

No. 02 (2012)

COMMISSIONERS OF IRISH LIGHTS

NOTICE TO MARINERS

GLA DGPS TRANSMISSIONS

Dun Laoghaire
Co. Dublin
01 January 2012

The General Lighthouse Authorities (GLA) provide a MF Radio Beacon Differential GPS (DGPS) service on the Coasts of Great Britain and Ireland.

DGPS is provided as a marine aid to navigation, giving 24 hour-a-day, all-year-round service with overlapping signal coverage up to 50 nautical miles offshore around the coasts of the United Kingdom and the Republic of Ireland. The differential signals are transmitted using a terrestrial network of medium frequency marine radio beacons in the 283.5-315 kHz band. Mariners are encouraged to equip themselves with a suitable receiver as the signal provides both real time integrity monitoring of GPS derived positions and the capability of fixing their positions to better than 5 metres accuracy (95% probability) in moving applications. Greater accuracy can be achieved in stationary applications.

All mariners are advised that:

1. DGPS relies inherently on GPS, the operation and characteristics of which is under the control of the US Department of Defense and users are cautioned that the signal availability and accuracy may be subject to change without warning.
2. The DGPS service is provided primarily for use in monitoring the integrity of GPS to enhance the safety of marine navigation. The provision of greater accuracy for marine navigation is a secondary feature.
3. Signal reception may become unreliable, under certain extreme environmental conditions, towards the limits of the geographical coverage.
4. All radio navigation systems are susceptible to interference (including jamming or spoofing) and environmental effects, which can adversely affect their availability. The GLAs strongly advise that no single aid to navigation system should be used in isolation and that DGPS users should use all alternative means available to cross check the information received. Users should also ensure that they have a receiver, which gives sufficient warning of the complete loss of the DGPS signal and reversion to GPS.
5. A wide range of on-board systems use GPS for timing and positioning purposes. The performance of these systems will also be affected by any GPS interference.
6. Various DGPS receiver types are available, some of which may not provide appropriate or timely warnings in respect of the system.
7. GLA Medium Frequency (MF) DGPS should not be confused with Satellite Based Augmentation Systems (SBAS) such as EGNOS, the European Geostationary Navigation Overlay Service, or WAAS, Wide Area Augmentation System. SBAS enabled receivers generally do not receive MF DGPS signals nor do MF DGPS receivers receive SBAS Signals.
8. Reference should be made to the Admiralty List of Radio Signals (Vol 2-NP 282) for details of Radiobeacons transmitting DGPS corrections. Also to the Mariners' Handbook (NP100) where the attention of mariners is drawn to the section dealing with horizontal datums on charts and the notes on satellite derived positions.

By Order,

Yvonne Shields

Chief Executive.

Previous Notice No. 01 (2012)
Marine Department Contact Numbers:

Phone: +353-1-2715545 (during office hours)
+353-1-2801996 (24 hour number)
Fax: +353-1-2715566
e-mail: marine@cil.ie
Website: www.cil.ie