

## Index

Backlight	p. 8,9	Main Menu	p. 4
Batteries	p. 9	Memory Storage Parameters	p. 6
Calibration	p. 7, 8	Menu Navigation	p. 4, 5
Date/Time	p. 3, 4, 7, 8	On/Off	p. 3, 5
Display Contrast	p. 7, 8	PC Interface	p. 8
Display Settings	p. 7, 8	Speed/Pace - Changing	p. 7
Distance Units of Measure- Changing	p. 7	Stroke Type	p. 7
Heart Rate	p. 3, 4, 6, 9	System Reset	p. 7
Just Row Mode:		Warranty and Service	p. 9
Clear Memory	p. 5	Workout Mode:	
Default Settings	p. 8	Clear Memory	p. 6
Mode Explanation	p. 3, 5	Mode Explanation	p. 4, 6
Reset Timers	p. 3, 5	Review Memory	p. 6
Review Memory	p. 5, 6	Run Workout	p. 6
Set Memory Type & Interval		Setup/Edit Workout	p. 6
p. 5			
Setup	p. 5		

## Need Help?

Our Knowledge Center has answers to many common questions, along with tips and tricks for using NK products. It's available 24-7 at:  
[www.nkhome.com/knowledgecenter/](http://www.nkhome.com/knowledgecenter/)

For email assistance with the installation or operation of your NK product, write:  
[techsupport@nkhome.com](mailto:techsupport@nkhome.com).

For help with an apparent malfunction, or to arrange or inquire about a repair, write:  
[repairs@nkhome.com](mailto:repairs@nkhome.com).

Or call 800.784.4221 (610.447.1555 outside the USA), Monday through Friday, 9:00 - 5:00 EST.

**Please register your product at [www.nkhome.com/register/](http://www.nkhome.com/register/) to ensure your full 2-year warranty.**

# **SpeedCoach<sup>®</sup>XL**

## Instruction Manual for XL1 and XL2 Models

# NK

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**Please register your product at [www.nkhome.com/register/](http://www.nkhome.com/register/) to ensure your full 2-year warranty.**

**Thank you for purchasing the SpeedCoach XL from NK!** And congratulations for being part of the 1% of the population who actually reads instruction manuals. If you stick with it, you'll be rewarded with not only a comprehensive understanding of how the XL works, but also with some training tips and tricks from Olympic coxswain and rowing celebrity Yaz Farooq.

We're convinced that you'll find the XL to be the simplest SpeedCoach you've ever used, but it's still a good idea to read the manual. The manual is divided into two sections: Using the SpeedCoach XL, and Setup for the SpeedCoach XL. If you just want to use the XL right out of the box, scan over the "Using" section and you're off. When you're ready to really use the XL to it's fullest potential, read over the "Setup" section for information on the menus, memory and general product specifications. There is also an index on the last page of the manual for quick reference.

As always, we have a full staff of people at NK ready to help out, so please call or email with questions. You can also visit [www.nkhome.com](http://www.nkhome.com) for additional product and support information.

## Table of Contents

Using the SpeedCoach XL . . . . .	3 - 4
Just Row Mode . . . . .	3
Workout Mode . . . . .	4
Setup for the SpeedCoach XL . . . . .	4 - 9
Menu Navigation . . . . .	4
Main Menu . . . . .	4 - 5
Off . . . . .	5
Just Row . . . . .	5
Workout . . . . .	6
Display Settings . . . . .	7
System Settings . . . . .	7
Calibration . . . . .	7 - 8
PC Interface . . . . .	8
About . . . . .	8
Factory Default Settings . . . . .	8
Heart Rate Sensor . . . . .	9
Batteries . . . . .	9
Warranty and Service . . . . .	9
Training with the SpeedCoach XL by Yaz Farooq . . . . .	10 - 11
Index . . . . .	12

actually program in 30 minutes for warm-up. Then I'll plug in 500m, 5 minutes rest, and "loop" it four times. Last, I'll add a 20 minute cool down. Because I can input all of these items in ONE workout, it's a great training tool for coxswains for warm-up management and sticking to the workout plan.

Note: Your unit comes with five pre-programmed workouts. Try them out to get a feeling for all of the different kinds of pieces you can monitor and execute with the XL.

### Other Uses

**Rigging evaluation:** Trying to decide if you should load those oars up another centimeter? Maybe next season's crew averages 10 pounds lighter and is significantly shorter. Use the XL to determine the optimal rigging set-up and corresponding stroke rate target for your crew.

**Seat Racing:** If you pre-program seat racing pieces into the workout menu, the XL can manage the pieces (ensuring that the rest time is equal) and provide feedback for the actual pieces themselves. Again, you can use any or all of the options for pieces: distance, time and strokes.

**Memory/Software, did anyone say, "Training Log?"**  
The XL showcases its flexibility again in the memory portion of the "Just Row" menu. You can set the unit to record in "distance," "time" or "strokes." For a 2k piece, I'd likely use "distance" intervals of "100m." Paging through 100m at a time would give me a ton of info: how well we started, how the splits adjusted as we stepped down to race pace, how well we sustained our speed, and how well we pushed for the line. For long steady state rows, "time" might be a better option. There, my crew might want to see the splits every few minutes, again with the goal of maintaining a steady speed and stroke rate. But say in another practice we're working specifically on starts—really trying to analyze how effective our first 10 strokes are. Now I'd set it to "strokes" with intervals of "1 stroke." We might then do a series of 10 stroke starts, focusing on different things for each one. Then we could page back through the splits and compare them.

The SpeedCoach XL software, when released, will work identically to the current Speed Coach Gold software. Over the years, the coaches I've worked with have found the software to be incredibly helpful. Not only can you print out entire workouts instantaneously, but now you'll have a detailed and

accurate log that includes speed/pace readings, stroke rate, heart rate, elapsed time, etc.

### Side Notes

Remember that wind and waves are factors in boat speed. In a headwind speed and pace splits will be slower. Conversely, they'll be faster in a tailwind up to a point. And of course, if the water is rough, you're typically going to go slower. Take all of these into account when setting split/speed goals for workouts.

When doing interval work, or any short race level pieces where you want to compare them to one another: make sure that your boat is up to speed by the beginning of the piece. This way, your comparisons will be accurate.

### Final Words of Advice

Use the SpeedCoach XL and your brain simultaneously. Don't become so reliant on the SpeedCoach XL readings alone that you fail to feel how you're moving the boat. You can pull great splits, and still may not be rowing a sustainable rhythm. True speed is a combination of effective technique and intelligently applied power. The SpeedCoach XL is designed to give you direct and immediate feedback as to how far you are propelling the boat, stroke rate, and elapsed time. Your head is attached to your body to remind you of common sense things. For example, if you use split targets for racing, make sure the conditions fit your targets. And of course, if you're pulling the pre-planned split in a race and find that you're still behind "Team X" you'll still have to strategize how to move past them if you want to win!

Enjoy your SpeedCoach XL. If you embrace it, you'll not only use it, you'll love it. And with the ability to continuously upgrade the unit you currently own, it will only keep getting better.

Good Luck and Good Speed!

*Yasmin "Yaz" Farooq has been involved in coxing and coaching for over 20 years. As the coxswain for the US National Team Women's Eight from 1989-1996, she competed in the 1992 and 1996 Olympic Games.*

*Now, as a coxswain coach for high school and collegiate coxswains and coaches, Yaz works with individuals and programs. She also races actively on the masters circuit and coxes and coaches for the Oregon Association of Rowers masters in Eugene, Oregon. Yaz served as color commentator for NBC's telecasts of the Sydney and Athens Olympics.*

\* See pages 9 for limitations when using a HR monitor with an XL.

## Training with the SpeedCoach XL

by Yaz Farooq

Ten years ago, Nielsen-Kellerman introduced its first speed computer, aptly named the "PaceCoach." I was the cox for the U.S. women's eight under head coach Hartmut Buschacher, and NK generously sent us a unit to use for training. We embraced it immediately. For the first time, coxswains and rowers were able to see their 500m splits instantaneously. The PaceCoach also gave speed in meters per second, stroke rate, distance traveled, and you could program the unit for timed and distance pieces. Because the technology was so new to the rowing world, USRowing asked me to write an article for American Rowing magazine. We named it, "Demystifying the Pace Coach," and it detailed how coaches and teams could truly use the unit to optimize training.

Now, a decade later, NK continues to show why they are the leaders in developing on-the-water rowing feedback equipment. When they asked me to test-drive the new Speed Coach XL and write a piece on how to make the most of it, of course I couldn't resist. A lot has changed since the introduction of the PaceCoach—most significantly the XL3 and XL4's ability to transmit the speed readings from the in-shell unit to the coach's motorboat. No longer does the coach have to rely on asking a cox to shout out readings during a piece, or have to wait until after the piece to find out the split average from the rowers.

### Install it and GO!

As soon as the XL wiring and impeller are installed you can slide the XL unit onto its mount and immediately start watching your splits. My advice: Don't stop there!

The unit is so easy to use that all of us who test drove it did so without receiving instructions. The menu is virtually self-explanatory. A few things I'd advise you to check out and take advantage of:

- Go ahead and name your unit something "speedy," and plug in the "Group Name" & "Private ID." This allows your coach to know which boat he or she is monitoring, and also ensures that no one else can intercept your readings. (XL3 or 4 models)

- Notice that the "time of day" is displayed in the

lower right hand corner. If you're at a regatta, plug in "regatta time." And it even has military time for those international races. No worries about getting to the starting line on time now!

### Really Using the Features

Now that you've got all of this instantaneous feedback, how do you use it? Odds are you bought this unit because you're on a competitive team and/or you want to truly monitor your training program. That's exactly why we embraced the XL's predecessors on the National Team. Here are a few ways to truly use the SpeedCoach XL's information:

**Steady State/Aerobic Base training:** Back in my day, we would actively use the "pace" reading with the goal of maintaining a certain split range for the entire workout. I'll use some of these examples as we monitored everything that we did. Our split goal for 4 x 20 minutes at stroke rate 20 was 1:50-1:52 (/500). With the XL, the heart rate feature is very handy for this workout. A typical heart rate for most of our rowers was 140-148. But if someone's heart rate was soaring by the end of the workout, we knew that they were either working too hard to maintain the target, or maybe they were feeling under the weather. Now with the XL2, you can monitor pace, distance traveled, elapsed time and heart rate simultaneously.\*

**Technique evaluation:** With instantaneous feedback literally at your fingertips throughout the workout—the XL seriously advances how you can implement technical improvements. Now when you try different technical changes - like quicker leg drive at the catch, unified body swing timing, or even just cleaning up the finishes - you can see how it affects the speed immediately. A really cool thing to witness is how a technical improvement by ONE person in an eight can often improve the splits a couple of seconds.

**Race Level:** The things you can do here are pretty amazing. Because the unit is so versatile, you can do racing pieces and interval work using meters, strokes, and/or time. You can even combine all of those measurements in one workout. For a race prep workout of 4 x 500m, for example, I can

## Using the SpeedCoach XL

To turn the XL on, simply hold the  button for 2 seconds. You will hear 3 beeps as the startup screen is displayed. The two-second button hold avoids the unit being inadvertently turned on if bumped in your bag. The SpeedCoach XL powers on in Just Row Mode.

The SpeedCoach XL is compatible with all SpeedCoach wiring harnesses and impellers. Simply slide the unit into the docking station that is installed in your boat.

To turn the XL off, hold the  button for 3 seconds. The XL will turn off after 17 minutes of inactivity.

### Just Row Mode

Just Row Mode describes the most basic way to use the XL. It means you are rowing without running a programmed workout. You will see measurements for each individual stroke, making it easy to track performance through any session.

#### What you will see in Just Row Mode:



#### Screen Windows:

- A: Speed or Pace
- B: User Selected: time, average speed/pace, distance, number of strokes
- C: User Selected: time, average speed/pace, distance, number of strokes
- D: Stroke Rate
- E: Heart Rate (XL2 only)
- F: System Window - Battery Indicator and Time of day

#### Active Buttons:

-  Start/Stop
-  Window B Select
-  Window C Select
-  Main Menu

**Window A** displays either speed or pace (predicted split) for the previous stroke, and updates every stroke. To change between speed and pace, see page 7.

**Windows B & C** display your choice of distance, time, stroke count, or average speed or pace. To cycle through these measurements in Window B, press the  button. To cycle through these measurements in Window C, press the  button. These windows can be changed at any time, and are cumulative measurements calculated from the last timer reset. To start the timers, press the  button and then begin rowing. The seat magnet passing over the sensor will activate the timer. Press the  button to stop the timer. The xSTOPx icon will indicate that the timers are not running.

To reset the timers (Windows B & C), hold down both the  and  buttons for one second. If you hold down the buttons while the timer is running, it will stop and reset. When the timers are reset, any previously stored data will remain logged in the memory. Resetting the timers simply sets the cumulative information back to zero. When you begin to record information after a reset, the date and time that you started recording will also be stored.

**Window D** displays the stroke rate for the previous stroke, and will update every stroke.

**Window E** displays heart rate if the heart rate sensor and chest strap are in use. The heart rate measurement will update every pulse beat. In XL1 units, or if a chest strap or sensor is not in use it will be blank.

**Window F** displays the System information: battery life indicator and the time of day.

**Just Row Memory** stores information in segments called intervals whenever the timers are running. You can set your storage interval to any: distance (eg. every 100 meters), time (eg. every 1 minute) or number of strokes (eg. every 10 strokes). For each interval, the XL will store: time, speed/pace, distance, number of strokes, and heart rate (XL2 only), the date and time the session began, and the interval number (eg. #1 of 12). The factory default storage interval is 100 meters, and the Just Row memory bank can store 1500 memory points. With a memory bank this large, you can store multiple rows in the memory for later review (depending on your storage interval). This information can be uploaded to a computer using the optional SpeedCoach Interface. When you review the stored data, it is easy to identify intervals since each is stored with the date and time it was rowed. To review Just Row Memory, see page 5 - 6.

## Workout Mode

A workout is when the XL runs a series of pre-programmed intervals.

### When running a workout, you will see:



#### Screen Windows:

- A: Speed or Pace
- B: Workout Interval (either distance, time or number of strokes) - counts DOWN. "WO" indicates that a workout is running.
- C: User Selected: time, average speed/pace, distance, number of strokes - counts UP.
- D: Stroke Rate
- E: Heart Rate (XL2 only)
- F: System Window - Battery Indicator and Time of day

#### Active Buttons:

- ⏻ Start/Stop
- ▶ Window C Select
- ⏪ Main Menu

The workout measurements will appear identical to Just Row mode, with the exception of Window B. This window will always display the current interval counting down. At the end of each interval, the XL will beep three times to indicate that it will begin counting down the next interval. In between windows B and C, a bar chart will indicate the progress of the workout.

The XL can store 5 different workout programs with up to 20 intervals in each. Each interval within a workout can be set for a specific distance, time or number of strokes (and you can mix these in a workout), and a workout can also be set to repeat, or "LOOP". These 5 workouts can be assigned names, and can easily be edited and saved.

**Workout Memory** can store up to 500 intervals. Cumulative or average measurements are stored for each interval. For example, if you ran a workout that was 500 meters with 2 minutes rest, your first interval would correspond to the 500 meter piece, then the interval point would correspond to the 2 minute piece. Memory will ONLY be stored for each workout interval, and NOT according to the Just Row memory settings.

To edit Workout parameters, review the Workout Memory, and clear the Workout Memory, see page 6.

## Menu Options & Setup

The SpeedCoach XL's menus are quite easy to navigate thanks to a large screen and context sensitive of buttons. Additionally, there are "hints" on the screen that help indicate button functionality.



#### Menu Navigation:

- Press the ⏪ button to enter the Main Menu.
- Press the ▲ and ▼ buttons to move the scroll bar up and down to the desired menu item.
- Press the ⏪ button to select the highlighted menu item.
- Press the ⏻ button to exit the menu.

## Heart Rate Sensor (XL2 Model Only)

In order to display heart rate on the SpeedCoach XL2 display unit, you must have a sensor attached to the unit and mounted on your boat, and you must be wearing a chest strap. Most coded or non-coded chest straps will work with the XL. To attach the sensor to the XL, simply insert the plug and twist. Then run the wire along the side of the boat, securing it with the included cable ties inbetween the track and the gunwale. The ideal location to mount the sensor is on the side of the boat, in line with the stroke rate sensor and oriented perpendicular to the stroke rate sensor. If the sensor is mounted inbetween the tracks, the seat magnet can potentially cause inconsistent heart rate readings. Try to mount the sensor so that the chest strap always remains within 3 feet of the sensor.

At present, NK can only guarantee interference-free readings for XL heart rate monitors when there is only ONE chest-belt transmitter within a 6-foot range of the heart rate sensor at any time. As a result, it is possible to use two monitors in most pairs or doubles by placing the stroke seat sensor close to the stern end of the seat deck, and the bow-seat sensor close to the bow end of the deck. In larger shells, the monitors and sensors will need to be at least two seats apart (i.e. at 2 and 4 seats, not at 2 and 3 seats). In larger team boats, it is likely that heart rate systems in adjacent seats will interfere with each other. (This includes having a rower wear a personal heart rate monitor in a seat adjacent to a rower using an XL2.)

## Batteries

The SpeedCoach XL uses a lithium-ion battery, similar to the one used in cell phones. These batteries are both rechargeable and user-replaceable. To charge your XL, simply slide it into the charging station. The screen will indicate that the unit is charging and what percent of the battery is charged. A dead battery requires 5 to 7 hours to fully charge. It is not necessary to let the battery completely drain between charging - frequent charging will not diminish the battery's life. The XL will power off when the charge is complete.

The battery indicator can be used as a guide to estimate how much battery life remains on your SpeedCoach XL. When the battery is fully charged, there are five bars comprised of 5 pixels each on the battery indicator.



Daily battery life is diminished faster with frequent backlight use. Each pixel represents approximately the following amount of time:

Backlight off	92 hours	1 pixel = 3.6 hours
Backlight on	39 hours	1 pixel = 1.6 hours

The battery in the XL should last 3 to 5 years before it needs to be replaced (depending on use.) Replacement batteries are user-installable. Contact NK to purchase a new battery.

When your battery is completely drained or replaced, or following a full system reset, the battery indication will be estimated until the unit has been fully charged. The battery icon will be a solid battery rather than an outline to indicate the estimate mode. When the battery has been fully charged, the battery indicator will be calculated exactly again.

The memory and settings (except date and time) will be saved during a battery drain or replacement.

It is highly recommended that users DO NOT open the battery door unnecessarily. Once the battery door is open, the Speedcoach is not waterproof. The battery door must be reinstalled (with the battery door's o-ring) for the unit to be waterproof again. Instructions are supplied with replacement battery packs or online: [www.nkhome.com](http://www.nkhome.com).

## NK Rowing Electronics Warranty & Service

NK does not believe in "disposable electronics." We know our products don't lead a pampered life, and we design them for years of performance in tough conditions. We guarantee every NK product to be free of defects in materials and workmanship for a period of TWO YEARS from your date of purchase. We will repair or replace any defective product or part when notified within the warranty period, and will return the product via domestic ground shipping at no charge. The following issues do not result from a manufacturing defect and are not covered under this warranty: damage due to improper use or neglect, including corrosion; impact damage; modifications or attempted repairs by someone other than an authorized NK repair agent; normal wear and tear; failed batteries. **Please register your product at [www.nkhome.com](http://www.nkhome.com) to ensure your full 2 years of warranty!**

NK wants you to be an NK customer for life, so we take care of you even beyond the terms of the normal product warranty with our Customer Care Program. Trade-in any NK display unit, no matter the age or condition, and receive a generous discount on the replacement product.

Please note that calibration is boat and impeller location specific; i.e. each boat has a unique calibration number, and if the impeller is moved, the unit needs to be recalibrated. If you are in a team situation where there are many SpeedCoach units being used in many different boats, it is helpful to note the boat's calibration number somewhere on the boat - such as on the deck by the mounting dock - so rowers can make sure the display unit they are using has the correct calibration number for the specific boat.

The XL uses the following formula to calculate the calibration value:

$$\frac{(\text{Old Cal Value}) (\text{True Distance})}{\text{Displayed Distance}} = \text{New Cal Value}$$

For example, if the known rowed distance is 1 mile, but the display shows 0.92, the calibration value would be:

$$\frac{(1.00) (1.00)}{0.92} = 1.086$$

## PC Interface

Initiates communication with a PC. The optional SpeedCoach Interface required. The SpeedCoach Communicator software comes with the interface hardware, or can be downloaded for free from: [www.nkhome.com](http://www.nkhome.com).

## About

Displays the model, and software version., ID and FCC information for the unit. US/FCC: KQLAC4490-100, CAN/IC: 2268C-AC4490.

The code version is also displayed on the splash screen when the unit is powered on. H 1.08 is the code version, and Amer, Eur, Aus indicates the region that the radio is approved for use. (Amer - North America, Eur - Europe and UK, Aus - Australia and New Zealand.) The XL 3/4 radio is not approved for use in any other countries.

**WARNING:** 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.

## Factory Default Settings

All new XL units are shipped from NK with the following settings. Performing a full system reset will restore all settings to these factory defaults.

<b>Just Row Mode:</b>	Memory type:	Distance
	Memory interval:	100 m
<b>Workouts:</b>	Workout 1: 4x (5' on, 4' off)	
	5min, 4min, Loop 4x	
	Workout 2: 2x 1000, 2x 500	
	1000m, 4min, 1000m, 4min, 500m, 3min, 500m	
	Workout 3: 2x (6x (30 st, 20 st)	
30 strokes, 20 strokes, Loop 6x, 10min, Loop 2x		
Workout 4: Pyramid (Time)		
4min, 3min, 2min, 1min, 2min, 3min, 4min, 10min, Loop 2x		
Workout 5: 4x (500 on, 1 off)		
10strokes, 500m, 1min, Loop 4x		
<b>Display Menu:</b>	Units:	m, m/s, /500m
	Speed Mode:	Pace
<b>System Settings:</b>	Backlight:	Auto
	Contrast:	11
	Stroke type:	Seat
<b>Calibration:</b>	Date:	2006 Jul 01
	Time:	AM 12:00:00
	Cal value:	1.000
<b>Cal Distance:</b>	500	
<b>Window A:</b>	Speed	
<b>Window B:</b>	Distance	
<b>Window C:</b>	Time	
<b>Window D:</b>	Stroke Rate	
<b>Window E:</b>	Heart Rate (XL2), Blank (XL1)	
<b>Window F:</b>	Time, User ID, Battery Indicator	
<b>Memory:</b>	Just Row:	1500 data points
	Workout:	500 data points



### Changing Menu Options:

To change a menu setting, press the **←** button to select the setting. The highlight will indicate the setting or value that can be changed.

Press the **▲** and **▼** buttons to increase or decrease the value, or to cycle through the setting options.

Press the **⏻** button to exit the setting without making the changes, or...

Press the **←** button to accept the value or setting.

The options in the Main Menu are:

Heading	Functions
Off	Turn the unit off
Just Row	Review stored data, set up storage interval, reset timers, clear Just Row memory
Workout	Run and edit workouts, review workout data, clear workout memory
Display Settings	Set units of measure, speed mode, backlight and contrast settings
System Settings	Set the stroke type, date, time, or perform a system reset
Calibration	Enter the calibration number or run a calibration routine
PC Interface	Upload information to a computer with the optional interface
About	Display model and software number

## OFF

Select to turn the unit off. You may also hold down the **⏻** button for 3 seconds to turn the unit off.

## Just Row

This menu sets up the Just Row memory bank and operation of the XL in Just Row mode, and also allows you to review Just Row Memory.

<b>Just Row</b>	Enter Just Row mode with timers as they were when last stopped.
<b>Review Memory</b>	Review the 1500 data points stored in the Just Row memory bank: the number of used and free data points will be displayed for 2 seconds, followed by a performance screen with the data from the first interval. (You can select to display distance, time, number of strokes or average speed/split using the <b>▶</b> and <b>▶</b> buttons.) See chart below for information on how memory is stored in Just Row Mode.
	<p>Indicates Recall Mode</p> <p>Current Memory Point</p> <p>Total Memory Points Stored</p> <p>Date &amp; Time the Session Began</p>
<b>Reset Timers</b>	Reset the timers in Just Row mode. None of the stored data is erased.
<b>Clear Memory</b>	Clear all stored data in the Just Row memory bank. ALL Just Row data is erased.
<b>Memory Type</b>	Set the storage interval type for the Just Row memory bank to either: strokes, time or distance.
<b>Memory Interval</b>	Set the length of the storage interval for the Just Row memory bank to either: a number of strokes, an amount of time, or a specific distance.

Interval data is stored differently in Just Row and Workout Modes:

Measurement	Just Row	Workout
Time	Cumulative time since clear or reset	Interval split time
Distance	Cumulative time since clear or reset	Total Interval distance
Rate	Rate at end of Interval	Rate at end of Interval
Stroke Count	Cumulative count since clear or reset	Stroke count for Interval
Speed/Pace	Interval average	Interval average
Avg Speed/Pace	Cumulative average since clear or reset	Cumulative Average for all WO (from last clear)
Heart Rate	Last reading in Interval	Last reading in Interval

## Workout

This menu edits and stores up to five workouts, reviews Workout Mode data stored in run workouts, and clears the Workout Memory bank.

<p><b>Run/Edit Workouts</b></p> <p>Select a workout to run or edit.</p> <p><b>Editing Workouts</b></p>  <p>Workout Name</p> <p>Interval Number</p> <p>END of Workout</p> <p>Interval Length</p> <p>Interval Type</p> <p>LOOP Indicates Everything Above This Line Will Repeat</p>	<p>Edit a workout by pressing the ► button: set the interval type (distance, number of strokes or time), and then the interval duration. To add rest to the workout, simply enter your rest as a separate interval. (You will need to remember which intervals were work and which were rest when reviewing the workout data.) Repeat a group of intervals by selecting LOOP as the interval, then determine how many times you'd like it to loop. (LOOP will repeat ALL intervals from the beginning, including previous loops.) To end a workout, select END as the interval type. You may also edit the name of the work out - simply scroll the cursor to the workout title line and adjust.</p> <p>Exit the Workout Edit Mode by pressing the ⏻ button.</p> <p>The XL stores 5 workouts with up to 20 intervals each.</p>
<p><b>Running Workouts</b></p> <p>Press the ⏪ button to run the highlighted workout.</p>	
<p><b>Review Memory</b></p>  <p>Indicates Recall Mode</p> <p>Current Memory Point</p> <p>Total Memory Points Stored</p> <p>Date &amp; Time the Session Began</p>	<p>The Workout Memory bank can store up to 500 data points across all workouts. The number of used and free data points will be displayed for 2 seconds, followed by a performance screen with the data from the first interval. Use the ▲ and ▼ buttons to cycle through the intervals - you can go forwards or backwards. You can select display of distance, time, number of strokes or average speed/split using the ► and ◀ buttons. See chart on page 8 for information on how memory is stored in Workout Mode.</p> <p>Press the ⏻ button to exit the memory review.</p>
<p><b>Clear Memory</b></p>	<p>Clear all stored data in the Workout memory bank. ALL Workout data is erased.</p>

## Display Settings

This menu adjusts the units of measure, the speed mode and display appearance.

<b>Units</b>	Set to: <ul style="list-style-type: none"> <li>- Meters, meters per second, and /500 meter</li> <li>- Miles, miles per hour, and /mile</li> <li>- Kilometers, kilometers per second, and /kilometer</li> <li>- Nautical miles, knots, and /nautical mile</li> </ul>
NOTE: if the units of measure are changed, any previously stored data will not be recalculated for the new units of measure.	
<b>Speed Mode</b>	Choose either: Speed or Pace (predicted split)
<b>Backlight</b>	Set to: <ul style="list-style-type: none"> <li>- ON (is always on)</li> <li>- OFF (is always off)</li> <li>- AUTO (illuminates automatically in low-light)</li> </ul>
<b>Contrast</b>	Adjust between: 0 and 30

## System Settings

This menu contains various system settings.

<b>Stroke Type</b>	Set to: <ul style="list-style-type: none"> <li><u>Seat</u>: Calculates the stroke rate based on a seat magnet (rowing shells with a seat magnet).</li> <li><u>Touch Pad</u>: Calculates the stroke rate based on touching a touch pad. In this mode, stroke rate is updated every 2 strokes.</li> <li><u>Impeller</u>: Calculates the stroke rate based on changes in boat. Speed measured by the impeller (canoes and rowing shells with out a seat magnet).</li> <li><u>Paddle</u>: Calculates stroke rate based on a paddle switch (kayaks). In this mode, stroke rate is updated every 2 strokes.</li> </ul>
<b>Date</b>	Set the current date.
<b>Time</b>	Set the current time. Select 24 to set the clock with military time, or scroll through hours to set AM/PM.
<b>Full System Reset</b>	Select YES to initiate a full system reset. This will return ALL settings to the factory settings. (See page 12 for the list of factory settings.) ALL memory is erased. NOTE: After performing a System Reset, the battery indication will be estimated until the battery has been fully charged. See page 9 for more on charging the battery.

## Calibration

For maximum accuracy, your SpeedCoach should be calibrated to adjust for your boat's unique impeller installation and hull shape. (However, even if your unit is not properly calibrated, it will ALWAYS show immediate, relative changes in boat speed and can be a very useful training tool.)

The SpeedCoach XL has integrated a Calibration Routine that simplifies calibration of the unit to a specific boat by automatically calculating the appropriate calibration number after rowing some known distance.

To calibrate your unit, you may either enter a known calibration value, or run the calibration routine. When running the calibration routine, the SpeedCoach XL will guide you through pieces of known land distance and automatically calculate the appropriate calibration value. You need to have a marked rowable distance. Enter this distance into the "Cal Distance" line in the Calibration Menu. Then select "Run Cal Routine" and follow the instructions on the screen. If you row on a body of water with current or tide, the calibration routine will require you to row the piece twice - once upstream and once downstream - so the current does not incorrectly affect your calibration number. Once properly calibrated, the measured distance, speed and pace will always be correct, regardless of current or tide.