

RO-IR 04

TECHNICAL REGULATION

for the radio interface

concerning railway applications

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.

This technical regulation contains the requirements for the use of licence exempt short-range devices intended for use on railways 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 of rules on Information Society services have been met (OJ L 241, 17.9.2015, p. 1–15).

All Romanian technical regulations for the radio interfaces notified under Directive 2015/1535 will be published and will be made available on National Authority for Management and Regulation in Communications of Romania (ANCOM) web-site at: http://www.ancom.org.ro/reglementari-interfete_2723

2. Radio Interface Specifications

Railway applications

Frequency band	Annex
27.090 – 27.100 MHz	RO-IR 04–01
76 – 77 GHz	RO-IR 04–02

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, *Eurobalise/ Euroloop* means the transmission unit mounted on the track that uses the magnetic transponder technology.

The main function of eurobalise/euroloop is to transmit and/or receive signals through the air gap. The Eurobalise/ Euroloop is a single device mounted on the track, which communicates with a device mounted on a train passing over it.

For the purpose of this technical regulation, *the magnetic transponder technology* means the method that uses magnetic coupling in the air gap between a transmitter and a receiver for conveying data and energy.

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 device is allowed on a non-interference and non-protected basis provided that such device meets the conditions set out in the Annexes.

3. Document history:

Edition	Changes
Edition 1/2014	Notification number according to Directive 98/34/EC: 2014/600/RO.
Edition 2/2018 (06.08.2018)	Update of the legal framework according to Point 1 – „Basic considerations“; Formal changes according to TCAM-RSC model of November 2017.

ROMANIA	Radio Interface Specification	SRD / Railway applications	RO-IR 04-01	Edition 2/ 2018
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Railway applications	<i>Balise tele-powering and train to ground down-link (railroad tracks) systems including Eurobalise and activation of the Loop / Euroloop.</i>
	3	Frequency band	27.090 – 27.100 MHz Center frequency is 27.095 MHz	
	4	Channelling (channel distribution)	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power/Power density	42 dBμA/m at 10 m	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of Directive 2014/53/EU)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 302 608; ERC/REC 70-03; Decision 1999/569/EC	
	14	Notification number	2014/600/RO	
	15	Remarks	-	

F1- RTIR Edition:1; Revision:1

ROMANIA	Radio Interface Specification	SRD / Railway applications	RO-IR 04-02	Edition 2/ 2018
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	Nr	Parameter	Description	Comments
Normative part	1	Radiocommunication Service	Mobile	
	2	Application	Short Range Devices / Railway applications	<i>Obstruction/Vehicle detection via radar sensor at railway level crossings</i>
	3	Frequency band	76 - 77 GHz	
	4	Channelling (channel distribution)	-	
	5	Modulation / Occupied bandwidth	-	
	6	Direction / Separation	-	
	7	Transmit power/Power density	55 dBm peak equivalent isotropic radiated power (e.i.r.p.) and 50 dBm mean e.i.r.p. for systems others than pulse radars 55 dBm peak e.i.r.p. and 23.5 dBm mean e.i.r.p. for pulse radars	
	8	Channel access and occupation rules	-	
	9	Authorisation regime	Licence exemption	
	10	Additional essential requirements (According to Article 3 Paragraph 3 of Directive 2014/53/EU)	-	
	11	Frequency planning assumptions	-	
Informative part	12	Planned changes	-	
	13	Reference	EN 301 091; ERC/REC 70-03	
	14	Notification number	2014/600/RO	
	15	Remarks	-	

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