

CEPT PROPOSALS FOR POTENTIAL WRC-18 AGENDA ITEMS

Subject	Improved Harmonisation of the 1.8MHz, 50MHz and 3.4GHz amateur allocations
Proposed by	Radio Society of Great Britain
Background/Reason	<ul style="list-style-type: none"> • Overdue revisions of Region-1 allocations to reflect current usage • Improved harmonisation and clarity within Region-1 • Consequential global harmonisation with Region-2/3 • Support continued innovation and growth by the amateur and amateur satellite service
Services potentially affected	See relevant notes and tables
Potential difficulties?	Based on existing usage/allocations where possible to minimise potential difficulties
Previous/ongoing studies on this issue?	

Pages give overview and provisional outline for

- Harmonisation of the 1800 – 2000kHz in Region 1 to align with Regions 2 and 3
- 50-52 MHz in Region-1 (also enabling a potential amateur satellite service allocation in Regions 1 and 3)
- Harmonisation of amateur microwave sub-bands – notably 3400-3410MHz in Region 1 with Regions 2 and 3

1.8 MHz Amateur Service Harmonisation

Increased harmonisation of 1800-2000kHz in Region 1 (inc a revision of RR 5.96) is sought to reflect existing use across 1800-2000 thus harmonise with Regions 2 and 3. Ideally this would extend the Region 1 Amateur Primary Allocation in the main table and delete the final sentence of RR5.96

Region 1	Region 2	Region 3
1 800-1 810 RADIOLOCATION 5.93	1 800-1 850 AMATEUR	1 800-2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIONAVIGATION Radiolocation
1 810-1 850 AMATEUR 5.98 5.99 5.100 5.101		
1 850-2 000 FIXED MOBILE except aeronautical mobile 5.92 5.96 5.103	1 850-2 000 AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION RADIONAVIGATION 5.102	5.97

5.93 *Additional allocation:* in Angola, Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Hungary, Kazakhstan, Latvia, Lithuania, Mongolia, Nigeria, Uzbekistan, Poland, Kyrgyzstan, Slovakia, Tajikistan, Chad, Turkmenistan and Ukraine, the bands 1 625-1 635 kHz, 1 800-1 810 kHz and 2 160-2 170 kHz are also allocated to the fixed and land mobile services on a primary basis, subject to agreement obtained under No. **9.21**. (WRC-12)

5.96 In Germany, Armenia, Austria, Azerbaijan, Belarus, Denmark, Estonia, the Russian Federation, Finland, Georgia, Hungary, Ireland, Iceland, Israel, Kazakhstan, Latvia, Liechtenstein, Lithuania, Malta, Moldova, Norway, Uzbekistan, Poland, Kyrgyzstan, Slovakia, the Czech Rep., the United Kingdom, Sweden, Switzerland, Tajikistan, Turkmenistan and Ukraine, **administrations may allocate up to 200 kHz to their amateur service in the bands 1 715-1 800 kHz and 1 850-2 000 kHz.** However, when allocating the bands within this range to their amateur service, administrations shall, after prior consultation with administrations of neighbouring countries, take such steps as may be necessary to prevent harmful interference from their amateur service to the fixed and mobile services of other countries. **The mean power of any amateur station shall not exceed 10 W.** (WRC-03)

5.97 In Region 3, the Loran system operates either on 1 850 kHz or 1 950 kHz, the bands occupied being 1 825-1 875 kHz and 1 925-1 975 kHz respectively. Other services to which the band 1 800-2 000 kHz is allocated may use any frequency therein on condition that no harmful interference is caused to the Loran system operating on 1 850 kHz or 1 950 kHz.

5.98 *Alternative allocation:* in Angola, Armenia, Azerbaijan, Belarus, Belgium, Cameroon, Congo (Rep. of the), Denmark, Egypt, Eritrea, Spain, Ethiopia, the Russian Federation, Georgia, Greece, Italy, Kazakhstan, Lebanon, Lithuania, the Syrian Arab Republic, Kyrgyzstan, Somalia, Tajikistan, Tunisia, Turkmenistan, Turkey and Ukraine, the band 1 810-1 830 kHz is allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)

5.99 *Additional allocation:* in Saudi Arabia, Austria, Iraq, Libya, Uzbekistan, Slovakia, Romania, Slovenia, Chad, and Togo, the band 1 810-1 830 kHz is also allocated to the fixed and mobile, except aeronautical mobile, services on a primary basis. (WRC-12)

5.100 In Region 1, the authorization to use the band 1 810-1 830 kHz by the amateur service in countries situated totally or partially north of 40° N shall be given only after consultation with the countries

mentioned in Nos. **5.98** and **5.99** to define the necessary steps to be taken to prevent harmful interference between amateur stations and stations of other services operating in accordance with Nos. **5.98** and **5.99**.

5.101 (SUP - WRC-12)

ECA Table (Feb 2013)

<i>RR Region 1 Allocation and RR footnotes applicable to CEPT</i>	<i>European Common Allocation</i>	<i>ECC/ERC harmonisation measure</i>	<i>Applications</i>	<i>European footnotes</i>
1800 - 1810 kHz				
RADIOLOCATION	RADIOLOCATION	ERC/REC 70-03	Inductive applications	
5.93	5.93		Radiodetermination applications	
1810 - 1850 kHz				
AMATEUR	AMATEUR		Amateur	
		ERC/REC 70-03	Inductive applications	
5.100	5.98 EU2			
5.98	5.100			
5.99				
1850 - 2000 kHz				
FIXED	FIXED		Amateur	
MOBILE except aeronautical mobile	MOBILE except aeronautical mobile		Defence systems	
		ERC/REC 70-03	Inductive applications	
5.103	5.96		Maritime communications	
5.92	5.103		Radiodetermination applications	
5.96				

50MHz Harmonisation.

The current ITU table is far from representative of the current services operating in Region-1 and in CEPT in particular - where the Amateur Service and Land Mobile have established 50-52 MHz allocations (and there is no longer a Broadcasting allocation).

The common CEPT allocation and Radio Regulation 5.169 which is gradually being expanded for amateur allocations in the African region together present a strong case for a harmonised Region 1 allocation which would then facilitate a wider harmonisation with Regions 2 & 3

ITU Table (WRC-12)

Region 1	Region 2	Region 3
47-68 BROADCASTING	47-50 FIXED MOBILE	47-50 FIXED MOBILE BROADCASTING 5.162A
5.169	50-54 AMATEUR 5.162A 5.166 5.167 5.167A 5.168 5.170	

5.162A *Additional allocation:* in Germany, Austria, Belgium, Bosnia and Herzegovina, China, Vatican, Denmark, Spain, Estonia, the Russian Federation, Finland, France, Ireland, Iceland, Italy, Latvia, The Former Yugoslav Republic of Macedonia, Liechtenstein, Lithuania, Luxembourg, Monaco, Montenegro, Norway, the Netherlands, Poland, Portugal, the Czech Rep., the United Kingdom, Serbia, Slovenia, Sweden and Switzerland the band 46-68 MHz is also allocated to the radiolocation service on a secondary basis. This use is limited to the operation of wind profiler radars in accordance with Resolution **217 (WRC-97)**. (WRC-12)

5.166 *Alternative allocation:* in New Zealand, the band 50-51 MHz is allocated to the fixed and mobile services on a primary basis; the band 53-54 MHz is allocated to the fixed and mobile services on a primary basis. (WRC-12)

5.167 *Alternative allocation:* in Bangladesh, Brunei Darussalam, India, Iran (Islamic Republic of), Pakistan, Singapore and Thailand, the band 50-54 MHz is allocated to the fixed, mobile and broadcasting services on a primary basis. (WRC-07)

5.167A *Additional allocation:* in Indonesia, the band 50-54 MHz is also allocated to the fixed, mobile and broadcasting services on a primary basis. (WRC-07)

5.168 *Additional allocation:* in Australia, China and the Dem. People's Rep. of Korea, the band 50-54 MHz is also allocated to the broadcasting service on a primary basis.

5.169 *Alternative allocation:* in Botswana, Lesotho, Malawi, Namibia, the Dem. Rep. of the Congo, Rwanda, South Africa, Swaziland, Zambia and Zimbabwe, the band 50-54 MHz is allocated to the amateur service on a primary basis. In Senegal, the band 50-51 MHz is allocated to the amateur service on a primary basis. (WRC-12)

Outline Requirement

A Region-1 allocation of 50-52MHz is sought for the Amateur Service with particular consideration for:-

- Priority for harmonised weak signal communications with Region-2 and Region-3 within the 50.0- 50.5MHz sub-band currently used for such purposes

In addition a harmonised global allocation for the Amateur Satellite Service is also sought within the 50-52MHz range to:-

- Provide a new optimum low-doppler communications capability and facilitate ionospheric research in conjunction with amateur service terrestrial beacons
- Bridge the very wide gap between 28MHz and 144MHz

Note: By 2018 TV Broadcasting in other parts of Region-1 within this frequency range is expected to decline further and we therefore consider that updates and harmonisation are long overdue

Harmonisation of sub-bands for some microwave bands

The increase of Mobile allocations particular for IMT and SRDs has resulted in increasingly severe restrictions on the amateur service in many countries in the 2.3, 2.4 and 3.4 GHz bands. In reviewing potential sub-bands where activity may be harmonised to provide greater certainty for both amateurs and other services **the sub-band 3400-3410 MHz presents itself as a strong candidate for a harmonised secondary allocation to the amateur and amateur satellite services in Region-1** based on:-

- Existing Region-2 and Region 3 amateur service allocations
- RR5.282 secondary allocation to the amateur satellite service in 3400-3410 in Regions 2/3
- ECA Table Footnote EU17 secondary allocation of 3400-3410 to the amateur service
- On-going incumbent use, including Radiolocation in 3400-3410

Region 1	Region 2	Region 3
3 400-3 600 FIXED FIXED-SATELLITE (space-to-Earth) Mobile 5.430A Radiolocation	3 400-3 500 FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile 5.431A Radiolocation 5.433 5.282	3 400-3 500 FIXED FIXED-SATELLITE (space-to-Earth) Amateur Mobile 5.432B Radiolocation 5.433 5.282 5.432 5.432A

5.282 In the bands 435-438 MHz, 1 260-1 270 MHz, 2 400-2 450 MHz, 3 400-3 410 MHz (in Regions 2 and 3 only) and 5 650-5 670 MHz, the amateur-satellite service may operate subject to not causing harmful interference to other services operating in accordance with the Table (see No. **5.43**). Administrations authorizing such use shall ensure that any harmful interference caused by emissions from a station in the amateur-satellite service is immediately eliminated in accordance with the provisions of No. **25.11**. The use of the bands 1 260-1 270 MHz and 5 650-5 670 MHz by the amateur-satellite service is limited to the Earth-to-space direction.

EU17: In the sub-bands **3400 - 3410 MHz**, 5660 - 5670 MHz, 10.36 - 10.37 GHz, 10.45 - 10.46 GHz the amateur service operates on a secondary basis. In making assignments to other services, CEPT administrations are requested wherever possible to maintain these sub-bands in such a way as to facilitate the reception of amateur emissions with minimal power flux densities.

Note: Whilst alternative substitute spectrum could in principle be potentially considered for such sub-bands, the above is currently believed to require the smallest changes to existing usage and allocations