

Driving the Red Eagle

The Red Eagle ferry has two Voith-Schneider propellers, one at each end on the ship's centerline. Each VSP can push that end of the ship in any direction—the direction of thrust.

The VSP has a number of wing-like blades hanging down from a rotating platform in the hull. The platform rotates at a constant speed and in only one direction, while the angles of the blades are varied cyclically to control the amount and direction of thrust.

Because only the blade angles need be changed to go from full thrust in one direction to full thrust in the opposite direction, reversal can be done in only a few seconds.

Each VSP has two control wheels: The wheel on the side of the control stand varies the thrust from 0 to 100%. **It does not change the rotational speed of the propeller.** However, the amount of thrust is indicated in RPM on the HUD. 100% thrust is indicated as 500 RPM.

The wheel on top of the control stand varies the direction of thrust—the direction the propeller pushes the ship. The direction of thrust is indicated by a dial with a white needle.

The outer end of the needle points in the direction that the ship will be pushed.

The direction control wheel can be turned continuously in either direction. There is no stop, as there is with azimuth drives. There is a 2:1 ratio between the control wheel and the direction indicator—one complete revolution of the wheel changes the thrust direction by 180 degrees.

To back the ship, you reverse the direction of thrust by giving the top wheel one complete turn. There is no reverse on the side wheel.

Unlike an azimuth drive, such as on B2 or Ocean Star, there is no large propeller assembly that needs to be rotated. Thrust reversal could be almost instantaneous, but the rate is controlled to limit the stress placed on the hull.

Camera 2 takes you to the forward control station on the bridge. The bow is what you see through the window. The smaller wheel—closest to the window—controls the bow VSP. When going ahead, the ship turns in the same direction as that wheel.

The larger wheel—closest to the stern—controls the stern VSP. When going ahead, the ship turns in the opposite direction to that wheel.

The white needles point toward where the respective VSPs push the ship.

You use camera 3 to go to the after control station. Assuming that you are there to drive the ship in the opposite direction:

Your bow is still what you see through the window.

The smaller wheel—closest to the window—still controls your bow VSP. When going ahead, the ship turns in the same direction as that wheel.

The larger wheel—closest to your stern—still controls your stern VSP. When going ahead, the ship turns in the opposite direction to that wheel.

The white needles still point toward where the respective VSPs push the ship.

The new version of RE handles the same way when controlled from either bridge station, **if** you define “going ahead” as going toward whatever you see through the window.