



Commission for
Communications Regulation

Information Notice

Short Range Devices in the 10.5 GHz band

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1 Executive Summary

The purpose of this Information Notice is to clarify the regulatory situation regarding the radiated power limits for the use of equipment for detecting movement and alert, e.g. Field Disturbance and Doppler Apparatus (FDDA), in the 10.5 - 10.6 GHz band. This includes equipment used for traffic applications such as vehicle motion detectors. It also acknowledges the growing demand for higher power (up to 500mW EIRP) equipment for movement detection and alert and outlines ComReg's plans to address this demand.

The document also draws attention to the publication of a corrigendum to the Table of Frequency Allocations for Ireland (ComReg Document 04/77R) with respect to the power limit for FDDA systems in the 10.5 - 10.6 GHz band.

2 Operation of SRDs in the 10.5 GHz band

2.1 Background

Short Range Devices (SRDs) are defined as radio transmitters which provide uni-directional or bi-directional communication and which, in general, have low capability of causing interference to other radio equipment. In Ireland, such devices are generally permitted to operate on a non-interference, non protected basis. The regulatory requirements for the use of SRDs on a licence exempt basis in Ireland are set out in ComReg Document 02/71R¹.

2.2 Equipment for Detecting Movement and Alert

Table 4 of ComReg Document 02/71R outlines the Interface Requirements² for Equipment for Detecting Movement and Alert³ which includes FDDA-type applications. For the 10.5 - 10.6 GHz band, a maximum power of 25 mW EIRP⁴ is stipulated for these systems to be allowed to operate on a licence exempt basis in Ireland. Adherence to this power limit typically means that these systems are more suited to indoor applications.

ComReg is conscious that there is now an increasing demand for the use of licence exempt FDDA-type systems at higher power levels (≤ 500 mW EIRP) than is currently provided for at 10.5 - 10.6 GHz. This includes equipment used for traffic applications to detect the movement of pedestrians and vehicles so as to facilitate traffic light changes (motion detectors). While there is no possibility to increase the existing 25 mW EIRP power limit for licence exempt SRDs in the 10.5 - 10.6 GHz band because of the potential for interference to existing licensed Fixed Wireless Access Local Area (FWALA) users in the same band, ComReg plans to introduce a 500mW EIRP power limit for equipment for movement detection and alert in the adjacent 10.4 - 10.42 GHz band.

ComReg has investigated the feasibility of introducing such a power limit for these applications into the 10.4 - 10.42 GHz band and is satisfied that this can be done successfully and without causing interference to other users of the spectrum. Before such a measure can be implemented however, ComReg will need to follow a formal notification procedure to open this band for use by these higher power (≤ 500 mW EIRP) FDDA-type systems. This procedure entails notifying the European Commission (EC) of the draft interface requirements under which these systems would be permitted to operate in Ireland. Following the initial notification, a statutory three-month standstill period must be observed and during this time other Member States and the EC can comment on the draft requirements. Once the standstill period lapses, ComReg will need to take into account any comments received on the draft interface requirements before adopting finalised requirements for the use of these systems in the 10.4 – 10.42 GHz band.

¹ “Permitted Short Range Devices in Ireland” available at <http://www.comreg.ie/fileupload/publications/odtr0271R.pdf>

² Interface requirements are the technical and administrative conditions in place for the use of radiocommunication services, e.g. frequency bands, power levels and relevant standards. See also ComReg Document 06/47R “Interface requirements for radio services in Ireland” available at <http://www.comreg.ie/fileupload/publications/ComReg0647R.pdf>

³ Equipment for movement detection and alert includes equipment used for traffic applications e.g. vehicle motion detectors.

⁴ Equivalent isotropically radiated power.

ComReg intends to notify to the EC draft interface requirements for the use of equipment for movement detection and alert in the 10.4 – 10.42 GHz band on a licence exempt basis in early July 2007. Taking into account the need to observe a three month standstill period, and assuming that no adverse comments are received, ComReg would then expect to be able to adopt finalised requirements for the operation of licence exempt equipment for movement and alert in the 10.4 - 10.42 GHz band in early October 2007.

3 Corrigendum to ComReg Document 04/77

ComReg has published a corrigendum to the Table of Frequency Allocations for Ireland (see ComReg Document 04/77R) to correct an error regarding the power limit for FDDA systems in the 10.5 - 10.6 GHz band. The original table in 04/77 mistakenly showed the power limit for these devices as 500mW EIRP. This reflected the power limit for equipment for detecting movement and alert in Annex 6 of CEPT ERC Recommendation 70-03 on Short Range Devices⁵ which is permitted in a number of European countries. However, because of the potential for interference to licensed FWALA services in Ireland, as mentioned in Section 2.2 above, FDDA-type systems using this level of radiated power cannot be deployed in the 10.5 – 10.6 GHz band here. The maximum permitted power level for these systems to operate in the 10.5 - 10.6 GHz band in Ireland is 25 mW EIRP. This corrigendum brings the requirements for these systems in the Table of Frequency Allocations into line with ComReg's 2006 Interface Requirements document (06/47R) and the most recently published Short Range Device requirements document (02/71R).

⁵ ERC Recommendation 70-03 Relating to the Use of Short Range Devices, available at <http://www.ero.dk/documentation/docs/doc98/official/pdf/REC7003E.PDF>