

**EUROPEAN RADIOCOMMUNICATIONS COMMITTEE**

ERC Decision  
of 22 October 1992  
on the frequency bands to be designated  
for the coordinated introduction of the  
Terrestrial Flight Telecommunications System  
(ERC/DEC/(92)01)



WITHDRAWN

## EXPLANATORY MEMORANDUM

### 1. INTRODUCTION

Aeronautical Public Correspondence (APC) is a public telecommunications service which enables passengers onboard aircraft to make telecommunications calls to people on the ground. The service can be provided by satellite or terrestrial based systems. Satellite systems can provide a wide area low capacity service and are ideal for use over oceans or in remote areas. Terrestrial systems have a more limited coverage but can support the additional capacity required in high population density areas such as Europe.

Provision of a terrestrial based system to service the increasing number of European airline passengers is considered an essential part of the development of the trans-European transport network.

A standard for terrestrial APC, which in Europe is more generally known as a Terrestrial Flight Telecommunications System (TFTS), is being produced by the European Telecommunications Standards Institute (ETSI). Other standards associated with the introduction of TFTS are being developed by the European Aeronautical Electronics Committee and the Airlines Electronic Engineering Committee.

The relatively large radio coverage area from an aircraft at normal cruising altitudes and the trans-European nature of the service provided by TFTS, makes it essential that TFTS operates on common frequency bands and that these are recognised within the Radio Regulations of the International Telecommunication Union (ITU). Within Europe, it is the responsibility of the European Radiocommunications Committee (ERC) to designate frequency bands and to seek international recognition of the use of these bands through the ITU.

### 2. BACKGROUND

There is no in-flight public telecommunications facility for passengers on European aircraft routes at present, although INMARSAT offers a satellite based APC service on long haul and oceanic routes and some trials have been undertaken at HF. In the United States, a terrestrial APC system has been introduced within the 800-900 MHz band demonstrating the feasibility of terrestrial based APC systems. However, in Europe, the 900 MHz band is used by land mobile and other systems, principally GSM.

At the World Administrative Conference for the Mobile Services (WARC MOB-87), spectrum was designated for both satellite and terrestrial APC. However, limitations in the use of this spectrum, both in the bandwidth available and incompatibility with the existing services, prevented the introduction of operational systems.

Recognising the urgent requirements for APC and the difficulties associated with the spectrum allocated by WARC MOB-87, the European Radiocommunications Committee undertook a study to identify suitable alternative spectrum as part of its preparations for the World Administrative Conference 1992 (WARC 92). In advance of the outcome of WARC 92, the ERC adopted Recommendation T/R 42-01 E which designated the following frequency bands for TFTS:

- 1670-1675 MHz for ground to air;
- 1800-1805 MHz for air to ground;

to be made available for TFTS in a phased way (2 x 1 MHz in 1993, 2 x 3 MHz in 1994 and the complete band in 1998) in accordance with market demands. This meets fully the traffic demands for TFTS as estimated by ETSI up to the year 2005.

These frequency bands were incorporated in the ERC European Common Proposal (No. 5) for WARC 92 and were adopted by the Conference as an additional Footnote in the Radio Regulations (No 740A), which provides a world-wide allocation for those administrations wishing to implement APC.

In preparation for a planned date of introduction of beginning of 1993, several European Network Operators have signed a Memorandum of Understanding on the introduction of TFTS (the TFTS MoU Group of Operators).

In designating these bands for TFTS, the ERC recognises that emissions from aeronautical stations can be particularly serious sources of interference to services operating in the same bands or in adjacent bands, in particular the radioastronomy service<sup>1</sup>. It will be necessary to avoid such harmful interference by careful planning in the introduction of TFTS stations and ensuring that the technical standards include the necessary technical measures. These matters are being dealt with by the ERC Frequency Management Working Group in cooperation with the TFTS MoU Group of Operators and ETSI.

### 3. REQUIREMENT FOR AN ERC DECISION

The allocation of radio frequencies in CEPT Member countries is laid down by law, regulation or administrative action. The ERC recognises that for TFTS to be introduced successfully throughout Europe, manufacturers and operators must be given the confidence to make the necessary investment in this new pan-European radiocommunications system and service. A commitment by CEPT Member countries to implement an ERC Decision will provide a clear indication that the required frequency bands will be made available on time and on a Europe-wide basis. The Decision also provides for CEPT Member countries to introduce into their national regimes, the ETSI standard and the ERC mechanism for enabling free circulation.

---

<sup>1</sup> ERC Report 11: Sharing between Terrestrial Flight Telecommunications System (TFTS) and Radio Astronomy in the 1.6 GHz band

**ERC Decision  
of 22 October 1992**

**on the frequency bands to be designated for the coordinated introduction of the  
Terrestrial Flight Telecommunications System  
(ERC/DEC/(92)01)**

The European Conference of Postal and Telecommunications Administrations,

*considering*

- a) that within Europe, there is an urgent requirement to introduce a terrestrial-based Aeronautical Public Correspondence (APC) service,
- b) that the European Telecommunications Standards Institute (ETSI) will produce, for final adoption in 1992, a standard for a terrestrial-based APC system,
- c) that this system will be known as the Terrestrial Flight Telecommunications System (TFTS),
- d) that several European Network Operators have signed a Memorandum of Understanding on the introduction of TFTS with a planned date of introduction of beginning 1993,
- e) that several airlines, the European Airlines Electronics Committee (EAEC), the Airlines Electronic Engineering Committee (AEEC) and the Société Internationale de Télécommunications Aéronautiques (SITA), are working closely with ETSI on the introduction of TFTS,
- f) that the successful introduction of TFTS will depend upon the provision of common frequency bands throughout Europe and associated harmonised equipment standards,
- g) that in order to give manufacturers and operators the confidence to make the necessary investment in this new pan-European radiocommunications system and service, they need a clear indication that the required frequency bands will be made available on time and on a Europe-wide basis,
- h) that market studies have indicated that the spectrum requirements will be 2 x 1 MHz by 1993, 2 x 3 MHz by 1994 and 2 x 5 MHz by 1998,
- i) that the World Administrative Radio Conference in 1992 (WARC 92) adopted Footnote 740A, designating the frequency bands 1670-1675 MHz and 1800-1805 MHz on a world-wide basis for those Administrations wishing to implement APC,
- j) that emissions from aeronautical stations can be particularly serious sources of interference to services operating in the same band or in adjacent bands and that the technical standard shall include the necessary technical measures to avoid such harmful interference,

## DECIDES

1. for the purpose of this Decision, Aeronautical Public Correspondence (APC) is defined as a public telecommunications service which enables passengers onboard aircraft to make telecommunications calls to people on the ground, and Terrestrial Flight Telephone System (TFTS) means the APC system that will be implemented to the standard developed by the European Telecommunications Standards Institute (ETSI),
2. to designate for TFTS the frequency bands 1670-1675 MHz for the ground to air direction and 1800-1805 MHz for the air to ground direction and to make them available according to commercial demand and subject to the requirements of Decides 3 as from the following dates:  
2 X 1 MHz with effect from 1.1.1993, in total  
2 X 3 MHz with effect from 1.1.1994, in total  
2 X 5 MHz with effect from 1.1.1998, in total,
3. to plan the introduction of TFTS so that harmful interference is not caused to existing services in the same band or in adjacent bands,
4. that the ETSI TFTS standard will be introduced into the national type approval regime of Members as soon as possible after its approval by ETSI,
5. that TFTS equipment operating in the designated bands shall be permitted free circulation provided that it conforms to the ETSI standard.

### 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.