

Blackburn.

NEURO

ADVANCED CYCLING ELECTRONICS
ENGLISH



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Congratulations on your purchase of a new Blackburn Neuro Cyclometer. Blackburn Cyclometers with UHF Digital Transmission are among the most advanced cyclometers available. Designed to meet the needs of elite cyclists, these products feature multiple channel, 2.4GHz digitally encoded data transmission making interference and cross talk a thing of the past. Blackburn has gone to great expense to assure these are the finest and most reliable cyclometers you can buy. We are so sure of this, each unit we make is covered by a limited LIFETIME WARRANTY against any defects in materials or workmanship. (See Page 54 for a complete description of the Bell Sports Limited Warranty.) Your new Neuro unit is filled with new and unique features designed to enhance your riding and racing experience. Of special note are the new Interval Training Program, 5 Zone Heart Rate System and Blackburn's exclusive Race Display Option.

This manual is an integral part of your Blackburn cyclometer. We have organized it to guide you through the setup, installation and operation follow in a logical sequence. When starting out it is best to start at the beginning of this manual and go through all sections in sequence. This will assure all setup and installation steps are done in the proper sequence. After you are fully familiar with all of the features and functions of your Blackburn cyclometer, put this manual in a safe location for future reference.



▲ WARNING TO PEOPLE THAT WEAR PACEMAKERS—Persons who have a pace maker, defibrillator or other similar device use this product at their own risk. We strongly recommend that you consult your physician or cardiologist before using this product or embarking on an exercise program.

▲ WARNING—Blackburn cyclometers and heart rate monitors are training and fitness tools. Before beginning any exercise program, consult your doctor to discuss your exercise plans.

▲ WARNING—Blackburn cyclometers featuring an altimeter sensor are NOT designed to be used as a PRIMARY altitude instrument for flying, skydiving, hang gliding or other sports where sudden major changes in altitude may occur or when there is a need for industrial precision.

▲ WARNING—Do not divert your attention from the road ahead to operate your cyclometer at any time. We also strongly suggest you wear a Bell or Giro helmet any time you ride your bike.

CAUTION—Blackburn cyclometers are sophisticated electronic instruments. Blackburn recommends this unit only be installed by a qualified Blackburn retailer. Failure to read the instructions may result in damaged caused by improper installation and may void the warranty. If you are unsure about how to properly perform any aspect of the assembly, installation or operation of your Blackburn cyclometer, please contact your local Blackburn retailer.

CAUTION—This unit is designed to be water resistant under normal riding conditions. It should not be immersed in water. It should not be left attached to the bike if the bike is being transported on an automobile.

**CARE AND MAINTENANCE**

Blackburn cyclometers contain many delicate electronic components which may be damaged by excessive exposure to heat, shock or general abuse. Treated with care, your cyclometer is capable of delivering many years of reliable service. Improper care and handling, or damage caused by abuse or neglect, will void your Blackburn Warranty.

NEVER—Leave your computer in your car on hot days.

NEVER—Store your Blackburn cyclometer in a plastic or other non-breathable container.

NEVER—Leave your Blackburn cyclometer on your bike while transporting it by automobile.

FCC & CE WARNINGS

CE—The CE logo is used to mark compliance with the European Union

Directives 89/336/EEC and 99/5/EEC

FCC - This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment generates uses and can radiate radio frequency energy and if not installed or used in accordance with the instructions, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular instance. If this equipment does cause harmful interference to other equipment, try to correct the problem by moving or reorienting the equipment.

If you cannot correct the problem by the method above, consult an authorized Bell Sports dealer or other qualified service technician. Repairs should be performed only by qualified and authorized Bell Sports technicians. Unauthorized repairs will void the products warranty.

This product has been tested and found to comply with FCC standards for home or office use.

FCC WARNING: Changes or modifications not expressly approved by Bell Sports, Inc. may void your authority to operate this device under FCC Regulations



HOW THIS PRODUCT WORKS

Your new Blackburn Neuro cyclometer is equipped with an Ultra-High Frequency (UHF) Digital transmission system for speed, distance, cadence and heart rate which operates on a frequency of 2.4GHz. This new transmission system offers significant performance advantages over previous generations of wireless cyclometers.

With this new system, information is sent to the receiver unit in the computer head in digitally encoded data packets. These data packets are identified by unique individual identifier codes making for cross communication (cross-talk) between adjacent units and electromagnetic interference (EMI) virtually impossible.

Another major advantage of this new system is greatly improved transmission range. Because digital encoding virtually eliminates interference and cross talk, we can make the new digital system operate at significantly greater ranges. While the range of most wireless cyclometers is measured in inches, our new UHF digital system is measured in feet. The increased range will result in dramatically improved performance on installations which have traditionally proven troublesome such as large bikes, tandems and recumbents.

AUTO START/STOP—Unlike wired units, wireless computers are incapable of having a true automatic start/stop system because there is no hard wired circuit to close and activate the computer. Because of this, wireless cyclometers must, at some point, turn off their radio system in order to conserve battery life. Your Blackburn wireless computer is programmed with the most sophisticated Start/Stop algorithm available in a cyclometer.

HOW THIS PRODUCT WORKS



WIRELESS HEART RATE MONITORS (NEURO 5.0 AND 6.0 MODELS ONLY)

All Blackburn Neuro models are capable of monitoring heart rate using our new 2.4GH UHF digital transmission system. If your Neuro unit was not supplied with a heart rate transmitter one may be purchased from your Blackburn retailer. Utilizing our new 2.4GHz UHF digital transmission system. By utilizing UHF digital technology we have been able to dramatically improve the reliability and performance of the heart rate system in this product as compared to traditional heart rate systems. While the UHF digital technology used in this new heart rate system dramatically improves its performance over traditional low frequency systems, it should be noted there are conditions which may cause the system to generate false readings. To avoid the potential for false readings. Please note the following:

1. The chest strap should be worn as tightly as possible without being uncomfortable. If the chest strap is not tight enough, movement between it and your body can cause false signals to be generated, which may be seen as heart beats by the cyclometer. This is especially true during high impact activities, such as running.
2. Although extremely rare, environmental factors may interfere with the ability of the cyclometer to receive a signal from the transmitter. This is especially true if the product is being used in close proximity to other products operating on the same 2.4GHz transmission frequency. The system is designed with redundancy to help reduce the possibility of interference effecting the accuracy of the unit.
3. While riding, the flow of air over your body may cause your jersey or shirt to flutter and tap against the heart rate transmitter. This tapping can result in false signals being generated causing inaccurate readings. Try wearing the transmitter backward so that the transmitter and electrodes are against your back with the elastic strap across the front of your chest. Wearing snug jerseys or a tight base layer will also help to reduce this problem from occurring.



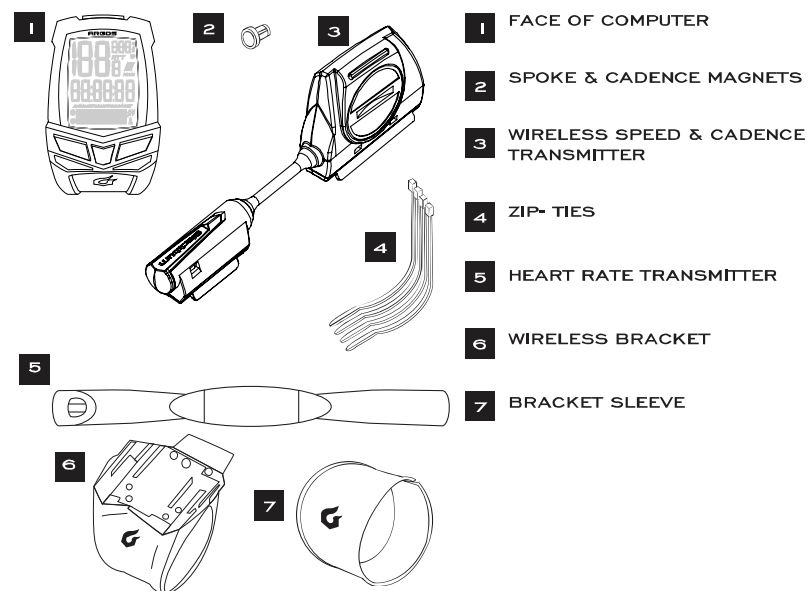
HOW THIS PRODUCT WORKS

PRESSURE SENSING ALTIMETERS (NEURO 6.0 MODEL ONLY)

Some Blackburn cyclometers come equipped with a highly sensitive pressure sensing altimeter module. This altimeter is capable of measuring changes in altitude of as little as 1' or 0.5m. The altimeter system in the Neuro units is also programmed to display your instantaneous % grade. Because the altimeter system in the Blackburn cyclometer relies on Barometric Pressure for its measurements, it is critical that you regularly calibrate the unit to a known altitude. You may notice the altitude at the end of a ride may be slightly different than what it was at the start, even though you started and stopped from the same location. This is caused by small pressure changes in the atmosphere which occur continually over time. Generally these small changes will have only a minor effect on the overall accuracy of the unit. However, the arrival or departure of a weather front can change the current altitude display by several hundred feet or more.

To simplify the calibration process the Blackburn Neuro allows you to store your home altitude to memory and calibrate the unit to this altitude at any time using a **PRESS & HOLD** of the OPTION key while in the CURRENT ALTITUDE screen (See Page 55 for more altimeter information).

PARTS OF YOUR BLACKBURN NEURO CYCLOMETER





RESETTING THE COMPUTER TO ITS DEFAULT SETTINGS

Two “hidden” keys are located on the bottom of the computer each with specific functions. Use a toothpick or other small pointed object to press these keys and initiate their functions.

PAIRING KEY—Located to the lower right of the battery door.

This key is used to initiate the **PAIRING SEQUENCE** which allows you to digitally match transmitters to the computer head. Detailed instructions for the **PAIRING SEQUENCE** is found on Pages 21-24 of this manual

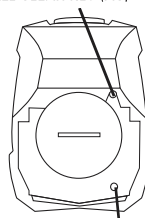
ALL CLEAR KEY (AC)—Located to the upper right of the battery door.

This key is used to reset the units microprocessor to its default programming values. Resetting the unit to its default values will **CLEAR ALL MEMORIES** including Total Time and Total Distance Memories as well as all Heart Rate and Bicycle related settings.

DO NOT use the AC key unless you are sure you want to clear all stored information.

NOTE: Using the AC key does not clear Paired Transmitter information from the memory, this information is permanently held in a separate memory.

ALL CLEAR KEY (AC)



PAIRING KEY

SHIPPING AND SLEEP MODES



SHIPPING MODE—Your new Blackburn Neuro computer comes to the dealer in **SHIPPING MODE**. In this mode the LCD display is totally blank. This is done to extend the battery life. Press any key to wake the unit up and advance to the default display mode.

NOTE: It is possible the unit may not be received in **SHIPPING MODE** if it has been previously activated. This should not have an adverse impact on the life of the battery.

SLEEP MODE—When the receiver circuit of the computer unit shuts down, the unit goes into its **SLEEP MODE**. In **SLEEP MODE** the display will show the current Time of Day, Chronograph (RT or TT) and Units (Miles or Kilometers) settings. In **SLEEP MODE** the SPD, CAD and HR icons indicate which types of transmitters are currently paired with the computer unit.





CHANGING THE BATTERY IN THE BLACKBURN NEURO CYCLOMETER

Blackburn Neuro computers are powered by a CR2032 3v Lithium Battery. Under normal conditions, this battery should last for approximately 300-350 hours depending on the quality of the battery.

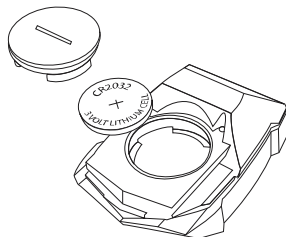
REPLACING THE COMPUTER BATTERY

1. Using a coin, turn the battery door counter clockwise until the door comes free.
2. Take care not to damage the O-ring seal for the battery compartment and carefully remove the old battery.
3. Place a new battery in the battery compartment with the positive (+) side toward the battery door. Be extremely careful not to bend the battery contact when inserting a new battery.
4. Place the battery door over the opening and tighten it down by using a coin and turning in a clockwise direction.
5. If the O-ring has been damaged, replace it before reinstalling the battery door. Battery door and O-ring kits are available as replacement parts from your Blackburn Retailer.

CAUTION—Extreme care should be taken when replacing the battery to ensure the unit remains fully water resistant. Failure to properly replace the battery and correctly seal the unit may cause the unit to become damaged and may void the warranty.

CAUTION—Excessive use of the backlight system will result in shortened battery life.

ALWAYS—Check the batteries if you are experiencing problems with your computer. Most problems experienced with the operation of this unit are the result of dead or dying batteries. Even supposedly “NEW” batteries may be dead as a result of age or improper storage.



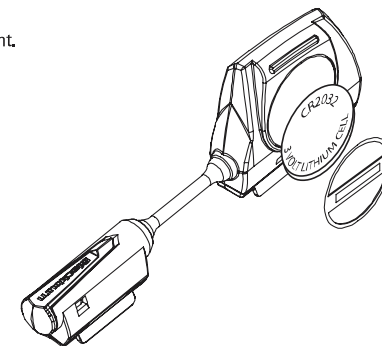
CHANGING THE BATTERY IN THE WIRELESS SPEED & CADENCE TRANSMITTER



The Wireless Speed & Cadence Transmitter uses a CR 2032 3v Lithium battery. Under normal conditions, you can expect to get about 1100-1450 hours of Speed & Cadence Transmitter use from a fresh battery.

1. Using a coin, turn the battery door counter clockwise until the door comes free.
2. Take care not to damage the O-ring seal for the battery compartment and carefully remove the old battery.
3. Place a new battery in the battery compartment with the positive (+) side toward the battery door. Be extremely careful not to bend the battery contact when inserting a new battery.
4. Place the battery door over the opening and tighten it down by using a coin and turning in a clockwise direction.
5. If the O-ring has been damaged, replace it before reinstalling the battery door. Battery door and O-ring kits are available as replacement parts from your Blackburn Retailer.

NOTE: Extreme care should be taken when replacing the battery to ensure the unit remains fully water resistant. Failure to properly replace the battery and correctly seal the unit may cause the unit to become damaged and may void the warranty.





CHANGING THE BATTERY IN THE HEART RATE TRANSMITTER

Blackburn Neuro cyclometers with Heart Rate feature a wireless heart rate transmitter, powered by a CR2032 3v Lithium battery. Under normal conditions you can expect to get approximately 750 hours of heart rate transmitter use with a fresh battery.

1. Using a coin, turn the battery door counter clockwise until the door comes free.
2. Take care not to damage the O-ring seal for the battery compartment and carefully remove the old battery.
3. Place a new battery in the battery compartment with the positive (+) side toward the battery door. Be extremely careful not to bend the battery contact when inserting a new battery.
4. Place the battery door over the opening and tighten it down by using a coin and turning in a clockwise direction.
5. If the O-ring has been damaged, replace it before reinstalling the battery door. Most jewelers and cyclometer shops should have replacement O-ring seals. Battery door and O-ring kits are available as replacement parts from your Blackburn Retailer.

NOTE: Extreme care should be taken when replacing the battery to ensure the unit remains fully water resistant. Failure to properly replace the battery and correctly seal the unit may cause the unit to become damaged and may void the warranty.

NOTE: All Neuro units are capable of displaying heart rate information from Blackburn Digital heart rate transmitters. Neuro 5.0 and 6.0 units are supplied from the factory with heart rate transmitters. The Neuro 4.0 unit can be upgraded to heart rate functionality with the additional purchase of a Blackburn Digital heart rate transmitter from your Blackburn dealer.

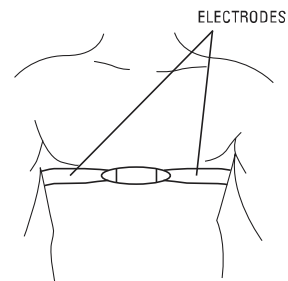
WEARING THE HEART RATE TRANSMITTER



To ensure a proper heart rate display, the chest transmitter must be properly adjusted. Snap the plastic tabs at the end of the elastic belt into the holes at the end of the transmitter, and adjust the strap so that the transmitter fits tightly below the pectoral muscles, as shown in the drawing.

NOTE: Users with significant chest hair may have a problem obtaining contact between the transmitter electrodes and their skin, resulting in poor performance. It may be necessary for these individuals to shave the area of their chest beneath the transmitter.

NOTE: In dry and cold climates it may take a few minutes for a layer of perspiration to form between the cheststrap and the skin. Moistening the electrodes with saliva or ECG conductive gel can speed up this process.





KEYS AND THEIR FUNCTIONS

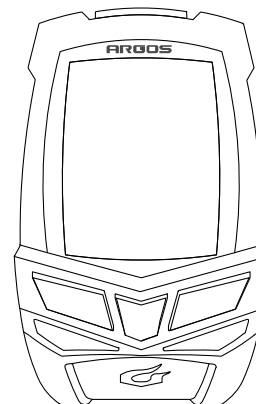
QUICK PRESS VS. PRESS & HOLD

There are two key actions used to program and operate the Neuro computer.

QUICK PRESS—The key is pressed quickly and then immediately released. This is the most common key action and is used for most operations. Throughout this manual, **QUICK PRESS** will be indicated in **BLUE**.

PRESS & HOLD—The key is pressed and held for a period of 2-seconds until the desired action takes place. This key action is generally used to enter a programming sequence or to clear information from the display. Throughout this manual, **PRESS & HOLD** will be indicated in **RED**.

KEYS AND THEIR FUNCTIONS



MULTIPLE KEY FUNCTIONS

- **PRESS & HOLD** MODE and OPTION to change between Bike 1 and Bike 2 settings
- **PRESS & HOLD** MODE, START/STOP and OPTION to enter RACE DISPLAY mode.



KEYS AND THEIR FUNCTIONS

UPPER DISPLAY/EL KEY**Primary Function**

- **PRESS & HOLD** to Change the Upper Display Window view. The upper window is capable of displaying Current Cadence, Current Heart Rate or Heart Rate Training Level.

Secondary Function

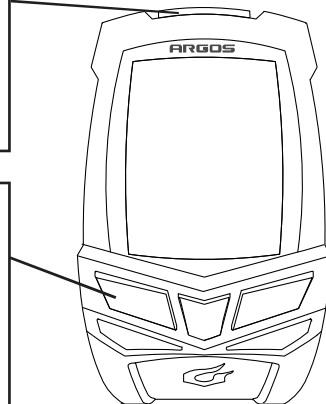
- **QUICK PRESS** to Activate the UltraNightGlow™ display light.

OPTION KEY**Primary Function**

- **QUICK PRESS** to change between OPTIONS within MODES

Secondary Functions

- **QUICK PRESS** to Change a Variable in a Setting Sequence Upward. HOLD for FAST ADVANCE
- **PRESS & HOLD** in Main Altimeter Display to calibrate to stored home altitude.
- **PRESS & HOLD** in any screen except Altimeter to enter LINK Sequence.



KEYS AND THEIR FUNCTIONS

**START/STOP KEY****Primary Function**

- **QUICK PRESS** to Start/Stop TT Chronograph.
- **QUICK PRESS** to Start and Stop LAP/INTERVAL Chronograph.
- **PRESS & HOLD** in DST MODE to Clear ALL Ride Data.

Secondary Functions

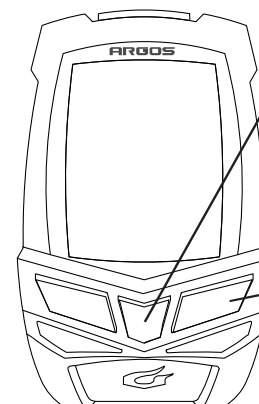
- **QUICK PRESS** to Change a Variable in a Setting Sequence Downward. HOLD for FAST ADVANCE.
- **PRESS & HOLD** to Clear Maximum Speed or Maximum Cadence.

MODE KEY**Primary Function**

- **QUICK PRESS** to change between MODES.

Secondary Functions

- **PRESS & HOLD** to Enter Setting Sequences.
- **QUICK PRESS** to Select a Variable in a Setting Sequence.





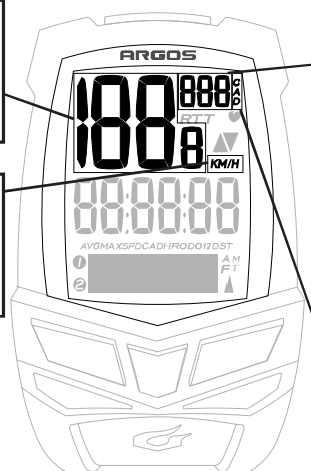
SECTIONS OF LCD DISPLAY

SPEED WINDOW

Current Speed is always visible in the upper left corner of the LCD display except in Race Mode.

KM/H AND M/H

These icons indicate if the unit is programmed to display speed and distance in Miles or Kilometers.



UPPER DATA WINDOW

The Upper Data Window located at the top right corner of the LCD Display is one of the unique features of Blackburn Neuro computers. You can choose to display Current Cadence, Current Heart Rate, Heart Rate Training Level or leave this window blank.

CAD

This icon indicates Cadence is currently being shown in the Upper Data Window.

SECTIONS OF LCD DISPLAY

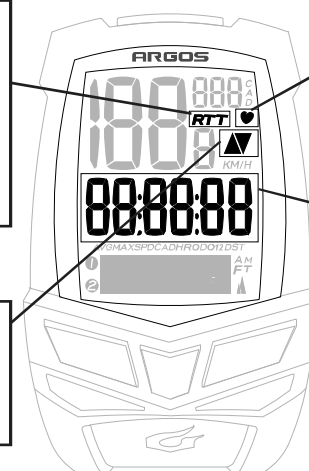


RT/TT

These icons indicate if the primary chronograph is programmed to display Ride Time (RT) with the chronograph starting and stopping with the turning of the wheel. Or Total Time (TT) with the chronograph running continually.

COMPARISON ARROWS

These arrows will indicate if your current speed is above, below or equal to your current average speed.



HEART RATE SYMBOL

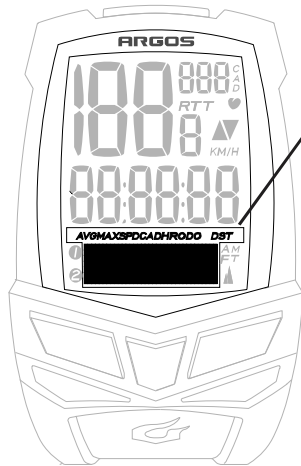
This icon indicates Heart Rate or Heart Rate Training Level is currently being shown in the Upper Data Window.

CHRONOGRAPH WINDOW

The center line of the LCD display shows the primary chronograph for the unit. The center line always shows the primary chronograph with two exceptions. **1.** When viewing Heart Rate Dynamic Memory in the Lower Data Window, time accumulated in each heart rate zone will be displayed in the Chronograph Window. **2.** When performing an interval workout using the Interval Chronograph the time for each Work and Rest Session is displayed in the Chronograph Window.



SECTIONS OF LCD DISPLAY

**LOWER DATA WINDOW**

The Lower Data Window shows a wide range of secondary functions. This window is controlled by the MODE and OPTION keys. Pressing the MODE key scrolls through the following primary information groups. Pressing the OPTION key scrolls through secondary information in each primary information group:

- Speed Information
- Distance Information
- LAP/INTERVAL Chronograph Information
- Cadence Information (If Active)
- Heart Rate Information
- Altitude Information

Time of Day (If Active—See Page 31 for more detail on the operation of the Lower Data Window using the MODE and OPTION keys.)

The Icon Line above the Lower Data Window indicates which function you are currently viewing.

In Sleep Mode, the Icon Line also indicates which transmitters are currently paired (SPD, CAD, HR) to the receiver.

SECTIONS OF LCD DISPLAY

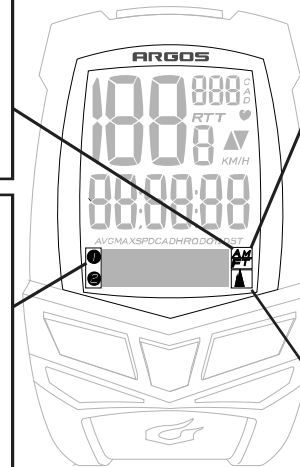
**AM**

This icon is located to the right of the Lower Data Window and indicates when the 12-hr clock is showing AM time. PM and 24-hr clock time are indicated by the lack of any icon.

BIKE 1/BIKE 2

To the left of the Lower Data Window are the Bike 1 and Bike 2 Icons. To manually change between Bike 1 and Bike 2 settings, **PRESS & HOLD** both the MODE and OPTION key to change the Bike Settings at any time.

NOTE: Once you have paired separate Transmitters for Bike 1 and Bike 2, the computer unit will automatically recognize each transmitter and configure the computer accordingly.

**FT / M**

These icons indicate if altitude is being shown in Feet (FT) or Meters (M).

NOTE: The altimeter setting is independent of the Miles/Kilometers settings. You may choose to display speed in Miles per Hour and Altitude in Meters.

ALTIMETER (NEURO 6.0 ONLY)

To the right of the Lower Data Line there is a mountain icon which is active when altimeter functions are being displayed.



BIKE ONE/BIKE TWO SETTING

Blackburn Neuro Computers allow you to program two separate bike functions. Most functions are totally independent. For example, you can program Bike One for Ride Time in Miles and Bike Two for Total Time in Kilometers.

CHANGE BIKE 1/BIKE 2 SETTING

To manually change the Bike 1/Bike 2 setting, **PRESS & HOLD** both the MODE and OPTION keys at the same time. When Bike 1-2 icon changes, release the keys.

Once you have paired separate Speed/Cadence transmitters for Bike 1 and Bike 2 to the system (Pages 24-27) there is no need to manually change between Bike 1 and Bike 2 settings in normal operation. This process will be performed automatically once the system LINKS with a Speed/Cadence transmitter.

PAIRING TRANSMITTERS TO THE COMPUTER UNIT



Each Speed/Cadence and Heart Rate transmitter is programmed with its own unique signal which must be stored in the memory of the computer unit. This process is called PAIRING. We have tried to make the pairing process as automated as possible. With a little planning all transmitters can be paired simply and easily. Before beginning the pairing process please have the following items easily accessible:

1. Computer Head Unit
2. Bike 1 Speed and Cadence Transmitter
3. Wheel Magnet
4. Heart Rate Transmitter (Heart Rate units only)
5. Bike 2 Speed and Cadence Transmitter if you are planning on setting up a second bike.

Please wear the heart rate transmitter and make sure the electrodes are moistened to assure good skin contact.

CAUTION—Do not attempt the pairing process for the Blackburn Neuro cyclometer with other Blackburn Neuro units in use near by. Please allow at least 15 feet of distance between units during the pairing process. Failure to do this may result in the wrong transmitters being paired to the receiver.



PAIRING TRANSMITTERS TO THE COMPUTER UNIT

STEP BY STEP — PAIRING THE SPEED/CADENCE TRANSMITTER

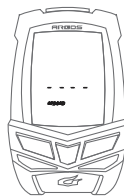
1. Make sure Bike 1 is selected. If Bike 2 is showing on the display, change the display to Bike 1 using a 2-second **PRESS & HOLD** of the MODE and OPTION keys. If you are planning on using the system with two different bikes you will need to purchase a second speed/cadence transmitter for use on Bike 2 and repeat the pairing process starting in the Bike 2 setting. Bike 1 Speed and Cadence must be paired BEFORE the system will allow you to pair a heart rate or second bike transmitter. (Complete second bike kits are available from your Blackburn Retailer)
2. On the back of the computer unit, depress the small hidden **PAIRING** key using a small pointed object. The display of the unit will clear with PAIR showing in the Lower Data Line and your Bike selection to left.
3. Select PAIR with a **QUICK PRESS** of the MODE key.
4. SPD/CAD will automatically appear in the Lower Data Line and 4-dashes will begin flashing in the Chronograph Window indicating the unit is searching for the Bike 1 Speed/Cadence Transmitter.



STEP 2



STEP 3



STEP 4

PAIRING TRANSMITTERS TO THE COMPUTER UNIT



STEP BY STEP — PAIRING TRANSMITTERS THE SPEED/CADENCE TRANSMITTER (CONTINUED)

5. Pass the Wheel Magnet back and forth past the Speed sensor portion of the Speed/Cadence Transmitter for several seconds. When the system has paired with and stored the Speed/Cadence Transmitter information to memory, the Lower Data Line will show DONE along with the SPD and CAD Icons above it for a period of 5-seconds, before advancing automatically to the pairing sequence for the Heart Rate Transmitter.



STEP 5

6. If the Pairing sequences is not successful, the Lower Data Window will flash FAIL along with the SPD/CAD Icons above it for a period of 5-seconds and automatically restart the pairing sequence for the Speed Transmitter.

NOTE: the unit will cycle through 3 FAIL sequences and abort the pairing sequence.

7. This will continue until the unit recognizes and stores a Speed Transmitter or the user aborts the process by a **QUICK PRESS** of the OPTION key.

NOTE: You MUST complete the Speed/Cadence pairing sequence for Bike 1 in order to advance to the Heart Rate Transmitter pairing sequence.

NOTE: If you intend to PAIR heart rate, you, MUST be wearing Heart Rate Transmitter.



STEP 6



PAIRING TRANSMITTERS TO THE COMPUTER UNIT

STEP BY STEP — PAIRING TRANSMITTERS TO THE HEART RATE TRANSMITTER (CONTINUED)

- Once the system has paired with and stored the Speed/Cadence Sensor information to memory it will advance automatically to the pairing sequence for Heart Rate.
- If you are wearing the Heart Rate Transmitter the pairing should be automatic as with the Speed and Cadence Transmitters. Once the system has paired with and stored the Heart Rate Transmitter information to memory it will automatically advance back to the Primary Display Screen.

NOTE: When a Heart Rate Transmitter has been paired to the system, it can be used for both Bike 1 and Bike 2 settings.

- If your Blackburn Neuro cyclometer system DOES NOT include a Heart Rate Transmitter simply **QUICK PRESS** the OPTION key to skip the Heart Rate Transmitter pairing process and exit to the Primary Display Screen.

- If you wish to configure the unit for a second bike, select Bike 2 and repeat steps 1-7 above.

NOTE: All Blackburn Neuro cyclometers are heart rate compatible. If your unit was not supplied with a Heart Rate Transmitter system you may upgrade your unit to full heart rate functionality simply by purchasing a compatible Heart Rate Transmitter from your Blackburn dealer.

NOTE: At any point during the Pairing Sequence a **QUICK PRESS** of the Pairing Key will exit the sequence.



STEP 8

INSTALLING THE COMPUTER ON YOUR BIKE



INSTALLING THE WIRELESS SPEED & CADENCE TRANSMITTER

Once the transmitter has been paired to the computer you are ready to install it on your bike. It is possible to install the Speed/Cadence transmitter first and then perform the pairing sequences but this is not recommended for reasons of simplicity.

The speed and cadence transmitter system is made up of two parts; the Speed Transmitter/Sensor and the Cadence Sensor which are attached to each other by a short wire. Attach the Cadence Sensor first followed by the Speed Sensor and Transmitter in the following manner.

- Attach the cadence sensor portion of the system to the LEFT chainstay where the crank arm passes the stay using the zip-ties provided. Snug up the zip-ties but do not fully tighten them. We recommend the cadence sensor be mounted toward the TOP of the chainstay (see illustration on following page).

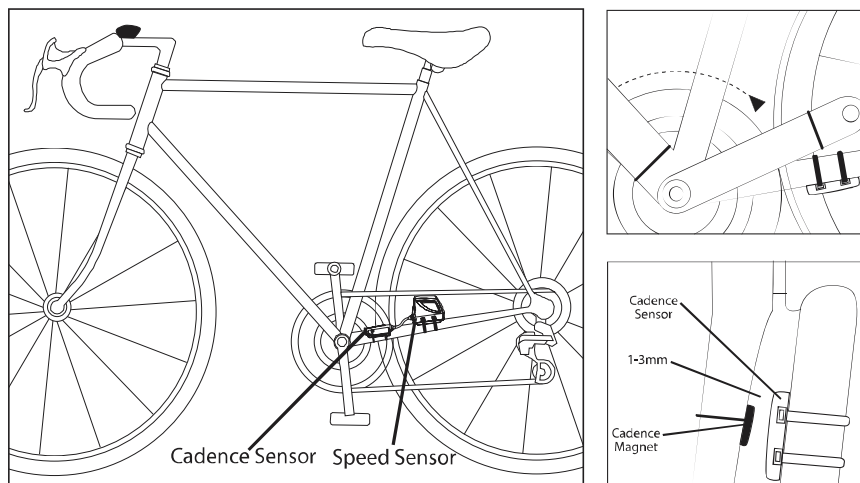
NOTE: The wire exiting the Cadence Sensor should be pointing toward the REAR of the bike.

- Very loosely attach the cadence magnet to the back side of the LEFT crank arm using the zip-tie provided (to allow for adding spacers, if necessary). The cadence magnet should be attached as closely to the pedal spindle as possible.
- Adjust and position the sensor and magnet so they pass within 1-3mm of each other. Fully tighten the zip-ties once you have everything properly aligned.
- Attach the transmitter body to the TOP of the LEFT chainstay (see illustration on following page) using the zip-ties provided so that the wire between the transmitter and cadence sensor is straight but not under a lot of tension. Snug up the zip-ties, but do not fully tighten them.
- Attach the spoke magnet to a spoke on the same side of the wheel as the sensor. Tighten the magnet enough to hold it in place but loose enough so that it is still movable.
- Adjust the position of the sensor and magnet so they are in proper alignment as shown (see illustration on following page) The magnet should pass by the sensor adjacent to the indicator line at a distance of 1-3mm.
- Once everything is in alignment, fully tighten the spoke magnet in place and tighten the zip-ties.



INSTALLING THE COMPUTER ON YOUR BIKE

INSTALLING THE WIRELESS SPEED & CADENCE TRANSMITTER



INSTALLING THE COMPUTER ON YOUR BIKE



INSTALLING THE WIRELESS SPEED & CADENCE TRANSMITTER

▲WARNING—Speed/Cadence Sensor mounting **MUST NOT** interfere with spokes or rear wheel.

▲WARNING—If Speed/Cadence Sensor interferes with rear wheel or spokes while riding, stop riding immediately and remount sensor as directed in owner's manual. Do not ride bike if Speed/Cadence sensor still interferes with rear wheel or spokes.

INSTALLING THE WIRELESS HANDLEBAR BRACKET

Attach the wireless handlebar bracket to the handlebars. Tighten the mounting screw enough so the bracket will not easily rotate on the handlebars. Do not over tighten the mounting screw or you may damage the bracket.

NOTE: There are two molded plastic shims supplied with the Neuro computer brackets. The **THIN** shim allows the bracket to fit Oversized 31.8 mm handlebars. The **THICK** shim allows the bracket to fit standard 26.0mm handlebars.

NOTE: There is a wide variety of smaller handlebar diameters which are available. If the thick shim does not make the bracket tight enough, cut a section of the thin spacer to use as a shim to fill up the additional space as necessary.

NOTE: If you have odd shaped handlebars which will not fit a standard round mounting system, a stem mount adaptor shoe is available from your Blackburn Dealer.



INSTALLING THE COMPUTER ON YOUR BIKE

ATTACHING THE COMPUTER HEAD TO THE HANDLEBAR BRACKET AND TESTING

When the bracket is completely installed on the bike slide the Neuro computer unit into the bracket. The computer should LOCK into the bracket with an AUDIBLE "CLICK". If you do not hear a click or if the Neuro computer body is not flush with the back edge of the bracket the computer is not locked in place and may come out.

Once everything is assembled perform the LINK sequence shown on Pages 27-28 and turn the crank to make sure speed and cadence are being displayed on the screen. If you are not receiving one or both pieces of information, check the magnet and sensor alignment and make sure the magnets are passing the proper point on the sensor and that they are within 1-3mm. If they are closer to 3mm than to 1mm try reducing the gap and test the system again. If you are still having problems getting display readings, repeat the Pairing and Link sequences for the transmitter.

LINKING TRANSMITTERS TO COMPUTER FOR USE



When you start the system needs to establish a LINK between the transmitters you are using and the computer unit on your bike before it can begin receiving data.

LINK FROM SLEEP MODE

Any time the computer is activated out of SLEEP MODE, the LINK sequence starts automatically and runs for a period of 10-12 Seconds, with LINK appearing in the Lower Data Line and 4-dashes flashing in the Chronograph Window. Begin your ride within that time period and the system will automatically LINK with all available paired transmitters and the display will automatically advance to the primary display screen as soon as the pairings have been made. If you do not start riding within the 10-12 second period the unit will go back into SLEEP MODE in order to conserve battery life. If this happens, simply restart the LINK sequence by pressing any key.



NOTE: If you have a paired heart rate transmitter but are choosing NOT to use the heart rate system on a particular ride, start riding for a short distance so the system can LINK with the speed and cadence transmitter. If the system does not recognise a heart rate transmitter by the end of the LINK sequence it will simply advance out of the link mode and the Heart Rate displays will not appear on screen. If you wish to LINK a Heart Rate Transmitter to the system AFTER it has recognized and linked with a SPEED/ CADENCE transmitter; OR if you wish to change Bikes while the system is active, follow the steps on the following page for LINKING a transmitter from active mode.

NOTE: When in Sleep Mode, the icon line above the Lower Data Window will indicate which types of transmitters are currently paired to the system—SPD—CAD—HR



LINKING TRANSMITTERS TO COMPUTER FOR USE

LINK FROM ACTIVE MODE

If you need to enter the LINK sequence while the computer is active (Not from Sleep Mode). **PRESS & HOLD** the OPTION key in any screen EXCEPT ALTIMETER for a period of approximately 3-seconds and the system will automatically enter the LINK sequence as described previously. LINK from Active Mode will usually be used under these conditions:

1. If you wish to LINK a paired heart rate transmitter when the unit is already fully operational.
2. If you wish to move your computer between Bike 1 and Bike 2 while the unit is fully operational.
3. If the LINK has been lost due to inactivity prior to the unit going into SLEEP MODE .

AUTOMATIC BIKE RECOGNITION

Once you have paired separate transmitters for Bike 1 and Bike 2, your Blackburn Neuro will automatically recognize which bike it is mounted on during the LINK process and configure itself accordingly.

BASIC OPERATION



MODE AND OPTION KEY SEQUENCES

This diagram shows the information which is displayed in the Lower Data Window in response to **QUICK PRESSES** of the MODE and OPTION keys.

