

race now worthy to inhabit it."

- Henry David Thoreau













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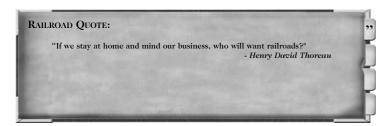
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CHAPTER 1: GETTING STARTED

ABOUT RAILROAD TYCOON 3

Railroad Tycoon 3 transports you back to the Golden Age of railroading. As the chairman of a fledgling railroad company, you must expand your tracks into new territories, seek out new and more lucrative opportunities, and most importantly, keep your stockholders happy. All the while, the competition will be working feverishly to steal away your customers, racing to beat you to new cities, and plotting to use you as a stepping-stone on their climb to the top.

A true entrepreneur knows how to seek out new opportunities where others fail to see them. In addition to transporting passengers and freight, and expanding your railway into new cities, keep your eyes open for new means of increasing your revenue. Industries will spring up to make use of the abundant resources in an area. Acquiring select industries allows you to expand your empire and not only make money from transporting goods, but also from producing them. Those with a keen eye for opportunities may wish to build new industries to tap unused resources, or even put your opponents' shipments to work for you. Cities in need of a rail service may be willing to offer incentives to the first company that is able to connect them to the ever-expanding web of rails. Whether this is a golden opportunity or a money pit is for you to decide. And don't forget the stock market. Many a fortune has been made and lost on the battlefield that is the stock market, with short-selling and hostile takeovers being the weapons of choice.



Railroad Tycoon 3 offers budding tycoons a chance to stretch their wings and prove their mettle. Finish playing the scenarios? Well, load them up again and you will find they don't play the same way twice. A new economy makes it a new gameplay experience. Need a new challenge? Challenge your friends to a multiplayer competition or use the matchmaking service to find other would-be tycoons to pit your business savvy against. Have an idea for a new scenario to share with your friends? The extensive editor can make that idea a reality. Railroad Tycoon 3 has it all.

Do you have what it takes to be a Railroad Tycoon?

NEW FEATURES

Fans of the award-winning Railroad Tycoon series will notice many of the same features that made the series a success. Below is a partial list of the numerous new features included in Railroad Tycoon 3.

- Powerful New 3D Engine Immerse yourself in the expansive and detailed 3D environments, complete with highly detailed trains, wide stretching forests and even day/night cycles and weather effects.
- Tunnels and Bridges Carve tunnels through mountains or span bridges across waterways, deep valleys, and even other track. Nothing has to stand in your way.
- Automatic Consist Manager Let the computer handle the small details of what cargo gets shipped where, so you can focus on the big picture. At each station stop it will look ahead to see what cargo is most profitable and select

RAILROAD JARGON: Dead-man's Handle - This is a safety device designed to cut-off the power and apply the brakes if the driver becomes unconscious. Usually a handle or pedal, the driver must maintain a level of pressure on this device to keep the train operating.

accordingly. Those wishing to take a more hands on approach can still use the manual cargo consist option to select their own cargo. Have as much or as little control as you want.

- Streamlined Interface You don't need to leave the action and go to another screen to check on your stock or to manage your trains. The new streamlined interface puts all the information you need right at your fingertips in the game world. More action takes place in the main game world, and everything else takes place in panels that don't obscure or take you away from the world.
- Building Placement Station upgrades, such as maintenance facilities, restaurants, and taverns are now placed in the main game world rather than on a separate screen. These and other buildings can now be placed just about anywhere. If you need a water tower in the middle of a long route or think you could weaken your opponents lumber supply by putting a lumber mill closer to the source, all you need to do is come up with the money and select the location where you want to build.
- More Stuff Railroad Tycoon 3 is packed to the gills, with over 60 industries, over 180 buildings and over 40 cargo types. In general, there is two to three times more content in almost every category than in Railroad Tycoon 2. The new game even has three times as much music as its predecessor. Overall, the sights and sounds of Railroad Tycoon 3 should keep you entertained for quite a while.
- Longer Trains Trains can now haul up to 8 cars along their routes, allowing more profitable trips.

RAILROAD FACT:

Mail could be picked up and delivered without the train ever having to stop. Mail to be picked up by the train was hung in a leather bag from a hook along the track. A net would be extended from the side of the train to pick up the mailbag as it passed. The mail being dropped off by the train would be hung in a leather mailbag from an arm extended from the side of the train as it approached nets built alongside the track.

- Industries You Can Buy, Build and Upgrade Not only can you buy any industry on the map, you can also build your own. Over time, you can reinvest in the most profitable factories by upgrading them. With the simple click of a button, and enough cash of course, your facility will increase in size and production output.
- More Realistic Cargo Movement Just like the real world, resources and goods can move on their own, without the railroad (though not as fast as riding aboard your trains of course!). Passengers will no longer simply allow you to haul them anywhere they have desired destinations and will not get on board a train that can't help them get to where they want to go.
- Better Multiplayer In-Game matchmaking makes it easy to find opponents. Once you find your opponents, the streamlined interface and other subtle improvements make the game better suited for multiplayer.
- Better Editor Railroad Tycoon 2's powerful editor helped spawn over 1500 user made maps available on various websites. We've made improving the editor a key design goal for Railroad Tycoon 3, and expect it to be even easier to make a great map for Railroad Tycoon 3. Even if you don't want to make maps yourself, you might enjoy sampling a few that others will inevitably make shortly after the game's release.

ABOUT THIS MANUAL

Most gamers like to jump into a game with both feet. After all, you bought this game to live the life of a railroad tycoon, not read about it. You certainly don't need to read through this man-

RAILROAD FACT:

Established by an Act of Parliament in 1758, the Middleton Railroad in Leeds has the distinction of being the oldest railway in the world.

ual cover to cover before beginning your game. The game manual should instead be used as a reference to answer questions you might have while playing the game. For your convenience, the manual has been laid out to cover the various gameplay topics in the order you are likely to need them.

We recommend that you begin by playing the Tutorial scenario. This will take you through some of the basics of playing the game and help prepare you for the exciting challenges ahead. Additional information on the Tutorial can be found in Chapter 2: The Tutorial.

You will also find a Readme file on the CD. This file may contain additional information that became available after the printing of this manual.

SYSTEM REQUIREMENTS

Please be sure your system meets the minimum system requirements listed below, before installing or playing Railroad Tycoon 3. Additional information regarding compatibility and technical issues may be found in the Readme file on the CD.

Processor: 400 MHz

OPERATING SYS.: Windows 98/Me/2000/XP

RAM: 128 MB HARD DRIVE: 1.2 GB

GRAPHICS: 16 MB 3D video card

MODEM: 56K (optional, for Internet play)

OTHER: 4X CD-ROM, Mouse and Keyboard, DirectX

compatible sound card with speakers/head

phones recommended

RAILROAD SUPERSTITION:

Your wish will come true if you can walk a rail for the length of sixteen railroad ties without falling off.

If you have problems running the game, please look at the "Readme" file. A shortcut to the Readme file appears in the "Autoplay" menu that appears when you insert the Railroad Tycoon 3 CD, as well as in the game under the main menu "Extras" option.

INSTALLING RAILROAD TYCOON 3

Place the Railroad Tycoon "Install" 3 CD into your CD-ROM drive. A menu screen should appear in a few seconds. Simply click on the "Install" button to begin the installation process and follow the on-screen prompts.

If your system's Autoplay is disabled, you will need to begin the installation process manually. Simply double-click on the "My Computer" icon on your desktop, then double-click on the icon for your computer's CD-ROM drive, and then double-click the "Menu.exe" file. Follow the on-screen prompts to complete the installation process.

Uninstalling Railroad Tycoon 3

To uninstall Railroad Tycoon 3 from your computer, click on the "Start" button on the Windows taskbar, then click on the "Programs" button and highlight the "Railroad Tycoon 3" listing and finally click on the "Uninstall Railroad Tycoon 3" option. Follow the onscreen prompts to complete the uninstall process. Files created after the game was installed, such as save games and new maps, will remain on the system after the game has been uninstalled and will need to be deleted manually.

RAILROAD QUOTE:

The railroad is in all its relations a matter of earnest business, to be got through as soon as possible. It transmits a man from a traveler into a living parcel."

- John Ruskin

STARTING RAILROAD TYCOON 3

Once you have installed the game, you are ready to begin your adventure as an up and coming tycoon. In order to play the game, you will need to have the Railroad Tycoon 3 "Play" CD in the CD-ROM drive. You will then be able to launch the game using one of the following two methods.

When you insert the CD, the menu screen will again appear. Simply select the "Play" button located on this screen to launch the game.

If the Autoplay is disabled, or you already have the CD in the CD-ROM drive, you can also launch the game from the link created in the program list. Simply click on the "Start" button on the Windows taskbar, then click on the "Programs" button and highlight the "Railroad Tycoon 3" listing and finally click on the "Railroad Tycoon 3" option.

Enjoy the game!!!

CHAPTER 2: QUICK START

Most gamers want to dive straight into the game without reading the entire manual. That's fine. We suggest you start by reading this chapter to get familiar with the basic concepts of Railroad Tycoon 3 play, then play the "Tutorial", then use the rest of the manual as a reference guide as you continue to play. The tutorial roughly follows the same sequence shown here.

Your goal in most Railroad Tycoon scenarios is to build a large,

RAILROAD FACT:

In 1829, the directors of the Liverpool & Manchester Railway held the historic Rainhill trials to find the most suitable locomotive for their railway. Robert Stephenson's famous locomotive Rocket won the competition and the 500 pounds prize.

profitable railroad empire, without going bankrupt personally or losing control of your company. While strategies may vary based on individual tastes and the mandates of the specific scenario you're playing, the general approach is:

Start the tutorial, or the campaign or a stand-alone scenario. We recommend playing the tutorial first, then starting the campaign. For details on the Main Menu, see Chapter 3: The Main Menu.

Get familiar with the interface.

To navigate around the world, move your mouse to the screen edges, or click on the radar box at the bottom left. To zoom in/out, roll the wheel on your mouse. Holding down the mouse wheel or the right mouse button and moving the mouse both provide additional navigational controls.

Move your mouse cursor over any button on the interface to find out what it does (Hover help for every button displays at the bottom of the screen.). Left-click on a button to use it. You can also left-click on most objects in the game world (buildings, stations, and trains). For details on the interface, see Chapter 4: Interface and Controls

Start a company (if you don't already control one at the scenario's start).

Most actions in the game (laying track, building stations, buying trains) are taken by the company you control. You can't do much unless you control a company. To start a company, click on the "Company detail" button in the Button Panel. If the sce-

RAILROAD SUPERSTITION:

 \boldsymbol{A} locomotive leaving the roundhouse and entering the turntable should never be turned to the left.

nario gives you a company to start with, you'll see its details otherwise you'll get the opportunity to start a new company. For details on companies, see Chapter 8: Companies and Players.

Choose a suitable starting city for your railroad.

Zoom all the way out (roll the mouse wheel back), and look for the best starting location. Usually, you want to find two cities or towns, each with relatively high "star values" (the more stars, the bigger the city), that are close to each other with no major barriers (Mountains and oceans are hard to get around. Rivers, on the other hand, are not too difficult to cross.) Ideally, those two cities should not both be located on the same river or ocean (or else prices and profits will be held back, as your railroad will have to compete with relatively easy ship/barge traffic between the cities). For details on how the cargo economy works and strategies on the best cities to connect by rail, see Chapter 10: Cargo Economy.

Lay track between your starting city and a nearby city or town.

Zoom in fairly close on your primary city. Choose the "Lay track" button in the Button Panel. To lay track in track mode, click on the map and drag your mouse. Be careful of obstacles (not only can you not lay track into buildings and bodies of water, but also you're restricted from laying track too close to them.) Start in the center of the city and lay out to the edge of the city. Then lay track towards the other city in relatively short intervals, into the other city center. If you reach a river, to create a bridge you'll have to use a relatively long click and drag, or else the bridge won't be placeable. Avoid using tunnels

RAILROAD QUOTE: "I do verily believe that carriages propelled by steam will come into general use, and travel at the rate of 300 miles a day." - Oliver Evens

early on - they're too expensive for a newly started company. For track building details, see Chapter 5: Track.

Place stations at each end of your track, and probably a service tower in the middle.

Click on the "Build station" button (top row of the Button Panel, middle button). Place a medium station near each end of your track, and a service tower roughly in the middle. (After about a year or so in operation, you'll want to add a maintenance facility, also somewhere in the middle of your track. For station building and management details, see Chapter 6: Stations and Buildings.

Buy 2 or 3 trains and route them between your stations.

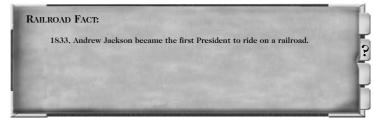
Click on the "Add train" button in the Button Panel. Buy two trains, using the most modern locomotive available. Set up a simple route by clicking in the routing map on the circle for your first station, then clicking again on the circle for your second station. Leave the defaults in place for what cargo gets hauled. For train buying and operating details, see Chapter 7: Trains.

Start the Clock.

The game usually starts "Paused" to allow you to best plan your initial moves. Once you've laid out your track, stations, and trains, un-pause the game by clicking on one of the speed buttons (colored buttons just below the Button Panel).

Gradually expand over time, building a bigger, more profitable railroad.

Leave your initial setup alone for 2 to 3 years. That gives you time to generate some revenues and get a feel for the rail opera-



tions. At that point, consider buying more trains if you've got excess cargo that isn't being hauled (especially if your initial cities are far apart, or if the scenario is pre-1860 and you're using relatively slow early steam locomotives). After you've built up some profits, issue a bond from the Company Detail panel, and use the proceeds to expand your railroad. Keep growing. If there are any computer controlled railroads, link up to them at some point - the inter-network traffic can be quite profitable.

Re-invest those company profits in buying up profitable industries or buying back stock so the stock price goes up. If your railroad is really profitable and you've already expanded to most of the best cities, start re-investing your profits elsewhere. First, consider buying up existing industries that are profitable (you can make even more money by buying up an industry BEFORE your railroad reaches the town it's in and increases its profits). Second, refinance and/or repay any outstanding bonds your company has. Third, consider trying to drive up your company's stock price by raising the dividend and using extra cash to repurchase outstanding shares.

Over time, work towards whatever the specific goals are for the scenario you're playing.

Different scenario have different goals. There are always 3 levels of victory that you're competing for - a bronze medal is the easiest to achieve, then silver, and if you're really good (or lucky), you might occasionally score a gold medal. Monitor your progress in the company ledger. Press the "View Ledger" button, just below and to the right of the Button Panel. Click on

RAILROAD FACT: The world's shortest underground railway system is the Carmelit in Israel. The Carmelit, which opened in 1959, is only 1.12 miles long, has only six stations, and is the only subway in Israel.

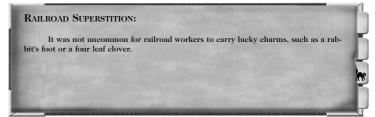
the lowest tab to see the scenario status - how you're doing in achieving the scenario's goals. Click on the "Briefing" link on this page to see the initial briefing dialog if you've forgotten the original goals.

CHAPTER 3: THE MAIN MENU

Each time you start Railroad Tycoon 3, you will be greeted by the Main Menu screen, which contains the seven options listed below.



- Tutorial Clicking here will take you directly to the Tutorial scenario. This option is strongly recommended for first-time players.
- Single Player Selecting this option will allow you to begin a new campaign or scenario, as well as resume a campaign or scenario you have previously saved.
- Multiplayer This allows you to take on up to 7 other human opponents via a LAN or over the Internet. More detailed information on multiplayer games can be found in Chapter 11: Multiplayer.
- High Scores Check here to see the records for the high scores in the game.



- Settings Use this to change your graphics, sound and gameplay options.
- Extras Everything else that didn't fit! Use this to access the game's editor (for details see Chapter 12: Map Editor), credits, weblinks to Railroad Tycoon 3 related sites, and the Readme file with technical/troubleshooting help and other last-minute information.
- **Exit** Select this option when you are ready to leave the game and return to Windows.

SINGLE PLAYER OPTIONS

Click on the "Single Player" button to begin a single player game. You'll have a choice of six gameplay options: New Campaign, Load Campaign, New Scenario, Load Scenario, New Sandbox, Load Sandbox.



NEW CAMPAIGN

Railroad Tycoon 3 includes a 16 scenario campaign, taking you to locations around the world. It is recommended that you play through these scenarios consecutively, as they have been designed to increase in difficulty as you move through the campaign. However, if you'd like, you



can skip any scenario or even play them out of order. To begin a new campaign:

RAILROAD QUOTE:

"I dislike the sleeping car sections more than I have ever disliked, ever shall dislike, or ever can dislike, anything in the world."

- Helen Hunt Jackson

- 1. Click on the "New Campaign" button.
- 2. You must now select a difficulty level for the campaign from the screen that appears. When choosing a difficulty level, choose wisely, because the difficulty level can't be adjusted once the campaign has begun. For those unfamiliar with strategy games, the "Easy" difficulty setting should be selected to give you a chance to get your feet wet. Those with some experience in strategy games should select the "Normal" difficulty level. We recommend playing through a complete campaign at least once before selecting the "Hard" difficulty level.
- 3. Each scenario in the campaign is represented by a display case in the railroad museum. Click on the first display case on the left, which is displaying a model of a horse and stagecoach, to begin the campaign's first scenario, "West to Buffalo". Before beginning the first scenario, you may wish to review Chapter 4: Interface and controls, to get a better understanding of how to play Railroad Tycoon 3. Once you have completed all five of the scenarios displayed on the first campaign screen, you will see another room with additional scenarios. You can also navigate between rooms by clicking on the arrow signs on the sides of the screen, or leave the campaign screen by clicking on an "Exit" sign.

LOAD CAMPAIGN

This will bring up a window listing all of the current saved campaign games (it does NOT show saved stand-alone scenarios and sandbox games.) Choose a game and you're on your way.

RAILROAD FACT:

Railroads played an important part in the Civil war, allowing the military to more quickly move their artillery, supplies and troops. The South was at a distinct disadvantage, controlling only about 9,000 miles of track, while the North was in control of about 20,000 miles of track.

NEW SCENARIO

If you would like to play a single stand-alone scenario, instead of the campaign, click on the "New Scenario" button. This will bring up a window allowing you to set up a new scenario by selecting the map, skill level, options, and number of computer players. Once you have



made these selections, just click on the "Start" button to begin.

Мар

This button will bring up a list of the available maps for you to choose from for this scenario. Once selected, the map will appear in the Dialog box next to the "Map" button.



Date - For some maps, you're allowed to change the starting date. The date of the game will determine, among other things, what locomotives will be available to you and what types of buildings appear (i.e. Nuclear Plants will not appear in 1845).

SKILL LEVEL

Next, you will need to select the difficulty level for the scenario. The basic game rules are the same at each level, but at the easier levels, vou are given a significant financial edge (vou get higher revenues from your trains, and lower expenses for things like maintenance, fuel and track building). Conversely, any computer opponents you face get financial penalties at the "Easy" setting



and financial bonuses at "Hard" and "Expert" settings. At the "Medium" setting, there are no bonuses and penalties for either you or your computer opponents. We recommend playing at "Easy" or "Medium" until you become familiar with the game.

COMPUTER PLAYERS

Use the arrow keys to increase/decrease the number of computer controlled players participating in the game. The maximum number of computer players permitted varies according to the map you have selected.

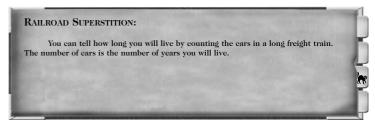
LOAD SCENARIO

This will bring up a window listing all of the current saved stand-alone scenario games (it does NOT show saved campaigns and sandbox games.) Choose a game and you're on your way.

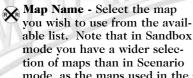
NEW SANDBOX

Sometimes you may just feel like laying track and playing with the trains, without having to worry about the running a business or making money. In Sandbox mode, all of the financial aspects of the game have been turned off, allowing you to enjoy the fun of building and feel like a kid with a new model train set. Also, in sandbox mode, you're able to modify the map in many ways you can't do in a normal game, including raising and lowering ground (i.e. you can create your own mountains), adding trees, and painting the map any colors you choose.

Clicking on the "New Sandbox" button will bring up a window displaying all of your options for setting up a new sandbox game.



Once you have made all of your selections, click on the "Start" button to begin the game.





mode, as the maps used in the Campaign are available.

Date - The date of the game will determine what locomotives and buildings will be available to you.

Special Options: Please note that all of the following options can also be changed once you've started a sandbox game, by choosing "File Options", then "Settings", then "Sandbox Options".

- Time of Day You can select the time of day when your game will take place. With the default option, the game will cycle through normal day and night cycles (although nights are somewhat abbreviated).
- Weather Conditions Choose the weather conditions for the game. With the default "Normal weather cycling" option, the weather will mostly be clear, with occasional storms.
- Allow locomotives from any time period Selecting this option will give you access to all of the locomotives in the game, regardless of the date and location the scenario takes place.

RAILROAD FACTS:

The first American-made steam locomotive to enter into regularly scheduled passenger service was The Best Friend of Charleston. Constructed by the West Point Foundry in New York, this train began service for the South Carolina Canal & Railway Company on December 25, 1830. After six months of successfully transporting passengers and freight between Charleston and Hamburg, the locomotive exploded in 1831, when the fireman closed the boiler's safety valve because of the noise.

- Allow breakdown/crash for locomotives Selecting this option will allow your locomotives to breakdown and crash normally. By default, in Sandbox mode, locomotives will not break down or crash, even if they receive no maintenance.
- Disable building/city generation Selecting this option will prevent cities and buildings from springing up on their own over time. The only buildings on the map will be those you place.

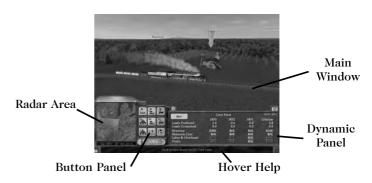
LOAD SANDBOX

This will bring up a window listing all of the current saved sandbox games (it does NOT show saved campaigns and scenarios.) Choose a game and you're on your way.

CHAPTER 4: INTERFACE AND CONTROLS

THE MAIN INTERFACE

Once you have selected the type of game you wish to play and begun the scenario, you will be greeted by the main interface. This is your window on the world. From here you can observe the game world, review the available information, and issue commands for building your empire. The main interface is composed of five parts:



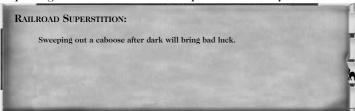
- Main Window This is your view on the world of Railroad Tycoon 3. Here is where all the action happens. This is where you will lay track, watch trains run their routes and keep an eye on your empire. The interface has been designed to allow you to keep a constant eye on the world.
- Radar Area Here you will find an overview of the current map. Clicking on a location on the map in this area will instantly transport you to that location, allowing you to quickly navigate the map without having to scroll around.
- Button Panel This area gives you access to all the functions and information you will need in building your empire. Simply clicking on a button will allow you to seamlessly move between the activity boxes, information and changes in game speed.
- Dynamic Panel As you select the different options in the Button Panel, this area will change to display the available information and/or controls for that option.
- Hover Help This area will provide you with information about the buttons/options as you move your mouse cursor over them. It will also provide you with important information about actions you are taking, including the cost of building or buying various items.

NAVIGATING THE MAP

You can move around the map using a number of different methods.

Mouse Controls

Exploring the vast and detailed maps in Railroad Tycoon 3 is



only a mouse-click away. To move around the map, move the mouse cursor to the edge of the screen in the direction you wish to go. To rotate the map, hold down the right mouse-button and drag the mouse in the direction you wish to rotate the map. The mouse-wheel allows you to zoom-in and zoom-out of the map. Rolling the mouse-wheel back toward you will zoom you out, giving you more of a birds eye view. Rolling the mouse-wheel forward zooms you in for a closer look. Finally, if you press and hold down the mouse-wheel and move the mouse, you can slide the map around.

USING YOUR RADAR

In addition to using the mouse controls, you can navigate the map using the radar area. You can instantly move to any location on the map by simply left clicking on a location on the radar map. The cities are marked by white dots on the map. You can also zoom quickly over the map by clicking and holding down the left mouse-button on the radar map and dragging your cursor over the map.

ALTERNATE MOVEMENT, ZOOM AND ROTATE CONTROLS

In addition to controls provided by the mouse and the radar area. you can use the arrow keys on the keyboard to move the map around. If you hold down <SHIFT> while using the arrow keys, you'll control zoom and rotation rather than just moving the map around. Finally, if you don't like the default controls for these items, you can change them in the Settings window. Press <F6> to see the settings window, and choose the "Camera Controls" option. You can enable on-screen buttons for zoom and rotate (like Railroad Tycoon 2), or you can switch into dif-

RAILROAD FACTS:

The Orient Express was nicknamed the "Spies Express" due to the number of spies that used the train. One famous spy to have traveled on the Orient Express was Mata Hari.

ferent camera modes, including the mode "Free - Any Angle", which allows you to use the mouse to look up at the sky or straight down at the ground.

PRIMARY ACTION BUTTONS

In the Button Panel there are nine square buttons, which represent the primary actions you will need to focus on in Railroad Tycoon 3. Clicking on any of these buttons will bring up a display in the Dynamic Panel, which provides you with information and options for that particular area of the game.

LAY TRACK



Clicking on the "Lay track" button will allow you to lay track - the first step in building a railroad. For complete track building information, see Chapter 5: Track.

BUILD STATION



After you've built some track, you'll need to build some stations (trains must travel between stations.) For complete station building and operating information, see Chapter 6: Stations And Buildings.

ADD TRAIN



Finally, after you've built track and stations, it's time to buy some trains! Click on this button to add a new train. We recommend using at least 2 trains on your early routes, and, depending on the amount of cargo available, you may need many more.

RAILROAD QUOTE: "If railroads are not built, how shall we get to heaven in season?" - Henry David Thoreau

For complete train buying and operating information, see Chapter 7: Trains.

VIEW COMPANIES



Click on the "View companies" button to view a list of the companies currently operating in the game. If you don't yet have a company, you may start one here. Double-click on any company listed in the Dynamic Panel to view the Company Details.

VIEW STATIONS



You can instantly view a list of all of the stations in your railway by clicking on the "View stations" button. Double-click on any of the stations listed to view details of the station. Your camera will also shift instantly to that station's location on the map.

VIEW TRAINS



Clicking on the "View trains" button will instantly display a list of all of your trains. Click on any of the trains listed in the Dynamic Panel to view the Train Detail screen for that train. For information on the Train Detail Screen refer to Chapter 7: Trains. Your camera will also shift instantly to that train's location on the map.

RAILROAD JARGON: RAILROAD WORKER TERMS Bull - Railroad Policeman Bake Head - Fireman Rag-Waver - Flagman Skipper - Conductor Groundhog - Brakeman Hogmaster - Engineer Paperweight - Railroad Clerk Bug Slinger - Switchman

COMPANY DETAIL



To view information on your company, click on the "Company detail" button. This option will bring up vital financial data on your company in the Dynamic Panel. For more information on companies, see Chapter 8: Companies and Players.

STOCK MARKET



For a quick view of the stock market, click on the "Stock market" button. The Dynamic Panel will display information on your personal Cash, Stock and Purchasing Power. You can also use the "Buy" and "Sell" listing to quickly trade stocks.

Selecting the "View" option will bring up a window with additional information on the performance of the stock. All of the "Per Share Data" may be displayed on the chart, by simply clicking the small box following the listing. Once clicked, the performance of that information will be



added to the chart in a unique color. For additional information on stocks refer to Chapter 9: The Stock Market.

OVERVIEW MODE



Clicking on the "Overview mode" button allows you apply various overlays to the map, so you can check on vital information as you play. There are five overlays available:

RAILROAD FACTS:

The first railroad tunnel in the Western Hemisphere was the Staple Bend Tunnel on the Allegheny Portage Railroad. Built in 1833, this tunnel allowed trains to travel through the Allegheny Mountains in Pennsylvania.



Cargo Supply - This overlay allows you to see the prices and availability of all cargos on the map.
Click on a given cargo. For most cargos, the map

turns shades of red, yellow and green - green areas will pay the highest prices for that cargo and red the lowest. The black rectangular boxcars indicate the number of carloads available to be hauled. The most profitable routes are ones that haul from red areas to green areas, with many carloads (i.e. black boxes) available to be hauled. Note: The cargos passengers, mail, and troops work somewhat differently. For full details, see Chapter 10: Cargo Economy.



Holdings by Company - This is especially useful when you're playing a crowded scenario against multiple opponents (human opponents or A.I.

controlled opponents). Click on a company and the track, trains, stations and other buildings it owns will be highlighted.



Profitability - All profit-making buildings and trains are highlighted. Those in green are the most profitable. The ones in yellow are roughly

breaking-even, and the ones in red are losing money. Note that not all buildings operate for profit. Late in the game, when you've got excess cash, you can use this overlay to help spot profitable industries worth purchasing.



Track Grade - Tracks with steep grades can slow trains down. With this overlay enabled, the steepest track is shown in red - the flattest is green. If

you zoom close to the track, you can see the actual grade per-

RAILROAD QUOTE:

"A man who has never gone to school may steal from a freight car; but if he has a university education, he may steal the whole railroad."

- Theodore Roosevelt

centage, which corresponds to the speed performance on grades that can be seen in the "Add Train" window.



Traffic Density - With this overlay enabled, track will be highlighted based on how much train traffic is passing over it, on average. Red track has

the most traffic, green track has the least. If you have track that is dark red, you might want to consider upgrading it from single track to double track.

ADDITIONAL ACTION BUTTONS



At the bottom of the Button Panel, there is a strip of eight buttons. These control the speed of the game

and access the View Ledger and File Options windows.

GAME SPEED



You can run Railroad Tycoon 3 at one of six speed settings: Paused, Very Slow, Slow, Normal, Fast, and Very Fast. You change

the game speed by selecting the appropriate button or by using the "+", "-", and "Pause" keys on your keyboard.

FILE OPTIONS



The "File Options" button displays a window containing seven options: Load, Save, Briefing, Settings, Main Menu, Ouit, and Cancel.

RAILROAD SUPERSTITION: Stepping onto the cab of an engine with your left foot first is bad luck.

- Load This option allows you to load a previously saved game.
- Save Select this option to save your current progress. You will be able to reload the game again from this point.
- Briefing This will display the same briefing that you received at the beginning of the scenario. Check here if you forget what you are supposed to be doing.
- Settings Here you will be able to change the existing options in the areas of Gameplay, Sound, Graphics, Hot Keys, Scrolling, Camera Controls and Dialogs.
- Resign Clicking here will end your current game and return you to the Main Menu.
- Quit This will end your current gameplay session and return you to the Windows desktop.
- Cancel Click here to return to the game.

VIEW LEDGER



The Company Ledger contains detailed information on the company, including in-depth information on its operation and financial status. For additional information on the Company Ledger, refer to Chapter 8: Companies and Players.

DATE

Below the Radar Map, you will see a box containing the date. You will want to keep an eye on the date for many reasons.

RAILROAD FACTS:

During the Civil War, General Sherman instructed his men to tear up the enemy railroads. They would then use the wood to make large bonfires, heat the metal rails and twist them around trees to make them unusable. These twisted rails were known as "Sherman's neckties".

First, certain scenarios require you to complete objectives before a specific date. Don't let time get away from you...or you might just run out of it. Second, many locomotives and industries don't become available until a particular date. If you are interested in purchasing one of these new fangled locomotives, you will want to watch the date to make sure you have enough money stocked away. Lastly, you may have certain expenses due on specific dates. For example, interest payments on bonds will be paid at the end of every quarter, so you can expect your coffers to be a little emptier when that time comes.

CASH DISPLAY

Next to the Date, there is a box listing your company's currently available cash. Now get out there and see if you can't make this number go up!

CHAPTER 5: TRACK

The heart of every railroad is, of course, the rails themselves the track upon which everything else is built. After starting a new railroad, the first thing you'll want to do is lay down some track.

LAYING TRACK

To lay track, select the "Lay track" button in the Button Panel. The Activity Panel will display various options for laying track and your mouse cursor will appear as a segment of track. To lay a section of track, move the mouse cursor over an open area in the world, hold the left mouse-button down and then drag the

RAILROAD FACTS:

The Transcontinental Railroad was completed on May 10, 1869, when the eastern bound tracks of the Central Pacific Railroad met the westward bound tracks of the Union Pacific Railroad for the driving of the "Golden Spike" in Promontory, Utah.

track out to the location where you wish it to end. Release the mouse button to lay the track, or press the <ESC> key to cancel. You can also press the "Undo" button if you're unsatisfied with the result.

OBSTACLES

If there are obstacles in the way, you may not be able to lay the track as you desire. Under normal circumstances, buildings, rivers, lakes/oceans, mountains, and even other track can all be potential obstacles. They can even project a small "blocking" radius around them - not only are you limited from laying track directly through them, but they may prevent track laying out to a distance of one to three track lengths on either side. In particular, laying track through dense cities and towns may take some trial and error.

Fortunately, there are methods of getting around virtually all of these obstacles. You can lay track around a building, or, in the worst case, bulldoze the building. You can build bridges across rivers right from the start of the game, and, from 1895 on, you can even build suspension bridges over lakes and oceans (though that's quite expensive). You can find a pass through a mountain, working your way up the slope, albeit with a steep grade. Or, you can shell out serious cash and lay a tunnel through a mountain. Finally, you can join up to existing track, cross over it at grade, or build overpasses so that trains on one track won't stop trains on the other.

RAILROAD FACTS:

The shortest length of railroad track in the world can be found in Vatican City (Holy See). The track, running between the Holy See and Italy, is only 2,828 ft long and is used to transport goods.

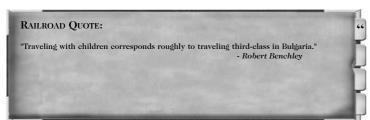
CONNECTIONS

In Railroad Tycoon 3, you have a great deal of flexibility in how you lay track - the angles, grades and types of track you build. However, this can sometimes make it harder to tell when you've connected up two pieces of track. When trying to connect to existing track, we suggest that you zoom in relatively close to the relevant track (so you can see what you're doing). Also, track needs a reasonable distance to turn (the "turning radius"). If you are laying from one piece of track toward another, make the last stretch of track a relatively longer stretch (at least 10 or so track "segments"), so that the game can properly turn one track into the other.

Note: In the real world, even competing railroads almost always have interconnected track - passengers and freight movers want the extra flexibility provided by the larger joined rail networks. In Railroad Tycoon 3, also, it makes good sense to connect up to your competitor's rail networks. Both of you will generally see more traffic as a result. For more information, see Chapter 10: Cargo Economy.

BRIDGES

As you're dragging the mouse to lay track, if you cross over a river, the game will attempt to automatically use a bridge to cross the river. To successfully lay a bridge, there must be no blocking obstacles (i.e. buildings) on either side of the river. You must also cross the river at a reasonably perpendicular angle (i.e. go directly across the river - don't cross at a 45 degree angle). Finally, you must drag the track across the river in a long enough motion to allow for ramps to descend from the bridge on both river banks.



This last issue can be the trickiest part of placing a bridge. If you're having trouble placing them, click the mouse a considerable distance on one side of the river (say, roughly 5 times the width of the river itself), hold the mouse down and drag it the same distance across the river. Don't lay track right up to the river's edge, release the mouse, and then try to lay track over the river - the track will be too close to the river to build a sufficient ramp. Remember, as you're first learning to do this, you can always experiment and use the "Undo" key to cancel out any results you don't like.

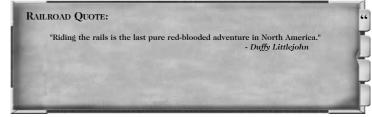
You can also lay bridges across canyons and gorges. At "Bridge Frequency: Average", the game will avoid doing this except in severe cases. If you're actively looking to do this, try "Bridge Frequency: Common".

TUNNELS

As with bridges, the key to laying tunnels is to use a long dragging motion - to give the game plenty of room to build the approach to and the exit from the tunnel. Tunnels can't be built in every situation - there needs to be an appropriate, reasonably flat place to start and end the tunnel. If you're actively looking to build tunnels, try "Tunnel Frequency: Common"

GRADE VERSUS COST

Since the dawn of the iron horse, railroads have been trying to achieve two conflicting goals as they build new routes - keeping grade down versus keeping costs down. Grade refers to the flatness of the track - it's hard and slow for trains to go up steep



hills. As you lay your track, it will be green in flat areas and red in steep areas. All other things being equal, keep your grades as low as possible.

Of course, all other things are never equal - the tradeoff for lower grades is often higher costs. To keep grades down, you could lay a longer piece of track on a more circuitous route (As the New York Central did in building from New York towards Chicago). Or, you can lay directly through the mountains, but use tunnels and land bridges (over gorges), to keep the grade low and the line straight. The Lackawanna Railroad (later merged with the Erie), also building west from New York, but several decades after the New York Central, followed this strategy, at enormous expense, generally hopping from mountaintop to mountaintop with enormous bridges and viaducts supporting the rails. The choice is yours.

TRACK LAYING OPTIONS

You have a variety of options available to you while laying track:

SINGLE/DOUBLE TRACK

Single track lays one set of tracks at a time - double track lays two sets of parallel track at a time.



Double track costs more, but not quite twice as much as single track. Double track allows two trains to pass each other at full speed. On single track, if two trains pass, one must stop (it becomes transparent), then when the tracks are clear, it must slowly accelerate back to full speed. Generally, you'll want to

RAILROAD FACTS:

The first commercially successful steam locomotives began running on the Middleton Railway in 1812. John Blenkinsop and Matthew Murray joined forces to create the Salamanca locomotive, and three subsequent locomotives, which used a "rack and pinion" drive to carry coal from the Middleton Colliery to the town of Leeds. These locomotives were able to replace the work of 50 horses and 200 men.

use mostly single track at the start, and selectively upgrade heavily used track to double track (upgrade by placing double track over the top of existing single track). Note that the combined cost of laying single track initially, then upgrading it later, is more expensive than simply starting with double track.

Type of Bridge

Until 1865, you have two bridge types to choose from - wood and stone. Wood is much cheaper, but only supports single track (not double), and trains traveling on wood bridges must slow down considerably. In 1865, steel bridges become available. They are basically a middle ground - cheaper than stone, more expensive than wood. They support double track. Steel bridges impose some slowdown penalty on trains, but less so than wooden bridges.

Finally, beginning in 1895, suspension bridges are available to you. This opens up the possibility, for the first time, of using bridges over oceans and lakes. They are not shown as an option - rather, suspension bridges are always used when laying a lengthy bridge over an ocean or lake. They are very expensive - use them cautiously.

FREQUENCY OF TUNNELS/BRIDGES/OVERPASSES

The game will use its own discretion on when to use a tunnel, track overpass, or bridge (bridges are always used, when legal, over rivers, lakes and oceans, but may also be used over canyons/gorges). You can increase or decrease the frequency with which they are used by pressing these buttons - you can even turn them off altogether.

RAILROAD QUOTE:

- Roger Lloyd

UNDO

Sometimes things don't go as planned. A slip of the finger or an error in judgment and you suddenly have an expensive and useless section of track. If you decide you are not happy with the track you just laid, click on the "Undo" button to remove the last section of track you laid. You will not be charged for the track and it will be as if it never happened. It is even possible to undo multiple sections of track, by elicking the button multiple times.

However, once you leave the Track Laying panel for any reason, any track you have placed is permanently committed and you cannot undo it - your only option at that point is to bulldoze it.

BULLDOZE

Use the bulldoze tool to remove buildings that are in your way, or to remove old pieces of track that are no longer necessary or are in your way. Beware, it is costly to bulldoze buildings (especially industrial buildings). Bulldozing your own track has relatively low cash out-of-pocket costs, it removes that track from your balance sheet, and that write-off is charged to your company's income statement immediately. On the flip-side, removing unused track reduces your company's track maintenance costs going forward.

RAILROAD QUOTE:

"The curious but intense pleasure that is given to many people by the watching and the study of railway trains, their engines, and the detail of their organization is both an art and a mystery. It is an art because the pleasure to be had is exactly proportionate to the informed enthusiasm one puts into it. It is a mystery because, try as one will, it is impossible to explain to others exactly in what the pleasure consists."

- Roger Lloyd

CHAPTER 6: STATIONS AND BUILDINGS

A railroad is only as good as the stations that allow people and cargo access to it. You can have tracks stretched from New York to California, but if people can't get to your stations, then you just end up with a whole lot of rusting track.

BUILDING STATIONS

To build a station, select the "Build station" button in the Button Panel. You will notice that your cursor has changed to a hammer icon and you are currently moving an image of a station over the map. If you've already placed track, then move the station onto the track, and it should "snap" into place, turning green and orienting itself with the track. In a crowded city center, you may have to experiment a bit to find a suitable '"snap to" location for a station.

You can also place stations without connecting them to existing track. If your station is colored yellow, it's in a valid location that is NOT connected to any track. For more precise control when placing unconnected stations, select "Locked" mode (bottom right of station options), then use the Building Rotation circle to choose the station's orientation.

If your station is red as you move it around, this means you cannot build it there. Look to the hover help for the specific reason.

STATION RADIUS

As you move the station over the map, you will notice a highlighted area around it. This is the collection area for the station.

RAILROAD FACTS:

The highest railroad station in the world is the Condor station in Bolivia. Opened in 1908, this railroad station resides at an altitude of 15,705 ft.

Cargos within that area will be immediately available to your trains at this station. Other freight will trickle in from further away, as local producers bring their products to the nearest "rail-head" for shipment to the outside world. Whereas freight cargos can reach your station even if they're not in the station's immediate radius, passengers and mail will ONLY use your station if the house they come from is within the station's radius. Passengers don't want to walk 100 miles to a train station to eatch a train, whereas a local grain farmer will haul his cargo that distance or more by wagon, if he has to, to get it to a station for shipment.

The only difference between the three station sizes is their cost and radius - the bigger stations cost more, but have a larger radius. Generally, the best strategy is to use medium or large stations in towns and cities, to fully capture both freight and passenger traffic. However, when laying spur lines out into the countryside to pick up from farms, mines and factories, you can use the smallest sized station, as freight will make its way to that station even if the radius doesn't encompass every freight producer in the region.

In addition to choosing a station size, you can also override the default architecture style and choose one of your own. This has no gameplay effect, it's just eye candy for the railroad tycoon with a passion for architecture.

RAILROAD FACTS:

Charles Carroll, the last living person to sign the Declaration of Independence, was among the earliest investors in the B&O Railroad and presided over the laying of the first stone of the railroad on July 4, 1828. Upon breaking ground he declared it "among the most important acts of my life, second only to my signing The Declaration of Independence, if even it be second to that!"

UPGRADING STATIONS

Over time, cities in major rail hubs grow. Perhaps that medium station you built 10 years ago services only a fraction of a now-larger city. You can upgrade small and medium stations to larger stations. Click on the station, then click on the "Upgrade" button. If there are other buildings (like houses) packed closely around your station, there may not be room to upgrade it. But even in that case, you may be able to bulldoze some of the surrounding buildings to make room for the upgrade.

SUPPORT BUILDINGS

In addition to stations, you must build 2 other structures - service towers and maintenance facilities, to support your railroad. Trains that pass either of these on their route will automatically stop to use them if their water, sand and/or oil levels are low (you can also schedule these stops manually, to force a train to stop.)

SERVICE TOWERS

Service towers combine the functions of a water tower and a sanding tower. Steam engines rely on a steady supply of water to produce the steam the need for power. If a steam engine runs out of water, it must limp along at a greatly reduced speed, scavenging water supplies from the local environment. Since most games of Railroad Tycoon 3 take place in the steam era (roughly 1830 to 1950), using primarily steam locomotives, you will need a service tower to provide water along every route - basically one service tower between every station pair. Fortunately, service towers are relatively cheap.

RAILROAD FACTS:

The worst train crash in UK history was on May 22, 1915. 227 people lost their lives when a troop train collided with a passenger train at Gretna Green.

Service towers also replenish sand. All locomotives (including diesels and electrics), use sand for traction in mountainous areas (they automatically feed a small amount of sand onto the tracks ahead of the drive wheels.) If a locomotive runs out of sand, its performance on grades is greatly reduced. So, even if you have no steam locomotives, you'll still need some service towers to provide sand, though likely not as many, especially if your routes are flat.

MAINTENANCE FACILITY

Locomotives must receive regular maintenance, or the chance of a breakdown or crash greatly increases. Unfortunately, maintenance facilities are relatively expensive. You'll need to use some, but perhaps you can scrape by with fewer of these than service towers. Keep an eye on your locomotive's oil levels - if they regularly reach empty, add a maintenance facility on that locomotive's route, or change the route so it passes by an existing maintenance facility.

When a locomotive receives maintenance, its oil gauge fills to capacity. As your locomotives move along their route, regular wear-and-tear and the effects of time will take their toll. In order to keep them running as long as possible, they will need regular maintenance. This will help prevent breakdowns and crashes. Better to spend a little now than a lot later. Click on the "Place a maintenance facility" button (wrench) and drag the image of the building to the desired location along your track. Once you have the building in place, click on your left mouse-button to place the maintenance facility.

RAILROAD QUOTE: "When I hear the iron horse make the hills echo with his snort like thunder, shaking the earth with his feet, and breathing fire and smoke from his nostrils ... it seems as if the earth had got a race now worthy to inhabit it." - Henry David Thoreau

OTHER BUILDINGS

You can also place a variety of other buildings. Click on the lower right option ("Place a non-station building") to see a list. This list varies depending on the scenario and the year.

POST OFFICE, HOTELS, RESTAURANTS, TAVERNS

The first few buildings, shown in yellow, complement existing stations. They must all be placed near a station to have any effect. Post Offices allow mail to wait at the station longer before disappearing. Restaurants, Hotels, and Taverns make a profit based on how much passenger traffic goes through that station. These buildings can potentially serve multiple stations, if those stations are placed close together. You can also place, say, a hotel near an opponent's station to make money off of his traffic! Of course, he can place his own hotel, and for the most part, each hotel will get roughly half the business. The market for hotels does not get bigger as more hotels are placed, rather, the hotels divvy up the market, with the hotel that's closest to the station getting the biggest share.

INDUSTRIES

Further down in the list are various factories that you may construct. If there is a large supply of cotton by your rail lines, but nowhere to haul it, consider building a textile mill. You'll make more money hauling cotton and clothing, and the textile mill itself may make a profit if there is a large enough supply of cotton and a large enough market for the clothing it makes.

Note: Your company logo will be displayed over any non-station buildings you own, making them easier to locate on the map.

You can also buy many existing industries on the map. If an industry is stable and profitable, you can buy it for a nice steady profit stream. Even better, if an industry is unprofitable, but you expect it to make a turnaround (say, you're about to build a rail line right to the factory's doorstep), you can buy it when it's losing money for very little, and after the turnaround, you'll make a hefty profit.

Finally, for any industry you already own (whether you built it, or bought an existing industry), you have the option to upgrade it. An upgrade doubles production capacity, but costs much less than building a new factory of that type. Be careful though, the larger capacity carries with it greater overhead. If you upgrade a factory but can't keep it well supplied with raw materials, it may quickly swing from profitable to unprofitable.

CHAPTER 7: TRAINS

There is something about locomotives that fascinate people. Maybe it is the freedom they represent; giving you the ability to just pick up stakes and go anywhere you please. Perhaps it is the power of these mighty iron horses, capable of roaring along effortlessly as they drag their lengthy load. For some it may be the adventure and the romance of traveling through a distant and exotic countryside. Whatever the reason, children and adults around the world have been fascinated with trains for almost 200 years, and there's no sign of this fascination fading anytime soon.

ADDING A TRAIN

Once you have track and stations in place, click on the "Add train" button in the Button Panel to purchase a new locomotive and add a new train for your railroad.

Note: A "locomotive" is the steam/diesel/electric engine (and accompanying coal tender, if applicable) at the head of a train. A "train" is the locomotive and any accompanying eargo cars it is hauling. Trains have a "route" which is a list of stations they visit, with a list of eargo cars (the "consist") that they load at each station.

RAILROAD SUPERSTITION: Some believed it was bad luck to take the first trip on a train on Fridays. Others believe it was bad luck to ride a train on Fridays at all.

To add a new train, you must purchase a locomotive and set up a route with consists. You are only charged for the locomotive - cargo cars may be added and removed freely as needed.



SELECTING YOUR LOCOMOTIVE

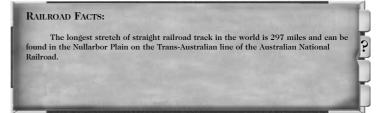
You will see a list of the locomotives available for purchase. The actual engines available will depend on what region of the world the map is located in and the time period. As time goes by, newer and more powerful locomotives become available. To select a locomotive click the left mouse-button on the name of the desired locomotive. The purchase will not be complete until the route has been set and you click on the "Buy" button, so you can always select another locomotive if the first one doesn't suit your fancy.

LOCOMOTIVE DATA

This section of the window (located above the train list) displays important information about the selected locomotive. For details, see the Locomotives section later in this chapter.

SET UP A ROUTE

Once you have selected your locomotive, you will need to set up a route for it to travel. The easiest way to set up a route is to click in the map area on the stations you want this train to visit (they're shown as yellow circles). You can also click on the "Add Station" button to choose from a listbox of available stations.



USING AN OPPONENT'S TRACKS AND STATIONS

When selecting routes for your trains, keep in mind that you can use both yours and your opponent's stations and tracks. This can expand the area you can cover, but it comes with a price. If a train uses another company's track, you must pay that company a share of your train's revenue equal to the proportion of their track you use, as a percentage of the total distance. For example, if you run a load of lumber from Munich to Berlin, and 40% of the route was on your opponent's tracks, then your opponent receives 40% of the revenue for hauling the lumber. Moreover, you still have to pay 100% of the fuel cost for your train, so your opponent's share is basically pure profit, whereas your expenses may outstrip the share of revenue you get to keep. So, when using opponents tracks, try not to go too deep into his rail network - keep routes to 10% or perhaps 20% on your opponent's tracks where possible.

SET UP CARGO

When you add a new station to your route, you'll see a row of icons just below the station's name in the list. This indicates what types and amounts of cargo the train will pick up at that station. Initially, you can probably get by leaving the default values alone. With the default settings, a train will essentially try to haul a reasonable number of whatever cars it can profitably pick up from that station. But as you get deeper into the game, you'll sometimes want to change these defaults and set up the cargo for a particular station yourself. Click on the "Change Cargo" button (or just double click on any station in your route) to adjust the cargo setup.

RAILROAD FACTS: In 1827, the Baltimore and Ohio Railroad (B&O) was chartered, making it the first common carrier (passengers or freight) railroad in the United States.

The default setup for a new train is for it to haul between 0 and 4 carloads of whatever can be resold most profitably at the next station on its route.

C PART OF THE PART

AUTO MANAGE/CUSTOM CONSIST

By default, every new train will be

set to auto-manage. This means that the game will automatically determine the best consist for your train. (A consist is the set of cargo cars that the train is hauling - say 3 oil tankers, 2 coal hoppers and 1 lumber flatbed). If auto-manage is enabled, and "Any Cargo" is selected, the game will haul the most profitable possible consist. You can limit things further, if you like. A good strategy is to assign your fastest, sleekest locomotives to haul express cargos only (i.e. passengers, mail and troops), and to have your slower locomotives haul freight only.

For the ultimate in control, choose "Custom Consist", and you can pick every individual car that the train will haul. This strategy can be useful if you always want to emphasize certain cargo, even if it isn't the most profitable. For instance, if you own the local Textile Mill, you may want to have a train hauling cotton into the city and clothing out of the city, even if they're less profitable than other cargos (because you're still making money from the Textile Mill itself.) Note though, that this is a fairly advanced strategy - we suggest you leave your trains on "Auto-Manage", with cargo types of "Any Cargo", "Any Freight", or "Any Express", until you're quite familiar with the game.

RAILROAD FACTS:

The Rail Passenger Service Act was passed by Congress in 1970, creating the National Railroad Passenger Corporation, better known as Amtrak. The Amtrak name is derived from the words "American" and "Track".

Finally, it should be noted that regardless of what cars you have on your train, and what cargos are available at a given station, that cargo will not board your train unless you're hauling to a suitable destination. Freight cargo will never board a train going to a station where the price is lower that at its current location (that would be like hauling ice to Alaska, or coal to Newcastle). And passengers and mail always have a specific destination in mind - if a given train isn't at least heading in the right direction, they won't board that train. For further details, see Chapter 10: Cargo Economy.

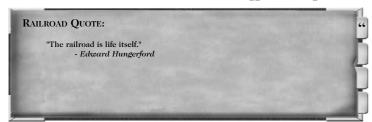
MIN/MAX CARS

Zero is specified as the minimum number of car-



loads the train will leave the station with (i.e. even if there's no cargo available to haul, it will still leave this station, hopefully to have better luck finding cargo to haul at the next station. And 4 is the maximum number of carloads it will carry. If there are 20 profitable carloads to haul, the train will only haul the most profitable 4. You can change both the minimum and maximum number of cars, with certain advantages and drawbacks.

If you increase the minimum number of cars, then the train will wait at the station until it has at least that many cars to haul. The advantage of this is that you'll have fewer empty or nearly empty trains running on your track, consuming fuel, increasing traffic, and potentially even breaking down or crashing. The disadvantage is that it may cause your train to wait a long time at the station, even while there is more profitable cargo to be hauled at other stations on its route. We suggest leaving the



minimums at 0 while you're getting familiar with the game, and only cautiously using higher values.

On the other hand, if you increase the maximum number of cars the train can carry, you're increasing its potential profit. If you change your maximum cars from 4 to 8 and there is enough cargo to fill those 8 cars, you'll potentially make about twice the profit per trip. And if there are only 6 cars available, the train will simply haul the 6 and be on its way. Sounds good, huh?

Well, the downside is that long trains are heavy, and heavy trains are slow. If you have several heavy, slow trains running along your track, they may interfere with lighter, faster trains, decreasing efficiency over your entire rail network. In particular, long, heavy trains in mountainous areas with steep grades is a recipe for some serious traffic jams.

Even so, as trains get more powerful over time, you'll probably want to start using higher maximum car counts. Keep in mind though, that the weight of a freight car also gets heavier over time, and this partially counteracts the increased performance of better locomotives. See Locomotive Statistics - Top Speed later in this chapter for more details

CAROOSE

By clicking on the "Caboose" box, you can add a caboose to your train (and also use up one of your 8 cargo car slots). The caboose will reduce the risk of breakdowns by 50%. This is especially useful for unreliable and/or older locomotives.

RAILROAD FACTS: After the explosion of The Best Friend of Charleston in 1831, the available parts were salvaged from the wreckage and used in the construction of a new locomotive. The new locomotive was named Phoenix, after the mythical bird, which was consumed by fire and reborn from the ashes.

DINING CAR

Click on "Dining Car" to add one to your train (also using up one of your 8 eargo car slots). The dining ear increases the passenger revenue on this train by 20%, but has no other effect. Only add a dining car if you know a train will be hauling a lot of passengers, particularly if the stop is set to "Any Express" (which will typically be 70% or more passengers), or just simply hauling passengers only.

APPLY THIS CONSIST TO ALL STATIONS

If you wish to use this same cargo setup for all of stations in the train's route, click on the "Apply this consist to all stations in this route" option. Be careful, though. This will overwrite and other consists you have previously set up for this train.

LOCOMOTIVES

"More powerful than a locomotive" conjures up an instant image, because, for most people a locomotive is the most powerful machine they've ever seen or could even imagine. Their progress is remarkable - from the original steam engines that look like toys today (but were considered monstrosities in their day), through the massive 4-8-8-4 Big Boy (which weighed 1.2 million pounds!), through today's massive diesel and electric engines (which weigh far less, but generate even more horsepower than the Big Boy).

Locomotives generate power in 3 basic ways (there are a few other more eccentric types, but none that have been commercially significant):

RAILROAD FACTS:

In 1990, the French electric, high-speed locomotive TGV (Train à Grande Vitesse) Atlantique set the new speed record for a train on a rail system when it achieved the speed of 320.2 mph.

Steam - The earliest locomotives were steam engines. They burned coal, oil or wood to heat a boiler, which would provide steam to power the pistons that made the locomotive move. These were the pioneering locomotives and continued to be widely used until middle part of the twentieth century (and are still used in a few countries to this day). As innovations in locomotives continued, these were eventually replaced by diesel and electric engines, which had lower operating costs.

Diesel - The term diesel engine is actually a bit of a misnomer. These locomotives actually use diesel-electric engines, which run on the electricity created by the diesel-powered generators it carries. Following World War II, diesel engines came into widespread use and, along with electric engines, began replacing the steam locomotives. Diesel locomotives are now dominant in most of North America.

Electric - Instead of generating its own power, electric locomotives draw power from an external source. In some cases this external source of energy is provided by power lines run over the track and in other cases the power may be sent through a special rail that runs along the track. These locomotives are usually more efficient than steam or diesel engines, but require a substantial investment in the infrastructure of the railway, in order to make power available to all areas of the track. For an electric locomotive to be used, the entire length of track between the desired stations must be electrified. Today, electric locomotives are dominant in Europe, Japan, and parts of the Northeast U.S.

RAILROAD SUPERSTITION:

An engine may be considered jinxed after having one or more accidents. In some cases the engine may be given a new number to remove the stigma.

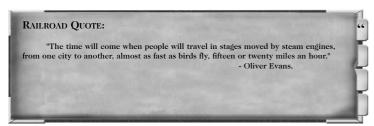
In Railroad Tycoon 3, you will start off with steam locomotives (one consequence of this is that you will have to build plenty of service towers to provide water for their boilers). The first diesels and electrics appear early in the 20th century, but they don't become overwhelmingly better than steam locomotives until roughly 1950. At that point, you will have to make a decision. You can invest in the high up-front costs of electric track so that you can use the generally superior electric locomotives, or keep your costs down by gradually transitioning to diesel, with no need for track improvements. The choice is yours.

LOCOMOTIVE STATISTICS

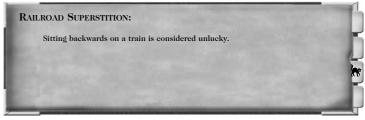
Ultimately, each locomotive's abilities are boiled down to a set of statistics and ratings. Newer locomotives are generally better than their predecessors, but sometimes a big advance in one area is offset by regression in another area:

When buying a new locomotive, you can see these statistics readily. For a train already in operation, click on the side view picture of the locomotive in the train list or train detail screen to see its statistics:

- Cost -The amount of money required to buy this locomotive.
- Annual Maintenance An estimated cost for maintaining this locomotive each year. Maintenance costs increase as a locomotive ages (it's hard to keep the old beasts running), and costs will also be higher if it runs out of oil.



- Fuel Economy The fuel efficiency of this locomotive, compared to all other available engines. Total fuel costs are a product of a locomotive's fuel economy, the distance it travels, and the weight of the loads it carries.
- Acceleration Measures how fast this locomotive reaches top speed from a standing start.
- Reliability Measures the relative chance of this locomotive breaking down or crashing.
- Passenger Appeal Passengers have always had a special interest in traveling via the sleekest, coolest mode available. Some locomotives were consciously designed to look good for the passengers (especially the "streamliners" of the 1930s). A locomotive with a high passenger appeal earns a revenue premium of up to 30% on all passenger traffic it carries. Conversely, a particularly ugly locomotive will drag down passenger receipts by up to 15%.
- Engine Type The type of power used to propel the locomotive (steam, diesel or electric). Remember, electric locomotives can only run on electrified track.
- Top Speed The maximum speed for this locomotive. The top speed of the engine will change depending on the number and type of cars it is pulling and the grade it has to travel over. More precisely, certain types of cars weigh more than others. A fully loaded express car (passengers, mail) or auxiliary car (caboose, dining car), always weighs one-third less than a fully loaded freight car of the same era. So you'll want to use more powerful engines on freight routes. Passengers and mail pay a larger profit if you haul them



quickly, so you'll want to try to use the fastest possible locomotive on passenger routes. You can use the freight/express/mixed radio button to modify the speed charts based on what type of traffic you expect to haul (the radio button doesn't actually set the cargo type to haul, it just determines what variables are used in the speed chart - it's for informational purposes only).

Also note that both express and freight cars get heavier in each era. In the first era, from 1830 to 1849, freight cars weigh 10 tons. From 1850 to 1899, they weigh 20 tons. From 1900 to 1949, they weigh 40 tons, and finally, from 1950 on, they weigh 80 tons. Express cars always weigh two-thirds of that. So, a locomotive that can pull 6 fully loaded cars at a decent speed in 1899 may struggle with 6 cars in 1901. Unfortunately, you don't get paid any more to haul the heavier cars - prices remain the same on a per carload basis. (Historically, the cost of shipping a ton of goods by rail has steadily and sharply decreased since the dawn of railroads, which has been roughly offset by the much larger cars and capacities of today's railroads).

Managing an Existing Train

Once you have purchased a locomotive, you can access its Instrument Panel by clicking on the train on the map or by clicking on the "View trains" button in the Button Panel and double-clicking on the desired train. The Instrument Panel consists of several parts:



RAILROAD FACT:

The Mallard set the world steam speed record in 1938 when it reached a top speed of 126 mph. This would remain the all-time speed record for a steam engine.

TRAIN CONTROLS



Clicking here will center the camera on the train you currently have selected. The camera does NOT follow the train, so if it is moving, it will quickly disappear from view.



This locks the camera view onto the currently selected train. No matter where the train goes on the screen, the camera will follow. You can still zoom and rotate for different views of the train, but if you "slide" the camera, it will break off the locked camera and let you return to normal camera controls. You can also click on the 'Camera' graphic that appears in the top left corner of the screen to disable the lock.



When a locomotive has reached the end of its useful service, and you no longer wish to keep its route running, you can retire it and remove the train from your list of trains.



If the locomotive for a train is getting older, but you wish to keep that train intact, you can replace the existing locomotive with a new one. This will retire the existing engine and replace it with the new one you select, without changing the existing route or eargo. Note that as locomotives age, their maintenance costs increase, and they are generally outclassed by newer locomotives. We suggest upgrading locomotives every 20-30 years.

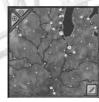
RAILROAD FACT:

Some of the earliest passenger trains used converted horse carriages as coaches, with people riding both inside of and outside of the carriage. Those unfortunate travelers riding on the outside of the carriage would often find themselves covered in smoke.



If you would like to have another identical train added to your fleet, with identical route and other settings, click on this button to make a copy.

ROUTE MAP



This map window displays all of the stations on the map. Stations connected by a line are part of the current route for this train. To add additional stations to the route, click on one of the station circles on the map.

LEVEL GAUGE



You can monitor the level of important components in maintaining your locomotive. These levels will affect the performance of the engine.

- Year This keeps track of the number of years this locomotive has been in service. The older the locomotive gets, the more likely it is to break down.
- Oil Locomotives require oil to run smoothly. When an engine runs out of oil, the chance of it encountering a breakdown is greatly increased. Put a maintenance facility on the track somewhere along the locomotive's route, and it will automatically stop for maintenance (and an oil refill) as needed.
- Water Steam locomotives require water to run. An engine running out of water will run at a greatly reduced speed, scavenging water from the local environment. Add service towers along the track to supply your locomotives with water (and sand).

- Sand Trains use sand to help provide additional traction on steeper grades. Running out of sand will decrease the speed of the train on steeper grades.
- Breakdown Chance This meter keeps track of the percentage chance this train has to break down. Breakdown chances depend heavily on the type of locomotive on the train, and are also increased as a locomotive ages, and if it is out of oil.

COST WINDOW

	1854	1853	Lifetime
Revenue:	\$124K	\$178K	\$1,154K
Maintenance:	-\$4K	-\$39K	-\$143K
Fuel:	-\$2K	-\$26K	-\$100K
Profit:	\$117K	\$113K	\$911K

This window keeps track of the financial information related to this locomotive. Consider changing a train's route or retiring it if it is consistently unprofitable.

ROUTE INFORMATION



This area of the Instrument Panel lists the stations currently on this route. You can also add/remove stations from the route and change the cargo being carried using the buttons below the list of stations.

ROUTE STATUS



You can keep track of your train's progress between stations in this area. The bar at the bottom will highlight as the train moves along the route. Icons will also appear in this area to warn you when the locomotive runs out of oil, water or sand.

PRIORITY STATUS



Priority status is used to determine which train yields when two trains meet on the track. A higher priority train will always have right-of-way over other trains of

the same company. Any train traveling on another company's track is always lower-priority than the track owner's trains (regardless of priority status). Finally, if two trains of equal priority status meet, the one carrying the more valuable cargo has priority. In general, you'll want to set freight-only trains to lower priority and express-only trains to higher priority.

CHAPTER 8: COMPANIES AND PLAYERS

Railways were able to expand and stretch-out across the globe because of the vision of a handful of great men and the backing of some powerful companies. These powerful visionaries and the mechanism for those great companies are represented in Railroad Tycoon 3. As an aspiring railroad tycoon, you must grow your fledgling company, expand your railways system and do whatever is necessary to make a profit.

An important concept to remember in Railroad Tycoon 3 is that you are in the role of a specific player - a tycoon. As a player, you will likely control a company and spend most of your time acting on that company's behalf - laying track, building stations, buying locomotives. However, you also need to look out for number one - yourself, the player. Usually, your personal profits hinge upon the success of your company. Indeed, in some scenarios, the success of your company is all that matters. But more often, you're trying to achieve company success as well as achieving great personal wealth. After all, you're trying to be a tycoon, not a middle manager.

Sometimes, as you play through the game, you may find yourself changing companies. This may be done to seize a new opportuni-

RAILROAD FACT: In 1991, the National Belgian Railway Company created the longest passenger train on record. The train, which was comprised of one locomotive pulling 70 cars, was 5,685 ft 3.6 in long.

ty or at the request of a less than satisfied board of directors. Keep your eyes out for new opportunities. Sometimes you may start out with an established company, other times you may be able to seize control of a company from an unfortunate competitor. Always remember to look out for number one.

COMPANY DETAILS PANEL

For a look at the overall performance of your company, as well as certain financial and other options, click on the "Company detail" button in the Button Panel. (If you don't currently control a company, you'll be offered the opportunity to start one.)

This information is broken down into four categories, which can be accessed by clicking on the "Overview", "Bonds", "Stock" and "Territories" buttons.

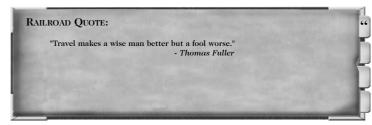
company's Revenue, Expenses, Interest and Profit. You can also resign as chairman of your company by clicking on the "Resign" button...though we don't recommend it. If you're viewing a company that is not your own, the resign button may be replaced with an "Attempt Takeover" button. If you control enough stock of another company, you may be able to boot out the current chairman and take the reins yourself.



Bonds - Clicking the "Bonds" button provides you with a listing of the company's Total Debt, Credit Rating and the Prime Rate.

Overview - This option displays information on your

Issue Bonds - If you find yourself needing additional capital to operate you railroad, you can issue



bonds to raise funds. Early in the game, issuing bonds will be one of the primary ways to fuel the rapid expansion of your company. Beware thoughif you issue too much debt and can't meet the interest payments, you may have to look into the following option:

Declare Bankruptey - If things are not going well, you may need to file bankruptcy to help with debts. This cuts all your debts in half. However, your credit rating will be terrible (you won't be able to issue new bonds), and the existing bondholders will receive some extra shares as compensation for the liquidated debt (this will dilute your stock and drive the price down). This should generally be used only as a last resort.



Stock - To view information on your company's stock, click on the "Stock" button. Here you will see current information on your Share Price, Shares Outstanding, Market Cap, Annual Dividend and Annual Dividend Payment.

Issue Stock - Issuing stock will bring additional money into the company, but every share you sell is a little less of the company you own. Issuing stock also generally drives the overall stock price of your company down, at least temporarily.

Buy Back Stock - You can buy back your company's outstanding stock if you have the money. This drives up the share price.

RAILROAD FACT:

Prior to the introduction of the railroads, stagecoaches were the quickest means of transportation. The stagecoach was able to average around 7 mph by stopping at relay stations along their journey to pickup fresh teams of horses.

- Change Dividend You can change the dividend you pay to your investors. A steady dividend, consistently paid for many years, can be very helpful to your stock price.
- Attempt Merger If you've got a lot of spare cash sitting around and would like to take control of another company, you can attempt a merger.



On certain maps, especially those set in Europe, you won't be able to build track or run trains outside of your home territory or country unless you pay a premium to gain access to that territory. Use this panel to see which territories you can currently access, and to buy your way into the ones you can't access.

THE LEDGER

While the Company Details panel offers some basic information about your company and a variety of actions you can take, the ledger gives you access to much deeper and more detailed information.

There are no actions to take from the ledger - everything within it is



"information-only". You can even ignore it much of the time. But if your railroad is losing money and you want to know why, the ledger is the place to look. Also, if you're trying to keep tabs on the goals for a scenario, the ledger offers the right information.

RAILROAD FACT:

Abraham Lincoln authorized the construction of the Transcontinental Railroad by signing the Pacific Railroad Act in 1862.

The ledger appears on the screen at the end of every fiscal year. You can also bring up the ledger at any point in the game by clicking on the "View ledger" button just below and to the right of the Button Panel.

The ledger contains four tabs. Each tab will take you to a page of the ledger containing different information on the status of the company finances and your own. The four tabs are Company Overview, Company List, Player List and Game Status.

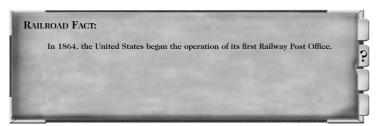
COMPANY OVERVIEW

This provides you with an overview of information on your company. This includes information on Revenue, Profits, Load miles hauled, Revenue per load and Average speed of your trains.



This tab also tells you how your investors feel about you and the status of your current salary. Investors like to see rising earnings and a rising stock price. Investors are always asking "What have you done for me lately?" Even if your railroad steadily grows and has a consistently rising stock price, a stretch of two or three consecutive bad years will have your investors rumbling loudly.

In addition to the basic information, there are links to pages containing more detailed information.



- **Income Statement** This shows a detailed breakdown of the revenues and profits/losses for the railroad.
- Balance Sheet Shows the amounts of cash, debt and assets (including locomotives and track) for the company.
- Haulage Report Gives a detailed accounting of train operations and cargo hauling on the railroad.
- Stock Report Tracks the performance of the company's stock in recent years as well as the Per Share Data for the stock.
- Train List A complete list of all of the trains owned by the railroad. This also provides information on each train, including the age and recent profits. You can sort your trains according to any of these factors.
- Station List Lists all of all of the company's stations and information regarding each, such as the cargo transported in and out.
- Industry List Contains information on all of the industries owned by the company, including their profitability.
- Cargo List Shows all of the cargo types available on this map. It also includes information on each cargo, including the number of loads and average price.

COMPANY LIST

It is also important to keep an eye on what the competition is up to. This section of the ledger contains a list of all of the compa-

RAILROAD QUOTE: "When the Golden Spike went into the last tie to connect the last rail, it brought together the lines from east and west. Lee's surrender four years earlier had signified the bonding of the Union, North and South. The Golden spike meant the Union Was held together, East and West." - Stephen Ambrose.

nies in the game. Click on the name of the company you are interested in researching to go to the Company Overview for that company.

PLAYER LIST

This tab allows you to view information on all of the players in the game, including their stock holdings. Click on the desired player to go to the Player Detail page. In addition to the financial information about the player, you will also receive some historical information on the famous character being portrayed.

Your player will usually be predetermined based on the scenario. Scenarios will also often encourage you to pursue a certain type of play to achieve success and the player selected may reflect that type of play. You can, however, play any way you wish, regardless of the character's personal style. The computer A.I., however, will normally act in a manner consistent with that historical figure. For example, Cecil Rhodes will strive to expand his company relentlessly, while Jay Gould will tend to spend more of his time speculating on the stock market. You can garner clues into opponents' play styles by clicking on them and reading their description.

GAME STATUS

Click here to see how you are doing so far. This section keeps track of your status in the scenario, and offers you an easy link to the original "Briefing" dialog you saw at the start of the scenario.

RAILROAD SUPERSTITION: If you get the wrong ticket at a train station, beware, it means your train will have an accident.

CHAPTER 9: THE STOCK MARKET

Many of the greatest railroad tycoons built their fortunes, not just on the running of rails, but on the manipulation of the stock market. The looser regulations of the stock market of the nineteenth century made it an attractive source of income to wise and wily tycoons. Now you have the chance to jump into the market with both feet. As they say, fortune favors the bold.

STOCK BASICS

Building a railroad empire takes money...lots and lots of money. Few people can afford to finance this undertaking on their own. The would-be tycoon invests as much money as possible into the business, then solicits the remaining funds they need from investors. These investors receive "shares", becoming part owners in the company. Usually, the would-be tycoon only controls a small minority of the shares, and investors control the rest. If those investors are unhappy with the company's performance, they'll quickly toss out the chairman (i.e. the tycoon who started the company). To keep investors happy, a tycoon must run the railroad profitably, and use some of those profits to make the investors happy by paying a steady and rising dividend. The remainder of the profits are held by the company and used for overall growth. Truly successful stocks both pay their owners dividends and increase in value.

The shares of stock can be bought and sold on the stock market. When large blocks of a stock are sold, it may cause the price of the stock to fall. When a company performs especially well, the price of the stock will likely go up. If the price of a stock is

RAILROAD FACT: The first railroad in Japan begins operation in 1872, linking the cities of Tokyo and Yokohama.

down, yet the company is still financially stable, this could be a good opportunity to buy and increase the value of your investment as the stock price rises again.

All companies in Railroad Tycoon 3 have tradable stocks that can be bought and sold on the stock market. On rare occasions, one or two players may own all of the outstanding shares in a company. In these instances, there will be no stocks available for trade on the stock market. More likely, the players will have a portion of the shares in their company, with the remaining shares being held by outside investors.

BUYING ON MARGIN

Sometimes people believe so strongly that a stock is going to increase in value, that they are willing to invest money they don't even have. This can be accomplished by buying a stock on margin. This is essentially like taking out a loan to purchase the stock, by using the stock you already own as collateral. Your ability to buy on margin is reflected by your purchasing power. This is the sum of your available cash plus half the value of your stock (i.e. the collateral). As you purchase more stocks on margin, your purchasing power will be reduced.

This may sound like an easy way to make a buck, but beware. If the value of your stocks goes down, so does your purchasing power. If they drop low enough, your purchasing power can drop below zero, meaning you don't have enough collateral to guarantee the loan the broker made you to buy the stock. If this happens, you will receive a margin call from your broker. This means the broker is requiring you to sell off all or part of the

RAILROAD QUOTE: "Still, the rivalry between the two railroad lines continued. The competition had become a habit." - Stephen Ambrose.

stocks you used as collateral in order to pay off your debt. This can be crippling to your finances. If you've heavily borrowed and all the money is invested in one stock, then selling shares of that stock to meet a margin call may drive the stock price down, so that your remaining shares have an even lower value as collateral. The moral of the story? Be cautious about heavy use of margin buying, especially if you're investing entirely in one stock.

SHORT SELLING

In addition to buying stocks with money you don't have, you can also sell stocks you don't own. This process is known as short selling. Shares are borrowed from a broker and sold on the stock market. At some point in the future, you must buy these same shares back up to repay the ones you've borrowed. Hopefully though (if you've planned it right), the stock has declined in the interim and you can buy the stock up later at a lower price than it is now. Essentially, this reverses the normal stock market strategy - you are trying to sell high (now), buy low (later). This is certainly not without risk. If the value of the stock increases between the time you sold the stock and the time you have to pay the broker back, you could lose a small fortune. A wily tycoon might short sell his opponent's stocks just before stabbing his opponent's company in the back. Or, if your opponent appears to be overextended on margin buying, then by shortselling his stock, you can drive the price of his collateral down and push him over the edge into financial collapse.

RAILROAD FACT:

In 1796, Nicholas Cugnot, produced the first moving vehicle to be powered by steam. A French military engineer, he designed a three-wheeled car to help the army move cannons more easily. Unfortunately, the heavy copper boiler at the front of the cart made it difficult to steer and it ended up running into a stonewall.

STOCK MARKET PANEL



To view the stock market and buy or sell stocks, click on the "Stock market" button, in the Button Panel.

The top left of the Stock Market panel shows a row of player portraits. Your portrait will be on the left, and your opponents lined up next to you. Select your portrait to see your holdings

and to buy and sell stock on your account. Select your opponents portraits to see their holdings.



Per Player Information:

- Cash Amount of eash on hand. This can be negative if you have borrowed money on margin.
- Stock Current market value of your stock holdings. This may change quite quickly as the game evolves.
- Total Your total net worth. The sum of your cash (or debt) plus your stock holdings. Frequently, one of the goals of a scenario is to achieve a high personal net worth to become a millionaire or multi-millionaire. This is the number you're measured on.
- Purchasing Power Total amount you can currently spend buying new stocks. This includes your cash, plus any amount you can borrow using your current stock as collateral (you can borrow against half the value of your current stock).

RAILROAD FACT:

The longest railroad tunnel in the world is the Seikan tunnel in Japan, which measures 33.46 miles long. First used in 1988, this tunnel links the Japanese islands of Honshu and Hokkaido.

Per Company Information:

- Share Price The price of the shares of this company's stock.
- Shares Owned The total number of shares you own in a company.
- Share Value The value of your holdings (share price times shares owned).
- Buy Click on this to purchase shares of this stock.
- Sell Click on this to sell shares of this stock.
- View Opens a stock information window, displaying detailed information on the selected stock.
- Per Share Data This information can prove useful when deciding whether or not you wish to purchase or sell a stock. To view this information on the graph, click on the small box next to the line of data. Each piece of data is represented by a different color on the graph.



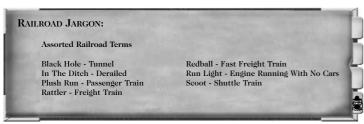
Share Price - A company's share price is increased by high book value, revenue and earnings, and consistent, healthy dividends. All share prices tend to be higher when the overall economy is good (i.e. Boom times). Share price is also increased if there has been recent heavy buying (and decreases with

RAILROAD FACT:

The longest train on record was also the heaviest train on record. In 2001, BHP Iron Ore assembled a train consisting of 8 locomotives pushing 682 ore cars. This train measured 4.568 miles in length and weighed an astonishing 220 million lbs.

selling), though that effect wears off over time.

- Book Value Per Share The sum of all the company's assets (physical assets plus cash), minus the company's debt, divided by the number of shares outstanding.
- Revenue Per Share Total company revenue, divided by shares outstanding. At all times except end-of-year ledger, this value uses an estimate of the current year's revenue (extrapolating out recent trends).
- Earnings Per Share Total company earnings (revenue less expenses), divided by shares outstanding. At all times except the end-of-year ledger, this value uses an estimate of the current year's earnings (extrapolating out recent trends).
- Dividend Per Share Dividends per share (cash paid by the company to its shareholders). Companies control their own dividend rate, but can only pay dividends if they're financially able. Investors like companies with consistent, steadily increasing dividends.
- 5 Year Weighted Return The average annual return to investors who've held this stock. This includes price appreciation of the stock, as well as dividends paid. An average over the last 5 years, with recent years more heavily weighted. If this return is poor, investors will consider tossing out the company chairman.



CHAPTER 10: CARGO ECONOMY

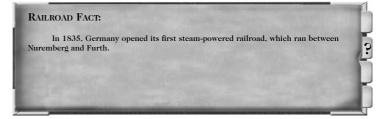
Railroad Tycoon 3 has a robust cargo economy focused around the railroad industry. Even without the railroads, freight is constantly moving across the map...albeit slowly and inefficiently. Passengers, mail, and troops ("Express" cargos) on the other hand, require the assistance of your railroad to move at all.

EXPRESS

Three types of cargo - passengers, mail, and troops, are considered "Express" cargos. Their behavior is different from all other cargos (everything else is called "Freight", and is discussed below). Express cargos are governed by two rules: They know exactly where they want to go, and they want to get there quickly. The following explains how a particular passenger may move through the system - mail and troops work the same way:

When a passenger first pops up in the Railroad Tycoon 3 cargo system, he has a specific destination in mind. Perhaps he appeared at a house near Birmingham, and wants to travel to a house just outside London (his Aunt Selma's house). He will make efforts to get to London - using a direct route, or a combination of connections, if need be. After some period of time, if he is unable to reach the house in London, he will return home, and moreover, will be disinclined to travel by rail for some time thereafter.

Unlike Freight cargos, Express cargos will ONLY travel via rail lines - it simply isn't very efficient to walk from Birmingham to London - the passenger will not make the trip if no rail line is



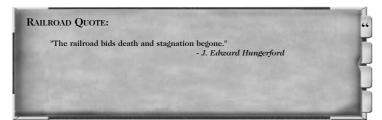
available.

In fact, when just starting out on a fresh map, no passengers will be visibly waiting to travel - there are no rails to travel on! Once you build a route and put down a station, you'll start to see passengers and mail show up.

If you only have a rail connection from Birmingham to London, your express traffic will be limited - some passengers from Birmingham want to go to London, but many want to go to other cities and your rail line offers no way to reach them. The more cities you connect to, the greater the volume of express traffic you will see. In fact, it is generally a good strategy to connect your rail lines to your opponents' rail lines, since the combined pool of possible destinations will lead to greatly increased passenger traffic (passengers will use a combination of trains and companies to reach their destination).

If you see a supply of passengers at a station, and they are not boarding a waiting passenger train, that means the passengers don't think getting on that train will help them reach their destination efficiently. Sometimes, even if the train is heading in the right general direction, the passengers won't board if they know that the intermediate stop is one rarely serviced by passenger trains. If London is a major hub with a variety of passenger trains departing at close intervals to many different points, then a passenger may even take a detour in the wrong direction to London in order to eatch a direct train to their final destination.

Remember though, that passengers, troops and especially mail demand speedy delivery. If you've got a high volume of passen-



ger, troop and mail traffic, consider purchasing several speedy locomotives, setting them to haul only "Express", and running them on the prime routes.

FREIGHT

Most of the cargos in the game are considered "freight". For every type of freight (for instance, lumber, steel, coal, milk, etc), there is a market for that item throughout the map. Every point on the map has a given price that each freight can be bought or sold at. Every point on the map also has some level of inventory of each type of freight. For most freights, at many points on the map, that inventory level is zero - there is none available to buy. However, at points near where that cargo is produced, there will typically be a large supply of that cargo (i.e. there is usually coal to be had in the vicinity of a coal mine.)

To see prices and supplies of cargos, use the "Overview mode" button in the Button Panel, and make sure the top-most mode (Cargo Supply) is selected. You can also use the <F1> key as a shortcut to this panel.

CARGO PRICES

If you look closely, you'll see that prices, supplies, and movements of cargos conform to what you would expect. Cargo is cheapest where it is produced (i.e. coal prices are cheap near coal mines), and prices are highest where there is a high demand for that item, especially if there is little supply available to meet that demand (e.g. steel mills and cities demand coal). Ultimately, your goal in Railroad Tycoon is to transport cargo from where it is cheap and readily available to where it is expen-

RAILROAD SUPERSTITION: Be sure to knock on wood if you say the name of your destination.

sive and in short supply. The profit you make from transporting the freight is generally the difference in price between the origin point and the destination point of the delivery. If you deliver 3 full loads of coal from a coal mine, where the price is \$30, to a city where the price is \$50, then you will make a profit of roughly \$20,000 per load - or about \$60,000 total.

This profit may be modified by various factors. The most notable of these is the timeliness of your delivery. Certain cargos, like milk and produce, spoil quickly. If you take too long to deliver these, your profit will fall quickly as your trains slowly roll towards their destination - you want to try to use fast locomotives to haul these items. For other cargos, like coal, iron, and lumber, speedy delivery is not very important. These are bulk cargos with typically lower prices and profit margins. You can load up a slow, but efficient train with these items and be content with a slower delivery.

Other factors that can modify profit include:

Game Difficulty Level: When playing at "Hard" or "Expert" level, your profits per load are reduced by 10% and 20% respectively. At "Easy" level, your profits are increased by 20%.

Station/City Age: The first railroad to reach a new city can charge a premium price - up to 15% extra profit on each load in and out of the city. This bonus disappears by the 4th year after a station has been built. Over longer periods, customers demand better pricing, and profits fall to a maximum of a 10% penalty profit by the time a station is 20 years old. If there is more than one station in a city, or a station is torn down and rebuilt, the

RAILROAD FACT:

Built in 1941, the largest railroad gun produced was the "Schwere Gustav" ("Heavy Gustav"). This massive weapon weighed over 1,300 tons and had a gun barrel over 95 ft long.

profit bonuses and penalties are still governed by the year that the first station was built. Stations in the open countryside experience a similar effect, but at only about half the level as stations in cities.

NON-RAIL CARGO MOVEMENT

The advent of the railroads in the early 1800's did not invent the concept of moving freight long distances - it just vastly improved the process. However, farmers, miners and factory owners had been transporting and trading goods in various other ways since the dawn of man. In Railroad Tycoon 3, freight can move without the help of a rail line - in some cases it can move quite well, though in most cases non-rail movement is slow and expensive, creating opportunities for your railroad to offer improved transportation at (hopefully) great profit to the railroad.

MIDDLEMEN AND THE MARKET

All the freight on the map is managed by unseen agents - the factory owners, miners, and farmers who produced the cargo, and the vast network of distributors, cart wheelers, ocean shippers and others who buy and sell cargo and try to move it profitably to where it will fetch the highest price, and ultimately the consumers who buy the products at their final destinations and consume them. You can't directly affect their actions - they constitute the "market" for each freight item.

The effect of this market is that freight will flow from areas where the prices are low (generally near its production point) to areas where the prices are highest (generally the final con-

RAILROAD FACT:

In 1990, the British five-pound note began to feature the image of George Stephenson and his famous steam engine Rocket.

sumers). If the freight can be transported easily without rail lines, then the prices from the production point to the final consumers will become very nearly equal. If there are any "hot spots" of high prices, and transportation is easy, the middle-men will quickly deliver a glut of freight to that hot spot and drive the price back down. Conversely, if non-rail transportation is hard or expensive, then that will tend to lead to wide price spreads, as middle men eat up a larger share of the price to cover transportation needs.

MOVING WITHOUT RAILS

So, you'll see the greatest price disparities between points where it is hard to transport freight conventionally (i.e. without a railroad). What are those cases? Usually, it's a function of distance and terrain difficulty. The longer the distance, the wider the price spread. Also, it is especially difficult to move freight over mountains using primitive transportation such as horse-pulled carts, so prices on either side of a mountain range can be wildly different, even if the actual distance between those areas is relatively small.

Conversely, where non-rail transportation is easy, prices will be relatively flat. Non-rail transportation is easiest when points are close (obviously), but also when the opportunity exists to transport by river or ocean. Before the advent of the railroad, rivers were the major transportation arteries. If you look at the cargo overview map, chances are you'll see a lot of cargo flowing along rivers. The other major transportation method pre-rail was via ocean. Wherever you see a port in Railroad Tycoon 3, you'll likely see a fair amount of freight moving through the port to

RAILROAD FACT: With a total of 44 platforms, Grand Central Terminal in New York City has the most platforms of any railway station in the world.

other ports on the ocean. (No ports are needed for river-based transportation).

So, what does this all mean? In many ways, this reasonably efficient market with its non-rail movement makes your job easier. You don't always have to have perfect connections to those producing the cargo or those consuming it - if you deliver freight to a small town and there is a big city just beyond it - the market (and the middlemen), will move most of your cargo the rest of the way to the big city, and you'll get a better price in the small town as a result. The middlemen will detect the presence of your stations and rail lines, and will tend to move freight to and from your stations for you, expanding the effective radius of your stations well beyond the actual city they're placed in.

From a strategy standpoint, you'll often find it better to build rail lines in ways that non-rail transport can't easily address. The first major railroad in the United States, the Baltimore and Ohio, built a rail line from the port of Baltimore across the Appalachian Mountains to the Ohio River. This mountainous route had previously been a barrier to freight. When completed, the B & O could deliver cargo from the entire Atlantic Coast (routed through the port of Baltimore) to the entire U.S. Midwest (routed via the Mississippi and Ohio rivers to the B & O's railhead).

You'll also want to have direct connections to as many medium and larger towns as possible. By delivering your freight directly to those cities, you'll cut out the middlemen and keep a larger profit for yourself.

RAILROAD FACT: The first regularly scheduled steam-powered train service for both passengers and freight is offered by the Liverpool & Manchester Railway in 1830.

Conversely, at the beginning of the game, you'll want to avoid laying track parallel to rivers and oceans - you'll be competing with efficient water-based transportation, and that will hold freight prices (and profits) down.

FACTORIES

All cargo has an ultimate destination. For many types of cargo, that destination is housing - found most densely in cities. However, many cargos are raw materials that must be processed at a factory to be something useful for end consumers. Raw cotton or wool isn't very useful to most people. But, take it to a textile mill, where it is spun into clothing, and suddenly you've got a cargo that is demanded by houses everywhere.

If you can set up your routes in a manner that delivers the necessary raw materials to factories, then hauls the finished goods to end consumers, you'll be able to haul roughly twice as much stuff (you'll haul cargo into the factories, then haul the finished goods away from the factories.) Moreover, the finished goods are generally more valuable and offer higher haulage profits to your railroad.

Finally, in an even better case, if you manage to buy the key factories on your routes (or build some yourself), you'll make money a third way - by the profits of the factory itself (for producing the goods).

So keep an eye on which factories are along your routes, and make a special effort to get them the raw materials they need.

Note: If a factory requires two input materials (a steel mill requires both iron and coal), then that factory won't produce anything unless both inputs have been supplied.

CARGO CHART			
Cargo	Year Available	Median Price Sensitivity	Delivery Time
Alcohol	1800	\$100	2
Aluminum	1910	\$85	/ 1
Ammunition	1848	\$160	2
Automobiles	1900	\$200	3
Bauxite	1910	\$30	1 1 1 1 1 1 1
Cheese	1880	\$235	5
Chemicals	1905	\$30	1 7/
Clothing	1800	\$ 95	3
Coal	1800	\$3 0	1
Coffee	1800	\$45	2
Corn	1800	\$25	3
Cotton	1800	\$3 0	2
Diesel	1890	\$100	1
Fertilizer	1905	\$80	2
Furniture	1880	\$220	1
Goods	1800	\$170	1
Grain	1800	\$30	3
Iron	1800	\$30	1
Livestock	1800	\$ 90	8
Logs	1800	\$30	2
Lumber	1800	\$85	1
Mail	1800	Variable	10
Meat	1800	\$ 195	5
Milk	1800	\$110	10
Oil	1860	\$40	1
Paper	1800	\$85	1
Passengers	1800	Variable	9
Plastic	1935	\$85	1
Produce	1800	\$45	8
Pulpwood	1800	\$3 0	2
Rice	1800	\$3 0	2
Rubber	1900	\$3 0	1
Steel	1856	\$85	1
Sugar	1800	\$35	2
Tires	1900	\$85	1
Toys	1880	\$175	3
Troops	1848	Variable	7
Uranium	1950	\$200	3
Waste (Recyclables) 1990	\$40	6
Weapons	1848	\$235	2
Wool	1800	\$30	1

Note: Mail, Passengers, and Troops are express cargos. Their price varies based on distance.

All other freights have variable pricing, based on supply and demand. The price shown is merely a typical median price.

CHAPTER 11: MULTIPLAYER

In Railroad Tycoon 3 you don't just match your wits against computer opponents, you can also test your entrepreneurial spirit against other human players. You can face opponents over a local area network (LAN) or over the Internet. Don't know anybody to play online? Not a problem. Just use the Game Lobby to meet other players seeking a worthy opponent.

BEGINNING A MULTIPLAYER GAME

To begin a multiplayer game, click on the "Multiplayer" button on the Main Menu. This will take you to a menu screen enabling you to choose between a LAN and Game Lobby game.

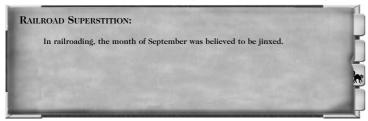


The LAN button is primarily intended for LAN play, but you can also use it to play other people across the internet, as long as you know the IP address of the host.

The Game Lobby option is a bit easier for Internet play, as it provides a common meeting area for Railroad Tycoon 3 players from around the world, and you don't need to know any particular player's IP address or other specifies.

GAME LOBBY (INTERNET) GAME

To begin a game over the Internet click on the "Game Lobby" button. This will take you to the game's built-in Internet game



lobby, where you can find other players interested in playing Railroad Tycoon 3 and start an Internet game. You do not need to sign up for any special account or jump through any hoops to use the Game Lobby - a couple of button presses and you're on your way.

- Servers A list of all of the available games in the game lobby will be displayed in this box. This list is automatically refreshed every 5 seconds.
- Join Once you have highlighted a game you wish to enter, click on this button to join. If no servers appear in the list, then there are no games available for you to join. You will need to either host a new game or wait for a new game to start.
- Host Click on this button to begin a new game. Within a few seconds, your server should be visible to everybody else in the game lobby.
- Change Use this to change your player's name and portrait This is how other players will see you both during multiplayer setup and within the game.

LAN GAME

To begin a game over a LAN connection, click on the "LAN" button.

Note: you can also use this option to play over the internet, if you know the IP address of the player who will be hosting the game.



Finding a game via the LAN option is almost identical to using the

Game Lobby option, except that you only see servers on your own LAN or over the internet at an address you've typed in, and you cannot chat with other players until you have connected to a server.

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- My IP The game will automatically detect the IP address for your machine in this box. (It may be necessary to provide this IP to the other players if you're hosting the game).
- Server IP When connecting to a LAN game, this field starts blank the system will automatically search for a server throughout your LAN. If you're playing an internet game with a server at a known IP address, enter it here.
- Servers A list of all of the available games on the LAN (or at the entered IP address) will be displayed in this box. This list is automatically refreshed every 5 seconds.
- Join Once you have highlighted a game you wish to enter, click on this button to join. If no servers appear in the list, then there are no games available for you to join. You will need to either host a new game or wait for a new game to start.
- Host Click on this button to begin a new game. Within a few seconds, your server should be visible to anybody else on your LAN (or who has entered your IP address over the Internet).
- Change Use this to change your player's name and portrait. This is how other players will see you both during multiplayer setup and within the game.

RAILROAD FACT:

With roughly $140,\!000$ miles of railway lines, the United States has the largest railway system in the world.

SETTING UP A MULTIPLAYER GAME

The setup for a multiplayer game is basically the same as the setup for a single-player game. The host will select the map, set the difficulty level and select the number of A.I. players to participate in the game. All players must click



the "ready" light to indicate that they've accepted the settings and are ready to play. The host then clicks 'Start' and you're on your way.

PLAYING THE GAME

Gameplay in a multiplayer game is largely identical to a singleplayer game. The notable differences between single player and multi-player are:

- Chatting While playing, you can chat with the other players by hitting the "Space" key on the keyboard, typing a message, then pressing "Enter" to send the message.
- Delayed actions When you lay track or place buildings, there will be a slight lag of a second or two before your track or building snaps into place.
- No saving or loading Due to the large size of RT3's saved game files and other technical considerations, it is not possible to save or load a multiplayer game in progress.

RAILROAD FACT:

The first country to put lamps on the front of their trains was the United States. Horatio Allen, founder of the South Carolina Railroad Company began placing burning piles of pinewood in iron baskets on their trains in the early 1830's. Early rail lamps were not intended to help the locomotive see, as much as they were intended to help the locomotive be seen by others at night to help avoid collisions.

- **Dropouts** If a human player drops out of a multiplayer game, the game will continue, with the computer running the departed player's persona, as a regular computer A.I. opponent.
- Continuous Gameplay The game does not pause for dialogs, newspapers and the like you'll have to be on your toes in a multiplayer game.
- Events and Winning Most multiplayer capable scenarios have a simplified event-scripting system and simplified victory conditions. You can stay focused on crushing your opponents and achieving whatever singular goal the scenario has to win it.

Playing human opponents makes it a whole new game experience. Computer A.I. opponents are tough, but human opponents are unpredictable and can be ruthless. It is recommended that you get at least a few single-player games under your belt before taking on other players.

CHAPTER 12: MAP EDITOR

The fun doesn't end with the campaign and scenarios that are included in the game. Railroad Tycoon 3 also includes a detailed map editor that allows you to create your own maps and scenarios for just about any place in the world or in your imagination. For further information beyond what is listed below, as well as contact with other mapmakers and links to sites with downloadable maps (as they come on-line), check out www.railroadtycoon3.com.

RAILROAD FACT:

The first railroad in Asia begins operation in 1853. The railway is located in India and runs between Bombay and Thana.

CREATING A NEW MAP

To create a new map, select "Extras" from the main menu, then "Editor". You can either create a new map from scratch, or load an existing map and edit it. We suggest starting with an existing map, until you become more familiar with the map editor. However, just in case you want to start with a new map, here are the steps:

STARTING FROM SCRATCH

After pressing "New Map", select "From Scratch". You'll be able to choose the map size, and soon you'll be staring at a very empty, very flat map. Dive in!

IMPORTING A HEIGHTMAP

Starting with a totally flat map makes it difficult to get realistic contours for mountains and coastlines. We suggest using a heightmap as a starting point, if possible (all of the maps included with RT3 were based off of heightmaps). A heightmap is normally a grayscale image saved in Targa format (.TGA). Press "New Map", then "From Heightmap", then the map you wish to import. An example heightmap has been provided for you. Look to the www.railroadtycoon3.com website and forums for more information and resources for creating and obtaining heightmaps.

LOAD MAP

Again, it's usually easiest to start editing by loading an existing map. You can edit any of the maps included with Railroad Tycoon 3. We strongly suggest that if you save an edited version

RAILROAD QUOTE:

"Railroad people are special. Like all the rest, they lose jobs, have to move, are underpaid, and otherwise have a lot to gripe about. But on the job, they love being responsible for all that fabulous machinery. Their spirit is a living tie to a momentous achievement."

- Stephen Ambrose

of an included map, that you save it under a different filename and do NOT overwrite the original file.

EDITOR BASICS



When you enter the editor, you will notice that the interface is very similar to the game interface you are already familiar with. The biggest difference is the addition of the "Editor Tools" buttons located on the left side of the screen. These buttons will allow you to access the various features in the editor.

CHANGE TERRAIN HEIGHT



This editing tool allows you to change the elevation of terrain (raise, lower or flatten it)

- Brush Size Selecting your brush size will determine the area affected by your cursor. The larger the brush size, the more area being affected.
- Raise an area This allows you to gradually raise the elevation of an area affected by the cursor. Click the left mouse-button to raise the elevation of the terrain. Each click raises the terrain slightly more.
- Lower an area This allows you to gradually lower the elevation of an area affected by the cursor. Click the left mouse-button to raise the elevation of the terrain. Each click lowers the terrain slightly more.

RAILROAD QUOTE:

"The only way of catching a train I have ever discovered is to miss the train before. Do this, and you will find in a railway station much of the quietude and consolation of a cathedral. It has many of the characteristics of a great ecclesiastical building; it has vast arches, void spaces, coloured lights, and, above all, it has recurrence or ritual. It is dedicated to the celebration of water and fire, the two prime elements of all human ceremonial. Lastly, a station resembles the old religions rather than the new religions in this point, that people go to it."

- G. K. Chesterton.

- Smooth an area Reduce dramatic edges to create a smoother, gentler appearing terrain without altering the average elevation.
- Change height of an area Click and hold down the left mouse-button and either move your cursor up or down to raise or lower the elevation of the terrain.
- Flatten an area to sea level This option will gradually flatten the elevation of the terrain to sea level.
- Flatten an area to plateau The area affected by the cursor is flattened into a plateau, with a height equal to the height at the center of the brush.

ADD TREES



THIS BUILDING TOOL ALLOWS YOU TO PLACE A VARIETY OF TREES, BUSHES AND ROCKS ON THE TERRAIN.

- Brush Size Selecting your brush size will determine the area affected by your cursor. The larger the brush size, the more area being affected.
- Tree Density The higher the density, the more trees you add with each mouse click. You can also achieve higher densities by dragging the mouse as you click.
- Average Tree Height This affects the height of the trees placed in an area, allowing you to place shorter or taller trees as you wish.

RAILROAD SUPERSTITION:

It was a common custom to place floral arrangements in the shape of a broken wheel on the graves of railroad workers. The origin of this practice can be traced back to 1887, when a group of runaway train cars threatened to crash into a passenger train. A conductor named "Long John" Simpkins sacrificed his own life to keep that from happening. When his body was found, he was still clutching a broken brake wheel in his hands...which was buried with him. "Rails who attended the funeral thought that if this grim souvenir did not give John a clear board through the Pearly Gates, they themselves would stand a mighty slim chance at the end of life's run." - Aden Donnelly.

- Add trees Select this option to place trees on the map. The trees placed will be affected by the Brush Size, Tree Density and Average Tree Height settings. The type of trees placed can be selected from the Forest Type list on the right side of the Dynamic Panel.
- Forest type Choose from a wide variety of forest types (from evergreens to cactus) to reflect the map you are designing.
- Remove trees Clear away existing trees if you make a mistake or just want to open up the landscape.
- Increase tree heights Once you have placed trees you can still adjust their height. Use this option to make the trees in the affected area taller.
- Decrease tree heights Once you have placed trees you can still adjust their height. Use this option to make the trees in the affected area shorter.

PAINT TERRAIN



Use this tool to paint the map to reflect the various types of terrain. Whether selecting from the wide assortment of included terrain swatches or creating your own color mix, you can create a rich tapestry of color and detail to bring your map to life.

RAILROAD FACT:

The first Railroad in Africa began operation in 1856. The railway is located in Egypt and runs between Alexandria and Cairo.

There are a variety of options included under the "Paint Terrain" tool button. While these features include different options to choose from in the Activity Box, they all draw from one set of shared buttons, though not every option uses every button.



- Use Pencil For hard-edged brush strokes.
- Wse Paint Brush For soft-edged brush strokes.
- Use Blend Mode Like paintbrush, but with blending options to mix color palettes from terrain swatches.
- Wse Fill Tool For Filling areas.
- We Use Air brush For a more solid appearance.
- We Splatter Mode Like paintbrush, but with options to splatter textures.
- Paint with a color from a swatch Select from the wide variety of pre-set terrain swatches.
- Apply ground noise When this option is selected, the terrain type you select from the swatch includes the associated ground noise when placed.
- Apply ground texture Selecting this option will include the texture for the terrain type, as well as the color, when placing it on the map.

RAILROAD FACT:

In 1863, the Metropolitan Railway opened in London, making it the first underground railroad in the world.

- Paint with color from color picker This option allows you to create custom colors for use in painting the map. Use the color picker if you can't find the desired terrain color in the swatches.
- Add in or decrease some ground noise Ground noise is the staticy looking noise visible in the ground when you zoom close to it. Use this tool to increase or decrease it.
- Add in or decrease a ground texture detail You can apply detail textures to the terrain such as stone, dirt, and grass.
- **Example 2 Lighten/Darken area** Use this option to lighten or darken the shade of the color placed on the terrain.
- Paint Rivers Adding rivers to the map is as simple as moving your cursor over the desired area. Note that to get the river current to flow properly at river junctions, you will need to use the third option here paint junction. Look at one of the rivers on an existing map for a better understanding of how these are best used.
- Paint oceans, lakes, or make land again Use this option to change terrain between ocean, lake and land.
- Reserve cells on/off Use this option to block off certain areas and to prevent buildings from appearing there.
- Allow waves In certain unusual shoreline configurations, the waves will look bad. Use this option to turn off waves wherever they appear odd.

RAILROAD FACT: The first railroad in South America began operation in 1848. The railway is located in Guyana and runs between Georgetown and Plaisance.

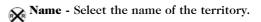
Blend colors - Blend colors on the map to create a more even look.

PAINT TERRITORIES



Use this tool to paint in national boundaries and other "territories" distinctions. These have no direct economic effect - they are used to prevent railroads from initially accessing certain parts of the map.

Clicking on the small magnifying glass icon in each territory listing in the Activity box allows access to more options by taking you to the "Territory" page under the "Control panel" tool button.

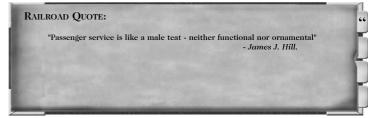


- Border is visible Selecting this option makes the borders clearly visible on the map by a dotted line around the border of the territory. Territories without visible borders can be used for certain types of events they appear to the end user to be part of whatever territory they are "remapped" to.
- Limited access This controls whether this territory is offlimits at game start by default. If true, you can set the price a company must pay to gain access.

PAINT REGIONS



Regions are used to set up economic activity - which buildings appear in a specific area. They need not have any correlation to territories - i.e. a coal mining region may be fall across multiple territory boundaries.



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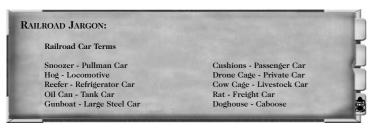
Clicking on the small magnifying glass icon in each region listing in the Activity box allows access to more options by taking you to the "Cities/Regions" page under the "Control panel" tool button.

- Current City/Region Use this option to cycle through all regions and cities on the map.
- Architectural Style Choose a default architecture for the area. This will affect the look of the housing in the area, and which stations are put in by default.
- **Building Density** This setting determines the number of buildings in the area. Higher numbers will put many more buildings into the same space.
- Industry Weighting You can select from the list of industries and set a percentage for each, which reflects the weighting of that industry within that industry. An industry with a weighting of 20 will appear roughly twice as often as one with a weighting of 10. Note that these are only important in determining the relative distribution among industry types. The overall number of industries is determined by building density.

PAINT AMBIENT SOUNDS



This option lets you apply swamp, jungle and other ambient sounds to the map.



BULLDOZE



Use this to cleanup any unwanted structures, trees, or cities.

CONTROL PANEL



Once you have made you map, you will want to get down to the work of setting up the scenario (the storyline, events, miscellaneous parameters and special restrictions used on the map). Click on the "Control panel" button:

- General Enter the scenario description, briefing, minimum starting year, default starting year, maximum starting year and whether or not the scenario is part of a campaign.
- Cities/Regions This area is more fully described earlier in this chapter under "Paint Regions".
- Territories This area is more fully described earlier in this chapter under "Paint Territories".
- Players Use this option to add additional players. For a map to support multi-player, at least two slots must be human-optional or human mandatory.
- Player Pool Choose which character types may randomly appear in any unassigned player slots.
- Building Density This is used, in combination with the specific building densities of each city/region, to determine how many buildings appear on the map. You can also control the overall rate of building growth for the scenario.
- Locomotives Select the locomotives you wish to make available from the full list of locomotives in the game. These will usually be based on the country where the scenario takes place.

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- Industry (Overall) Decide which industries to use in the scenario. These will normally be based on the actual resources available in that part of the world. Try to limit things so that no more than about half of the total industries are available in a particular scenario otherwise the scenario will feel cluttered and confusing to players.
- Special Conditions These are additional obstacles that you can place in the scenario. You can use these to disable the stock market, prevent companies from laying unconnected track, or limit the overall amount of track companies can build, among other things.
- Port/Warehouse Cargos Ports and warehouses can have various recipes for the cargos they supply and demand. Set up as many recipes as you need here (up to 12), then, at each city that can produce ports or warehouses, choose which recipe to use.
- Computer A.I. Set the aggressiveness for the computer A.I. in both the area of Track Expansion and Dividend Payout/Stock Buyback.
- Events This option lets you set the events in the game, including the win conditions (gold, silver, and bronze), the lose conditions, and any special storyline or events.

 Creating events is a complex area. Fortunately, all possible events options are accessible through lists so you can see all the possible options. Still, we recommend looking at some existing scenarios to use as examples for how to set up events.

Note: The options listed below are for informational purposes only and can prove useful when setting up your scenario.

- Event Debugging Tracks any variables you may be using in events. To test a scenario you're working on, launch it via "New Scenario", then toggle into editor mode periodically, by pressing <SHIFT> "E" to monitor your events.
- Event Validation Shows errors or warnings from the events you've set up.

- General Validation Notes possible general errors in the scenario that may need to be addressed.
- Stats Cargo Lists information on all of the cargo types selected for inclusion in the scenario.
- Stats Buildings Provides information on all of the buildings in the scenario.
- Stats City/Region Keeps track of how much each city/region has grown throughout the game.
- Stats Trees Tracks the number of trees on the map. High tree counts lead to slow game performance, especially on lower end machines.
- Stats City Count Provides information on the total number of cities on the map. A low density of cities on a map can make it boring, and can make it hard for A.I. controlled opponents to build successfully.

CREDITS

POPTOP SOFTWARE

Game Design Phil Steinmever

Additional Design Franz Felsl

Producing - Internal Phil Steinmeyer Franz Felsl

Tech Lead Phil Steinmeyer

Game Programming Brent Smith Phil Steinmeyer Jeff Beekham Andrea Ferris

Engine ProgrammingGuillermo J. Garcia-Sampedro

Art Lead Franz Felsl

Art - Buildings and Trains Todd Bergantz Arne Schmidt Steve Mohesky Casper McElwee David Deen

Brian Feldges Nathan Harris

Art - Cinematics Nathan Harris Brian Feldges Steve Mohesky

Art - Interface Franz Felsl Arne Schmidt

Art - Landscape David Deen Todd Bergantz Arne Schmidt Scenario Design Franz Felsl Daniel Eichling Ted Spieth

Mapmaking Casper McElwee Daniel Eichling Franz Felsl Arne Schmidt

In-Game Sound FXDaniel Eichling

Webmaster/Network/Operations Daniel Eichling

MapBuilder Tool Brent Smith

Testing/Balancing Everyone

Music - In Game Jupiter Studios

Lead Musician/Producer
Jim Callahan

Acoustic Guitar John Jump

Stand Up Bass Vince Corkery

Banjo

Rev. Edward Richard

Fiddle Thayne Bradford

Dobro Bob Breidenbach

Accordion
Thayne Bradford

Harmonica Sandy Weltman

CINEMATICS

Narration Dick Anderson

Sound (Cinematics) Mike Tipul

Music (Cinematics) HamsterBall Studios

Music & Lyrics Randy Ryan

Lead Vocals and Banjo Tim Wright

Drums Tim "Bird" Eversole

Bass, Guitar, Mandolin & Dobro Bob Bailey

Backing Vocals Lindsey Ridenour

GATHERING

Development Director Luke Vernon

Producer Brian M. McGinn

TEST/Q.A.

Q.A. Manager, USA Phil Santiago

Lead Tester, USA Scott Vail

Test Team, USA Charles Franklin Tom McConlogue Lisa Nawrot Josh Noll Greg Peeler Mykl Ranere Josh Rose Justin Santiago **QA Manager, UK**Mark Lloyd **Lead Tester, UK**Charlie Kinloch

Test Team, UK
Kit Brown
Dan Goddard
Steve McGagh
Jon Dixon
Steve Bell
Lee Johnson
Craig Reeve
Sergio Russo
Peter Broughton

External Beta Testers
Scott "Cyscott" Anderson
Dick Knisely
Richard Lally
Steve Lorenz
Jim Mapes
Jerry "Gwizz" Meyer
Craig "Kraellin" Walters

LOCALIZATION

Group Production Co-ordinator Chris Madgwick

MARKETING

Worldwide Head Of Marketing Sarah Seaby

Worldwide Project Manager Christina Camerota

VP Publishing, USA Chris Mate

Marketing Manager, UK Tina Hicks

Marketing Director, USA Greg Bauman

Product Manager, UK Katherine Terry

P.R. Director, USA Anne-Marie Sims