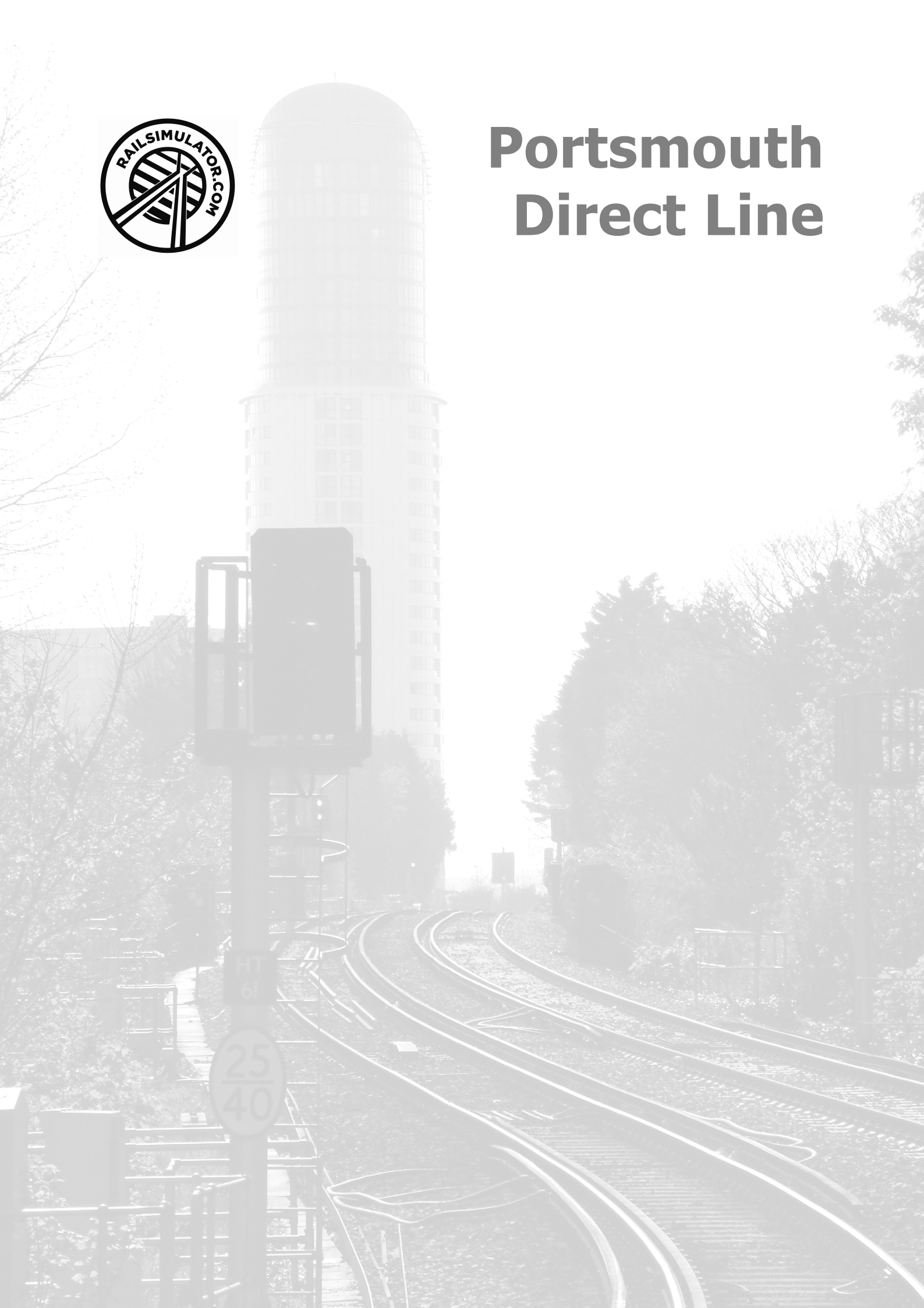




# Portsmouth Direct Line



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## 1 Route Information

### 1.1 History

By the middle of the 19<sup>th</sup> Century, the explosion of the railway evolution had spread throughout southern England. Two companies raced to serve the southern counties – The London & South West Railway; and the London, Brighton & South Coast Railway.

The LSWR, already having established a direct route to Southampton, was keen to provide similar services to nearby Portsmouth. However, this for many years took the form of an indirect route via Gosport and a ferry across the waterway to Portsea Island. Not helped by the fact the line ended more than ½ a mile from the Ferry terminal.

The LBSCR on the other hand, were making speedy progress of extending their sphere of operation all along the south coast, reaching Portsea and providing the first direct line to Portsmouth in 1847. The completion of which required penetrating the military defenses on the northern shore of Portsea Island. It is this later development which prevented the LSWR establishing its own link to the coastal town, instead agreeing to joint ownership of the line south of Cosham, which the LSWR had extended from Southampton and Eastleigh by 1848.

Yet, while in the space of 1 year, Portsmouth now had two companies providing a service to the coastal town, the lack of a direct route did not prove popular with the travelling public. The best chance of which had begun a few years earlier with the extension of a branch line from Woking to Guildford, and later Godalming by 1849.

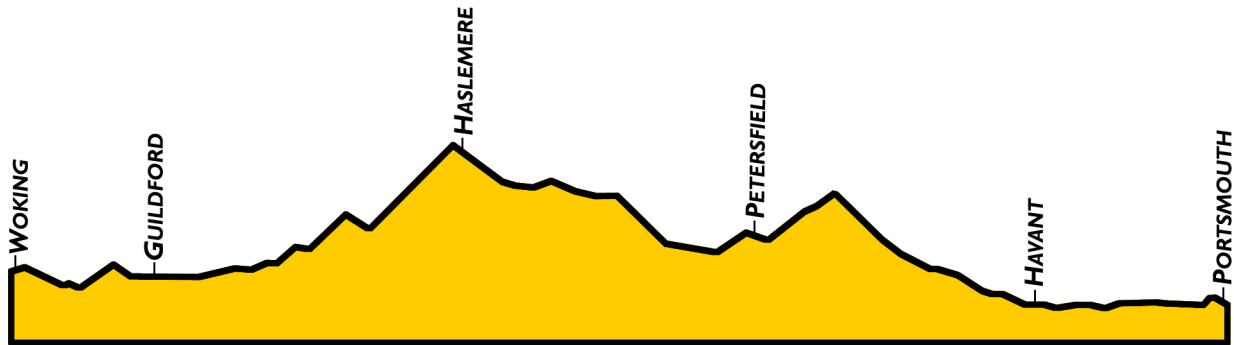
While this obvious choice was available, it wasn't until an further additional company obtained the required parliamentary consent, and began construction of the Godalming to Havant railway, did either of the two former operators take any notice.

In 1859, the direct route from Woking to Havant was finally opened, much to the jubilation of passengers, who no longer required the complications of travelling via Brighton or Southampton. On opening, the LSWR, being the obvious intended user, was forced to partially lease the line to prevent the appearance of a 3<sup>rd</sup> operator from entering the region (The South Eastern Railway, which had already established a link from Redhill to Guildford in 1849).

The line originally terminated at the foot of Commercial Road, just outside the established defenses, and it was to be another 30 years before permission was granted for the 1 mile extension to the harbor itself. The link being built on a elegant viaduct that curves to the south of the now Portsmouth & Southsea station.

## 1.2 Geography

In order to reach the coast from Woking, the Portsmouth Direct route must pass over both the North and South Downs. The crossing of the North Downs was made at its narrowest point via the Wey Gap south of Guildford. Beyond here, the line climbs for over 20 miles as it weaves its way to the South Downs. Just south of Petersfield, the summit is reached with a small tunnel at Buriton, after which a long and shallow decent is made all the way to the coast.



## 1.3 Rolling Stock

The line has seen many distinct periods of rolling stock operate to Portsmouth. A full line up of steam haulage was provided right through to the end of Steam in 1967, despite the electrification of the route 30 years prior.

With the introduction of electrified services just before World War II, massive improvements were seen, with passenger volumes almost doubling in less than two years. This introduction bought about the era of 4-car multiple units, which could operate either as single 'sets' or be coupled together to form larger trains of multiple sets.

During the latter half of the 20<sup>th</sup> Century, a plethora of 4-car units were developed, each with their own identifying purpose prefixed with the number 4 (designating the number of vehicles): BEP, BIG, BUF, CAP, CEP, CIG, COP, JOP, LAV, PEP, PUL, REP, SUB, TEP, VEC, VEG, VEP, VIP and VOP.

Finally, with the ever increasing presence of Health and Safety, the aging Mk1 multiple units were no longer able to meet crashworthiness and disabled access requirements, and so replacement was inevitable. At the turn of the century, the present operator South West Trains, placed an order for 785 vehicles to be formed into 110 4-car units. This was followed by a further order for 17 more units, after a failed attempt to negotiate the introduction of 5-car units on the 3<sup>rd</sup> rail network.

## 2 Class 450 'Desiro' Electric Multiple Unit



### 2.1 Class 450

The Class 450 third-rail DC electric multiple units began service during 2003. They are a part of the Siemens Desiro modular train family and are more commonly known as the '4DES'. In standing with requirements of all new rolling stock for the South East region, provision has been made for future conversion to 25 kV AC overhead supply or dual voltage although, at present, none of the Class 450 fleet have been fitted with a pantograph. The trains are used for outer suburban services, and feature the South West Trains blue livery to indicate this (White denoting long distance / Intercity, and Red indicating inner suburban). The Class 450 trains feature standard seating in both 2+2 and 3+2 configuration, as well as first class in 2+2 accommodation.

### 2.2 Design & Specification

<b>TOPS Number</b>	<b>Class 450</b>
<b>Formation</b>	4-car: DMSO+TCO+TSO+DMSO
<b>Unit Weight</b>	172.2 tonnes (35-48 tonnes per vehicle)
<b>Vehicle Length</b>	66ft 9in (20.4m)
<b>Vehicle Width</b>	9ft 2in (2.7m)
<b>Body Construction</b>	Welded Aluminium
<b>Power Collection</b>	750v DC 3rd Rail
<b>Vehicle Power</b>	2,682HP (2,000kW)
<b>Design Speed</b>	100 MPH (160km/h)
<b>Coupling Type</b>	Dellner 12
<b>Brake Types</b>	Air & Regenerative
<b>Seating</b>	246 Standard, 24 First

## 3 Scenarios

Please take time to read each Scenario Briefing as these explain your scheduled tasks and make completion of the scenarios much easier. It is important to follow the timetabled departure times and you can also print the Route Map at the end of this document for reference.

### 3.1 Introduction to Portsmouth Direct Line

It is your first day on the Portsmouth Direct Line and you are being shadowed by a veteran driver. As you drive the line, performing passenger stops at the major stations just before rush hour, he will offer driving tips and information about the surrounding towns and areas of interest.

- **Date** **8th September 2010**
- **Time** **15:23**
- **Rating** **Tutorial**
- **Duration** **60 Minutes**
- **Weather** **Clear Skies**
- **Start Location** **Woking Platform 4**
- **Train** **Class 450 12car Electric Multiple Unit**

#### Scenario Timetable

Location	Arrive	Depart
Woking Platform 4	-	15:23:00
Guildford Platform 4	15:32:00	15:33:00
Haslemere Platform 1	16:50:00	16:51:00
Petersfield Platform 2	16:05:00	16:06:00
Havant Platform 2	16:21:00	16:22:00
Fratton Platform 3	16:30:00	16:31:00
Portsmouth & Southsea Platform 2	16:34:00	16:35:00
Portsmouth Harbour Platform 4	16:38:00	-

### 3.2 End of Days

**Its the end of a good days work. Take a unit on its final leg to Portsmouth Harbour, before working back to Fratton Depot.**

Take this unit on to Portsmouth Harbour calling at Fratton and Southsea. Once everyone is clear, move the unit back to Fratton Depot, not forgetting to go via the train wash on your way. Staff will be waiting to greet you at the depot.

- **Date**                      **23rd September 2011**
- **Time**                      **23:19**
- **Rating**                    **Easy**
- **Duration**                **25 Minutes**
- **Weather**                **Night Hazy**
- **Start Location**        **Havant**
- **Train**                    **Class 450 8car Electric Multiple Unit**

#### Scenario Timetable

Location	Arrive	Depart
Havant Platform 2	-	23:18:00
Fratton Platform 3	23:27:25	23:28:00
Portsmouth & Southsea 2	23:31:25	23:32:00
Portsmouth Harbour 5	23:36:00	23:37:00
Fratton Back Road	23:43:00	-
Fratton Train Wash	23:45:00	-
Fratton Depot Road 5	23:47:00	-

### 3.3 Chop and Change

**Not all services are straight forward end to end runs. Sometime units must be deployed around the network for strategic purposes.**

Shunt into Woking Platform 1 before commencing a south bound service to Havant. At Guildford, detach the rear portion of the train. At Havant, attach to the waiting train and then head onto Fratton. Once loading is complete at Fratton, shunt the entire train into the yard.

- **Date**                      **16th April 2011**
- **Time**                      **13:25**
- **Rating**                    **Hard**
- **Duration**                **75 Minutes**
- **Weather**                **Overcast**
- **Start Location**        **Woking Up Yard**
- **Train**                    **Class 450 8car Electric Multiple Unit**

#### Scenario Timetable

Location	Arrive	Depart
Woking Up yard	-	13:25:00
Woking Platform 1	13:27:00	13:27:35
Guildford Platform 2	13:40:25	13:41:00
Haslemere Platform 1	13:58:00	13:58:30
Petersfield Platform 1	14:11:25	14:12:00
Havant Platform 1	14:26:00	14:27:00
Fratton Platform 1	14:32:45	14:33:30
Fratton Depot Road 5	14:40:00	-



### 3.4 Halfway Haslemere

**Haslemere is a key turn back point along the line. Run a return service from Guildford to Haslemere, observing the tight timings of surrounding services.**

Waste not time loading passengers at Guildford, before departing for Haslemere under the wintry conditions. Make your way south, calling where required, before pulling to Platform 2 at Haslemere. Once the faster north bound service has passed on the adjacent platform, follow it back to Guildford.

- **Date**                      **29th March 2011**
- **Time**                      **09:24**
- **Rating**                    **Medium**
- **Duration**                **40 Minutes**
- **Weather**                **Winter Fog**
- **Start Location**        **Guildford**
- **Train**                    **Class 450 8car Electric Multiple Unit**

#### Scenario Timetable

Location	Arrive	Depart
Guildford Platform 3	-	09:25:00
Godalming Platform 2	09:31:00	09:31:35
Milford Platform 2	09:34:25	09:35:00
Haslemere Platform 2	09:41:25	09:43:00
Witley Platform 1	09:50:25	09:56:00
Farncombe Platform 1	09:57:25	09:58:00
Guildford Platform 3	10:04:00	-

### 3.5 Hightail to the Harbour

**Join an 8-car Class 450 at Woking, on its way to Portsmouth Harbour. This is a semi-fast service so you'll only be calling at principle stations along the route.**

Once cleared to enter Woking, make your first stop on route to Portsmouth. After Woking, call at Guildford, Haslemere, Petersfield, Havant, Fratton, Portsmouth & Southsea and finally Portsmouth Harbour.

- **Date**                      **12th May 2011**
- **Time**                        **11:23**
- **Rating**                     **Easy**
- **Duration**                **70 Minutes**
- **Weather**                 **Overcast Rain**
- **Start Location**        **Woking Station**
- **Train**                     **Class 450 8car Electric Multiple Unit**

#### Scenario Timetable

Location	Arrive	Depart
Woking Platform 5	11:24:15	11:25:00
Guildford Platform 4	11:32:25	11:33:00
Haslemere Platform 1	11:51:25	11:52:00
Petersfield Platform 2	12:01:25	12:02:00
Havant Platform 2	12:13:00	12:14:00
Fratton Platform 2	12:20:15	12:21:00
Portsmouth & Southsea Platform 2	12:23:25	12:24:00
Portsmouth Harbour Platform 5	12:27:00	-

### 3.6 Holybourne Tanks

**A weekly delivery of fuel oil is made to the industries of the Water Cress Valley near Alton in north Hampshire. Pilot today's service from the southern town of Havant, north through Guildford, and on to the terminal at Holybourne.**

Haul this weekly delivery of petroleum tankers to the terminal at Holybourne near Alton. Along the way, you'll be required to fit between the busy commuter trains that traverse the network.

- **Date**                      **10th October 2011**
- **Time**                        **10:30**
- **Rating**                    **Medium**
- **Duration**                **70 Minutes**
- **Weather**                 **Rain & Overcast**
- **Start Location**        **Havant Station**
- **Train**                     **Class 37 Diesel Locomotive**

#### Scenario Timetable

Location	Arrive	Depart
Cosham	-	10:30:00
Havant Junction	10:39:00	-
Petersfield	11:00:00	-
Shalford Junction	11:40:00	-
Guildford Platform 6/7	11:41:25	11:42:25
Aldershot South Junction	12:00:00	-
Aldershot	12:05:00	-
Alton	12:35:00	12:38:00
Holybourne Refinery	12:55:00	-

### 3.7 Saturday Shunt

**Take a 4-car Class 450 unit from Woking to Guildford to be used for the Ascot Shuttle**

This unit needs to be moved to Guildford so it can be used on the Ascot Shuttle service. Collect a guard from Platform 4 at Woking, and then head over to Guildford. Follow the signallers orders for arrival in Guildford.

- **Date**                      **28th February 2011**
- **Time**                      **11:45**
- **Rating**                    **Easy**
- **Duration**                **15 Minutes**
- **Weather**                **Stormy**
- **Start Location**        **Woking Down Yard**
- **Train**                    **Class 450 4car Electric Multiple Unit**

#### Scenario Timetable

Location	Arrive	Depart
Woking East End Siding	-	11:45:00
Woking Platform 5	11:46:00	11:46:20
Guildford Platform 6/7	11:52:00	-

### 3.8 Petersfield Shuffle

**Engineering works on the line mean trains can only work as far as Petersfield. Operate a Sunday service as far as the blockage before turning back south for the return journey.**

Engineering works are taking place between Peterfield and Shalford Junction today. This will be a shuttle service as far as Petersfield. Commence boarding and then depart north. Call at all stations for the outbound trip. Once at Petersfield, shunt forward beyond the crossover, change ends and shunt back into the station. From here, commence the 10:53 fast service back to Portsmouth.

- **Date**                      **4th September 2011**
- **Time**                        **10:23**
- **Rating**                    **Medium**
- **Duration**                **55 Minutes**
- **Weather**                 **Hazy Skies**
- **Start Location**        **Portsmouth & Southsea Station**
- **Train**                     **Class 450 4car Electric Multiple Unit**

#### Scenario Timetable

Location	Arrive	Depart
Portsmouth & Southsea Platform 3	-	10:24:00
Fratton Platform 1	10:25:45	10:26:30
Hilsea Platform 1	10:29:00	10:29:35
Bedhampton Platform 1	10:34:00	10:34:35
Havant Platform 1	10:36:25	10:37:00
Rowlands Castle Platform 1	10:41:00	10:41:35
Peterfield Platform 1	10:50:00	10:51:00
Petersfield Platform 2	10:53:00	10:54:00
Havant Platform 2	11:05:00	11:06:00
Fratton Platform 3	11:12:00	11:12:35
Portsmouth & Southsea Platform 3	11:15:00	-

### 3.9 Southern Rail Tour

**Operate a summer Saturday rail tour headed by an LMS Black5 steam locomotives to Portsmouth Harbour. Despite it being the weekend, the mainline remains a busy place. You may be required to let faster trains pass, or be delayed behind the many commuter services that operate. Do your best to get to the coast on time.**

We'll be stopping at Guildford to pick up water, but apart from that do your best to keep up with the schedule. We don't want to get a fine for delays from the operator.

- **Date**                      **2nd July 2011**
- **Time**                      **10:35**
- **Rating**                    **Easy**
- **Duration**                **70 Minutes**
- **Weather**                **Hazy Skies**
- **Start Location**        **Woking Station**
- **Train**                    **Black 5 Steam Locomotive**

#### Scenario Timetable

Location	Arrive	Depart
Woking Platform 5	-	10:36:00
Guildford Platform 2	10:45:00	10:47:00
Havant Platform 2	11:34:00	11:50:00
Portsmouth & Southsea Platform 4B	11:50:00	-

### 3.10 Working to Woking

**An all stops service from Portsmouth & Southsea to Waterloo. Another driver will relieve you at Woking station for the final leg along the Southern Mainline into the Capital.**

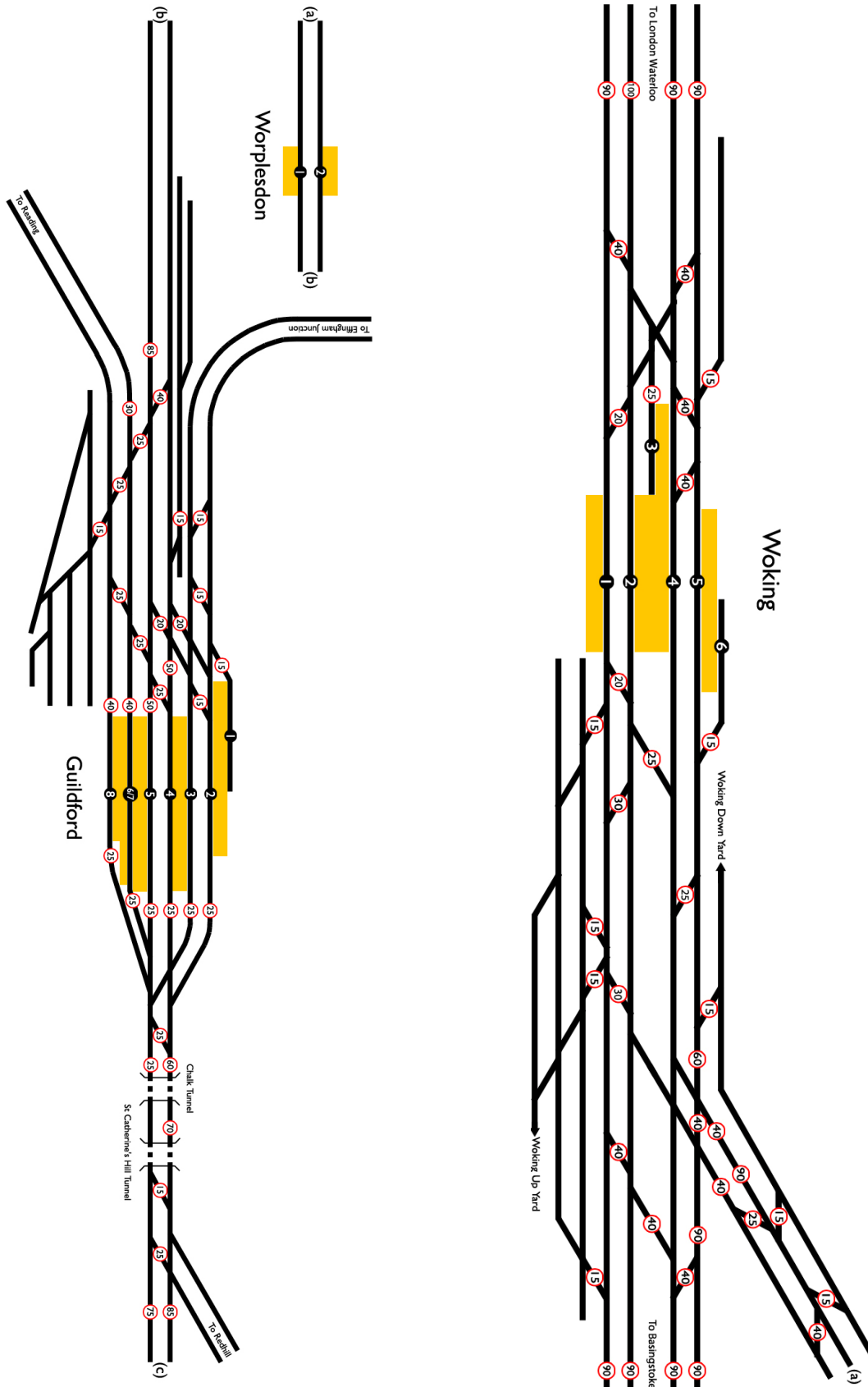
This duty is an all stops service to the Capital. You're running a full 12 car formation on this trip so ensure you stop as close to platforms ends as possible to accommodate all you can. Be mindful of your speed and stopping distance. Have a good trip.

- **Date**                      **19th June 2011**
- **Time**                      **14:23**
- **Rating**                    **Medium**
- **Duration**                **90 Minutes**
- **Weather**                **Hazy Skies**
- **Start Location**        **Portsmouth & Southsea**
- **Train**                    **Class 450 12car Electric Multiple Unit**

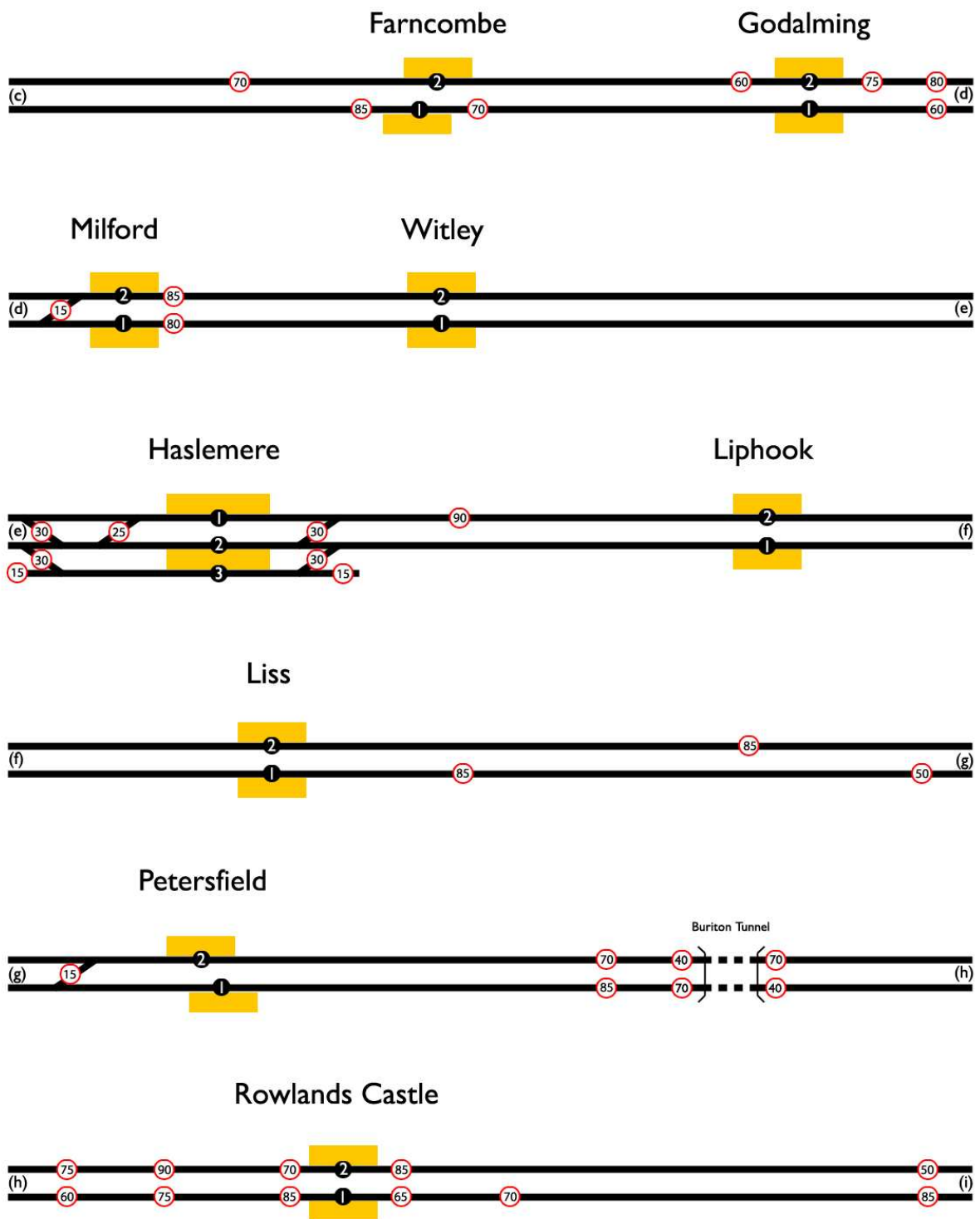
#### Scenario Timetable

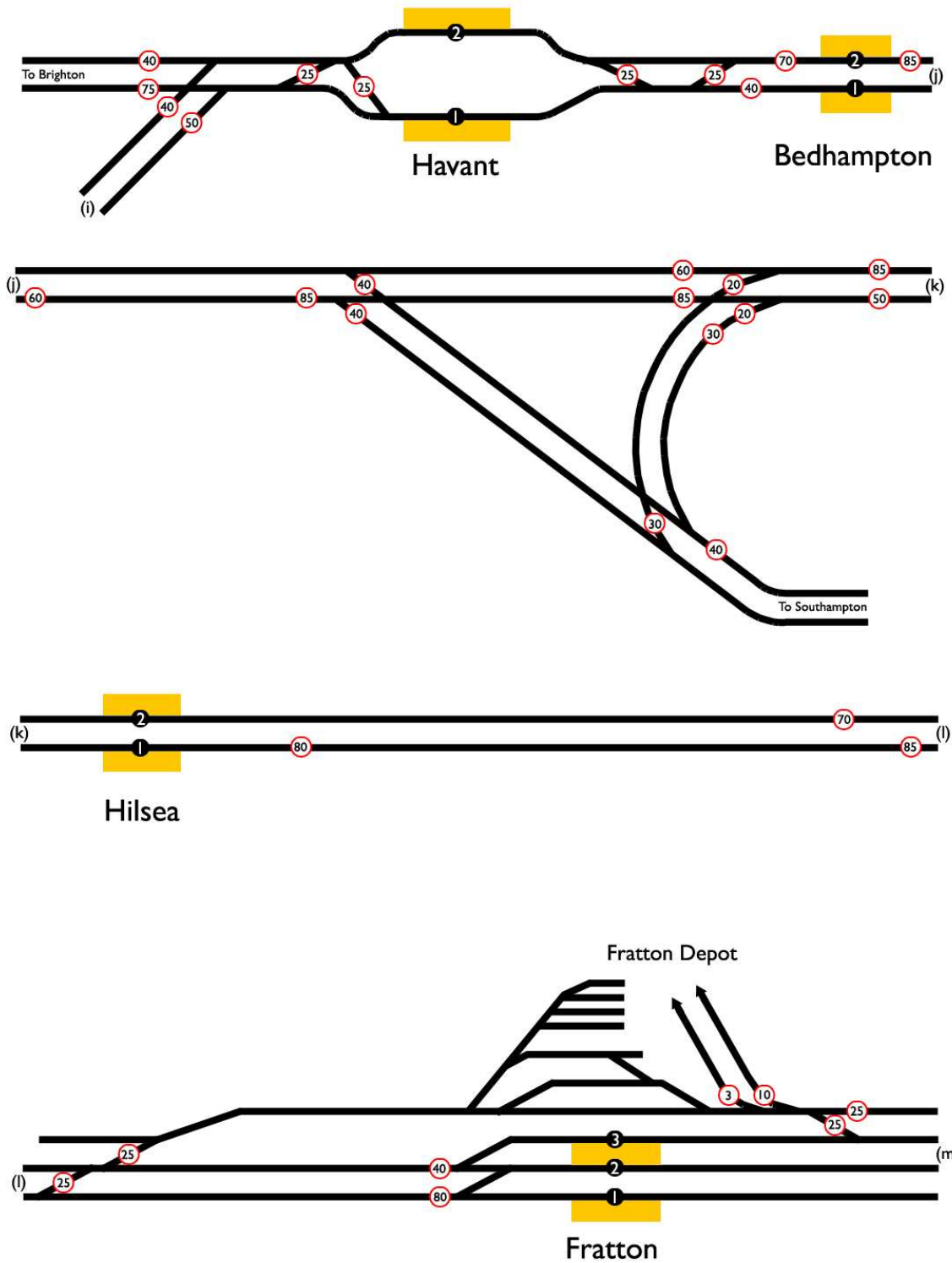
Location	Arrive	Depart
Portsmouth & Southsea Platform 1	-	14:24:00
Fratton Platform 1	14:27:25	14:28:00
Hilsea Platform 1	14:31:25	14:32:00
Bedhampton Platform 1	14:36:25	14:37:00
Havant Platform 1	14:39:00	14:40:00
Rowlands Castle Platform 1	14:45:25	14:46:00
Petersfield Platform 1	14:55:25	14:56:00
Liss Platform 1	15:01:25	15:02:00
Liphook Platform 1	15:08:25	15:09:00
Haslemere Platform 3	15:14:15	15:15:00
Godalming Platform 1	15:24:25	15:25:10
Farncombe Platform 1	15:27:25	15:28:00
Guildford Platform 5	15:33:00	15:34:00
Worplesdon Platform 1	15:39:25	15:40:00
Woking Platform 2	15:43:15	-

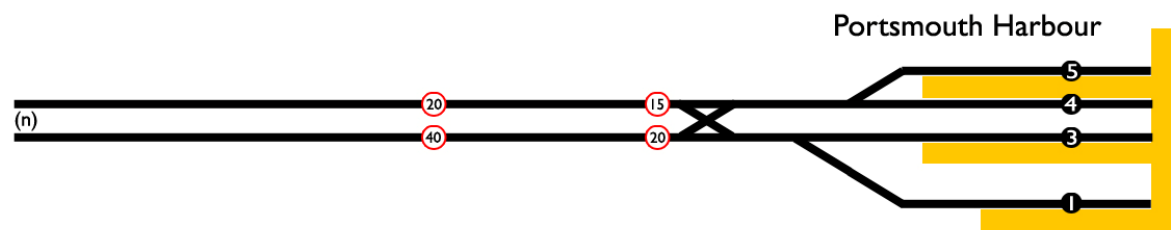
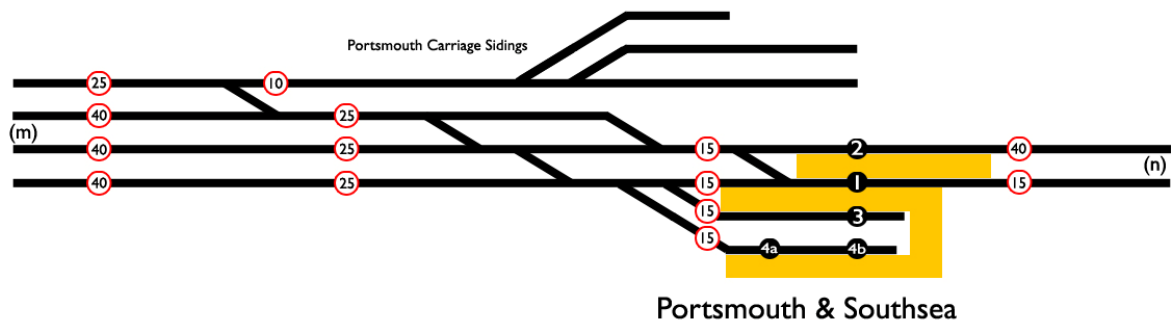
## 4 Route Map











## 5 Signals

### 5.1 Main Signal Head Aspects



Colour light signals are used for controlling running movements. They display aspects by means of red, yellow and green coloured lights.

Signal Aspect	Description	Instruction to Driver
Red light	Danger	Stop.
Single yellow light	Caution	Proceed: be prepared to stop at the next signal.
Double yellow lights	Preliminary caution	Proceed: be prepared to find the next signal displaying one yellow light.
One flashing yellow light	Preliminary caution for a diverging route	Proceed: Be prepared to find the next signal displaying one yellow light with feather junction indicator for diverging route(s).
Double flashing yellow lights	Indication of diverging route ahead of the next but one signal	Proceed: Be prepared to find the next signal displaying one flashing yellow light.
Green light	Clear	Proceed: The next signal is displaying a proceed aspect.

### 5.2 Theatre Type Signals

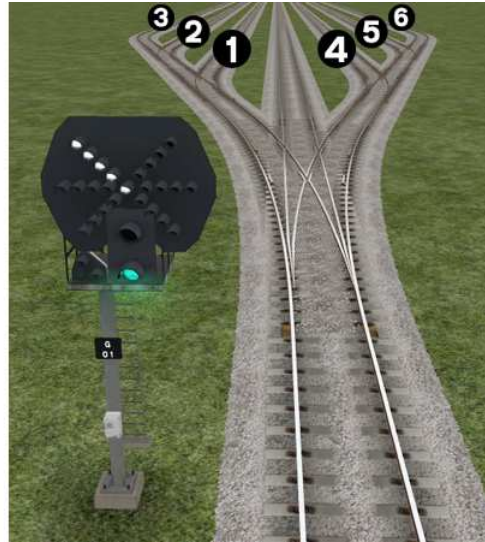
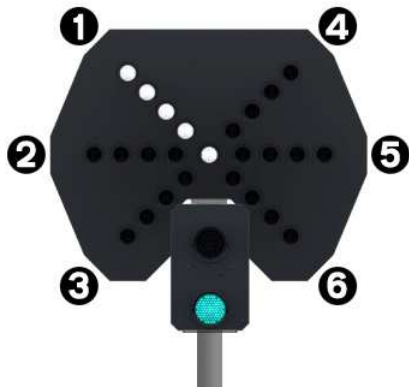


A Theatre alphanumeric route indicator indicates the route to be taken using numbers or letters (or a combination of numbers and letters).

A Theatre indicator is often used to show the arrival platform number.

### 5.3 Feather Type Signals

A Feather junction indicator indicates a diverging route to be taken by the angle at which a line of five white lights is displayed. (*Position 1 shown*)



Feather Indication	Instruction to Driver
No Feather Indication	Obey main aspect, straight-ahead route is set
Position 1 indication	Obey main aspect, expect divergence to left
Position 2 indication	Obey main aspect, expect divergence to left more extreme than that for position 1
Position 3 indication	Obey main aspect, expect divergence to left more extreme than that for position 2
Position 4 indication	Obey main aspect, expect divergence to right
Position 5 indication	Obey main aspect, expect divergence to right more extreme than that for position 4
Position 6 indication	Obey main aspect, expect divergence to right more extreme than that for position 5

## 5.4 Ground Signals and Position Light Signals



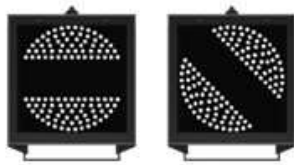
Ground Signals and Position Light Signals (PLS) display their aspects by means of the position and colour of lights. Ground Signals are always illuminated and can have miniature theatre indicators attached whereas PLS only illuminate to allow a train to pass in to an occupied section of line and are mounted as an addition to a main signal head.

Signal Aspect	Description	Instruction to Driver
Two red lights	Danger	Stop.
No aspect (located on a main aspect)		Obey main aspect.
Two white lights	Caution	The line ahead may be occupied. Proceed cautiously towards the next stop signal, stop board or buffer stops. Be prepared to stop short of any obstruction. The associated main aspect (where provided) may be passed at danger

## 5.5 Entering an Occupied Section of Track

During a scenario your train may be scheduled to enter a platform or section of track that is already occupied by another train or rolling stock. In this situation you should stop at the red signal protecting this section of track as normal. Once your train has stopped press the TAB key on your keyboard to request permission from the signalling centre to enter the occupied section of track. When your train movement is approved the signal will illuminate the two white lights on the position light signal if it has one.

## 5.6 Repeater Signals



A banner repeater signal indicates whether the signal ahead is displaying a proceed aspect or is at danger. Modern fibre optic banner repeating signals, as shown opposite, consist of a rectangular unlit black background displaying a white circle with a black bar.

Signal Display	Instruction to Driver
Horizontal arm	Be prepared to find the related signal at danger
Arm at an upper quadrant angle of 45°	Related signal is exhibiting a proceed aspect

Repeater signals are intended to provide a driver with advance information of a signal that may be obscured on approach. A train does not need to stop at a repeater signal, only at the related signal if it is at danger.

Splitting banner signals provide two banner signal heads combined to form a splitting banner repeating signal. These are used to indicate the aspect of a signal with a feather junction indicator. If the related junction signal is displaying an illuminated feather then the lower banner head displays an arm at an upper quadrant angle of 45°. Alternatively, if the related junction signal is not displaying an illuminated feather and is indicating a straight ahead route then the higher "main" banner head displays an arm at an upper quadrant angle of 45°.

## 6 Speed Signs

### 6.1 Permissible Speed Indicators



These signs display the permissible speed in M.P.H. applicable to the section of line beyond the sign up to the commencement of any subsequent permissible speed section.

Remember to wait for the complete length of your train to pass these signs before accelerating if the permissible line speed is increasing. If the permissible line speed is decreasing then you must reduce your speed before passing these signs.

### 6.2 Permissible Speed Warning Indicators

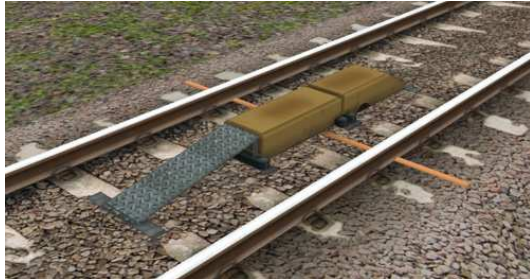


These signs provide advance warning of a reduction in permissible speed ahead. Permanent AWS Ramps (Automatic Warning System) are often installed in conjunction with these signs. In these cases the driver must cancel the AWS warning when triggered on approach to these signs.



## 7 Safety Systems

### 7.1 AWS (Automatic Warning System)



AWS is provided to give train drivers in-cab warnings of the approach to signals, reductions in permissible speed and temporary/emergency speed restrictions, and to apply the brakes in the event that a driver does not acknowledge cautionary warnings given by the system.

As a train approaches a signal, it passes over AWS track equipment (magnets) which are fixed to the

sleepers between the running rails. The magnets are sensed by a receiver mounted under the leading end of the train.

If the signal ahead is displaying a clear aspect (green), a bell (or an electronic ping) sounds in the driver's cab, and the AWS Sunflower indicator displays "all black". No action in respect of the AWS is required of the driver.

If the signal is displaying a caution or danger aspect (yellow, double yellow or red), a horn sounds in the driver's cab and the display shows "all black". The driver has to acknowledge the warning by pressing the "AWS Acknowledgement" push button. When the driver operates the push button, the horn is silenced and the AWS Sunflower changes to a segmented yellow and black circular display. If the driver fails to acknowledge the warning horn within a set time period, the brakes are applied automatically.

Where AWS equipment is provided on the approach to reductions in permissible speed and temporary/emergency speed restrictions, the cab equipment always operates in a manner equivalent to the approach to a signal displaying a caution or stop aspect. The driver receives a warning and has to respond to it accordingly; otherwise the brakes are applied automatically.

## 8 Creating a Class 450 train set

### 8.1 Scenario Editor (if creating new scenarios)

To get the Class 450 ready for selection in a scenario that is not located on the Portsmouth Direct Line, you will need to enable it in the object set filters, which will add it to the rolling stock browser list.

Follow these steps:

1. Enter the Scenario Editor. (Note: If a route is locked it will need to be unlocked first before you can enter the Scenario Editor. Unlock by clicking the padlock icon in the bottom right of the screen).
2. Click the Object Set Filter button (the small blue cube on the middle left panel).
3. In the new window which opens on the right hand side, select the following:  
**RSC / Guildford District**
4. The Class 450 vehicles will now appear in the list of rolling stock.
5. You may need to repeat this process on other routes or scenarios where you wish the Class 450 to be available.

### 8.2 Assigning Destinations and Numbers

For developers wishing to make use of the units in their own scenarios and routes, it is possible to customise the Destination Display during creation of a scenario. This allows the train to correctly display an appropriate destination.

In order to display a specific destination, the correct value must be entered into the vehicle properties window. This number consists of a 12 digit value containing both a letter and numbers.

The 12 digit value is arranged like so: **UUUUUUVVVVVD**

<b>UUUUUU</b>	= the Unit number (this is the number displayed on the front of the driving vehicle)
<b>VVVVV</b>	= the Vehicle number (this is the number displayed on the side of the coach)
<b>D</b>	= the Destination code (this is one of the destinations below which is case sensitive)

Example : 45012063703AR (*where "R" is for Guildford*)

So the above value results in unit 450120, with vehicle number 63703, displaying "Guildford" as the destination



### 8.3 Destination List

<b>A</b>	London Waterloo via Guildford	<b>N</b>	Alton
<b>B</b>	London Waterloo via Basingstoke	<b>O</b>	Basingstoke
<b>C</b>	London Waterloo via Surbiton	<b>P</b>	Bournemouth
<b>D</b>	London Waterloo Fast Service	<b>Q</b>	Clapham Junction
<b>E</b>	London Waterloo Direct Service	<b>R</b>	Guildford
<b>F</b>	London Waterloo Stopping Service	<b>S</b>	Haslemere
<b>G</b>	Portsmouth Harbour via Guildford	<b>T</b>	Not in Use
<b>H</b>	Portsmouth Harbour via Basingstoke	<b>U</b>	Poole
<b>I</b>	Portsmouth Harbour via Surbiton	<b>V</b>	Reading
<b>J</b>	Portsmouth Harbour Fast Service	<b>W</b>	South West Trains
<b>K</b>	Portsmouth Harbour Direct Service	<b>X</b>	Special
<b>L</b>	Portsmouth Harbour Stopping Service	<b>Y</b>	Weymouth
<b>M</b>	Portsmouth & Southsea	<b>Z</b>	Woking

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