

Jeff Jacobsen (Mexico research)

Charles:

I'm glad we finally connected; here is a quick summary of what we did with the Interphase Twinscope. During the winter of 2001 we utilized the Interphase Twinscope for three months at Isla Socorro, a remote volcanic island in the Mexican Pacific, tracking Humpback Whales. We used a 14' Zodiac inflatable boat powered by a 25-hp outboard motor for our daily surveys. By attaching Twinscope's two transducers to 2" square aluminum tubes we were able to quickly mount them to the transom by utilizing the wheel brackets. The transducers remained below the waterline throughout all our activities, and did not impede our movements nor throw up spray even while at maximum planing speed (up to 20knots). We used a small motorcycle battery for power that easily lasted for several days of surveying between charges.

The Twinscope was invaluable in our bathymetric surveys of the uncharted near shore environment as we prospected for locations to place, by scuba diving, bottom mounted automated acoustic recorders. We primarily used the vertical scanning feature to track whales in the water column. We soon learned what was noise and what was whale, which often increased our ability to remain with the whale(s), which decreased our need to zoom back over to where they were to obtain identification photographs, which in turn decreased our impact on the whale's behavior. We never observed any avoidance behavior, even at very close range (10 meters). When we lost sonar contact we often were able to relocate the whale(s) by slowly turning the boat in a radial search pattern, and on a few occasions found whales underwater that we had not observed at the surface. Estimations of whale depth were made while the boat was stationary, so we could better control the angle of the transducer. We also began to explore using Twinscope to detect the streams of bubbles that whales in competitive groups (several males displaying and fighting for a female) often release at depth. We were successful on a few occasions when the bubble trail crossed the bow, when we were more perpendicular to the whales.

We left the field impressed with the portability and performance of Twinscope, especially with the ease of using and adjusting the various displays. We plan to improve our mounting system so that we can pivot the vertical scanning transducer to track whales to the side of the boat, not just in front.

Thanks again for your support of our research program. Oh, by the way, we presented our results of the automated acoustic recorders, mapping singers in time and space, at the Marine Mammal Conference in Vancouver in December, and included Interphase in the acknowledgments, and two people asked me about Twinscope after the talk.

Best regards,

Jeff Jacobsen