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EXAMINATION PROCEDURES FOR FREQUENCY ASSIGNMENT NOTICES CONCERNING TERRESTRIAL SERVICES (EXCEPT LF/MF AND VHF/UHF BROADCASTING SERVICES) UNDER ARTICLE 11

1 Introduction

The purpose of this document is to provide a tutorial summary of the provisions, which describe the examination procedures of frequency assignment notices concerning terrestrial services (except LF/MF and VHF/UHF broadcasting services) under Article 11 of the Radio Regulations (RR). However, it does not aim to describe the procedures set out in Article 11 of RR in great detail. The explanation is based on the provisions of the RR and the corresponding Rules of Procedure.

2 Examination of frequency assignment notices submitted by administrations

When a frequency assignment notice submitted by an administration contains all the necessary information specified in Appendix 4 to the RR, it is published in Part 1 of the Bureau's International Frequency Information Circular (BR IFIC) in accordance with No. 11.28, after ascertaining that the notice is receivable. This publication serves as acknowledgement of receipt and also enables the notifying administration to check that the publication is an accurate reflection of the information submitted.

Subsequent processing of a notice in the Radiocommunication Bureau (BR) varies according to the frequency band and service concerned and may include the following types of examination:

- 1) regulatory examination;
- 2) examination with respect to a coordination procedure;
- 3) examination with respect to worldwide or regional plans;
- 4) further technical examination, such as probability of harmful interference.

The first and mandatory stage for all notice processing, after ascertaining that the notice is receivable, is the regulatory examination followed by other types of examination, if necessary. A simplified structure of examination procedure for different cases is shown in Figure 1.

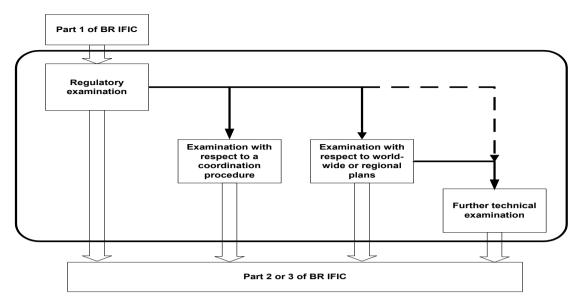


Figure 1. A simplified structure of examination procedures

A simplified diagram relating to the examination and publication of assignments to terrestrial services operating in all bands, which are not LF/MF and VHF/UHF broadcasting services, is given in Flowchart 1.

2.1 Regulatory examination

During the regulatory examination the Bureau verifies the conformity of the notice to the Table of Frequency Allocations (RR Article 5, including the relevant footnotes thereto) and, where appropriate, to the other provisions of the RR.

2.1.1 Examination of conformity with the Table of Frequency Allocations and associated provisions in Article 5 of the RR

The examination of conformity with the Table of Frequency Allocations consists in determining whether the assigned frequency and/or the necessary bandwidth of the emission is within the frequency band allocated to the service in which the notified station operates.

In accordance with No. 11.31.1 conformity with the Table of Frequency Allocations also implies the successful application of No. 9.21, when necessary. This applies if the obligation to effect coordination is indicated in a footnote making reference to the provision No 9.21.

However, the recording of the assignment with respect to those objecting administration(s) whose agreement(s) have not been obtained will be with a favourable finding, subject to the condition that the assignment in question shall not cause harmful interference to nor claim protection from the service(s) of the objecting administration(s) from which the agreement was sought. With respect to the administration(s) which have not objected under No. 9.21, the recording of the assignment shall also be made with a favourable finding.

Other elements are to identify the category of service according to the Table of Frequency Allocations and to check conformity to the relevant footnotes. Some examples of regulatory examination checks are as follows:

out-of band emission: the assigned frequency is in a band which is not allocated to the service;

- overlapping emissions: the assigned frequency is in a band which is allocated to the service, but the necessary bandwidth overlaps the immediately adjoining band which is not allocated to the service;
- receiving point of a terrestrial service is in a region where the service is not allocated: the
 case of a circuit whose transmitting point is in a country, sub region or region where the
 frequency is allocated to the service, but whose receiving point is not;
- categories of service: the assigned bandwidth overlaps two frequency bands that are both allocated to the service in question, but with different categories of services;
- tropical broadcasting bands: The frequency bands 2 300-2 498 kHz (Region 1), 2 300-2 495 kHz (Regions 2 and 3), 3 200-3 400 kHz (all Regions), 4 750-4 995 kHz (all Regions) and 5 005-5 060 kHz (all Regions) are allocated on a shared basis to the broadcasting service and other services, but the allocation to the broadcasting service is limited to the Tropical Zone only.

2.1.2 Examination of conformity with the other provisions of the Radio Regulations

This examination stage consists of verification of technical and operational conditions, laid down in other Articles or Appendices to the RR (power limits, authorized classes of emission, minimum elevation angle). In accordance with No. 11.31.2 the "other provisions" are included in the Rules of Procedure and listed below.

1) Fixed service

In bands allocated below 30 MHz, F3E and G3E classes of emissions are prohibited for fixed service stations (No. 24.2).

2) Aeronautical mobile service

Two types of aeronautical mobile service are defined in the RR:

Aeronautical mobile (R) service: An aeronautical mobile service reserved for communications relating to safety and regularity of flight primarily along national or international civil air routes (No. 1.33).

Aeronautical mobile (OR) service: An aeronautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes (No. 1.34).

These two types of the aeronautical mobile service are governed by differentiated procedures, some of them are described in the RR; others, especially for the aeronautical mobile (R) service, are described in Annex 10 to the Convention of the International Civil Aviation Organization.

For regulatory examination there are mandatory provisions only for the frequency band between 2 850 and 22 000 kHz that are allocated exclusively to the aeronautical mobile service. These provisions (obligatory channelling arrangement, permitted classes of emission, power limits) are contained in Appendices 26 and 27 to the RR. The provisions of No. 43.4 also fall into this category of mandatory regulatory provisions, i.e. the prohibition of using the exclusive frequency allocations to the aeronautical mobile service for any kind of public correspondence.

Maritime mobile service

The maritime mobile service is subject to very detailed international regulations basically because by its nature it is very often an international service. A large part of RR is currently devoted to the maritime mobile service. Several bands below 28 MHz are allocated to the maritime mobile service on an exclusive basis.

Maritime mobile service stations operating in the exclusive bands are subject to detailed regulation under Article 51 (Conditions to be observed in the maritime services), Article 52 (Special rules relating to the use of frequencies) and Appendix 17 (Frequencies and channelling arrangements in the high-frequency bands for the maritime mobile service). These provisions specify the frequency bands to be used for maritime radiocommunications, the frequencies to be used for distress and safety communications, and the basic characteristics of transmitting and receiving equipment. They also prescribe the operational procedures to be followed for calling, replying, and handling traffic, and deal with other issues like the licences to stations, the master's authority in radio matters, the international inspection of ship stations, operators' certificates, the working hours of ship stations, etc.

The technical specifications of some of the equipment and systems are also specified by Recommendations ITU-R M.1173-1, M.476-5, M.625-4 which have been incorporated in RR by reference with the intent to make the utilization of the sub-bands concerned uniform throughout the world

A summary of the relevant provisions applicable to the maritime mobile service in the bands below 28 MHz is given in Tables 1.1, 1.2 and 1.3. Tables 1.1, 1.2 and 1.3 list the bands below 28 MHz which are intended for use by the maritime mobile service with a summary of the relevant conditions concerning the use of the subject bands by the maritime mobile services.

4) Terrestrial stations operating in the bands shared with equal rights with space services Examination procedures for terrestrial stations in the bands shared between terrestrial and space services with equal rights depend on the space service direction of transmission (Earth-to-space or space-to-Earth).

In the bands allocated to space services in the Earth-to-space direction fixed and mobile transmitting stations shall apply the power limits specified in Article 21 of the RR. Verification of notified power values against these limits is performed during regulatory examination.

These power limits are given in Nos. 21.3, 21.4, 21.5 and 21.5A and apply, where applicable, to the services and frequency bands indicated in the Table 21-2 for reception by space stations where the frequency bands are shared with equal rights with the fixed or mobile service (No. 21.6).

A summary of examination procedures referred to in Article 21 is described in the Flowchart 2.

In the frequency bands allocated to the space services in space-to-Earth direction of transmission a terrestrial transmitting station in some cases shall undergo one of the coordination procedures set up in Article 9 of the RR. The conditions of such coordination are described in paragraph 2.2 of this document. Verification of the completion of these procedures is performed at the stage of coordination examination.

2.1.3 Regulatory examination results

If the results of the regulatory examination are favourable, and the notified assigned frequency falls in the bands which are not covered by worldwide or regional plans or are not subject to a coordination procedure, the assignment is recorded in the Master Register after publication of the results in Part 2 of the BR IFIC. If results of this examination are unfavourable and the administration concerned has not explicitly undertaken the commitment not to cause interference to assignments operating in conformity with RR by making reference to No. 4.4, the notice is returned to the notifying administration after publication of the findings in Part 3 of the BR IFIC (No. 11.36).

2.2 Examination with respect to conformity with coordination procedures

Where appropriate, the notices are also examined with respect to their conformity with the procedures relating to coordination with other administrations applicable to the radiocommunication service and the frequency band concerned (No. 11.32). Frequency assignments to stations of the appropriate terrestrial services must be coordinated with other administrations in the following cases.

- 1) If the station operates in the frequency bands above 100 MHz shared with space services with equal rights whenever a transmitting terrestrial service station is inside the coordination area of a receiving earth station. The procedures for effecting coordination are indicated in Article 9, Section II (Nos. 9.16, 9.18)
- 2) If the station operates in a frequency band shared on an equal primary basis with the broadcasting-satellite service, with respect to typical earth station included in the service area of a space station in the broadcasting-satellite service (No. 9.19)
- 3) If the obligation to effect coordination is indicated in a footnote to the Table of Frequency Allocations making reference to the provisions No. 9.21. Examples of such coordination requirements are footnotes RR 5.197 and RR 5.293, which allocate specific frequency bands to the mobile service subject to agreement obtained under No. 9.21
- 4) If a station of a non-planned service operates in the bands and areas covered by the regional agreement (GE85-EMA, GE85-MM-R1 and GE89). The examination of conformity with the coordination procedures for this case includes a check whether the agreement is obtained from all administrations whose assignments in the planned services are potentially affected.

When the coordination procedures specified in No. 11.32 have been successfully completed with all administrations whose space or terrestrial radiocommunication stations may be affected, the assignment shall be recorded in the Master Register.

2.2.2 Examination with respect to worldwide or regional plans

Examination with respect to conformity with a worldwide or regional allotment or assignment plan and the associated provisions (No. 11.34) applies only to assignments in bands covered by worldwide plans or by Regional Agreements concerned.

Examination with respect to worldwide plans

The following worldwide plans are included in this examination stage:

- Frequency allotment plan for coast radiotelephone stations operating in the exclusive maritime mobile bands between 4 000 and 27 500 kHz (Appendix **25** to RR)
- Frequency allotment plan for the aeronautical mobile (OR) service in the exclusive bands between 3 025 and 18 030 kHz (Appendix 26 to RR)
- Frequency allotment plan for the aeronautical mobile (R) service in the exclusive bands between 2 850 and 22 000 kHz (Appendix 27 to RR).

With respect to Appendices 25, 26 and 27 a notice is examined in conformity with the frequency allotment and the associated allotment area. Notices under Appendices 25, 26 and 27 shall be treated as follows (No. 11.39):

In the case of a notice in conformity with the technical principles of Appendix 27, but not in conformity with the Allotment Plan, the Bureau shall examine whether the protection specified in Appendix 27 is afforded to the allotments in the Plan and to assignments already recorded in the Master Register with a favourable finding (11.39A).

When the examination under No. 11.39A leads to a favourable finding, the assignment shall be recorded in the Master Register. When the finding is unfavourable, the assignment shall be recorded in the Master Register with a symbol indicating that it shall cause no harmful interference to any frequency assignment which is either in conformity with the Allotment Plan or recorded in the Master Register with a favourable finding with respect to No. 11.39A (11.39B).

A notice in conformity with the technical principles of Appendix 26, but not in conformity with the Allotment Plan, shall be examined with respect to the allotments in Part III of Appendix 26 (11.39C).

When the examination under No. 11.39C leads to a favourable finding, the assignment shall be recorded in the Master Register. When the finding is unfavourable, the assignment shall be recorded in the Master Register with a symbol indicating that it shall cause no harmful interference to any frequency assignment which is either in conformity with the Allotment Plan or recorded in the Master Register with a favourable finding with respect to No. 11.39C (11.39D).

In the case of a notice not in conformity with the Allotment Plan of Appendix 25, the assignment may be recorded provisionally in the Master Register on the condition that the administration has initiated the procedure of Appendix 25 in accordance with § 25/1.23 of Section I of Appendix 25 (11.39E).

Furthermore, in accordance with No. 11.39F the notice which is not in conformity with the technical principles of Appendices 25, 26 or 27, as applicable, shall be returned to the notifying administration, unless the administration undertakes that it will be operated in accordance with No. 4.4; in such a case the assignment shall be recorded in the Master Register for information purposes and subject to application of No. 8.5.

A summary of the examination procedures referred to in Appendices 25, 26 and 27 are described in Flowcharts 3, 4 and 5.

Examination with respect to regional plans

The following regional plans are included in this examination stage:

- Frequency assignment plans for stations of the maritime mobile and the aeronautical radionavigation service in the MF bands in Region 1 annexed to the Regional Agreement concerning the MF maritime mobile and aeronautical radionavigation services in Region 1, Geneva, 1985 (GE85-MM-R1)
- Frequency assignment plan for stations of the maritime radionavigation service (radiobeacons) for the European Maritime Area in the band 283.5-315 kHz annexed to the Regional Agreement concerning the planning of the maritime radionavigation service (radiobeacons) in the European Maritime Area, Geneva, 1985 (GE85-EMA).

The examination of conformity with the regional plans includes verification of whether the characteristic of a new frequency notice corresponds to the parameters of the assignment recorded in the Plan.

The examination of the conformity with plans contained in regional Agreements GE85-MM-R1 and GE85-EMA is performed for administrations, which are considered parties to the relevant Agreement. For administrations, which are considered non-parties to the Agreement, only regulatory examination is performed.

In accordance with Part A8 of the Rules of Procedure, the Bureau will consider parties to GE85-MM-R1 Agreement all administrations having territories in Region 1, with the exception of the following administrations: AND, BFA, CAF, GNB, LSO, LUX, MLI, MNG, MWI, NGR,

RRW, SWZ, TZA, UGA, ZMB and ZWE, which are considered non-parties to the Agreement, until such a time as they accede formally to the Agreement.

In accordance with Part A9 of the Rules of Procedure, the Bureau will consider parties to GE85-EMA Agreement all administrations having territories in the European Maritime Area, with the exception of the following administrations: AND, BIH, BLR, CVA, IRQ, ISL, LIE, LUX, MDA, MKD, SMR, SUI and SVN, which are considered non-parties to the Agreement, until such a time as they accede formally to the Agreement.

A summary of the examination procedures referred to in regional plans GE85-MM-R1 and GE85-EMA are described in flowcharts 6, 7, 8 and 9.

When the examination of conformity with regional allotment or assignment plans and the associated provisions leads to a favourable finding, the assignment shall be recorded in the Master Register after publication of the results in Part 2 of the BR IFIC. When the finding is unfavourable, the notice shall be returned to the notifying administration, with an indication of the appropriate action.

2.3 Further technical examination

This examination stage applies to the stations of the aeronautical mobile service, which are related to the worldwide plans in Appendices 26 and 27.

Examination of the probability of harmful interference is performed if the notified assignment to an aeronautical station in the bands governed by Appendices 26 and 27 to the RR is not in conformity with the relevant allotment plan and other provisions of the Appendices.

The examination of the probability of harmful interference in the bands covered by Appendix 27 consists of the phases described below.

Examination whether the planned allotments are protected (e.g. identification of the areas which are likely to be affected; calculation of separation distances and corresponding azimuths between the test points associated with every area which is likely to be affected, calculation of the protection ratio, etc.). If the results of the examination indicate that appropriate protection is given to the allotments in the Plan, the next phase of examination is performed, i.e. examination whether protection is given to those assignments, already recorded in the Master Register with a favourable finding, which are not covered by appropriate allotments but are compatible with the allotments appearing in the Plan. If the results of both compatibility examinations are favourable the assignment is recorded in the Master Register after publication of the results in Part 2 of the BR IFIC, with the indication of the findings. If results of any of the compatibility examination are unfavourable the notice is nevertheless recorded in the Master Register, after publication of the results in Part 2 of the BR IFIC, with the indication of those allotment areas that it will operate on a non-interference basis.

The technical examination performed in the bands covered by Appendix 26 consists of the separation distance calculation, then, if applicable, the correction factor (CF) calculation according to No. 26/6.3.

If the results of the technical examination are favourable the assignment is recorded in the Master Register after publication of the results in Part 2 of the BR IFIC, with the indication of the findings. If results of the compatibility examination are unfavourable the notice is nevertheless recorded in the Master Register, after publication of the results in Part 2 of the BR IFIC, with the indication that it will operate on a non-interference basis.

8 WRS16/7-E

TABLE 1.1 Frequency bands between 14 and 535 kHz

Frequency bands (kHz)	Mode of communication	Permitted classes of emission	Power limitations		Remarks Provisions of RR
			Coast station	Ship station	
14-19.95 20.05-70 70-90	RTG	A1A (A1B, J2A) F1B (J2B, J2D) (J7B)	-	-	RR 5.57 , RR 52.2 , RR 52.3
110-160 (110-148.5 in R1)	RTG	A1A (A1B, J2A) F1B (J2B, J2D) A2C, A3C, F1C, F3C, (J7B)	-	-	RR 5.64
415-490 490-495 495-505 505-510 510-535	RTG	A1A (A1B, J2A) F1B (J2B, J2D)	-	(DSC: 400 W)	RR5.79, RR5.82, RR5.84, RR51.27, RR51.44, RR52.97, RR52.115, RR52.117 R1: GE85

9 WRS16/7-E

TABLE 1.2 Frequency bands between 1 605.5 and 4 000 kHz

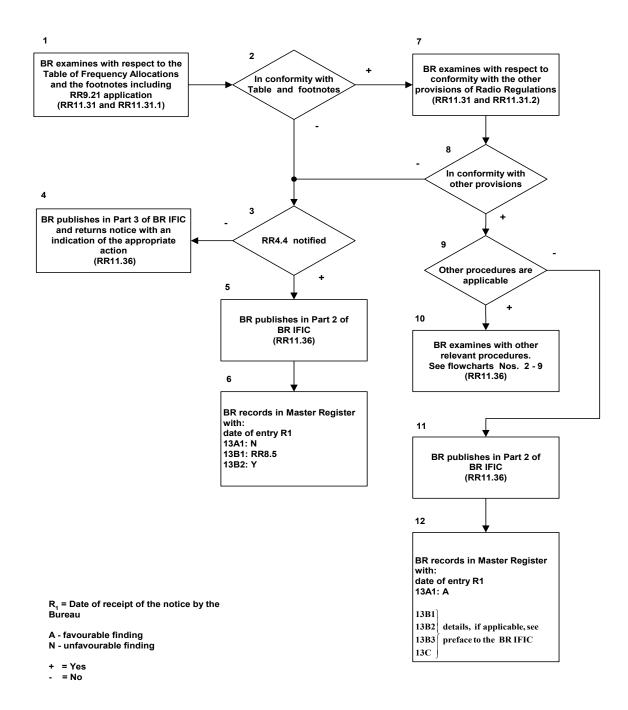
Frequency bands (kHz)	Mode of communication	Permitted classes of emission	Power limitations		Remarks Provisions of RR
			Coast station	Ship station	
1 606.5-2 170 2 194-2 498 2 502-2 850	RTG	ALL (RTG)	-	R1: (DSC: 400 W)	RR 52.127 , R1: GE85
	RTF	J3E	5 kW (>32°N) 10 kW (<32°N)	R1: 400 W	RR52.177, RR52.183, RR52.198, RR5.105, RR52.9, RR52.10, RR52.184-RR52.186, RR52.202 R1: GE85
2 170-2 194	RTF (D+S), DSC	J3E, (H3E, A3E) F1B, (J2B), (H2B)	-	-	RR 52.101 , RR 52.188 , RR 52.199
3 155-3 400	RTG	ALL (RTG)	-	R1: (DSC: 400 W)	RR 52.127 R1: RR 52.9
3 500-4 000	RTF	Ј3Е	5 kW (>32°N) 10 kW (<32°N)	-	RR 52.177 , RR 52.183 , RR 52.198 , RR 52.184 , RR 52.186 , RR 52.9

10 WRS16/7-E TABLE 1.3

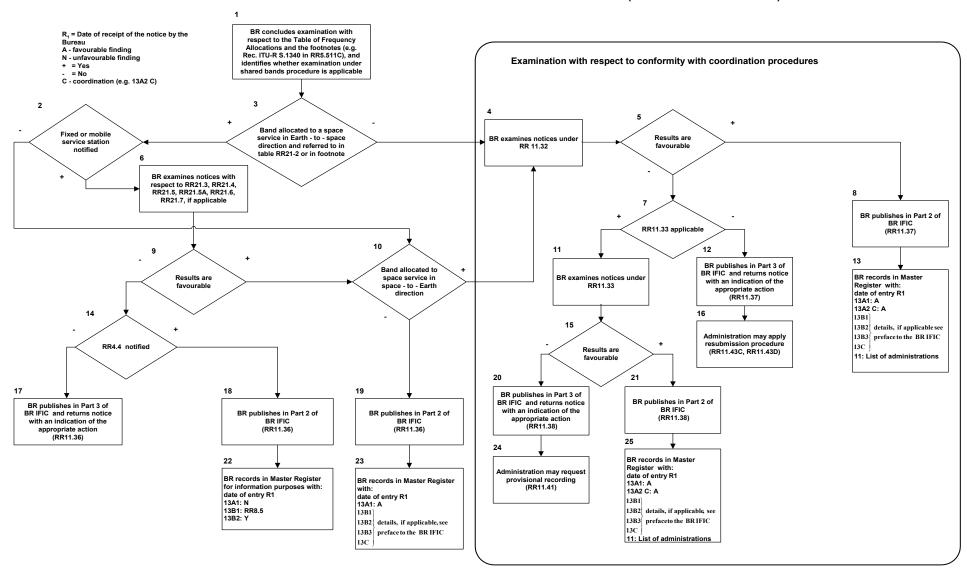
Frequency bands between 4 000 and 27 500 kHz $\,$

Frequency bands (kHz)	Mode of communication	Permitted classes of emission	Power limitations		Remarks Provisions of RR
			Coast station	Ship station	
	RTF, duplex	J3E, J2D	10 kW	1.5 kW	RR 52.177, RR 52.217 , RR 52.219 , RR 52.220
Exclusive	RTF, simplex	J3E, J2D	1 kW	1.5 kW	RR 52.177, RR 52.217 , RR 52.227 , RR 52.220
4 063-4 438	RTG wide-band, FC	All RTG except A2A, A2B	5/10/15 kW (2.5 kW per 500 Hz)		RR 52.171 , RR 52.172
6 200-6 525 8 195-8 815					
12 230-13 200 16 360-17 410	RTG, NBDP, paired, FC + MS	F1B (J2B, J2D)	5/10/15 kW		RR 52.104
18 780-18 899.75 19 680.25-19 800	RTG, NBDP, non-paired	F1B (J2B, J2D) (A1A*)	5/10/15 kW		RR 52.104
22 000-22 855 25 070-25 210	RTG Morse, calling, MS	A1A (A1B, J2A, J2B, J2D)			
26 100.25-26 175	RTG Morse, working MS	A1A (A1B, J2A, J2B, J2D)			
	DSC (FC, MS)	F1B, J2B, J2D	5/10/15 kW	1.5 kW	RR 52.143 , RR 52.144
	Oceanographic data transmission	A1A, F1B, J2B, J2D, etc.			
	Data transmission	J2D or others in Rec. ITU-R M.1798	10 kW	1.5 kW	RR 52.265 , RR 52.266
Non-	RTG	-	DSC: 5/10/15 kW	DSC: 1.5 kW	RR 52.143 , RR 52.144
exclusive	RTF	J3E, J2D	10 kW	1.5 kW	RR 52.177 , RR 52.217 , RR 52.219 , RR 52.220

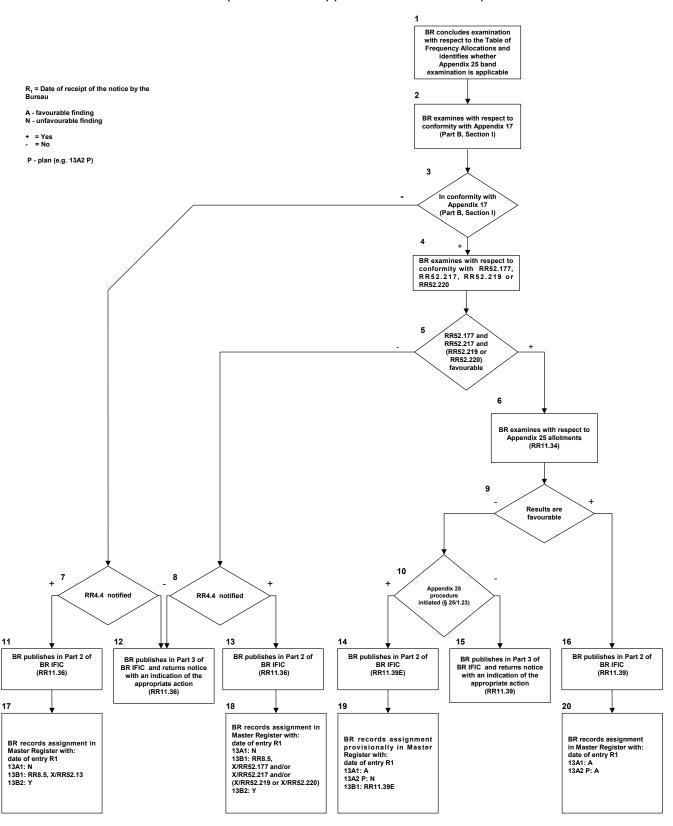
PROCEDURES RELATING TO REGULATORY EXAMINATION OF ASSIGNMENTS TO TERRESTRIAL SERVICES EXCEPT LF/MF AND VHF/UHF BROADCASTING SERVICES (SIMPLIFIED FLOWCHART)



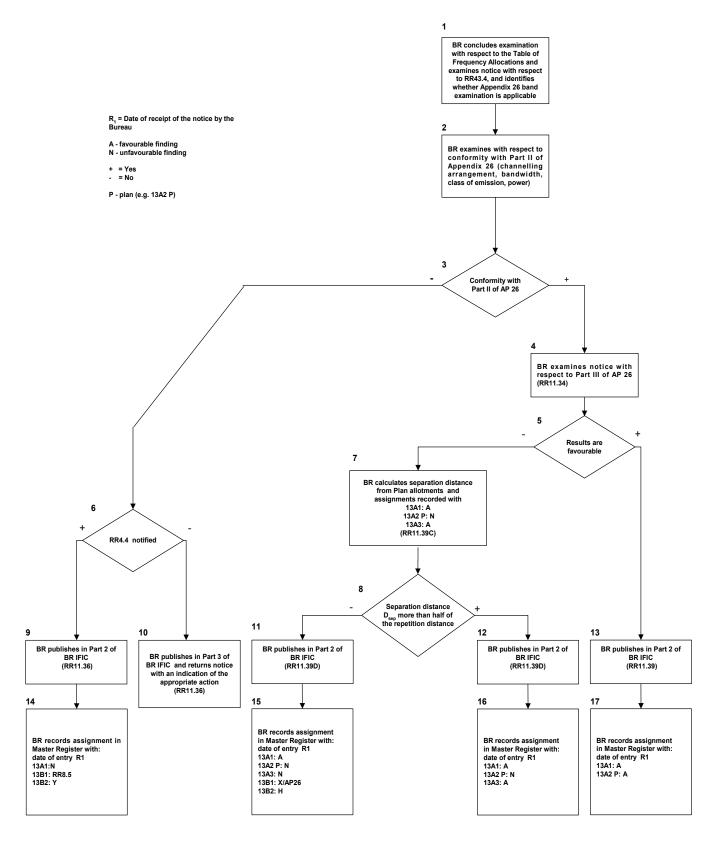
PROCEDURE RELATING TO EXAMINATION OF NOTICES OF ASSIGNMENTS TO TERRESTRIAL STATIONS OPERATING IN THE BANDS ABOVE 100 MHz SHARED WITH SPACE SERVICES (SIMPLIFIED FLOWCHART)



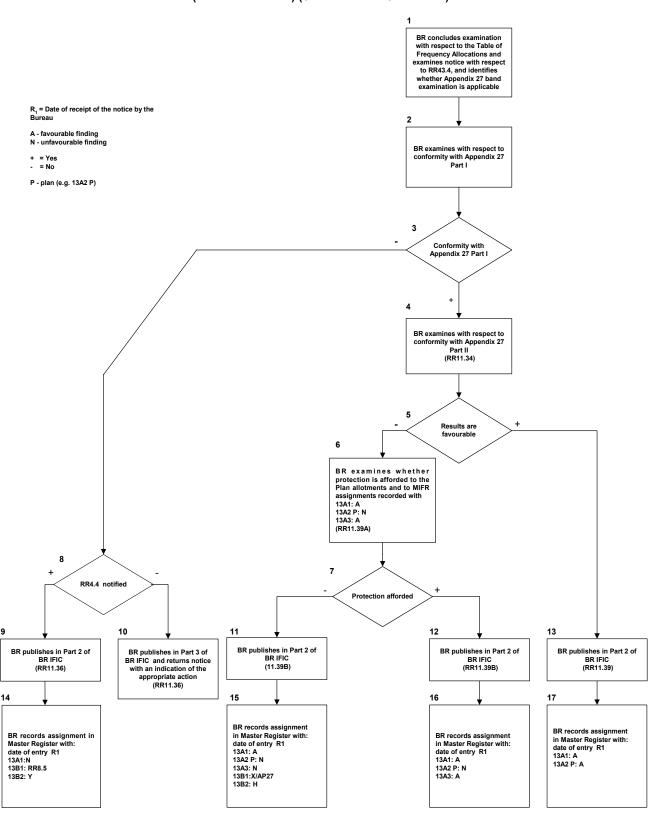
PROCEDURE RELATING TO EXAMINATION OF NOTICES OF ASSIGNMENTS TO TRANSMITTING OR RECEIVING COAST RADIOTELEPHONE STATIONS IN THE EXCLUSIVE MARITIME MOBILE BANDS BETWEEN 4 000 AND 27 500 kHz (RR APPENDIX 25) (SIMPLIFIED FLOWCHART)



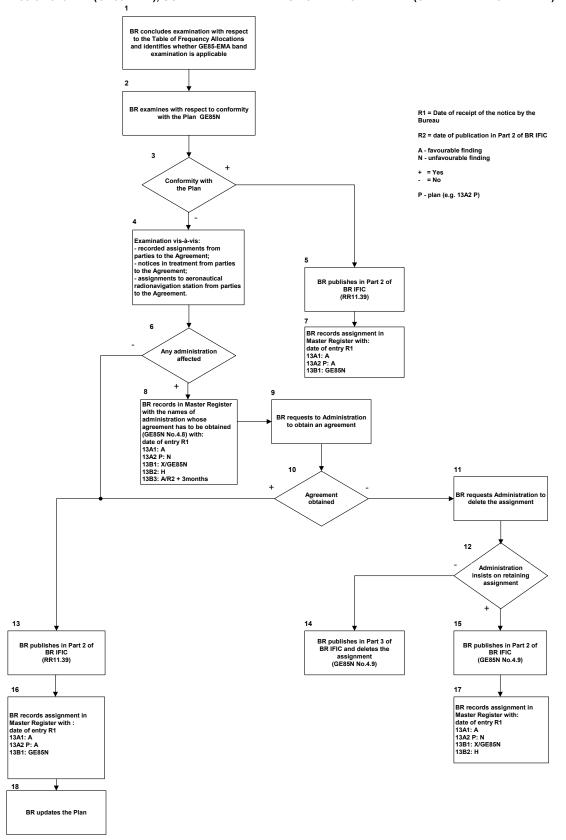
PROCEDURE RELATING TO EXAMINATION OF NOTICES OF FREQUENCY ASSIGNMENTS TO AERONAUTICAL STATIONS IN THE EXCLUSIVE AERONAUTICAL MOBILE (OR) BANDS BETWEEN 3 025 AND 18 030 kHz (RR APPENDIX 26) (SIMPLIFIED FLOWCHART)



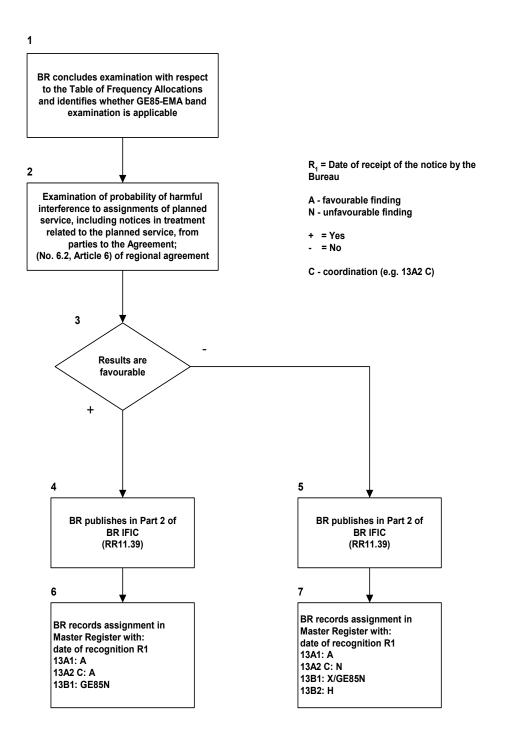
PROCEDURE RELATING TO EXAMINATION OF NOTICES OF FREQUENCY ASSIGNMENTS TO AERONAUTICAL STATIONS IN THE EXCLUSIVE AERONAUTICAL MOBILE (R) BANDS BETWEEN 2 850 AND 22 000 KHZ (RR APPENDIX 27) (SIMPLIFIED FLOWCHART)



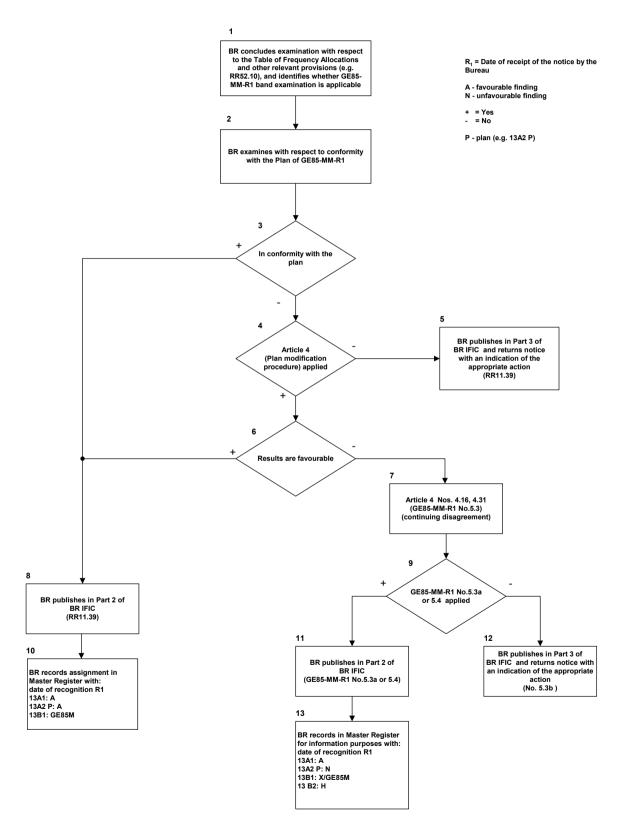
PROCEDURE RELATING TO EXAMINATION OF NOTICES OF FREQUENCY ASSIGNMENTS TO MARITIME RADIONAVIGATION SERVICE STATIONS IN THE EUROPEAN MARITIME AREA IN THE FREQUENCY BAND 283.5 - 315 kHz (GE85-EMA), SUBMITTED BY PARTIES TO THE AGREEMENT (SIMPLIFIED FLOWCHART)



PROCEDURE RELATING TO EXAMINATION OF NOTICES OF FREQUENCY ASSIGNMENTS TO AERONAUTICAL RADIONAVIGATION STATIONS IN THE EUROPEAN MARITIME AREA IN THE BAND 283.5-315 kHz, SUBMITTED BY PARTIES TO THE AGREEMENT (SIMPLIFIED FLOWCHART)



PROCEDURE RELATING TO EXAMINATION OF NOTICES FOR ASSIGNMENTS OF MARITIME MOBILE AND AERONAUTICAL RADIONAVIGATION SERVICES IN FREQUENCY BANDS 415 - 435, 435 - 495, 505 - 526.5, 1 606.5 - 1625, 1635 - 1 800, 2 045 - 2 160 kHz, SUBMITTED BY PARTIES TO THE AGREEMENT (REGIONAL AGREEMENT GE85-MM-R1) (SIMPLIFIED FLOWCHART)



PROCEDURE RELATING TO EXAMINATION OF NOTICES FOR ASSIGNMENTS OF THE FIXED AND LAND MOBILE SERVICES IN FREQUENCY BANDS 1606.5 - 1625 kHz, 1635 - 1800 kHz, SUBMITTED BY PARTIES TO THE AGREEMENT (REGIONAL AGREEMENT GE85-MM-R1) (SIMPLIFIED FLOWCHART)

