CONTENTS

1. Purpose ................................................................................................................. 3
2. General .................................................................................................................. 3
3. Indications of Fixed Signals ................................................................................... 4
  3.1. Stop .............................................................................................................. 4
  3.2. Proceed ........................................................................................................ 4
4. Types of Fixed Signals .......................................................................................... 5
  4.1. Running Signals ........................................................................................... 5
  4.2. Controlled Absolute Signals ......................................................................... 5
    4.2.1. Departure Signals ........................................................................... 5
  4.3. Absolute Signals .......................................................................................... 5
    4.3.1. Intermediate Signals ....................................................................... 5
    4.3.2. Approach Signals ........................................................................... 6
  4.4. Shunting Signals .......................................................................................... 6
5. Changing Signal Indications .................................................................................. 7
  5.1. Responding to a Condition Affecting the Network ........................................ 7
6. Irregular Signal Indications .................................................................................... 7
7. Out of Service or Non-Commissioned Signals ...................................................... 8
8. Testing Signals ...................................................................................................... 8
9. Signal Indications and Their Meanings ................................................................. 9
10. Three Colour Light Signalling Operation ............................................................. 14
11. Repeater Signals ................................................................................................ 15
12. Reference ............................................................................................................ 15
13. Effective Date ...................................................................................................... 15
1. PURPOSE

The purpose of this rule is to identify Fixed Signals and the process of Authorising and regulating the movement of Rail Traffic in the Public Transport Authority (PTA) Network.

2. GENERAL

Fixed Signals are used to:

- separate and regulate Rail Traffic;
- indicate to Rail Traffic Crew and other Competent Workers the status of the line ahead; and
- show which Route is set.

Rail Traffic Crew and Competent Workers directing Shunting and Propelling movements must obey the indications and instructions displayed by Signals.

Fixed Signals must be located:

- where they enable Rail Traffic Crew to see and respond in sufficient time to safely control Rail Traffic movements;
- where they provide a sufficient safe overlap; and
- as far as practicable:
  - on the left hand side Adjacent to; or
  - directly over the Track to which they apply.

NOTE

Only in circumstances where it is not safe or not practical to place Signals on the left hand side or above the Track to which they apply, may be placed on the right hand side.

Fixed Signal indications are displayed by coloured lights.

Fixed Signals may be fitted with marker plates for identification.
3. INDICATIONS OF FIXED SIGNALS

The indications of Fixed Signals are:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clear</strong></td>
<td>indicated by a green light</td>
</tr>
<tr>
<td><strong>Caution</strong></td>
<td>indicated by a yellow light</td>
</tr>
<tr>
<td><strong>Stop</strong></td>
<td>indicated by a red light</td>
</tr>
</tbody>
</table>

Caution and Clear are Signal Aspects that give Rail Traffic Crew the Authority to Proceed.

3.1. STOP

Rail Traffic must Stop before a Signal displaying a Stop Aspect.

Signals may be passed at Stop only in accordance with Rule 6013 Passing Fixed Signals at Stop.

3.2. PROCEED

A Proceed Aspect shows that:

- interlocked Points protected by the Signal are set in the correct position for the movement;
- no conflicting Route has been set; and
- where interlocked, Active Control Level Crossing equipment is operational.

A Proceed Aspect on a running Signal shows that the Block ahead is unoccupied.

A Proceed Aspect on a Shunting Signal does not indicate that the Block ahead is unoccupied.

NOTE

A Proceed Aspect on a Signal proves Route Integrity.
4. TYPES OF FIXED SIGNALS

*Fixed Signals* are of two types:

- Running Signal; and
- Shunting Signal.

4.1. RUNNING SIGNALS

There are two categories of *Running Signals*:

- Controlled Absolute Signal; and
- Absolute Signal.

4.2. CONTROLLED ABSOLUTE SIGNALS

**WARNING**

*Absolute Signals* must not be passed at Stop without the *Authority* of the *Train Controller*.

A Controlled Absolute Signal is:

- Controlled by the *Train Controller* and the passage of *Rail Traffic*; and
- identified by a white reflectorised marker plate located on the centre of the mast, or if there is more than one *Signal* on the same mast, showing a *Signal number* as shown on the diagram of *Signalling*.

The normal indication of a *Controlled Absolute Signal* is Stop. A *Controlled Absolute Signal* must be maintained at Stop until it is necessary to place it to *Proceed*.

Some *Controlled Absolute Signals* may be fixed at Red.

4.2.1. Departure signals

*Departure Signals* are placed at the entrance to all *Single Line Sections* in *Automatic Signalling Sections* to facilitate *Single Line Working* and to prevent *Rail Traffic* from meeting head-on in a *Section*.

*Departure Signals* at each end of a single line *Automatic Signalling Section* work in conjunction with each other to ensure only one *Departure Signal* can display a *Proceed Aspect* at the same time. The opposing *Departure Signal* will not show a *Proceed Aspect* until *Rail Traffic* has passed out of the *Section*.

4.3. ABSOLUTE SIGNALS

4.3.1. Intermediate signals

*Intermediate Signals* are *Absolute Signals* used to divide the *Section* between *Controlled Locations* to facilitate the movement of following *Rail Traffic* and are:

- controlled only by the passage of *Rail Traffic*; and
• identified by a white reflectorised marker plate located diagonally below and to the right of the Signal head and displays the signal number based on the kilometreage, preceded by the letter "D" for Down Signal and "U" for Up Signal.

The normal indication of an Intermediate Signal is Proceed (Caution or Clear).

4.3.2. Approach Signals

Approach Signals are Absolute Signals that do not divide the Section.

These Signals are identified by a white reflectorised triangle marker plate located diagonally below and to the right of the Signal head, and displays the Signal number based on the kilometreage, preceded by the letter "D" for the Down Signal and "U" for the Up Signal.

The purpose of approach Signals is to provide an indication to Rail Traffic Crew that they are approaching a Controlled Location.

The normal indication of an Approach Signal is Proceed (Caution).

NOTE
Not all Controlled Locations have approach Signals.

4.4. SHUNTING SIGNALS

WARNING
A Shunting Signal must not be used as the Authority for Rail Traffic to pass through a Section.

A Shunting Signal Authorise a movement at Restricted Speed past that Signal.

WARNING
Shunting Signals can be cleared if the line beyond the Signal is occupied. Rail Traffic Crew must proceed as if the line is occupied.

A Proceed Aspect by a Shunting Signal is an Authority to Proceed up to and not beyond the first of the following limits reached:

• as far as the line ahead is Clear;
• limit of the Shunt sign;
• a set of non-interlocked Points;
• a Signal for the direction of Travel; or
• a shorter distance defined by the Train Controller.
5. **Changing Signal Indications**

Under normal conditions, if **Rail Traffic** is standing at or approaching a **Signal**, the **Train Controller** must not change the indication of that **Signal** to a more restrictive **Aspect** unless the **Rail Traffic Crew**:

- has been told; and
- is able to respond to the altered indication.

Additionally, the **Train Controller** must not activate any **Points** or **Signals**, or engage in any activity that is likely to jeopardise the safety of the **Rail Traffic**.

5.1. **Responding to a Condition Affecting the Network**

If there is a **Condition Affecting the Network (CAN)** and **Rail Traffic** is standing at or **Closely Approaching** a **Signal**, the **Train Controller** may change the indication of the **Signal** to a more restrictive **Aspect**.

The **Train Controller** must tell the **Rail Traffic Crew** about the altered **Signal Aspect**:

- prior to altering the **Signal**; or
- as soon as possible after altering the **Signal**.

6. **Irregular Signal Indications**

A **Fixed Signal** indication must be treated as **Stop** if:

- it is an **Illegal Signal Indication**;
- there is no indication;
- there is no indication other than the junction or **Route Indicator**; or
- it is not understood.

**Competent Workers** must report irregular **Signal** indications to the **Train Controller**.

The **Train Controller** must tell a **Signals Maintenance Representative** about irregular **Signal** indications.

The **Train Controller** must set affected **Controlled Signals** to **Stop** with **Blocking Facilities** applied, and:

- check that these **Signals** display a **Stop** indication;
- if the **Signals** do not display a **Stop** indication, issue **Rail Traffic** with a **Restraint Authority**; and
- **Authorise Signals** to be passed at **Stop** only in accordance with **Rule 6013 Passing Fixed Signals at Stop**.

If **Absolute Signals** maintain a **Stop** indication these **Signals** may be passed at **Stop** only in accordance with **Rule 6013 Passing Fixed Signals at Stop**.
If affected Absolute Signals maintain a Clear indication, the Train Controller must implement Rule 5023 Manual Block Working.

Affected Signals must not be used to provide Proceed indications before they have been Certified back into use.

7. OUT OF SERVICE OR NON-COMMISSIONED SIGNALS

Signals may be put in place prior to commissioning or may remain in place after being taken out of service.

These are identified by:

- an obscuring cover over the Signal;
- a white cross affixed to the front of the Signal; or
- where next to a functioning Signal, having the Signal head covered or turned away from the line.

![Examples of out of service or non-commissioned Signals](image)

FIGURE: 7.1 Examples of out of service or non-commissioned Signals

8. TESTING SIGNALS

A Signal must not be tested if:

- Rail Traffic is Closely Approaching; and
- the testing could change the Signal indication.

If Rail Traffic is standing at a Signal at Stop, the Train Controller must:
• before testing the Signal, tell the Rail Traffic Crew that Signal testing is about to commence and that their Rail Traffic movement must not move unless instructed to do so; and
• after testing the Signal, tell the Rail Traffic Crew that the testing has been completed and, if required, give a Proceed Authority.

The Train Controller and Competent Worker must make a Permanent Record of the Signal test.

9. SIGNAL INDICATIONS AND THEIR MEANINGS

<table>
<thead>
<tr>
<th>Signal</th>
<th>Controlled</th>
<th>Absolute</th>
<th>Meaning</th>
<th>Required Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute</td>
<td>Intermediate</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
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</tbody>
</table>

The Block ahead of the Signal is occupied or for any reason that the Rail Traffic has to be stopped.

Rail Traffic must be stopped before reaching the Signal.

The Block ahead of the Signal is Clear but the next Signal is at Stop.

Rail Traffic to proceed at Normal Speed for the Section and be prepared to stop at the next Signal.
<table>
<thead>
<tr>
<th>Signal</th>
<th>Controlled Absolute</th>
<th>Absolute Intermediate</th>
<th>Meaning</th>
<th>Required Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Block ahead of</td>
<td>Absolute</td>
<td>Intermediate</td>
<td>The Block ahead of the signal is Clear and the next Signal is either at</td>
<td>Proceed at Normal Speed for the Section.</td>
</tr>
<tr>
<td>the signal is Clear</td>
<td>Intermediate</td>
<td></td>
<td>Caution or Clear.</td>
<td></td>
</tr>
<tr>
<td>and the next Signal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>is either at Caution</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or Clear.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceed at Normal Speed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signal</td>
<td>Meaning</td>
<td>Required Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absolute Approach</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Controlled Absolute</td>
<td>The <em>Controlled Absolute Signal</em> ahead is at Stop.</td>
<td>Rail Traffic to <em>Proceed</em> and be prepared to Stop at the next <em>Signal</em>.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signal ahead is at</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caution</td>
<td>The <em>Controlled Absolute Signal</em> ahead is at Caution or Clear.</td>
<td><em>Proceed at Normal Speed for the Section</em>.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signal</td>
<td>Type of Signal</td>
<td>Meaning</td>
<td>Action Required</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
<td>---------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Signal" /></td>
<td>Controlled Absolute Signal with a Single Aspect Shunt Signal on the same mast.</td>
<td>The Block ahead of the Signal is occupied or for any reason the Rail Traffic has to be stopped.</td>
<td>Rail Traffic must be stopped before reaching the Signal.</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Signal" /></td>
<td>Controlled Absolute Signal with a single Aspect Shunt Signal on the same mast.</td>
<td>The Route is set and the Block ahead of the Signal may be occupied and movements are to be at Restricted Speed.</td>
<td>Rail Traffic to proceed with Caution and be prepared to Stop short of any obstruction.</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE**
At some Locations, Running Signals will be at a reduced height due to there being insufficient room to fit a Signal at its normal height.
## Ground Shunt Signals

<table>
<thead>
<tr>
<th>Two Aspect Ground Shunt Signal</th>
<th>Meaning</th>
<th>Action Required</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Led" /></td>
<td>The <em>Route</em> for the <em>Signal</em> is not set.</td>
<td>Rail Traffic must be stopped before reaching the <em>Signal</em>.</td>
</tr>
<tr>
<td><img src="image" alt="Led" /></td>
<td>The <em>Points</em> are set correctly for the <em>Route</em>.</td>
<td>Rail Traffic is to proceed at <em>Restricted Speed</em> but be prepared to Stop short of any obstruction.</td>
</tr>
</tbody>
</table>
10. THREE COLOUR LIGHT SIGNALLING OPERATION

This diagram represents a series of Blocks and how the Signals operate as Trains move along the Track.

**Signal A** will remain at “Stop” until Train No. 2 has passed Clear of the overlap of Signal B.

**Signal B** displays a “Stop” aspect as Train No. 2 is passing the Signal.

**Signal C** displays a “Clear” (green) aspect indicating that the next Signal is displaying a “Proceed” Aspect.

**Signal D** displays a “Caution” (yellow) Aspect indicating that the next Signal, Signal E is at Stop.

**Signal E** will be held at “Stop” by Train No. 1 until has passed Clear of the overlap Track of Signal F.

**Signal F** displays a “Clear” (green) aspect as there is no Train in the Block in advance of the Signal.
11. REPEATER SIGNALS

Repeater Signals are provided to give Rail Traffic Crew advanced information of the indication of the main Fixed Signal.

Repeater Signals are used where the Fixed Signal that is to be repeated is located in a position where Rail Traffic Crew cannot respond in sufficient time to control Rail Traffic.

12. REFERENCE

Rule 5023 Manual Block Working
Rule 6013 Passing Fixed Signals at Stop

13. EFFECTIVE DATE

19 February 2016