



NOTICE TO MARINERS

(No. 10 of 2005)

SCOTLAND

TRIAL LORAN-C TRANSMISSIONS

Northern Lighthouse Board
Edinburgh, 21 February 2005

On or about 31 May 2005, the General Lighthouse Authorities will commence trial transmissions of Loran C in the frequency band 90-110 kHz from a location in Rugby of approximate Latitude 52° 22' North and Longitude 001° 11' West. It is anticipated that the signals will have an effective usable range of up to 1000 nautical miles.

The signals will be pulsed, with a Group Repetition Interval of 6731 (67,310 micro seconds) and an Emission Delay of 27,300 microseconds. Initially, transmissions will include a 'blink' signal which will prevent their use by receivers; on completion of signal testing a further Notice to Mariners will be issued and the 'blink' feature disabled.

Mariners are advised that:

1. Maritime Users are strongly encouraged to use LORAN-C as a navigational input system to back-up the widespread use of GPS. Existing LORAN-C receiver users will require software upgrades from their equipment suppliers in order to use the new signal.
2. Older receivers may have this station identity (6731-Y) listed as Loop Head and may produce significantly erroneous position outputs as a result. Owners of such receivers are advised to contact their equipment suppliers or manually inhibit the use of this station.
3. The Loran-C transmissions are referenced to the World Geodetic System 1984 (WGS84) datum. Loran-C derived positions may be plotted direct onto charts referred to WGS84 datum. Most Loran-C and other integrated electronic position fixing receivers will have the facility to transform positions from WGS84 datum to the regional datum of the chart. However, the resulting accuracy will depend on the transformation parameters contained within the software of the users receiver. It is advisable therefore to keep the receiver referenced to WGS84 datum and to apply the position shift values denoted on the appropriate nautical chart before plotting a position. Position shifts for those charts, which do not include a "satellite derived positions" note, are listed in the UK Hydrographic Office annual summary of Admiralty Notices to Mariners Annual Notice 19.

4. Signal reception may become unreliable, under certain extreme environmental conditions, towards the limits of the geographical coverage. The usability and accuracy levels of LORAN-C are highly dependant on the user's position within the coverage area; further details may be found in the Admiralty List of Radio Signals Volume 2.
5. All radio navigation systems are susceptible to interference (including jamming) 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 users should use all alternative means available to cross check the information received.
6. No responsibility can be accepted for the consequence of inaccurate positions obtained by means of these trial LORAN-C transmissions.
7. The General Lighthouse Authorities are committed to the future of LORAN-C as offering a radionavigation system without the vulnerabilities of GPS and are keen to hear feedback from the user community as the performance of LORAN-C.

J B TAYLOR
Chief Executive