



The way ahead in
**Marine Aids to
Navigation**

IALA COMPLIANT, RELIABLE AND EFFICIENT



When safety matters most you can trust in Tideland Signal.

For almost 70 years, Tideland has delivered high quality and reliable Aids to Navigation solutions for coastal navigation, ports and harbours, lighthouse authorities, and bridges. With a full range of lanterns and beacons, navigation buoys, fog signals, RACON, electronic AtoN and remote monitoring and control systems, Tideland offers the full package of AtoN products from a single manufacturer.

In 2020 Orga acquired Tideland Signal and had the opportunity to combine this newly available knowledge with the existing in-house Orga knowledge and experience on AtoN. Existing Tideland knowhow together with our in-house research and development department, we ensure that Tideland remains at the forefront of emerging technologies. This results in highly reliable, innovative and cost-effective solutions.

Tideland Signal's Aids to Navigation solutions are optimized for all kinds of projects. Whether it is a simple replacement lantern, the marking of a channel with navigation buoys or the monitoring and control of assets within a busy port, we have the knowledge and expertise to support our customers.

To contribute to the safety of the people, assets and the environment we understand it is important to comply with international and national standards. Therefore, all of our Aids to Navigation products meet the latest IALA (International Association of Lighthouse Authorities) requirements and are compliant with regional regulatory requirements.



Innovative, reliable & cost effective Aids to Navigation solutions.



Almost 70 years of experience in Aids to Navigation



Full compliance with regulations (IALA, USCG, etc)



High quality products. Easy to install and maintain.

"Tideland has a long heritage in the design and supply of quality marine and Offshore Aids to Navigation."



Regulatory Compliance for Marine Aids to Navigation.

Aids to navigation have been used to warn mariners of hazards and guide them safely in and out of port for hundreds of years. In 1929 the first international lighthouse conference was held in the United Kingdom with the aim of bringing together different lighthouse authorities from around the world to exchange views on technical developments in marine aids to navigation. A further four conferences were held over the coming years and this ongoing collaboration between nations led to the formation of IALA (International Association of Lighthouse Authorities) in 1957.

Through the work of various technical committees, IALA has published over 250 standards, recommendations and guidelines, to provide guidance on marine aids to navigation services provision. These documents contain both operational and technical guidance to ensure common best practises are set. The work of the committees ensures mariners have Marine Aids to Navigation which meet both current and future needs with the aim of reducing accidents at sea.

Tideland has been an industrial member of IALA since 1966 and over the past 57 years we have served on numerous IALA committees, helping shape the future of Marine Aids to Navigation. The Tideland Signal product range has been developed with the knowledge and experience gained from our work on the technical committees and with a view to complying fully with the standards, guidelines and recommendations.

Do you have specific requirements? No problem, at Tideland we work closely with our customers worldwide to make sure our Aids to Navigation Solutions are fitted to your needs.



Lanterns and Beacons for Marine Aids to Navigation.

Tideland Signal offers a comprehensive range of marine lanterns and beacons to meet every possible application. Our lanterns are designed to meet IALA standards, guidelines and recommendations and are tested on our in-house light range and at independent test centres to make sure these requirements are met.

LED self-contained lanterns and standalone lanterns with ranges from 2 nautical miles up to 10 nautical miles, in all IALA colours and a variety of vertical divergence options cover the majority of customer requirements. Longer range LED beacons are also available for shore-based applications requiring ranges up to 18 nautical miles.

For more traditional lighthouse applications Tideland offers our TRB-220 and TRB-400 rotating beacons. Tideland pioneered the design of optics for high performance rotating beacons and a number of options with LED or incandescent lamps are available with ranges up to 24 nautical miles.

Long range LED directional lanterns are also available for Leading Line applications. Sized using the IALA calculator for leading lines, ranges of up to 24NM can be achieved with a variety of different horizontal divergences to enable full visibility across a channel's width and length. In addition to the standard products available from Tideland, we also offer bespoke engineering for specialist applications such as traffic light systems and very long-range leading lines. Please consult your regional sales manager for more information.



Navigation Buoys

for Marine Aids to Navigation.

Tideland Signal has a long history of supplying navigation buoys manufactured from either polyethylene or steel. All of the buoys in the Tideland range are designed and engineered to the highest possible standards, with stability calculations and test data available for each buoy in our product portfolio.

Our Sentinel Buoy® range of polyethylene buoys are rotationally moulded from UV-15 plastic and are available in all IALA configurations with diameters from 1 metre up to 3 metres enabling installation in various sea conditions, depths and currents. All of our polyethylene buoys are fully compliant with the latest IALA Guideline G1006 Ed.4 giving our customers confidence that the buoys we produce meet their requirements.

Raw materials are tested throughout the manufacturing process to ensure the quality standards we set are met at all times. This includes impact testing at various temperature ranges, tensile strength testing, abrasion testing and colour testing.

The Tideland range of steel navigation buoys are available in diameters from 1.3 metres up to 3 metres and can be manufactured in all IALA configurations. Heavy duty construction with sealed bulkheads to provide extra flotation in the event of a collision, Tideland steel buoys are designed to last. Painted using the highest quality of coatings and with accessories such as day mark wings and cathodic protection, our steel buoys meet the high-quality requirements of our customers.



Polyethylene Buoys are fully recyclable.



Polyethylene Buoys have low maintenance.



Steel Buoys are extremely robust.



High quality design and construction extends product life



Electronic Aids to Navigation

Tideland has been at the forefront of Radar Beacon (RACON) technology for over 30 years and our current model the SeaBeacon 2 System 6 RACON has been the industry standard since 2002. With the lowest power consumption available, class leading -50dBm sensitivity and certification to IP68, the product is still at the forefront of RACON technology. Built to last, the SeaBeacon 2 System 6 RACON has a cast aluminium base and heavy-duty radome to protect the sensitive electronics and with a proven 18 years Mean Time Between Failure, offer the lowest ownership costs currently available.

In addition to RACON, Tideland leads the way in AIS AtoN technology, with a huge amount of experience and knowledge in the company ensuring we deliver fully working systems to our customers backed up with inhouse knowledge. With standalone and fully integrated AIS we can offer a solution to meet almost every requirement.

Remote Monitoring and Control of assets is becoming increasingly important and Tideland has a number of solutions available. As well as working as an electronic Aid to Navigation, AIS can also be used to monitor other assets via dedicated AIS Monitoring software. GSM modems can also be fitted to lanterns and buoys to provide remote monitoring and satellite modems can be used for the same function. Tideland can offer all three types of monitoring solutions and to understand which option is the best for your requirements please speak to a member of our team.



Aids to Navigation for The Marking of Bridges

Bridges over navigable waterways can vary from small road bridges over rivers and canals, to large suspension bridges over vast expanses of waters. Aids to Navigation form an important part of a bridges infrastructure and can range from painted day mark signs marking the correct transit point, lanterns which mark a channel at night, fog signals and buoys to mark the bridges piers and RACON to mark the centreline. Each AtoN provides information to the mariner to enable them to safely pass under or through the bridge, protecting both the bridge and the vessel.

Tideland Signal has a full range of products which can be used to mark bridges, from lanterns and beacons, RACON, fog signals and navigation buoys. In addition to the standard products, we can also offer swing arms for mounting lanterns below the bridge and bespoke control panels and SCADA integration for the control and monitoring of the equipment via the bridges main control system. On larger bridges, a key element of the safety systems is aviation obstruction lighting and Orga have a full range of low, medium and high intensity obstruction lights available.

For further details on our full range of products for use on bridges or to discuss a specific project, please contact our sales team.



Nova 65 LED Marine Lantern

The Nova-65 features unique and proprietary optics which provide a 360° Beam at 5°, 10°, 20° or 30° vertical divergence. Available in all IALA colours the Nova-65 has low power consumption and ranges up to 8NM @ T=0.74, dependent on colour and vertical divergence. Two options of housing are available for general marine use (GMU): polycarbonate and a ruggedized aluminium version. Certified to both IP68 and IP66 the Nova-65 is the professionals choice.



- **User Selectable power and flash codes**
- **Optional GPS Synchronisation**
- **Full monitor and control capability**
- **Certified to IP66 and IP68**

SolaMAX-65 5NM and 7NM LED Self-Contained Lanterns

The SolaMAX-65 is a LED self-contained lantern capable of ranges up to 5NM in the standard version and up to 7NM in the extended version (SolaMAX-65 T). A compact design and various battery and vertical divergence options make the SolaMAX-65 and SolaMAX-65 T exceptionally suitable for northern and southern latitudes and low solar radiation applications. Certified to both IP-66 and IP68 the SolaMAX-65 range of products is capable of handling the demands of the harsh environments in which they are installed.



- **User Selectable power and flash codes**
- **Optional GPS Synchronisation**
- **Full monitor and control capability**
- **Optional internal Type 1 or Type 3 AIS**



Nova-65 HI 10NM LED Marine Lantern

The Nova-65 HI features unique and proprietary optics, developed in 2012 from the original Nova-65 Lanterns, which provide a 360° Beam at 3° vertical divergence. Available in white the Nova-65 HI is a small lightweight LED marine beacon with range up to 10NM @ T=0.74, while still using minimal power. Two options of housing are available for general marine use (GMU): polycarbonate and a ruggedized aluminium version. Certified to both IP68 and IP66 the Nova-65 HI is the professionals choice.

- **User Selectable power and flash codes**
- **Optional GPS Synchronisation**
- **Full monitor and control capability**
- **Certified to IP66 and IP68**



Nova-250 Long Range Rotating Beacon

Nova-250 features unique proprietary optics engineered to project a 360°, horizontal, high-intensity, long range beam of light. With one tier, two tier or three tier configurations ranges of up to 18NM @ T=0.74 can be achieved. Constructed of rugged, corrosion resistant marine aluminium, Nova-250 is able to withstand the most severe elements. A combination of high efficiency optics, power conditioning circuitry and high intensity LEDs make Nova-250 ideal for solar installations.

- **User Selectable power and flash codes**
- **Optional GPS Synchronisation**
- **Full monitor and control capability**
- **Available in all IALA colours**

TRB-220

Long Range Rotating Beacon

The TRB-220 is a high intensity rotating beacon capable of providing simple and complex flash characters. The beacon can be configured to provide high efficiency in effective intensities using a wide range of low wattage marine signal lamps as well as LED light source. Mounted on a light tower of proper height, TRB-220 gives coastal shipping up to a 20NM range @ T=0.74 transmissivity factor.



- **Six Lens Carousel, consisting of a flash panel design with catadioptric prisms.**
- **Brushless DC direct drive motor**
- **Available in all IALA colours**
- **25 years of useful life.**



RLED-355

Long Range LED Directional Beacon

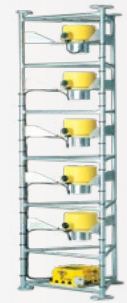
Tideland's original RL-355 range lantern was developed for the US Coast Guard as a high intensity range lantern. Upgraded to LED the RLED-355 provides exceptional performance over traditional incandescent lamps. This new assembly not only eliminates lamp changers, it also eliminates costly mirrors and does not require focusing. RLED-355 is available with multiple numbers of LEDs, from 2 to 15, allowing for a wide range of effective intensities, with ranges up to 24NM @ T=0.74 transmissivity factor.

- **Spreader lenses are available for varied horizontal divergences.**
- **Dual Power available for day and night use.**
- **Optional GPS Synchronisation.**
- **Available in all approved IALA colours.**

AB-560

2Nm Fog Signal

AB-560 Audiobeam® is an electronically powered fog signal that automatically broadcasts a 360° beam of sound to a pre-selected code audible for 2NM. It is United States Coast Guard approved and complies with all IALA recommendations. Five heavy duty driver units are mounted on a galvanised steel frame with Tideland Signal's patented solid-state power amplifier and dissipation less power regulator, creating a world leading audible AtoN.



- **US Coast Guard approved.**
- **Drivers operate at only 10% of rated capacity for longer life.**
- **Full monitor and control access.**



SeaBeacon® 2 System 6

Radar Beacon

The SeaBeacon® 2 System 6 is a frequency agile radar beacon (RACON) operating over X & S Bands and provided with enhanced sidelobe suppression to ensure dependable automatic identification service to all marine radars including those with modern narrow band receivers. With IP68 certification, the best receiver sensitivity currently available and a proven 18 years mean time between failure, the SeaBeacon® 2 System 6 RACON is the proven choice for many national authorities.

- **Proven -50dBm Receiver Sensitivity.**
- **IP68 certified, can be submerged to depths of 10 metres.**
- **Proven 18 years MTBF.**
- **Robust cast aluminium base and heavy-duty radome.**

e-NAVCON

Combined RACON and AIS

SeaBeacon® 2 System 6, a frequency agile radar beacon (racon), has provided dependable service to all marine radars, including those with modern narrow band receivers. e-NAVCON combines the SeaBeacon® 2 System 6 with an in-built AIS AtoN transponder to provide the mariner with two forms of electronic signatures, one of which is independent of the GPS network increasing accuracy and redundancy.



- **No possibility of interference between different manufacturers equipment.**
- **No outside antenna cabling**
- **Single or dual power supply options providing additional redundancy.**
- **RACON operating in X-Band.**



- **Internal GPS Antenna**
- **Low power consumption**
- **Type 1 and Type 3 available**

V-Track™ V-20 Informer™

AIS AtoN

The V-Track™ V-20 Informer™ is an AIS information provider and remote monitoring system for use on marine aids to navigation (AtoN) and other structures. The V-20 Informer™ is available in two options: "Type 1" is a transmit only device, and "Type 3" is a transmit and receive device that can be configured over the air and has chaining functionality. With the lowest power consumption on the market the V-20 Informer™ is perfect for use on navigation buoys.

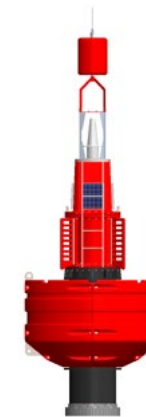
SB-1500

1.5 Metre Diameter Polyethylene Buoy

SB-1500 is a product of Tideland's continued development of higher performance, low maintenance, cost-effective multi-purpose buoys for use in all marine environments. The unique design of this buoy allows it to be deployed in a wide variety of applications that include shallow water, channel edges, rivers up to 6 knots current, deep harbours and fast tidal currents. Recently updated to meet the latest IALA Guideline G1006 Ed.4, the buoy has replaceable steel mooring and lifting eyes and a polyurethane foam filling.



- **Available in all IALA Configurations**
- **Aluminium IALA compliant Top Mark and Lantern Guard**
- **Optional Day Mark Wings**



- **Central Core design allows each of the hull sections to be easily fitted and quickly replaced if damaged.**
- **Outstanding colour retention**
- **All IALA configurations are available.**
- **Optional Day Mark Wings**

SB-2.6

2.6 Metre Diameter Polyethylene Buoy

The SB-2.6 has a fully modular design which is configurable to meet most of the demands of our customers. Manufactured using the latest raw materials and construction methods, the buoy is fully compliant with IALA Guidelines. Medium Density Polyethylene float sections form the heart of the buoy giving it physical strength that resists damage. The buoy's unique design and controlled manufacturing process ensure a homogeneous profile with an increased thickness in high stress areas.

Why make business complicated when the solution is just one call away?

With nearly 70 years of experience, Tideland Signal provides the right advice and guidance during the complete project process. With our expertise we can find a reliable and cost-effective solution to meet your needs.

With a network of agents and distributors around the world and internal engineering and technical support, Tideland Signal has the capability to provide the support our customers need whether that be on-site or remotely.

Our main goal is to provide safety and compliance with regulatory requirements. We trust that with our expertise and confidence we can provide you with confidence and peace of mind.

Nearly 70 years of experience in Marine Aids to Navigation.

Since 1954, Tideland has been delivering high quality and efficient Aids to Navigation solutions for coastal navigation, ports and harbours, inland waterway and bridges to contribute to the safety of people, assets and the environment.

**For optimum marking of structure, call us:
+31 (0)10 208 5555**



Design, production, quality control & commissioning.



100% regulatory compliance guaranteed worldwide.



Locally based support teams & international partners.



The right solutions & services around the world.





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