ASCENT® IO COMPUTER

INTRODUCTION

Thank you for purchasing an Ascent™ cycle computer. With all the features that a professional rider needs to keep track of a ride, the Ascent IO is the perfect accessory for any cyclist. The convenience of coded wireless transmission makes installation simple and virtually eliminates interference issues.

BATTERY INSTALLATION

To help you get started quickly, the computer and transmitter batteries have been installed at the factory. Under normal use the batteries should last one to two years. The Ascent IO uses a 3V CR2032 button cell battery (available at most drug stores or electronic shops) in both the computer and the transmitter.

NOTE: Most problems that occur with cycle computers are caused by weak or dead batteries. Should you need to replace the batteries, follow the steps below.

COMPUTER HEAD

NOTE: During a battery change, all data will be cleared from memory. Make a note of your current wheel size settings and cumulative odometer mileage before replacing the battery so you can reprogram these values once the battery is replaced.

STEP 1: Remove the battery cover from the underside of the computer using a coin. See Figure 1. Remove the old battery and dispose of it properly.

STEP 2: Install a fresh battery with the positive (+) side facing the battery cover.

STEP 3: Install the battery cover securely, making sure the rubber O-ring seal around the battery compartment is still in place and seated properly.

TRANSMITTER

STEP 1: Remove the battery cover from the back of the transmitter using a coin. See Figure 1. Remove the old battery and dispose of it properly.

STEP 2: Install a fresh battery with the positive (+) side facing the battery cover.

STEP 3: Install the battery cover securely, making sure that the rubber O-ring seal around the battery compartment is still in place and seated properly.
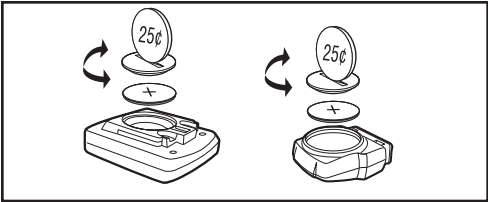

FIGURE 1

COMPUTER FUNCTIONS

CLOCK (CLK)
Displays time of day in a 12 hour or 24 hour format.

AUTOMATIC RIDE TIMER (TM)
Auto start/stop timer is activated by front wheel movement and records actual ride time up to 29:59:59.

CURRENT SPEED (M/H or KM/H)
Displays current speed, up to 62.4 M/H (99.9 KM/H). Accurate to 0.1 M/H or KM/H. Always displayed at the top of the screen.

AVERAGE SPEED (AVS)
Calculates average speed based on ride time (TM) & trip distance (DST).

MAXIMUM SPEED (MXS)
Displays highest speed attained during a ride (or since last reset), up to 62.4 M/H (99.9 KM/H).

SPEED COMPARISON INDICATOR (▲or▼)
Compares current speed to average speed. As you ride, a (▲) or (▼) will appear next to the current speed display to indicate whether your current speed is above (▲) or below (▼) your average speed. This function is automatic, requires no programming and cannot be disabled.

TRIP DISTANCE (DST)
Displays distance traveled during current ride (or since last reset), up to 624.99 miles (999.99 kilometers).

ODOMETER (ODO 1)
Displays cumulative ride distance, up to 62,499 miles (99,999 kilometers) for wheel size Ⓘ.

ODOMETER (ODO 2)
Displays cumulative ride distance, up to 62,499 miles (99,999 kilometers) for wheel size ⒾⒾ.

TOTAL ODOMETER (ODO)
Displays total cumulative ride distance for both wheel sizes combined, up to 62,499 miles (99,999 kilometers).

DUAL WHEEL SIZE SETTINGS Ⓘ or ⒾⒾ
Wheel circumference is used to calculate speed and distance. The Ascent IO computer includes two wheel size settings (Ⓘ and ⒾⒾ), to keep track of ride data on two bikes with different wheel sizes (e.g. your road bike and mountain bike).

TEMPERATURE
Displays air temperature in °F or °C, from 32°F to 122°F.

AUTO SLEEP
To prolong battery life, the Ascent IO automatically enters "sleep" mode after 30 minutes of inactivity. In sleep mode, only the time of day will be displayed. To activate the computer when it's in sleep mode, simply press the MODE button.

DETERMINE WHEEL SIZE

The Ascent IO uses wheel circumference (measured in millimeters) to calculate speed and distance. Before programming the computer, calculate wheel circumference using one of the three methods below.

1. Select size from chart (least accurate): Use the chart below to find the circumference for your tire size. The chart lists the programming sizes for some of the most popular tire sizes currently in use. These numbers are estimations which may not precisely match the circumference of your wheel, due to variations in tire size between brands and models.

TIRE SIZE	CIRCUMFERENCE	TIRE SIZE	CIRCUMFERENCE
16 x 1.75	1077	27 x 1¼	2161
20 x 1.75	1515	28 x 1.5	2224
24 x 1.75	1890	700 x 18c	2102
26 x 1.0	1953	700 x 23c	2096
26 x 1.5	2026	700 x 25c	2105
26 x 1.95	2051	700 x 28c	2136
26 x 1.75	2070	700 x 32c	2155
26 x 1.9	2089	700 x 35c	2168
26 x 2	2114	700 x 38c	2180
26 x 2⅛	2133		

2. Measure wheel diameter (more accurate): Measure your wheel diameter (including wheel and tire) in millimeters (1 inch = 25.4mm) and multiply by 3.1416. This value is your wheel circumference.

3. Perform roll-out test (most accurate): See Figure 2.

STEP 1: Stand your bicycle upright. With your tires inflated to their normal riding pressure, rotate the front wheel so the valve stem is located at the 6 o'clock position. Make a mark on the ground to indicate the valve location.

STEP 2: Roll the bicycle forward in a straight line for one complete wheel revolution, until the valve stem is again at the bottom (ideally, you should be on the bike). Make a mark on the ground to indicate the valve location.

STEP 3: Measure the distance between the marks in millimeters (1 inch = 25.4mm). This value is your wheel circumference.
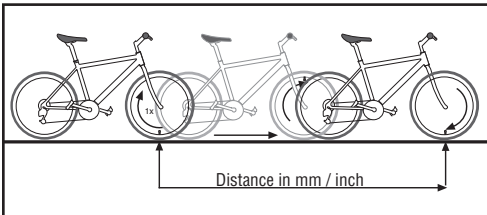

Distance in mm / inch

FIGURE 2

PROGRAM THE COMPUTER

Before using your Ascent IO, you must set the clock, select a speed scale (miles or kilometers), program wheel size, set the odometers (if desired), select a temperature scale (°F or °C) and program gender and weight.
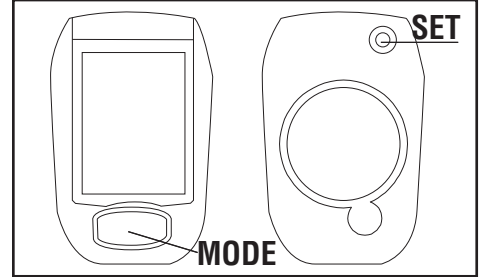

SET

MODE

FIGURE 3

SET THE CLOCK
The Ascent IO is equipped with a digital clock that displays time of day in a 12 hour or 24 hour format.

STEP 1: Press the MODE button to advance to the Clock display screen (CLK). Then press and hold the red SET button on the underside of the computer to enter set-up mode. See Figure 3.

STEP 2: "12" or "24" will flash at the top of the screen. Press the SET button to select 12 hour or 24 hour mode. Press the MODE button to confirm your selection and advance to the hours setting.

STEP 3: The hours will flash. Press the SET button (or press and hold) to advance the hours. If you selected 12 hour mode, "PM" will appear for hours between noon and midnight. Press the MODE button to advance to the minutes setting.

STEP 4: The minutes will flash. Press the SET button (or press and hold) to advance the minutes. Press the MODE button to advance to the seconds setting.

STEP 5: The seconds will flash. Press the SET button to reset the seconds to "00". Press and hold the MODE button to exit set-up mode.

SELECT SPEED SCALE
The Ascent IO is capable of displaying speed and distance information in miles or kilometers.
STEP 1: Press the MODE button to advance to the Odometer display screen (ODO). Then press and hold the SET button on the underside of the computer to enter set-up mode.
STEP 2: "M/H" or "KM/H" will flash in the display screen. Press the SET button to select miles (M/H) or kilometers (KM/H).
STEP 3: Press the MODE button to confirm your selection and advance to the wheel size Ⓘ programming screen.

PROGRAM WHEEL SIZE Ⓘ AND ODOMETER (ODO1)

STEP 1: After the speed scale has been selected (see above), the computer will automatically advance to the wheel size selection screen. "Ⓘ" or "ⒾⒾ" will flash at the top of the screen.

STEP 2: Press the SET button to select wheel size Ⓘ. Press the MODE button to confirm your selection and advance to the wheel size setting.

STEP 3: The left-most digit will flash. Press the SET button to adjust the value according to the wheel circumference determined above (see "Determine Wheel Size"). Then press the MODE button to advance to the next flashing digit.

STEP 4: Repeat this sequence until the correct wheel size has been entered. Then press the MODE button to advance to the odometer setting (ODO1) for wheel size Ⓘ. (If you don't wish to program the odometer, press the MODE button 5 times to advance to the temperature scale selection screen, or press and hold the MODE button to exit set-up.)

STEP 5: The left-most digit will flash. Press the SET button to adjust the value. Then press the MODE button to advance to the next flashing digit.

STEP 6: Repeat this sequence until the odometer value for wheel size Ⓘ has been set. Then press the MODE button to advance to the temperature scale selection screen, or press and hold the MODE button to exit set-up.

SELECT TEMPERATURE SCALE

STEP 1: After the odometer has been set (see above), the computer will automatically advance to the temperature scale selection screen. "°F" or "°C" will flash at the bottom of the screen.

STEP 2: Press the SET button to select Fahrenheit

(°F) or Celsius (°C).

STEP 3: Press the MODE button to return to the wheel size selection and programming screen (if you wish to program wheel size Ⓘ) or press and hold the MODE button to exit set-up.

PROGRAM WHEEL SIZE Ⓘ AND ODOMETER (ODO2)

STEP 1: Press the MODE button to advance to the Odometer display screen (ODO). Then press and hold the SET button on the underside of the computer to enter set-up mode. Press the MODE button one time until " Ⓘ " or " Ⓘ " flashes at the top of the screen.

STEP 2: Press the SET button to select wheel size Ⓘ. Press the MODE button to confirm your selection and advance to the wheel size setting.

STEP 3: The left-most digit will flash. Press the SET button to adjust the value according to the wheel circumference determined above (see "Determine Wheel Size"). Then press the MODE button to advance to the next flashing digit.

STEP 4: Repeat this sequence until the correct wheel size has been entered. Then press the MODE button to advance to the odometer setting (ODO2) for wheel size Ⓘ. (If you don't wish to program the odometer, press and hold the MODE button to exit set-up.)

STEP 5: The left-most digit will flash. Press the SET button to adjust the value. Then press the MODE button to advance to the next flashing digit.

STEP 6: Repeat this sequence until the odometer value for wheel size Ⓘ has been set. Press and hold the MODE button to exit set-up mode.

SET THE CALORIE COUNTER

The Ascent IO uses weight and gender to calculate calories burned during exercise. In order for the calorie counter to provide an accurate measurement, you must enter your weight and gender.

STEP 1: Press the MODE button to advance to the Calorie display screen (KCAL). Then press and hold the SET button on the underside of the computer to enter set-up mode.

STEP 2: "MALE" or "FEMALE" will flash at the bottom of the screen. Press the SET button to select gender, then press the MODE button to advance to the weight scale selection screen.

STEP 3: "kg" or "Lb" will flash at the bottom of the screen. Press the SET button to select Kilograms (kg) or Pounds (Lb). Then press the MODE button to advance to the weight input screen.

STEP 4: The weight value will flash at the top of the screen. Press the SET button (or press and hold) to adjust the weight value (from 44 to 330 Lbs). Press and hold the MODE button to exit set-up mode.

INSTALLATION

Wireless transmission makes installation simple. Begin by attaching the computer bracket to the handlebar or stem.

STEP 1: The mounting bracket consists of two parts and can be configured for handlebar or stem mounting. See Figure 4. Use the included zip-ties and shims (if necessary) to attach the bracket to the handlebar or stem. Tighten the zip-ties securely and trim the excess length with scissors or fingernail clippers.
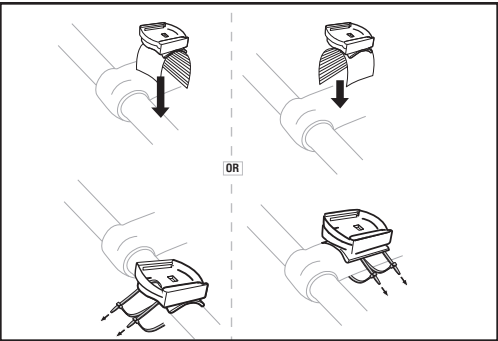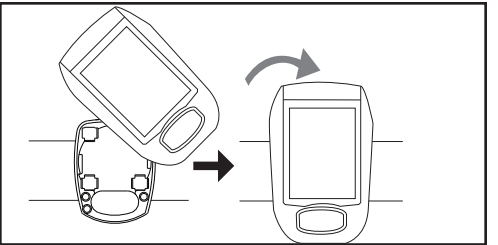

FIGURE 4

FIGURE 5

STEP 2: Attach the computer head to the bracket. Press the computer head into the bracket and rotate it clockwise to lock in place. See Figure 5. You should feel the computer head click securely into the bracket.

STEP 3: Using the included zip-ties, loosely mount the transmitter (so that you can slide it around) to the fork blade on the same side of the bike as the computer. See Figure 6 and Figure 7. The Ascent IO transmission range is 24" (60cm). The transmitter must be mounted within 24" of the computer in order for the computer to receive the signal. We recommend mounting the transmitter to the front (leading) edge of the fork blade to avoid problems in the event that the transmitter contacts the spokes during a ride.

STEP 4: Attach the wheel magnet loosely to one of the spokes on the same side of the wheel as the transmitter. Adjust the position of the magnet and transmitter so that the magnet passes the alignment mark on the transmitter with a clearance of 1mm to 5 mm (1mm is about the thickness of a penny). See Figure 8. If the magnet and transmitter are not aligned or not close enough together, the computer will not pick up a signal from the transmitter or the reading will be inconsistent and erratic. Most problems that occur when installing a new computer are related to magnet and transmitter alignment and spacing.
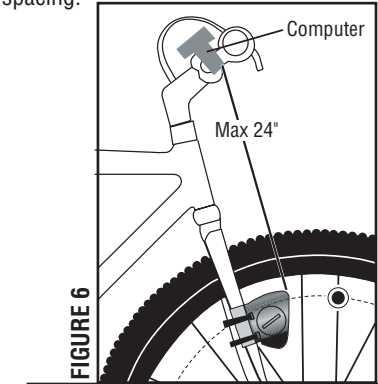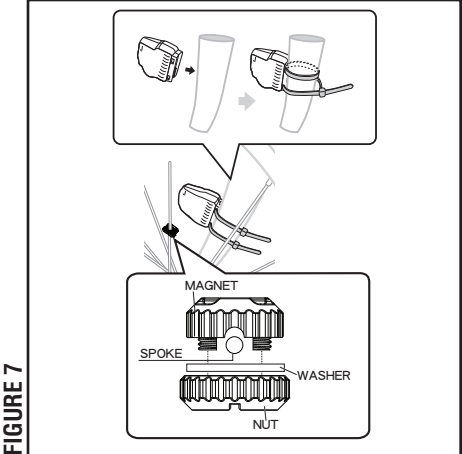

FIGURE 6

FIGURE 7

Computer
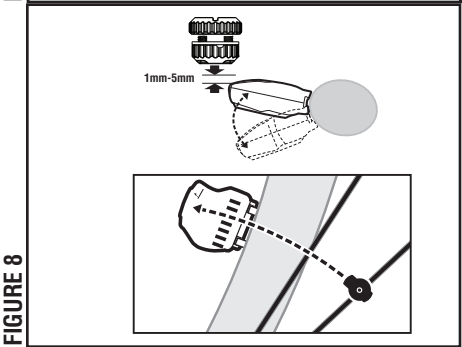
Max 24"

MAGNET

SPOKE

WASHER

NUT

1mm-5mm

FIGURE 8

STEP 5: Once the transmitter and wheel magnet are aligned properly, securely tighten both in place. Trim the excess zip-tie ends from the transmitter with scissors or fingernail clippers.

STEP 6: Test the unit to make sure everything is adjusted and working properly. Pick up the front end of the bicycle and spin the front wheel. The computer should register a speed reading within 1-2 seconds. If not, check the alignment of the wheel magnet and transmitter and make sure the space between the two is 5mm or less. Adjust as necessary and re-test.

SELECT WHEEL SIZE Ⓘ OR Ⓘ

If you switch your computer between bikes with different wheel sizes, don't forget to select the appropriate wheel size setting before each ride.

STEP 1: In the Odometer display screen (ODO), press and hold the SET button on the underside of the computer to enter set-up mode.

STEP 2: Press the MODE button one time until Ⓘ

or Ⓘ flashes at the top of the screen.

STEP 3: Press the SET button to select wheel size Ⓘ or Ⓘ. Press and hold the MODE button to confirm your selection and exit set-up.

PROGRAM ODOMETER

The Ascent IO includes a separate odometer for wheel size Ⓘ (ODO1) and wheel size Ⓘ (ODO2). The total odometer (ODO) displays the combined mileage total from ODO1 and ODO2. Therefore, to program the odometer (for example, after replacing a battery or when transferring mileage from another computer) program ODO1 and/or ODO2.

RESET DISPLAY SCREENS

The Ascent IO maintains a separate odometer reading for wheel size Ⓘ and Ⓘ. Average Speed, Maximum Speed, Trip Distance, Calorie and Ride Timer values, however, are combined for both wheel sizes and are reset simultaneously.

STEP 1: To simultaneously reset Average Speed, Maximum Speed, Trip Distance, Calories and Ride Timer for wheel size Ⓘ and Ⓘ, press the MODE button to advance to the Ride Timer display screen (TM).

STEP 2: Press and hold the SET button for 3 seconds to clear the ride data. The three Odometer values (ODO1, ODO2 and ODO) will not be reset.

NOTE: Entering set-up mode (to select wheel size or adjust settings) will not reset the display screens or clear any ride data.

MAINTENANCE

COMPUTER

If you notice a change in the display screen contrast or if the figures become faint, it may be time to replace the computer battery. See "Battery Installation". We recommend replacing both the computer and transmitter batteries at the same time.

TRANSMITTER

Periodically check the alignment of the wheel magnet and transmitter and make sure the space between them is 5mm or less. Remove any signs of rust or corrosion from the magnet to ensure proper function.

CLEANING

The computer head, transmitter, wheel magnet and handlebar bracket can all be cleaned with mild soap and water. Do not use harsh abrasives or petroleum based cleaners to clean any of the components.

TROUBLESHOOTING

1. Computer display is blank or very light
The computer battery may be weak or installed incorrectly. Make sure the battery is installed with the positive (+) pole facing the battery cover, or replace the battery with a fresh one.

2. Computer display becomes dark or black
The ambient temperature may be too high. Allow the computer to cool, and the display will return to normal.

3. Computer display appears to update slowly

The ambient temperature may be too low. When the temperature rises, the display will return to normal. Note: Even when the display is affected by cold, the computer will continue to record data normally.

4. Absent or erratic speed reading

Check the alignment of the wheel magnet and transmitter, and make sure that the space between the two is 5 mm or less. Adjust as necessary and re-test.

Make sure the computer transmitter batteries are installed correctly and fully charged. If in doubt, replace both batteries with fresh ones.

Even coded wireless cycle computers are occasionally affected by electromagnetic interference from high voltage power lines, motor driven equipment and other wireless devices (such as heart rate monitors). If you experience unusually high speed readings, check your surroundings for possible sources of electromagnetic interference and move away from the source.