

MGL Avionics

**Odyssey and Voyager
G1 and G2**

Interactive Map and Flightplan tool

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Introduction



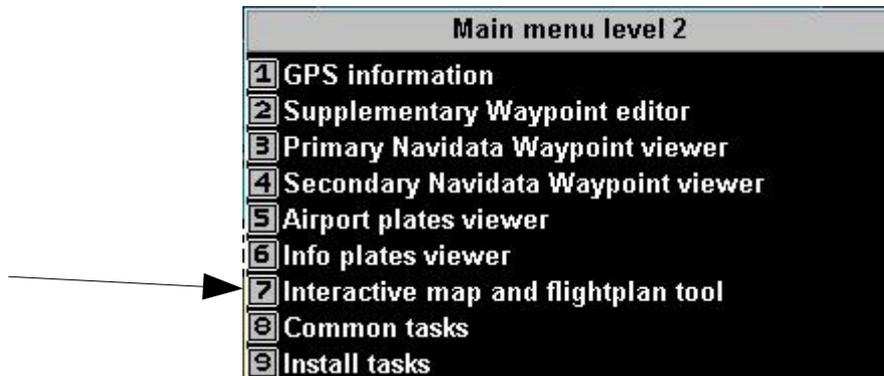
The G1 and G2 EFIS systems have a built in “interactive Map and Flightplan tool” This guide explains what you can do with this tool. This tool will be referred to in the following documentation as **IMFT**.

The IMFT can be used in one of three different modes:

- 1) View any map location and pick this location as destination for a “direct-to” GPS navigation. You can choose any location, the nearest waypoint or the nearest airport to the selected map location.
- 2) View any map location and use the location to make a waypoint for inclusion into your Supplementary waypoint database file.
- 3) Create or edit a Route (Flightplan) with direct references to map locations or pick waypoints and airports from your databases.

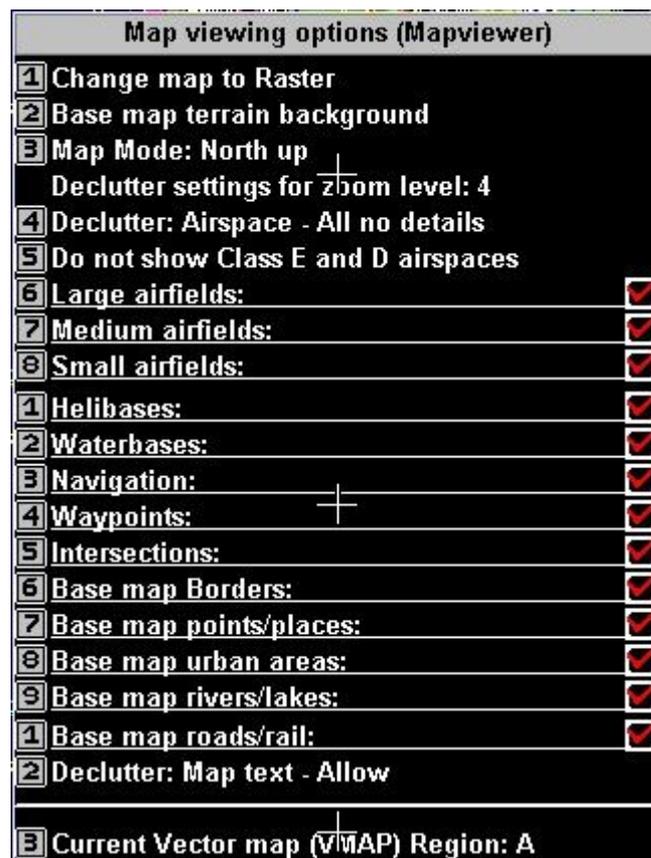
Opening the IMFT

You will find the function to open the **IMFT** in menu level 2. From any normal screen, press the menu button twice.



The maps shown in the map viewer behave just like the moving map of the EFIS except that you can choose any location.

The map viewer has its own private map options that you can choose by pressing the button [SHIFT] followed by the button [5] (Note the word "Map" above the button).



Please note that every zoom level has its own declutter settings allowing you to choose how the map should display for every level of zoom.

The IMFT in Waypoint mode

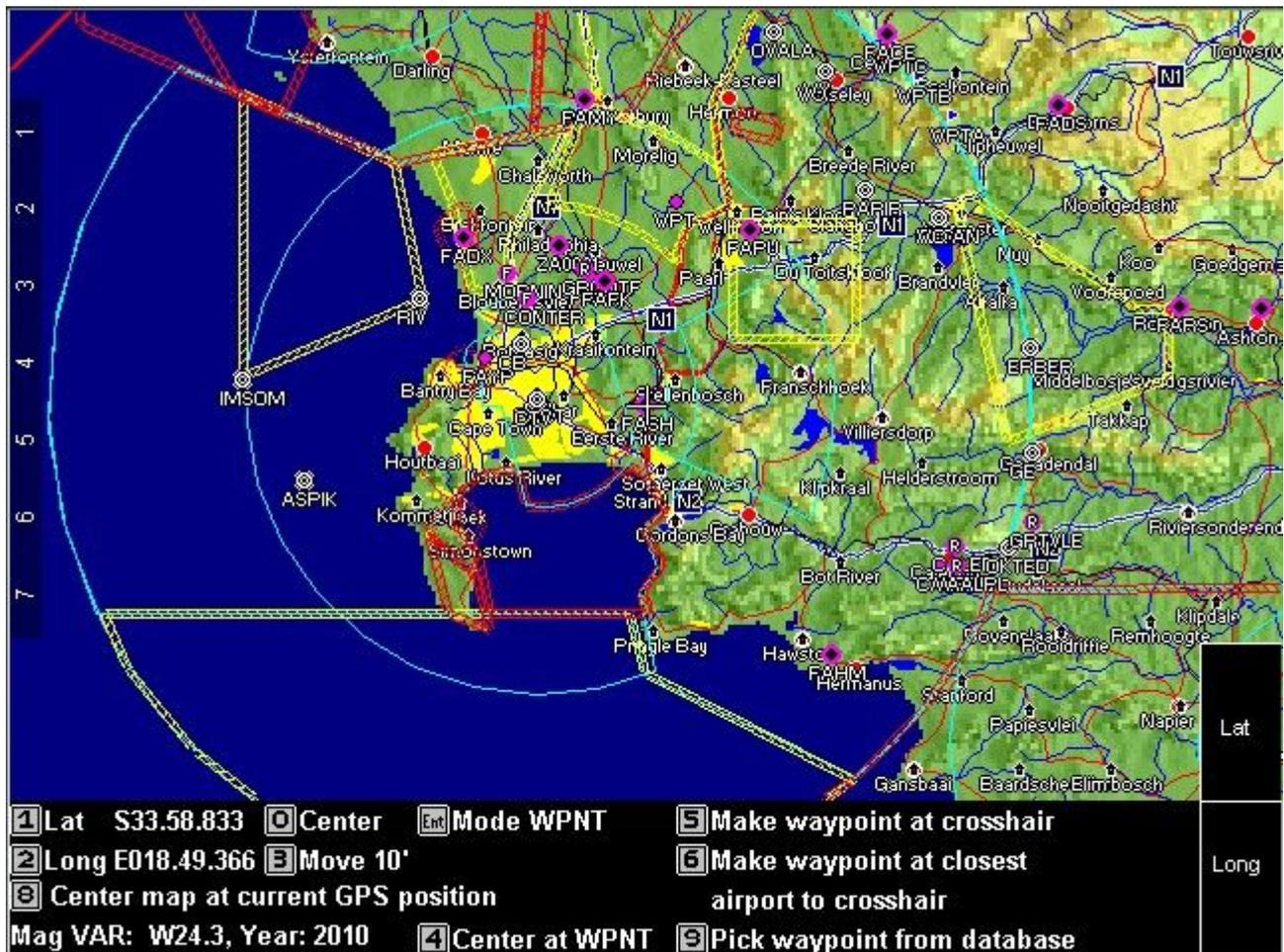
Use the buttons [1] and [2] or use the rotary controls to select the position of the crosshair. You can also center the map at the current GPS position using button [8].

Button [0] can be used to center the crosshair on the map or cause a map redraw.

Button [3] sets the move distance if you would like to use the four arrow keys to move the crosshair.

Button [4] allows you to center the map at any location contained in your database.

Button [ENTER] will change the map to the next mode which is the “Route” (Flightplan) mode.



Button [5] makes a new waypoint at the crosshair.

Button [6] makes a new waypoint at the closest airport to the crosshair. This can be used to copy an existing airport location to the Supplementary waypoint database but tends to have little use beyond that.

Button [9] allows you to center the map at any location from your database. The dialog for this is similar to your “Goto – direct-to GPS navigation window” so you get the search function as well.

The IMFT in Goto mode

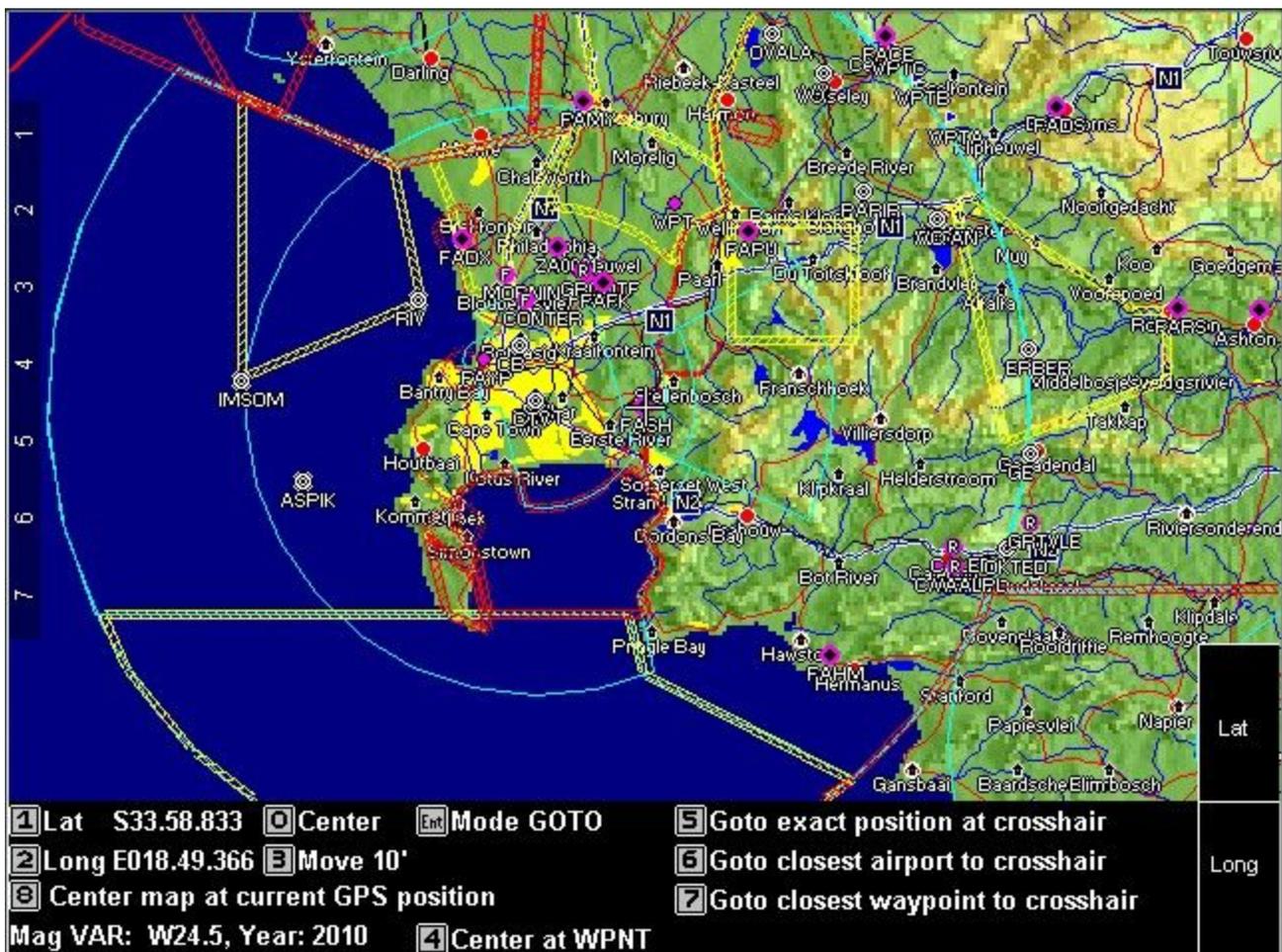
Use the buttons [1] and [2] or use the rotary controls to select the position of the crosshair. You can also center the map at the current GPS position using button [8].

Button [0] can be used to center the crosshair on the map or cause a map redraw.

Button [3] sets the move distance if you would like to use the four arrow keys to move the crosshair.

Button [4] allows you to center the map at any location contained in your database.

Button [ENTER] will change the map to the next mode which is the “Waypoint” mode.



The “Goto” mode is similar to “direct-to” GPS navigation, except you pick the location to go to from the map.

Button [5] – activates a GPS goto to the exact location of the crosshair on the map

Button [6] – Activates a GPS goto to the closest airport from the location of the crosshair

Button [7] – Activates a GPS goto to the closest waypoint (of any type) from the location of the crosshair

The IMFT in “Route” mode (Flightplan mode)

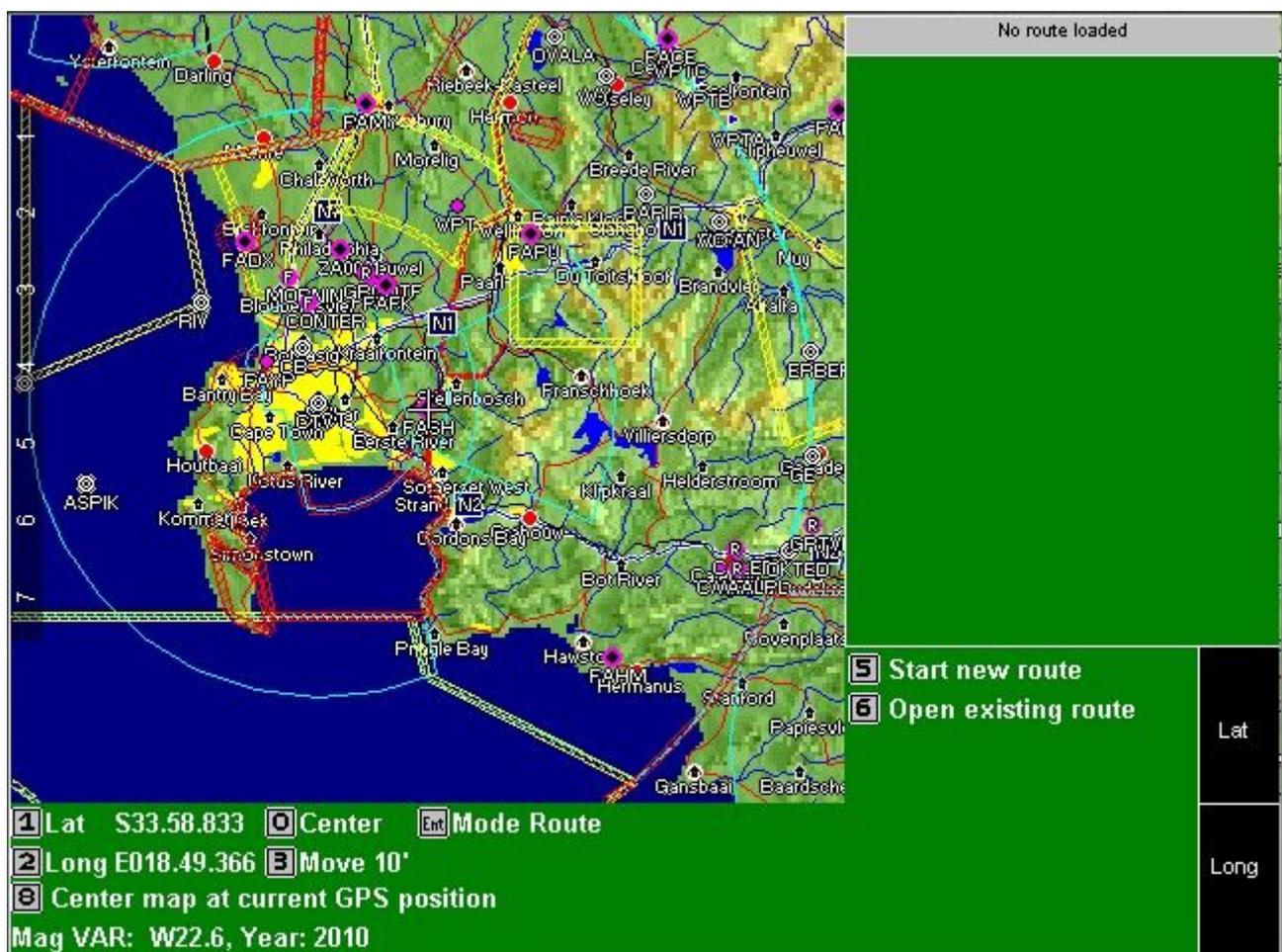
This mode is used to view existing routes, create new routes or edit existing routes. Route waypoints can be created from map references or by selection from the database.

Use the buttons [1] and [2] or use the rotary controls to select the position of the crosshair. You can also center the map at the current GPS position using button [8].

Button [0] can be used to center the crosshair on the map or cause a map redraw.

Button [3] sets the move distance if you would like to use the four arrow keys to move the crosshair.

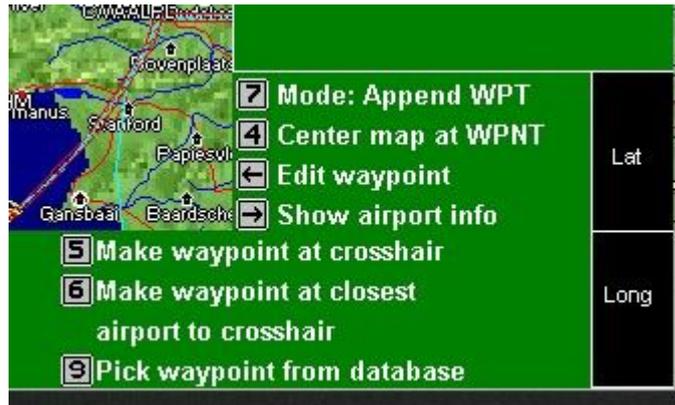
Button [4] allows you to center the map at any location contained in your database. Button [ENTER] will change the map to the next mode which is the “GOTO” mode.



Using the route editor

In this example, we will start a brand new route. First, we press the button [5] to “Start a new route”.

Now we need to supply a name for the new route. We can use up to 8 characters and these will also be used as the filename for the route. We must enter a valid filename and should not use spaces or special characters. For this example, we entered “MYROUTE” using the numeric keypad on the right. The route is stored as “MYROUTE.ERT” in your RAM drive (you can copy it from here to you SD card if you need it in future).



After we entered the name, a new, empty route file has been created. We are now presented with new options.

Button [7] – This allows us to select the edit mode. Append will add a new waypoint to the end of an existing route. This is perhaps the most common mode. We can also choose “Insert”, “Replace”, “Move” or “Delete”.

Button [4] – has been added to allow us to center the map at a waypoint from the route.

Button[<] (left arrow) is used to edit a waypoint – that would be names, type and so on.

Button[>] (right arrow) is used to show airport information for a waypoint that is any of the airport types.

Other options appear as we change the edit mode.

As example, we are going to make a route that takes us from our home airfield FASH to FAFK, then on to FAYP and back to FASH.

Even though we are starting from FASH, we will add this as first waypoint so we can fly the route in either direction.

With the edit mode at “Append WPT”, we press button [9] “Pick waypoint from database”.



The selection is based on your current position as reported by the GPS. Here we used the search function to find and select FASH.

The route editor now shows:

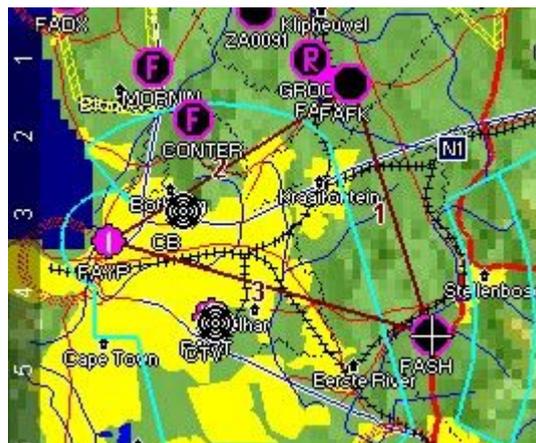


OK, that was easy.

Lets add FAFK, FAYP and FASH again in that order.



Zooming a bit into the map we can see that the route has been plotted with leg numbers.



Note that one of the waypoints in the route is highlighted with a white background ? We can move that highlight using the up and down arrows. This is the waypoint that will be used for insert, delete, edit and other modes.

OK, let us insert a new waypoint by choosing it from the map. We would like to insert a new waypoint in leg 2, just to the north of CONTER.

We move the white highlight to FAYP as we want to insert BEFORE this waypoint (insert is always “before”). Then we change the edit mode to “Insert WPT”.

Now we move the crosshair using the rotary controls to just north of CONTER. Note that you can move fine and coarse by pressing the rotary control in while turning.

MYROUTE.ERT		
1	FASH	Stellenbosch Airport, SF
	15.2mi	BRG: 342.4°T 7.3°M to FAFK
2	FAFK	Fisantekraal Airport, SF
	16.5mi	BRG: 237.0°T 261.7°M to FAYP
3	FAYP	Ysterplaat Airport, SF
	19.2mi	BRG: 106.7°T 131.4°M to FASH
4	FASH	Stellenbosch Airport, SF



Mode: Insert WPT
Center map at WPT

Right, we are ready to make and insert our new waypoint. Press button [5] “Make waypoint at crosshair”.

MYROUTE.ERT		
1	FASH	Stellenbosch Airport, SF
	15.2mi	BRG: 342.4°T 7.3°M to FAFK
2	FAFK	Fisantekraal Airport, SF
	9.2mi	BRG: 274.2°T 298.9°M to MAPSEL
3	MAPSEL	Selected/Mapviewer
	10.8mi	BRG: 205.8°T 230.4°M to FAYP
4	FAYP	Ysterplaat Airport, SF
	19.2mi	BRG: 106.7°T 131.4°M to FASH
5	FASH	Stellenbosch Airport, SF

There we go !

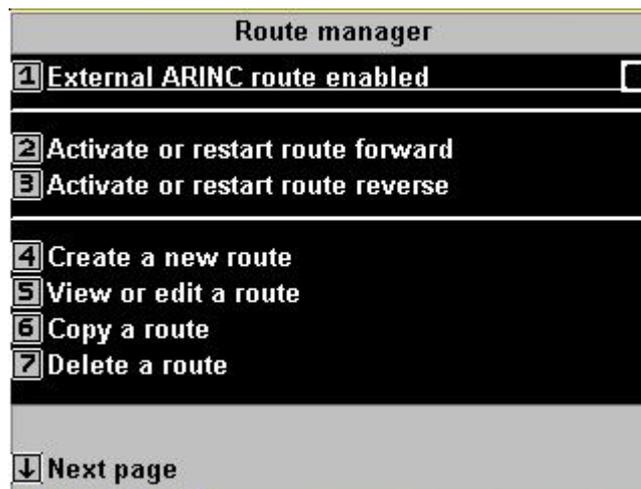
If we would like to change the name of our new waypoint, make sure it is highlighted (like in the above image) and press button [←] (left arrow) “Edit waypoint”.



There is no need to “save” your work, it has been done. The route file changes as you edit it.

Activating a route

Activating a route, moving forward or backwards and other route related functions are grouped in the “Route manager”.



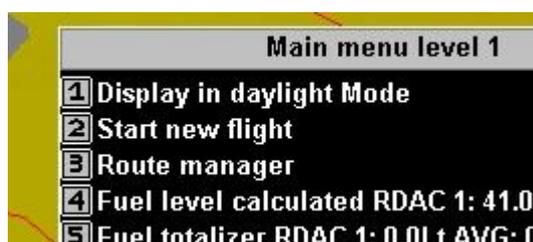
You can access the route manager from:

The “RT” button.

Button [4] after pressing [SHIFT]



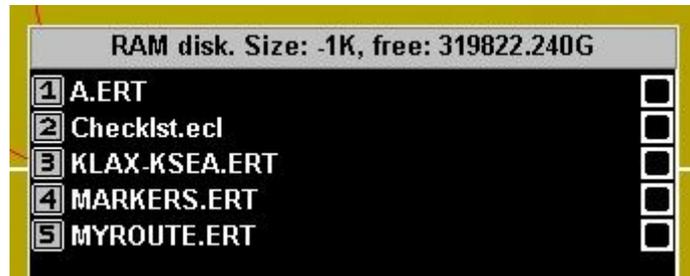
or you can access the route manager from Menu level 1



Route file location

Route files are stored on your RAM disk.

Here we used the Filemanager from Menu level 2 to look at this disk after we created "MYROUTE" in this example.



Note the file "MARKERS.ERT" ?

That is an interesting route file. It is created by the system when you press [ENTER] from a normal screen. A Waypoint is created from your current location and added to this file.

This gives you the ability to quickly record a location or even to create a route as you fly. This route can be edited and used like any other route.

The MARKERS.ERT route file is often overlooked – make use of it, it is quite useful.