SIMRAD®

75 YEARS OF INNOVATION

AUTOPILOT BUYER'S GUIDE



2021

www.simrad-yachting.com

THE AUTOPILOT ADVANTAGE

Whether you have already enjoyed it, or are yet to experience the freedom of a really good autopilot, you will see that Simrad® autopilots reduce your workload and fatigue, improve your situational awareness and safety, helping you arrive fresher at your destination.

Simply put, an autopilot will lock a pre-set course in its memory and keep you on course by making small adjustments to the helm for you. Simrad® autopilot systems give you reliable and accurate control over your heading without years of experience at the helm – saving you time and fuel by making efficient turns, and keeping you closer to your planned course.

Compensating for wind and tide, a Simrad® autopilot frees you from constant course corrections when you're busy trawling for game fish, planning your next destination, or just cruising. Set waypoints simply by tapping where you want to go on-screen, and your autopilot will take you there.

Need to navigate around an unexpected obstruction? Dodge functionality lets you do so without disengaging the autopilot. Once you've avoided the obstacle, your Simrad® autopilot will bring you back on your original course.

An autopilot is one of the most satisfying upgrades you can add to any boat –an advantage you can't afford to be without.



SIMRAD® AT THE HELM

The current range of Simrad® autopilots represent over 75 years of experience and development.

The Simrad® AP1 was the world's first auto-steering system, and has been winning awards for our auto-steering technology ever since.

We have a wide range of solutions to suit any vessel type and length. Design your own system one component at a time, or start by choosing one of our autopilot core packs.

With our modular components, you can build an autopilot system in just a few steps:

1. Select a drive unit compatible with your boat's steering system.
2. Choose a rudder feedback unit, or utilize our Virtual Rudder Feedback.
3. Select the autopilot computer that matches your drive unit.
4. Choose how you want to control your autopilot system – select a dedicated controller or a Simrad® multifunction display with full autopilot integration.

Alternatively, start with a pack of core components that we have put together, and simply add a drive unit that suits your vessel and then customize your system with a controller of your choice.

THE CONTINUUM ADVANTAGE

Steering your boat isn't just mechanical – your piloting skill is a product of your own unique experience on the water. When it comes to our autopilot systems, the skill to make smart steering decisions comes from the Simrad® Continuum™ algorithm.

The software that drives our autopilots is the product of decades of development, distilling countless hours of real-world on-water experience into a system you can trust to take the helm.

BUILDING A SYSTEM: THE MAIN COMPONENTS

There are a number of components that make up an autopilot system, but if you approach it in the right order, it's straight forward.

A lot of the choices are made for you based on the type of steering system you have on your boat. Start by understanding what type of steering you have, then work through the drive selection process; this will in turn select the right computer for you and help you understand if you need a rudder feedback unit.

Then, you can select the controller and any additional accessories you may need.

1 Drive Unit



An autopilot drive unit translates instructions from your autopilot system into movements of your rudder or outboard. The drive unit you'll need depends on the type of steering system you have and the size of your boat. Is your steering system hydraulic or mechanical?

2 Rudder Feedback Units



Rudder feedback units are small sensors that measure and report rudder position, enabling precise rudder control for smooth and accurate steering. On smaller boats, Virtual Rudder Feedback (VRF) eliminates the need to install a physical sensor by using a software-based approach to calculate rudder position.

3 Autopilot Computer



An autopilot computer is the brain of your Simrad® Continuum autopilot system. It continuously monitors data from compasses, rudder feedback units and other on-board instruments, and steers to your chosen heading or course. An autopilot computer also includes the electronics required to operate your drive unit.

4 Autopilot Controllers



Controllers provide a status display and a hands-on interface to your autopilot system, allowing you to set a course or use more advanced auto-steering features. Choose from a dedicated controller or control your autopilot system using a Simrad® multifunction display.

5 Additional Components



A compass is always required, plus you can add additional components like remotes for flexibility, convenience and accessibility.

6 Find an Authorised Dealer/ Installer

SIMRAD Certified Dealer

Contact your local authorized Simrad® autopilot dealer/installer to help confirm you have the best system for your vessel and to professionally install it for optimum results and warranty coverage.



BUILDING A SYSTEM: WHAT'S RIGHT FOR YOUR BOAT?

1 How To Select The Right Drive Unit For Your Steering Mechanism

Below deck, the steering mechanism and size of your boat decide what sort of autopilot computer and drive system you'll need –the hardware that actually moves your rudder and keeps track of its position.

A) A reversible hydraulic steering pump is used to add autopilot capabilities to outboard or sterndrive (inboard/outboard) vessels with existing hydraulic steering systems. Larger boats need larger pumps; your choice of pump will decide whether you need a standard NAC-2 or high-current NAC-3 autopilot computer.

TIP: You can identify your boat's steering mechanism by locating the cylinder capacity label on the hydraulic RAM on your engine. This will be in cubic inches or cc.



B) Helm drives and linear rams are used to add autopilot capabilities to vessels with mechanical (non-hydraulic) steering systems.

- Electronic helm drive units suit smaller cable-steered runabouts.
- Linear rams operate rudders on power-driven boats, or steering quadrants on sailing vessels.

Helm drives and smaller rams work with a standard NAC-2 autopilot computer; more powerful rams for larger vessels are driven by a high-current NAC-3 autopilot computer.



2 Do You Need A Rudder Feedback Unit?

For reliable and accurate auto-steering, your autopilot computer must also keep track of your rudder position, a rudder feedback unit provides that data.

On smaller boats, Virtual Rudder Feedback (VRF) eliminates the need to install a physical sensor by using a software-based approach to calculate rudder position.

Rudder Feedback Units are typically used on larger boats or boats with inboard engines. A rudder feedback unit physically connects to your rudder, continually measures its position, and reports it to your autopilot computer.

Boats with commercial electronic steering (e.g. Volvo IPS, Optimus EPS etc.) may not require a rudder feedback unit as this feedback is integrated into the existing system.



There are Simrad® autopilot solutions with Virtual Rudder Feedback (VRF) options.

3 Your Drive Selection Dictates Your Autopilot Computer

Whether you command your autopilot via multifunction display, dedicated autopilot controller or remote control, there's an autopilot computer sitting below deck that continuously monitors data from compasses, rudder feedback units and other on board instruments.

Our autopilot computers also looks at your current heading and works out how to move the rudder or outboard.

Depending on the size of your boat and drive unit required, you'll either need a standard or high-current computer.



4 Choose Your Controller – It's Up To You!

With a Simrad® autopilot, the choice of display (controller) is up to you.

Dedicated controllers offer an always-visible display and instantaneous control at the touch of a button. It's also possible to control your autopilot system using a Simrad® multifunction display for an on-screen touch interface.

NMEA 2000® networking lets you connect multiple dedicated controllers and multifunction displays anywhere on board – perfect for dual-helm vessels.

DEDICATED:



AP44



IS42

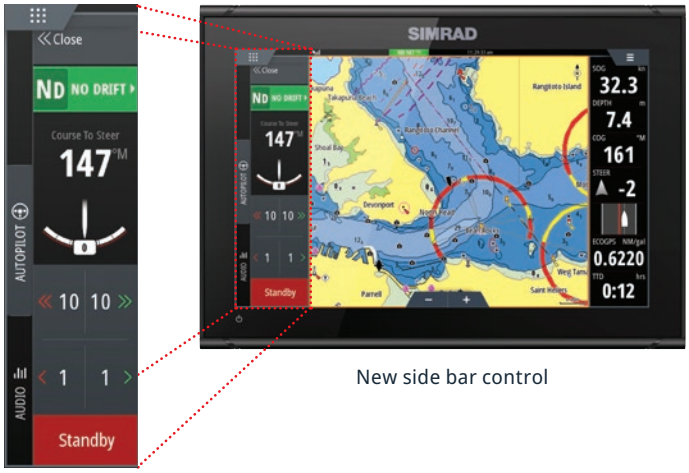


OP12



AP48

INTEGRATED:



New side bar control

5 Select additional accessories

Compasses: to set and hold a course, your autopilot needs to know your current heading.

This is supplied by a position sensor – an electronic compass – below deck.



Precision 9



HS60



HS75

Remote Controllers: our autopilot remotes can be combined with a multifunction display at the helm to add traditional hands-on steering control, or mounted elsewhere aboard your vessel to provide autopilot heading control from a fly bridge or other convenient location.



OP50



OP12



WR10



NF80



QS80



FU80

6 Find an authorized Dealer/Installer

Our global service program is world class and is designed to ensure you have the best possible experience with your products.

When you choose a Simrad® Autopilot, you are automatically protected by a standard service and support program. However, choosing to have your system installed by a Certified Dealer adds 2-Year Onboard Support and 24-Hour Replacement* to your support package.

This is available only on systems installed by a Certified Dealer and valued at over US$2500*.

Visit www.Simrad-yachting.com to find your local certified Dealer/Installer.

SIMRAD Certified Dealer

They will ensure you have the best system to suit your vessel and can assist with dockside commissioning to get your new Autopilot system working effectively and efficiently for the ultimate on-water experience!
*Subject to terms and conditions of the Navico Limited Warranty Policy.



DRIVE & COMPUTER SELECTION & COMPATIBILITY

Steering System	Typical Vessel	Steering Configuration	Required Drive Unit	Required Computer & RFU
Hydraulic & Hydraulic Power Assisted (with RAM or Cylinder)	35ft & Under	Single Outboard	PUMP-1	Outboard Pilot/ DrivePilot Hydraulic Pack NAC-2 & VRF
		Twin Outboards (Single hydraulic cylinder < 15 cubic in or 250cc)	PUMP-2	NAC-2 & VRF
		Inboards (Steering cylinder < 15 cubic in or 250cc)	PUMP-2	NAC-2 & RF25
	Over 35ft	Twin/Tripe/Quad Outboards (Dual Cylinder/Cylinder Capacities 10-33 cubic in or 160-550cc)	PUMP-3	NAC-3 & VRF
		Inboards (Dual Cylinder/Cylinder Capacities 10-33 cubic in or 160-550cc)	PUMP-3	NAC-3 & RF25
		Inboards (Dual Cylinder/Cylinder Capacities 17-58 cubic in or 290-960cc)	PUMP-4 (12V) PUMP-5 (24V)	NAC-3 & RF25
Electronic Steering Systems (Steer by Wire)	Any	Seastar Optimus 360	Not Required	NAC-D Autopilot Computer for Optimus/CANbus Steering
		Yamaha Helm Master™		Steer-by-wire Autopilot Kit for Yamaha
		Volvo IPS/EVC		Steer-by-wire Autopilot Kit for Volvo EVC
Helm Drive Cable Steered	32ft and Under	Single Outboard	Helm-1	Outboard Pilot Cable Steer Pack
Solenoid Steering	Any	Any	Not Required	NAC-2 or NAC-3 & RF25
Mechanical Steering	Sailing	Cable & Quadrant	For the best in Sailboat Auto steering applications, visit www.bandg.com	

FINALISE THE PARTS YOU NEED

Part Number	Description	Notes
Popular Packs, everything you need in one box (some packs exclude hydraulic hose/fittings)		
000-11748-001	Outboard Pilot Hydraulic Pack	Affordable small boat Autopilot packs for vessels with Hydraulic Steering, Includes Point-1 AP Heading and GPS Sensor, NAC-1 Autopilot Computer, PUMP-1
000-11749-001	Outboard Pilot Cable Steer Pack	Affordable small boat Autopilot pack for vessels with Cable Steering, Includes Point-1 AP Heading and GPS Sensor, NAC-1 Autopilot Computer, Helm-1
000-11750-001	DrivePilot Hydraulic Pack	Affordable small boat Autopilot pack with premium compass, Includes Precison 9 Compass, NAC-1 Autopilot Computer, PUMP-1
000-13291-001	AP44 VRF Medium Capacity Pack	Premium Autopilot bundle for vessels with single hydraulic cylinders
000-13562-001	AP44 VRF High Capacity Pack	Premium Autopilot bundle for vessels with dual hydraulic or large capacity cylinders
Popular Computer Core Packs, add a separate controller and drive to complete your system		
000-13337-001	NAC-2 VRF Core Pack	Includes NAC-2 Computer (drives up to 8 Amps), Precision-9 Compass and NMEA2000 cables
000-13338-001	NAC-3 VRF Core Pack	Includes NAC-3 Computer (drives up to 30 Amps) Precision-9 Compass and NMEA2000 cables
000-13335-001	NAC-2 Autopilot Core Pack	Includes NAC-2 Computer (drives up to 8 Amps), Precision-9 Compass, RF25 Rudder Feedback and NMEA2000 cables
000-13336-001	NAC-3 Autopilot Core Pack	Includes NAC-3 Computer (drives up to 30 Amps), Precision-9 Compass, RF25 Rudder Feedback and NMEA2000 cables
Simrad® Autopilot Controllers		
000-13289-001	AP44 Autopilot Controller	Dedicated Autopilot Controller with a full colour display and intuitive rotary dial
000-13894-001	AP48 Autopilot Controller	Premium dedicated Autopilot Controller with a full colour display and large, heavy-duty rotary dial
000-13285-001	IS42 Digital Display	Multi-purpose instrument and autopilot display (OP12 required for Autopilot Functionality)
Compasses		
000-12607-001	Precision-9 Compass	Based on reliable solid-state sensor technology, this compact compass offers easy installation aboard any vessel. 2° Accuracy
000-12308-001	HS60 GPS Compass	GPS Compass which can replace both compass and GPS antenna, not affected by magnetic deviation. 2° Accuracy
000-15585-001	HS75 GPS Compass	GPS Compass which can replace both compass and GPS antenna, not affected by magnetic deviation. 0.75° Accuracy
Remotes and Accessories (Autopilot controller required for autopilot setup & commissioning)		
000-13287-001	OP12 Autopilot Controller	Required for Autopilot Functionality on IS42, or add as a separate standalone wired remote controller anywhere on board
000-12316-001	WR10 Wireless Autopilot Remote	Affordable add on for wireless control
000-10184-001	QS80 Remote	Quickstick Remote, operates the Autopilot in Non-Follow Up Mode and engages auto steering
000-10185-001	NF80 Non-Follow Up Remote	Non-Follow up remote with mode buttons and status display
000-10183-001	FU80 Follow Up Remote	Follow Up remote which moves the rudder to the commanded angle set by turning the lever to port or starboard
000-10756-001	RF25 Rudder Feedback Unit	NMEA2000 Rudder Feedback unit compatible with all computers
20193744	RF300 Rudder Feedback Unit	2 Wire Rudder Feedback for use with NAC-3 only, when NMEA2000 to the rudder area is not practical
Pumps & Drives		
000-11770-001	PUMP-1	Pump for Single hydraulic cylinders less than 14 cubic in or 250cc (Non-servicable)
000-15444-001	PUMP-2	Pump for Single hydraulic cylinders less than 15 cubic in or 250cc
000-15445-001	PUMP-3	Pump for Dual Cylinder/Cylinder Capacities 10-33 cubic in or 160-550cc
000-15446-001	PUMP-4	12V Pump for Dual Cylinder/Cylinder Capacities 17-58 cubic in or 290-960cc)
000-15447-001	PUMP-5	24V Pump for Dual Cylinder/Cylinder Capacities 17-58 cubic in or 290-960cc)
000-11771-001	HELM-1 FOR NAC-1 & NAC-2	Replaces a Manual Helm drive unit. Compatible with Morse 290,304411 and TeleflexSSC52 cables. Built in RFU

For Commercial vessel installations, please see www.navico.com/commercial

For sailing boat installations, please see www.bandg.com

AUTOPILOT COMPATIBILITY

		Simrad® Pilot Heads				Simrad® Remotes			Simrad® Pilot MFD's										Remotes
		AP24	AP28	AP44	AP48	OP10	OP12	QS80, FU80, NFU80	NSE	NSS	NSO	GO Series	NSS evo2	NSS evo3	NSS evo3S	NSO evo2	NSO evo3	NSO evo3S	WR10
Pilot Computers	AC12	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
	AC42	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
	NAC-1	✘	✘	✘	✘	✘	✘	✘	✘	✘	✘	✔	✔	✔	✔	✔	✔	✔	✔
	NAC-2	✘	✘	✔	✔	✘	✔	✔	✘	✘	✘	✔	✔	✔	✔	✔	✔	✔	✔
	NAC-3	✘	✘	✔	✔	✘	✔	✔	✘	✘	✘	✔	✔	✔	✔	✔	✔	✔	✔
	NAC-D	✘	✘	✔	✔	✘	✔	✔	✘	✘	✘	✔	✔	✔	✔	✔	✔	✔	✔

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