Class 68

Release Version 1.0

1 Background

1.1 Class 68

The Class 68 is a powerful, mixed traffic diesel-electric locomotive initially built between 2013 and 2014 by Vossloh for Direct Rail Services. The design is derived from the Eurolight family of locomotives and is called UKLight by the manufacturer.

An order of 15 locomotives was placed by DRS in January 2012 for use on passenger and intermodal operations around the UK, the first locomotive to be built, 68001 Evolution was sent to the Czech Republic for extensive testing of its power and reliability. The first to enter the UK, 68002 Intrepid arrived in January 2014.

DRS mainly use their new locomotives to haul container freight services, however their signed agreement between themselves and Venice-Simplon Orient Express sees Class 68s hauling the Northern Belle service from time to time.

While DRS retain direct operation of 6 Class 68s and are waiting for an order of 17 new locos to be built in the near future, the other 7 have been leased to passenger Train Operating Companies, with 5 going to Chiltern Railways and the last 2 going to ScotRail.

Chiltern Railways use their Class 68s on express services from London Marylebone towards Birmingham, they had to modify them so they could be operated with Mk3 DVT stock and 2 DRS locos also received the same modifications. ScotRail use their Class 68s to haul a rake of 6 Mk2e coaches across the Fife Circle Line alongside Class 158s and 170s.

With 3,800 horsepower, a top speed of 100mph and a hefty weight of 85 tons, the ultra-modern Class 68 is a perfect example of a mixed traffic locomotive, being able to haul heavy freight loads and perform mainline passenger services with ease.

1.2 Design & Specification

Power Type	Diesel Electric
Builder	Vossloh
Locomotive Weight	85t
Total Built	19 (as of 2015)
Build Date	2013 – 2014, 2015
Vehicle Power	3,800hp (2,800kW)
Top Speed	100mph (160km/h)
Brake Types	Blended: Rheostatic braking (2,100kW); Electro-pneumatic

2 Rolling Stock

2.1 Class 68 - ScotRail

3 ScotRail Mk2E Coaches

3.1.1 Mk2E BSO

3.1.2 Mk2E FO

3.1.3 Mk2E TSO

4 Driving the Class 68

4.1 Cab Controls

1	Cab Heating
2	DSD Reset (Numpad Enter) **
3	Horn (Space)
4	AWS Reset (Q)
5	Sander Switch (X)
6	Direct Brake Control ([or])
7	Auto Air Brake (‘ or ;)
8	Desk Light
9	Instrument Light (I)
10	Cab Light (L)
11	Headlight Dimmer
12	AWS Isolate
13	DRA
14	Train Length
15	Reverser (W or S)
16	Power Controller (A or D)
17	Screen Controls
18	Emergency Brake (Backspace)
19	Hazard Lights
20	Wheel Slip Protection (Override: C)
21	Head/Tail Lights (H or Shift+H)
22	Wipers (V)
23	Parking Brake (/)
24	Engine On/Off (Z)
25	ETS On/Off (Ctrl-Shift-Z)

** DSD On/Off (Ctrl + D)

4.2 Driving Features

Auto Air Braking
The Air brake is controlled through the Auto Air Brake (7) and has four notches to utilise.

The ‘Release’ notch, as named, releases any pressure in the Air brake.

The ‘Hold’ notch holds the current amount of brake pressure.

The ‘Apply’ notch adds more brake pressure gradually, for however long it is held there until a maximum brake application is achieved.

The ‘Emergency’ notch sends all available air from the brake pipe into the brake cylinder and can only be accessed by holding the Auto Air Brake in its maximum application position for three seconds.

For ease of use it is recommended to use the keyboard hotkeys for operating the Auto Air Brake. This allows users to sit the Auto Air Brake in the hold position and then simply tap up and then down to add slight amounts of air pressure to the brake cylinder. This also helps to avoid placing the brake its maximum position and accidently triggering an emergency brake application.

Dynamic Braking
The Dynamic brake is accessed through the negative side of the Power Controller (16). Speeds above 3MPH will allow the Class 68 to use a proportion of the dynamic brake based on the position of the lever.

ETS – Electric Train Supply
The Class 68 powers its passenger coaches through ETS (25). When the switch is activated a spool-up period begins. Once completed the passenger lights are activated. If the switch is de-activated the passenger coaches will lose power and the lights will turn off. The RPM of the engine is increased to account for the increase in power needed to run the electrics.

5 Scenarios

For driving tutorials, please visit the Academy from the main TS2016 menu screen*

5.1 [68] 1. ScotRail Saviour

ScotRail has taken several Class 170s out of service for maintenance and has therefore roped in a small fleet of Class 68s to help run replacement services between Edinburgh and Glasgow. Check your briefing for today's scheduled stops.

Duration: 55 Minutes
Difficulty: Easy

5.2 [68] 2. ScotRail Saviour: Return Trip

Drive a replacement express service from Queen Street Glasgow to Edinburgh Waverly.

Duration: 60 Minutes
Difficulty: Medium

5.3 [68] 3. A Helping Hand

Join another one of ScotRail's Class 68 services at the Camelon Junction, waiting for a heavy coal train to clear the signals. You'll be following 37708 all the way to Edinburgh, so keep a check on the signals.

Duration: 55 Minutes
Difficulty: Medium

5 Acknowledgements

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Beta Testing Team
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