**Installation**

Strap Mounting

Use the strap mount to attach your SpeedCoach GPS to a rigger, foot stretcher or any other secure part of your boat. The mount base rotates to allow you to install the strap vertically or horizontally. (Please see Use Your Lanyard and Float warning above)

SpeedCoach Harness Dock Mounting

If your boat is equipped with a SpeedCoach harness, you can mount your unit on the dock. Your SpeedCoach GPS will always use its internal accelerometer to calculate stroke rate as it is using your oar movement and not necessary. If an impeller is present, you have the option to select “Impeller” for speed and distance input. Otherwise, the harness dock will serve as a secure holder and your unit will use its internal GPS receiver to calculate speed and distance. (Please see Use Your Lanyard and Float warning above)

**SpeedCoach Heart Rate Monitor**

The heart rate SMART L.E.D. monitor connects to your unit via Bluetooth technology and adjust the strap to fit your body snugly. Attach belt across the lower portion of your chest, as shown in the figure to the right. To pair your unit, please see Setup Menu option.

**Classic Mode**

**Change Flex Field Measurement**

- Press once to change the flex field measurement. (Press once to access the Main Menu.)

- **AVERAGE**

- **DISTANCE**

- **STROKE RATE**

- **ELAPSED TIME**

**Heart Rate Indicator**

The heart rate SMART L.E.D. monitor connects  to your unit via Bluetooth technology and adjust the strap to fit your body snugly. Attach belt across the lower portion of your chest, as shown in the figure to the right. To pair your unit, please see Setup Menu option.

**Live LINK Indicator**

Indicates mobile device is connected and streaming.

**Skill Mode**

Indicates mobile device is connected but not streaming.

**Button Functions**

**ON/OFF/BACK UP**

- Press once to exit from any screen or menu to the previous screen.

**Down Select**

- As seen from front.

**Impeller Contacts**

- Indicates mobile device is connected and streaming.

**Impeller Indicator**

- GPS Indicator

**Battery Life Indicator**

- Secure holder and your unit will use its internal GPS receiver to calculate speed and distance. (Please see Use Your Lanyard and Float warning above)

**Hearth Rate Indicator**

- Trains the Heart Rate Measurement. (Training pack only)

**Impeller Indicator**

- Indicates mobile device is connected but not streaming.

**Lanyard Attachment**

- Indicates mobile device is connected and streaming.

**Power On/Off**

- Press once.

**Satellite Lock Indicator**

- It is recommended to turn the unit on when outside and wait for the icon to go to a solid satellite icon to ensure the satellite signal is not lost. A solid icon is required to ensure the satellite signal is not lost.

**Stop**

- Press once.

**Reset Timers**

- Hold for 2 seconds until the RESET bar appears, then release. Press again to Start.

**Turn Off**

- Hold for 3 seconds until TURN OFF bar appears (after STOP and RESET), then release. Your SpeedCoach GPS will turn off automatically after 8 minutes of not sensing accelerometer movement.

**To preserve your battery, be sure to turn your unit off before carrying it in your workout bag or car.**

**Basic Operation**

- **Turn On**

- Hold for 2 seconds.

- **Start**

- Press once. A checkered READY bar will appear on the screen. (Please see Use Your Lanyard and Float warning above)

- **Stop**

- Press once.

- **Reset Timers**

- Hold for 2 seconds until the RESET bar appears, then release. Press again to Start.

- **Turn Off**

- Hold for 3 seconds until TURN OFF bar appears (after STOP and RESET), then release. Your SpeedCoach GPS will turn off automatically after 8 minutes of not sensing accelerometer movement.

- **To preserve your battery, be sure to turn your unit off before carrying it in your workout bag or car.**

**Memory**

The total memory that the unit can store is approximately 25 hours. Every stroke is stored in memory and the memory can be reviewed by every 100 meter increment. The speed input (GPS or Impeller) and system of units used will be stored as was rowed.

**Memory Storage**

When the memory is full, the unit will stop recording data. When hearing or at full data, delete all session data to continue recording (see below). The amount of memory used can be found on the bottom of the Recall Menu. An alert message will appear when memory log is nearly full.

**Data Recall**

Select Data Recall from the Main Menu to review stored data. Recall memory will be formatted in sessions according to date and time. Just row sessions will have the JustRow prefix whereas a Workout session will just show the piece runs.

- Please note: A session is not complete until:
  1. In Just Row, you reset the counter to 0.
  2. In Workout, the workout is completed or cancelled.

**Delete All Session Data**

This selection will delete all memory if chosen. Sessions cannot be deleted individually.

**Viewing Sessions**

- Selecting a session will bring up the Session Overview (Figure 1).

**Overview**

- The overview provides the overall distance, time, avg split, and avg stroke rate during that session. Selecting the Session Overview will bring up the Session Details (Figure 2). This page will show the session breakdown by specified period (time or distance). Select MORE to view additional measurement values not currently shown on the screen.

**Data Link**

Select this to connect your unit to your PC or MAC for firmware update or uploading data to your computer. Please go to www.nkhome.com/support/rowing-and-sports-support/manuals-updates/downloads to download the LINK application and follow instructions.

**Live Stream**

Select Live Stream to broadcast your SpeedCoach measurements to the cloud for public viewing. You will need to pair the SpeedCoach to a mobile phone and have the phone in range of the SpeedCoach to broadcast your data live. We recommend keeping the phone in a waterproof bag.

1. Download NK Live LINK application to your mobile device.
2. Make sure Bluetooth is turned on on your mobile device.
3. Open the NK Live LINK App.
4. Enter a Boat ID in the Live LINK application.
5. Turn Live Streaming ON on the SpeedCoach.
6. On SpeedCoach select Phone Pairing -> Find New. In the LINK app, select Pair.
7. Your data will now be broadcast live. Go to the app or link nklink.com to view live results.

**Nielsen-Kellerman**

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www.NKsports.com
**SETUP MENU**

From the Main Menu select Setup. From there, use the menu navigation steps described above to navigate, select, adjust and exit setup options:

**Display Setup**: Allows you to toggle between using the Classic SpeedCoach display layout and the Skill display layout when using the Emperor Oarlock.

**Display Mode**: Choose between Classic and Skill (see above). Please note that you can also view oarlock measurements in the Classic display mode in the window of your choice.

**Classic Setup**: Allows you to set the top two windows to display any of the available measurements.

**Impeller**: The Speed (and distance) input setting can be set to GPS or Impeller. Please note that you will need a wiring harness and impeller to use the Impeller mode.

**Accessory Setup**: Used to pair either the Heart Rate belt or Emperor Oarlock.

**HRM Setup**: Selecting this option will automatically attempt to pair the Heart Rate Monitor (HRM) Belt with the unit. If more than one belt is found, you may need to change locations to isolate belt. The HRM will automatically turn on when attached to your body. The belt works best with moisture, so if you are not getting a reading, place some moisture on the rubber contacts of the belt before attaching to your body. Once the belt has been paired with the unit, you will not need to pair in the future (unless you select HRM and remove belt).

**Oarlock Setup**: Selecting this option to pair your wireless oarlock.

**Connection**: This option to pair your wireless oarlock to the SpeedCoach unit.

**Oarlock Target**: Enter the total length of your oarlock.

**Inboard**: Enter the measurement from the collar to the sleeve of your oar.

**Bobtail**: Enter the name of the boat that is being used up to 5 characters.

**Seat Number**: Enter the seat number in which the oarlock is used.

**Side**: Side that the oarlock is on: starboard or port.

**Set Zero Force**: Used to run a routine to calibrate the zero force of the oarlock.

**Set Zero Angle**: Used to run a routine to calibrate the zero angle of the oarlock.

**Multiplying Factor by 2**: (scaling only) Toggle between showing double the force, work and power being displayed by the unit for all boating for being used.

**Battery Type**: Enter the battery type that you are using with the oarlock: Alkaline, Lithium or Nickel Metal (non-rechargeable).

**Fiware Version**: Shows the current firmware version of your oarlock.

**Speed/Distance Setup**: Options are Speed mode or Split mode. Speed mode will display your speed in the top left window. Split mode will display your speed per 500m (or Mile) as a series of dashes. This mode is used to calculate your cumulative average speed.

**Impeller Cal$ation**: Follow the steps above to perform an Impeller Calibration. The SpeedCoach GPS will only be calibrated if an Impeller is used.

**NOTE**: The unit will not Auto Pause during the Rest sessions of a Workout.

**Connection**: This option to run a single distance-based workout at the distance shown. If you wish to change your calibration distance from 500M, press to select, then to move to the distance that you wish to set. Press to select the new distance and to exit.

**Countdown**: When toggled ON, a countdown timer will start when the first stroke is detected. When the countdown reaches zero, the workout will begin. Tip: The countdown allows you to build to “race pace” before starting your workout. If countdown is toggled OFF, the workout will start immediately when the first stroke is detected.

**Intervals**: Determines the number of intervals in the workout. If you select Equal, all work intervals will be equal in type and value and all rest intervals that can each vary by type and duration.

**Work**: Defines the first work interval of the workout. Work can be time-based or distance based. When the SpeedCoach GPS is being performed, a segment will be added to this entry (i.e., Work1, Work2, Work3, etc.).

**Rest**: Defines the amount of rest in between work intervals. Rest can be time-based or distance-based. The number shown to the right is the rest period per the unit shown. Similarly if more than one rest period is entered in a variable workout, it will be followed by a number of sets.

**Number of Sets**: Select the number of sets of the proceeding interval to run. For example, if you have a workout with a work and rest interval, setting this to 2 will run this work and rest interval twice.

**Rest Between Sets**: Only appears if Number of Sets is greater than 1. Defines the rest period between a repeated group of intervals.

**ADVANCED SETUP MENU**

**Impeller Calibration**

To perform your Calibration Value or run the calibration routine (see below).

**GPS Spd Smoothing, Strokes**: The GPS smoothing feature will average the last n strokes of selected if “2” is selected, for example, the Speed/Split displayed will be an average of the last two strokes, every stroke displayed.

**Stroke Rate Setup**: Options are Timer Start Acceleration, Noise Filtering and Axis.

**Timer Start Acceleration**: Governs the degree of acceleration that must be detected to start the stroke meter. The default value is 4. If you increase this value, a more forceful stroke is needed to start the timer. If you decrease this value, a less forceful stroke is needed to start the timer.

**Noise Filtering**: Governs the degree to which the accelerometer will register changes in acceleration as a stroke. The default value is 2. If you increase this value, it will register acceleration is needed to register a stroke. If you decrease this value, less acceleration is needed to register a stroke.

**Axis**: Allows you to select Front-Back (2) or Any (3). Front-Back (2) is generally recommended for rowing assuming that the majority of your rowing is in the longitudinal plane of the boat. If mounting on a non-axial perpendicular axis, the recommendation is to toggle to Any (3).

**Time and Date**: Used to change the format of the date and time displayed. Please note: only time shows on the display.

**Display Mode**: Used to change the format of the date and time displayed. Please note: only time shows on the display.

**ACCURACY**: Speed +/- 0.1 m/s; Distance +/- 2.5 m over any distance.

**IMPELLER CALIBRATION**

Calibration is only relevant if you are using your SpeedCoach GPS with a wiring harness and speed impeller. The Calibration Value is an adjustment factor that compensates for any discrepancy between your impeller’s distance measured and the “standard boat” upon which the SpeedCoach’s calculations are based. Calibration applies only when in Impeller mode for speed and distance calculation can average out any amount of current or tide to improve the accuracy of the calibration results.

**Entering Impeller Calibration**

Select ‘Impeller Calibration’ from the Advanced Setup Menu.

**Entering a Calibration Value Manually**

If you know your boat’s SpeedCoach Calibration Value from previous calibration(s) then for any SpeedCoach GPS please enter it manually. From the Calibration Menu, press to select the Calibration Value, then press to adjust the value, and to accept the value.

**Running the Calibration Routine**

The SpeedCoach GPS does not need a measured course to be calibrated. Because the SpeedCoach GPS knows both the GPS and Impeller distance measurement, it can self-calibrate. Calibration simply involves rowing the selected distance in two directions. Your distance options are 500M to 1000M. Although a longer distance will sometimes yield a better accuracy of your calibration, it is important to choose a calibration distance that you can row in a relatively straight line in both directions. Ideally, it will also have relatively consistent current throughout. The Calibration routine requires that you row your course in both directions so the unit can average out any amount of current and tide to improve the accuracy of the calibration result through more comparison data.

If you wish to change your calibration distance from 500M, press select to move to the distance line, then to adjust and to accept.

To run the calibration routine, press to highlight Run on the Calibration Menu, then select. From the calibration screen, press to start each calibration leg and follow the screen prompts. On each leg, the distance and rest distance count will up until the selected distance is reached in the land distance window (left). Note that there will be a three- or four-stroke delay at the end of each leg while the GPS and impeller readings are synchronized. At the end of the routine, the newly calculated Calibration Value will be displayed. Press to accept the new calibration value or press to exit the routine without changing your Calibration Value. At any time while running the calibration routine, you can press to exit the routine without changing your calibration value.

**BATTERY USAGE AND CHARGING**

A fully charged battery will provide approximately 6-8 hours of operation, depending on backlit use. Each bar on the battery indicator represents 20% of battery life, or approximately 1.2 to 1.6 hours. To charge your unit, press it firmly into the charging dock of your SpeedCoach GPS charger until it clicks and you hear “Charging…” on the screen. The battery indicator will flash and the bars will indicate the charge status achieved. The battery icon will show full and stop flashing after 100% charge is achieved and the display will turn off when the unit is fully charged.

The SpeedCoach GPS can only be charged with the supplied charging dock. The SpeedCoach GPS is compatible with any USB charging source, including your computer an automotive USB or a cell-phone standby power source. A SpeedCoach XL charger will not charge a SpeedCoach GPS.

Your SpeedCoach is equipped with a safety feature that will shut down charging if the battery is too hot or too cold. Do not charge below 32°F (0°C) or above 115°F (45°C). If you receive a battery warning on the screen while the unit is within these temperature limits, immediately remove the unit from the charging dock and contact NK for service. Further attempts to charge may result in fire or permanent damage.

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