



# International Amateur Radio Union Region 1

Europe, Middle East, Africa and Northern Asia

Founded 1950

## Committee C4 (HF Matters) Interim Meeting 20-21 April 2013 InterCity Hotel, Vienna

<b>SUBJECT</b>	Worldwide alignment of the 160 meter band		
<b>Society</b>	IARU-R1	<b>Country:</b>	IARU-R1
<b>Committee:</b>	C4	<b>Paper number:</b>	VIE13/C4/11
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### Worldwide alignment of the 160 meter band

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#### 1 Executive summary

TBD

#### 2 Introduction

The IARU Administrative Council, at its 2012 meeting in Vietnam, decided that a worldwide alignment of the 160 meter band should be high on our priority list. This document is meant for discussion and improvement at the 2013 interim meeting for Region 1 HF managers.

#### 3 Current situation

Critical to our success is to determine the “as-is” situation. The current situation is reflected in the ITU Radio Regulations, Regional Allocation Tables like the European Common allocation Table and National Allocation Tables. Annex A (160m-allocations in IARU R1 rev\_16 jan 2013) sums up the situation for countries within Region 1.

### 3.1 Radio Regulations 2012

Allocation to services		
Region 1	Region 2	Region 3
<b>1 635-1 800</b> FIXED MARITIME MOBILE 5.90 LAND MOBILE  5.92 5.96 <b>1 800-1 810</b> RADIOLOCATION 5.93	5.90	5.91 <b>1 800-2 000</b> AMATEUR FIXED MOBILE except aeronautical mobile RADIONAVIGATION Radiolocation
	<b>1 705-1 800</b> FIXED MOBILE RADIOLOCATION AERONAUTICAL RADIONAVIGATION  <b>1 800-1 850</b> AMATEUR	
<b>1 850-2 000</b> FIXED MOBILE except aeronautical mobile  5.92 5.96 5.103	<b>1 850-2 000</b> AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION RADIONAVIGATION  5.102	5.97

**5.92** Some countries of Region 1 use radiodetermination systems in the bands 1 606.5-1 625 kHz, 1 635-1 800 kHz, 1 850-2 160 kHz, 2 194-2 300 kHz, 2 502-2 850 kHz and 3 500-3 800 kHz, subject to agreement obtained under No. 9.21. The radiated mean power of these stations shall not exceed 50 W.

**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.

**5.102** *Alternative allocation:* in Bolivia, Chile, Mexico, Paraguay, Peru and Uruguay, the band 1 850-2 000 kHz is allocated to the fixed, mobile except aeronautical mobile, radiolocation and radionavigation services on a primary basis. (WRC-07)

**5.103** In Region 1, in making assignments to stations in the fixed and mobile services in the bands 1 850-2 045 kHz, 2 194-2 498 kHz, 2 502-2 625 kHz and 2 650-2 850 kHz, administrations should bear in mind the special requirements of the maritime mobile service.

### 3.2 European Allocation Table

Freq Range	RR	ECA	EU harmoni- sation	Application	Notes
1635-1800 kHz	FX, LM, MM 5.90 5.92 5.96	FX, LM, MM 5.90 5.96		Defence systems	
			ERC/REC 70-03	Inductive applications	Within the band 148.5 kHz – 30 MHz
				Maritime Radio Determination Applications	Frequency Assignment plan GE85
1800 - 1810 kHz	RL 5.93	RL 5.93	ERC/REC 70-03	Inductive applications	Within the band 148.5 kHz – 30 MHz
				Radio Determination Applications	
1810 – 1850 kHz	AM 5.00 5.98 5.99	AM 5.98 5.100 EU2	ERC/REC 70-03	Inductive applications	Within the band 148.5 kHz – 30 MHz
				Amateur	
1850 - 2000 kHz	FX Meam 5.103 5.92 5.96	FX Meam 5.96 5.103		Amateur	
				Defence Systems	
			ERC/REC 70-03	Inductive applications	Within the band 148.5 kHz – 30 MHz
				Maritime Radio Determination Applications	

EU2 Civil Military sharing

## 4 Justification

Some thoughts. This paragraph needs to be worked on

- [world wide alignment]
- [Look at the use of 1 800 – 1 810 kHz]
- [Look at the use of 1 850 – 2 000 kHz]

## 5 Desired situation

The desired situation will be reflected in the ITU Radio Regulations. [WRC-2015 to decide on an Agenda Item for WRC-2018]. Note that there will be several options to satisfy our requirements.

### 5.1 Option 1

<b>Allocation to services</b>		
<b>Region 1</b>	<b>Region 2</b>	<b>Region 3</b>
<b>1 800-1 850</b> AMATEUR	<b>1 800-1 850</b> AMATEUR	<b>1 800-1 850</b> AMATEUR FIXED MOBILE except aeronautical mobile RADIONAVIGATION Radiolocation
<b>1 850-2 000</b> AMATEUR FIXED MOBILE except aeronautical mobile RADIOLOCATION RADIONAVIGATION		

### 5.2 Other options

TBD

## **6 Transition from current to desired situation**

### **6.1 National allocations**

Member Societies are requested to approach their national administration in order to

- Align with current Radio Regulations and ensure a primary allocation to the amateur service in the band 1 810 – 1 850 kHz;
- Relax existing power limitations;
- Remove country names from footnote 5.98. 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;
- Remove country names from footnote 5.99. 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;
- Work on amateur privileges in the segment 1 850 – 2 000 kHz, with footnote 5.96 in mind. 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, avoiding the power limitation.

### **6.2 CEPT**

- Work on a ECC Recommendation (through WGFM)
- Propose a change to the European Allocation Table

### **6.3 ATU**

TBD

### **6.4 ASMG**

no actions are foreseen

### **6.5 RCC**

no actions are foreseen

### **6.6 Proposal of AI for WRC-18**

TBD. A proposal for WRC Agenda Items must come from an administration.

## **7 Required actions**

### **7.1 IARU Region 1**

#### **7.1.1 IARU Region 1 EC/ERC**

- Propose an ECC Recommendation to WGFM
- Propose a change to the European Allocation Table

#### **7.1.2 IARU Region 1 HF Manager**

Update 160m-allocations in IARU R1 rev\_16 jan 2013

#### **7.1.3 IARU Region 1 Monitoring System**

[Monitoring campaign TBD]

#### **7.1.4 IARU Region 1 Member Societies**

- Check 160m-allocations in IARU R1 rev\_16 jan 2013
- Report discrepancies and changes to DK4VW

### **7.2 IARU IS**

Monitor actions taken by Region 1 and provide comments where appropriate and ensure support when necessary

### **7.3 IARU Region 2**

- Monitor actions taken by Region 1 and provide comments where appropriate and ensure support if necessary
- Work on the removal of country names from footnote 5.102. In Bolivia, Chile, Mexico, Paraguay, Peru and Uruguay, the band 1 850-2 000 kHz is allocated to the fixed, mobile except aeronautical mobile, radiolocation and radionavigation services on a primary basis.

### **7.4 IARU Region 3**

Monitor actions taken by Region 1 and provide comments where appropriate and ensure support if necessary

## ANNEX A

**160 Metre Band in IARU Region 1**

rev 16 jan 2013

pse changes or additions to dk4vw@dar.c.de

	Frequencies	National Listing	CEPT T/R 61-01	Usage	Modes	Remarks
<b>Andorra URA</b>	1810-1850 1850-2000					General licence <b>ONLY</b> during international contests
<b>Austria OEVSV</b>	1810-1830 1830-1840 1830-1840 1840-1850 1840-1850 1850-1950		100 Watts 200 Watts 100 Watts 200 Watts 100 Watts 100 Watts	Secondary Secondary Secondary Secondary Secondary Secondary	A1A, A1B A1A, A1B A1A, A1B A1A, A1B, J3E A1A, A1B, J3E A1A, A1B, J3E	CEPT+CEPT Novice Lic. CEPT CEPT Novice Licence CEPT CEPT Novice Licence CEPT + CEPT Novice Lic.
<b>Bahrain ARAB</b>	1810-1850 1850-2000		1500 Watts 1500 Watts	Primary Secondary		
<b>Belarus BFRR</b>	1810-1840 1840-1930	10 Watts 10 Watts	N/A N/A		CW SSB	1 kW may be used for contests with special permission
<b>Belgium UBA</b>	1810-1850 1850-1875		150 Watts* 10 Watts			* 1kW when you inform the B.I.P.T. of using high power (up to 1kW) on HF.
<b>Bosnia Hercegovina ARABiH</b>	1810-1850 1850-2000			Primary Primary		
<b>Bulgaria BFRA</b>	1810-1830 1830-1850		100 Watts 100 Watts	Secondary Primary	CW, SSB CW, SSB	
<b>Croatia HRS</b>	1810-1900		1000 Watts	Secondary	CW, SSB	
<b>Cyprus CARS</b>	1810-1850 1850-2000		400 Watts 400 Watts	Primary Secondary		Available on the basis of non-interference to other services
<b>Czech Republic CRC</b>	1810-1850  1830-2000 1850-1890 1890-2000		750 Watts*  10 Watts 75 Watts 10 Watts	Primary		*During international contests Class A operators may use 1.5 kW out in urban and 3 kw out in rural areas. Novice Licence
<b>Denmark EDR</b>	1810-1850 1850-1900		1000 Watts 10 Watts	Primary Secondary		

	1930-2000		10 Watts	Secondary		
<b>Estonia</b>	1810-1850		1000 Watts	Primary		
	1850-1955		1000 Watts	Secondary		
<b>Faroe Islands FRA</b>	1810-1850		1000 Watts	Primary		As part of Danish adm.
	1850-1900		10 Watts	Secondary		
	1930-2000		10 Watts	Secondary		
<b>Finland SRAL</b>	1810-1850		1500 Watts*	Primary		* Basic Class 120 Watts
	1850-1855		15 Watts	Primary		Avoids Mariehamn Radio
	1861-1906		15 Watts	Primary		allocations on
	1912-2000		15 Watts	Primary		1858 kHz and 1909 kHz
<b>France REF</b>	1810-1830		500 Watts	Primary		
	1830-1850		500 Watts	Primary		
<b>Germany DARC</b>	1810-1850		750 Watts	Primary		
	1850-1890		75 Watts	Secondary		<b>No Contests</b>
	1890-2000		10 Watts	Secondary		<b>No Contests</b>
<b>Georgia NARG</b>	1810-1838			Primary	CW	
	1838-1840			Primary	Digi (no Packet), CW	
	1840-1850			Primary	Digi (no Packet), CW, SSB	
	1850-2000			Secondary	CW, SSB	
	1810-2000		1000 Watts		Class "E" + Class "A"	
	1810-2000		500 Watts		Class "B"	
	1810-2000		100 Watts		Class "C"	
<b>Greece RAAG</b>	1810-1850		500 Watts	Primary		
<b>Hungary MRASZ</b>	1810-1838		1500 Watts	Primary	200 Hz BW – CW only	
	1810-1838	10 Watts		Primary	200 Hz BW – CW only	Novice Licence
	1838-1840		1500 Watts	Primary	500 Hz BW – CW & digital	
	1838-1840	10 Watts		Primary	500 Hz BW – CW & digital	Novice Licence
	1840-1843		1500 Watts	Primary	2.7 kHz – All modes	
	1840-1843	10 Watts		Primary	2.7 kHz – All modes	Novice Licence
	1843-1850		1500 Watts	Primary	2.7 kHz – CW & SSB	
	1843-1850	10 Watts		Primary	2.7 kHz – CW & SSB	Novice Licence
	1850-2000		10 Watts	Secondary	10 Watts – CW & SSB	
<b>Iceland IRA</b>	1810-1850		1000 Watts	Primary		
	1900-2000		10 Watts	Secondary		
<b>Ireland IRTS</b>	1810-1850		400 Watts	Primary	All modes except SSTV	
	1850-2000		10 Watts	Primary	All modes except SSTV	
<b>Israel IARC</b>	1810-1850		1500 Warrts	Primary	CW, SSB, Digital, Image	Advanced class
	1810-1850		250 Watts	Primary	CW, SSB, Digital, Image	General class
	1810-2000		40 Watts	Secondary	CW, SSB, RTTY	Advanced & General class on N.I.B



<b>Jordan</b> <b>RJARS</b>	1810-2000					
<b>Kuwait</b> <b>KARS</b>	1810-1850		1500 Watts			
<b>Latvia</b> <b>LRAL</b>	1810-1850		1000 Watts	Primary		Class A only
	1850-2000		10 Watts	Secondary		Class A only
<b>Lebanon</b> <b>RAL</b>	1810-2000	100 W	N/A			
	1810-2000	100 W	N/A			
<b>Lithuania</b> <b>LRMD</b>	1810-1850		1000 Watts	Primary		Class A
	1850-2000		10 Watts	Secondary		Class A
<b>Luxemburg</b> <b>RL</b>	1810-1838		1000 Watts		CW	
	1838-1840		1000 Watts		CW, Digital Modes	no packet
	1840-1843		1000 Watts		Digital Modes	no packet
	1843-2000		1000 Watts		Phone (CW)	
	1810-1830			Secondary		
	1830-1850			Primary		
	1850-2000			Secondary		
<b>Malta</b> <b>MARL</b>	1810 - 1850		10 Watts	Primary		
	1850 - 2000		10 Watts	Secondary		
<b>Moldova</b> <b>ARM</b>	1810-1840	10 Watts	N/A		CW	
	1840-2000	10 Watts	N/A		SSB	
<b>Monaco</b> <b>ARM</b>	1810-1850			Primary		
	1850-2000			Secondary		
<b>Montenegro</b> <b>MARP</b>						
<b>Netherlands</b> <b>VERON</b>	1810-1850		400 Watts	Primary		
	1850-1880		400 Watts	Secondary		
<b>Norway</b> <b>NRRL</b>	1810-1850		1000 Watts	Primary		
	1850-2000		10 Watts	Secondary		
<b>Poland</b> <b>PZK</b>	1810-1850		500 Watts	Primary		
	1850-2000		10 Watts	Secondary		
<b>Portugal</b> <b>REP</b>	1830-1850		1500 Watts	Primary		Soon to be changed to 1810 - 1850 kHz
<b>Qatar</b> <b>QARS</b>						
<b>Romania</b> <b>FRR</b>						
<b>Russia</b>	1810-1840	10 Watts	N/A	Secondary	CW	

<b>SRR</b>	1840-1843	10 Watts	N/A	Secondary	Digital, SSB	
	1843-1900	10 Watts	N/A	Secondary	CW, SSB	
	1900-2000	10 Watts	N/A	Secondary	AM, CW, SSB	
<b>Serbia</b>	1810-1838		300 Watts		CW	
<b>SRS</b>	1838-1840		300 Watts		Digimode, CW	no packet
	1840-1842		300 Watts		Digimode, Phone, CW	no packet
	1842-2000		300 Watts		Phone, CW	
<b>Slovenia</b> <b>ZRS</b>	1810-1838		300 Watts	Primary	200Hz BW, CW only	
	1838-1840		300 Watts	Primary	500Hz BW, CW, digital	
	1840-1842		300 Watts	Primary	2.7 kHz BW, CW, digital	
	1842-1850		300 Watts	Primary	2.7 kHz BW, CW, SSB	
	1850-2000		300 Watts	Secondary	2.7 kHz BW, CW, SSB	
<b>Slovakia</b> <b>SARA</b>	1810-1850		750 Watts			in Contests 1500 Watts
	1850-2000		10 Watts			
<b>Syria</b> <b>SSTARS</b>	1810-1950					
<b>Spain</b> <b>URE</b>	1830-1850		50 W carrier	Primary		
	1850-2000			Secondary	or 200 Watts PEP only during major specific contests	
<b>South Africa</b> <b>SARL</b>	1810-1850		400 Watts	Primary		
<b>Sweden</b> <b>SSA</b>	1810-1850		1000 Watts			
	1850-2000		10 Watts			
<b>Turkey</b> <b>TRAC</b>	1810-1840		30 Watts	Primary		SSB between only
	1840-1850		30 Watts	Secondary		1832 - 1836 kHz
<b>UKRAINE</b> <b>UARL</b>	1810-1840			Secondary	CW	
	1840-1850			Secondary	SSB, CW	
	1838-1842			Secondary	Digimodes	
	1850-1900			Secondary	SSB, CW	
	1900-2000			Secondary	SSB, CW, AM	
			10 Watts*			1st category - 1 kW by special request for contests
			5 Watts**			2nd + 3rd + novice category
						* 200 W expected
						** 100 W expected
<b>United Kingdom</b> <b>RSGB</b>	1810-1850		400 Watts	Primary		Available on the basis
	1850-2000		32 Watts	Secondary		non-interference to other services.
<b>Zimbabwe</b> <b>ZARS</b>	1810 - 1850		400 Watts PEP	Primary	All Modes	Full Licence
	1810 - 1850		10 Watts PEP	Primary	All Modes	Novice Licence

