liquid crystal

Sensor Non-contact magnetic sensor

Signal range 20 to 70 cm (8” to 27”)

Tire size to be selected 26”, 700c, 27”, 27.5”, 29”, 16”, 18”, 20”, 22” and 24”, or tire circumference of 100 cm - 299 cm (initial value: 26 inch)

Operating temperature range 32°F – 104°F (0°C – 40°C)  
(Guaranteed operating temperature range: Display visibility may deteriorate outside this range.)

Dimensions/weight

| Computer        | 2-3/16” x 1-29/64” x 21/32” (55.5 x 37 x 16.5 mm) / 0.93 oz (26.4 g) |
| Speed sensor    | 1-41/64” x 1-27/64” x 19/32” (41.5 x 36 x 15 mm) / 0.53 oz (15 g) |

* Specifications and design are subject to change without notice.

LIMITED WARRANTY

2-Years Computer/Speed Sensor Only  
(Accessories 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 due to 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.

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Standard accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>1602990</td>
<td>Parts kit</td>
</tr>
<tr>
<td>1602980</td>
<td>Nylon tie bracket</td>
</tr>
<tr>
<td>1602196</td>
<td>Speed sensor (SPD-01)</td>
</tr>
<tr>
<td>1665150</td>
<td>Lithium battery</td>
</tr>
</tbody>
</table>

Optional accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1604100</td>
<td>Out-front bracket</td>
</tr>
<tr>
<td>1602194</td>
<td>Bracket kit</td>
</tr>
</tbody>
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