

RO-IR 06

TECHNICAL REGULATION

for the radio interface

concerning radio determination applications

98/34/EC Notification number: 2014/602/RO

1. Basic considerations

The Radio Equipment and Telecommunications Terminal Equipment Directive 1999/5/EC (R&TTE Directive) was implemented in Romania (RO) by Government Decision No. 130/2015.

This technical regulation contains the necessary equipment parameters for the use of licence exempt radio determination devices in the specified frequency bands and considers especially compliance with Articles 3.2, 4.1, 6 and 7.2 of Directive 1999/5/EC.

Nothing in this Technical Regulation shall preclude the need for equipment placed on the market in Romania to comply with Directive 1999/5/EC.

The obligations arising from Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services (OJ L 204 p. 37), as amended by Directive 98/48/EC of the European Parliament and of the Council of 20 July 1998 (OJ L 217 p. 18), have been met.

All Romanian Technical Regulations notified under Directive 1998/34/EC will be published and will be made available free of charge from the ANCOM web-site at:

http://www.ancom.org.ro/en/interface-regulations-_2723

2. Radio Interface Specifications

Radiodetermination applications

Frequency band	Annex
2 400 – 2 483.5 MHz	RO-IR 06–01
4 500 – 7 000 MHz	RO-IR 06–02
6 000 – 8 500 MHz	RO-IR 06–03
8 500 -10 600 MHz	RO-IR 06–04
9 200 – 9 500 MHz	RO-IR 06–05
9 500 – 9 975 MHz	RO-IR 06–06
10.5 – 10.6 GHz	RO-IR 06–07
13.4 - 14 GHz	RO-IR 06–08
17.1 - 17.3 GHz	RO-IR 06–09
24.05 - 24.25 GHz	RO-IR 06–10
24.05 – 26.5 GHz	RO-IR 06–11
24.05 - 27 GHz	RO-IR 06–12
57 - 64 GHz	RO-IR 06–13a; RO-IR 06–13b
75 - 85 GHz	RO-IR 06–14a; RO-IR 06–14b

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.

The *radio determination* device category covers radio devices that are used for determining the position, velocity and/or other characteristics of an object, or for obtaining information relating to these parameters. Typical uses are various kinds of measurement applications.

For the purpose of this technical regulation, *Tank Level Probing Radar (TLPR)* is a specific type of radio determination application, which is used for tank level measurements and is installed in metallic or reinforced concrete tanks, or similar structures made of material with comparable attenuation characteristics. The purpose of the tank is to contain a substance.

For the purpose of this technical regulation, *non-interference and non-protected basis* means 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 device is allowed on a non-interference and non-protected basis provided that such device meets the conditions set out in Annexes.

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-01	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications Detection, movement and alert applications	
	3	Frequency band	2 400 – 2 483.5 MHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	25 mW equivalent isotropic radiated power (e.i.r.p.)	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 440; Decision 2013/752/EU amending Decision 2006/771/EC; ERC/DEC/(01)08; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-02	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to Tank Level Probing Radar (TLPR)	
	3	Frequency band	4 500 – 7 000 MHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	24 dBm equivalent isotropic radiated power (e.i.r.p.)	<i>The power limit applies inside a closed tank and corresponds to a spectral density of – 41. 3 dBm/MHz e.i.r.p. outside the enclosed test tank structure.</i>
	8	Channel access and occupation rules	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 372; Decision 2013/752/EU amending Decision 2006/771/EC; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-03	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to Level Probing Radar (LPR). Established exclusion zones around radio astronomy sites must be obeyed.	
	3	Frequency band	6 000 – 8 500 MHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	7 dBm/50 MHz peak e.i.r.p. and - 33 dBm/MHz mean e.i.r.p	
	8	Channel access and occupation rules	Automatic power control and antenna requirements as well as equivalent techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 729; Decision 2013/752/EU amending Decision 2006/771/EC; ERC/REC 70-03; ECC/DEC/(11)02	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-04	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to Tank Level Probing Radar (TLPR).	
	3	Frequency band	8 500 – 10 600 GHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	--	
	6	Direction / Separation	-	
	7	Transmit power / Power density	30 dBm e.i.r.p.	<i>The power limit applies inside a closed tank and corresponds to a spectral density of – 41 .3 dBm/MHz e.i.r.p. outside the enclosed test tank structure. For the frequency range 10.6 GHz to 10.7 GHz, the radiated unwanted radiated emissions outside the tank enclosure shall be less than -60 dBm/MHz e.i.r.p.</i>
	8	Channel access and occupation rules	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 372; Decision 2013/752/EU amending Decision 2006/771/EC; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-05	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications Radar, detection, movement and alert applications	
	3	Frequency band	9 200 – 9 500 MHz	
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	--	
	6	Direction / Separation	-	
	7	Transmit power / Power density	25 mW e.i.r.p.	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 440; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-06	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications Radar, detection, movement and alert applications	
	3	Frequency band	9 500 – 9 975 MHz	
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	25 mW e.i.r.p.	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 440; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-07	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications Radar, detection, movement and alert applications	
	3	Frequency band	10.5 - 10.6 GHz	
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	500 mW e.i.r.p.	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 440; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-08	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications Radar, detection, movement and alert applications	
	3	Frequency band	13.4 - 14 GHz	
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	25 mW e.i.r.p.	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 440; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-09	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to ground-based systems.	<i>Ground Based Synthetic Aperture Radar (GBSAR)</i>
	3	Frequency band	17.1 - 17.3 GHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	26 dBm e.i.r.p.	
	8	Channel access and occupation rules	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 440; Decision 2013/752/EU amending Decision 2006/771/EC; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-10	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications Radar, detection, movement and alert applications	
	3	Frequency band	24.05 - 24.25 GHz	
	4	Channelling	-	
	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	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 300 440; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-11	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to Level Probing Radar (LPR). Established exclusion zones around radio astronomy sites must be obeyed.	
	3	Frequency band	24.05 – 26.5 GHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	26 dBm/50 MHz peak e.i.r.p. and – 14 dBm/MHz mean e.i.r.p.	
	8	Channel access and occupation rules	Automatic power control and antenna requirements as well as equivalent techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 729; Decision 2013/752/EU amending Decision 2006/771/EC; ERC/REC 70-03; ECC/DEC/(11)02	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-12	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to Tank Level Probing Radar (TLPR).	
	3	Frequency band	24.05 - 27 GHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	43 dBm e.i.r.p.	<i>The power limit applies inside a closed tank and corresponds to a spectral density of - 41 .3 dBm/MHz e.i.r.p. outside the enclosed test tank structure.</i>
	8	Channel access and occupation rules	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 372; Decision 2013/752/EU amending Decision 2006/771/EC; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-13a	Edition 1 / 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to Tank Level Probing Radar (TLPR).	
	3	Frequency band	57 - 64 GHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	43 dBm e.i.r.p.	<i>The power limit applies inside a closed tank and corresponds to a spectral density of - 41 .3 dBm/MHz e.i.r.p. outside the enclosed test tank structure.</i>
	8	Channel access and occupation rules	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 372; Decision 2014/752/EU amending Decision 2006/771/EC; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-13b	Edition 1 / 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to Level Probing Radar (LPR).	
	3	Frequency band	57 - 64 GHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	35 dBm/50 MHz peak e.i.r.p. and – 2 dBm/MHz mean e.i.r.p.	
	8	Channel access and occupation rules	Automatic power control and antenna requirements as well as equivalent techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 729; Decision 2013/752/EU amending Decision 2006/771/EC; ERC/REC 70-03; ECC/DEC/(11)02	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-14a	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to Tank Level Probing Radar (TLPR).	
	3	Frequency band	75 – 85 GHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	43 dBm e.i.r.p.	<i>The power limit applies inside a closed tank and corresponds to a spectral density of – 41 .3 dBm/MHz e.i.r.p. outside the enclosed test tank structure.</i>
	8	Channel access and occupation rules	Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 372; Decision 2014/752/EU amending Decision 2006/771/EC; ERC/REC 70-03	
	14	Notification number	2014/602/RO	
	15	Remarks	-	

ROMANIA	Radio Interface Specification	SRD / Radio determination applications	RO-IR 06-14b	Edition 1/ 2014
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Radio determination applications This set of usage conditions is only available to Level Probing Radar (LPR). Established exclusion zones around radio astronomy sites must be obeyed.	
	3	Frequency band	75 – 85 GHz	<i>Harmonised radio spectrum for use by short-range devices (Decision 2013/752/EU amending Decision 2006/771/EC)</i>
	4	Channelling	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power / Power density	34 dBm/50 MHz peak e.i.r.p. and – 3 dBm/MHz mean e.i.r.p.	
	8	Channel access and occupation rules	Automatic power control and antenna requirements as well as equivalent techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 1999/5/EC must be used.	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 729; Decision 2013/752/EU amending Decision 2006/771/EC; ERC/REC 70-03; ECC/DEC/(11)02	
	14	Notification number	2014/602/RO	
	15	Remarks	-	