





## PROGRAM WHEEL SIZE, UNITS AND CHRONOGRAPH

Blackburn Neuro Computers use the rolling circumference of your wheel and tire combination to determine speed and distance. The more accurate this setting, the more accurate your ride information will be. However, variations of less than 30mm from the actual circumference will have very little impact on the overall accuracy of the unit.

### PRESET WHEEL SIZES

For easy setup, Blackburn Neuro Computers come with 11 of the most popular wheel/tire sizes pre-programmed into the unit. Simply select the size of your tire as you scroll through the list in the programming sequence and you are done.

The following are the pre-set wheel sizes programmed into the unit. Follow the steps on Page 33 to enter a preset wheel size into the Neuro unit.

PRESET WHEEL SIZES	WHEEL CIRCUMFERENCE
700 x 23c	2096MM
700 x 20c	2086MM
700 x 25c	2105MM
700 x 28c	2136MM
700 x 32c	2155MM
700 x 38c	2180MM
650 x 20c	1945MM
650 x 23c	1990MM
26 x 1.9	2050MM
26 x 2.0	2055MM
26 x 2.1	2068MM

## PROGRAM WHEEL SIZE, UNITS AND CHRONOGRAPH



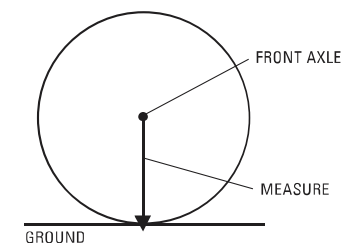
### MEASURED WHEEL SIZE

If your wheel/tire size is not one of the pre-programmed sizes, or if you desire absolute accuracy, you may enter an exact wheel circumference into the system. Use one of the two following methods for measuring the circumference of your wheel/tire combination.

### MEASURING WHEEL SIZE USING RADIUS METHOD

The wheel radius method is quick, easy and very accurate.

1. With your bike standing vertically on a flat surface, measure the distance in millimeters from the center of the front axle or quick release to the floor. If your measurement is in inches, multiply by 25.4 to convert to millimeters.
2. Multiply the measurement in millimeters by 6.28 and enter the resulting number into your computer using the steps on Page 35.



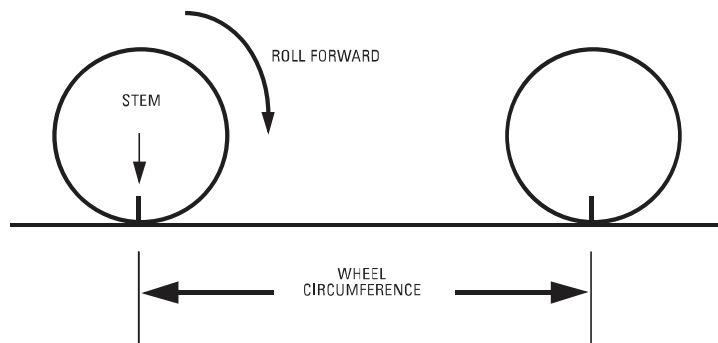


## PROGRAM WHEEL SIZE, UNITS AND CHRONOGRAPH

### MEASURING WHEEL SIZE USING ROLLOUT METHOD

The roll-out method is the most accurate method for determining the circumference of your wheel/tire combination.

1. On a flat open surface make a mark on your tire and the floor exactly where they meet.
2. Roll your bike forward one full revolution of the front wheel and mark the point on the floor where the revolution is complete. For maximum accuracy be sitting on the bike while someone rolls you and the bike forward.
3. Measure the distance from the first mark to the second in millimeters and enter the resulting number into your computer using the steps on Page 35.



## PROGRAM WHEEL SIZE, UNITS AND CHRONOGRAPH



### STEP BY STEP—ENTER A PRE-PROGRAMMED WHEEL SIZE

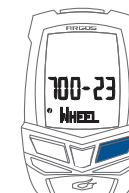
1. From Sleep Mode, press any key twice to bypass the LINK Sequence. You may also program the unit after the unit has completed the LINK sequence and is active.
2. Choose Bike 1 or Bike 2. (Page 21)
3. Starting in the Distance (DST) screen of the Lower Display Window.
4. **PRESS & HOLD** the MODE key for approximately 2- seconds.
5. **QUICK PRESS** the OPTION or START/STOP keys to scroll through the 11 pre-programmed wheel sizes. "WHEEL" will be shown in the lower line of the display with the pre-programmed wheel size shown in the center line of the display.
6. Select your choice using a **QUICK PRESS** of the MODE key and advance to the SET Speed and Distance units display (Page 36).



STEPS 3 & 4



STEP 5



STEP 6



## PROGRAM WHEEL SIZE, UNITS AND CHRONOGRAPH

### STEP BY STEP—ENTER AN EXACT WHEEL SIZE

1. From SLEEP MODE, press any key twice to bypass LINK Mode.
2. Choose Bike 1 or Bike 2. (Page 29)
3. Starting in the Distance (DST) screen of the Lower Display Window.
4. **PRESS & HOLD** the MODE key for approximately 2- seconds.
5. **QUICK PRESS** the OPTION or START/STOP keys until the display shows 2096 flashing in the center line of the display.
6. **QUICK PRESS** the MODE key once. The ones (right) digit will begin to flash.
7. Adjust the digit using **QUICK PRESSES** of the OPTION and START/STOP keys and enter your choice into memory using a **QUICK PRESS** of the MODE key.
8. Repeat until all digits are entered
9. A final **QUICK PRESS** of the MODE key will exit the Wheel Size setting sequence and advance to the SET Speed and Distance units Display (Page 36).

**NOTE:** Before you can program most computer settings, the primary chronograph must be cleared to zero using a 2-second **PRESS & HOLD** of the S/S key while in the Ride Distance (DST) screen.

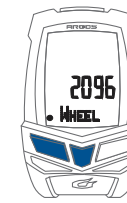
## PROGRAM WHEEL SIZE, UNITS AND CHRONOGRAPH



### STEP BY STEP—ENTER AN EXACT WHEEL SIZE



STEPS 3 & 4



STEP 5



STEP 6



STEP 7



STEPS 8 & 9



## PROGRAM WHEEL SIZE, UNITS AND CHRONOGRAPH

### STEP BY STEP—SET SPEED AND DISTANCE UNITS

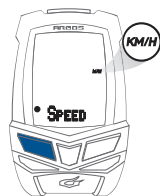
1. Upon entering the SET Speed and Distance units display, M/H (Miles per Hour) or KM/H (Kilometers per Hour) will flash in the upper right hand corner of the display.
2. **QUICK PRESS** the OPTION key to cycle between M/H and KM/H settings.
3. Select your choice using a **QUICK PRESS** of the MODE key and advance to the SET Chronograph function display.

### STEP BY STEP—SET CHRONOGRAPH FUNCTION

1. Upon entering the SET Chronograph function display, RT (Ride Time) or TT (Total Time) will flash in the upper right hand corner of the display.
2. **QUICK PRESS** the OPTION key to cycle between RT and TT (Total Time) settings.
3. Select your choice using a **QUICK PRESS** of the MODE key and exit the setting sequence.

**RIDE TIME (RT)**—When RT is selected the Neuro's Chronograph will start and stop with the motion of the wheel. This setting tracks the actual time you are riding your bike.

**TOTAL TIME (TT)**—When TT is selected the Neuro's Chronograph will initially start with the first rotation of the wheel. However, it will continue to run from that point, until the timing is stopped, using a **QUICK PRESS** of the START/STOP key.



STEPS 1 & 2  
(SPEED/DISTANCE)



STEPS 1 & 2  
(CHRONOGRAPH)

## ODOMETERS, WEEKLY AND ANNUAL RIDE TIME



In addition to tracking data for individual rides, your new Blackburn Neuro cyclometer comes with a highly-advanced long term ride memory system which tracks your weekly and yearly ride time and distance. Tracking for weekly ride time and distance starts automatically at 12:00 (0000h) each Monday morning. This is automatic and cannot be changed so if you wish to see what your mileage and ride time for the preceding week has been you must check it prior to Midnight Sunday night.

Annual mileage and ride time are tracked on a continual basis starting each time the battery is changed or the AC key is pressed. If you wish to retain your cumulative mileage following a battery change or system reset, it may be programmed into the unit as outlined below. Annual ride time cannot be reprogrammed.

Weekly and yearly ride time and distance are unique to an individual Bike 1 or Bike 2 setting. In either Bike 1 or Bike 2, you may view the Weekly and Annual distance and time for the alternate bike by **PRESSING & HOLDING** both the MODE and OPTION keys down. The alternate Bike information will be displayed for as long as you continue to hold the keys. When you release the keys the display will return to its original configuration

**NOTE:** Make sure you write down your mileage for each Odometer prior to removing the battery if you wish to reprogram the odometers.

**NOTE:** Weekly and annual memories do not update with information from the most current ride until it has been cleared from the display using a 2-second **PRESS & HOLD** of the Start/Stop key.

**NOTE:** Because of limitations on the amount of information which can be shown on the display, Weekly and Annual time and distance memories only display in whole miles and do not update to the next mile or hour until a whole unit has accumulated. Thus, 999.99 miles or 9h59m will be shown on the display as 999miles and 9 hours until they roll over to 1000miles and 10hours.



## ODOMETERS, WEEKLY AND ANNUAL RIDE TIME

### ODOMETERS, WEEKLY AND ANNUAL RIDE TIME DISPLAYS



ODOMETER



ANNUAL RIDE TIME



WEEKLY DISTANCE



WEEKLY RIDE TIME

NOTE: **PRESS & HOLD** MODE and OPTION to view data for alternate bike.

## ODOMETERS, WEEKLY AND ANNUAL RIDE TIME



### STEP BY STEP—SETTING THE PROGRAMMABLE ODOMETERS

1. From Sleep Mode, press any key twice to bypass the LINK Sequence. You may also program the unit after the unit has completed the LINK sequence and is active.
2. Starting in the Odometer screen in either Bike 1 or Bike 2.
3. **PRESS & HOLD** the MODE key for approximately 2-seconds.
4. ODO 1 will appear in the Lower Data Window with "00,000" in the Center Display Line.
5. Adjust the Odometer 1 setting using **QUICK PRESSES** of the OPTION and START/STOP keys. Fast advance using a **PRESS & HOLD**.
6. When Odo 1 is set to the desired value, **QUICK PRESS** the MODE key to enter the value and Advance to setting Odo 2.
7. Repeat steps 3 and 4.
8. **QUICK PRESS** the MODE key to enter the Odo 2 value and exit the setting sequence.



STEPS 4 &amp; 5



STEPS 6 &amp; 8



## PROGRAM TIME OF DAY

Blackburn Neuro Computers are equipped with a clock which shows time of day in either 12 or 24 hour formats. There is also a programming option which allows you to turn the clock off so it does not show up in the normal operation sequence, reducing the number of key strokes needed to move through the displays.

### STEP BY STEP—SETTING THE TIME OF DAY

1. From Sleep Mode, press any key twice to bypass the LINK Sequence. You may also program the unit after the unit has completed the LINK sequence and is active.
2. Starting in the Time of Day display in the Lower Data Window if Time of Day is Active; or Starting in the Average or Maximum Speed displays if Time of Day is Inactive.
3. **PRESS & HOLD** the MODE key for approximately 2-seconds.
4. **VIEW** will appear in the Lower Data Window with ON or OFF in the Center Display Line.
5. Select ON or OFF using **QUICK PRESSES** of the OPTION key. **QUICK PRESS** the MODE key to enter the value and advance to 12/24 Hour setting.
  - a. Select ON if you wish Time of Day to be part of the display sequence in the Lower Display Window.
  - b. Select OFF if you do not wish to view Time of Day on the display.
6. Repeat steps 3 and 4 to Hours, Minutes, Year, Month and Date and **QUICK PRESS** the MODE key to exit the Time of Day programming sequence.

**NOTE:** Before you can program most computer settings, the primary chronograph must be cleared to zero using a 2-second **PRESS & HOLD** of the S/S key while in the Ride Distance (DST) screen.

## PROGRAM TIME OF DAY



### STEP BY STEP—SETTING THE TIME OF DAY



STEPS 1 & 2



STEPS 3 & 4



STEP 4



STEP 5



## PROGRAM HEART RATE LEVELS

The Blackburn Neuro models with Heart Rate, feature an extremely advanced 5 level memory and display system. With the Neuro<sup>®</sup> heart rate system 5 contiguous training levels may be programmed in 1 beat per minute increments. This makes the Neuro compatible with almost every contemporary heart rate training system. Once programmed, the Neuro heart rate system will track the amount of time you have spent in each of your 5 levels as well as displaying your heart rate and current training level on the display in real time. The heart rate system will also track your average and maximum heart rates for your entire workout.

The system is designed to allow you to easily program your 5 training levels with a minimum of key-strokes. The upper limit of Level 5 and the lower limit of Level 1 are automatically established by the functional limits of the unit at 240 and 30 beats respectively. The remainder of the level ranges are established by programming the upper and lower limits of Levels 4 and 2 into the unit.

**NOTE:** You will need to enter your ranges into the Neuro unit using Beats per Minute. The default values for the upper and lower limits are set at 180/160 beats/minute and 140/120 beats/minute respectively. If you do not know your actual training zones or how to properly calculate them please consult a professional coach or cardiologist.

## PROGRAM HEART RATE LEVELS



### STEP BY STEP—SETTING THE HEART RATE ZONE

1. From Sleep Mode, press any key twice to bypass the LINK Sequence. You may also program the unit after the unit has completed the LINK sequence for Heart Rate and is active.
2. Starting in the Heart Rate Display in the Lower Data Window.
3. **PRESS & HOLD** the MODE key for approximately 2-seconds
4. L4 HI will appear in the Lower Data Window with 180 in the Center Display Line, indicating the upper heart rate limit of Training Level 4.
5. Adjust the value for the upper limit of level 4 using **QUICK PRESSES** of the OPTION and START/STOP keys. **QUICK PRESS** the MODE key to enter the value and advance to Lower Limit setting for Training Level 4.
6. Adjust the value for the lower limit of level 4 using **QUICK PRESSES** of the OPTION and START/STOP keys. **QUICK PRESS** the MODE key to enter the value and advance to Upper Limit setting for Training Level 2.
7. Repeat step 4 to Adjust and Set the Upper and Lower limits for Training Level 2. **QUICK PRESS** the MODE key to exit the Heart Rate Training Level programming sequence.
8. To review the ranges for your 5 Heart Rate Levels, use the OPTION key to scroll through the secondary heart rate displays. The range for each zone will be displayed to the right hand side of the Lower Display Window with the Level number to the left.

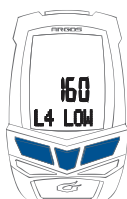




PROGRAM HEART RATE LEVELS



STEPS 3 & 4



STEP 5



STEP 6



STEP 7

OPERATING THE HEART MONITOR



Once you are wearing a properly paired heart rate transmitter and have performed the LINK sequence, the operation of the Heart Rate Monitor system is automatic. When a heart rate display is selected in the Upper or Lower Data Window your heart rate reading will display automatically. In the Upper Data Window, you may choose to view either Cadence, Current Heart Rate or Current Training Level. In the Lower Data Window, if you are viewing current heart rate, the current Training Level will be displayed to the left of your heart rate.





## OPERATING THE HEART MONITOR

### REVIEW HEART RATE DYNAMIC MEMORY

The Neuro units are equipped with an exclusive feature called DYNAMIC MEMORY™. Unlike most heart rate monitor systems which only allow you to review your heart rate memory information after your workout is completed, the DYNAMIC MEMORY™ system of the Blackburn Neuro units allow you to review all aspects of your workout in real time as you are riding. This unique feature will help you to get the most out of your workouts.

In the Heart Rate Display, use **QUICK PRESSES** of the OPTION key to scroll through the following information:

1. Average Heart Rate and Training Level—The cumulative average heart rate for your entire ride along with its corresponding heart rate level.
2. Maximum Heart Rate and Training Level—The current highest heart rate you have achieved during your ride along with its corresponding heart rate level.
3. Time in Training Levels 1-5--These displays show the time which has accumulated in each level displayed in the Chronograph Window. The Training Level (L1-L5) will be indicated in the Lower Data Window along with its range in Beats per Minute.

**NOTE:** When the CHRONOGRAPH DISPLAY is showing time accumulated in each zone, the RT/TT Chronograph display is temporarily hidden, but remains working in the background.

**NOTE:** If you have not PAIRED and LINKED a heart rate transmitter to the system all heart rate functions are hidden in the operational modes.

## PROGRAM ALTIMETER



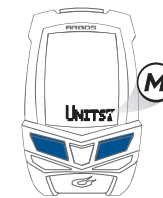
The Neuro 6.0 is equipped with an extremely sensitive pressure sensing altimeter with a resolution of 1' or 0.5m. The altimeter system will display your current altitude, your distance climbed and your current % Grade. The Neuro 6.0 is also equipped with a home altitude memory which allows quick and easy one-key calibration at your home location.

### STEP BY STEP—CALIBRATE AND STORE HOME ALTITUDE TO MEMORY

1. From Sleep Mode, press any key twice to bypass the LINK Sequence. You may also program the unit after the unit has completed the LINK sequence and is active.
2. Starting in the Altitude Display in the Lower Data Window.
3. **PRESS & HOLD** the MODE key for approximately 2-seconds.
4. UNITS will appear in the Lower Data Window with the Feet (FT) or Meter (M) Icon flashing to the right.
5. Choose FT (Feet) or M (Meters) using **QUICK PRESSES** of the OPTION key. **QUICK PRESS** the MODE key to enter the value and advance to adjusting the Current Altitude.



STEPS 2 & 3



STEPS 4 & 5



## PROGRAM ALTIMETER

STEP BY STEP—CALIBRATE AND STORE HOME ALTITUDE TO MEMORY  
(CONTINUED)

6. Adjust the Current Altitude up and down using **QUICK PRESSES** of the OPTION and START/STOP keys.
7. When you have adjusted the Current Altitude to the desired value you have two options.
  - 7a. **CALIBRATE THE CURRENT ALTITUDE WITHOUT STORING IT**—To do this **QUICK PRESS** the MODE key. The display will revert to the main display screen, with the corrected altitude reading in the Lower Data Window.
  - 7b. **CALIBRATE THE CURRENT ALTITUDE AND STORE IT AS YOUR HOME ALTITUDE**—To do this **PRESS & HOLD** the MODE key for approximately 2-seconds. **STORED** will appear in the Lower Data Window for approximately 1-second. The display will then revert to the main display screen, with the corrected altitude reading in the Lower Data Window AND the value will be stored in the unit's memory as your Home Altitude. Once you have stored a Home Altitude value you will be able to quickly calibrate the unit to that value in a single step.



STEPS 6 &amp; 7

## PROGRAM ALTIMETER

STEP BY STEP—CALIBRATE THE NEURO TO THE STORED  
HOME ALTITUDE VALUE

1. Starting in the Altitude Display in the Lower Data Window.
2. **PRESS & HOLD** the OPTION key for 2-seconds.
3. The altitude will automatically change to the stored Home Altitude value.

**NOTE:** It is important for your computer to be calibrated as closely as possible to your actual starting altitude. If your altimeter is calibrated to an altitude significantly different from your actual starting altitude, your distance climbed and % grade readings may be inaccurate.

**NOTE:** You may notice on some days, due to changes in local barometric pressure, that your ending altitude is different from your starting altitude. This is a normal response to pressure changes over time. These changes, because they happen so slowly will not generally be recorded in your distance climbed reading.

**NOTE:** The Neuro 6.0 calculates % grade using distance and the changes in altitude measured by the altimeter. The grade display is updated once every 2-4 seconds using the distance and altimeter data from the previous 20-seconds. Because of this it is normal for the % Grade indication to lag behind the actual changes, especially if quickly transitioning from one slope to another.



STEP 2



## OPERATING THE RIDE TIME AND TOTAL TIME CHRONOGRAPHS

All data acquisition is controlled by the primary Ride Time or Total Time Chronograph. Ride data such as Average and Maximum values and Memory Information are only tracked if the primary chronograph is running. At any time, clearing the Ride Time or Total Time chronograph will also clear ALL data and memory values.

**NOTE:** Before you can program most computer settings, the primary chronograph must be cleared to zero using a 2-second **PRESS & HOLD** of the S/S key while in the Ride Distance (DST) screen.

### STARTING AND STOPPING THE RIDE TIME CHRONOGRAPH

The operation of the Ride Time Chronograph is totally automatic and is controlled by speed input. If the unit is receiving a speed input, the Ride Time Chronograph will run, if the speed stops, the Ride Time Chronograph will stop.

### STARTING AND STOPPING THE TOTAL TIME CHRONOGRAPH

From an initial reading of zero, the Total Time Chronograph starts automatically as soon as it sees a speed input or is manually started using a **QUICK PRESS** of the START/STOP key. Once it has started the Total Time Chronograph will continue to run until it is Stopped using a **QUICK PRESS** of the START/STOP key.

**NOTE:** When you are in the LAP/INTERVAL Chronograph display, the Start/Stop key is dedicated to that function. If you wish to STOP or START the Total Time Chronograph, you CANNOT be in the LAP/INTERVAL Chronograph display.

**NOTE:** CALCULATING AVERAGES—Regardless of whether you use the RT or TT chronographs, your average speed, cadence and heart rate for the ride are ONLY calculated while you are actually riding. Average Heart Rate is calculated any time the unit is receiving a heart rate reading. In ALL cases, readings of ZERO are not counted by the averaging algorithms.

## STARTING STOPPING AND CLEARING THE CHRONOGRAPH AND MEMORY



### CLEARING ALL RIDE DATA

To clear the chronograph and all data and memories to zero **PRESS & HOLD** the START/STOP key for approximately 2-seconds in the Ride Distance (DST) screen until the chronograph line shows all zeros.

## CLEARING MAXIMUM SPEED AND MAXIMUM CADENCE ONLY



The Neuro computers allow you to clear the Maximum Speed and Cadence values independently of all other information. This feature is helpful if you are doing sprint workouts and wish to review your maximum values for each sprint. To clear Maximum Speed and Maximum Cadence, **PRESS & HOLD** the START/STOP key while in either of these two displays.



## OPERATING THE LAP CHRONOGRAPH/ INTERVAL CHRONOGRAPH SYSTEM

Blackburn Neuro cyclometers come with a second, independent and highly sophisticated chronograph system which is capable of being programmed to track individual laps or to prompt the user through an interval workout. The system automatically tracks multiple ride metrics for up to 50 individual laps or intervals. You must choose which secondary chronograph system you will use before the start of your ride which may be reviewed either during or after your ride using our exclusive DYNAMIC MEMORY™ system.

### STEP BY STEP—PROGRAMMING THE LAP/INTERVAL CHRONOGRAPH

1. Advance to the Lap Chronograph / Interval Chronograph display in the Lower Data Window using **QUICK PRESSES** of the MODE key. The Lap/Interval Chronograph follows the Distance Screen in the Lower Display Window sequence.

**NOTE:** The default setting for the system is the Lap Chronograph display, however the Interval Chronograph display may appear in the Lower Data Window if it has previously been programmed.

2. **PRESS & HOLD** the MODE key for approximately 2-seconds until the display clears and LAP STP or INT STP appears in the Lower Data Window.
3. Choose Lap Chronograph (LAP STP) or Interval Chronograph (INT STP) using **QUICK PRESSES** of the OPTION or START/STOP keys.
4. Enter your choice using a **QUICK PRESS** of the MODE key.
5. If you have chosen the Lap Chronograph the display will automatically change back to the default display setting with Lap 1 appearing in the Lower Data Window. At this point you are ready to ride and use the Lap Chronograph system. See next section on Starting and Stopping the Lap Chronograph.



STEP 1



STEP 2

## OPERATING THE LAP CHRONOGRAPH/ INTERVAL CHRONOGRAPH SYSTEM



### STEP BY STEP—PROGRAMMING THE LAP/INTERVAL CHRONOGRAPH (CONTINUED)

6. If you have chosen the Interval Chronograph with a **QUICK PRESS** of the MODE key, the display will advance to the Interval Chronograph programming sequence.
7. The word WORK will appear in the Lower Data Window with 0:05 seconds appearing in the Center Display window. Adjust the Work period of time up or down using **QUICK PRESSES** of the OPTION and START/STOP keys (Hold the keys down to fast advance the setting).
8. When you have adjusted the WORK time to the value you desire, enter your choice using a **QUICK PRESS** of the MODE key.
9. Repeat steps 7 and 8 to program the REST time period for your interval workout.

**NOTE:** Work and Rest periods of time may be programmed for periods of time from a minimum of 5 seconds to a maximum of 30 minutes. The resolution for programming intervals is 5 seconds. This means you may program intervals for 5, 10, 15 20....seconds but not for times such as 16, 23, 37 seconds.

**NOTE:** During the operation of the unit, you may change the settings for your WORK and REST segments as often as you wish. This will allow you to perform intervals of varying duration.

**NOTE:** Changing the units setting from Lap Chronograph to Interval Chronograph or visa versa automatically clears any information stored in their memories.



STEP 7



STEP 9



## OPERATING THE LAP CHRONOGRAPH/ INTERVAL CHRONOGRAPH SYSTEM

### STARTING AND STOPPING THE LAP CHRONOGRAPH

1. Starting in the LAP Chronograph screen you will see LAP 1 and 0:00:00 alternating on the display every second. The LAP Chronograph screen follows the Distance/Odometer screens in the MODE sequence
2. **QUICK PRESS** the START/STOP key to begin timing LAP 1.
3. Stop timing LAP 1 and automatically advance to LAP 2 by **QUICK PRESSING** the START/STOP key again. You will see LAP 2 and 0:00:00 alternating on the display every second.
4. **QUICK PRESS** the START/STOP key to begin timing LAP 2.
5. Repeat for each additional LAP up to #50.

**NOTE:** When in the LAP Chronograph display, the START/STOP key cannot be used to START or STOP the Total Time Chronograph.

**NOTE:** The maximum time for any LAP is 9h 59m 59s. When the time limit for any lap is reached the LAP Chronograph will stop timing and wait for further action from the user.

## OPERATING THE LAP CHRONOGRAPH/ INTERVAL CHRONOGRAPH SYSTEM



### STARTING AND STOPPING THE INTERVAL CHRONOGRAPH

1. The operation of the Interval Chronograph system is slightly different than that of the Lap Chronograph system. Rather than showing both the Interval number and time in the Lower Display Window like the Lap Chronograph, the Interval Chronograph shows the time for your Interval in the Center Data Window with the Interval Work or Rest indication in the Lower Display Window. This was done to make the Interval Time larger and easier to read during the interval workout and because we felt the user would not have a need for their RT/TT information during the middle of an interval workout.

**NOTE:** During an interval workout you may change the Lower Data Window to display any ride information you wish. As long as the Interval Chronograph is running, your interval time will be displayed in the Center Display Line regardless of what is showing in the Lower Display Line. To the top and bottom at the far left side of the Center Display Line are two square boxes. The top box being active indicates you are timing a Work segment, the bottom box indicates a Rest segment.

**NOTE:** The Center Display line will not change to display the Interval Time information until the Interval Chronograph system is activated by a **QUICK PRESS** of the START/STOP key. When not actively timing the Interval Chronograph system will show INT (Interval) and the number of the next interval waiting to be timed showing in the Lower Data Window. If you wish to check your current settings for the Interval Chronograph you will need to enter the setting sequence to review them.



STEP 1



## OPERATING THE LAP CHRONOGRAPH/ INTERVAL CHRONOGRAPH SYSTEM

### STARTING AND STOPPING THE INTERVAL CHRONOGRAPH (CONTINUED)

- From the Interval Chronograph display **QUICK PRESS** the START/STOP key to initiate the timing of the WORK portion of Interval 1 (WORK 1), counting down from the programmed value. From this point forward, if nothing else is done the Interval Chronograph system will function automatically guiding you through your interval workout until you stop the system with a **QUICK PRESS** of the START/STOP key.
- If during an Interval workout you wish to terminate the workout, simply **QUICK PRESS** the START/STOP key while timing either the WORK or REST portion of any Interval. When you do this, the segment currently being timed will be terminated, all data to that point will be stored and the system will automatically advance to the start of the WORK segment for the next interval in sequence and wait. For example, if you are timing the WORK segment of Interval 5 (WORK 5) which is programmed to be 5 minutes long and you **QUICK PRESS** the START/STOP key to terminate the interval at 3:30 all related information up to that point will be stored and the system will automatically advance WORK 6 and wait for a subsequent **QUICK PRESS** of the START/STOP key to begin the interval timing sequence once again.

You may enter the Interval Chronograph programming sequence as many times as you wish and change the Work/Rest timer settings. In this way you can perform different types of intervals during the same workout.



STEP 2



STEP 3

## OPERATING THE LAP CHRONOGRAPH/ INTERVAL CHRONOGRAPH SYSTEM



### REVIEWING THE LAP CHRONOGRAPH MEMORY

- Once you have finished timing a LAP you may review it and the stored information for the segment.
- From the LAP Chronograph display, **QUICK PRESS** the OPTION key to advance through the stored LAPs starting with the most recently timed LAP.
- When you advance to a stored LAP, the Lower Data Window will show the LAP #, followed by the following information scrolling automatically at 2-second intervals: LAP Time, LAP Distance, LAP Average Speed, LAP Average Heart Rate and LAP Distance Climbed.

#### AUTOMATIC AT 2-SECOND INTERVALS





## OPERATING THE LAP CHRONOGRAPH/ INTERVAL CHRONOGRAPH SYSTEM

### REVIEWING THE INTERVAL CHRONOGRAPH MEMORY

Once you have finished timing an interval session and stopped the Interval Chronograph, you may go back and review the stored data in the same manner as with the Lap Chronograph.

1. Using **QUICK PRESSES** of the OPTION key scroll through the stored intervals starting with the most recently timed interval.
2. Only data from the WORK portion of each Interval is stored in memory. No information related to the REST portion is stored.
3. The stored information is identical to that tracked in the Lap Chronograph memory, with ONE IMPORTANT DIFFERENCE.
4. Rather than tracking Average Heart Rate, the Interval Chronograph system stored you LAST heart rate for the WORK section of each Interval. We did this because the LAST heart rate gives you a better indication of the actual intensity of the interval than average heart rate.

### AUTOMATIC AT 2-SECOND INTERVALS



### CLEARING LAP/INTERVAL CHRONOGRAPH MEMORY

The LAP/INTERVAL Chronograph Memory is automatically cleared to zero and LAP 1 any time you clear the Ride Time or Total Time Chronograph to zero.

## OPERATING RACE DISPLAY SYSTEM



### OPERATING THE RACE DISPLAY OPTION

The new Blackburn Neuro cyclometers are equipped with an exclusive feature designed to meet the needs of racing cyclists. Many cyclists while racing would prefer to have a limited amount of information available on display to avoid distractions and allow them to concentrate on the race. However, they still wish to be able to store and review all the data from an event after it has been completed. For these riders, we created the Blackburn Race Display. When activated, the race display shuts off the active display of all of the Neuro's ride data EXCEPT for the RT/TT Chronograph and the Lap Chronograph. No other functions appear on the display, however all ride metrics including distance, heart rate, cadence and altimeter functions are tracked in the background for later review.

1. To activate the Race Display option, simply **PRESS & HOLD** all three of the main keys (MODE, OPTION & START/STOP) at the same time for a period of approximately 2-seconds. The display will clear and only RT or TT, M/H or K/H and the Lap Chronograph will appear on the display. (Two new Drawings)
2. When in the Race Display mode the START/STOP key is dedicated to the function of the Lap Chronograph. If the computer is programmed for Total Time mode, you must exit the Race Display option to Stop the TT chronograph once it has started.



STEP 1

To simply and easily Exit the Race Display at any time, **QUICK PRESS** either the MODE or OPTION keys. You may enter and exit the Race Display system as often as you wish during a ride.





## OPERATING THE BACKLIGHT SYSTEM

The Neuro units are equipped with Blackburn's exclusive UltraNightglow™ electroluminescent backlight system for use when operating the unit in low light conditions.

When activated, the UltraNightglow™ system automatically remains lit for a period of 10-seconds. Pressing any key while the UltraNightglow™ system is activated, automatically resets the timer for an additional 5-seconds. This feature allows you to view several functions without having to reach up and re-activate the system.

**CAUTION**—The backlight system places a high load on the battery in the computer. Excessive use of the backlight system WILL result in shortened battery life.

To activate the UltraNightglow™ backlight system, **QUICK PRESS** the Upper Display/EL key.

## TECHNICAL DATA



### BATTERIES

Computer Battery—CR 2032 3v Lithium

Wireless Transmitter Battery—CR 2032 3v Lithium

Heart Rate Transmitter Battery—CR 2032 3v Lithium

### FUNCTIONS AND OPERATIONAL RANGES

#### Bike Functions

Speed—0—199.9 Miles or Kilometers/Hr—0.1 Mi or Km/Hr

Average Speed—same

Maximum Speed—same

Trip Distance—0—999.99 Miles or Kilometers—0.01 Mi or Km

Bike 1—0—99,999 Miles or Kilometers—1.0 Mi or Km

Bike 2—same

Weekly Ride Time—0—99hours—1.0 hours

Annual Ride Time—0—999hours—1.0hours

Cadence—0—250 rpm—1rpm

Average Cadence—same

Maximum Cadence—same

#### Chronograph Functions

Ride Time Chronograph—0—99h59m59s—1.0 Sec

Total Time Chronograph—same

#### LAP Chronograph Functions

LAP Time—50 LAPS—0—9h59m59s each—1.0 Sec

LAP Distance—0—999.99 Miles or Kilometers—0.01 Mi or Km

LAP Average Speed—0—199.9 Miles or Kilometers/Hr—0.1 Mi or Km/Hr

LAP Average Cadence—0—250rpm—1rpm

LAP Average Heart Rate—30—240BPM—1BPM

LAP Distance Climbed—0—999,999Ft or Mt—5' or 3m



## TECHNICAL DATA

## FUNCTIONS AND OPERATIONAL RANGES (CONTINUED)

**INTERVAL Chronograph Function**

INTERVAL Time—25 Intervals—0:05—30:00 for both work and rest—5.0 second programming resolution.  
 INTERVAL Distance—0—999.99 Miles or Kilometers—0.01 Mi or Km  
 INTERVAL Average Speed—0—199.9 Miles or Kilometers/Hr—0.1 Mi or Km/Hr  
 INTERVAL Average Cadence—0—250rpm—1rpm  
 INTERVAL Final Heart Rate—30—240BPM—1BPM  
 INTERVAL Distance Climbed—0—999,999Ft or M—5' or 3m

**Heart Rate Functions**

Current Heart Rate—30-240BPM—1BPM  
 Average Heart Rate—same  
 Maximum Heart Rate—same  
 Target Heart Rate Zone  
 Target Heart Rate Zone Memory

**Altimeter Functions**

Current Altitude—1,250 to 30,180Ft or -381 to 9,200M-3' or 1m  
 Total Distance Climbed—0-999,999Ft or M—5' or 3m  
 Current % Grade—60 to +60%—1%

**Other Functions**

Auto Start/Stop  
 12/24 Time of Day  
 11 Pre-programmed Wheel Sizes  
 Backlight

## WARRANTY AND REPAIR

**BELL SPORTS/BLACKBURN ELECTRONICS LIMITED LIFETIME WARRANTY FOR THE UNITED STATES AND CANADA**

BELL SPORTS INC. hereby warrants, to the original purchaser, this product to be free from defects in material and/or workmanship for the life of the product. The obligations of Bell Sports under this warranty are limited to the repair or replacement of such part or parts of the unit which are found by Bell Sports' inspection to be defective in said materials and/or workmanship. Bell Sports reserves the right, at its sole option to repair your product by installing either new or completely reconditioned and inspected components or to replace it with an identical or similar unit of comparable value.

The above Limited Lifetime Warranty is subject to the following restrictions:

- Bell Sports will not be responsible for damage or failure caused by abuse, neglect, service performed by unqualified persons or entities, or normal wear and tear.
- This warranty is void if the product was not originally purchased from an authorized Bell Sports retail outlet.
- Under no conditions are batteries covered under the product warranty.
- Postage or freight required to return a product for service is the sole responsibility of the purchaser. Return postage or freight will be paid by Bell Sports.
- The above warranty is expressly in lieu of any other warranties, including implied warranty of merchantability and/or fitness for a particular purpose. Bell Sports is not liable for any Special, Consequential or Incidental damages.
- This warranty gives you, as purchaser, certain and specific legal rights. You may also have other rights depending on individual state laws.

For specific directions on how to return your Bell Sports Electronics product for warranty repair or general service please go to:

[www.blackburndesign.com/support.html](http://www.blackburndesign.com/support.html) or call

Bell Sports Customer Service at 800.456.2355 / 217.893.9300 8am-5pm Central Time



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