



**UP AND RUNNING:** Electronic controls make running and handling large boats easier for experts and novices alike.

## Fly by Wire

Digital controls are changing the way outboards are rigged and operated. BY CAPT. DAVE LEAR

**FROM SMART PHONES AND CAMERAS** to entertainment systems, the digital age is changing the way we work and play. The same holds true for boating. Every month my colleague, Glenn Law, describes in his column how marine electronics are going digital faster than a Pentium chip.

But the impact doesn't end there. High-horsepower outboards with computerized control modules maximize performance and fuel efficiency. Networking capability between the gauges and components lets the operator monitor various functions. Digital technology is also rapidly shifting, literally, to the helm. Mercury, Suzuki and Yamaha all now offer electronic "fly-by-wire" engine throttle controls on select outboard models. The advantages of using data rather than cable are numerous.

"With digital controls, there's no cable binding or play, so the operator has smooth, positive shifting at all times and precise throttle response, especially at low rpm levels," says Gus Blakely, a sales manager with Suzuki Outboards. "It's as close to clunk-free shifting as you can get."

### RIG FASTER AND EASIER

**INITIAL RIGGING TIME** is greatly reduced with digital controls because of the single wiring harness. That simplicity makes it easier to connect multiple engines or add secondary control stations. After installation, digital throttles are

## Harnessing the Horses

**DIGITAL CONTROL THROTTLES** are not the only accessories unique to big block outboards. Because of their heavier weight and the extra torque generated, special modifications are required for the

steering systems. Mercury developed an electro-hydraulic power steering setup for the Verados. Similar to a car, it uses an electric pump with a hydraulic steering cylinder to reduce torque and fatigue.

Suzuki and Yamaha relied on existing after-market products. Teleflex Marine (teleflexmarine.com), makers of SeaStar hydraulic steering systems, beefed up

cylinders and added a power-assist pump to counter the extra weight and torque.

Latham Marine (lathammarine.com) builds another option specifically for the Yamaha F350 V-8 engine. Its side-mount stainless-steel bracket ties into the power head so the entire engine turns instead of pivoting on a center-mount connecting pin.