BR Class 105



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Release Version 1.0

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1 Background

1.1 Loco

Originally manufactured by Cravens Limited of Sheffield from 1956 to 1959 the British Rail Class 105 diesel multiple units shared the same body profile as the British Railways Mk1 coaches.

They were operated around Newcastle, Scotland, Cumbria, Manchester, North London, East Anglia and Lincolnshire. The last vehicles were withdrawn from service in 1988.

The Norwich depot was the last to use the units, returning set 30 to its green livery, and even gaining some celebrity status towards the end of its service life. Although it was discovered that the unit was contaminated with asbestos and was consequently scrapped.

The class 105 has fared rather badly in preservation, 51485 and 56121 were preserved by the West Somerset Railway but moved to the East Lancashire Railway in 1997, where they are being restored after being stripped from the asbestos contamination. 56456 is based on the Llangollen Railway, working with a Class 127. The National Railway Museum had intended to preserve 53812, which had been de-contaminated but a lack of space prevented the car and the Class 100 coupled to it from being moved to York and they were vandalised beyond repair at Crewe.

1.2 Design & Specification

Power Type	Diesel
Operator	British Rail
Vehicle Length	57ft 6 in (17.53m)
Build Date	1956-1959
Total Produced	302 Total Cars
Power Output	150 bhp (112 kW)
Maximum Speed	70 mph (113 km/h)

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2 Rolling Stock

2.1 BR Class 105 DMBS



2.2 BR Class 105 DTCL



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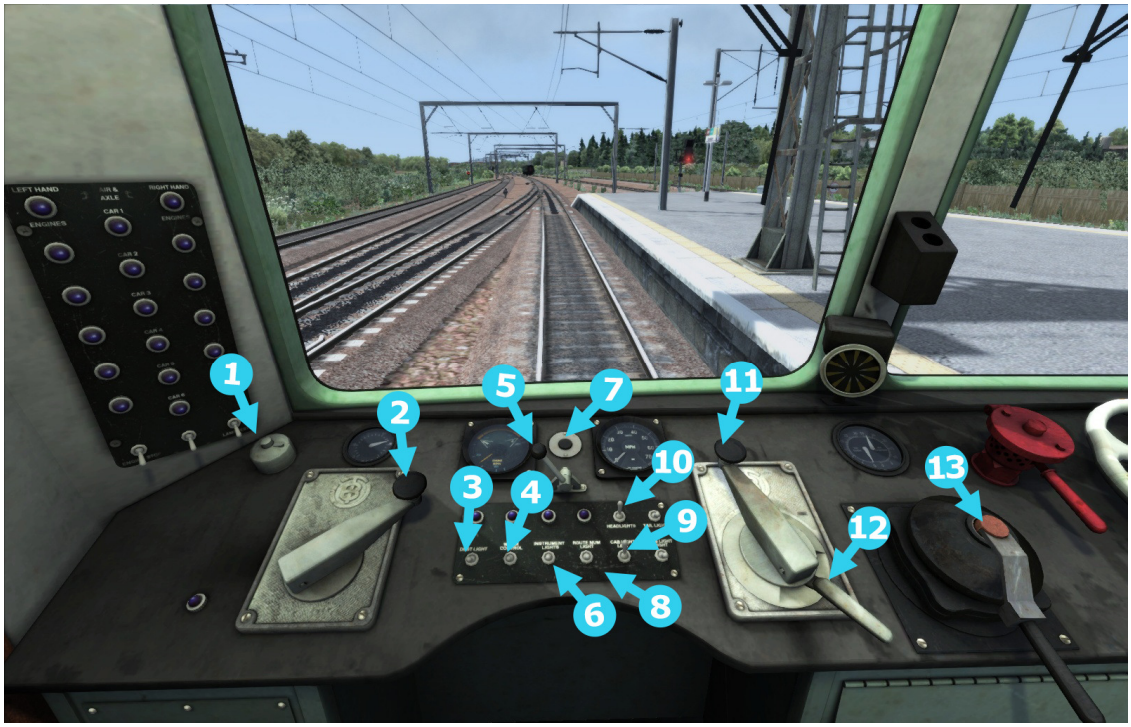
3 Driving the BR Class 105

3.1 Cab Controls



1	AWS Reset	9	Cab Light Switch
2	Throttle	10	Headlight Control
3	Destination Lights	11	Gear Lever
4	Wiper Control	12	Reverser
5	Horn Control	13	Train Brake Control
6	Instrument Lights	14	Parking Brake
7	Signal Buzzer	15	Destination Handle
8	Route Number Lights		



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3.2 Locomotive Keyboard Controls

Key Equivalent	Action
D A	Decrease or Increase the Regulator.
S W	Decrease or Increase the Reverser.
: ; " '	Decrease or Increase the Train Brake.
{ [}]	Decrease or Increase the Locomotive Brake.

3.3 General Keyboard Controls

Key Equivalent	Action
T	**Load/Unload.** Press once to load/unload passengers or freight.
H	**Lights.** Repeatedly pressing will cycle through headlight states.
Q	**(Expert) Alerter.** The Alerter is a system used to ensure that the driver has seen a signal. If the alert sounds (a black/yellow striped symbol is shown in the cab) it must be acknowledged by pressing the Alerter button or the emergency brakes will be applied.
X	**(Expert) Sander**. Causes sand to be laid on the rails next to the wheels to assist with adhesion. Press once to apply sand and again to stop.
Space	**Horn.** Sound the locomotive horn.
? /	**Handbrake On/Off.** This icon is displayed in the Coupling view
Shift Ctrl C	**Couple Manually.**

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3.4 Driving Technique

Starting the Train

Move the Reversing Handle into the Forward position and set 15" vacuum in the Brake Pipe by moving the Brake Valve into the Release position until the gauge shows 15". Move the handle back into the Hold sector to maintain the vacuum level.

If the guard gives a 'Right Away' signal (two buzzes), acknowledge him by pressing 'B' twice and move the Gear Selector into 1st gear. Release the brake fully by moving the handle fully to the right and leave it there. Move the Power Controller to the Full position and let the train accelerate.

Changing Gear

The change up into 2nd gear needs to happen at around 15 mph. When you reach that speed bring the Power Controller back to Idling and wait a few seconds for the engine speed to fall, move the Gear Selector to the 2nd gear position wait 2 seconds for the gearboxes to respond and then apply full power again. The speeds at which the other gear changes should be made are in the table below:

Speed Range (MPH)	Gear Ratio
0 - 15	1st
15 - 27	2nd
27 - 41	3rd
41 - 70	4th

When you've reached the desired speed (maximum permitted is 70 mph) ease back on the Power Controller. When coasting (Putting the Power Controller back to Idle), you must be in 4th gear to prevent damage occurring to the gearbox.

Gradients

If you come to an adverse gradient and speed can't be maintained with full power then it will be necessary to change down to a lower gear, for example if you're running in 4th gear and the speed drops below about 40 mph. To change down bring the Power Controller back to idling and immediately select the next lower gear, pause for 2 seconds and then re-apply power. The speeds for down changes in other gears can be deduced from the table show above.

Stopping the Train

To stop the train, return the Power Controller to Idle, select 4th gear, and apply the brake by moving the Brake Valve into the Apply sector. The vacuum will start to drop and the brakes will apply. The further you move into the Apply sector the faster the vacuum will drop and therefore the faster the brakes will come on. To hold the desired vacuum move the valve back into the Hold sector.

Keep 4th gear selected until you're almost stopped and then select Neutral.

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4 Scenarios

For driving tutorials, please visit the Academy from the main TS2015 menu screen*

4.1 [105] Barnard Castle to Crook

Starting at Barnard Castle, this is an early morning commuter service to the industrial estate at Crook.

Morning, Driver! Today you'll be taking a stopping passenger service from Barnard Castle to Crook. Good luck!

Difficulty: Easy
Duration: 50 Minutes

4.2 [105] Darlington to Barnard Castle

It's a rainy summer's evening and the workers from the Gasworks are tired and want to get home! You are tasked with taking this passenger service from Darlington to Barnard Castle.

Good evening driver! Tonight you have been tasked with taking passengers from Darlington to Barnard Castle, stopping at all stations on the way.

Difficulty: Easy
Duration: 45 Minutes

4.3 [105] Darlington to Stanhope

An early morning commuter service from Darlington to the mines at Stanhope. Snowy conditions and thick fog conspire to make this a tricky journey.

Good morning driver. Today you'll be taking this stopping service to Stanhope. Because of the adverse conditions due to this week's snowfall and today's fog, take care while driving.

Difficulty: Hard
Duration: 60 Minutes

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5 Acknowledgements

Dovetail Games would like to thank the Beta Testing Team for their contribution to the development of the BR Class 105.

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