

SOUTHERN RAILWAY S15 CLASS





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1 BACKGROUND

1.1 SR S15 CLASS

The SR S15 class was a British 2-cylinder 4-6-0 freight steam locomotive designed by Robert W. Urie, based on his H15 class and N15 class locomotives. The class had a complex build history, spanning several years of construction from 1920 to 1936. The first examples were constructed for the London and South Western Railway (LSWR), where they hauled freight trains to the south coast ports and further west to Exeter, as well as occasional passenger work in conjunction with their larger-wheeled N15 class counterparts.

Following the Grouping of railway companies in 1923, the LSWR became part of the Southern Railway, and the Chief Mechanical Engineer of the newly formed company, Richard Maunsell, increased the S15 class strength to 45 locomotives. Maunsell incorporated several improvements, notably to the steam circuit and the locomotive's loading gauge, allowing it to operate on routes with height and width restrictions.

The new locomotives were built in three batches at Eastleigh, and were in service with the Southern Railway for 14 years. The locomotives continued in operation with the Southern Region of British Railways until 1966. Seven examples have been preserved for use on heritage railways and are currently in varying states of repair.



1.2 DESIGN & SPECIFICATION

Power Type Steam
Locomotive Weight 137.8 tons

Vehicle Length 65 ft 6.75 in (19.98m)

Build Date 1920 - 1936

Tractive Effort 29,860 lbf (132.8 kN) **Power Class** SR – A, BR - 6F

Total Produced 45

Fuel Capacity 5,000 gallons (23,000L) water, 8 tons coal

2 ROLLING STOCK

2.1 SR S15 LOCOMOTIVE - SR OLIVE GREEN



2.2 SR S15 LOCOMOTIVE - SR BLACK



2.3 SR OLIVE GREEN MAUNSELL 8-WHEEL BOGIE TENDER



2.4 SR BLACK MAUNSELL 8-WHEEL BOGIE TENDER



2.5 SR BULLEID 59FT BRAKE THIRD (DIA. 2121)



2.6 SR BULLEID 64FT 6IN BRAKE THIRD (DIA. 2)22)



• This coach has two "head out" passenger views.

2.7 SR BULLEID 59FT COMPOSITE (DIA. 2316)

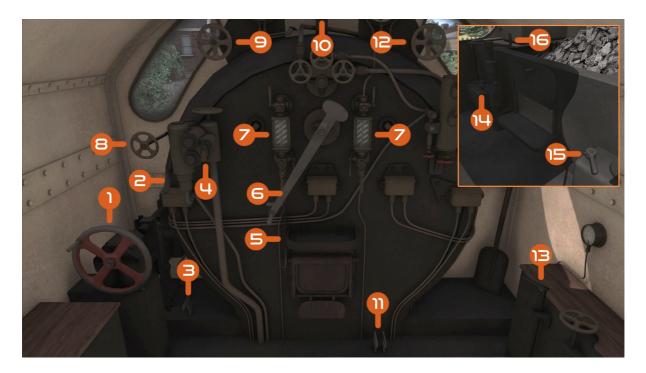


2.8 SR BULLEID 64FT 6IN COMPOSITE (DIA. 2317)



3 DRIVING THE S15 CLASS

3.1 CAB CONTROLS



- 1 Reverser
- 2 Train Brake
- 3 Cylinder Cocks
- 4 | Small Ejector
- 5 Firebox Doors
- 6 Regulator
- 7 Water Gauge Glass Protectors
- 8 Blower

- 9 | Live Steam Injector Steam Valve
- 10 | Whistle
- 11 Dampers
- 12 | Exhaust Steam Injector Steam Valve
- 13 | Sander
- 14 | Exhaust Steam Injector Water Valve
- 15 | Live Steam Injector Water Valve
- 16 | Handbrake

3.2 LOCOMOTIVE KEYBOARD CONTROLS

Key	Action
A/D	Regulator Open / Close
W/S	Reverser Forward / Reverse
'/;	Train Brake On / Off
J	Small Ejector On / Off
]	Brake Reservoir Release Valve Open / Closed
Page Up / Page Down	Brake Mode Cycles through brake modes
E	Smokebox Door Open / Close
H / Shift+H	Headlamps/Disks Cycles through 17 headlamp/disk states
С	Cylinder Cocks Open / Close
N / Shift+N	Blower On / Off
M / Shift+M	Dampers Open / Close
F / Shift+F	Firebox Door Open / Close
R	Stoke Fire Press and hold
Ctrl+R	Automatic Fireman On/Off
В	Realistic / Legacy Mode Toggles steam chest simulation on / off
X	Sander Press and hold
Space	Whistle
V	Long Whistle Loop
Ctrl+V	Short Whistle Loop
I	Exhaust Steam Injector - Steam Valve On / Off
Ο	Live Steam Injector - Steam Valve On / Off
K / Shift+K	Exhaust Steam Injector - Water Valve On / Off
L / Shift+L	Live Steam Injector - Water Valve On / Off
1	Handbrake On/Off

3.3 GENERAL KEYBOARD CONTROLS

Key Action

Shift + Ctrl+C Couple Manually

G / Shift+G Points/Switches

Tab / Ctrl+Tab Request authority to pass a signal at danger

T **Load/Unload** Press once to load/unload passengers or freight.

3.4 AUTOMATIC FIREMAN

The S15 locomotive has an Automatic Fireman, which can be toggled on and off using Ctrl+R. This will take over control of stoking the fire. The injectors still need to be controlled manually.

3.5 ADVANCED BRAKES

The S15 locomotive has an advanced vacuum brake setup. The main train brake handle controls both the large ejector and the flow of air into the brake pipe which applies the brakes. There is also a small ejector which is used to maintain the brake vacuum once the brakes are fully released. The brakes will begin to apply if neither of the ejectors are used.

Brake application/release rates will be significantly different when you are coupled to coaches compared to when you are running light engine.

The brake reservoir can be drained using the] key.

3.6 BRAKE MODES

The brake modes on this locomotive should be changed according to what type of rolling stock you are coupled to. The brake modes can be cycled through using the "Page Up" & "Page Down" keys on your keyboard.

- Passenger coaching stock with vacuum brake and D.A. valves
- Wagons with vacuum brake and D.A. valves
- Wagons with vacuum brake and no D.A. valves
- Wagons with vacuum brake and no D.A. valves, 50% fitted
- Wagons with vacuum brake and no D.A. valves, 20% fitted
- Unfitted or light engine

3.7 GENERAL DRIVING NOTES

- The fire cannot be stoked using only the F4 HUD on this locomotive. If using the F4 HUD, you must first open the firebox doors using the stoke fire button on the HUD and use the R button on the keyboard to stoke.
- It is advised to open the dampers to achieve better steam generation.

4 SCENARIOS

4.1 [S15] GOODS ARTHUR TO MINEHEAD

Take Southern Railway S15 Class No. 847, visiting from its home in Sussex, on a down stopping service to Minehead on a muggy, damp Summer morning.

Duration: 90 Minutes **Difficulty:** Medium

4.2 [S15] MINEHEAD TO BISHOPS LYDEARD

It's early on a Spring morning and your loco for the day is S15 No. 825, which is visiting from its usual home in North Yorkshire. You will be taking 7 coaches from Minehead to Bishops Lydeard.

Duration: 100 Minutes **Difficulty:** Medium

4.3 [S15] SOUTHERN WORKHORSE

In this scenario take control of S15 No. 841 and do some shunting around Bishops Lydeard. Once you've done the shunting, head to Norton Fitzwarren to collect an engineering train which needs taking to Williton.

Duration: 70 Minutes

Difficulty: Hard

5 CREDITS

BOSSMAN GAMES

BEN JERVIS Artist, Scenario Writer

SIMON PAYNE Scenario Writer, Internal Tester

Bossman Games would also like to thank the following people for their contribution to the development of the Southern Railway S15 loco:

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