

# StrokeCoach

## Wiring Installation Instructions & Troubleshooting

# NK

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**Thank you for purchasing this StrokeCoach wiring system.** PLEASE take a moment to review these instructions before installing the wiring harness. Your StrokeCoach system should provide you with years of trouble-free service but we are always here to help if a problem arises. To order parts or accessories or obtain technical support, please call 02 6553 2473 You may also e-mail orders to [info@nk.com.au](mailto:info@nk.com.au) and send questions to our support representatives at [info@nk.com.au](mailto:info@nk.com.au) You can also visit us on the web: [www.nk.com.au](http://www.nk.com.au)

***If you've never done this before, please read through all of these installation instructions before permanently installing any part of your StrokeCoach System.***

***The VHB ("Very High Bond") mounting tape used in this installation requires 24 hours to cure to its full bond. PLEASE avoid getting it wet (in other words, don't take your boat for a row) until fully cured. Failure to do this risks having to re-install parts of your system.***

***Wherever you will be installing VHB mounting tape, make sure to use the provided alcohol swabs to clean all oil and dust from the mounting surfaces. Avoid touching the VHB with your fingers as the oil on your skin decreases the bond strength.***

***IF you ever need to remove installed VHB, use a hair dryer to warm the VHB thoroughly, then peel very slowly from one edge to avoid damaging the surface.***

## SELECTING AN INSTALLATION LOCATION AND MOUNTING BRACKET

It's a good idea to think about where you want your StrokeCoach while you are sitting in your boat. Your mounting location should allow you to see the unit clearly and reach the button, but still keep the unit out of the way of your hands, oar handle or paddle throughout the stroke. There are four common mounting locations:

- On the footstretcher plate between the shoes. This location is by far the most common and will generally require the use of a T-Bracket to raise the StrokeCoach above the end of your shoes. A few rowing shells are now equipped with an extended footplate that provides a mounting location without the T-bracket.
- On top of a wing rigger. A wing rigger usually prevents access to the footstretcher mounting location. The StrokeCoach is mounted in this location with an Angle Bracket attached with Dual-Lock tape to permit the bracket and wires to remain with the boat when the wing rigger is removed.
- On top of the deck. The StrokeCoach is mounted in this location with an Angle Bracket. Note that the Angle Bracket is shipped with Dual-Lock tape pre-installed. If desired, this tape may be peeled off and replaced with VHB mounting tape for a permanent installation on the deck.
- On the cockpit washboard or wall. In some boats, you may wish to mount your unit directly to the stern-most wall of the cockpit. The dock may be attached directly to the cockpit wall with no mounting bracket, or a T-Bracket may be used to raise the unit up.

## INSTALLING THE MOUNTING BRACKET (IF USED)

The StrokeCoach wiring is shipped with no mounting bracket attached to allow you the flexibility to choose your mounting option. Make sure you have purchased the correct mounting bracket for the installation option you have chosen. To install the bracket, clean the mounting location thoroughly with an alcohol prep pad, peel the liner from the Dual-Lock or VHB tape, align the bracket on the mounting location, and press firmly.

### ***Install the T-Bracket:***

The pre-drilled holes in the T-Bracket are designed to allow easy installation of the bracket onto the bolts that are used to adjust the height of the footstretcher shoe plate. To mount in this location, simply remove one of the bolts, slide the mounting bracket onto the bolt in front or behind the plate, and replace the bolt.

If there is not a bolt already on the footstretcher that you can use, you may need to drill holes in the footstretcher and secure the docking station with a stainless steel bolt and nut or screw(s). Be sure your footplate is a solid material if you are using screws. It may be necessary to insert a small shim behind the stem of the T-Bracket to support it.



To mount the T-Bracket onto the washbox or cockpit wall, you may use VHB tape to avoid making holes in your boat. Try to maximize the contact area for the VHB as the stem of the mounting bracket takes a good deal of force when clicking the SpeedCoach into the mounting dock.

### ***Install the Angle Bracket:***

The Angle Bracket is designed to be mounted to the top of a wing rigger or the deck. The Dual-Lock tape allows you to remove the docking station from the wing rigger when you derig your boat. It's easiest to leave both pieces of Dual-Lock attached to the bracket when making the installation.



## INSTALLING THE STROKECOACH DOCK

Next you will mount the plastic dock on the end of the StrokeCoach wiring to the front of the installed mounting bracket or directly to the mounting location chosen. If installing the docking station on a T-Bracket, you may use a cable tie to secure the harness wires so they will stay out of the way when you are strapping your feet into your shoes.

- 1) Clean the mounting location thoroughly with an alcohol prep pad.
- 2) Peel the liner from the VHB tape on the wiring dock;
- 3) Align the dock on the mounting bracket or location and press firmly. Be sure to support the mounting bracket from behind while pressing the dock into place.



## MOUNTING THE STROKECOACH

Slide the StrokeCoach display unit onto the docking station until it clicks. Be sure that the lanyard is out of the way.

**NOTE:** To prevent the loss of your StrokeCoach in the event that it is bumped while you are rowing, loop the lanyard around the top of the T-bracket or some part of your shell and slip the StrokeCoach through the loop. (The lanyard is designed specifically for this purpose.)



## INSTALLING THE SEAT MAGNET & RATE SENSOR

The seat magnet and rate sensor work together to measure your rating while rowing. The magnet must pass within  $\frac{3}{4}$ " of the sensor in order to register a rating, so it is important to make sure that the seat magnet and sensor are installed correctly.

### Install the Rate Sensor:

Refer to Figures 1a and 1b. Note the position of the sensor - it should be close to the center of the seat travel and it **MUST** be perpendicular to the long axis of the shell.

It is not necessary for the sensor and magnets to be centered between the rails as shown in Figure 1a. They may be positioned off center as shown in Fig 1b. However, the holes in the magnet assembly **MUST** pass directly over the holes in the sensor. The dashed horizontal line in each figure indicates the correct alignment.

**PLEASE NOTE:** The sensor needs to be installed at the center of the seat travel. If the sensor is too close to either end of the seat travel, the StrokeCoach may indicate ONE-HALF the correct stroke rate.

The vertical spacing between the stroke sensor and the magnet assembly is critical. If the magnet passes too far from the sensor the sensor may fail to register every stroke, resulting in low readings. If the magnet is too close to the sensor, it may strike the sensor and knock one or both out of place.

Because the distance between the seat plate and the deck varies considerably from shell to shell, you should start by measuring this distance. Refer to Figure 2.

- If the distance measured as in Figure 2 is between  $\frac{7}{8}$ " and  $1 \frac{1}{8}$ ", you may mount the sensor and magnet with no further adjustment.
- If the distance measured as in Figure 2 is **GREATER** than  $1 \frac{1}{8}$ ", you will need to make a spacer of appropriate thickness. You may choose to shim the sensor or the magnet; whichever is easier. **DO NOT** use any magnetic material for your shim. Many boat builders have shims designed to fit their particular seats.

- If the distance measured in Figure 2 is **LESS** than  $\frac{7}{8}$ ", the magnet and the sensor will interfere. Try mounting the magnet on the upper side of the seat plate or the sensor on the underside of the deck. As a last resort, you will have to remove material from either the seat or the deck (this almost never needs to be done).

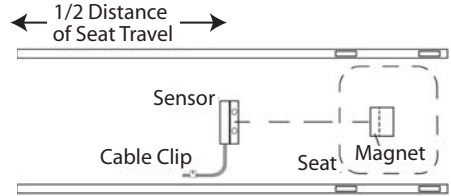


FIGURE 1a: SENSOR & MAGNET INSTALLATION (Sensor Installed on Centerline of Seat)

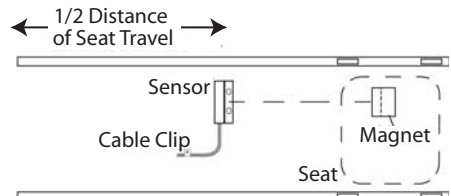


FIGURE 1b: SENSOR & MAGNET INSTALLATION (Sensor Offset Centerline of Seat)

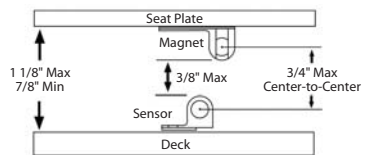


FIGURE 2: SENSOR & MAGNET SPACING

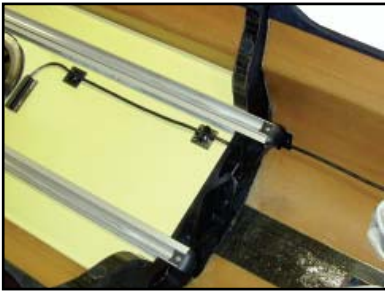
Check that the sensor cable is routed conveniently before mounting the sensor. You can install the sensor and magnets semi-permanently by using the 3M VHB (Very High Bond) tape supplied. Should you wish to make a temporary installation, use electrical tape to affix the sensor. Use the alcohol prep pad provided to clean the area of the deck to where you will attach the sensor. Peel away the protective layers of the VHB double-sided tapes, and firmly press the sensor onto the cleaned area of the deck. Wait 24 hours before rowing to allow the VHB tape to fully cure.

Using the provided cable tie mounts, secure the sensor wire. If in the future you need to remove the wire, simply cut the cable tie and later use a new one to secure the wire.

### ***Install the Magnet:***

- 1) Remove and inspect the seat plate to find an appropriate place to mount the magnet.
- 2) Clean the mounting location thoroughly with an alcohol prep pad.
- 3) Peel the liner from the VHB tape on the magnet.
- 4) Align the magnet on the mounting location and press firmly.
- 5) Return the stroke seat to its slide and check that the clearance between the magnet and sensor is no more than 3/8" (refer to Fig 2). Check also that the magnets pass directly over the sensor (refer to Figures 1a, 1b).

**NOTE:** On seats without a sliding carriage (such as shown in the photo), there may be no seat plate for attaching the magnet. One option in this instance is to place the flange of the magnet assembly on top of the axle tube and secure the magnet with a few wraps of electrical tape.



## PROBLEMS

The most effective way to troubleshoot the StrokeCoach unit is to narrow the variables and determine which component is at fault. In order to do this, you will need to trade units with a fellow rower. You should use his or her unit (with the same stroke-mode setting your unit) on your dock station. The fellow rower should use your StrokeCoach (with the same settings) on his or her docking station. This will allow you to determine if the control unit or the docking station is at fault.

### **No stroke rate readings**

The display unit may not be in contact with the mounting bracket. Push the display unit firmly onto the mounting bracket until a loud 'click' is heard.

The seat magnet may not be passing close enough to the stroke rate sensor. Make sure that the magnet is passing directly over the black sensor and within 3/4".

The magnet and stroke rate sensor may not be correctly aligned. Make sure that the magnet and black sensor are both across (perpendicular to) the long axis of the boat.

If possible, swap your control unit with a control unit you know works. If the stroke rate begins working, your problem lies with your control unit. If the stroke rate still does not work, your problem lies with your mounting bracket, stroke rate sensor or magnet.

### **Timer does not start**

The unit is in STOP or MEMORY mode. Hold the NOT START button for two seconds to reset the unit and clear "STOP".

The unit may not be receiving a "start" signal from the stroke rate sensor. Review "no stroke rate" solutions above.

### **Display appears faint, display suddenly goes blank, and/or unit will not turn on**

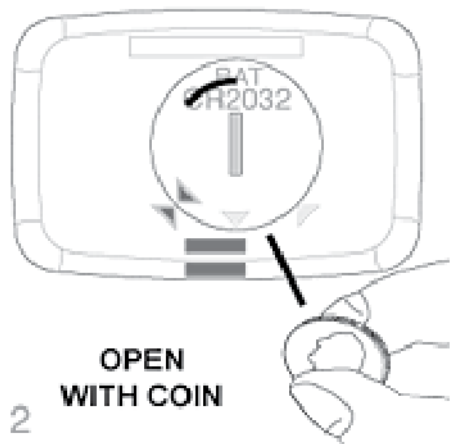
Replace your battery (CR2032 Lithium watch battery), following the instructions in the owners manual. In rare cases, an electrostatic discharge (static electricity "shock") may cause your display's unit to go blank. In dry weather, a charge can build up while the unit is being carried in the storage pouch or a pocket and be discharged when the unit is touched or placed on the mounting bracket. If this happens, you can perform a complete reset of your unit as follows:

Open the battery door and remove the battery. Leave the battery out for at least 10 seconds while pressing and holding the button. Release the button and reinstall the battery. The unit should turn on and function normally when you push the button.

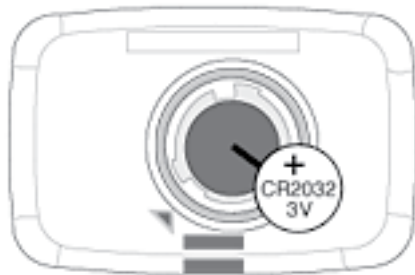
If this procedure does not solve the problem, and your unit is more than 2 years old, try replacing the battery.



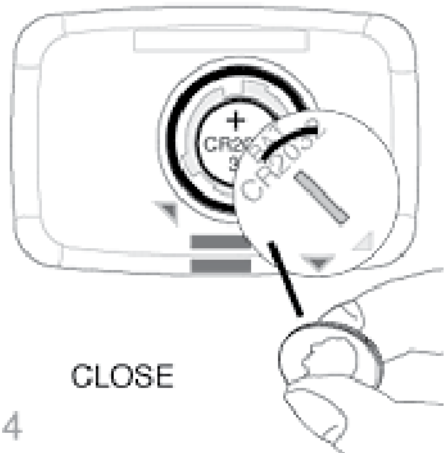
**LOW  
BATTERY**



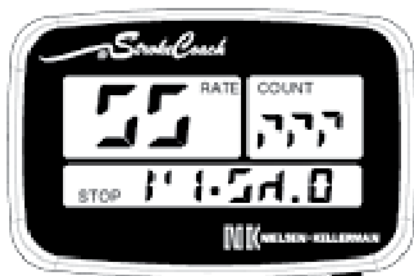
**OPEN  
WITH COIN**



**BATTERY =  
3V LITHIUM CR2032**



**CLOSE**



**BAD DISPLAY AFTER  
BATTERY CHANGE...  
NEEDS RESET**



**HOLD TO  
RESET**

## **Contact Info:**

### ***Delivery Address***

**(Please send all parcels to this address)**

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### ***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.

Visit [www.nk.com.au](http://www.nk.com.au) at anytime for detailed product specifications, troubleshooting and online ordering.