

# Emulating Dolphins

*Seeing bottom contours in color*

The strength of the echo is represented in color, from the strongest, red, through shades of yellow and green to blue. Strength will be greater when the bottom is sloping up and weaker when it is sloping down. Images 1-4 below illustrate some actual scenarios encountered during the sea trial.

- 1 **Vertical scan.** The sonar scans ahead in a 90-degree arc from the surface to the bottom. The red color rising from left to right clearly shows the bottom shelving up ahead.
- 2 **Horizontal scan.** Sweeping ahead in a 90-degree, horizontal arc, the sonar presents a radar-like view (head-up orientation) of a strong return where the bottom is sloping up and made of rock.
- 3 **Horizontal scan** (same spot as No. 2.). The boat has turned to starboard leaving rock to port.
- 4 **A dual screen view** displays depth below the hull (left screen), and what lies ahead (right screen): a pod of dolphins that just crossed the bow.



*The abilities of the SE-200 lag far behind the echolocation used by dolphins, who can differentiate nearly identical targets in a very noisy environment.*

