

TRAINZ™
SIMULATOR 12
NOW WITH MULTIPLAYER



MANUAL

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1 - INTRODUCTION TO TRAINZ

Welcome to the latest edition of the Trainz series, Trainz Simulator 12. As well as all the features you have come to expect from Trainz over the past ten years, Trainz Simulator 12 extends the Trainz experience by introducing online multiplayer.

Whether you wish to drive the trains yourself, manage 'AI' operations of multiple trains, control industries or create your own Trainz world, Trainz Simulator 12 is the platform that will allow you to do this and more to bring your virtual railway to life.



The team at N3V Games wish to thank you for purchasing this evolutionary product, and we trust that you will enjoy not only what's in the box, but also the rapidly growing online Trainz community and wealth of free user created / 3rd party content that expands and enhances your experience. You can discover more about Trainz at

<http://www.trainzportal.com/>

COMMON TERMS USED IN THIS MANUAL

- Click - use the Left Mouse Button (LMB)
- Double-Click - clicking the LMB twice
- R-Click - use the Right Mouse Button (RMB)
- Mouse-over - move the cursor over an object and pause
- Drag - click and hold the LMB then drag the item
- Hotkey – press the key described to carry out the action
- CM - Content Manager

BASIC CONTROLS

KP = numpad

W	Throttle Up	KP8
X	Throttle Down	KP2
S	Throttle Idle	KP5
Q	Brake Release	KP9
A	Brake Lap	KP6
Z	Brake Apply	KP3
F	Reverser Fwd	KP*
R	Reverser Bwd	KP/
H	Horn	KP+
B	Bell	KP-
L	Headlight	
Shift-L	Dimmer	
;	Ditch Lights	
V	Toggle Sanders	
P	Pause	

CAMERA HOTKEYS

1	Cab Interior View
2	Chase View
3	Lineside View
4	Free Roaming View

INTERFACE HOTKEYS

F5	Interface Toggle on/off
F6	Driver Bar
F7	Button Bar
F8	Custom HUD
F9	HUD Controls

2 - GETTING STARTED

To get the most out of your Trainz experience, it's a good idea to do a little preparation first. Make sure your PC has up to date graphics drivers, clean your mouse and keyboard, grab the beverage of your choice, adjust your chair, and you'll be ready for a rail journey of a lifetime. Welcome to the world of Trainz.

INSTALLATION

Before installing, ensure that you have sufficient disk space (at least 10GB) and that you have no other programs running.

If you have the DVD version, begin the installation process by inserting the DVD into your DVD drive. If you have auto run enabled on your computer the installer will start automatically. If you don't have auto run enabled, you will need to start the installation yourself - double click on your DVD drive through My Computer or manually browse the contents of the DVD and double click on the setup.exe file found on the root directory of the DVD.

The installation wizard will guide you through the installation process. During this process, you will need to enter your product key. For a DVD version, this is normally found on a label stuck inside the DVD case or on the back of the manual. For a Digital Download version, you will have been notified of your product key electronically by the online shop.

For further help with installing TS12, please refer to the Readme file found on the DVD, or refer to the Trainz Portal website at <http://www.trainzportal.com>

STARTING TRAINZ FOR THE FIRST TIME

At the end of the installer, you will be prompted if you want to launch Trainz straight away. If you chose not to, then click on the Trainz icon on the desktop or in the start menu to start the Trainz Launcher. The first time Trainz is run, a diagnostic check will verify if your computer is up to date and capable of running Trainz. Any warnings it flags may cause functionality or performance problems.

Once the diagnostic check is complete, and you have addressed any problems it raised, you will arrive at the Trainz launcher. To get the most from your Trainz experience click the Options button in the launcher to open the configuration screen, and go to the 'Planet Auran' tab. From here you can enter your Planet Auran profile details.

Creating Games, Entertainment & Technology

Home Planet Auran Citizens Online Forums Shop Welcome Back, **#woodok** Logout

PLANET AURAN REGISTRATION

1 CREATE ACCOUNT **2** CONFIRM ACCOUNT **3** VERIFY E-MAIL

Fill out all the fields to register with Planet Auran

Username: Check Username
 Password: Password help
 Confirm Password:
 Email Address:
 First Name:
 Last Name:

Which Auran Newsletters do you want to register for?

Trainz
 Other Games

I have read and agreed to the Planet Auran Rules.

SUBMIT REGISTRATION

JOIN NOW - IT'S FREE!

Planet Auran Community
 Planet Auran is home for over 300,000 gamers and train fans. Create a profile and share your online experience with others.

Unlimited Access
 Register your Trainz serial number to access thousands of items from the Trainz Download Station.

Trainz Forums
 Join discussions and let your voice be heard in the world of Trainz.

Trainz Online
 Create your own Trainz gallery and view thousands of screenshots from other Trainz fans.

TRAINZ DOWNLOAD STATION **TRAINZ SIMULATOR 2010** **TRAINZ ONLINE STORE** **NEWSLETTER SIGN UP NOW!** **BLUE COMET**

Trainz Products
 Trainz Simulator iPad
 Trainz Simulator 2010
 My First TRAINZ SET
 Trainz Simulator 2009
 Trainz Classics
 Trainz Driver
 Trainz Railway Simulator 2006
 Trainz Railway Simulator 2004

Planet Auran
 Planet Auran
 Join Planet Auran
 Citizens Online

Community
 Forums
 Download Station

Auran Store
 Auran Store
 Buy TS2010
 View All Trainz Products
 View All Simulation Products
 Downloadable Trainz Content

If you are new to Trainz click Join Planet Auran to create a Planet Auran profile. Although not compulsory, once you have a profile, you can register your serial number and gain access to the extensive library of content available via the Download Station. There are currently well over 100,000 items on the Download station, and it is growing every day.

Note: You must be connected to the internet to register with Planet Auran and to download content.

For Trainz to look its best, you should run Trainz in the same resolution as your native display resolution. This is set in the 'display settings' section of the Launcher. For a typical flat panel screen, this is generally the highest setting listed in the launcher - the one at the bottom of the list. If in doubt, consult the documentation for your monitor to determine what the native resolution is.

Once these details are entered, click on OK to save them and click Start to launch Trainz.

You can update or change any of these details by clicking on Options on the Trainz launcher at any time.

OVERVIEW OF AVAILABLE SETTINGS

If you are having issues with game performance on your machine, please try the tweaks listed below:

- **Draw Distance** (Trainz in-game option): Larger draw distances require significantly more CPU and GPU power. If you are having performance problems, try lowering the draw distance first.

- **Anti-Aliasing** (Trainz Launcher option; Video Driver Options): Reducing or disabling AA quality increases performance on low-end hardware but results in a significant reduction of visual quality. We recommend that you use the TS12 anti-aliasing settings rather than attempting to override them with your video driver settings.
- **Anisotropy** (Trainz in-game option): Anisotropy dramatically improves the crispness of distant objects and objects that are on an angle to the observer. However, this may introduce performance problems on low-end hardware.
- **Virtual memory settings** (System options): Virtual memory is used when windows has used up all of the available RAM installed in your system. You can edit the virtual memory settings by going to Windows Control Panel -> System -> Advanced Tab -> Settings (in the performance section) -> Advanced Tab -> and clicking "Change" in the Virtual memory section. Select the Custom size radio button and change the Maximum size to at least 4092. Click OK on the various screens to return to Windows.
- **Enable hardware accelerated texture compression** (CM settings - Miscellaneous): Enabled by default, this option can significantly reduce the time taken to install large content items. On some faulty video hardware/video driver combinations, this may result in corrupted textures. To fix this issue disable the option and reinstall the affected content items.

TS12 LAUNCHER

Once you have successfully installed TS12, Double Click on the TS12 icon on your Desktop (or at N3V Games > on the Start menu) to access the Trainz Launcher menu.



The Trainz Launcher menu provides a number of functions:

Start

This will launch Trainz.

Options

Enables you to customize your settings for Trainz, including your Planet Auran settings, display settings and advanced graphics features such as shadows. Read on to to the next section for a detailed description of these options.

Content

This will start Content Manager, a utility to help you manage your Trainz content and to download additional content.

Section 14 examines the details of Content Manager.

Manual

Opens up the .PDF version of the Trainz manual (i.e. what you are reading now). The Adobe® Reader® application must be installed for you to view the digital manual.

Website

This will open up your browser to the Trainz Online community portal where you can access wikis and community information along with the latest Trainz news.

Extras

A number of extra documents from N3V and the 3rd Party Content Creators.

Forums

This will open up your browser to the TS12 community forum where thousands of Trainz fans are ready to help you with your questions and share experiences.

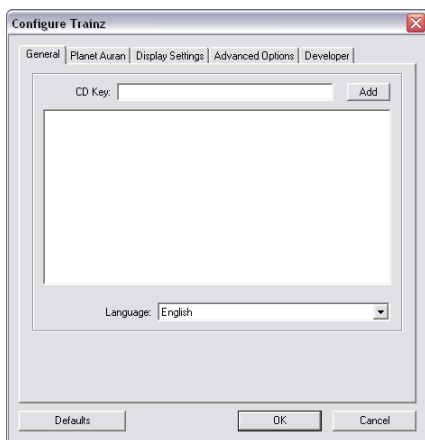
Quit

Closes the TS12 Launcher.

OPTIONS MENU IN DETAIL

By selecting “options” from the TS12 Launcher you can customize various elements to maximize your enjoyment.

General



Under this tab you will find a dialogue for adding your product keys and selecting your desired language.

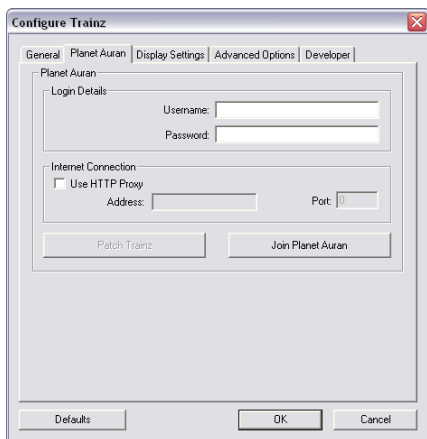
Planet Auran

Planet Auran is an ever growing online community that is free for all TS12 users to join. There is an incredible wealth of additional information and content available that will enormously expand your enjoyment of TS12.

Highlights include:

- Additional files and utilities that help you get the most out of TS12.

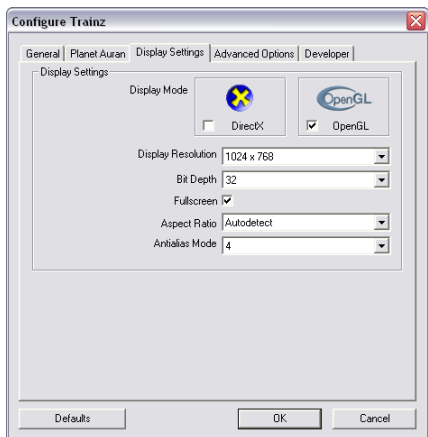
- Online forums (message boards) where you can ask questions you have about using TS12 and learn from others.
- Interactive online features like iTrainz Chat; iPortal and Multiplayer.



If you haven't already joined, click on the "Join Planet Auran" button to register. This will launch your default browser with the Planet Auran registration page that will guide you through the registration process. You will need to have Internet access and be online to do this.

Once you've registered, you'll have access to over 150,000 different items such as routes, engines, rolling stock, buildings, bridges, track, etc so that you can build exactly the rail empire you want to.

Display Settings



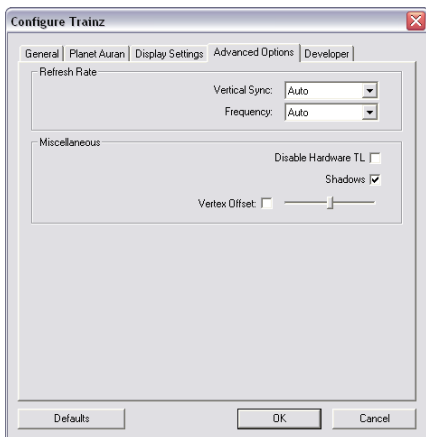
DirectX mode or OpenGL mode can be selected depending on your graphics hardware requirements. For older systems, DirectX generally improves rendering speed. Experiment to see which graphics setting works best with your hardware.

Display Resolution determines what resolution your screen will run at. For best results, set this to your usual (native) desktop resolution.

Bit Depth should be left at 32 bit unless your graphics card doesn't support 32 bit graphics.

Anti-Aliasing - Disabling AA increases performance on low-end hardware but results in a significant reduction of visual quality. We recommend that you use the TS12 antialiasing settings rather than attempting to override them with your video driver settings.

Advanced options



Under this tab you will find technical settings along with the option to disable in-game Shadows.

Vertical Sync - Allows for smoother graphics (helps eliminate tearing). “Half-Rate” option is recommended for slower hardware.

Frequency - Specifies the “vertical refresh frequency”. If this is set too high for your hardware, the game may not start. The default (“Auto”) should run on most hardware, but may not give the best results.

Disable Hardware TL - Turns off some hardware acceleration options. Results in poorer performance, but may help reduce conflicts with faulty AGP or GPU drivers.

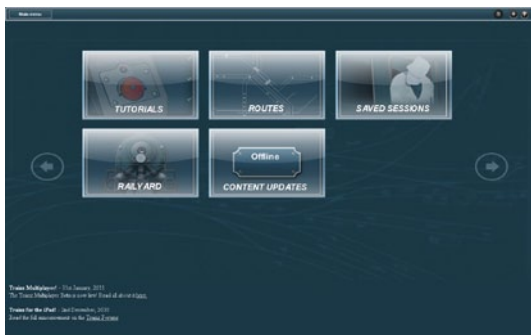
Vertex Offset - Applicable only to DirectX. If set incorrectly, some elements of Trainz (such as text) will appear blurred.

Developer

This tab stores further technical settings related to developer and beta testing.

3 - MENU SYSTEM

The Trainz main menu has five options, Tutorials, Routes, Saved Sessions, Railyard and Content Updates.



3.1 TUTORIALS

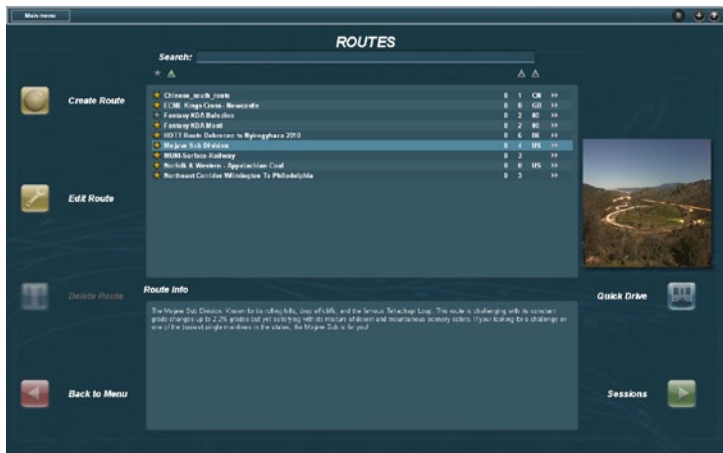
This menu features 4 introductory tutorials, each focused on a different aspect of train operation in the Driver system. The 4 tutorials in order are:

- Tutorial 1 – Trainz interface and basic DCC Controls
- Tutorial 2 – Advanced DCC Controls
- Tutorial 3 – Basic CAB Controls
- Tutorial 4 – Advanced CAB Controls

To get started, select the first tutorial. This will bring up a description of the tutorial at the bottom of the screen. Once the tutorial has been selected, click on the Play Tutorial button found at the bottom right corner of the screen. Trainz will now start running Tutorial 1, where you will be guided through all the basic controls that make up the Trainz driving interface. Once you have completed Tutorial 1, go through to the next tutorials and discover more ways to control your trains.

3.2 ROUTES

The Routes menu provides access to drive, edit, and create routes and sessions.



There are a number of pre-defined sessions for the built-in routes for your driving pleasure. You can also use the 'Sandbox' mode to quickly place a train of your choice and explore a route. You can also choose to create your own session to drive on one of the existing routes, or even create your own route from scratch.

Click on a route in the list, and a description of the route will be shown in the information pane below the list. Clicking the 'Sessions' button will list the sessions for this route, along with any saved sessions or active multiplayer games currently running on this route.

If you click on a session in the list, the description of the session will be shown in the information pane. Click the 'Drive Session' button to begin driving.



We recommend you start with the easier sessions and progress onto the more difficult sessions when you are looking for more of a challenge. The relative difficulty of a session is listed in the information displayed about it. If you click on a saved session, details about the saved session (e.g. when it was saved, and how long the session had run for) will be displayed in the information pane.

If you click on a multiplayer game, details of the game (e.g. the number of current players and the host's description) will be shown in the information pane. Click the 'Join Game' button to join the multiplayer game. Participation in a multiplayer game requires an internet connection, a Planet Auran account (with a registered serial number), and an active multiplayer account.

We recommend that you join a number of existing multiplayer games and gain some experience with the multiplayer environment before you consider hosting your own multiplayer game.

See section 6 of this manual for more information on multiplayer sessions.

Definitions

Route - Routes contain the 'world' components such as terrain, buildings, track, trees and trackside objects.

Session - Sessions contain the 'variable' aspects such as locos, rolling stock, time of day, weather and other Rules.

Saved session - A session you have previously started playing, and saved part way through.

3.3 SAVED SESSIONS

The 'Saved Sessions' menu provides an alternative way to load a previously saved session. In particular, it allows you to easily find a session you'd started if you can't remember which map you started it on.

3.4 RAILYARD

The railyard module allows you to inspect your locomotive and rolling stock collection. There is a list of all available rolling stock, and clicking on a vehicle in the list will bring it into the shed, where you can inspect it from any angle, and operate the horn, lights and pantograph (if fitted). Many of the locomotives also have extensive descriptions including vehicle history and operating information, which can be read in the Railyard module.



3.5 CONTENT UPDATE

The content update menu allows you to download any content updates from the Download Station. Updated content items may fix minor behavioural or graphical problems, or add additional functionality. Much of this content is sourced from community members. Keeping your content up to date is recommended, particularly if you intend to participate in multiplayer games, where a consistent set of content is required across all players.

The content update menu requires an internet connection and a Planet Auran account with a registered serial number. If you download a lot of content, you may wish to consider buying a 'first class ticket', which will improve content download speed.

3.6 ITRAINZ CHAT

To chat with other Trainz fans, click on the iTrainz Chat icon in the top right of the menu bar across the top of the screen. This opens the Chat Buddy List. Click on #trainz to open the general Trainz chat channel. Begin typing and press the Enter key to 'publish' your words for others to see.

You can create your own chat channels, add Buddies and also ignore users. Ignore will stop you from seeing any comments from that person but they will still be able to see your comments.

Note: For iTrainz Chat to work, you are required to have your Planet Auran username and password entered in the main options screen (accessed from the Launcher).

4 - DRIVER

To drive a session, first select a route from the list and click Sessions, you can also double-click the route name. Once you are in the sessions submenu, select which session you wish to drive and click “Drive Session” to launch.

Note: When you have a route or session selected, information regarding the route and session is displayed in the central box beneath the main listing.

In Trainz you can also give commands to AI Drivers to carry out tasks such as delivering freight, coupling and decoupling and keeping to a passenger schedule.

Whilst in Driver, you can use either your mouse or Hotkeys to drive. Experiment with different camera positions (Hotkeys 1-4) or use the “[“ or “]” keys to move between different camera views.

In Cab Interior View, hold RMB to rotate your view around the cab.

In Chase View it rotates the camera around the currently selected vehicle.

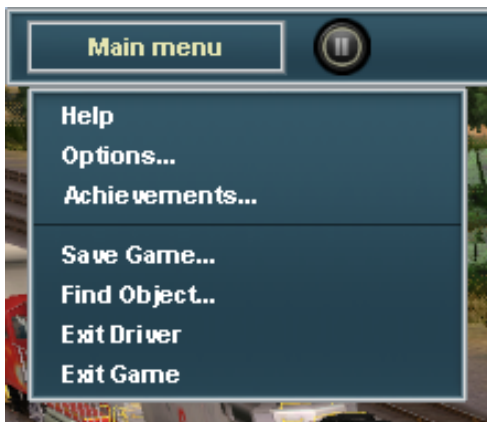
Lineside View (Hotkey 3) selects the closest pre-placed camera. If there are no pre-placed cameras nearby then it will change to Chase View by default.

In Free Roaming View, holding RMB will move the focal point around the map, similar to the camera controls in Surveyor.

4.1 NAVIGATING THE DRIVER INTERFACE

MAIN MENU DROP-DOWN LIST

This drop-down menu is found in the top-left corner of the screen.



Help

This opens a browser window within Trainz to display the Online Wiki.

Options

This is where you can tweak the graphics slider settings to improve the visual quality of your game, or sacrifice some visual quality for improved performance (framerate).

Achievements

This lets you check your progress towards earning Trainz Achievements.

Save Game (Ctrl-S)

Lets you save your progress including where each train is located and the state of each industry. To reload a Saved Session, either choose it from the list in the “Routes” menu or from the “Saved Session” menu from the Trainz Main Menu screen.

Find Object (Ctrl-F)

Lets you locate a particular item on the map (such as a junction, station, loco or interactive industry). Selecting the item will move the camera position to that position on the route.

Exit Driver (Esc)

Quits the current session back to the Driver Main Menu or Surveyor screen with the option to save the session before exiting.

MAIN MENU BAR

This section covers the icons to the right of the Main Menu drop-down list.

Pause (P)



The Pause button is located beside the Main Menu button. Clicking the Pause button (or pressing ‘P’), will suspend the current session so that you can answer that important phone call or stop for a lunch, dinner or toilet break. It can also be used to give additional time when reading the instructions for a session.

4.2 CAMERA VIEWS

There are many different ways of viewing the 3D world in Trainz, as well as a map view that gives you a 2D top down view. You can zoom in and out, pan around, and change the camera focus point with each of these views.



The current camera mode is shown on the Trainz menubar. Clicking it will bring down the camera menu, allowing you to choose from one of 5 camera modes.

Cab Interior View



Firstly, make sure the view is focused on a locomotive (Click LMB on a locomotive to focus the view), then click LMB on the Cab Interior View (or “Cab View”) entry in the camera menu (you can also press the “1” key). Your view is now from the driver’s seat of the cab. Hold the RMB and move the mouse to look around the cab and out of the windows. You can change your viewpoint within the cab by pressing the “[” and “]” keys.

If the locomotive has a second cab, press ALT + C to switch between the cabs.

Chase View



When you first start a Driver session, you will normally be in Chase (or “External”) View by default. The scene will be focused on a particular locomotive. Selecting Chase View, or pressing the “2” key, will return you to this camera mode. While in Chase View, use RMB + Drag to rotate and elevate the view, and the mouse wheel (or Page Up / Page Down keys) to zoom. Chase View will follow the currently selected vehicle as it moves around the map.

If you Click LMB on one of the cars attached to the locomotive, the view will move along the train so that the selected car becomes the new focus. You can also press the “-” and “+” keys on the keyboard to select the next or previous car in the consist. You can still control the locomotive using the HUD or keyboard controls even while viewing a parts of the consist other than the engine.

To shift the focus to a different train, simply Click LMB on the desired train, use the driver selector in the bottom left of the screen, or click on the consist icons in the 2D Map View.

Lineside View



Click on Lineside View (or “Tracking Camera”) and your view changes to the nearest pre-placed camera. You can also go to Lineside View view by pushing the “3” key. There are two types of cameras, static and tracking.

These cameras are placed in the 3D world in Surveyor mode. Static cameras will stay fixed in a direction, and allow the

tracked object to enter, cross and move out of the frame. Tracking cameras are fixed in place, but pan with the tracked object, keeping it in the centre of the view. If there are no cameras within visual range of the tracked object, the view reverts back to Chase View functionality until a camera comes within range.



Free Roaming View

The fourth camera mode is Free Roaming View. This is accessed by selecting it from the menu or pushing the “4” key. It operates in a similar fashion to navigating in the route editor (Surveyor).

To move the camera focus point, simply Click RMB in the 3D world to where you want the new central focus point to be. The view will then smoothly move to the new focus point. You can use the cursor keys to rotate or change elevation. To zoom in and out scroll the mouse wheel or press the Page Up/Page Down keys. Like in Surveyor, in Free Roaming Mode you are able to zoom out all the way to satellite altitudes at which point it transitions into Map View.

Hold down RMB and move the mouse to continuously change the focus point, and hence the view point. By combining this mouse movement with the cursor keys and the zoom function, you will be able to roam around the route with great speed and precision.

Map View



The fifth camera mode isn't really a camera mode at all - it is the 2D map view. You can get to the map by using the Map View menu item, or by pressing 'M'. You will find the Map View is useful for getting an overview of where your trains are in relation to the industries, the track configuration, plotting your train movements and checking turnout settings and signal states.

In the Map View you will see the position, length, and name of each Consist, the direction set for each turnout and important names for assets such as turnouts, industries and stations. Zoom in and out using the mouse wheel or the Page Up/Page Down keys. Unlike entering Map View from Free Roaming View, you are able to zoom in close without it transitioning into the 3D map.

The map follows the movement of the currently selected Consist. The currently selected Consist shows as green, and all other Consists show as gray on the map. Click on one of the gray Consists to centre the Map view on that Consist.

Click RMB on a point on the map to centre the map view to a new location, losing focus on any particular consist.

You can also set the turnouts by clicking on them and seeing the direction arrows change. Also visible is the state of any signals on the route. Exit the map screen either by picking another camera mode, or pressing CTRL + M again to close the map.

4.3 TOOLS MENU

The tools menu consolidates many functions that are useful when driving in a session.

Toggle Session Instructions

Click on this to display the session instructions.

Show Commodity Picker

This displays the commodity picker. See section 4.12 for more information.

Show Waybills

This shows available waybills from participating industries on the route. See section 4.11 for more information.

Toggle Schedule Information

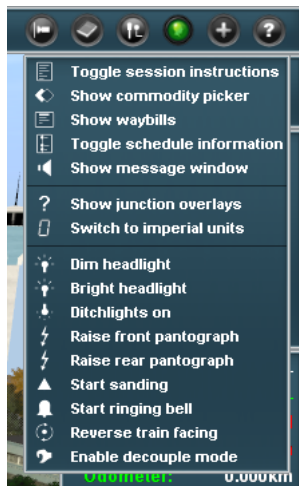
This displays the schedule (if applicable to the session).

Show Message Window

This displays the message window which contains many messages about the movements of trains throughout the route.

Show Junction Overlays

This toggles whether junction names (and arrow controls) are visible at all times or only when you hover your mouse over them.



Switch Between Imperial/Metric Units

Toggles the settings from Imperial to Metric or vice versa. This will affect parts of Trainz that involve the display of measurement/speed information such as the Time & Speed HUD Panel.

Dim Headlight

Changes the headlight to dimmed state or if dim, turns off.

Bright Headlight

Changes the headlight to a bright state or if already bright, turns headlights off. This button can also be found in the bottom-right corner of the screen. Read on for more details.

Ditchlights On

This toggles the selected train's ditchlights on and off. Read on for more details.

Raise/Lower Front Pantograph

If applicable, this toggles the selected train's front pantographs up and down. A pantograph button can also be found in the bottom-right corner of the screen. Read on for more details.

Raise/Lower Rear Pantograph

If applicable, this toggles the selected train's rear pantographs up and down. A pantograph button can also be found in the bottom-right corner of the screen. Read on for more details.

Start Sanding

This toggles sanding the tracks in front of the selected train to help prevent wheel slippage.

Start Ringing Bell

If applicable, this begins ringing the selected train's bell. This button can also be found in the bottom-right corner of the screen. Read on for more details.

Reverse Train Facing

This toggles the direction that the train considers forwards. This button can also be found in the bottom-right corner of the screen. Read on for more details.

Enable Decouple Mode

Clicking on this display all of the available couplers as bright red. You will also be able to see them through other objects. This button can also be found in the bottom-right corner of the screen. Read on for more details.

On Screen Help (Ctrl-H)

Toggles the display of on screen icons such as turnout direction markers.

iTRAINZ CHAT

This icon changes colour depending on various events when online (eg, to show that you are online, or if there is a message waiting, etc). See section 3.6 for more information.

TRAINZ ONLINE BROWSER

Provided you have an internet connection, this opens an in-game browser that lets you surf N3V Games approved websites without leaving Trainz.

HELP MODE

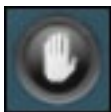
By first clicking this icon and then clicking on an object that you wish to query, Trainz will open the in-game browser taking you to the wiki entry providing details or help for that object.

4.4 DCC CONTROLLER (W/X/S)



In DCC mode, a simple rotary dial controller is available in the bottom right panel of the HUD. This dial controls the movement of the currently selected train and is analogous to a model railway DCC controller knob. Click LMB and drag it clockwise on the dial to move forward. Dragging the dial so the arrow points upwards will stop the train. Dragging the dial anti-clockwise will move the train in reverse. Clicking LMB on a position of the dial will also move the dial to that location.

Stop (S)



To quickly reset the dial and bring the current consist to a halt, Click LMB on the Stop icon.

You can also use the “W” and “X” keys for forward and reverse controls and the “S” key for stop. If you are using the keyboard to control the throttle, you can refer to the position of the rotary dial on the HUD to see your current throttle setting.

Decouple



To decouple traincars from your train, first click the decouple button. A series of coupler icons will appear where the train can be decoupled. Click on the coupler where you want to make a break in the train. Go to section 4.6 for more details.

Pantographs (KPend / KP1)



Click LMB on the Pantograph button on the right of the throttle to raise and lower them or press the 'End' key on the keypad. If the locomotive has multiple pantographs subsequent key/button presses will raise them individually or together before cycling back to all down.

Reverse Train Facing (ALT + C)



If your locomotive has two cabs, or two control desks in the same cab, you can click LMB on the Reverse Train Facing button to change to the other cab. This can also be done (from Cab Interior View only) with the key combination ALT + C.

Bell (B)



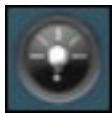
To activate or deactivate the locomotive bell, Click LMB on the bell button or press the "B" key.

Ditchlights (;)



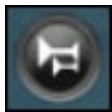
To activate or deactivate the flasher for the ditchlights, Click LMB on the ditchlights button, or press the ";" key.

Lights (L)



To activate the headlights, click LMB on the Light button. The lights will cycle through off, dim and bright settings. You can also control the headlights with the “L” key on the keyboard, which will switch the lights on and off. Shift + L will change between dim and bright.

Horn (H)



To operate the horn or whistle, Click LMB on the Horn button to the right of the throttle control on the HUD. For long blasts of the horn, simply hold the “H” key down longer or Click LMB + Hold on the Horn button. Some horns may have a set length, and will play for the same duration each time.

Note: Your locomotive may not be fitted with some of these devices. Only devices fitted to this loco will be operable.

4.5 JUNCTION LEVERS

You change the direction of the Turnout (Junction/Switch) by Clicking LMB on arrows associated with the Switch. The green arrow points in the direction the Turnout is set to. If you are in the Cab, hold the Ctrl key when you Click LMB or use the J key to change the junction ahead (Ctrl-J if you are reversing).

You can also change turnouts in the 2D Map View, which is useful for planning your train's movements well in advance of its progress. Keep in mind the position of other trains on the route when setting up junctions far away.

Tip: Click between the arrows to change their direction.

4.6 TURNTABLES AND TRANSFER TABLES

To operate a turntable or transfer table, click the curved arrow to rotate the turntable in that direction. The turntable will slowly rotate to the next track, and stop lined up with it. Clicking repeatedly will allow the table to rotate across several tracks.

Once the table is lined up with your track, drive the loco slowly onto the table. Stop in the middle, making sure the train is clear of both ends. Then rotate the turntable to the track you want to depart on, and pull slowly off the turntable.

4.7 DECOUPLING

To activate decouple mode, click on the Decouple icon (or press the “Ctrl-D” key), then move your cursor over the couplers between train cars until you see a red decouple icon. When the red decouple icon appears, click LMB to decouple the consist at this point. When you have successfully performed the decouple operation, the red coupler icon “opens” and a message is displayed on the screen.

The act of decoupling creates a new consist and your camera remains focused on the same car or loco as before the decoupling operation. To re-couple, ensure that you are operating at speeds below 5mph (8kph). Experiment with different camera positions to make this task easier.

4.8 CAB MODE

Cab Mode provides a more realistic driving experience taking into account much more detailed aspects of locomotive performance, the length and weight of the train, and the gradient.


Each of the levers, switches and dials in the 3D cab can be used to operate the locos or you can use the Hotkeys or HUD to carry out the same function. (This lets you control the locos from outside, even in Cab Mode).

The following tips will get you started, but we recommend you play through the cab mode tutorials included with Trainz, and also that you check out the 'Engineer's Guide' in section of this manual for more detailed information about driving using Cab controls.

Cab controls (Diesel or Electric locos)

To start a locomotive in cab mode, first release the train brakes ("Q"). If the brake cylinder has not emptied, you may need to also release the independent brake ("D"). Put the reverser into forward pressing "F" (make sure you have not increased the throttle before altering the reverser).

Increase the throttle ("W") slowly and the train will begin to move forward. Don't increase it too far too quickly, or the wheels will begin to spin. If they do, use "X" to decrease the throttle and/or "S" to set the throttle to idle. If you are having difficulty pulling away, you may also find applying sand ("V") helpful - this will increase the level of traction slightly. Don't forget to turn the sanders off once you are underway!



Slowing and/or stopping a train can be quite a challenge in cab mode. There are three different brake systems available. The Independent brake is simple to use (one handle progressively applies and releases the brake) and fast to act, but it will apply the brakes on the locomotive only. This provides effective stopping power for a locomotive without a train, or for a light train moving slowly. It will not be effective for a heavy train.

The train air brake applies brakes down the entire train - but is more complicated and slower to take effect. There are two types - standard and self-lapping. A standard air brake handle has 'release', 'lap' and 'apply' positions.

Move the handle to 'Apply' ("A"), wait for a period to allow the brake pipe pressure to reduce, and then move the handle to 'Lap' ("Z"). The brakes will slowly apply down the train to the requested level. How hard the brakes apply is controlled by how long the lever was in the 'Apply' notch. Think of filling up a bucket to store power (apply) and then pouring it out to apply the brakes (lap); the more water you put in the bucket, the more you have to use.

You can apply the brakes further - simply move the handle back to 'Apply', and then back to 'Lap' again. Though you cannot partially release the brakes - you can only fully release the brakes by moving the handle to 'release'. You must then wait for the brakes to fully release before you can apply them again.

A self-lapping brake handle has a range of 'Apply' notches - which will automatically lap the brakes at specific braking

levels. This means you don't have to wait in 'Apply' for a set period of time - you just move the lever to the level of braking you want. Just like the standard air brake, you can apply the brakes further - this time by moving the lever further, but you cannot partially release the brakes. You must fully release the brakes and re-apply them.

Be careful with the air brakes - if you repeatedly release and re-apply the brakes in quick succession, you can run out of air and the brakes will no longer apply properly. The air will return over time, but make sure not to waste it in case you don't have enough braking power for when you really need it!


The third braking system is the dynamic (or regenerative) brake. Not all locomotives have a dynamic brake fitted, but for locomotives that are fitted, you can move the dynamic braking lever into the 'brake' position ("E"), and control the level of braking with the throttle lever ("W"/"S"/"X").

Dynamic breaks use the locomotive's own engine to power their application which means that they are quick to respond, and will generate a lot of force to slow the train, but they become ineffective at low speed. They are ideally suited for descending hills.

Tip: Watch the information in the Cab HUD Panel to get information on speed, throttle, brake settings and Reverser direction.

Cab controls (Steam locos)

Entering the cab of a steam locomotive for the first time



during a new session, you will find that the light-up crew will have prepared you a nice hot fire. Fire temperature can be gauged by looking at the colour of the firebox; an orange fire is relatively cool, and a white-hot fire is required to raise the necessary pressure to power the locomotive. You should have a nice head of steam already raised and you can check the gauge pressure either in the cab or on the Cab HUD Panel.

To pull away, release the brakes (same as for a diesel or electric loco), check that the reverser/cutoff is in full forward gear (the HUD should show 75% forward cutoff - use "F" to increase this if necessary) and open the throttle (regulator) a small amount ("W"). Open the throttle further ("W") for more power. Reduce the throttle ("S") to reduce power. When a steam loco slips, it often spins up very fast, so you may need to fully close the throttle ("X") and wait for the wheels to stop spinning before opening the throttle again.

As you pick up speed, to maintain steam pressure, you need to reduce the demand for steam. This is usually done by reducing the cutoff level. Consider this like the gears in a car - 75% is like first gear, and 15% like fifth gear. First is great for starting, but you can't go very fast. As you pick up speed you change up the gears. Fifth is great for cruising down the highway. You may need to change down to 3rd or 4th when climbing a hill. The steam loco is the same - so slowly wind back the cutoff as you accelerate. You'll want the full 75% when you are just starting out, but you'll get the best out of the loco at about 15% or 20% cutoff at full speed. Open it back up to 30% or more when climbing a hill.

The brakes work much the same as a diesel or electric loco


- you have independent (steam) brakes for the locomotive and tender, and air brakes for the whole train. There is no dynamic braking on a steam loco.

Maintaining the boiler pressure is essential for good performance. If the pressure drops off by any margin, the performance of the locomotive will drop off dramatically. Boiler pressure is maintained by heating the water in the boiler, which you do by having a nice hot firebed.

Add coal to the firebed by pressing the spacebar. Do this progressively over time, rather than dumping a large amount of coal into the firebox in one go. Fresh coal is cold, and adding lots of it in one go will actually cool the fire down, making it burn slower and produce less heat.

As the fire heats up, the boiler pressure should start to rise. Always ensure there is sufficient water in the boiler by checking the water gauges; they should show be half to two-thirds in the glass. Water level in the boiler is increased by use of the injectors (“I”/”O” and “shift+I”/”shift+O”). Again, add water gradually, as it is cold when coming from the tender - and will cool the boiler if added in large quantities, resulting in a drop in pressure.

To increase the rate the coal burns at, draft the fire. There are three sources of draft - the steam exhaust (increased by working the locomotive hard), the primary airflow (increased by running fast) and the blower (which uses steam directly from the boiler to create artificial draft). The blower is generally used to build pressure when stationary, not while driving.



When the nominal boiler pressure is exceeded, Safety Valves lift to vent excess pressure to the atmosphere. A good crew will avoid this waste of steam and fuel by striking a good balance between the temperature of the fire, the pressure in the boiler, and the conditions of the road ahead. When approaching a heavy ascent for example, a hot fire will be required to maintain adequate steam pressure. Conversely when approaching an easy section with a very hot fire, pressure can be eased to prevent lifting safety valves by adding more water to the boiler.

Observe the water level in the locomotives tender periodically, especially after working the locomotive hard, as it may require topping up. Steam routes often have water supplies provided at regular intervals for this purpose.

Note: Nominal Boiler Pressure is different for each locomotive type.

Note: Take care not to add excessive coal, as this will lower the temperature of the fire for a time. A great rule of thumb is "a little coal often", try between 2-4 shovels every kilometer (that's 3-6 shovels every mile).

4.9 INDUSTRIES AND PASSENGER STATIONS

An industry will operate automatically by stopping a compatible vehicle in the right place on the track (or sometimes dragging one slowly past, if the industry supports moving load/unload operations).

Ctrl+RMB on an industry will bring up a menu. Click 'Properties' to describe the industry and its current commodity levels.

4.10 WAYBILLS – WHO NEEDS WHAT

The waybill entry on the 'tools' menu will bring up a list of industries that have created waybills showing that they require certain products for delivery. Click LMB on each industry icon in the list to show what quantities of products are required.

Waybills are automatically produced by an industry when that industry reaches a percentage of capacity of a particular commodity. Once the full amount required by the Waybill has been delivered, the Waybill is deleted from your list (although another one may well have appeared in its place).

4.11 COMMODITIES

You can allocate which commodities are carried by a particular item of rolling stock. Click on the 'Show Commodity Picker' entry on the 'tools' menu to bring up the Commodities Menu.

Click on an appropriate icon and then click on an item of rolling stock. The icon shows that the rolling stock is now limited to carrying only that type of Commodity. To stop any commodity being loaded or unloaded, use the "Stop" icon. To allow the default load only, use the "Default" icon. You can only assign commodities to vehicles built for carrying that type of commodity.

5 - INTRODUCTION TO QUICKDRIVE

QuickDrive allows you to configure a limited set of variables for conveniently constructing simple Driver sessions.

Whilst in Surveyor, QuickDrive can be accessed by Clicking LMB on the QuickDrive icon or with Ctrl+F2.

QuickDrive can also be accessed directly from the routes menu by selecting a route and clicking the QuickDrive button on the right hand side of the routes menu.

Using QuickDrive, you can operate trains on a route without any preparation in Surveyor.

After starting a Driver session with QuickDrive, you will see the QuickDrive settings window.



CONTROL TYPE

Here you can switch between Cab and DCC control. Click on the image of your chosen control type to select it.

ENVIRONMENT

Here you can change the weather type, time & date, game rate and derailment realism.

CONSISTS

Click LMB on “Consists” and you will see the current consists on the route. Here you have the some consist options:

Clone - Allows you to place another instance of the same consist. As before, the popup will appear notifying you that placement mode is active.


Delete - Requests your confirmation before deleting the consist from the route.

Driver - Allows you to assign a driver from among those you have enabled under “Drivers”.

NEW TRAIN

Click LMB on “New Train” to display consist management options. From the Global Consist Library select Surveyor List or a custom list and find a suitable consist.

Click LMB on the consist of your choice and a pop up window will appear saying “placement active”, this means that the



consist can now be placed onto the track in the usual way by Clicking LMB on the track. You will now see the popup displays options to either reverse or delete that particular consist.

Click the close window button when done.

Tip: Make sure the track you click on is long enough for the consist.

DRIVERS

Here you can select the available drivers for the session by Clicking LMB in the checkbox beside each driver.

COMMANDS

Use this menu for selecting the commands you would like to be able to issue to the drivers in the session.

Tip: QuickDrive, like the Control Type rule is one of the session rules implemented by default when creating a new session. It can be removed from a session by entering Surveyor's Edit Session dialogue explained in section 11.

Tip: QuickDrive can be accessed at any time during a Driver session which has the rule enabled. Click the User Rules Menu icon in the top right of the menu bar to re-open the QuickDrive settings.

6 - MULTIPLAYER

JOINING AN EXISTING MULTIPLAYER SESSION

To join a multiplayer session, simply follow these steps:

Start Trainz and open the Routes menu.

Select a Multiplayer-capable Route (currently Port Ogden & Northern, or Harbor Master) to view the available sessions.

In the route's sessions list, select an active multiplayer session. If there are any active multiplayer sessions they will appear differently to regular sessions, listing the name of the hosting user by default.

Enter the multiplayer session as you would any other session. A multiplayer-specific connection dialog is displayed before Driver begins loading.

If you don't have the latest content required for the selected session, you will be prompted to download it at this point. Selecting "Yes" will download the updates and automatically launch you in to the game. Selecting "No" will cancel the session join and return you to the Routes menu.

When you load into Driver, you'll notice that the Multiplayer Session is still loading. This can take a minute or so depending on the route and your connection speed.

Once you're in the game, the multiplayer window will change to show a list of players currently in the game.

Click LMB on "Choose a Driver" to see a list of available



drivers and trains in the session.

Click LMB on an eye button to view that train's location on the map, and then Click LMB on the arrow button next to the driver of your choice to select that train.

Drive your train around!

CHAT DURING MULTIPLAYER SESSIONS

During a Multiplayer Session, a special chat channel is visible which allows communication between participants. This chat channel is not a regular window, but can still be dragged or resized to suit. Session admins and officers are denoted in the chat and you should take care to follow their directions - they have the power to kick you from that Multiplayer Session if you are being disruptive.

We recommend that the first thing you do when joining a multiplayer session is to greet your fellow participants and ask how you can best help out in the Session. Don't be afraid to ask for advice regarding Trainz Multiplayer or the specific session that you have joined.

GAMEPLAY

In Trainz Multiplayer, you control one or more Drivers. Each driver is assigned to a train, so through the driver you can control a train. You cannot control a train which does not have your driver, and you cannot control a train which is already controlled by someone else's driver.

Multiplayer introduces a new level of interactivity to the Trainz environment. Just like on a real railroad, the safe passage of several trains requires the co-operation of railroad staff.

With real people working each train, operational possibilities of online sessions are virtually limitless!

Before hosting your own multiplayer session, it's probably worthwhile for you to take some time to familiarise yourself with the routes and to participate in a few established multiplayer sessions. This way you can get a feel for the capabilities of Trainz Multiplayer before you're lumped with the responsibility of assigning tasks to other users.

HOSTING A MULTIPLAYER SESSION

Anybody can start a Multiplayer Session, however it helps if you've got some friends ready to join you. Follow these steps:

Start Trainz and open the Routes Menu. Select a Multiplayer-capable Session and enter the session as per normal. You'll note that Driver begins like a single-player session. You need to take additional steps to begin hosting a Multiplayer Session.

The Multiplayer options dialog is visible on the screen. If you close it, you can use the new Multiplayer button near the right of the Trainz main menu bar to bring it back.

If you want, you can customise the options in the Multiplayer dialog. We recommend that you give your Multiplayer Session a short, descriptive name.

If you wish to start a private multiplayer session, you can specify a password. If you do this, you'll need to let your friends know the name of your session and the password to use.

Click "Start Session" to begin the multiplayer session. This allows other users to find your Multiplayer Session in the Routes Menu.

Wait for some friends to join your session! While it's possible for random Trainz users to join in (when you haven't set a password), it's best if you organise some friends to join you straight away.

Once other players are in the game, you can assign them

drivers by clicking on them in the player list and choosing “Assign Driver...”

You can also promote or kick players by clicking on their portraits in the multiplayer window list and selecting the relevant options.

You are now the Admin of your multiplayer session. Let your participants know what you’d like them to do, and away you go.

Note: Trainz Multiplayer requires that any content used in a Multiplayer Session is available on your computer in unmodified form. If you’ve modified the content, Trainz will automatically revert your modifications and (where necessary) download the latest version from the Auran Download Station. Don’t worry- Trainz will always ask before modifying content, and will move the modified files into a “backups” folder in the Trainz program folder in case you need to get them back later.

7 - KEYBOARD CONTROLS

KP = Number Pad

Some controls will not work with this Help window open.

Capital letters represent the letter to press (no need to press the Shift key.)

A comma (,) means there is more than one option. Choose either option.

Shift X means hold the shift key down and press the X key.

DCC MODE

Down	X, COMMA
Forward	W, FULLSTOP
Stop	S, SLASH
Handbrake (if throttle at idle)	A, APOSTROPHE

CAB MODE

Brake Release	Q, KP9, KPPGUP
Brake Lap	Z, KP6, KPRIGHT
Brake Application	A, KP3, KPPGDN
Emergency Brake	PAUSE
Independent Brake	E, KP4, KPLEFT
Independent Brake Bail	D, KP0, KPINS
Throttle Up	W, KP8, KPUP
Throttle Down	X, KP2, KPDN
Throttle Idle	S, KP5, KPCLEAR

Reverser Handle Forward	F, KPSTAR
Reverser Handle Backward	R, KP SLASH
Dynamic Brake Toggle	C, KP7, KP HOME

STEAM CONTROLS

Shovel Coal	SPACE
Coalman Wave	SHIFT SPACE
Fans	SHIFT F
Regulator Up	W, FULLSTOP, KP8, KPUP
Regulator Down	S, SLASH, KP2, KP DN
Reverser Up	F, KPSTAR
Reverser Down	R, KP SLASH
Injector Up	I
Injector Down	O
Blower Up	N
Blower Down	SHIFT N

ALL LOCOS

Lights	L
Lights	SHIFT L
Toggle on/off Flashing Ditch lights	; (semi-colon)
Pantograph	KP1, KP END, END
Horn	H, KP PLUS
Sand	V, KP MINUS
Bell	B

INTERFACE DISPLAY OPTIONS

Help	F1
Hide / Display All	F5
Hide / Display Drivers and Orders	F6
Hide / Display Driver Button Bar	F7
Hide / Display Custom HUD	F8
Hide / Display Driver HUD	F9

CAMERA MOVEMENTS

Up	UP ARROW
Down	DOWN ARROW
Left	LEFT ARROW
Right	RIGHT ARROW
Zoom In	PAGEUP (OR MOUSEWHEEL)
Zoom Out	PAGEDOWN (OR MOUSEWHEEL)
Forward Along Consist	PLUS (on top row, not Numpad)
Forward Backward Along Consist	MINUS
Interior Cab View	1
Chase View	2
Lineside View	3
Free Roaming View	4
Driver 1	CTRL 1
Driver 2	CTRL 2
Driver 3	CTRL 3

DRIVER 4	CTRL 4
DRIVER 5	CTRL 5
DRIVER 6	CTRL 6
DRIVER 7	CTRL 7

CAB CAMERA CONTROLS

PREVIOUS VIEW	[
NEXT VIEW]
PREVIOUS VIEW FAST	CTRL [
NEXT VIEW FAST	CTRL]
ZOOM IN	PAGEUP (OR MOUSEWHEEL)
ZOOM OUT	PAGEDOWN (OR MOUSEWHEEL)

OTHER

Metric Speed Display	G
Decouple	CTRL D
Train Reverse Heading	ALT C
Display Work Orders (Scenarios)	K
Objective Window (scenarios)	ENTER
Switch Forward Junction	J
Switch Rear Junction	CTRL J
hud_help_toggle	CTRL H
Reset Tripmeter	T

MAP VIEW

Background	ALT B
Gradients	ALT G
Junctions	ALT J
Signals	ALT S
Triggers	ALT T
Trackmarks	ALT M
Industries	ALT I
Named Objects	ALT N
Objects	ALT O
Consists	ALT C
Trackside Labels	ALT L

GENERAL

Close	ESCAPE
Find Object	CTRL F
Map View	M, CTRL M
Pause	P
Save	CTRL S
Load	CTRL L
Display Performance Tuning Dialogue	CTRL T

8 - EXTRA FUN

Want to have some extra fun?

Try pressing Ctrl + Alt + Shift + P on a new map, then stand back and watch (click on the map and press esc to stop).

Also try Ctrl + Alt + Shift + Z in a map with road traffic or Ctrl + Alt + A (then click on the map) for a spectacular effect.

9 - CREDITS

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CONTENT CREATORS

We would like to offer a special thank you to our content creators, without whom we would not have a product to release.

ALPHA TESTING

Thanks to the TrainzDev community for their assistance during development of the features, tools and content pipeline.

BETA TESTING

Thanks to the hundreds of testers who participated in Beta testing and helped us make this the best ever version of Trainz.

NOTES



NOTES



www.n3vgames.com