GWR MANOR

Contents

Introduction

Thank you for purchasing the GWR Manor Class Add-on for Train Simulator.

For many years we have wanted to make an up to date version of this classic GWR engine with improved graphics and advanced features as well as including all members of the class (and the 10 that were planned but not built as well!)

These engines include all of the advanced features we have created to date which makes driving them in Advanced Mode so challenging, rewarding and immersive. However if you prefer, the engines are equally as happy running in simple mode and standard mode using the F4 HUD, keyboard, mouse and/or Xbox controller.

Please read this manual thoroughly, especially to get the best from Advanced Mode.

We hope you enjoy driving these Great Western classics.

All the best,
Victory Works

Click on the links below to see work in progress pictures and read more about the research, detail and passion that we have put into our Train Simulator add-ons.

Features

- Simple, standard and advanced driving modes
- Xbox controller support *SIMPLE AND STANDARD MODES ONLY*

- GWR 7800 Manor Class Locomotive
    - GWR Livery (pre-modified drafting)
    - BR Liveries
        - 1948-50 Unlined Black (pre-modified drafting, **see below**)
        - 1950-54 Lined Black (modified drafting, **see below**)
            - Optional red backed number/name plates
            - Clean and worn
        - 1952-56 Unlined Black (modified drafting)
            - Clean and worn
        - 1956- Unlined Black
            - Clean and worn
        - 1956- Lined Green
            - Clean and worn
    - Preserved liveries
        - (All fitted with twin live injectors and speedometers and modified drafting)
        - GWR
        - BR Black
            - Optional red backed number/name plates
        - BR Green
        - BR Green (7828 Odney Manor as Norton Manor)
- 4 named service headboards and customisable reporting numbers for all engines
- Optional parts and fittings including lining, ATC, power discs, overhead warning labels and speedometer
- Two custom sound sets inside and out for GWR and BR built engines
- Realistic cab with multiple views, including dual head out and fully modelled firebox and coal
- Realistic wheel slip physics and effects *ADVANCED MODE ONLY*
- Simulated steam chest *ADVANCED MODE ONLY*
- Realistic train pipe and reservoir vacuum braking *ADVANCED MODE ONLY*
- Cylinder cock management *ADVANCED MODE ONLY*

- Boiler management with priming possible *ADVANCED MODE ONLY*
- Realistic injector control *ADVANCED MODE ONLY*
- Realistic "by the shovel" stoking with synchronised sound *ADVANCED MODE ONLY*
- Dynamic steam and smoke colour and quantity
- Realistic boiler water gauges effected by gradient, acceleration and speed and with blow down test
- Opening windows and window rain effects
- Dynamic lamp setting
- Cab light effects including firebox glow and water gauge lamp
- Second valve regulator effects *ADVANCED MODE ONLY*
- Atmospheric AI effects *ADVANCED MODE ONLY*
- Fully compatible with the TPO coaches included with the GWR Saint add-on and the Toad Guard van communication included with the GWR Large Prairies add-on

- Rolling stock
    - GWR H.1 "Beaver A" Flat
        - GWR and BR liveries
        - Empty and Loaded
    - GWR E.3 "Morel"
        - GWR and BR liveries
        - Empty and Loaded

- 3 scenarios for the Riviera Line in the Fifties: Exeter - Kingswear Route
- 24 Quick Drive consists

IMPORTANT NOTE:

When the Manor class was built it had a few design flaws which meant that draughting was problematic and consequently the amount of power that they could produce was quite poor. This was fixed under BR and they became a much more useful class. The simulation we have added to the GWR engines and early BR engines is designed with this same issue, so they are not very easy to drive especially with heavy loads. The later BR engines and all of the preserved versions are much easier.

What we are saying is, THIS IS NOT A BUG! It is how the real things were.

Background

The Great Western Railway (GWR) 7800 Class or Manor Class is a 4-6-0 configuration designed as a lighter version of the GWR Grange Class allowing them to use more routes. Twenty were built from 1938 to 1939 with British Railways building 10 more in 1950 and were named after Manors in Great Western Railway's region.

The GWR Hall and the Grange classes were not able to cover the full duties previously fulfilled by the 4300 Class locomotives due to their weight classification and by the late 1930s a lighter version was urgently needed for cross-country and branch line duties forbidden to those heavier locomotives. A new lighter boiler was designed and the driving wheels and motion components were recovered from withdrawn members of the 4300 Class to create the Manor class and with its axle loading of 17 tons it could be used on many lines from which the heavier engines were barred.

The first Manor No.7800 "Torquay Manor" was built at Swindon and entered traffic in January 1938 and by February of the next year nineteen more were in service however the outbreak of war cancelled the construction of another batch of twenty. After nationalisation British Railways built ten more of the class, Nos.7820-29, at Swindon in November and December 1950. A further batch of ten more Manors was planned but eventually cancelled.

Despite their growing fleet the initial performance of the Manors was very poor and this was not dealt with until an examination under British Railways in the early 1950's showed that minor alterations could correct the issues and produce a much more useful engine. Internal alterations to the blastpipe and an increase in air space in the firegrate added to the new type of narrow chimney improved the draughting a great deal and after trials the improvements became standard from July 1954.

The first Manor to be withdrawn was No.7809 Childrey Manor in April 1963. By May 1965 only 15 Manor's remained in service and the final two in service, No.7808 Cookham Manor, and No.7829 Ramsbury Manor, were withdrawn in December 1965.

Remarkably, for such a small class of thirty engines, nine examples survived and are very popular with crews at preserved railway lines.

Scenarios

The GWR Manor add-on comes with the following scenarios.

Route: Riviera Line in the Fifties: Exeter - Kingswear Route [Link to Steam]

Manor: [1] Minehead Passenger
Friday 21st April 1950
Drive GWR Manor No. 7813 "Freshford Manor" completing the service from
Minehead to Kingswear. (Based on the real timetabled service)
40 minutes

Manor: [2] Filthy Manors
Monday 30th September 1957
Drive 7809 Childrey Manor and take some older freight wagons from Brixham to
Mortenhampstead.
30 minutes

Manor: [3] Paddington Express
Saturday 20th August 1960
Drive 7808 "Cookham Manor" on the Newton Abbot to Paddington Express. (Based
on the real timetabled service)
50 minutes

Control Modes

There are 3 ways to drive the GWR Manor locomotives.

Simple Mode

This is selected using the menu in Train Simulator and provides a simple stop/go, forwards/backwards set of controls via the simulators built in HUD.

Standard Mode

This is the default mode if you choose to drive in Expert mode using the Train Simulator menu. The locomotive will operate with more complex controls and can be driven using the F4 HUD or an Xbox controller.

Advanced Mode

This is an advanced mode for those who want a more realistic experience and introduces features such as condensed water in the cylinders, overfilling the boiler, realistic wheel slip and a simulated steam chest. To achieve these extra functions use of a keyboard is required, although this can be used in conjunction with mouse operation or the F4 HUD.

To turn on Advanced Mode you can press Control and A at any time and this will also turn it off again.

The *Advanced Mode* controls and features are shown below.

Driving Controls

1. Regulator

This controls the amount of steam allowed into the cylinders, hence directly controlling the speed in conjunction with the reverser.

Keys: A,D

Advanced Mode

In Advanced Mode the locomotive steam chest is simulated. This will add a delay and smoothing to the increase and decrease of the regulators power to simulate steam moving through the locomotives pipes and valves. Please note that the F5 HUD regulator value will not reflect the actual position of the in-cab regulator, but the value used to simulate the chest.

The Manors also feature a simulated second valve. When observing GWR engines being driven in real life it is common to see the driver fully open the regulator before closing it. The reason for this is to realign the second valve so that it is fully closed when the regulator is closed. If this is not done then the regulator will not always close fully. If the regulator is forced closed this can stop the flow of steam, however on opening it again the second valve port is already open and a very large amount of steam can flow immediately.

This is all simulated in Advanced Mode, so if you open the second valve (opening the regulator more than about halfway) you will need to open it fully to realign the valve before you close it.

Another feature of Advanced Mode is the jockey valve on the regulator which needs to be open to continue pumping oil around the moving parts of the engine using the hydrostatic lubricator. If the engine is moving you must make sure that the regulator is open slightly to ensure that steam is passing into the lubricator to pass oil around the engine.

As we are unable to simulate the physical notch on the regulator slide that exists in reality to help the driver to align the regulator, we have added a key control that will place the regulator in the correct location where no steam will be passing to the cylinders but it will operate the lubricator.

Key: Shift A
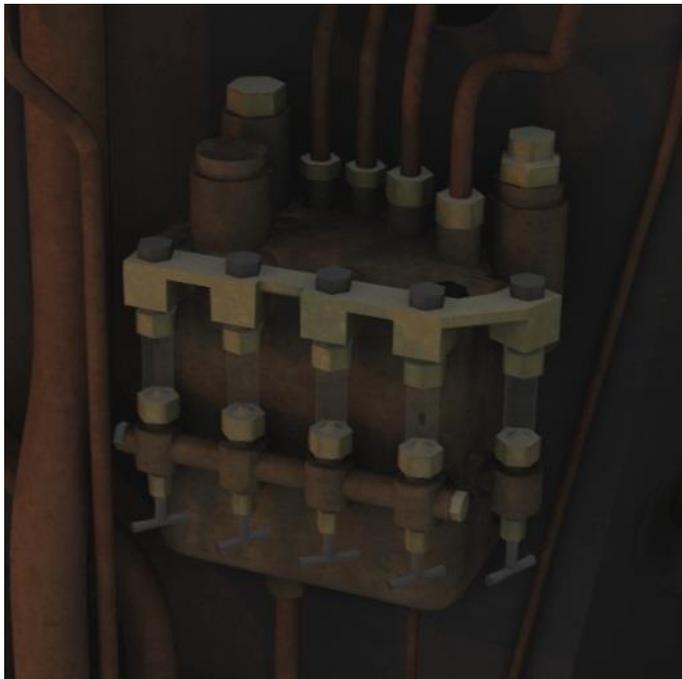
You can check that the jockey is open and the lubricator is working by looking at the drops of oil passing through the sight glasses of the lubricator. You can also adjust the speed of these oil drops using the sight glass valves – the ideal speed should be for a drop to pass approximately every 4 seconds.

2. Reverser

This is like the gears on a car. It is usual to start with the reverser set at 75 percent cut-off (full). As you pick up speed you reduce the cut-off, thereby allowing economic driving as well as good speed whilst hauling a load.

Keys: W, S

Advanced Mode

To move the reverser requires the hand lock to be taken off. To do this, press and hold the E key on the keyboard, move the reverser to the required position, and then release the hand lock (let go of the E key).

Key: E

3. Cylinder Cocks

Advanced Mode

When a locomotive sits static for any amount of time, water condensation builds up in the cylinders. Thus when the piston is in motion, and because water does not compress, the cylinder will explode. The cylinder cocks are designed to expel this condensed water and should be opened for at least 4 turns of the locomotive wheels when the locomotive sets off after being stationary for some time.
There is also an audio cue when the cylinders are clear, the pitch of the steam changing as it no longer contains any expelling water.

The amount of stationary time varies depending on the time of day (the assumption being that most steam locomotives were working from early in the morning) and also the weather. If you stop for more than a couple of minutes it is safer to open them for a few wheel rotations just to be sure. Always ensure they are open when first setting off in a scenario.

Key: C

4. Sanders

The sanders assist in starting and stopping without the wheels slipping.

Keys: X, Shift X

Advanced Mode

Sand is essential in pulling away with minimal wheel slip in wet or icy conditions. You should use the front sanders when travelling boiler first and the rear sanders when travelling tender first.
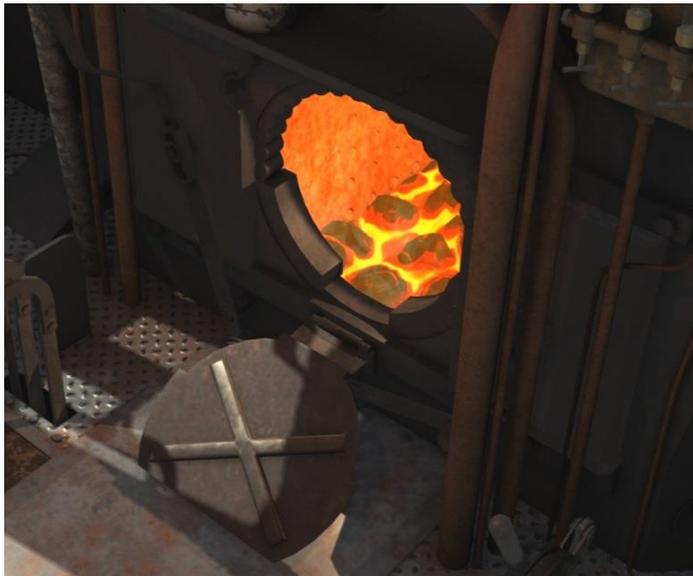
5. Firebox

Ensure the firebox doors are fully open to allow maximum stoking. A related tool is the coal box door in the coal bunker. When the firebox door is open, pull the coal bunker door to regulate the input of coal into the firebox.

Key: F
Keys: R, Shift R (Stoking)

Advanced Mode

In Advanced Mode the Manors feature realistic stoking by the shovelful. As default in Train Simulator coal is slowly trickled into the firebox at a steady rate. In reality coal is thrown into the firebox by the shovelful and in Advanced Mode this is now the case for this locomotive as well. The shovel still controls the amount of coal although this now varies from approximately half a shovelful to a loaded shovelful.

However with this comes the chance to tire out your fireman! Should you force him to shovel too much in too short a time he will gradually slow down between each shovelful and finally stop shovelling altogether – please note that GWR fireman are tough as nails and it takes a lot to make him do this!
The sound of the shovel is fully synchronised to the actual coal going into the firebox so you will be able to tell if he is slowing down. If he stops completely you will be shown a message to that effect and will receive another when he has recovered enough to continue.

As an additional tool for those who like to drive with minimal or no HUD display the firebox and coal is fully modelled with a specific cab view for checking the fire mass. The coal level is slightly exaggerated over its working range so it can be used as a visual indicator of when firing is needed. The coal level rises and falls gradually but the images below will help in visualising how this can help.

Coal level low *< 42% 661 lb*
The grate can be seen with a small amount of coal.

Coal level average *63% 992 lb*

Coal level high *> 85% 1338 lb*
The grate is deeply covered and the coal layer is molten white.

The shovel on the tender is used to control the stoking speed/amount.

6. Blower and Boiler Pressure Gauge

The most useful application of the blower is when the regulator is at idle. Since there is no throughput of steam when at idle, air flow is minimised and therefore the fire loses heat. In some circumstances (such as when the safety valve is going off) this is acceptable but if you need to get some pressure into the boiler while the regulator is closed then fully opening the blower will force air over the fire, increasing temperature and then boiler pressure. It is good practice to turn off the blower again when you open the regulator to save on unnecessary steam usage.

Keys: N, Shift N

The boiler runs best at around 220 psi. At 225 psi the first safety valve will open and the excess steam will vent quickly and noisily. If the boiler is still continuing to gain pressure a second larger valve will open at 227 psi. Both valves close again when the boiler is under 220 psi.
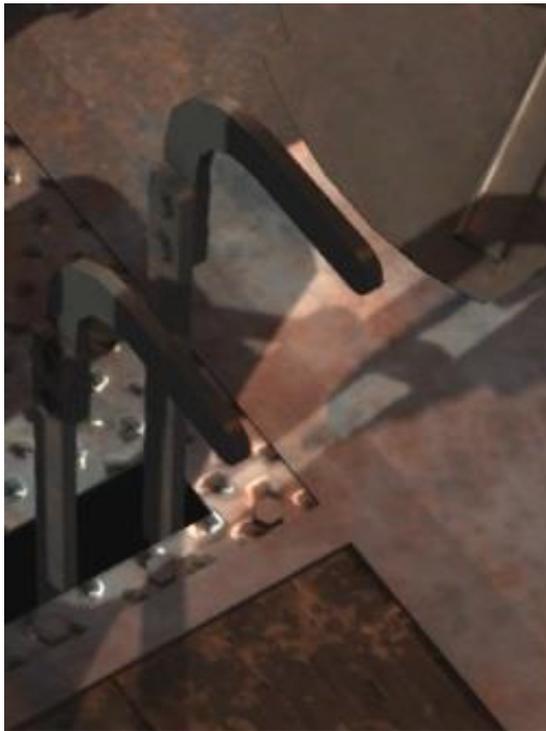
7. Dampers

Another tool related to the firebox. This helps control the heat of the firebox. Closing it will reduce the air flow through the fire, thereby lowering heat and steam production. Opening it will allow more air in, hence producing more heat and steam.

Keys: M, Shift M

Advanced Mode

There are 2 damper levers; the left hand is the front damper and the right hand is the rear damper. Each has 3 notches: closed, half and full. To get the maximum amount of air to keep the locomotive running well you need to set the damper in the **OPPOSITE** direction of travel to fully open (pulled up).

In addition to the dampers you can increase the amount of air entering the firebox by opening the firebox doors and this can be tempered by closing the firebox flap.

8. Fireman's Injector Steam (left)

The injectors take steam from the boiler and use it to blast water from the tanks into the boiler. There are two fitted, one on the fireman's side and the other on the driver's.

Key: I, Shift I

Drivers steam Injector Steam (right)

The driver's injector is slightly larger and will add water faster.

Key: O, Shift O

Advanced Mode

See below.
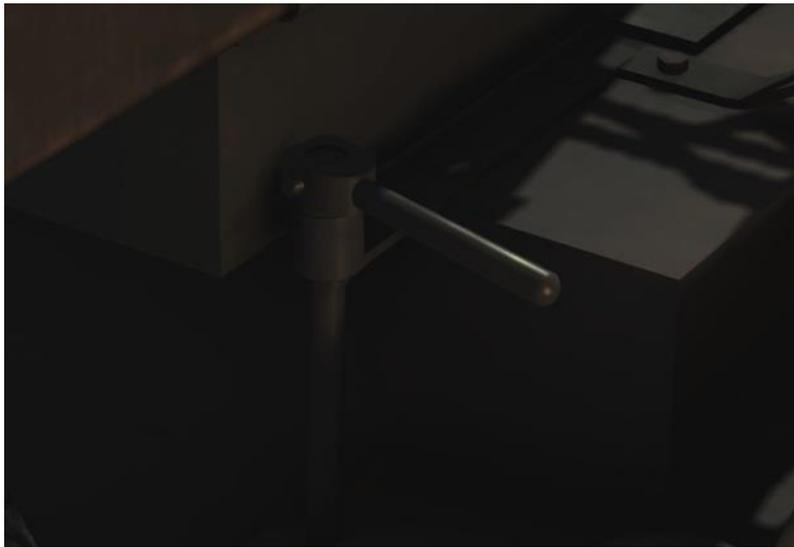
9. Fireman and Driver Water Taps

These are used to adjust the flow of water for the appropriate injector control.

Keys: K, Shift K / L, Shift L

Advanced Mode

In Advanced Mode you will need to operate the injectors as the real thing and balance the water and steam to use them properly.
The correct procedure is as follows – for either injector use the appropriately named controls:
1. Fully open the water control tap.
    *   You will hear and see water coming from under the left or right hand side of the cab.
2. Turn the injector steam lever until you hear the injector start working.
    *   If you hear a hiss and see a jet of steam under the cab you have too much steam pressure and the water is not entering the injector.
    *   If you hear running water and see water running from the pipe under the cab you need more steam to force it into the boiler.

10. Boiler Sight Glass

Attached to the boiler is a strong glass tube indicating the current level of water in the boiler. If this reaches the bottom then the fusible plugs will melt and relieve the boiler pressure whilst providing a warning to the locomotive crew.

The water level is not static when the locomotive is in motion and will wobble around appropriately. It is also affected by gradients, acceleration and deceleration.

Advanced Mode

Overfilling the boiler (past 110%) at high pressure can force water into the cylinders and cause the same problems as having condensed water from standing still. It can also cause the regulator to become jammed open! If you overfill the boiler, open the cylinder cocks immediately and leave them open until the water level in the glass falls.

You can also perform a blow down test on the gauge glass by doing the following:

1. Shut off the water supply to the top and bottom of the glass by pulling the lever down, the water will empty from the glass.
2. Return the lever to its previous position by reversing the above process to refill the glass.

11. Vacuum Brake and Brake Pressure Gauge

The vacuum brake is used to pull the brake shoes away from the wheels by creating a vacuum in the pipes connected to them. The brake has 3 settings, brake off which forces a vacuum into the pipes and takes the brakes off, brake on which lets air into the pipes and applies the brakes, and brake running which holds the vacuum steady at its current pressure.
The brake pressure gauge shows the current pressure in the system, from 0" (on) to 25" (off).
In basic mode all of this can be controlled by the brake lever.

Keys: ' (apostrophe), ; (semicolon)

Advanced Mode

In Advanced Mode the GWR Manors require the use of the large ejector to release the brake, the brake lever being used to apply it. You will also need to be aware of the brake reservoir which is now accurately simulated.

Important: Note that in Advanced Mode the F4/F5 HUD brake pressure may NOT be representative of the engines brake gauges and you should use the gauges in the cab to operate the engine correctly. Please also note that the setting of the lamp head codes is CRITICAL to the operation of the brakes so that the engine knows how much of the train is made up of fitted (vacuum braked) rolling stock.

Vacuum brakes operate by having a pressure difference between a train pipe and a reservoir. When the train pipe is less than the reservoir then the difference between these pressures is how hard the brakes are applied. The brakes are fully applied with

a difference of approximately 20" or more, and fully released with a difference of approximately 3" or less.

However these systems are not airtight and therefore when leaks occur the train pipe and the reservoir (although leaking much slower than the train pipe) will trend towards 0". The way to create to create a vacuum in both systems on the Manor is to use the large ejector which will create a vacuum in the train pipe, and once the train pipe pressure reaches the same as the reservoir then an automatic valve will open and the reservoir pressure will increase as well.

The large ejector is steam powered and requires a pressure of at least 90 psi in the boiler so be careful to manage this properly or you may not be able to release the brakes.

In addition to the large ejector (which is steam driven) the Manors also have a mechanical vacuum pump (powered by a piston) which will start to work when the locomotive is travelling at approximately 10 mph and will apply pressure to the train pipe to counter any leaks. The pump can hold the vacuum up to 25" and on a short train can even create vacuum in the train pipe up to 22" or 23". This creates the effect of slowly releasing the brakes when you are braking at speed and you may need to use multiple applications of the brake lever to stop the train.

Keys: Large Ejector - P, Shift P

To this point we have referred to the train pipe as it applies to the engine, however on a fitted train (where some or all of the rolling stock is fitted with vacuum brakes) this pipe is shared along the whole train via flexible connecting pipes. This means that the ejector and pump are creating vacuum along the whole length of the train and so this will increase the time that it takes to create or release pressure from the train pipe. In addition fitted stock have their own reservoirs so even if the train pipe is at 0" and engine reservoir falls to 0" (no pressure difference and therefore no brake application on the engine) the train will still be held by the brakes on the rest of the fitted stock. When running light or on a totally unfitted train you do not have this "backup" and it is advisable to apply the handbrake when stopping for any length of time as the train and pipe reservoir will slowly drain to 0", releasing the engine brakes.

In Train Simulator there is no way for the engine to know what stock it is pulling so the Manor uses the player selected head code to indicate how much of the train is vacuum fitted.

The head codes and percentages are as follows and on changing lamps (see section on head code setting below) you will see a message describing the code and how much of the train is fitted with vacuum brakes.

A: Express passenger 100%
B: Stopping passenger 100%
C: Parcels, perishables, etc. 100%
D: Express freight 100%
E: Express freight 50%
F: Express freight 0%
G: Light engine 100% (can have 1 or 2 brake vans which would be fitted)
H: Through freight or ballast 0%
J: Through mineral or empty 0%
K: Pick up/branch freight 0%

So if you are pulling a passenger train (using head code A for example) then the brake simulation will use 100% of the length of the train to calculate how long it takes to gain and lose pressure in the train pipe.

Finally, although not required for standard operation you can manually release pressure from the brake reservoir using the reservoir drain valve next to the driver's front window.

12. Whistles

Steam locomotive whistles are powered by steam from the boiler and are used to signal a train's approach, warn of danger and often to signify departure. The Manor, like many GWR locomotives, has 2 whistles; the second being used to communicate messages to the guard of the train on freight services.

The main whistle is operated using the Space key, with a selection of short whistles operable by holding down Control at the same time. The B key operates the lower tone guard whistle.

Key: Space, B, Ctrl Space

Whistles were also used to communicate with signalmen, requesting clearance to go via certain tracks, etc. We have simulated this by adding a whistle sound when you use Tab and Ctrl-Tab to pass signals at danger. In truth there were dozens of whistle codes used for numerous request types however within the limitations of the game we have included a single long-short-short whistle to replicate this regularly used system.

Advanced Mode

If the train that you are driving has one or more brake vans in it and they are fitted with Victory Works "ActiveGuard" system then you can communicate with the guard in the van using the low-tone second whistle (B key).

To request the guard to put on the van's handbrake give him 3 short blasts on the second whistle. To request him to take off the handbrake give him 6 short blasts.

13. Handbrake

A hand operated screw that applies the brakes on the tender without the need to destroy the vacuum in the brake pipes.

Key: / (toggle on and off)

14. Water Scoop

This lever operates a screw that raises and lowers the water scoop on the tender. This is used to fill the tender from water troughs in the track while travelling at speed.

Key: Ctrl-T

15. Windows

Working in the cab of any steam locomotive is hot work. To aid in the comfort of the crew you can open the front windows. You can also fold the driver's and fireman's seats away.

Click and drag with the mouse.

16. Automatic Train Control (ATC)

This system indicates a signal being either clear or at danger and issues a bell or buzzer tone to the locomotive crew. If a warning buzzer is heard it will need to be acknowledged or the brakes will be automatically applied.

If you are driving on an AWS-fitted route you will hear a bell ring if you pass a clear (green) signal. If you pass a signal at danger (red, yellows or distant red) a buzzer will sound and you will have 3.7 seconds to clear the warning or the train will be brought to a stop automatically.

Press the Q key or press down the lever on the side of the ATC box to acknowledge the warning.

Note: For AWS to function the route that the locomotive is running on needs to have been fitted with the relevant scenery markers.

17. Head Code Setting

The Manors have a standard GWR 4 lamp set up for the front and rear – 1 lamp at the top and 3 below – to show the standard GWR head codes (see Appendix 1).

The codes can be preset using the scenario locomotive number or changed by the driver at any time.

You can show or hide each lamp by holding the Control key and pressing numbers 1 to 4 on the keypad.

The lamps are also intelligent in that they will not show for each end if something is coupled to the front or rear of the locomotive.

H and Shift H control the locomotive lights as follows:

- 0 – Lights off, forward running
- 1 – Lights on, forward running
- 2 – Lights on, reverse running
- 3 – Lights off, reverse running

Keys: H, Shift H, Ctrl + Numpad 1-4

Driving in Advanced Mode

Advanced Mode ONLY

The following is a summary of how to drive successfully in Advanced Mode. It does not contain hard figures – e.g. set the reverser at 25% and the regulator at 30% - as these are the things you will learn by driving the locomotive.

However there are some realistic features that are incorporated that require some specific knowledge for the best operation.

Before You Start

Dampers – Make sure you have the dampers set for running in the appropriate direction if the fire requires air. Cutting off the air is a good way to limit the boiler pressure from increasing when at a stand or running downhill (see Controls Section 7).

Head Code - Set the appropriate head code, this is required for the advanced brakes to work correctly (see Controls Section 17).

Fire – Assuming you are not using the auto-fireman and not about to run downhill for a long way you will want to start building the fire as soon as possible (see Controls Section 5).

Gauge Glass Test – If you have time at the start of a scenario then you can perform gauge glass blow down tests to pass the time (see Controls Section 10).

Setting Off

Cylinder Cocks – If you are just starting or have been stationary for a while, ensure that the cylinder cocks are open. As you drive off, listen for the change in pitch as the water empties or count 4 full revolutions of the wheels and then close them (see Controls Section 3).

Wheel Slip – In wet or icy conditions due to the accurate wheel slip and simulated steam chest you will need to use the regulator like a real driver would. Primarily on starting (when the reverser cut off is high) this means you must manage the steam entering the pistons to make sure that the power being applied to the rails does not exceed the amount of grip available.

If you open the regulator and just leave it open the pressure will continue to build as will the amount of power being applied to the rail. This will likely cause wheel slipping in any conditions but even more so when wet or icy.

As a real driver would you need to pump the regulator to gradually build the pressure in the cylinders as you accelerate. This means opening the regulator for a moment and then closing it again, the residual steam will continue to work and cause the locomotive to carry on accelerating. Continually doing this will allow the locomotive to build speed and pressure gradually and avoid wheel slip.

Once a slow speed is reached you can then leave the regulator open and accelerate and adjust as needed to maintain a constant speed.

The speed at which you can stop pumping varies and is based on how much grip is available – an icy rail will need a much higher speed to allow full power than a dry rail.

The weight of the consist will also affect how long it takes before this speed is reached (simply because a heavier load takes longer to accelerate) which means you are more likely to have to manage the wheel slip for longer, therefore making it more likely.

In summary, as you set off do not throw the regulator to full and leave it there! Pump it gradually, increasing the power slowly until you can leave the regulator open.

You will also need to be aware of the second valve on the regulator. When opening the regulator more than about halfway you will then need to fully open it before closing it shut. Otherwise the second valve will not close properly and you will have trouble closing the regulator completely – you will also experience a large burst of steam when you open it again if it was not properly closed first.

Be aware of the weather, a wet or icy rail provides a lot less grip.
This brings us to:

Sander – The sander helps to provide grip for the wheels on the rail and should be used when starting in wet or icy conditions (see Controls Section 12).

Under Way

Water Filling – You will need to use the water levers and the injector steam levers to fill the boiler (see Controls Section 9).

Due to the water gauge glasses wobbling around and being effected by gradient and acceleration it is normal procedure to try and keep the boiler between half and three quarters full to avoid overfilling the boiler and causing priming to occur.

Locomotive Numbering

When any Manor is added to a scenario the number will be randomly chosen from a list of all members of the appropriate class and era selected.

These are preset with the correct configurations for each number as they were historically outfitted. However if you wish to change any of the components then the setups are listed below.

GWR Manor, e.g. 7800###01YYNYN

1. to 4. 4-digit locomotive number
5. to 7. 3-digit reporting number, use ### for no number
8. Headboard
   - 0 - None
   - 1 – The Cornishman
   - 2 – Torbay Express
   - 3 – The Mayflower
   - 4 – Royal Duchy
   - 5 – Cambrian Coast Express
9. Company logo
   - **1** – Shirt button roundel
   - **2** – GWR lettering (1942-47)
10. Power disc – **Y**es or **N**o
11. ATC – **Y**es or **N**o
12. Speedometer – **Y**es or **N**o

13. Awning Posts on the tender – **Y**es or **N**o
14. Overhead Warning Labels – **Y**es or **N**o
15. Head code – Letter of the head code class (see Appendix), note: lower case for running tender first

BR(W) Manor, e.g. 780084E###02YNYYYNN

1. to 4. 4-digit locomotive number
5. to 7. 3-digit shed code
8. to 10. 3-digit reporting number
11. Headboard (see above)
12. Company logo
   - **1** – British Railways Text
   - **2** – Pre-1956
   - **3** – Post 1956
13. Lining – **Y**es or **N**o
14. Red background on number/name plates – **Y**es or **N**o
15. Visible name plates – **Y**es or **N**o
16. Power disc – **Y**es or **N**o
17. ATC – **Y**es or **N**o
18. Speedometer – **Y**es or **N**o
19. Overhead Warning Labels – **Y**es or **N**o
20. Head code – Letter of the head code class (see Appendix), note: lower case for running tender first

Rolling Stock

GWR H.1 "Beaver A" Flat

Available in: GWR and BR liveries Empty and Loaded

GWR E.3 "Morel"

Available in: GWR and BR liveries Empty and Loaded

Modification Policy

You are free to create modifications for this pack (including but not limited to reskins, sound updates, "enhancement" packs, etc.) but they must not include any 3D model files, audio samples or scripts – original or modified. If you choose to make your mods public then they **must be provided free of charge**. They can be hosted on a site that asks a nominal membership fee for quicker downloads (e.g. UK Train Sim) but **cannot be sold in any way** without the express permission of Victory Works.

If you wish to discuss terms for selling modifications please contact us via email at victoryworks@live.co.uk

To summarise – free mods are fine but must not include model, audio or script files. If you wish to sell mods then you **MUST** get permission first.

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The Train Sim community has a great passion for all things rail and it has been a particular joy to be able to be a part of the UK group for many years and to get feedback, advice and critique from you all and I wish you many more years of train simming as I look at the many exciting projects that are on the horizon from the other modellers and builders.

To the customers, the advisors and the friends – Thank You.

Appendix: Head Codes

Head code classes that can be set using the scenario numbering system.

Class A

- Express passenger train.
- Breakdown van train going to clear the line, or light engine going to assist disabled train.
- Empty coaching stock timed at express speed.
- Express streamline railcar.

Class B

- Ordinary passenger or mixed train.
- Branch passenger train.
- Breakdown train not going to clear the line.
- Rail motor car, auto-train or streamline railcar.

Class C

- Parcels, newspapers, meat, fish, fruit, milk, horse, cattle or perishable train composed entirely of vacuum fitted stock with vacuum pipe connected to the engine.
- Express freight, livestock, perishable or ballast. Train pipe with not less than one third of the vehicles vacuum fitted and pipe connected to the engine.

Class D

- Express freight, or ballast train conveying a stipulated number of vacuum braked vehicles connected by the vacuum pipe to the engine and authorised to run at a maximum speed of 35 mph.
- Empty coaching stock train (not specially authorised to carry "A" head code).

Class E

- Express freight, fish, fruit, meat, cattle or ballast train.
- Breakdown train not proceeding to an accident.

Class F

- Fast freight conveying through load, all unfitted.

Class G

- Light engine or light engines coupled.
- Engine with not more than two brake vans.

Class H

- Freight, mineral or ballast train or empty train carrying through load to destination.

Class J

- Freight, mineral or ballast train stopping at intermediate stations.

Class K

- Branch freight train.
- Freight or ballast train or officers special train requiring to stop in section.