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List of CCS Class B systems

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1. INTRODUCTION

This document contains the list of train protection and voice radio legacy systems referred in the Control-Command and Signalling TSI.

2. ABBREVIATIONS, ACRONYMS AND REFERENCES

2.1. ABBREVIATIONS AND ACRONYMS

The acronyms used as names of legacy systems are explained in the table in sections 3.2 and 3.3.

RDD: Reference Document Database (<https://rdd.era.europa.eu/RDD/>).

2.2. REFERENCES

[1] – Commission Regulation (EU) 2016/919 of 27 May 2016 on the technical specification for interoperability relating to control-command and signalling subsystems of the rail system in the European Union¹ and its amendments².

¹ *OJ L158, 15.6.2016, p.1.*

² *At the time of publishing this document, the latest amendment is Commission Implementing Regulation (EU) 2019/776 of 16 May 2019 (OJ L139 I, 27.5.2019, p. 108.)*

3. CLASS B SYSTEMS

3.1. USE OF THIS DOCUMENT

This is a technical document prepared by the European Union Agency for Railways based on information received from Member States, Norway and Switzerland, and in accordance with the provisions of [1].

As stated in article 3.1 of the Annex of [1] *“The requirements for Class B systems are the responsibility of the relevant Member State”*. Details on the technical specifications can be found in the RDD.

3.2. LIST OF CLASS B TRAIN PROTECTION SYSTEMS

| Member State | Name of the legacy system ³ | Scope | Version identification | Date of latest authorisation to placing into service |
|----------------|---|---|---------------------------------|--|
| Austria | INDUSI I60 ³ PZB 90 ⁴ LZB (LZB L72, LZB L72 CE I and LZB L72 CE II) | Whole network Whole network Whole network | AT/DE | |
| Belgium | Crocodile TBL 1 TBL 2 TVM 430 TBL1+ KVB | Whole network Whole network Whole network Whole network Off-TEN only Access to high speed line 1 | | |
| Bulgaria | EBICAB 700 | Whole network | BU | |
| Croatia | INDUSI I60 ⁵ | Whole network | | |
| Czech Republic | LS | Whole network | | |
| Denmark | ZUB 123 | Whole network | SW02A (version 1.37 edition 04) | 02.02.2004 |
| Estonia | ALSN | Whole network | | |
| Finland | ATP-VR/RHK | Whole network | | |

³ The fact that two or more Member States use the same system does not imply that they are compatible: the versions shall be taken into account.

⁴ All new authorised vehicles must be equipped with PZB 90

⁵ Rolling stock equipped with higher versions (eg PZB 90) is accepted.

| Member State | Name of the legacy system ³ | Scope | Version identification | Date of latest authorisation to placing into service |
|---------------------|--|---|------------------------|--|
| France | Crocodile KVB TVM 300 TVM 430 KVBP KCVF KCVB NEXTEO DAAT | Whole network Whole network High speed lines High speed lines (sub)urban area of Paris (sub)urban area of Paris (sub)urban area of Paris (sub)urban area of Paris Whole network | | |
| Germany | PZB 90 LZB (LZB L72, LZB L72 CE I and LZB L72 CE II) ⁶ GNT (Geschwindigkeitsüberwachung für NeiTech-Züge) ⁷ | Whole network Whole network Whole network (routes with higher lateral acceleration for tilting trains) | AT/DE | |
| Hungary | EVM | Whole network | | |
| Ireland | CAWS ATP | Whole network Whole network | | |
| Italy | BACC RSDD/SCMT SSC | Whole network Whole network Off-TEN only | | |
| Latvia | ALSN | Whole network | | |
| Lithuania | ALSN | Whole network | | |
| Luxembourg | MEMOR II+ ⁸ | Whole network | | |
| Norway ⁹ | ATC ¹⁰ | Whole network | 2 | 1993 |
| Poland | SHP PKP radio system with Radiostop function | Whole network Whole network | | |

⁶ Leading vehicles for operation on LZB lines have to be equipped with an onboard system which can connect at least to L72 and CE I

⁷ GNT can only work in connection with PZB 90

⁸ ETCS BL2 is the safety system required on the Luxembourg rail network. Vehicles equipped and authorized with MEMOR II+ are still allowed to run on a limited area of the network on the basis of a derogation delivered by the NSA LU.

⁹ For information

¹⁰ Formerly referred as "EBICAB 700"

| Member State | Name of the legacy system ³ | Scope | Version identification | Date of latest authorisation to placing into service |
|---------------------------|---|---|------------------------|--|
| Portugal | INDUSI I60 EBICAB 700 | Cascais line Off-TEN Whole network | PT | |
| Romania | INDUSI I60 ¹¹ | Whole network | | |
| Slovak Republic | LS | Whole network | | |
| Slovenia | INDUSI I60 ¹² | All main tracks and also 3 regional tracks | | |
| Spain | ASFA EBICAB 900 LZB | Whole network Mediterranean Corridor. Section “La Encina – Barcelona Sants” High Speed Line “Madrid – Sevilla/Toledo/Málaga” C5 Commuter Line (Madrid). Section “Humanes – Mostoles el Soto” | ES ES | |
| Sweden | ATC ¹³ | Whole network except Linköping- Västervik/Kisa Linköping- Västervik/Kisa | 2 R | |
| Switzerland ¹⁴ | EuroSIGNUM ¹⁵ EuroZUB ¹⁵ | Whole network Whole network | | |
| The Netherlands | ATB First generation ATB new generation | Whole network Whole network | | |

¹¹ Rolling stock equipped with higher versions (eg PZB 90) is accepted

¹² Rolling stock equipped with higher versions (eg PZB 90) is accepted.

¹³ Formerly referred as “EBICAB 700”

¹⁴ For information

¹⁵ Swiss Class B systems are forbidden for ETCS B3 vehicles.

| Member State | Name of the legacy system ³ | Scope | Version identification | Date of latest authorisation to placing into service |
|--------------|---|---|------------------------|--|
| UK | GW ATP RETB TPWS/AWS TVM 430 Chiltern-ATP Mechanical Trainstops KVB | limited to specific routes only limited to specific routes only Whole network HS1 only limited to specific routes only limited to specific routes only HS1 only | | |

3.3. LIST OF CLASS B VOICE RADIO SYSTEMS¹⁶

| Member State | Name of the legacy system ¹⁷ | Scope | Version identification | Date of latest authorisation to placing into service |
|----------------|---|---------------|------------------------|--|
| Austria | UIC Radio Chapter 1-4+6 | | | |
| Bulgaria | UIC Radio Chapter Bulgaria | | | |
| Croatia | UIC Radio Chapter 1-4 | | | |
| Czech Republic | TRS — The Czech Railways radio system | | | |
| Estonia | The Estonian Railways train communication network | Whole network | | |

¹⁶ This list is based on the information in the Decisions 2006/860/EC and 2006/679/EC.

¹⁷ The fact that two or more Member States use the same system does not imply that they are compatible: the versions shall be taken into account.

| Member State | Name of the legacy system ¹⁷ | Scope | Version identification | Date of latest authorisation to placing into service |
|--------------|---|--|------------------------|--|
| Germany | <p>Analogue Radio Germany - in compliance with UIC 751-3 (all chapters):</p> <ul style="list-style-type: none"> • TGL 43886 März 1987, UKW-Verkehrsfunktechnik, Zugfunksystem, • functional requirement specification radio for low frequency traffic routes (Lastenheft Zugfunk auf Strecken mit einfachen betrieblichen Verhältnissen), detailed standard for an open simplex mode • functional requirement specification for dual mode user interface for digital and analogue cab radio and digital shunting radio – part 2 (Lastenheft Dualmode Bedienteil für digitalen und analogen Zugfunk digitalen Rangierfunk - Teil 2 - Funktionale Anforderungen), detailed standard for the MMI for cab radio with the function to switch between GSM-R and analogue train radio, used in the migration period | <p>Lines of the former GDR installed before 1990</p> <p>Low frequency traffic routes</p> <p>All routes outside the GSM-R network</p> | | |
| Greece | CH — Greek Railways radio system (VHF) | Whole network except Kiato-Athens airport section. | | |
| Hungary | UIC Radio Chapter 1-4 UIC Radio Chapter 1- 4 + 6 (Irish system) | | | |
| Ireland | UIC Radio Chapter 1- 4 + 6 (Irish system) | | | |
| Italy | GSM-P | On lines not covered with GSM-R | | |
| Latvia | LDZ radio system | Whole network | | |

| Member State | Name of the legacy system ¹⁷ | Scope | Version identification | Date of latest authorisation to placing into service |
|--------------|---|---|------------------------|--|
| Lithuania | The Lithuanian Railways train radio system Shunting Radio Communication System | All line sections between stations in border areas Whole network (for manoeuvring) | | |
| Poland | PKP radio system | TEN only | | |
| Portugal | UIC Radio Chapter 1-4 (TTT radio system installed at Cascais line) TTT radio system CP_N | Cascais line Off TEN Whole-network | | |
| Romania | Radio Network of CFR | | | |
| Slovakia | 450 Mhz UIC (kanál C) Multikom BOSCH OMEGA SRO ZUGFUNK 95 ZUGFUNK 2000 | | | |
| Slovenia | Analogue railway radio system called RDZ - in compliance with UIC 751-3 | All main tracks and 5 regional tracks | | |
| Spain | UIC Radio Chapter 1-4+6 | | | |
| UK | RETB (voice) | RETB lines only | | |