Ascent
ride to the top

Delta HR Wireless Cycle Computer with Heart Rate

108 38.8 KM/H
627.8
TOTALODO

INTRODUCTION

Thank you for your purchase of an Ascent computer! The Ascent *Delta hr* combines all the features of an advanced cycle computer with ECG accurate heart rate technology to create the ultimate training tool. The added convenience of wireless transmission makes installation simple.

COMPUTER FUNCTIONS

Current Speed
Displays current speed up to 62mph (99.9kmh). Accurate to 0.1mph or kmh. Current speed is always displayed in the top right corner of the screen.

Current Heart Rate
Provided the chest transmitter is being used, current heart rate is displayed in the top left corner of all display screens.

Modes
Press the MODE button to scroll through the *Delta hr* display screens in the following order:

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

Auto Ride Timer (AUTOTIME)
Auto start/stop timer is activated by front wheel movement and records ride time up to 9:59:59.

Maximum Speed (MAXSPEED)
Displays maximum speed attained during a ride, up to 62mph (99.9kmh).

Average Speed (AVGSPEED)
Displays average speed up to 62mph (99.9kmh). Calculated using ride time and trip distance. Note, if either ride time or trip distance reach their maximum value (9:59:59, or 600 mi.) average speed can no longer be calculated correctly. "Err" will appear in the display screen until the ride time and trip distance values have been reset.

Trip Distance (TRIP)
Displays distance traveled during current ride, up to 600 mi. (999.99 km).

Total Odometer (TOTALODO)
Displays cumulative ride distance, up to 6200 mi. (9,999.9 km).

Maximum Heart Rate (MAXPULSE)
Displays maximum heart rate attained since last reset. From 30bpm—240bpm.

Average Heart Rate (AVGPULSE)
Displays average heart rate attained since last reset. From 30bpm—240bpm.

Calorie Counter (KCAL)
Displays calories burned since last reset, up to 9999 Kcal.

Scan
Allows hands free viewing of display screens. When activated, the scan feature scrolls through all nine display screens on a continuous loop, displaying the screens for five seconds each.

Additional Features:

Dual Wheel Settings
Two wheel size settings allow you to switch the computer between two bikes with different wheel sizes (e.g. your road bike and mountain bike), and keep track of your combined ride time and distance on both bikes. To select the desired wheel setting ("I" or "II"), press the blue button on the underside of the computer head.

Programmable Heart Rate Target Zone
Allows you to program upper and lower heart rate target zone limits to ensure the most efficient workout based on your specific fitness goals.

Out of Zone Alarm
Visual and selectable audible alarm indicates when your heart rate rises above your target zone upper limit or falls below your target zone lower limit.

Low Battery Indicator
Indicates when batteries should be replaced.

PROGRAMMING THE COMPUTER

SETTING THE CALORIE COUNTER
The *Delta hr* uses weight and gender to calculate calories burned. 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 (KCAL) display screen. Press and hold the SET button for 2 seconds to enter the personal settings screen.

STEP 2: Press the SET button to select gender, then press the MODE button to advance to the weight scale selection screen.

STEP 3: Press the SET button to select the desired weight scale (Kg or Lb). Then press the MODE button to advance to the weight input screen.

STEP 4: Press the SET button (or press and hold) to adjust the weight value. Press and hold the MODE button to set the value and exit the set-up mode.

SETTING THE CLOCK
The *Delta hr* 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 (CLOCK) display screen. Press and hold the SET button for 2 seconds to enter the clock setting screen.

STEP 2: "12H" or "24H" will flash in the upper row of the display. Press the SET button to select 12 hour or 24 hour mode. Press the MODE button to set your choice and advance to the hours setting.

STEP 3: The hours will flash. Press the SET button (or press and hold) to advance the hours. Press the MODE button to set the value and advance to the minutes setting.

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

STEP 5: Press the SET button to reset the seconds to "00".

STEP 6: Press and hold the MODE button to exit the clock set-up screen and return to the Clock display screen.

DETERMINING WHEEL SIZE
The *Delta hr* uses wheel circumference to calculate speed and distance. There are three methods for determining wheel circumference:
1. Select size from chart below (least accurate)
2. Measure wheel diameter (more accurate)
3. Perform roll-out test (most accurate)

1. Chart: Use the chart to find the circumference for your tire size, and enter this value in the computer (see "Programming Wheel Size"). The chart lists circumferences for some of the most popular tire sizes currently in use. These numbers are only estimates which may not precisely match the circumference of your wheel, due to variations in tire size between brands and models.

Tire Size	Circ.(mm)	Tire Size	Circ.(mm)	Tire Size	Circ.(mm)
26x1.5	2030	700x20	2095	700x28	2135
26x1.75	2045	700x23	2110	700x32	2155
26x2.0	2115	700x25	2125	27x11/4	2155

2. Measure: Measure your wheel diameter (including wheel and tire) in millimeters (1 inch = 25.4mm) and multiply by 3.1416. Enter this value in the computer (see "Programming Wheel Size").

3. Roll-out Test: See Figure 1.

STEP 1: Stand your bicycle upright. With your tire inflated to its proper pressure, rotate your front wheel so that the valve is located at the bottom (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 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. Enter this value in the computer (see "Programming Wheel Size")
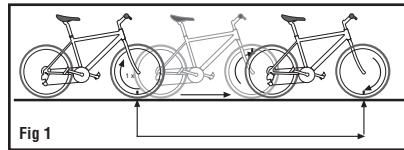

Fig 1

PROGRAMMING WHEEL SIZE & SELECTING MILES OR KILOMETERS
After determining wheel size by one of the three methods above, enter the value in the computer.

STEP 1: Press the MODE button to advance to the Odometer (TOTALODO) display screen. Press and hold the SET button for 2 seconds to enter the wheel size setting screen.

STEP 2: "KM/H" or "M/H" will flash. Press the SET button to select the desired speed scale (mph or kmh) and then press the MODE button to set your choice and advance to the wheel size setting.

STEP 3: The digit on the left side of the screen will flash. Press the SET button to adjust the value. Press the MODE button to set the value and advance to the next flashing digit.

STEP 4: Repeat this sequence until all digits have been set to the appropriate value.

STEP 5: Press and hold the MODE button to set the wheel size in memory and return to the Odometer display screen.

STEP 6: To program a second wheel size (if you plan to use the *Delta hr* on two bikes with different wheel sizes), depress the blue button on the back of the computer to activate the second wheel size. Then follow steps 1 through 5 above, to program the wheel size.

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

STEP 1: Use the included zip-ties and shim pad (if necessary) to attach the bracket to the handlebar as shown in Figure 2. Tighten the zip-ties securely and trim off any excess length.
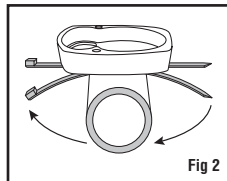

Fig 2

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 3. You should hear a "CLICK" when the computer is locked in place.
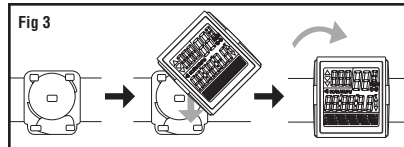

Fig 3

STEP 3: Using the included zip-ties, loosely mount the sensor (so that you can slide it around) to the fork blade on the same side of the bike as the handlebar bracket. See Figure 4. The *Delta hr* transmission range is 24" (60cm). The sensor must be mounted within 24" of the computer in order for the computer to receive the signal. We recommend mounting the sensor to the front (leading) edge of the fork blade to avoid problems should the sensor ever come into contact with the spokes.
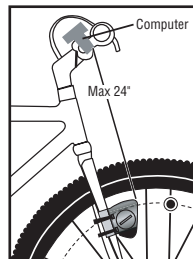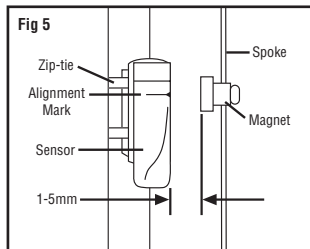

Computer
Max 24"
Fig 4

STEP 4: Attach the wheel magnet loosely to one of the spokes on the same side of the wheel as the sensor. Adjust the position of the magnet and sensor by sliding both pieces up or down to achieve 1-5mm of clearance between the two. See Figure 5. If the magnet and sensor are not close enough, the computer will not pick up a reading or the reading will be inconsistent and erratic. Most problems that occur when installing a new computer are related to magnet and sensor alignment and spacing.

Fig 5

Zip-tie
Alignment Mark
Sensor
1-5mm
Spoke
Magnet

STEP 5: Once the installation procedure is complete, 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 sensor, and make sure that the space between the magnet and sensor is 5mm or less. Adjust as necessary and re-test.

USING THE HEART RATE MONITOR

1. Position the chest transmitter below the breast/pectoral muscles as shown in Figure 6. Adjust the tightness of the transmitter strap to achieve a snug, comfortable fit.
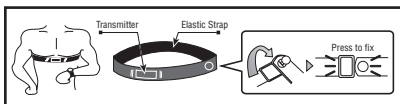

Transmitter   Elastic Strap   Press to fix

Fig 6

2. Use your maximum heart rate (MHR) and fitness goals to select a target zone. The formula commonly used to determine maximum heart rate for most individuals is: MHR = 220 – Age.

Target Zones:
50% - 60% MHR: Exercise in this zone to warm up and burn fat.
60% - 70% MHR: Exercise in this zone to develop basic endurance and aerobic capacity and burn fat, or to recover from a more strenuous workout.
70% - 80% MHR: Exercise in this zone to increase aerobic capacity.
80% - 90% MHR: Exercise in this zone to increase anaerobic threshold.

3. Target zone settings vary for every individual depending on age, personal fitness goals, existing medical conditions (high blood pressure, circulatory or respiratory problems, etc.) and personal physicians' recommendations.

SETTING TARGET ZONE LIMITS
If you wish to exercise within a particular target zone and utilize the out of zone alarm to alert you when your heart rate rises above or falls below that zone, you must first set upper and lower target zone limits. See "Using the Heart Rate Monitor" for more information about determining an appropriate target zone.

STEP 1: Press the MODE button to advance to the Maximum Heart Rate (MAXPULSE) display screen. Press and hold the SET button for 2 seconds to enter the target zone setting screen.

STEP 2: The target zone upper limit will flash. Press the SET button (or press and hold) to adjust the value (between 50bpm and 240bpm). Press the MODE button to set the value and advance to the target zone lower limit.

STEP 3: Press the SET button (or press and hold) to adjust the value (from the upper limit value minus 10bpm to 30bpm). Then press and hold the MODE button to return to the Max Heart Rate display screen.

STEP 4: To activate the audible out of zone alarm, press the SET button in any display screen. To turn off the alarm, press the SET button again. Please note, to prevent interference with the wireless signal, the alarm will only sound when there is no speed reading (no incoming data from the fork sensor).

OUT OF ZONE ALARM
The out of zone alarm indicates when your heart rate rises above your target zone upper limit or falls below your target zone lower limit.

An up arrow to the left of the heart rate value indicates your current heart rate is above your preset target zone upper limit.

A down arrow indicates your current heart rate is below your preset target zone lower limit.

An arrow pointing in both directions indicates your current heart rate is within the upper and lower limits of your preset target zone.

To activate the audible out of zone alarm, press the SET button in any display screen. An alarm icon will appear in the display to indicate the alarm is activated.

PLEASE NOTE: To avoid signal interference, the audible alarm will sound only when the computer is not receiving data from the fork sensor (when the front wheel is not moving).

RESET DISPLAY SCREENS
All display screens (except Odometer) are reset simultaneously. Advance to the Auto Ride Timer (AUTOTIME) display screen. Press and hold the SET button for three seconds to reset all display screens to zero.

To reset all display screens including Odometer (TOTALODO) AND reset all programmed settings (including gender, weight, clock and wheel size) you must remove the battery from the computer head. See "Battery Installation."

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 the computer head and fork sensor batteries at the same time.

CHEST TRANSMITTER
To extend the life of the chest transmitter, avoid scratching the transmitter electrodes, or unnecessarily flexing or bending the strap.

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

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

BATTERY INSTALLATION
LOW BATTERY INDICATOR
When the computer head or fork sensor batteries are low, the low battery icon will appear in the display screen. Make a note of any data you wish to record (such as odometer reading or wheel size settings) before replacing the batteries.

1. *Chest Transmitter:* Remove the screws from the battery cover on the back side of the transmitter and remove the cover. Remove the old battery and dispose of properly. Install a new CR2032 battery with the positive (+) pole facing up. Replace the cover and tighten the screws.

2. *Computer Head:* Insert a coin in the battery cover slot on the back side of the computer head and twist counterclockwise to remove. Remove the old battery and dispose of properly. Install a new CR2032 battery with the positive (+) pole facing up. Replace the cover and turn clockwise to tighten.

3. *Fork Sensor:* Insert a coin in the battery cover slot on the back side of the fork sensor and twist counterclockwise to remove. Remove the old battery and dispose of properly. Install a new CR2032 battery with the positive (+) pole facing up. Replace the cover and turn clockwise to tighten.

TROUBLESHOOTING
1. Absent or erratic heart rate
Make sure the chest transmitter strap is properly positioned and sufficiently tight. Adjust the strap side to side or slightly up or down to position it on the center of the chest with the back side of the strap (the electrodes) flat against the skin.

Make sure there is sufficient moisture between the transmitter electrodes and your skin. Re-moisten the transmitter electrodes with water, saliva or a signal enhancing gel.

Accumulated dirt or residue may impair electrical contact between the transmitter and your skin. Make sure the transmitter electrodes are clean.

Make sure the transmitter battery is installed correctly and fully charged. If in doubt, replace the battery with a fresh one.

2. Abnormally high or erratic heart rate
Electromagnetic interference may cause abnormally high or erratic heart rate readings. Common sources of electromagnetic interference include high voltage power lines, motor driven equipment, computers, and other wireless devices. Check your surroundings for possible sources of electromagnetic signals and move away from the source.

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

4. 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.

5. 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 read and record data normally.

6. Absent or erratic speed reading
Check the alignment of the wheel magnet and sensor, and make sure that the space between the magnet and sensor is 5mm or less. Adjust as necessary and re-test.

Wireless cyclocomputers are occasionally affected by electromagnetic interference. Common sources of electromagnetic signals include high voltage power lines, motor driven equipment and other wireless devices. If you experience unusually high speed readings, check your surroundings for possible sources of electromagnetic signals and move away from the source.

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

SPECIFICATIONS
Auto Ride Timer: 9 hours, 59 minutes, 59 seconds
Current Speed: Up to 62mph (99.9kmh)
Average Speed: Up to 62mph (99.9kmh)
Maximum Speed: Up to 62mph (99.9kmh)
Trip Distance: Up to 600 mi. (999.99km)
Odometer: Up to 6200 mi. (9999.9km)
Heart Rate Range: 30 bpm—240 bpm
Heart Rate Accuracy: +/- 1 bpm
Calories Burned: Up to 9999 Kcal