

**RO-IR MICRO**

**TECHNICAL REGULATION**

**for the radio interface**

**on Radio microphones**

**(former RO-IR 10)**

**Notification number according to Directive (EU) 2015/1535: 2021/462/RO**

## 1. Basic considerations

Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 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 implemented in national legislation by Government Decision No. 740/2016 on making available on the market of radio equipment, with subsequent amendments and completions.

This technical regulation contains the requirements for the use of radio microphones in the specified frequency bands and considers, especially, compliance with the provisions of Article 3 Paragraph 2 and Articles 6, 7 and 8 of Directive 2014/53/EU.

Nothing in this Technical Regulation shall preclude the need for equipment placed on the market in Romania to comply with Directive 2014/53/EU.

The obligations arising from 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 rules on Information Society services have been met (OJ L 241, 17.9.2015, p. 1-15).

All Romanian Technical Regulations for the radio interface notified under Directive (EU) 2015/1535 shall be published and made available on National Authority for Management and Regulation in Communications of Romania (ANCOM) web-site at: <https://www.ancom.ro/en/romanian-regulation-2719>.

## 2. Radio Interface Specifications

### Radio microphones

Frequency band	Annex
29.7 – 30.3 MHz	RO-IR MICRO 01-1
30.5 – 32.15 MHz	RO-IR MICRO 01-2
32.45 – 33.1 MHz	RO-IR MICRO 01-3
33.6 – 34.975 MHz	RO-IR MICRO 01-4
37.5 – 40.02 MHz	RO-IR MICRO 01-5
40.66 – 41.015 MHz	RO-IR MICRO 01-6
44.5 – 45.2 MHz	RO-IR MICRO 01-7
863 – 865 MHz	RO-IR MICRO 02
174 – 216 MHz	RO-IR MICRO 03
470 – 574 MHz; 582 – 694 MHz	RO-IR MICRO 04
1785 – 1804.8 MHz	RO-IR MICRO 05
823 – 826 MHz	RO-IR MICRO 06
826 – 832 MHz	RO-IR MICRO 07

For the purpose of this technical regulation, Short-Range Device (SRD) means radio transmitters, which provide either unidirectional or bidirectional communication and which transmit over a short distance at low power.

For the purpose of this Technical Regulation, radio microphones are small, low power (typically 50 mW or less) transmitters designated to be worn on the body, or hand held, for the transmission of sound.

For the purpose of this technical regulation, non-interference and non-protected basis means the interdiction that no harmful interference may be caused to any radio communications service and that no claim may be made for protection of these devices against harmful interference originating from radio communications services.

The use of radio spectrum by short-range devices is allowed on a non-interference and non-protected basis provided that such devices meet the conditions set out in the Annexes below.

### 3. Document history:

Edition	Changes
Edition 1/2010	Notification number according to Directive 98/34/EC: 2010/764/RO.
Edition 2/2018 [14.11.2018]	<p>Update according to Decision (EU) 2017/899 of the European Parliament and of the Council on usage of frequency band 470-790 MHz in the European Union:</p> <ul style="list-style-type: none"> <li>- RO-IR 10-04 changed (the frequency band was restricted to 470-694 MHz).</li> </ul> <p>Update according to ERC/REC 70-03 (version of 22 May 2018):</p> <ul style="list-style-type: none"> <li>- Specifications RO-IR 10-06 (frequency band 823 – 826 MHz) and RO-IR 10-07 (frequency band 826 – 832 MHz) added.</li> </ul> <p>Update of the legal framework according to Point 1 – „Basic considerations“ and reference documents (row 13).</p> <p>Formal changes according to TCAM-RSC model of November 2017.</p>
Edition 3/2020 [16.06.2020]	<p>In the frequency band 470-694 MHz, the use of 630-638 MHz band is performed under licensing authorisation regime. Therefore, the technical specification for the RO-IR 10-04 shall include only the frequency bands 470 – 630 MHz and 638 – 694 MHz.</p> <p>Update according to Commission Implementing Decision 2014/641/EU on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union and ERC/REC 70-03 Recommendation (version of 7 June 2019) :</p> <ul style="list-style-type: none"> <li>- RO-IR 10-05 changed (the frequency band 1785 – 1800 MHz expanded to 1785 – 1804.8 MHz);</li> <li>- Update of the reference documents for RO-IR 10-05, RO-IR 10-06 and RO-IR 10-07.</li> </ul>
Edition 4/2021 [27.10.2021]	<p>The name of the radio interface RO-IR 10 was changed according to the Decision of the President of the National Authority for Management and Regulation in Communications no. 248/2021 for the amendment and completion of the Decision of the President of the National Authority for Management and Regulation in Communications no. 311/2016 on radio frequencies or radio frequency bands exempted from the licensing regime (RO-IR 10 becomes RO-IR MICRO);</p> <p>In the frequency band 470-694 MHz, the use of the 574-582 MHz frequency band is performed under licensing authorisation regime. Therefore, the technical specification for RO-IR MICRO 04 (former RO-IR 10-04) shall include only the frequency bands 470 – 574 MHz and 582 – 694 MHz.</p>

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 01-1	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	29.7 – 30.3 MHz	<i>On a tuning range basis</i>
	4	Channeling (channel distribution)	50 kHz	
	5	Modulation/Occupied bandwidth	-	
	6	Direction/Separation	-	
	7	Transmit power / Power density	10 mW effective radiated power (e.r.p.)	
	8	Channel occupation and access rules	-	
	9	Authorization regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 01-2	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	30.5 – 32.15 MHz	<i>On a tuning range basis</i>
	4	Channeling (channel distribution)	50 kHz	
	5	Modulation/Occupied bandwidth	-	
	6	Direction/Separation	-	
	7	Transmit power / Power density	10 mW e.r.p.	
	8	Channel occupation and access rules	-	
	9	Authorization regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 01-3	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	32.45 – 33.1 MHz	<i>On a tuning range basis</i>
	4	Channeling (channel distribution)	50 kHz	
	5	Modulation/Occupied bandwidth	-	
	6	Direction/Separation	-	
	7	Transmit power / Power density	10 mW e.r.p.	
	8	Channel occupation and access rules	-	
	9	Authorization regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 01-4	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	33.6 – 34.975 MHz	<i>On a tuning range basis</i>
	4	Channeling (channel distribution)	50 kHz	
	5	Modulation/Occupied bandwidth	-	
	6	Direction/Separation	-	
	7	Transmit power / Power density	10 mW e.r.p.	
	8	Channel occupation and access rules	-	
	9	Authorization regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Assumptions on spectrum planning	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 01-5	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	37.5 – 40.02 MHz	<i>On a tuning range basis</i>
	4	Channeling (channel distribution)	50 kHz	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	10 mW e.r.p.	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1



ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 01-6	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	40.66 – 41.015 MHz	<i>On a tuning range basis</i>
	4	Channeling (channel distribution)	50 kHz	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	10 mW e.r.p.	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 01-7	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	44.5 – 45.2 MHz	<i>On a tuning range basis</i>
	4	Channeling (channel distribution)	50 kHz	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	10 mW e.r.p.	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 02	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	863 – 865 MHz	
	4	Channeling (channel distribution)	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	10 mW e.r.p.	<i>In accordance with Annex 10 of ERC/REC 70-03.</i>
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; EN 301 357; ERC/REC 70-03	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 03	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	174 – 216 MHz	<i>In accordance with Annex 10 of ERC/REC 70 – 03 On a tuning range basis. Geographical restrictions for the sharing usage with the services of digital terrestrial television and digital terrestrial broadcasting. It is needed to contact the National Authority for Management and Regulation in Communications.</i>
	4	Channeling (channel distribution)	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	50 mW e.r.p.	<i>In accordance with Annex 10 of ERC/REC 70 – 03.</i>
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 04	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	470 – 574 MHz; 582 – 694 MHz	<i>On a tuning range basis. Geographical restrictions for the sharing usage with the service of digital terrestrial television. It is needed to contact the National Authority for Management and Regulation in Communications.</i>
	4	Channeling (channel distribution)	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	50 mW e.r.p.	<i>In accordance with Annex 10 of ERC/REC 70 – 03.</i>
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03; Decision (EU) 2017/899 of the European Parliament and of the Council on the usage of 470-790 MHz frequency band in the European Union.	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 05	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	1785 – 1804.8 MHz	<i>Harmonised radio spectrum for use by radio microphones (Commission Implementing Decision 2014/641/EU on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union) In accordance with Annex 10 of ERC/REC 70-03</i>
	4	Channeling (channel distribution)	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	20 mW e.i.r.p. 50 mW e.i.r.p.	<i>50 mW restricted to body worn equipment</i>
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; EN 301 357; ERC/REC 70-03; Commission Implementing Decision 2014/641/EU on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 06	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	823 – 826 MHz	<i>Harmonised radio spectrum for use by radio microphones (Commission Implementing Decision 2014/641/EU on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union) In accordance with Annex 10 of ERC/REC 70 – 03</i>
	4	Channeling (channel distribution)	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	20 mW equivalent isotropic radiated power (e.i.r.p.) / 100 mW e.i.r.p.	<i>100 mW restricted to body worn equipment</i>
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03; Commission Implementing Decision 2014/641/EU on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Radio microphones	RO-IR MICRO 07	Edition 4/2021
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio microphones	
	3	Frequency band	826 – 832 MHz	<i>Harmonised radio spectrum for use by radio microphones (Commission Implementing Decision 2014/641/EU on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union) In accordance with Annex 10 of ERC/REC 70-03</i>
	4	Channeling (channel distribution)	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	100 mW e.i.r.p.	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of 2014/53/EU Directive)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 422; ERC/REC 70-03; Commission Implementing Decision 2014/641/EU on harmonised technical conditions of radio spectrum use by wireless audio programme making and special events equipment in the Union	
	14	Notification number	2021/462/RO	
	15	Remarks		

F1- RTIR Edition:1; Revision:1