

# Sailing electronics for cruising and racing

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"B&G have really helped our team massively in terms of having the best instruments we can possibly have."

> Sir Ben Ainslie -INEOS TEAM UK

Challengers for the 36th America's Cup

## Passionate about sailing

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## Winning since 1956

### From racing around the world to racing around the cans, B&G has been at the forefront of yacht racing.

In this environment, precision and accuracy are everything. One subtle shift in the wind, a tenth of a knot of boat speed or making the correct sail choice, can be the difference between winning and losing. B&G is proud to have supported so many winners.

#### 1966/7

Sir Francis Chichester sails solo around the world in Gipsy Moth IV fitted with B&G.

#### 2011

4

B&G equipment is installed on every Volvo Ocean Race boat, including the winner Groupama.

#### 1974

Ramon Carlin wins the first ever Whitbread Round the World Race with Sayula II fully equipped with B&G.

#### 2013/17

Vendée Globe wins – François Gabart wins in 2013 and Armel Le Cléac'h in 2017 with B&G.

#### 1990

B&G was installed on 90% of the 1990 Whitbread boats, including the outright winner Steinlager II, skippered by Sir Peter Blake, as well as Tracy Edward's Maiden.



B&G becomes Technical Supplier for the inaugural SailGP race Series.

#### Onboard every Volvo Ocean Race winner ever!

#### Recent Wins:

#### Volvo Ocean Race 1974 to 2018

#### Vendée Globe 2013 - François Gabart 2017 - Armel Le Cléac'h

#### Sydney Hobart Line Honours 2017 Line Honours 2019

#### Fastnet 2019

and a set of the

Line Honours 1st, 2nd & 3rd IRC Overall 1st, 2nd & 3rd

#### Maxi Worlds 2018 1st Super Maxi, Wally & Mini Maxi

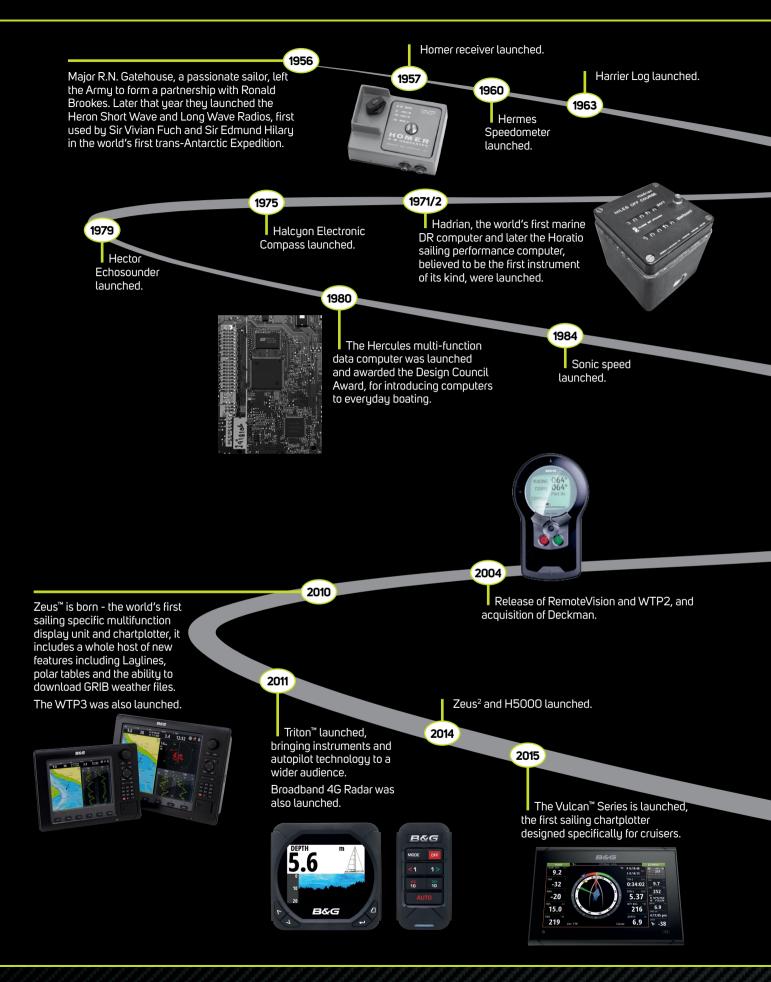
#### World Records

Round the world non Stop Single handed - Macif 2018 Crewed - IDEC 2017

#### And many more....

TECHNICAL SUPPLIER OF







B&G launched the Hecta, the world's first transistorised echo sounder. The Hestia Electronic Course Indicator was also launched.

1968

1988

The Helmstar Autopilot was launched.

## **B&G** Product History

Since 1956, B&G has been passionate about sailing and over the years we have worked with the world's best sailors to develop and test new technologies and innovations, in the most challenging conditions. This has enabled us to help sailors achieve their goals and be their best, whichever type of sailing they do.

First WTP System launched.

2002

H1000 launched including a range of instruments, autopilot and chartplotters aimed at medium sized sailboats and powerboats.



1995





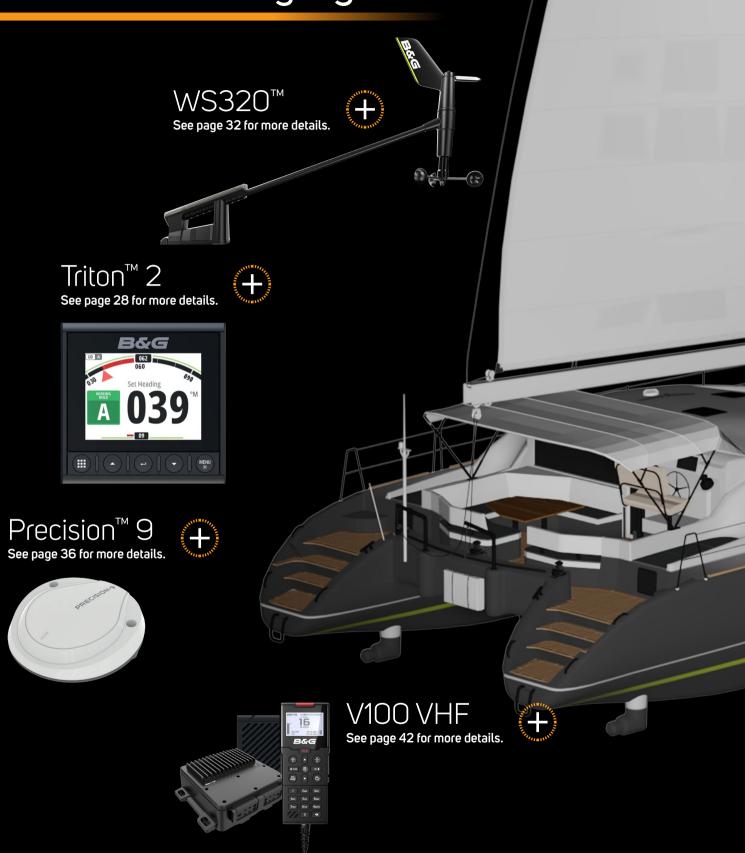
Zeus 3S Chartplotter, Zeus 3S Glass Helm, V60 & V100 Series VHF and Nemesis™ display launched.





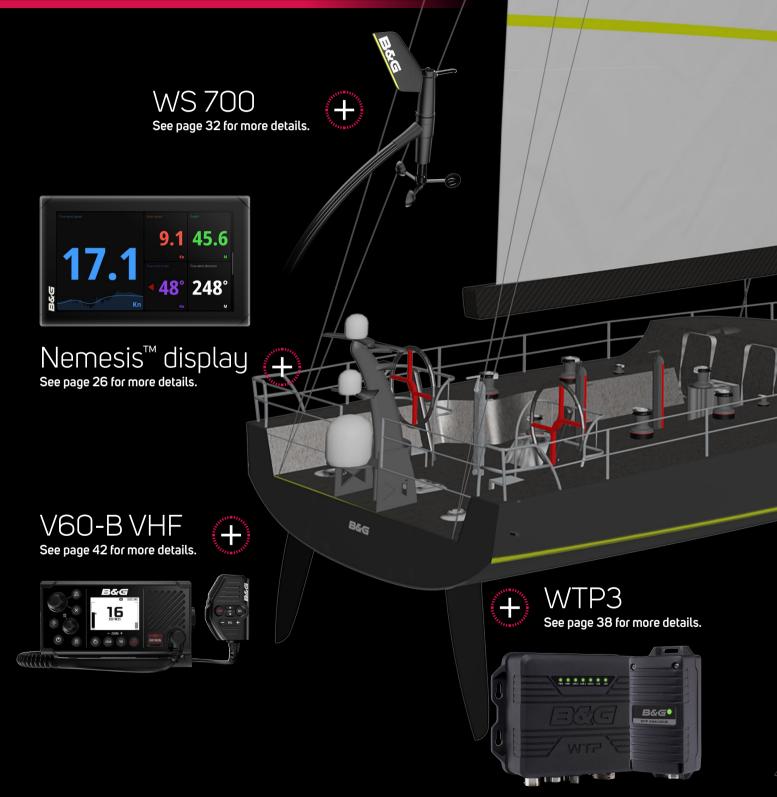
www.bandg.com 9

## **Offshore Sailing System**





## Performance Sailing/ Racing System





## Chartplotters

Designed to be as intuitive as a tablet or smartphone, B&G chartplotters are a one-destination screen to get all the information you need to set sail and navigate with total confidence.

|   | Vulcan™      | Zeus <sup>™</sup> 3S | Zeus™ 3S<br>Glass Helm |
|---|--------------|----------------------|------------------------|
| Sailing & racing software                                     | ✓            | 1                    | 1                      |
| Instrument (speed/wind/depth) data                            | 1            | 1                    | 1                      |
| Sunlight viewable display                                     | 1            | 1                    | 1                      |
| AIS & VHF compatible  | 1            | 1                    | 1                      |
| Pilot control   | 1            | 1                    | 1                      |
| NMEA 2000®  | 1            | 1                    | 1                      |
| Chartplotter  | 1            | 1                    | 1                      |
| Multi-touch screen  | 1            | 1                    | 1                      |
| Choice of mapping C-MAP <sup>®</sup> & Navionics <sup>®</sup> | 1            | 1                    | 1                      |
| Radar capable   | 1            | 1                    | 1                      |
| Weather grib & routing  | $\checkmark$ | $\checkmark$         | 1                      |
| Entertainment integration                                     | $\checkmark$ | $\checkmark$         | 1                      |
| Built-in ForwardScan®   | 1            | 1                    | 1                      |
| МОВ   | 1            | 1                    | 1                      |
| Built-in Wi-Fi  | ✓            | $\checkmark$         | 1                      |
| Internal GPS  | 1            | 1                    | 1                      |
| Keypad for use in extreme conditions                          |              | 1                    | 1                      |
| SolarMAX™ HD ultra-bright display                             |              | 1                    | 1                      |
| Networking capabilities (including chart sharing)             |              | 1                    | 1                      |
| High-spec processor for greater performance                   |              | 1                    | 1                      |
| Integrated quad-core processor                                |              | 1                    | 1                      |
| Smarter<br>with CMP   | and an       |                      |                        |

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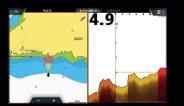
#### Laylines & SailingTime

See your course and know when to tack to minimise beating and gybing. Laylines take into account tidal effects and displays wind shift history.



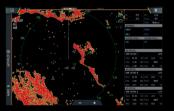
#### Charts

B&G offers you the widest choice of charting options for sailing, from mapping leaders C-MAP<sup>®</sup> as well as many other manufacturers.



#### ForwardScan®

See what lies ahead under the water with approaching depth information. Sail poorly-charted or unfamiliar waters confidently with a clear image of the bottom ahead of your boat.



#### Radar

Access and monitor your radar output conveniently from the chartplotter display for total control and awareness in a fully integrated sailing navigation system.

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## Sailing Features

As sailors, we know that cruising or racing in a sailing boat is different. Enjoy stressfree journeys and get where you want to go quickly and safely with B&G sailing specific software.

B&G SailSteer<sup>™</sup> provides all your important instrument and navigation information in one view.

#### **Current Course** Overview $(\hat{\mathbf{r}})$ Heading, Course Over Ground and your current lauline × Tide Tide/Current set and rate relative to boat C Laylines Current and opposite tack laylines, providing opposite tack course



#### PredictWind

High resolution wind forecasting and planning for sailing. Integrated exclusively on B&G's Zeus<sup>™</sup> and Vulcan<sup>™</sup> products, and available via a Wi-Fi connection upon registration.



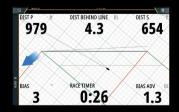
#### Wi-Fi

Built-in wireless technology provides an unprecedented level of connectivity between your chartplotters, tablets and smartphones. Download the free software to view (smartphone) and control (tablet) from almost anywhere on board.



#### Autopilot Control

Engage and take charge of the autopilot directly from your B&G chartplotter and enjoy the reassurance of seamless integration and control, while you sit back and relax.



#### RacePanel & StartLine

Be on the line at full speed as the gun goes. Get the best start in the fleet, with time, distance and positioning data.

## Adding a Vulcan to your boat is easy:

- Just add power for basic navigation and chart plotting functionality, with integrated high-precision GPS antenna
- For advanced sailing features simply add: wind sensor, compass sensor and speed log
- Compatible with your existing B&G system
- Mount where and how you want, with flush and bracket mounting options
- Compatible with 3rd party products and systems, with NMEA 2000<sup>®</sup>







Radar and chart bundles are also available, please visit the website for more information.

## Vulcan<sup>™</sup> Chartplotter

Perfect for small boats including coastal cruisers and club racers. The highresolution super-bright screen enables you to read even in direct sunlight and Vulcan's responsive touch screen gives you easy, fingertip control.

Vulcan chartplotters are easy to install and network with AIS, Radar and other on-board instruments.

#### Key Features

- B&G sailing software
- Multi-touch screen
- Built-in Wi-Fi
- HALO<sup>™</sup> Radar compatible
- ForwardScan<sup>®</sup> compatible
- NMEA 2000®



## NEW Zeus™ 3S Chartplotter

## The Zeus 3S series are the complete navigation solution for blue water cruisers and regatta racers.

With superfast processors you can display up to 6 different information panels simultaneously, on the ultra-bright SolarMax<sup>™</sup> HD all- weather touchscreen, which is combined with a rotary dial and keypad for ultimate control in all conditions.

These easy to use chartplotters include all of B&G's unique and proven sailing features such as SailSteer<sup>™</sup>, Laylines, and RacePanel and integrates seamlessly with a wide range of instruments and accessories for greater safety, performance, and enjoyment on the water.

#### **Key Features**

- B&G sailing software
- Built in Wi-Fi, ForwardScan®, NMEA 2000® and Ethernet connectivity
- Internal 10Hz GPS
- Multi-touch screen and keypad control
- Integrated autopilot controller





#### **Exceptional visibility**

The SolarMax<sup>™</sup> HD screen ensures perfect visibility in all conditions. Zeus 3S's screen has been tested to the limit in everything from tropical sunlight to the depths of the southern ocean and polar winters. You can see it through polarised sunglasses, and the responsive touchscreen works even in flying spray and rough sea.

#### Super-fast processor for immediate response

Enjoy exceptional situational awareness thanks to Zeus 3S's high-performance processor. There's plenty of processing power to run charts, radar, ForwardScan® and autopilot controls simultaneously without compromising on performance – giving you all the tools you need to enjoy the sailing, safe in the knowledge that you can monitor your surroundings.

#### Seamless integration with your instruments

Enjoy a fully connected sailing experience and control and monitor your H5000 instrument system on board from the display. Zeus 3S can also take full control of on-board systems using Naviop™ and CZone™, allowing fingertip command and monitoring of lights and systems on board.

#### Easy to expand your network

Just add power to enjoy Zeus 3S as a versatile standalone chartplotter with first-rate navigation functions. For the best experience and to take advantage of our award-winning sailing features, network your chartplotter with instruments and sensors using industry standard NMEA 2000<sup>®</sup> connectivity.

#### Mapping options

Zeus3S chartplotters support a wide range of leading cartography, from C-MAP® and Navionics®. Take advantage of advanced mapping features including autorouting, dynamic tides and currents, aerial photos and detailed harbour charts to ensure you know exactly what lies beneath your keel at all times.



Zeus<sup>3</sup> 7" 000-13241-001 7" screen size only available in Zeus<sup>3</sup> model, not Zeus 3S.



Zeus 3S 9" 000-15408-001





Ceus 3S 16"

Radar bundles are also available, please visit the website for more information.

#### Powerful & intuitive

Take advantage of the powerful new iMX8 processor that allows for the fastest response times available and the flexibility to run many different data sources at the same time on one screen.

#### **Complete Onboard integration**

All the netwrorking support you need including; HALO<sup>™</sup> Radar, ForwardScan<sup>®</sup>, B&G Instruments, Autopilots, entertainment and digital switching systems.

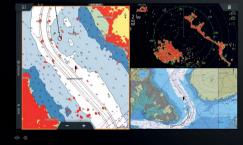
#### **Dedicated Sailing Features**

With up to 6 way split screens you can view all the key sailing data you need on one screen.

#### Unbeatable Screen Quality

Ultra bright SolarMax<sup>™</sup> HD touch screen allows for perfect visibility of the on screen data at all angles and all weather conditions.







Zeus 3S Glass Helm 24 (System Pack) 000-15131-001

Zeus 3S Glass Helm 19 000-15050-001 Zeus 3S Glass Helm 19 (System Pack)

000-15130-001

297 39 15.5 336

Zeus 3S Glass Helm 16 000-15048-001 Zeus 3S Glass Helm 16 (System Pack) 000-15129-001

Included in the system pack is a ZC2 remote keypad control, a GPS Antenna and Chart Card reader.



Zeus™ 3S Glass Helm

Zeus 3S Glass Helm is the ultimate sailing navigation system perfect for larger bluewater cruisers and superyachts.

The ultra-bright full HD displays are ideal for both indoor and outdoor installations. The new processor provides super-fast loading times, smoother transitions and ability to run 6 functions simultaneously without a drop in performance. Navigate charts and use RacePanel, whilst also viewing your connected systems.

Built-in wireless connectivity links Zeus 3S to your existing mobile devices. Wired Ethernet, NMEA 2000<sup>®</sup>, and J1939 networking provide almost limitless integration options.

#### **Key Features**

- B&G sailing software
- Low-profile, all glass touchscreen
- Ultra-bright, wide-angle, full HD display
- Built in IMX8 super fast and powerful processor (no black box required)



• NMEA 2000<sup>®</sup>, 0183, Ethernet and Wi-Fi compatibility RACING

- Integrated Pilot control
- HALO<sup>™</sup> 24 compatible



## **Chartplotter Accessories**

#### Accessories to complement your B&G electronics

#### Barometer

Barometric trend is the offshore sailor's friend, a warning of a pending storm or calm. B&G's high resolution barometer provides data resolution of 0.1mb for highly accurate trend data.

High-Resolution Barometer

000-11552-001



B&G

#### SonicHub® 2

The B&G SonicHub 2 features integrated Bluetooth®, allowing you to stream music from a smartphone or tablet, playback audio/video from a USB storage device or listen to radio, all with full control from your Zeus<sup>™</sup> 3S or Vulcan<sup>™</sup> display.



SonicHub 2

000-12302-001

#### Zeus Controller

Control your Zeus 3S display with the ZC2's intuitive keypad and multi- directional controller. Available in landscape or portrait versions, the ZC2 can also be used to control a B&G Pilot via any networked display.

| ZC2 - Portrait mount  | 000-12365-001 |
|-----------------------|---------------|
| ZC2 - Landscape mount | 000-12513-001 |

#### **Class-BAIS**

See and be seen. Reduce your risk of collision with this latest generation, fully integrated, Class-B AIS transponder. Compact in size, lightweight, fully waterproof, and with low power draw.



| NAIS-500 Class B AIS system   | 000-13609-001 |
|-------------------------------|---------------|
| NSPL-500 AIS Antenna Splitter | 000-13612-001 |

#### **ZG100 GPS**

The ZG100 GPS Antenna provides high accuracy position, course and speed ten times every second ensuring maximum confidence in the displayed position. The ZG100 also includes a multi-axis heading sensor for data optimisation and backup heading data.

ZG100 GPS Antenna

000-11048-002

#### **ForwardScan®**

ForwardScan forward-looking sonar shows you what lies ahead under the water with approaching depth information. Enjoy a clear and easy to read image of the bottom ahead of your boat as ForwardScan transmits and receives up to ten times faster for real-time updates.

| ForwardScan Transducer   | 000-11674-001 |
|--------------------------|---------------|
| SonarHub™ Sounder Module | 000-11142-001 |





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#### Visibility & versatility

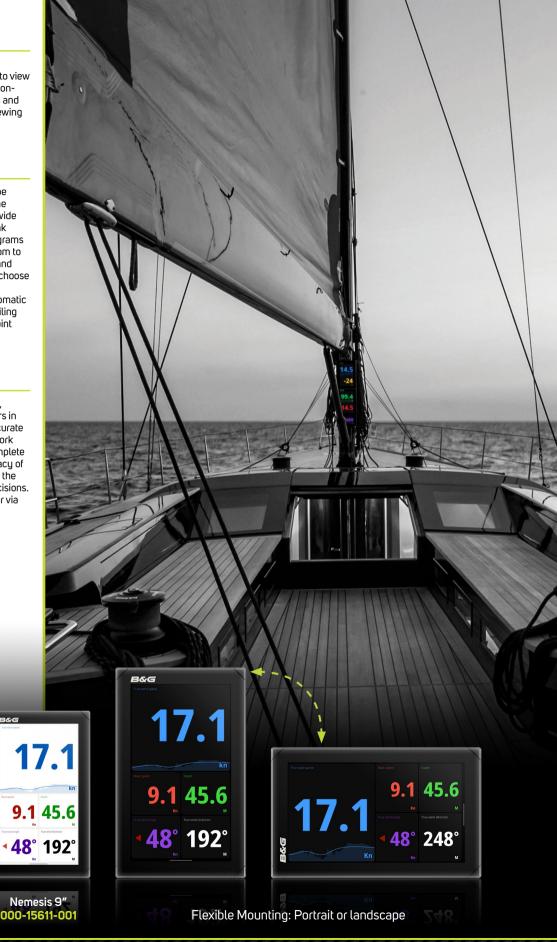
A bright SolarMax<sup>™</sup> HD touch screen, with super-wide viewing angles and the ability to view with polarised sunglasses from anywhere onboard. With adjustable data sizes, palettes and backlighting, this display offers optimal viewing in all conditions, whether on the mast or in the cockpit.

#### Complete customisation

This all-in-one customisable display can be mounted in either portrait or landscape. The easy to use drag & drop editor provides a wide choice of graphical gauges, SailSteer<sup>™</sup>, tank levels, digital data, IP camera views, histograms and images. With this, you have the freedom to select the data, visualisation and set size and position that you want; or you can simply choose from a choice of pre-selected built-in B&G dashboards and templates. Additional automatic context modes allow you to choose the sailing data you want to display based on your point of sail or sailing mode: Upwind, Reaching, Downwind or Pre-start.

#### Integration & control

The use of commercial grade components, hours of testing and development by sailors in all conditions, combined with the most accurate sailing data available from your B&G network and instruments, will ensure you have complete trust in Nemesis. The reliability and accuracy of both the data and the display will give you the confidence you need to make the right decisions. Control your display on the touch screen or via an Apple Watch<sup>®</sup>.



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**48°** 192°

Nemesis 12"

000-15612-001

## NEW Nemesis<sup>™</sup> Sailing Display

## This intelligent sailing data display offers unparalleled visibility from all angles and distances on-board.

With complete data customisation including a choice of easy to use multi-function templates, and automatic dashboards based on your point of sail. Whether racing or cruising, you will never be out of touch. Nemesis<sup>™</sup> allows you to define how you see the data you want, and when, no matter what the conditions, providing an intuitive link between your trusted instrument network and the real world.

#### Key Features

- Pre-set dashboards or easy to use drag & drop editor for full customisation
- Wide choice of digital data displays including graphical gauges, SailSteer, tank levels, IP camera views, histograms and images
- Automatic Context modes: Upwind, Reaching, Downwind, Pre-start
- B&G App and Apple Watch® control
- Bright, crisp SolarMax HD touch screen, with super-wide viewing angles, with or without polarised sunglasses
- Adjustable data sizes, palettes and backlight for optimal viewing in all conditions

- Mount in portrait or landscape
- Connect multiple screens via the Nemesis Hub
- Ethernet and/or NMEA 2000®

45.6

#### **HV** Displays

HVision<sup>®</sup> bonded glass displays provide ultra-

TRUE W/A P

clear instrumentation with zero condensation risk. Designed to be installed on the mast in the sailor's line-of-sight, HV Displays show almost any information on the system. When paired with H5000 Hercules<sup>™</sup> or Performance CPUs, HV Displays will auto- switch data based on point of sail or pre-start status. Getting the crucial information in the right place at the right time.

| 10/10 HV Display | 000-11087-001 |
|------------------|---------------|
| 20/20 HV Display | 000-11088-001 |
| 30/30 HV Display | 000-11089-001 |
| 40/40 HV Display | 000-11090-001 |

ny to waypoint 041° 18.3 M UTC time

Sailing time to waypoint 15:01:45

Apple Watch® control

B&G

Mast 1

Mast 2

Mast 3

Navigatio

Neme

10:09

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#### Triton 2 Packs

It is easy to build your Triton 2 system with one of our starter packs that include network components and a choice of key instrument sensors.

#### Speed/Depth Pack



Includes: Triton 2 Display, DST-810 Speed/Depth/Temp Sensor, Micro-C Backbone kit.

Triton 2 Speed, Depth Pack

#### 000-13298-002

#### Speed/Depth/ Wind Pack

Includes: Triton 2 Display,



WS310 wired wind sensor, DST-810 Speed/ Depth/Temp Sensor, Micro-C Backbone kit.

Triton 2 Speed, Depth, Wind Pack

000-14955-002

#### Speed/Depth/ Wireless Wind Pack



Includes: Triton 2 Display, WS320 wireless wind sensor, DST-810 Speed/ Depth/Temp Sensor, Micro-C Backbone kit.

Triton 2 Speed, Depth, Wireless Wind Pack

000-14956-002

#### Triton 2 Sensors

#### Precision<sup>™</sup> 9 Compass

The Precision 9 provides accurate heading data for steering compass, autopilot, True Wind Direction calculation and stabilisation of radar displays.

Precision 9 Compass

000-12607-001



#### **DST-810**

PRECISION-9

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A compact multisensor that offers depth, speed and temperature data. Directly connected to the network for easy installation.

DST-810 Triducer multisensor plastic TH DST-810 Triducer multisensor bronze TH

000-15735-001 000-15736-001



## Triton<sup>™</sup> 2 Display

Your course looks clearer with Triton 2 displays. Triton 2 instruments and autopilots bring Grand Prix technology to coastal cruising and club racing sailors.

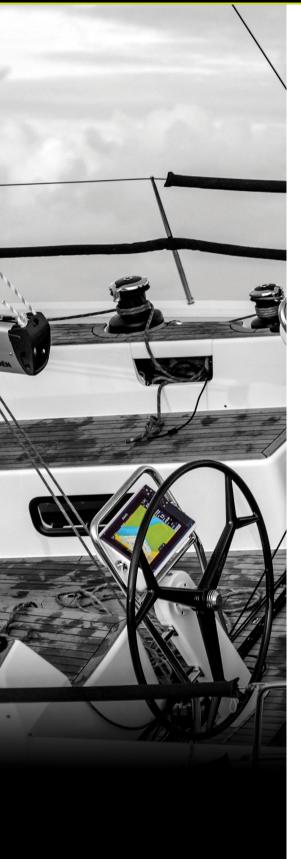
See the data you rely on: speed, depth, wind and more, in full colour on Triton 2's low-profile, intuitive displays.

Triton 2's low profile design will enhance any cockpit. Whether you mount the display at the helm, on the bulkhead or over the hatch, you'll always be able to see the data you need.

#### **Key Features**

- Display wind, speed, depth, heading, GPS, AIS and more
- Large 4.1-inch colour display
- Brightest transflective LCD screen
- Configurable AIS screen
- Unique sailing features including SailSteer<sup>™</sup> and WindPlot
- Easy to use, easy to install
- Low power consumption





## Triton<sup>™</sup> 2 Autopilots

Designed for sailors and tested in every one of the world's oceans, a Triton 2 Pilot will helm your boat hour after hour - better than most helmsmen.

Triton 2 Pilots feature intelligent sail steering, with compass and wind steering. Smart Manoeuvre controls allow you to tack at the touch of a button, and chartplotter integration enables waypoint and route navigation. The keypad offers precise control of all the autopilot functions, automatically displayed on a nearby Triton 2 display.

#### Build your B&G autopilot system

#### 1. Choose your display



#### 2. Choose your Triton 2 Pack

Select a Triton 2 Pilot Pack to match your boat (includes computer, compass, rudder feedback unit and network starter kit).

#### 3. Choose a drive unit

B&G Pilots are compatible with a number of third-party drive units in addition to B&G models. Consult your B&G specialist.



Triton 2 Pilot Computer/Compass/Rudder Feedback Unit

| Triton 2 Pilot Controller                | 000-13296-001 |
|--|---------------|
| Triton 2 Pilot Controller & Display Pack | 000-13561-001 |
| NAC-2 Core Pack                          | 000-13335-001 |
| NAC-3 Core Pack                          | 000-13336-001 |



**Drive units** 

| RAM TO - 12v (26ft-35ft boats*)   | 000-13902-001 |
|-----------------------------------|---------------|
| RAM T1 - 12v (30ft - 40ft boats*) | RAM-T1-12V    |
| RAM T2 - 12v (40ft - 50ft boats*) | RAM-T2-12V    |
| RAM T2 - 24v (40ft - 50ft boats*) | RAM-T2-24V    |
| RAM T3 - 12v (50ft+ boats*)       | 000-13788-001 |
| RAM T3 - 24v (50ft+ boats*)       | RAM-T3-24V    |

\*Consult your dealer to confirm the drive suitability for your boat.

"B&G electronics provide me with a vital sixth sense, which I trust. The reliability and accuracy is second to none and is critical in these harsh environments." Andreas B. Heide -Professional Expedition Sailor, Arctic Norway



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B&G provide the same accuracy, reliability and performance for the Americas Cup teams, as we do for the leisure sailor, so you can trust in your B&G kit, no matter what.



WS710 Wind Pack 000-14384-001 WS720 Wind Pack 000-14385-001

WS730 Wind Pack 000-14386-001

WS710 Vertical Wind Sensor 000-14392-001

WS720 Vertical Wind Sensor 000-14393-001

WS730 Vertical Wind Sensor 000-14394-001

WS740S Vertical Wind Sensor 000-14395-001



with interface 000-14383-001 VS310 Wind Sensor Pack, 20 cable, interface 000-14382-001

## WS300 and WS700 Wind Series

A range of high precision wind sensors, designed for cruising, club and performance racing.

#### WS700 Series

The WS700 series provides the ultimate wind sensor for performance sailing, providing the most accurate wind angle and speed data. The new one-piece vane design gives superb aerodynamics and stability, as a result of over 200,000 hours of combined design and wind tunnel testing.

#### WS700 Key Features

• High precision and accuracy

© INEOS TEAM UI

- High performance aerodynamic design
- Ocean Race proven
- Straightforward installation

#### WS310 Wind Sensor

Designed for cruising and club racing sailors. WS310 offers high performance and outstanding data accuracy, with improved aerodynamics. Suitable for all yachts, it comes with 20, 35, 50 or 80m cables.

#### WS320™ Wireless Wind Sensor

Installation is no longer a challenge. This wireless sensor is lightweight and eliminates the need to run wires through the mast with no loss in accuracy. WS320 outputs wind at a super smooth five times per second and its smart rechargeable power management will guarantee reliable data, regardless of the weather.

#### WS310 Key Features

- High precision and accuracy
- Wind tunnel validated aerodynamics
- 4 cable options from 20 to 80m
- Connects to instrument network via interface

#### WS320 Key Features

- Easy installation
- Wireless communication
- Smart power management
- High precision and accuracy
- Wind tunnel validated aerodynamics
- Connects to NMEA 2000® via remote interface







## H5000

B&G's H5000 instrument and autopilot system delivers sailing-specific features and powerful race-proven technology with an ultra-fast CPU, convenient webstyle interface, full colour displays and a dedicated autopilot.

#### H5000 Displays

The 5-inch, sunlight viewable, graphic colour screen with a highly intuitive user interface is packed with sailing features including SailSteer<sup>™</sup>, Start Line, AIS display and Pilot status. The bonded glass display gives zero condensation and enhanced contrast. 5-inch monochrome, segmented Race Display also available.

#### **Graphic Display Features**

- Start Line
- WindPlot
- SailSteer<sup>™</sup>
- Quick, context-based
- AIS repeater
- Pilot status
- menus
- Bright colour display



#### Instrument CPU



The H5000 system is powered by a smart Central Processing Unit (CPU) which runs three levels of software, Hydra<sup>™</sup>, Hercules<sup>™</sup> and Performance to match your sailing requirements.

#### H5000 CPU function levels

| FUNCTIONS  | Hydra | Hercules | Performance |
|--|-------|----------|-------------|
| Performance Wind Filtering                       | •     | •        | •           |
| 3D Motion corrected wind support                 |       | •        | •           |
| Ground Wind Speed and Direction                  |       |          | •           |
| SOG as Boat Speed option                         | •     | •        | •           |
| Dynamic Boat Speed Damping                       |       | •        | •           |
| Polar Table and functions                        |       | •        | •           |
| HV Display Context Switching mode                |       | •        | •           |
| Start Line proximity, with Bow Positioning       | •     | •        | •           |
| 16 Custom User Channels                          | •     | •        | •           |
| CALIBRATION                                      |       |          |             |
| AutoCal routines, including True Wind correction | •     | •        | •           |
| Advanced True Wind Speed correction              |       | •        | •           |
| Boat Speed Linearity/Heel correction             |       | •        | •           |
| Cubic Spline interpolation                       | •     | •        | •           |
| INTERFACING                                      |       |          |             |
| Selectable NMEA0183 Input/Output                 | •     | •        | •           |
| H5000 Webserver browser based control            | •     | •        | •           |
| H-Link Communications                            |       | •        | •           |
| Websockets v2                                    | •     | •        | •           |
| Nemesis <sup>™</sup> Ethernet                    | •     | •        | •           |
| SENSOR SUPPORT                                   |       |          |             |
| Dual Boat Speed input                            | •     | •        | •           |
| Dual Wind Sensors (switching on wind angle)      |       |          | •           |
| Rotating Mast support for Wind Calculation       | •     | •        | •           |
| Port & Starboard Rudder inputs, with Toe-In      |       |          | •           |
| Advanced Linear channel types                    |       | Set A    | Set A+B     |
| Dual Depth sensors                               | •     | •        | •           |
| Duar Depth sensors                               |       |          |             |
| Network Loadcells                                | •     | •        | •           |

#### Analogue Displays

B&G's Analogue displays provide a clear view of key data types in a classic display, meeting the aesthetic demands of classic yachts and providing instant understanding of important data, like Wind Angle, at a glance.

Analogue Displays – all models



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# -inked out function for the most precise data.

#### **3D Motion**

Wind measurement is affected by the pitching and rolling motion of the yacht, which distorts the wind measurement at the top of the mast. The solution is 3D Motion correction



- H5000 takes data from multiple sensors including high-specification rate-guros to correct for induced wind, providing the best wind solution available in an instrument system.

#### Startline

H5000's Start Line feature provides high-resolution



data for distance to line, distance to line ends, line bias and the distance gained by starting at the favoured end. H5000 Start Line uses BowPosition, calculating the position of the yacht's bow ten times every second. For the ultimate in starting performance, interface H5000 with a Zeus<sup>3</sup> system with scaled StartLine view.

#### H5000 Browser Interface



Browser-based configuration (

sustem enables advanced calibration, set-up and diagnostics without the hassle of negotiating a complex and unfamiliar menu system. The powerful web-style interface can be accessed via PC, tablet or smartphone (tablet/smartphone requires Wi-Fi interface).

#### Advanced Calibration

H5000 offers the ultimate in high resolution sensor

input, the best processing techniques and optimum system calibration including AutoCal routines, with corrections for almost every

"All this technology is essential today to be able to control these machines which can reach average speeds of more than 25 knots when the conditions are right." Thomas Ruyant – LinkedOut

Vendee Globe 2020

## H5000 Sensors

#### **Heading Sensors**

The Precision<sup>™</sup> 9 Compass supplies heading and rate-of-turn information to B&G instrument, autopilot, radar and navigation systems. Incorporating a nine-axis array of solid-state motion and orientation sensors, the Precision-9 also provides accurate heel, trim and heave data to compatible equipment via its NMEA 2000<sup>®</sup> interface.

Precision 9 Compass

000-12607-001

# PRECISION-9

#### **Expansion Modules**

H5000 Expansion modules provide additional interfacing capacity. Serial Expansion for interfacing additional GPS units, Gyro compasses and other NMEA 0183 devices. Analogue Expansion enables additional inputs for 0-5V sensors including wind, mast angle and loadcells.



| H5000 Serial Expansion   | 000-11726-001 |
|--------------------------|---------------|
| H5000 Analogue Expansion | 000-11725-001 |

#### Wind Sensors

High performance light-weight wind speed and angle sensors, built to withstand the rigors of offshore racing and high-latitude cruising. B&G's wind sensors are accurate and stable across all wind conditions – providing confidence in the data, whether for a tactical windshift call or autopilot steering performance.

| Vertical Wind Sensor Pack<br>810mm  | BGH030001 |
|-------------------------------------|-----------|
| Vertical Wind Sensor Pack<br>1050mm | BGH030002 |
| Vertical Wind Sensor Pack<br>1450mm | BGH030003 |

Further wind sensor models are available, see www bandg.com

#### Speed Sensors

Accurate boat speed is key to any instrument system, ensuring calculated functions including True Wind are as precise as possible. Options include dedicated speed sensors, for optimum performance, and combined Depth/Speed sensors for single through-hull convenience.

| H5000 Speed Sensor, Plastic<br>housing       | SEN-SPD-HP   |
|--|--------------|
| H5000 Speed Sensor, Plastic<br>Flush housing | SEN-SPD-HPF  |
| H5000 Speed Sensor Bronze<br>housing         | SEN-SPD-HM   |
| DST-810 Triducer multisensor<br>plastic TH   | 000-15735-00 |



#### **Depth Sensors**

B&G offer a selection of sensors to provide the all-important depth data. Select a DT800 sensor to partner a dedicated speed sensor, or select the combined DST-810 depth/speed sensor. Both options are NMEA 2000<sup>®</sup> compatible and include water temperature sensors.

| DT800 NMEA 2000® Depth                     | 000-11738-001 |
|--|---------------|
| DST-810 Triducer multisensor<br>plastic TH | 000-15735-001 |
| DST-810 Triducer multisensor<br>bronze TH  | 000-15736-001 |



#### **Rudder Sensors**

Rudder angle is imperative for both autopilot performance and race yacht performance optimization. B&G's sensors provide highly accurate rudder data ten times per second.

| RF25N Rudder sensor | 000-10756-001 |
|---------------------|---------------|
| RF300 Rudder sensor | 20193744      |



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## H5000 Pilot

### Advanced Sailing Features

The H5000 Pilot isn't the same as other autopilots, its expert systems constantly monitor heading, wind, sea-state, heel angle and other variables to react to changes in conditions immediately, providing performance and safety in equal measure.

**Recovery Mode** recognises sudden course deviations caused by out of pattern waves and ensures that the yacht deviates less from the target course and returns to course quicker.

**Gust Response** takes pre-emptive action based on incoming H5000 or WTP3 instrument data to hold a more stable course in changeable wind conditions.

**High-Wind Response** naturally bears the yacht away if wind increases while reaching to keep the boat flatter and driving faster.

B&G's H5000 Pilot contains failsafe systems including secondary data sources and user configurable hard-limits to provide safety features to match its performance.

#### Pilot Keypad

Provides straightforward autopilot control and system setup from its dedicated keypad. As the primary autopilot controller, or as a second station to a Zeus<sup>™</sup> chartplotter, the Pilot Keypad provides assured control and feedback.

H5000 Pilot Keypad





#### Pilot CPU

The record-breaking and Vendée Globe winning H5000 Pilot features dedicated sailing algorithms and steering modes - Gust Response, Recovery and High-Wind Response. It has been proven in the toughest of conditions and the most testing environments and is ideal for short-handed racing.

H5000 Pilot CPU

000-11554-001

#### H5000 Pilot Keypad Key Features



- Dedicated pilot control
- Full pilot setup access
- Glass bonded, monochrome display
- Straightforward interface

#### H5000 Pilot CPU Key Features

- Steer to compass, wind or waypoint
- Apparent and true wind steering
- Expert systems including gust and high-wind response
- Auto response switching and recovery mode

#### Wireless Remote

Wirelessly control your autopilot from anywhere on-board with this Bluetooth® Wireless Pilot Controller. Worn on the wrist or a lanyard, the WR10 works with H5000 and Triton<sup>™</sup> 2 Pilot systems, up to 30m from the waterproof base station.



| WR10 Remote Controller &<br>BT-1 Base Station |  |
|---|--|
| W/D10 Demote Controller                       |  |

WR10 Remote Controller additional remote 000-12316-001

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000-12358-001

### WTP3

#### WTP3 is the ultimate Grand Prix instrument system.

The powerful multi-processor CPU links to distributed data acquisition modules via 3 independent CAN networks, providing vast data collection and calculation possibilities. The data is processed in the CPU that transmits serial data for output to displays via modules, communicates with PC software via Ethernet and operates an on-board datalogger for post-sail data analysis.

WTP3 systems are installed by certified professionals and fully supported throughout commissioning and use.

#### The WTP3 meets three principle objectives

- Flexibility and reliability for the professional yacht navigator
- Unmatched data accuracy with powerful calibration options and 3D Motion correction
- Super-fast data calculation and display

Contact your B&G Grand Prix specialist for more information.





RACINO

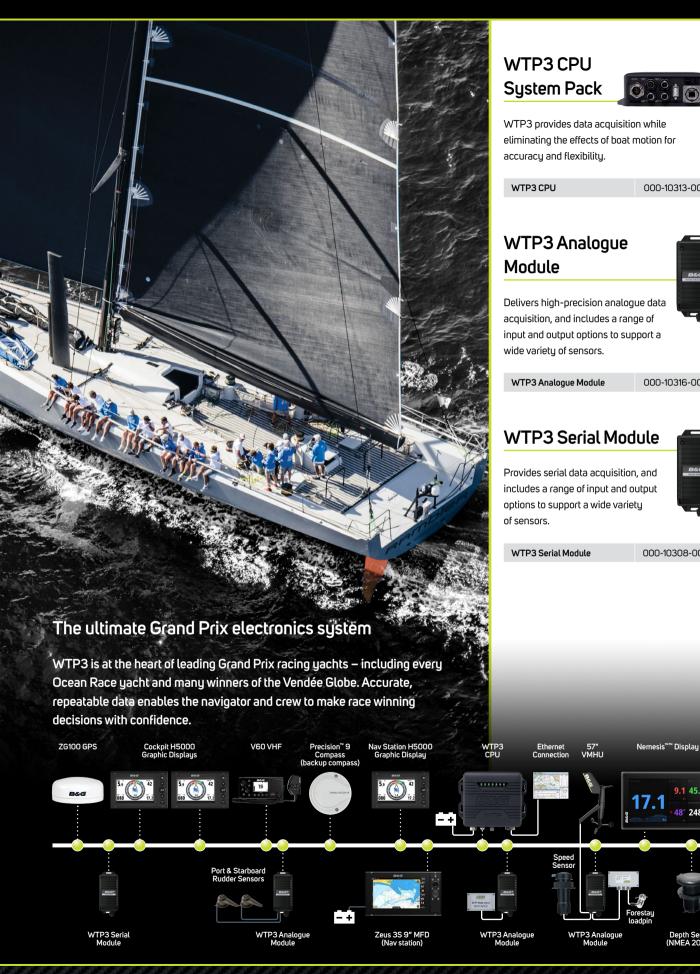
000-10313-001

000-10316-001

000-10308-001

9.1 45.6 <mark>48°</mark> 248°

Depth Sensor (NMEA 2000<sup>®</sup>)



#### www.bandg.com

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## Radar

See near and far with one compact dome.

### HALO™ 24 and HALO™ 20+ Radar

HALO 24 and the new 20+ deliver an almost real-time view, with 60 RPM for the ultimate in collision avoidance. Identify hazards in an instant with VelocityTrack<sup>™</sup> and enjoy simultaneous short and long-range coverage—up to 48 nautical miles—from a lightweight compact 24 and 20inch dome.



A cost-effective solution for sailors to increase situational awareness and collision avoidance, detecting collision hazards and other targets nearby and up to 24 nautical miles away. With its small footprint, low profile and light weight, HALO 20 is the perfect radar solution for smaller sailboats.





Ready whenever you are

HALO 24, HALO 20+ and HALO 20 radars wake instantly from low-power standby mode, delivering high-speed radar coverage in seconds.



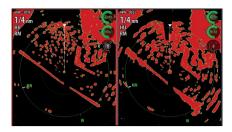






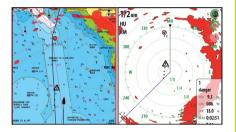
# The ultimate view for collision avoidance

Get ultra-fast updates with a 360 degree sweep every second, thanks to its industry-first 60 RPM rotation at ranges up to 1.5 nautical miles. Available on the HALO 24 and the new HALO 20+.



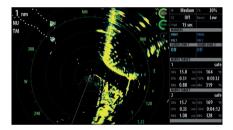
#### Dual Range Mode

Keep an eye on far away weather cells, while watching for collision dangers up close.



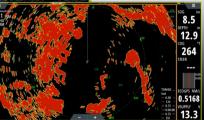
#### Chart Overlay

Overlay the radar image on the chart to immediately flag up any uncharted obstructions and vessels.



#### MARPA target tracking

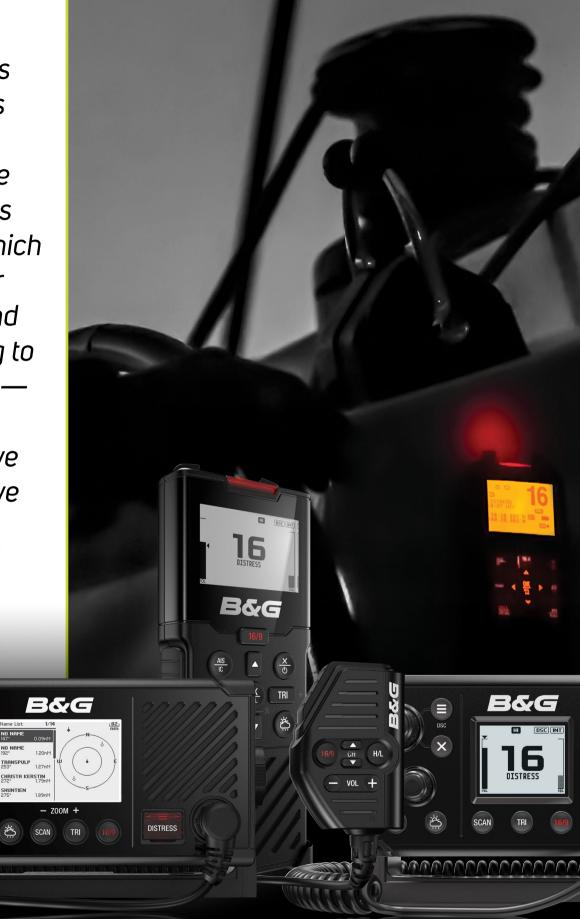
Track up to 10 MARPA targets simultaneously.



### VelocityTrack™ doppler technology built-In

VelocityTrack technology provides instant visual feedback on whether targets are approaching or moving away, by using on-screen colour coding. Available on the HALO 24 and the new HALO 20+.

"One of the best upgrades we made was installing a coherent suite of instruments from B&G, which has taken our navigating and boat handling to the next level giving us the information we need, when we need it." Dan & Kika, Sailing Uma



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## Communications

#### Stay connected with B&G's range of VHF and AIS products.

A VHF radio is a must have communication device for safety at sea and one of the most important items onboard your boat. Whether you're looking for a fixed mount system at the chart table or a flexible handheld offering whilst on the rail, B&G offer a choice of sailing VHF radios. For a fully integrated navigation and safety system, add AIS to your marine electronics system.

#### V60 & V60-B VHF



000-14471-001

000-14474-001

Stay safer on the water with V60 VHF marine radios with built-in GPS and full Class B AIS receiver, and in the case of the V60-B an AIS transmitter. See and be seen by nearby AISequipped vessels. This low-profile design radio grants flexible mounting options and supports up to two optional wireless handsets.

### NEW V100 & V100 - B VHF



Stay safer on the water with the latest multistation V100 and V100-B VHF marine radios from B&G. Stay connected from anuwhere on board with up to 8 handsets (4 wired and 4 wireless) and 4 external speakers. Each system is comprised of a VHF Radio Black box, a handset and a speaker. The Black box is available in two formats: NRS-1 and the NRS-2 with integrated Class-B AIS. The NRS-1 does not receive or transmit AIS. Add additional speakers or wireless handsets with charging stations as you need, for the same freedom of a handheld VHF. Use as an intercom for easy communication with your crew on board, at the touch of a button. The new V100 Series multi-system VHF radio has been developed to allow wider integration possibilities through NMEA 2000<sup>®</sup> and 0183, while featuring improved user interfaces and design styles aligned to the new displays of B&G.



The V2OS is perfect as a stand-alone VHF

V60 VHF Radio

V60-B VHF Radio

V20S VHF

system in the cockpit or at the navigation station. The sleek low profile design, clear bright display, and easy button access are combined with key features including all international channels, Class D DSC Approved and NMEA 2000<sup>®</sup> compatible.



000-14492-001

#### H60 Handset

The H60 remote handset adds wireless communications to the V60 VHF, duplicating the display and key controls to the handset and providing an on-board intercom system, for flexible communications away from the chart table.

H60 Wireless Handset



| V100 Packaged System with<br>Handset and Speaker               | 000-15644-001 |
|--|---------------|
| V100-B Packaged System<br>with Handset, Speaker and<br>GPS-500 | 000-15793-001 |
| HS100 KIT - Handset &<br>Speaker Pack                          | 000-15647-001 |
| H100 KIT - Handset &<br>Speaker Pack                           | 000-15648-001 |
| CR100 - Handset Cradle for<br>HS100/H100                       | 000-15653-001 |
| CH100-20 - HS100/H100<br>Handset Cable 20 Meter                | 000-15656-001 |
| CW100-6 – Extension<br>Cable & Bracket for Wireless<br>Antenna | 000-15657-001 |

## Connected Vessel

We want you to spend more time sailing and less time planning or configuring your boat's systems. Reliability and precision are in our DNA, connectivity is the future.

### B&G App







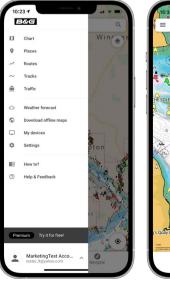
The B&G app, is designed as a companion to your B&G system, to help you get the most out of your products and your time on the water. Whether pre-planning your routes and waypoints and then syncing them to your chartplotter, learning tips and tricks or getting the latest software update, the B&G App is here to help.

#### **Main Features**

- Register and access your chartplotter information from one place
- Plan your sailing in advance and synchronize your waypoints, routes and tracks onboard
- Mirror your displays to your phone
- Marine weather forecast\* and weather routing (live)
- Get the latest software updates
- View helpful content, tips and tricks

- Service and support information
- Free detailed on and offline\* marine charts from C-MAP, with autorouting
- Thousands of points of interest, including relevant information about marinas, harbours, beaches, shops and much more
- Personalization of your maps
- AIS Traffic\*

\*Premium Subscription Required









## כסעע/סעס

Enhance your boat with vessel-wide monitoring and control capabilities.

Extend the functionality of your chartplotter to monitor and display a wealth of information.

Compatible with Zeus<sup>™</sup> 3S chartplotters, this integration will give you instant information on your vessel's key systems including: engines, generators, lighting, fuel consumption, batteries and much more.



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### Weather



PredictWind is recognised as the world leader in high resolution wind forecasting for sailing, with their own global weather forecast models.

PredictWind was launched in 2008 in a web-based format by America's Cup weather strategist Jon Bilger and a team of technical experts. The aim of PredictWind is to be the world leader in supplying weather forecasting tools for every level of mariner who requires accurate weather forecasts.

PredictWind weather forecast services are integrated exclusively on B&G's Zeus<sup>™</sup> and Vulcan<sup>™</sup> products and are available via a Wi-Fi connection upon registration with PredictWind (premium features require a subscription).

www.predictwind.com



## Charts and Weather

### Cartography

B&G offer the widest range of cartography.



### Chart features to enhance every day out on the water.

New REVEAL<sup>™</sup> charts include the very best of C-MAP<sup>®</sup>, with Dynamic Raster Charts, HRB including integrated Genesis<sup>®</sup> data, Tides & Currents and Custom Depth Shading.

To learn more about the C-MAP range, and findthe perfect chart for you, visit the website and online store at www.c-map.com



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#### Navionics<sup>®</sup>

Compatible with B&G Vulcan and Zeus Series chartplotters, worldwide electronic marine cartography.

## Worldwide Support



Many boats race or cruise a long way from home waters, when you purchase B&G equipment you can be confident that you will receive a high level of support wherever you are in the world.

#### **Regatta Support**

B&G experts are present at hundreds of events every year to support you. Check our website and subscribe to our newsletters to keep up to date with our regatta schedule.

#### **B&G Service**

We are committed to offer you the best service. For this reason, in addition to our comprehensive warranty, our dedicated support teams offer B&G customers preferential out-of-warranty terms for up to five years after purchase. Extended warranties are also available for absolute peace-of-mind.



Contact consumer support directly from your chartplotter. The NASA integrated diagnostics tool is now available in all B&G multifunction displays.



#### www.bandg.com



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