Linese Safety Signs

Synopsis
This document mandates the arrangements for the management and specification of lineside operational safety signs in order to provide consistency of form and presentation throughout the network.

This document contains requirements that are amended under the Railway Group Standards Code (Issue Three) as a small scale change. Reference to the amended requirements is made in the ‘Issue record’. All other parts of the document are unchanged from the previous issue.

Copyright in the Railway Group Standards is owned by Rail Safety and Standards Board Limited. All rights are hereby reserved. No Railway Group Standard (in whole or in part) may be reproduced, stored in a retrieval system, or transmitted, in any form or means, without the prior written permission of Rail Safety and Standards Board Limited, or as expressly permitted by law.

Content approved by:

CCS Standards Committee on 16 July 2009

Authorised by RSSB on 30 July 2009

Published by:
RSSB
Block 2 Angel Square
1 Torrens Street
London EC1V 1NY

© Copyright 2009 Rail Safety and Standards Board Limited
This page has been left blank intentionally
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part A</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>Issue record</td>
<td>2</td>
</tr>
<tr>
<td>A2</td>
<td>Implementation of this document</td>
<td>2</td>
</tr>
<tr>
<td>A3</td>
<td>Scope of Railway Group Standards</td>
<td>3</td>
</tr>
<tr>
<td>A4</td>
<td>Responsibilities</td>
<td>3</td>
</tr>
<tr>
<td>A5</td>
<td>Health and safety responsibilities</td>
<td>3</td>
</tr>
<tr>
<td>A6</td>
<td>Technical content</td>
<td>3</td>
</tr>
<tr>
<td>A7</td>
<td>Supply</td>
<td>3</td>
</tr>
<tr>
<td><strong>Part B</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>Purpose</td>
<td>4</td>
</tr>
<tr>
<td>B2</td>
<td>Application of this document</td>
<td>4</td>
</tr>
<tr>
<td>B3</td>
<td>Definitions</td>
<td>5</td>
</tr>
<tr>
<td>B4</td>
<td>Installation of signs</td>
<td>6</td>
</tr>
<tr>
<td>B5</td>
<td>Permitted signs</td>
<td>6</td>
</tr>
<tr>
<td>B6</td>
<td>Requirements for approved signs</td>
<td>7</td>
</tr>
<tr>
<td>B7</td>
<td>Positioning of signs</td>
<td>9</td>
</tr>
<tr>
<td>B8</td>
<td>Readability and reflectivity</td>
<td>11</td>
</tr>
<tr>
<td>B9</td>
<td>Temporary signs</td>
<td>11</td>
</tr>
<tr>
<td>B10</td>
<td>Proposals for new designs of sign</td>
<td>12</td>
</tr>
<tr>
<td>B11</td>
<td>Management and maintenance of signs</td>
<td>13</td>
</tr>
<tr>
<td>B12</td>
<td>Signs not in service</td>
<td>13</td>
</tr>
<tr>
<td>B13</td>
<td>Records of signs</td>
<td>13</td>
</tr>
<tr>
<td>B14</td>
<td>Duties of Railway Safety</td>
<td>13</td>
</tr>
<tr>
<td>Figure 1</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Figure 2</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td><strong>Appendices</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>Specification of signs primarily for train drivers</td>
<td>15</td>
</tr>
<tr>
<td>B</td>
<td>Specification of signs for personnel on or near the line or lineside</td>
<td>131</td>
</tr>
<tr>
<td>C</td>
<td>Specification of signs for the public</td>
<td>153</td>
</tr>
<tr>
<td>D</td>
<td>Specification of signs for communication</td>
<td>189</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td>212</td>
<td></td>
</tr>
</tbody>
</table>
Part A

A1 Issue record

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>June 2003</td>
<td>First issue</td>
</tr>
<tr>
<td>Two</td>
<td>October 2009</td>
<td>The following sections have been amended as a small-scale change</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Section B6.2.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appendix A:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AB01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AB02</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AB03</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AB04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AB05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AB07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AB08</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AB09</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AC06</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AC11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AC12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AH05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign AK201kz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appendix D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Sign DC05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minor corrections following consultation</td>
</tr>
</tbody>
</table>

Revisions have been marked by a vertical black line in this issue.

This document will be updated when necessary by distribution of a complete replacement.

A2 Implementation of this document

The publication date of this document is 3 October 2009.

This document comes into force on 3 October 2009.

The dates by which compliance with the requirements of this document is to be achieved are set out in Part B2. Where those dates are later than the date on which this document comes into force, this is to give Railway Group members additional time to plan and commence implementation so as to achieve full compliance by the dates set out in Part B2.

This document supersedes the following Railway Group Standards, either in whole or in part as indicated:

<table>
<thead>
<tr>
<th>Railway Group Standard</th>
<th>Issue No.</th>
<th>Title</th>
<th>RGS sections superseded by this document</th>
<th>Date(s) as of which sections are superseded</th>
</tr>
</thead>
<tbody>
<tr>
<td>GK/RT0033</td>
<td>3</td>
<td>Lineside Signs</td>
<td>All sections</td>
<td>2 August 2005 (document withdrawn as of this date)</td>
</tr>
<tr>
<td>GC/RT5060</td>
<td>2</td>
<td>Equipment for the Signing of Temporary and Emergency Speed</td>
<td>All sections</td>
<td>2 August 2005 (document withdrawn as of this date)</td>
</tr>
</tbody>
</table>
Lineside Operational Safety Signs

Restrictions

<table>
<thead>
<tr>
<th>Restrictions</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>GK/RT0005 2</td>
<td>Section 7</td>
</tr>
<tr>
<td>Safety Related Colours for Signalling Applications</td>
<td></td>
</tr>
<tr>
<td>2 August 2005 (section 7 withdrawn as of this date)</td>
<td></td>
</tr>
</tbody>
</table>

Other sections of GK/RT0005 was replaced by GK/RT0025 when re-issued.

The changes introduced in Issue 2 as part of the small scale change process come into force from the issue date of this document.

A3 Scope of Railway Group Standards

The overall scope of Railway Group Standards is set out in Appendix A of GA/RT6001. The specific scope of this document is set out in Part B2.

A4 Responsibilities

Railway Group Standards are mandatory on all members of the Railway Group* and apply to all relevant activities that fall into the scope of each individual’s Railway Safety Case. If any activities are performed by a contractor, the contractor’s obligation in respect of Railway Group Standards is determined by the terms of the contract between the respective parties. Where a contractor is a duty holder of a Railway Safety Case then Railway Group Standards apply directly to the activities described in the Safety Case.

* The Railway Group comprises Network Rail Infrastructure Limited, Rail Safety and Standards Board Limited, and the train and station operators who hold railway safety cases for operation on or related to infrastructure controlled by Network Rail Infrastructure Limited.

Network Rail Infrastructure Limited is also known as Network Rail.

Rail Safety and Standards Board Limited is also known as RSSB.

A5 Health and safety responsibilities

In issuing this document, RSSB makes no warranties, express or implied, that compliance with all or any documents published by RSSB is sufficient on its own to ensure safe systems of work or operation. Each user is reminded of its own responsibilities to ensure health and safety at work and its individual duties under health and safety legislation.

A6 Technical content

The technical content of this document has been approved by:

Jeff Allan, Principal Signalling and Telecommunications Engineer

Enquiries should be directed to RSSB – Tel: 020 3142 5400 or e-mail enquiries@rssb.co.uk.

A7 Supply

The authoritative version of this document is available at www.rgsonline.co.uk. Uncontrolled copies of this document can be obtained from Communications, RSSB, Block 2 Angel Square, 1 Torrens Street, London EC1V 1NY, telephone 020 3142 5400 or e-mail enquiries@rssb.co.uk. Other Standards and associated documents can also be viewed at www.rgsonline.co.uk.
Part B

B1 Purpose
This document mandates the arrangements for the management and specification of lineside operational safety signs in order to provide consistency of form and presentation throughout the network.

B2 Application of this document

B2.1 To whom the requirements apply
This document contains requirements that are applicable to RSSB and duty holders of the following categories of Railway Safety Case:

a) infrastructure controller
b) station operator

Under the Railways (Safety Case) Regulations 2000, the duty holder at a station (as defined in those Regulations) is responsible for ensuring that the requirements of Railway Group Standards are complied with. At a station, contractual arrangements (including a lease) do not of themselves relieve the duty holder of his obligations under those Regulations.

B2.2 Compliance requirements

B2.2.1 Infrastructure controller
The requirements of this document for all new signs shall be complied with no later than 2 August 2005, with the exceptions set out below:

a) where existing signs do not conform with this document, arrangements shall be made to install the correct sign in conformance with this document. The infrastructure controller shall:
   i) review all signs within its responsibility and prepare an action plan by 2 August 2007 to replace those that do not conform to this document
   ii) replace signs that do not conform with this document by 2 August 2009.

b) where the appearance of existing signs conforms to the requirements of this document but they have very minor differences in specification, for example larger dimensions or incorrect typeface, they shall be changed to meet the requirements of this document when they are next renewed.

B2.2.2 Station operator
The requirements of this document for all new signs shall be complied with no later than 2 August 2005, with the exceptions set out below:

a) where existing signs do not conform with this document, arrangements shall be made to install the correct sign in conformance with this document. The station operator shall:
   i) review all signs within its responsibility and prepare an action plan by 2 August 2007 to replace those that do not conform to this document
   ii) replace signs that do not conform with this document by 2 August 2009.

b) where the appearance of existing signs conforms to the requirements of this document but they have very minor differences in specification, for example larger dimensions or incorrect typeface, they shall be changed to meet the requirements of this document when they are next renewed.

B2.2.3 RSSB
RSSB shall comply with the requirements of this document by 2 August 2003.
**B2.2.4 General compliance requirements**

Until the compliance dates, or the date by which compliance is achieved (if earlier), the applicable requirements of the predecessor documents shall continue to be met (see Part A for details).

After the compliance date, or after the date by which compliance is achieved (if earlier), duty holders shall not deviate from the requirements set out in this document.

Where it is considered not reasonably practicable to comply with the requirements set out in this document, authorisation not to comply shall be sought in accordance with GA/RT6001, GA/RT6004 or GA/RT6006.

**B2.3 Exclusions from the application of this document**

This document does not include signs contained in the documents listed in section B2.5, which are adequately specified to ensure consistent and correct reproduction.

This document does not address the requirements for signs on trains.

This document does not address the requirements for signs in public areas except for those dealing with operational safety.

**B2.4 Related requirements in other documents**

The requirements for signs performing the function of a signal are set out in GK/RT0031.

**B2.5 Supporting documents**

Where a sign is mandated by another Railway Group Standard an appropriate reference is included within the text defining the sign.

The following documents adequately describe signs that have relevance to the railway:

a) Traffic Signs Regulations & General Directions 2002  
b) The Health and Safety (Safety Signs & Signals) Regulations 1996  

**B3 Definitions**

**New design of sign**  
A sign required for a purpose within the scope of this document, but which is not currently included within one of the appendices to this document.

**New installation of sign**  
A sign placed where there was previously no sign. The replacement of an existing sign with another sign having the same meaning is not a new installation, although the form of the sign may need to be changed to meet the requirements of this document.

**Readability**  
A sign is readable if, when viewed under the conditions defined for the sign in the appendices and by a person with the relevant minimum eyesight, the message it conveys is understandable.

**Required reading time**  
The required reading time for a sign is the time necessary for the reader to:

a) identify the presence of a sign (conspicuity)  
b) read and understand the information presented by the sign (readability)  
c) determine what action, if any, is required and when (decision),
presuming that the sign is visible and that there is no other information required
to be taken in at the location concerned.

**Typeface - BS 3693B: 1964**
A typeface approved for use as specified in this document. BS 3693B:1964 has
been withdrawn (but see section B14 for availability of this typeface). The current
version of this standard, BS 3693B:1992 does not contain the required
information.

**Typeface - Rail Alphabet**
A typeface approved for use as specified in this document, designed by Kinnear
& Calvert for the British Railways Board in the 1960s (see section B14 for
availability of this typeface).

**Typeface - Transport**
A typeface approved for use as specified in this document, designed by Kinnear
& Calvert for the Ministry of Transport Warboys Committee in 1963. This
typeface is available commercially. (This typeface is not to be confused with
Linotype “Transport”, which differs from the MoT design.)

**Visible**
Visible means that the person intended to read the sign is able to see the whole
of the sign.

### B4 Installation of signs

**B4.1 Installation arrangements**

**B4.1.1**
Duty holders planning the installation of signs shall assess each application to
determine the requirements for:

a) positioning as set out in section B7

b) robustness to the environment, taking into account all reasonably
foreseeable conditions

c) resistance to deliberate defacement and movement

d) method of fixing and removal

e) resistance to rotation

f) control of vegetation to prevent the sign becoming obscured

g) access for maintenance

h) the maintenance policy, as set out in section B11

**B4.1.2**
Signs that are not in service shall be obscured until they are commissioned.

**B4.2 New installations of signs - consultation**

Prior to approval of new permanent installations, the duty holder shall consult
other duty holders concerned with the installation to assess whether the signs as
installed are fit for the intended purpose and to ensure, when relevant, that the
consequences for the control of trains and driver workload are acceptable.

### B5 Permitted signs

Signs included in the appendices to this document are permitted to be used on
Network Rail controlled infrastructure:

- Appendix A - Signs primarily for train drivers
- Appendix B - Signs for personnel on or near the line or lineside
- Appendix C - Signs for the public
- Appendix D - Signs for communication.
The signs in appendices A to C have been grouped to take account of the eyesight requirements set out in section B8.3.

The signs set out in this document shall be installed for use only as set out in the appendices. The signs shall not be used for other than the permitted purpose.

Signs that consist of words and information shall use the generic styles shown in this document.

**B6 Requirements for approved signs**

**B6.1 Size of signs**

Unless otherwise stated, duty holders shall apply a maximum tolerance of 1% to the dimensions specified in the appendices to this document, but subject to a maximum of ±10 mm.

**B6.2 Colours**

**B6.2.1**

References to red, yellow, purple, blue, green and grey in this document shall mean:

<table>
<thead>
<tr>
<th>Colour</th>
<th>Shade (non-reflective)</th>
<th>Shade (retro-reflective)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>BS 381C:1996 – 355</td>
<td>BS 4800: 1989 – 08E51</td>
</tr>
<tr>
<td>Purple</td>
<td>Pantone 260C</td>
<td>Pantone 260C *</td>
</tr>
<tr>
<td>Blue</td>
<td>BS 381C:1996 – 109</td>
<td>BS 4800: 1989 – 1E53</td>
</tr>
<tr>
<td>Green</td>
<td>BS 381C:1996 – 228</td>
<td>BS 4800: 1989 – 14E53</td>
</tr>
<tr>
<td>Grey</td>
<td>BS 381C:1996 – 693</td>
<td>Not used</td>
</tr>
</tbody>
</table>

* This shade is not available as a single product, but can be achieved by overlaying a transparent Pantone 260C product on a white retro-reflective product.

**B6.2.2**

The rear of signs, when visible, shall be so coloured that they do not cause confusion to railway staff or the public.

**B6.3 Language**

**B6.3.1 Signs for railway personnel**

Signs for railway personnel shall be in the English language. It is permissible for signs for railway personnel near international borders to be multi-lingual.

**B6.3.2 Signs for the public**

Pictograms shall be used where one language alone is not appropriate to the application, except where it is considered that text is justified, in which case it is permissible for signs for the public to be multi-lingual.
B6.4  Lettering and symbols

Unless otherwise stated in the appendices, for signs within the scope of this document duty holders shall use the following typefaces for any symbols or text required:

B6.4.1  BS 3693B: 1964 typeface shall be used for signs containing only digits and/or capitals as abbreviations.

B6.4.2  Rail Alphabet typeface shall be used for:

a) text addressed to traincrew, except where BS 3693B: 1964 applies.

b) textual instructions, warnings and information addressed to the public and staff at the trackside.

Figures 1 and 2 illustrate the manner in which text shall be formatted using the Rail Alphabet and section B6.5 explains the corresponding layout of the text.

B6.4.3  Transport typeface shall be used for the level crossing signs where indicated in the appendices to this document.

B6.5  Layout of text

The layout of text within the sign shall be based on a grid system as illustrated in Figure 1. As signs vary in size depending on application, the grid system allows elements to be positioned, and the radius of corners to be chosen, in proportion to their size.

Figure 1: Generic format of text using the Rail Alphabet

There are three sizes of text, which are used to convey information in order of importance.

The size of the grid is defined by the “x”-height of the main heading, the “x”-height being the height of a lower-case “x”. In this case the x-height shall be 3 grid units.

If hierarchical information is required, for example a main heading “Danger”, followed by qualifying text “Overhead live wires”, the x-height of the main heading shall be 3 units, and of the qualifying text 2 units. Text of one unit in height shall be reserved for any limitations which need to be applied.
Interlinear separation shall be double the x-height of the text. Hence, for a 3 unit spacing between text lines, the baseline to baseline will be 6 units.

Borders shall be the same thickness as the x-height of the largest text. Hence, if the main text is 3 units the border shall be 3 units.

For example:

- **Warning** 3 unit height: ‘Danger’
- **Text** 2 unit height: ‘Passengers must not cross the line’
- **Limitation** 1 unit height: ‘Except by means of the footbridge’.

![Example of text using the Rail Alphabet](image)

**Figure 2:** Example of text using the Rail Alphabet

### B7  Positioning of signs

**B7.1  Visibility and position along the track**

**B7.1.1**

Duty holders shall place signs and orientate them in a manner that is appropriate to the associated normal viewing position.

**B7.1.2**

Duty holders shall choose locations for signs so that signs are not obscured by other equipment and so that the readability requirements are achieved. The potential for the signs to be obscured by staff or by passengers on a platform shall also be assessed. Signs shall not be positioned where they may obscure other information. When positioning signs, duty holders shall consider their impact in relation to the decisions to be made associated with the sign.
B7.1.3
Duty holders shall carry out an assessment for signs to be installed within the sighting distance of a signal or other sign intended for drivers, to ensure that the sighting of the signal and signs continue to meet the requirements of GK/RT0037.

When provided in support of a signalling requirement, it is permissible for the signs set out in appendix A, section AK, subsection 1 to be subject to the recommendations of a signal sighting committee.

B7.1.4
Where a sign is intended for the drivers of trains, duty holders shall assess the sighting requirements.

B7.1.5
Where a sign is not intended for the drivers of trains, duty holders shall position the sign taking into consideration any hazards that may arise.

B7.1.6
Duty holders shall choose a location that meets the requirements set out in the appendices and the references for the sign concerned. The location shall not prejudice the intent of the sign.

B7.2 Driver ergonomics
Duty holders shall ensure that the arrangement of signs along the trackside for the control of the movement of trains takes into consideration the activities that a driver may be required to undertake on the approach to the signs and the required reading time. The sequence of information shall be arranged so that the effect on the workload of the driver is accepted by the train operators affected.

B7.3 Clearances
Duty holders shall ensure that signs are positioned and maintained so that:

a) at least normal clearances for new, altered and temporary infrastructure as set out in GC/RT5212 are achieved

b) at least minimum clearances for personnel set out in GC/RT5203 are provided

c) at least minimum electrical clearances set out in GE/RT8025 are provided.

B7.4 Vertical position
Duty holders shall determine the vertical position of signs in accordance with the usual viewing position. The height of signs at the trackside for the operation of trains shall take account of the available clearances, and the other signs and signals in the vicinity.

It is permissible to place signs in an elevated position, for example on a gantry. The duty holder responsible shall take into account the effects of illumination from the train and the neighbouring locality.

B7.5 Effect of the sun
Duty holders shall take into account the movement of the sun on the readability and reflectivity of signs when choosing the orientation and location of signs to be read by drivers at permissible speeds. When considering the positioning of retro-reflective signs the effect of the sun on the readability and appearance of the sign shall be assessed.

B7.6 Ambient lighting
Duty holders shall assess locations at which signs are to be installed to determine hazards arising from the effects of ambient lighting, for example street lights.
It is not permissible for duty holders to depend on ambient lighting that is not under their control to obtain the required visibility and readability of their signs.

**B7.7 Limitation of visibility**
Where required for the safety of the application, measures to limit the visibility away from the intended line of approach shall be assessed.

**B8 Readability and reflectivity**

**B8.1 Readability**
Duty holders shall specify and position signs to achieve the readability and reading times set out in the appendices to this document.

**B8.2 Reflectivity**
Where required to meet the readability requirements, the front of signs shall be retro-reflective or illuminated during the hours of darkness. With the exception of black, reflective performance shall be no worse than that associated with Class 1 retro-reflective material (as defined in BS 873 Part 6). The readability shall be judged in accordance with the luminance requirements of train headlights set out in GM/RT2180 under clear night-time conditions.

Reflective signs intended for the drivers of approaching trains shall be angled such that glare and spectral effects do not arise when the train is within the reading distance.

**B8.3 Eyesight standards to be considered**
The requirements and guidance contained within the following documents shall be taken into account:

a) **Staff**
   Any specific eyesight requirements contained within GO/RT3251 or GO/RT3353 as appropriate.

b) **Public**
   i) SRA Code of Practice ‘Train and Station Services for Disabled Passengers’ (section B4.2)
   ii) ‘Sign Design Guide’ by Peter Barker and June Fraser, published by JMU and the Sign Design Society.

**B9 Temporary signs**

**B9.1 Requirements for temporary signs**
Signs whose application is temporary, for example temporary speed restrictions, shall meet the requirements in sections B9.2 and B9.3 below, in addition to the general requirements for signs set out in sections B4, B5, B6, B7, B8 and B11.

**B9.2 Method of fixing of temporary signs**
The method of fixing of temporary signs shall provide for:

a) portability, ease of use and resistance to unauthorised removal
b) stability, especially in the presence of passing trains, high winds and on ballast or other uneven surfaces
c) safe use on AC and DC electrified lines.

**B9.3 Power supply for illumination of temporary signs**
Where temporary signs are illuminated, the power supply shall meet at least the following operational requirements:

a) the design shall not allow unauthorised operation
b) there shall be a means of checking the condition of the power supply for the illumination (if any)
c) any power supply indications shall not emit a light in a direction which allows observation by a driver of a train.
B10 Proposals for new designs of signs

B10.1 Signs required, but not currently included in this document
Where a sign is required for a purpose that is within the scope of this document, but is not currently included, the duty holder concerned shall advise RSSB by submitting a proposal for a new design of sign and a change to this document, as set out in GA/RT6001.

The proposal shall include artwork to a standard comparable with that used in the appendices to this document. Section B10 sets out specific requirements to be applied to new designs of signs. These requirements are in addition to the requirements set out in sections B6 and B8.

B10.2 Presentation and shape of new designs of signs
For new designs of signs related to the safe operation of trains, duty holders shall reinforce the intended purpose by use of the following shapes, either for the sign itself or as a symbol contained within a rectangular or circular shape:

a) a circular sign or symbol shall be used to denote an instruction
b) a triangular sign or symbol, apex upwards, shall denote a warning, for example, a hazard or an advance indication of an instruction beyond
c) a rectangular sign or symbol shall be used for the display of information.

For new designs of signs for other purposes, the presentation and the shape of the signs is determined by the legislation and the regulations in force. Otherwise the principles set out in this section shall be applied.

B10.3 Use of colour for new designs of signs
B10.3.1 For signs for the safe operation of trains, the colour of the signs shall be determined as follows:

a) a red border shall be used to denote an instruction; the instruction shall appear as black pictogram/text on a white background
b) a yellow border shall be used to denote a warning; the instruction shall appear as black pictogram/text on a white background
c) a black border shall be used for the display of information; the instruction shall appear as black pictogram/text on a white background.

B.10.3.2 For signs for other purposes, the colour of the signs shall be determined by the legislation and the regulations in force. Where this is not applicable, the following rules shall be applied:

a) instructions for the public and staff at the trackside shall appear as white pictogram/text upon a red background; the border, if used, shall be white
b) warnings for the public and staff at the trackside shall appear as black pictogram/text upon a yellow background contained within a black border
c) information for the public and staff at the trackside shall appear as black pictogram/text upon a white background, usually contained within a black border.

B10.4 Contrasting colours for new designs of signs
For signs within the scope of this document, duty holders shall use the following colours:
Lineside Operational Safety Signs

<table>
<thead>
<tr>
<th>Colour</th>
<th>Contrasting colour (if required)</th>
<th>Symbol colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>White</td>
<td>Black</td>
</tr>
<tr>
<td>Yellow</td>
<td>Black</td>
<td>Black</td>
</tr>
<tr>
<td>Purple</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>Blue</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>Green</td>
<td>White</td>
<td>White</td>
</tr>
<tr>
<td>Grey</td>
<td>Black</td>
<td>Black</td>
</tr>
</tbody>
</table>

These colour combinations are as set out in BS 5378-2: 1980.

B11 Management and maintenance of signs

For the signs for which they are responsible, duty holders shall ensure that signs:

- a) continue to be fit for the intended purpose
- b) are subject to a planned inspection and condition monitoring regime
- c) are the subject of a maintenance programme that includes cleaning, graffiti removal and replacement as soon as these become necessary
- d) are not declared redundant before the arrangements for their decommissioning are complete.

B12 Signs not in service

Signs that have been decommissioned and are not in service shall be obscured and then removed as soon as practicable.

B13 Records of signs

Duty holders shall keep records, as set out in GI/RT7001, of all the permanent signs required by this standard for which they are responsible. The records shall include the following:

- a) type and identity of sign
- b) position and the reasons for the choice of position
- c) the need addressed by the sign
- d) the justification where higher than class 1 reflectivity is used
- e) maintenance arrangements
- f) maintenance history.

GI/RT7001 sets out the requirements for the management of safety related records of elements of the infrastructure.

B14 Duties of RSSB

RSSB shall make the typeface defined in BS 3693B: 1964 and the Rail Alphabet typeface available to the Railway Group.
# Lineside Operational Safety Signs

## Appendix A

Signs primarily for train drivers.

### Contents

The suffixes used have the following meanings:
- z: the sign is not mandated by a current group standard
- m: sign displays imperial speeds or distances
- k: sign displays metric speeds or distances.

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section AA</strong></td>
<td></td>
</tr>
<tr>
<td>AWS and Train Protection</td>
<td></td>
</tr>
<tr>
<td>AA01 Commencement of AWS gap</td>
<td>19</td>
</tr>
<tr>
<td>AA02 Termination of AWS gap</td>
<td>20</td>
</tr>
<tr>
<td>AA03z Commencement of special AWS working</td>
<td>21</td>
</tr>
<tr>
<td>AA04z Termination of special AWS working</td>
<td>22</td>
</tr>
<tr>
<td>AA05 Permanently installed AWS cancelling indicator</td>
<td>23</td>
</tr>
<tr>
<td><strong>Section AB</strong></td>
<td></td>
</tr>
<tr>
<td>Cab and Radio Signalling</td>
<td></td>
</tr>
<tr>
<td>AB01 Warning of the start of cab-signalling</td>
<td>27</td>
</tr>
<tr>
<td>AB02 Indication of start of cab-signalling</td>
<td>28</td>
</tr>
<tr>
<td>AB03 Indication of end of cab-signalling</td>
<td>29</td>
</tr>
<tr>
<td>AB04 TVM block marker</td>
<td>30</td>
</tr>
<tr>
<td>AB05 Cab signalling shunt entry board</td>
<td>31</td>
</tr>
<tr>
<td>AB06 Radio electronic token block: loop clear marker</td>
<td>32</td>
</tr>
<tr>
<td>AB07 Start / end of cab signalling directional arrows</td>
<td>33</td>
</tr>
<tr>
<td>AB08 ETCS block marker</td>
<td>34</td>
</tr>
<tr>
<td>AB09 ETCS block marker passable plate</td>
<td>35</td>
</tr>
<tr>
<td><strong>Section AC</strong></td>
<td></td>
</tr>
<tr>
<td>Identification of Signals and Points</td>
<td></td>
</tr>
<tr>
<td>AC01 Controlled (non-passable) signal identification plate</td>
<td>38</td>
</tr>
<tr>
<td>AC02 Distant signal sign and identification plate</td>
<td>39</td>
</tr>
<tr>
<td>AC03 Automatic (passable) signal sign and identification plate</td>
<td>40</td>
</tr>
<tr>
<td>AC04z Semi-automatic signal sign and identification plate</td>
<td>41</td>
</tr>
<tr>
<td>AC05 Intermediate block home signal and identification plate</td>
<td>42</td>
</tr>
<tr>
<td>AC06 CSR Alias plate</td>
<td>43</td>
</tr>
<tr>
<td>AC07 SPAD indicator sign and identification plate</td>
<td>44</td>
</tr>
<tr>
<td>AC08 Points indicator sign</td>
<td>45</td>
</tr>
<tr>
<td>AC09 Ground position light signal identification plate</td>
<td>46</td>
</tr>
<tr>
<td>AC10 Points identification plates</td>
<td>47</td>
</tr>
<tr>
<td>AC11 ETCS identification plate</td>
<td>48</td>
</tr>
<tr>
<td>AC12 GSM-R alias plate</td>
<td>49</td>
</tr>
<tr>
<td><strong>Section AD</strong></td>
<td></td>
</tr>
<tr>
<td>Permissible Speed Signs</td>
<td></td>
</tr>
<tr>
<td>AD01m Permissible speed indicators (mph)</td>
<td>52</td>
</tr>
<tr>
<td>AD01kz Permissible speed indicators (km/h)</td>
<td>54</td>
</tr>
<tr>
<td>AD02m Permissible speed indicators (limited clearance) (mph)</td>
<td>56</td>
</tr>
<tr>
<td>AD02kz Permissible speed indicators (limited clearance) (km/h)</td>
<td>58</td>
</tr>
<tr>
<td>AD03m Permissible speed warning indicators (mph)</td>
<td>60</td>
</tr>
<tr>
<td>AD03kz Permissible speed warning indicators (km/h)</td>
<td>62</td>
</tr>
<tr>
<td>AD04m Permissible speed warning indicators (limited clearance) (mph)</td>
<td>64</td>
</tr>
<tr>
<td>AD04kz Permissible speed warning indicators (limited clearance) (km/h)</td>
<td>66</td>
</tr>
<tr>
<td>AD05 Permissible speed directional arrows</td>
<td>68</td>
</tr>
<tr>
<td><strong>Section AE</strong></td>
<td></td>
</tr>
<tr>
<td>Enhanced Permissible Speed Signs</td>
<td></td>
</tr>
<tr>
<td>AE01m Enhanced permissible speed indicators</td>
<td>72</td>
</tr>
<tr>
<td>AE02m Enhanced permissible speed indicators (limited clearance)</td>
<td>73</td>
</tr>
<tr>
<td>AE03m Enhanced permissible speed warning indicators</td>
<td>74</td>
</tr>
<tr>
<td>AE04m Enhanced permissible speed warning indicators (limited clearance)</td>
<td>75</td>
</tr>
</tbody>
</table>
# Lineside Operational Safety Signs

**Section AF**  
**Signs for Emergency and Temporary Speed Restrictions**
- AF01 Emergency indicator  
- AF02m Temporary speed restriction warning boards (mph)  
- AF02kz Temporary speed restriction warning boards (km/h)  
- AF03 Temporary speed restriction repeater warning board  
- AF04m Temporary speed restriction speed indicators (mph)  
- AF04kz Temporary speed restriction speed indicators (km/h)  
- AF05 Temporary speed restriction directional arrows  
- AF06 Temporary speed restriction termination indicator  
- AF07 Temporary speed restriction Spate indicator  
- AF08 Temporary speed restriction AWS cancelling indicator

**Section AG**  
**Signs for Limits of Engineering Possessions**
- AG01z Possession limit board  
- AG02z Work site entrance marker  
- AG03z Work site exit marker

**Section AH**  
**Signs on the Approach to Level Crossings**
- AH01 Level crossing warning sign  
- AH02m Open level crossing combined speed restriction/whistleboard  
- AH03m Automatic level crossing restriction board  
- AH04m Automatic level crossing wrong direction speed restriction board  
- AH05 Level crossing sighting board

**Section AJ**  
**Electric Traction Signs**
- AJ01z Neutral section warning board  
- AJ02z Neutral section indication  
- AJ03z Lower pantograph  
- AJ04z Warning of traction system changeover  
- AJ05z 25kVac electrification boundary - entering  
- AJ06z 750Vdc electrification boundary - entering

**Section AK**  
**Miscellaneous Signs**
- **Sub-section 1:** Miscellaneous signs subject to the recommendations of a Signal Sighting Committee
  - AK101 Signal reminder board  
  - AK102 Countdown markers  
  - AK103 Line identification board  
  - AK104z Platform stop markers  
  - AK105 Mid-platform train berth markers
- **Sub-section 2:** Other signs
  - AK201mz Mile posts  
  - AK201kz Kilometre posts  
  - AK202z Gradient sign  
  - AK203z Whistle board  
  - AK204z Spring catch points marker  
  - AK205z Rear clear marker  
  - AK206z Train class specific instruction  
  - AK207z Train class specific NO ENTRY  
  - AK208z Coasting board  
  - AK209z Miscellaneous Instructions to traincrew  
  - AK210z Warnings for train crew  
  - AK211z Sandite markers  
  - AK212 Infrastructure location names, information and references  
  - AK213 Bridge identity plates
Lineside Operational Safety Signs

Section AA

AWS and Train Protection

<table>
<thead>
<tr>
<th>AA01</th>
<th>Commencement of AWS gap</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA02</td>
<td>Termination of AWS gap</td>
<td>20</td>
</tr>
<tr>
<td>AA03z</td>
<td>Commencement of special AWS working</td>
<td>21</td>
</tr>
<tr>
<td>AA04z</td>
<td>Termination of special AWS working</td>
<td>22</td>
</tr>
<tr>
<td>AA05</td>
<td>Permanently installed AWS cancelling indicator</td>
<td>23</td>
</tr>
</tbody>
</table>

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009

Uncontrolled When Printed
Document to be superseded as of 05/09/2015
To be superseded by GIRT7033 Iss 3 published on 06/06/2015
Lineside Operational Safety Signs

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009

This page has been left blank intentionally
Sign AA01: Commencement of AWS Gap

Mandated by Railway Group Standard GE/RT8035.

Meaning: There is no AWS beyond the sign. GE/RT8035 sets out the use of this sign.

Size: The standard dimensions shall be used.


Lettering: Black text. The typeface defined in BS 3693B:1964 shall be used.

Readability: Minimum of 2 seconds at the highest permissible speed approaching the location concerned.
Sign AA02: Termination of AWS

Gap

**Mandated by Railway Group Standard GE/RT8035.**

**Meaning:** The line(s) beyond the sign is/are equipped with AWS. GE/RT8035 sets out the use of this sign.

**Size:** The standard dimensions shall be used.

**Presentation:** White background. Black border. Class 1 retro-reflectivity shall be applied.

**Lettering:** Black text. The typeface defined in BS 3693B:1964 shall be used.

**Readability:** Minimum of 2 seconds at the highest permissible speed approaching the location concerned.
Sign AA03z: Commencement of Special AWS Working

Published within Railway Group Standard GO/RT3000.

Meaning: The AWS equipment on the line beyond this sign and applicable to movements in the opposite direction has not been suppressed. Cancelling indicators are not provided.

Size: The standard dimensions shall be used.


Lettering: Black text. The typeface defined in BS 3693B:1964 shall be used.

Readability: Minimum of 2 seconds at the highest permissible speed approaching the location concerned.
Sign AA04z: Termination of Special AWS Working

Published within Railway Group Standard GO/RT3000.

Meaning: Normal AWS working resumes beyond the sign.

Size: The standard dimensions shall be used.

Presentation: White background. Black border. Class 1 retro-reflectivity shall be applied.

Lettering: Black text. The typeface defined in BS 3693B:1964 shall be used.

Readability: Minimum of 2 seconds at the highest permissible speed approaching the location concerned.
Sign AA05: Permanently Installed AWS Cancelling Indicator

*Mandated by Railway Group Standard GE/RT8035.*

**Meaning:**
The AWS indication already received shall be ignored.

**Size:**
The standard dimensions shall be used.

**Presentation:**
Blue background.
White saltire.
Class 1 retro-reflectivity shall be applied.

**Lettering:**
Not applicable

**Readability:**
Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Lineside Operational Safety Signs

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
Section AB
Cab and Radio Signalling

AB01 Warning of the start of cab-signalling 27
AB02 Indication of start of cab-signalling 28
AB03 Indication of end of cab-signalling 29
AB04 TVM block marker 30
AB05 Cab signalling shunt entry board 31
AB06 Radio electronic token block: loop clear marker 32
AB07 Start / end of cab signalling directional arrows 33
AB08 ETCS block marker 34
AB09 ETCS block marker passable plate 35
Lineside Operational Safety Signs

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009

This page has been left blank intentionally
Lineside Operational Safety Signs

Sign AB01:  Warning of the Start of Cab Signalling

Mandated by Railway Group Standard GK/RT0036 and GK/RT0407..

Meaning: The sign warns that the line ahead is equipped with cab signalling and the driver must prepare to ensure that the cab signalling equipment has been activated.

Size: The standard dimensions shall be used.

Presentation: White background.
Black border.
Class 1 retro-reflectivity shall be applied.

Lettering: Black text. The typeface defined in BS 3693B:1964 shall be used.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned. It is permissible to repeat the sign if the required reading time is not achievable.
Sign AB02: Indication of the Start of Cab Signalling

Mandated by Railway Group Standards GE/RT8026, GK/RT0036 and GK/RT0407.

Meaning: The line ahead is equipped with cab signalling and the driver must confirm that the cab signalling equipment has been activated.

Size: The standard dimensions shall be used.

Presentation: Black background
White border
Class 1, or better, retro-reflectivity shall be applied.

Lettering: White characters.
Class 1, or better, retro-reflectivity shall be applied.
The typeface defined in BS 3693B:1964 shall be used.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AB03: Indication of End of Cab Signalling

Mandated by Railway Group Standards GE/RT8026, GK/RT0036 and GK/RT0407.

Meaning: The line ahead is not equipped with cab signalling and the driver must ensure that the cab signalling equipment has been disabled.

Size: The standard dimensions shall be used.


Lettering: Black text. The typeface defined in BS 3693B:1964 shall be used.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AB04: TVM Block Marker

Mandated by Railway Group Standards GE/RT8026 and GK/RT0036.

Meaning: This sign marks the limit of a block section on lines signalled with TVM cab signalling.

Size: The standard dimensions shall be used. It is permissible to use a smaller profile in tunnels.

Presentation: As shown. The blue and yellow shall be retro-reflective.

Readability: In accordance with GE/RT8037. Where the permissible speed is above 200km/h (125mph) and if used in conjunction with a system of automatic train protection, it is permissible to reduce the minimum reading time, but to not less than 2.5 seconds under normal night time conditions at the highest permissible speed approaching the location concerned.
**Sign AB05:** Cab Signalling
Shunt Entry Board

*Mandated by Railway Group Standard GE/RT8026 and GK/RT0407.*

**Meaning:**
This sign marks the entry of a shunt route on ETCS and TVM cab signalled lines where lineside signals are not provided.

Arrow points towards track to which sign applies.

**Size:**
The standard dimensions shall be used. It is permissible to use a smaller profile in tunnels.

**Presentation:**
As shown.

The purple and white shall be retro-reflective.

**Reading Time:**
In accordance with GE/RT8037 at the highest permissible speed at which it will be necessary to read the sign.
Sign AB06: Radio Electronic
Token Block: Loop
Clear Marker

*Mandated by Railway Group Standard GK/RT0054.*

**Meaning:** The rear of the train has cleared the previous token block section or station limits.

**Size:** The standard dimensions shall be used.

**Presentation:** White background.
Blue diagonals.
Class 1 retro-reflectivity shall be applied.

**Readability:** In accordance with GK/RT0037.
Sign AB07: Start / End of Cab Signalling Directional Arrows

*Mandated by Railway Group Standard GK/RT0407.*

**Meaning:** These signs shall be used with a warning of the start of cab signalling sign, an indication of the start of cab signalling sign or an indication of end of cab signalling sign when it is necessary to show that the sign applies to the diverging route.

**Size:** The standard dimensions shall be used.

**Presentation:** Black arrow
White background

The arrow shall be placed on top of the sign to which it refers.

Retro-reflectivity shall be applied as applied to the main sign.

**Lettering and Digits:** The arrow defined in BS 3693B:1964 shall be used.

**Positioning:** Immediately above the associated sign.

**Readability:** Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AB08: ETCS Block Marker

Mandated by:

COMMISSION DECISION of 23/IV/2008 modifying Annex A to Decision 2006/679/EC of 28 March 2006 concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European conventional rail system and Annex A to Decision 2006/860/EC of 7 November 2006 concerning the technical specification for interoperability relating to the control-command and signalling subsystem of the trans-European high speed rail system.

Meaning:
See the commission decision referred to above.

Size:
See the commission decision referred to above.
The standard dimensions shall be used where practicable.

Presentation:
See the commission decision referred to above.

Readability:
In accordance with GE/RT8037 at the highest permissible speed in degraded mode operation approaching the location concerned.
Sign AB09: **ETCS Block Marker Passable Plate**

*Mandated by Railway Group Standard GK/RT0407.*

**Meaning:** This sign identifies an ETCS block marker as being passable.

Any ETCS block marker that does not have this sign is non-passable.

**Size:** The dimensions are recommended.

**Presentation:** As shown.

**Lettering:** White text on black background. Railway alphabet typeface.

**Readability:** In accordance with GE/RT8037 at the highest permissible speed in degraded mode operation approaching the location concerned.
## Section AC

### Identification of Signals and Points

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC01</td>
<td>Controlled (non-passable) signal identification plate</td>
<td>38</td>
</tr>
<tr>
<td>AC02</td>
<td>Distant signal sign and identification plate</td>
<td>39</td>
</tr>
<tr>
<td>AC03</td>
<td>Automatic (passable) signal sign and identification plate</td>
<td>40</td>
</tr>
<tr>
<td>AC04z</td>
<td>Semi-automatic signal sign and identification plate</td>
<td>41</td>
</tr>
<tr>
<td>AC05</td>
<td>Intermediate block home signal and identification plate</td>
<td>42</td>
</tr>
<tr>
<td>AC06</td>
<td>CSR Alias plate</td>
<td>43</td>
</tr>
<tr>
<td>AC07</td>
<td>SPAD indicator sign and identification plate</td>
<td>44</td>
</tr>
<tr>
<td>AC08</td>
<td>Points indicator sign</td>
<td>45</td>
</tr>
<tr>
<td>AC09</td>
<td>Ground position light signal identification plate</td>
<td>46</td>
</tr>
<tr>
<td>AC10</td>
<td>Points identification plates</td>
<td>47</td>
</tr>
<tr>
<td>AC11</td>
<td>ETCS identification plate</td>
<td>48</td>
</tr>
<tr>
<td>AC12</td>
<td>GSM-R Alias Plate</td>
<td>49</td>
</tr>
</tbody>
</table>
Lineside Operational Safety Signs

Railway Group Standard
GI//RT7033
Issue Two
Date October 2009

This page has been left blank intentionally
Lineside Operational Safety Signs

Sign AC01: Controlled (Non-passable) Signal Identification Plate

*Mandated by Railway Group Standard GK/RT0032.*

**Meaning:** The sign displays the signal identity.

**Size:** The dimensions are recommended. When the suffix is not used the recommended height is 350 mm.

**Presentation:** Black background.

**Lettering and Digits:** White text. The typeface defined in BS 3693B:1964 shall be used.

The suffix BR shall be used to identify a banner repeater signal.

The suffix CA shall be used to identify a co-acting signal.

**Positioning:** Normally below the signal head to which it relates.

**Readability:** The text shall be readable from the cab of a train before the signal from a distance of 50 metres.
Sign AC02:  Distant Signal Sign and Identification Plate

*Mandated by Railway Group Standard GK/RT0032.*

**Meaning:** The sign displays the signal identity and indicates that the signal is not capable of displaying a stop aspect.

**Size:** The dimensions are recommended.

**Presentation:** Black background. The text is headed by a white triangle.

**Lettering and Digits:** White text. The typeface defined in BS 3693B:1964 shall be used.

**Positioning:** Normally below the signal head to which it relates.

**Readability:** The text shall be readable from the cab of a train before the signal from a distance of 50 metres.
Sign AC03: Automatic (Passable) Signal Sign and Identification Plate

*Mandated by Railway Group Standard GK/RT0032.*

**Meaning:**
The sign displays the signal identity and indicates that the rules applicable to automatic signals apply.

**Size:**
The dimensions are recommended.

**Presentation:**
Black background. The text is headed by a horizontal black bar upon a white background.

**Lettering and Digits:**
White text. The typeface defined in BS 3693B:1964 shall be used.

**Positioning:**
Normally below the signal head to which it relates.

**Readability:**
The text shall be readable from the cab of a train before the signal from a distance of 50 metres.
Sign AC04z: Semi-automatic Signal Sign and Identification Plate

Published within Railway Group Standard G0/RT3000.

Meaning: The sign displays the signal identity and indicates that the rules applicable to semi-automatic signals apply.

Size: The dimensions are recommended.

Presentation: Black background. The signal identity is headed by a horizontal black bar upon a white background.

Lettering and Digits: The term "SEMI" shall be in black text. White text shall be used for the signal identity. The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally below the signal head to which it relates.

Readability: The text shall be readable from the cab of a train before the signal from a distance of 50 metres.
Sign AC05: Intermediate Block Home Signal Sign and Identification Plate

*Mandated by Railway Group Standard GK/RT0032.*

**Meaning:**
The sign displays the signal identity and indicates that the rules applicable to intermediate block home signals apply.

**Size:**
The dimensions are recommended.

**Presentation:**
Black background. The signal identity is headed by a white rectangle with a central vertical black bar.

**Lettering and Digits:**
White text. The typeface defined in BS 3693B:1964 shall be used.

**Positioning:**
Normally below the signal head to which it relates.

**Readability:**
The text shall be readable from the cab of a train before the signal from a distance of 50 metres.
Sign AC06: CSR Alias Plate

Mandated by Railway Group Standard GO/RT3410.

Meaning: For cab secure radio purposes the radio identification number, which is different from the signal identification, is shown.

Size: The dimensions are recommended.

Presentation: Blue background.

Lettering and Digits: White text.

The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally below the signal head to which it relates.

Readability: The text shall be readable from the cab of a train at rest before the signal from a distance of 50 metres.
Sign AC07: SPAD Indicator Sign and Identification Plate

**Mandated by Railway Group Standard** GK/RT0031.

**Meaning:** The sign identifies a SPAD indicator and displays its identity. Drivers should disregard the indicator if not lit. If lit, all drivers who see the sign shall immediately stop.

**Size:** The dimensions are recommended.

**Presentation:** Blue background.

**Lettering and Digits:** White text. The typeface defined in BS 3693B:1964 shall be used.

**Positioning:** Normally below the indicator to which it relates.

**Readability:** The text shall be readable from the cab of a train before the signal from a distance of 50 metres.
Sign AC08: Points Indicator

Mandated by Railway Group Standard GK/RT0031.

Meaning: The sign identifies the aspects to which it relates as a points indicator. A points indicator informs the driver whether or not the points to which it refers (usually facing points) are correctly closed.

Size: The dimensions are recommended.

Presentation: White background.

Lettering and Digits: Black text. The Rail Alphabet typeface shall be used.

Positioning: Normally below the aspects to which it relates.

Readability: The text shall be readable from the cab of a train approaching the points indicator at the permissible speed through the points from a distance of 50m.
Lineside Operational Safety Signs

Sign AC09: Ground Position Light Signal Identification Plate

Mandated by Railway Group Standard GK/RT0032.

Meaning: This sign enables the associated ground position signal (when independent from a main signal) to be accurately identified. Where an arrow is displayed this identifies the line to which the signal applies.

Size: The dimensions are recommended. When the arrows are not required it is permissible to reduce the dimensions accordingly.

Presentation: White background. The text, including the arrow shall be centre justified.

Lettering and Digits: Black text. The typeface defined in BS 3693B:1964 shall be used. The arrows are used when necessary for clarity.

Positioning: Normally immediately above or below the ground position light signal to which it relates.

Readability: The text shall be readable from the cab of a train before the signal from a distance of 50 metres.
Sign AC10: Points Identification Plates

Mandated by Railway Group Standard GI/RT7004.

Meaning: The plates enable the associated points to be identified.

Size: The dimensions are recommended.

Presentation: Two presentations are permitted:

Presentation A, which shows individual raised white characters on a black background.

Presentation B, which shows a single plate with white letters on a black background. It is permissible to use raised characters in this case.

Lettering and Digits: Presentation A: The typeface shown shall be used. The dimensions are recommended.

Presentation B: The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally fixed upon the sleepers adjacent to the point ends to which they refer as set out in GI/RT7004.

Readability: Not relevant.

Presentation B:
Sign AC11: ETCS Identification Plate

Mandated by Railway Group Standard GK/RT0407.

Meaning: The sign displays the identity of an ETCS block marker, a cab signalling shunt entry board or an indication of the start of cab-signalling board.

Size: The standard dimensions shall be used.

Presentation: Black background.

Lettering and Digits: White text. The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally below the sign to which it relates.

Readability: The text shall be readable from the cab of a train before the sign from a distance of 50 metres.
Sign AC12: GSM-R Alias Plate

Meaning: For GSM-R purposes the radio identification number is shown.

Size: The dimensions are recommended.

Presentation: Blue background.

Lettering and Digits: White text. The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally below the signal head to which it relates.

Readability: The text shall be readable from the cab of a train at rest before the signal from a distance of 50 metres.
Section AD

Permissible Speed Signs

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD01m</td>
<td>Permissible speed indicators (mph)</td>
<td>52</td>
</tr>
<tr>
<td>AD01kz</td>
<td>Permissible speed indicators (km/h)</td>
<td>54</td>
</tr>
<tr>
<td>AD02m</td>
<td>Permissible speed indicators (limited clearance) (mph)</td>
<td>56</td>
</tr>
<tr>
<td>AD02kz</td>
<td>Permissible speed indicators (limited clearance) (km/h)</td>
<td>58</td>
</tr>
<tr>
<td>AD03m</td>
<td>Permissible speed warning indicators (mph)</td>
<td>60</td>
</tr>
<tr>
<td>AD03kz</td>
<td>Permissible speed warning indicators (km/h)</td>
<td>62</td>
</tr>
<tr>
<td>AD04m</td>
<td>Permissible speed warning indicators (limited clearance) (mph)</td>
<td>64</td>
</tr>
<tr>
<td>AD04kz</td>
<td>Permissible speed warning indicators (limited clearance) (km/h)</td>
<td>66</td>
</tr>
<tr>
<td>AD05</td>
<td>Permissible speed directional arrows</td>
<td>68</td>
</tr>
</tbody>
</table>
### Sign AD01m: Permissible Speed Indicators (mph)

*Mandated by Railway Group Standard GK/RT0038.*

**Meaning:** These signs display the permissible speed applicable to the section of line beyond the sign up to the commencement of any subsequent permissible speed section, but subject to any exceptions defined in table A of the sectional appendix applicable to that line and GO/RT3000. The meanings of the standard differential display and the non-standard differential displays are given in the referenced Railway Group Standards.

**Size:** The standard dimensions shall be used, unless the clearances are inadequate, in which case the signs designed for limited clearance areas shall be used (refer to signs defined under AD02m).

Where permissible speed values are repeated within a signed speed section the limited clearance signs shall be used.

**Presentation:** Display of values in miles per hour.
- White background.
- Red border.
- Black lettering and digits.

Class 1 retro-reflectivity shall be applied.

(continued . . .)
Lettering and Digits: Single values below 100 shall be 400mm high centred on the width of the sign. It is permissible to reduce the size of values of 100 and above, but not below 370mm high, and only when the space available so requires.

Standard differential values shall be 315 mm high centred on the width of the sign.

Text identifying non-standard differential permissible speeds shall be 250mm high, and the values shall be 315mm high; both centred on the width of the sign.

The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside in accordance with GK/RT0038.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AD01kz: Permissible Speed Indicators (km/h)

**Meaning:**
These signs display the permissible speed applicable to the section of line beyond the sign up to the commencement of any subsequent permissible speed section, but subject to any exceptions defined in table A of the sectional appendix applicable to that line and GO/RT3000. The meanings of the standard differential display and the non-standard differential displays are given in the referenced Railway Group Standards.

**Size:**
The standard dimensions shall be used, unless the clearances are inadequate, in which case the signs designed for limited clearance areas shall be used (refer to signs defined under AD02kz).

Where permissible speed values are repeated within a signed speed section the limited clearance signs shall be used.

**Presentation:**
Display of values in kilometres per hour.
Black background.
Red border.
White lettering and digits.
Better than class 1 retro-reflectivity shall be applied.

(continued . . .)
Lettering and Digits: Single values below 100 shall be 380mm high centred on the width of the sign. It is permissible to reduce the size of values of 100 and above, but not below 320mm high, and only when the space available so requires.

Standard differential values shall be 260 mm high centred on the width of the sign.

Text identifying non-standard differential permissible speeds shall be 195mm high, and the values shall be 245mm high; both centred on the width of the sign.

The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AD02m: Permissible Speed Indicators (mph)

Applicable to Limited Clearances

Mandated by Railway Group Standard GK/RT0038.

Meaning:

These signs display the permissible speed applicable to the section of line beyond the sign up to the commencement of any subsequent permissible speed section, but subject to any exceptions defined in the sectional appendix applicable to that line and GO/RT3000. The meanings of the standard differential display and the non-standard differential displays are given in the referenced Railway Group Standards.

These signs shall also be used where permissible speed values are repeated within a signed speed section.

Size:

These signs shall be used where the clearances for the standard signs are inadequate (refer to signs defined under AD01m).

These signs shall be used where continuous route signing is in use.

Presentation:

Display of values in miles per hour.

- White background.
- Red border.
- Black lettering and digits.
- Class 1 retro-reflectivity shall be applied.

(continued . . .)
Lineside Operational Safety Signs

Lettering and Digits: Values shall be not less than 180mm high centred on the width of the sign. Larger digits shall be used where the space available permits.

The preferred ellipse standard differential values shall be 190mm high centred on the width of the sign. Circular differential as shown.

Text identifying non-standard differential permissible speeds shall be 130mm high centred on the width of the ellipse sign.

The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside in accordance with GK/RT0038.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Lineside Operational Safety Signs

Sign AD02kz: Permissible Speed Indicators (km/h)

Applicable to Limited Clearances

Meaning:
These signs display the permissible speed applicable to the section of line beyond the sign up to the commencement of any subsequent permissible speed section, but subject to any exceptions defined in the sectional appendix applicable to that line and GO/RT3000. The meanings of the standard differential display and the non-standard differential displays are given in the referenced Railway Group Standards.

These signs shall also be used where permissible speed values are repeated within a signed speed section.

Size:
These signs shall be used where the clearances for the standard signs are inadequate (refer to signs defined under AD01kz).

These signs shall be used where continuous route signing is in use.

Presentation:
Display of values in kilometres per hour.
Black background.
Red border.
White lettering and digits.
Better than class 1 retro-reflectivity shall be applied.

(continued . . .)
Lineside Operational Safety Signs

Lettering and Digits: Values shall be not less than 160mm high centred on the width of the sign. Larger digits shall be used where the space available permits.

The preferred ellipse standard differential values shall be 145mm high centred on the width of the sign. Circular differential as shown.

Text identifying non-standard differential permissible speeds shall be 115mm high centred on the width of the ellipse sign.

The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AD03m: Permissible Speed Warning Indicators (mph).

Mandated by Railway Group Standard GK/RT0038.

 Meaning: These signs provide warning of a reduction in permissible speed ahead. The meanings of the standard differential display and the non-standard differential displays are given in the referenced Railway Group Standards.

 Size: The standard dimensions shall be used, unless the clearances are inadequate, in which case the signs for limited clearance areas shall be used (refer to signs AD04m). It is permissible to vary the dimension marked zz up to a maximum of 450mm to accommodate the lettering and digits required.

 Presentation: Display of values in miles per hour. White background. Yellow border. Black lettering and digits.

 Class 1 retro-reflectivity shall be applied.
**Lettering and Digits:**

Single values shall be 315mm high centred on the width of the sign.

Standard differential values shall be 315mm high centred on the width of the sign.

Text identifying non-standard differential permissible speeds shall be 250mm high, and the values shall be 315mm high; both centred on the width of the sign.

The typeface defined in BS 3693B:1964 shall be used.

**Positioning:**

Normally at the trackside in accordance with GK/RT0038.

**Readability:**

Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AD03kz: Permissible Speed Warning Indicators (km/h).

Meaning: These signs provide warning of a reduction in permissible speed ahead. The meanings of the standard differential display and the non-standard differential displays are given in the referenced Railway Group Standards.

Size: The standard dimensions shall be used, unless the clearances are inadequate, in which case the signs for limited clearance areas shall be used (refer to signs AD04kz). It is permissible to vary the dimension marked zz up to a maximum of 450mm to accommodate the lettering and digits required.

Presentation: Display of values in kilometres per hour. Black background. Yellow border. White lettering and digits. Better than class 1 retro-reflectivity shall be applied.

(continued . . .)
Lettering and Digits: Single values shall be 270mm high centred on the width of the sign.

Standard differential values shall be 270mm high centred on the width of the sign.

Text identifying non-standard differential permissible speeds shall be 220mm high, and the values shall be 270mm high; both centred on the width of the sign.

The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AD04m:  Permissible Speed Warning Indicators (mph)

Applicable to Limited Clearances

*Mandated by Railway Group Standard GK/RT0038.*

**Meaning:** These signs provide warning of a reduction in permissible speed ahead. The meanings of the standard differential display and the non-standard differential displays are given in the referenced Railway Group Standards.

**Size:** These signs shall be used where the clearances for the standard signs are inadequate (refer to signs defined under AD03m). It is permissible to vary the dimension marked YY up to a maximum of 300mm to accommodate the lettering and digits required.

The standard limited clearance signs shall be used wherever possible. Where more than one sign is required and the clearance is inadequate for the standard limited clearance signs, the special limited clearance signs shall be used. If in accordance with GE/RT8012 an enhanced permissible speed is to be displayed also, and the clearance is inadequate for the standard limited clearance signs, the special limited clearance sign reference shall be used.

(continued . . .)
Presentation: Display of values in mph
White background.
Yellow border.
Black lettering and digits.
Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: Standard limited clearance signs:
Values shall be not less than 180mm high centred on the width of the sign.
Larger digits shall be used where the space available permits.

Text identifying non-standard differential permissible speeds shall be 130mm high, and the values shall be 150mm high; both centred on the width of the sign.

The typeface defined in BS 3693B:1964 shall be used.

Special Limited Clearance Signs:
These signs shall be used with the dimensions shown. They shall only be used with the limited clearance signs for enhanced permissible speeds, ref AE04.

Positioning: Normally at the trackside in accordance with GK/RT0038.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.

For use with Enhanced Permissible Speed (EPS) signs only (refer to section AE).
Sign AD04kz: Permissible Speed Warning Indicators (km/h)

Applicable to Limited Clearances

Meaning:
The meanings of the standard differential display and the non-standard differential displays are given in the referenced Railway Group Standards.

Size:
These signs shall be used where the clearances for the standard signs are inadequate (refer to signs defined under AD03kz). It is permissible to reduce the dimension marked YY up to a maximum of 300mm to accommodate the lettering and digits required.

Presentation:
Display of values in kilometres per hour. White background. Yellow border. Black lettering and digits. Better than class 1 retro-reflectivity shall be applied.

(continued . . .)
Lineside Operational Safety Signs

Lettering and Digits: **Standard limited clearance signs:**
Values shall be not less than 150mm high centred on the width of the sign.
Larger digits shall be used where the space available permits.

Text identifying non-standard differential permissible speeds shall be 110mm high, and the values shall be 135mm high; both centred on the width of the sign.

The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AD05: Permissible Speed Directional Arrows

Mandated by Railway Group Standard GK/RT0038.

Meaning: These signs shall be used with a permissible speed indicator or a permissible speed warning indicator when it is necessary to show that the indicator applies over the diverging route.

Size: The standard dimensions shall be used, unless the clearances are inadequate, in which case the signs for limited clearance areas shall be used.

Presentation: The arrow shall be placed above the indicator to which it refers.

Display of values in miles per hour.
White background.
Yellow or yellow border as applied to the main sign.
Black arrow(s).
Retro-reflectivity shall be applied as applied to the main sign.

Display of values in kilometres per hour.
White background.
Yellow or yellow border as applied to the main sign.
Black arrow(s).
Retro-reflectivity shall be applied as applied to the main sign.

Lettering and Digits: The arrow defined in BS 3693B:1964 shall be used.

Positioning: Immediately above the associated sign.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
### Section AE

**Enhanced Permissible Speed Signs**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AE01m</td>
<td>Enhanced permissible speed indicators</td>
<td>72</td>
</tr>
<tr>
<td>AE02m</td>
<td>Enhanced permissible speed indicators (limited clearance)</td>
<td>73</td>
</tr>
<tr>
<td>AE03m</td>
<td>Enhanced permissible speed warning indicators</td>
<td>74</td>
</tr>
<tr>
<td>AE04m</td>
<td>Enhanced permissible speed warning indicators (limited clearance)</td>
<td>75</td>
</tr>
</tbody>
</table>
Lineside Operational Safety Signs

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009

This page has been left blank intentionally
Sign AE01m: Enhanced Permissible Speed Indicators

*Mandated by Railway Group Standard GE/RT8012.*

**Meaning:**
These signs display the enhanced permissible speed applicable to the section of line beyond the sign up to the commencement of the following permissible speed section, but subject to any exceptions defined in the sectional appendix applicable to that line and GO/RT3000. A permissible speed indicator without an enhanced permissible speed indicator means that no enhanced permissible speed is authorised over the section of line beyond the sign.

**Size:**
The standard dimensions shall be used, unless the clearances are inadequate, in which case the signs designed for limited clearance areas shall be used (refer to signs defined under AE02m).

**Presentation:**
Display of values in miles per hour:
- Red roundel
- White surround
- Yellow background
- Black border
- Black lettering and digits

Class 1 retro-reflectivity shall be applied.

**Lettering and Digits:**
Single values below 100 shall be 340mm high centred on the width of the sign. It is permissible to reduce the size of values of 100 and above, but not below 315mm high, and only when the space available so requires.

The text "EPS" shall be 120mm high centred on the width of the sign.

The typeface defined in BS 3693B: 1964 shall be used.

**Positioning:**
Normally at the trackside as set out in GE/RT8012.

**Readability:**
Minimum of 4 seconds at the highest enhanced permissible speed approaching the location concerned.
Sign AE02m: Enhanced Permissible Speed Indicators

Applicable to Limited Clearances

Mandated by Railway Group Standard GE/RT8012.

Meaning: These signs display the enhanced permissible speed applicable to the section of line beyond the sign up to the commencement of any subsequent permissible speed section, but subject to any exceptions defined in the sectional appendix applicable to that line and GO/RT3000.

This signs shall also be used where enhanced permissible speed values are repeated within a signed speed section.

A permissible speed indicator without an enhanced permissible speed indicator means that no enhanced permissible speed is authorised over the section of line beyond the sign.

Size: These signs shall be used where the clearances for the standard signs are inadequate (refer to signs defined under AE01).

Presentation: Display of values in miles per hour:
Red roundel
White surround.
Yellow background.
Black border.
Black lettering and digits.

Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: Values shall be not less than 160mm high centred on the width of the sign. Larger digits shall be used where the space available permits.

Text identifying non-standard differential permissible speeds shall be 130mm high centred on the width of the sign.

The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside as set out in GE/RT8012.

Readability: Minimum of 4 seconds at the highest enhanced permissible speed approaching the location concerned.
Lineside Operational Safety Signs

Sign AE03m: Enhanced Permissible Speed Warning Indicators

Mandated by Railway Group Standard GE/RT8012.

Meaning: These signs provide warning of a reduction in enhanced permissible speed ahead. A permissible speed warning indicator without an enhanced permissible speed warning indicator means that no enhanced permissible speed is authorised over the section of line beyond the sign.

Size: The standard dimensions shall be used, unless the clearances are inadequate, in which case the signs for limited clearance areas shall be used (refer to signs defined under AE04m).

Presentation: Display of values in miles per hour only.
Yellow background.
Black border.
Black lettering and digits.

Class 1 retro-reflectivity shall be applied.

Lettering and Digits: Single values shall be 315mm high centred on the width of the sign.
Standard differential values shall be 190 mm high centred on the width of the sign.

Text identifying non-standard differential permissible speeds shall be 250mm high, and the values shall be 315mm high; both centred on the width of the sign.

The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside as set out in GE/RT8012.

Readability: Minimum of 4 seconds at the highest enhanced permissible speed approaching the location concerned.
Sign AE04m: Enhanced Permissible Speed Warning Indicators

Applicable to Limited Clearances

Mandated by Railway Group Standard GE/RT8012.

Meaning: These signs provide warning of a reduction in enhanced permissible speed ahead.

Size: These signs shall be used where the clearances for the full sized signs are inadequate (refer to signs defined under AE03m).

Presentation: Display of values in mph only.
Yellow background.
Black border.
Black lettering and digits.
Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: This shall be used as shown. It shall be used only in conjunction with the special limited clearance warning indicator for permissible speeds (ref AD04m).

Positioning: Normally at the trackside as set out in GE/RT8012.

Readability: Minimum of 4 seconds at the highest enhanced permissible speed approaching the location concerned.
### Section AF

#### Signs for Emergency and Temporary Speed Restrictions

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AF01</td>
<td>Emergency indicator</td>
<td>78</td>
</tr>
<tr>
<td>AF02m</td>
<td>Temporary speed restriction warning boards (mph)</td>
<td>79</td>
</tr>
<tr>
<td>AF02kz</td>
<td>Temporary speed restriction warning boards (km/h)</td>
<td>80</td>
</tr>
<tr>
<td>AF03</td>
<td>Temporary speed restriction repeater warning board</td>
<td>81</td>
</tr>
<tr>
<td>AF04m</td>
<td>Temporary speed restriction speed indicators (mph)</td>
<td>82</td>
</tr>
<tr>
<td>AF04kz</td>
<td>Temporary speed restriction speed indicators (km/h)</td>
<td>83</td>
</tr>
<tr>
<td>AF05</td>
<td>Temporary speed restriction directional arrows</td>
<td>84</td>
</tr>
<tr>
<td>AF06</td>
<td>Temporary speed restriction termination indicator</td>
<td>85</td>
</tr>
<tr>
<td>AF07</td>
<td>Temporary speed restriction Spate indicator</td>
<td>86</td>
</tr>
<tr>
<td>AF08</td>
<td>Temporary speed restriction AWS cancelling indicator</td>
<td>87</td>
</tr>
</tbody>
</table>
Sign AF01: Emergency Indicator

Mandated by Railway Group Standard GK/RT0038.

Meaning: This sign warns that there is a warning board ahead for an emergency speed restriction. Application is in accordance with GK/RT0038.

Size: The standard dimensions shall be used, except it is permissible where clearances are insufficient to omit the lowest black area.

Presentation: Yellow background. Black chevrons.

Better than class 1 retro-reflectivity shall be applied.

Lights: 150mm diameter maximum, providing synchronous flashes at 2Hz. Flash length shall be 150 ± 50 micro-seconds. The integrated power of each light source shall not be less than 7.0 lumen-seconds per flash. The main beam intensity shall comply with Table 1 of this leaflet.

Lettering and Digits: Not applicable.

Positioning: Normally at the trackside in accordance with GK/RT0038.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.

Table 1: Emergency Indicator beam intensity characteristics

<table>
<thead>
<tr>
<th>Vertical Angle (degrees of axis)</th>
<th>0</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>30</td>
<td>30</td>
<td>20</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>120</td>
<td>120</td>
<td>50</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>300</td>
<td>300</td>
<td>100</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>450</td>
<td>450</td>
<td>110</td>
<td>45</td>
<td>-</td>
</tr>
<tr>
<td>0</td>
<td>1200</td>
<td>1050</td>
<td>120</td>
<td>50</td>
<td>20</td>
</tr>
</tbody>
</table>

milli-candela per flash.
Sign AF02m: **Temporary Speed Restriction Warning Board**

*Mandated by Railway Group Standard GK/RT0038.*

**Meaning:**
This sign provides warning of a temporary speed restriction board ahead. The differential presentations shall have the meanings set out in GO/RT3000.

**Size:**
The minimum dimensions are shown.

**Presentation:**
Display of values in miles per hour:
- Yellow background.
- White spots.
- Black lettering and digits.

Better than Class 1 retro-reflectivity shall be applied.

Standard differential values shall be represented by two boards, the lower value above the other.

The single speed board shall be square.

**Lettering and Digits:**
The typeface defined in BS 3693B:1964 shall be used.

**Positioning:**
At the trackside as set out in GE/RT0038.

**Readability:**
Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AF02kz: **Temporary Speed Restriction Warning Board (km/h)**

**Meaning:** This sign provides warning of a temporary speed restriction board ahead. The differential presentations shall have the meanings set out in GO/RT3000.

**Size:** The minimum dimensions are shown.

**Presentation:** Display of values in kilometres per hour:
- Yellow background.
- White spots.
- Black lettering and digits.

Better than Class 1 retro-reflectivity shall be applied.

Standard differential values shall be represented by two boards, the lower value above the other.

The board shall be hexagonal. Additionally the text “km/h” shall be added below the digits.

**Lettering and Digits:**
- The typeface defined in BS 3693B:1964 shall be used.

**Positioning:** At the trackside.

**Readability:** Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AF03: Temporary Speed Restriction Repeater Warning Board

Mandated by Railway Group Standard GK/RT0038.

Meaning: This sign provides a reminder of a temporary speed restriction board ahead. It is normally used where drivers start from a platform, or at a siding connection after having had a warning board.

Size: The minimum dimensions are shown.

Presentation: Display of values in miles per hour:

- Yellow background.
- White spots.
- Black lettering and digits.

Better than Class 1 retro-reflectivity shall be applied.

Lettering: The typeface defined in BS 3693B:1964 shall be used.

Positioning: At the trackside as set out in GE/RT0038.

Readability: Minimum of 4 seconds at the highest attainable speed at the location concerned. It shall be visible from the stopping points of trains on the tracks to which the sign relates.
Sign AF04m: Temporary Speed Restriction Speed Indicator

*Mandated by Railway Group Standard* GK/RT0038.

**Meaning:** This sign indicates the start of a temporary speed restriction with the value shown. The differential presentations shall have the meanings set out in GO/RT3000.

**Size:** The minimum dimensions are shown.

**Presentation:** Display of values in mph:
- Yellow background.
- Black lettering and digits.
- Better than Class 1 retro-reflectivity shall be applied.
- The single speed indicator shall be square.
- Standard differential values shall be represented by two boards, the lower value above the other.

**Lettering and Digits:** The typeface defined in BS 3693B:1964 shall be used.

**Positioning:** At the trackside as set out in GE/RT0038.

**Readability:** Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.

Example of a differential display:

Note: A single value display shall have the dimensions of one of the panels shown below.
Sign AF04kz: Temporary Speed Restriction Speed Indicator (km/h)

Meaning: This sign indicates the start of a temporary speed restriction with the value shown. The differential presentations shall have the meanings set out in GO/RT3000.

Size: The minimum dimensions are shown.

Presentation: Display of values in kilometres per hour:
- Yellow background.
- Black lettering and digits.
- Better than Class 1 retro-reflectivity shall be applied.
- When required, standard differential values shall be represented by two boards, the lower value above the other.

Lettering and Digits: The typeface defined in BS 3693B:1964 shall be used.

Positioning: At the trackside.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.

Example of a differential display:
Sign AF05: Temporary Speed Restriction Directional Arrow

Mandated by Railway Group Standard GK/RT0038.

**Meaning:**
This sign is always associated with a warning board, a speed indicator, or a spate indicator. It indicates that the restriction applies to a diverging route (either left or right).

**Size:**
The minimum dimensions are shown.

**Presentation:**
Display of values in mph and km/h:

The board shall be shown below the speed values, but above the warning bar.

The board shall be square.

Yellow background.
Black arrow.

Better than Class 1 retro-reflectivity shall be applied.

**Lettering:**
The typeface defined in BS 3693B:1964 shall be used.

**Positioning:**
At the trackside as set out in GE/RT0038.

**Readability:**
As applicable to the sign to which it relates.
Sign AF06: \textbf{Temporary Speed Restriction Termination Indicator}

\textit{Mandated by Railway Group Standard GK/RT0038.}

\textbf{Meaning:} This sign identifies the end of a temporary speed restriction.

\textbf{Size:} The minimum dimensions are shown.

\textbf{Presentation:} The board shall contain a black “T” on a yellow background, background to class 1 retro-reflectivity.

\textbf{Lettering:} \textbf{Display of values in mph:}
- Yellow background.
- Black lettering.
- Better than Class 1 retro-reflectivity shall be applied.

\textbf{Lettering:} The typeface defined in BS 3693B:1964 shall be used.

\textbf{Positioning:} At the trackside as set out in GE/RT0038.

\textbf{Readability:} Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AF07: Temporary Speed Restriction Spate Indicator

Mandated by Railway Group Standard GK/RT0038.

Meaning: This sign identifies that the temporary speed restriction at that location included in the current weekly operating notice (WON) is not in force. It is known as a spate indicator.

Size: The minimum dimensions are shown.

Presentation: Display of values in mph:
- The symbol shall be on a yellow square board.
- Yellow background.
- Black symbol.
- Better than Class 1 retro-reflectivity shall be applied.

Lettering: Not applicable.

Positioning: At the trackside as set out in GE/RT0038.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
# Lineside Operational Safety Signs

**Sign AF08:** Temporary Speed Restriction AWS Cancelling Indicator

*Mandated by Railway Group Standard GK/RT0038.*

**Meaning:**
The AWS indication already received shall be ignored.

**Size:**
The minimum dimensions are shown.

**Presentation:**
*Display of values in mph:*
- The board shall contain a black saltire upon a yellow background.
- The board shall be square.
- Better than Class 1 retro-reflectivity shall be applied.

**Lettering:**
Not applicable.

**Positioning:**
At the trackside as set out in GE/RT0038.

**Readability:**
Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Section AG

Signs for Limits of Engineering Possessions

AG01z Possession limit board 90
AG02z Work site entrance marker 91
AG03z Work site exit marker 92
# Sign AG01z: Possession Limit Board

*Published within Railway Group Standard GO/RT3000.*

**Meaning:**
This sign identifies the location within an engineering possession where all trains shall stop.

**Size:**
The dimensions shown are typical of available products.

**Presentation:**
- Red background.
- White border.
- White lettering.
- Class 1, or better, retro-reflectivity shall be applied.
- There shall be a flashing red light above the sign, as shown. The shape of the light is not mandated. The light power shall be a minimum of 1000 milli-candela. The flash rate shall be between 1Hz and 2 Hz with a mark-space ratio of 1:1 ±20%.

**Lettering:**
- White Rail Alphabet typeface.

**Positioning:**
In the centre of the track, central to the detonator protection.

**Readability:**
Minimum of 4 seconds at the highest permissible speed approaching or within the possession as appropriate.
Sign AG02z: Work Site Entrance Marker Board

Published within Railway Group Standard GO/RT3000.

Meaning: This marker board identifies the entrance to a work site area.

Size: The dimensions shown are typical of available products.

Presentation: Yellow background.
Class 1, or better, retro-reflectivity shall be applied.

Lights: The lights shall be 80mm diameter. The light power shall be a minimum of 1000 milli-candela. The flash rate shall be between 1Hz and 2 Hz with a mark-space ratio of 1:1 ±20%.

The colour shall be red and in accordance with GK/RT0031.

Lettering and Digits: Not applicable.

Positioning: At the trackside.

Readability: The sign shall be visible for 4 seconds to a train proceeding on-sight.
Sign AG03z: Work Site Exit Marker Board

Published within Railway Group Standard GO/RT3000.

Meaning: This marker board identifies the exit from a work site area.

Size: The dimensions shown are typical of available products.

Presentation: Yellow background.

Class 1, or better, retro-reflectivity shall be applied.

Lights: The lights shall be 80mm diameter. The light power shall be a minimum of 1000 milli-candela. The flash rate shall be between 1Hz and 2 Hz with a mark-space ratio of 1:1 ±20%.

The colour shall be yellow and in accordance with GK/RT0031.

Lettering and Digits: Not applicable.

Positioning: At the trackside.

Readability: The sign shall be visible for 4 seconds to a train proceeding on-sight.
Lineside Operational Safety Signs

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
Lineside Operational Safety Signs

Section AH

Signs on the Approach to Level Crossings

AH01  Level crossing warning sign  96
AH02m  Open level crossing combined speed restriction/whistleboard  97
AH03m  Automatic level crossing restriction board  98
AH04m  Automatic level crossing wrong direction speed restriction board  99
AH05  Level crossing sighting board  100
This page has been left intentionally blank
Sign AH01: Level Crossing Warning Sign

This sign is mandated by Railway Group Standard GI/RT7012. Reference should be made to HMRI Railway Safety Principles and Guidance Part 2 section E Guidance on Level crossings.

Meaning: This sign instructs the driver to regulate the speed of the train for the level crossing ahead. The sign is used at:
- Automatic barrier crossings, locally monitored
- Automatic open crossings, locally monitored
- Open crossings.

Size: The standard dimensions shall be used.

Presentation: White background. Black cross. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: Not applicable.

Positioning: At the trackside close to driver’s eye level. GK/RT0034 shall be used to determine the minimum distance required from the level crossing to enable the driver to control the speed of his train to a stop, if necessary, before the crossing. If the line speed and crossing speed are the same, a board shall be provided as set out in the HMRI guidance.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AH02m: Open Level Crossing Combined Speed Restriction/Whistle Sign

This sign is mandated by Railway Group Standard GI/RT7012. Reference should be made to HMRI Railway Safety Principles and Guidance Part 2 section E Guidance on Level crossings.

Meaning: This sign indicates the commencement of the permissible speed on the approach to an Open Crossing and that the horn shall be sounded. The rules given in GO/RT3000 for the display of differential speeds apply. This format applies only to miles per hour.

Size: The standard dimensions shall be used.

Presentation: White background.
Black lettering and digits.
The ‘W’ shall have an additional black border, as shown.
Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The typeface defined in BS 3693B: 1964 shall be used.

Positioning: At the trackside close to the driver’s eye level. The sign is placed where an approaching train, having passed sign AH01, would have decelerated to the speed displayed.

Readability: Minimum of 4 seconds at the highest permissible speed approaching the location concerned.
Lineside Operational Safety Signs

Sign AH03m: Automatic Level Crossing Speed Restriction Sign

This sign is mandated by Railway Group Standard GI/RT7012. Reference should be made to HMRI Railway Safety Principles and Guidance Part 2 section E Guidance on Level crossings.

Meaning: This sign is used at:

- Automatic barrier crossings, locally monitored ABCL
- Automatic open crossings, locally monitored AOCL.

This sign indicates the commencement of the permissible speed on the approach to a locally monitored automatic level crossing. It also indicates the point at which the driver is required to ensure that the level crossing is clear and to observe the driver's level crossing indicator. The rules given in GO/RT3000 for the display of differential speeds apply.

This format applies only to miles per hour.

Size: The standard dimensions shall be used. A smaller variant for any intervening signal post is permitted by GI/RT7012.

Presentation: White background. Black lettering and digits. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The typeface defined in BS 3693B: 1964 shall be used.

Positioning: At the trackside close to the driver's eye level. The sign is placed where an approaching train having passed sign - AH01 would have decelerated to the speed displayed.

Readability: Minimum of 4 seconds at the highest permissible speed (including enhanced permissible speed) approaching the location concerned.

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009
Lineside Operational Safety Signs

Sign AH04m: Automatic Level Crossing Wrong Direction Speed Restriction

This sign is mandated by Railway Group Standard GI/RT7012. Reference should be made to HMRI Railway Safety Principles and Guidance Part 2 section E Guidance on Level crossings.

Meaning: This sign is used at:
• Automatic half-barrier crossings
• Crossings with miniature lights where wrong direction controls are provided.

This sign indicates the commencement of the permissible speed for trains travelling in the wrong direction on the approach to such automatic level crossings.

This format applies only to miles per hour.

Size: The standard dimensions shall be used.

Presentation: White background.
Black lettering and digits.

Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The typeface defined in BS 3693B: 1964 shall be used.

Positioning: At the trackside close to the driver’s eye level on all approaches for which wrong-direction controls are provided.

Readability: Minimum of 4 seconds at the highest permissible approach speed for the wrong road direction.
Sign AH05: Level Crossing Sighting Board

This sign is mandated by Railway Group Standard GI/RT7012. Reference should be made to HMRI Railway Safety Principles and Guidance Part 2 section E Guidance on Level crossings.

Meaning: This sign is used on ETCS cab signalled lines, where lineside signals are not provided, at:
- Automatic barrier crossings, locally monitored ABCL
- Automatic open crossings, locally monitored AOCL.

This sign indicates the point at which the driver is required to ensure that the level crossing is clear and to observe the driver's level crossing indicator.

Size: The standard dimensions shall be used.

Presentation: White background. Black lettering and digits. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The typeface defined in BS 3693B: 1964 shall be used.

Positioning: At the trackside close to the driver's eye level.

Readability: Minimum of 4 seconds at the highest permissible speed (including enhanced permissible speed) approaching the location concerned.
### Section AJ

#### Electric Traction Signs

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>AJ01z</td>
<td>Neutral section warning board</td>
<td>103</td>
</tr>
<tr>
<td>AJ02z</td>
<td>Neutral section indication</td>
<td>104</td>
</tr>
<tr>
<td>AJ03z</td>
<td>Lower pantograph</td>
<td>105</td>
</tr>
<tr>
<td>AJ04z</td>
<td>Warning of traction system changeover</td>
<td>106</td>
</tr>
<tr>
<td>AJ05z</td>
<td>25kVac electrification boundary - entering</td>
<td>107</td>
</tr>
<tr>
<td>AJ06z</td>
<td>750Vdc electrification boundary - entering</td>
<td>108</td>
</tr>
</tbody>
</table>
Sign AJ01z: Neutral Section Warning Board

Meaning: This sign provides advance warning of an electrification neutral section.

Size: The standard dimensions shall be used.

Presentation: Black background. White symbol. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: Not applicable.

Positioning: At the trackside.

Readability: Minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AJ02z: Neutral Section Indication Board

Meaning: This sign identifies the commencement of an electrification neutral section.

Size: The standard dimensions shall be used.

Presentation: White background. Black symbol. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: Not applicable.

Positioning: At the trackside.

Readability: Minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
## Sign AJ03z: Lower Pantograph

*Published within the International Rule Book.*

**Meaning:**
This sign indicates that successive (if more than one is used) pantographs must be lowered by this point.

**Size:**
The standard dimensions shall be used.

**Presentation:**
Black background.
White border.
White symbol.
Class 1, or better, retro-reflectivity shall be applied.

**Lettering and Digits:**
Not relevant.

**Positioning:**
At the trackside.

**Readability:**
Minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AJ04z: Warning of Traction System Changeover

Published within the International Rule Book.

Meaning: This sign warns the driver that there is a traction supply changeover section ahead.

Size: The standard dimensions shall be used.

Presentation: Black background.
White border.
White symbol.
Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: Not relevant

Positioning: At the trackside.

Readability: Minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AJ05z: Traction Changeover to 25kV ac.

Published within the International Rule Book.

**Meaning:**
This sign indicates that the train is entering (in this example) Eurotunnel 25kV catenary.

This sign is followed by sign AK09 which indicates the location at which the driver is able to raise the pantograph(s).

**Size:**
The standard dimensions shall be used.

**Presentation:**
Black background.
White borders.
White text.
White symbol.
Class 1, or better, retro-reflectivity shall be applied.

**Lettering and Digits:**
The Rail Alphabet typeface shall be used.

**Positioning:**
At the trackside.

**Readability:**
Minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AJ06z: Traction Changeover to 750V dc.

Published within the International Rule Book.

Meaning: This sign indicates that the longest train is over (in this example) British 3rd rail traction supply. The pantograph shall remain lowered.

This sign is followed by sign AK09 which indicates the location at which the driver is able to lower the shoes.

Size: The standard dimensions shall be used.

Presentation: Black background. White borders. White text. White symbol. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The Rail Alphabet typeface shall be used. The legend "BR" indicates the British conventional network.

Positioning: At the trackside.

Readability: Minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Lineside Operational Safety Signs

Section AK

Miscellaneous Signs

Sub-section 1: Miscellaneous signs subject to the recommendation s of a Signal Sighting Committee

AK101 Signal reminder board
AK102 Countdown markers
AK103 Line identification board
AK104z Platform stop markers
AK105 Mid-platform train berth markers

Sub-section 2: Other signs

AK201mz Mile posts
AK201kz Kilometre posts
AK202z Gradient sign
AK203z Whistle board
AK204z Spring catch points marker
AK205z Rear clear marker
AK206z Train class specific instruction
AK207z Train class specific NO ENTRY
AK208z Coasting board
AK209z Miscellaneous Instructions to traincrew
AK210z Warnings for train crew
AK211z Sandite markers
AK212z Infrastructure location names, information and references
AK213z Bridge identity plates
Sign AK101: Signal Reminder Board

Referred to in GK/RT0037.

Meaning: This board reminds a driver that the signal with the identity shown is the stated distance ahead.

Size: The dimensions are recommended.

Presentation: White background. Red border. Black text. Black symbol. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: Rail Alphabet typeface. The exclamation mark shall conform to that set out in the Traffic Signs Regulations and General Directions 2002.

Positioning: At the trackside.

Readability: In accordance with the recommendations of the signal sighting committee.
Sign AK102: Countdown Markers

Referred to in GK/RT0037.

Meaning: This sign provides distance information to a specific location to the driver. There are three standard signs:

- Outer Board, with three marks meaning that the relevant location is 300m ahead
- Intermediate Board, with two marks meaning that the relevant location is 200m ahead
- Inner Board, with one mark meaning that the relevant location is 100m ahead

It is permissible for countdown marker boards with more than three marks to be used, up to a maximum of six marks. These shall be located at the appropriate distance from the feature concerned. The marks shall be grouped in sets of up to three.

Size: The dimensions shown are recommended. Where the countdown markers relate to a signal the dimensions shall be decided by the signal sighting committee.

Presentation: White background. Red marks. Black text. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The identity of the feature shall be shown, for example a signal identity. The typeface defined in BS 3693B:1964 shall be used.

Positioning: At the trackside.

Readability: For the outer board, a minimum of 2 seconds at the highest permissible speed approaching the location concerned. It is permissible for a signal sighting committee to modify this requirement.
Lineside Operational Safety Signs

Sign AK103: Line Identification Board

Referred to in GK/RT0037.

Meaning: This sign informs the driver of the identification of the line to which it refers. The identity shall be that used for signal route indicators in rear.

Size: The dimensions shown are typical.

Presentation: White background. Black border. Black text. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The typeface defined in BS 3693B:1964 shall be used.

Positioning: Over the line concerned as set out in GK/RT0037.

Readability: Minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned. It is permissible for a signal sighting committee to modify this requirement.
Lineside Operational Safety Signs

Sign AK104z: Platform Stop Markers

Meaning: This sign informs the driver of the stopping points along station platforms determined by the train length and class. The number(s) indicate the length of the train concerned. "S" shall be used to indicate the stopping point for trains of any length. Where required, the train class shall be indicated at the top of the sign. Alternatively it is permissible to replace the class number by the type of train or vehicle, for example HST.

Size: The standard dimensions are recommended.

Presentation: The background, represented by the shaded area, and text shall be in contrasting colours. Where more than one number is required these shall generally be given in a vertical list. Station operators are permitted to provide markers in accordance with the needs of the services operating at the station.

The permitted additional information shall not be allowed to reduce the effectiveness of the sign.

Lettering and Digits: Rail Alphabet typeface shall be used.

Positioning: At the point where the front of the train is required to stop.

Readability: 2 seconds visibility available to a train stopping at the platform. It is permissible for a signal sighting committee to modify this requirement.
Sign AK105: Mid-platform Train Berth Marker

Referred to in GK/RT0044.

Meaning: This sign informs the driver of the sub-divisions along a station platform to permit its use by more than one train.

Size: The standard dimensions shall be used. It is permissible for a signal sighting committee to modify this requirement.

Presentation: White background. Black symbol. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: Not applicable.

Positioning: At the point where the front of the longest train allowed in that berth is required to stop.

Readability: 7 seconds visibility available to a train stopping at the platform. It is permissible for a signal sighting committee to modify this requirement.

NOTE: It is permissible for other forms of this sign to remain in use, but their use shall not be extended to other locations.
Lineside Operational Safety Signs

Sign AK201mz: Mile Posts

Mandated by Railway Consolidation Act 1845.

Meaning: This sign displays the distance in miles from a known datum. On the posts representing ¼, ½ and ¾ mile distances the associated miles value should also be shown.

Size: The dimensions are recommended.

Presentation: The background shall be yellow.

A double-sided or angled arrangement shall be employed where required to meet the visibility requirement.

Lettering and Digits: The typeface defined in BS 36938:1964 shall be used. The digits shall be black. The yellow background shall not be retro-reflective unless required by the infrastructure controller.

Positioning: Beyond the cess on the down side. The infrastructure controller shall designate the preferred side of the railway for them to be installed. They shall be on the same side as the gradient signs AK202z. If these are duplicated on the opposite side of the line, both gradient and mile posts shall be repeated. The true location shall be shown on the signalling plans. They shall be sited as close as possible to and not more than 5 yards from this position.

Visibility: For new signs the visibility shall be a minimum of 2 seconds at an approach speed of 50mph on the nearest running line. They shall be visible from all lines passing the post, on the approach from either direction.
Sign AK201kz: Kilometre Posts

Meaning: This sign displays the distance in kilometres from a known datum. It is permissible to show intervals in multiples of 100 metres by a single digit below the kilometic value.

Size: The sign shall be square. The dimensions are recommended.

Presentation: The border shall be square, and yellow to class 1 retro-reflectivity. The background shall be black.

A double-sided or angled arrangement shall be adopted where required to meet the visibility requirement.

Lettering and Digits: The typeface defined in BS 3693B:1964 shall be used. The digits shall be yellow, retro-reflective to the requirement of the infrastructure controller.

Positioning: Beyond the cess on the down side. The infrastructure controller shall designate the preferred side of the railway for them to be installed. They shall be on the same side as the gradient signs AK202z. If these are duplicated on the opposite side of the line, both gradient and kilometre posts shall be repeated. The true location shall be shown on the signalling plans. They shall be sited as close as possible to and not more than 5m from this position.

Visibility: For new signs the visibility shall be a minimum of 2 seconds at an approach speed of 80km/h on the nearest running line. They shall be visible from all lines passing the post, on the approach from either direction.
### Lineside Operational Safety Signs

**Sign AK202z: Gradient Sign**

**Meaning:**
This sign identifies the gradient of the track in both directions from the sign.

**Size:**
The dimensions are recommended.

**Presentation:**
Level track shall be indicated by the word "level". Up to the value of 100, gradients shall be indicated by the cotangent to the nearest integer, for example "95". Above the value of 100 the gradient shall be indicated to the nearest decade including the final zero.

**Presentation A:**
The background shall be white. The appearance of the arms shall be inclined to indicate the relative direction of gradient.

**Presentation B:**
It is permissible to represent the arms on a board as shown.

**Lettering and Digits:**
The Rail Alphabet typeface shall be used. Digits and letters shall be black.

**Positioning:**
Beyond the cess, normally at locations where the gradient changes. They shall be present on a designated side of the railway, which shall be same as for mile posts or kilometre posts. If duplicated on the opposite side, both gradient and mile posts shall be repeated. The orientation shall be determined by the infrastructure controller.

**Visibility:**
For new signs the visibility shall be a minimum of 2 seconds at an approach speed of 50mph on the nearest running line. They shall be visible from all lines.
Lineside Operational Safety Signs

Sign AK203z: Whistle Board

Published within Railway Group Standard GO/RT3000.

Meaning: This sign instructs the driver to sound the horn as set out in the reference.

Size: The standard dimensions shall be used.

Presentation: White background.
Grey border.
Black text.
Class 1, or better, retro-reflectivity shall be applied to the white background.

Lettering: The typeface defined in BS 3693B:1964 shall be used.

Positioning: At the trackside close to driver’s eye level.

Readability: Minimum of 4 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Lineside Operational Safety Signs

Sign AK204: Spring Catch Points

Meaning: This sign identifies the location of spring catch points.

Size: The standard dimensions shall be used.

Presentation: White background. Black border. Black text. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The typeface defined in BS 3693B:1964 shall be used.

Positioning: At the trackside, at the toe of the points.

Readability: Minimum of 2 seconds at an approach speed of 50mph.
Sign AK205z: Rear Clear Marker

Referred to in GK/RT0032 and published within the International Rule Book.

Meaning: This sign informs the driver that his train has cleared a defined location to the rear.

Size: The standard dimensions shall be used.

Presentation: White background.
Black text.
Black symbol.
No border.
Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The Rail Alphabet shall be used for the train class description. Characters shall be black.

Readability: Minimum of 2 seconds at the line speed appropriate for the move and train class.
### Sign AK206z: Train Class Specific Instruction

**Meaning:**
This sign is to advise the driver of a train of the class addressed of specific action or constraints that apply at that location.

**Size:**
The standard dimensions shall be used.

**Presentation:**
White background. Blue border containing the train class identifier in white. Black text, giving the instruction. Red saltire to indicate prohibition. Red, or other colour, symbol.

Class 1, or better, retro-reflectivity shall be applied.

**Lettering and Digits:**
The Rail Alphabet typeface shall be used. The train class shall be in white to class 1 retro-reflectivity on the blue background. The instruction shall be in black contained in a white box to class 1 retro-reflectivity as shown.

The text field markers <> shall not be shown.

**Readability:**
Minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Lineside Operational Safety Signs

Sign AK207z:  Train Class Specific
NO ENTRY

Meaning:  This sign is to advise the driver of a train of the class addressed that he is not to proceed beyond that board.

Size:  The standard dimensions shall be used.

Presentation:  White background. Blue border containing the train class identifier in white. Red symbol.
Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits:  The Rail Alphabet typeface shall be used. The train class shall be in white to class 1 retro-reflectivity on the blue background.
The text field markers <> shall not be shown.

Positioning:  At the trackside. Lateral positioning shall be determined according to the required clearances set out in GE/RT8029.

Readability:  Minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
**Sign AK208z: Coasting Board**

**Meaning:** This board advises the driver to coast to a stopping point or significant speed reduction beyond the board.

**Size:** The standard dimensions shall be used.

**Presentation:** White background. No border. Class 1, or better, retro-reflectivity shall be applied.

**Lettering and Digits:** Not applicable.

**Positioning:** At the trackside. **Readability:** Identifiable at the highest permissible speed.
Sign AK209z: Miscellaneous Instructions for Train Crews

Meaning: This sign informs the driver of specific action required at the location concerned. This sign shall not be used as a signal reminder board.

Size: The dimensions are determined by the text.

Presentation: White background. Red border. Black text or symbol, giving the instruction. Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The Rail Alphabet typeface shall be used. The recommended minimum size is $Y = 12.5$mm. The text shall be black.

Readability: The Infrastructure Controller shall determine the readability according to the context. Readable from a train at rest.
Sign AK210z: Warnings for Train Crews

**Meaning:**
This sign informs the driver of a specific hazard at the location concerned.

**Size:**
The standard dimensions shall be used.

**Presentation:**
White background. Yellow border. Black text or symbol, giving the instruction. Class 1, or better, retro-reflectivity shall be applied.

**Lettering and Digits:**
Text shall be black, in the Rail Alphabet typeface.

**Positioning:**
At the trackside.

**Readability:**
Minimum of 2 seconds at the highest permissible speed.

---

Low adhesion hazard ahead:

miscellaneous text warning:

Fire risk
Sign AK211z: Sandite Markers

Meaning: These signs inform the driver of sites where Sandite should be applied.

Size: The standard dimensions shall be used.

Presentation: There are three signs:
- Three marks: advance warning of Sandite application site
- Two marks: start applying Sandite
- One mark: stop applying Sandite.

Yellow background.
Black marks.
Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: Not applicable

Positioning: At the trackside.

Readability: For the outer board, a minimum of 2 seconds at the highest permissible (including enhanced permissible) speed approaching the location concerned.
Sign AK212: Infrastructure Location Names, Information and References

Referred to in GI/RT7012 and GK/RT0009.

Meaning: This sign informs the driver of the identification of the location or feature concerned, and when required includes information, for example tunnel length, or the infrastructure reference, for example an Ordnance Survey grid reference.

Size: The standard dimensions are recommended.

Presentation: White background. Black border. Black text or symbol, giving the information.

Class 1, or better, retro-reflectivity shall be applied.

Lettering and Digits: The Rail Alphabet typeface shall be used. The recommended minimum size is Y = 12.5mm. The text shall be black.

The Infrastructure Controller shall determine when the reference is to be included.

Positioning: Near the trackside, where possible on the feature or structure concerned.

Readability: Readable from a train at rest. Visible to passing trains.
Sign AK213: Bridge Identity Plates

Referred to in GC/RT5100.

Meaning: This sign informs personnel of the bridge identity.

Size: The standard dimensions are recommended.

Presentation: The plate shall be oval.
White background.
Black border.
Black text or symbol, giving the information.
It is permissible to apply class 1, or better, retro-reflectivity.

Lettering and Digits: The Rail Alphabet typeface shall be used.

Positioning: On the bridge concerned.

Readability: Readable from a train at rest. Visible to passing trains.
Lineside Operational Safety Signs

Railway Group Standard
GI//RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
Appendix  B

Signs for personnel on or near the line or lineside

Contents

The suffixes used have the following meanings:
z: the sign is not mandated by a current group standard
m: sign displays imperial speeds or distances
k: sign displays metric speeds or distances.

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section BA</strong> Cess Path Instructions and Information</td>
<td></td>
</tr>
<tr>
<td>BA01z High visibility clothing obligatory</td>
<td>135</td>
</tr>
<tr>
<td>BA02 Warnings</td>
<td>136</td>
</tr>
<tr>
<td>BA03 Access prohibited sign</td>
<td>137</td>
</tr>
<tr>
<td>BA04 Limited clearance sign</td>
<td>138</td>
</tr>
<tr>
<td>BA05 No refuges signs</td>
<td>139</td>
</tr>
<tr>
<td><strong>Section BB</strong> Signs in Tunnels</td>
<td></td>
</tr>
<tr>
<td>BB01 Text signs</td>
<td>143</td>
</tr>
<tr>
<td><strong>Section BC</strong> Signs at Access Points</td>
<td></td>
</tr>
<tr>
<td>BC01 Signs at access points - information</td>
<td>147</td>
</tr>
<tr>
<td><strong>Section BD</strong> Signs related to Electrical Hazards</td>
<td></td>
</tr>
<tr>
<td>BD01 Electrical Hazard</td>
<td>151</td>
</tr>
</tbody>
</table>
Lineside Operational Safety Signs

Railway Group Standard
GI//RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
Lineside Operational Safety Signs

Section BA

Cess Path Instructions and Information

- BA01z High visibility clothing obligatory
- BA02 Warnings
- BA03 Access prohibited sign
- BA04 Limited clearance sign
- BA05 No refuges signs
Lineside Operational Safety Signs

Railway Group Standard
GI//RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
Sign BA01z: High Visibility Clothing Obligatory

Meaning: No person is to pass the sign unless they are wearing the approved high visibility clothing meeting the standards in force.

Size: The dimensions are determined by the application.

Presentation: A rectangular board is recommended. The infrastructure controller shall hold the silhouette in a computer file, which shall be made available to the other railway group members.

Lettering: White text on a blue background.

Positioning: At eye height oriented to face people entering.

Readability: Readable at the entrance point to the cess concerned.
Sign BA02: Warnings

Mandated by Railway Group Standard GC/RT5203.

Meaning: This specification shall be used for all warning signs applied to trackside staff.

The text shall indicate the hazard. The standard texts shall include, but are not limited to:

- Cess walkway continues opposite across the running lines.
- Trains run either way.
- Cess path continues on other side of tunnel.

The sign shall include the exclamation mark, BS 5378-2: 1980 appendix A reference 2.9.

Size: The dimensions are determined by the text.

Presentation: The warning text shall be to the right or below the yellow and black British Standard symbol, BS 5378-2: 1980 appendix A reference 2.9. The text shall be a rectangular board with a yellow background. The background behind the symbol and the text block shall be white.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

Lettering: The Rail Alphabet Typeface shall be used. The recommended minimum size is \( Y = 12.5 \text{mm} \). The text shall be black.

Positioning: Along the cess without creating a tripping or snagging hazard.

Readability: Readable from the approved walking route.
Sign BA03: Access Prohibited Sign

Mandated by Railway Group Standard GC/RT5203.

Meaning: Access along the cess is prohibited for one of the following hazards:

- It is not possible to reach a position of safety because of sighting distances or other reasons.
- Trains travel above 125mph and no cess walkway is provided.
- The highest permissible or enhanced permissible speed is above 100mph and continuous positions of safety or refuges are not provided on at least one side of the running lines.
- There is a bi-directional line and continuous positions of safety or refuges are not provided on at least one side of the running lines.

The text accompanying the sign shall state the hazard concerned.

Lettering: The Rail Alphabet typeface shall be used; the recommended size is $Y = 12.5\text{mm}$. The text shall be white upon a red background.

Positioning: The signs should be at average eye height and oriented to face people at the entry/exit points of the section of track concerned, including intermediate access locations and platform ends. The Infrastructure Controller shall assess whether they should be repeated along the cess. They shall not create a tripping or snagging hazard.

Readability: Readable from the approved walking route.

Size: The dimensions are recommended.

Presentation: Red British Standard symbol, BS 5378-2: 1980 appendix A reference 1.3, upon a white background meaning "No Access", above or to the left of the text. The Infrastructure Controller shall assess the requirement for retro-reflectivity.
Sign BA04: Limited Clearance Sign

*Mandated by Railway Group Standard GC/RT5203.*

**Meaning:** A continuous position of safety is interrupted for more than 2 metres. Not to be used unless neither references BA03 nor BA05 are applicable.

**Size:** The dimensions are recommended.

**Presentation:**

a) Red and white chequered square.

b) The yellow warning triangle with the legend ‘Warning - Limited clearance’. The sign shall include the exclamation mark, BS 5378-2: 1980 appendix A reference 2.9.

The two signs shall be used together. The Infrastructure Controller shall assess the requirement for retro-reflectivity.

**Lettering:** The Rail Alphabet typeface shall be used. The text shall be the colour shown. The recommended minimum size is $Y = 12.5$mm.

**Positioning:** Along the cess, without creating a tripping or snagging hazard.

**Readability:** Readable from the approved walking route.

**NOTE:** The chequered sign shall remain in use until further notice because it is the sign recognised by staff. The yellow triangle is required by The Health and Safety (Safety Signs & Signals) Regulations 1996 and will in due course replace the chequered sign.
Sign BA05: No Refuges Sign

Mandated by Railway Group Standard GC/RT5203.

Meaning: A continuous position of safety or refuges are only available along the cess on the opposite side of the running lines. The side where the sign is displayed has neither a continuous position of safety nor refuges. It is not to be used when reference BA04 is applicable.

Size: The dimensions are recommended.

Presentation:

a) Blue and white chequered square.

b) The yellow warning triangle with the legend 'Warning - No refuges'. The sign shall include the exclamation mark, BS 5378-2: 1980 appendix A reference 2.9.

The two signs shall be used together. The Infrastructure Controller shall assess the requirement for retro-reflectivity.

Lettering: The Rail Alphabet typeface shall be used. The text shall be the colour shown. The recommended minimum size is $Y = 12.5 \text{mm}$.

Positioning: Along the cess, without creating a tripping or snagging hazard.

Readability: Readable from the approved walking route.

NOTE: The chequered sign shall remain in use until further notice because it is the sign recognised by staff. The yellow triangle is required by The Health and Safety (Safety Signs & Signals) Regulations 1996 and will in due course replace the chequered sign.
## Section BB

**Signs in Tunnels**

<table>
<thead>
<tr>
<th>BB01</th>
<th>Text signs</th>
</tr>
</thead>
</table>

Uncontrolled When Printed
Document to be superseded as of 05/09/2015
To be superseded by GIRT7033 Iss 3 published on 06/06/2015
**Sign BB01: Text Signs**

*Mandated by Railway Group Standard GC/RT5203.*

**Meaning:**
The direction and distance (in metres) to the nearest exit from a tunnel:

- Exit, plus an arrow indicating the direction to the nearest exit(s).
- Nearest cross-passage, plus an arrow.

**Size:**
The dimensions are determined by the text.

**Presentation:**
Green and white British Standard symbol, BS 5499-1: 2002 appendix D exit symbol upon a green background shall be shown when the exit or cross passage is also a fire exit. This symbol shall be placed above or to the left of the explanatory text.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

**Lettering:**
The Rail Alphabet typeface shall be used in accordance with this Railway Group Standard; the recommended size is $Y = 12.5$mm. The text shall be white upon the green background.

**Positioning:**
On the tunnel wall at eye height.

**Readability:**
Readable from the approved walking route(s).
Lineside Operational Safety Signs
## Lineside Operational Safety Signs

### Section BC

#### Signs at Access Points

| BC01 | Signs at access points - information | 147 |

Railway Group Standard  
GI//RT7033  
Issue Two  
Date October 2009
Lineside Operational Safety Signs

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
Sign BC01: Signs at Access Points - Information.

Mandated by Railway Group Standard GC/RT5203.

Meaning: Each access point to operational railway property shall display the information shown. In addition, a warning shall be displayed at access points associated with the following hazards:

- Where there is more than one running line and at least one is bi-directional.
- Trains travel in excess of 125mph.

Size: The dimensions are determined by the text.

Presentation: The border shall be black and enclose the warning(s). The warning text shall be to the right or below the yellow and black British Standard symbol, BS 5378-2: 1980 appendix A reference 2.9. These signs shall be accompanied by BA01z, High Visibility Clothing Obligatory, and CA03, No Unauthorised Access.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

Lettering: The Rail Alphabet typeface shall be used in accordance with this Railway Group Standard; the recommended size is $Y = 12.5\text{mm}$. The informative text shall be black text on a white background. The warning text shall be black upon a yellow background.

Positioning: At eye height oriented to face people entering.

Readability: Readable at the entrance.
Lineside Operational Safety Signs

Railway Group Standard
GI//RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
### Lineside Operational Safety Signs

#### Section BD

<table>
<thead>
<tr>
<th>Sign Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BD01</td>
<td>Electrical Hazard</td>
</tr>
</tbody>
</table>

To be superseded by GIRT7033 Iss 3 published on 06/06/2015

Uncontrolled When Printed
Document to be superseded as of 05/09/2015
To be superseded by GIRT7033 Iss 3 published on 06/06/2015
Lineside Operational Safety Signs

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
Sign BD01: Electrical Hazard

*Mandated by Railway Group Standard GM/RT1041.*

**Meaning:** This sign is used to reinforce other information to describe an electrical hazard. It is also used with the notices giving warning of the energisation of electrified track.

**Size:** The standard dimensions are recommended.

**Presentation:** Black triangular British Standard electrical hazard symbol, BS 5378-2: 1980 appendix A reference 2.8, upon a yellow background, above or to the left of the explanatory text.

It is permissible to apply the supplementary text according to the need.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

**Lettering and Digits:** The Rail Alphabet typeface shall be used in accordance with this Railway Group Standard; the recommended size is $Y = 12.5\text{mm}$. The text shall be black upon a yellow background.

**Positioning:** Where relevant, close to or with the equipment concerned without presenting a snagging or trip hazard

**Readability:** Readable from the approved walking route or access point.
Appendix C

Signs for the public

Contents

The suffixes used have the following meanings:
- z: the sign is not mandated by a current group standard
- m: sign displays imperial speeds or distances
- k: sign displays metric speeds or distances.

PCR - means the Private Crossing (Signs and Barriers) Regulations 1996.

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section CA</strong></td>
<td></td>
</tr>
<tr>
<td>Information in Public Areas</td>
<td></td>
</tr>
<tr>
<td>CA01 Danger from passing trains</td>
<td>157</td>
</tr>
<tr>
<td>CA02 Mind the gap/step</td>
<td>158</td>
</tr>
<tr>
<td>CA03 No Unauthorised Access</td>
<td>159</td>
</tr>
<tr>
<td><strong>Section CB</strong></td>
<td></td>
</tr>
<tr>
<td>Electrical warnings</td>
<td></td>
</tr>
<tr>
<td>CB01 Electrical Hazard: Warnings to the public</td>
<td>163</td>
</tr>
<tr>
<td><strong>Section CC</strong></td>
<td></td>
</tr>
<tr>
<td>Level crossings</td>
<td></td>
</tr>
<tr>
<td>CC01z Supplementary sign at crossings where trains pass in excess of 100mph (PCR diagram 101)</td>
<td>167</td>
</tr>
<tr>
<td>CC02 Supplementary sign for level crossings</td>
<td>168</td>
</tr>
<tr>
<td>CC03z Warning sign for a non-vehicular crossing (PCR diagram 101)</td>
<td>169</td>
</tr>
<tr>
<td>CC04z Instructions for use at a vehicular crossing without a telephone (PCR diagram 102)</td>
<td>170</td>
</tr>
<tr>
<td>CC05z Instructions for use at a vehicular crossing with a phone (PCR diagram 103)</td>
<td>171</td>
</tr>
<tr>
<td>CC06z Operating instructions for barrier (PCR diagram 104)</td>
<td>172</td>
</tr>
<tr>
<td>CC07z Sign indicating the penalty for failure to shut gate at a vehicular crossing (PCR diagram 105)</td>
<td>173</td>
</tr>
<tr>
<td>CC08z Signs for use with miniature red/green lights with and without a telephone (PCR diagrams 107 &amp; 108)</td>
<td>174</td>
</tr>
<tr>
<td>CC09z Instructions for use at a crossing with miniature red/green lights and user-operated gates (PCR diagram 109)</td>
<td>175</td>
</tr>
<tr>
<td>CC10z Instructions for use at a crossing with miniature stop lights and user-operated barriers (PCR diagram 110)</td>
<td>176</td>
</tr>
<tr>
<td>CC11z Reminder at a crossing with user-operated gates (PCR diagram 111)</td>
<td>177</td>
</tr>
<tr>
<td>CC12z Reminder at a crossing with user-operated barriers (PCR diagram 112)</td>
<td>178</td>
</tr>
<tr>
<td>CC13z Sign at a vehicular crossing where there are overhead electric wires and the road approaches are on a gradient (PCR diagram 113)</td>
<td>179</td>
</tr>
<tr>
<td>CC14z Instructions to non-vehicular traffic at a crossing with miniature stop lights (PCR diagram 114)</td>
<td>180</td>
</tr>
<tr>
<td>CC15z Instructions at a crossing with gates (PCR diagram 115)</td>
<td>181</td>
</tr>
<tr>
<td>CC16z Supplementary sign where crossing is used for animal traffic (PCR diagram 118)</td>
<td>182</td>
</tr>
<tr>
<td>CC17z Horseriders to dismount at crossings where there are overhead electric lines</td>
<td>183</td>
</tr>
<tr>
<td><strong>Section CD</strong></td>
<td></td>
</tr>
<tr>
<td>Information to the Public</td>
<td></td>
</tr>
<tr>
<td>CD01 Bridge strike information</td>
<td>187</td>
</tr>
</tbody>
</table>
Lineside Operational Safety Signs

Railway Group Standard
GI//RT7033
Issue Two
Date October 2009

Section CA

Information in Public Areas

<table>
<thead>
<tr>
<th>CA01</th>
<th>Danger from passing trains</th>
<th>Page 157</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA02</td>
<td>Mind the gap/step</td>
<td>Page 158</td>
</tr>
<tr>
<td>CA03</td>
<td>No Unauthorised Access</td>
<td>Page 159</td>
</tr>
</tbody>
</table>
Sign CA01: Danger from Passing Trains

Mandated by Railway Group Standard GC/RT5161.

Meaning: Stand back from the platform edge, usually behind a yellow line, or waiting prohibited within a marked area.

Size: The dimensions are recommended

Presentation: The warning shall be to the right or below the yellow and black triangular British Standard symbol, BS 5378-2: 1980 appendix A reference 2.9. The text shall be on a rectangular board with a yellow background.

The text shall describe the hazard presented by the location concerned.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

Lettering: The Rail Alphabet typeface shall be used in accordance with this Railway Group Standard. The warning text shall be black upon a yellow background. It is permissible to adapt the wording to the nature of the location.

Positioning: Where the impact is optimised, eg at the entrance to platforms. The sign shall be repeated at intervals along the public platforms without presenting a snagging or trip hazard. The Infrastructure Controller shall determine the minimum interval.

Readability: Readable on the approach, and from the platform opposite when standing on that platform edge.
Sign CA02: Mind the Gap/Step

Referred to in Railway Group Standard GC/RT5161.

Meaning: When entering or descending from a passenger vehicle, the stepping distance is unusually large in the horizontal and/or vertical dimension.

Size: The dimensions are recommended

Presentation: The warning shall be placed along the platform coping, alternately facing people entering and those leaving the vehicle. The words “Gap/Step” shall be applied as determined by the location.

Lettering: In accordance with signing practice, the text shall be in lower case after the initial capital in white lettering and applied by stencil. Where this is not possible, it is permissible to use upper case. The Rail Alphabet typeface is recommended.

The infrastructure controller shall assess the contrast and apply a background colour if deemed appropriate.

Positioning: At intervals on the public platforms. The Infrastructure Controller shall determine the minimum interval.

Readability: Readable by the public when boarding or alighting from a train.
Sign CA03: No Unauthorised Access

Mandated by Railway Group Standard GC/RT5203 and GC/RT5161.

Meaning: Only those persons with authority to leave a public area are to pass the notice.

Size: The dimensions are recommended

Presentation: Red British Standard symbol, BS 5378-2: 1980 appendix A reference 1.3, upon a white background meaning "No Access", above or to the left of the text.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

The sign shall be accompanied by the following text "Danger - No unauthorised access". It is permissible to add other text according to the circumstances.

Lettering: The Rail Alphabet typeface shall be used in accordance with this Railway Group Standard; the recommended size is $Y = 12.5 \text{mm}$. The text shall be white upon a red background.

Positioning: At all access points, including platform ramps, facing people entering without presenting a snagging or trip hazard.

Readability: Readable when approached from the public area.
Lineside Operational Safety Signs

Railway Group Standard
GI/RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
### Electrical warnings

<table>
<thead>
<tr>
<th>Section CB</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB01</td>
<td>Electrical Hazard: Warnings to the public</td>
</tr>
</tbody>
</table>
**Lineside Operational Safety Signs**

**Sign CB01: Electrical Hazards: Warnings to the Public**

*Mandated by Railway Group Standard GM/RT1041.*

**Meaning:** This sign shall be used to reinforce other information to describe specifically a hazard arising from overhead traction power equipment at stations and at level crossings. It shall also be used on:

- Posters announcing energisation of new traction power.
- Other applications as required by the Infrastructure Controller.

**Size:** The standard dimensions are recommended.

**Presentation:** Black triangular British Standard electrical hazard symbol, BS 5378-2: 1980 appendix A reference 2.8, above or to the left of the explanatory text.

The sign shall always be accompanied by an explanatory text specific to the hazard presented by the location concerned.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

**Lettering and Digits:** The Rail Alphabet typeface shall be used. The text shall be black upon a yellow background.

**Positioning:** On the approach to the railway property, and otherwise as required.

**Readability:** Readable from the public access point.
### Section CC

**Level crossings**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC01z</td>
<td>Supplementary sign at crossings where trains pass in excess of 100mph</td>
<td>167</td>
</tr>
<tr>
<td>CC02</td>
<td>Supplementary sign for level crossings</td>
<td>168</td>
</tr>
<tr>
<td>CC03z</td>
<td>Warning sign for a non-vehicular crossing (PCR diagram 101)</td>
<td>169</td>
</tr>
<tr>
<td>CC04z</td>
<td>Instructions for use at a vehicular crossing without a telephone</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>(PCR diagram 102)</td>
<td></td>
</tr>
<tr>
<td>CC05z</td>
<td>Instructions for use at a vehicular crossing with a phone (PCR diagram 103)</td>
<td>171</td>
</tr>
<tr>
<td>CC06z</td>
<td>Operating instructions for barrier (PCR diagram 104)</td>
<td>172</td>
</tr>
<tr>
<td>CC07z</td>
<td>Sign indicating the penalty for failure to shut gate at a vehicular crossing</td>
<td>173</td>
</tr>
<tr>
<td></td>
<td>(PCR diagram 105)</td>
<td></td>
</tr>
<tr>
<td>CC08z</td>
<td>Signs for use with miniature red/green lights with and without a telephone</td>
<td>174</td>
</tr>
<tr>
<td></td>
<td>(PCR diagrams 107 &amp; 108)</td>
<td></td>
</tr>
<tr>
<td>CC09z</td>
<td>Instructions for use at a crossing with miniature red/green lights</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>and user-operated gates (PCR diagram 109)</td>
<td></td>
</tr>
<tr>
<td>CC10z</td>
<td>Instructions for use at a crossing with miniature stop lights</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>and user-operated barriers (PCR diagram 110)</td>
<td></td>
</tr>
<tr>
<td>CC11z</td>
<td>Reminder at a crossing with user-operated gates (PCR diagram 111)</td>
<td>177</td>
</tr>
<tr>
<td>CC12z</td>
<td>Reminder at a crossing with user-operated barriers (PCR diagram 112)</td>
<td>178</td>
</tr>
<tr>
<td>CC13z</td>
<td>Sign at a vehicular crossing where there are overhead electric wires and the road approaches are on a gradient (PCR diagram 113)</td>
<td>179</td>
</tr>
<tr>
<td>CC14z</td>
<td>Instructions to non-vehicular traffic at a crossing with miniature stop lights</td>
<td>180</td>
</tr>
<tr>
<td></td>
<td>(PCR diagram 114)</td>
<td></td>
</tr>
<tr>
<td>CC15z</td>
<td>Instructions at a crossing with gates (PCR diagram 115)</td>
<td>181</td>
</tr>
<tr>
<td>CC16z</td>
<td>Supplementary sign where crossing is used for animal traffic</td>
<td>182</td>
</tr>
<tr>
<td></td>
<td>(PCR diagram 118)</td>
<td></td>
</tr>
<tr>
<td>CC17z</td>
<td>Horseriders to dismount at crossings where there are overhead electric lines</td>
<td>183</td>
</tr>
</tbody>
</table>
Sign CC01z: Supplementary Sign at crossings where trains pass in excess of 100mph

Meaning: The public to be aware that trains approach the crossing at high speed.

Size: The standard dimensions are recommended.

Presentation: The warning text shall be to the right or below the yellow and black British Standard symbol, BS 5378-2: 1980 appendix A reference 2.9.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

Lettering and Digits: The Rail Alphabet shall be used. The text shall be black upon a yellow background.

Positioning: On the approach to the railway property, and otherwise as required.

Readability: Readable by a person at the public access point.
Sign CC02: Supplementary Sign for Level Crossings

Mandated by Railway Group Standard GI/RT7012.

Meaning: This sign informs the public of the details necessary to identify the location of a crossing.

Size: The standard dimensions are recommended.

Presentation: The text shall be black upon a white background.

The border shall be black.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

Lettering and Digits: The Rail Alphabet shall be used.
Sign CC03z: Warning Sign for a Non-Vehicular Crossing

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering: Rail Alphabet typeface.

Dimensions: The dimensions shown shall be used.
Sign CC04z: Instructions for use at a vehicular crossing without a telephone

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering: Rail Alphabet typeface.

Dimensions: The dimensions shown shall be used.

Permitted variations: a) See sign reference CC05. b) It is permissible to add a telephone number below the text in the red area.

Stop
Look
Listen

Notify crossing operator before crossing with a vehicle which is unusually long, wide, low, heavy or slow moving

1. Open both gates and look in both directions before crossing.
2. Close quickly
3. Close and secure gates after use. Maximum penalty for not doing so £900
Sign CC05z: Instructions for use at a vehicular crossing with a telephone

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering: Rail Alphabet typeface.

Dimensions: The dimensions shown shall be used.

Permitted variation: a) See sign reference CC04.

b) It is permissible to add a telephone number below the text in the red area.

Always telephone before crossing with vehicles or animals to find out if there is time to cross.

Tell the crossing operator if the vehicle is large or slow moving.

1. Open for gate before crossing with vehicles or animals.
2. Cross quickly.
3. Close and secure gates after use. Maximum penalty for not doing so £1000.
Sign CC06z: Private Level Crossings:
Operating Instructions for Barrier

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.

Sign reference: The Private Crossings (Signs and Barriers) Regulations 1996, diagram 104.

Lettering: Transport typeface.

Dimensions: The dimensions shown shall be used.
Sign CC07z: Sign Indicating the Penalty for Failure to Shut Gate at a Vehicular Crossing

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering: Transport typeface.

Dimensions: The dimensions shown shall be used.

Maximum penalty for not closing gates £1000
Sign CC08z: Signs for use with Miniature Red/Green Lights with and without telephone

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering: Transport typeface.

Dimensions: The dimensions shown shall be used.

Permissible variation: According to the design of the installation, it is permissible for the lenses of the lamps to be circular or rectangular. Where the lamps are not integrated with the sign the coloured symbols shall be shown on the sign.
Sign CC09z: Instructions for use at a crossing with Miniature Red/Green Lights and User-operated Gates

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering: Transport typeface.

Dimensions: The dimensions shown shall be used.

INSTRUCTIONS

1. Check that green light shows
2. Open both gates
3. Check that green light still shows
4. Cross quickly
5. Close gates
Sign CC10z: Instructions for use at a crossing with Miniature Stop Lights and User-operated Barriers

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering: Transport typeface.

Dimensions: The dimensions shown shall be used.
Sign CC11z: Reminder at a crossing with User-operated Gates

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.

Sign reference: The Private Crossings (Signs and Barriers) Regulations 1996, diagram 111.

Lettering: Transport typeface.

Dimensions: The dimensions shown shall be used.
Sign CC12z: Reminder at a crossing with User-operated Barriers

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.

Sign reference: The Private Crossings (Signs and Barriers) Regulations 1996, diagram 112.

Lettering: Transport typeface.

Dimensions: The dimensions shown shall be used.
Sign CC13z:  Sign at a vehicular crossing where there are overhead live wires and road approaches are on a gradient

Note:  This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering:  Rail Alphabet typeface.

Dimensions:  The dimensions shown shall be used.

Permitted variations:  As shown.
Sign CC14z: Instructions for non-vehicular traffic at crossing with Miniature Stop Lights

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering: Transport typeface.

Dimensions: The dimensions shown shall be used.
Sign CC15z: Instructions at a crossing with gates

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.


Lettering: Rail Alphabet typeface.

Dimensions: The dimensions shown shall be used.
Sign CC16z: Supplementary Sign where Crossing is used for Animal Traffic

Note: This drawing is authorised by the Private Crossing (Signs and Barriers) Regulations 1996. It is shown here to provide reproduction information. It shall be used as required by the regulations.

Sign reference: The Private Crossings (Signs and Barriers) Regulations 1996, diagram 118.

Lettering: Transport typeface.

Dimensions: The dimensions shown shall be used.
Sign CC17z: Horseriders to dismount at crossings where there are overhead electric lines

Mandated by Railway Group Standard GM/RT1041.

Meaning: This sign requires horseriders to lead their horses across the level crossing concerned.

Size: The standard dimensions are recommended.

Presentation: Black triangular British Standard electrical hazard symbol, BS 5378-2: 1980 appendix A reference 2.8, above or to the left of the explanatory text.

The sign shall be accompanied by the explanatory text.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

Lettering and Digits: The Rail Alphabet typeface shall be used. The text shall be black upon a yellow background.

Positioning: At the entrances to the level crossing, and otherwise as required.

Readability: Readable at the public access point.
Lineside Operational Safety Signs

Railway Group Standard
GI//RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
Lineside Operational Safety Signs

Section CD

Information to the Public

CD01  Bridge strike information  187
Sign CD01: Bridge Strike Information

*Mandated by Railway Group Standard* GC/RT5122.

**Meaning:** Action to be taken by people who have witnessed a bridge being struck by a vehicle.

**Size:** The standard dimensions shall be used.

**Presentation:** Rectangular as shown with a white background and red border.

The bridge identity shall be unique, and it is permissible for it to be complemented by the OS Grid reference.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

**Lettering and Digits:** The text shall be black. The Rail Alphabet typeface shall be used.

**Positioning:** The sign shall be positioned to be visible from the road concerned, and on or near the bridge.

**Readability:** Readable by pedestrians at street level. The infrastructure controller shall assess the most appropriate positioning.
Appendix  D

Signs for communication

Contents

The suffixes used have the following meanings:
- z: the sign is not mandated by a current group standard
- m: sign displays imperial speeds or distances
- k: sign displays metric speeds or distances.

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section DA</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Signal Post Signs</strong></td>
<td></td>
</tr>
<tr>
<td>DA01 Telephone number</td>
<td>193</td>
</tr>
<tr>
<td>DA02 White Diamond</td>
<td>194</td>
</tr>
<tr>
<td>DA03 White Diamond with &quot;X&quot;</td>
<td>195</td>
</tr>
<tr>
<td><strong>Section DB</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Telephone Signs</strong></td>
<td></td>
</tr>
<tr>
<td>DB01 Signal post telephone</td>
<td>199</td>
</tr>
<tr>
<td>DB02 Signal post telephone - Limited clearance label</td>
<td>200</td>
</tr>
<tr>
<td>DB03 Lineside telephone</td>
<td>201</td>
</tr>
<tr>
<td>DB04 Emergency telephone</td>
<td>202</td>
</tr>
<tr>
<td>DB05 Electrification telephone</td>
<td>203</td>
</tr>
<tr>
<td>DB06 Telephone for routine use by railway staff</td>
<td>204</td>
</tr>
<tr>
<td><strong>Section DC</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Radio Signs</strong></td>
<td></td>
</tr>
<tr>
<td>DC01 Entering and leaving a GSM-R radio zone marker</td>
<td>207</td>
</tr>
<tr>
<td>DC02 Cab secure radio channel change marker</td>
<td>208</td>
</tr>
<tr>
<td>DC03 National radio network channel change marker</td>
<td>209</td>
</tr>
<tr>
<td>DC04 RETB channel change marker</td>
<td>210</td>
</tr>
<tr>
<td>DC05 Combined end of GSM-R and national radio network channel change marker</td>
<td>211</td>
</tr>
</tbody>
</table>
Lineside Operational Safety Signs

Railway Group Standard
GI//RT7033
Issue Two
Date October 2009

This page has been left intentionally blank
### Section DA

**Signal Post Signs**

<table>
<thead>
<tr>
<th>DA01</th>
<th>Telephone number</th>
<th>193</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA02</td>
<td>White Diamond</td>
<td>194</td>
</tr>
<tr>
<td>DA03</td>
<td>White Diamond with &quot;X&quot;</td>
<td>195</td>
</tr>
</tbody>
</table>
Sign DA01: Telephone Number

Mandated by Railway Group Standard GE/RT8048.

**Meaning:**
Because of limited clearance, normally the signal post telephone at that signal is not to be used to contact the signaller. The radio should be used to call the number given.

**Size:**
The standard dimensions shall be used.

**Presentation:**
Rectangular as shown with a white background.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

**Lettering and Digits:**
The text shall be black. The Rail Alphabet typeface shall be used.

**Positioning:**
Normally below the signal head to which it relates, under the appropriate diamond sign.

**Readability:**
Readable from the driver’s cab when at rest 50m before the signal.
Sign DA02: White Diamond

Mandated by Railway Group Standard GE/RT8048.

Meaning: No signal post telephone is provided, but train detection or other means of protection is provided on the approach to the signal.

Size: The standard dimensions shall be used.

Presentation: Diamond as shown with a white background.

Lettering: Not applicable.

Positioning: Normally below the signal head to which it relates.

Readability: Identifiable from the driver’s cab when at rest 50m before the signal.
Lineside Operational Safety Signs

Sign DA03: White Diamond with "X"

Mandated by Railway Group Standard GE/RT8048.

Meaning: Because of restricted clearances, the driver shall only use the signal post telephone in an emergency or when advised that it is safe to use.

Size:
- a) The standard dimensions shall be used for a sign fixed to the signal post or structure.
- b) A miniature sign positioned on or below the signal post telephone enclosure shall have dimensions appropriate to the enclosure (see DB01).

Presentation: Diamond as shown with a white background.

Lettering: The text shall be black. The Rail Alphabet typeface shall be used.

Positioning:
- a) Normally below the signal head to which it relates, and
- b) On or below the signal post telephone enclosure.

Readability:Readable from the driver's cab when at rest 50m before the signal.
Lineside Operational Safety Signs

This page has been left intentionally blank
# Lineside Operational Safety Signs

**Railway Group Standard**  
GI//RT7033  
**Issue Two**  
**Date** October 2009

## Section DB

### Telephone Signs

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB01</td>
<td>Signal post telephone</td>
<td>199</td>
</tr>
<tr>
<td>DB02</td>
<td>Signal post telephone - Limited clearance label</td>
<td>200</td>
</tr>
<tr>
<td>DB03</td>
<td>Lineside telephone</td>
<td>201</td>
</tr>
<tr>
<td>DB04</td>
<td>Emergency telephone</td>
<td>202</td>
</tr>
<tr>
<td>DB05</td>
<td>Electrification telephone</td>
<td>203</td>
</tr>
<tr>
<td>DB06</td>
<td>Telephone for routine use by railway staff</td>
<td>204</td>
</tr>
</tbody>
</table>
**Sign DB01: Signal Post Telephone**

*Mandated by Railway Group Standard GE/RT8048.*

**Meaning:**
The sign identifies a signal post telephone that provides communication directly with the signaller. Initial contact by a driver is to be made within the number of minutes indicated after standing at a stop aspect at the signal, if different from the standard delay of 2 minutes.

**Size:**
The standard dimensions are recommended.

**Presentation:**
Alternate white and black diagonal lines. A non-standard waiting period shall be displayed within a black circle upon a white background. The arrows shall be used for signs affixed to the signal post or structure to indicate the direction to the signal post telephone.

**Numbering:**
The text shall be black. The typeface shall be to BS 3693B:1964.

**Positioning:**
On the telephone enclosure. If this should not be obviously identified when viewed from a stationary train cab near the signal, one or more additional signs shall be affixed to the signal post or structure and include the appropriate directional arrow.

**Readability:**
Readable from the driver’s cab when at rest up to 50m before the signal.
Lineside Operational Safety Signs

Sign DB02: Signal Post Telephone - Limited Clearance Label

Mandated by Railway Group Standard GE/RT8048.

Meaning: This label, if affixed to a signal post telephone enclosure, means that it is not to be used to contact the signaller except by train crew who are protected by their train. In the event of an emergency it is available for use by any user.

Size: The dimensions are determined by the application.

Presentation: Red and white chequered square and yellow warning triangle with wording “Limited clearance”.

Lettering: The Rail Alphabet typeface shall be used. The text shall be red.

Positioning: On the signal post telephone enclosure concerned.

Readability: Visible from the approved walking route and from the driver’s cab at rest up to 50m before the signal.

NOTE: The chequered sign shall remain in use until further notice because it is the sign recognised by staff. The yellow triangle is required by The Health and Safety (Safety Signs & Signals) Regulations 1996 and will in due course replace the chequered sign.
## Sign DB03: Lineside Telephone

*Mandated by Railway Group Standard GE/RT8048.*

### Meaning:
The sign identifies a lineside telephone other than a signal post telephone that provides communication directly with the signaller.

### Size:
The dimensions depend upon the application.

### Presentation:
- Black saltire upon a white background.
- The Infrastructure Controller shall assess the requirement for retro-reflectivity.

### Numbering:
Not applicable.

### Positioning:
Normally on the telephone enclosure.

### Readability:
Readable when in the vicinity of the sign.

![Diagram of a lineside telephone sign with dimensions and notes on retro-reflectivity.](image)
Sign DB04: Emergency Telephone

*Mandated by Railway Group Standard GE/RT8048.*

**Meaning:** The sign identifies a telephone providing communication with the electrical control room, and which is available to the public for use.

**Size:** The recommended standard dimensions is $Y = 12.5$mm.

**Presentation:** A telephone symbol upon a green background.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

**Lettering and Digits:** White text upon a green background. The Rail Alphabet typeface is recommended. Where applicable, the short code or number to call the electrical control room shall be indicated on a label affixed inside the telephone cabinet.

**Positioning:** On the telephone enclosure. This shall be in a public area and visible from the station platforms.

**Readability:** Readable when in the area for which the telephone is provided.
Sign DB05: Electrification Telephone

Mandated by: No longer mandated in GE/RT8048 for new work.

Meaning: The sign identifies a telephone providing communication directly with the electrical control operator.

Size: The dimensions are determined by the application.

Presentation: Red symbol upon a white background. The Infrastructure Controller shall assess the requirement for retro-reflectivity.

Lettering: The text shall be red. The Rail Alphabet typeface shall be used.

Positioning: Normally on the telephone enclosure. This shall be in a position of safety.

Readability: Readable when in the vicinity of the sign.
Sign DB06: Telephone for Routine Use by Railway Staff

*Mandated by Railway Group Standard GE/RT8048.*

**Meaning:** The sign identifies a railway telephone that is available to railway staff for use when carrying out their duties.

**Size:** The recommended standard dimensions is \( Y = 12.5 \text{mm} \).

**Presentation:** As shown. The telephone sign is defined in the Rail Alphabet typeface.

The Infrastructure Controller shall assess the requirement for retro-reflectivity.

**Numbering:** Not applicable.

**Positioning:** Normally on the telephone enclosure.

**Readability:** Readable when in the vicinity of the telephone. The eyesight requirements of GO/RT3251 do not apply to this sign.
## Section DC

### Radio Signs

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC01</td>
<td>Entering and leaving a GSM-R radio zone marker</td>
<td>207</td>
</tr>
<tr>
<td>DC02</td>
<td>Cab secure radio channel change marker</td>
<td>208</td>
</tr>
<tr>
<td>DC03</td>
<td>National radio network channel change marker</td>
<td>209</td>
</tr>
<tr>
<td>DC04</td>
<td>RETB channel change marker</td>
<td>210</td>
</tr>
<tr>
<td>DC05</td>
<td>Combined end of GSM-R and national radio network channel change marker</td>
<td>211</td>
</tr>
</tbody>
</table>
Sign DC01: Entering and Leaving a GSM-R Radio Zone Marker

*Mandated by Railway Group Standard GO/RT3410.*

**Meaning:** These signs identify a zone in which trains equipped with GSM-R radios are expected to use that system.

**Size:** The standard dimensions shall be used.

**Presentation:**
- As shown. The white areas and red saltire shall be to class 1 retro-reflectivity.
- The Infrastructure Controller shall assess the requirement for higher retro-reflectivity.

**Lettering:**
- The typeface defined in BS 3693B:1964 shall be used.

**Positioning:**
- Normally at the trackside in accordance with GO/RT3410. Lateral positioning shall be determined according to the required clearances set out in GE/RT8029.

**Readability:**
- The sign shall be visible for 2 seconds at the highest permissible (including enhanced permissible) speed.
Sign DC02: Cab Secure Radio Channel Change Marker

Mandated by Railway Group Standard GO/RT3410.

Meaning: The number of the radio channel for the line ahead. The driver must ensure that this channel is selected on his radio.

Size: The standard dimensions shall be used.

Presentation: As shown. The white areas shall be to class 1 retro-reflectivity. The Infrastructure Controller shall assess the requirement for higher retro-reflectivity.

Lettering: The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside in accordance with GO/RT3410. Lateral positioning shall be determined according to the required clearances set out in GE/RT8029.

Readability: The sign shall be visible for 2 seconds at the highest permissible (including enhanced permissible) speed.
Sign DC03: National Radio Network Channel Change Marker

*Mandated by Railway Group Standard GO/RT3410.*

**Meaning:**
The number of the radio channel for the line ahead. The driver must ensure that this channel is selected on his radio.

**Size:**
The standard dimensions shall be used.

**Presentation:**
As shown. The white areas shall be to class 1 retro-reflectivity. The Infrastructure Controller shall assess the requirement for higher retro-reflectivity.

**Lettering:**
The typeface defined in BS 3693B:1964 shall be used.

**Positioning:**
Normally at the trackside in accordance with GO/RT3410. Lateral positioning shall be determined according to the required clearances set out in GE/RT8029.

**Readability:**
The sign shall be visible for 2 seconds at the highest permissible (including enhanced permissible) speed.
Sign DC04: Radio Electronic Token Block Channel Change Marker

Mandated by Railway Group Standard GO/RT3410.

Meaning: The number of the radio channel for the line ahead. The driver must ensure that this channel is selected on his radio.

Size: The standard dimensions shall be used.

Presentation: As shown. The white areas shall be to class 1 retro-reflectivity.

The Infrastructure Controller shall assess the requirement for higher retro-reflectivity.

Lettering: The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside in accordance with GO/RT3410. Lateral positioning shall be determined according to the required clearances set out in GE/RT8029.

Readability: The sign shall be visible for 2 seconds at the highest permissible (including enhanced permissible) speed.)
Sign DC05: Combined End of GSM-R and National Radio Network Channel Change Marker

Mandated by Railway Group Standard GO/RT3410.

Meaning: The number of the national radio network channel for the line ahead. The driver must ensure that this channel is selected on his radio. GSM-R radios should not be used beyond this point.

Size: The standard dimensions shall be used.

Presentation: As shown. The white areas shall be to class 1 retro-reflectivity.

The Infrastructure Controller shall assess the requirement for higher retro-reflectivity.

Lettering: The typeface defined in BS 3693B:1964 shall be used.

Positioning: Normally at the trackside in accordance with GO/RT3410. Lateral positioning shall be determined according to the required clearances set out in GE/RT8029.

Readability: The sign shall be visible for 2 seconds at the highest permissible (including enhanced permissible) speed.
References

Railway Group Standards and other Railway Group documents

GA/RT6001  Railway Group Standards Change Procedures
GA/RT6004  Temporary Non Compliance with Railway Group Standards
GA/RT6006  Derogations from Railway Group Standards
GC/RT5060  Equipment for the Signing of Temporary and Emergency Speed Restrictions
GC/RT5100  Safe Management of Structures
GC/RT5122  Bridge Strikes from Road Vehicles or Waterborne Vessels
GC/RT5161  Station Design and Maintenance Requirements
GC/RT5203  Infrastructure Requirements for Personal Track Safety in Respect of Clearances and Access
GC/RT5212  Requirements for Defining and Maintaining Clearances
GE/RT8012  Controlling the Speed of Tilting Trains Through Curves
GE/RT8025  Electrical Protective Provisions for Electrified Lines
GE/RT8026  Safety Requirements for Cab Signalling Systems
GE/RT8029  Management of Clearances and Gauging
GE/RT8035  Automatic Warning System (AWS)
GE/RT8037  Signal Positioning and Visibility
GE/RT8048  Positioning and Labelling of Lineside Telephones
GE/RT8067  Personal Track Safety
GI/RT7001  Management of Safety Related Records of Elements of the Infrastructure
GI/RT7004  Requirements for the Design, Operation and Maintenance of Points
GI/RT7012  Requirements for Level Crossings
GK/RT0005  Safety Related Colours for Signalling Applications
GK/RT0009  Identification of Signalling and Related Equipment
GK/RT0031  Lineside Signals and Indicators
GK/RT0032  Provision of Lineside Signals
GK/RT0033  Lineside Signs
GK/RT0034  Lineside Signal Spacing
GK/RT0036  Transition between Lineside Signalling and other Systems of Train Control
GK/RT0037  Signal Positioning and Visibility
GK/RT0038  Signing of Permissible Speeds and Speed Restrictions
GK/RT0044  Controls for Signalling a Train onto an Occupied Line
GK/RT0054  Radio Electronic Token Block
GM/RT1041  Warning Signs and Notices for Electrified Lines
GM/RT2180  Visibility and Audibility Requirements for Trains
Lineside Operational Safety Signs

GO/RT3000  Rule Book
GO/RT3251  Train Driving
GO/RT3410  Train Radio Communication

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.

Other References

BS 381C: 1996  Colours for identification, coding and special purposes
BS 873 Part 6: 1983  Road Traffic Signs and Internally Illuminated Bollards
BS 3693B: 1964 (withdrawn)  Recommendations for the design of scales, indexes and geometric construction of the recommended form of digits for use on dials and scales. Extracts from BS 3693B: 1964 are produced with the permission of BSI under license number 2003DH0149. British Standards can be obtained from BSI Customer Services, 389 Chiswick High Road, London, W4 4AL, United Kingdom, Tel +44 (0) 20 8996 9001.
BS 4800: 1989  Paint colours for building purposes
BS 5378-2: 1980  Appendix A Safety signs and colours

Health and Safety (Safety Signs and Signals) Regulations 1996
HMRI Railway Safety Principles and Guidance Part 2, Section E Guidance on Level Crossings
HSE Railway Safety Principles and Guidance
International Rule book
Pantone American printing colours and definitions
Private Crossings (Signs and Barriers) Regulations 1996
Railway Consolidation Act 1845
Sign Design Guide
Train and Station Services for Disabled Passengers, Code of Practice, SRA
Traffic Signs Regulations and General Directions 2002