Atlantic Sun Airways Payware Aircraft Guides.

These guides are designed to help pilots operate the various payware aircraft available for the ASA fleet. They are by no means comprehensive but do enable pilots to take the aircraft from a “Cold & Dark” state (everything off), through systems programming, engine start-up, take off and landing in a streamlined (as possible) method.

These guides do not deal with:

- System testing ie: testing the function of the aircraft systems before start-up.
- System failures.

The operating manuals for most payware aircraft include large sections about going through the test procedures for the various systems. I find that as a virtual pilot I can guarantee the system's functionality and when flying a variety of aircraft in a short space of time, I do not have the time or memory of the tests to go through all these checks!

I have to confess that when I fly I have all failures off. This is a point of practicality so I am able to leave the aircraft to look after itself in cruise mode and not return to find my trans-oceanic flight crashed 5 hours ago through some random failure.

This particular guide is my first one. Any feedback is welcomed to improve the accessibility and quality of these guides.

No. 1: PMDG 747-400.

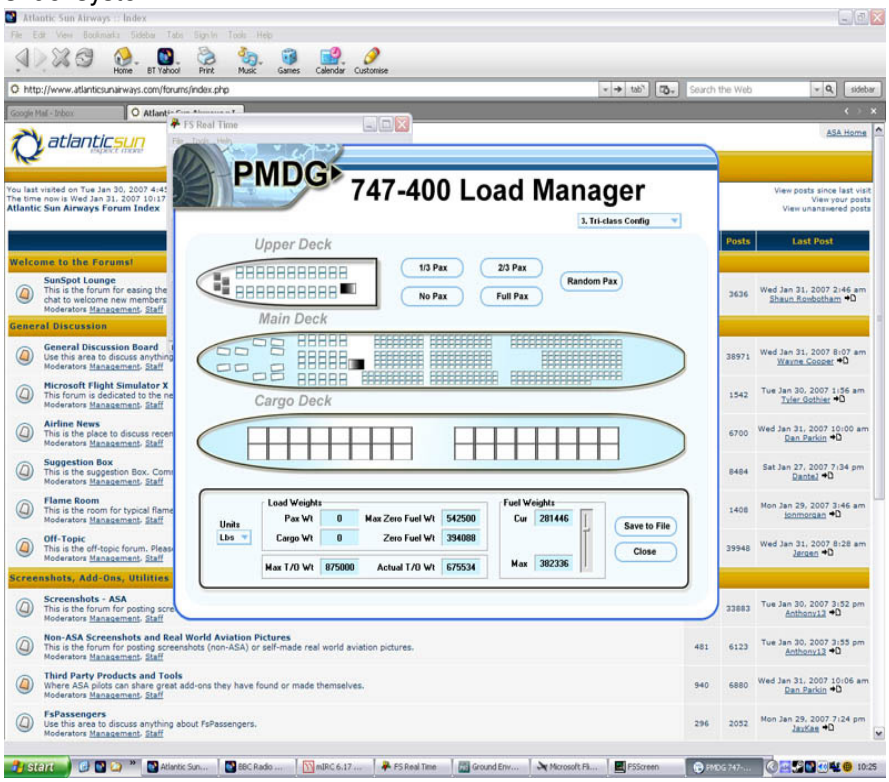
The 744 is PMDG's most recent airliner and is a wonderful aircraft in terms of both systems and hand flying. Below is how **I** set up and start the aircraft. It works for me but is by no means definitive.

A rule of thumb for this aircraft: Left Click to reduce a value or turn a dial to the left.
Right Click to increase a value or turn a dial to the right.

Part 1: Setup and FMC.

Preparation.

Use the load sheet to set fuel and load weights. This is particularly important if you use FSPassengers. You don't have to load passengers here but must load the correct fuel – for some reason FsP does not interact well with the 744's fuel system.



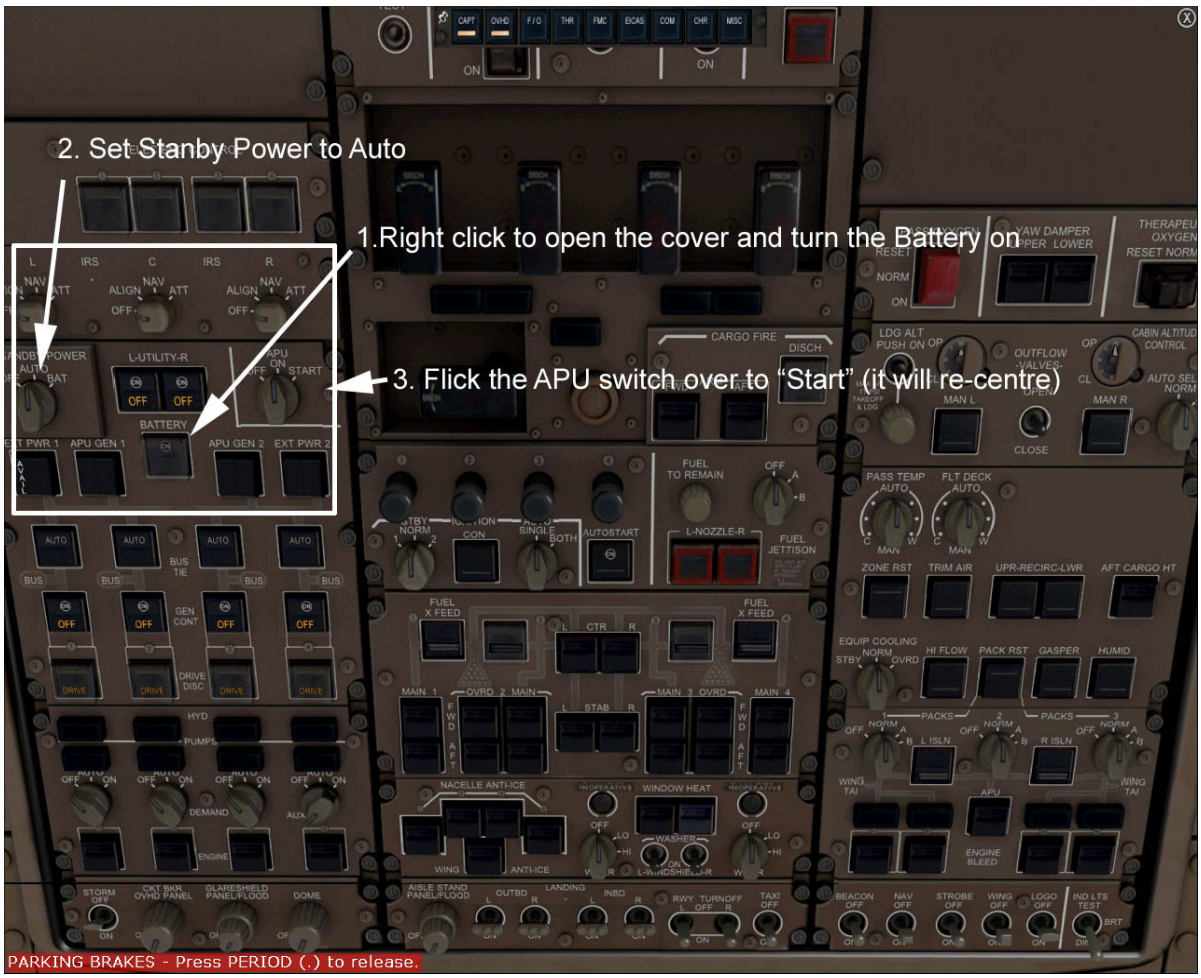
Use a fuel calculator (I use the Pierre Chevallier one on AVSIM), load up your fuel and passengers and hit "Save to File".

Cold & Dark.

As recommended by many payware aircraft I start with the default flight with engines off:

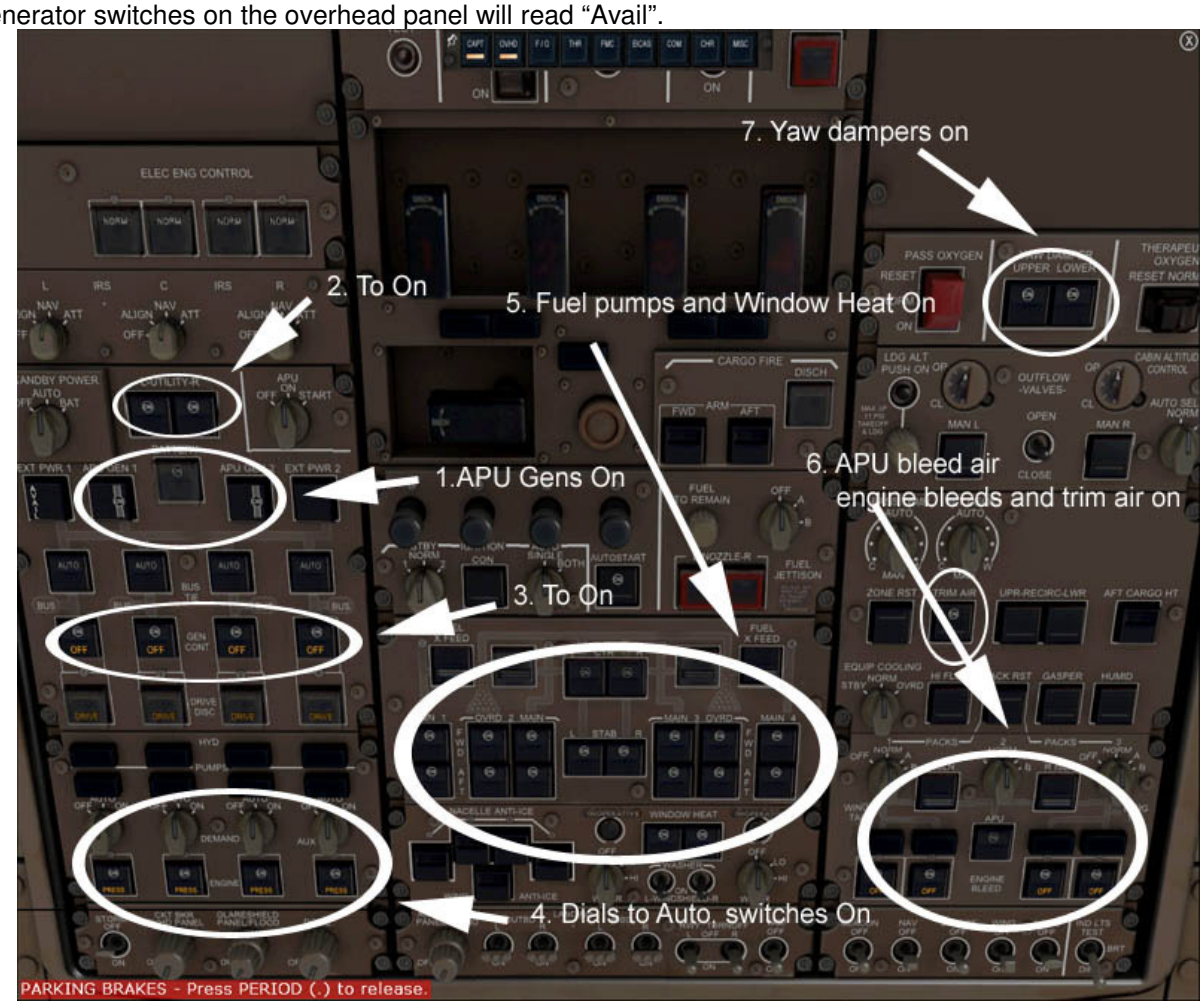
Then you can load up the 744:

First we need a sustainable source of Power and Air. Although Ground Power is available when the Parking Brake is on I always use the APU (Auxiliary Power Unit) so I can start the engines as I pushback from the stand. Open the Overhead Panel:



The main panel should look something like this while we wait for the APU to power up.

Once the APU is running we need to set all the overhead panel switches. When the APU is ready the Generator switches on the overhead panel will read “Avail”.



Now we have power and bleed air we can start to set up the navigation of the aircraft. First we need to tell the aircraft where it is. To do this we use the IRS and the FMC. In the simulation I have alignment set to immediate, you can set it to what you wish through the PMDG menu. The IRS switches are just above the APU controls.

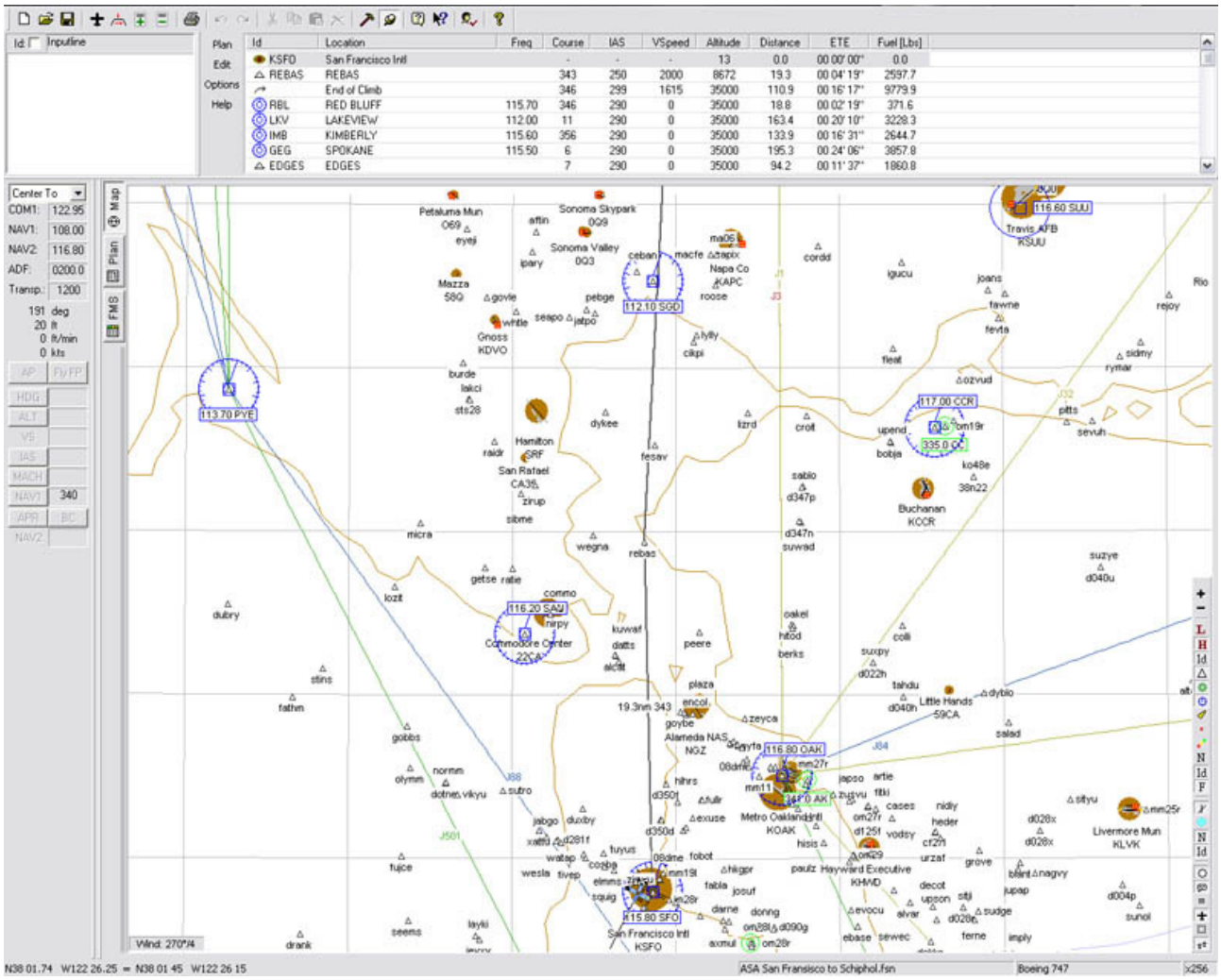
First set the switches to “Align” for a moment, then to “Nav”. Now open the FMC and you should see this page:

Enter the ICAO code of the airport you are at and a Latitude and Longitude position will appear. You may even be able to set the exact position of your gate but this doesn't always work in FS.

Use the “CLR” button to get rid of the message in the scratchpad at the bottom of the FMC screen.

Click on the right hand side button beside the Lat and Long positon and it will be copied to the scratchpad (at the bottom of the FMC). Then simple click on the button beside “Set IRS position” and the information will be written in. The aircraft now knows where it is and the map display should change accordingly. If I'm honest I sometimes have to fiddle with Align and Nav modes to get this right.

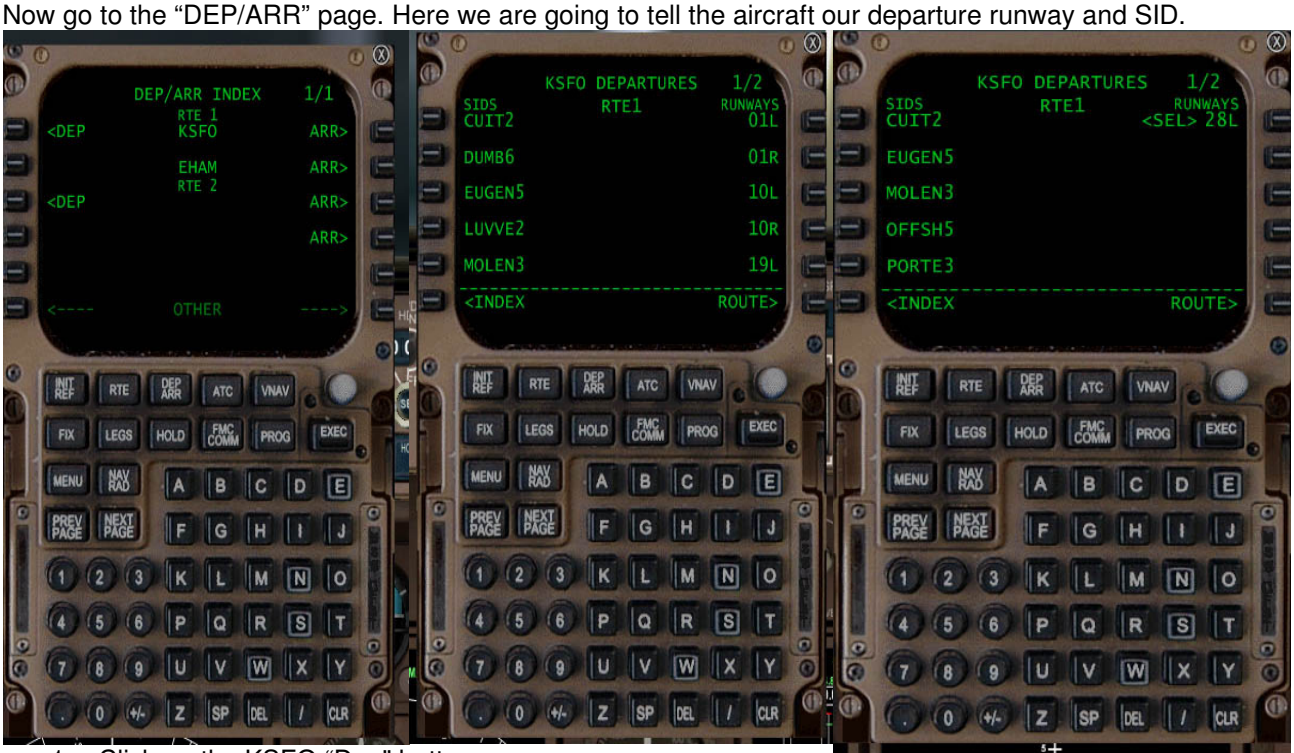
We can now start to program our flightplan into the FMC. For realistic FMCs such as this one this is where a good route planning tool becomes invaluable. I use FSNav for all my route planning:



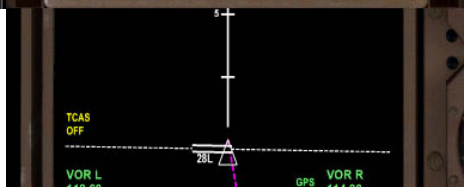
Here is my departure route out of KSFO. I know that REBAS is the end point of northerly SIDs out of KSFO so that is my first proper waypoint. The key thing about FSNav is the easy use of Airways – as you'll see know which airway you are using makes programming our route much easier.

Here is the first page of our route planner. We have our departure airport and our destination airport entered. Having set the IRS and entered the departute airport you can see the map display knows that the aircraft is sat at KSFO.

Now go to the “DEP/ARR” page. Here we are going to tell the aircraft our departure runway and SID.



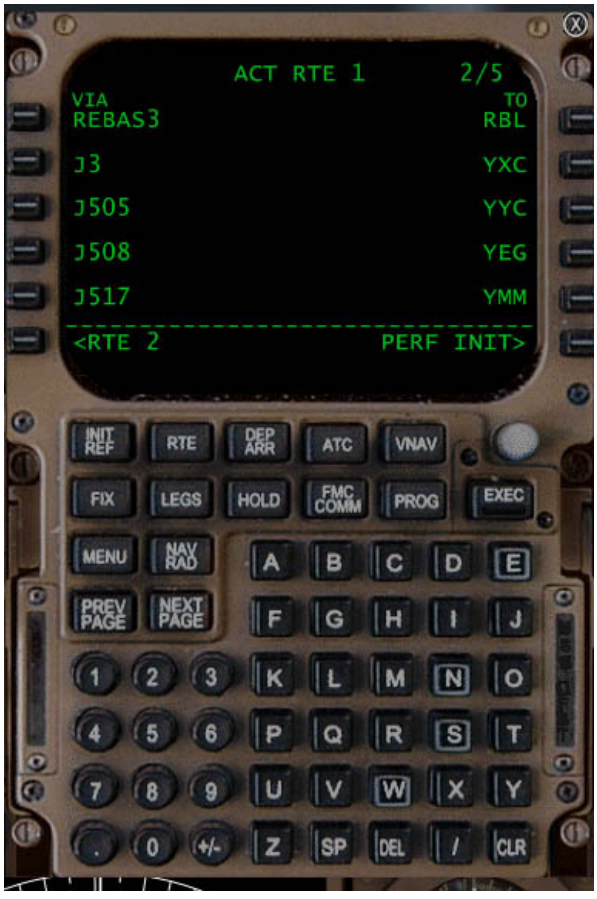
1. Click on the KSFO “Dep” button
2. Use “Prev Page” and “Next Page” to select your runway
3. I have selected Rwy 28L now I need to select my SID. You can see the active runway in the map display below.



4. With the runway and the REBAS SID selected I also have the option of inputting a transition waypoint. You do not have to do this as it might not fit your flight plan.
5. Back to the front page of the route we now have our departure runway displayed.

Now we can start to program the rest of our route.

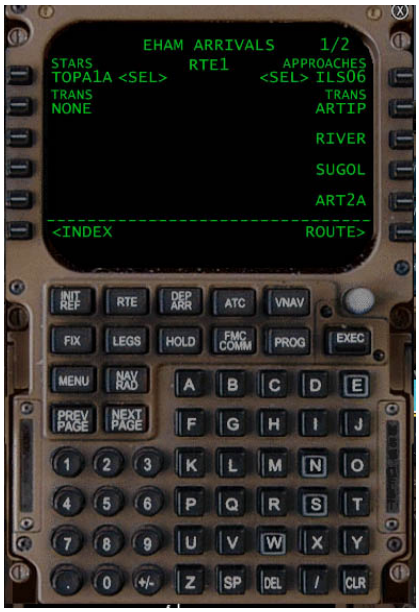
Here is the route page. You can see the REBAS3 SID and the onward transition to RBL that we have already programmed in as part of our departure procedure.



Using FSNav I can see that from RBL we pick up airway “J3” that we follow to the YXC VOR up in Canada. All we have to do is type “J3” into the scratchpad and then click on the left hand side button to enter the Airway. Then enter the last waypoint we use on that Airway on the corresponding place on the right hand side and the FMC will write into our route all the intervening waypoints. Note, these are not displayed on the “Route” page but are displayed on the “Legs” page that we will look at later. As an aside if anybody wants to fly VATSIM but isn't sure what to do this is the format in which you should file your flightplan.

So now we have programmed in our departure and cruise sections of the route. With the PMDG 744 you can also program in your approach and landing at this point. On a long flight you would leave this action until you were closer to your destination to receive more up-to-date weather information but for the purposes for the guide we will program this now.

1. Here is the end of our route. From the Schiphol charts I know “TOPPA” is the start point for a STAR.
2. Go to the “DEP/ARR” page and click on the button beside “EHAM – ARR”.
3. Now I have selected the runway at Schiphol “ILS06” (ILS approach to Rwy 06) and I am presented with STARs and transition waypoints.



4. I have used “Next Page” to scroll through and find “TOPA1A”, the STAR that starts at the TOPPA waypoint.
5. Then I have chosen “SUGOL” as my transition waypoint as I know from my charts that this is the correct transition waypoint for my North Westerly approach to Schiphol.

The amount of information displayed on these pages will depend on the SID/STAR database you have loaded. Every 2 -3 months I pay £10 to download and update all my navigation databases for all my aircraft but there are freeware options out there.

Now we have the entire route programmed in. Click on “Activate” and the “Exec” button will light up. Click on this to make the flightplan active. Everytime you edit the flightplan you need to confirm the change by hitting the “Exec” key.

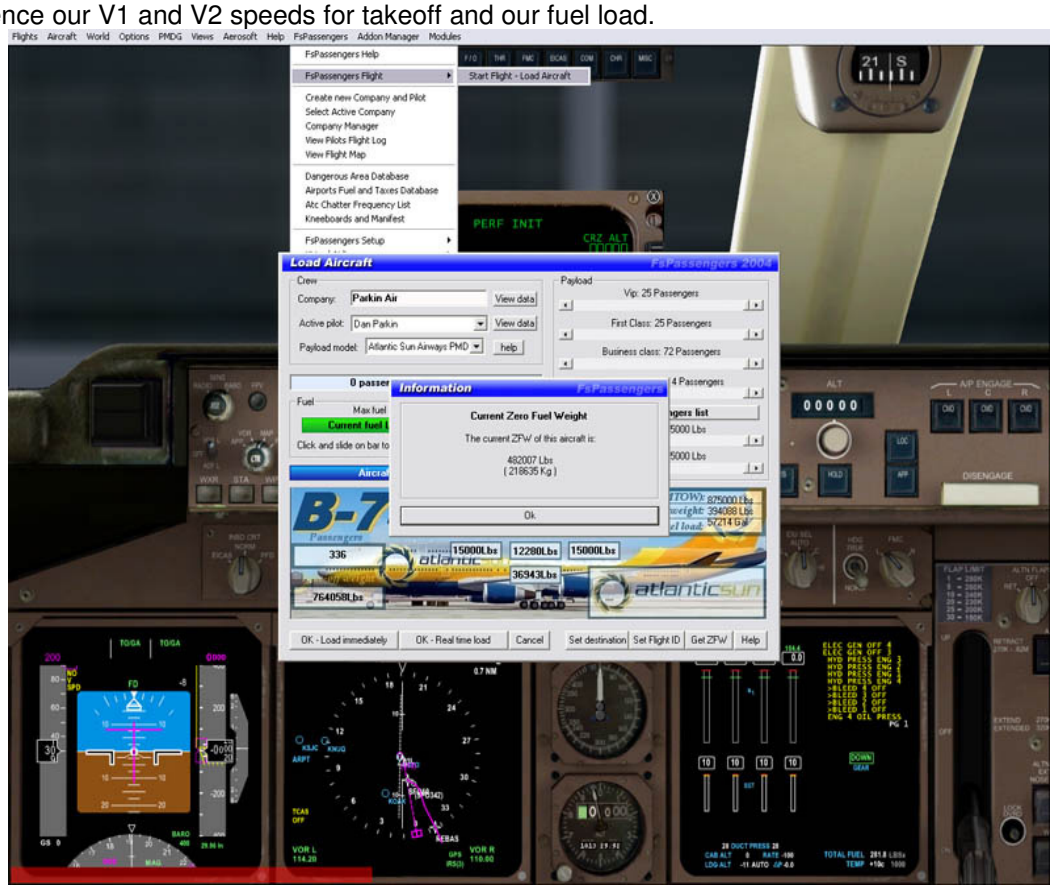
We can check the route using the “LEGS” page I mentioned earlier. This is the most useful page on the FMC as it enables us to check our route but also edit it easily both at the start of a flight but more importantly during our flight.

Here is the “LEGS” page towards the end of our flight and you can see the waypoints that make up our “TOPA1A” STAR that we just programmed in and our transition waypoint “SUGOL”. The second page shows the end of our route with the final two entries being Runway 06 and the Go-Around altitude and track should we need it.

The LEGS page will also show us discontinuities (gaps) in the flight plan.

Again you will need to hit the “Exec” key to confirm the change to the flightplan. Once the flightplan has been loaded into the FMC and activated the bottom right of the screen will say “PERF INIT”. Click on the button to go to the aircraft weights page.

The next step is to enter the aircraft weights into the FMC. This will give us our climb profile in “VNAV” mode and influence our V1 and V2 speeds for takeoff and our fuel load.



Here is the FSPassengers load sheet showing our Zero Fuel Weight (ZFW), that is the aircraft weight including passengers and cargo but not fuel. If you are not using FsP for loading the aircraft then you take this figure from the loadsheet before you load the aircraft in FS.

And here is the “PERF INIT” page with our ZFW of 482,000lbs entered. Also on this page you enter your reserve fuel (normally around an hour's fuel), the cost index (economy setting – I always use 50) and our cruise altitude (FL330, or 33,000ft). Just do these steps by putting the relevant information into the scratchpad and then clicking beside where you want the information to go.

Now go to the “THRUST LIM” page (on the left below). Here we get the opportunity to derate (reduce) the power used by the autothrottle during takeoff and climb. I normally leave these alone unless I am very light.

Finally there is the “TAKEOFF REF” page. This sets the V1, VR and V2 speeds based on flap settings and weight. Put in the flap setting (10 degrees on long runways) and then the speeds will appear in small print on the right. Click beside the speeds and the font will grow bigger and be entered in to the flight display.

We are finally ready to start the engines.