BONTRAGER

NODE 1.1 & NODE 2.1

Complete Instructions.

ENGLISH

About This Manual

This is the complete manual for your NODE computer. It explains how to install your NODE computer and complete the setup (programming). It includes riding safety. It also shows how to access the features of your NODE computer and to view and record your ride data. If you need additional information, visit your Bontrager dealer or visit us online at www.bontrager.com.

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Screen Terms

The following abbreviations appear on the screen of the Node computer.

Abbreviation	Meaning
ALT	Altitude
AVG	Average
BIKE	Bicycles, including bike1 and bike 2
CAD	Cadence
CAL	Calorie
CLOCK	Clock
CUR	Current, or now
DIST	Distance
F	Female
GRADE	Grade
HR	Heart Rate
KG	Kilogram
LB	Pound
M	Male
MAX	Maximum
MIN	Minimum
ODO	Odometer
OFF	Off
ON	On
PWR	Power
TEMP	Temperature
TIME	Time

SAFETY

When riding your bicycle, do not stare at the computer for a long time (Figure 1). If you do not watch the road, you could hit an obstacle, which might cause you to lose control and fall.

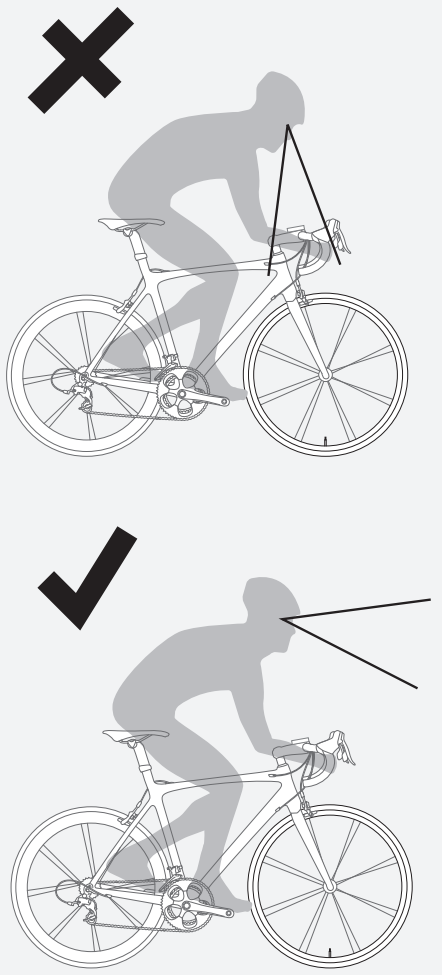


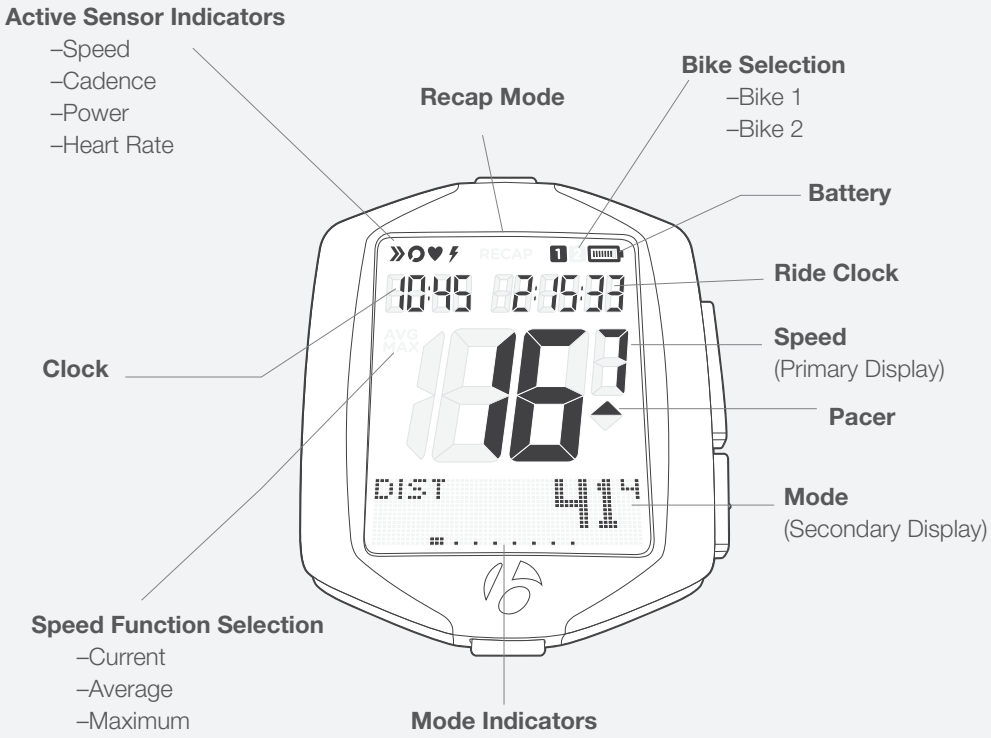
Figure 1. Do Not Stare at Computer for Long Periods of Time.

BASIC INFORMATION

This section describes the NODE display, the terms used in this manual, and the working modes. This is background information to help you understand the other sections of the manual. However, you will not see any of the screen elements until you have installed the computer.

Display (screen)

There are four regions of data on the NODE screen:



Computer status

The uppermost section of the NODE screen shows the status of connected sensors, mode, bike selection, and battery level.

Time and Ride Clock

The second section of the NODE screen shows the time of day (either 12-hour or 24-hour) and the Ride Clock, which shows the time the computer has been running on the current trip.

Speed

The NODE always shows Speed as the biggest numbers in the middle of the display.

Secondary display

The lower part of the display shows the secondary functions.

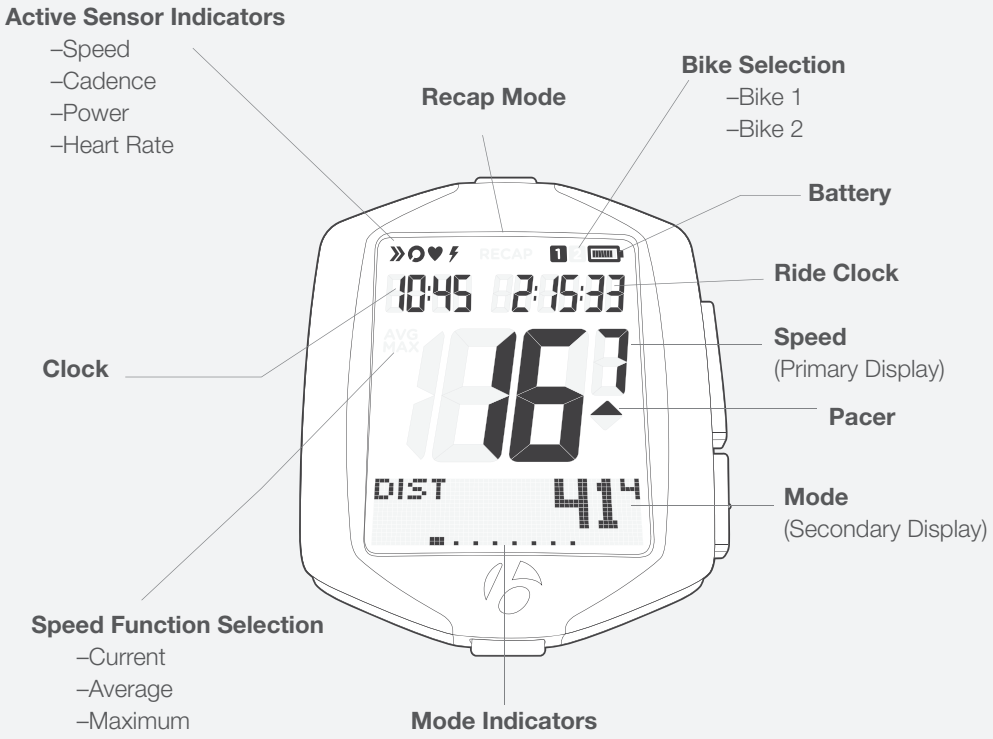
When set to Dual View, your computer shows two secondary functions at the same time. See the section ‘Setting the Dual View’ in the Manage section.

Function list

The NODE 1.1 and NODE 2.1 have different function menus.

	NODE 1.1	NODE 2.1
Distance	X	X
Dual View	X	X
Cadence	X	X
Heart rate	X	X
Power	X	X
Grade		X
Altitude		X
Temperature		X

You can switch most of the sensors to Off or On. If a sensor is switched to Off, its function does not appear when you browse functions.



Buttons

The NODE has four buttons (Figure 7). The actions for buttons are described in the table below. For simplicity, these are the abbreviations of button names:

T is Top
B is Bottom
s1 is Side 1
s2 is Side 2

Browse	Press and repeat to switch through a list of values or screen elements.
Hold	Press a button continuously for about three seconds.
Press	Push a button once, briefly.

Memory

The NODE has a Trip memory and a Total (accumulated) memory.

Trip data

- Cadence AVG and MAX
- Distance
- Heart Rate AVG, MIN, and MAX; plus Zones 1 through 5
- Power AVG, MIN, and MAX
- Speed AVG and MAX
- Altitude (ALT), +, –, and Grade (%) AVG and MAX

Erasing trip data: Trip Restart

The Trip data can be erased (set to 0) before each ride (Figure 8): hold s1 for three seconds. Resetting the Trip memory does not affect the Total memory.

Accumulated data (Total memory)

- Total distance
- Total altitude gain

Erasing total memory: Reset

You can set all values in the memory to 0 (zero) and erase all settings. See page 50.

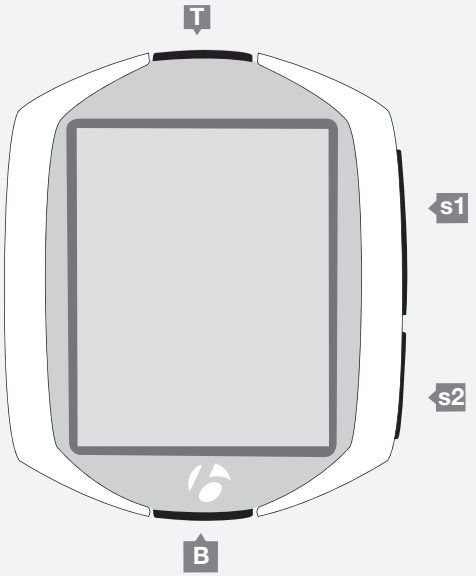


Figure 7. Names of Buttons.

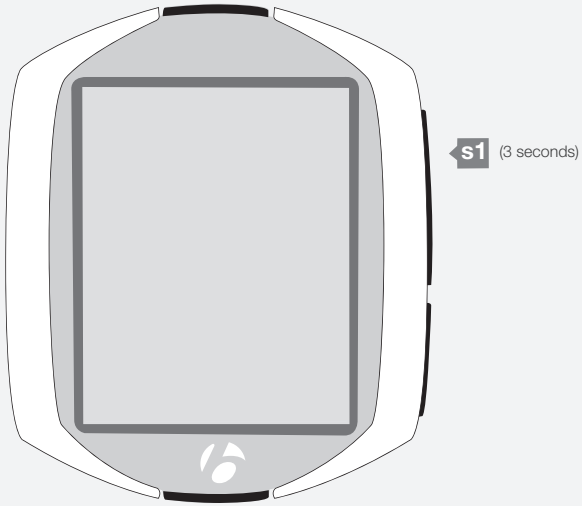


Figure 8. Erase Trip Data.

Modes

The NODE computer has five modes:

Setup

This mode allows you to ‘program’ the computer, setting your preferences for language, distance units, time, and odometer.

Ride

Use the Ride mode (Figure 9) when riding. It shows displays of the information gathered by the computer. This information can be the current data: your current speed, the current temperature, or data from other functions. For some functions the NODE can display your average, total, or minimum/maximum data. You can learn more about each of these functions in the section that covers functions.

Recap

When you have finished a ride or just want to see your data, you can view the computed data in the Recap mode (Figure 10).

Manage

This mode allows you to revise the Setup or perform advanced settings.

Sleep (Standby)

If the sensors do not send a signal to the NODE for 20 minutes, the computer goes into Standby to conserve battery power. In Standby, the screen will display two dashes (— —). After an additional 10 minutes, the NODE switches to Off.

NOTE: To extend battery life during long periods of non-use, remove the computer from its computer base. This deactivates the Auto Start feature.

There are two methods for waking the computer:

- Press any button
- Autostart: spin the wheel to make the wheel sensor send a signal



Figure 9. Ride Mode.

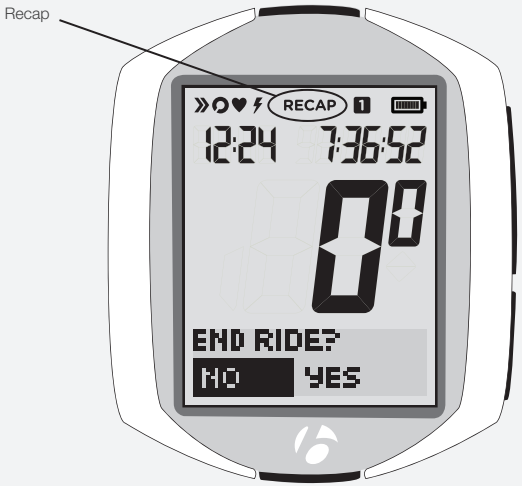


Figure 10. Recap Mode.

INSTALLATION

Getting your Node up and running is easy and takes only about 10 minutes.

Process Overview

It will help you through the process if you take the time to completely read the installation section before you start. For example, you cannot complete the setup process (#3 below) if the sensor cannot read the magnet in the wheel (#1).

Here are the steps in the process (explained more fully in the following pages):

1. Install the speed sensor and wheel magnet (see the instructions packaged with the sensor). Install optional accessory sensors.
2. Attach the computer to the handlebar or stem.
3. Setup your preferences for time, miles, etc.
4. “Pair” the computer (make the computer recognize and remember the radio signal from the sensor).

Sensors

Your NODE is not packaged with sensors. You can purchase sensors for the NODE from your Bontrager dealer. For installation instructions for a sensor, see those packaged with the sensor.

The NODE can read up to four signals or sensors:

- Speed
- Cadence
- Heart rate
- Power
- Combo (speed and cadence)

You can add sensors at any time. However, additional setup work is required each time you add a sensor.

Tools Required

- Screwdriver, small phillips type
- Coin

Parts List

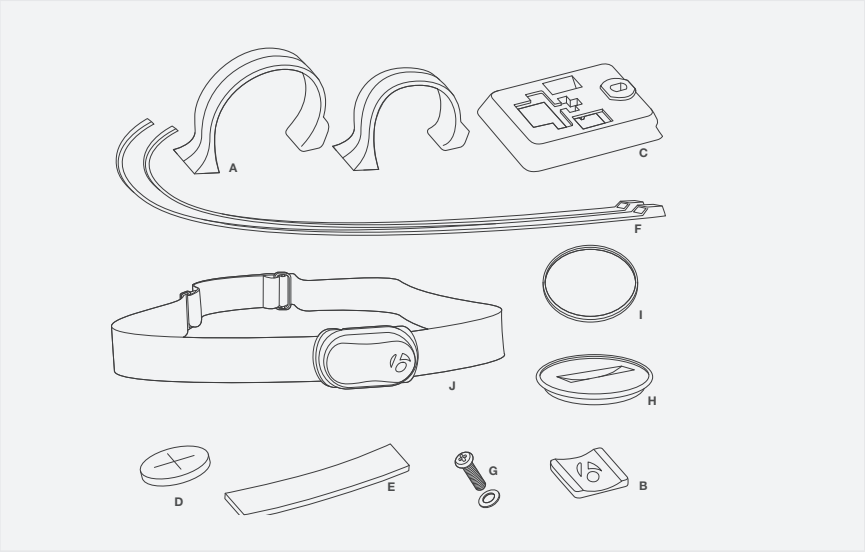


Figure 11. Parts Included with Your Node Computer.

A. Handlebar clamp
B. Rubber pad
C. Brackets
D. Battery
E. Rubber shim
F. Zip ties
G. Screw & washer
H. Battery cover
I. Rubber o-ring
J. Heart rate strap (NODE 2.1 only)

Attaching the Computer

You can choose to attach the computer to the handlebar or the stem.

On the handlebar, consider your preference for left and right, and your access to the buttons on the computer. On the stem, the computer is in the center.

Handlebars are generally round with only one or two sizes, while stems come in many shapes and sizes. Because stems have so much variation, one or two clamp designs cannot accommodate them all. Therefore, mounting to the stem requires zipties.

To Attach to the Handlebar

1. Determine the diameter of your handlebar (25.4 mm, 26.0 mm, or 31.8 mm).
2. Insert the correct handlebar clamp into the computer base (Figure 12).
3. Slide the head of the handlebar clamp to the end of the slot in the computer base.
4. Insert the rubber pad with logo into the back of the computer base (Figure 13).
5. With the screw hole toward the back of the bike, wrap the handlebar clamp around the handlebar.
6. Insert the screw and tighten, just until the computer base no longer rotates on the handlebar (Figure 14). Do not overtighten.
7. Slide the computer into the computer base (Figure 15).

To Attach to the Stem

1. Insert the rubber pad with logo into the back of the computer base (Figure 16).
2. Position the computer base on the stem with the screw hole toward the back of the bike (Figure 17).
3. Secure the computer base to the stem using zip-ties.
4. Slide the computer into the computer base (Figure 15).

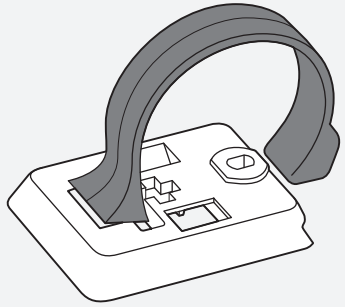


Figure 12. Clasp in Back of Computer Base.

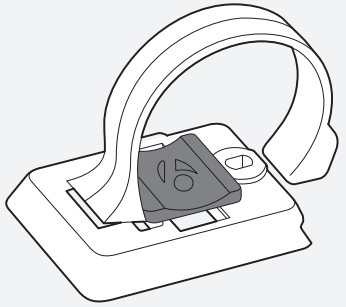


Figure 13. Pad Inserted in Computer Base.

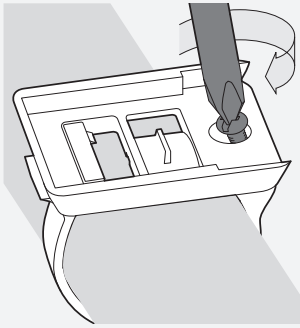


Figure 14. Tighten Screw.

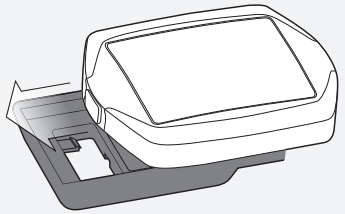


Figure 15. Slide Computer into Computer Base.

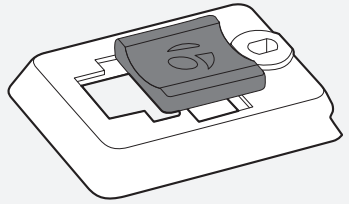


Figure 16. Pad Inserted in Computer Base.

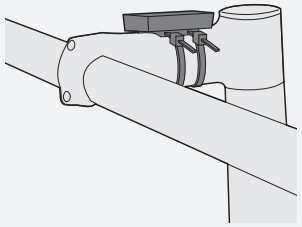


Figure 17. Base on Stem.

Setup (Initial Programming)

The NODE is shipped with the battery outside the computer so that the battery is fresh. When you install the battery, your NODE will automatically proceed through this Setup, including the Pairing process and Connecting procedures. The automatic Setup also happens when you replace the battery or perform the Reset procedure. Read this entire page before proceeding.

Before you start Setup

Before starting the Setup, complete the installation of the computer bracket, sensor, and magnet (for a sensor, see the installation instructions that are packaged with the sensor). Install the battery and place the NODE within 5 feet (1.5 m) of the sensor, and be ready to activate the sensor as explained in the next section.

Pairing Sensors

“Pairing” is a process used by the computer to identify the signal from a sensor (Figure 18). This process happens at the end of the initial setup. When a sensor is paired, its icon appears on the screen (Figure 19).

For the computer to find and pair to the sensor, the sensor must send a signal. The speed sensor only sends a signal when the wheel rotates.

Installing the Battery

1. Insert the supplied battery with the ‘+’ facing up or out.

2. Attach the battery cover. Turn the cover clockwise with a coin.



Figure 18. Pairing onto Radio Signals to Identify Sensors.

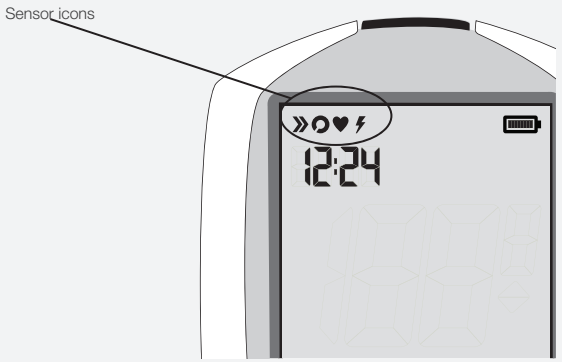
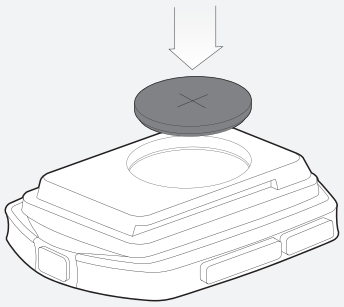
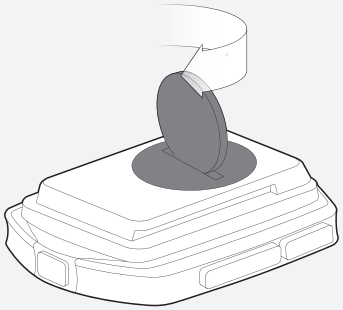


Figure 19. Icons Indicate Sensors that are Connected.



1.



2.

Basic Setup

In this procedure, you will set your preference for a function, then save those preferences. When you save one function, the setup program proceeds to the next function.

1. Wake the computer: install the battery, push any button, or make the speed sensor send a signal.
2. To change the language (choose *Deutsch, English, Espanol,* or *Francais*), press T or B.

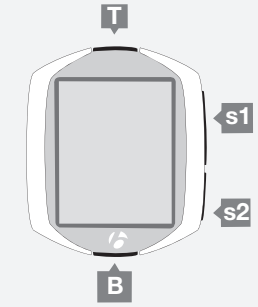
   To save the Language and proceed to the Clock (clock type) function, press s1.

3. The clock shows the time of day. To change the type of clock (choose *12HR* or *24HR*), press s2.

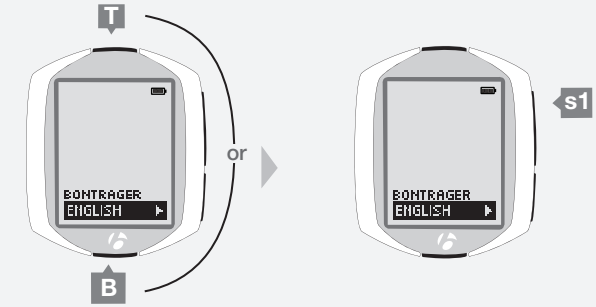
   To save the Clock and proceed to the Set Clock (set time) function, press s1.

4. To change the hours, press T or B.

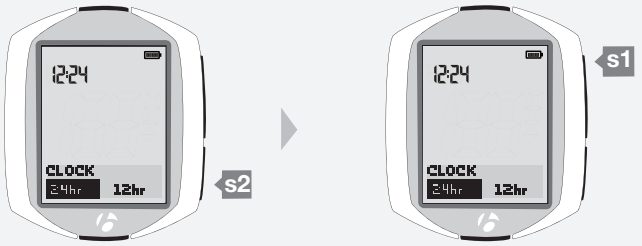
   To set the hours and proceed to change the minutes, press s2.



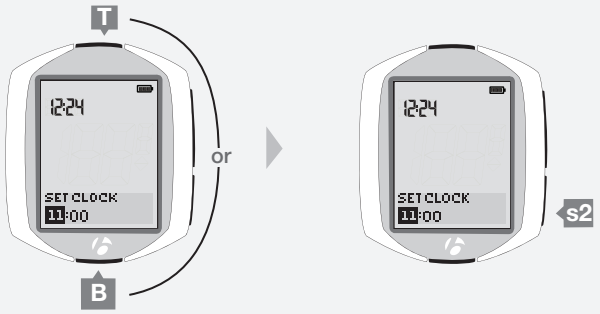
1.



2.



3.

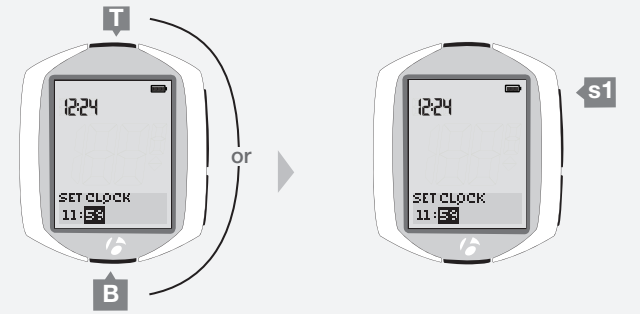


4.

5. To the change the minutes, press T or B.

   If desired, you can go back to the hours in the previous step by pressing s2.

   To save the Set Clock (time) and proceed to the Wheel (wheel size) function, press s1.



5.

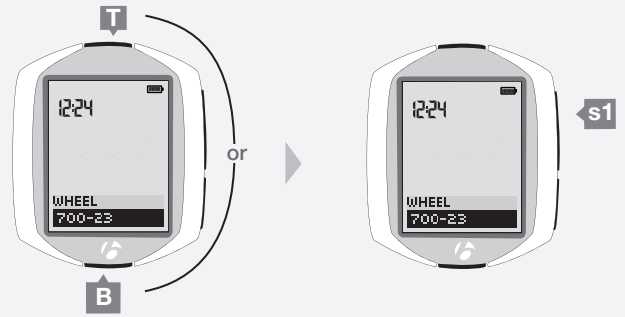
6. To change the wheel size (choose from the Wheel size menu on the right), press T or B.

   To set a custom wheel size, see page 27.

   To save the Wheel and proceed to the Distance (units) function, press s1.

Wheel size menu

- *700 x 20*
- *700 x 23*
- *700 x 25*
- *700 x 28*
- *700 x 32*
- *700 x 35*
- *700 x 38*
- *26 x 1.5*
- *26 x 1.9*
- *26 x 2.0*
- *26 x 2.1*
- *26 x 2.2*
- *Custom*



6.

7. To change units (choose *KM* or *MILES*), press s2.

   To save the Units and proceed to the Odometer function, press s1.

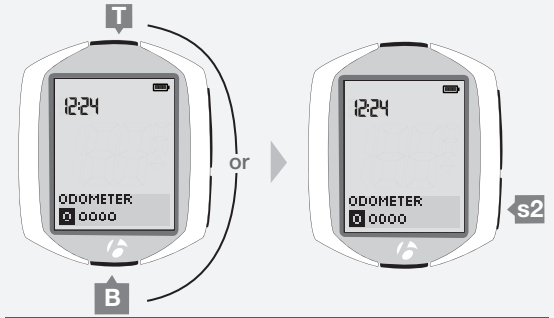


7.

8. The odometer shows your accumulated distance.

You can skip this step and leave the value at 00000 by pressing s1, and then go to step 10.

To change the highlighted number, press T or B.
To select a value and proceed to the next digit, press s2.



8.

9. Repeat for each of the other four digits:
To change the highlighted number, press T or B.
To select a value and proceed to the next digit, press s2.

If desired, you can go back to the first digit (and then the other digits) by pressing s2.

To save the Odometer and proceed to the Pairing Process, press s1.



9.

10. After saving the odometer settings, the Node goes into the Pairing Process. For the Node to Pair to a sensor signal, you must activate the sensor so that it sends a signal:

- Speed: spin the wheel
- Cadence: rotate the crankarm
- Heart rate: wear the chest strap
- Power: rotate the crankarm (or, for a hub sensor, turn the wheel)

The next page explains the display during pairing.

11. When the screen shows “Setup Complete,” press s1 to save all your settings and switch to the Ride mode.



10.

The display during Pairing

During the Pairing process, the display shows PAIRING SENSORS and the receiving icon flashes in the lower right corner (Figure 20). When the computer finds the signal and pairs to it, the icon for the sensor flashes three times and it is then added to the display. Figure 21 shows the speed sensor is paired. The Pairing process continues for one minute, or until you press any button to end it. The display then shows SENSORS FOUND and a number, which is the number of sensors to which it has paired.

When the pairing process is finished, the display shows SETUP COMPLETE (Figure 22). Press the upper side button, s1, and then the computer shows the DIST display and is in Ride Mode, ready for you to ride (Figure 23).



Figure 20. Pairing Sensors.



Figure 21. Sensors Found.



Figure 22. Setup Complete.

When the NODE changes to Ride mode and shows the Speed display, it is ready for use.

If the speed icon does not appear after the Pairing process, do one of the following:

- Perform the Force Pair procedure
- Press the Reset button to start over (erase all setup, see the complete NODE manual)
- See the Troubleshooting section.



Figure 23. Ride Mode.

Force Pair

If the NODE fails to Pair with a sensor, or you add a sensor after the initial setup, you can force the Pairing process:

1. In Ride mode, hold s1 and s2 for three seconds and then make each sensor send a signal.



1.

STARTING A RIDE

This section explains how to start a new ride. To start a ride, you must connect the sensor and then either continue your previous ride or start a new ride.

Connecting the Sensor

Each time you wake the NODE or switch it to On, it automatically tries to communicate with the sensor. This is called “connecting.” For the NODE to connect to the speed sensor, the wheel must turn.

The display during Connecting

During the Connecting process, the display shows CONNECTING SENSORS and the lower right corner of the display flashes the ‘receiving’ icon (Figure 24). This process can take as long as a minute to complete. The NODE shows the connected sensor in the upper left corner of the display (Figure 25).

After connecting, the display shows NEW RIDE?

Force Connect

If your NODE did not connect correctly, you can “Force Connect,” making the NODE repeat the connecting procedure. In Ride mode, hold s2 for three seconds and then make the sensor send a signal (Figure 26).

NEW RIDE?

1. To change the value (choose *YES* or *NO*), press s2.

2. To select, press s1.

	YES	NO
Trip data	Erased	Saved
Trip Clock	0:00:00	Starts from previous time
Backlight	Switches to On for 5 seconds	
	Switches to RIDE mode	Switches to RIDE mode



Figure 24. Connecting to Sensors.

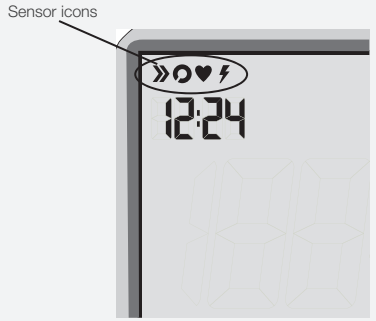
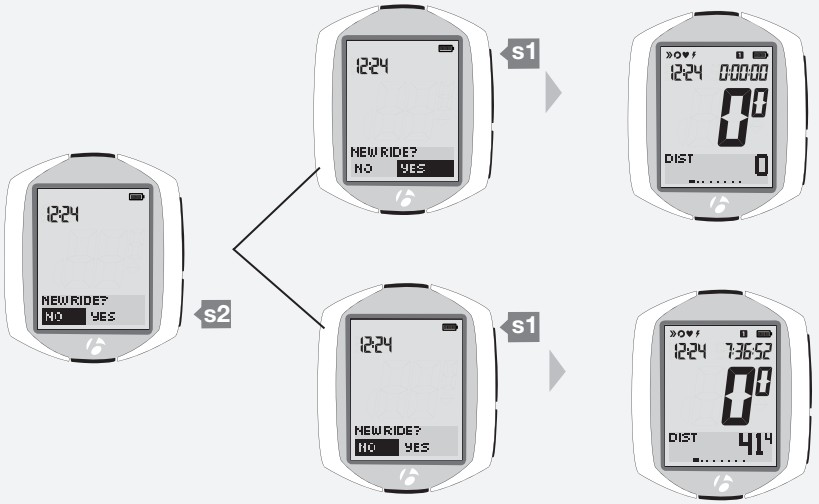


Figure 25. Connected Sensors.



Figure 26. Force Connect.



1. 2.

Main Ride Functions

This section explains how to access and see the displays of the NODE computer. The information is arranged in the order in which the displays appear as you browse through the functions.

To see these functions, you must first connect the sensors as discussed in *Starting a Ride* on page 13. If a sensor is not connected, that function will be skipped. In other words, if the heart rate sensor is not connected, the screen for heart rate will not appear after cadence. Instead you will see the screen for the function of the next connected sensor.

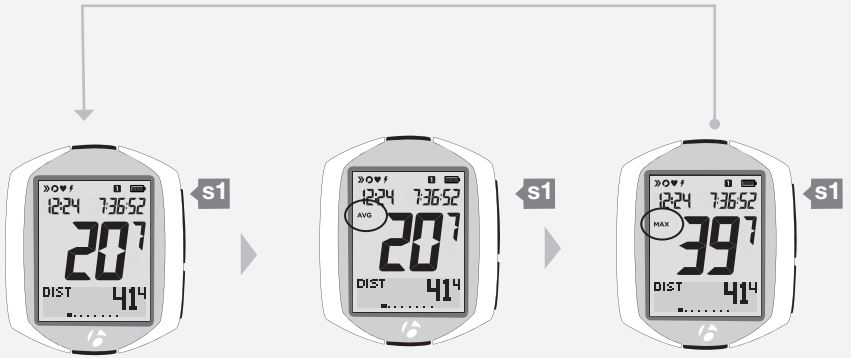
Note: The NODE 2.1 has additional functions not available on the NODE 1.1. When viewing the NODE 1.1 secondary display, the browse sequence goes from its last connected sensor function (Speed, Cadence, Heart Rate, or Power) to Distance.

Speed

In Ride mode, the computer always shows Speed as the biggest numbers in the middle of the display. Speed is a measurement of how fast your bike is moving.

1. To switch from current speed (no letters) to average speed (AVG) and then to maximum speed (MAX), browse s1.

   The lower button, s2, switches the functions in the lower, secondary display. The secondary display is explained on the next page.



1.

Pacer

The pacer arrow (Figure 27) tells you if your current speed is faster or slower than your average speed. If the arrow is pointing up, you are going faster than your average speed.



Figure 27. Pacer.

Secondary display

The lower part of the display (Figure 28) shows the secondary functions.

If a sensor is switched to Off, the computer will not show the display for the matching function. Some secondary functions are only available on the NODE 2.1.

Function	NODE 1.1	NODE 2.1
Distance	X	X
Dual View	X	X
Cadence	X	X
Heart rate	X	X
Power	X	X
Grade		X
Altitude		X
Temperature		X

1. To see each secondary function, browse s2.

The following sections explain each function and show its features.



Figure 28. Secondary Display



1.

DIST

Distance

As you ride, the NODE measures how far you have gone, shown as Distance. This is the Trip distance, the distance you have ridden during this ride.

1. To see your total accumulated distance (DIST ODO), browse B.



1.

Dual View

Your computer can show two secondary functions at the same time (Figure 29). This is called Dual View. To make your computer do this, see the section *Setup Dual View* on pages 42-43.

1. To switch the secondary display from Distance to Dual View, press s2.



Figure 29. Dual View.

1.

CAD

Cadence

Cadence is how fast you are pedaling, counted as the number of complete revolutions of the crankset in a minute.

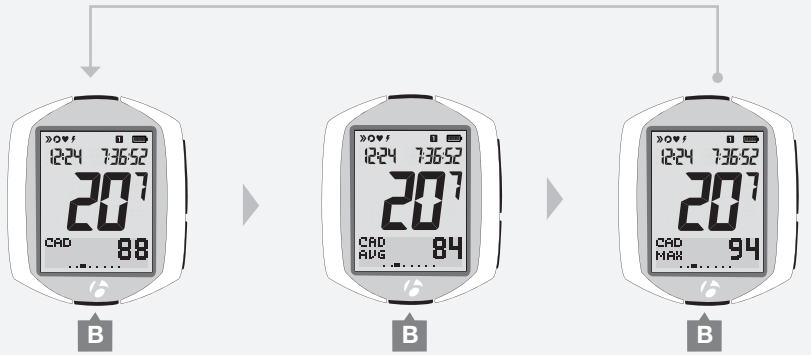
1. To switch the secondary display from Dual View to Cadence, press s2.

   If the cadence sensor is not connected and switched to On, the display will switch to the next available function.

2. To switch from current cadence (CAD) to average cadence (CAD AVG) to maximum cadence (CAD MAX), browse B.



1.



2.

HR

Heart Rate

Heart rate is a measurement of the number of times your heart beats in a minute (BPM).

Sensor

The sensor for heart rate is the chest strap. The chest strap must be ANT+ compatible and correctly located on your chest (Figure 30) and against your skin. To keep the chest strap in position, it should fit snugly. Slide the buckles to adjust the length of the strap. The sensors of the chest strap will work better if the contact area is slightly moist.

Heart Rate Zones

The NODE measures the length of time you spend in each of five heart rate zones. This is part of the Trip data. The current zone is the number displayed under the “HR” on the display.

Each heart rate zone from 1 to 5 is based on your maximum heart rate setting (Table 1). As an example, if you set your maximum heart rate at 160 BPM, Zone 5 would be 90 to 100% of 160 BPM, or 144-160.
Zone 1 would then be 50 to 60%, or 80-96.

To set your maximum heart rate, see page 35.

1. To switch the secondary display from Cadence to Heart Rate, press s2.
   If the heart rate sensor is not connected and switched to On, the display will switch to the next available function.

2. To see other heart rate functions, browse B:
   - Average HR AVG
   - Maximum HR MAX
   - Calorie burn HR CAL
   - Time in Zone 1 HR 1
   - Time in Zone 2 HR 2
   - Time in Zone 3 HR 3
   - Time in Zone 4 HR 4
   - Time in Zone 5 HR 5

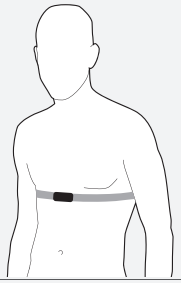
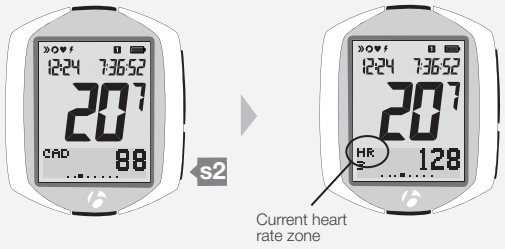


Figure 30. Location for Chest Strap.

Table 1. Heart Rate Zones.

Zone	% of maximum heart rate setting
1	50-60
2	60-70
3	70-80
4	80-90
5	90-100



1.



2.

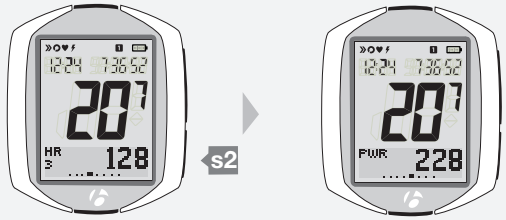
PWR

Power

Power is a measurement of the amount of work you are doing, or the horsepower. The metric equivalent of horsepower is joules.

1. To switch the secondary display from Heart Rate to Power, press s2.
   If the power sensor is not connected and switched to On, the display will switch to the next available function.
2. To switch from current power (PWR) to average power (PWR AVG) to maximum power (PWR MAX), browse B.

To calibrate the power, see the Manage mode, page 31.



1.



2.

NODE 1.1: continue browsing

1. For the NODE 1.1, you can now return to Distance in the secondary display. Press s2.



1.

NODE 2.1: additional features

The NODE 2.1 has additional features. Go to the next pages to read about these features:

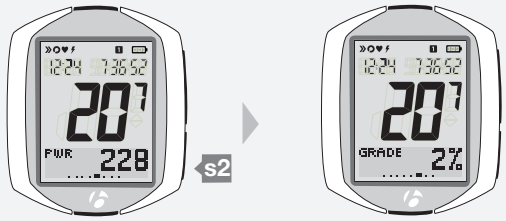
- Grade
- Altitude
- Temperature

GRADE

Grade

Grade is a measurement of the steepness of a climb expressed in percent. This represents the number of feet (or meters) you climb for each 100 feet you travel in a horizontal direction.

1. To switch the secondary display from Power to Grade, press s2.
2. To switch from current grade (GRADE) to average grade (GRADE AVG) to maximum grade (GRADE MAX), browse B.



1.



2.

ALT

Altitude

Altitude is the height in feet (or meters) above sea level.

The NODE calculates altitude based on air pressure. Because air pressure at a given location varies with the weather, you may want to reset the altitude for the most accuracy. To reset a known altitude, see page 30.

The NODE adds total (accumulated) altitude values from *bike1* to those of *bike2*.

1. To switch the secondary display from Grade to Altitude, press s2.
2. To switch from current altitude (ALT) to altitude gain (ALT +) to altitude loss (ALT -) to accumulated gain (+∑) to accumulated loss (-∑) to maximum altitude (ALT MAX), browse B.



1.

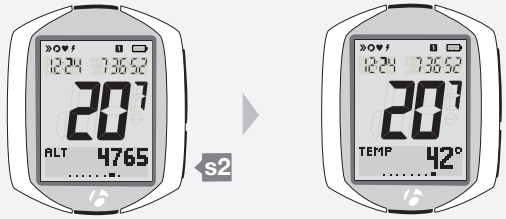


2.

TEMP

Temperature

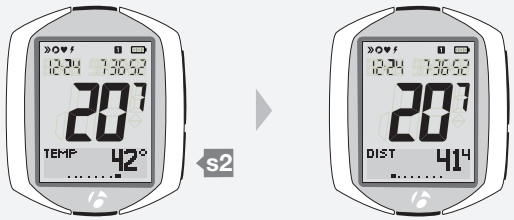
1. To switch the secondary display from Altitude to Temperature, press s2.



1.

Continue browsing

1. You can now return to Distance in the secondary display. Press s2.



1.

Backlight

The NODE 2.1 has a screen backlight. The backlight provides a light source behind the screen so that the numbers are more visible.

To Switch the Backlight to ON

1. In Ride mode, press T.

   To save battery life, the backlight automatically switches to Off after five seconds.



1.

RECAP (Review Trip Data)

You can review all current data in the memory of the computer, including average and maximum values.

Switch to RECAP mode

1. Hold T for three seconds.
   The computer shows the END RIDE? display.
2. To switch the value (choose *YES* or *NO*), press s2.

	YES	NO
	Stops recording trip data Switches to RECAP mode	Switches to RIDE mode

To save your choice and proceed to the mode you chose, press s1.

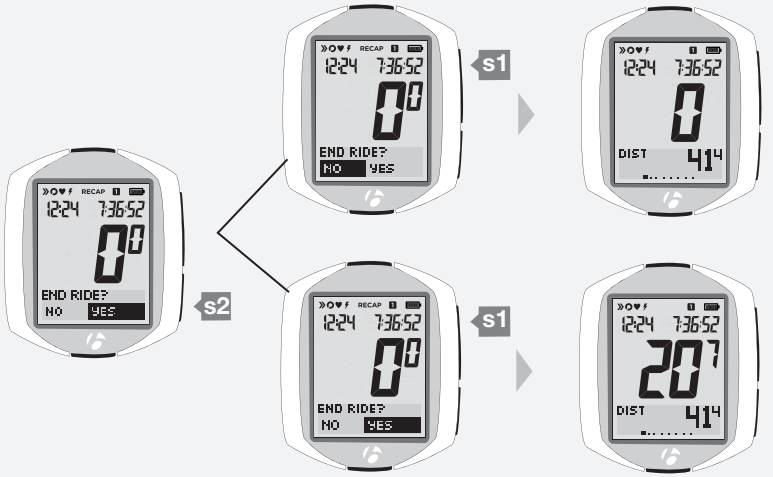
Switch to RIDE mode (from any Recap function)

1. Hold T for three seconds. The computer shows the *NEW RIDE?* display.
2. To switch the value (choose *YES* or *NO*), press s2.
   If you select YES, all trip data will be erased. See page 13.

To save your choice and proceed to the Ride mode, press s1.



1.



2.

See Recap (Trip data)

1. To see the functions in the secondary display, browse s2.
2. To see the data for a function, browse B.

Functions Press s2	Data Press B						
Cadence	AVG	MAX					
Heart Rate	MAX	CAL	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
Power	AVG	MAX					
Grade	AVG	MAX					
Altitude	ALT+	ALT-	MAX				
Distance							



1.



2.

RECAP Mode

MANAGE (Optional Programming)

In this mode, you can change the setup (programming) of your computer: either to change existing settings, or to add advanced features.

Switch to Manage mode

1. Hold B for three seconds.
   The computer shows the BIKE display
2. To go to a function (see ordered list below), browse S1. To perform a task, see the following pages.

Function	Tasks
Bike	Choose bike1 or bike 2
Wheel size	Choose from a list, or select Custom
Altitude	Set current altitude
Cadence	Switch sensor to Off or On
Power	Switch sensor to Off or On Calibrate
Heart Rate	Switch sensor to Off or On Set minimum and maximum heart rate Choose gender Set body weight
Temperature	Switch to Off or On
Dual View	Switch to Off or On Select functions (cadence, distance, temperature, heart rate, power)
Clock type	Choose 12hr or 24hr
Clock	Set the time of day
Distance units	Choose miles or kilometers
Odometer	Set accumulated distance
Language	Choose English, Francais, or Deutsch

Switch to RIDE mode (from any Manage function)

1. Hold B for three seconds.



1.



2.

Bike Selection

Setup second bike

1. Enter MANAGE mode. Hold B for three seconds.
   The Manage mode starts with the Bike Selection display.
2. To change the selection (choose *bike1* or *bike2*), press s2.

   To save the Bike and proceed to the Wheel Size function, press s1.
3. Choose one of the following:
   - Follow the instructions on the next page to setup the wheel size.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.



1. 2.



1. 2.

Switch bike1 to bike2

If you have already setup bike1 and bike2 but want to choose the other bike, follow these steps.

1. Enter MANAGE mode. Hold B for three seconds.
   The computer shows the BIKE display.
2. To change the selection (choose *bike1* or *bike2*), press s2.

   To save the Bike and proceed to the Wheel Size function, press s1.
3. To return to RIDE mode, hold B for three seconds.



3.

Wheel Size

Setup

If the NODE is currently showing WHEEL, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.
   The Manage mode starts with the Bike Selection display.
2. Browse S1 to wheel size.
   Make sure you are setting the wheel size for the correct Bike Selection: bike1 or bike2.
3. To change the wheel size (choose from the Wheel size menu on the right), press T or B.
   To set a custom wheel size, choose and select Custom, then go to the section lower on this page.

   To save your wheel size selection, press S1.
   The display switches to Altitude in Manage mode.
4. Choose one of the following:
   - Follow the instructions to manage Altitude in the next section.
   - To see other functions, browse S1.
   - To return to RIDE mode, hold B for three seconds.

Wheel size menu

700 x 20
700 x 23
700 x 25
700 x 28
700 x 32
700 x 35
700 x 38
26 x 1.5
26 x 1.9
26 x 2.0
26 x 2.1
26 x 2.2
Custom

Custom wheel size

To setup a custom wheel size, measure the bike's rollout (Figure 31, the distance the bike travels in exactly one revolution of the wheel), then setup the computer.

To measure rollout

Tools required: helper, pen, and measuring tape

1. With the valve stem of the wheel directly over the floor, sit on the bike.
2. Have your helper mark the floor at the valve stem.
3. Roll the bike forward one revolution of the wheel, so that the valve stem is again directly over the floor.
4. Mark the new location of the valve stem.
5. Measure the distance between the marks. If needed, convert to millimeters. The result is your custom wheel size.



1. 2.



3.

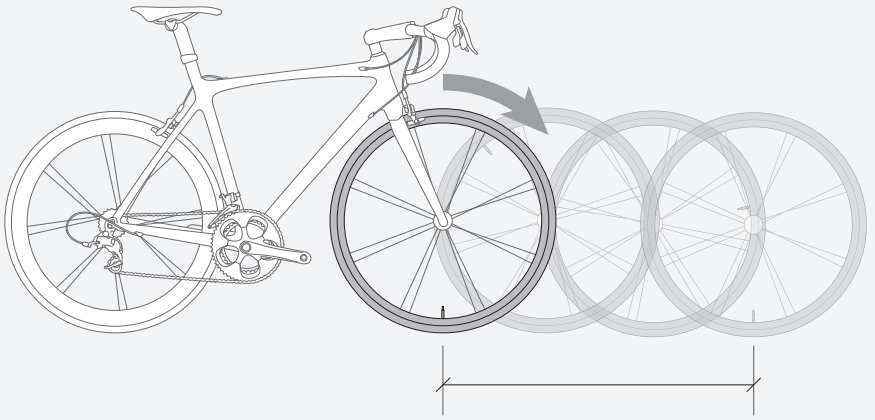


Figure 31. Rollout

To setup the computer with a custom wheel size

If the NODE is currently showing WHEEL, start with Step 3.

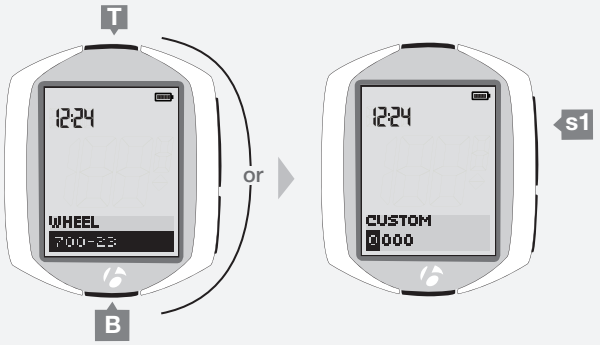
1. Enter MANAGE mode. Hold B for three seconds.
   The Manage mode starts with the Bike Selection display.
2. Browse s1 to wheel size.



1. 2.

3. Browse T or B to Custom.

   To save Custom choice and proceed to setting the custom value, press s1.
   The display switches to Custom with the first digit highlighted.

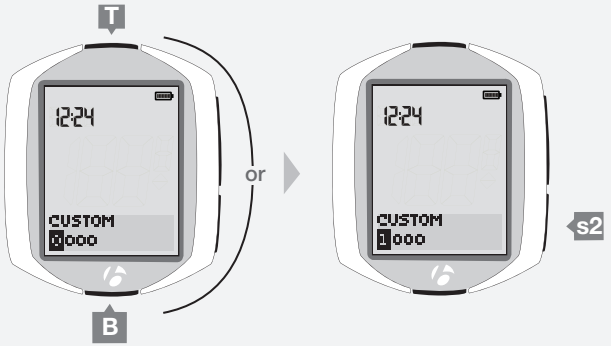


3.

4. To change the number, browse T or B.

   To select the number, press s2.
   After you select a number, the next digit is highlighted.

5. Repeat Step 4 for the other three digits.



4 and 5.

MANAGE Mode

6. To save your custom wheel size settings, press s1.
   The display switches to Altitude in Manage mode.



6.

7. Choose one of the following:
   - Follow the instructions to manage Altitude on the next page.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.

MANAGE Mode

Altitude

Setup

If the NODE is currently showing ALTITUDE, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.
   The Manage mode starts with the Bike Selection display.

2. Browse s1 to altitude.

3. To change the first digit, browse T or B.

   To select a number, press s2.
   After you select a number, the next digit is highlighted.

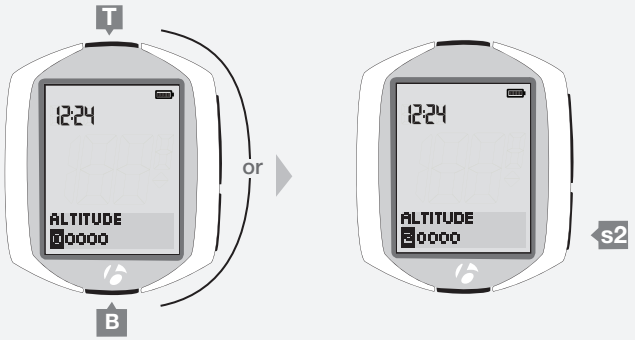
4. Repeat step 3 for the other four digits.

5. To save your altitude settings, press s1.
   The display switches to Cadence in Manage mode.

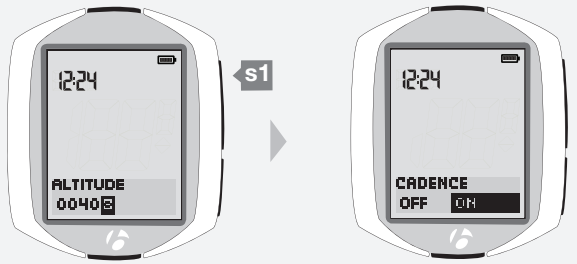
6. Choose one of the following:
   - To return to RIDE mode, hold B for three seconds.
   - Follow the instructions to manage Cadence on the next page.
   - To browse functions in Manage mode, press s1.



1. 2.



3 and 4.



5.

Cadence

Switch sensor to Off or On

If the NODE is currently showing CADENCE, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to cadence.

3. To change to Off or On, press s2.

   To save your choice and proceed to the Power function, press s1.

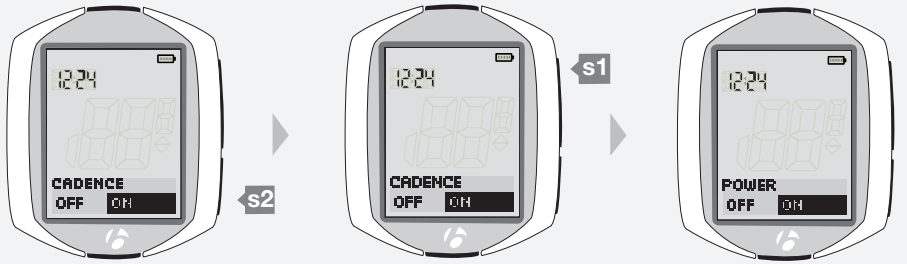
   The NODE switches to Power in Manage mode.

4. Choose one of the following:

   - Follow the instructions to manage Power on the next page.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.



1. 2.



3.

Power

Switch sensor to Off or On

If the NODE is currently showing POWER, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to power.

3. To change to Off or On, press s2.

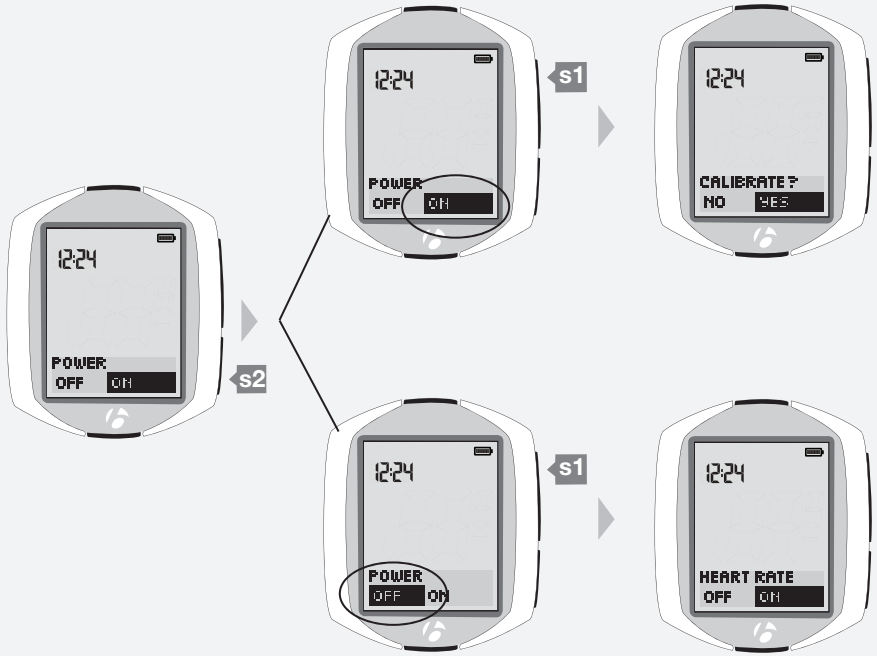
   To save your choice and proceed to the manage function for your choice, press s1.

4. Choose one of the following:

   - Follow the instructions to manage Power Calibration on page 33.
   - Follow the instructions to manage Heart Rate on page 34.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.



1. 2.



3.

Calibrate

To calibrate, the Power sensor must be turned on, then connected and paired. If the NODE is currently showing CALIBRATE?, start with Step 4.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to power.

3. If needed, change Power to On. Press s2 to change.

   Press s1 to save.

   Hold B for three seconds to return to RIDE mode.

   Perform a Force Pair: hold s1 and s2 for three seconds and make each sensor send a signal.

   Wait for the Force Pair to complete, then repeat step 1 and step 2.

4. If needed, change Calibrate? to Yes. Press s2 to change.

   To save your choice and proceed to the calibration process, press s1. When the “Calibrating Power” shows on the screen, do one of the following:

   For a Powertap power sensor, spin the wheel

   For a SRM power sensor, spin the crankset backwards with no weight on the pedals

   For a Quarq power sensor, do not spin the crank

5. If the calibration fails, the screen reverts to Calibrate? (step 4). Refer to Troubleshooting on page 52.

   If the calibration process passes, the Node goes to the Heart Rate screen. Choose one of the following:

   • Follow the instructions to manage Heart Rate on page 34.
   • To see other functions, browse s1.
   • To return to RIDE mode, hold B for three seconds.



1. 2.



3.



4.

MANAGE Mode

Heart Rate and Calories

Switch sensor to Off or On

If the NODE is currently showing HEART RATE, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to heart rate.

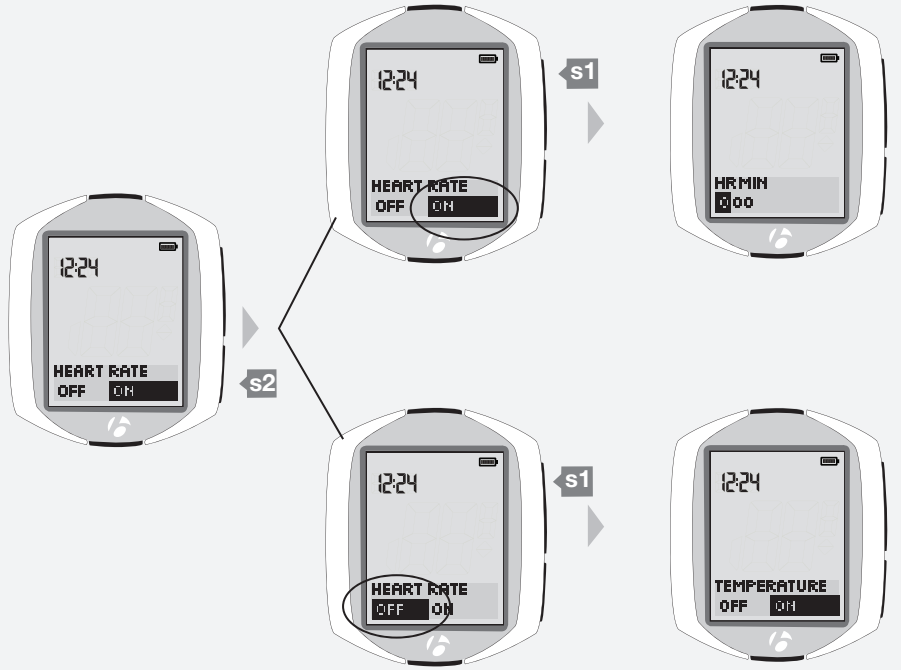


1. 2.

3. To change to Off or On, press s2.

   To save your choice and proceed to the manage function for your choice, press s1.

	ON	OFF
Action	Switches to Heart Rate Minimum / Maximum	Switches to Temperature
Information	Page 35	Page 40



3.

4. Choose one of the following:
   - Follow the instructions to manage heart rate minimum and maximum on page 35.
   - Follow the instructions to manage temperature on page 40.
   - To see other functions, browse s1
   - To return to RIDE mode, hold B for three seconds.

Setup minimum and maximum

If the NODE is currently showing HR MIN, start with Step 4.

1. Enter MANAGE mode. Hold B for three seconds.
   The Manage mode starts with the Bike Selection display.
2. Browse s1 to heart rate.



1. 2.

3. If needed, change Heart Rate to On. Press s2 to change. To save your choice and proceed to the set Heart Rate function, press s1. The first digit is highlighted.

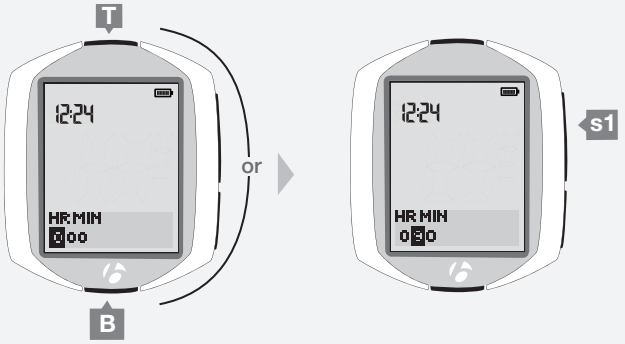


3.

4. To change the highlighted HR MIN number, press T or B.

   To select a number, press s1.
   After you select a number, the next digit is highlighted.

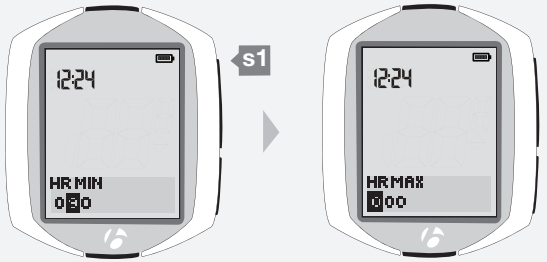
5. Repeat Step 4 for each of the other two digits.



4 and 5.

MANAGE Mode

6. To save the minimum heart rate setting, press S1. The display switches to HR MAX in Manage mode.



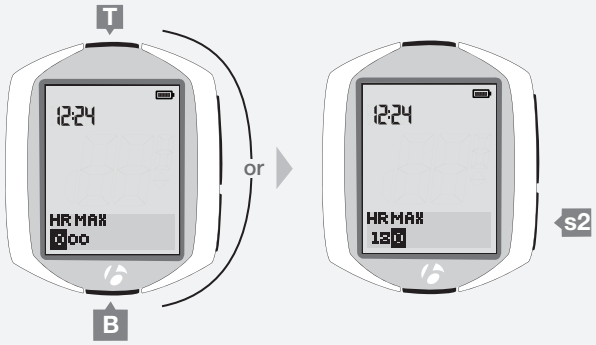
6.

7. To change the highlighted HR MAX number, press T or B.

   To select a number, press S2.

   After you select a number, the next digit is highlighted.

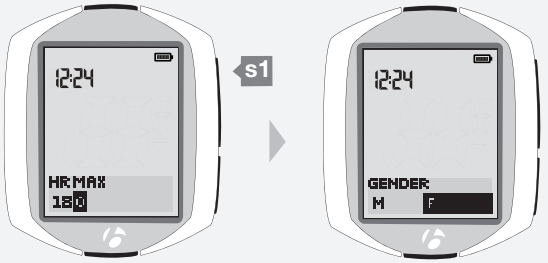
8. Repeat Step 7 for each of the other two digits.



7 and 8.

9. To save the maximum heart rate setting, press S1

   The display switches to Gender in Manage mode.



9.

10. Choose one of the following:

- Follow the instructions to manage Gender on page 37.
- To see other functions, browse S1
- To return to RIDE mode, hold B for three seconds.

Setup gender

Gender is used in calculations of calorie output.

If the NODE display is currently showing Gender, start with Step 5.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to heart rate.

3. If needed, change Heart Rate to On. Press s2 to change.

   To save the your choice and proceed to the Set Gender function, press s1.

4. Browse s1 to gender.

5. To change the gender (choose *M* or *F*), press s2.

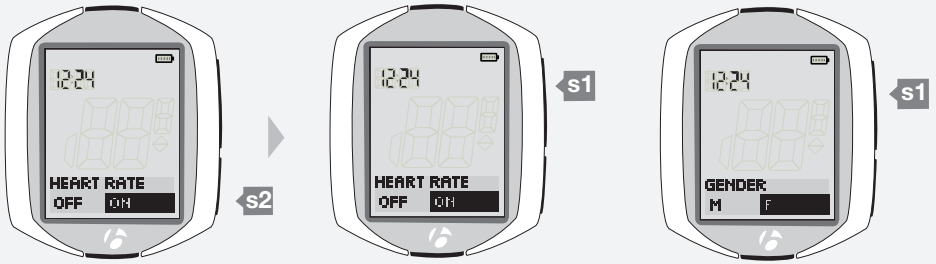
   To save your choice and proceed to the Weight function, press s1.

6. Choose one of the following:

   - Follow the instructions to manage Weight on page 38.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.



1. 2.



3. 4.



5.

MANAGE Mode

Setup body weight

If the NODE display is currently showing Weight, start with Step 5.

1. Enter MANAGE mode. Hold B for three seconds.
   The Manage mode starts with the Bike Selection display.
2. Browse s1 to heart rate.



1. 2.

3. If needed, change Heart Rate to On. Press s2 to change.

   To save your choice and proceed to the Set Weight function, press s1.

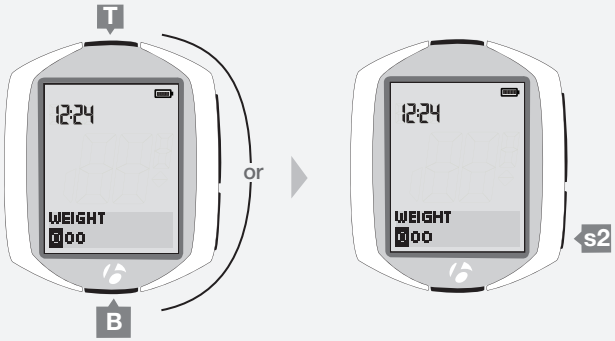
4. Browse s1 to weight.



3. 4.

5. To change the first digit, browse T or B.

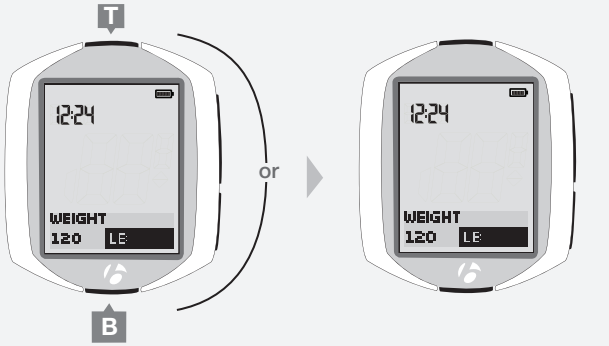
   To select a number, press s2.
   After you select a number, the next digit is highlighted.
6. Repeat Step 5 to select the other two digits.



5 and 6.

MANAGE Mode

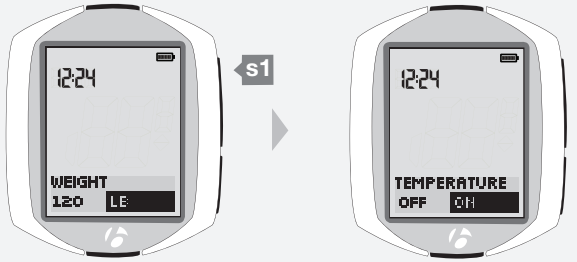
7. To change to your choice of units (choose *LB* or *KG*), browse T or B.



7.

8. To save your weight settings, press S1.

The display switches to Temperature in Manage mode.



8.

9. Choose one of the following:
   - Follow the instructions to manage Temperature on page 40.
   - To see other functions, browse S1.
   - To return to RIDE mode, hold B for three seconds.

Temperature

Switch to Off or On

If the NODE display is currently showing Temperature, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to temperature.

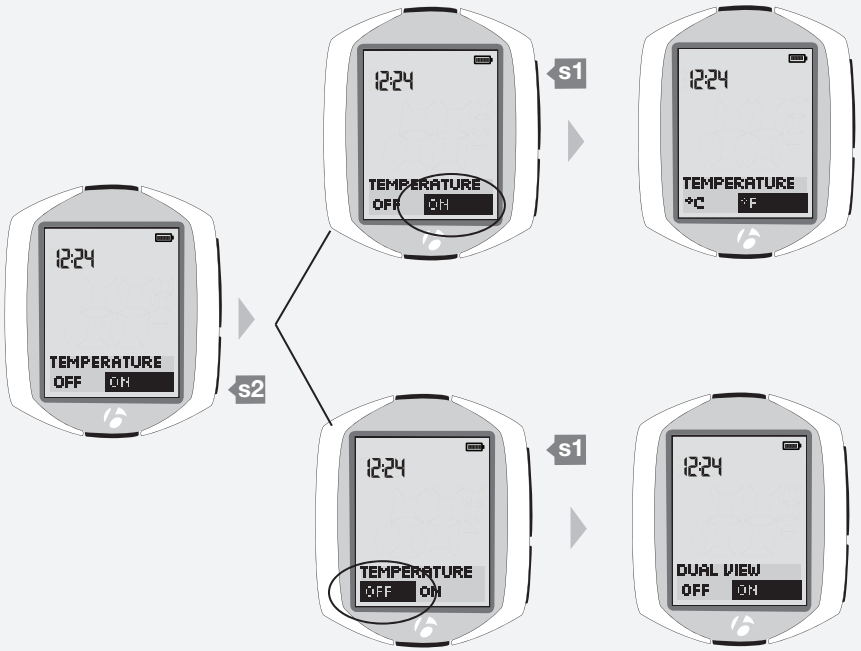


1. 2.

3. To change to Off or On, press s2.

   To save your choice and proceed to that function, press s1.

	ON	OFF
Action	Switches to temperature units	Switches to Dual View
Information	Page 41	Page 42



3.

4. Choose one of the following:
   - Follow the instructions to set temperature units on page 41.
   - Follow the instructions to set Dual View on page 42.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.

Setup units

If the NODE display is currently showing Temperature Units, start with Step 4.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to temperature.

3. If needed, change temperature to On. Press s2 to change.

   To save your choice and proceed to the temperature units function, press s1.

4. To change the temperature units (choose *C*° or *F*°), press s2.

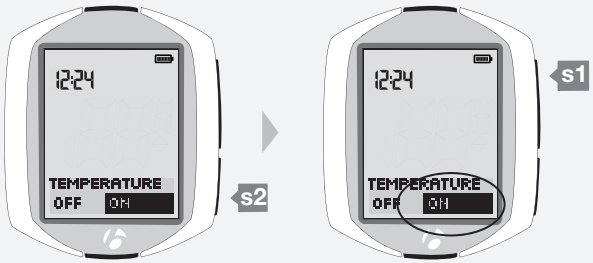
   To save your choice and proceed to the Dual View function, press s1.

5. Choose one of the following:

   - Follow the instructions to set Dual View on page 42.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.



1. 2.



3.



4.

Dual View

Switch to Off or On

If the NODE display is currently showing Dual View, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to Dual View.

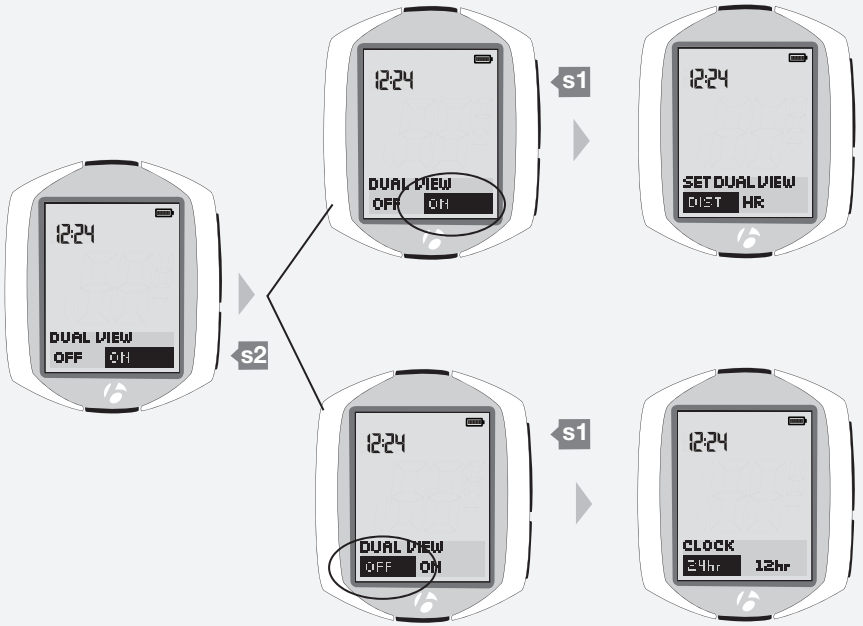


1. 2.

3. To change Dual View to Off or On, press s2.

   To save your choice and proceed to that function, press s1.

	ON	OFF
Action	Switches to Set Dual View	Switches to Clock Type
Information	Page 43	Page 46



3.

4. Choose one of the following:

   - Follow the instructions to set Dual View on page 43.
   - Follow the instructions to set Clock Type on page 46.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.

Setup

If the NODE display is currently showing Set Dual View, start with Step 4.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to Dual View.

3. If needed, change Dual View to On. Press s2 to change.

   To save your choice and proceed to the Set Dual View function, press s1.

4. To change the left view, browse T or B.

Left Dual View Function	Node 1.1	Node 2.1
CAD	X	X
DIST	X	X
TEMP	X	X
GRADE		X
PWR	X	X
HR		X

   To save your choice and proceed to set the second Dual View function, press s2.

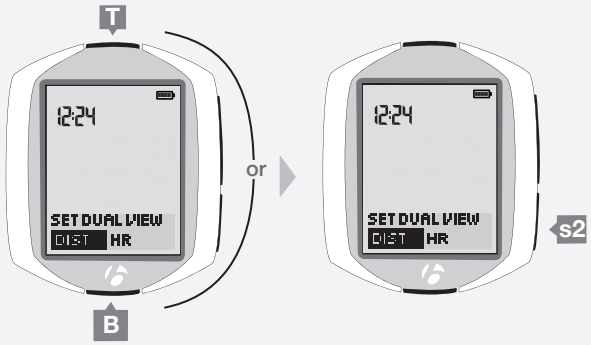
5. To change the right view, browse T or B.



1. 2.



3.



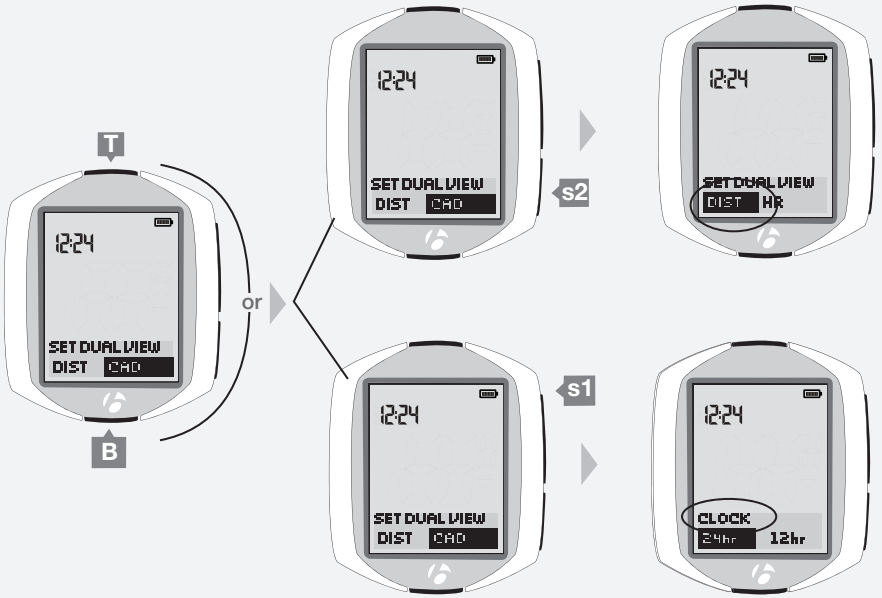
4.

MANAGE Mode

Right Dual View Function	Node 1.1	Node 2.1
CAD	X	X
DIST	X	X
TEMP	X	X
GRADE		X
PWR	X	X
HR		X

To return to set the left Dual View, press s2.

To save your choice of Dual View functions and proceed to the Clock Type function, press s1.



5.

6. Choose one of the following:
   - Follow the instructions to set Clock Type on page 45.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.

Clock

Setup Clock Type

If the NODE display is currently showing Clock Type, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to Clock Type.

3. To change Clock Type (choose *12hr* or *24hr*), browse s2.

   To save the Clock Type and proceed to the Set Clock function, press s1.

4. Choose one of the following:

   - Follow the instructions to Set Clock on page 46.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.



1. 2.



3.

Setup Time

If the NODE display is currently showing Clock Type, start with Step 3.

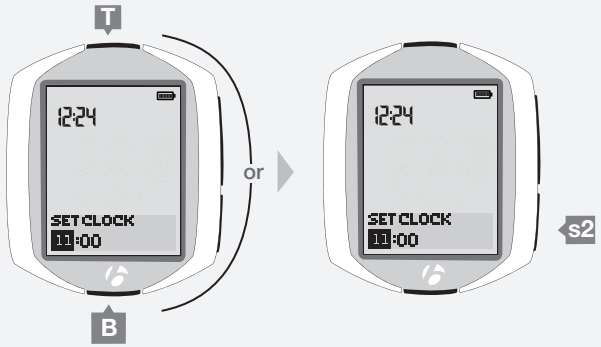
1. Enter MANAGE mode. Hold B for three seconds.
   The Manage mode starts with the Bike Selection display.
2. Browse s1 to Set Clock.
   The hours are highlighted.



1. 2.

3. To change the hours, browse T or B.

   To set the hours and proceed to the set minutes function, press s2.



3.

4. To change the minutes, browse T or B.
   To return to set the hours, press s2.

   To save the clock settings and proceed to the set Distance Units, press s1.

5. Choose one of the following:
   - Follow the instructions to set Distance Units on page 47.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.



4.

Distance

Setup Units

If the NODE display is currently showing Distance Units, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to Distance Units.

3. To change Distance Units (choose *KM* or *MILES*), press s2.

   To save your choice and proceed to the Set Odometer function, press s1.

4. Choose one of the following:

   - Follow the instructions to setup Odometer on page 48.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.



1. 2.



3.

Setup Odometer

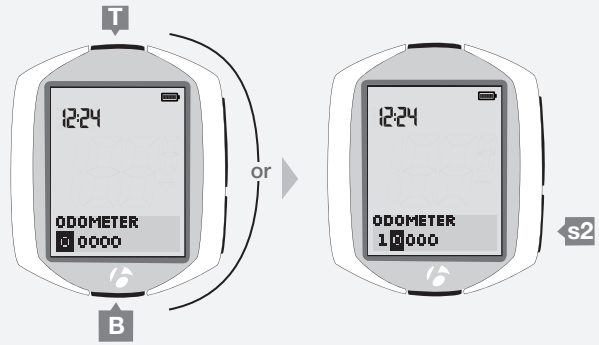
If the NODE display is currently showing Odometer, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.
   The Manage mode starts with the Bike Selection display.
2. Browse s1 to Odometer.
   The first digit is highlighted.
3. To change the first digit, browse T or B.

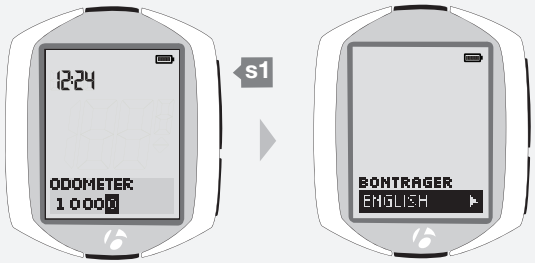
   To set the first digit and proceed to the next digit, press s2.
   The next digit is highlighted.
4. Repeat Step 3 to select the other four digits.
5. To save your odometer setting and proceed to the Set Language function, press s1.
6. Choose one of the following:
   - Follow the instructions to set Language on page 49.
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.



1. 2.



3 and 4.



5.

Language

Setup

If the NODE display is currently showing Language, start with Step 3.

1. Enter MANAGE mode. Hold B for three seconds.

   The Manage mode starts with the Bike Selection display.

2. Browse s1 to Language.



1. 2.

3. To change the Language (Choose *English*, *Francais*, *Espanol*, or *Deutsch*), browse T or B.

   To save the language and proceed to Bike function, press s1.



3.

4. Choose one of the following:
   - To see other functions, browse s1.
   - To return to RIDE mode, hold B for three seconds.

BATTERY INFORMATION

There is a battery in the computer, and also one in each sensor. If you use the NODE for one hour every day, the batteries should last about ten months.

To extend battery life during long periods of non-use, remove the computer from its computer base. This deactivates the Auto Start feature.

Sensor Battery

Replace the battery in the sensor(s) every ten months, or whenever the computer cannot perform the Pair or Connect procedure with the sensor.

Computer Battery

Replace the battery in the computer when the battery indicator drops below 10% (when the indicator shows no bars).

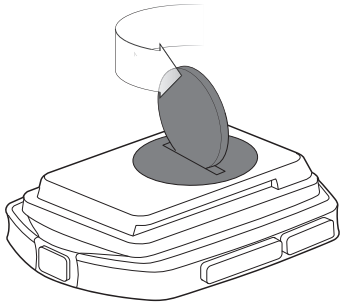
Before removing the computer battery, note your Trip and Total data values. When the battery is removed from the computer, the computer automatically does a Reset (erase settings) and changes accumulated data totals to zero (0). After installing a new battery, you can manually set your totals.

Battery Type

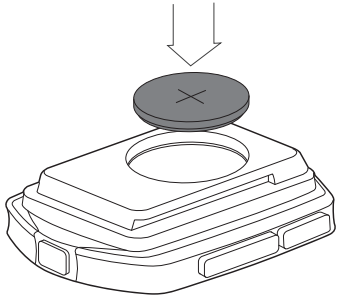
The computer and each sensor use the same battery type, a 3-volt CR2032 lithium cell. When you go to the store, take the old battery with you to make sure the new battery is the same as the old one.

Replacing the Battery

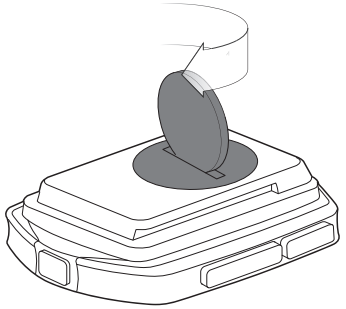
1. With a coin, turn the battery cover in a counter-clockwise direction. Remove the battery. Be careful to keep the rubber seal in place.
2. Insert the new battery with the '+' facing up or out.
3. Attach the battery cover. Turn the cover clockwise with a coin.



1



2



3

RESET

You can erase all settings and programming. Push the Reset button (Figure 32).

The NODE goes to the process for Automatic Setup.

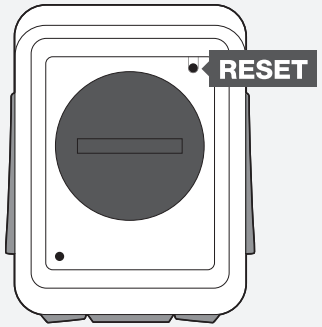


Figure 32. Reset Button.

TROUBLESHOOTING

If your NODE computer has problems, use this guide to fix it. If you cannot fix it, take your computer—with the bicycle—to your dealer.

Symptom	Possible Causes	Solution	Page
Erratic data	Magnet misaligned or too far away	Readjust magnet and sensor placement	4
	Sensor battery power is low	Replace battery	8
No current speed	Magnet misaligned or too far away	Readjust magnet and sensor placement	4
	Computer is not connected to sensor signal	Force connect	14
Speed is incorrect	Wheel size is incorrect	Reset wheel size	27
	Sensor is not reading magnet properly	Readjust magnet and sensor alignment	4
	Sensor battery power is low	Replace battery	8
No cadence	Sensor is not reading magnet properly	Readjust magnet and sensor alignment	4
	Computer is not connected to sensor signal	Force connect	14
	Sensor battery power is low	Replace battery	8
	Sensor is switched to OFF	Switch sensor to ON	31
No heart rate	Sensor is not reading heart rate properly	Readjust or moisten heart rate strap	34
	Computer is not connected to sensor signal	Force connect	14
	Sensor battery power is low	Replace battery	8
	Sensor is switched to OFF	Switch sensor to ON	34
	Sensor (heart rate strap) is not ANT+ compatible	Select correct sensor and then pair/connect	12
Power does not calibrate	Computer is not connected to sensor signal	Force connect	14
	Sensor battery power is low	Replace battery	8
	Sensor is switched to OFF	Switch sensor to ON	32
	Sensor not sending signal	Refer to owner's manual for power meter	
Blank screen	Computer is in shipping mode or asleep	Press any button	8
	Battery is dead, or installed incorrectly	Reinstall good battery	8
Display shows – –	No sensors signals are connected	Activate the sensors and Force connect	14

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