



# Class 87 Electric Locomotive

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## 1 Background

### 1.1 Class 87 Overview

The British Rail Class 87 is a type of electric locomotive built from 1973-75 by British Rail Engineering Limited. 36 of these locomotives were built to work passenger services over the West Coast Main Line and they were the flagships of British Rail's electric locomotive fleet until the late 1980s when the Class 90s started to roll off the production line. The privatisation of British Rail saw all but one of the fleet transferred to Virgin Trains where they continued their duties until the advent of the new Pendolino trains. The 87s were then transferred to other operators or withdrawn.

### 1.2 Class 87 Origins

A requirement for more electric locomotives came about after the electrification of the WCML was extended from Weaver Junction north of Crewe to Preston, Carlisle and Glasgow. Initially, three Class 86 locomotives were used as test-beds to trial equipment (mainly electrical equipment and suspension) that would be used in the new locomotives; effectively, these locomotives were Class 87s in everything but appearance.

The external design of the Class 87 was clearly derived from that of the Class 86; the only major detail differences were two front cab windows on the 87 instead of the three of the 86, and also the lack of headcode indicator boxes. The 87s were also fitted with multiple working equipment which enabled locomotives to work with other members of the class (and some Class 86s) while controlled by one driver. Power output was also increased to 5000 hp in order to deal with the more demanding gradients on the northern half of the WCML such as Shap Fell and Beattock Summit.

### 1.3 Technical Specification

<b>TOPS Number</b>	Class 87
<b>Wheel Arrangement</b>	Bo-Bo
<b>Weight</b>	84 tonnes
<b>Height</b>	12ft 2¼in (3.77m) with pantograph down
<b>Length</b>	58ft 6in (17.83m)
<b>Width</b>	8ft 8in (2.68m)
<b>Electrical System</b>	25kV AC Overhead Pantograph
<b>Power Output</b>	5,000hp (3,730kW)
<b>Maximum Tractive Effort</b>	58,000lb (258kN)
<b>Brake Type</b>	Air
<b>Axle load class</b>	RA 6

## 2 The Class 87 Intercity Executive

### 2.1 Class 87 in Intercity Executive livery



## 3 Rolling Stock

### 3.1 Intercity Mk3 First





### 3.2 Intercity Mk3 Second



### 3.3 Intercity Mk3 RFB



## 4 Cab controls



1. Loco brake
2. Train brake
3. Anti-slip button
4. Wipers
5. Horn
6. AWS reset
7. Headlight switch
8. Pantograph
9. Fault Reset

10. Reverser
11. Tap Changer
12. Instrument Lights



## 5 Scenarios

### 5.1 Opening the Taps

Learn the controls of the Class 87 locomotive and take some empty coaching stock on the short run from Polmadie Depot to Glasgow Central.

- Rating: Easy
- Duration: 15 minutes
- Scenario Type: Standard

### 5.2 AC from GC

Following on from what you have learned in scenario 1, you are now able to take charge of a passenger service.

- Rating: Medium
- Duration: 35 minutes
- Scenario Type: Standard

### 5.3 Evening Rescue

Following the earlier failure of an electric locomotive that was hauling a Glasgow bound express at Carlisle, you have been sent from Carlisle Yard to collect the coaching stock and continue the service.

- Rating: Hard
- Duration: 95 minutes
- Scenario Type: Standard and Career

## 6 Locomotive Numbering

Provided with the Class 87 Electric Locomotive Add-on is a selection of Nameplates

These nameplates are accessed via the numbering system provided with Train Simulator 2013. To change the number, open the Scenario Editor. Double Click on the Class 87 locomotive and open its property window on the right hand side.

Number	Nameplate	Numbering System
87001	Royal Scot	a87001
87003	Patriot	b87003
87004	Britannia	c87004
87010	King Arthur	d87010
87013	John o'Gaunt	e87013
87016	Sir Francis Drake	f87016
87017	Iron Duke	g87017
87018	Lord Nelson	h87018
87020	North Briton	i87020
87022	Cock 'o the North	j87022
87023	Velocity	k87023
87025	Borderer	l87025
87026	Redgauntlet	m87026
87031	Hal o' the Wynd	n87031
87032	Kenilworth	o87032

## 7 Credits

The team at Railsimulator.com would like to thank the following:

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