

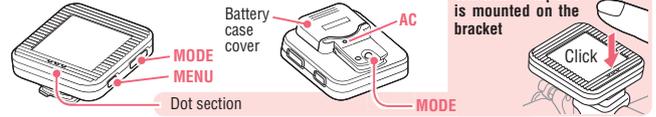
**Before using the computer, please thoroughly read this manual and keep it for future reference.**

Our website shows how to install and set up the unit on your bicycle, in an understandable way using a movie (<http://www.cateye.com>).

This unit can be used for measuring speed and distance while installed on your bicycle, and also used as a pedometer for measuring calorie consumption and number of steps in everyday life while carried with you all the time. First of all, go through "Preparing the computer" and "How to install the unit on your bicycle".

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device must 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.

### Element names

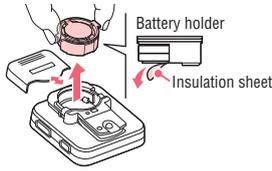


## Preparing the computer

Perform the formatting operation according to the following procedure when you use the unit for the first time or restore the unit to the setting at the time of factory shipment.

### 1 Removing the insulation sheet

Remove the battery case cover, and hold the battery holder tab to pull out the battery.

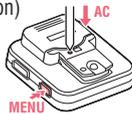


The battery holder is lifted when either tab is pulled up. Remove the insulation sheet under the battery.

- \* If the battery is detached, insert it correctly. (Replacing the battery)
- \* Insert the battery holder with the  $\Delta$  mark toward the front side of the computer.

### 2 Press the AC button while pressing and holding the MENU button (formatting operation)

Check that the whole screen illumination is turned on for 5 seconds.



- \* Press and hold the MENU button for 3 seconds after you release the AC button.

### 3 Select the measurement unit (Speed, Stride, and Weight)

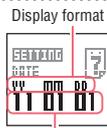
- When the MODE button is pressed, "KM. CM. KG" and "MILE. INCH. LB" will flash alternatively for selection.



- With the desired measurement unit displayed, press the MENU button.

### 4 Set the date

- When the MODE button is pressed, "YY/MM/DD" (Year, Month, Day) will flash in different order for selection.



- When the MODE button is pressed and held, the item to set will appear for selection, and "11" (Year) will flash.

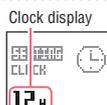
- Press the MODE button to increase the flashing value, whereas press and hold it to switch the item to set. Set "Month" and "Day" in the same procedure.

- Press the MENU button to proceed to "Set the clock".

- \* When it fails to set the date, "ERROR" will appear.

### 5 Set the clock

- Set the display format of "12H" or "24H", and the values for "Hour" and "Minute" in the same procedure as Step 4. Press the MENU button to proceed to "Enter the tire circumference".



- \* For the display format of "12H", select "AM" (morning) or "PM" (afternoon).

### 6 Enter the tire circumference

Enter the tire circumference of your bicycle (distance per turn) in mm.

(Tire circumference reference table)

- Press the MODE button to adjust the value, and press and hold it to move to the next digit. Enter the value for "ones place digit" through "thousands place digit" in the same procedure.



- Press the MENU button to proceed to "Enter the weight".

- \* When any invalid value is entered, "ERROR" will appear.

### 7 Enter the weight

Enter your weight in the unit you selected in Step 3 (KG or LB).

- Set the value in the same procedure as Step 6. Press the MENU button to proceed to "Enter the stride".



### 8 Enter the stride

Enter your stride in the unit you selected (CM or INCH). (How to measure the stride)

- Set the value in the same procedure as Step 6. Press the MENU button to confirm the setting.



Now, preparing the computer is completed.

## Tire circumference reference table

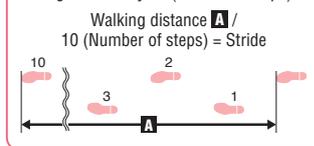
\* Generally, the tire size is indicated on the side of the tire.

ET670	Tire size	L (mm)	ET670	Tire size	L (mm)
47-303	12x1.75	935	57-559	26x2.125	2070
54-203	12x1.95	940	58-559	26x2.35	2083
40-254	14x1.50	1020	75-559	26x3.00	2170
47-254	14x1.75	1055	28-590	26x1-1/8	1970
40-305	16x1.50	1185	37-590	26x1-3/8	2068
47-305	16x1.75	1195	37-584	26x1-1/2	2100
54-305	16x2.00	1245		650C Tubular	1920
28-349	16x1-1/8	1290	20-571	650x20C	1938
37-349	16x1-3/8	1300	23-571	650x23C	1944
32-369	17x1-1/4 (869)	1340	20-571	650x25C	1952
40-355	18x1.50	1340	20-571	650x25C	1952
47-355	18x1.75	1350	40-590	650x38A	2125
32-406	20x1.25	1450	40-584	650x38B	2105
35-406	20x1.35	1460	25-630	27x1(630)	2145
40-406	20x1.50	1490	28-630	27x1-1/8	2155
47-406	20x1.75	1515	32-630	27x1-1/4	2161
50-406	20x1.95	1565	37-630	27x1-3/8	2169
28-451	20x1-1/8	1545	18-622	700x18C	2070
37-451	20x1-3/8	1615	19-622	700x19C	2080
37-501	22x1-3/8	1770	20-622	700x20C	2086
40-501	22x1-1/2	1785	23-622	700x23C	2096
47-501	24x1.50	1890	25-622	700x25C	2105
50-501	24x2.00	1925	28-622	700x28C	2136
54-501	24x2.125	1965	38-622	700x38C	2146
25-520	24x1(520)	1753	32-622	700x32C	2155
	24x3/4 Tubular	1785		700C Tubular	2130
28-540	24x1-1/8	1795	35-622	700x35C	2168
32-540	24x1-1/4	1865	38-622	700x38C	2180
25-559	26x1(559)	1913	40-622	700x40C	2200
32-559	26x1.25	1950	42-622	700x42C	2224
37-559	26x1.40	2005	44-622	700x44C	2235
40-559	26x1.50	2010	44-622	700x45C	2242
47-559	26x1.75	2023	47-622	700x47C	2268
50-559	26x1.95	2050	54-622	28x2.1	2288
54-559	26x2.10	2068	60-622	28x2.3	2326

### How to measure the stride

The stride means the distance between adjacent tiptoes of your footprint. Mark at your tiptoe in the start point and the point after you make 10 steps, and then measure the distance between them.

- \* The stride becomes larger as you walk faster. For measurement, walk at a normal speed. An average stride is determined by dividing the walking distance by 10 (number of steps).



### Measure wheel circumference (L) of your bike

To get the most accurate calibration do a wheel roll out. With the valve stem perpendicular to the ground, mark the pavement at the valve stem. With the riders weight on the bike, roll the wheel one tire revolution in a straight line and mark the ground when the valve stem is perpendicular to the ground again. Measure the distance in millimeters. This is the most accurate wheel calibration number.



## How to install the unit on your bicycle

### Package contents



### Install the bracket and computer

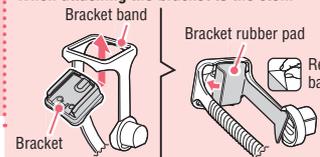
#### Installation conditions

- \* The back of the computer must face the speed sensor.

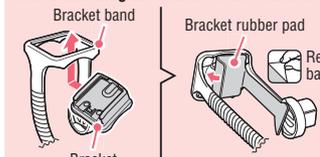
YES! NO!



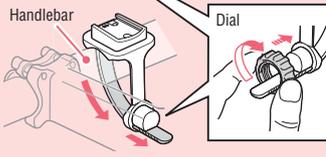
#### When attaching the bracket to the stem



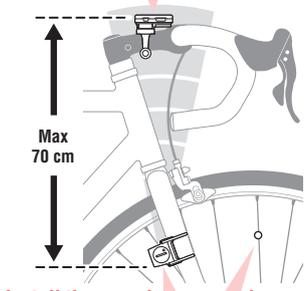
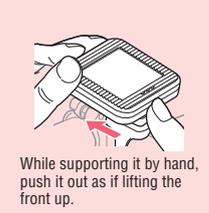
#### When attaching the bracket to the handlebar



**CAUTION:** Round off the cut edge of the bracket band to prevent injury.



#### Remove/install the computer

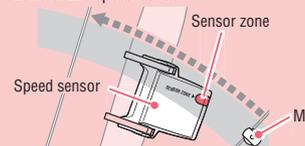


- \* For receiving sensitivity reasons, attach the bracket so that the back of the computer faces the speed sensor.
- \* Use the applicable optional parts when attaching to an aero-shaped handlebar or a large stem.

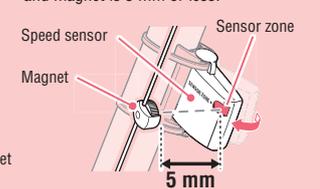
### Install the speed sensor and magnet

#### Installation conditions

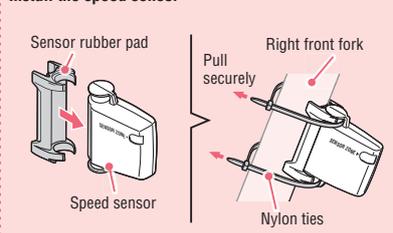
- \* The distance from the speed sensor to the computer must be less than 70 cm.
- \* The magnet must pass through the sensor zone of the speed sensor.



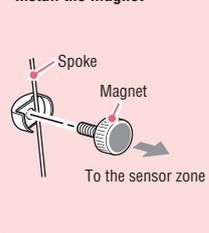
- \* The clearance between the speed sensor and magnet is 5 mm or less.



#### Install the speed sensor



#### Install the magnet



After installing the speed sensor, check that the speed is displayed on the computer by turning the front wheel with the computer installed to the bracket. If not displayed, review the installation conditions, and check the positions of the speed sensor and magnet.

#### CAUTION:

The computer in the bike mode measures speed only when installed on the bracket.

## How to use

### Walk (walk mode measuring screen)

#### 1 Carry

Remove the computer from the bracket, and put it in your pocket or bag.



\* When the computer is independent, the walk icon is turned on, and the unit switches automatically to the walk mode.

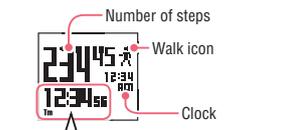
#### 2 Start/Stop measurement



Measurement automatically starts when you take more than 6 steps.

#### Walk mode

In the walk mode, generally the computer does not display anything. The screen is turned on once the button is pressed, but turned off 30 seconds later.



#### Selected data

With the screen turned on, pressing the **MODE** button switches the selected data in the bottom row of the screen.



### Ride on your bicycle (bike mode measuring screen)

#### 1 Install

Install the computer to the bracket.



\* Install it firmly in place until it clicks.  
\* When the computer is installed, the bicycle icon is turned on, and the unit switches automatically to the bike mode.

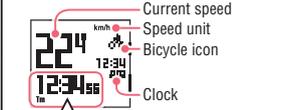
#### 2 Start/Stop measurement



Measurement starts/stops automatically according to the motion of your bicycle. During measurement, "km/h" or "mph" flashes.

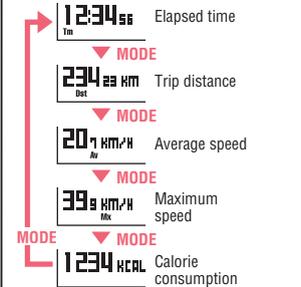
#### Bike mode

The following screen appears during measurement. When the screen is turned off, press any button.



#### Selected data

Pressing the dot section on the front of the computer switches the selected data in the bottom row of the screen.



### Power-saving mode

This unit switches to Sleep at the specified time. To start measurement during Sleep (Initial setting: 8:00 p.m. through 6:00 a.m.), press any button to cancel Sleep.

\* The specified time can be changed according to the life rhythm.  
(Change the settings)

\* During measurement, the unit does not switch to Sleep at the specified time. In such a case, it switches to Sleep one hour after the measurement is completed.

### Resetting data

When the computer clock passes 0:00 in the morning, the measured data is reset automatically.

\* Pressing and holding both the **MODE** and **MENU** buttons resets manually the measured data in the walk or bike mode currently displayed.



### Calorie consumption

The calorie consumption measured by this computer is as follows. View it as a reference value.

**Bike mode**: Determined by integrating the value calculated from the speed in every second.

**Walk mode**: Determined using RMR (relative metabolic rate), while targeting women in their 30's.

## View the measured result

#### 1 Switch to the Menu screen

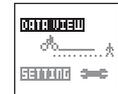
Press and hold the **MENU** button to switch to the Menu screen.

\* When the Menu screen appears, measurement will be paused.



#### 2 Select DATA VIEW

Press and hold the **MODE** button, while "DATA VIEW" flashes.



#### 3 Select the display period

1. When the **MODE** button is pressed, "TOTAL", "WEEKLY", "TODAY", and "Past 6 days" will flash alternatively for selection, in this order.

2. With the desired period flashed, press and hold the **MODE** button.



#### 4 View the measured result

When the **MODE** button is pressed, "Distance", "Number of steps", "Calorie consumption", "Carbon offset" will appear alternatively for selection, in this order, and the unit returns to the display period selection screen (3).

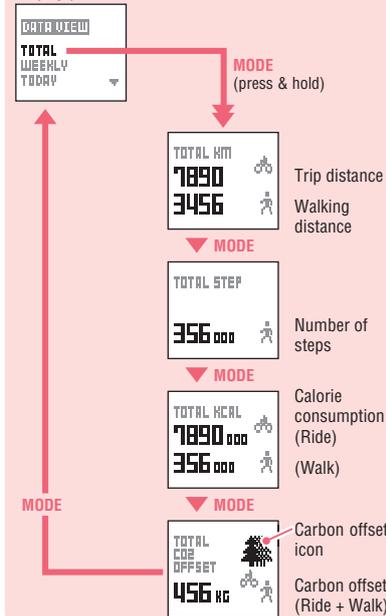
#### 5 Return to the measuring screen

Press the **MENU** button to return to the Menu screen. Press the **MENU** button again to return to the previous measuring screen.  
\* During measurement, the unit will resume measurement.

### DATA VIEW

Example: When "TOTAL" is selected

Display period selection screen



### Carbon offset

The carbon offset icon grows in number as the carbon offset increases.

#### How to calculate the carbon offset

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 1km drive of a gasoline-powered car" described on the website of the Ministry of Land, Infrastructure and Transport and Tourism (Japan).

### DATA VIEW's display period and update timing

The data view is updated and the values displayed are reset, when the computer clock passes 0:00 in the morning. (The values reset manually are also reflected.) Refer to the following description.

Item	Description
<b>TOTAL</b>	The total after starting measurement by this computer can be viewed.
<b>WEEKLY</b>	The total over 7 days including today can be viewed.
<b>TODAY</b>	The measurement data per day can be viewed. The Past 6 days data of the previous day is stored and the data of 7 days ago is deleted at the time of update at 0:00 in the morning.

\* When data is reset manually, it is reflected as today's data at that moment.

## Change the settings

#### 1 Switch to the Menu screen

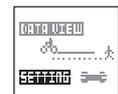
Press and hold the **MENU** button from the measuring screen to switch to the Menu screen.



#### 2 Select SETTING

1. When the **MODE** button is pressed, "DATA VIEW" and "SETTING" will flash alternatively for selection.

2. Press and hold the **MODE** button, while "SETTING" flashes.



#### 3 Select the item to change

1. When the **MODE** button is pressed, the item will flash alternatively for selection, as shown in Step 4.

2. With the desired item to change flashing, press and hold the **MODE** button to switch to the setting screen for the selected item.

#### 4 Change the settings

Refer to the following procedure for setting.

Item	Reference
1 <b>CLOCK</b>	Preparing the computer 5
2 <b>DATE</b>	Preparing the computer 4
3 <b>STRIDE</b>	Preparing the computer 8
4 <b>WEIGHT</b>	Preparing the computer 7
5 <b>SLEEP</b> Sleep time setting	
6 <b>WHEEL</b> Tire circumference	Preparing the computer 6
7 <b>UNIT</b> Measurement unit	Preparing the computer 3

\* Date setting (DATE) cannot be changed to the date before the record date of DATA VIEW.

#### 5 Return to the measuring screen

With each press of the **MENU** button, all changes are saved, and the unit returns to the setting screen for the selected item, the Menu screen and then the previous measuring screen.

#### Sleep time setting

Change the Sleep start time and end time. Press the **MODE** button to increase the value flashing, whereas press and hold it to switch the item to set.

\* The unit does not sleep when the Sleep start time is set as the same as the end time. In this case, the battery life is shortened.



## Warning / Caution

- Pay careful attention to your surroundings when using the computer.
- 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.
- Do not carry computer in back pocket of pants. Sitting down with the computer put in back pocket of pants may damage the unit.
- When using the computer installed on the bracket, change the **MODE** by pressing on the three dots below the screen. Pressing hard on other areas can result in malfunction or damage to the computer.
- Be sure to tighten the dial of the FlexTight™ bracket by hand. Tightening it strongly using a tool, etc. may damage the screw thread.
- Dispose of used batteries according to local regulations.
- LCD screen may be distorted when viewed through polarized sunglass lenses.

## Walk mode

The unit may not make measurement correctly in the following environments and actions.

- When the unit moves irregularly in a bag
- When walking irregularly in sandals or wooden clogs
- When walking or jogging as if shuffling
- When walking is disturbed on a crowded road
- When standing up or sitting down
- When walking up and down a stairway or steep slope
- When getting on a vehicle (car, train, etc.)

## Wireless sensor

The sensor was designed to receive signals within a maximum range of 70 cm, to reduce chance of interference. When adjusting the wireless sensor, note the following:

- Signals cannot be received if the distance between the sensor and the computer is too large.
- The receiving distance may be shortened due to low temperature and exhausted batteries.
- Signals can be received only when the back of the computer is facing the sensor.

Interference may occur, resulting in incorrect data, if the computer is:

- Near a TV, PC, radio, motor, or in a car or train.
- Close to a railroad crossing, railway tracks, TV stations and/or radar base.
- Using with other wireless devices or some particular battery lights in close proximity.

## Replacing the battery

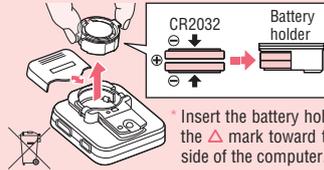
### Computer

If  turns on, replace the battery.

### CAUTION:

- Reset measured data manually just before replacing the battery. Today's measurement data is not saved when you go through the restart operation without resetting data. (👉 [How to use : Resetting data](#))
- Do not combine old and new batteries or different types of batteries. Do not insert them in the reverse direction.

1. Remove the battery case cover, and hold the battery holder tab to pull out the battery. The battery holder is lifted when either tab is pulled up.
2. Insert 2 new lithium batteries (CR2032) in the battery holder, with the (+) side facing each other.



\* Insert the battery holder with the  $\Delta$  mark toward the front side of the computer.

3. Press the **AC** button (restart operation) The whole screen illumination is turned on.

\* In the restart operation, the record data of the speed unit, date, tire circumference, weight, stride, and data view are maintained.



4. Set the date

For procedures, refer to

"[Preparing the computer 4](#)".

\* When setting the date, the latest record date in the data view is initially displayed, and any date before that cannot be set.

5. Set the clock

For procedures, refer to "[Preparing the computer 5](#)".

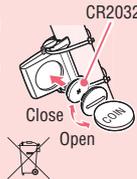
\* The time when the restart operation was performed is initially displayed on the screen.

\* In the restart operation, the speed unit, date, tire circumference, weight, stride, and data view are maintained.

### Speed sensor

When the sensor signal is hardly received in the bike mode, replace the battery. Install a new lithium battery (CR2032) with the (+) side facing upward.

After replacement, review the installation conditions, and check the positions of the sensor and magnet. (👉 [How to install the unit on your bicycle](#))



## Trouble shooting

Check the following items before contacting us.

**MODE does not change when the computer is mounted on its bracket.**

Check that there is no dirt between the bracket and the computer.

Wash off the bracket with water to get rid of any dirt.

**The current speed is not displayed**

Check that the clearance between the speed sensor and magnet is not too large. (Clearance: within 5 mm)

Check that the magnet passes through the sensor zone correctly.

Adjust the positions of the magnet and speed sensor.

**Is the computer installed at the correct angle?**

Back of computer must face toward the speed sensor.

Check that the distance between the computer and speed sensor is correct. (Distance: within 70 cm)

Install the speed sensor within the specified range.

**Is the computer or sensor battery weak? In winter, battery performance diminishes.**

Replace with new batteries. (👉 [Replacing the battery](#))

**No display even after pressing the button**

**Is battery in the computer run down?**

Replace with new batteries. (👉 [Replacing the battery](#))

**Incorrect data appear.**

👉 [Replacing the battery, Steps 3 to 5 \(Restarting operation\)](#)

## Maintenance

To clean the computer or accessories, use diluted neutral detergent on a soft cloth, and wipe it off with a dry cloth.

## Specification

<b>Battery</b>	Computer: Lithium battery (CR2032) x 2 Sensor: Lithium battery (CR2032) x 1
<b>Battery life</b>	Computer: Bike mode About 1 year if it is used for 1 hour per day Walk mode: About 4.5 months when using it for 10000 steps a day Sensor: About 10000 km
* This is the average figure of being used under 20 °C temperature and the distance between the computer and the sensor is 65 cm.	
<b>Controller</b>	8 bit, 1-chip microcomputer (Crystal controlled oscillator)
<b>Display</b>	Liquid crystal display
<b>Sensor</b>	No contact magnetic sensor, Acceleration sensor
<b>Transmission distance</b>	Within 70 cm
<b>Tire circumference range</b>	0100 mm - 3999 mm (Initial value: 2096 mm)
<b>Working temperature</b>	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.)
<b>Dimensions/weight</b>	Computer: 1-13/16" x 1-59/64" x 1/32" (46 x 49 x 19.5 mm) / 1.3 oz (37 g) Sensor: 1-41/64" x 1-27/64" x 19/32" (41.5 x 36 x 15 mm) / 0.5 oz (15 g)

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

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

## Limited warranty

### 2-Year Computer 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 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 certifi cate (proof of purchase) with instruction for repair. Please write or type your name and address clearly on the warranty certifi cate. 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.

### CATEYE CO., LTD.

2-8-25, Kuwazu, Higashi Sumiyoshi-ku, Osaka 546-0041 Japan

Attn: CATEYE Customer Service

Phone : (06)6719-6863

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E-mail : support@cateye.co.jp

URL : <http://www.cateye.com>

### [For US Customers]

### CATEYE AMERICA, INC.

2825 Wilderness Place Suite 1200, Boulder CO80301-5494 USA

Phone : 303.443.4595

Toll Free : 800.5CATEYE

Fax : 303.473.0006

E-mail : [service@cateye.com](mailto:service@cateye.com)

## Standard parts

1602190N



Parts kit

1600280N



Bracket band

1602193



Bracket

1602196



Speed sensor

1699691N



Wheel magnet

1665150



Lithium battery (CR2032)

## Option parts

1602770



Bracket holder