

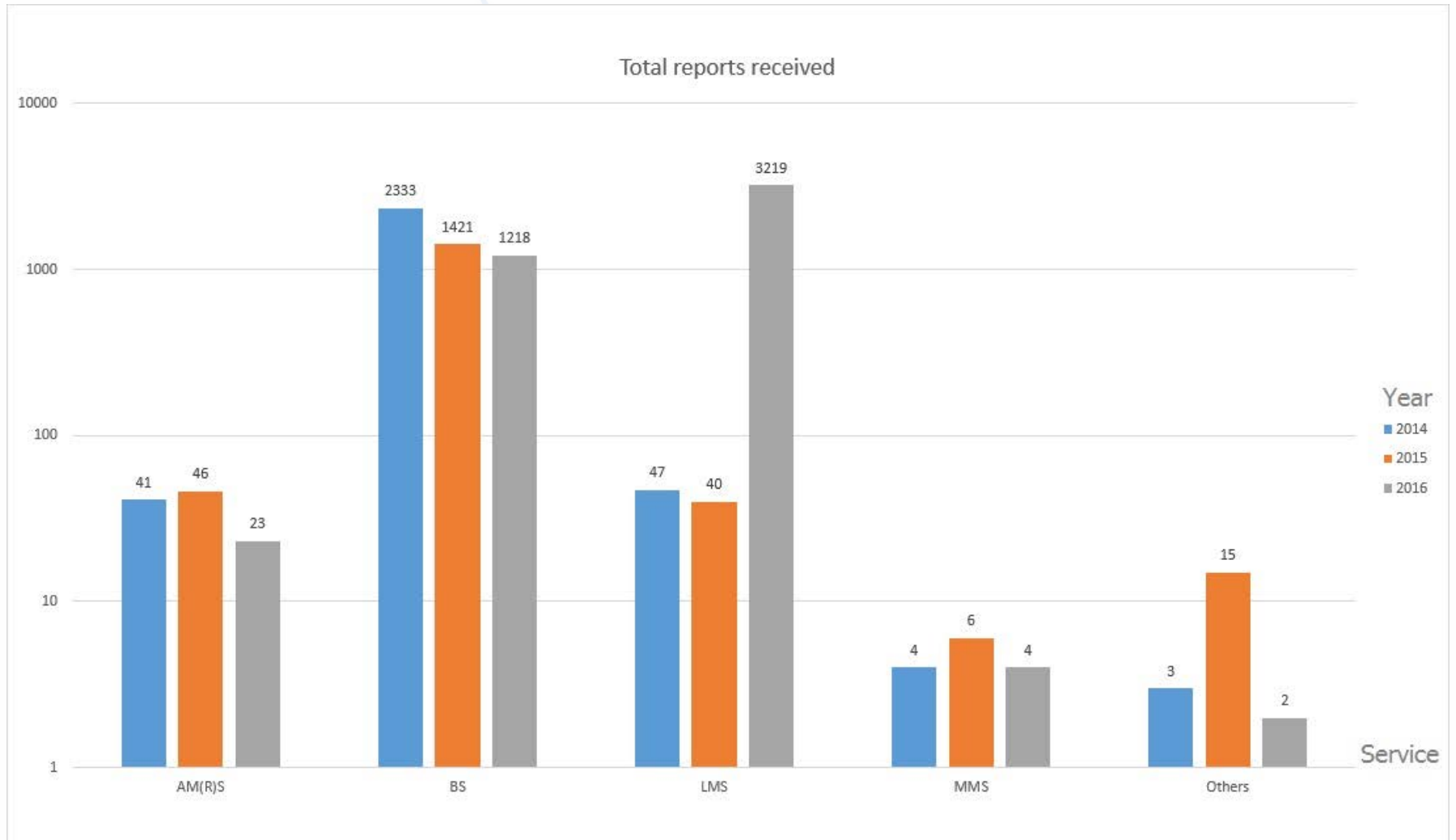


Harmful Interference and Infringements concerning terrestrial services

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Statistics of Appendix 10 Reports





Out-of-band emissions



Our Aeronautical station on 8 826.4 kHz is interfered by Radar emissions!

8 815-8 965 kHz

Allocation to services		
Region 1	Region 2	Region 3
8 815-8 965	AERONAUTICAL MOBILE (R)	



The frequency band 8 815-8 965 kHz is exclusively allocated to the aeronautical mobile (R) service
Radar emissions (radiolocation service) are not in conformity with Article 5 of the Radio Regulations



FM sound broadcasting



*Our FM station recorded in the
GE84 Plan and MIFR is interfered
by FM station not in the Plan!
(example from Africa)*

Before bringing into use an assignment not appearing in the Plan, the concerned Administration shall initiate the Plan modification procedure in accordance with Article 4 of the GE84 Agreement

Once all the required coordination obtained, the concerned Administration may request the BR to publish the assignment in Part B of the GE84 Special Section and update the Plan

Thereafter, the assignment can be notified for recording in the MIFR

FINAL ACTS

of the
Regional Administrative Conference
for the Planning
of VHF Sound Broadcasting
(Region 1 and part of Region 3)
Geneva, 1984



Television broadcasting



*Our Analogue TV service is
interfered by Digital TV stations!
(example from Africa)*

Analogue TV assignments may continue to be operated after the end of the Transition period, under the conditions that these analogue assignments:

- were contained in the Plan and already brought into use
- shall not cause unacceptable interference to, and shall not claim protection from, any assignments in conformity with the Agreement and its Plans

Final Acts

of the Regional Radiocommunication Conference
for planning of the digital terrestrial broadcasting
service in parts of Regions 1 and 3, in the frequency
bands 174-230 MHz and 470-862 MHz (RRC-06)

Geneva, 15 May - 16 June 2006



Mobile by Mobile



*Our mobile stations are
interfered by mobile stations of a
neighbouring country!
(example from Middle East)*

Administrations should coordinate before issuing the licence to operators

Any frequency assignment, capable of causing harmful interference to any service of another administration shall be notified to the BR for recording in the MIFR

With the agreement of the administrations concerned, the case may be dealt with directly by direct coordination between operators to eliminate the interference or to reduce it to acceptable levels (RR15.26)



Mobile by Digital TV



*Our mobile stations operating
in band 790-862 MHz by
Digital TV stations!
(example from Europe)*

The band 790-862 MHz is allocated to the land mobile and broadcasting services on a primary basis

For countries party to the GE06 Agreement, the use of stations of the mobile service is subject to the successful application of the GE06 procedures (RR5.316B)

Administrations which deploy stations in the mobile service without having obtained the prior consent of administrations that may be affected, shall not cause unacceptable interference to, nor claim protection from, broadcasting stations operated in conformity with the GE06 Agreement (Resolution 224 (Rev.WRC-15))





Unnecessary transmissions



- All stations are forbidden to carry out unnecessary transmissions (RR15.1)
- Transmitting stations shall radiate only as much power as is necessary to ensure a satisfactory service (RR15.2)
- Radiation in and reception from unnecessary directions shall be minimized ... whenever the nature of the service permits (RR15.5)



Non-conforming assignment



- No assignment shall be made to any station in derogation of the Radio Regulations
- It is possible to notify such a non-conforming assignment and enter it in the MIFR, for information only
- It shall not cause harmful interference to, and shall not claim protection from harmful interference caused by, a station operating in accordance with the RR



Primary and secondary services



- Nos. 5.28 to 5.31 define hierarchy among services and the priority that assignments of such services may have over other assignments
- Stations of a secondary service shall not cause harmful interference to stations of a primary service and cannot claim protection from harmful interference from stations of a primary service
- Stations of a secondary service can claim protection from harmful interference from stations of the same service or other secondary services



Actions to be taken by administrations



- The procedure of Article 15 (Section VI) of the Radio Regulations is to be followed in a case of harmful interference
- The Administration responsible of the affected station shall send an Appendix 10 Report to the administration responsible for the station causing the harmful interference (RR15.27)
- When informed that a station under its jurisdiction is causing harmful interference, the Administration shall acknowledge receipt of that information as soon as possible (RR15.35) and take necessary action
- The concerned administrations shall cooperate for resolving the harmful interference.



Report of Harmful interference (Appendix 10 to the Radio Regulations)



APPENDIX 10 (Rev.WRC-07)

Report of harmful interference

(See Article 15, Section VI)

Particulars concerning the station causing the interference:

- a* Name, call sign or other means of identification
- b* Frequency measured
- Date:
- Time (UTC):
- c* Class of emission¹
- d* Bandwidth (indicate whether measured or estimated)
- e* Measured field strength or power flux-density²
- Date:
- Time (UTC):
- f* Observed polarization
- g* Class of station and nature of service
- h* Location/position/area/bearing (QTE³) (wrc-07)
- i* Location of the facility which made the above measurements

Particulars concerning the transmitting station interfered with:

- j* Name, call sign or other means of identification
- k* Frequency assigned

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- l* Frequency measured
 - Date:
 - Time (UTC):
 - m* Class of emission⁴
 - n* Bandwidth (indicate whether measured or estimated, or indicate the necessary bandwidth notified to the Radiocommunication Bureau)
 - o* Location/position/area
 - p* Location of the facility which made the above measurements
- Particulars furnished by the receiving station experiencing the interference:*
- q* Name of station
 - r* Location/position/area
 - s* Dates and times (UTC) of occurrence of harmful interference
 - t* Bearings (QTE³) or other particulars (wrc-07)
 - u* Nature of interference
 - v* Field strength or power flux-density of the wanted emission at the receiving station experiencing the interference⁵
 - Date:
 - Time (UTC):
 - w* Polarization of the receiving antenna or observed polarization
 - x* Action requested

NOTE – For convenience and brevity, telegraphic reports shall be in the format above, using the letters in the order listed in lieu of the explanatory titles, but only those letters for which information is provided should be used. However, sufficient information shall be provided to the administration receiving the report, so that an appropriate investigation can be conducted.

¹ The class of emission shall contain the basic characteristics listed in Appendix 1. 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).

² When measurements are not available, signal strengths according to the QSA scale should be provided.

³ See the most recent version of Recommendation ITU-R M.1172. (wrc-07)

⁴ See footnote 1.

⁵ See footnote 3.

⁶ See footnote 2.



Assistance of the BR



If the cooperation between administrations has not produced satisfactory results, the Administration concerned shall forward details of the case to the BR for its information and may also request its assistance

The BR studies :

- the Appendix 10 Report
- the content of the MIFR (characteristics of assignments, status of assignments,...)
- the content of the Plan if the concerned band is subject to a plan
- the causes of the interference, taking into account all the facts communicated and any information received concerning the characteristics effectively used



Assistance of the BR



If necessary, the BR may also request the cooperation of stations on the International Monitoring List that may be able to help in identifying the source of harmful interference

The BR will forward to the two administrations its findings and recommendations for the solution of the problem

If the harmful interference persists, the BR prepares a report for consideration by the Radio Regulations Board

The BR transmits the decisions of the Board to the administrations concerned



Procedure in a case of Infringement



- Infringement of the Constitution, Convention or Radio Regulations shall be reported to its Administration in the form indicated in Appendix 9 (RR15.19)
- Afterwards, the Administration may inform the administration responsible of the station causing the Infringement (RR15.20)
- RR15.21 stipulates that “if an administration has information of an infringement of the Constitution, the Convention or the Radio Regulations ... committed by a station under its jurisdiction, the administration shall ascertain the facts and take the necessary actions”



Report of an irregularity or infringement (Appendix 9 to the Radio Regulations)



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APPENDIX 9

Report of an irregularity or infringement

(See Article 15, Section V)

Particulars concerning the station infringing the Radio Regulations:

- 1 Name¹ if known (in BLOCK letters)
- 2 Call sign or other identification (in BLOCK letters)
- 3 Nationality, if known
- 4 Frequency used (kHz, MHz, GHz or THz)
- 5 Class of emission²
- 6 Class of station and nature of service, if known
- 7 Location^{3, 4, 5}

Particulars concerning the station, the centralizing office or inspection service reporting the irregularity or infringement:

- 8 Name (in BLOCK letters)
- 9 Call sign or other identification (in BLOCK letters)
- 10 Nationality
- 11 Location^{3, 4}

Particulars of the irregularity or infringement:

- 12 Name⁶ of the station (in BLOCK letters) in communication with the station committing the irregularity or infringement
- 13 Call sign or other identification (in BLOCK letters) of the station in communication with the station committing the irregularity or infringement

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- 14 Date and time⁷
- 15 Nature of the irregularity or infringement⁸
- 16 Extracts from ship log or other information supporting the report

Particulars concerning the transmitting station interfered with⁹:

- 17 Name of the station (in BLOCK letters)
- 18 Call sign or other identification (in BLOCK letters)
- 19 Frequency assigned (kHz, MHz, GHz or THz)
- 20 Frequency measured at the time of the interference
- 21 Class of emission² and bandwidth (indicate whether measured or estimated, or indicate the necessary bandwidth notified to the Radiocommunication Bureau)
- 22 Receiving location^{3, 4} (in BLOCK letters) where the interference was experienced

23 Certificate:

I certify that the foregoing report represents, to the best of my knowledge, a complete and accurate account of what took place.

Signatures¹⁰ Date:



Final remarks



- All stations must be established and operated in such a manner as not to cause harmful interference to the stations of other Administrations... (CS Nos. 197 and 198 refer)
- Any new assignment or modification of an existing assignment shall be made in such a way as to avoid causing harmful interference to stations using frequencies assigned in accordance with the RR and whose characteristics are recorded in the MIFR (RR4.3)
- No assignment shall be made in derogation of the Radio Regulations (RR4.4)
- In the assignment and use of frequencies, it is necessary to take into account the fact that safety services require special measures to ensure their freedom from harmful interference (RR4.10)
- No transmitting station may be established or operated without a licence and in conformity with the provisions of RR... (RR18.1)



Conclusions



It is recommended notifying any assignment that may have international impact for registration in the MIFR in order to benefit from international recognition

Spectrum monitoring is part of a National Spectrum Management System and is important for identifying sources of harmful interference

While it is true that spectrum management is a sovereign matter for each Member, the fact remains that radio waves do not stop at borders. In order to avoid harmful interference at the border area, it is necessary to coordinate the use of the spectrum