



Train Simulator 2013

Driver Manual

TS2013 – Driver Manual

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Train Simulator 2013

1 Introduction to Train Simulator 2013

Welcome to the Train Simulator 2013 ("TS2013") Driver Manual.

In this Driver Manual you will find detailed instructions on the TS2013 menus and controls, plus tips on more advanced driving techniques.

For a more general overview of TS2013, read the Quick Start Guide.

I want to...

Install TS2013

Get started driving straight away

Understand the menus and information windows better

Learn advanced driving techniques

Learn About Signals

Learn about engines and rolling stock available in TS2013

Choose a route and scenario to suit my ability

Go to

Read the installation instructions in the Quick Start Guide

Read the simple driving instructions in the Quick Start Guide

Read the Overview of Menus and Screens in this Manual

Read the techniques for different locomotives in this Manual

Refer to the Route guides where the signalling used on that route are described

Read the Route and Locomotive guides supplied with your product. See Accessing the Manuals in section 2.9.6 below

Read the Route and Locomotive guides supplied with your product. See Accessing the Manuals in section 2.9.6 below

Add new material I have obtained for TS2013

Visit www.railsimulator.com to see the range of routes and locomotives available, plus see the section on Steam Workshop (2.7.1) to see how to obtain additional scenarios

Create and package up my own Routes and Scenarios

Read the Creator Manual supplied with TS2013

Please note that the features and content provided with TS2013 are periodically updated, and the format screens and content depicted in this manual may be slightly different to that in your software.

You can obtain the latest version of this manual from www.railsimulator.com

Although your version of TS2013 comes supplied with an exciting range of routes and locomotives, there are many more available. Visit our shop at www.railsimulator.com to see the range available. When you acquire these add-ons through Steam, they are loaded directly into your game, so locomotives appear in the locomotive list and routes in the route list – no additional installation required!



The use of this software product is subject to the user's acceptance of the limited license and other terms and conditions set forth in the User Agreement available online at <http://www.railsimulator.com>



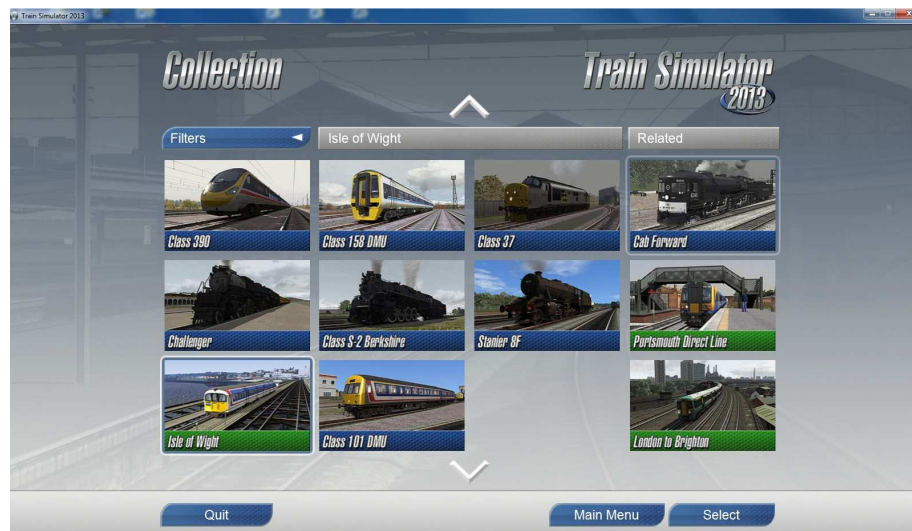
2 Overview of Screens and Menus

2.1 Controlling TS2013

TS2013 has been designed to allow you to control it using the keyboard/mouse as well as an Xbox 360 game controller. Most of this manual will use keyboard/mouse terminology, but the user interface has been designed to allow user of the controller throughout.

TS2013 is provided in several different versions with different content, so do not be surprised if the list of trains and route you have is different to the ones shown in these screenshots.

2.2 Collection Window

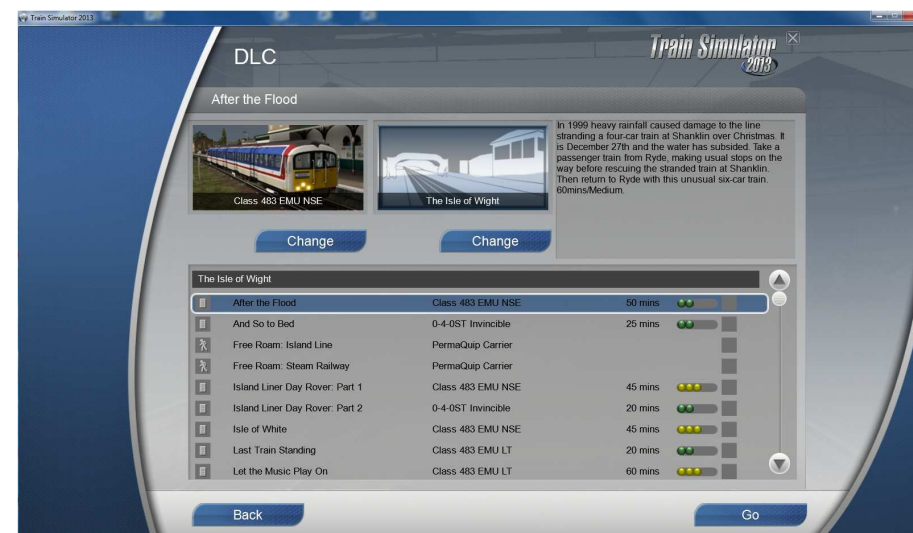


Starting TS2013 brings up a list of the various routes and locomotives that you have available to you. The screen above shows a set of routes (green tag) and locomotives (blue tag) that you have available - note that contents of this screen will change depending on what content came with your version of TS2013 and any additional content you have purchased. You may also see related items that are available for purchase through the Steam shop.

Use the Up and Down arrows to scroll through your list. If you have difficulty finding the content you are looking for, click on the 'Filter' tab to select items that you want to see displayed.

Double click on the locomotive or the route that you wish to drive or highlight and click Select.

You will be given a list of scenarios (missions) to drive.



We have picked the Isle of Wight route and so we are presented with scenarios for the various locomotives on that route. Scroll through the list until you find a suitable scenario to play.

Each scenario listed contains the following information:

Type

Scenarios are of three types: *Free Roam Scenarios*, *Standard Scenarios*; and *Career Mode Scenarios*. The differences are described in section 2.5 below. Other icons will show if a scenario is locked (you must successfully complete another scenario before starting this one) or if it was downloaded from the Steam Workshop

Name

The scenario name

Locomotive

The locomotive used for the scenario

| | |
|-----------------------------|---|
| Approximate duration | Time taken to completed the scenario (not relevant for free roam scenarios) |
| Difficulty | Sliding scale of difficulty. Start with the easy ones! |
| Tag | This will be set to show the scenarios you have successfully completed |

If you want to change either the Route or the Locomotive, click the 'change button'.

Double click on the scenario you want to play and get ready to start driving! See section 3 below for details on using the simulator and section 4 for details on driving specific trains.

2.3 Main Menu

From the Collection, select **Main Menu** to access the range of TS2013 functions. This menu is displayed:



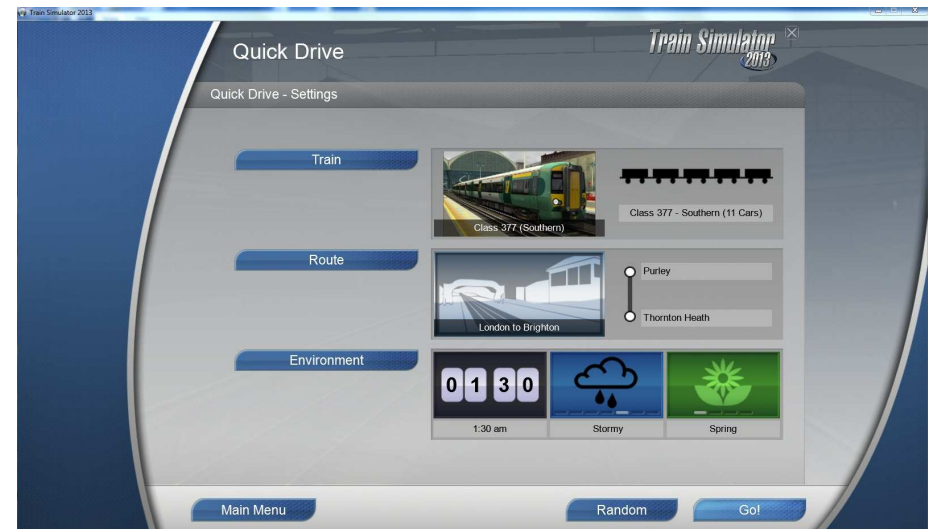
These options are

| | |
|-----------------------|---|
| Quick Drive | Quickly choose a route and locomotive to explore |
| Single player | Choose your train-driving mission |
| Relay | Select scenarios that you can play with multiple players |
| Steam Workshop | Get new scenarios from other Steam players or allow scenarios you have created to be used by others |
| Resume | Continue a scenario you have saved |

| | |
|----------------------|--|
| Editor | Create new scenarios and routes or modify existing content |
| Game Settings | Change your options |

Each option is further described below. Click **Collection** to return to the Collection screen.

2.4 Quick Drive



Quick Drive provides a great way of exploring routes in different ways. Simply pick your train, your route (including start and end points), the environment and then start driving. For an extra challenge, use the **Random** option to be given a new set of conditions.

2.5 Single Player



TS2013 contains three types of scenario: Free roam, Standard and Career Mode scenarios. Each has particular characteristics which are described below.

2.5.1 Free Roam Scenarios

In this type of scenario, there is no goal, and no required objectives (such as meeting a timetable or picking up passengers). There are no AI Trains (other trains run by the software with which you can interact) on the route in this mode.

Simply select a Free Roam scenario, click on a train and start driving. Note that all junctions in Free Roam are manual and need to be set by the player to achieve their desired path. Press "G" to switch the junction ahead or shift+"G" to change the junction behind. Alternately use the 2D Map as described in section 3.6.5.

As there is no goal in Free Roam mode, you can exit at any time by selecting the Quit icon in the Main menu (visible when you place your mouse at the bottom of your screen), or by pressing <Ctrl-Q> on the keyboard.

2.5.2 Standard Scenarios

Standard Scenarios are focused on a specific assignment, with a goal to achieve by accomplishing various objectives along the way. A Scenario could include stopping to pick up passengers, deliver freight, or meeting a particular timetable. Scenarios are usually timed, and your success at completing a Scenario is measured against achieving the required objectives and completing them within the time allowed. You can practise Scenarios to improve your skills, and stop and save a Scenario to complete at a later time.

2.5.3 Career Mode Scenarios

Career Mode Scenarios extend standard scenarios by scoring your driving performance and allowing you to compare your performance with friends and the rest of the TS2013 community.

TS2013 calculates your score based on a range of characteristics including adherence to speed limits, passenger comfort, timeliness, fuel efficiency etc. Each scenario uses a different balance of factors to determine the score depending on the type of mission.

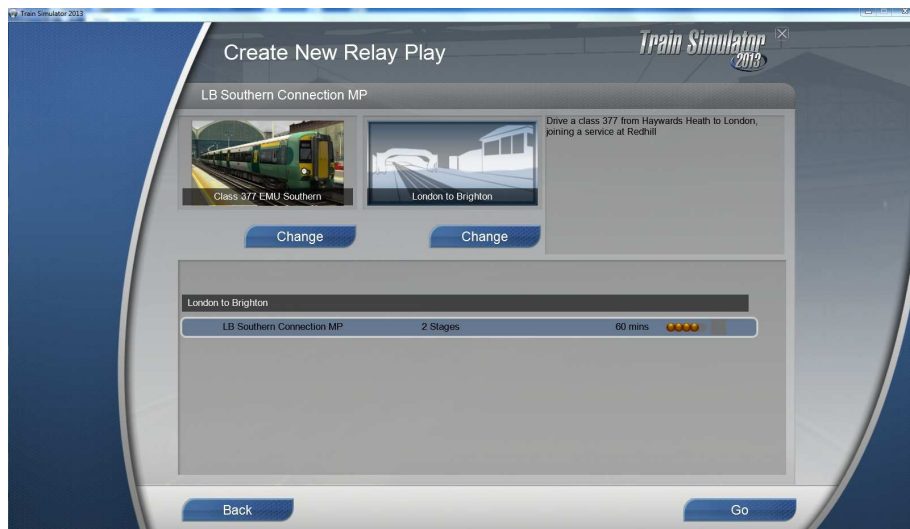
2.6 Relay

Relay provides the ability to carry out scenarios that require more than one player. This option allows one player to start a scenario which is then handed over to another player at a specific point. So you might arrange the wagons in yard to make up a freight consist and then hand over to another driver to handle the main line driving.

The Relay menu lets you start a new relay scenario or pick up from where another user has left off.



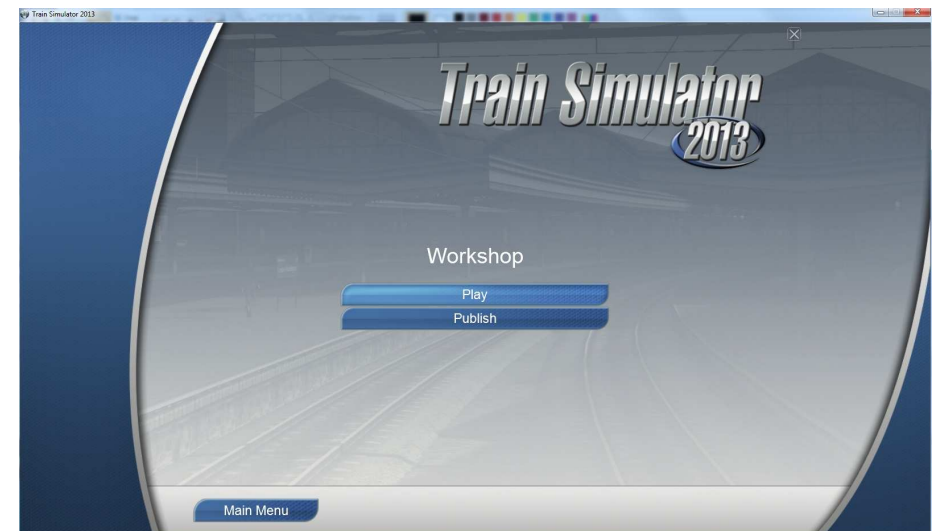
To start a new Relay, pick that option and then select the scenario you wish to drive.



When you reach the handover point you will be prompted to identify which Steam user you want to continue the scenario.

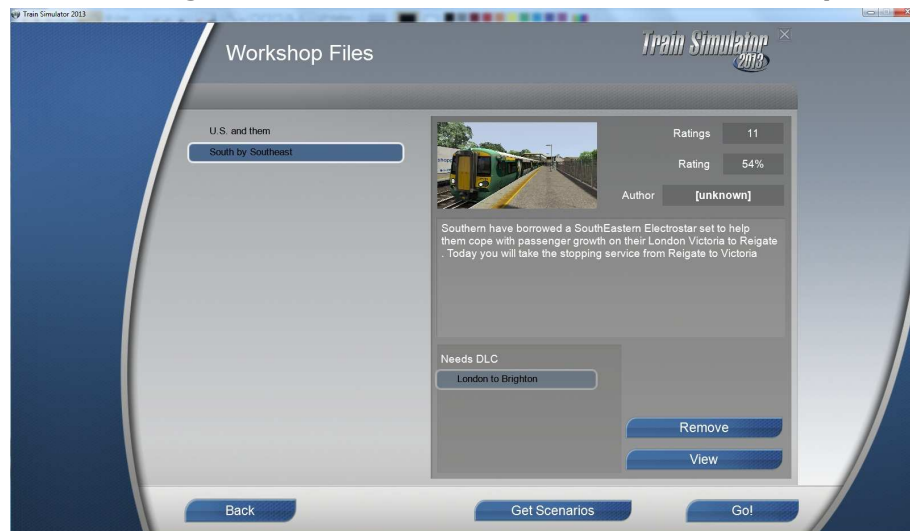
2.7 Steam Workshop

TS2013 provides a range of scenarios for you to explore, but there is always more to do! Steam Workshop provides the capability to add to your collection of scenario challenges, or, if you are of a creative nature, share scenarios you have created with others. These scenarios are kept in the Steam system and so you must be online to use this facility.



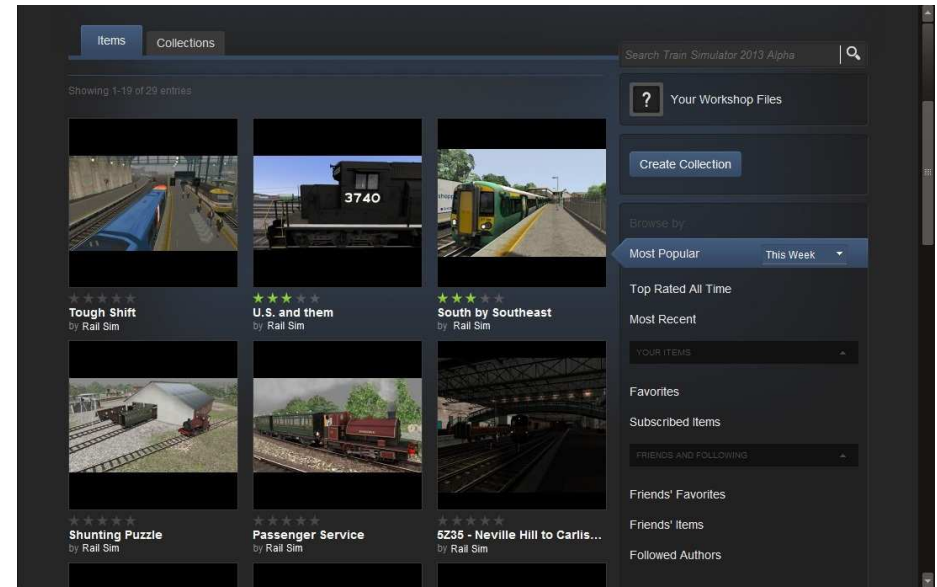
Click on **Play** to pick a Workshop scenario to use or **Publish** to make your scenarios available to others.

2.7.1 Getting additional scenarios from Steam Workshop

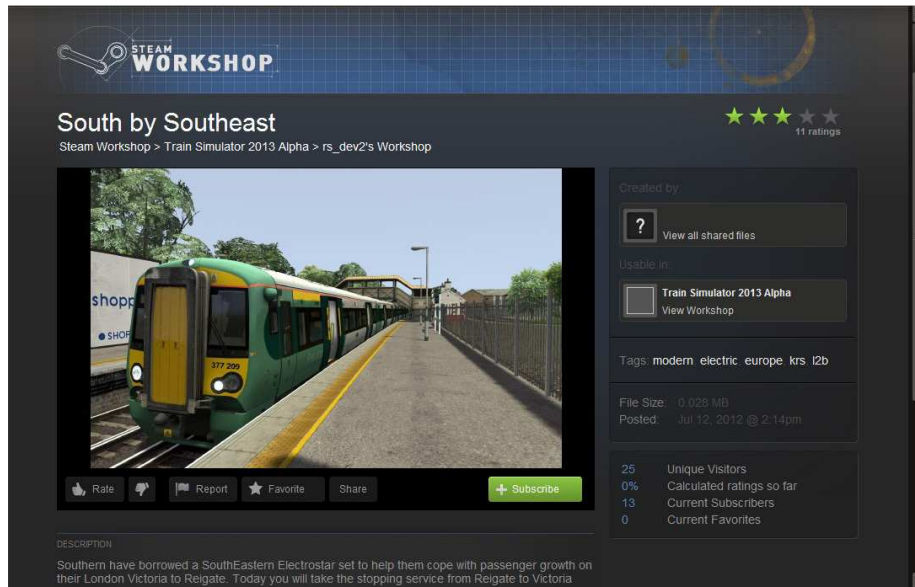


The **Play** option shows the Workshop scenarios that you have downloaded and gives you the option to play this scenario (**Go**) or look for new content (**Get Scenarios**).

Get Scenarios shows the scenarios available and indicates which ones are most highly rated and which are most popular.



By clicking on a scenario that interests you, you will get more information about that scenario displayed as shown in the example below.



Choose **Subscribe** to obtain the content - you will subsequently get a copy of the scenario. The scenario will be downloaded and then appear in your **Workshop/Play** menu.

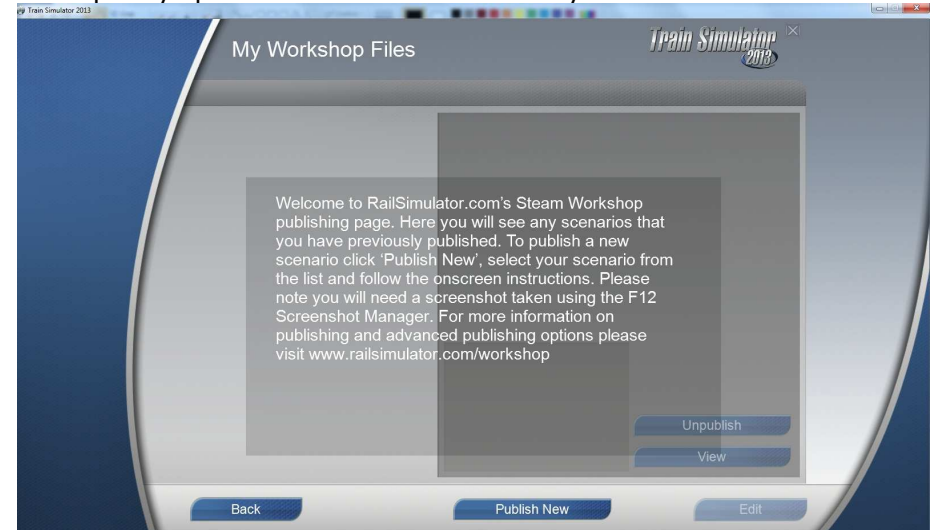
Please note that content provided in the Workshop is not provided by RailSimulator.com and so we are not responsible for the quality of the material provided.

This facility is partly provided by Valve Corporation through their Workshop facility and we can not guarantee the ongoing availability of this system.

Use of this option will bring up an overlay from the Steam system. Close this Steam window to return to TS2013.

2.7.2 Uploading your Scenarios to Steam Workshop

We encourage you to share scenarios you have created with other TS2013 players. Click on Publish to start this process. Note that you can subsequently update or remove this content if you wish to do so.



2.8 Editor

The editor provides the ability to create new routes and scenarios. Its features are described in the Creator Manual.

2.9 Game Settings

TS2013 can be set up in many ways. The Settings menu lets you change these settings. Each of these options is described in greater detail below.



2.9.1 Graphics



Master Detail Level

This quickly sets the options based on the performance of your computer. If you wish to set an individual set of features, choose **Custom**.

Screen Resolution

You can set the screen resolution used by TS2013. Higher resolution requires more processing power and can lead to a more jerky experience, depending on which other graphic options are selected. Note that TS2013 will restart after changes to the screen resolution.

Full Screen

Switch between windowed and full screen mode. Note that TS2013 will restart after changes to this option.

Screen Brightness TSX mode

Change brightness - only applicable to full screen mode. This option is included for backwards compatibility with users who have purchased previous versions of Train Simulator or RailWorks and who have less powerful computers.

The **Advanced** options allow you to customise TS2013 to provide higher or lower levels of detail in the simulator. It is not normally necessary to adjust these options.

Master Detail Level

This quickly sets the options based on the performance of your computer. If you wish to set an individual set of features, choose **Custom**.

Anti-Aliasing

TS2013 offers a number of different methods of edge-

Texture Filtering
Scenery Quality
Scenery Detail
View Distance
Shadow Quality
Water Quality
Procedural Flora

smoothing. This option allows you to match the technique to the capabilities of your computer and graphics card

The smoothing method to use for textures

The complexity and quality of models and textures used

Controls the amount of scenery displayed

The limit of how far from the camera scenery is drawn

Controls the quality of shadows displayed

Controls the display quality of water surfaces.

Controls the rendering of 'automatic' grass and weeds on the ground.

Adaptive Bloom

Adaptive bloom simulates the eyes adaptation to changes of light level such as when exiting tunnels

Depth of field

Simulates the depth of field of a camera so that close up and distant objects are slightly out of focus.

2.9.2 Gameplay



Driving Model

Choose either **Expert** or **Simple**.

Note that not all locomotives support simple controls and Career Mode scenarios can not be played in simple mode

User Hints

If selected, the names of driving controls will be shown

Automatic Coupling

when the mouse is positioned over them and left for a few moments.

Use this setting to allow vehicles to automatically connect when pushed together.

Automatic Fireman

Use this to allow the simulation to automatically handle coal shovelling and water loading.

Exit if Pass Danger Signal

The simulator stops if you pass a signal at danger in certain scenarios

Show Language Warning

Displays a message if the scenario chosen is not translated into the language you are using.

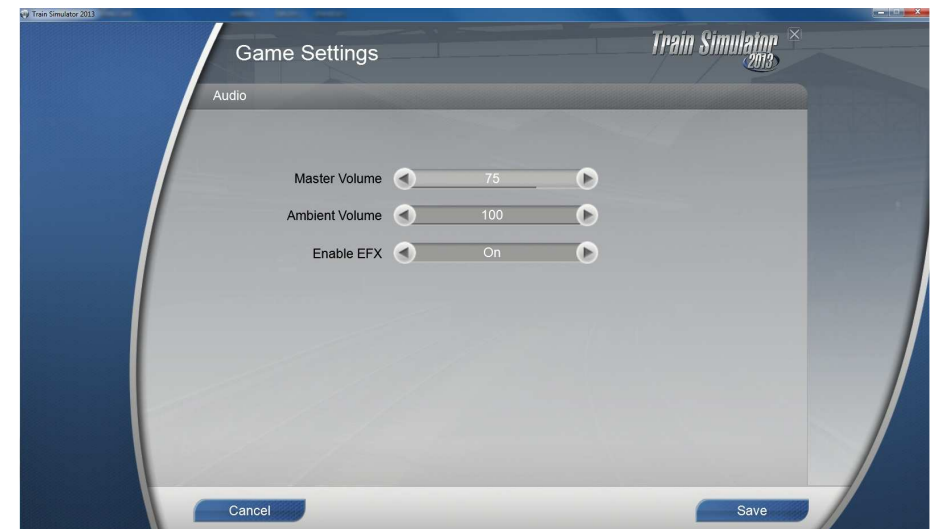
Brake on over-speed

Applies emergency brake if speed limit exceeded (certain trains only).

Coupling Override

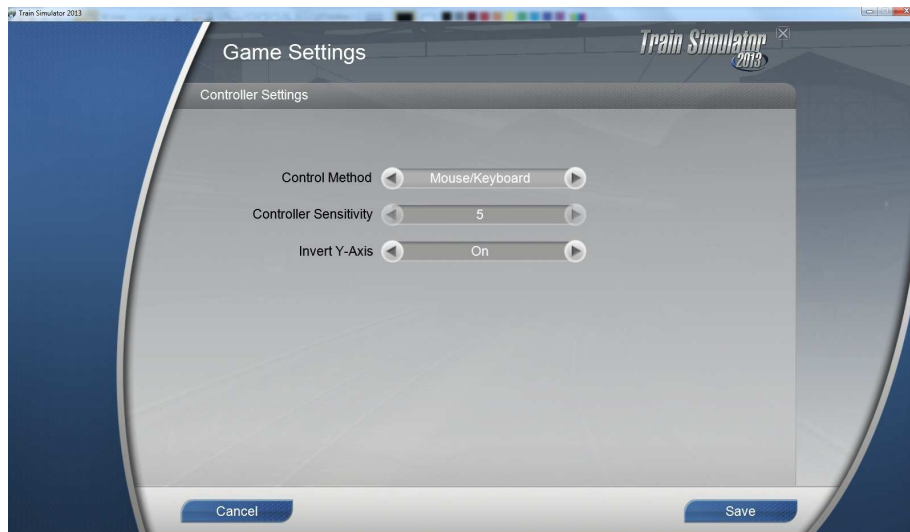
Use this setting to allow vehicles with incompatible types of coupler to connect together.

2.9.3 Audio



These change the audio options - main and background noise volume, **EFX** enables the advanced features such as 'reverb' and 'cab occlusion', but may have a performance impact upon slower computers.

2.9.4 Controls

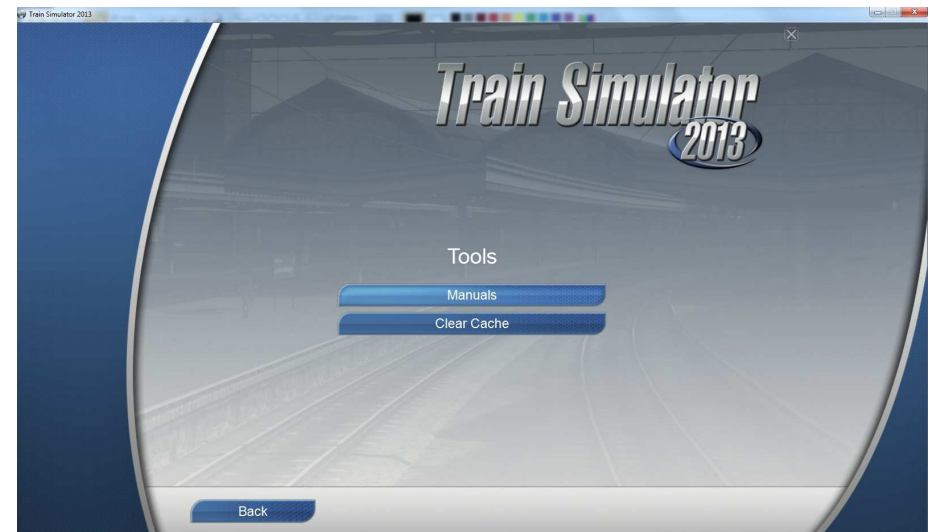


If you are using the game controller, these options let you switch between the keyboard and controller, change the sensitivity and invert the Y-Axis.

2.9.5 Credits

Lists the people who have been involved in making TS2013. If we have inadvertently missed anyone, please let us know!

2.9.6 Tools



The Tools menu is home for tools you may need.

The **Manuals** option lists the available manuals for TS2013 along with any additional content you may have purchased. These manuals are organised by language. **Note: This only is only available if you are running TS2013 in Windowed mode (see setting graphical options above).**

The **Clear Cache** option should be used if you are having problems with TS2013 content. **Clear Cache** removes a number of temporary files and forces some cached databases to be rebuilt. This eliminates corruptions that may follow system failure.

3 Driving Controls and Information

A quick reference to the keyboard driving controls can be found in the Keyboard Guide supplied with TS2013. This section further describes the most useful controls.

TS2013 lets you control the train in four ways:

- You can use the mouse to manipulate the in-cab controls
- You can use the standardized controls of the driving interface
- You can use the Xbox game controller. See section 5 below
- You can use keyboard commands.

Because each train has different control layouts, the remainder of this guide will focus on the driving interface and the keyboard commands as these interfaces are standardized.

However, if you do wish to use the mouse to manipulate the train controls, first switch to the cab view (see 3.4 below) and then left-click on the control (throttle or brake), and, holding down the left mouse button, drag the control in the direction in which you wish to manipulate it. Look at the locomotive-specific information in the Driver Manual for details of the in-cab controls.

If you do not wish to see the Driving Interface displayed, use the **"F4"** key. This will cycle between the full display, a minimal display and none at all.

3.1 The Driving Interface overlay

You will see an overlay on the simulator, which will look like this:



Using the mouse, keyboard or game controller, this interface provides information to help you drive and also control the simulation.



The pause button provides a set of additional, in-game, options. See section 3.9 below

3.2 Simple Driving Controls

When you first install TS2013, the driving controls are set to 'Expert'. You can change to the Simple set of driving controls using the **Driving Model** option on the **Gameplay** section of the **Game Settings** menu.

Note that not all trains can be driven with Simple Controls and you cannot select Career Mode scenarios in this mode.

The Driving Interface overlay gives you all the route information you need simplifies the complexity of the driving controls

The following simple controls are the most important (the keyboard alternates are shown in quotes):



"A"

Accelerate. Click on the upper part of the control or left click and drag the control upwards to increase the speed. (This will be achieved through a combination of releasing the brake and applying power.)

"D"

Decelerate Click on the lower part of the control or click and drag the control down to decrease the speed. (This will be achieved through a combination of reducing power and applying brakes.)



"S"

Reverse direction. Click on the control to change the direction of the locomotive. You should be at a complete stop to do this.



"Back-space"

Emergency Brake. Apply emergency brakes. This sets the brakes to 100% and locks the other controls. Once the train has come to a complete stop, the other controls will unlock.



"Space-bar"

Horn. Sound the horn or whistle.

The information areas of the display and other controls shown are described in the next sections – those that are not available if the Simple Controls option is selected are shown as **"Expert"**.

3.3 Expert Driving Controls

To experience the full features of the simulation, you must the Expert mode (this is set via the **Driving Model** option on the **Gameplay** section of the **Game Settings** menu). All locomotives can then be accessed and Career Mode scenarios are available.

The full driving control set is shown as follows:



The full driving control set provides additional flexibility. The key components are (left to right):

- Throttle (Diesel/Electric locomotives) or Regulator (Steam trains)
- Reverser
- Brake

Depending on the locomotive/consist, there are three types of brake selectable (top to bottom): Train brake, Locomotive brake and Dynamic brake.



Note: Many modern locomotives combine the throttle and brake control and this is shown as a signal control



A small number of trains also have a Gear control. This is displayed to the left of the Throttle control.

The keyboard equivalents for these functions are:

| | |
|----------------|---|
| "A"/"D" | Increase/Decrease throttle (or open/close regulator for steam trains) |
| "W"/"S" | Increase/Decrease Reverser |
| "`"/"'" | (apostrophe/semicolon) Increase/Decrease Train brake |
| "J"/"I" | Increase/Decrease locomotive brakes |
| ".""/"'" | Increase/Decrease dynamic brakes |
| "E"/ "Shift-E" | Gear up/Gear down |

You can also manipulate the in-cab controls – click and hold the relevant control and drag it in the required direction.

3.4 Changing Your Point of View

TS2013 gives you many ways of observing the simulation. Initially, the camera is positioned outside and above the train (the external camera). Use the following controls to change cameras as you drive:

| | | |
|--|-------------------|---|
| | "1" | Cab view. |
| | "2" | External front camera. This is the initial view displayed |
| | "3" | Rear of train |
| | "4" | Trackside camera |
| | "5" | Passenger view |
| | "6" | Front coupling camera |
| | "7" | Overhead Yard camera |
| | "8" | Detach camera from train for general exploration |
| | Up arrow | Zoom in. As an alternate use the mouse scroll wheel |
| | Down arrow | Zoom out. As an alternate use the mouse scroll wheel |
| | Shift+ 2 | Head out of cab left/Head out of cab right. |
| | | |
| | | Alternate camera |
| | Ctrl+ "=" | Move forward to next cab. For consists with multiple cabs |
| | Ctrl+ "_" | Move back to previous cab. For consists with multiple cabs |

You can control the camera by pressing and holding the right mouse button and moving the mouse wheel, or you can change your viewing angle (the direction of the camera) using the following keys (**Note:** not all are available in all views):

Zoom: “↑”, “↓”
 Zoom fast: **Shift** + “↑”, **Shift** + “↓”
 Pan: “←”, “→”
 Angle: **ctrl**+ “↑”, “↓”

3.5 Controls for Steam Trains

Steam trains require careful use of a range of controls. TS2013 provides the option of an Automatic Fireman to allow you to focus on driving the locomotive. Beginners are strongly recommended to make use of this option (check the **Automatic Fireman** option on the **Gameplay** tab of the **Option** menu).

Because different types of Steam train have significantly different types of controls, our Overlay (or HUD) simplifies these controls.

3.5.1 Steam Controls when using the Overlay

If you are using the Overlay (HUD), the following controls are available:
 (Note that not all controls will be available for all locomotives)



Brake display.

This shows the brake pressure.

Use the button in the centre to switch between train and locomotive brake



Blower: on/off control



Click on the firebox icon to load coal into the fire. Click it again to stop loading.

Click on the Water icon to let water into the boiler. Click it again to stop.

3.5.2 Keyboard controls for steam trains

You can control the train to a fine degree using either the keyboard or the in-cab controls (using the mouse). You should not use these if you are using the Overlay controls.

| | |
|---------------|--|
| "J" | (Expert) Small ejector on/off (Steam trains only) |
| "C" | (Expert) Cylinder cocks on/off (Steam trains only) |
| "F"/"shift-F" | Open/Close fire box |
| "R"/"shift-R" | Increase/Reduce rate of shovelling coal |
| "I" | Turn on/off Live injector |
| "K"/"shift-K" | Increase/Reduce flow to Live injector |
| "O" | Turn on/off Exhaust injector |
| "L"/"shift-L" | Increase/Reduce flow to Exhaust injector |
| "N"/"shift-N" | Increase/Reduce Blower |
| "M"/"shift-M" | Increase/reduce Damper |

3.6 Other Controls

(**Note:** Not all controls are available on all locomotives)



"T"

Load/unload Passengers or freight



"H"

Lights. Repeatedly pressing will cycle through headlight states if appropriate.



"V"

Wipers



"Ctrl+ S"

Take screenshot – an image file will be placed in the directory "My pictures" with a file name indicating the location (lat/long) and time. You will also have the option to upload your picture to your Steam account so that you can share it with the TS2013 community



"Z"

(Expert) Engine stop/start. By default engines will already be running at the start of a scenario. Press this button to stop and then restart the engine.



"P"

(Expert) Raise/Lower Pantograph (Electric trains only)



"Q"

(Expert) Alerter. The alerter is a system used on some trains to ensure that the driver has seen a signal. If the

alert sounds (a black/yellow striped symbol is shown on the Driver's display), you must acknowledge by clicking on the Alerter button or the emergency brakes will be applied.



"X"

(Expert) Sander



"B"

Bell



"Back-space"

Emergency Brake. Apply emergency brakes. This sets the brakes to 100% and locks the other controls. Once the train has come to a complete stop, the other controls will unlock.

Note: Not all trains have an emergency brake.



"Space-bar"

Horn. Sound the horn or whistle.



"/"

Handbrake off. This icon is displayed in the Coupling view – see below



"Esc"

Pause. This suspends the simulation and displays a menu giving you a choice of:

Continue/Save Scenario State/Enter World Editor/Quit

"Ctrl-Q"

Exit. You will receive an option to exit or continue.

"Ctrl-E"

Enter World Editor. See the Creator Guide for more information.

"F2"

Save position in Scenario. You can also do this via the **Pause** function.



"Tab"/ "Alt+Tab"

Request permission to pass signal that is showing red. Use "Alt+Tab" if reversing and the signal is behind.



"G"/
"Shift+G"

Change state of junction in front/behind. You can also do this using the 2D map (see below) or by clicking the junction itself.

"Ctrl+Shift+C"

Couple manually. You can also use the coupling view to couple.

3.7 Information displays



Current speed and speed limit



Current time and scenario instructions. The Circulate target is an indication of the comfort (acceleration/deceleration) experienced by passengers



The display at the bottom of the Driving Interface gives you the key information necessary to drive a train, in particular:

- The track shows the incline and the wagons or carriages that make up the train
- The distance to the next signal is shown
- Speed limits and stations are shown

Use this information to anticipate the track ahead and plan accordingly. Engine Information is specific to the type of Locomotive being driven.

3.7.1 Steam Train information (simple controls only)

Note: not all steam trains will show all this information.



This shows (left to right): Boiler level; Boiler Pressure; Fire Mass; Water level; Coal level.

3.7.2 Electric/Diesel Train information



This shows (left to right): Brake cylinder pressure and Brake pipe pressure.

3.8 Information displays

TS2013 gives you access to a range of other information.

Other information available:



"9" **Display 2D Track map.** See 3.8.1 below



"F1" **Display Task Information.** See 3.8.2 below



Display Coupling view (locomotives, wagons, coaches). See below

"F3" **Reduce Overlay display (legacy).**

This toggles the Driver's overlay between its Off and minimal state.

"F4" **Change Driver's Overlay.**

The Driver's overlay has three states, Off, minimal and Full. Pressing **F4** toggles between these states.

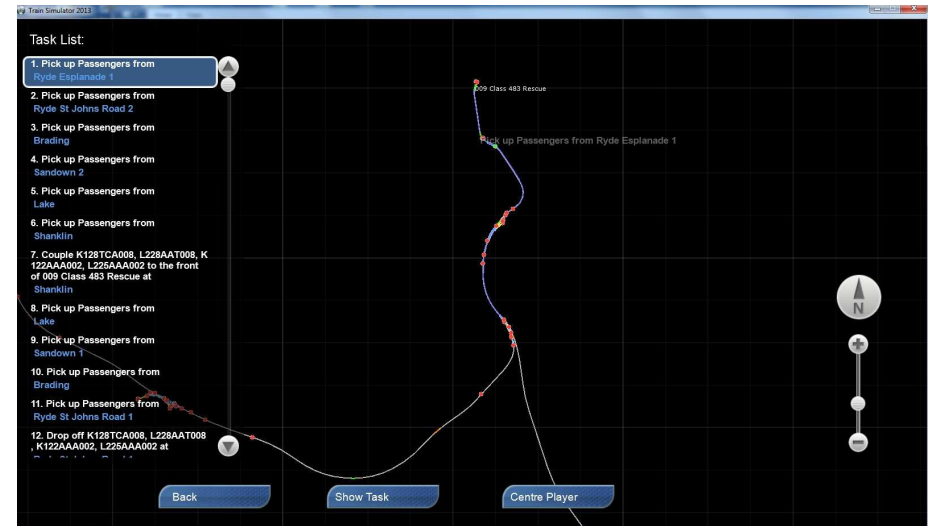
"F5" **Engine information.** This provides technical detailed information. It is only available if the Overlay is not displayed.

"F6" **Display labels.** As you drive your train, names of trains and locations relevant to the current scenario appear on screen. These labels are valuable for identifying locations, other trains, and vehicle numbers used in the scenario. Press the "F6" to turn off the display.

"F7" **Display engine and wagon numbers.** This displays the engine and wagon numbers relevant to current display. Note that this option is only available if **Display Labels** (above) is already selected.

3.8.1 2D Map

The 2D map can be accessed via the map icon on the Driving Interface or by pressing the "9" key.



The 2D map displays the track layout and the setting of all of the junctions along with the tasks in your current scenarios. The junction is set to the direction that is brightened. The path your locomotive is set to follow is shown in blue.

You can change the setting of *manual* junctions by clicking on the junction. This is especially useful for setting paths in complex yards, also note that in free roam scenarios **all** junctions are manual and so you need to set your path in advance.

Use the **Back** option at the bottom (or press "9") to return to the simulation. **Show Task** moves the focus of the map to the currently selected task in the list, while **Centre Player** keeps the train you are driving in the middle of the display (click it again to move freely around the map). The **+** and **-** buttons or the mouse scroll wheel allow you to zoom the display in and out.

Move around the map by holding down the left mouse button and moving the mouse.

3.8.2 Task Information



The scenario information can be displayed by pressing the task information icon or F1 at any time.

Press F1 to turn off this display

Note the 6 symbols on the right. These can be used to control features in the simulation.



This space is reserved for context sensitive actions (such as couple, load passengers etc)



Ask for permission to pass Red signal ahead

Ask for permission to pass Red signal behind



Change switch ahead



Change switch behind



Change to another cab on this train

3.8.3 Coupling view



When performing shunting operations, switch to the coupling view to make easy work of creating your consist. Press the Coupling icon to switch between this view and the

normal view. Click on the individual joints to attach or detach the components of the consist.

You can also set or release the handbrake by clicking on the brake icon.

3.9 In Game Options - the Pause menu

By clicking on the pause button or pressing the '**Esc**' key, you can access the in-game options. The simulation is suspended and the following menu displayed.



Continue

Returns to the simulation

Save

Save your scenario so that you can return to it later.
Note that you will overwrite any scenario you have
previously saved with this option

Controller Layout

Shows a diagram of usage of the buttons on the Xbox 360 controller

Keyboard layout

Shows the key assignments

World Editor

Lets you create and modify TS2013 content

Options

Contains two options.

1. Change the makeup of the driving overlay
2. Change the level of transparency of the driving overlay.

Quit

Leave the simulator and return to the scenario selection screen

4 Driving a Locomotive

This section describes how to drive a locomotive.

TS2013 has been designed to allow you to slowly build up your skills in operating complex vehicles by using the difficulty settings ("Driving Model") in the options menu. If you are not familiar with the operation of locomotives, we strongly recommend starting with the "simple" control setting, particularly when using steam trains.

You can drive the locomotive in one of four ways. You can use the Driving Interface (described above), you can use the keyboard (described above and in the Keyboard guide), you can use the mouse or you can use the game controller. For mouse control, first switch to cab view (press "1"), then click on a particular control in the cab, then drag the control to change the setting.

Because the position and operation of controls differ between locomotives, the remainder of this guide refers to the Driving Interface controls (with keyboard commands in brackets), but use the in-cab controls if you prefer.

4.1 Driving a Steam Locomotive

Until you are proficient at driving steam engines, switch on the Automatic Fireman to reduce your workload (to turn on the Automatic Fireman, click on the **Options** screen of the main screen, click on **Gameplay Options**, select **Automatic Fireman** and then return to select your train/route/scenario).

When driving a steam train, there are three key controls:



Regulator. This allows steam to pass from the boiler to the cylinders, which turns the wheels and moves the locomotive. Manipulate the regulator by clicking and dragging the control to change the amount of steam passed. ("A" to increase/ "D" to decrease)



Reverser. This can be switched between Full Forward and Full Reverse and must be used before setting off. Use a high reverser setting to give maximum power. This uses a lot of steam, so slowly reduce the reverser setting as you speed up. ("W" to wind the reverser forwards and the "S" key to wind it backwards).



Train Brakes. This applies the brakes on the locomotive and any other attached vehicles that have brakes. ("'" (apostrophe) key to apply the brakes and the ";" key to release them).

Starting a Steam Train

1. Release your brakes. Once they are fully released and the brake pipe pressure becomes constant (see the pressure display), apply the brakes slightly until they are in the Running position. Leaving them in the Release position would waste steam.
2. Wind the reverser fully forwards.
3. Open the regulator to about 50% and the train starts to move.
4. When you reach about 10mph, wind the reverser back to about 45%.
5. As you pick up speed, continue to wind the reverser back until it is about 15-20%.

Driving Tips

- If you then need to go faster, increase the regulator until you reach your desired speed.
- When going uphill, you may need to wind the reverser forwards and/or open your regulator to keep speed up.
- When going downhill you can coast by closing the regulator completely and setting the reverser to about 45%.
- If you begin to lose boiler pressure you are probably using more steam than you are generating so adjust the regulator and reverser or you will lose power.

Stopping the Train

1. Always give yourself plenty of room to stop – a typical steam-hauled train takes $\frac{3}{4}$ of a mile to stop from 60 mph.
2. Apply the train brake.
3. Leave the brake control in this position, and the brakes will come on slowly until they reach their maximum force.

If you only want to make a partial brake application, after applying the brakes, release them until the control is in the 'Self LAP' position. This will hold the braking force at its current level.

4.2 Driving a Diesel Locomotive

The key controls:



Throttle .

("A" to increase/"D" to decrease)



Reverser. The reverser on a diesel locomotive usually has three positions: Forwards, Reverse and Neutral. When stationary, always move the reverser to the Neutral position.

("W"/"S" – Forward/Reverse)



Brakes. Diesel trains generally have three types of brakes – Train brake, Locomotive brake (normally only used when driving a locomotive on its own – a 'Light Engine') and dynamic brake. Use the buttons on the right to select the brake you wish to use and then move the control.

("'"/";" – apply/release Train brake)

("J"/"L" – apply/release Locomotive brake)

(">"/"<" – apply/release dynamic brake)



Gear. Certain locomotives have a gear control.

("E" to increase/"Shift+E" to decrease).



Start up/ Shut down. Trains are initially started. ("Z")

Note: Some locomotives (including the BR294) combine the throttle and train brake into one control. When driving these, reducing the throttle (<D> key) also applies the brakes.

Starting the Train

1. Start up the locomotive if it is not already running.
2. Move the reverser to the Forwards position.
3. Release the train brakes and locomotive brakes if applied.

4. Move the throttle to around 25%. Do not use full throttle from a standing start as this can cause wheel slip or overload the traction motors, causing the power to trip out.
5. When you've reached around 10 mph, you can normally then give the locomotive full throttle. Be more careful in wet or snowy conditions.

Stopping the Train

1. Always give yourself plenty of room to stop – a typical diesel hauled train takes ¾ of a mile to stop from 90 mph.
2. Apply the train brake control until it is in the 'Self LAP' position. Increase or decrease the braking force by moving the train brake control within the Self LAP position.

4.3 Driving an Electric Locomotive

The key controls:



Throttle .

("A" to increase/"D" to decrease)



Reverser. The reverser on electric locomotives usually has three positions: Forwards, Reverse and Neutral.

When stationary, always move the reverser to the Neutral position.

("W"/"S" – Forward/Reverse)



Brakes. Electric trains generally have three types of brakes – Train brake, Locomotive brake (normally only used when driving a locomotive on its own – a 'Light Engine') and dynamic brake. Use the buttons on the right to select the brake you wish to use and then move the control.

("'"/";" – apply/release Train Brake)

("J"/"L" – apply/release Locomotive Brake)

(">"/"<" – apply/release dynamic brake)



Pantograph. Click to raise or lower the pantograph/3rd Rail shoes (if applicable), which collect electricity from the available power supply.

("P")



Start up/ Shut down. Trains are initially started ("Z")

Starting the Train

1. Raise the pantograph if it isn't already raised.
2. Start up the locomotive.
3. Move the reverser to the Forwards position.
4. Release the train brakes and locomotive brakes if applied.
5. Move the throttle to around 25%. Do not use full throttle from a standing start as this can cause wheel slip or overload the traction motors, causing the power to trip out.
6. When you've reached around 10mph, you can normally then give the locomotive full throttle. Be more careful in wet or snowy conditions.

Stopping the Train

1. Always give yourself plenty of room to stop – a typical electric hauled train takes 3/4 of a mile to stop from 90 mph.
2. Apply the train brake control until it is in the *Self LAP* position. Increase or decrease the braking force by moving the train brake control within the Self LAP position.

4.4 Warning icons

To help you improve your score when playing Career Mode scenarios, TS2013 displays a number of icons to show how your performance is being measured.



Comfort. Acceleration or deceleration too rapid



Time keeping. Schedules are important in some scenarios



Excessive Fuel usage.



Wheel slip. Manage your acceleration better.



Operational error. Did you stop for passengers? Check the briefing notes to ensure you followed all steps.



Accuracy warning. You need to stop closer to the target.



Speeding. Keep to the limits for the best score

4.5 Positive achievement

The following icons indicate successful achievement of key goals



Accuracy. Spot on!

Carriages aligned with platform. All the passengers can get on/off

Timeliness. Everyone likes an early train!

4.6 Activity markers

When playing scenarios, you can use your cursor to start key activities. As you move your cursor over the appropriate object (platform, junction etc), you'll see the following icons. Click to carry out the relevant activity.



Load bulk freight



Load fuel



Load Container



Load passengers



Couple



Load water



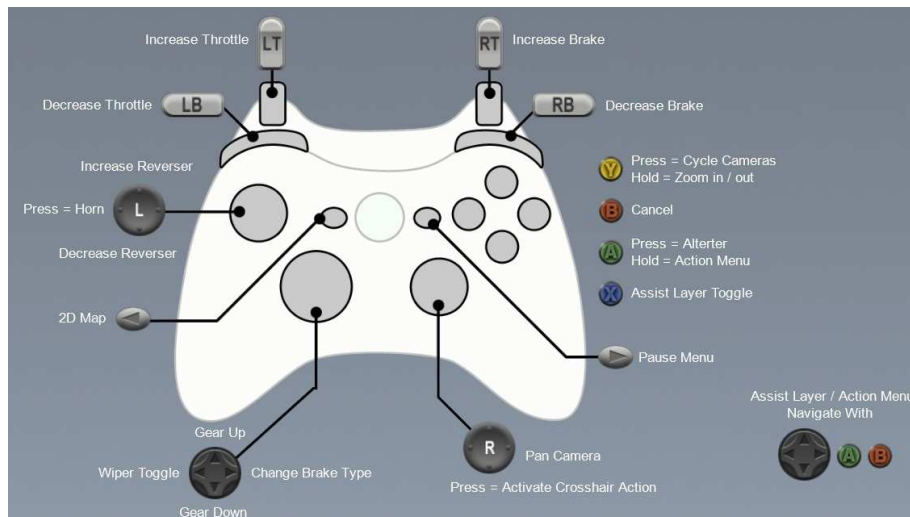
Uncouple



Set junction

5 Game Controller

As more people use their PC for gaming, we know that lots of customers have game controllers attached and so TS2013 supports use of the Xbox 360 controller attached to your PC.



Some additional notes on using the Xbox controller.

5.1 Using the controller in free roam

In free roam, the following actions control the camera position:

- Left thumbstick - moves the player position
- Right thumbstick - looks around
- When the hand icon appears over a driveable locomotive, clicking the right thumbstick will take control of that locomotive

6 Operational Error messages

6.1 Unrecoverable Errors

The following errors cause a Free Play session or Scenario to terminate immediately:

Train derailment

Your train leaves the track. This is usually when you travel round corners too fast or pass over a closed junction.

Collision

Your train collides with another train or wagon at speed.

Locomotive ran out of water (steam trains only)

Your steam locomotive runs out of water.

Fusible plug has melted (steam trains only)

Your steam locomotive runs out of water and a safety mechanism allows pressure to leave the boiler so it doesn't explode. To avoid this, make sure the boiler water level never drops to zero.

Fatal blowback (steam trains only)

Your steam locomotive enters a tunnel with the firebox doors open. To avoid this, close the firebox doors and turn the blower onto full when entering tunnels.

Firebox extinguished (steam trains only)

You didn't stoke your fire with sufficient coal and it died.

6.2 Major Operational Errors

The following errors don't end a Scenario or Free Play session because you can still drive the train. However, you will be penalised heavily in the performance report at the end of the Scenario.

| | |
|---|---|
| Moved train while doors were open | Your train moves at any point while the doors are open. If you are playing a career mode scenario, it will terminate immediately. |
| Left station before passenger loading was complete | You leave the station area before the passenger loading bar reaches 100%. |
| Moved train whilst loading/unloading was under way | You move before the freight/fuel loading bar reaches 100%. |
| Signal passed at danger (SPAD) | You pass a red signal without requesting permission to do so. |

6.3 Minor Operational Errors

The following errors don't end a Scenario or Free Play session because you can still drive the train.

| | |
|---|--|
| Used emergency brakes/penalty brakes | You apply the emergency brakes or cause the automatic warning systems to trigger them. |
| Speeding | You exceed the speed limit. For each incident of speeding, the start time, maximum velocity, distance travelled, nearest milepost and speed limit is recorded. |
| Passenger/freight comfort | Passengers experience unacceptable discomfort. This usually happens when you exceed line speed, especially when the train is travelling around corners. It also happens if you apply brakes too hard. |
| Wheelslip (Scenarios only) | This usually happens when the train accelerates too hard or brakes too hard (especially when pulling a load). The best way to avoid wheelslip is to accelerate gently and use the train's sander to apply sand to the track. |

Failed to stop at a station (Passenger Scenarios only)

You don't stop at a station stop required in your Scenario instructions.

Failed to stop for work order (Freight Scenarios only)

You don't stop for a work order required in your Scenario instructions.

Improper horn use (Scenarios only)

You should not sound the horn during hours of darkness.