AS 7716:2017

Australian STANDARD®

Signalling Testing Process

RISSB
RAIL INDUSTRY SAFETY AND STANDARDS BOARD

Train Control Systems Standard

This Australian Standard® AS 7716 Signalling Testing Process was prepared by a Rail Industry Safety and Standards Board (RISSB) Development Group consisting of representatives from the following organisations:

Metro Trains Melbourne	Siemens	PTA of WA
ARTC	Queensland Rail	Brookfield Rail

The Standard was approved by the Development Group and the Train Control Systems Standing Committee in May, 2017. On June 22, 2017 the RISSB Board approved the Standard for release.

This standard was issued for public consultation and was independently validated before being approved.

Development of the Standard was undertaken in accordance with RISSB's accredited process. As part of the approval process, the Standing Committee verified that proper process was followed in developing the Standard.

RISSB wishes to acknowledge the positive contribution of subject matter experts in the development of this Standard. Their efforts ranged from membership of the Development Group through to individuals providing comment on a draft of the Standard during the open review.

I commend this Standard to the Australasian rail industry as it represents industry good practice and has been developed through a rigorous process.

Paul Daly
Chief Executive Officer
Rail Industry Safety and Standards Board

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Approval

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1 Introduction

1.1 Purpose

The main purpose of this Standard is to outline requirements that describe types of testing and methods for testing typical signalling apparatus and systems that form part of the signalling systems, in Australian railway corridors. This standard excludes mechanical signalling testing.

The Standard covers the testing, through production and maintenance phases, including detailed testing processes and performance requirements for individual items of apparatus and systems.

The Standard provides a set of testing requirements to support the completion of the testing required by AS7717 and to manage the hazards associated with the signalling testing process. This standard does not diminish the obligation of the verification, validation engineers and test engineers to decide what should be tested and how it should be tested respectively.

1.2 Scope

This Standard is intended to be applied to railway signalling works and will cover the following:

(a) Design function testing.

(b) Design principles testing.

(c) Use of design simulators for testing.

(d) Verification testing.

(e) Function testing.

(f) Integration (including correspondence) testing.

(g) Trackside apparatus testing.

(h) Cable testing.

(i) Aspect sequence test.

(j) Systems testing.

(k) Operation validation.

(l) Testing and validation after minor works, accidents or incidents.

(m) Competencies of testing personnel.

This Standard is intended to be used by RIMs, operators and suppliers of signalling testing apparatus and systems.

The Standard is intended to be applied to new installations, recertification after incidents and upgrades.

This Standard is intended to be used in conjunction with AS 7717.

This Standard specifies the accepted processes that should be employed when testing of all types of signalling apparatus, that form part of the signalling systems, on the Australian railway network.

This Standard applies to all railways in Australia with the exception of the following infrastructure:

(a) Heritage railways, unless there is an interface with a non-heritage railway.

(b) Tram ways, with the exception of an interface with a railway.