

RSGB Spectrum Forum meeting 9th July 2005

LF Report

Whilst interesting experimental work continues to be done on 136kHz with significant DX being achieved, the immediate concern in the UK is that of interference from the expansion of the Loran C hyperbolic radio navigation system in NW Europe.

Previously, amateurs along the south coast of England had to find novel ways of contending with the sidebands from the nearest Loran C transmitter at Lessay, on the French coast. However, in recent weeks trials have commenced of a new transmitter at Rugby, which has resulted in a significant increase in the noise floor at 136kHz, e.g. 15dB at Brookman's Park and 10dB at Martlesham (both in a 300Hz bandwidth) and an estimated 6 "S points" increase in Birmingham. This could make the band inoperable for much of the UK.

The Loran transmission at Rugby is being operated by BT Global Services for Trinity House to "provide high quality timing service over the UK and improve Loran performance over much of Europe"¹. The Loran system operates on 100kHz and transmits short pulses. The Loran receiver operates within a 20kHz bandwidth, centred on 100kHz. Each Loran chain has a different pulse repetition frequency (GRI), so different parts of the world have different Loran lines. Significant energy comes from the sidebands outside of the 20kHz-operating band, which leads to the interference noted in the 136kHz band.

The RSGB Spectrum Forum is asked to take note of the effects of the Rugby Loran trial on the 136kHz amateur band. It is also asked to consider what action should be taken to minimise the impact of the Loran C expansion in NW Europe on amateur activity at LF.

John Gould, G3WKL
IARU Region 1 LF Coordinator

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¹ www.loran.org