AUSTRALIAN RAIL TRACK CORPORATION LTD

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Category
Signalling

Title
Bi-Directional Signalling

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Document Control

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About This Standard

This Principle addresses the requirements for the provision and operation of bi-directional signalling over double running line sections.

Document History

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List of Amendments –

ISSUE	DATE	CLAUSE	DESCRIPTION
1.1	01/09/2004		▪ Reformatting to ARTC Standard
1.2	14/03/2005	Disclaimer	▪ Minor editorial change ▪ Footer reformatted

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8 Bi-Directional Signalling

8.1 Principle No. 8.1 - Bi Directional Signalling

8.1.1 Introduction

This Principle addresses the requirements for the provision and operation of bi-directional signalling over double running line sections.

8.1.2 Signalling Arrangements

Generally the number of signals provided for the reverse direction of running is considerably less than for the normal direction of running.

Care shall be exercised in ensuring that the signals provided for the reverse direction of running are situated so as not to be confused with the signals provided for the normal direction of running, on the adjacent track. Where provided, reverse direction running signals are to be paired with the normal direction running signals on the adjacent track.

8.1.3 Signalling Controls

If a train is signalled into a bi-directional section from one end then the signal controlling the entrance into the section shall lock the signal controlling the entrance into the section at the opposite end and prove that all intermediate automatic signals controlling movements in the opposite direction to which the train is running are at stop.

In addition the signal controlling the entrance into the section for the reverse direction of running shall prove that the maintenance releases are normal.

If a train is in the bi-directional section then its direction of travel shall be detected by the signalling system and constantly monitored at intermediate signals in order to allow a second train running in the same direction as the first train to enter the bi-directional section as soon as the first train has cleared the overlap beyond the first automatic signal in the section.

The signal at the opposite end of the bi-directional section controlling the entrance to the bidirectional section shall not be able to be cleared until all trains in the opposing direction have cleared the bi-directional section. (Opposing shunt signal moves may be permissible up to a train proved at stop at the home signal at the exit to the bidirectional section, where required)

8.1.4 Maintenance Releases

Maintenance releasing switches may be provided where necessary for maintenance staff protection and shall enable maintenance staff to block the reverse direction movements.

The routes controlling the reverse direction movements shall be proved normal and the section proved clear of all trains travelling in the reverse direction before the maintenance release can be operated and the reverse direction block enabled.

Three separate maintenance releasing switches, X, Y & Z may be provided to facilitate up to three independent maintenance crews. The removal of the key from any one of the releasing switches shall disable the reverse direction working on both lines in the double line section.

The location of the releasing switches shall be subject to their on-track accessibility with respect to the maintenance crew requirements.

8.1.5 Half – Pilot Staff Inscription

Details are required to be inscribed on half pilot staffs in bi-directional signaled areas similar to the following two examples:

CORRIMAL WG501D DOWN MAIN (to WOLLONGONG)	WOLLONGONG 466D DOWN MAIN (to CORRIMAL)

Name of the interlocking and Home/Starting or Starting Signal where half pilot staff located.

Bi-directional line concerned

Name of the interlocking at the opposite end of the bi-directional section

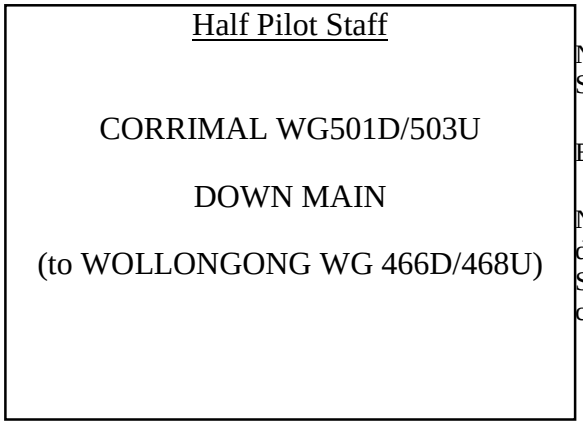
CORRIMAL WG503U UP MAIN (to WOLLONGONG)	WOLLONGONG 468U UP MAIN (to CORRIMAL)

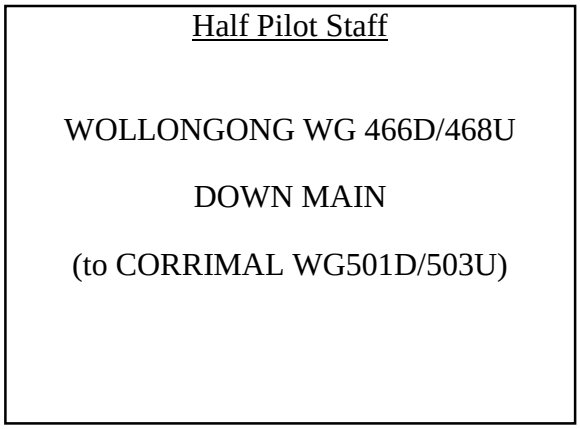
Half pilot staffs in bi-directional signalled areas are to be further individually identified by being coloured/banded yellow for the normal down direction line and blue for the normal up direction line.

The signal number is the normal Home/Starting Signal for the line concerned and also applies to other Home/Starting or Starting Signal(s) leading onto the bi-directional line concerned.

8.1.6 Pilot Staff Lock Designation Plate

Designation plates attached to Pilot Staff Locks are to be inscribed with details similar to the following two examples:





Pilot Staff Locks in bi-directional signalled areas are to be further individually identified by being coloured yellow for the normal down direction line and blue for the normal up direction line.