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Issue:	02
Date:	2 June 2012
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Level 2

Signalling Works Testing Glossary

Endorsement and Authorisation

For endorsement, authorisation and issue record of this document, please refer to NR/L2/SIG/30014

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Issue record

Issue	Date	Comments
1	Dec 09	Initial Issue
02	Jun12	Updated in connection with updates to the other chapters of the handbook.

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors, if applicable, from 1 December 2012.

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

Group Standards

GK/GN0802	Glossary of Signalling Terms
GK/RT0044	Controls for Signalling a Train onto an Occupied Line

Company Standards

NR/L2/CTM/012/055	Competence and Training in Signal Engineering G110 Tester / Lead Tester
NR/L2/SIG/10157	Signal Sighting
NR/L2/SIG/30014	Signalling Works Testing Handbook
NR/L2/SIG/30014/A110	Signalling Works Testing
NR/L2/SIG/30014/C310	Check Marking and Recording on Test Copies
NR/L2/SIG/30014/C410	Error Reporting
NR/L2/SIG/30014/B310	Signalling Works Testing Training and Competence Modules
NR/L2/SIG/30014/B410	Signalling Works Testing Staff Competence Assessment
NR/L2/SIG/30014/B510	Project Specific Appointment of Signalling Testers in Charge
NR/L2/SIG/30014/D115	Defined Checks and Tests

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[NR/L2/SIG/30014/G110](#) Signalling Non-Conceptual Works and Emergency Testing

British and international Standards

[BS 2754: 1976](#) Construction of electrical equipment for protection against electric shock

Miscellaneous

[CDM 2007](#) The Construction (Design & Management) Regulations 2007

[RSPG](#) RSPG - Railway Safety Principles and Guidance Part 2, Signalling Section, published by ORR (previously HSE)

[ROGS 2006](#) The Railways and Other Guided Transport Systems (Safety) Regulations 2006

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1 Purpose

This Level 2 standard supports the Signalling Works Testing Handbook [NR/L2/SIG/30014](#) in providing the glossary used in the instructions and guidance to Signalling Works Testers on the mandatory procedures and process controls so that new signalling installations, and alterations to existing installations, are independently tested in a manner that confirms:

- Compliance with the Project Concept Design and Engineering Details, and fitness for purpose before the signalling system is offered for Entry Into Operational Service.

This glossary also, as far as practicable, specifies consistent terms used in the procedures and process controls specified in the Signalling Works Testing Handbook [NR/L2/SIG/30014](#).

2 Scope

This Level 2 standard applies to all projects to alter Network Rail's signalling infrastructure.

This Signalling Works Testing Glossary is an individually published section of the Signalling Works Testing Handbook [NR/L2/SIG/30014](#).

3 Flowchart

None.

4 Structure

This document consists of one section of abbreviations and definitions.

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5 Abbreviations and Definitions

5.1 Abbreviations

GRIP	Governance of Railway Investment Projects
IRJ	Insulated Rail Joint
IRSE	Institution of Railway Signal Engineers
LED	Light Emitting Diode
TFM	Trackside Functional Module
TIC	Tester In Charge

5.2 Definitions

For general signalling terms refer to GK/GN0802.

TERM	DEFINITION
Acceptance (Product or Engineering Details)	The status given by Network Rail before use is permitted.
Acceptance (Testing Planning Documentation)	Acceptance of Testing Planning documentation checks, so far as is reasonably practicable, that the document accords with the requirements of the appropriate Network Rail specifications.
Accredited Assessor	A1 Qualified Assessors./ IRSE Workplace Assessor / IRSE Competence Assessor / City & Guilds 7331/01 Instructional Techniques
Adequate Sighting	Where the driver's view of a signal is not obstructed, e.g. by trees, bushes, buildings or other structures, and can be seen for the minimum required time on approach (see NR/L2/SIG/10157).
Affected Lever / Locking	Any locking affected by the removal, addition or potential release of any part which could alter the setting or integrity of the locking.
Alterations	Changes to existing installations (including the provision of new signalling) which form part or all of a self contained scheme. A single alteration is by definition one which is designed to be commissioned on a single occasion.
Amendments	Changes to the design details which are required to be carried out as a result of a change in scope of the original specification. These should generally result in an amendment to a scheme plan.
Apparatus	The equipment needed for a particular activity or purpose.
Apparatus Housing	This is provided to house relays and / or other equipment at lineside locations or interlockings, and may consist of an apparatus case, apparatus cupboard, disconnection box, equipment room, REB, signal box, control centre, or other equipment building. See also equipment housing .
Application Criteria	Document(s) specifying the constraints applied to the design, installation and maintenance of a system or an item of equipment in order that it can be guaranteed to deliver the performance attributes stated in the system or equipment specification.

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Apportionment	A process whereby the dependability elements for a system are sub-divided between various items which comprise the system to provide individual targets.
Approval	The status given by the requisite authority when the product or works complies in all respects with the specification and addresses all identified risks.
Approval In Principle (AIP)	The status given to a signalling scheme when the Scheme Plan is approved.
Approved For Construction (AFC)	The status given to engineering details by the Responsible Design Engineer following acceptance by Network Rail.
Aspect Test	See signal aspect test .
Assessment	The undertaking of an investigation in order to arrive at a judgement, based on evidence, of the suitability of a product, competence of a person or acceptability of a risk.
Authorisation	The formal permission to use a product within specified application constraints, or a person in a specified role.
Back (B) Contact	A contact of a relay which is made when the relay is released or de-energised , and broken when it is operated or energised .
Back Feed	An inadvertent feed which has arisen at an intermediate point within a circuit due to the uncontrolled combination of positions of several pieces of control equipment.
Binding Post	A single terminal of a pair of terminals used as an individual termination point, rather than the usual convention of both terminals being used as a linked pair.
Block Tests (Various)	A test to confirm correct operation of specified block equipment.
Bonding Plan	A detailed plan of the track layout showing individual rails and position of IRJ's, together with track circuit feed and relay connections with polarities, yellow bonding, cross bonds, structure bonds, impedance bonds, etc., as applicable. This term may also include track plans and negative Bonding Plans in D.C. electrified areas.
Cable Function Test	A test to confirm that each circuit in a cable functions correctly after work on that cable.
Campaign Changes	Campaign changes are occasions where the same alteration is carried out many times at different locations.
Certificate of Competency	Network Rail approved Signalling Works Testing Certificate of Competency, issued in accordance with NR/L2/SIG/30014/B410 .
Certificate of Completion	Advice that works are ready for testing.
Certificate of Compliance (Plant Or Equipment)	A statement of compliance with type approval .
Certificate of Conformity	A statement of conformity to requirements and standards.
Change-Over Contact	See dependent contact .
Check	Visual, audible and / or physical inspection .

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Check Mark	A tick or other symbol added to Test Copies on satisfactory completion of a test. The standard Check Marks are defined in NR/L2/SIG/30014/C310 .
Circuit Diagrams	See wiring diagrams .
Circuit Function Test	A test of each individual circuit to verify the presence of the specified controls.
Class I Equipment	Electrical equipment that requires the connection of the exposed conductive parts to a protective conductor connected to earth, for personal safety. See BS 2754: 1976 .
Class II Equipment	Electrical equipment with double or reinforced insulation, either to prevent contact with exposed conductive parts, or avoid contact between such parts and live parts. The insulation is not therefore to be pierced by screws. Such equipment is never connected to earth. See BS 2754: 1976 .
Closure List	The Closure List is a declaration of the totality of the Design issued by the Responsible Design Engineer. This is usually the final updated set of index sheets showing the latest version of every sheet of Test Copies issued. This shall be issued to the Tester in Charge using a single issue document by the Responsible Design Engineer.
Commissioning Copies	Temporary maintenance records left on site during the commissioning to enable maintenance and faulting of the infrastructure until the maintenance records are provided. Commissioning Copies may be hand annotated to reflect any commissioning modifications.
Commissioning Identifier	A small self-adhesive coloured, shaped or otherwise unique sticker or label, coloured paint or other unique means of distinctively identifying wiring and / or equipment and / or recoveries associated with a specific commissioning. Commissioning Identifiers are applied by the tester while undertaking preparatory testing in accordance with defined checks NR/L2/SIG/30014/D115 .
Common Cause Failure (CCF)	A failure which is the result of an event(s) which, because of dependencies, causes a coincidence of failure states of components in two or more separate channels of a redundancy system, leading to the defined system failing to perform its intended function.
Competence	The ability to undertake responsibilities and to perform activities to a recognised standard on a regular basis. A combination of practical thinking skills, experience and knowledge, and may include a willingness to undertake work activities in accordance with agreed standards, rules and procedures.
Competent Person	A person who has demonstrated competence in the work to be undertaken.

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Complex Works	Alterations to signalling infrastructure which potentially impact the necessary interlocking and/or involve an element of novelty in either the equipment used or in the manner in which it is configured or incorporated within the remainder of the signalling system and is thus of a technically complex nature. From the testing management perspective such work is characterised by: • The need for special planning and co-ordination attention, • The need to deploy relatively small numbers but highly specialised staff, • Possible involvement with Safety Case, novel Testing Specifications etc. For further details refer to NR/L2/SIG/30014/B310.
Configuration Control	The means by which it is known that a combined system is composed of a collection of consistent and compatible sub-systems at all times and changes to one or more such elements is managed. To achieve this a “baseline” is declared on which the design of the application is based and for which the various products are compatible. The functional and physical characteristics of each element are identified sufficiently to uniquely define its characteristics (design version and modification state of: hardware, software program, parameter configuration and installed data). These are recorded as an initial stage of testing and subsequent changes to these characteristics are controlled so that there is traceability throughout the life-cycle of the design or product. Also known as version control, especially when applied to diagrams and other documents.
Configuration (System)	The structuring and interconnection of the hardware and software to create an integrated system.
Construction	The carrying out of any building, civil engineering or other engineering work, particularly that which falls within the scope of the CDM 2007. Installation is a one of the activities required when constructing a signalling system.
Construction Led Changeover	The construction / installation contractor undertakes the changeover without the independent control of a tester. The opposite is Testing Led changeover.