Bundesnetzagentur

Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railways

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SSB SE 025

Interface specification for for VHF radio equipment in maritime radio (excluding AIS)

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Notified in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services (OJ L 241, 17/9/2015, p. 1).

This interface specification has 13 pages.

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1 General

Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 (OJ L 153/62) on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC was transposed in the Federal Republic of Germany by the Act on the making available of radio equipment on the market (Funkanlagengesetz [Radio Equipment Act] – FuAG) of 27 June 2017 (BGBl. [Federal Law Gazette] I No 42, p. 1947), last amended by Article 1 of the Act of 14 May 2024 (BGBl. I No. 148).

Pursuant to § 33(1) FuAG, the Federal Network Agency shall provide specific and appropriate specifications of the radio interfaces as regards radio equipment operated in frequency bands for which the conditions of use are not harmonised throughout the Community.

This interface specification (SSB) contains information necessary to enable the manufacturer to carry out the relevant tests in relation to the essential requirements applicable to the relevant radio equipment in accordance with the provisions of FuAG Section 4(2) and, where applicable, Section 4(3).

Furthermore, radio equipment must be designed in such a way that other basic requirements under § 4(1)(1) and (2) FuAG are observed.

For the commissioning and operation of radio equipment, the provisions concerning frequency allocation, in particular those contained in Part 6 of the Telecommunications Act (TKG) of 23 June 2021 (BGBl. I No 35, p. 1858), last amended on 30 July 2025 by Article 1 of the Act of 24 July 2025 (BGBl. I No 181), remain unaffected.

In addition, maritime regulations must still be observed with regard to radio equipment on ships.

The Federal Network Agency shall order the enactment of the interface specification in its Official Gazette and publish its reference therein; only the German edition is binding.

2 Single Market clause

Goods lawfully marketed in another Member State of the European Union or in Turkey, or originating and lawfully marketed in an EFTA State that is a contracting party to the Agreement on the European Economic Area, are deemed to be compatible with this measure. The application of [this measure] is subject to Regulation (EU) 2019/515 of 19 March 2019 on the mutual recognition of goods lawfully marketed in another Member State from 19 April 2020.

3 Scope of application

This interface description outlines the essential requirements pursuant to FuAG § 4(2) concerning VHF in maritime radio equipment (excluding Automatic Identification System (AIS)).

Radio transmitters within the meaning of this interface specification are to be used for their intended purpose and operated in accordance with the manufacturer's instructions. Directive 2014/53/EU requires manufacturers to provide radio equipment users with appropriate information to enable them to operate the radio equipment as intended and in accordance with the provisions of said Directive. This information shall also include suitable instructions on cabling and antenna types to be used in conjunction with the radio equipment.

This interface specification replaces SSB SE 018, September 2013 edition, notified under 2013/0623/D.

4 Documents

The following cited documents are necessary for the application of this document. For dated references, only the referenced edition of the document shall apply. For undated references, the most recent edition of the referenced document (including any amendments) shall apply.

Presumption of conformity may be based solely on versions of harmonised European standards that are included in the current list of harmonised standards within the framework of Directive 2014/53/EU and have been published by the European Commission in the Official Journal of the EU.

- Frequency plan in accordance with the Telecommunications Act (TKG) on the distribution of the frequency range from 0 kHz to 3000 GHz among spectrum usages and on the definitions for such use
  Published by the Federal Network Agency
- GASV - Ordinance for the determination of further essential requirements for equipment and for the determination of equivalences of national interfaces and device class identifiers in the field of radio equipment and telecommunications terminal equipment (Grundlegende Anforderungen- und Schnittstellen-Verordnung, GASV [Basic Requirements and Interface Ordinance]) of 08.01.2002, (Federal Law Gazette I p. 398 from 11.01.2002), last amended by Article 1 of the Ordinance of 31 March 2014 (Federal Law Gazette I p. 313)
- Administrative Order 52/2023, General allocation of frequencies for mobile radio applications for maritime and inland waterway radio telephone services; Official Gazette of the Federal Network Agency No 10 of 24.05.2023
- Radio Regulations[1] (VO Funk),
  International Telecommunication Union (ITU), Geneva
  (Règlement des radiocommunications, Union internationale des télécommunications (UIT), Geneva)
- ITU-R M. 489
  Technical characteristics of VHF radio telephone equipment operating in the maritime mobile service in channels separated by 25 kHz
- ITU-R M. 493
  Digital selective calling system for use in the maritime mobile service

[1] The Radio Regulations are available in Arabic, Chinese, English, French, Russian and Spanish. In all cases of dispute or doubt, the French text shall prevail.

- ITU-R M. 541
  Operational procedures for the use of digital selective calling equipment in the maritime mobile service
- ITU-R M.1084
  Interim solutions for improved efficiency in the use of the band 156-174 MHz by stations in the maritime mobile service
- ETSI EN 300 338
  Technical characteristics and methods of measurement for equipment for generation, transmission and reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and/or VHF mobile service
  - 1: Common requirements,
  - 2: Class A DSC
  - 3: Class D DSC
  - 4: Class E DSC
  - 5: Handheld VHF Class H DSC
  - 6: Class M DSC
  - 7: Implementation of Bridge Alert Management (BAM) in DSC radio equipment
  - 8: Enabling DSC radio equipment with remote control capabilities
- ETSI EN 301 025
  VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC);
  Harmonised Standard for access to radio spectrum and for features for emergency services
- ETSI EN 301 033
  Electromagnetic compatibility and Radio spectrum Matters (ERM); Technical characteristics and methods of measurement for shipborne watchkeeping receivers for reception of Digital Selective Calling (DSC) in the maritime MF, MF/HF and VHF bands
- ETSI EN 301 178
  Portable Very High Frequency (VHF) radiotelephone equipment for the maritime mobile service operating in the VHF bands (for non-GMDSS applications only);
  Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
- ETSI EN 301 925
  Radiotelephone transmitters and receivers for the maritime mobile service operating in VHF bands;
  Technical characteristics and methods of measurement
- ETSI EN 302 885
  Portable Very High Frequency (VHF) radiotelephone equipment for the maritime mobile service operating in the VHF bands with integrated handheld class H DSC;
  Harmonised Standard covering the essential requirements of articles 3.2 and 3.3(g) of Directive 2014/53/EU
- ETSI EN 303 132
  Maritime low power VHF personal locating beacons employing Digital Selective Calling (DSC);
  Harmonised Standard covering the essential requirements of Article 3.2 of Directive 2014/53/EU
- CEPT ECC Decision (19)03
  Harmonised usage of the channels of the Radio Regulations Appendix 18 (transmitting frequencies in the VHF maritime mobile band)
- CEPT/ERC/REC 74-01
  Unwanted Emissions in the Spurious Domain

5 Technical interface requirements

This interface specification system contains the technical interface requirements for VHF maritime radio equipment (excluding AIS) for the following radio stations:

Table 1: Maritime radio stations: 156.0125 – 156.4875 MHz, 156.5625 – 156.7625 MHz

Table 2: Maritime radio stations: 156.7625 – 156.8375 MHz (emergencies and phone calls)

Table 3: Maritime radio stations: 156.8375 – 157.4375 MHz, 160.6125 – 160.9625 MHz, 161.7875 – 161.9625 MHz, 161.9875 – 162.0125 MHz

Table 4 Maritime radio stations: 156.4875 – 156.5625 MHz (K10, K70 and K11, Emergency and call via DSC)

Table 5: Air radio stations: 156.2875 – 156.3125 MHz, 156.3626 – 156.3875 MHz, 156.4375 – 156.4625 MHz, 156.6125 – 156.6375 MHz, 156.6625 – 156.6875 MHz

Table 6: Air radio stations: 156.4875 – 156.5125 MHz, 156.5125 – 156.5375 MHz (K10 and K70 Emergency and call via DSC)

Table 7: Air radio stations: 156.7875 – 156.8125 MHz (K16, emergency and call)

Table 1: Maritime radio stations: 156.0125 – 156.4875 MHz, 156.5625 – 156.7625 MHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MOBILE RADIO SERVICE excluding aeronautical mobile service (R)	
	2	Intended use/application *(Application)*	Fixed and portable VHF radio equipment of the maritime service	
	3	Frequency band *(Frequency band)*	156,0125 – 156,4875 MHz, 156,5625 – 156,7625 MHz	
	4	Channelling *(Channelling)*	25 kHz channel spacing	
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	G3E	Voice
	6	Direction/distance *(Direction/Separation)*		
	7	Transmit power/Power density *(Transmit power/Power density)*	≤ 25 W ≤ 6 W	Fixed radio equipment Portable radio equipment
	8	Channel access and occupation rules *(Channel access and occupation rules)*		
	9	Approval procedure *(Authorisation regime)*	General allocation	Note 1
	10	Additional essential requirements *(Additional essential requirements)*		
	11	Frequency planning assumptions *(Frequency planning assumptions)*		
Informative part	12	Planned changes		
	13	References *(References)*	ITU-R M. 489, ITU-R M. 1084 EN 301 178, EN 301 925, CEPT ECC Decision (19)02, CEPT/ERC/REC 74-01	
	14	Notification number *(Notification number)*		
	15	Notes *(Remarks)*		

Note 1:
To be able to use the frequencies, a Ship Station Licence needs to be issued beforehand (assignment of numbers for the maritime or inland waterway radiotelephone service) by the Federal Network Agency (Decree 52/2023).

Table 2: Maritime radio stations: 156.7625 – 156.8375 MHz (emergencies and phone calls)

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MARITIME MOBILE SERVICE	
	2	Intended use/application *(Application)*	Fixed and portable VHF radio equipment of the maritime service	
	3	Frequency band *(Frequency band)*	156,7625 – 156,8375 MHz	K75: 156,7625-156,7875 MHz K16: 156,7875-156,8125 MHz K76: 156,8125-156,8375 MHz
	4	Channelling *(Channelling)*	25 kHz channel spacing	
	5	Modulation/occupied bandwidth	G3E	Voice
	6	Direction/distance *(Direction/Separation)*		
	7	Transmit power/Power density *(Transmit power/Power density)*	≤ 25 W ≤ 6 W ≤ 1 W (automatic power reduction)	Fixed radio equipment, K16 only Portable radio equipment; K16 only K75 and K76 only
	8	Channel access and occupation rules *(Channel access and occupation rules)*		
	9	Approval procedure *(Authorisation regime)*	General allocation	Note 1
	10	Additional essential requirements *(Additional essential requirements)*		
	11	Frequency planning assumptions *(Frequency planning assumptions)*		
Informative part	12	Planned changes *(Planned changes)*		
	13	References *(References)*	ITU-R M. 489, ITU-R M. 1084 EN 301 178, EN 301 925, CEPT ECC Decision (19)02, CEPT/ERC/REC 74-01	
	14	Notification number *(Notification number)*		
	15	Notes *(Remarks)*		

Note 1:
To be able to use the frequencies, a Ship Station Licence needs to be issued beforehand (assignment of numbers for the maritime or inland waterway radiotelephone service) by the Federal Network Agency (Decree 52/2023).

Table 3: Maritime radio stations: 156.8375 – 157.4375 MHz, 160.6125 – 160.9625 MHz, 161.7875 – 161.9625 MHz, 161.9875 – 162.0125 MHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MOBILE RADIO SERVICE except for the aeronautical mobile service	
	2	Intended use/application *(Application)*	Fixed and portable VHF radio equipment of the maritime service	
	3	Frequency band *(Frequency band)*	156,8375 – 157,4375 MHz, 160,6125 – 160,9625 MHz, 161,7875 – 161,9625 MHz, 161,9875 – 162,0125 MHz	
	4	Channelling *(Channelling)*	25 kHz channel spacing	Note 1
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	G3E FXB	Voice Data (VHF Data Exchange System – VDES)
	6	Direction/distance *(Direction/Separation)*		
	7	Transmit power/Power density *(Transmit power/Power density)*	≤ 25 W ≤ 6 W	Fixed TSS radio equipment Portable radio equipment
	8	Channel access and occupation rules *(Channel access and occupation rules)*		
	9	Approval procedure *(Authorisation regime)*	General allocation	Note 2
	10	Additional essential requirements *(Additional essential requirements)*		
	11	Frequency planning assumptions *(Frequency planning assumptions)*		
Informative part	12	Planned changes *(Planned changes)*		
	13	References *(References)*	ITU-R M. 489, ITU-R M. 1084 EN 301 178, EN 301 925, CEPT ECC Decision (19)02, CEPT/ERC/REC 74-01	
	14	Notification number *(Notification number)*		
	15	Notes *(Remarks)*		

Note 1:

a) No analogue frequency use for voice permitted for channels: K24, K84, K25, K85, K26, K86, K27 and K28.
b) Only digital frequency use by VDES for channels: K1024, K2024, K1084, K2084, K1025, K2025, K1085, K2085, K1026, K2026, K1086 and K2086.
c) Analogue use of spectrum for voice as of 1 January 2024 for channels K1027 (157.3375 – 157.3625 MHz) and K1028 (157.3875 – 157.4125 MHz).
d) Frequency use for application specific message from 1 January 2024 for channels ASM1 (161.9375 - 161.9625 MHz) and ASM2 (161.9875 - 162.0125 MHz).

Note 2:
To be able to use the frequencies, a Ship Station Licence needs to be issued beforehand (assignment of numbers for the maritime or inland waterway radiotelephone service) by the Federal Network Agency (Decree 52/2023).

Table 4: Maritime radio stations: 156.4875 – 156.5625 MHz (K10, K70 and K11, emergency and call via DSC)

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio service *(Radiocommunication Service)*	MARITIME MOBILE SERVICE (Emergency and call via DSC)	
	2	Intended use/application *(Application)*	Fixed and portable VHF radio equipment of the maritime service	with the option of using the digital selective calling (DSC) in the GMDSS
	3	Frequency band *(Frequency band)*	156,4875 – 156,5125 MHz 156,5125 – 156,5375 MHz 156,5375 – 156,5625 MHz	K10 K70: Data (DSC only) K11
	4	Channelling *(Channelling)*	25 kHz channel spacing	
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	G3E G2B	Voice Data
	6	Direction/distance *(Direction/Separation)*		
	7	Transmit power/Power density	≤ 25 W ≤ 6 W	Fixed radio equipment Portable radio equipment
	8	Channel access and occupation rules *(Channel access and occupation rules)*		
	9	Approval procedure *(Authorisation regime)*	General allocation	Note 1
	10	Additional essential requirements *(Additional essential requirements)*		
	11	Frequency planning assumptions *(Frequency planning assumptions)*		
Informative part	12	Planned changes *(Planned changes)*		
	13	References *(References)*	ITU-R M. 489, ITU-R M. 493, ITU-R M. 541, ITU-R M. 1084 EN 300 338, EN 301 025, EN 301 033, EN 301 178, EN 301 925, EN 302 885, EN 303 132, CEPT ECC Decision (19)02, CEPT/ERC/REC 74-01	
	14	Notification number *(Notification number)*		
	15	Notes *(Remarks)*		

Note 1:
To be able to use the frequencies, a Ship Station Licence needs to be issued beforehand (assignment of numbers for the maritime or inland waterway radiotelephone service) by the Federal Network Agency (Decree 52/2023).

Table 5: Air radio stations: 156.2875 – 156.3125 MHz, 156.3625 – 156.3875 MHz, 156.4375 – 156.4625 MHz, 156.6125 – 156.6375 MHz, 156.6625 – 156.6875 MHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MOBILE RADIO SERVICE excluding aeronautical mobile service (R)	
	2	Intended use/application *(Application)*	Fixed and portable VHF radio equipment of the maritime service	
	3	Frequency band *(Frequency band)*	156,2875 – 156,3125 MHz 156,3625 – 156,3875 MHz 156,4375 – 156,4625 MHz 156,6125 – 156,6375 MHz 156,6625 – 156,6875 MHz	K06: Analogue voice radio, simplex K67: Analogue voice radio, simplex. K09: Analogue voice radio, simplex, for pilot transfer service only K72: Analogue voice radio, simplex, for pilot transfer service only K73: Analogue voice radio, simplex
	4	Channelling *(Channelling)*	25 kHz channel spacing	
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	G3E	Voice
	6	Direction/distance *(Direction/Separation)*		
	7	Transmit power/Power density *(Transmit power/Power density)*	≤ 1 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*		
	9	Approval procedure *(Authorisation regime)*	General allocation	Note 1
	10	Additional essential requirements *(Additional essential requirements)*		
	11	Frequency planning assumptions *(Frequency planning assumptions)*		
Informative part	12	Planned changes *(Planned changes)*		
	13	References *(References)*	ITU-R M. 489, ITU-R M. 1084 EN 301 178, EN 301 925, CEPT ECC Decision (19)02, CEPT/ERC/REC 74-01	
	14	Notification number *(Notification number)*		
	15	Notes *(Remarks)*		

Note 1:

a) The use of frequencies from the mobile maritime radio service and radiotelephone service on inland waterways by aviation personnel in aircraft requires the prior allocation of a maritime or inland waterway radio number for the relevant aircraft by the Federal Network Agency.

b) Further frequency usage conditions are included in Decree 52/2023.

Table 6: Air radio stations: 156.4875 – 156.5125 MHz, 156.5125 – 156.5375 MHz (K10 and K70 Emergency and call via DSC)

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MARITIME MOBILE SERVICE (Emergency and call via DSC)	
	2	Intended use/application *(Application)*	Fixed and portable VHF radio equipment of the maritime service	with the possibility of using digital selective calling DSC in the GMDSS
	3	Frequency band *(Frequency band)*	156,4875 – 156,5125 MHz 156,5125 – 156,5375 MHz	K10: Voice (analogue), simplex K70: Data (DSC)
	4	Channelling	25 kHz channel spacing	
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	G3E G2B	Voice Data (DSC)
	6	Direction/distance *(Direction/Separation)*		
	7	Transmit power/Power density *(Transmit power/Power density)*	≤ 1 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*		
	9	Approval procedure *(Authorisation regime)*	General allocation	Note 1
	10	Additional essential requirements *(Additional essential requirements)*		
	11	Frequency planning assumptions *(Frequency planning assumptions)*		
Informative part	12	Planned changes *(Planned changes)*		
	13	References *(References)*	ITU-R M. 489, ITU-R M. 493, ITU-R M. 541, ITU-R M. 1084 EN 300 338, EN 301 025, EN 301 033, EN 301 178, EN 301 925, EN 302 885, EN 303 132, CEPT ECC Decision (19)02, CEPT/ERC/REC 74-01	
	14	Notification number *(Notification number)*		
	15	Notes *(Remarks)*		

Note 1:

a) The use of frequencies from the mobile maritime radio service and radiotelephone service on inland waterways by aviation personnel in aircraft requires the prior allocation of a maritime or inland waterway radio number for the relevant aircraft by the Federal Network Agency.

b) Further frequency usage conditions are included in Decree 52/2023.

Table 7: Air radio stations: 156.7875 – 156.8125 MHz (K16, emergency and call)

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MARITIME MOBILE SERVICE	
	2	Intended use/application *(Application)*	Fixed and portable VHF radio equipment of the maritime service	
	3	Frequency band *(Frequency band)*	156,7875 – 156,8125 MHz	K16 voice (analogue), simplex, Use of spectrum only for emergency traffic, emergency and security calls and as a call channel
	4	Channelling *(Channelling)*	25 kHz channel spacing	
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	G3E	Voice
	6	Direction/distance *(Direction/Separation)*		
	7	Transmit power/Power density *(Transmit power/Power density)*	≤ 1 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*		
	9	Approval procedure *(Authorisation regime)*	General allocation	Note 1
	10	Additional essential requirements		
	11	Frequency planning assumptions *(Frequency planning assumptions)*		
Informative part	12	Planned changes		
	13	References *(References)*	ITU-R M. 489, ITU-R M. 1084 EN 301 178, EN 301 925, CEPT ECC Decision (19)02, CEPT/ERC/REC 74-01	
	14	Notification number *(Notification number)*		
	15	Notes *(Remarks)*		

Note 1:

a) The use of frequencies from the mobile maritime radio service and radiotelephone service on inland waterways by aviation personnel in aircraft requires the prior allocation of a maritime or inland waterway radio number for the relevant aircraft by the Federal Network Agency.

b) Further frequency usage conditions are included in Decree 52/2023.