

RoutePlanner

Chris Lawrence

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COLLABORATORS

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| | <i>TITLE :</i> RoutePlanner | | |
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Chapter 1

RoutePlanner

1.1 RoutePlanner 1.4 AmigaGuide documentation

RoutePlanner 1.4 user documentation

(I apologize for the incomplete documentation -- the next release will include the documentation for RouteEdit, along with improvements in this file.)

Introduction

- About~RoutePlanner
- Features
- Copyright~and~Other~Issues

Using RoutePlanner

- How~to~use~RoutePlanner
- The~Main~Window
- The~Preferences~Window
- The~Trip~Window

Appendices

- Converting~databases~from~RoadRoute~to~RoutePlanner~format
- Highway~Classifications
- RouteEdit~Interim~Documentation
- ToDo~list;~Completed~sections~of~NorthAmerica~database

** Please note: Some links refer to "RouteEdit.guide" and will not work in the current release.

1.2 Purpose and Requirements

RoutePlanner is a highway trip planner program. It works out the best available route between two 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.

System Requirements:

Amiga Release 2 or later
At least 1 MB of memory (2 MB required to use more detailed map files)
Magic User Interface 2.2 (or later) *

Recommended System:

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

1.3 Features

RoutePlanner is an update to Jim Butterfield's RoadRoute program. The following enhancements have been made:

- A graphic user interface has been added, using Stefan Stuntz's MUI 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 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 state lines, 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.

1.4 Copyright Issues

Copyright:

The program RoutePlanner is derived on a public domain software product, Jim Butterfield's RoadRoute. Therefore, the following copyright applies:

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

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

This archive is freely distributable, provided:

1. This archive (or its unpacked contents) must be distributed as a unit.
2. No file in the archive may be altered.
3. Additional files (BBS advertisements, Fred Fish readmes, etc) may be added to the archive provided that the files do not solicit payment for services and do not contradict any of the supplied documentation.

This archive may be included on the Fred Fish CD series (Frozen Fish, Fresh Fish, etc.) and the Aminet CD-ROM. If you are interested in some other form of distribution, contact the author at the address below.

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Please Note:

Many terms used in this document are trademarks or registered trademarks. This is generally indicated by the use of capital letters, i.e. AmigaGuide.

1.5 Getting up and running

Installation:

There is no specific installation procedure required. Just decompress the archive, and drag the RoutePlanner drawer somewhere convenient. Separating the files is not recommended, mainly for the sake of convenience.

Note that to use the large database, you will need either a high-density floppy disk drive or a hard drive, and at least 2 MB of memory.

Starting:

The easiest way to start RoutePlanner is to double-click on the RoutePlanner icon. This will automatically open the default map file (Basic-USA.route) and allow you to plan a route.

To use a map file other than the default, it is easiest to double-click on the map file's icon, to automatically open that file in RoutePlanner.

For example, let's try a simple route. Click on the "From..." button, or press the underlined character (F), to bring up the city~requester.

There are two ways to find the city you are looking for. We're going to type the name of a city to start off with. For this example, type in "ocala" and press Return.

After a brief pause, the list will change positions and the name "Ocala, Florida" will be highlighted. Note that the case didn't matter.

Now, simply press Return again. To the right of the "From..." button, the name "Ocala, Florida" will be displayed.

Now let's set the destination city. Click on the "To..." button (or press T), and type in "wash,dc" and press Return.

The name "Washington, DC" will appear highlighted in the list. But why did we put the ",dc" on the end? To see, click on the "Cancel" button in the requester and then click on the "To..." button again.

This time, type in just "wash" and press Return. If you are using the simple (default) map file, the result is the same as it was before. But if you use the extended (high detail) map file, you will see a list of cities that start with "Wash", such as "Washington Park, Illinois", and "Washington Court House, Ohio". To select Washington, DC, you would either have to add the ",dc" now, click on "Washington, DC" in the list, or use the cursor keys to select it.

Click on "Ok" in the requester to choose Washington, DC. The button labeled "Plan Route..." will no longer be ghosted, so click on it (or press P) to see your route.

Depending on how your preferences are set, the route may list every intersection between Ocala and Washington, or just the intersections where there is a turn to be made. If you use the enhanced database, you will find that exit numbers are given where applicable.

1.6 RoutePlanner window

This is where you actually set up the trip that you want to take. There are several buttons and a listview in this window.

Use the ~From...~ button to specify your starting location.

Use the ~To...~ button to specify your ending location.

To set up an intermediate destination, see the~'Via'~listview.

To actually plan the route, press the ~Plan~Route...~ button. This will result in the display of the Trip window.

When you are done using RoutePlanner, click on the ~Quit~RoutePlanner~ button.

The window also has two menus.

Project

| | |
|--------------------------|---|
| Open Map... (Amiga-O) | Open another map file |
| About... (Amiga-?) | Get information on RoutePlanner |
| Information... (Amiga-I) | Get information on the current database |
| Hide (Amiga-H) | Iconify the window |
| Quit (Amiga-Q) | Quit RoutePlanner |

Settings

| | |
|--------------------------|----------------------------------|
| Preferences... (Amiga-P) | Bring up the Preferences~window. |
|--------------------------|----------------------------------|

1.7 The `Via' listview

This section allows you to specify what cities you want to visit on your route.

To add a new city to the list, click on the ~Add...~ button. Cities are added to the end of the list.

To remove the highlighted city from the list, click on the ~Remove...~ button.

To change the highlighted city, click on the ~Change...~ button.

To move the highlighted city up or down, click on the arrow buttons.

Please note that cities will be visited in the order they are listed (from top to bottom).

For example: To travel from Washington, DC to Las Vegas, Nevada via Chattanooga, Tennessee and Barstow, California, you would:

- Set the From city to Washington, DC
- Set the To city to Las Vegas, Nevada
- Add Chattanooga, Tennessee to the Via listview
- Add Barstow, California to the Via listview
- Click on the Plan Route... button

1.8 City selection requester

The city selection requester is used to choose starting, ending, and intermediate cities. The largest element of the requester is the scrolling listview, which contains the current city choices.

Below the listview is a string gadget labelled "Search:", along with the

~All~ button. To look for a city or a subset of cities, enter a pattern into the search gadget. Generally, you can enter the first few letters of the city's name, a comma, and the first letter of the state name and the city will be found automatically.

[The following examples assume you are using the larger database, NorthAmerica.route. However, the concepts are the same for all databases.]

For example, "jack,f" will only match "Jacksonville, Florida," so the city's name will be highlighted. If a city name is highlighted, you need only 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.

1.9 Preferences window

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

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

The third 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 "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 ~Save~ button will keep these settings forever.

The ~Use~ button will keep these settings for this session.

The ~Cancel~ button will revert to the last settings.

1.10 Trip display window

The trip window is used to display the results from a planned route.

The From, To and Via text display gadgets indicate the route you selected in the main window.

To alternate between viewing the most direct (shortest) and quickest routes, click on the View cycle gadget. If the shortest and quickest routes are the same, this gadget will be disabled.

The Distance, Time and Fuel used text display gadgets indicate these statistics for the currently displayed route.

The large listview contains the computed by RoutePlanner. Each segment of the route appears on an individual line.

The first column indicates the distance of this segment.

The second column indicates the time it takes to complete this segment.

The third and fourth columns (in brackets) indicate the distance and time elapsed since leaving the last specified (From or Via) city.

The remainder of the line indicates the name of the highway, and where to turn off onto the next highway. If supported in your database, this will include an exit number.

The output will also indicate which state line(s) will be crossed on a segment, ABOVE the actual segment that it pertains to.

The large button at the bottom of the window will close it and return to the main window.

There is one menu in this window, the Project menu. It contains four items:

Save As...: Write both routes to a file on disk.

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

Close Window: Close the Trip window.

Quit RoutePlanner: Exit completely from RoutePlanner.

1.11 Appendix: RouteConv conversion utility

Basically, select your source city and road data files (usually called Cities and Roads), choose the destination filename, and specify whether the file distances in the file are in kilometers or miles.

An improved progress display will be included with the next release.

1.12 Appendix: The Highway Classifications

RoutePlanner currently supports 18 different highway classes, 12 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
- Autoroute (Canada)
- Main Highway (Canada)
- Rural Motorway (UK)
- Suburban Motorway (UK)
- Urban Motorway (UK)
- Primary 4 Lane (UK)
- Primary 2 Lane (UK)
- Other Route (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 Interstate highways.

1.13 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.

You can enter coordinates if you want; RoutePlanner ignores them at the

moment but support will be added for map drawing eventually. Positive numbers are North and East (relatively speaking); the North America database will probably be based on "standard" Latitude and Longitude, but this is not required by any means, as long as the coordinates are linearly scaled.

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. U.S. Personal Checks accepted; may be a delay of up to 10 days at my discretion. Cash in United States dollars only, please..

Individuals who register RouteEdit will receive a copy of the license agreement for RouteEdit key files.

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.

Contact Information is here.

Proper documentation will be included in the next release.

1.14 ToDo List

Immediate ToDo List

- Complete NorthAmerica database
- Better documentation

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

- Alabama
- California
- Delaware
- District of Columbia
- Florida
- Georgia
- Illinois
- Indiana
- Kentucky
- Louisiana
- Maryland
- Mississippi
- New Jersey
- New York

North Carolina
Ohio
Pennsylvania
South Carolina
Tennessee
Texas
Virginia
West Virginia

In addition, some areas of adjoining states are complete.

The following regions are slated for completion before the next release:

Maine
Massachussets
Michigan
New Hampshire
Ontario
Quebec
Rhode Island
Vermont

This level will leave only two states east of the Mississippi river to be completed: Minnesota and Wisconsin.

"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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Buttons

~Add...~

~All~

~Cancel~
~Change...~
~From...~
~Ok~
~Plan~Route...~
~Quit~RoutePlanner~
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