

## Addendum to Monitor MRUD Installation Guide for the Monitor E-Rudder

November 2023

This addendum covers the installation and operation of the Monitor E-Rudder emergency rudder for the Monitor Windvane. The E-Rudder differs from the original Monitor MRUD in that it is a sleeve that fits over the Monitor's water paddle, allowing for quick deployment.

Be sure to familiarize yourself with the E-Rudder prior to departure. We suggest first installing the E-Rudder in port, as it will be much easier to then repeat the installation at sea. For this initial installation, consider backing the boat into a slip first. This makes removal of the E-Rudder foil easier, as it can require significant pressure to remove the foil due to the tight tolerances required to join the two together. This is normal. Please be aware that scratches to the paddle can occur during this procedure.

Your Monitor is shipped from the factory with 2 safety tubes (one working and one spare). It's good practice to carry at least one spare safety tube onboard, especially if you deploy the Monitor E-Rudder.

**WARNING!** Care must be taken during deployment and operation to ensure the safety of the crew and vessel. If possible, wait for good weather and plan the installation in advance. The Monitor E-Rudder is a "get home" rudder and not intended to allow for continued racing or a heavy press of sail.

Do not hesitate to contact us with any questions on the proper use of the Monitor E-Rudder.

## What's Included

Your Monitor E-Rudder is shipped complete with everything necessary to install it on your Monitor.



Figure 1 – Monitor E-Rudder and accessories.

A - MR2 rudder foil    B - Lower eyebolt    C - Upper eyebolt and nut    D – (2) 18' ¼" support line for lower eyebolts  
E – (2) 10' ¼" line for upper eyebolts    F - Rubber safety trim    G – E-Rudder Pendulum bracket

## Mounting and operation of the Monitor E-Rudder

1. Heave to with the boat and try to avoid forward movement. Wear your safety harness.
2. Disconnect the Monitor's pendulum lines from the tiller or wheel adapter, center and lock the pendulum in place by taking the lines to a cleat.
3. Raise the Monitor's water paddle by releasing the hinge latch and pulling the water paddle upward. Secure the water paddle in its upright position with the pendulum centered.



Figure 2 – E-Rudder Pendulum bracket installed and being secured on a Monitor frame.

4. Place the stainless pendulum bracket between the pendulum and the strut guard. Secure it in place by attaching it to the strut guard with the clevis pins, in the three (3) locations circled in Figure 2 above. Attach safety lines as necessary to avoid dropping anything overboard.
5. Remove the rubber safety trim from top of the E-Rudder by pulling from the rudder foil.



**Note:** The purpose of the cosmetic rubber trim around the top of the rudder foil is to soften the sharp edge of the foil. The rubber trim needs to be removed prior to installing the rudder foil over the Monitor water paddle. When finished using the E-Rudder, the rubber strip can be reattached by simply pressing it back into place. If necessary, additional rubber contact cement is available at any hardware store.

6. Slide the E-Rudder foil over the Monitor's water paddle and push down in the direction of the red arrow in Figure 3, until it bottoms out on the lower eyebolt. The two holes at the top of the foil should be clear of the water paddle allowing the upper eyebolt to pass through.

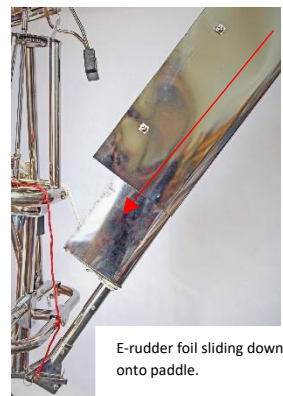


Figure 3

7. Now place the eyebolt through one of the holes in the top of the rudder foil so that it protrudes through the other side of the foil. If the bolt strikes the Monitor water paddle, then the foil has not been pulled completely down over the water paddle. Secure with the eye nut and tighten so that the E-Rudder foil squeezes the Monitor water paddle. Additional leverage on the eye nut can be gained by passing the shaft of a screwdriver through the eyebolt and turning.



Figure 4 - Place eyebolt through upper holes in e-rudder foil. They should be clear of Monitor water paddle allowing eyebolt to pass through.

8. Referring to Figure 5, attach the upper and lower support lines to the e-rudder. These provide lateral support to the rudder.

Attach the 10' support lines to the upper eye bolts with bowline knots. Loosely run each line around the nearest corner of the strut guard where it is welded to the leg of the Monitor frame, then back down to the bowline and up to the strut guard again. By running the lines back and forth you now have a very simple and practical "block and tackle" purchase system. The upper lines will stretch very little, and you have an easy system to make the lines tight.

Attach the 18' support lines to the lower eyebolts with bowline knots and lead to a cleat or a winch on their respective side on deck. You have now secured the pendulum with the pendulum bracket and the lines are supporting the rudder the same way your mast is supported with uppers and lowers, only this "mast" is upside down. Check for chafing in the lines after use and adjust or replace lines as necessary.

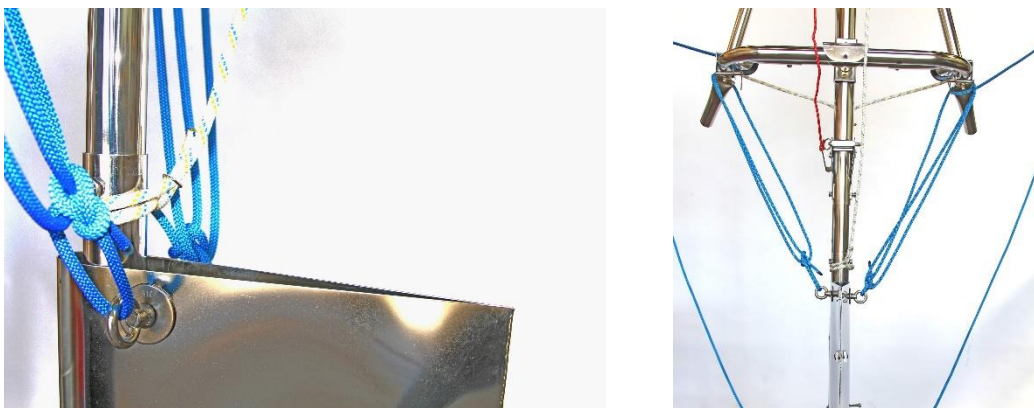


Figure 5 – Attach the support lines to the upper and lower eyebolts and then to the Monitor and stern cleats as described above.

9. Lower the Monitor water paddle with the rudder foil attached. This may require further loosening of the lines to lower the paddle. Once the paddle is down and the hinge locked into place, tighten the lines to provide support.

NOTE: Do not over tighten the support lines. Experiment with the tension. If the lines are too tight, you will have problems turning the E-Rudder.

## Operation

Your Monitor now has a very rigid and strong spade rudder ready to steer your boat. As when sailing with the Monitor, boat balance and sail trim are critical. Consider reducing sail.

When deployed, there should be very small corrections with the E-Rudder unless you are carrying too much sail and/or the sail plan is not balanced (refer to Chapter 4 of the Monitor owner's manual). With the E-Rudder in the open ocean and a course to steer, you can make slow corrections. At your destination you can anchor or get help for the last few miles if you feel you cannot maneuver in close quarters.

You can now steer by three different methods:

1. By hand: Grab the counterweight and move it. You are now steering by hand. You can rig up lines to the counterweight and steer from any position on the boat.
2. With the Monitor's Light Air airvane: Your Monitor will now work as an auxiliary rudder windvane. The tensioned support lines provide some friction, and you may find that performance improves if you slightly ease the support lines if conditions permit.
3. With a small autopilot: A small tiller pilot can be rigged up to the gear set allowing the tiller pilot to steer a magnetic compass course. The Pelagic Autopilot ([pelagicaautopilot.com](http://pelagicaautopilot.com)) features a small actuator that attaches directly to the Monitor frame for this purpose.