

train working

# NTR 434 Automatic train protection (ATP) onboard equipment

## Purpose

To prescribe the rules for using Automatic Train Protection (ATP) onboard equipment.

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## Principle

This Network Rule applies only to:

- trains approved to operate in the Network with operating ATP equipment
- Drivers qualified to operate the ATP equipment.

ATP onboard equipment fitted to the leading cab of a train must be operating in accordance with the *Train Operating Conditions (TOC) manual* before the train may enter the Sydney Trains Network.

Drivers must report faults in ATP onboard equipment to the Signaller.

### Warning

The maximum speeds allowed by ATP do not imply that it is safe to travel at those speeds.

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## Isolating ATP equipment

The ATP equipment in an active Drivers cab may be isolated only if a fault cannot be remedied by the Train Crew, and the fault prevents travel.

If the ATP equipment in an active Drivers cab is isolated, the Driver must tell the Signaller.

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## ATP levels

### Automatic level transitions

ATP level transitions are announced by a balise group before each level boundary.

On running lines, level transitions should automatically occur at the boundary between the areas with different ATP levels.

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## Missed level transitions

If a level transition does not occur at a signposted location, the Driver must:

- treat the inconsistency as a Condition Affecting the Network (CAN)
- stop and manually change the ATP level in the active cab.

### Note

If a train crosses a level transition border in Shunting mode, the level transition will not occur until Shunting mode is exited.

## Manually selecting an ATP level

When required by the system, Drivers must select the correct ATP level for their current location.

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## Activating modes

### Shunting (SH) mode

Shunting (SH) mode must be activated by the Driver:

- to make authorised propelling movements, or
- to divide a train or amalgamate trains, or
- to shunt within shunting yards and sidings.

Shunting (SH) mode must be exited before a non-propelling through movement is commenced.

### Non leading (NL) mode

Non-Leading (NL) mode may be activated in a cab only with the authority of the Network Controller.

Non-Leading (NL) mode must be exited after the movements for which it has been authorised have been completed.

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## Wrong running-direction movements

For wrong running-direction movements on unidirectional lines in ATP level 1 areas, the ATP system will enforce:

- a 40km/h maximum speed
  - 15km/h maximum speed on the approach to active control level crossings.
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## Using the override function

Drivers may activate the ATP override function only if they receive an ATP message requiring them to do so.

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## Setting train data

Drivers must accurately confirm or enter the ATP level, the train length and airbrake cutout information into the onboard system:

- when required by the system
  - if the data change.
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## Interventions

Drivers must tell the Signaller if there is an ATP emergency brake intervention.

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## Trackside faults

Drivers must treat a suspected fault in trackside ATP equipment as a Condition Affecting the Network (CAN).

### Note

ATP onboard equipment can display messages that relate to trackside faults.

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If a CAN about trackside ATP equipment is reported, the Signaller must tell the Driver of the next ATP-fitted train to report if an error message is received at the affected location.

If the Driver of the following ATP-fitted train also reports the equipment as faulty, the Signaller must:

- arrange for a Signals Maintenance Representative to attend
- give a CAN warning to Drivers of ATP-fitted trains.

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## Precautions for people under trains

Train Crews must disconnect power to a vehicle's ATP antenna:

- before any person goes beneath the vehicle, or
- if anyone is struck by the train.

The ATP antennas must not be re-powered until people are no longer beneath the vehicle.

**Warning**

ATP antennas generate electromagnetic radiation that can be harmful to people underneath them.

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## ATP messages

Messages shown on the Driver machine interface (DMI) must be read and understood by Drivers before they act upon them.

If a message begins with 'Report Balise fault', Drivers must tell the Signaller.

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## Related Documents

*Nil*