



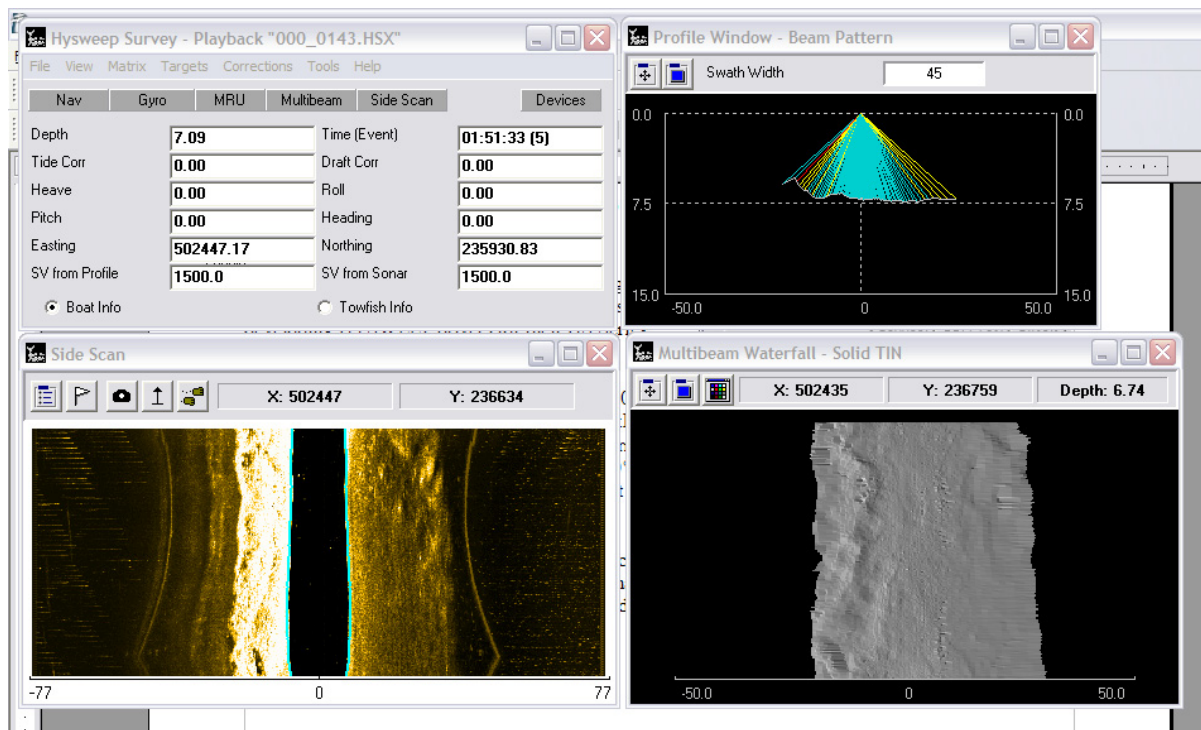
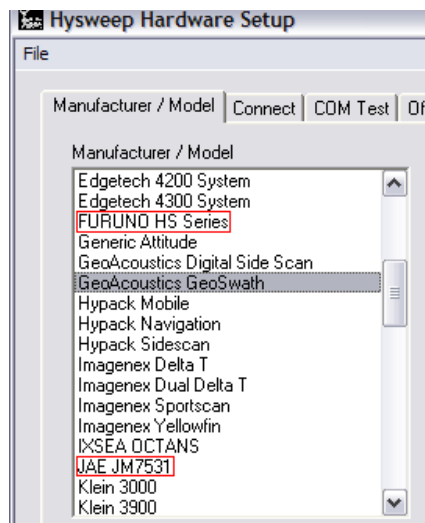
FURUNO Changes to HYSWEEP

BY David Maddock

In December I spent a week in Japan with the good folks at FURUNO, Marine Electronic Products Division, developing HYSWEEP drivers for their HS Series multibeam and standard motion sensor—when I wasn't enjoying the karaoke and amazingly great food, that is.

HYSWEEP supports three models—the HS-600, HS-600F, and HS-300F. The HS-600 is a 320kHz system with a 101 beam, 150° swath circular array. The HS-600F, a flat array, has 121 beams and a 120° swath. The HS-300F is also a 121 beam, flat array, but is a 150kHz system.

Communication is done over a network interface. In addition to the range/angle information, the sonar provides beam intensity and sidescan imagery data. Also included are beam quality codes that can be used to color beams by quality in the HYSWEEP profile window or as search criteria in Stage 2 of editing in MBMAX.



Also new to HYSWEEP is support for the standard motion sensor shipped with the HS, the JM7531 made by Japan Aviation Electronics Industry, Ltd. (JAE). It outputs a binary string on a serial port and provides heave, pitch, roll, and heading pings are time-tagged on the FURUNO side of the interface so it is important to insure that the multibeam and HYPACK computer clocks are synchronized by splitting the GPS 1PPS (one pulse per second) signal and sending it to both devices.