

International Telecommunication Union

ITU-R
Radiocommunication Sector of ITU

Recommendation ITU-R TF.768-7
(04/2011)

Standard frequencies and time signals

TF Series
Time signals and frequency standards emissions

Foreword

The role of the Radiocommunication Sector is to ensure the rational, equitable, efficient and economical use of the radio-frequency spectrum by all radiocommunication services, including satellite services, and carry out studies without limit of frequency range on the basis of which Recommendations are adopted.

The regulatory and policy functions of the Radiocommunication Sector are performed by World and Regional Radiocommunication Conferences and Radiocommunication Assemblies supported by Study Groups.

Policy on Intellectual Property Right (IPR)

ITU-R policy on IPR is described in the Common Patent Policy for ITU-T/ITU-R/ISO/IEC referenced in Resolution ITU-R 1. Forms to be used for the submission of patent statements and licensing declarations by patent holders are available from <http://www.itu.int/ITU-R/go/patents/en> where the Guidelines for Implementation of the Common Patent Policy for ITU-T/ITU-R/ISO/IEC and the ITU-R patent information database can also be found.

Series of ITU-R Recommendations

(Also available online at <http://www.itu.int/publ/R-REC/en>)

Series	Title
BO	Satellite delivery
BR	Recording for production, archival and play-out; film for television
BS	Broadcasting service (sound)
BT	Broadcasting service (television)
F	Fixed service
M	Mobile, radiodetermination, amateur and related satellite services
P	Radiowave propagation
RA	Radio astronomy
RS	Remote sensing systems
S	Fixed-satellite service
SA	Space applications and meteorology
SF	Frequency sharing and coordination between fixed-satellite and fixed service systems
SM	Spectrum management
SNG	Satellite news gathering
TF	Time signals and frequency standards emissions
V	Vocabulary and related subjects

Note: This ITU-R Recommendation was approved in English under the procedure detailed in Resolution ITU-R 1.

Electronic Publication
Geneva, 2011

RECOMMENDATION ITU-R TF.768-7*

Standard frequencies and time signals

(1992-1994-1995-1997-2001-2002-2003-2011)

Scope

This Recommendation provides the rationale and procedures for providing stable and accurate time and frequency reference signals by broadcast services.

The ITU Radiocommunication Assembly,

considering

- a) the continuing need in all parts of the world for readily available standard frequency and time reference signals that are internationally coordinated;
- b) the advantages offered by radio broadcasts of standard time and frequency signals in terms of wide coverage, ease and reliability of reception, achievable level of accuracy as received, and the wide availability of relatively inexpensive receiving equipment;
- c) that Article 26 of the Radio Regulations is considering the coordination of the establishment and operation of services of standard-frequency and time-signal dissemination on a worldwide basis;
- d) that a number of stations are now regularly emitting standard frequencies and time signals in the bands allocated by WARC-79 and that additional stations provide similar services using other frequency bands;
- e) that these services operate in accordance with Recommendation ITU-R TF.460 which establishes the internationally coordinated time (UTC) system;
- f) that other broadcasts exist which, although designed primarily for other functions such as navigation or communications, emit highly stabilized carrier frequencies and/or precise time signals that can be very useful in time and frequency applications,

recommends

- 1** that, for applications requiring stable and accurate time and frequency reference signals that are traceable to the internationally coordinated UTC system, serious consideration should be given to the use of one or more of the broadcast services listed and described in that part of the ITU-R website concerning Radiocommunication Study Group 7, select: standard-frequency and time signals¹;
- 2** that in the case of a radio time signal generated directly by a laboratory designated “k”, the measured delay between the time of emission of the signal and UTC(k) should be published;
- 3** that in the case of a radio time signal controlled by a clock at the transmitting station and measured at the laboratory “k”, it should be stated explicitly whether the published times in relation to UTC(k) refer to reception or emission and what corrections for propagation and receiver delays should be or have been applied;

* Radiocommunication Study Group 7 made editorial corrections to this Recommendation in 2022 in accordance with Resolution ITU-R 1.

¹ The following hyperlink is provided with respect to the referred information, pending a future revision of this Recommendation: <https://www.itu.int/oth/ROA08000007/en>.

4 that administrations responsible for the various broadcast services disseminating standard-frequency and time should make every effort to provide Radiocommunication Study Group 7 with accurate and up-to-date information, particularly when changes to those broadcast services occur. (Administrations are also requested to send such information to the Bureau International des Poids et Mesures (BIPM).)
