

RoutePlanner

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COLLABORATORS

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Chapter 1

RoutePlanner

1.1 RoutePlanner 1.7 AmigaGuide documentation

RoutePlanner 1.7 User's Guide

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1.2 Purpose and Requirements

RoutePlanner is a highway trip planner program for Amigas with Release 2 or later. It works out the best available route between two (or more cities) by consulting a map file, also known as a database. With RouteEdit, an included utility, you can create and edit your own map files.

See

What's~New
for changes in this release.

System Requirements:

Amiga Release 2 or later
At least 1.5 MB of memory (2 MB required to use more detailed map files)
Magic User Interface 3.1 (or later) *

Recommended System:

Amiga Release 2 or later
[For PostScript printing, Amiga Release 2.1 or later]
At least 2 MB of memory
A compatible version of Magic User Interface
A 68020 or higher processor
A hard disk drive with at least 3 MB free
A Preferences-supported printer

1.3 What's New

New in release 1.7:

- Now including the German highway database from RoadRoute. The converted database is called Deutschland.route, and is mainly included so someone will decide to improve it.
 - RouteConv now features a "Default Grade" setting. You can now override the hardcoded time values to save some time in RouteEdit.
 - All of the contiguous United States (the lower 48) are now complete. Alaska will be added after Canada is completed. I really don't see any need for a Hawaii database (but if you want to contribute one, I'd be happy to distribute it).
 - Automatic fuel efficiency computations. You now only have to enter city and highway MPG's (or km/l's), and RoutePlanner will calculate the fuel efficiency data from that.
-

1.4 Features

RoutePlanner replaces Jim Butterfield's RoadRoute program, the only other highway trip planner for the Amiga. The following enhancements have been made:

- A graphic user interface has been added, using Stefan Stuntz's Magic User Interface system.
- The program now incorporates fuel consumption data as part of its output.
- Highway classifications have been added. You can adjust the master speed values for each classification, depending on your driving habits. *
- You can make the program choose routes based on your preference of driving on that type of road. (Preferred routing) *
- You may choose up to 20 intermediate cities on your route, making realistic "round trips" possible.
- Named map files can be loaded using extended selection, double-clicking on map file icons, or on the command line.
- Includes comprehensive documentation, supplemental utilities, and two map files, designed for small and large machines.
- Notification of crossing political boundaries, and arriving in intermediate cities.

Best of all, you can use your existing RoadRoute database files with RoutePlanner. Simply use the included

```

RouteConv
~utility to import the basic
structure, then use
RouteEdit
~to add any necessary highway classification
data.
```

* Requires enhanced databases.

1.5 Many Thanks To...

RoutePlanner comes to you, courtesy of:

Edd Dumbill -- Author of the Heddley AmigaGuide document editor.

Jim Butterfield -- General god of Commodore software writing (particularly in the "good old days" of the Commodore 64), and author of RoadRoute 1.6, the source of RoutePlanner's navigation routines, and the Basic-USA database.

Günter Kirrbach -- Author of the German database (included here as Deutschland.route) from Fred Fish disk no. 504.

Brian Martz -- Suggested the automatic MPG calculation feature.

Aminet -- The world's best Amiga software archives (which could teach every Unix archive I know of a thing or two about decent organization and readmes).

Waters Computing Center, Rose-Hulman Institute of Technology -- Because they give me my net access. 'Nuff said.

SAS/C 6.51 -- Still the best C programming environment under AmigaOS. You know, it would be nice if they'd come back...

RevUp -- A nifty little version numbering tool.

Stefan Stuntz and the SASG -- For Magic User Interface 3.2. Yes, it's slower than I'd like, but (1) MUI 3.2 is noticeably faster than 2.x, even on my Amiga 4000/040 and (2) it means I can modify the GUI without rewriting the entire user interface. Adding the "Extend..." button in RouteEdit was a snap with MUI; with GadTools, you'd still be waiting for it. Besides, even AT is including it with their Internet surfer package, so it can't be 100% bad. :)

End users like you -- Who send in \$5 (US) or \$10 (US) and make me waste time on RoutePlanner I could be wasting on other things. Hint, hint :)

1.6 Copyright Issues

Copyright:

The program RoutePlanner is derived, in part, from a public domain software product, Jim Butterfield's RoadRoute. In the interest of supporting Jim's intention of keeping the core of the software freely available, the following copyright applies:

All portions of the archive, except the navigation module, are (C) 1994-96 Chris Lawrence. No registration fee is required or requested for the use of RoutePlanner and RouteConv.

RouteEdit is an original work of the author. It is copyrighted shareware. Please refer to the RouteEdit legalese for further details.

The NorthAmerica database is also an original work of the author. If you

register RouteEdit, you will receive an unlocked copy of the database for your own personal use. Alternately, if you are interested in having an area of the database improved further, contact the author at the address below for details.

Distribution Restrictions:

This archive is freely distributable, provided:

the keyfile, you may use the keyfile on one system at any given time. The file may be duplicated onto any computers that you may own, lease, or rent, but must not be allowed to be distributed to computers owned, leased, or rented by another individual. Additional keyfiles for additional systems under your control may be issued at the discretion of the author for \$2 each. (These keyfiles will bear different registration numbers for tracking purposes.) Additional keyfiles are licenced from the main keyfile, and all of your keyfiles are considered a indivisible unit.

In essence: you may use a specific RoutePlanner keyfile on one Amiga at a time. To use the Save As Locked... option on two Amigas at one time, you must have two keyfiles. Additional keyfiles are \$2 each. All additional keyfiles must be retained by the owner of the main keyfile.

You may transfer all of your keyfiles to another individual, provided that you destroy all copies of all of your keyfiles, the other individual has read and understood this license, and you inform the author within thirty (30) days of the transfer. You must inform the author of the name, address, and email address (if applicable) of the transferee. The transferee will receive all of the rights that a registered RoutePlanner user is entitled to, and you will be required to either re-register or be transferred the rights to another person's keyfiles in order to be considered a registered user again. There is no fee for a keyfile transfer. You may charge the transferee for the rights to your keyfiles if you wish. You must transfer all of your keyfiles, or not transfer any of them. Renting or leasing of keyfiles is not permitted. If you transfer your keyfiles to someone else, that person cannot transfer those keyfiles back to you within six (6) months of the original transfer.

In essence: you may sell ALL of your keyfiles to another individual. The other individual will receive all of the rights to RoutePlanner that you had previously received, and you will revert to having the rights of an unregistered user. There is no limit to the number of transfers that can be made of a specific set of keyfiles. Rental or leasing of keyfiles is a violation of this agreement, as are short-term repurchases.

Keyfiles may not be placed in (a) download directories of Bulletin Board Systems, (b) world-readable directories of an AFS-based system, (c) world-readable directories of an FTP site, (d) world-readable directories of an FSP site, or (e) any place where an anonymous or unentitled (person who has not registered RoutePlanner or been transferred someone else's registration) user might be able to receive a copy of the file (excepting floppy diskettes used for personal storage).

It is illegal for an unentitled user to use a keyfile. Violations will be prosecuted to the fullest extent of the law.

By receiving a keyfile and using it, you imply consent to this agreement.

Exceptions to this agreement must be made by the author (me) in writing.

If you register, you also receive the right to use an unlocked version of the NorthAmerica.route database. The following condition for its use applies:

You may redistribute a modified NorthAmerica.route database if you lock it so that unregistered users will be unable to edit it. Any other

press Enter to select it (or click on the ~Ok~ button).

However, if you were to enter "ocean,calif" there would be two matches: Ocean Beach and Oceanside. The list will only display these two cities, to allow you to choose between the two. If you made a mistake, click on the All button (or clear the Search gadget of text and press Enter) to return to the full city listing.

This can be very helpful if your city isn't in the database, because you can type a comma followed by a state name in the Search gadget to find all of the cities in the database that are in your state.

If you enter something into the search gadget that doesn't match anything currently displayed in the listview, a requester will pop up informing you that nothing was found; upon satisfying this requester you will return to the same listview as before.

Important note: RoutePlanner doesn't understand postal abbreviations. For example, if you want to choose a city in North Dakota, you should not type ",nd", but either ",north d" or ",n#?d". Note that RoutePlanner allows the use of wildcards within the search expressions.

1.13 Preferences window

The first page includes miscellaneous settings:

The "Measurement" cycle gadget allows you to choose whether you want the program's output to be in metric or English (Imperial) units.

The "Display" cycle gadget allows a choice between displaying (1) all intersections on the route, (2) only those intersections where there is a turn, or (3) intersections where there are turns and intersections near state/provincial boundaries.

The "Automatic Efficiency Calculation" allows you to pretty much skip the third page. Simply enter your vehicle's city and highway MPG's (or km/l's) and click the "Recalculate" button. This will calculate all the fuel efficiency data on the third page for you. Filling in this data and the "Default Fuel Efficiency" should be sufficient for most users.

The "Default Fuel Efficiency" integer gadget allows setting a fuel efficiency for unenhanced map files.

The "Default Database" is the one that is automatically loaded on startup unless an alternate map file is loaded (by shift-clicking, etc.)

The second page allows you to specify what average speed you wish to use on the different
classes~of~highway
.

The third page allows you to decide what fuel efficiency to associate with each class of highway.

Print: Send both routes to the Preferences printer, separated by form feeds.

Close Window: Close the Trip window.

Quit RoutePlanner: Exit completely from RoutePlanner.

1.15 Appendix: RouteConv conversion utility

Basically, all you need to do to convert a RoadRoute database into a RoutePlanner database is:

1. Start up RouteConv
2. Select your RoadRoute City file (usually called "Cities")
3. Select your RoadRoute Route file (usually called "Roads")
4. Choose a name for the new database (the "Output file").
5. Specify whether the distances in the file are in kilometers or miles.
6. Choose whether you want to ignore the hardcoded times in the file. To use those times, ignore the "Default Grade" cycle gadget; otherwise, choose the grade you think most of the roads belong in (for example, a database of Canadian roads the best choice would probably be "Rural Highway (2 Lane) (Canada)").

An improved progress display will be included if there's demand for it.

1.16 Appendix: The Highway Classifications

RoutePlanner currently supports 26 different highway classes, most of which are currently used. The other six will be used in the United Kingdom map that will be released after the large United States map is completed.

The classes are:

- Rural Interstate
- Suburban Interstate
- Urban Interstate
- Rural Highway (4 Lane)
- Rural Highway (2 Lane)
- Suburban Highway
- Suburban Road
- Urban Road
- Rural Interstate (55) *
- Metro Interstate
- Rural Freeway (Canada)
- Urban Freeway (Canada)
- Rural Highway (4 Lane) (Canada)

Rural Highway (2 Lane) (Canada)
Urban Highway (Canada)
Urban Road (Canada)
Rural Motorway (UK)
Suburban Motorway (UK)
Urban Motorway (UK)
Dual Carriageway (UK)
Rural 'A' Road (UK)
Rural 'B' Road (UK)
Suburban Road (UK)
Urban Road (UK)

* This is used instead of Rural Interstate in states where the legal speed limit is still 55 mph, and on rural controlled access highways that are not part of the Interstate system.

1.17 Appendix: RouteEdit Interim Documentation

Important stuff to note:

Save As Locked... will only work if you are a registered user. Chances are, you aren't :)

You will only be able to edit unlocked files. RouteConv creates unlocked files, and the Basic-USA database is also unlocked. The NorthAmerica database is locked, both because it is being worked on at the moment and is proprietary to the author. If you register RouteEdit, you will receive an unlocked copy of the NorthAmerica database for your own personal use.

The coordinate features have been disabled in version 1.5. If your database contains coordinates already, I recommend that you keep it around as a backup copy (I will provide a conversion utility with the next version of RouteEdit with coordinate features).

The reason why coordinates have been disabled is that I would have had to redesign the file format otherwise. For the next major release, 2.0, I plan to create a smaller file format that will support coordinates, but I felt that direct file compatibility from 1.4 to 1.5 was important. (Note that 1.5 databases can also be used with version 1.4).

Please avoid using hard-coded times and speeds. This allows users to customize the routes they receive around their driving habits. The NA database will only contain hardcoded values for ferries and other things that can't really be "sped up"; I advise you to do the same.

If you will be distributing map files, please make use of the Information requester to add your name and contact info (if you don't have email, put the name of your town or something there instead).

RouteEdit

registration

is \$5 US for a keyfile via electronic mail, \$10 US for a complete distribution (with other goodies) on a floppy disk, mailed anywhere in the world. Follow the registration link for details.

The license agreement for RouteEdit can be found
here.

RouteEdit may be distributed according to the restrictions ←
supplied for

RoutePlanner and RouteConv. Please note that RouteEdit is copyrighted
shareware, and that redistribution of keyfiles is restricted by the
RouteEdit key file license agreement.

My contact information is
here.

1.18 Appendix: ToDo List

Planned for upcoming releases (in order by priority):

- Complete the NorthAmerica database
- Bubble help
- Better documentation
- Separate RouteEdit documentation
- Multiple navigation windows
- Floating "city palette"

The following regions (states, provinces, etc.) in NorthAmerica.route are
"completed" in this release of the database:

- Alabama
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico

New York
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming

[Total complete: 48 states + DC]

In addition, some areas of adjoining states are complete.

"Completed" means the data for this region has been "filled in" with many more cities, and checked for route number and name accuracy. Other areas are described well enough for through travel, but probably not enough for local (in-region) travel.

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