

NR/L2/SIG/30014/D120/TS11-01

Control Tables and Principles Testing Signalling Works Test Specification

Includes:	New and altered existing signalling systems.
Excludes:	Manufacturer's product testing.
Related Test Specifications:	NR/L2/SIG/30014/D120/TS9-01, TS9-02, TS10-01, TS10-10, TS15-01, TS15-10.
Related Standards:	NR/L2/SIG/30009 Signalling Principles and Application Handbook
Related Design details:	Scheme plan, Signaller's Display System panel / diagram / screen layout, Aspect Sequence Charts, Location area plan, SB / REB / Location drawings.
Recording of Testing:	Completion of tests shall be by application of the check marks on the Test Copies, and by signing the appropriate test certificate \$.
Pre-requisites:	Functional and integration testing of the equipment and systems under test, and set to work of interlocking using simulator, routiner, test panel, switch panel, etc, as applicable#

General

This test specification is formed of the following sections, which correlate to the competency levels identified in NR/L2/SIG/30014/B410 for this type of equipment or testing.

1. Control Tables Testing (Simple)
2. Principles Testing (Simple) / (Complex)

General definitions of terms are given in NR/L2/SIG/30014/E110, however terms specific to this specification are defined in the last section of this specification.

\$ = The use of Test Certificate associated with this Test Specification is not mandated in all cases; it is not appropriate for smaller scale works, however it is anticipated that it is be used to summarise the completion of testing of different elements of the testing of a new interlocking. Where the Test Certificate is not used, the Master Test Certificate shall be endorsed "N/A" in the number of sheets column, and the Principles Tester shall sign for the satisfactory completion of testing directly on the Master Test Certificate.

= Unless Coordinated Testing is being undertaken.

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GENERAL

This Test Specification describes the tests most frequently required where undertaking Control Tables and Principles Testing. It does not describe in totality the tests required for any particular design of interlocking and the Principles Tester shall use knowledge and experience to develop and implement specific additional tests as required by the interlocking being tested, although it is intended that tests described in this Test Specification shall set the standard to be adopted for Control Tables and Principles Testing.

Once it has been defined in outline the testing that is required, reference shall be made to the Principles Testing standard from [NR/L2/SIG/30014/F000](#) appropriate to the type of interlocking under test for further details of the methodology for the tests.

Control Tables and Principles Testing is undertaken using the Principles Tester's knowledge and experience of signalling principles and procedures, statutory requirements and railway operating requirements and practices to verify the controls specified in the Control Tables using the Signaller's Display System and referring to the Signalling Scheme documentation. The Principles Tester shall have knowledge and experience appropriate to the design features of the type of interlocking being tested.

The amount of Control Tables and Principles Testing to be performed following alterations is dependent on the extent and nature of the alterations. Where a significant amount of changes have been made, a full test of the interlocking may be required. Alternatively, where an existing interlocking is being recontrolled, it may only be necessary to prove that any controls applied by the previous Signaller's Display System are still effective, and that the interface between the new system and the existing interlocking operates as required.

Consideration shall to be given to principles testing one unaffected signal section outside the area affected by signalling alterations, especially at the interface between different technologies, eras of signalling or block control systems e.g. mechanical signalling to colour light signalling, relay interlocking to electronic interlocking, Absolute Block to Track Circuit Block, etc.

Special attention shall also be paid to the identification of testing required following changes to electronic interlocking cross boundary controls.

The Tester in Charge, supported by the Principles Tester, shall determine the extent of Principles Testing required for any Project. This shall be sufficient to confirm the integrity and safety of the working system. This shall be a Control Table and / or Principles Test of all the affected functions or elements as a minimum.

Wherever possible, the Principles Tester shall have had an input to the proposals for the application of signalling principles early on in the project. This is especially important where the current standards are not being applied, and instead the standards applicable to the vintage of the affected interlocking are being maintained. An example of how this could be achieved is for a review to be completed by the Project Team, including one or more Module 2CP Principles Tester, the outcome of which should be recorded in a report as part of the design specification, or supplement thereto.