

# EUROPEAN RADIOCOMMUNICATIONS COMMITTEE

ERC Decision  
of 27 March 2000  
on the use of the band 37.5 - 40.5 GHz  
by the fixed service and Earth stations of  
the fixed - satellite service (space-to-Earth)

(ERC/DEC/(00)02)





## **EXPLANATORY MEMORANDUM**

### **1 INTRODUCTION**

This ERC Decision addresses the use of the band 37.5-40.5 GHz by the fixed service (FS) and Earth stations of the fixed-satellite service (FSS) (space-to-Earth) in relation to the requirements and priorities of CEPT Administrations.

### **2 BACKGROUND**

The band covered by this ERC Decision is allocated to the fixed and fixed-satellite service (space-to-Earth) on a primary basis in the Radio Regulations.

The fixed service (FS) is a key medium for delivering inexpensive telecommunication services with a rapid and local deployment. In particular, the increasing demand for the provision of infrastructure for public mobile systems and for wireless local loop applications results in the deployment of large numbers of FS stations.

The band 37.5-39.5 GHz is already heavily used by the fixed service in CEPT countries, and its development will increase in the future. The ERO Report on "Fixed service trends post-1998" foresees more than 20 000 links by the year 2003. In addition the UMTS forum foresees the need for very large numbers of links in several bands to support UMTS.

Satellite systems are also a key medium for delivery of future telecommunication services enabling communication to rapidly be established over wide areas. Recent proposals for new GSO and NGSO systems in the fixed-satellite service (FSS) indicate that large numbers of user terminals are intended to be deployed on an uncoordinated basis for direct customer access in some frequency bands.

The band 39.5-40.5 GHz is not used by the fixed service in CEPT countries, and thus offer a good opportunity for the unconstrained deployment of a high number of uncoordinated FSS Earth stations.

In order to enable coexistence between the fixed service and the fixed-satellite service without imposing undue constraints on either of the services the approach of 'sharing' should be applied when possible. In view of an ever increasing number of radio systems world-wide and that the electromagnetic spectrum is a limited and valuable resource sharing is more necessary than ever before.

Until recently, the sharing between the FS and the FSS was not a problem because satellite Earth stations were few in number and could be co-ordinated easily with the radio relay systems being operated in the same frequency bands. With the advent of the mass application of FSS systems, the situation has changed.

### **3 REQUIREMENT FOR AN ERC DECISION**

In order to provide a clear regulatory framework for future investment and deployment of fixed and fixed-satellite systems, and to facilitate the use of transportable and uncoordinated FSS terminals, an ERC Decision setting out the priorities and regulatory framework for the use of FS and FSS terminals is necessary for the frequency range 37.5-40.5 GHz.

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**(ERC/DEC/(00)02)**

The European Conference of Postal and Telecommunications Administrations,

*considering*

- a) that the band 37.5-40.5 GHz is allocated, among other services, to both the fixed service and the fixed-satellite service (space-to-Earth) on a primary basis in the Radio Regulations;
- b) that a large number of fixed service systems have already been deployed in CEPT countries in the band 37-39.5 GHz in line with the RF channel frequency plan in CEPT Recommendation T/R 12-01;
- c) that the band 39.5-40.5 GHz is not used by the fixed service;
- d) that the frequency band 39.5-40.5 GHz has been identified for possible shared civil and non civil satellite applications;
- e) that the future expansion of the fixed service in the bands 37.5-39.5 GHz is of vital importance to provide Europe's telecommunication infrastructure, particularly in relation to the mobile infrastructure network (e.g. GSM, GSM1800 and UMTS);
- f) that a number of GSO/NGSO FSS systems intending to operate in this frequency range has been advanced published in the ITU-R, and that some of them intend to deploy large numbers of user terminals on an uncoordinated basis;
- g) that some FSS systems also intend to deploy a small number of large antenna Earth Stations on a coordinated basis;
- h) that the probability of interference of FSS uncoordinated Earth stations by FS stations is generally low and can be further decreased with appropriate mitigation techniques for FS and FSS;
- i) that this probability can increase in hot spot areas such as large conurbations;

**DECIDES**

1. to designate the band 37.5-39.5 GHz for the use of point-to-point fixed links;
2. to designate the band 39.5-40.5 GHz for the use of coordinated and uncoordinated FSS Earth stations;
3. that in the band 37.5-39.5 GHz, uncoordinated Earth stations in the fixed-satellite service (FSS) shall not claim protection from stations of the fixed service;
4. that CEPT Administrations shall not deploy stations in the fixed service in the band 39.5-40.5 GHz;
5. that this Decision shall enter into force on 27 March 2000;
6. that CEPT Administrations shall communicate the national measures implementing this Decision to the ERC Chairman and the ERO when the Decision is nationally implemented.

**Note:**

Please check the ERO web site ( [www.ero.dk](http://www.ero.dk) ) under "Documentation / Implementation" for the up to date position on the implementation of this and other ERC Decisions.