

No. 02 (2026)

COMMISSIONERS OF IRISH LIGHTS

NOTICE TO MARINERS

AUTOMATIC IDENTIFICATION SYSTEM (AIS)

USE OF AIS AS AN AID TO NAVIGATION (AtoN)

January 2026

The General Lighthouse Authorities¹ (GLA) provide AIS AtoN at selected fixed and floating stations on the coasts of UK and Ireland.

AIS AtoN are Aids to Navigation under the Merchant Shipping Acts and as such Statutory Consent for their provision is required from the General Lighthouse Authority for the area in which they are established. Details of how to make an application for a Statutory Consent are available at [Statutory Consent \(irishlights.ie\)](https://www.irishlights.ie/statutory-consent)

It is considered appropriate at this time to repeat some guidance to mariners on the purpose of AIS AtoN and what they may expect to see on some of the available displays.

Minimum Carriage Requirement

It is important to bear in mind that not all vessels are equipped with AIS. Of those vessels that are AIS-equipped, the displays available can range from no display on some Class B² units, through the mandatory Class A MKD (minimum keyboard and display which displays the data in alphanumeric form.), to full ECDIS and radar overlay.

In the absence of ECDIS or radar overlay users will not be able to fully utilise AIS AtoN functionality. There is also a variance in the information that will be displayed by different manufacturers on ECDIS or radar equipment.

The information available to mariners will be dependent on their display system and **not all transmitted information may be displayed**. Mariners are encouraged to install systems that provide AIS overlay on ECDIS and radar.

Mariners are cautioned against using websites that purport to provide accurate AIS data, as the source and the age of this data can be unreliable.

¹ The General Lighthouse Authorities (GLA) consist of Trinity House (England & Wales), Northern Lighthouse Board (Scotland and the Isle of Man) and the Commissioners of Irish Lights (Ireland and Northern Ireland).

² Class A AIS units are those meeting the mandatory SOLAS carriage requirements (SOLAS Chapter V, Rule 19) for vessels over 300GRT. Class B AIS units are for use on craft that are not covered by the mandatory carriage requirements.

There are approximately 4,000 AtoN around the island of Ireland. A growing number of these are AIS AtoN, of which there are three types - "real" (or "physical"), "synthetic," and "virtual."

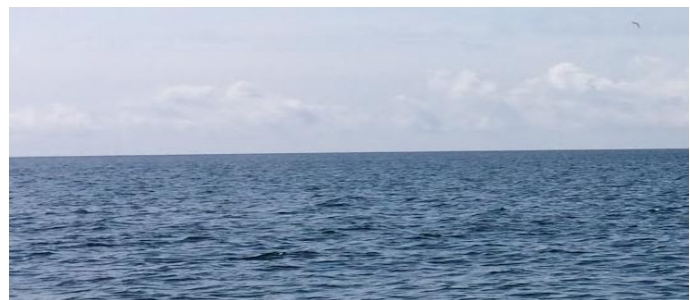
Types of AIS AtoN

Real AIS AtoN - A physical aid to navigation structure on which an AIS transmitter is affixed and from which AIS messages are broadcast.

Synthetic AIS AtoN - A physical aid to navigation structure, without an AIS transmitter, but for which AIS messages are broadcast from another (usually land-based) location.³

Virtual AIS AtoN - An aid to navigation with no physical structure. It exists only through AIS messages broadcast from another location.

What the Mariner sees



Displays & Symbolology

For AIS AtoN, the symbology that may be displayed on nautical charts, display systems and MKD is summarised below:

Traditional Chart Symbols (Paper charts & Raster Navigation Charts RNC)



On paper and RNC charts, AIS AtoN are indicated by a magenta circle, surrounding the existing AtoN symbol and an adjacent legend stating AIS. The font will be straight for fixed AtoN and *italic* for floating AtoN.



Traditional symbol of a Virtual Aid to Navigation marked on a nautical chart. The topmark indicates its navigational purpose.

Simplified Chart Symbols (Electronic Navigational Charts ENC)⁴



Safe Water physical AtoN including AIS. The presence of an AIS transmitted signal intended for use as an aid to navigation associated with a physical aid, including the AIS MMSI Number, can be obtained by cursor pick on the physical aid.

Note – On ENC it is common for NO magenta circle to be displayed to indicate a Radio beacon. Instead, the AIS overlay shown below will be visible near the charted AtoN

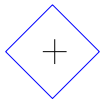


Safe Water virtual aid. For Virtual AtoN on ENC the magenta circle is displayed.

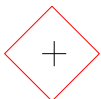
³ Unless a real-time comms link can be maintained to update the buoy position (which is difficult) Synthetic AIS AtoN are not recommended for use on floating AtoN

⁴ IHO S-52 Presentation Library Edition 4.0.

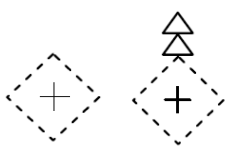
Display Systems



Where AIS is provided as an overlay on ECDIS, Radar or other display systems, AIS AtoN are indicated by a Diamond shape with crossed lines at the reported position of the AtoN.



Where the AtoN is on station the diamond will be Blue and where the AtoN Off Station flag has been activated the diamond will be Red.



In the case of a Virtual AIS AtoN⁵ the diamond will be drawn using a thin dashed line. If available, a symbol indicating the navigational purpose should be included e.g. a North Cardinal Virtual mark will include two triangles, pointed upwards on top of the diamond.

Minimum Keyboard Display (MKD)

Range	Bearing	Name
XX.XX	XXX.X	XXXXXXXXXX
XX.XX	XXX.X	XXXXXXXXXX
XX.XX	XXX.X	XXXXXXXXXX
Latitude	XXX XX.XXX	
Longitude	XXX XX.XXX	

The mandatory Minimum Keyboard Display (MKD) is only required to display data in alphanumeric form. Some MKD units are supplemented by a small graphical display. Exact presentation will vary but the layout opposite would be typical of MKD displays.

Message Types

AIS stations provided by the GLA will transmit Message 21 – Aids to Navigation Report.

This message will provide details of the Name, MMSI, Type and Position of the AtoN. In addition, there will be an indication if the AtoN is off-station, and of the status of the light, Racon or other equipment.

Other messages providing additional data may occasionally be broadcast. These would normally be binary messages 8/10 or short safety-related messages 12/14. The Commissioners of Irish Lights provides near-real-time wind and sea-state data from a number of AIS AtoN using AIS binary message 8. Irish Lights is working with Met Éireann to increase the number of such MetOcean enabled AIS AtoN around the coast.

Irish Lights also provides this information over the Internet and “X” (formerly Twitter). See Irish Lights <https://www.irishlights.ie/technology-data-services/metocean-charts.aspx> for more detail. Details of AIS AtoN are set out in Volume 2 of the Admiralty List of Radio Signals.

⁵ Virtual AIS AtoN are used by the competent authority to mark new dangers / wrecks or in circumstances where a physical AtoN is not appropriate or achievable. The AtoN does not physically exist and therefore will only be visible on display systems.

Feedback

The Commissioners of Irish Lights, working in collaboration with Met Éireann, is continuing to expand the number of AIS AtoN equipped with MetOcean as per Irish Lights Notice to Mariners No. 05 of 2014.

Mariners are requested to contact the General Lighthouse Authorities regarding their experience of AIS and in particular the extent to which AIS AtoN data is available to them.



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Chief Executive

Previous Notice No. 01 (2026)

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