

RO-IR 05

TECHNICAL REGULATION

for the radio interface

concerning Transport and Traffic Telematics devices (TTT)

1. Basic considerations

Directive 2014/53/EU (RED Directive) 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 Romania (RO) by Government Decision No. 740/2016.

This technical regulation contains the requirements for the use of Transport and Traffic Telematics devices (TTT), including radar system installations to be used in vehicles, 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 (EU) 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

Transport and Traffic Telematics Devices (TTT)

| Frequency band | Annex |
|--------------------|----------------------------|
| 984 – 7484 kHz | RO-IR 05–01 |
| 7 300 – 23.000 kHz | RO-IR 05–02 |
| 5795 – 5815 MHz | RO-IR 05–03a; RO-IR 05–03b |
| 24.05 – 24.075 GHz | RO-IR 05–05 |
| 24.075 – 24.15 GHz | RO-IR 05–06a; RO-IR 05–06b |
| 24.15 – 24.25 GHz | RO-IR 05–07 |
| 24.25 – 24.495 GHz | RO-IR 05–08 |
| 24.25 – 24.5 GHz | RO-IR 05–09 |
| 24.495 – 24.5 GHz | RO-IR 05–10 |
| 63 – 64 GHz | RO-IR 05–11 |
| 76 – 77 GHz | RO-IR 05–12a; RO-IR 05–12b |

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, the *transport and traffic telematics* device category covers radio devices that are used in the fields of transport (road, rail, water or air, depending on the relevant technical restrictions), traffic management, navigation, mobility management and in intelligent transport systems (ITS). Typical applications are used for interfaces between different modes of transport, communication between vehicles (e.g. car to car), between vehicles and fixed locations (e.g. car to infrastructure communication) as well as communication from and to users.

For the purpose of this technical regulation, *Eurobalise/ Euroloop* means the wayside 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 the 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, *dwell time* means in general, a time interval for which a certain frequency range is occupied.

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 Transport and Traffic Telematics devices (TTT), including radar system installations to be used in vehicles is allowed provided that such devices meet the conditions set out in the Annexes.

3. Document history:

| Edition | Changes |
|--------------------------------|---|
| Edition 1/2014 | Notification number according to Directive 98/34/EC: 2014/601/RO. |
| Edition 2/2018 (06.08.2018) | <p>Update according to implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on harmonizing the radio spectrum for the use of short range devices and repealing Decision 2006/804/EC:</p> <ul style="list-style-type: none"> - Update of all technical specifications, except RO-IR 05-03b; - At RO-IR 05-03a, frequency band 5795-5805 MHz was changed in 5795-5815 MHz, for road tolling infrastructure applications; - RO-IR 05-12b was introduced for 76-77 GHz frequency band, on the conditions for the use of obstacle detection systems on gyroplanes (generic name given to aircraft with wings having a roundabout). <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> |

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-01 | Edition 2/2018 |
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| | Nr | Parameter | Description | Comments |
|------------------|----|--|--|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions is only available for intermittent data transmissions (Eurobalise) in the presence of trains and using the 27 MHz band for telepowering.</i> |
| | 3 | Frequency band | 984 – 7 484 kHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | 9 dBμA/m at 10 meters | |
| | 8 | Channel access and occupation rules | Duty cycle limit: 1% | |
| | 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 302 608; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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|---------|-------------------------------|-----------|-------------|----------------|
| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-02 | Edition 2/2018 |
|---------|-------------------------------|-----------|-------------|----------------|

| | Nr | Parameter | Description | Comments |
|------------------|----|--|--|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions is only available for Euroloop transmissions in the presence of trains and using the 27 MHz band for telepowering.</i> |
| | 3 | Frequency band | 7 300 – 23 000 kHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | – 7 dBμA/m at 10 meters | |
| | 8 | Channel access and occupation rules | Antenna restrictions apply that provide at least equivalent performance to the techniques described in the harmonised standards adopted under Directive 2014/53/EU | |
| | 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 302 609; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-03a | Edition 2/2018 |
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| | Nr | Parameter | Description | Comments |
|------------------|----|---|--|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions applies only to road tolling infrastructure usage.</i> |
| | 3 | Frequency band | 5795 – 5815 MHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | 2 W equivalent isotropic radiated power (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 harmonized standards adopted under Directive 2014/53/EU shall be used. | |
| | 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 300 674-2-1; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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|----------------|--------------------------------------|------------------|---------------------|------------------------|
| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-03b | Edition 2/ 2018 |
|----------------|--------------------------------------|------------------|---------------------|------------------------|

| | Nr | Parameter | Description | Comments |
|-------------------------|-----------|---|--|-----------------|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | |
| | 3 | Frequency band | 5795 - 5805 MHz | |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | 8 W 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 300 674; ERC/REC 70-03 | |
| | 14 | Notification number | 2014/601/RO | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-05 | Edition 2/2018 |
|---------|-------------------------------|-----------|-------------|----------------|

| | Nr | Parameter | Description | Comments |
|------------------|----|--|--|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | |
| | 3 | Frequency band | 24.05 – 24.075 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (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 302 858; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-06a | Edition 2/2018 |
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| | Nr | Parameter | Description | Comments |
|------------------|----|--|---|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions is only available to ground-based vehicle radars.</i> |
| | 3 | Frequency band | 24.075 – 24.15 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (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 | Techniques to access spectrum and mitigate interference that provide at least equivalent performance to the techniques described in harmonised standards adopted under Directive 2014/53/EU shall be used. Dwell time limits and frequency modulation range apply as specified in harmonised standards. | |
| | 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 302 858; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-06b | Edition 2/2018 |
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| | Nr | Parameter | Description | Comments |
|------------------|----|--|--|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | |
| | 3 | Frequency band | 24.075 – 24.15 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | 0.1 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 302 858; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-07 | Edition 2/2018 |
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| | Nr | Parameter | Description | Comments |
|------------------|----|--|--|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | |
| | 3 | Frequency band | 24.15 – 24.25 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (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 302 858; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-08 | Edition 2/2018 |
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| | Nr | Parameter | Description | Comments |
|------------------|----|---|--|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions is only available to ground-based vehicle radars operating in the harmonised 24 GHz frequency range.</i> |
| | 3 | Frequency band | 24.25 – 24.495 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | – 11 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 2014/53/EU shall be used. Dwell time limits and frequency modulation range apply as specified in harmonised standards. | |
| | 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 302 858; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-09 | Edition 2/2018 |
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| | Nr | Parameter | Description | Comments |
|------------------|----|--|---|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions is only available to ground-based vehicle radars operating in the harmonised 24 GHz frequency range.</i> |
| | 3 | Frequency band | 24.25 – 24.5 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | 20 dBm e.i.r.p. (forward-facing to the direction of travel radars) 16 dBm e.i.r.p. (rear-facing to the direction of travel radars) | |
| | 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 2014/53/EU shall be used. Duty cycle limits and frequency modulation ranges apply as specified in harmonised standards. | |
| | 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 302 858; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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|---------|-------------------------------|-----------|-------------|----------------|
| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-10 | Edition 2/2018 |
|---------|-------------------------------|-----------|-------------|----------------|

| | Nr | Parameter | Description | Comments |
|------------------|----|--|---|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions is only available to ground-based vehicle radars operating in the harmonised 24 GHz frequency range.</i> |
| | 3 | Frequency band | 24.495 – 24.5 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | – 8 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 2014/53/EU shall be used. Duty cycle limits and frequency modulation ranges apply as specified in harmonised standards. | |
| | 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 302 858; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

F1- RTIR Edition:1; Revision:1

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|---------|-------------------------------|-----------|-------------|----------------|
| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-11 | Edition 2/2018 |
|---------|-------------------------------|-----------|-------------|----------------|

| | Nr | Parameter | Description | Comments |
|------------------|----|--|---|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions applies to vehicle-to-vehicle, vehicle-to-infrastructure and infrastructure-to-vehicle systems only.</i> |
| | 3 | Frequency band | 63 – 64 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | 40 dBm 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 302 686; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ECC/DEC/(09)01 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-12a | Edition 2/2018 |
|---------|-------------------------------|-----------|--------------|----------------|

| | Nr | Parameter | Description | Comments |
|------------------|----|--|--|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions applies to infrastructure and terrestrial vehicle systems only.</i> |
| | 3 | Frequency band | 76 – 77 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | 55 dBm peak 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 2014/53/EU Directive) | - | |
| | 11 | Frequency planning assumptions | - | |
| Informative part | 12 | Planned changes | - | |
| | 13 | Reference | EN 301 091-1; EN 301 091-2; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

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| ROMANIA | Radio Interface Specification | SRD / TTT | RO-IR 05-12b | Edition 2/2018 |
|----------------|--------------------------------------|------------------|---------------------|-----------------------|

| | Nr | Parameter | Description | Comments |
|-------------------------|-----------|---|--|---|
| Normative part | 1 | Radiocommunication Service | Mobile | |
| | 2 | Application | Short Range Devices / Transport and Traffic Telematics devices (TTT) | <i>This set of usage conditions applies to obstacle detection systems for use in gyroplanes only.¹</i> |
| | 3 | Frequency band | 76 – 77 GHz | <i>Harmonised radio spectrum for use by short-range devices (Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC)</i> |
| | 4 | Channelling (channel distribution) | - | |
| | 5 | Modulation / Occupied bandwidth | - | |
| | 6 | Direction / Separation | - | |
| | 7 | Transmit power / Power density | 30 dBm peak e.i.r.p. and 3 dBm/MHz average power spectral density | |
| | 8 | Channel access and occupation rules | Duty cycle limit: ≤ 56%/s | |
| | 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 303 360; Implementing Decision (EU) 2017/1483 amending Decision 2006/771/EC on the harmonization of radio frequencies spectrum for the use of short range devices and repealing Decision 2006/804/EC; ECC/DEC/(16)01; ERC/REC 70-03 | |
| | 14 | Notification number | - | |
| | 15 | Remarks | - | |

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¹ Member States may specify exclusion areas or equivalent measures in which the obstacles detection application for gyroplanes shall not be used for the protection of radio astronomy services or for other uses at national level. Gyroplanes are defined as EASA CS-27 and CS-29 (respectively JAR-27 and JAR-29 for previous certifications);