

# RoutePlanner

navigation system for the Amstrad CPC

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users' guide

## WELCOME TO RoutePlanner!

RoutePlanner is an incredible development in CPC applications. It allows you, for the first time on any 8-bit home computer, to find the best route between two places - a task which previously only powerful computers like the PC, Macintosh, Amiga and ST have been able to manage. The code itself is a complicated and powerful program, but you need not worry, as all this is accomplished using an elegant and easy-to-use graphical user interface which requires the minimum of explanation. You will be up and running finding routes in seconds.

RoutePlanner runs on any 128k disc-based CPC.

## GETTING STARTED

Put your RoutePlanner disc in drive A: and type `RUN"DISC`. RoutePlanner will load. Now press 2, and wait a while while the data loads. When all the data is loaded, the RoutePlanner screen will appear, and the computer will begin to draw the motorways of England and Scotland on-screen.

Type in "Oakham", and press ENTER. Then 'click on' the word `FROM:`. This is done by moving the on-screen arrow with the cursor keys, and pressing `COPY` when its head is over the word in question.

Type in "Cambridge", and press ENTER. Then click on the word `TO:`.

Now click on the button `FASTEST`.

The fastest route from Oakham to Cambridge will be calculated, and drawn on your screen. If you want to see an itinerary for this route, then click on the button `DISPLAY`.

## LOADING RoutePlanner

RoutePlanner is loaded simply by typing `RUN"DISC`. The program loads in two parts: firstly, the main code: and secondly, the data. Before the data loads, you will be asked which of three areas (the Scottish Highlands, Wales, or South-West England) you wish to omit. Press 1, 2 or 3, depending on which area you do not want to travel through.

This is necessary because the CPC does not have enough memory to keep all the map data in memory. However, it does not restrict the program in any way: for example, if you were travelling from South-West England to the Scottish Highlands, you would not travel through Wales, and so on.

## OPERATING RoutePlanner

RoutePlanner works by a graphical user interface: that is to say, operations are chosen by moving a pointer around the screen. You

do this with the cursor keys. To select the operation underneath the pointer (this is known as 'clicking'), press COPY.

Many operations also have a keyboard short-cut which you can press.

## USING THE MAP

Once RoutePlanner has loaded, you will see a plan of the motorways of Britain drawn on the screen. This should help you orientate yourself. It is possible to look at the map in much more detail: click on any point on the map, and then click the ZOOM IN button. The current zoom level (from 1x to 16x) is shown on the right of the screen.

To zoom out from a place, use the ZOOM OUT button. To centre the map around a particular place, click on that place twice in succession.

If you click on a named place - note that names are not always displayed at low zoom levels, to avoid the screen becoming unreadable - its name will be displayed in the HERE display at the bottom of the screen.

A 'pen' symbol to the right of the zoom level indicates that the map is currently being drawn.

## FINDING A ROUTE

First of all, you need to tell RoutePlanner where you want to go Cfrom, and where you want to go Cto.

To do this, put a place-name in the HERE display. You can either do that by clicking on a place on the map, clicking on a line of the itinerary, or by typing the name in and pressing ENTER. (If the name disappears when you press ENTER, this indicates that RoutePlanner has never heard of it.) Then click on FROM OR TO to transfer it to the appropriate display.

Then, to calculate the fastest route, click on FASTEST. To calculate the shortest route, click on SHORTEST. The pointer will disappear, and a spinning clock will appear to the right of the zoom level, to indicate that RoutePlanner is calculating the best route.

When RoutePlanner has finished calculating the route, it will be drawn on the map as a thick line. You can display an itinerary on screen by clicking the DISPLAY button - click again to return to the map - or print the itinerary by clicking PRINT. The itinerary can be scrolled down by clicking on the arrow symbol on the right of the screen.

## AVOIDING PLACES

Let's say the route found takes you through Shrewsbury, which you'd rather avoid. No problem: simply put the name Shrewsbury into the HERE box by typing it in, clicking on the appropriate

line of the itinerary, or clicking on the map, and then click on the `AVOID` button.

Clicking on the `AVOID` button while nowhere is in the `HERE` box will bring up a list of places currently being avoided. You can click on any one of them to remove them from the list, or click on the `RESTORE` button to remove all places from the list.

Clicking on the `LONDON` button will toggle whether the entire area within the M25 is avoided or not. Clicking on `OK` closes the window.

## CHANGING SPEED

You will probably not drive at the same speeds that RoutePlanner is preset to. To view and alter these, click on the `OPTIONS` button. A new window will appear.

This contains the speeds (in miles per hour) for driving on motorways, primary A roads (white and yellow on green signs), secondary A roads (black on white signs), and B roads. The first column is the speed on a dual carriageway: the second is the speed on a single carriageway. Click on any of them, type in a new number, and press `ENTER` to change it. When you have finished, click on `OK`.

You can store three sets of speeds in memory at once - useful if you have more than one car. To access any of them, click on the `STORE` or `RECALL` buttons, as appropriate, and select `FAST`, `STANDARD` or `SLOW`. (These names are provided for convenience, but you need not store the fastest in `FAST`, etc.). The `SAVE` button can be used to store all three sets (and other current option settings) on disc, with the `LOAD` button loading them back in again.

## CUSTOMISING YOUR ITINERARY

By default, RoutePlanner displays the itinerary in three columns: a place-name, the road you should take from it, and the distance (or time, depending on whether you calculated the shortest or the quickest route) which you will spend on this road before arriving at the next place.

It is possible to alter this to always show both the distance and time on each road - select the Options window, and click on 'Show other data' so that the box is filled in. You can also tell the program to calculate a running total of the number of miles/time elapsed so far - click on 'Cumulative total' in the Options window.

These only affect the itinerary display. Map drawing and print-outs are not affected.

If you want to store the itinerary in a text file on disc - for example, so that you can include it in a letter to a friend -

then click on 'Print to disc' in the Options window. This will send output from the `PRINT` button to a disc file rather than to the printer. You will be asked to input a filename whenever you click on `PRINT`.

## KEYBOARD SHORTCUTS

The following keypresses may be used to speed up operating RoutePlanner.

Operation	Press
Calculate fastest route	CTRL C
Calculate shortest route	CTRL S
Avoid place	CTRL V
Set FROM	CTRL F
Set To	CTRL T
Toggle display	CTRL D

## PLACES

RoutePlanner knows of all the major towns and cities of Britain, as well as motorway junctions and many smaller towns. You can just enter your start and destination places, and RoutePlanner will find the shortest route between them.

If you are navigating to or from a small town or village, there is a chance that, due to memory limitations, RoutePlanner may not know of it. You can, of course, ask the way to the nearest town which RoutePlanner knows, or the town may be situated near a road junction on the map - in which case, choose it graphically as described above.

If RoutePlanner rejects your typing of a name which you think should be on the map, don't worry - it may well be. Newcastle-upon-Tyne isn't, for example, but Newcastle upon Tyne is. St Ives isn't, but St Ives - Cambridgeshire and St Ives - Cornwall are. Either try a few alternate 'spellings', or zoom in to the appropriate place on the map and click on it.

Important destinations you may need include:

## ROADS

RoutePlanner's database includes all the motorways, primary routes and other A-roads in Britain, except for secondary A-roads within cities which are no use for navigation purposes. It also knows some B-roads. It knows which roads are dual-carriageway and which are single-carriageway.

## USING RoutePlanner TO NAVIGATE

RoutePlanner is not designed to replace your road atlas: we recommend that, while in the car, you refer to both RoutePlanner's output and a good atlas. (The CAA Road Atlas of Great Britain is exceptionally clear, detailed, and inexpensive.) If you don't have a printer, copy down RoutePlanner's suggested route with pen and paper.

## POSSIBLE PROBLEMS

*C''The program won't let me calculate a route.''*

Check that you have selected both FROM: and TO: places, and that they are different. Check that neither of them are being avoided.

*C''I don't like driving on motorways. How do I find a route that avoids them?''*

Change your speed on motorways (using the Options window) to a very low speed, e.g. 20mph. Then ask RoutePlanner to find the quickest route. As you have told it that motorways are slow roads, it will avoid them.

*C''How do I find out how to go from London to Manchester via Derby?''*

Easy. First of all, find the route from London to Derby. This is the first leg of your journey. Then find a route from Derby to Manchester.

*C''Can I ask RoutePlanner to find an alternative route to the one it's generated?''*

There are a number of ways to go about doing this. One is to ask for the shortest route rather than the quickest. Another is to alter the speeds in the Options window: so if the route suggested is mostly on motorways, reduce your motorway speed and try again.

One very good way is to tell RoutePlanner to avoid key places on the route it has given you, and then recalculate. (For example, try calculating the quickest route from Oakham to Cambridge, then recalculate avoiding Wansford.) This is made easy by the fact that clicking on any place in the itinerary will transfer it into the HERE display immediately, from where you can click on the AVOID button.

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