



## Practical tips for making detailed routes

### Introduction

Many motorcyclists use their bikes as a hobby to enjoy their environment via scenic routes. Additionally there are those for whom their bikes is their main means of transport; they want to reach their destination via the fastest or shortest route. With the current generation of (automotive) navigation systems (including the Garmin GPS V and Streetpilot III systems), finding the fastest or shortest route is not a problem.

So, most motorcyclists want to do more than travel quickly from point A to point B. They want to be able to put their own ideas into an attractive and enjoyable route. Unfortunately, making such an enjoyable route is not yet an automatic process. With the new autorouting function in the MapSource software we have a unique tool to do this ourselves.

As mentioned earlier, most motorcyclists want more than just to travel quickly from A to B. For those GPS units that can't calculate their own routes, we can use the MapSource software to make very attractive routes. If the Garmin GPS V or the StreetPilot III is available, then we can take advantage of all the possibilities that MapSource offers.

The generated routes for these GPS units were much more than we expected. Without this software it's almost impossible (and those who make routes for clubs know this all too well) to describe a route without first having ridden it, as you can never tell in advance which exits, junctions or towns we will encounter and where we have to go left or right.



*Garmin GPSV*



*Garmin StreetPilot III*

### Making routes

Here we will fully describe how to make routes for the Garmin GPS V and the StreetPilot III. Unfortunately the combination of MapSource and GPS V or StreetPilot III isn't perfect, and we frequently get questions about this. This manual describes how to go about making routes.

### Before we begin

Before we begin with making routes, we have a number of things to keep in mind.

1. You get the most attractive routes in MapSource by changing the preferences in the [ROUTING] menu. There we indicate that we do NOT want to travel over freeways/motorways and toll roads, and that we are riding a bicycle (unfortunately there's no option for motorcycle).
2. Take into account that the routes that are calculated in this way go over roads that are not in the base map. This means that the map sectors involved in the route must be loaded into the GPS, as the GPS cannot guide us over roads it has no knowledge of.

For the GPS V this can mean trouble in the form of the limited memory available in that unit. This implies that the planned route must be limited to the (map) area that will fit into the unit. Travelling to and from the route can of course be done over the roads that are in the base map, which unfortunately will mean the larger transit roads.

3. When riding the planned route, the automatic rerouting calculation must be switched off. If this is not done, then the GPS unit will calculate its own "ideal" route and will skip any waypoints that have



been set in order to lead us to the destination via the shortest or fastest route (this is a bug in the firmware, hopefully this will be corrected in a future update).

So, if we happen to go "off route" we have to return to the programmed route ourselves using the information shown on the displayed map.

4. Sometimes it happens that the "lady" in the StreetPilot III falls asleep, and remains silent. This can happen when we went "off route" and since returned back to the route, but it can also happen when we're simply following a route. In this situation she can be woken up again by pressing the [SPEAK] button.
5. A practical point: when using an earphone, it's best to set the volume to "1".

When setting up reasonably long routes, we often come up against limitations in the Garmin StreetPilot III. This unit can hold up to 250 instructions per route. Normally, when you want to go from A to B and you let MapSource figure it out by itself, this is more than enough to go quite a distance. However, as soon as you make use of the "point to point" method, the number of waypoints becomes quite large quickly and then the above limitation comes into play.

Note that MapSource does not take into account the type of road when setting out the route. It's quite possible that when riding the route you'll be lead over a gravel road or dirt track. In such cases, if you're not up to the challenge, try to detour and pick up the route again later on.

### Example

Taking the points from the discussion above into practice, let's make a route. Say we want to make a trip to the hills (Sauerland in Germany), which are about 200 - 250km away. The route for the day there will also be about that same distance. In total there's approximately 750-1000km route to be planned.

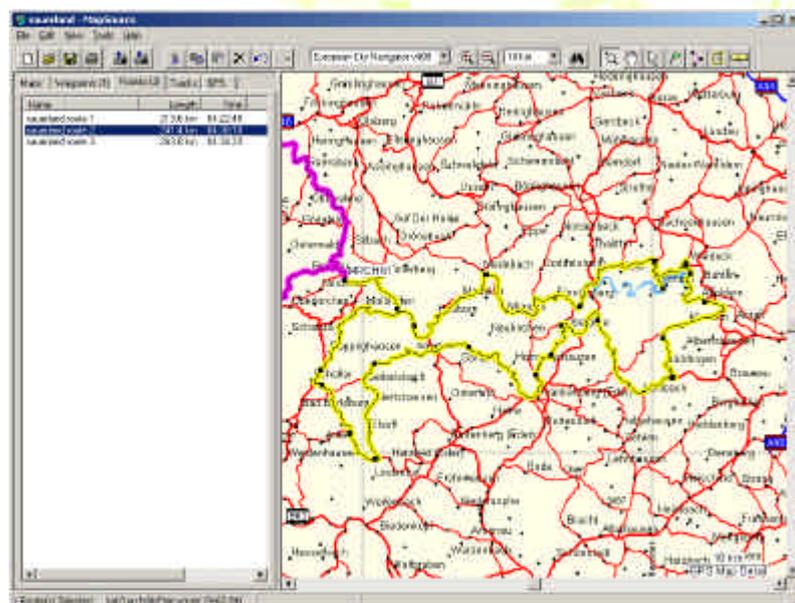


fig. 1) On this image the routes for the three days are displayed. The route for day 2 is selected and is displayed in yellow.

### Method

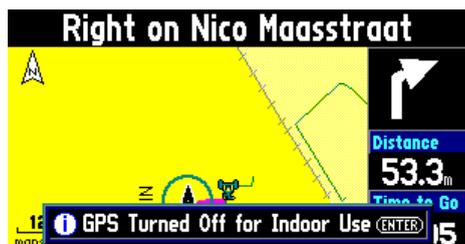
After starting MapSource, we mark the starting point with the waypoint tool. We do the same with the destination, for example the hotel in Sauerland. After that it's best to create the route according to your own desire, irrespective of the number of waypoints. If you choose the points too far apart, MapSource may place the route somewhere else than what you intended. In such a case, you can undo the point by pressing CTRL-Z. The "rubber band" will then be where it was previously, and then you place a point just past the location where MapSource previously went the wrong way.



You'll have seen that MapSource makes up its own name for the route. Double-click on the name and change it into "sauerland route day 1" (fig. 1). Now that the route for day 1 is complete, first save it (CTRL-S) on the hard disk. Give it a name, e.g. "sauerland route" and then upload it to the GPS unit.

### Uploading

Connect the GPS unit with the supplied serial cable to the RS-232 port of the PC. Switch off "outdoor use" (fig. 2), go to the LIST option via the ROUTE menu (fig. 3). Keep this screen active.



(fig. 2) GPS reception switched off



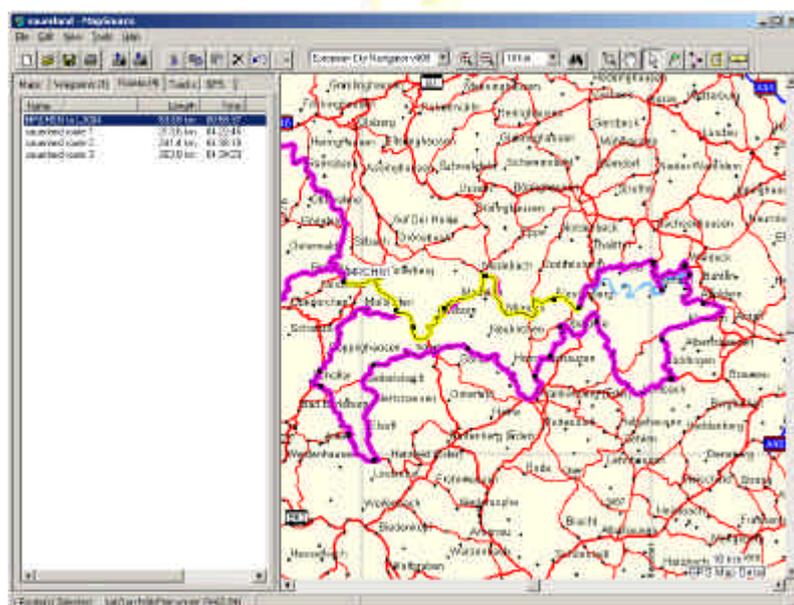
(fig. 3) The LIST option via the ROUTES menu

Start the route upload procedure. After a couple of seconds you will undoubtedly get the message "ROUTE TRUNCATED". If this is the only route currently loaded, it will be displayed on the GPS unit. If there are also other routes, use the rocker panel to find the new route. As soon as you're on it, the distance in miles, the time and the number of points will be displayed.



(fig. 4) Route split up. This means that the route is in fact simply cut off at that point. Bottom left is shown at what distance that happens.

We've reached a distance of 117.1 km (fig. 4). Now we have to do the next step.



### Next step

Taking into account this distance of 117 km we convert the "sauerland route day 1" into a number of subroutes. We'll call these "sauerland route a1", "...a2" etc., the "a" stands for "day 1". For "day 2" we'll use "b" of course... This is done to keep the names in alphabetical order so that it's easier to find the next route when you've come to the end of the current route.

(fig. 5) As soon as we mark a point, MapSource makes up a new name for the route, see top line (in blue) on the left in the white frame next to the map. The route is displayed in yellow on the map.



Back to MapSource. We again have "sauerland route day 1" on the screen and now we'll start defining a new route. We start at the departure location and see that MapSource makes up a new name for the route.

We try to place a point as far away as possible on the existing route, and let MapSource do the thinking for a while. What happens? MapSource wants to go a different way than we do in some places. Where the route is different from ours, we take the "selection tool" and pick up the route line somewhere in the middle of the "wrong part" and move it to wherever we want to go. This may have to be repeated a number of times until both routes fall precisely over each other. After a bit of practice you'll be able to anticipate where and how MapSource will go the wrong way.

By working in this manner you limit the number of forced waypoints in the route. Now save both routes in the existing "sauerland route" file with CTRL-S.

At this moment you have to stay focussed on the task at hand, because it can go wrong if you're distracted for whatever reason.

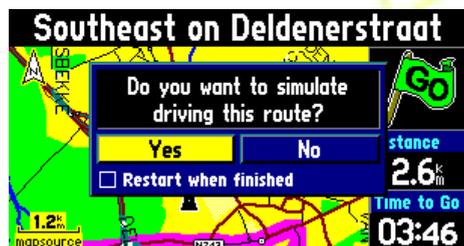
We still have both routes on the screen. Click on "sauerland route dag 1" (the first and complete route of the first day) and then hit DEL (this is safe because the file has just been saved. Now we only have the subroute left on screen.



The arrow shows the automatic distilled name by MapSource (see also fig. 5).

(fig. 6) the subroute is uploaded successfully to the Garmin StreetPilot III.

We upload this to the Garmin, and check whether the screen displays "DATA TRANSFER COMPLETE" (fig. 6). If that's the case, then the route fits, and that means that we managed to get more distance into the route. It also means less subroutes and less stopping to activate the next subroute. We now have a distance of 175.6 km, a lot more than our previous attempt. The distance that you can get into a single route will not always be as far as this, and is also difficult to predict. Practising a lot and trying different techniques will help, in time.



(fig. 7) As an extra test you can simulate riding the route on the Garmin StreetPilot III. It's a fun option where you can get into the holiday spirit early!



(fig. 8) Make sure that you've loaded the map sectors of the area you'll be travelling through, otherwise the GPS unit won't be able to navigate correctly.

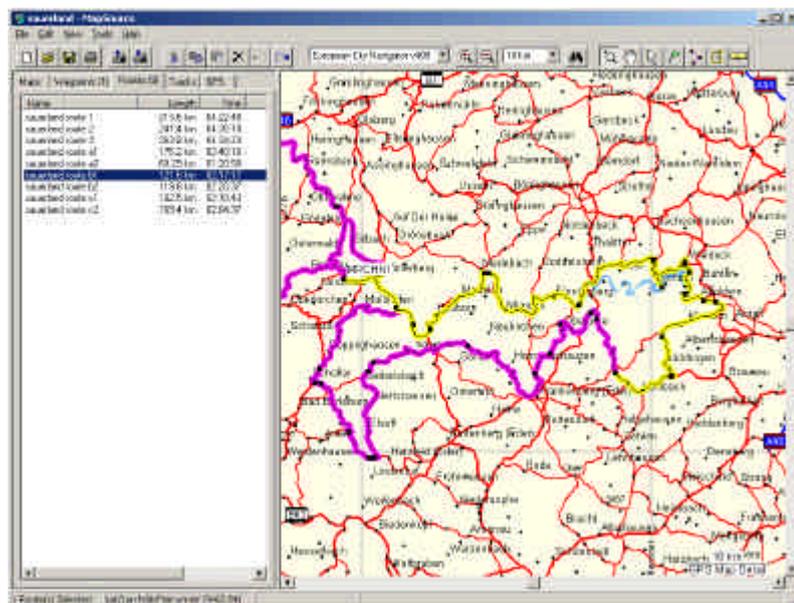
You can check the loaded map sectors by simulating riding the route (fig. 7). If you don't get a message "TOO MANY WAYPOINTS" then the route is OK. The map sectors through which the route leads need to be loaded (fig. 8), otherwise the GPS unit won't know where to go.



Now you can try squeezing in more miles by making the subroute longer and uploading again, until you again get the message "ROUTE TRUNCATED".

You can delete the routes in the GPS unit while experimenting, as it's still stored in MapSource. Knowing the route is OK (no "ROUTE TRUNCATED"), open the original file "sauerland route".

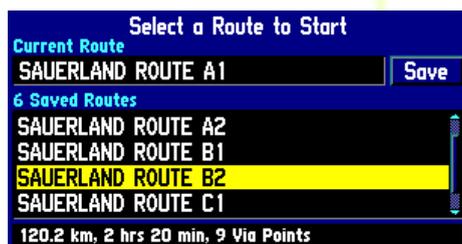
**NOW BE CAREFUL!**



MapSource, when opening this file, will ask if the current file should be saved. You must answer "NO". If all goes well, you have 2 routes in the tab "routes", namely "sauerland route day 1" and the file made in MapSource. Double-click on the latter which opens it, and give it the new name "sauerland route a1". Now the first thing to do is to save it with CTRL-S so that the current state of affairs is preserved. You follow the same procedure for the other routes until everything has been ordered correctly (fig. 9).

(fig. 9) All routes are now in bite-sized chunks that have been tested in the described manner, and can be uploaded ready for use.

If you now leave on the trip, load all the sauerland routes a(x), b(x) and c(x) (fig. 10) into the GPS unit. Tip: first remove the "base routes" "sauerland day 1", "2" and "3" or these will also be loaded into the unit (and they won't fit, as we already discovered). Again, don't forget to load the map sectors through which the routes lead, otherwise all will have been in vain.



(fig. 10) All subroutes have been uploaded into the GPS unit. You can see the effect of the naming of the routes; this way they stay in the correct order in the list. As soon as a route has been ridden, it can be removed.

This manual is a joint effort of the Garmin GPS shop (NL) and Harry Kamp. Translated from Dutch into English by Paul Sloodman.

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