

International Telecommunication Union

**ITU-R**  
Radiocommunication Sector of ITU

**Recommendation ITU-R SM.1139-0**  
(10/1995)

**International monitoring system**

**SM Series**  
**Spectrum management**



## 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)

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### Series of ITU-R Recommendations

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

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

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

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RECOMMENDATION ITU-R SM.1139-0\*  
INTERNATIONAL MONITORING SYSTEM

(1995)

### Scope

This Recommendation provides the guideline that administrations are recommended to consider regarding international monitoring systems.

### Keywords

International monitoring system, terrestrial radiocommunication services, space, radiocommunication services

The ITU Radiocommunication Assembly,

*considering*

- a) the necessity to assist to the extent practicable in the implementation of the RR, in particular to help ensure efficient and economical use of the radio-frequency spectrum and to help in the prompt elimination of harmful interference;
- b) that the relevant provision of the RR states that administrative and procedural requirements for use and operation of the international monitoring system shall be in accordance with the provisions of this Recommendation,

*recommends*

**1** that in requesting monitoring observations, administrations and the Radiocommunication Bureau should take into account the monitoring facilities set forth in the List of International Monitoring Stations, and should clearly specify both the purpose for which the observations are requested and the parameters of the requested monitoring work (including appropriate schedules). The results of such monitoring forwarded to other administrations may also be sent to the Radiocommunication Bureau, if appropriate;

**2** that monitoring requests from international organizations not participating in the international monitoring system should be coordinated by the Radiocommunication Bureau and, if appropriate, forwarded by it to administrations;

**3** that the technical standards recommended by the Radiocommunication Assembly to be observed by monitoring stations shall be recognized by the Radiocommunication Bureau as the optimum practicable technical standards for monitoring stations participating in the international monitoring system;

**4** that, to meet some needs for monitoring data, stations observing lower technical standards may participate in the international monitoring system at the discretion of their administrations;

**5** that administrations having determined whether the monitoring stations meet adequate technical standards, shall notify to the Radiocommunication Bureau pertinent information on the centralizing office and on the stations they wish to have included in List VIII, clearly identifying those stations which may participate in the international monitoring system;

**6** that results of measurements (see Note 1) forwarded to the Radiocommunication Bureau or other administrations shall indicate the estimated accuracy obtained at the time the measurements were made.

NOTE 1 – Where the results supplied by any monitoring station appear to be doubtful or insufficient for its purposes, the Radiocommunication Bureau shall advise the administration or international organization concerned giving the appropriate details;

**7** that administrations shall make every effort to arrange for monitoring observations (see Annex 1) to be submitted to the Radiocommunication Bureau as soon as possible.

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\* Radiocommunication Study Group 1 made editorial amendments to this Recommendation in the years 2010 and 2019 in accordance with Resolution ITU-R 1.

## Reports of international monitoring of emissions

### Section I. Reports Concerning Stations in the Terrestrial Radiocommunication Services

**1** Reports of measurements of frequency should contain as much as necessary of the following information:

- a) identification of the monitoring station (administration or organization, and location);
- b) date of measurement;
- c) time of measurement (UTC);
- d) call sign or other means of identification, or both, of the station monitored;
- e) class of emission (see Note 1);
- f) assigned frequency or reference frequency;
- g) frequency tolerance;
- h) measured frequency;
- i) accuracy of measurement;
- j) departure from assigned or reference frequency;
- k) additional information (e.g. period covered by measurement, drift of measured frequency during that period, quality of received signal and conditions of reception);
- l) remarks.

**2** Reports of measurements of field strength or power flux-density should contain as much as necessary of the following information:

- a) identification of the monitoring station (administration or organization, and location);
- b) date of measurement;
- c) time of measurement (UTC);
- d) call sign or other means of identification, or both, of the station monitored;
- e) class of emission (see Note 1);
- f) assigned frequency;
- g) value of measured field strength or power flux-density;
- h) estimated accuracy of measurement;
- i) value of the measured component of polarization;
- j) other elements or characteristics of the measurement;
- k) remarks.

**3** Reports of observations of spectrum occupancy should as far as practicable be made in the form recommended by the BR and contain if possible the following information:

- a) identification of the monitoring station (administration or organization, and location);
- b) date of measurement;
- c) time of measurement (UTC);
- d) call sign or other means of identification, or both, of the station monitored;
- e) class of emission (see Note 1);

- f) class of station and nature of service;
- g) measured frequency;
- h) period during which the emission was heard or recorded;
- i) value of measured field strength or power flux-density or signal strength according to the QSA scale;
- j) occupied bandwidth (indicate whether measured or estimated, or indicate the necessary bandwidth notified to the BR);
- k) information as to the locality or area in which reception is intended;
- l) remarks.

**4** In providing these data, the symbols contained in the RR or in the Preface to the International Frequency List should be used as far as possible.

## **Section II. Reports Concerning Stations in the Space Radiocommunication Services**

**1** Reports of measurements of frequency should contain as much as necessary of the following information:

- a) identification of the monitoring station (administration or organization, and location);
- b) date of measurement;
- c) time of measurement (UTC);
- d) call sign or other means of identification, or both, of the station monitored;
- e) class of emission (see Note 1);
- f) assigned frequency or reference frequency;
- g) frequency tolerance;
- h) measured frequency;
- i) accuracy of measurement;
- j) departure from assigned or reference frequency;
- k) additional information (e.g. period covered by measurement, drift of measured frequency during that period, quality of received signal and conditions of reception);
- l) remarks.

**2** Reports of measurements of field strength or power flux-density should contain as much as necessary of the following information:

- a) identification of the monitoring station (administration or organization, and location);
- b) date of measurement;
- c) time of measurement (UTC);
- d) call sign or other means of identification, or both, of the station monitored;
- e) class of emission (see Note 1);
- f) assigned frequency;
- g) value of measured field strength or power flux-density;
- h) estimated accuracy of measurement;
- i) value of the measured component of polarization;
- j) other elements or characteristics of the measurement;
- k) remarks.

**3** Reports of observations of spectrum occupancy should as far as practicable be made in the form recommended by the BR and contain if possible the following information:

**3.1** Reports of observations concerning emissions of space stations:

- a) identification of the monitoring station (administration or organization, and location);
- b) date of measurement;
- c) time of measurement (UTC);
- d) call sign or other means of identification, or both, of the station monitored;
- e) class of emission (see Note 1);
- f) class of station and nature of service;
- g) measured frequency;
- h) period during which the emission was heard or recorded;
- i) value of measured field strength or power flux-density or signal strength according to the QSA scale;
- j) occupied bandwidth (indicate whether measured or estimated, or indicate the necessary bandwidth notified to the BR);
- k) observed polarization;
- l) information on orbit;
- m) information as to the locality or area in which reception is intended, if known;
- n) remarks.

**3.2** Reports of observations concerning emissions of earth stations:

- a) identification of the monitoring station (administration or organization, and location);
- b) date of measurement;
- c) time of measurement (UTC);
- d) call sign or other means of identification, or both, of the station monitored;
- e) class of emission (see Note 1);
- f) class of station and nature of service;
- g) measured frequency;
- h) period during which the emission was observed or recorded;
- i) value of measured field strength or power flux-density or signal strength according to the QSA scale;
- j) occupied bandwidth (indicate whether measured or estimated, or indicate the necessary bandwidth notified to the BR);
- k) information as to the orbital position where reception is intended;
- l) remarks.

**4** In providing these data, the symbols contained in the RR or in the Preface to the International Frequency List should be used as far as possible.

NOTE 1 – The class of emission shall contain the basic characteristics listed in Article 4 and, if possible, the additional characteristics listed in Appendix 6. If any characteristic cannot be determined, indicate the unknown symbol with a dash. However, if a station is not able to identify unambiguously whether the modulation is frequency or phase modulation, indicate frequency modulation (F).

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