Bundesnetzagentur

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

Draft

SSB SE 029

Interface specification for Fixed MW/SW Radio equipment on vessels

Edition: April 2025

Notification number under Directive (EU) 2015/1535:
xxxx/xxxx/DE

Notified pursuant to 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.

Contact information: Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railways
Referat 421, Seidelstr. 49, D-13405 Berlin

Phone: +49 30 4374 0
Fax: +49 30 4374 1180
Email: ssb@bnetza.de
Internet: www.bundesnetzagentur.de

Version: 16 June 2025

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 (Radio Equipment Act (Funkanlagengesetz – FuAG) of 27 June 2017 (Federal Law Gazette (BGBl.) 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 § 4(2) and, where applicable, § 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 14 May 2024 by Article 35 of the Act of 6 May 2024 (BGBl. I No 149), remain unaffected.

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

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 Türkiye, 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 describes the fundamental requirements relating to § 4(2) of the FuAG for fixed MW/SW radio equipment on vessels for communication in the maritime radio service (MW - medium wave band, SW - short wave band).

Radio equipment within the meaning of this interface specification is to be used for its 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 appropriate instructions on cabling and antenna types to be used in conjunction with the radio equipment.

This interface specification replaces SSB SE 016, July 2013 edition, notified under 2013/0430/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 band from 0 kHz to 3000 GHz among spectrum usages and on the definitions for such use
  published by the Federal Network Agency
- Decree 52/2023, General allocation of frequencies for mobile radio applications of the maritime and inland waterway radiotelephone service
  Official Journal of the Federal Network Agency No 10 of 24 May 2023
- Radio Regulations[1](VO Funk),
  International Telecommunication Union (ITU), Geneva
  (Règlement des radiocommunications, Union internationale des télécommunications (UIT), Geneva)
- ITU-R M.493
  Digital selective-calling system for use in the maritime mobile service
- ITU-R M.541
  Operational procedures for the use of digital selective-calling equipment in the maritime mobile service
- ITU-R M.625
  Direct-printing telegraph equipment employing automatic identification in the maritime mobile service
- ITU-R M.627
  Technical characteristics for HF maritime radio equipment using narrow-band phase-shift keying (NBPSK) telegraphy

[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.1173
  Technical characteristics of single-sideband transmitters used in the maritime mobile service for radiotelephony in the bands between 1 606.5 kHz (1 605 kHz Region 2) and 4 000 kHz and between 4 000 kHz and 27 500 kHz
- ETS 300 067
  Radio Equipment and Systems (RES); Radiotelex equipment operating in the maritime MF/HF service - Technical characteristics and methods of measurement
- 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 300 373-1
  Electromagnetic compatibility and Radio spectrum Matters (ERM);
  Maritime mobile transmitters and receivers for use in the MF and HF bands;
  Part 1: Technical characteristics and methods of measurements
- ETSI EN 301 843-1
  ElectroMagnetic Compatibility (EMC) standard for marine radio equipment and services;
  Harmonised Standard for electromagnetic compatibility; Part 1: Common technical requirements
- ETSI EN 301 843-4
  ElectroMagnetic Compatibility (EMC) standard for marine radio equipment and services;
  Harmonised Standard for electromagnetic compatibility; Part 4: Specific conditions for Narrow-Band Direct-Printing (NBDP) NAVTEX receivers
- ETSI EN 301 843-5
  ElectroMagnetic Compatibility (EMC) standard for marine radio equipment and services;
  Harmonised Standard for electromagnetic compatibility; Part 5: Specific conditions for MF/HF radiotelephone transmitters and receivers
- ETSI EN 303 402
  Maritime mobile transmitters and receivers for use in the MF and HF band;
  Harmonised Standard covering the essential requirements of articles 3.2 and 3.3 (g) of the Directive 2014/53/EU;
- ETSI EN 60945
  Maritime navigation and radiocommunication equipment and systems –
  General requirements – Methods of testing and required test results (IEC 60945)
- CEPT/ERC/REC 74-01
  Unwanted Emissions in the Spurious Domain
- Decision 2004/71/EC, Commission Decision of 4 September 2003 (Official Journal of the European Union L 16 p. 54 of 23.01.2004) on essential requirements relating to marine radio communication equipment which is intended to be used on non-SOLAS vessels and to participate in the Global Maritime Distress and Safety System (GMDSS).

5 Technical interface requirements

This interface specification contains the technical interface requirements for fixed MW/SW radio equipment on vessels on the following frequencies:

Table 1: Medium wave band: 1 606.5–1 625.0 kHz, 1 635.0–1 800.0 kHz
2 045.0–2 160.0 kHz, 2 170.0–2 173.5 kHz, 2 190.5–2 194.0 kHz
2 625.0–2 650.0 kHz

Table 2 Medium wave band: 1 850.0–2 000.0 kHz, 3 230.0–3 400.0 kHz,
3 500.0–3 800.0 kHz

Table 3: Medium wave band: 2 000.0–2 045.0 kHz, 2 194.0–2 498.0 kHz,
2 502.0–2 625.0 kHz, 2 650.0–2 850.0 kHz, 3 155.0–3 230.0 kHz

Table 4: Medium wave band: 2 173.5–2 190.5 kHz (emergencies and phone calls)

Table 5: Short wave band: 4 000.0–4 438.0 kHz, 6 200.0–6 525.0 kHz,
8 100.0–8 815.0 kHz, 12 230.0–13 200.0 kHz, 16 360.0–17 410.0 kHz,
18 780.0–18 900.0 kHz, 19 680.0–19 800.0 kHz, 22 000.0–22 855.0 kHz,
25 070.0–25 210.0 kHz, 26 100.0–26 175.0 kHz

Table 6: Short wave band: 23 350.0–24 000.0 kHz, 25 010.0–25 070.0 kHz
25 210.0–25 550.0 kHz, 26 175.0–27 500.0 kHz

Table 7: Short wave band: 23 000.0–23 200.0 kHz

Table 1: Medium wave band: 1 606.5–1 625.0 kHz, 1 635.0–1 800.0 kHz
2 045.0–2 160.0 kHz, 2 170.0–2 173.5 kHz, 2 190.5–2 194.0 kHz
2 625.0–2 650.0 kHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MARITIME MOBILE SERVICE	
	2	Application *(Application)*	Communication in the maritime radio service	DSC, radiotelephony, narrow band direct printing (NBDP) Radio Regulations Article 52.10
	3	Frequency band *(Frequency band)*	1 606.5–1 625.0 kHz 1 635.0–1 800.0 kHz 2 045.0–2 160.0 kHz 2 170.0–2 173.5 kHz 2 190.5–2 194.0 kHz 2 625.0–2 650.0 kHz	
	4	Occupancy of frequency channels *(Channelling)*		
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	< 4.5 kHz < 0.3 kHz	J3E F1B, J2B
	6	Direction/separation *(Direction/Separation)*		
	7	Transmit power/power density *(Transmit power/Power density)*	≤ 400 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*	J3E F1B, J2B	Language, upper sideband DSC, NDBP
	9	Authorisation 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.493, ITU-R M.541, ITU-R M.625, ITU-R M.627, ITU-R M.1173, ETS 300 067, EN 300 338, EN 300 373-1, EN 303 402, EN 301 033, EN 60945, 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: Medium wave band: 1 850.0–2 000.0 kHz, 3 230.0–3 400.0 kHz, 3 500.0–3 800.0 kHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MOBILE SERVICE excluding aeronautical mobile service	
	2	Application *(Application)*	Communication in the maritime radio service	Radiotelephony Radio Regulations Article 52.9
	3	Frequency band *(Frequency band)*	1 850.0–2 000.0 kHz 3 230.0–3 400.0 kHz 3 500.0–3 800.0 kHz	
	4	Occupancy of frequency channels *(Channelling)*		
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	< 4.5 kHz	J3E
	6	Direction/separation *(Direction/Separation)*		
	7	Transmit power/power density *(Transmit power/Power density)*	≤ 400 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*	J3E	Language, upper sideband
	9	Authorisation 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.1173, EN 300 373-1, EN 303 402, EN 301 033, EN 60945, 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: Medium wave band: 2 000.0–2 045.0 kHz, 2 194.0–2 498.0 kHz 2 502.0–2 625.0 kHz, 2 650.0–2 850.0 kHz, 3 155.0–3 230.0 kHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MOBILE SERVICE excluding aeronautical mobile service (R)	
	2	Application *(Application)*	Communication in the maritime radio service	Radiotelephony, narrow band direct printing (NBDP)
	3	Frequency band *(Frequency band)*	2 000.0–2 045.0 kHz 2 194.0–2 498.0 kHz 2 502.0–2 625.0 kHz 2 650.0–2 850.0 kHz 3 155.0–3 230.0 kHz	
	4	Occupancy of frequency channels *(Channelling)*		
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	< 4.5 kHz < 0.3 kHz	J3E J2B
	6	Direction/separation *(Direction/Separation)*		
	7	Transmit power/power density *(Transmit power/Power density)*	≤ 400 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*	J3E J2B	Language, upper sideband NDBP
	9	Authorisation 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.493, ITU-R M.541, ITU-R M.625, ITU-R M.627, ITU-R M.1173, ETS 300 067, EN 300 338, EN 300 373-1, EN 303 402, EN 301 033, EN 60945, 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 4: Medium wave band: 2 173.5–2 190.5 kHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MOBILE RADIO SERVICE (Emergencies and phone calls)	
	2	Application *(Application)*	Communication in the maritime radio service	DSC, radiotelephony, narrow band direct printing (NBDP)
	3	Frequency band *(Frequency band)*	2 173.5–2 190.5 kHz	
	4	Occupancy of frequency channels *(Channelling)*		
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	< 4.5 kHz < 0.3 kHz	J3E F1B, J2B
	6	Direction/separation *(Direction/Separation)*		
	7	Transmit power/power density *(Transmit power/Power density)*	≤ 400 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*	J3E F1B, J2B	Language, upper sideband DSC, NDBP
	9	Authorisation 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.493, ITU-R M.541, ITU-R M.625, ITU-R M.627, ITU-R M.1173, ETS 300 067, EN 300 338, EN 300 373-1, EN 303 402, EN 301 033, EN 60945, 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: Short wave band: 4 000.0–4 438.0 kHz, 6 200.0–6 525.0 kHz, 8 100.0–8 815.0 kHz, 12 230.0–13 200.0 kHz, 16 360.0–17 410.0 kHz, 18 780.0–18 900.0 kHz, 19 680.0–19 800.0 kHz, 22 000.0–22 855.0 kHz, 25 070.0–25 210.0 kHz, 26 100.0–26 175.0 kHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MARITIME MOBILE SERVICE	
	2	Application *(Application)*	Communication in the maritime radio service	DSC, radiotelephony, narrow band direct printing (NBDP), data radio
	3	Frequency band *(Frequency band)*	4 000.0–4 438.0 kHz 6 200.0–6 525.0 kHz 8 100.0–8 815.0 kHz 12 230.0–13 200.0 kHz 16 360.0–17 410.0 kHz 18 780.0–18 900.0 kHz 19 680.0–19 800.0 kHz 22 000.0–22 855.0 kHz 25 070.0–25 210.0 kHz 26 100.0–26 175.0 kHz	
	4	Occupancy of frequency channels *(Channelling)*		
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	< 4.5 kHz < 0.3 kHz < 0.3 kHz < 2.0 kHz < 0.1 kHz	J3E F1B, J2B J2D F1C, F3C A1A, A1B
	6	Direction/separation *(Direction/Separation)*		
	7	Transmit power/power density *(Transmit power/Power density)*	≤ 1 500 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*	J3E F1B, J2B J2D F1C, F3C A1A, A1B	Language, upper sideband DSC, NDBP Digital communication Facsimile Morse telegraphy
	9	Authorisation 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.493, ITU-R M.541, ITU-R M.625, ITU-R M.627, ITU-R M.1173, ETS 300 067, EN 300 338, EN 300 373-1, EN 303 402, EN 301 033, EN 60945, 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 6: Short wave band: 23 350.0–24 000.0 kHz, 25 010.0–25 070.0 kHz 25 210.0–25 550.0 kHz, 26 175.0–27 500.0 kHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MOBILE SERVICE excluding aeronautical mobile service	
	2	Application *(Application)*	Communication in the maritime radio service	DSC, radiotelephony, narrow band direct printing (NBDP), data radio
	3	Frequency band *(Frequency band)*	23 350.0–24 000.0 kHz 25 010.0–25 070.0 kHz 25 210.0–25 550.0 kHz 26 175.0–27 500.0 kHz	
	4	Occupancy of frequency channels *(Channelling)*		
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	< 4.5 kHz < 0.3 kHz < 0.3 kHz < 2.0 kHz < 0.1 kHz	J3E F1B, J2B J2D F1C, F3C A1A, A1B
	6	Direction/separation *(Direction/Separation)*		
	7	Transmit power/power density *(Transmit power/Power density)*	≤ 1 500 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*	J3E F1B, J2B J2D F1C, F3C A1A, A1B	Language, upper sideband DSC, NDBP Digital communication Facsimile Morse telegraphy
	9	Authorisation 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.493, ITU-R M.541, ITU-R M.625, ITU-R M.627, ITU-R M.1173, ETS 300 067, EN 300 338, EN 300 373-1, EN 303 402, EN 301 033, EN 60945, 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 7: Short wave band: 23 000.0–23 200.0 kHz

	No.	Parameter	Description *(Description)*	Comments *(Comments)*
Normative part	1	Radio services *(Radiocommunication Service)*	MOBILE SERVICE excluding aeronautical mobile service (R)	
	2	Application *(Application)*	Communication in the maritime radio service	DSC, radiotelephony, narrow band direct printing (NBDP), data radio
	3	Frequency band *(Frequency band)*	23 000.0–23 200.0 kHz	
	4	Occupancy of frequency channels *(Channelling)*		
	5	Modulation/occupied bandwidth *(Modulation/Occupied bandwidth)*	< 4.5 kHz < 0.3 kHz < 0.3 kHz < 2.0 kHz < 0.1 kHz	J3E F1B, J2B J2D F1C, F3C A1A, A1B
	6	Direction/separation *(Direction/Separation)*		
	7	Transmit power/power density *(Transmit power/Power density)*	≤ 1 500 W	
	8	Channel access and occupation rules *(Channel access and occupation rules)*	J3E F1B, J2B J2D F1C, F3C A1A, A1B	Language, upper sideband DSC, NDBP Digital communication Facsimile Morse telegraphy
	9	Authorisation 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.493, ITU-R M.541, ITU-R M.625, ITU-R M.627, ITU-R M.1173, ETS 300 067, EN 300 338, EN 300 373-1, EN 303 402, EN 301 033, EN 60945, 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).