

Ref:	SSI8003-72
Issue:	4
Date:	05/09/2015
Compliance date:	06/12/2015

Module

Co-Acting Signals

Endorsement and Authorisation

For endorsement, authorisation and issue record of this document, please refer to the SSI Applications Manual Contents, NR/L2/SIG/17002.

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User information

This Network Rail standard contains colour-coding according to the following Red–Amber–Green classification.

Red requirements – *No variations, could stop the railway*

- **Red requirements shall** always be complied with and achieved.
- Red requirements shall be presented in a red box **with the word “shall” or expressed as a direct instruction**.
- Accountability for the efficacy of red requirements lies with the Professional Head/Standard Owner.
- Red requirements are monitored for compliance.
- Corrective actions shall be enforced if deviations are discovered through functional checks (e.g. engineering verification visits, audit or Operations Self-Assurance).

Amber requirements – *Controlled variations, approved risk analysis and mitigation*

- **Amber requirements shall** be complied with unless variation has been approved in advance.
- Amber requirements shall be presented with an amber sidebar **and with the word “shall” or expressed as a direct instruction**.
- Accountability for the efficacy of these requirements lies with the Professional Head/Standard Owner, or their nominated Delegated Authority.
- Amber requirements are monitored for compliance.
- Variations **may** be permitted. Variations are approved by the Standard Owner or through existing Delegated Authority arrangements.
- Corrective actions shall be enforced if **non-approved** variations are discovered through functional checks (e.g. engineering verification visits, audit or Operations Self-Assurance).

Green – *Guidance*

- Guidance is based on good practice. Guidance represents supporting information to help achieve **Red** and **Amber** requirements.
- Guidance shall be presented with a dotted green sidebar **and with the word “should” (usually in notes) or as a direct instruction**.
- Guidance is **not mandatory** and is not monitored for compliance.
- Alternative solutions may be used. Alternative solutions do not need to be formally approved.
- Decisions made by a competent person to use alternative solutions should be backed up by appropriate evidence or documentation.

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Issue record

Issue	Date	Comments
3	August 2004	3 rd Issue
4	05/09/2015	Clause 3.2 amended to define latch identities

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 06/12/2015.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 3 (Option Selection) to continue to comply with the issue of any relevant Network Rail standards current when GRIP Stage 3 was completed and not to comply with requirements contained herein, unless stipulated otherwise in the scope of this standard.

Reference documentation

[GK/RT/0031](#) Lineside Signals and Indicators, Issue 4, February 2002

[NR/L2/SIG/11201](#) Signalling Design Handbook

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1 Introduction

When sighting of a signal is difficult, an additional signal may be required, co-acting with the signal that would normally be provided, often placed on the other side of the line to provide adequate sighting.

2 Principles

The requirements and principles for such signals are shown in [GK/RT0031](#) and [NR/L2/SIG/11201](#). Additional guidance on implementing these requirements and principles has been taken from the superseded Standard Signalling Principle [No. 82](#) dated 11/92.

The two signals are referred to as the "primary signal", i.e. the signal that would normally be provided, and the "co-acting signal", i.e. the signal with the suffix CA.

2.1 Aspects to be Displayed

The co-acting signal has to display **all** the main aspects of the primary signal, but position light aspects are only provided if a need is identified. Each aspect displayed by the co-acting signal shall be the same as the primary signal aspect.

2.2 Lamp Proving

Where route or junction indicators are required to be proved alight, then both indicators are to be proved lit before either signal is allowed to clear.

Although the co-acting signal is shown on the Signaller's Panel or display, it is not indicated separately; instead the lamp proving of the co-acting signal is included in the indication for the primary signal.

2.3 Special Proving

[GK/RT0031](#) requires that main routes up to the signal shall require both signals proved lit at the correct aspect. Additionally, [NR/L2/SIG/11201](#) requires that co-acting pairs of signals should mutually prove each other alight and displaying the same aspect - if such proving fails, both signals should return to danger within two seconds.

With SSI controlled co-acting pairs of signals, such a mutual proving failure can only occur through lamp failure or the Signal Module controlling one of the signals entering red-retaining.

Once replaced to danger by such a failure, as suggested by [SSP82](#), the signals shall only be able to re-clear once either the Signaller re-strokes the route (or, if the signals are automatic or semi-automatic, the Signaller pushes the Replacement button) or a train has passed the signals. (In any case, unlike single signals, the method used will not permit the signals to automatically revert to proceed aspects after a controlling Signal Module has exited from the red-retaining state.)

This control will, for four aspect signals, require the second yellow aspect of both the primary and co-acting signals to also be proved alight. If a failure extinguishes one signal's second yellow aspect then the other signal's second yellow aspect is to be extinguished within two seconds, but the signals are to continue to be treated as being at double yellow for aspect sequencing purposes. Although not strictly adhering to the requirements in [NR/L2/SIG/11201](#), it is a logical extension of these,