

For Atari ST and Commodore Amiga.

Sid Meier's RAILROAD TYCOON

TECHNICAL SUPPLEMENT

Contents

Your *Railroad Tycoon* package should contain a manual, this technical supplement folder, two Atari ST or two Commodore Amiga disks, two player aid cards, and a registration card.

Required Equipment

Computer & Display: This simulation requires *either* a Commodore Amiga with a minimum of 1 Meg. of RAM or an Atari ST with a minimum of 512 K of RAM, and a colour monitor. Please pre-format a disk for your Saved Games.

Controls: The simulation can be run entirely from the keyboard, or with a mouse and keyboard. A mouse is recommended as the interface has been designed to take advantage of the mouse. Unlike some MicroProse simulations, a joystick cannot be used to run *Railroad Tycoon*.

Installation on a Hard Disk

COMMODORE AMIGA: Boot up your hard disk as normal and insert *Railroad Tycoon* Disk A. Open this disk and double-click on the "INSTALL" icon. Please follow any on-screen prompts. A drawer titled "Railroad" will be created on your hard disk, containing all necessary files.

ATARI ST: Boot up your machine as normal. When the GEM desktop appears, insert *Railroad Tycoon* Disk A and open it. Double-click on "INSTALL.TOS". Please follow any on-screen prompts. A folder titled "Railroad" will be created on your hard disk, containing all necessary files.

LOADING Loading from Floppy Disks

COMMODORE AMIGA: If your computer has KickStart in ROM, insert the *Railroad Tycoon* "A" disk into the internal drive. The program will then auto-load.

If your computer does not have KickStart in ROM, load KickStart as normal, then insert your *Railroad Tycoon* Disk A into the internal drive. The program will then auto-load.

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Thereafter during play you are prompted when you must remove the "A" disk to insert the "B" disk. Note that at certain times the program accesses the "A" disk for information so **do not remove the "A" disk from your drive once the game has begun** unless prompted to make a switch.

ATARI ST: Turn your computer off and remove all unnecessary peripherals. Insert your *Railroad Tycoon* Disk A into the internal drive and switch on the computer. The program will then auto-load.

Thereafter during play you are prompted when you must remove the "A" disk to insert the "B" disk. Note that at certain times the program accesses the "A" disk for information so **do not remove the "A" disk from your drive once the game has begun** unless prompted to make a switch.

Loading from a Hard Disk

COMMODORE AMIGA: Boot up your hard disk as normal. Open the "Railroad" drawer and double-click on the "Game" icon.

ATARI ST: Boot up your hard disk as normal. Open the "Railroad" folder and double click on the "GAME.PRG" icon.

SAVED GAMES

You may save games currently under way and recontinue them at a later date. Games may be saved onto your hard drive or onto a previously formatted saved game disk. You may not save games onto your original game disks or back-up game disks. To save a current game, open the Game menu and choose "Save Game". If the game was booted from floppy disk, you will be asked to insert your previously formatted Save Game disk before selecting a slot to save to. If the game was booted from hard disk, you will simply be asked to choose a slot to save to.

You may only have four games saved on any disk. If the game files are full on any disk, move the highlight to the existing saved game you wish to overwrite and press return. This writes the new saved game over the old one, erasing the old one. If you don't want to erase any game on a full disk, hit the ESC key to return to the game, and start over. However, you cannot format a disk while the game is underway, so have additional formatted disks handy.

Loading a Saved Game

ST & AMIGA RAILROAD TYCOON FEATURES

Saved games can only be loaded during the pre-game options. To load a saved game, follow these instructions:

- 1) Choose the option "Load Saved RR" when you start the game.
- 2) If you are playing from floppy disk, follow the prompt to insert your Save Game disk.
- 3) Move the highlight down the list of saved games until the game you wish to load is highlighted, and press RETURN. This loads the saved game.

Dissolving Railroads: If the share price of a competing railroad falls below \$5 and stays there for too long, there is a chance that the railroad can be dissolved and disappear entirely from the game.

Bankruptcy Penalty: For each bankruptcy that you declare, the interest you must pay for selling new bonds increases by 1%. After enough bankruptcies, you will be unable to sell any bonds.

Car Costs: Each car you place on your trains costs \$5,000. When you make consist changes, you are only charged if the total number of cars on your railroad increases.

Menu Options: You may highlight any menu option by pressing the letter key of the first letter in the option. If more than one choice share the same first letter, additional letter key taps cycle through the options that start with the same letter.

Sound Effects: If you selected one of the sound driver options when you started your game, you may toggle the sound effects on or off later in the game. This is done from the Features option, found in the Game menu. If you selected No Sounds when beginning play, the sound effects option does not operate.

Find City: You may zoom into the Detail Display around any city in the game world by pulling down the Display menu and choosing "Find City." Type in at least enough letters of the city name to distinguish it from all other cities in the world and press RETURN.

Animations: There are no animated sequences in ST & Amiga versions, speeding up gameplay. Hence there is no Animation option in the Game Menu.

Difficulty Levels: You are not required to retire after a certain number of years as explained in the manual on page 16 under Difficulty Levels. Instead, you may play up to 100 years at any level. However, you may not increase the level of difficulty once you have started playing. The difficulty level you choose when beginning a new game remains in effect for its duration.

WORLD ECONOMY NOTES

North America

North America is blessed with huge natural resources that have only been exploited since the beginning of European colonization. To this day, the region remains a major source of raw materials such as coal, metallic ores, oil, and wood products. It is also one of the richest meat and grain producing regions in the world.

Railroads were especially useful in America because they made cheap transportation available throughout this large continent. They made exploitation of this bounty of resources possible.

The early railroads were built to bring mainly raw products, such as coal and grain, from the continental interior to the peripheral harbours. As the region industrialized, the role of railroads expanded. They moved people westward during the great expansion, they interconnected the growing eastern cities, and they connected the growing industrial sector with both the sources of raw materials and markets.

In *Railroad Tycoon* the economic impact and role of railroads in North America is similar to that of the real world. The equivalent of the Pittsburgh steel mills, the West Virginia coal fields, the Detroit automobile factories, and the Chicago stockyards are in the game, though rarely in their historical location. The opportunity is there for your railroad to find the raw materials and connect them to the industries, and the industries to their markets. You develop your business by linking the coal fields to the steel mills, the steel mills to the factories, and the factories to the cities.

In a similar manner you can connect the cattle ranches to stockyards, the grain elevators to food processing plants, lumber yards to paper mills, etc. When you connect larger cities together, you create the opportunity for carrying mail and passengers between them. Harbours and river landings are places where you can pass on cargos to ships and river boats, and may be a source of new cargos from overseas.

As you build and operate your railroad, you witness the impact you have on the population and industrial growth of the area that you serve. Cities along your railroad may become the Pittsburgh or Detroit of your world.

England

Great Britain was the first nation to industrialize and the place where the concept and technology of railroading was invented. The earliest railroads in Britain were built to connect interior industries and resources with harbours. The main export resource was coal, mostly shipped around the coast to London and other population centres. But unlike North America where there was a rich variety and quantity of resources, in Britain the resources were more limited.

As a result of the Industrial Revolution, this island nation was converted into an industrial powerhouse, a world leader in manufacturing technology and production. Raw materials not available at home were imported and converted into goods for export or home consumption. Railroads played a vital role in this industrialization process by easing and speeding the movement of materials, finished goods, and labour throughout the country.

For example, coal from the mines near Newcastle was first carried by rail to coastal ports like Sunderland, and later directly by rail to the steel mills and factories of Sheffield.

The famous Sheffield knives went by train throughout the country and from ports throughout the world.

Another major industry comprised the cotton mills that grew around Manchester to use the water coming down the hills for power. Cotton for the mills arrived at Liverpool from India and the American South, and was carried by rail to Manchester. The mills converted the cotton to cloth goods that were carried back to Liverpool for shipment overseas.

In *Railroad Tycoon* you can profit by looking for these same economic relationships. Harbours are sources of supply for cotton and hops, and these cargos can be carried to textile mills and breweries for conversion into goods and beer. Pottery and glass goods from glass works, the products of chemical plants, and factory goods can all be shipped to harbours for exportation.

To be successful, your railroad must link the peripheral harbours to the industrial midlands and resource centres. Since each game map is different, you must locate coal and chemical deposits now not necessarily outside Newcastle, and link these resources to the industries that use them. In this way you can help build cities such as Salisbury or York into another London.

Europe

The European economy is in the middle, between the resource rich North American economy and the industry rich British economy. Europe is large enough to have substantial resources and thus not depend so much on imported resources. Still, the European nations industrialized, although after Britain and not to the same degree.

Blessed with greater natural resources than the island nation of Great Britain, the European nations were not as forced to rely on their ability to manufacture goods for exportation. Although trade was certainly important, it was not necessary to finance the importation of food and materials as it was in Britain. Most of the larger European nations found within their borders sufficient natural resources for industrial production.

Nevertheless, some nations proved to have a comparative advantage in the production of certain goods. These advantages became the basis for international trade across the continent. French wines were traded for German guns or Italian cloth.

Railroads served their familiar important transport role throughout Europe. Within nations they brought the coal and ore to the mills, and moved the mill products to other industries and harbours. They were also found to be more important people movers than in either Britain or North America because of congestion, lack of roads, and high petroleum costs. Between nations railroads hauled resources, finished products, people, and mail.

In *Railroad Tycoon* the rich industrial region of the Ruhr River Valley or the grain fields of the Ukraine may turn up anywhere. As a railroad president it is for you to search the map to find the pieces of the economic puzzle and profitably link them together.

DISPLAY COLOURS

Regional Display Map Colours

COLOUR

Dark blue
Light blue
Blue
Dark green
Light green
Light grey
Light blue
White
Brown
Red
Yellow
Red/yellow
Dark red
Black

INFORMATION DISPLAYED

Oceans and lakes
Rivers
Woods
Cleared land
Farmland
Foothills
Hills
Mountains/Alps
Swamp/Desert
Villages
Cities
Industries
Harbours
Coal, wood, chemicals, nitrates

Train Roster

COLOUR

Black line
Red line
Green line
Black engine
Green engine
White car
Light grey car
Light blue car
Blue car
Yellow car
Light green car
Red car
Dark red car
Black car
Dark grey car

INFORMATION DISPLAYED

Stopped train
Paused train
Train speed indicator
Normal loads
Priority Shipment on board
Mail car at least half full
Mail car less than half full
Passenger car at least half full
Passenger car less than half full
Fast freight car at least half full
Fast freight car less than half full
Slow freight car at least half full
Slow freight car less than half full
Bulk freight car at least half full
Bulk freight car less than half full

Freight Classes

COLOUR

White
Light blue
Yellow
Red
Black

INFORMATION DISPLAYED

Mail
Passengers
Fast freight
Slow freight
Bulk freight

Financial Reports

COLOUR

Red
Black

INFORMATION DISPLAYED

Losses or decreases
Profits or increases

Shipping Report Borders

COLOUR

Grey
Red
White

INFORMATION DISPLAYED

Normal revenues
Halved revenues
Doubled revenues

Train Report Scheduled Stops

COLOUR

Light grey
Black

INFORMATION DISPLAYED

Scheduled stop
Current destination

Station Reports

COLOUR

Dark green

Red
Light green

INFORMATION DISPLAYED

Cargo picked up this period or
Revenue earned for delivery
Cargos removed by other transport
Cargos available now

Construction Box Colours

COLOUR

White
Red

INFORMATION DISPLAYED

Build track
Remove track and bridges

CONTROLS General

FUNCTION

Selector
Selector 1
Selector 2
Open menu
Move cursor,
Construction Box (Box)
or menu highlight

KEYBOARD

RETURN key
RETURN key

First letter key

MOUSE

Left button
Left button
Right button
Right button
Numeric keypad keys

Track Construction/ Demolition Keys

FUNCTION

North
Northeast
East
Southeast
South
Southwest
West
Northwest

KEYBOARD COMMAND

Shift and numeric keypad '8' key
Shift and numeric keypad '9' key
Shift and numeric keypad '6' key
Shift and numeric keypad '3' key
Shift and numeric keypad '2' key
Shift and numeric keypad '1' key
Shift and numeric keypad '4' key
Shift and numeric keypad '7' key

Shortcut Keys

FUNCTION

Go to Regional Display
Go to Area Display
Go to Local Display
Go to Detail Display
Open Income Statement
Open Train Income Report
Build a new train
Build station
Call broker
Survey elevations

KEYBOARD COMMAND

'F1' key
'F2' key (centres on cursor or pointer)
'F3' key (centres on cursor or pointer)
'F4' key (centres on cursor or pointer)
'F5' key
'F6' key
'F7' key (must own engine shop)
'F8' key (Box on spot)
'F9' key (game not frozen)
'F10' key (from Detail Display only)

Additional Keys

FUNCTION

Double track a single track section
(Box must be on track section)
Single track a double track section
(Box must be on track section)
Get information
(for icon inside Box)
Override signal
(for signal within Box or cursor)
Centre map on cursor or pointer
Quit game
Exit menu without making choice

KEYBOARD COMMAND

Shift and 'D' key

Shift and 'S' key

'I' key or Shift and '?' key

'S' key

'C' key
Alt and 'Q' key
ESC key

KEYBOARD INTERFACE ONLY

General

FUNCTION

Switch cursor
(between map and Train Roster)
Open Train Report
(train marked in roster by cursor)
Pause train
(train marked in roster by cursor)

KEYBOARD COMMAND

TAB key

RETURN key

'H' key

Train Report Controls

FUNCTION

Go to priority row of Train Report
Highlight schedule stops 1, 2, 3, or 4
Go to Route Map
Move highlight on Route Map
Select highlighted stop on Route Map
Exit Route Map without any changes

KEYBOARD COMMAND

'P' key
'1', '2', '3', or '4' key
Shift and 'S' key
Numeric keypad '1-9' keys (not '5')
RETURN key
ESC key

SOUND CUES

Sound

Whistle/Horn

Clink of coins

Caused By

Train passing through station without stopping
Revenue earned (one clink for each \$25,000)

SIGNAL OVERRIDE CHART

Normal Operation

Overridden
Operation

Existing Signal

Colour

Effect

GO

Green

Indicates currently safe to enter block

STOP

Red

Indicates currently not safe to enter block

PROCEED

Yellow

Passes next train and returns to NORMAL operation

HOLD

Black

Stops all trains until overridden with NORMAL or PROCEED

Note: On the Area and Local Displays, normal signals appear in black boxes and overridden signals appear in white boxes.

ST & AMIGA CREDITS

In addition to the Credits you can find on page 179 of the manual, the following deserve great praise for their skill and speed in converting Railroad Tycoon to Commodore Amiga and Atari ST formats;

Software Engineer : Laurie Sinnett

16-Bit Colour Retouching : Mark Scott

Music & Sound Effects : Dave Lowe

If you have any difficulty whilst loading or running Railroad Tycoon, MicroProse will be happy to speak to you on the Helpline. Please call UK 0666-504399 Mon-Fri 9 a.m. - 5.30 p.m. Please have a pen and paper handy when you call.

WORLD CITY LISTS

The following lists include all the cities found on the four world maps. To find the location of any city pull down the Display menu and choose "Find City." Type in enough letters of the city name to differentiate it from any other name on the list. For example, in the Northeast USA, "All" is enough identification for Allentown because those letters differentiate it from all other cities on the list, including Albany and Altoona.

The same information is sufficient when ordering a controlled railroad to build track from one city to another.

Northeast USA Cities

Akron	Cumberland	Knoxville	Roanoke
Albany	Dayton	Lansing	Rochester
Allentown	Detroit	Lexington	Saginaw
Altoona	Dover	London	Salisbury
Asheville	Elkhart	Louisville	Sault Ste Marie
Ashland	Elmira	Manchester	Scranton
Atlantic City	Erie	Memphis	Sherbrooke
Baltimore	Evansville	Milwaukee	Springfield
Bangor	Florence	Montreal	St Louis
Binghamton	Fort Wayne	Morgantown	Sudbury
Bluefield	Fredericksburg	Nashville	Syracuse
Boston	Gary	New Haven	Terre Haute
Bridgeport	Grafton	New York	Toledo
Bristol	Grand Rapids	Norfolk	Toronto
Buffalo	Green Bay	Oil City	Traverse City
Burlington	Greensboro	Ottawa	Trenton
Champaign	Greenville	Paterson	Utica
Charleston	Hagerstown	Pembroke	Washington
Charlotte	Harpers Ferry	Philadelphia	Watertown
Charlottesville	Harrisburg	Pittsburgh	Wheeling
Chattanooga	Hartford	Portland	Williamsport
Chicago	Huntington	Poughkeepsie	Wilmington
Cincinnati	Indianapolis	Providence	Winchester
Cleveland	Jamestown	Raleigh	Winston-Salem
Columbus	Johnstown	Richmond	Youngstown

Western USA Cities

Abilene	Burns	Dodge City	Fort Worth
Albuquerque	Butte	Duluth	Fresno
Amarillo	Calgary	Durango	Gary
Austin	Casper	El Paso	Grand Junction
Barstow	Cedar City	Elko	Grand Rapids
Baton Rouge	Chicago	Eugene	Great Falls
Billings	Chihuahua	Evansville	Green Bay
Bismarck	Decatur	Fargo	Hays
Boise	Denver	Flagstaff	Hermosillo
Bozeman	Des Moines	Fort Smith	Houston

Indianapolis
Jackson
Kansas City
La Crosse
Lake Charles
Las Vegas
Lincoln
Little Rock
Los Angeles
Memphis
Midland
Miles City
Milwaukee
Minot
Mobile

Monclova
Monroe
Nashville
Needles
New Orleans
Ogallala
Oklahoma City
Omaha
Phoenix
Pierre
Pocatello
Portland
Pueblo
Rapid City
Redding

Regina
Reno
Richland
Rock Island
Roswell
Sacramento
Salt Lake City
San Antonio
San Diego
San Francisco
Saskatoon
Sault Ste Marie
Seattle
Shreveport
Sioux Falls

Spokane
Springfield
St Louis
St Paul
Thunder Bay
Tonopah
Tucson
Tucumcari
Tulsa
Tuscaloosa
Vancouver
Waterloo
Wausau
Wichita
Winnipeg

English Cities

Aberystwyth
Aldershot
Appleby
Banbury
Bangor
Barmouth
Barnstaple
Barrow
Bath
Bedford
Birkenhead
Birmingham
Bletchley
Bolton
Boston
Bournemouth
Bradford
Brighton
Bristol
Builth Wells
Cambridge
Canterbury
Cardiff
Carlisle
Carmarthen

Chatham
Cheltenham
Chester
Colchester
Colwyn Bay
Coventry
Crewe
Croydon
Darlington
Derby
Doncaster
Dover
Durham
Exeter
Gloucester
Great Yarmouth
Harrogate
Hastings
Hereford
Hexham
Holyhead
Horsham
Ipswich
Kendal
Keswick

King's Lynn
Kingston
Lancaster
Leeds
Leicester
Lincoln
Liverpool
London
Ludlow
Luton
Macclesfield
Manchester
Merthyr Tydfil
Middlesbrough
Minehead
Morpeth
Newcastle
Newport
Newtown
Northampton
Norwich
Nottingham
Okehampton
Oxford
Penrith

Peterborough
Plymouth
Portsmouth
Preston
Reading
Rugby
Salisbury
Scarborough
Sheffield
Shrewsbury
Southampton
Stockport
Stoke
Sunderland
Swansea
Swindon
Taunton
Thetford
Torbay
Whitehaven
Winchester
Wolverhampton
Worcester
Wrexham
York

European Cities

Adrianople
Amsterdam
Antwerp
Barcelona
Bari
Bayonne
Belgrade
Berlin
Bern
Bialystok
Birmingham
Bologna
Bordeaux
Bremen
Breslau
Brest
Brest-Litovsk
Bristol
Brussels
Bucharest
Budapest
Cologne
Copenhagen
Danzig
Debrecken

Dijon
Dresden
Essen
Florence
Frankfurt
Genoa
Graz
Grenoble
Hamburg
Hannover
Innsbruck
Istanbul
Kaunas
Kiel
Kiev
Kisinev
Konigsberg
Krakow
Le Havre
Le Mans
Leipzig
Lille
Limoges
Liverpool
London

Lublin
Lvov
Lyons
Madrid
Magdeburg
Marseilles
Metz
Milan
Minsk
Munich
Nantes
Naples
Nice
Nuremburg
Orleans
Osijek
Osnabruck
Ostrava
Paris
Plymouth
Poznan
Prague
Regensburg
Reims
Rome

Rostock
Saint Etienne
Salonika
Salzburg
Saragossa
Sarajevo
Sofia
Southampton
Split
Stettin
Strasbourg
Stuttgart
Tirana
Toulouse
Tours
Trieste
Turin
Utrecht
Valencia
Varna
Vienna
Vinnica
Warsaw
Zagreb
Zurich



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