

# HELM MASTER<sup>®</sup> EX

## FOR QUINT-POWERED BOATS



### Yamaha's Next Generation Integrated Boat Control System

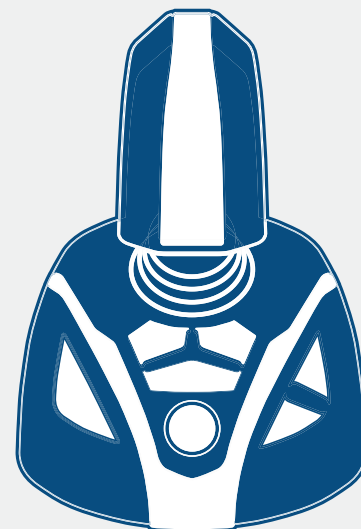
*Ultimate control now available for quint powered boats, too*

Helm Master EX offers integrated boat control with more ease and convenience than ever before, and now it's available for boats with a quint Yamaha outboard configuration. Intended exclusively for use with Yamaha's XTO Offshore<sup>®</sup> outboards in the Full Maneuverability configuration, the Helm Master EX system for quint-powered boats brings ultimate boat control and fishability to even the largest outboard-powered boats.

Helm Master EX for quint-powered boats has taken all the benefits of the original Helm Master system and improved upon them. Helm Master EX has:

- Re-designed joystick with new smooth-shifting software and control capabilities
- Effortless autopilot that can be adjusted with the joystick
- Precise digital electric steering integrated directly into the XTO Offshore
- New digital electronic control box
- Sharp looks and design

**AVAILABLE: JULY, 2021**



### HELM MASTER<sup>®</sup> EX



Helm Master EX is born of Yamaha's **CommandBlue<sup>™</sup>** philosophy. CommandBlue represents Yamaha's commitment to move engineering development into the realm of the customer, ultimately delivering products that are easier to use and create greater satisfaction and confidence on the water.

## HELM MASTER EX Full Maneuverability Features\*

	FUNCTION	HELM MASTER EX®
	Single Lever	✓
<b>NEW</b>	Speed Control	✓
<b>NEW</b>	Trim Assist*	✓
	Center Engine	✓
	Neutral Hold (Formerly "Free Throttle")	✓
<b>NEW</b>	Pattern Shift	✓
<b>NEW</b>	Adjustable/Variable Lock to Lock	✓
	Adjustable/Variable Steering Friction	✓
<b>NEW</b>	Heading Hold	✓
<b>NEW</b>	Course Hold	✓
<b>NEW</b>	Track Point	✓
<b>NEW</b>	Pattern Steer	✓
<b>NEW</b>	Autopilot with Waypoint Arrival and Joystick Adjustability	✓
<b>NEW</b>	SetPoint Suite Features	✓
<b>NEW</b>	Full Joystick Maneuverability	✓

\*Now activated on gauge

## WHAT'S NEW

- Twin-handle DEC Control Box
- Available, smaller, non-tilt Helm Unit (excellent for second stations)
- Autopilot
- Joystick with DriftPoint® Track
- New Electronic Key Switch (EKS)
- Keyless ignition fob (works with EKS)
- Available five-inch Touchscreen Display (CL5)
- Touchscreen integration with Garmin® Multi-functional Displays (MFDs)
- Integration with Raymarine® AXIOM® XL and Simrad® MFDs using remote

## HELM MASTER EX - FOR QUINT-POWERED BOATS

- Enhanced joystick maneuverability with smooth, quiet, precise operation, new single-function buttons, and new features like DriftPoint Track
- Convenient Yamaha Autopilot features like course and heading hold, Track Point (NAV along waypoints), and two types of pattern steer that seamlessly integrate with Speed Control and Pattern Shift
- Increased comfort, control, and convenience with joystick-adjustability that allows fine tuning of Yamaha Autopilot and SetPoint without leaving current mode – ease of use and more capability
- Incredibly fast and responsive Digital Electric Steering (DES) means precise control, particularly when using Helm Master EX Full Maneuverability functions and XTO's Thrust Enhancing Reverse Exhaust
- Totally redesigned Digital Electronic Control (DEC) for ergonomic comfort and ease of use
- Suits quint-configured boats powered by Yamaha XTO Offshore outboards
- Yamaha Helm Master EX PowerMatched®/Component Limited Warranty applies to all components within the system

## THE HELM MASTER EX SYSTEM

Completely new with modern styling, premium feel and ergonomics, the Yamaha Helm Master EX quint system features the all-new joystick with new software for controlling five Yamaha DEC outboards. It offers smooth shifting and single-function buttons for easy operator understanding. The new Helm Master EX joystick also allows fine tuning of autopilot (both speed and direction) and positioning adjustments within SetPoint, without leaving the individual mode.



## AUTOPILOT



Yamaha's new autopilot offers a host of customer amenities and benefits, and is a required installation for the Full Maneuverability Helm Master EX system. It includes a small panel on the console, a heading sensor under the console, an antenna above the boat, and a control unit. Yamaha autopilot provides many convenient features for boat control and operation, and serves as the gateway to new features and benefits.

### **BENEFITS INCLUDE:**

- Single-touch, useful convenience features like heading hold, course hold, pattern steer and heading/course adjustability
  - Heading Hold – automatically maintains set compass heading, but allows for drift. Can also be used in reverse while using speed control for back-trolling at slower-than-idle speeds
  - Course Hold – keeps course, automatically adjusting for current and/or wind
  - Pattern Steer – allows boaters to select one of two pre-set steering patterns (zigzag or spiral) without having to set waypoints. Speed Control and Pattern Shift (very slow trolling) are available to use while in Pattern Steer mode
- Track Point pilots automatically along an operator-input set of waypoints (route). Easy manual override for operator-commanded change of direction
- Seamless integration with Speed Control, Trim Assist, and other Helm Master EX functions/modes
- Waypoint Arrival provides automatic deceleration when approaching the final waypoint (route) and automatically puts the outboards into neutral upon arrival. Helm Master EX can also engage one of the pre-selected SetPoint functions at the place where the operator returns the controls to the neutral position, if selected. (See Helm Master EX Operator's Manual for additional information on exact sequence and set up – requires joystick and joystick software.)

**NOTE:** Boat deceleration and stopping characteristics may differ between MFD manufacturers. Boat may pass by final waypoint in some situations during Waypoint Arrival. Operator attention is necessary at all times when approaching a final waypoint.



## DIGITAL ELECTRIC STEERING



Yamaha's Digital Electric Steering (DES) is integrated into every XTO Offshore. Since there are no conventional steering pumps, hoses, or wiring, Yamaha DES offers a clean, more spacious bilge. There are also no valves, hoses, or control units, and no need for fluid filling, purging, bleeding, or clean-up resulting from these. Boaters will love the smooth, precise action, too.



## **BENEFITS INCLUDE:**

- **Incredible speed and precision.** Electric power steering is very responsive and requires very little effort to operate.
- **Great vessel control.** Zero lag time, while new variable lock-to-lock settings (four-nine rotations) and adjustable steering friction (100 – 200 percent) become available automatically based on outboard rpm. Boaters can then choose to select heavier steering load manually (for example in heavy seas) or can set the DES system to not use auto-increase/decrease features.
- **Additional space in the bilge** and under the console. No pumps or conventional steering-related rigging means new-found room in the bilge area. A new smaller, no-tilt helm is also now available to save space under the console(s).
- **More net battery charging power.** Increased available net charging power over hydraulic systems. The system is not constantly drawing amps like some conventional power steering pumps. This offers the potential for more charging amps to help power on-board electronics.

## **DIGITAL ELECTRONIC CONTROL and KEYLESS IGNITION**



The all-new Helm Master EX DEC control box for quint applications has been redesigned with a sleek new look, greater ergonomic comfort and new capabilities. The user can access the features with individual buttons. In addition

to its great feel and precision, new single-function buttons are back-lit, easy to read in both day or night conditions, and simplify operation.



## **NEW QUINT-CONFIGURED DEC CONTROLS INCLUDE:**

- Speed Control (includes automatic Pattern Shift mode for slower-than-idle-speed trolling)
- Neutral Hold (formerly Free Throttle)
- Station Selector
- Single Lever
- Center Engine(s)
- All Engine Trim
- Individual Engine Trim
- Adjustable Shift Detent
- Throttle Friction Adjustment

**NOTE:** Trim Assist is now easily controlled through whatever display configuration is selected.

## KEY FOB AND KEYLESS IGNITION

A buoyant wireless fob (push-button) allows use of keyless start/stop push-button ignition panels. It also serves as the on/off device for Y-COP® functionality (anti-theft), enabling ignition and the fuel-injection system of the outboards. An under-dash mounted wireless receiver automatically connects with the fob to allow one-touch starting while at the helm (maximum distance approximately 32 inches). The fob can manually unlock/lock ignition from up to 15 feet away.

If necessary, such as in the case of loss, the operator can unlock the system using a four-digit code assigned at the factory or one chosen by the operator. Additionally, the battery-operated fob self-monitors its battery level and audibly alerts the operator when the battery is low. It floats, and is water resistant for immersion for five minutes at a depth of 10cm (approximately 4 inches). Two fobs are provided with each Electronic Key Switch (EKS) kit, and up to four more can be programmed into the system.



## SETPOINT® MODES

All SetPoint modes have been modified for the Helm Master EX system, increasing effectiveness while providing smoother operation.

- **SetPoint®**
  - Collective term for suite of Yamaha positioning modes
- **StayPoint®**
  - Seeks to automatically maintain both boat heading and position. Automatically uses up to Thrust Level 5 as needed to maintain position
- **FishPoint®**
  - Seeks to automatically maintain boat position only (not heading) using minimal rpm for fishing
  - Can set boat ahead (FishPoint Bow) or astern (FishPoint Stern) to prevailing current/wind
  - Automatically resets to Thrust Level 1 each time FishPoint is activated
- **DriftPoint®**
  - Seeks to maintain heading (only) while allowing natural drift via prevailing current/wind
  - Automatically resets to Thrust Level 1 each time DriftPoint is activated
- **DriftPoint® Track**
  - Seeks to maintain heading while drifting along a track (route) of operator-selected waypoints
  - Automatically resets to Thrust Level 1 each time DriftPoint Track is activated

## JOYSTICK ADJUSTABILITY

- **Speed (in Autopilot only)**
  - Up or down, by rpm or by GPS speed over ground (operator-selected via display), in preset increments, by pushing joystick forward (up speed) or backward (down speed)
- **Heading\***
  - Rotate handle once for one degree or hold until beep for 5 degree heading adjustment (stackable up to 50 degrees by twisting and holding)
- **Course\***
  - Change course by rotating same as heading, or offset course parallel by moving joystick sideways (10-foot, 20-foot, 50-foot intervals as pre-selected selected by operator through display)



- **Repositioning in SetPoint Modes (StayPoint, DriftPoint, DriftPoint Track, FishPoint Bow, FishPoint Stern)**
  - Move 5 feet, 10 feet, or 20 feet per movement of joystick forward, reverse, or either side (interval pre-selected by operator via display) without leaving the mode
  - Move boat heading 1 degree with a short twist or 5 degrees with one long twist of the joystick. Hold the joystick in the twisted position to "stack" 5-degree increments of movement, up to 50 degrees total
- **+/- button**
  - Level can be adjusted from Level 1 (lowest, least system effort) to Level 5 (highest, most system effort)
  - Joystick thrust
  - Steering sensitivity/effort to maintain operator-selected A/P input

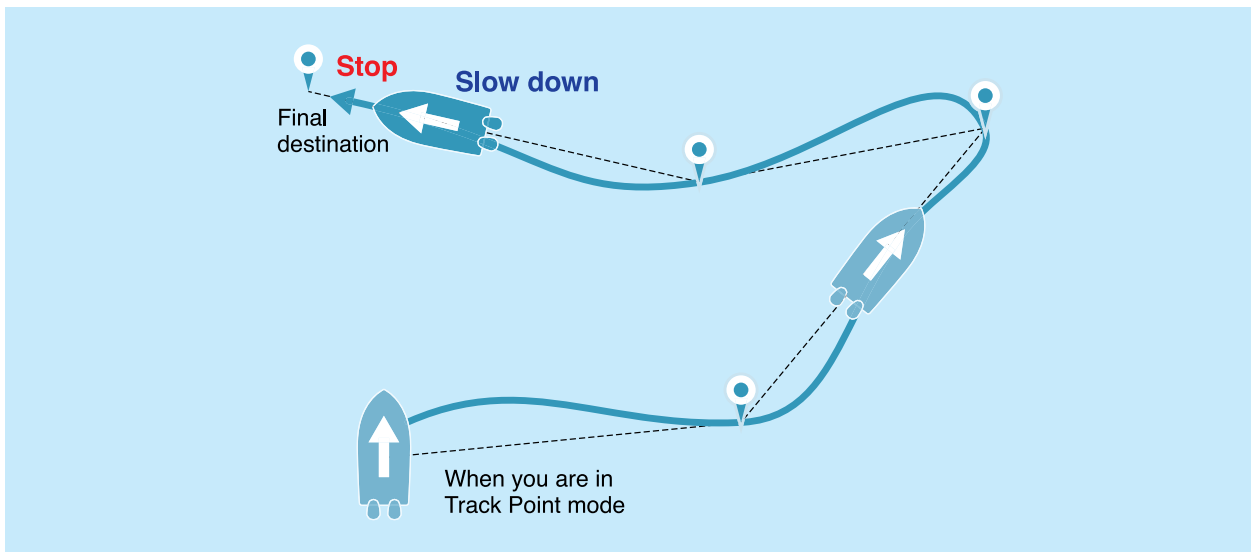
\*These joystick adjustments are stackable up to 10x if no longer than a three-second delay between inputs.



## ENHANCED SETPOINT FEATURES

### Waypoint Arrival with SetPoint

The operator can select what the autopilot does when reaching its final waypoint: do nothing, decelerate and automatically place the engines into neutral at the waypoint, or decelerate to the waypoint, automatically place the engines in neutral, and then enter a SetPoint mode pre-selected by the operator at the exact point at which the operator returns the controls to the neutral position. Two beeps from the display inform the operator the final waypoint has been reached and to return the control handle position to neutral. Immediately upon doing so, the boat will enter the pre-selected mode (i.e. FishPoint, DriftPoint, etc.).



**NOTE:** Boat deceleration and stopping characteristics may differ between MFD manufacturers. Boat may pass by final waypoint in some situations during Waypoint Arrival. Operator attention is necessary at all times when approaching a final waypoint.

## NEW DISPLAY OPTIONS

### CL5 COLOR TOUCHSCREEN DISPLAY

An all-new, thin Yamaha CL5 touchscreen is small in size but big on information and ability. Its sophisticated, modern design features intuitive operation and matches the latest boat console trends, while its compact size leaves more room on the console for other equipment.



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YAMAHA MARINE ENGINE SYSTEMS | HOT SHEET

## MFD INTERFACE (MFDI) – GARMIN®

Allows direct connection and display of system information, and use of touchscreen capabilities, on the following Garmin® MFD models:

GPSMAP® 7400/7600 series (J1939 compatible)

GPSMAP® 8400/8600 Series

GPSMAP® 8700 Black Box

GPSMAP® 7x2/9x2/12x2 PLUS Series



## MFD INTERFACE (MFDI) – OTHER MANUFACTURERS (currently Raymarine® only\*)

Allows connection and display of system information on various manufacturers' compatible MFD models. Selection and input is achieved through a buoyant handheld controller that can be retained on the console via a holster provided with the unit.

\*Raymarine® is an approved manufacturer for its Axiom® XL model MFDs.



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**REMEMBER** to always observe all applicable boating laws. Never drink and drive. Dress properly with a USCG-approved personal flotation device and protective gear. Boat smart from the start. Take a boating safety course and get a free vessel safety check annually for your boat. For more information, contact: United States Coast Guard Auxiliary online at [www.cgaux.org](http://www.cgaux.org), or United States Power Squadrons at 888-for-usps or [www.usps.org](http://www.usps.org).

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