Identification of Signalling and Related Equipment

Synopsis
This document defines the principles for ensuring that signalling and related assets are uniquely identified.
Railway Group Standard
GK/RT0009
Issue four
Date June 2011

Identification of Signalling and Related Equipment

Issue record

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<td>One</td>
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<td>Two</td>
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Superseded documents

The following Railway Group documents are superseded, either in whole or in part as indicated:

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GK/RT0009, issue 3, Identification of Signalling and Related Equipment ceases to be in force and is withdrawn as of 03 September 2011.

Supply

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# Identification of Signalling and Related Equipment

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Part 1 Purpose and Introduction

1.1 Purpose

1.1.1 This document sets out the principles for the identification of signalling and associated assets and for their signing, to ensure that the equipment and locations can be clearly and unambiguously identified.

1.2 Introduction

1.2.1 Background

1.2.1.1 In accordance with the Railway Group Standards Code (RGSC 01), RSSB has given a commitment to carry out a structured review of all Railway Group Standards with a view to mandating only those requirements that define the interface and the need for co-operation between two or more duty holders.

1.2.1.2 A review of these requirements associated with the identification of signalling related assets has resulted in a revised Railway Group Standard on this topic.

1.2.2 Related requirements in other documents

1.2.2.1 The following Railway Group Standards contain requirements that are relevant to the scope of this document:

- GK/RT0045 Lineside Signals, Indicators and Layout of Signals
- GC/RT5021 Track System Requirements

1.2.3 Supporting documents

1.2.3.1 The following Railway Group documents support this Railway Group Standard:

- GK/GN0609 Guidance on Identification of Signalling and Related Equipment
- GK/GN0645 Guidance on Lineside Signals, Indicators and Layout of Signals

1.3 Approval and authorisation of this document

1.3.1 The content of this document was approved by Control Command and Signalling Standards Committee on 20 January 2011.

1.3.2 This document was authorised by RSSB on 17 May 2011.
Part 2  Requirements for Identification of Signalling and Related Equipment

2.1  Allocation of infrastructure asset identities

2.1.1  Identities of infrastructure assets

2.1.1.1  The following infrastructure assets shall have a defined identity:

a)  Signalling control centres, signal boxes and gate boxes.

b)  Lineside signals and indicators.

c)  Ground frames and ground switch panels.

d)  Junctions or other distinct groups of points controlled or detected by the signalling system.

e)  Tunnels, viaducts, swing bridges and other significant physical and / or operational features.

f)  Neutral sections.

g)  Level crossings.

2.1.2  Identities of lines

2.1.2.1  Each line and siding, within or adjoining a signalled area, shall have a unique defined identity.

2.1.2.2  Single and bidirectional lines which have no predominant direction of traffic shall be identified by 'single', 'up & down' or 'reversible'.

2.1.2.3  Where necessary, to aid identification, the line identity shall also include an identification of route. Such line identities shall be unique within signalling control centre areas.

2.1.3  Identities of signalling control centres

2.1.3.1  Each portion of route or signalling control centre shall be assigned a unique code of a maximum of three characters.

2.1.3.2  Each item or function shall have a unique identity within the portion of route or signalling control centre.

2.1.4  Identities of signalling lockout systems

2.1.4.1  Each signalling lockout system shall be identified by a numeric identity unique to the signal box. Regardless of signal box or locality prefixes, there shall be adequate separation between similar identities so that there is no possibility of confusion for users as to which section is in use.

2.1.5  Allocation of identities of other assets

2.1.5.1  The Close Doors Indicator (CD) and Right Away Indicator (RA) shall be identified using the associated signal or European Train Control System (ETCS) block marker identity or, where there is no relevant signal or ETCS block marker, with the platform identity.

2.1.5.2  OFF indicators shall be identified with the relevant signal or ETCS block marker.

2.1.5.3  Points indicators shall be identified using the relevant point identification number.
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2.1.5.4 Signal Passed at Danger (SPAD) indicators shall be identified using the relevant signal(s) identification.

2.1.5.5 The following ETCS features shall be allocated identities:
   a) Block markers.
   b) Cab signalling shunt entry boards.
   c) Indication of start of cab-signalling.

2.2 Display of infrastructure asset identities

2.2.1 Provision of lineside operational signs

2.2.1.1 Signalling and related equipment identities shall be displayed for the following assets so that the identity is visible to traincrew at permissible speed in daylight:
   a) Signalling control centres and gate boxes (except where these are remote from the railway).
   b) Ground frames and switch panels.
   c) Level crossings.
   d) Junctions and other distinct groups of points.
   e) Tunnels, viaducts, swing bridges and other significant physical features.

2.2.1.2 GI/RT7033 identifies signs that are to be provided with grid references.

2.2.2 Provision of signal and indicator identification plates

2.2.2.1 Signal identification plates shall be provided at all of the following signals and indicators:
   a) Colour light signals.
   b) Semaphore stop signals.
   c) Semaphore distant signals.
   d) Independent position light signals.
   e) Limit of shunt signals.
   f) Banner repeating signals.
   g) Stop boards.
   h) Distant boards.
   i) Preliminary route indicators.
   j) SPAD indicators.
   k) OFF indicators.
   l) SPAD indicators – combined identification sign and plate.
   m) Loading / unloading indicators – separate identification plate as for a running signal.
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n) Other indicators where the associated control function is not obvious, for example, RA indicators – separate identification plate as for a running signal.

2.2.2.2 Requirements for signal identification plates that are required to be read by drivers are set out in GI/RT7033.

2.2.2.3 The following ETCS features shall have an identification plate:
   a) Block markers.
   b) Cab signalling shunt entry boards.
   c) Indication of start of cab-signalling.

2.2.2.4 Signal identification plates shall distinguish between:
   a) Passable and non-passable stop signals.
   b) Colour light stop signals and isolated colour light distant signals.
   c) 2-state and 3-state banner repeating signals.

2.2.2.5 Displayed signal identities shall be unique to the portion of route or controlling signal box and shall incorporate all of the following:
   a) The portion of route or signalling control centre prefix code.
   b) The signal number, which shall be the signal primary identification where this applies.
   c) An arrow, where a shunting or a subsidiary signal is positioned on the right-hand side of the line in the direction of traffic. It is permitted for arrows to be provided where main signals are positioned on the right-hand side of the line if the sighting committee believes that extra clarity is required.

2.2.2.6 The following signals shall also display a suffix as part of the displayed signal identity, that is unique to that type of signal or indicator:
   a) Banner repeating signals shall have the same signal box prefix code and signal number identification as the repeated signal, with the addition of the suffix BR. Where multiple banners are provided for a signal, individual banners shall be identified by suffixes BR-1, BR-2, in the direction of traffic.
   b) Co-acting signals shall have the same signal box prefix code and signal number identification as the primary signal, with the addition of the suffix CA.
   c) It is permitted for distant signals worked from the same lever or switch as the associated stop signal to have the same prefix code and signal number identification as the stop signal, with the addition of the suffix R.
   d) It is permitted for outer distant signals worked from the same lever or switch as the associated stop signal to have the same prefix code and signal number identification as the stop signal, with the addition of the suffix RR.
   e) SPAD indicators shall have the same signal box prefix code and signal number identification as the associated signal(s), with the addition of the suffix SPAD, except where multiple SPAD indicators are provided in association with a signal(s), in which case the suffix shall be SPAD-A, SPAD-B (and so on).
f) Preliminary route indicators shall have the same number as the junction signal to which they apply, with the addition of the suffix PRI, except where two preliminary route indicators are provided in a sequence, in which case:

i) The outer preliminary route indicator shall have the suffix PRI-A, and

ii) The inner preliminary route indicator shall have the suffix PRI-B.

g) Loading and unloading indicators shall have a suffix to identify individual indicators within a set.

2.2.2.7 With the exception of the applications set out in 2.2.2.6 a) to f), all signals shall be individually numbered as part of a sequence.

2.3 Train identity

2.3.1 Reporting of train identity

2.3.1.1 GE/RT8270 sets out the process for the assessment of compatibility that is required whenever a material change is to be made that affects the interface between the signalling system and railway undertakings or any infrastructure managers that operate trains.

2.3.1.2 When it becomes necessary for the operation of the signalling system for train-mounted equipment to report the identity of the train on which it is installed, a system for allocating and recording these identities in which the infrastructure and the rolling stock sub-systems are compatible shall be established and maintained.
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Part 3 Application of this document

3.1 Application - infrastructure managers

3.1.1 Scope

3.1.1.1 The requirements of this document apply to all work and alterations that require new identities or signage.

3.1.1.2 It is permissible for the infrastructure manager to designate specific infrastructure projects, ongoing when this document comes into force, for which compliance with the requirements of this document applicable to the design, construction and commissioning of new or altered infrastructure is not mandatory. When designating such projects, the infrastructure manager shall consider:

a) Its responsibilities under its current safety authorisation.

b) The stage reached by the project at the time this document comes into force (for example, approval in principle).

c) Whether compliance is necessary to ensure compatibility with other parts of the infrastructure.

d) Whether compliance is necessary to facilitate safe interworking having regard to changes to related requirements mandated on another infrastructure manager or a railway undertaking.

e) The economic impact of compliance, but subject to its current safety authorisation in relation to the infrastructure in question.

3.1.1.3 Action to bring existing identities into compliance with the requirements set out in 2.1 and 2.2 of this document is not required.

3.1.2 Exclusions from scope

3.1.2.1 There are no exclusions from the scope specified in 3.1.1 for infrastructure managers.

3.1.3 General compliance date for infrastructure managers

3.1.3.1 This Railway Group Standard comes into force and is to be complied with from 03 September 2011.

3.1.3.2 After the compliance dates or the date by which compliance is achieved if earlier, infrastructure managers are to maintain compliance with the requirements set out in this Railway Group Standard. Where it is considered not reasonably practicable to comply with the requirements, authorisation not to comply should be sought in accordance with the Railway Group Standards Code.

3.1.4 Exceptions to general compliance date

3.1.4.1 There are no exceptions to the general compliance date specified in 3.1.3 for infrastructure managers.

3.2 Application - railway undertakings

3.2.1 Scope

3.2.1.1 The requirements of this document apply to all work relating to train identities that affects the interface between trains and the signalling system, as set out in 2.3.
3.2.1.2 The requirements of this document apply where it is known, or becomes known, that the requirements relating to train identities affect the interface between trains and the signalling system, as set out in 2.3.

3.2.1.3 Action to bring existing signage into compliance with the requirements set out in 2.1 and 2.2 of this document is not required.

3.2.2 Exclusions from scope

3.2.2.1 There are no exclusions from the scope specified in 3.2.1 for railway undertakings.

3.2.3 General compliance date for railway undertakings

3.2.3.1 This Railway Group Standard comes into force and is to be complied with from 03 September 2011.

3.2.3.2 After the compliance dates or the date by which compliance is achieved if earlier, railway undertakings are to maintain compliance with the requirements set out in this Railway Group Standard. Where it is considered not reasonably practicable to comply with the requirements, authorisation not to comply should be sought in accordance with the Railway Group Standards Code.

3.2.4 Exceptions to general compliance date

3.2.4.1 There are no exceptions to the general compliance date specified in 3.2.3 for railway undertakings.

3.3 Health and safety responsibilities

3.3.1 Users of documents published by RSSB are reminded of the need to consider their own responsibilities to ensure health and safety at work and their own duties under health and safety legislation. RSSB does not warrant that compliance with all or any documents published by RSSB is sufficient in itself to ensure safe systems of work or operation or to satisfy such responsibilities or duties.
Definitions and Abbreviations

Block marker
A sign provided for the information of drivers on ERTMS signalled lines. It indicates a location designated as an ‘End of (Movement) Authority’ when trains are operating in degraded mode.

CD
Close Doors Indicator.

European Rail Traffic Management System (ERTMS)
A system providing real-time control and supervision of trains, consisting of trainborne, track and lineside equipment.

European Train Control System (ETCS)
A subset of ERTMS providing a level of protection against overspeed and overrun depending upon the capability of the lineside infrastructure.

Identification plate
A conspicuous identity sign that can easily be read by users. The plate can be a lineside sign, or part of a lineside sign.

RA
Right Away Indicator.

SPAD
Signal Passed at Danger.

Other signalling related terms are defined in GK/GN0802.
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References

The Catalogue of Railway Group Standards and the Railway Group Standards CD-ROM give the current issue number and status of documents published by RSSB. This information is also available from www.rgsonline.co.uk.

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