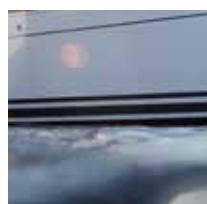


**SIMRAD**

# Marine Electronics Product Catalogue





## Service Beyond The Standard.

In addition to a standard warranty program, Simrad Yachting has now expanded its service offerings with the Advantage Service program. This program, which is free and available to all Simrad Yachting customers, offers the most comprehensive service and support available today.

The Advantage Service program aims to provide the best possible experience with Simrad Yachting products, even on occasions when support or replacement is required. Simrad Yachting stands for high quality both in its products and support offerings.



**SIMRAD**

# ►Contents

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**NSO OFFSHORE**

**NSE EXPERT**

**NSS SPORT**

# Total Control.

## ► NSO Offshore, NSE Expert and NSS Sport: Feature Loaded Multifunction Displays

### ► Choosing a navigation system to suit you

Simrad Yachting offer sophisticated navigation systems to accommodate almost every conceivable helm requirement. Mix and match displays from 7-inches to 19-inches and build a set-up to match your boat.

### ► Purpose-built for safety and enjoyment on the water

Expert and novice operators will appreciate the intuitive user interfaces and clear presentation of information that our multifunction displays offer. Leading cartography and a comprehensive range of performance modules also ensure that our navigation systems perform to the highest standard.

	System Description	Display Size	Screen Brightness	Compatible Cartography	GPS Antenna	Networking Capability	Video Integration	Radar Options	Radar Features	Echosounder Options	StructureScan® HD Compatible	CZone Smart Boat Integration
<b>NSS Sport</b>	Touchscreen, Multifunction Display	6.4"/ 8" / 12"	1200 cd/m2	Navionics Silver, Gold and Platinum	Internal (External Optional)	6 Units	2 x Input	All	Standard	Built-in (NSS7 & NSS8), BSM-1, BSM-2	Yes	Yes
<b>NSE Expert</b>	High Performance, Multifunction Display	8" / 12"	1500 cd/m2	Navionics Silver, Gold and Platinum	External (GS15)	6 Units	2 x Input 1 x Output	All	Advanced 4G Features	BSM-1, BSM-2	Yes	Yes
<b>NSO Offshore</b>	Blackbox, Glass Bridge System with Remote Keypad	15"/17"/19"	600 cd/m2 (DI15) 900-1500 cd/m2 (MO-L)	Navionics Silver, Gold and Platinum	External (GS15)	4 Units	MO-L Monitor Multiple Input, 3 x Output	All	Advanced 4G Features	BSM-1, BSM-2	Yes	Yes



Above: Simrad NSO

## Features Common to All NS Navigation Systems



### ► Brilliant, Low Power LED Display Technology

- Bright, sunlight viewable displays
- Large, readable type

### ► Lightning Fast, Fully Loaded Chartplotter

- High power processors provide rapid zoom and pan functionality
- Compatible with Navionics Silver, Gold and Platinum charts
- Pin point accuracy from GS15 5Hz GPS antenna with NMEA2000®/ SimNet connectivity

### ► Award Winning Echosounder and Radar Technology

- Broadband Sonar capability for outstanding target separation, fish detection and bottom definition.
- Broadband & HD Radar Options with true colour clarity, innovative features and professional grade performance

### ► Intuitive Control Interface for Easy Operation

- Easy to read on-screen menus
- Rotary controller for flexible and precise adjustment
- Quick Touch keys or TouchSensible™ interface options

### ► Elegant Design, Brutally Strong

- Classic designs with flush mount options compliment any helm
- Robust engineering with waterproof connections designed for harsh environments

### ► Complete Flexibility – with “Masterless” Networking

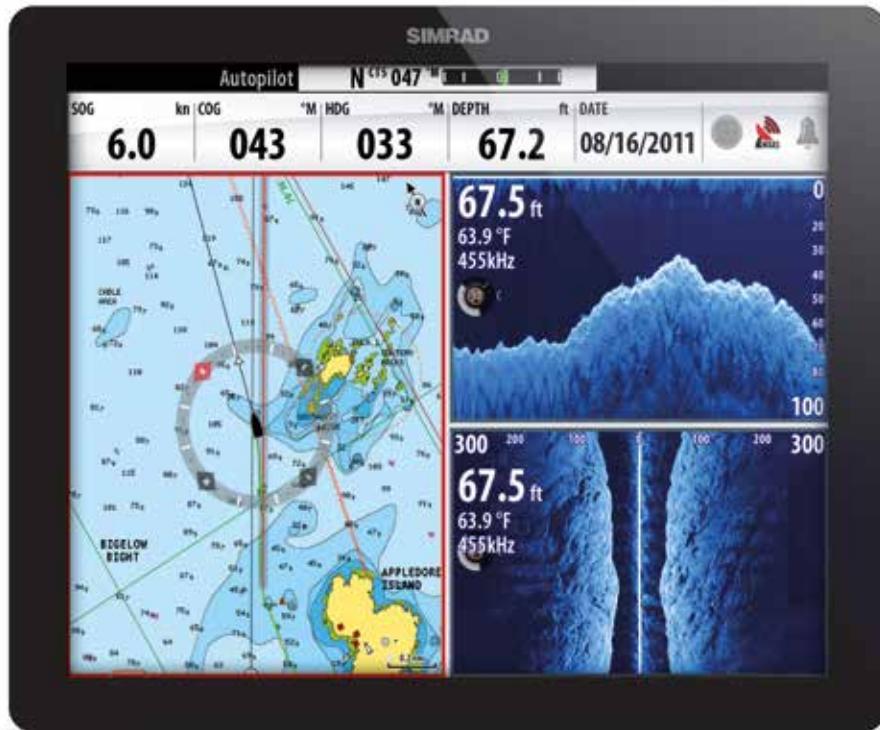
- Share Charting, Echosounder and Radar information across multiple units
- “Masterless” system - Any networked unit can operate independently (network switch may be required)
- SimNet plug and play data networking for NMEA2000 compatible sensors & instrumentation
- Complete autopilot control
- StructureScan® HD life-like underwater imagery
- NMEA2000® engine instrumentation
- CZone Digital Switching and monitoring capability

NSO OFFSHORE

# Offshore Control.

► **Flexible performance** navigation systems with uncompromising bridge aesthetics and unrivalled integration options.

► MO19-L 19" Monitor



► OP40 Controller



A#

► Alphanumeric keypad



► QuickTouch keys



## Display Options: Superior and Stylish

Our MO-L series displays offer the ultimate in monitor technology and our DI15 forms part of an excellent package.

- DI15 15-inch NSO Display
- MO15-L 15-inch LED Monitor (multiple inputs)
- MO17-L 17-inch LED Monitor (multiple inputs)
- MO19-L 19-inch LED Monitor (multiple inputs)
- Third Party DVI/VGA displays



MO15-L



MO17-L



MO19-L

## Powerful yet simple: Total Control

### ► OP40 Controller

Designed by captains for logical functionality, ease and speed.

- Wired Remote Keypad
- QuickTouch keys
- Alphanumeric keypad
- Rotary controller

### ► Marine Processor

Engineered for lightning-fast performance in harsh offshore environments.

- Rugged cast-aluminium housing
- Ultra-fast processor
- Large capacity hard-drive

### ► NSO15 Package



Enjoy the benefits that powerful processing and bright screens bring, with a plug & play, out of the box package.

- NSO Processor
- DI15 15" monitor
- OP40 wired remote
- Dash-mounted SD card reader

NSE

EXPERT

# Expert Technology.

► **8 and 12-inch multifunction displays** providing powerful networking and integration capabilities and professional level performance with sophisticated charting, radar and echosounder technology.

► NSE12



► **Rotary controller:**

Perfectly intuitive for fine or coarse control of gain, zoom and menu with push to enter functionality

► **Alphanumeric keypad**

Quickly enter waypoint, route and track information with precision



► **QuickTouch keys**

Touch a button and make things happen

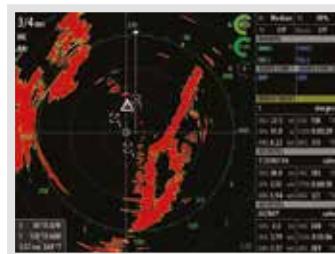


## Quick Touch Keys: Immediate information



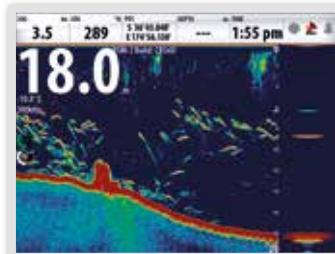
### CHART

Instantly orientate yourself to your surroundings. Simrad NSE comes with embedded coastal charts that allow for out of the box navigation for both novice and experienced mariners.



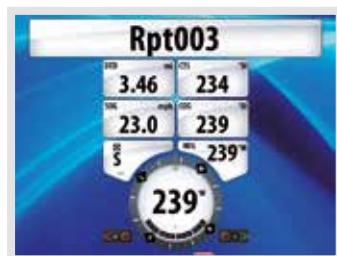
### RADAR

Radar improves a mariner's situational awareness. Easy to operate Radar function allows for Navigation, Target Tracking and collision avoidance. Display both MARPA and AIS targets for the complete picture.



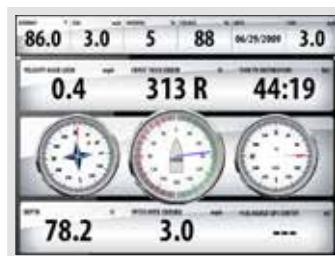
### ECHO

NSO, NSE and NSS can utilise high performance Broadband Sounder™ technology to penetrate deepwater, clearly define underwater structure and "whisper" into the water to find more fish.



### NAV

Clear and easy to read steering and position information. Integrated autopilot control for an extra vibrant, large Pilot display.



### INFO

Get complete engine instrumentation from your NMEA2000® engine. Pre-configured gauge displays combine engine and navigation data in an easy to understand format.



### PAGES

The Pages utility is Command Central for frequently used options and tools. Display and edit waypoints, routes and tracks as well as saved log files. AIS, Alarms and GPS status pages are easily accessed.

NSS

SPORT

# Sport Touch.

► **6.4, 8 and 12.1-inch touchscreen multifunction displays** bringing powerful performance system options to recreational boaters.





## Feature loaded: More than just a chartplotter...

### ► Extreme Ease of Use

Navigation made quicker and easier than any competitive system.

- Simple smart phone style icons
- Tap, Touch & Swipe Gestures
- Context sensitive menus

### ► Touch Sensible™ Technology

Developed specifically for the marine environment for outstanding functionality in any sea state.

- Touchscreen menus and positioning
- Rotary controller for smooth, precise adjustments
- Minimalist keypad for repeated operations

### ► Bright

Unique LED backlighting technology.

- Bright, clear, highly visible display
- Reduces power consumption
- Increases product life

### ► Powerfully Fast Charting

Navigate effortlessly with premium cartography.

- Fingertip panning
- Touch to mark waypoints and easily build routes
- Premium Navionics cartography

### ► Expandable

Network multiple displays and Simrad performance modules.

- NSS, NSE, NSO systems
- Radar options
- Echosounders & StructureScan® HD
- AIS, GPS and heading sensors

### ► Full Control and Integration

Add fully innovative vessel control options

- Complete autopilot control and integration
- NMEA2000® engine and tank instrumentation
- Sonichub® audio server
- CZone Digital Switching & smart boat systems



# Integrate everything

Enhance your navigation system with best-in-class, plug and play performance modules.



## StructureScan® HD

The ultimate in reality echosounding.

- SideScan and DownScan™
- True 180° view
- Picture perfect imagery

High speed GPS

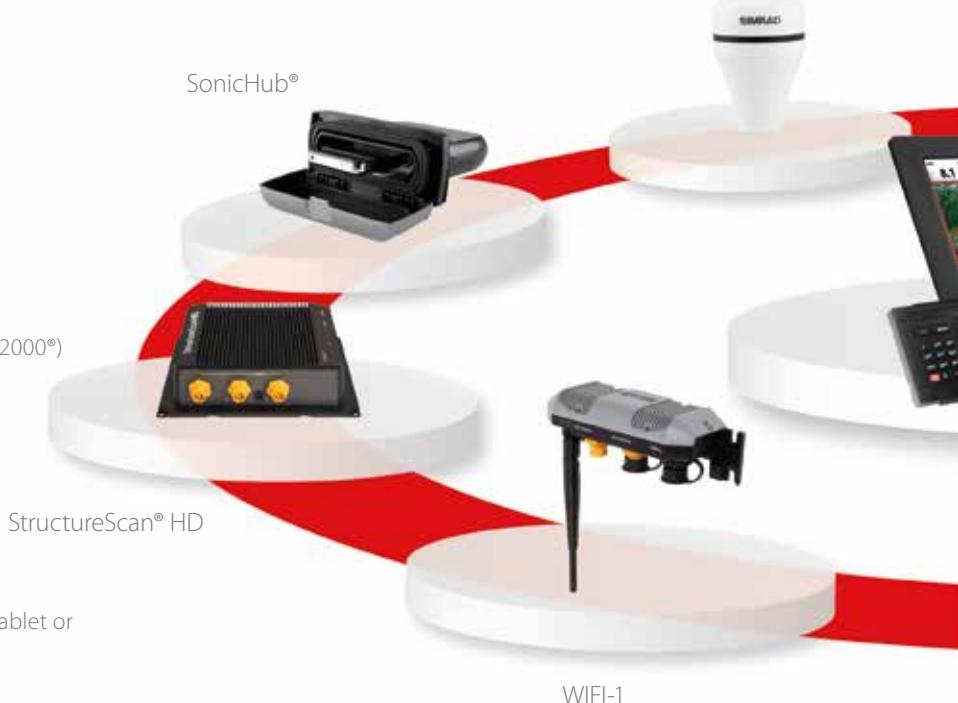


## High Speed GPS

Incredible position accuracy.

- 16-channel 5Hz GPS antenna (NMEA2000®)
- Superior signal acquisition
- Compact design
- Easily flush mounted

SonicHub®



WIFI-1



## WIFI-1

View and control your MFD with your tablet or smartphone from anywhere on board.

- Free viewer app
- Free controller app
- Open protocol data for custom app development



## SonicHub®

Fully integrated marine audio server.

- Control your music from your NSO, NSE or NSS
- iPhone, iTouch & iPod compatible
- Play MP3 files via the USB drive
- Fully waterproof



## Broadband Sounder Modules

Raising the bar in fish finding technology.

- Advanced digital processing
- Incredible targeting & fish detection
- High definition of bottom at speed
- New CHIRP technology in BSM-2



## CZONE

Turn your vessel into a smart boat with CZone digital switching.



- Full electrical panel on your display
- Smart boat modes
- Monitor tanks and power consumption
- Custom alarms and vessel status

Broadband Sounder Module



Autopilot



## Autopilot

Award-winning and ocean-proven autopilot systems.

- Integrated turn patterns
- Dodge function
- Virtual rudder feedback
- Advanced wind steering
- Choice of AP24, AP28 & AP70



## AIS

Overlay AIS equipped vessel information.

- Class B AIS transponders
- See and be seen technology
- Track and identify vessels for safe navigation
- Black box module



Broadband Radar™



## Broadband Radar™

A revolution in recreational radar.

- Innovative FMCW technology
- Unrivalled performance
- Eliminates "main bang" dead zone
- Efficient low-power technology
- Performance features with new Broadband 4G™ Radar



## HD Digital Radar

High-definition radome and open array radar.

- 4kW dome, 6kW, 10kW & 25kW open arrays
- High definition clarity
- True colour displays for storm imagery
- Auto modes with reduced screen clutter



## VHF

Sleek and stylish VHF radios.

- Class D DSC
- Fixed and Handheld
- Loud and clear audio

**NSO OFFSHORE**

**NSE EXPERT**

**NSS SPORT**



# Wireless Solution.

Go beyond view and control, with Simrad GoFree™ wireless technology for your tablet and smartphone.



## View and Control

Use your smartphone to view your Simrad NSS screen. Control features such as radar guard zones, sounders and the SonicHub™ audio system using your tablet.

- Replicate Simrad NSS screen on your smartphone
- Control your NSS from your tablet
- Link numerous tablets to your NSS
- Download apps
- Set user access for ultimate safety

## Choose Your Apps

From GoFree Controller to other third party apps such as iRegatta and iNavX™, you can download and explore a world of possibilities.

- Download GoFree Controller at no cost
- Use Simrad NSS data with other apps
- Own a potentially unlimited number of apps
- GoFree™ open-protocol data enables development of third party apps with the GoFree Developer Toolkit™

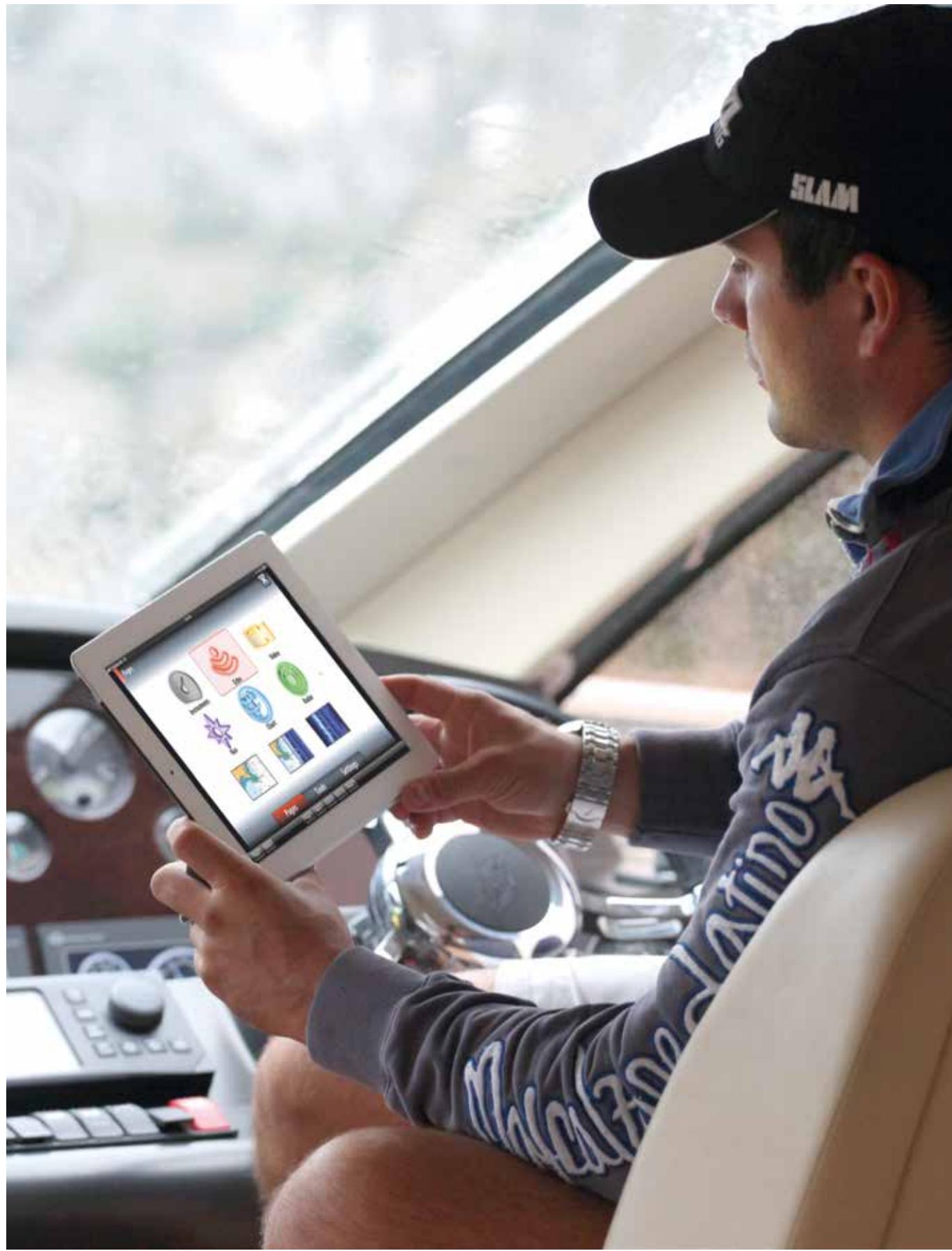


**WIFI-1 Module**

## Go Wireless

The WIFI-1 module is a marine gateway that forms part of your Simrad network and lets you go wireless.

- One unit is all you need
- Fits your existing network
- Low profile, automatic setup
- Rugged and waterproof
- Support for multiple WIFI-1 bridging to extend coverage on larger vessels



▲ GoFree™ in action

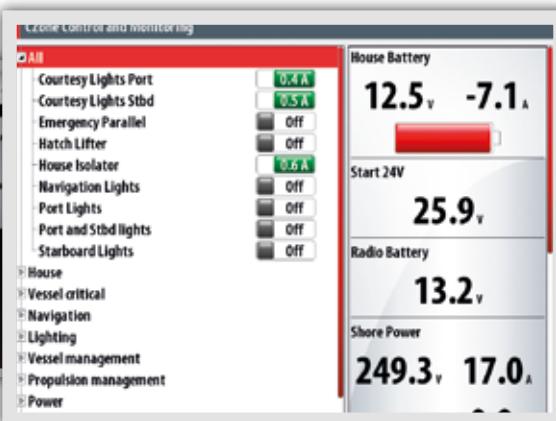


# Control & Monitor.

Transform your boat into a “smart boat” using Simrad NS Navigation systems linked with CZone digital switching and monitoring technology.



▲ Battery and Tank Monitoring



▲ Circuits



▲ Home Page

## Take Control

Manage multiple circuits from your multifunction display.

- Add a virtual electrical panel on your NS display
- Control almost any electrical circuit onboard
- Set one-touch boat modes
- Easy to see circuit and switch status
- Build in protection for boat systems

## NMEA2000® Networking

CZone operates using a standardised NMEA2000® backbone.

- Plug & Play control with navigation network
- Cost effective and robust
- Easy to install

## Monitor your Systems

CZone presents you with information relating to many onboard electrical systems.

- Battery and power consumption
- Individual circuit status (Amps, Short, Open)
- Tank monitoring (fuel & water)
- Resistive & voltage analogue sensors

## Alerts and Alarms

CZone allows you to instantly see alerts and alarms

- Navigation & system alarms
- Track alarm history and severity
- Easier maintenance & troubleshooting



Gilles Martin-Raget (Beneteau)

▲ Custom dining mode with CZone



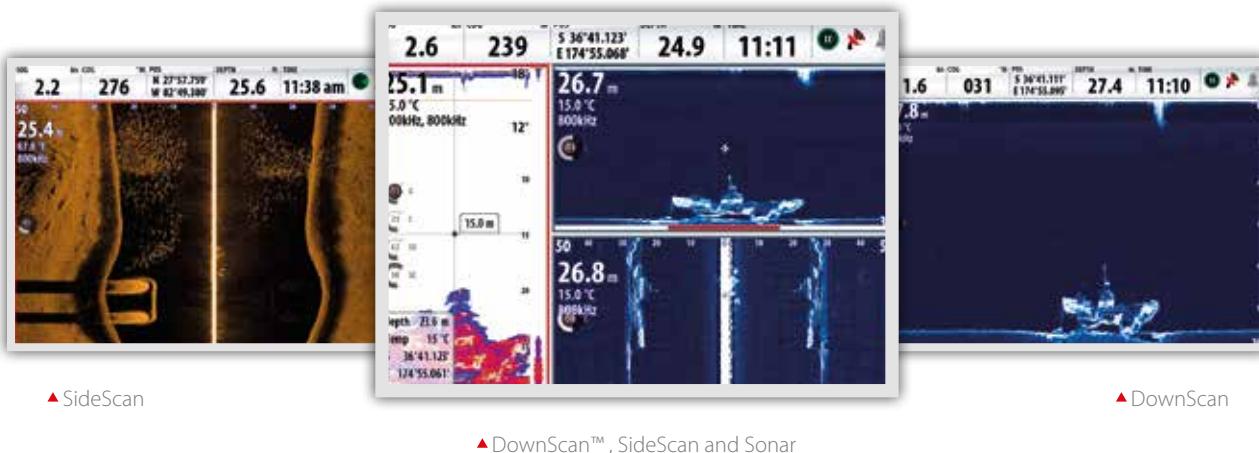
## Echosounder Comparison Table

	Description	Max Depths	Transducers	Frequencies
<b>StructureScan® HD Sonar</b>	High Resolution Underwater Imaging (Downward and side viewing)	60m/200ft	Transom Mount, Nylon ThruHull, Bronze ThruHull	455kHz/800kHz
<b>BSM-1 Broadband Sounder</b>	High Performance Echosounder (600/1kW Transducers)	1,000m/3,000ft	Transom Mount, ThruHull & InHull Options for 600W/1kW Transducers	50kHz/83kHz/200kHz
<b>BSM-2 Broadband Sounder</b>	Ultra Performance, Broadband CHIRP Echosounder (1kW, 3kW Broadband Transducers)	3,000m/10,000ft	Standard Narrowband AND High Performance Broadband (1kW/3kW) Transducers	Selectable 28kHz, 38kHz, 50kHz CHIRP Low 25-45kHz, Mid 40-60kHz, High 130-210, Custom single Freq.



## ► StructureScan® HD Sonar Imaging

Revolutionise the way you see underwater with the ultimate in reality echosounding technology. Not only can you see high detail with SideScan coverage, but also exclusive DownScan™ images to provide a true 180° view below your boat.



### ► DownScan™ Imaging

Add a new dimension to echosounding. High frequency imaging gives a life-like representation of the water column, the bottom and any structure. See fish, rocks, weeds, and wrecks like never before. Great for fishing, diving and anchoring.

### ► Sidescan Imaging

A panoramic view of the boats echo history. Scan the water and bottom out of both sides of the boat for a unique perspective view and to better locate underwater targets when fishing.

### ► TrackBack™

Get the unique ability to scroll back the echosounder history. Great for marking fish or structure you just passed over. Take your time, and drop a waypoint anywhere on your trackback to easily navigate back to the exact, desired spot.

### ► Downscan Overlay

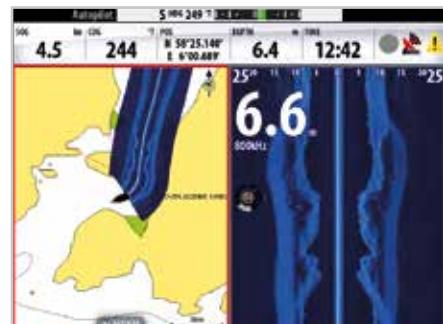
Exclusive technology allows you to overlay DownScan Imaging onto Broadband Sounder™ on one display to clearly separate fish targets from surrounding structure.

### ► NEW StructureMap™

The new real-time StructureMap™ overlay feature allows boaters with NSS multifunction displays to view and create underwater charts by overlaying StructureScan® HD sonar images onto existing charts.

### ► Transducer Options for Everyone

Bronze and plastic, transom mount, thru-hull and deep-vee twin transducer options allow StructureScan® HD to be fitted to almost any boat.

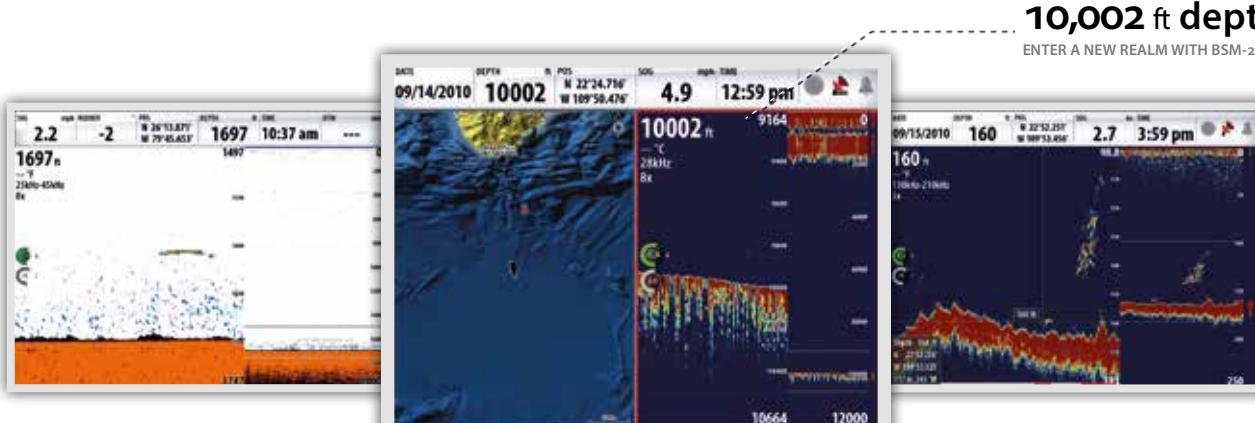


▲ StructureMap™ screens for NSS



## ► BSM-2 Broadband Sounder™ Module

The latest advancement in Broadband Sounder technology provides exceptional performance benefits that leaves 3kW sounders in the shallows. Crisp, clear targeting with CHIRP technology and a 3000m (10,000ft) working range are just a few of the reasons professionals and serious sport fishermen are turning to Simrad BSM-2.



### ► More advanced technology

Along with enhanced Digital Signal Processing (DSP), BSM-2 Broadband Sounder is the first with Frequency Sweeping Pulse Compression technology – also known as CHIRP. Together, they produce higher target resolution and greater sounding depths.

### ► Penetrate the deepest waters on the planet

With imaging capability to the bottom at 3000m (10,000 ft) – and deeper – BSM-2 paints the deepest drop-offs and canyon bottoms, while maintaining bottom lock, even at speed. Just think what you can see at 900 to 1200 m (3,000 to 4,000 ft) with this performance level.

### ► Unprecedented resolution

BSM-2 technology delivers an improvement over existing sounder resolutions - typically five times better resolution in the midwater column.

### ► 'Whisper' into the water to find more fish

Thanks to the unique blend of digital processing and extremely efficient pulse generation, BSM-2 outperforms traditional 3kW systems on all counts. Find fish with lower transmit power and much less noise.

### ► Powerful performance transducer options

With dual sonar transceivers, dual temperature, and speed sensor ports housed in a rugged IPX6 die-cast aluminium casing, the BSM-2 module is professionally wired through glands and terminal blocks to virtually any Airmar® high-performance Broadband or traditional transducer. The BSM-2 dual transceivers operate in 25-45 kHz, 40-60 kHz, and 130-210 kHz range options. Narrowband transducers in the 28/38/50/200 kHz range are also compatible as are custom single frequency transducers.

**For more detailed information on Simrad Echosounder technology, visit [www.simrad-yachting.com](http://www.simrad-yachting.com).**





► **The Simrad BSM-1** brings together a very clean, low power signal, an adaptable long pulse and an extremely sensitive linear receiver. The resulting high quality signal and the best Digital Signal Processing allow the BSM-1 to provide superior clarity and fantastic echosounder images. No longer is power the measure of echosounder performance.



▲ Shallow water clarity

▲ Deep water penetration

▲ 'Whisper' into the water

#### ► Penetrate deep waters

Capability to track bottom and see structure in deep offshore terrain and canyons over 1000 m (3,000 feet).

#### ► Clearly define underwater structure

High-resolution linear receiver provides superior clarity in shallow and mid-water levels.

#### ► 'Whisper' into the water

Exceptionally low power with efficient long pulses make the perfect 'low-noise' sounder.

#### ► Tri-frequency capability

Better match the frequency with your fishing location: 200kHz for shallow inshore, 50 kHz for deep offshore and 83 kHz for a desirable blend of both.



## Radar Comparison Table

	Description	Antenna Width	Technology	Max Range	Power Requirements	Features
<b>Broadband 3G™ Radar</b>	Broadband Radome	19"	Broadband FMCW	24nm	12v / 17 Watt	MARPA, Guard Zones, InstantOn
<b>Broadband 4G™ Radar</b>	High Performance Broadband Radome	19"	Broadband FMCW	36nm	12v / 20 Watt	MARPA, Guard Zones, InstantOn, Dual Range*, High Speed*, Beam Sharpening*
<b>4kW HD Dome</b>	HD Digital 24" 4kW Radome	24"	HD Digital / Magnetron Pulse	48nm	12v / 30 Watt	MARPA, Guard Zones, TrueColour
<b>6kW HD Array</b>	HD Digital 4ft 6kW Open Array Radar	48"	HD Digital / Magnetron Pulse	64nm	12v / 120 Watt (Max)	MARPA, Guard Zones, TrueColour
<b>10kW HD Array</b>	HD Digital 6ft 10kW Open Array Radar	72"	HD Digital / Magnetron Pulse	72nm	24v / 250Watt (Max)	MARPA, Guard Zones, TrueColour

\*NSE and NSO only.



► **HD Digital Radar** systems combine high performance scanners and microwave technology with the latest in digital radar processing. Exceptional detection of small or distant targets with virtually no screen clutter, displays the full picture of your surroundings.



► **Advanced radar that is easy to use**

- Simrad HD Radars ensure exceptional detection of small or distant targets using advanced Digital Signal Processing
- Simrad HD Digital Radars automatically adjust colour gradients on longer ranges for better interpretation when looking for storm areas and weather fronts
- Automatic Harbour and Offshore modes provide optimised radar imaging for hands-off operation.
- The integration of a high speed heading sensor allows up to 10 different MARPA targets to be displayed on screen
- The radar provides bearing and distance, speed and course, closest point of approach and time on selected targets. Easy to use Guard Zone areas can be shaped and defined by the user, to maintain a radar watch in specific zones. Qualified radar targets that enter the active zone will trigger an alert on the radar system.
- Simrad HD Radars now support True Motion Radar Display. Moving vessels are instantly distinguished from fixed objects and land masses, eliminating guesswork in PPI interpretation

RADAR



► **Broadband Radar™:** Simrad Yachting offers two Broadband Radar choices; the outstanding Broadband 3G™ Radar and the truly exceptional Simrad Broadband 4G™ Radar.



► **Broadband Radar™ Common Features of 3G and 4G:**

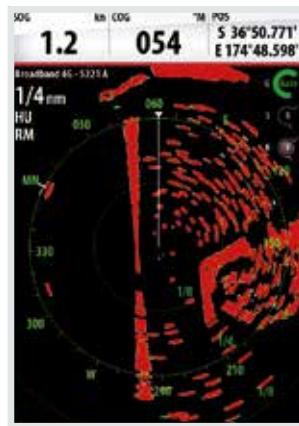
- Crystal Clear Image - Fantastic for tight manoeuvres in marinas or in conditions of limited visibility
- Automatic Clarity - Proven auto Harbour and Offshore modes
- MARPA Target Tracking - Track up to 10 targets (Requires a heading sensor)
- Dual Guard Zones - Protect yourself from more angles
- InstantOn™ - Solid-state technology produces an immediate, accurate on-screen image unlike normal warm-up times associated with magnetron pulse radars
- Low Power Consumption - Ideal for boats of any size, sail, cruise or fish
- Extremely Low Emissions - Safer than any other radar currently on the market and emitting less radiation than a mobile phone allowing it to be mounted anywhere
- Quick Installation - No reason to open the dome, no tune or zero mile adjustment, and no radar-licensed technician required



► **Beam Sharpening:** Broadband 4G™ Radar is the only dome radar in the world to employ beam sharpening, which allows you to control the level of target separation, so you can see the sharpest images possible when you need them most.



Target separation off (~5.2°)



Target separation low (~4.4°)



Target separation medium (~3.5°)



Target separation high (~2.6°)

► **More Range**

50% more true range than Broadband 3G™ Radar. Now you can see crystal clear targets up to 32nm away and inside strong storm cells more than 17nm away.

► **Dual Range**

Capable of displaying Dual Range radar combination when combined with an NSE or NSO system. Monitor targets from 200 feet to 32nm from a single dome and view up to 20 MARPA targets.

► **High Speed Mode**

Select 48 RPM for almost instant updating at less than 1nm.

► **Advanced Target Detection**

Increased target detection with directional clutter rejection and sidelobe suppression.



BROADBAND 3G™ RADAR

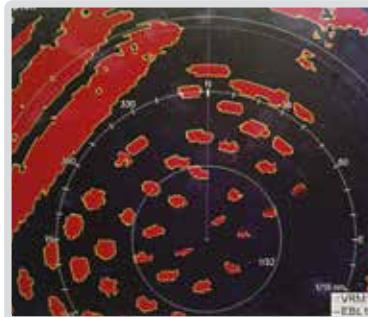
**► Crystal Clear:** Broadband 3G™ Radar boasts outstanding performance for novice and expert users alike. Impressive for target detection and clarity of image, the Broadband 3G Radar aides safe navigation in any state of visibility.

### Harbour / Marina

- Boats and docks separated due to superior target definition

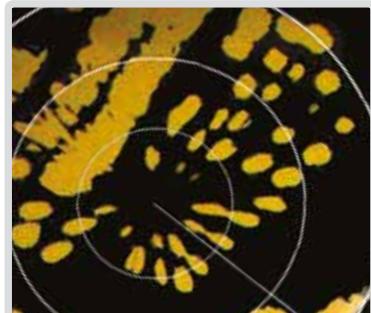


▼ Broadband 3G Radar



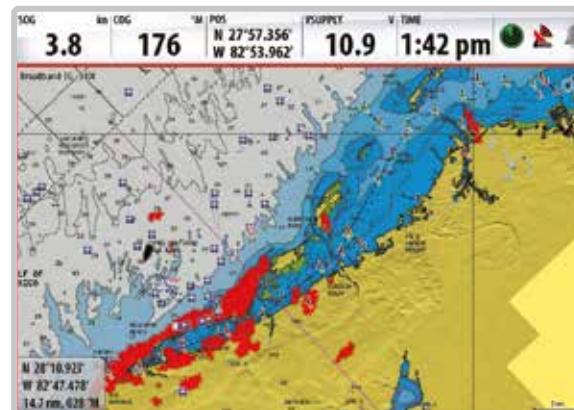
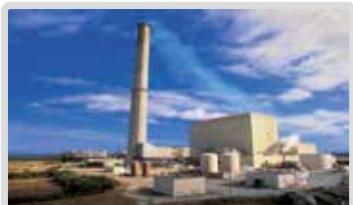
Superior short-range target discrimination clearly shows docks, boats and moored vessels.

▼ Traditional Pulse Radar



Inferior separation of boats, docks and other features with traditional pulse radar, further obscured by "main bang" (where it matters most) closest to the vessel.

### 18nm Working Range



A medium sized power station is easily seen at 15nm



**sonichub™**  
marine audio server



► **Simrad SonicHub®:** Take control of your music and experience a revolution in boating entertainment with SonicHub®, the world's first marine audio hub and docking station.



Made for  
iPod iPhone



SONICHUB®

## Sounds For Everyone to Enjoy

### ► Entertainment at your fingertips

Play your music direct from your Navigation System display.

- Simple User Interface
- Intuitive operation
- Familiar menus and icons

### ► Full connectivity

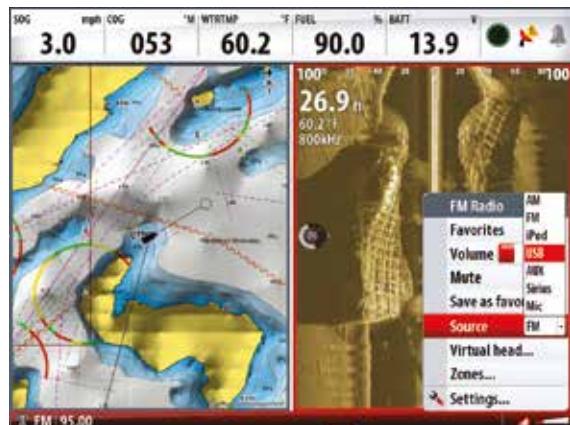
Play your music from a range of sources.

- Made for iPhone, iPod, iPod Touch
- Play MP3 with USB thumb drive
- AM/FM built in; AUX in capability
- Display videos on your MFD

### ► Seamless Integration

Plug and play simplicity.

- NMEA2000 connectivity
- Compatible with NSO, NSE, NSS



### ► Powerful, multi-zone audio server

Sensational sounds, anywhere on your boat.

- Control up to 3 sound zones
- 4 x 50W amplifiers per channel
- Communicate commands to crew - perfect for larger vessels

### ► Rugged and Waterproof

The unique docking station provides a safe and waterproof casing for your device.

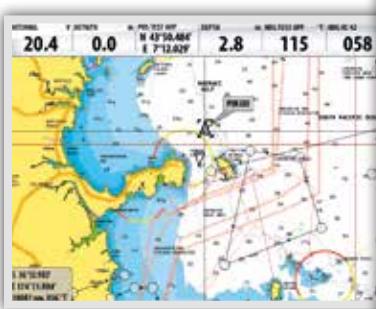
- IPX6 Waterproof
- Designed for the marine environment

Sonichub Zones	
Zone 1	Volume <input type="range" value="4"/> 4 Limit <input type="range" value="24"/> 24 Balance Center
Zone 2	Volume <input type="range" value="3"/> 3 Limit <input type="range" value="24"/> 24 Balance Center
Zone 3	Volume <input type="range" value="3"/> 3 Limit <input type="range" value="24"/> 24 Balance Center Subwoofer limit <input type="range" value="24"/> 24 Low pass filter 120 Hz
All Zones	Bass <input type="range" value="7"/> 7 Treble <input type="range" value="7"/> 7

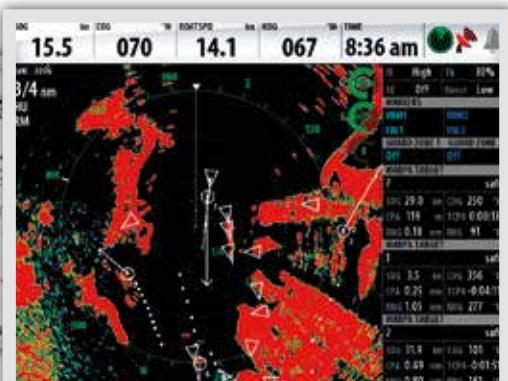


► **Automatic Identification Systems:** Aiding safe navigation, AIS provide vessel data for collision avoidance purposes. Essential in today's congested ports and busy shipping lanes.

Typical NSE and NSO AIS pages



▲ Move the cursor over a target to identify the vessel, select the target for vessel details



▲ Radar overlay with AIS data showing target prediction vectors



▲ Detailed Class B AIS received vessel details



#### NAIS-400

◀ Black Box Class-B AIS solution. Compatible with NSO, NSE and NSS.

#### ► NAIS-400

NEW Black box solution.

- Class-B Approved
- Fully waterproof to IPX7 standard
- Multiple networking connections (NMEA2000® / NMEA0183® / NMEA0183® Multiplexing / USB)
- Lightweight at just 250g
- Low power consumption



## ► Reducing the risk:

NAIS-400 class-B transponder enables the exchange of critical vessel information to reduce the risk of collision.

### ► Specific Data Exchange

Show vessels in your vicinity where you're going as well as obtaining information from them.

- Vessel name, size and call sign/Maritime Mobile Service Identity (MMSI) number
- Vessel type
- Closest Point Approach (CPA) and Time to Closest Point of Approach (TCPA)
- Course, Speed and Heading

### ► Send & Receive

See and be seen at all times.

- Transmit and receive vessel and course data
- Plan any necessary avoidance manoeuvres in advance
- Typical working range of 20nm

### ► Fully Compatible

Seamlessly integrates with your multifunction display.

- NSO, NSE and NSS
- VHF integration

## ► NSPL-400:

Eliminate the requirement for a costly second antenna and make use of your existing VHF antenna with an antenna splitter.



**NSPL-400**

◀ Black Box AIS Splitter

### ► NSPL-400

Antenna splitter.

- Plug & Play
- Lightweight
- Low power consumption
- Waterproof
- FM Radio connection
- Low voltage range
- No insertion loss on AIS and VHF Rx
- Low insertion loss on AIS and VHF Tx



## Autopilot Comparison Table

	Description	Controller Dimensions	Drives	Features	MFD Integration
<b>AP24 Autopilot</b>	Compact, Full Featured Autopilot Controller	114mm x 114mm	RPU Pumps, Mechanical Steering Systems, Hydraulic Linear Drives, Solenoid Drives, Pod Drives (IPS, Dock-n-Go)	VRF, NoDrift, Data Pages, Turn Patterns	NSS, NSE, NSO
<b>AP28 Autopilot</b>	Full Featured Autopilot Controller with Rotary Control	172mm x 114mm	RPU Pumps, Mechanical Steering Systems, Hydraulic Linear Drives, Solenoid Drives, Pod Drives (IPS, Dock-n-Go)	VRF, NoDrift, Data Pages, Turn Patterns	NSS, NSE, NSO
<b>AP70 Autopilot</b>	Large Display, Color Autopilot System	230mm x 144mm	RPU Pumps, Mechanical Steering Systems, Hydraulic Linear Drives, Solenoid Drives, Analogue Steering Systems, Thrusters	Data Pages, Turn Patterns, Thruster Integration, Range of Remote Control Options	n/a



► **Simrad Yachting Autopilots** safely take control of your boat's steering at the single press of a button. Similar to having an extra trusted crew member on board, ready to take the helm, day or night whatever the weather.

► **Simrad Yachting Autopilots bring your boating experience to a new level.**

Whether you already have enjoyed it, or you are yet to experience the freedom of a really good pilot, you will see that Simrad Yachting Autopilots reduce your workload and fatigue, improve your situational awareness and safety, helping you arrive fresher at your destination. Expand your boating experience and make the most of your electronics.

► **All of our Pilots offer a range of features to enhance your experience, whatever type of boating you enjoy.**

On a power cruiser, rock solid handling and track keeping with the autopilot make passages a pleasure. When fishing, the dedicated fishing patterns and functions help you on the way to that tournament catch. For sailing, the advanced wind features make efficient passages a breeze, even when you are short handed.



AP70 AUTOPILOT

► **Simrad AP70** offers the ultimate in autopilot performance for vessels over 50 feet. More than 60 years of experience and development is embedded in the most comprehensive of all pilot system packages.



Simrad AP70 is a state-of-the-art, commercial grade, autopilot which not only benefits from an unrivalled adaptive auto-steering system, but also has a clear, colour display and a large rotary controller for easy viewing and adjustment in any conditions.

#### ► AP70 Features

- Easy to read colour display
- Large rotary controller
- Easy to use interface
- Interfaces to a wide variety of rudder configurations
- Thruster integration
- Optional range of Remote Controllers – Joystick, Steering Levers
- CAN bus & NMEA0183 Interface

#### ► QS80

Finger tip control with the QS80 Quickstick, can be mounted in the arm of the captain's seat for relaxed total control.





► **AP28 and AP24 Pilot Systems:** Whether it's a casual day on the water with friends, a tournament match or an extended passage, our range of Pilots has the performance and reliability you require. Ideal for all types of leisure boat - fish, sail or cruise - from 35 to 80 feet.



► **AP24 Features**

- Easy to read display
- Space saving design
- Matches IS20 Instruments



► **AP28 Features**

- Larger, easy to read display
- Rotary controller
- Dedicated mode keys



The Joystick JS10 is a neat and compact way to control your autopilot. Its size means it can be conveniently mounted for example in the armrest of a captain's seat.



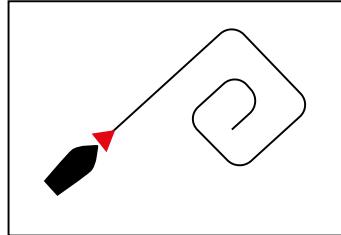
Integrate your NSO, NSE or NSS with your autopilot for a space saving alternative to the AP24 and AP28.



## ► AP24 & AP28 Pilot Features:

### Integrated Turn Patterns

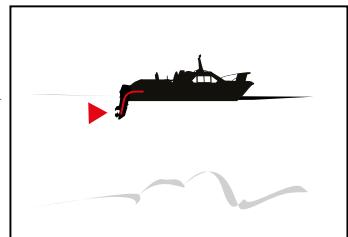
A range of integrated turn patterns assist you with fishing, diving or just recovering a lost fender.



### Virtual Rudder Feedback

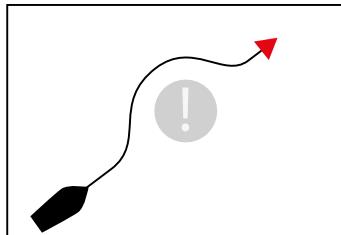
Eliminates the need to fit a rudder position sensor, which saves time and money on tight installations such as outboards and stern drive boats.

\*Requires the RC42 rate compass.



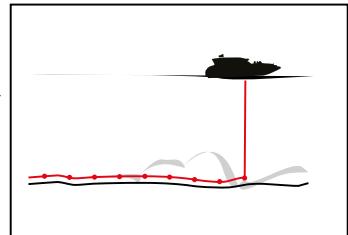
### Dodge Function

The dodge function allows you to navigate around obstructions without disengaging your autopilot.



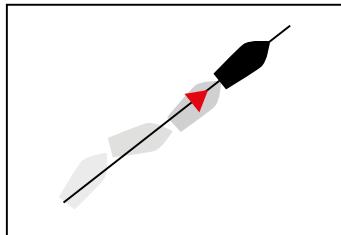
### Constant Depth Tracking

Using the power of SimNet, the pilot will use the data from the depth sounder to follow the line of the seabed, and stay in constant depth of water. Ideal for fishing or dodging the tide.



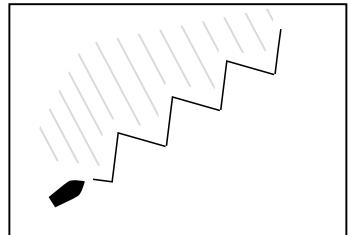
### No Drift Mode

Combining the power of the autopilot and the GPS on the SimNet allows you to operate in no drift mode; it counteracts the effects of wind and tide to ensure your track is straight and true.



### Advanced Wind Steering

The pilot will use wind information from the IS20 system and Navigation information from your chartplotter to assist you in sailing most efficiently to your destination.





New

► **IS40 and OP10 Pilot:** Combining our new IS40 digital instrument display and OP10 autopilot controller creates an intuitive and easy to use autopilot control system. Whether your boat employs the AC12 or AC42 pilot computer, uses rudder feedback with a rate compass, or makes the most of a hydraulic steering system, this control system will give you all the knowledge you need to accurately and safely steer your boat to its destination.



► **IS40 Pilot Display Features**

- Full-feature pilot display
- Full colour screen
- Bonded Glass Display
- Large function keys



► **OP10 Features**

- Large buttons
- LED backlit keypad
- One touch control
- Volvo IPS Drive compatible



## ► Autopilot System Overview





New

**► IS40 Digital Instruments:** Bright, easy to use, full colour instrument displays featuring multiple data pages to suit almost every motor cruising or sailing requirement.

► **Easy to use**

- Straight forward menus
- Large keys for instant access
- Dedicated Page button

► **Multi data**

- Speed (kts/mph)
- Depth (m/ft)
- Wind (kts/mph)
- Autopilot status and control
- Engine data

► **Large Full Colour Display**

- 40% larger display than its rivals
- Largest digits available
- Easy to read day or night

► **Bonded LCD**

- Greater contrast
- Massive 170° viewing angle
- Zero condensation
- Increased longevity and durability

► **Integrate**

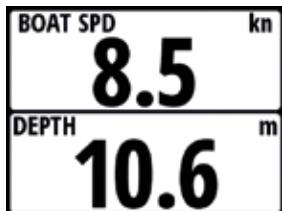
- Easy to install with daisy chain connectivity
- Compatible with NSO, NSE, NSS and OP10



► Analogue display



► Easy to use menu system



► Highly visible numeric data



## ► **IS20 Digital Instruments:** Flexible display units for vital data, including depth, boat speed, wind speed and more.

### ► Easy to use

- Simple menus
- Straightforward selection
- Large control buttons

### ► Choice of data

- See what you want, where and when you want
- Speed (kts/mph)
- Depth (m/ft)
- Water temperature (Fahrenheit or Celsius)

### IS20 Graphic

- Graphical trend indicator
- 8 user-configurable data pages
- Rapid toggle
- Multiple data view



### IS20 Combi

- Ideal stand alone display
- 4 pre-configurable pages
- Rapid toggle
- Multiple data view



## ► **IS20 Analogue Instruments:** Easy to read with a classic style.



**IS20 Wind**



**IS20 Tack**



**IS20 Compass**



**IS20 Rudder**



► **RS80 VHF Radios:** Reliable and dependable, advanced communication systems for all types of vessel and every situation. Sleek designs and rugged Simrad Yachting build quality.



**RS87/82 Handset**

► **RS80 Series Features:**

- Stowaway Black Box Transceiver
- Robust, waterproof design
- Full Class D DSC functionality
- Large, full numeric keypad
- Wireless option with WR20

► **RS82**

- Includes Blackbox, RS82 Handset, Speaker
- Optional 2nd Station AHK82 Kit

► **RS87**

- Includes Blackbox, RS87 Handset, Speaker
- Can expand up to 4 stations with AHK87 kit
- Optional Loudhailer and Foghorn Functions
- Intercom
- Listen back hailer
- External audio input



New



**► RS35 VHF Radio:** Versatile and rugged, with everything required to communicate, including a built-in AIS receiver. Optional, sophisticated wireless handset for complete mobility and intercom capability.

#### ► RS35 Features

- Flush mountable Class D DSC fixed mount VHF transceiver
- Loud and clear audio (94dBA at 1m)
- Easy to use with extra-large, high resolution display, smooth rotary controller and buttons
- High quality fist mic with built-in speaker
- 25 W / 1 W transmission power
- Built-in AIS receiver with AIS plot functionality
- Position polling and group call capabilities
- MOB feature
- Track your buddy option
- PA/Hailer Horn output with listen back feature
- Dual watch / tri watch and all scan functions
- ATIS facility for inland waterways (EU only)
- 20 user programmable names with MMSI
- Fully waterproof
- NMEA0183 and NMEA2000 compatible

#### ► HS35 Wireless Handset Features:

- Optional wireless handset (up to two per system)
- 100m range
- Provides complete radio control plus intercom function
- High resolution display
- Inductive charging with 8 hour battery life
- Fully waterproof



RS35

HS35



► **Simrad RS12 VHF Radio:** Ideal for use on a wide variety of boats from RIBS to Cruisers, this dependable class D fixed DSC VHF radio is easy to use and has a huge range of communication functions.

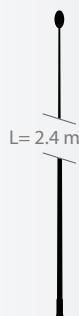


RS12

► **RS12 Features**

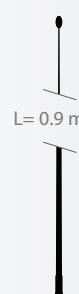
- DSC VHF with NMEA2000 input - Class D Displays Lat / Lon when connected to GPS
- Rugged and fully waterproof
- 25 W / 1 W transmission power
- Large, easy to read display
- Dual watch / tri watch and all scan functions
- Position Polling and Group Call
- ATIS facility for inland waterways (EU only)
- Dedicated channel 16 key
- 20 user programmable names with MMSI

► **VHF Antennas**  
Whip Antenna



Antenna mount Stainless Steel  
Stainless Steel 4-way adjustable antenna mount.

Plastic Whip Antenna



Antenna Mount Heavy Duty Nylon  
White plastic 4-way adjustable antenna mount.

Masthead SS Antenna



30 metres Cable


New

► **HH36 Handheld VHF Radio:** Bringing together functionality, safety and value, this combination handheld VHF radio and GPS receiver puts a highly capable communications /navigation device in your pocket. Ideal for use on small craft or as a back-up on larger boats, it floats if dropped over the side, recharges in less than 3 hours, and features one of the best displays in its class.

#### ► HH36 Features

- Full Class-D DSC
- Powerful 700mW speaker
- 5W / 1W transmission power
- Built in 12 channel GPS receiver with less than 5 sec hot start acquisition time
- Trackplotter stores up to 500 waypoints, shows closest Icons and vessel track history
- Stores up to 500 waypoints
- Long-life, high-capacity 1400mAh Li-Polymer battery with rapid charger
- NMEA0183 output via charging cradle
- Positive buoyancy
- ATIS facility for inland waterways - EU only



**HH36**



# Technical Specifications

Specifications are subject to change without notice.

For a complete list of specifications and drawings, go to [www.simrad-yachting.com](http://www.simrad-yachting.com)

## NSO Specifications



	<b>DI15</b>	<b>MO-L15</b>	<b>MO-L17</b>	<b>MO-L19</b>	<b>NSO Processor</b>	<b>OP40</b>
Dimensions	337.9mm x 290mm Overall	356.9mm x 280.9mm	390.55mm x 322.99mm	422.35mm x 347.07mm	352mm x 262mm x73mm	160mm x 116mm
Display	15-Inch Bonded XGA Display 600cd/m Brightness	15-Inch, XGA Monitor 1500cd/m Brightness	17-Inch, XGA Monitor 1300 cdL/m Brightness	19-Inch, SXGA Monitor 900 cdL/m Brightness	Up to 3 Video Outputs (2 DVI, 1 VGA with splitter cable option)	N/A
Weight	6.0kg / 13 lbs	6.8kg / 15.0 lbs	7.9kg / 17.59 lbs	8.99kg / 19.84 lbs	4.2kg / 9.3 lbs	0.3 kg / 0.7 lbs
Power Requirements	10-30 Volts DC (34W Max Typical)	10-30 Volts DC (50W Max Typical)	10-30 Volts DC (90W Max Typical)	10-30 Volts DC (90W Max Typical)	10-30 Volts DC (45W Max Typical)	10-16 Volts DC (SimNet Powered)
Mounting Options	Dash Mount Hardware Incl.	Dash Mount Hardware Incl.	Dash Mount Hardware Incl.	Dash Mount Hardware Incl.	Blackbox (Under Dash) Mounting	Dash Mount Hardware Incl.
Environmental	IPX6	IP66	IP66	IP66	IPX6	IPX6
Main Accessories Included or Required	Requires Video Cable (3m included in NSO15 Kit)	Wired Dash Remote Included (On/Off, Source Selection & Brightness Control)	Wired Dash Remote Included (On/Off, Source Selection & Brightness Control)	Wired Dash Remote Included (On/Off, Source Selection & Brightness Control)	Dash Mount SD Card Reader (Incl); Monitor & OP40 Controller Required	Suncover Included, Micro-C to SimNet 4m Cable Incl
Video Connections	Power, 26p NSO Video Input	9 Video Inputs; 3 VGA, 2 DVI, 3 Composite, 1 S-Video	9 Video Inputs; 3 VGA, 2 DVI, 3 Composite, 1 S-Video	9 Video Inputs; 3 VGA, 2 DVI, 3 Composite, 1 S-Video	3 Video Outputs; 2 DVI, 1 VGA w/Splitter Cable Option	N/A
Data Connections	N/A	Serial Controller Connection	Serial Controller Connection	Serial Controller Connection	SD Card (Charts), 1x USB	(1) Micro-C Connector (Data/Power)
NMEA Interfacing	N/A	N/A	N/A	N/A	SimNet (NMEA2000 PGNs), 1 x NMEA0183 In/Out	N/A
Languages	N/A	OSD Menu: English, German, French, Spanish, Italian	OSD Menu: English, German, French, Spanish, Italian	OSD Menu: English, German, French, Spanish, Italian	English, German, French, Spanish, Italian, Portuguese, Croatian, Finnish, Icelandic, Dutch, Norwegian, Polish, Swedish, Slovenian, Russian, Ukrainian, Bulgarian, Asian & Middle Eastern Language Pack	N/A

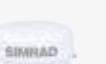
# MFD Specifications

						
Dimensions	Blackbox, Display & Controller Package	356mm x 266mm x 122.7mm	285mm x 212mm x 111.3mm	353mm x 250mm	283mm x 192mm	229mm x 161mm
Display	15-Inch Bonded XGA Display 600cd/m Brightness	12-Inch Bonded XGA Display 1500 cd/m Brightness	8-Inch, SVGA Display 1500 cd/m Brightness	12-Inch Bonded XGA Display 1200 cd/m Brightness	8-Inch Bonded SVGA Display 1200 cd/m Brightness	6.4-Inch Bonded VGA Display 1200 cd/m Brightness
Weight	10.5 kg / 23 lbs	8.5 kg / 17 lbs	6.3 kg / 12.6 lbs	3.78 kg / 8.3 lbs	2.1 kg / 4.6 lbs	1.6 kg / 3.5 lbs
Power Requirements	10-30 Volts DC	10-30 Volts DC (33W Max Typical)	10-30 Volts DC (22W Max Typical)	10-30 Volts DC (26W Max Typical)	10-30 Volts DC (16W Max Typical)	10-30 Volts DC (10W Max Typical)
Mounting Options	Dash Mount Hardware Incl.	Dash Mount or Bracket Mount Hardware Incl.	Dash Mount or Bracket Mount Hardware Incl.	Dash Mount or Bracket Mount Hardware Incl.	Dash Mount or Bracket Mount Hardware Incl.	Dash Mount or Bracket Mount Hardware Incl.
Environmental	IPX6	IPX6	IPX6	IPX7	IPX7	IPX7
Main Accessories Included or Required	Requires Video Cable (3m included in NSO15 Kit)	GPS Antenna Required (GS15)	GPS Antenna Required (GS15)	Internal GPS Antenna	Built-in EchoSounder, Internal GPS Antenna	Built-in EchoSounder, Internal GPS Antenna
Video Connections	Dedicated Link to DI15 Display (1 x DVI-I, 1 x VGA Outputs Available)	2 Composite Video Inputs; 1 DVI-I Output (Remote Display)	2 Composite Video Inputs; 1 DVI-I Output (Remote Display)	2 Composite Video Inputs	2 Composite Video Inputs	2 Composite Video Inputs
Data Connections	SD Card (Charts), 1 x USB	SD Card (Charts), 2 x USB (Front & Back)	SD Card (Charts), 2 x USB (Front & Back)	Micro-SD Card Slot (Charts)	Micro-SD Card Slot (Charts)	Micro-SD Card Slot (Charts)
Network Ports	(1) RJ45 with Yellow Adapter	(3) Ethernet Yellow	(3) Ethernet Yellow	(3) Ethernet Yellow	(1) Ethernet Yellow	(1) Ethernet Yellow
NMEA Interfacing	SimNet (NMEA2000 PGNs) 1 x NMEA0183 In/Out	SimNet (NMEA2000 PGNs) 1 x NMEA0183 In/Out	SimNet (NMEA2000 PGNs) 1 x NMEA0183 In/Out	1 x NMEA2000 Micro-C, 1 x NMEA0183 In/Out	1 x NMEA2000 Micro-C, 1 x NMEA0183 In/Out	1 x NMEA2000 Micro-C, 1 x NMEA0183 In/Out
Languages	English, German, French, Spanish, Italian, Portuguese, Croatian, Finnish, Icelandic, Dutch, Norwegian, Polish, Swedish, Slovenian, Russian, Ukrainian, Bulgarian, Asian & Middle Eastern Language Pack	English, German, French, Spanish, Italian, Portuguese, Croatian, Finnish, Icelandic, Dutch, Norwegian, Polish, Swedish, Slovenian, Russian, Ukrainian, Bulgarian, Asian & Middle Eastern Language Pack	English, German, French, Spanish, Italian, Portuguese, Croatian, Finnish, Icelandic, Dutch, Norwegian, Polish, Swedish, Slovenian, Russian, Ukrainian, Bulgarian, Asian & Middle Eastern Language Pack	English, German, French, Spanish, Italian, Portuguese, Croatian, Finnish, Icelandic, Dutch, Norwegian, Polish, Swedish, Slovenian, Russian, Ukrainian, Bulgarian, Asian & Middle Eastern Language Pack	English, German, French, Spanish, Italian, Portuguese, Croatian, Finnish, Icelandic, Dutch, Norwegian, Polish, Swedish, Slovenian, Russian, Ukrainian, Bulgarian, Asian & Middle Eastern Language Pack	English, German, French, Spanish, Italian, Portuguese, Croatian, Finnish, Icelandic, Dutch, Norwegian, Polish, Swedish, Slovenian, Russian, Ukrainian, Bulgarian, Asian & Middle Eastern Language Pack

## Echosounders Specifications

				
Dimensions	210mm x 191.4mm x 57.7mm	see MFD specs	203.75mm x 180mm x 57mm	340mm x 288mm x 100mm
Display	n/a	12-Inch Bonded XGA Display 1500 cd/L/m Brightness	n/a	n/a
Weight	0.82 kg / 1.8 lbs	see MFD specs	0.9 kg / 2 lbs	4.8 kg / 10.6 lbs
Power Requirements	10-17 Volts DC (8W Max Typical)	10-30 Volts DC (10/16W Max Typical)	10-30 Volts DC (< 10W Max Typical)	10-30 Volts DC (< 10W Max Typical)
Mounting Options	Blackbox (Under Dash) Mounting	Dash Mount or Bracket Mount Hardware Incl.	Blackbox (Under Dash) Mounting	Blackbox (Under Dash) Mounting
Environmental	IPX6	IPX7	IPX7	IPX6
Main Accessories Included or Required	Requires StructureScan Transducer	Requires 600W/1kW Transducer	Requires 600W/1kW Transducer	Requires 1kW Narrowband or New Broadband CHIRP Transducers
Network Ports	(3) Ethernet Yellow (Can act as Switch)	(1) Ethernet Yellow	(1) Ethernet Yellow	(1) Ethernet Yellow
Frequencies	455kHz and 800kHz	50kHz, 83kHz, 200kHz	50kHz, 83kHz, 200kHz	Dual CHIRP Transceivers 25-40kHz, 40-60kHz, 130-210kHz, 28kHz, 38kHz, 50kHz Adjustable
Predicted Depth/Range	60m / 200 ft Down 60m / 200 ft Each Side	1,000m / 3,000 ft	1,000m / 3,000 ft	3,000m / 10,000 ft

## Radar Specifications

					
Dimensions	489mm Diameter x 280mm H (19-Inch Dome)	489mm Diameter x 280mm H (19-Inch Dome)	620mm Diameter x 280mm H (24-Inch Dome)	1285mm x 448mm x 437mm (4ft Array)	1880mm x 448mm x 437mm (6ft Array)
Technology	Frequency Modulated Continuous Wave (FMCW)	Frequency Modulated Continuous Wave (FMCW)	HD Digital / Magnetron Pulse	HD Digital / Magnetron Pulse	HD Digital / Magnetron Pulse
Range	24nm	36nm	48nm	64nm	72nm
RPM	24/36 RPM Modes	24/36/48 RPM Modes (Display Dependant)	27 RPM	27 RPM	27 RPM
Horizontal / Vertical Beamwidth	25 Deg Vertical 5.2 Deg Horizontal	25 Deg Vertical 5.2-2.6 Deg Horizontal w/ Adjustable Beam Sharpening	25 Deg Vertical 4 Deg Horizontal	20 Deg Vertical 1.8 Deg Horizontal	20 Deg Vertical 1.2 Deg Horizontal
Weight	7.4kg / 16 lbs (no cable)	7.4kg / 16 lbs (no cable)	10 kg / 22 lbs	29 kg / 64 lbs	35 kg / 77 lbs
Main Accessories Included or Required	Includes 20m Radar Cable and Interface Box; Requires Heading Sensor for Overlay/MARPA	Includes 20m Radar Cable and Interface Box; Requires Heading Sensor for Overlay/MARPA	DX64S Kit includes 15m Cable & Radar Processor Box; Requires Heading Sensor for Overlay/MARPA	TX06S Kit includes 20m Cable & Radar Processor Box; Requires Heading Sensor for Overlay/MARPA	TX10S Kit includes 20m Cable & Radar Processor Box; Requires Heading Sensor for Overlay/MARPA
Network Ports	(1) Ethernet Yellow	(1) Ethernet Yellow	(1) RJ45 Ethernet	(1) RJ45 Ethernet	(1) RJ45 Ethernet
Power Requirements	10-30 Volts DC (18W Max Typical Operating) (2W Typical Standby)	10-30 Volts DC (20W Max Typical Operating) (2.9W Typical Standby)	10.8-30 Volts DC (30W Max Typical)	10.8-30 Volts DC (120W Max Typical)	21.6V-41.6 Volts DC (250W Max Typical)
Mounting Options	233m x 141.5mm Mount (compatible with BR24, GMR18, RD218)	233m x 141.5mm Mount (compatible with BR24, GMR18, RD218)	250m x 250mm Mounting hole pattern. Separate Processor Box.	Pedestal Mount with separate under deck processor box.	Pedestal Mount with separate under deck processor box.
Environmental	IPX6	IPX6	IPX6	IPX6	IPX6

## Autopilot Specifications

						
Dimensions	114mm x 114mm x 39mm	172mm x 114mm x 48mm	230mm x 144mm	210mm x 167mm x 60mm	210mm x 180mm x 60mm	106mm x 102mm x 72mm
Display	TFT Matrix LCD (130 x 79 pixels)	TFT Matrix LCD (130 x 104 pixels)	5-Inch Color Bonded Display	N/A	N/A	N/A
Weight	0.3 kg / 0.7 lbs	0.5 kg / 1.1 lbs	1.2 kg / 2.6 lbs	1.3 kg / 2.9 lbs	2.8 kg / 6.2 lbs	0.9 kg / 2 lbs
Power Requirements	8 - 16 V DC (SimNet) (1.2W Max Typical)	8 - 16 V DC (SimNet) (1.2W Max Typical)	10.8-30 Volts DC (8W Max Typical)	8-16 V DC (5W Max Typical) (without Drive)	8-16 V DC (5W Max Typical) (without Drive)	8 - 16 V DC (SimNet) (1.4W Max Typical)
Mounting Options	Dash Mount (From Front)	Dash Mount (From Front)	Dash Mount & Flush Mount Options	Under Deck Blackbox	Under Deck Blackbox	Under Deck Sensor
Environmental	IPX6 (from front)	IPX6 (from front)	IPX4			IPX6
Main Accessories Included or Required	Suncover Included, AC12/AC42 Pilot System Required	Suncover Included, AC12/AC42 Pilot System Required	Requires AC70 Autopilot Computer, compatible with a wide range of optional controllers.	SimNet Cable Included, Pilot Controller, Drive, Heading Sensor Required	SimNet Cable Included, Pilot Controller, Drive, Heading Sensor Required	SimNet Cable Attached
NMEA Interfacing	(2) SimNet Ports	(2) SimNet Ports	(1) Micro-C Port	(1) SimNet Port	(1) SimNet Port	(1) SimNet Lead, NMEA0183 Capable
Other Interfaces	N/A	N/A	Drive / Motor, Clutch, Rudder Feedback, Remote, Alarm	Drive / Motor, Solenoid, Clutch, Rudder Feedback, Remote, Alarm	Drive / Motor, Clutch, Rudder Feedback, Remote, Alarm	N/A
Languages	English, German, French, Spanish, Italian, Dutch, Norwegian, Swedish	English, German, French, Spanish, Italian, Dutch, Norwegian, Swedish	English, German, French, Spanish, Italian, Norwegian, Expanded European & Asian Language Pack	N/A	N/A	N/A

## Instrument Specifications

			
	<b>IS40 Instrument Displays</b>	<b>IS20 Analog Displays</b>	<b>IS20 Digital Displays</b>
Dimensions	118mm x 115mm x 20mm	114mm x 114mm x 38mm	114mm x 114mm x 38mm
Display	Full colour, bonded LCD	White/Red Backlit Analog Display w/small LCD	White/Red Backlit Dot Matrix LCD Display
Weight	0.3 kg / 0.7 lbs	0.3 kg / 0.7 lbs	0.3 kg / 0.7 lbs
Power Requirements	12 Volts DC nominal (via network)	10-16 Volts DC (SimNet Powered) (1.2W Max Typical)	10-16 Volts DC (SimNet Powered) (1.2W Max Typical)
Mounting Options	Dash Mount (from front)	Dash Mount (from front)	Dash Mount (from front)
Environmental	IPX7 (from front)	IPX6 (from front)	IPX6 (from front)
Main Accessories Included or Required	Windvane/Speed & Depth Sensors Required	Windvane/Speed & Depth Sensors Required	Requires Transducer(NMEA2000) Optional NMEA0183 Cable
Data Connections	Micro-C	NMEA0183 Input	NMEA0183 Input (Graphic)

## VHF Radio Specifications



	<b>RS12</b>	<b>RS35</b>	<b>HS35</b>	<b>HH36 Handheld</b>	<b>RS82</b>	<b>RS87</b>
Dimensions	160mm(W) x 72mm(H) x 156mm(D)	96mm x 180mm x 156mm	153mm x 70mm x 35mm	140mm x 80mm x 58mm (w/o 140mm Antenna)	193mm x 70mm x 45mm Handset on Cradle	340mm x 288mm x 100mm
Display	46mm x 25mm Display	66mm x 33mm Display	46mm x 25mm Display	39mm x 39mm Display	Segmented LCD	Segmented LCD
Weight	1.29 kg / 2.8 lbs	1.66 kg / 3.7 lbs	0.9 kg / 2 lbs	0.3 kg / 0.7 lbs	0.45 kg / 1 lbs (Handset)	0.45 kg / 1 lbs (Handset)
Power Requirements	10.8-15 Volts DC (25W Max Typical Transmit)	10.8-14 Volts DC (25W Max Typical Transmit)	750 mAh Lithium Ion Battery 10-14 Volts DC Charger	1400 mAh Li-Polymer Battery 10-14 Volts DC Charger	10.8-15.5 Volts DC (25W Max Typical Transmit)	10.8-15.5 Volts DC (25W Max Typical Transmit)
Mounting Options	Dash Mount or Bracket Mount Hardware Incl.	Dash Mount or Bracket Mount Hardware Incl.	Belt Clip & Charging Cradle Included.	Belt Clip & Charging Cradle Included.	Handset on Cradle, Speaker and Blackbox System	Handset on Cradle, Speaker and Blackbox System
Environmental	JIS-7 (similar to IPX7)	IP67 Handset/Speakers	IP67 Handset/Speakers			
Main Accessories Included or Required	Includes Suncover	Includes Suncover, Optional HS35 Wireless Handset	12V Charger Cradle & Belt Clip Included	Internal GPS Sensor, AC Mains Charging Cradle Included	Optional 2nd Handset & Speaker Station	Optional Handset & Speaker Stations (Max 4 Stations), Hailer Horn
Data Connections	NMEA0183 & NMAE2000 Input	NMEA0183 & NMAE2000 Input	2.4GHz Wireless Link to RS35	NMEA0183 Out	NMEA0183 Input	NMEA0183 Input
DSC mode	Class D DSC	Class D DSC	Class D DSC	Class-D DSC	Class D DSC	Class D DSC
Channels	International, USA, Canadian, Weather, ATIS Facility	International, USA, Canadian, Weather, ATIS Facility	International, USA, Canadian, Weather, ATIS Facility			

## Entertainment / AIS / Remote Specifications



	<b>SonicHub Audio</b>	<b>NAIS-400 Class B AIS</b>	<b>NSPL-400 Splitter</b>
Dimensions	157mm(W) x 68mm (H) x 225mm(D) Dock	140mm x 100mm x 42mm	140mm x 100mm x 42mm
Display	N/A	N/A	N/A
Weight	2.2 kg / 5 lbs (Dock & Hub)	0.25 kg / 0.55 lbs	0.25 kg / 0.55 lbs
Power Requirements	10-16 Volts DC (180W Max)	9.6-31.2 Volts DC (6W Max Typical)	9.6-31.2 Volts DC (6W Max Typical)
Mounting Options	Dash Mount Dock & Under Deck Amp	Under Deck Blackbox	Under Deck Blackbox
Environmental	IPX2	IPX7	IPX7
Main Accessories Included or Required	Includes Sleeves for most iPod, iPhone, iPod Touch models.	Optional matching antenna splitter	N/A
Network Interfacing	1 Micro-C Connector for SimNet	NMEA 0183 & NMEA2000 Capability	NMEA 0183 & NMEA2000 Capability
Other Interfaces	(3) Zone Music Outputs, 1 x USB port for MP3 music, Aux Inputs	SO-239 Connection for VHF Antenna, External GPS antenna connector, USB type Mini-B	SO-239 Connection for VHF Antenna, AIS transceiver connector, FM radio connector



## ► Worldwide Support

By choosing a product from Simrad Yachting, you automatically qualify for standard warranty support, which offers two years of protection on all products.

In addition to this, there is a global service network of specialists on hand to provide service for the duration of your product warranty. For technical queries regarding Simrad Yachting products, there are a whole array of features available on the Simrad Yachting website including self help sections, Frequently Asked Questions and email support.



### ► 5-YEAR Advantage

As well as the standard warranty features, Simrad Yachting has expanded its service offerings with the Advantage Program, which is free to join and available to all Simrad Yachting customers, offering the most comprehensive marine electronic service level available today!

**An alternative to traditional swap and repair programs, the 5-Year Advantage provides you with a fast and flexible service.**

In the unlikely event of failure within the first five years of purchasing a new product, the program guarantees that you will have the option to upgrade to the latest model technology at a discount price.

In addition, the 5-Year Advantage allows the extension of upgrade discount to complementary components when replacing a faulty product. This includes items such as displays, radar, sounders and autopilots that comprise your overall system.



### ► ONBOARD Advantage

**The OnBoard Advantage Program provides you with the option to receive warranty service by a Certified Dealer onboard your vessel for the first 2 years.**

Systems valued over \$2,500 USD qualify when they have been installed or signed-off by a Certified Dealer, or installed by an authorised factory, and are still under warranty. Select limits apply to labour and travel related costs as detailed by the program guidelines.

The most complete service & support program on earth... and water.



### ► 24 SWAP Advantage

**The 24 Swap Advantage ensures that if a qualifying product is identified as defective within the first year of warranty, you will be shipped a replacement product within 1 business day.**

The products currently eligible for the 24 Swap Advantage include Simrad NSE, NSO and NSS multifunction displays.



### ► CERTIFIED DEALER Advantage

**Exceptional service, unbeatable product knowledge and utmost professionalism – installations and information you can trust.**

Certified Dealers within the Advantage Program have the highest levels of product knowledge, installation ability and technical proficiency, allowing you to be safe in the knowledge that your brand new Simrad Yachting products are ready for action whenever you are.

Certified Dealers have exclusive access to the online Advantage Hub, which provides them with all the information about your product's service history so that you get what you need, when you need it.

**For further information on the Advantage program and locating a certified dealer, go to [www.simrad-yachting.com](http://www.simrad-yachting.com)**



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