



AUSTRALIAN RAIL TRACK CORPORATION LTD

Signals - Commissioning

**Specification
Requirements**

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Australian Rail Track Corporation

Authorised By:

1. Scope

This document specifies requirements for commissioning applying to:

- (a) new and modified signalling system including flashing point indicator installation.
- (b) deactivate signal, active grade crossing and flashing point indicator installations in the event of perway working on the track etc.

2. Technical Specification

2.1 **Reactivate Signal, Active Grade Crossing and Flashing point Indicator Installations**

These requirements apply to new and modified signalling system including flashing point indicator installation.

2.2.1 **Signal and Active Grade Crossing Installations**

The testing and commissioning of signal and active grade crossing installations shall be carried out in accordance with **ARA Code of Practice of Safety-Related Railway Signalling Systems**.

The Contractor shall submit Test Plans and Commissioning Plan to ARTC prior to testing and commissioning. A copy of Test Certificate and Checklist shall be submitted to ARTC after testing and commissioning.

The installation shall not be considered complete until it is in service without failure for four weeks continuously after commissioning and in service drawings and documentation are updated to as installed.

2.2.2 **Flashing Point Indicator Installations**

The testing and commissioning of point and flashing point indicator (also known as target enhancer) shall be carried out in accordance with Appendices C2 and C6 of ARA Code of Practice of Safety-Related Railway Signalling Systems.

The Contractor shall submit a copy of Test Certificate, Checklist and PLC logging after commissioning.

The installation shall not be considered complete until it is in service without failure for four weeks continuously after commissioning and in service drawings and documentation are updated to as installed.

2.2 **Deactivate Signal, Active Grade Crossing and Flashing point Indicator Installations**

These requirements apply to deactivate signal, active grade crossing and flashing point indicator installations in the event of gang working on the track etc.

2.2.1 Active Grade Crossing Installations

The contractor shall establish the impact of the gang working on the grade crossing approaches and plan the deactivation of active grade crossing protective devices procedures accordingly.

Including in the establishment of procedures, the contractor shall:

- Comply with Clause 1,2 & 7, section 36 of TA03 Network Interface – Rules and Procedures of ARTC Code of Practice Commonwealth Network Operations.
- Establish the responsibility and authority of fitter.
- Establish a Temporary Alteration Form describing the alterations and to be signed by the fitter doing the alterations. In the event of shift change, new shift shall be briefed. The form shall be transferred to the new shift and signed by both shifts.
- Provide signal fitter with fixed number of jumper leads of no less than 2.5 mm² and 2 m in length. The jumper lead shall be in orange colour and labelled to identify the fitter.
- Jumper across the open circuit path of the XR circuit.
Jumper lead across the section of rail to be cut.
- Establish crossing keeper for any movement over the track.

2.2.2 Signal and Flashing Point Indicator Installations

Deactivation of Signal

When it is necessary to disconnect an electrically controlled signal to prevent the operation of the signal and maintain it at stop, GR or HR wire of A-B-C unit may be removed from terminal leaving the adjacent control box but the exposed wire shall be fully taped off to prevent accidental activation.

For Signal Cabin controls, the lever or push button for the signal concerned shall be out of action during the execution of the work, the signal controller shall be requested to put an out of order clip. On the CTC territory, a blocking function will be enforced for the section of track under TC working. The out of order clip and blocking to be removed only after being advised by the contractor that it is safe to do so.

Signals shall not be operated by hand from the stop position. Should it be necessary to momentarily move the arm of a signal mechanism for maintenance, the maintainer shall ensure there are no trains approaching that could accept the signal arm movement as authority to proceed.

Deactivation of Point

When it is necessary to electrically disconnect power worked points to prevent their operation, the motor control circuit fuses shall be removed.

The procedures described above render the points inoperative but still safely connected to the interlocking with the points locked in position and the signals detecting and interlocked with the points.

When it is intended that the points are to be further worked on, manually operated or disconnected from the interlocking, then, in addition to removal of power fuse, the signals protecting the points shall also be disconnected and maintained at stop (or caution in the case of Distant signal). Where crank handle is provided for the manual operation of power worked points during failure conditions, the disconnection of the points and the protecting signals is accomplished through use of the WZR relay.

Points permanently disconnected and out of service shall be clamped and spiked or locked in the case of concrete bearer.