



Implementing Signalling Standards

Applicability

ARTC Network Wide	✓	RIC (NSW CRN)	
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Audience	Main Points	Amendment Record
ARTC staff Alliance Partners & Contractors	The required steps and actions for the distribution and implementation of new and revised Signalling Standards	

1. General

The new and revised Signalling Standards require planning and actions for the successful application to ARTC activities. The two sections below detail the steps that are to be undertaken for each and every one of the new and revised standards to ensure that the standards are correctly applied by all users and stakeholders.

Those responsible for the application of the approved standards shall also plan these activities and monitor that all tasks are completed. The responsible persons shall have checklists or project plans as part of the monitoring. Completion of all the activities shall be certified and recorded. Where multiple standards are to be applied, then consideration shall be given to staged implementation in groups based on the capability of the users to be trained and become familiar with the new standards.

Realistic dates must also be given for work by others. The nominated operative date shall allow for all these tasks to be completed.

2. Introduction

This section explains how the updated ARTC Signalling Standards will be distributed to the relevant users and stakeholders.

- 1) The updated ARTC Signalling Standards will be uploaded on to the ARTC Extranet and Intranet sites. The superseded standards will remain listed (only) on the websites with a reference to the new signalling standard.
- 2) The Recent Change Register will also be updated. The Signalling Statement of Competency requires all staff to check the Recent Changes Register every three months.
- 3) For each updated signalling standard a Commentary shall be provided outlining the changes to the signalling standard as well as highlighting any key issues such as new software or tools that will be required as a result of the signalling standards update. The Commentary shall include photos or examples if applicable for the task. The Commentary is to be independently reviewed prior to issue. This shall ensure that the Commentaries are suitable for the intended audience. Multiple sections in a commentary may be required where it applies to Maintenance, Design and Construction. These Commentaries shall be under configuration management and be available on the Intranet / Extranet.
- 4) The commentaries shall be distributed to all users and stakeholders via email, which will also contain a hyperlink to the updated signalling standards. Email Distribution Lists shall be created and will be maintained. All stakeholders internal and external shall be able to confirm that they have been included in the Distribution Lists. New users or stakeholders shall be able to request to be added to the Distribution Lists. Distribution Lists shall be accessible via the Intranet / Extranet.

Issued by	Date
John Furness, Manager Standards	26 March 2009

- 5) The email will be forwarded to both Internal and External ARTC Stakeholders.
 - a) The emails shall include a receipt acknowledgement. A record shall be kept of the distribution and the acknowledgements.
 - b) For Internal Stakeholders (ARTC staff) the email will be sent to the relevant Line Mangers who will forward the email to a tailored group of Team Leaders and Supervisors.
 - c) For External Stakeholders (Contractors & Consultancies) the email shall be sent to a nominated contact within the company. This person will be responsible for forwarding the information to the relevant staff within the company.
 - d) External Stakeholders shall maintain a distribution list of those staff requiring notification. The organisation shall require receipt acknowledgement from these staff. Where the organisation has sub-contractors, then they shall be included in the distribution lists of the organisation. If the sub-contractor is listed on the ARTC Distribution Lists, then the organisation does not need to include the sub-contractor on its internal distribution list. The organisation shall keep a record of the distribution and receipt acknowledgements. The organisation shall undertake an internal review of the effectiveness of the distribution process and report this to ARTC annually at the start of the calendar year. This report should also address the effectiveness of training in the new standards and the resulting competency of the staff.
 - e) Where there are small external contractors not included on the Distribution Lists, then they shall access the ARTC Extranet Recent Change Register on a 3 monthly basis. They shall use the Extranet based Commentary and record their self-paced training in the Competency Training Record for each person.
- 6) Where changes are made to the Maintenance standards, then the maintenance work order system will be updated to reflect the changes to the maintenance procedures and operative dates.
- 7) Where changes are made to the Signalling Design standards, any new operative dates for new design work, design working processes and completed / in service designs will be identified along with any retrospective issues.
- 8) Where changes are made to the Construction standards any new operative dates for new construction work, working processes and completed / in service jobs will be identified along with any retrospective issues.

3. Implementation

This section explains how staff undertaking work that is affected by the Signalling Standards update will be informed, trained and prepared to undertake the work in accordance with the new standards.

- 1) Team Leaders and Managers shall undertake the following actions prior to the operative date. Generally, these Team Leaders and Managers shall give a priority for these actions over production to ensure that the tasks can be completed. Where the tasks cannot be completed, then the person responsible for the Implementation of the new standard shall be advised.
- 2) Users and Stakeholders shall undertake an OHS Review of the new standard and any tasks resulting from it as part of the Toolbox briefing. Any adverse impacts shall be reported to Line Management and the nominated person responsible for the implementation of the Standard. The stakeholders shall also draft amendments or comments to the Safe Work Method Statements (SWMS) appropriate for the new or revised standards.
- 3) Maintenance. The Team leaders shall inform maintenance staff of the changes to the signalling standards via tool box meetings. The commentary that was forwarded to the Team Leaders via E-mail will be printed and distributed to all staff attending the tool box meeting. Staff will sign to acknowledge that they have received a briefing at the tool box meeting and that they understand the implication the signalling standards updates have on their duties.
- 4) Construction. Construction Managers shall determine which projects are affected by the retrospective requirements and application dates. This information is to be recorded and used as the basis for notifying the ARTC Project Manager of the change in scope and impact on the project. Where applicable, contract or project variations shall be determined and approved.
- 5) Construction. The Team leaders shall inform construction staff of the changes to the signalling standards via tool box meetings. The commentary that was forwarded to the Team Leaders via

E-mail will be printed and distributed to all staff attending the tool box meeting. Staff will sign to acknowledge that they have received a briefing at the tool box meeting and that they understand the implication the signalling standards updates have on their duties.

- 6) Design. Design Managers shall determine which projects are affected by the changes and the nominated implementation dates. This information is to be recorded and used as the basis for notifying the ARTC Project Manager of the change in scope and impact on the project. Where applicable, contract or project variations shall be determined and approved.
- 7) Design. The Team leaders will inform design staff of the changes to the signalling standards via tool box meetings. The commentary that was forwarded to the Team Leaders via E-mail will be printed and distributed to all staff attending the tool box meeting. Staff will sign to acknowledge that they have received a briefing at the tool box meeting and that they understand the implication the signalling standards updates have on their duties.
- 8) The Team Leaders shall provide feedback to the Line Managers demonstrating the completion and implementation of the standards updates. Team Leaders shall keep the records of all staff signing acknowledgement of the new standards. This information shall be available for quality auditing. Team Leaders may email any issues arising from the implementation of the Standards to standards@artc.com.au.
- 9) The Team Leaders shall review the application of the Standard after its first application in either maintenance, construction or design. If there are any issues arising out of the use of the standard which may affect the safety or efficiency of the infrastructure, these shall be reported to standards@artc.com.au.

Where training is required for Signalling Design, Construction and Maintenance staff as a result of changes to the signalling standards, this shall be undertaken before staff carry out new duties. The staff shall also be assessed as competent in the tasks. The competency statement shall be updated to reflect any training undertaken and competencies attained.

- 10) Team Leaders are responsible to undertake compliance audits for the implementation of the new standards at reasonable intervals after the start date. Any issues arising with compliance shall be reported to line management for ARTC and to standards@artc.com.au for external organisations working on ARTC infrastructure.
- 11) The person responsible for Implementation of the Standard shall review that all actions have been satisfactorily completed prior to the operative date and record the results.
- 12) Where the changes are significant or widespread, then consideration shall be given to the holding of an industry briefing or forum.

4. Commentary Template

The Commentaries on the new or revised standards shall include the following information.

- Acknowledgement
- Operable Dates
- Training Process
- Outline of Standard
- Key Changes or Updates in the Standard
- Special Tool Requirements
- Changed Management Systems
- Retrospective Requirements

An example of a Commentary is attached.



AUSTRALIAN RAIL TRACK CORPORATION LTD

Engineering (Signalling) Commentary

ESM-06-01C

Commentary for Standard: ESM-06-01 Facing Point Lock and Detection

Standard Status

Version	1.0
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1 Acknowledgment

ARTC Maintenance & Construction Staff and Construction Contractors employees (or Design Consultancies) are required to sign a briefing form to acknowledge they have read this commentary and received a briefing from their Team Leader / Signals Work Group Leaders and they understand the implications the standard has on their duties.

2 Operable Dates

2.1 Maintenance

The Maintenance Operable Date is 31-March-2009.

2.2 Design Retrospective Requirements

N/A

2.3 Construction Prohibitive Requirements

N/A

3 Training Process

3.1 Maintenance

All ARTC Maintenance Staff are to be briefed by their Team Leaders/ Signals Work Group Leader / Signal Manager about ESM-06-01. The briefing is to be carried out via a tool box meeting or team briefing. This commentary shall be printed and distributed to all staff attending the briefing. Staff must sign to acknowledge that they have read this commentary, received a briefing and that they understand the implications the standard has on their duties. The Team Leaders shall provide feedback to the Managers demonstrating the completion and implementation of the briefing. Team Leaders shall keep the records of all staff signing acknowledgement of the commentary and briefing. This information shall be available for quality auditing.

3.2 Construction

All ARTC construction staff and external Contractors must ensure that all staff who may work on points equipment on ARTC projects are briefed about ESM-06-01. The briefing is to be carried out via a tool box meeting or team briefing. This commentary shall be printed and distributed to all staff attending the briefing. Staff must sign to acknowledge that they have read this commentary, received a briefing and that they understand the implications the standard has on their duties. Construction Contractors shall keep the records of all staff signing acknowledgement of the commentary and briefing. This information shall be available for quality auditing.

3.3 Design

There are no specific training requirements for Design staff. Design staff involved in commissioning points would be briefed as per Construction staff.

4 Outline of Standard

ESM-06-01 is a new common maintenance standard that will be introduced across all ARTC jurisdictions. The standard outlines the process involved in testing and adjusting the facing point locks for mechanical and electrical point machines and specifies the Lock Enter, Lock Not Enter, Detection and Detection Lost values. Previously these values had varied between the different ARTC jurisdictions.

5 Key Changes/Updates to Standard

5.1 New to NSW Jurisdiction

Measurement:	New STD.	NSW	VIC	SA
Lock Enter	2.0 mm	2.0 mm	2.0 mm	2.0 mm
Lock Not Enter	3.2 mm	2 mm	-	-
Detection Made	4.8 mm	3.2 mm	4.0 mm	4.0 mm
Detection Lost	6.0 mm	4.8 mm	6.0 mm	6.0 mm

Table 1 - Facing point lock and detection values

Referring to table 1, the new facing point lock gauge and detection values specified in the ESM-06-01 are currently used on the South Australian and Victorian network. In New South Wales however, the values specified in ESM-06-01 are less restrictive than those currently used on the NSW network.

Section 4 - Gauge for Facing Point Lock and Detection Testing is currently not documented within specifications or standards on the NSW network.

5.2 New to VIC Jurisdiction

The following sections from ESM-06-01 are currently not documented within specifications or standards on the Victorian network, they are however, covered by existing practices:

- 1 - Points Detection Test: Separate Electrical
- 2 - Facing Point Lock Testing – Mechanical
- 3 - Facing Point Lock and Detection Testing – Combined Point Machine
- 4 - Gauge for Facing Point Lock and Detection Testing

5.3 Deleted Sections

N/A

6 Special Tool Requirements

6.1 Hardware

V Samson will be responsible for arranging the initial manufacturing and distribution of the new FPL gauges. The gauges will be issued with a unique serial number and shall be calibration tested every two years.

All ARTC Maintenance staff will be issued with new gauges by their Team Leaders/ Line Manger in exchange for their existing gauges. Staff will be required to sign and acknowledge receipt of the new gauges.

All construction contractors will need to order the new FPL gauges through V Samson. Only gauges issued by ARTC shall be used on the ARTC infrastructure.

The gauges will subsequently be available through ARTC Procurement.

6.2 Software

N/A

7 Changed Management Systems

7.1 Ellipse

The Ellipse system in NSW will be updated to incorporate the new facing point lock gauge and detection values. The corresponding Service Schedules will be updated.

7.2 Reports

N/A

8 Exemptions and Exclusions

The standard does not apply to Cogifer points or to points with Spherolocks.