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# Handbook on Radio Frequency Spectrum Requirements for Civil Aviation

Volume II - Frequency assignment planning criteria for  
aeronautical radio communication and navigation systems (ICAO Doc 9718, Volume II)

## (3) Use of Frequencies

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**Prepared by**

Loftur Jónasson ICAO/HQ  
Mie Utsunomiya ICAO/HQ  
Fabiola Chouha ICAO/HQ  
Robert Witzen



## Use of frequencies

# Allotment of frequencies

Annex 10 Vol V includes an allotment plan for national and for international/national use

In order to achieve international protection from harmful interference, **ALL** frequency assignments in the band 117.975 – 137 MHz need to be coordinated through the ICAO Regional Office

Table 4-1. Allotment table

	<i>Block allotment frequencies (MHz)</i>	<i>Worldwide utilization</i>	<i>Remarks</i>
a)	118.000 – 121.450 inclusive	International and National Aeronautical Mobile Services	Specific international allotments will be determined in the light of regional agreement. National assignments are covered by the provisions in 4.1.4.8 and 4.1.4.9.
b)	121.500	Emergency frequency	See 4.1.3.1. In order to provide a guard band for the protection of the aeronautical emergency frequency, the nearest assignable frequencies on either side of 121.500 MHz are 121.450 MHz and 121.550 MHz.
c)	121.550 – 121.9917 inclusive	International and National Aerodrome Surface Communications	Reserved for ground movement, pre-flight checking, air traffic services clearances, and associated operations.
d)	122.000 – 123.050 inclusive	National Aeronautical Mobile Services	Reserved for national allotments. National assignments are covered by the provisions of 4.1.4.8 and 4.1.4.9.
e)	123.100	Auxiliary frequency SAR	See 4.1.3.4. In order to provide a guard band for the protection of the aeronautical auxiliary frequency, the nearest assignable frequencies on either side of 123.100 MHz are 123.050 MHz and 123.150 MHz.
f)	123.150 – 123.6917 inclusive	National Aeronautical Mobile Services	Reserved for national allotments, with the exception of 123.450 MHz which is also used as an air-to-air communications channel (see g)). National assignments are covered by the provisions of 4.1.4.8 and 4.1.4.9.
g)	123.450	Air-to-air communications	Designated for use as provided for in 4.1.3.2.
h)	123.700 – 129.6917 inclusive	International and National Aeronautical Mobile Services	Specific international allotments will be determined in light of regional agreement. National assignments are covered by the provisions in 4.1.4.8 and 4.1.4.9.
i)	129.700 – 130.8917 inclusive	National Aeronautical Mobile Services	Reserved for national allotments but may be used in whole or in part, subject to regional agreement, to meet the requirements mentioned in 4.1.6.1.3.
j)	130.900 – 136.875 inclusive	International and National Aeronautical Mobile Services	Specific international allotments will be determined in light of regional agreement. National assignments are covered by the provisions in 4.1.4.8 and 4.1.4.9.
k)	136.900 – 136.975 inclusive	International and National Aeronautical Mobile Services	Reserved for VHF air-ground data link communications.



## Use of frequencies Special frequencies

- Special frequencies identified in Annex 10:
  - 121.500 MHz; aeronautical emergency frequency
  - 123.100 MHz[ auxiliary frequency (SAR)
  - 123.450 MHz: Air-to-air frequency
- These frequencies, including any appropriate guard band, are not assignable with Frequency Finder but may be entered in the COM list 3 without a compatibility test being required. Registration of assignments on these frequencies with ICAO is not necessary.
- Some Regions have allotted special frequencies for harmonized use throughout the Region.



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## Use of frequencies Special frequencies VDL

- The band 136.500 – 136.975 MHz is only available for facilities with 25 kHz channel spacing.
- It is preferred that frequency assignments for VDL will be made in this band
- It is proposed that on a Regional basis, all Regions allot the band 136.5 – 136.975 MHz for VDL (VDL Mode 2 and VDL Mode 4)



## Use of frequencies

### Regional Frequency Allotment Plans

- Each Region has developed a frequency allotment plan where sub-bands in the band 117.975 - 137 MHz have been allotted to specific air-ground communication services
- Review of the allotment plan may increase the amount of spectrum that can be used for ATC Services
  - Current sub-bands that are not allotted
  - Band that is currently allotted for AOC

while protecting any frequency assignment that has already been incorporated in the COM list 3)

### VHF COM Frequency Allotment Plan for MID (Re. MID ANP)

	116.000	116.100	116.200	116.300	116.400	116.500	116.600	116.700	116.800	116.900	117.000	117.100	117.200	117.300	117.400	117.500	117.600	117.700	117.800	117.900	118.000	118.100	118.200	118.300	118.400	118.500	118.600	118.700	118.800	118.900	119.000	119.100	119.200	119.300	119.400	119.500	119.600	119.700	119.800	119.900	120.000	120.100	120.200	120.300	120.400	120.500	120.600	120.700	120.800	120.900	121.000	121.100	121.200	121.300	121.400	121.500	121.600	121.700	121.800	121.900	122.000	122.100	122.200	122.300	122.400	122.500	122.600	122.700	122.800	122.900	123.000	123.100	123.200	123.300	123.400	123.500	123.600	123.700	123.800	123.900	124.000	124.100	124.200	124.300	124.400	124.500	124.600	124.700	124.800	124.900	125.000	125.100	125.200	125.300	125.400	125.500	125.600	125.700	125.800	125.900	126.000	126.100	126.200	126.300	126.400	126.500	126.600	126.700	126.800	126.900	127.000	127.100	127.200	127.300	127.400	127.500	127.600	127.700	127.800	127.900	128.000	128.100	128.200	128.300	128.400	128.500	128.600	128.700	128.800	128.900	129.000	129.100	129.200	129.300	129.400	129.500	129.600	129.700	129.800	129.900	130.000	130.100	130.200	130.300	130.400	130.500	130.600	130.700	130.800	130.900	131.000	131.100	131.200	131.300	131.400	131.500	131.600	131.700	131.800	131.900	132.000	132.100	132.200	132.300	132.400	132.500	132.600	132.700	132.800	132.900	133.000	133.100	133.200	133.300	133.400	133.500	133.600	133.700	133.800	133.900	134.000	134.100	134.200	134.300	134.400	134.500	134.600	134.700	134.800	134.900	135.000	135.100	135.200	135.300	135.400	135.500	135.600	135.700	135.800	135.900	136.000	136.100	136.200	136.300	136.400	136.500	136.600	136.700	136.800	136.900	137.000	137.100	137.200	137.300	137.400	137.500	137.600	137.700	137.800	137.900	138.000	138.100	138.200	138.300	138.400	138.500	138.600	138.700	138.800	138.900	139.000	139.100	139.200	139.300	139.400	139.500	139.600	139.700	139.800	139.900	140.000	140.100	140.200	140.300	140.400	140.500	140.600	140.700	140.800	140.900	141.000	141.100	141.200	141.300	141.400	141.500	141.600	141.700	141.800	141.900	142.000	142.100	142.200	142.300	142.400	142.500	142.600	142.700	142.800	142.900	143.000	143.100	143.200	143.300	143.400	143.500	143.600	143.700	143.800	143.900	144.000	144.100	144.200	144.300	144.400	144.500	144.600	144.700	144.800	144.900	145.000	145.100	145.200	145.300	145.400	145.500	145.600	145.700	145.800	145.900	146.000	146.100	146.200	146.300	146.400	146.500	146.600	146.700	146.800	146.900	147.000	147.100	147.200	147.300	147.400	147.500	147.600	147.700	147.800	147.900	148.000	148.100	148.200	148.300	148.400	148.500	148.600	148.700	148.800	148.900	149.000	149.100	149.200	149.300	149.400	149.500	149.600	149.700	149.800	149.900	150.000	150.100	150.200	150.300	150.400	150.500	150.600	150.700	150.800	150.900	151.000	151.100	151.200	151.300	151.400	151.500	151.600	151.700	151.800	151.900	152.000	152.100	152.200	152.300	152.400	152.500	152.600	152.700	152.800	152.900	153.000	153.100	153.200	153.300	153.400	153.500	153.600	153.700	153.800	153.900	154.000	154.100	154.200	154.300	154.400	154.500	154.600	154.700	154.800	154.900	155.000	155.100	155.200	155.300	155.400	155.500	155.600	155.700	155.800	155.900	156.000	156.100	156.200	156.300	156.400	156.500	156.600	156.700	156.800	156.900	157.000	157.100	157.200	157.300	157.400	157.500	157.600	157.700	157.800	157.900	158.000	158.100	158.200	158.300	158.400	158.500	158.600	158.700	158.800	158.900	159.000	159.100	159.200	159.300	159.400	159.500	159.600	159.700	159.800	159.900	160.000	160.100	160.200	160.300	160.400	160.500	160.600	160.700	160.800	160.900	161.000	161.100	161.200	161.300	161.400	161.500	161.600	161.700	161.800	161.900	162.000	162.100	162.200	162.300	162.400	162.500	162.600	162.700	162.800	162.900	163.000	163.100	163.200	163.300	163.400	163.500	163.600	163.700	163.800	163.900	164.000	164.100	164.200	164.300	164.400	164.500	164.600	164.700	164.800	164.900
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## Use of frequencies Uniform values for DOC

- A table with uniform values for the DOC of specific Services has been developed and has been in use for many years.
  - E.g. standard DOC for TWR is 25/40 (25 NM, 4000ft)
- Frequency Finder provides the option to “tailor” the actual DOC to the minimum DOC that is operationally required. Such use may be more frequency efficient.
- A review of the uniform values may be considered in particular with regard to the difference between the uniform values used in the EUR Region and in other Regions



## Use of frequencies

### Frequency coordination

- Frequency coordination takes place between States and the Regional Office. States can submit their frequency requirements to the Regional Office in any format (letter, email etc.)
- Pre-coordination of new or modified frequency assignments between States is encouraged but not required
- The relevant Regional Office updates the (global) COM list 3
- Inter-regional coordination takes place between the Regional Offices
- Current coordination methods are not being changed
- States can submit their requirements to the Regional Office, using the **- - Export submissions -** button in Frequency Finder.

This will generate an Excel file that should then be emailed to the Regional Office.



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***QUESTIONS?***