

# Broadcasting Assignment Plan RJ81

535 – 1605 kHz

Region 2

- **Features of RJ81 Agreement**
- **Modification to the RJ81 Plan**
- **Notification to the MIFR**
- **Introduction of digital sound**
- **List B in RJ81 Plan**



BR/TSD/BCD

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## Features of RJ81 Agreement

**RJ81 Agreement comprises:**

**rules of the use** of medium frequency spectrum 535 – 1605 kHz for sound broadcasting service in Region 2 including basic characteristics of stations and antennas as well as technical criteria for the application of the Agreement

**assignment plan** (frequency channel is assigned to a station in given location) containing assignments in List A and in List B; the Plan updated by Special Sections RJ81 is kept in BR's data base and its copy is included in biweekly BR IFIC for Terrestrial Services



# Broadcasting Assignment Plan RJ81

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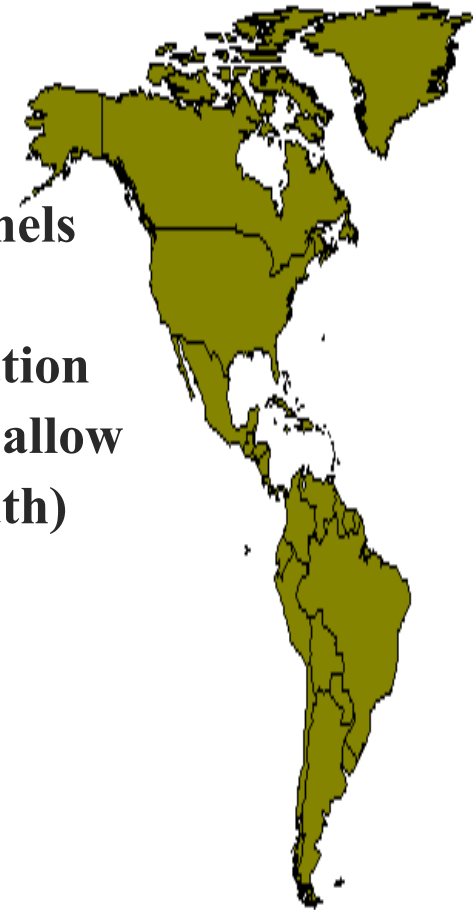
Region 2

## Features of RJ81 Agreement

Carrier frequencies: 540, 550, 560,...,1580, 1590, 1600 kHz  
**integer multiples of 10**, total 107 channels

Class of emission: A3E (double-sideband Amplitude Modulation  
with full carrier, agreed protection ratios allow  
operation with 20 kHz occupied bandwidth)

Protection ratio:	co-channel	26 dB
	1 <sup>st</sup> adjacent channel	0 dB
	2 <sup>nd</sup> adjacent channel	-29.5 dB



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## Features of RJ81 Agreement

Three classes of stations:

**Class A:** power  $\leq 100$  kW (Day),  $\leq 50$  kW (Night)  
covers extensive primary (ground wave) and secondary (sky wave) service area;

**Class B:** power  $\leq 50$  kW (Day and Night)  
covers over one or more population centers and contiguous rural areas in its primary service areas;

**Class C:** power  $\leq 1$  kW (Day in Noise Zone 1 and Night)  
 $\leq 5$  kW (Day in Noise Zone 2)  
covers over a city or town and contiguous suburban areas in its primary service areas.



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## Features of RJ81 Agreement

References for planning and technical examination:

**En**: (nominal usable field strength) agreed value of the minimum field strength required to provide satisfactory reception

**Protected contour**: set of points around a station where its ground or sky wave produces a field strength of **En**

**Protected value**: value in a protected contour point not to be exceeded by the interference, otherwise objectionable interference occurs and protected assignment is declared affected



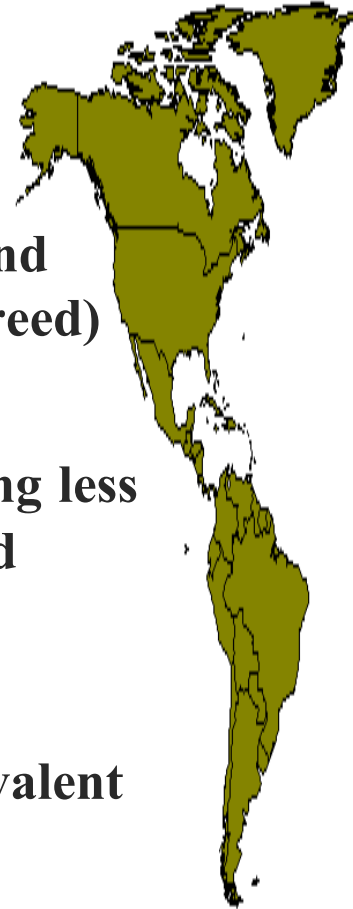
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## Modification to the RJ81 Plan

- 1 Publication in Part A of Special Section Rj81 of complete notified data, list of coordinated and affected administrations and expiry date for comments (following 60 days, no comment = agreed)**
- 2 If there are assignments already published in Part A and pending less than 180 days after, their mutual effect with respect to proposed modifications is examined and the results communicated**
- 3 For publication in Part B of Special Section RJ81 (what is equivalent to the entry into Plan) a separate request must be sent**



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## Notification to the MIFR

- An administration may propose to bring into use its assignment during five years following its entry into the Plan, by notifying to BR under Article 11 of RR

- BR publishes the complete data of notified assignment in **Part I of its BRIFIC**

- BR publishes in **Part II of its BRIFIC** the final characteristics of the relevant assignments and records (with favorable finding) it in the MIFR with date of recognition equal to the date of receipt of complete notification (in the case of minor modifications the previous date of recognition is maintained), if the notified data are in CONFORMITY with that of corresponding assignment recorded in the RJ81 Plan

- Otherwise, BR publishes in **Part III of its BRIFIC** the final characteristics of the relevant assignments with unfavorable finding and returns the notice



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## Introduction of digital sound

**Two systems - Digital Radio Mondiale (DRM) and In-Band On-Channel Digital Sound broadcasting (IBOC DSB) - are recommended for digital sound broadcasting in the broadcast bands below 3 MHz by recommendation ITU-R BS.1514-1**

**In Circular Letter CCRR/20 Radiocommunication Bureau concluded that the current formulations in the RJ81 Agreement do not provide for the possibility of introducing digital modulation in the bands concerned**

**In order to determine what changes if any to RJ81 are required to facilitate the introduction of digital sound broadcasting, the Question ITU-R 120/6 (2006) “Digital sound broadcasting in Region 2” has been adopted by Study Group 6E**





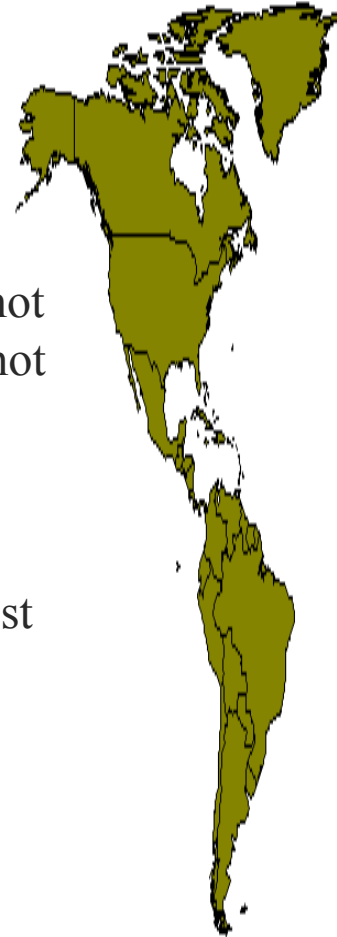
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## List B in RJ81 Plan (General Aspects)

1. No one new assignment can enter into List B in any case.
2. Assignment in List B can be modified via procedure of Article 4 but can not be transferred through it into List A even if after the modification it does not cause any affectations. Resolution 2 and Part A4 of Rules of Procedure provide regulations for transfer of an assignment from List B into List A.
3. Assignment in List B is protected in the same way as an assignment in List A except night-time co channel operation of class B and C stations for which the value of protected field strength is determined in point 11 of Annex 2 to Resolution 2.



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## List B in RJ81 Plan (General Aspects)

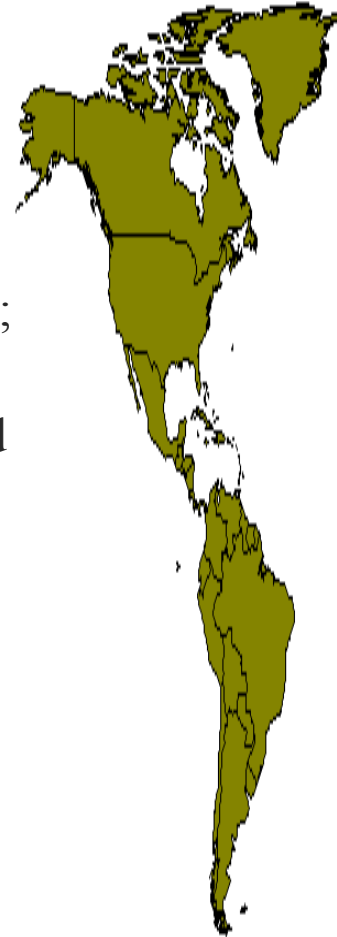
4. Practically there are four Lists in the RJ81 Plan:

**List A** contains assignments which cause and receive accepted affectations;

**List B** contains assignments which cause or receive at least one unaccepted affectation since the origin;

**List C** contains assignments from List A which are disregarded because of formal reason;

**List D** contains assignments from List B which are disregarded because of Resolution 4.



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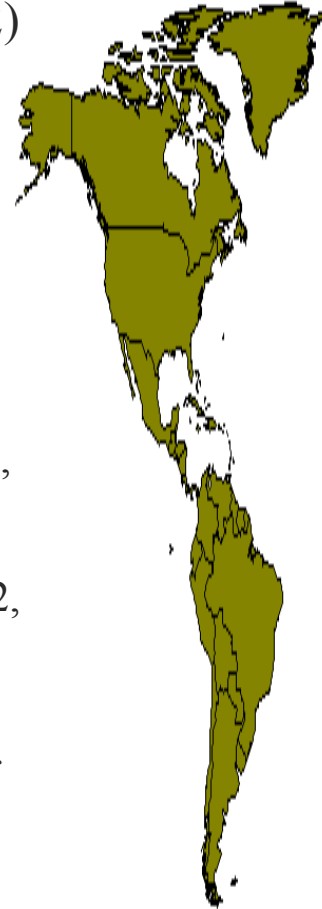
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## List B in RJ81 Plan (Transfer from List B to List A - Annex 2 to Res.2)

Assume that List B assignment x of adm. X receives affectations from List B assignments r1, r2 of adm. R1, R2, respectively, and causes affectations to List B assignments c1, c2 of adm. C1, C2, respectively.

1. Adm. X sends to BR a ‘notification of agreement’ (‘na’) of its assignment x /\* and MOD notification of x, if so agreed in ‘na’;
2. Adm. R1, R2 send to BR, if so agreed in ‘na’, MOD notifications of assignments r1, r2, respectively, with mention ‘Res.2’ in remark Column of notice form;
3. Adm. C1, C2 send to BR, if so agreed in ‘na’, MOD notifications of assignments c1, c2, respectively, with mention ‘Res.2’ in remark Column of notice form.

BR assesses the effect of the proposed modifications on the assignments in Lists A and B (all concerned MOD’s are assessed together and assignment x is examined as member of List A, consequently this assessment is different then that of Article 4 and that’s why a special mention ‘Res.2’ is required in the notice form).



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## List B in RJ81 Plan (Transfer to List A - Annex 2 to Resolution 2)

/\*

### ‘notification of agreement’

of List B assignment x of administration X contains Form M1 used during the Conference (or similar one) with:

- 1) information about all affectations caused and received by x;
- 2) signatures (accepting affectation caused by x) by the competent representatives of ALL adversely affected administrations;
- 3) the names of administrations which have agreed to modify the characteristics of their stations in order to resolve the incompatibilities.



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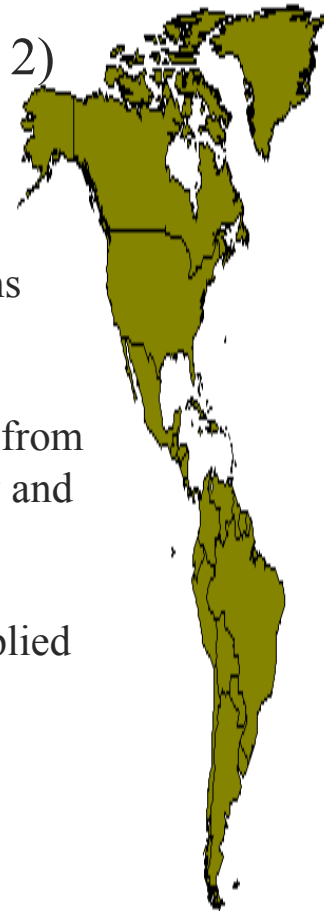
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## List B in RJ81 Plan (Transfer to List A - Annex 2 to Resolution 2)

BR publishes the results of assessment with names of adversely affected administrations in a special section RJ81 of its BRIFIC.

If BR receives no comment from any adversely affected administration within 60 days from the date of publication of relevant BRIFIC, then BR updates the RJ81 Plan accordingly and transfers assignment x from List B to List A.

Otherwise the procedure for the resolution of incompatibilities of assignment x is reapplied and negotiations resumed until a solution satisfactory to all parties is reached.



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## List B in RJ81 Plan (Transfer to List A – Rules of Procedure, Part A4)

After the completion of the Article 4 procedure, each List B assignment (with changed characteristics) is examined to assess the effect of changed characteristics with a view to possibly transferring the assignments from List B to List A.

This examination may show an **increase** or **decrease** in its nuisance field in relation to the other List B assignment(s) concerned.



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## List B in RJ81 Plan (Transfer to List A – Rules of Procedure, Part A4)

### Increase in the nuisance field

The fact that the assignment with changed characteristics has been able to enter the Plan indicates that agreement has been reached with, among others, administrations responsible for the affected List B assignments on the interferences caused to them. If the modified assignment was, initially, in List B only because its interference caused being unacceptable, it shall now be transferred to List A if the agreement for all the List B assignments concerned has been obtained through the Article 4 procedure. If there was also unaccepted interference received, the administration concerned shall be consulted before the assignment is transferred to List A.

### Decrease in the nuisance field

The modified assignment is examined to determine the improvement to all the List B assignments to which it caused unaccepted interference in the Plan of 1 January 1982. If this examination shows that, with the now modified characteristics, the List B assignments would not have been considered affected on 1 January 1982, the modified assignment shall be transferred to List A after consultation concerning received interference.

