

StrokeCoach

Wiring Installation Instructions

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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 610-447-1555. You may also e-mail orders to orders@nkhome.com and send questions to our support representatives at support@nkhome.com. You can also visit us on the web: www.nkhome.com.

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.

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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.

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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 washboard 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.



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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.



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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.

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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 on the next page.

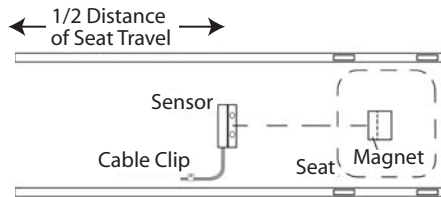


FIGURE 1a: SENSOR & MAGNET INSTALLATION (Sensor Installed on Centerline of Seat)

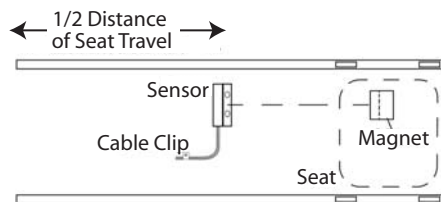


FIGURE 1b: SENSOR & MAGNET INSTALLATION (Sensor Offset Centerline of Seat)

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- 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.

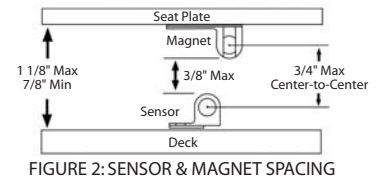


FIGURE 2: SENSOR & MAGNET SPACING

- 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).

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.



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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.

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TROUBLESHOOTING

General Troubleshooting:

Always try to borrow a fellow rower's StrokeCoach so that you can narrow down the variables. By testing your boat's wiring harness with a functional unit, and having your unit tested in a functional wiring harness, you can help determine where the problem lies.

My Unit Works in My Friend's Boat, but Neither Mine nor Hers Work in My Boat:

The problem most likely lies with your wiring harness or impeller --

- 1) Check to make sure there are no cuts, nicks or pinched areas along the wire (a flashlight is helpful here).
- 2) Be sure that both sensors are aligned correctly.
- 3) Check that the metal contacts on the mounting dock are flush with the surface of the dock.
- 4) Clean the metal contacts on the mounting dock with a non-abrasive cleanser, like Bon-Ami. DO NOT use solvents on the docking station as it may cause damage and voids the warranty.

My Unit Doesn't Work in my Boat or My Friend's Boat, but Hers Works in My Boat:

The problem most likely lies with your StrokeCoach --

- 1) Inspect the metal contacts on the back of you StrokeCoach. Are all above the level of the case? Do they spring back out when you press them in gently? Is their metal surface smooth and shiny?
- 2) Clean the metal contacts on your unit with a non-abrasive cleanser, like Bon-Ami. DO NOT use solvents on the unit as it may cause damage and voids the warranty.
- 3) Is the battery door secure and well-sealed?
- 4) Is the unit window secure and undamaged?

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- 5) Your unit may have been affected by an ESD (electro-static discharge). Perform a hard reset on your unit to clear the charge. To do so, open the battery door, remove the battery, and hold down the button for 10 seconds. Replace the battery, make sure the o-ring is in place, and close the battery door. This is like rebooting your computer, and often fixes strange or erratic behavior of the display unit.

Specific Problems:

No Stroke Rate or Rate Seems Incorrect

Is Unit Making Contact with the Bracket?

The unit must have clear contact with contact pins on mounting bracket. Push the unit into the mounting bracket until a clear "click" is heard. Be sure the lanyard is not pinched in the bracket and interfering with the connection.

Are the Magnet and Sensor Aligned?

Double-check the set-up and orientation of the seat magnet and black sensor.

Is the Unit in Memory Recall Mode?

If there is no rate, time or distance displaying, make sure the unit has not been left in memory recall mode.

Are the ratings very high and intermittent?

Your unit may have been affected by an ESD (electro-static discharge). Perform a hard reset on your unit to clear the charge. To do so, open the battery door, remove the battery or batteries, and hold down both buttons for 10 seconds. Replace the batteries, make sure the o-ring is in place, and close the battery door. This is like rebooting your computer, and often fixes strange or erratic behavior of the display unit.

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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.

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.

Visit www.nkhome.com at anytime for detailed product specifications, troubleshooting and online ordering.

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