

Yamaha DRiVE Technology

Brief Summary

Water jet driven boats have a reputation for being difficult to maneuver in close-quarter situations such as docking or crowded traffic. When Yamaha introduced its latest series of dual engine jet boats, they touted a new technology they call DRiVE, which they claim would make close-in maneuvering much easier.

We tested the DRiVE system and it proved to be so intuitive and simple to use that practically anyone could manage even in the most challenging situations – our report.

Price

Base Price

Key Features

- Enhanced low speed maneuverability
- Steering wheel mounted control paddles
- Digital shift and throttle controls
- Connex touchscreen interface

Specifications

Length Overall	
BEAM	
Dry Weight	
Tested Weight	
Draft	
Draft Up	
Draft Down	

Air Draft	
Deadrise/Transom	
Max Headroom	
Bridge Clearance	
Weight Capacity	
Person Capacity	
Fuel Capacity	
Water Capacity	
Length on Trailer	
Height on Trailer	
Trailer Weight	
Total Weight	
Aft Deck	
Salon Inside Width	
Salon Fore & Aft	
Salon Height	
Salon Volume	

Galley Volume	
Master SR Width	
Master SR fore & Aft	
Master SR Overhead	
Master SR Volume	
Eng. Room Volume	

Acceleration Times & Conditions

Time to Plane	
0 to 20	
Ratio	
Props	
Load	
Climate	

Captain’s Report by Capt. Mark Kellum

Yamaha DRiVE is unknown

Yamaha introduced their largest jet boats to date, the Yamaha 275 Series with new innovative and intuitive low-speed maneuvering technology called DRiVE.
Single handed docking

With Yamaha’s DRiVE Technology, single-handed docking becomes a definite possibility.

Mission

Yamaha's mission was to create an intuitive system that would make a twin-engine jet boat easy to maneuver in tight quarters situations, such as docking at a crowded marina.

Mounted paddles

The key to the Yamaha DRiVE Technology is the two steering wheel-mounted paddles that control forward and reverse thrust, similar to the shift paddles on many sports cars.

Major Features

- Steering wheel-mounted control paddles
- Short throw steering
- Limited controlled thrust

The right-hand paddle mounted at 2 o'clock on the back side of the wheel controls forward thrust and the left-hand paddle mounted at 10 o'clock controls the reverse thrust.

When in DRiVE mode the steering becomes more abbreviated, going from 1¼ turns from lock-to-lock in normal mode to ½ turn in DRiVE mode, while keeping the full range of directional thrust.

A 12.3" (31.24 cm) Connex touchscreen makes changing modes simple. Alternatively, a joystick mouse is also provided as a point and click on the Connex screen.

The digital controls work in conjunction with the DRiVE Technology.

Performance

Maneuvering

With the recently introduced Yamaha DRiVE Technology, the test boat, a Yamaha 275SD, performed admirably in close-in maneuvering which proved to be very intuitive, immediately building operator confidence.

The Yamaha DRiVE Technology combines the steering, forward and reverse thrust paddles, limited no-wake-style levels of thrust and the Connex display to engage and disengage. If the digital shift and throttle binnacle is put into gear, DRiVE will automatically disengage.

Connect display

Once both engines are started and both shift and throttle levers on the binnacle are in the neutral position, touching the mode button on the Connex display will engage DRiVE mode.

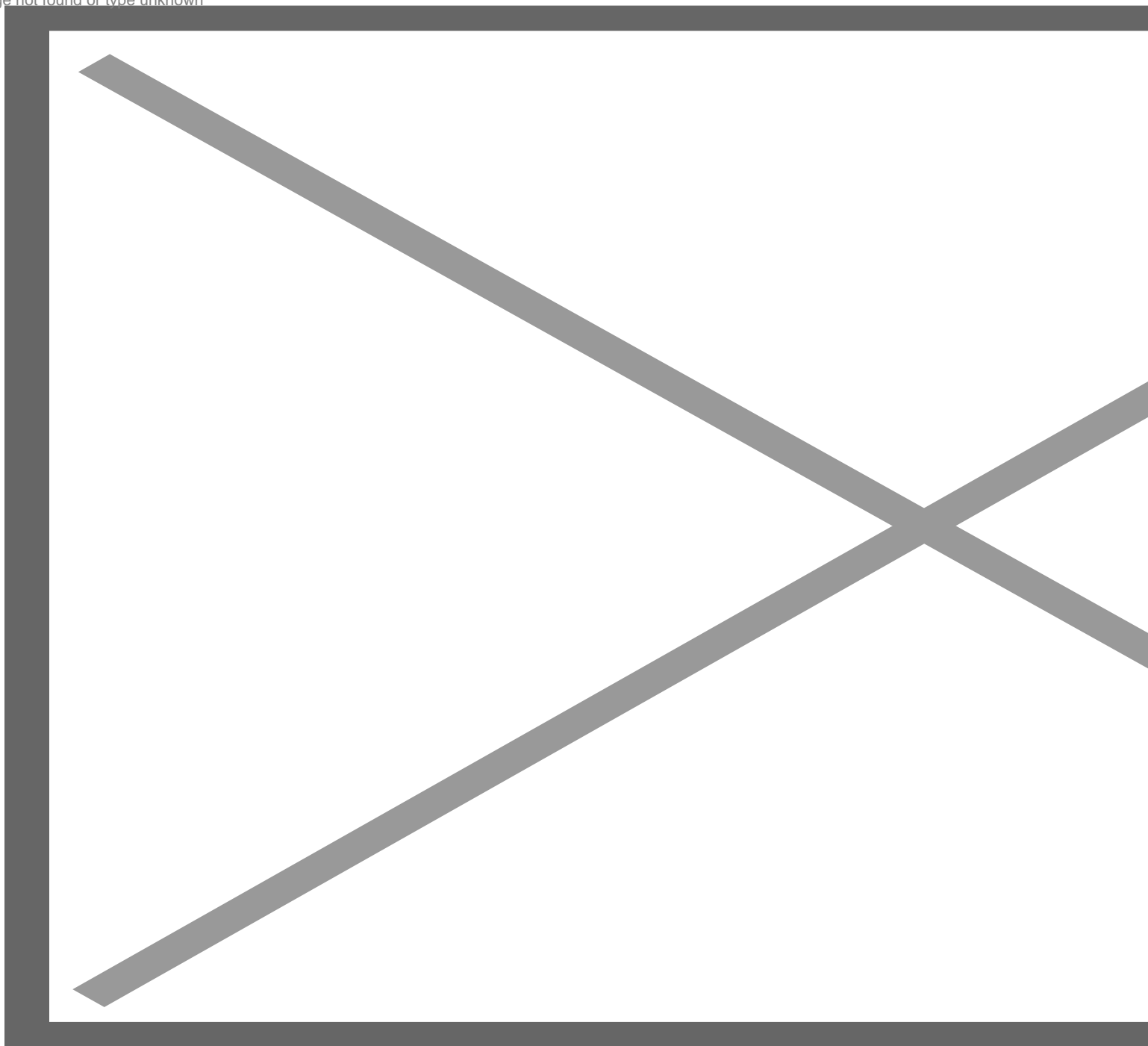
The operator places the Yamaha 275SD in neutral and then can choose between individual shift and throttle mode for controlling the engines separately, single shift and throttle mode for synchronized operation, or, DRiVE mode for close-in maneuvering using the paddles on the wheel in place of the traditional throttles and shifters. When in DRiVE mode, the thrust level is limited to no-wake speeds under 3000 rpm.

With a jet boats ability to direct thrust and turn nearly in her own length when stopped, there is no need to split the engines so one is going forward and the other reversed that prop driven boats might use to torque the boat around - a simple directional thrust of the jets suffices.

Engine in neutral

Shown is the DRiVE mode engaged (yellow arrow) with the shift levers in the neutral position (red arrow).

Image not found or type unknown



Shown is the DRiVE mode automatically disengaging (yellow arrow) when the shift levers are placed in the forward position (red arrow).

Spring loaded paddles

The spring-loaded control paddles increase thrust as they are drawn to the wheel. The right paddle at 2 o'clock is forward thrust. The left paddle at 10 o'clock provides reverse thrust.

A simple mnemonic way to remember which paddle is forward is this suggested phrase, “**go right ahead.**”

Operation

Using the Yamaha DRiVE Technology proved to be intuitive and, in many situations, can be operated with a single hand on the wheel, allowing the operator to turn and observe the boat’s position. It is important to remember that the Yamaha 275SD is a jet boat with no rudders and like its siblings, it won’t steer without a burst of vectored thrust.

Bow-in Docking

With bow-in, the operator is able to keep both hands on the wheel and paddles. The operator does not have to reach for the shift and throttle binnacle with one hand while holding the wheel with the other. And if the operator chooses to stand while docking, that’s not a problem.

~~Slip docking~~ not found or type unknown

The operator simply needs to line up the slip and gently move forward with gentle bumps of forward thrust from the spring-loaded right paddle.

~~Steering wheel~~ not found or type unknown

With the abbreviated ½ turn lock-to-lock on the steering, the operator is able to maintain both hands on the wheel and paddles simultaneously.

~~Short bursts~~ not found or type unknown

Once in the slip, the operator applies short bursts of reverse with the left paddle to slow the boat and gently bring her alongside.

Face Dock Approach

At times, skippers may need to dock in locations where they parallel park the boat. The Yamaha DRiVE Technology makes it stress-free.

~~dock~~ not found or type unknown

The approach would be perpendicular to the dock, applying gentle bursts of forward thrust, pointing at where the midships should eventually be when the operator completes the maneuver.

~~Maneuvering~~ not found or type unknown

Shown is the Yamaha 275SD as the operator begins to apply forward thrust and steer to port.

~~docking~~ not found or type unknown

When the boat is about a third of a length from the dock the operator needs to apply bursts of forward thrust while turning the wheel hard to port.

Docking with ease
Image not found or type unknown

When the bow nears the dock, the operator applies bursts of reverse thrust while turning the wheel to starboard.

When in a tight docking situation be sure to look forward and to the rear. It may take a few bursts of forward thrust and reverse thrust to avoid bumping other boats. The beauty of the Yamaha DRiVE Technology is that the operator can keep both hands on the wheel and in contact with the paddle thrust controls at the same time.

Docked
Image not found or type unknown

The operator is applying the final burst of reverse thrust with the wheel turned to starboard to gently bring the Yamaha 275SD to rest with a soft bump on the dock.

Stern-in Docking

Stern-in docking with the Yamaha DRiVE Technology clearly demonstrates one of the added benefits of the system. The operator is able to complete the maneuver with a single hand on the wheel while turned to look astern during docking.

Look
Image not found or type unknown

To begin the maneuver, the operator aligned the Yamaha 275SD with the slip.

Clear reverse view
Image not found or type unknown

After aligning the Yamaha 275SD, the operator applies bursts of reverse thrust while maintaining a clear view of the dock. In reverse the directional flow bucket is employed and the operator is still able to use the wheel to steer and control the direction of reverse thrust.

Port side docking
Image not found or type unknown

Once in the slip, the operator applies a short burst of forward thrust with the wheel turned to port. This stops the reverse motion and brings the boat gently into the dock on the port side.

Observations

With the Yamaha DRiVE Technology, Yamaha set out to develop a system that would make their largest models to date, the Yamaha 275 Series, easy to maneuver. When the captains at BoatTEST.com first heard about DRiVE Technology, knowing it was developed by Yamaha, we pretty much thought it would be cool.

After testing DRiVE on the Yamaha 275SD, we were impressed with how well it performed. It is simple and intuitive and builds a tremendous amount of confidence when operating this 27' (8.23 m) luxury jet boat in

close quarters. With the Yamaha DRiVE Technology, anyone capable of docking prop boats should be able to dock the Yamaha 275 Series models with ease.