



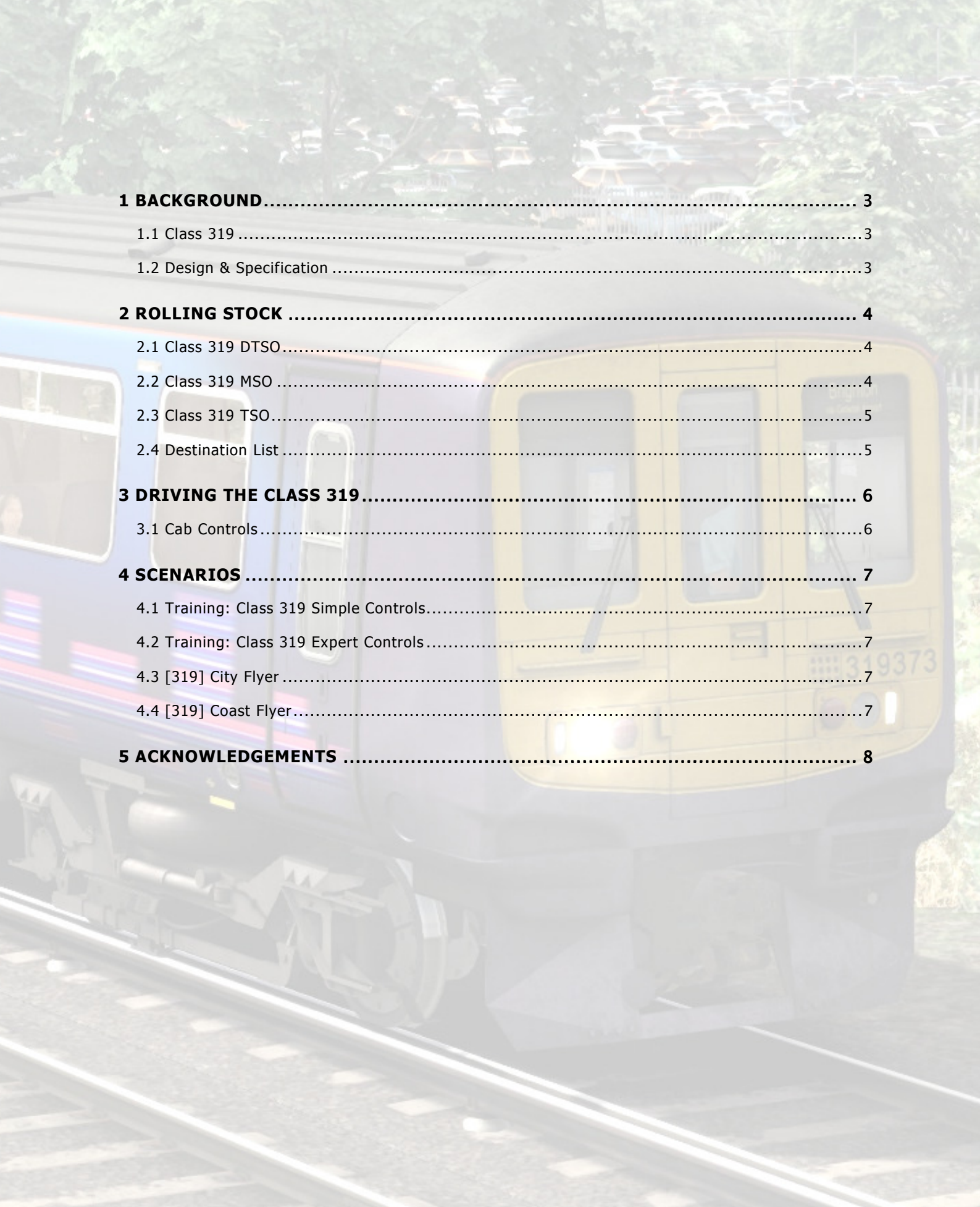
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GAMES

CLASS 319

ELECTRIC MULTIPLE UNIT



First  **Capital Connect**



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1 Background

1.1 Class 319

The British Rail Class 319 dual-voltage electric multiple-unit (EMU) trains were built by BREL, York, in two batches in 1987–88 and 1990. The trains were introduced for new north-south cross-London services from Bedford to Brighton, and since privatisation these services have been operated by Thameslink and First Capital Connect, the former franchise having been merged with the Great Northern section of the former WAGN franchise to form the latter train operating company on 1 April 2006 as a result of re-franchising. Class 319 units have dual-power pick-up, from either 25 kV alternating current (AC) overhead lines for services north of London, or 750 V direct current (DC) third rail to the south. However, some units were used only on outer suburban services in South London.

In the 1980s, there were plans for a rail service that would link Bedford and Brighton. These services would cross London in a north-south direction, and thus became the first route for many years to cross London from north to south. These services were branded Thameslink by Network SouthEast, which operated the services.

Before the Thameslink service became operational in 1988, stations along the Midland Main Line north of London were served by Class 317 electric multiple units, introduced in 1981. This required the electrification (using 25 kV AC overhead wires) of the line between Bedford and London St. Pancras and the branch to Moorgate. This service was therefore known colloquially as the "Bed-Pan" service. Key destinations included Bedford, Luton, St Albans, Moorgate, and London St. Pancras.

As the Thameslink service was to use a route with 25 kV AC OHLE north of Farringdon and along the branch to Moorgate, and 750 V DC third-rail electrification south of Farringdon, the Class 319 trains were built with dual-voltage capabilities, making them very versatile. Their body shape is slightly different from contemporary electric units due to restrictions in the loading gauge in Kings Cross tunnel, which meant that other dual-voltage units were not suitable. They were also required to have Emergency end doors in the cabs, due to the twin single bore layout of Smithfield tunnel preventing normal train evacuation.

Two sub-classes of Class 319 units were originally built. Over the years, units have been refurbished, creating five sub-classes, of which four still exist.

1.2 Design & Specification

TOPS Number	Class 319
Formation	4-car: DTSO+MSO+TSO+DTSO
Builder	BREL York
Total 319/3 Units Built	25 (converted from 319/1 units)
Locomotive Weight	140.1 tonnes
Vehicle Length	260ft 10in (79.52m)
Power Source	25kV AC OHE / 750V DC 3rd Rail
Power Output	1,438hp (1,072kW)
Top Speed	100Mph (161kmph)
Brake Types	Air

2 Rolling Stock

2.1 Class 319 DTSO



2.2 Class 319 MSO



2.3 Class 319 TSO

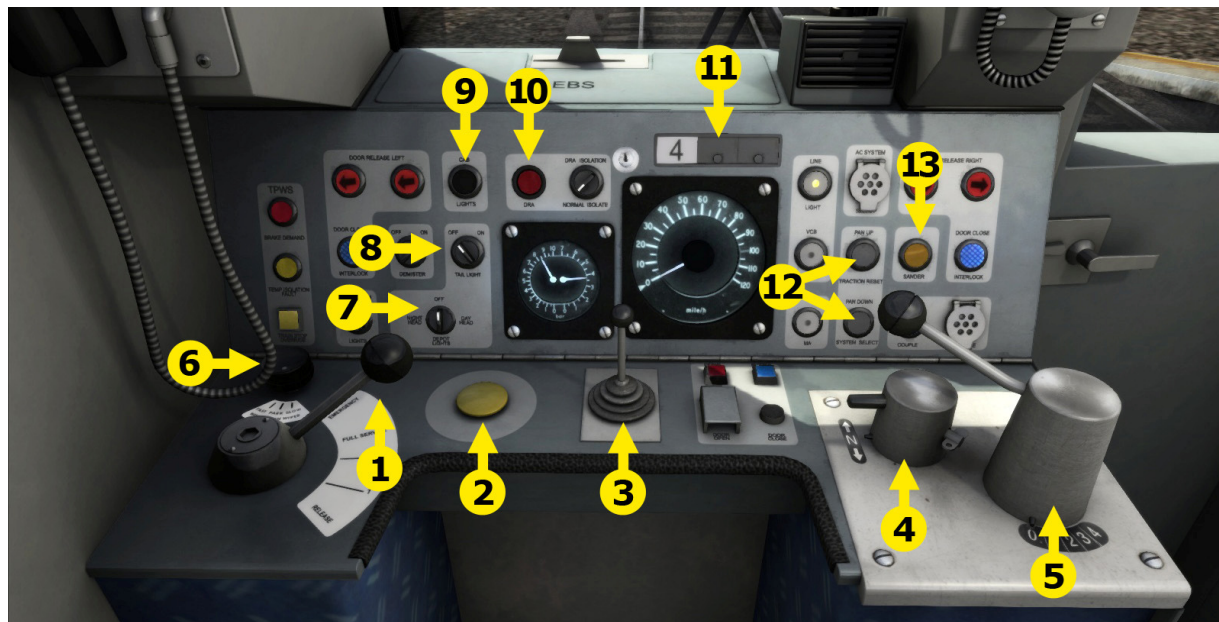


2.4 Destination List

A	Brighton via Gatwick Airport	J	London Blackfriars	S	Sevenoaks
B	Brighton	K	Kentish Town	T	Thameslink
C	City Thameslink	L	Luton	U	Sutton
D	Bedford	M	Moorgate	V	Victoria
E	London Bridge	N	Norwood Junction	W	Sutton Via Wimbledon
F	Farringdon	O	Orpington via Herne Hill	X	Special
G	Gatwick Airport	P	St Pancras	Y	Empty to Depot
H	Herne Hill	Q	St Albans City	Z	Not in Service
I	Horsham	R	Three Bridges	#	blank

3 Driving the Class 319

3.1 Cab Controls



- | | | | |
|---|--------------------------------|----|-----------------------------|
| 1 | Train Brake (; & ') | 9 | Cab Light (L) |
| 2 | AWS Reset (Q) | 10 | DRA |
| 3 | Horn (Space) | 11 | Car Set Reminder |
| 4 | Reverser (W & S) | 12 | Pantograph Up/Down (P) |
| 5 | Throttle (A & D) | 13 | Sander (X) |
| 6 | Wiper Switch - Left Window (V) | 14 | Wiper Switch - Right Window |
| 7 | Headlights (H & Shift H) | 15 | Fan |
| 8 | Tail Lights | - | Vigilance Reset (Q) |

*Driver Vigilance can be disabled/enabled by pressing CTRL+D

4 Scenarios

4.1 Training: Class 319 Simple Controls

Learn to drive the Class 319 with simple controls.

- **Duration** **5 minutes**

4.2 Training: Class 319 Expert Controls

Learn to drive the Class 319 with expert controls.

- **Duration** **5 minutes**

4.3 [319] City Flyer

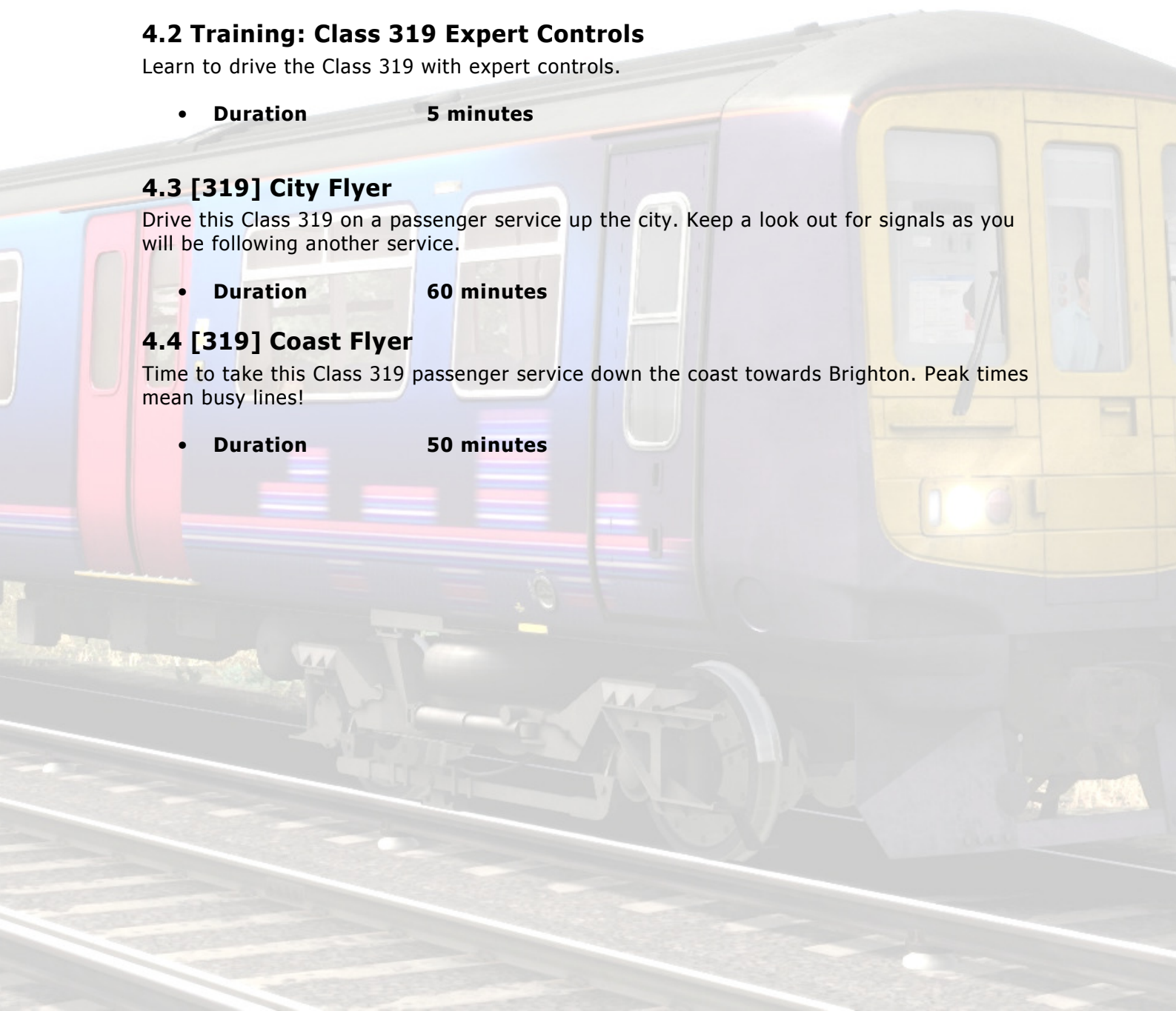
Drive this Class 319 on a passenger service up the city. Keep a look out for signals as you will be following another service.

- **Duration** **60 minutes**

4.4 [319] Coast Flyer

Time to take this Class 319 passenger service down the coast towards Brighton. Peak times mean busy lines!

- **Duration** **50 minutes**



5 Acknowledgements

RailSimulator.com would like to thank the following people for their contribution to the development of the Class 319

Beta Testing Team

