GTE DUATS Flyer

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Introduction to the GTE Flight Planner

The flight planning module is designed to assist the pilot by computing and printing a flight log. The flight planner can be directed to produce a route from the departure airport to the destination airport completely automatically, or it can be given an *origin, intermediate points,* and a *destination.* The flight planning module utilizes sophisticated algorithms to rapidly compute a true shortest-path route. It utilizes the full FAA database of airways, airports, and navigation aids for the continental U.S, and automatically takes advantage of the up-to-date winds aloft information available on DUATS.

Limitations

The flight planner can only assist you in planning a safe flight, If you:

Verify the performance data you supply to the flight planner is correct for the particular aircraft and conditions..

Obtain a thorough weather briefing and understand how any enroute weather may affect the planned route of flight..

Verify that the planned route of flight does not encroach on any airspace restrictions, either charted or issued by NOTAM..

Check that navigational aids or airways which you will be using are not affected by NOTAMs..

Ensure that the planned altitudes will provide adequate terrain separation and in the case of instrument flights, that they are at or above required minimum altitudes..

Add appropriate reserve amounts to the fuel you carry for the flight -- the flight planner does not include any reserve fuel in its computations..

NOTE: ***Each requested flight will be planned at the altitude specified by you. The flight planning module does NOT take into account obstacles, terrain, controlled airspace (ARSAs and TCAs), and special use airspace (prohibited areas, restricted areas, alert areas, warning areas, military operation areas, etc.). The pilot MUST verify the suggested route against current aviation charts to ensure that it can be flown safely.***

The flight planner computes the fuel burn based on known distances and winds and does NOT include reserve fuel in its calculations. It is the responsibility of the pilot to ensure that reserve fuel adequate for the flight is available – both to meet the minimum FAR requirements, and to meet potentially unanticipated conditions such as stronger head winds or re-routings by air traffic control.

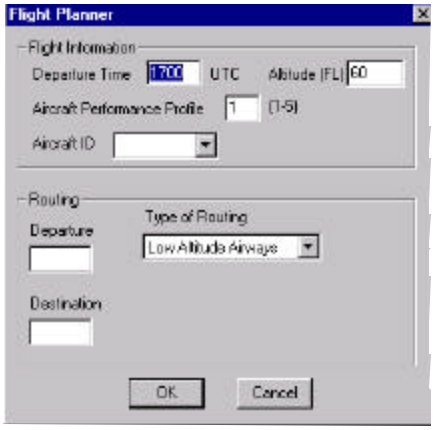
The flight planner **computes** the magnetic course for each leg of the flight. These may differ from the official definition of an airway segment by a few degrees. Always consult current VFR or IFR charts for the published radial for an airway.

Using the Flight Planner

To plan a flight, you must supply the flight planner with several basic pieces of information:

1. Departure point.
2. Destination.
3. Departure time.
4. Route selection.
5. Aircraft performance information.
6. Cruise altitude.

Cirrus provides you with a dialog box which displays a form that prompts you for the information.



If you use DUATS interactively this data will be entered through a combination of prompts and menus. Advanced users may use Quick Path to input this information rapidly, by passing the menus and prompts.

How Wind Is Applied to the Flight Planner

The GTE Flight Planner uses current and future winds information pertinent to the

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route of flight. This means that if you plan a flight form the East Coast to the West Coast and the ETE spans two enroute wind reporting times for FDs the flight planner will accommodate the correct wind for the route and time. Winds used by the flight planner are interpolated from two wind reporting locations per flight leg. Flight legs are determined either automatically or user defined by the pilot. Thus a route of flight from Dulles to San Francisco could be broken up into many legs if you are using Victor routing, Jet routing, VOR to VOR, RNAV, or LORAN/GPS. However, you could simple ask for IAD to SFO the flight planner considers this to be a single leg provides wind information from only two reporting locations along the route. This probably does not represent the actual wind for that flight. To get accurate wind information you need to break the flight into multiple legs.

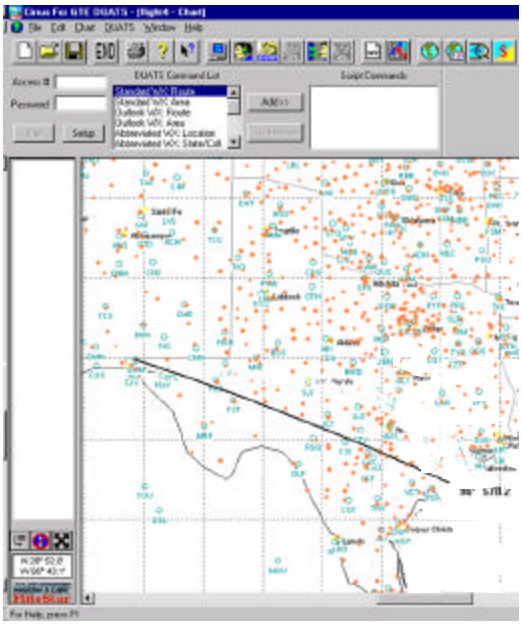
User Way-points

Sometimes, you need additional way-points to define your route. If you want to bend your route around restricted airspace, for example, you may need a place to connect your route that doesn't exist on the chart. You can make a place by adding your own way-point.

You can also add user way-points to define private airports, or other places you need Cirrus to keep track of. We'll show you a easy and practical way to add user way-points in a moment, but first, we would like to introduce you to the Cirrus ruler.

You can find any point on the Cirrus if you know its position relative to something else. Or you can measure the distance between any two points on the chart.

So, how far it is across Texas? Point to El Paso, press SHIFT+MOUSE BUTTON (use the LEFT mouse button). While holding SHIFT+MOUSE BUTTON, drag the mouse pointer over to the Gulf of Mexico. Cirrus shows the direction (magnetic) and distance from El Paso.



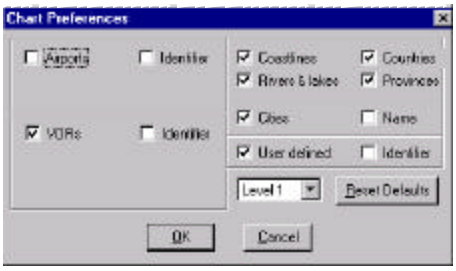
Suppose you want to create a user way-point at this location, (south-east of El Paso 93° bearing 625.5 NM). With the mouse pointer exactly where you finished measuring with the ruler, press the CTRL KEY and while holding the CTRL KEY, click the left mouse button. Cirrus will open the Edit User Way-point dialog box where you can define a way-point at that location...

The latitude and longitude is already filled in for you, but if you were imprecise with your mouse pointing you may change it here. Fill in the rest of the information about your way-point. Cirrus computes an accurate magnetic variation, but sometimes local variations are not up to date and you may wish to use a variation that agrees with what is published for other local navaids and airports to make your courses come out right.

Make sure you enter the latitude, longitude, an identifier, and check the magnetic variation. If you leave the identifier blank, you will not be able to see the way-point in the user way-points list shown later. When entering latitude and longitude, use the degrees, minutes, and hundredths of minutes (DD MM.MM) format. Use Tab and Shift+Tab to move between the boxes.

For example you would enter 45 degrees 20 minutes and 30 seconds North as "N Tab 45 Tab 20.50" (since each minute is 60 seconds, 30 seconds is the same as .5 minutes). You may drop minutes or decimal values of minutes from latitude and longitude if you don't need the precision.

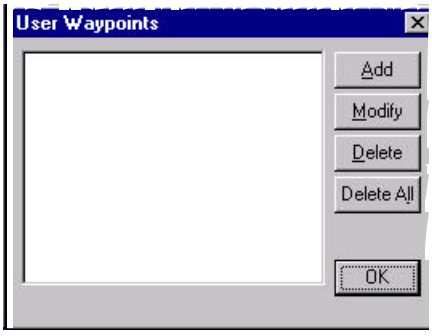
Choose OK (ENTER) when you are done. If USER WAY-POINTS are turned on under Chart/Preferences (CTRL+I) then Cirrus will display a symbol on the screen for this new way-point.



The Case of the Disappear-ing User Way-points: User way-points appear on your chart as long as they are enabled in the chart preferences. Cirrus shows user way-points by default at all levels of magnification. However, if you later turn them off under Chart/Preferences (Ctrl+I) you will not see them. You will need to go back into Chart/Preferences and re-check the User Way-points box for all zoom levels in which you disabled them. Also, note that the user way-point identifier needs to be checked or it won't appear on the chart.

Using the menu to create and edit User Way-points

To add, modify, or delete user Way-points, choose User Way-points from the Edit menu (ALT+E, W). This opens the User Way-points List dialog box.



Choose Add to create a new Way-point. If you wish to work with an existing Way-point, then select it from the list and choose Modify or Delete. Add and Modify open the Edit User Way-point dialog box where you can type in way-point data. See the previous section for instructions on filling it out. When you're done with the User Way-points list, choose OK.