



London Transport Heritage Collection



1 ROLLING STOCK.....	4
1.1 Class 20	4
1.1.1 Background	4
1.1.2 Design & Specification	5
1.2 Pannier 5700 Class.....	5
1.2.1 Background	6
1.2.2 Design & Specification	6
1.3 1938 Tube Stock	7
1.3.1 Background	7
1.3.2 Design & Specification	7
2 DRIVING THE CLASS 20	8
2.1 Cab Controls and image.....	8
2.2 Slow Speed Control	9
3 DRIVING THE PANNIER 5700 CLASS	10
3.1 Cab Controls and image.....	10
4 DRIVING THE 1938 TUBE STOCK.....	11
4.1 Cab Controls and image.....	11
5 SCENARIOS	12
5.1 01. [1938] Red Red Line	12
5.2 02. [1938] The Old Breed	12
5.3 03. [1938] The Veteran Returns.....	12
5.4 04. [Pannier] Dehydration Emergency	12
5.5 05. [Pannier] The Heritage Show	12
5.6 06. [Class20] A Class of Stone	13
5.7 07. [Class20] The Work Horse.....	13
6 RAILFAN MODE SCENARIOS	14
6.1 [RailfanMode] Breakwater Docks	14
6.2 [RailfanMode] St Paul's	14
6.3 [RailfanMode] Spinswit Harbour.....	14
7 ACKNOWLEDGEMENTS	15

Whilst we do our utmost to reproduce sounds that are accurate and true-to-life, sometimes these sounds may not completely tally with the user's expectation. Due to the nature of the simulation, it is often not possible to reproduce a completely accurate soundscape for a variety of reasons such as limitations with our current technology and occasional inability to gain meaningful access to the locomotives being created. You should therefore regard the audio reproduction for our locomotives as authentic interpretations rather than perfect recreations.

1 Rolling Stock

1.1 Class 20



1.1.1 Background

The British Rail Class 20 diesel locomotives, also known as the English Electric Type 1, were built by English Electric at Vulcan Foundry and Robert Stephenson and Hawthorns. In total, 228 locomotives of the class were built between 1957 and 1968. The large number is in part because of the failure of other early designs to provide reliable locomotives in the same power range.

The locomotives were originally numbered D8000–D8199 and D8300–D8327, before they were re-numbered in the BR TOPS scheme. They are also known by their nickname as "Choppers", a name derived from the distinctive beat that the engine produces under load, which resembles the sound of a helicopter.

A total of 22 Class 20 locomotives are preserved, including the first of the class built, D8000, which is part of the National Railway Collection at the National Railway Museum in York.

1.1.2 Design & Specification

Builder	English Electric at Vulcan Foundry and Robert Stephenson and Hawthorns
Locomotive Weight	73.2 tonnes
Vehicle Length	46 ft 9 1/2 in (14.262 m)
Vehicle Width	8 ft 9 in (2.67 m)
Fuel Capacity	460 US gal
Vehicle Power	1,000 hp (746 kW)
Top Speed	60 MPH (96 km/h)
Brake Types	Vacuum/Air
Tractive Effort	42,000 lbf (186.8 kN)

1.2 Pannier 5700 Class



1.2.1 Background

The Great Western Railway (GWR) 5700 Class is a class of 0-6-0 pannier tank steam locomotive, built between 1929 and 1950. 863 were built, making them the second most-produced British class of steam locomotive. The GWR had favored Pannier Tank locomotives since 1911 when they had started rebuilding saddle tank locomotives originally built between 1870 and 1905. By 1929 these older locomotives were in need of replacement.

The first 5700s were almost identical in appearance to several of the older converted locos (e.g. classes 645, 1701, 1854, 2721) and had round spectacles (windows) in the cab front. However, those built after 1933 from Class 8750-onwards had rectangular windows and a slightly different cab profile which was virtually identical to the style introduced with the GWR 5400 Class in 1931. Whilst they can be viewed as a simple update of the GWR 2721 Class, the Collett improvements were worthwhile and the class became as synonymous with the GWR as Castles and Kings, lasting until the end of steam on the Western Region of British Railways.

The last 5700 in service was at Mountain Ash colliery, where it was working well into the 1970s and could still be seen on shed in 1980.

1.2.2 Design & Specification

Builder	Great Western Railway.
Locomotive Weight	48.26 tonnes
Vehicle Length	31'2"(9.5m)
Fuel Capacity	3t Coal / 1,400 US gal (5,500L) Water
Vehicle Power	750hp (559kW)
Top Speed	60 MPH (96 km/h)
Brake Type	Vacuum
Tractive Effort	22,515 lbf
Ideal Fire Mass	505lbs (50% on HUD)

1.3 1938 Tube Stock



1.3.1 Background

1938 Tube stock were built between 1935 – 1940 for use on the London Underground Tube system. A total of 1,121 cars were built, and were in service with London Transport from 1938 to 1988.

The trains have worked on the Northern and Bakerloo lines, with an additional seven trains also being used on the Piccadilly line.

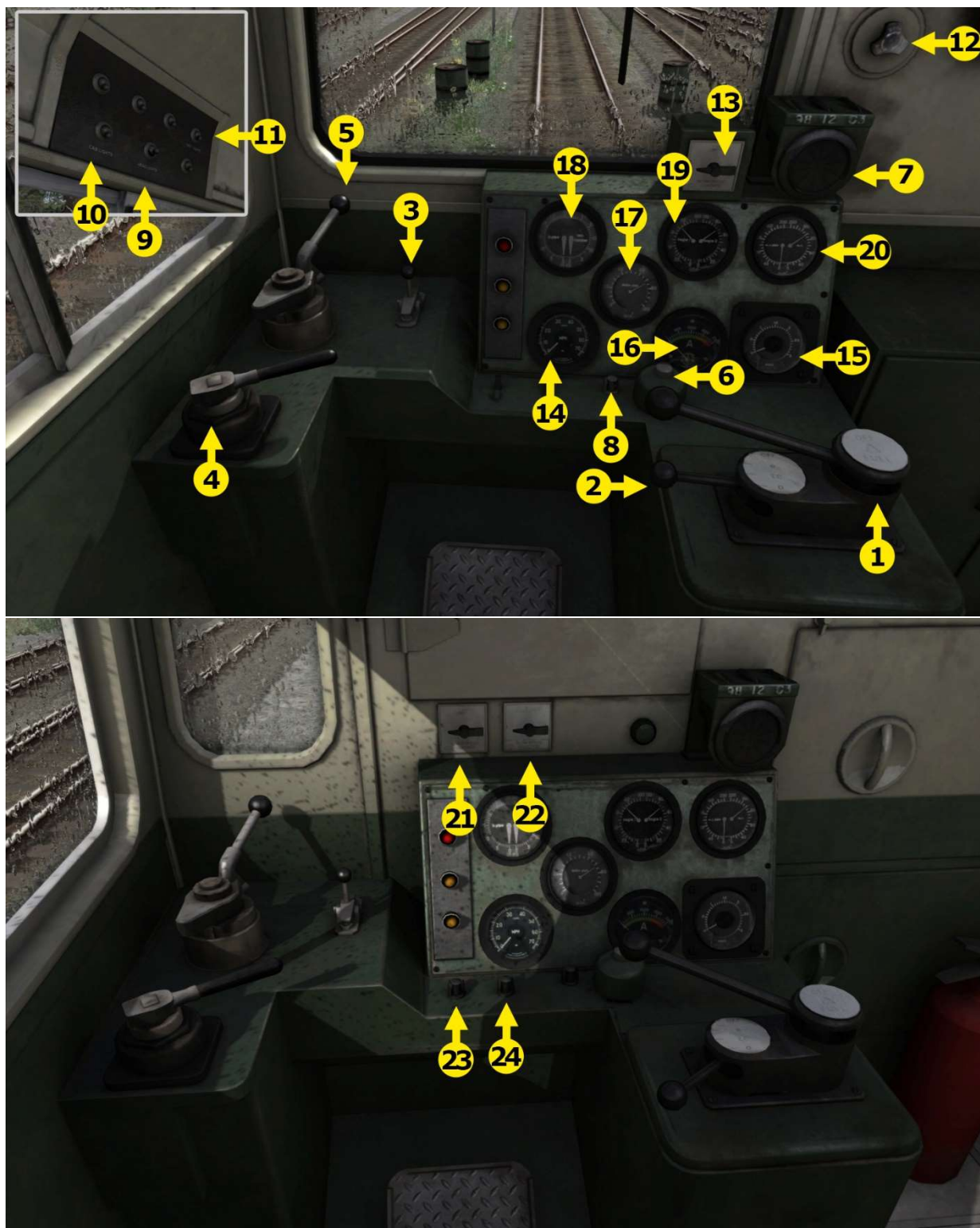
Some examples are still in daily use operating the Island Line service on the Isle of Wight, and allocated TOPS Class 483. This makes them the oldest operating timetabled passenger stock on the National Rail network.

1.3.2 Design & Specification

Total Produced	1,121
Locomotive Weight	DM 27.8 tonnes, NDM 26.3 tonnes, T 20.98 tonnes
Build Date	1935 - 1940

2 Driving the Class 20

2.1 Cab Controls and image



1	Throttle	13	Slow Speed Control On/Off
2	Reverser	14	Speedometer (MPH)
3	Horn	15	Slow Speedometer
4	Loco Brake	16	Ammeter
5	Train Brake	17	Air Brake Pipe Pressure
6	AWS Reset	18	Vacuum Pipe/Chamber Pressure
7	AWS Sun Flower	19	Air Bogie Brake Pressures
8	Sander	20	Air Reservoir/ Brake Pipe Pressures
9	Headlights Switch	21	Slow Speed Control On/Off
10	Cab Light Switch	22	Slow Speed Control Set 1 / 2 / 3
11	Instrument Lights Switch	23	Engine On/Off
12	Wiper Switch	24	Engine On/Off

2.2 Slow Speed Control

To enable or disable the Slow Speed Control press **Shift+B**, or press the in cab switch marked 13 or 21 on the control key image shown above.

To switch in between speeds press **Crtl+B** and **Crtl+Shift+B**, or press the in cab switch marked 22.

There are three speed settings.

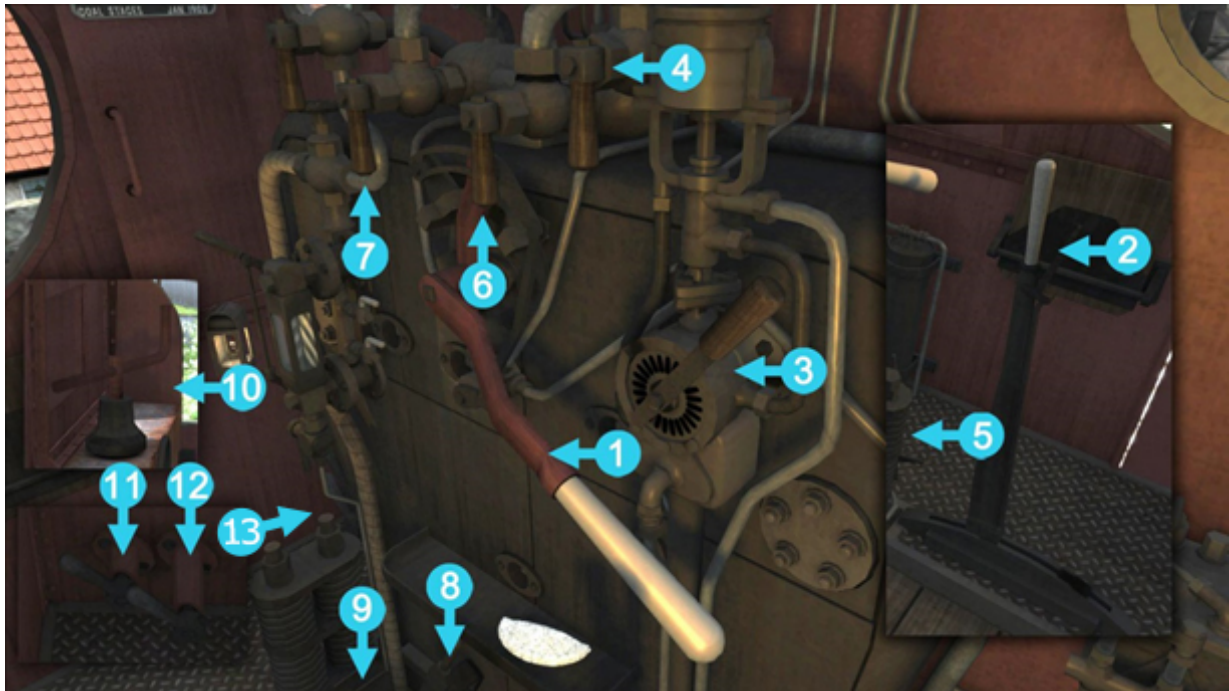
Speed Set 1 = 0.7 mph

Speed Set 2 = 1.7 mph

Speed Set 3 = 2.7 mph

3 Driving the Pannier 5700 Class

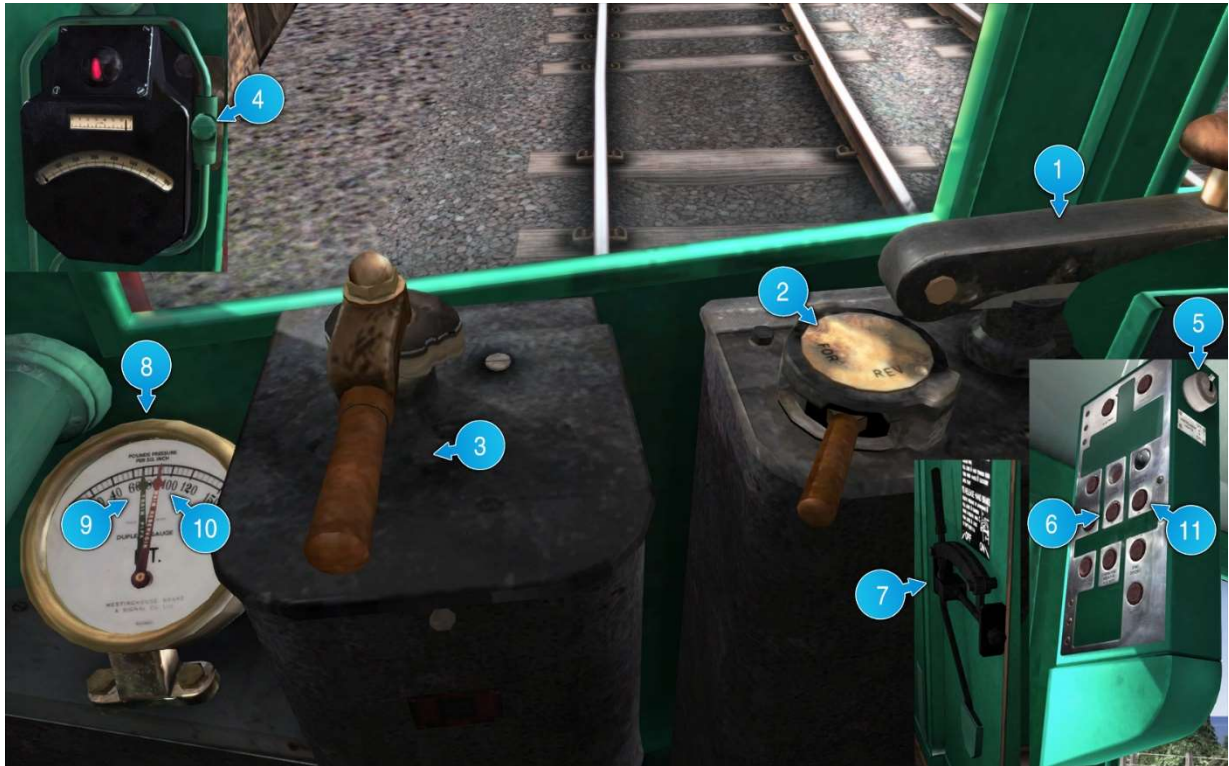
3.1 Cab Controls and image



1	Regulator	8	Exhaust Injector Steam Valve
2	Reverser	9	Firebox Doors
3	Train Brake	10	Dampers
4	Blower	11	Handbrake
5	Cylinder Cocks	12	Exhaust Injector Water Valve
6	Live Injector Steam Valve	13	Live Injector water Valve
7	Whistle		

4 Driving the 1938 Tube Stock

4.1 Cab Controls and image



- | | | | |
|---|-------------------|----|-----------------------|
| 1 | Power Handle | 8 | Brake Gauge |
| 2 | Reverser | 9 | Train Pipe Needle |
| 3 | Train Brake | 10 | Main Reservoir Needle |
| 4 | Horn | 11 | Window Wipers |
| 5 | Instrument Lights | | |
| 6 | Headlight | | |
| 7 | Hand Brake | | |

5 Scenarios

5.1 01. [1938] Red Red Line

Your tour of the heritage collection route begins here with the 1938 Tube Stock. You'll be in charge of this historic stock starting from St Paul's in the North before making your way down South ending at Vindelis, with 4 scheduled stops on the way.

Duration: 20 minutes

Difficulty: Easy

5.2 02. [1938] The Old Breed

The 1938 Tube Stock will act as a shuttle service this evening, as a large number of services have been cancelled due to the snow. You will begin the shuttle from Vindelis making your way around the central part of the route, before returning to Vindelis from the opposite direction.

Duration: 25 minutes

Difficulty: Easy

5.3 03. [1938] The Veteran Returns

The 1938 Tube Stock will be put to work today, as this service is scheduled for a full length run of the route. You will be at the controls of the Tube Stock from St Paul's in the North and ending back at St Paul's making 7 stops along the way.

Duration: 35 minutes

Difficulty: Easy

5.4 04. [Pannier] Dehydration Emergency

Next up in the Heritage Collection tour is the historic Pannier steam locomotive. On this passenger run, your Pannier is extremely low on water, due to maintenance work on the pipes at Vindelis. You will have to make your way down to Stony Point, to fill up your engine before returning to Vindelis.

Duration: 25 minutes

Difficulty: Medium

5.5 05. [Pannier] The Heritage Show

The Pannier is scheduled for a special service this morning. You will be in charge of the Pannier in this special service showing off the historic rolling stock to all bystanders around the route. This consist also includes a special passenger coach so the people can be a part of this historic run from Vindelis, making your way around the route before ending at Stony Point in the South.

Duration: 35 minutes

Difficulty: Medium

5.6 06. [Class20] A Class of Stone

Lastly in the Heritage Collection tour is the Class 20 Diesel engine. You'll be at the controls of this Class 20 Diesel engine, beginning from Stony Point, you will take a consist of empties to Stony Bay Quarry where you will drop them off. You will then couple up to the stone loaded wagons, before making your way back to Stony Point as far as King Henry VIII Halt.

Duration: 50 minutes

Difficulty: Hard

5.7 07. [Class20] The Work Horse

The Class 20 is required for some early morning work. You'll be in charge of this Class 20 Diesel engine taking loaded conflat wagons for a scheduled delivery at Vindelis Goods. You will begin by picking up the empties, before loading them up by using the swing crane and coupling up to already loaded up conflat. Once this is done you will make your journey to Vindelis.

Duration: 25 minutes

Difficulty: Hard

6 Railfan Mode Scenarios

Railfan Mode provides a unique chance to observe and enjoy the operations of trains without the pressure and involvement of driving them. Railfan Mode scenarios are positioned at various key points along the route and provide camera functionality to sit back and watch the action unfold.

These scenarios are located on the Drive screen under the Career tab.

6.1 [RailfanMode] Breakwater Docks

Located at Breakwater Docks, observe the operations and passing trains from a good vantage point. See what you can capture as the action unfolds.

Duration: 10 Minutes
Difficulty: Easy

6.2 [RailfanMode] St Paul's

Located at St Paul's, observe the operations and passing trains from a good vantage point. See what you can capture as the action unfolds.

Duration: 10 Minutes
Difficulty: Easy

6.3 [RailfanMode] Spinswit Harbour

Located at **Spinswit Harbour**, observe the operations and passing trains from a good vantage point. See what you can capture as the action unfolds.

Duration: 10 Minutes
Difficulty: Easy

7 Acknowledgements

Dovetail Games would like to thank the following people for their contribution to the development of the London Transport Heritage Collection.

Beta Testing Team

