

LONDON SOUTH COAST – THE SERIES

London South Coast – The Series is a commercial Train Simulator add-on produced by **///EuropeanBahn///** that consists of three lines from the Southern railways, the Brighton Main Line (London Victoria to Brighton), the West Coastway (Brighton to Portsmouth) and the Arun Valley Line (Three Bridges to Ford) that form a triangle.

The Brighton Main Line was originally released as "**London Brighton Express**" from **///EuropeanBahn///**, and the West Coastway was released as "**Brighton to Portsmouth**, the West Coastway Express", two separate routes with no way to smoothly go between them.

London South Coast – The Series joins them in to the same route and adds the new third section along the Arun Valley Line as well as adding lots of new scenic detail on all three sections of the route and some fresh new rolling stock!

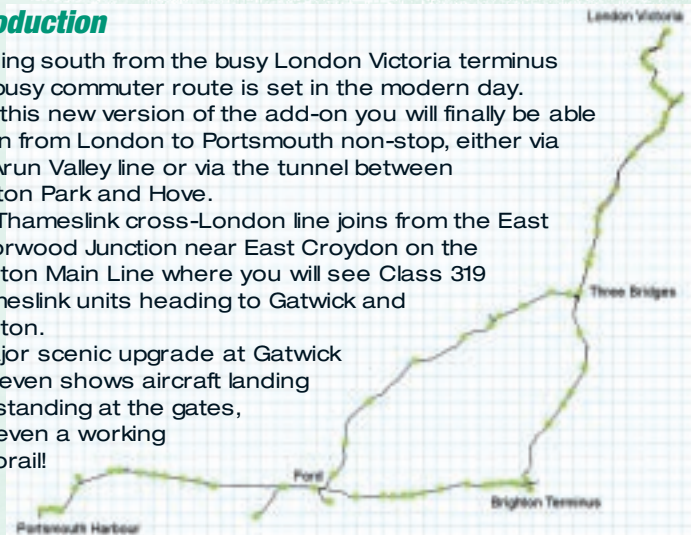
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Introduction

Running south from the busy London Victoria terminus this busy commuter route is set in the modern day. With this new version of the add-on you will finally be able to run from London to Portsmouth non-stop, either via the Arun Valley line or via the tunnel between Preston Park and Hove.

The Thameslink cross-London line joins from the East at Norwood Junction near East Croydon on the Brighton Main Line where you will see Class 319 Thameslink units heading to Gatwick and Brighton.

A major scenic upgrade at Gatwick now even shows aircraft landing and standing at the gates, and even a working Monorail!

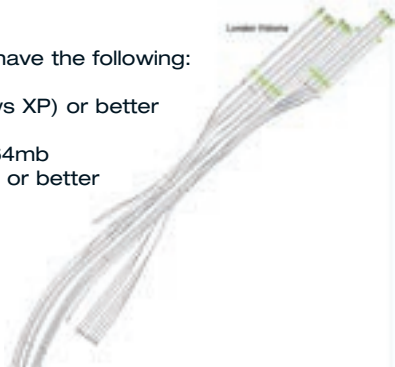


Track layout overview diagrams in this manual generated by Trainsimfiles 'Track Viewer'
<http://www.trainsimfiles.com>

System Requirements

We suggest that your PC should have the following:

- Minimum 1.5ghz Processor
- 256mb Ram (512mb for Windows XP) or better
- Minimum 270mb Disk Space
- A good quality video card with 64mb (128mb preferred) of Video Ram or better
- A CD or DVD Rom Drive
- Windows Operating System
- Microsoft Train Simulator
- A good quality sound card (not on-board is preferred) is recommended



Installation

When using Windows XP or Windows 2000 as your operating system you must be logged in as the Administrator user to begin installation. Insert the CD in to your CD or DVD drive, the installation program will start automatically. If it does not start automatically (you or one of your installed tools may have disabled the auto-start facility of your computer) you should click Start followed by Run and then type "D:\Setup" where D: is the letter of your CD or DVD drive.

The install window will appear and you should follow the prompts to complete the installation. When asked to enter a serial key you will find this either on the front cover of the printed manual. The install path of your Microsoft Train Simulator will be checked – however if you are running multiple copies of Train Simulator you may need to manually configure it. The files for this add-on will then be copied to your hard drive.

After a successful installation you will find the new route, activities and stock at your disposal within Microsoft Train Simulator.

London South Coast – The Series does not require nor does it conflict with London Brighton Express or Brighton to Portsmouth.

Uninstallation

If you would like to uninstall this add-on from your system simply select "London South Coast" in the add/delete programs menu, which can be found in your Control Panel. Click "delete" and the add-on will be uninstalled.

Note: if you have used London South Coast – The Series rolling stock in activities for other add-ons on your system, uninstalling this add-on and its rolling stock could cause MSTs to show errors indicating this missing stock. Either replace the stock or remove the activities that use it to resolve these errors.

Route Information

The Brighton Main Line



With six original proposals to build a railway between London Victoria and Brighton, the London and Brighton Railway (L&BR) emerged with an Act of Parliament on 15 July 1837. The final stretch of the line was eventually opened on 21 September 1841. In the early days, the London, Brighton and South Coast Railway (LB&SCR) and the South Eastern Railway (SER) had been forced by another Act of Parliament to share the route southwards from London as far as Redhill. This caused a great deal of friction between the two companies and eventually the LB&SCR built a new line between Coulsdon North and Earlswood that became known as the Quarry Line and was opened to passenger traffic on 1 April 1900 and is still today used by fast trains avoiding Redhill.

The LB&SCR began electrification on 1 December 1909. Following some initial flirtation with overhead electrics as far as Coulsdon North, the entire southern network was upgraded to use 3rd rail during 1928/1929 as it remains today.

The line is heavily used by commuter services as people commute in to London for work and also by those using the Gatwick Express service to the large and well known Gatwick Airport.

The Aron Valley Line



The Arun Valley Line starts on the Brighton Main Line at Three Bridges, heading south west via Crawley and Horsham to Arundel before reaching the West Coastway Line at Arundel Junction near Ford and Littlehampton.

The first section from Three Bridges to Horsham was opened in 1848 with the final section joining the West Coastway line opening in 1863.

You can find out more information about this line by visiting <http://www.arunrail.com>

Route Information

The West Coastway Line



Heading west from Brighton along the West Coastway the route travels via Worthing to Portsmouth.

Branches are included for lines such as Littlehampton, Bognor Regis and the main line extends out to Cosham as the West Coastway turns South West for Fratton and Portsmouth.

The initial phase of the line from Brighton to Shoreham was opened 12 May 1840 finally reaching Portsmouth on 14 June 1847. The Littlehampton branch was opened in 1863 and the Bognor Regis branch opened in 1864.

There used to be a line from Shoreham-on-sea heading north to Horsham via Steyning (the "Steyning Line"), however this line was closed in March 1966.

Trains from the Brighton Main Line heading along the West Coastway can make use of the tunnel between Preston Park and Hove to avoid having to run through Brighton.

Rolling Stock

You can find out a wealth of information about Southern rolling stock by visiting the Southern Email Group (SEMG) at <http://www.semg.org.uk>

Class 319 EMU



Thameslink Livery



Southern Livery



Cab View

Cross-London services, operated by Thames Link, required special stock which could operate with dual voltages supporting both overhead AC electric and third rail DC electric. For this purpose the 319 was developed using the same Mark 3 body shells as Class 317 and 318 units though slightly modified.

319's are seen joining the Brighton Main Line at East Croydon coming in from Norwood Junction.

Class 377 EMU "Electrostar"



Southern Livery



Cab View

Based on Class 375 Electrostar units, these are different in that they have Dellner couplings and less generous seating. They are commonly seen running the Brighton Main Line.

Class 421 EMU "4-CIG"



Network South East



South Central



Cab View

Originally introduced in 1963 these units were the main stay of the southern and could be seen everywhere. They carried a wide range of liveries around the Southern network.

Withdrawal started in mid-2004 and the last handful of units were withdrawn in May 2005, however five complete sets are still operational in preservation by Network Southeast Society, Great Central Railway, Dartmoor Railway and Dean Forest Railway.

Class 171 DMU "Turbostar"



171/7 Southern



171/8 Southern



Cab View

The Class 171 is a refit of the Class 170 units to fit Dellner couplings and enable them to be coupled to Electrostars in an emergency. There was a total of nine 171/7 units, shipped in 2-car formation and then six newer 171/8 units which were shipped in 4-car formation.

Class 220 "Voyager"



Class 220 Voyager



Cab View

A High speed Diesel/Electric Multiple Unit built by Bombardier Transportation, air conditioned throughout and with a maximum speed of 125mph, with each carriage having its own engine. They were originally introduced to replace the aging 30 year old HST fleet.

Class 121/960 DMU "Bubblecar"



Railtrack / Balfour Beatty Livery



Cab View

Unit 960011, No 977859 is a Video Survey Unit in Railtrack Blue/Green. It was originally a Class 121 DMU (formerly Vehicle no 55025) and can be seen currently preserved at the National Railway Museum, York.

There are two main cameras, one on the middle of each end looking down. There are then four bright lamps (two on each end) at the bottom shining on the rails and beneath each of those lamps are additional cameras filming each rail.

Note: *When running this unit in reverse be very careful, due to a bug in MSTs, DMU's tend to race away very quickly just by being in gear when set to reverse. We suggest simply putting it in gear (with no throttle) briefly and taking it back out of gear once you are going fast enough.*

Activities

01 – Down Brighton Express			
Easy	Clear Summer Day	50 minutes	Class 377

Take a 12-car Class 377 on an express run from London Victoria to Brighton, with stops at East Croydon and Gatwick Airport. The line is busy, as usual, although there are no reported problems affecting your journey today.

02 – Southbound CityFlier

Easy	Clear Summer Day	50 minutes	Class 319
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The CityFlier was Thameslink's frequent service from Bedford to Brighton, starting at Bedford on the Midland Mainline and running through Snow Hill Tunnel to cross central London before joining the Brighton Mainline at Norwood Junction. You take over the service in motion approaching Norwood Junction for your first stop at East Croydon. You then run fast to Gatwick Airport and proceed to call all stations to Brighton. There are no problems today so nothing should hinder your run.

03 – Arun Valley Inspection

Easy	Cold Winter Afternoon	45 minutes	Class 960
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Take the Railtrack Class 960 DMU on a railhead inspection run on the Arun Valley line. Starting at Stretham Common, travel down the Brighton Mainline until the turnout at Three Bridges. Your path should be fairly clear, although you will be following a stopping service for a short period. Once you have completed your run, reverse at the Ford Triangle, and stable your unit in the sidings at West Worthing.

04 – Arun Valley Inspection

Easy	Cold Winter Afternoon	45 minutes	Class 960
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The usual Class 377 which works this service has failed. Your 171/8 has been dispatched from the sheds at Brighton Lovers Walk to cover this service. As the 377 was diagrammed as an 8 car train, it may take longer to load and unload passengers into your 4 car train and you may exceed your allocated wait time at some stations. Try to arrive at Victoria as near to time as possible.

05 – East Croydon Stopper

Easy	Rainy Spring Evening	60 minutes	Class 319
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Take a Southern 319 on a stopping service from Brighton to East Croydon. Staff at Lovers Walk Depot have reported possible track damage on the approach to Preston Park. As a precaution all trains have been routed via the Down line when leaving Brighton. There is also a TSR in effect in the area.

06 – The Speed Run			
Easy	Clear Summer Day	40 minutes	Class 377

To mark the withdrawal of slam door stock and the delivery of their final Electrostar unit on Sunday September 11th 2005, Southern staged a special high speed run between London Bridge and Brighton. Now is your chance to take charge of this special service, joining the Brighton Mainline at Norwood Junction.

IMPORTANT: *Your train has been cleared to run at 100mph whilst in 90mph sections. All other speed limits must be strictly adhered to for safety reasons.*

07 – Arun Valley Slammer			
Easy	Snowy Winter Morning	50 minutes	4-Cig

Take your 8-car CIG on a service down the Arun Valley line. Starting at Three Bridges, you will call at all stations before crossing the West Coastway to reach your destination of Littlehampton. Be sure to take into account the winter conditions and avoid braking too hard.

08 – Arun Valley Up Semi-Fast			
Medium	Clear Spring Afternoon	60 minutes	Class 377

Take your 377 on a semi-fast service from Littlehampton to Three Bridges via Horsham, running fast from Arundel to Christ Hospital. The Ford to Three Bridges service has reported possible shoe gear damage at Arundel, which will need to be checked. This is likely to cause some delay to your journey.

09 – The Brighton Voyager			
Medium	Rainy Summer Day	55 minutes	Class 220

Having started it's journey in Birmingham, you have taken over the Voyager service to Brighton on the approach to Clapham Junction. There is a TSR between Purley and Purley Oaks after recent ballast renewal. There have been some minor delays this morning, which have mostly cleared. However, there may be some residual delays which could affect your journey, especially south of Gatwick.

10 – Brighton to Bognor			
Medium	Snowy Spring Morning	70 minutes	Class 319

You are at the controls of an all-stations service from Brighton to Bognor travelling along the West Coastway. Traffic is fairly busy during the morning peak period, but nothing should hinder your progress. Do remember though that driving a stopping service in icy conditions can be difficult.

11 – Southsea Slammer

Medium	Warm Summer Morning	35 minutes	4-Cig
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Take your 421 on this morning semi-fast run from Littlehampton to Portsmouth & Southsea. The train full of commuters are expecting you to keep to time, but with TSRs at the Ford Triangle, and west of Chichester, you will have to get the best from your slammer.

12 – Portsmouth to Brighton 171

Medium	Rainy Summer Evening	65 minutes	Class 171/8
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Usually worked by an EMU, your task is to take the 18:42 semi-fast service from Portsmouth Harbour to Brighton, along the West Coastway. Your 171/8 should have no difficulty keeping to the timetable, although a TSR between West Worthing and Worthing will hinder your progress slightly.

13 – Bognor to Littlehampton Shuttle

Medium	Autumn Afternoon	20 minutes	Class 171/7
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Take a Turbostar on the short run from Bognor to Littlehampton. This may sound like an easy run, but the timetable is very tight, and remember, the mainline services will get priority.

14 – Horsham to Cosham

Medium	Clear Winter Night	70 minutes	Class 377
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Starting in the sidings outside Horsham, take your Class 377 on an all stations service to Cosham, via the Arun Valley. There are no reported problems, although if you fall behind schedule, you may encounter traffic on the West Coastway.

15 – Horsham to Cosham

Medium	Rainy Autumn Afternoon	85 minutes	Class 319
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Whilst sat in the sidings at Hove, reports of a failure of a Southern 319 at Brighton come through. Your Thameslink unit has been drafted in as cover to work the stopping service to London Victoria. Traffic is extremely busy on the Brighton Mainline, and you have a tight timetable to keep to. Efficient driving is essential if you are to keep to time.

16 – London to Portsmouth Express

Medium	Clear Spring Morning	115 minutes	Class 171/8
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You are at the controls of an 8-car 377 for the mid-morning working from London Victoria to Portsmouth Harbour, running via Horsham on the Arun Valley line. There are two reported speed restrictions en route. The first is on departure from Chichester, and the second is on the approach to, and through Fratton.

17 – West Coastway Inspection

Hard	Warm Summer Night	120 minutes	Class 960
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Take the Railtrack 960 'Bubblecar' on a railhead inspection run. You will be leaving Fratton depot, and running to Ford where a pilotman will join your train. With the pilotmans assistance, you will then reverse around the Ford Triangle before proceeding back to Fratton Depot, not forgetting to let the pilotman disembark again at Ford! For the purposes of Train Sim, TSRs have been placed at various locations which require particular attention from the inspection equipment, and timetable entries have been done for Ford to use as a guideline, and to provide the stop time required for a crewe change. At this time of night, traffic is minimal, with the exception of a handful of ECS movements.

18 – London to Portsmouth Diversion

Hard	Cold Winters Morning	130 minutes	Class 171/8
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The direct service from Victoria to Portsmouth usually runs via Horsham. The Arun Valley line has been closed due to recent blizzards. The snow has stopped falling, but the Arun Valley remains closed. Instead, you will be routed via Hove, calling at the same stops (where possible) as the usual service.

19 – London to Bognor Regis

Hard	Wet Summer Morning	110 minutes	Class 421
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Take your slammer on the hourly direct service from Victoria to Bognor Regis, via Redhill and Horsham. Traffic is busy during the morning peak, although no problems have been reported. You may encounter delays if you fall behind your schedule, as pathing is tight.

20 – Problems in the Winter

Hard	Cold Winter Afternoon	120 minutes	Class 171/7
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You are working the DMU service from Littlehampton to London. The cold weather can cause problems for the railways, as you are about to find out.....
Your brief is simply to pay attention to what is happening this afternoon

21 – Last train from Portsmouth

Hard	Warm Spring Night	95 minutes	Class 319
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The last departure for Brighton leaving Portsmouth Harbour at 22:15. You will call at all stations en-route. Driving a stopping service at night can be a challenge, as it is difficult to concentrate.
There are no reported problems, and traffic is light.

Signalling

London South Coast – The Series uses a modern UK 2, 3 and 4 aspect colour light signal system with modern UK standard speed limit signs. Tony Formoso and *///EuropeanBahn///* have put together the most accurate possible signalling system and speed limit sign layout.

Basic Signals



The basics are pretty straight forward – a green signal means the line ahead is clear for maximum line speed running. Red means that you must stop before the signal – if you attempt to pass it then you will fail the activity with a SPAD "Signal Passed at Danger" failure.

Three aspect signals have a single amber light, this indicates that the next signal is currently red so you should slow to a stop.

Four aspect signals have two amber lights. If you can see two amber lights, the next signal is a single amber. If you can see a single amber then the next one after that will be a red. This allows you more notice to begin you braking on high speed lines and is particularly useful in allowing you to follow behind a service running in front of you. If you think you're stuck behind a service, you should aim to keep it at double ambers – if you see a green then speed up and try to catch up to the service in front until you get double ambers again, if you see a single amber (or worse, a red) then slow down. This technique enables you to run a tight service right behind one in front and is crucial if you are to make time on difficult busy schedules!

Semaphore Signals



The Arun Valley Line features some simple Semaphore signals. These are very straight forward Upper Quadrant signals which means that they move "up" (Lower Quadrant Signals move down). Semaphore signals are similar to two-aspect light signals – there are only Green and Red states.

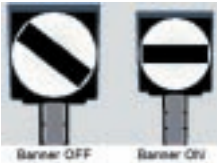


When the red signal arm is angled upwards the line is clear (like a Green signal) to the next signal only and when the arm is level and horizontal the line is not clear (like a Red signal) and you should slow to a stop.

Route Indicators

There are also signals with a Route indicator of some kind, this shows you that points have been set to follow a particular route. Route Indicators could be 'feathers' shown by a series of white lights, or theatre boxes indicating a direction or platform that you are cleared on to.

Repeaters



In cases of low visibility there are Repeater signals that show you what the following signal is showing. These are usually placed where the terrain, buildings and other obstructions mean that you could not actually see a signal in time to obey it.

In 'Banner OFF' state, the following signal is showing either Clear or Caution states. If the signal is 'Banner ON' then it is showing a Red state and you should be ready to stop.

Approach Control

Due to limitations within the simulator the implementation of Approach control it's not strictly accurate but it does serve the purpose. We set the signal to a special aspect showing a Red indicator but it will display "Restricting (150)" rather than Stop in the Track Monitor so you can proceed through it safely. Signals leading up to it will show a standard double-amber / amber approach to slow you down.

Shunting Signals

These allow a train to be signalled to move forwards a short distance as long as the track is not obstructed. A shunting signal is shown as three smaller lights in a triangle and is either found attached to a normal signal or on its own. When it's attached to another signal it will only be illuminated when a shunting movement is required, otherwise, it will show two red or yellow lights. Two white lights are used to indicate that you are clear to proceed with caution at a speed where you can stop quickly for any obstruction. This will show up in the Track Monitor as "Restricting" and you can proceed through it.

Visit our Web Site

You can visit us online at <http://www.europeanbahn.co.uk> and get the latest news and also see our Online Store to order more great add-ons and other products.

Troubleshooting

Whilst we have tried to make this add-on function on all PCs, on lower spec machines you may find areas of low frame rates (screen judders). Whilst the ideal solution is to buy an updated PC we can offer the following alternative solutions to try first in the Train Simulator Options menu.

General – We do not recommend "simple controls" – people have had problems with this in the past, the locos in this add-on are pretty simple to drive anyway.

Sound – Turn the "quantity of sounds" down a notch or two if you are having problems with the game crashing when there is a lot happening, if you have sounds playing over and over without stopping. Also see the note below about the DirectX Diagnostic Utility.

Display – Our cabs are designed to run at a screen resolution of 1024x768, so I would suggest using this mode if your monitor/graphics card supports it. You can adjust the "overall display quality" here, to the left is better frame rates but less detail, plus you can also fine tune settings on the next page along.

Advanced Display

Visibility – Turn this down to give a general boost in frame rates, MSTs won't draw objects so far in front of you, meaning there is less on the screen to worry about. Of course, this means that distant buildings suddenly spring up in front of you, everything here is a trade-off between speed and quality.

Terrain Error Threshold – If you are seeing land over the track then this setting is too low. However, the lower the setting the less MSTs has to worry about landscape and the better the framerate will be.

World Objects Density – Reducing this makes whole groups of objects disappear so if you are really stuck, try turning this down. This may cause whole spots of country side to disappear however if turned down too low.

It is also worth experimenting with the bottom four sliders, moving them to the left removes / reduces details but increases frame rate.

The Checkboxes on the right – We recommend turning off overhead wires, high detail shadows, specular lighting and dynamic shadows in that order. This will improve the speed; every little helps when it comes to frame rates so don't be afraid to turn something else off, you can always switch it back on later.

DirectX Diagnostic Utility

Sometimes you can get improvements in the sound system or less crashing in the game by altering the "hardware acceleration" setting in the DirectX configuration.

To do this, press the start button and choose "run", type "dxdiag.exe" and press OK to run the tool.

It may be worth running the tests but normally they all pass anyway unless you have other problems with your system outside the scope of this manual.

On the sound page is a slider – hardware sound acceleration level. This is normally fully right but sliding this to the left can sometimes solve problems. There is no OK or Save button, just changing this and exiting automatically saves it. If this has no effect, you should set it back – the further to the right the more it will rely on sound hardware, the more to the left it will use your main CPU power for sounds, which could impact frame rates.

Further Support

For support queries relating to this or any other **///EuropeanBahn///** product you may wish to contact us via the "Help Desk" on <http://www.trainstrains.co.uk/helpdesk/> detailing your problem, your PC specifications, other add-ons you have installed and so forth. The more information you provide the quicker we'll be able to help you out!



Credits

The EuropeanBahn team includes...

Ken Austin	Development Controller	General Scenery, Route Construction and Layout Design
Alan Salmon	Technical Manager	Scenery Design and Placement, Signal Placement, General Organisation and Track Texture Design
Pete Harvey	Modelling Guru	Beta Tester, Scenery, Locos and Stock
Steve Hornsey	Cab Guru	Trees, Cabs and Beta Testing
Gary Coupe	Activity Guru	Activities, Rolling Stock Physics and Sound, Graphics, Photography

Route and Activities Testing Mike Hambley

Hassocks and Wivelsfield Stations supplied under agreement with MakingTracks Software Ltd (<http://www.makingtracks-online.co.uk/>).

We are also grateful for the contributions made by: Tony Formoso, Matt Peddlesden, Matthew Walker, Mike Simpson and Edward Grabowski, plus all the team at First Class Simulation for their support in more way that you could imagine.

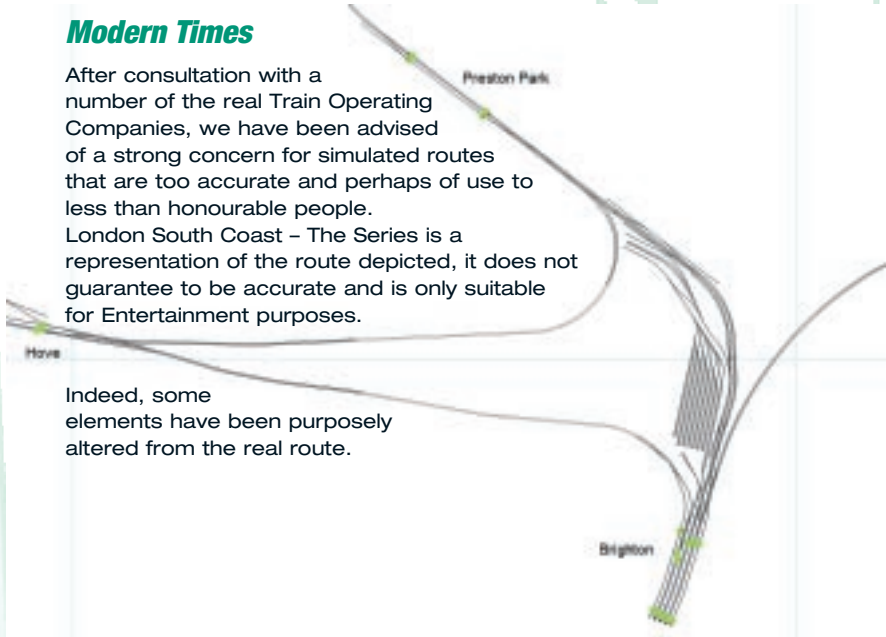


Modern Times

After consultation with a number of the real Train Operating Companies, we have been advised of a strong concern for simulated routes that are too accurate and perhaps of use to less than honourable people.

London South Coast – The Series is a representation of the route depicted, it does not guarantee to be accurate and is only suitable for Entertainment purposes.

Indeed, some elements have been purposely altered from the real route.



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