

June/July 2006 Edition

Delta **FLY!**



In this issue...
- Flight Planning - SEA to SLC
- Learning the B763's FMC
...and more!



June/July 2006

Issue #7

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On short final for runway 11 at
Grand Junction, CO (KGJT) – Trevor Bair

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From the President's Desk



Terry Eshenour - President, Senior Captain 777

In the Northern Hemisphere summer is beginning signaling school and work vacations. Our friends in the Southern Hemisphere can look forward to cooler weather and spending more time indoors. With more time available, pilots globally will find time to go to their virtual hangars and take an airplane out for a spin. Personally I enjoy viewing Google Earth and finding DVA pilots flying in all corners of the world.

Andrew Dalrymple, Director of Events, scheduled events through mid-July with many weeks having multiple events. Plan to participate. The experience will be fun and interesting and certainly challenging. Expect the unexpected when flying in a group flight.

Matt Reamy, Editor of Delta FLY!, is on leave. George Lewis, Vice President and Director of Training, agreed to step in to assist as acting Editor until Matt returns. Thank you George for your assistance.

If you review our server statistics you will note a growing demand with higher page hits and increased bandwidth with our highest on June 11th since we moved to the dedicated server back in November. There is no reason for concern about site performance since our dedicated server is idle most of the time and is rarely required to use even 10% of its capacity. Likewise, bandwidth usage is not an issue; we are well within our plan.

The Flight Academy has six pilots that earned a Private Pilot License certification since opening its doors in April. George Lewis and crew have plans underway to offer additional instruction units.

The improved Delta Virtual Airlines flight schedules which will be updated monthly were launched early in June. Luke Kolin, Vice President of Technology, worked with an airline schedule service to provide a monthly data feed of DL and AF flight schedules. This will simplify the process for selection of flights. There will be one place to visit for current DL, AF and codeshare flights.

Wishing you enjoyable and safe vacations.

Thank you for flying Delta Virtual Airlines,



Terry Eshenour
President, Senior Captain 777
DVA057





Welcome to the June/July 2006 issue of the Delta FLY newsletter. I am helping Matt Reamy out this issue as the interim editor. During Matt's absence we'll be doing bi-monthly issues.

This month I wrote an article on flight route planning from KSEA to KSLC and it delves into the thinking and planning process of SID/STAR selection as well as jet airways and the use of high altitude enroute charts.

Stephen Faison wrote a nice article on programming the FMC for the Level-D Simulations B763 payware bird, complete with screenshots. If you are new to the LDS 763 or need some FMC help, check this article out for some good tips.

Squawkbox has come out with update 3.1 which fixed a bunch of issues with the previous version. Issues with planes not appearing, modelsets and other things are addressed. This is a must-have download if you fly online and use Squawkbox.

Jim Warner, DVA Flight Academy CFI, contributes this month with an article on fsnet/copilot and discusses some of the issues you'll likely encounter when tackling this great piece of software. Jim is usually the first instructor the students encounter when starting flight lessons in the PPL course, as Jim is knowledgeable in computers and is a great person to work with involving the initial setup of multiplayer, fsnet/copilot and firewall/routing issues.

On behalf of the staff at DVA, I hope you enjoy this issue of the Delta FLY

George Lewis
DVA2253
Interim Editor In Chief Delta FLY
DVA VP of Training





Hello fellow DVA pilots! I've got some updates concerning the flight academy.

Vince Carlo has resigned as Flight Academy CFIs. I thank him for his service and dedication and wish him all the best!

I am happy to announce Jim Warner as one of our new DVA Flight Academy CFIs. Jim is a real world pilot and is heavily involved as the first contact for Private Pilot (PPL) students. Jim is talented with computers and can help first time students get up and running with teamspeak, multiplayer and fsnet/copilot issues. For new students at the Flight Academy, Jim is going to be your first flight instructor.

Our newest DVA Flight Academy CFI is Andrew Logan. Andrew is a real world flight instructor and is looking forward to teaching DVA members in the flight academy how to fly airplanes.

We have implemented a 30 day inactivity policy in the Flight Academy. Simply stated, if you have no activity in a course over a 30 day period, we will withdraw you from the course. There are some pilots who enroll in a course and then nothing happens. Activity is taking the exam, requesting/taking flight instruction or sending a comment in the course you are enrolled in.

If you happen to be withdrawn and would like to continue, you should be able to re-enroll in the course and you should be able to pick up where you left off. If you have any problems, just email me and I'll get it fixed for you.

We fly the EMB-120 aircraft and have recently updated the panel in the aircraft to facilitate our training flights for future courses. Changes include a dual RMI, a timer, turn and bank coordinator, different fuel flow gauges and master battery and avionics switches added to the airplane. You can download the new EMB-120 in the Pilot Center's Fleet Library.

We are currently offering the Private Pilot (PPL) course, which teaches the basics – hand flying the airplane, introduction to online flying and ATC communication, VFR flight planning and navigation and traffic pattern work. We don't use the autopilot in the Private Pilot course.

Once you pass the course, you will be awarded your virtual Private Pilot License at DVA. This will even display in the water cooler next to your name displaying "PPL", indicating you have the rating.

The next course is being developed at this time, which is the Commercial course. This course will teach the next level of navigation techniques, including flying victor airways and specific VOR course radials. We'll tighten up the flying in the EMB-120 and then transfer to the CRJ jet. Basic charts will also be taught as we prepare the student for the IFR rating, which comes after the Commercial course.

If you are interested in signing up for the Commercial course when it becomes available, remember that the course will only be available to those who have graduated the PPL course.

We continue to review our Flight Academy exams and make improvements to them. Our exams have included multiple choice questions for some time now, but recently we added the capability of graphics to the test questions. This is crucial for future examinations where we will need to test the ability of the student to read charts, maps and flight instruments in the cockpit.

To join the Flight Academy, simply go to the Pilot Center and click on the Flight Academy link and sign up. Once enrolled, you'll get an email mentioning what steps to take. We would like students to pass their written examination by the third flight instruction session if possible. Those who wish to withdraw can send me an email at training@deltava.org and I'll take care of that for you.

We also have a MENTOR program in place. If you are in need of training in a specific area, send me an email that you'd like to have training and list the area of need. I'll do my best to hook you up with a compatible mentor, who is an experienced DVA pilot that is willing to help teach you that area of need.

If you are an experienced pilot who would like to volunteer to teach, please send me an email stating you'd like to volunteer for service as a mentor. I'll need to know what areas you are comfortable teaching in.

When you help someone as a mentor, keep in mind that the sessions are considered confidential between you and the student. It is unethical to post comments in the water cooler that you taught a specific pilot some techniques. This is potentially embarrassing to the person who requested training and doing so could result in you being removed from the mentor pool.

Happy Flying!

George Lewis
DVA 2253
Senior Captain, B722
DVA Vice President and Director of Training



Flight Route Planning - KSEA-KSLC

George Lewis, DVA2253

Flying into Salt Lake City, Utah is one of the most rewarding things you can do in flight simulator. The view going in is breathtaking. This month we're going to focus on flight route planning from Seattle, Washington to our Delta hub in Salt Lake City.

There are many ways to get to KSLC. It all depends on which SID and STAR you wish to fly out of Seattle and into Salt Lake City.

Let's look at planning those routes.

For starters, suppose I didn't know the area at all. I would go to Microsoft Flight Simulator's Flight Planner and do up a GPS direct route from KSEA-KSLC to get an idea of what navigation aids are between the departure and destination.

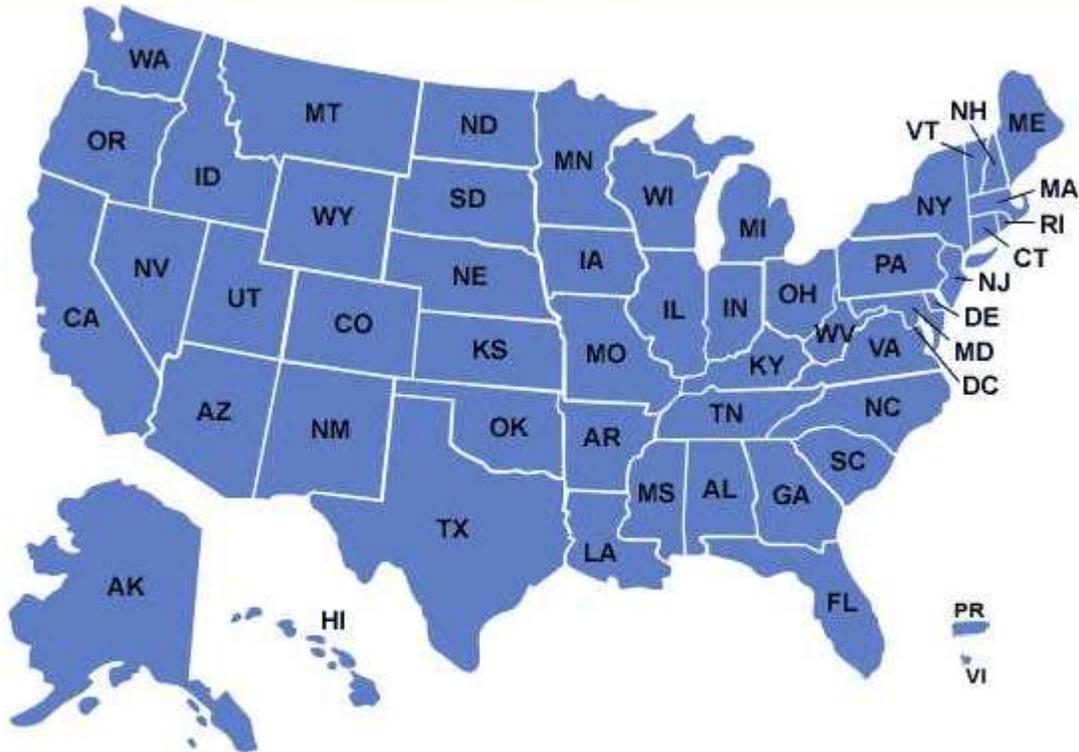


This builds me a straight line from KSEA-KSLC. I am looking for known VORs along the route, that I look for on the departure and arrival routes. Looking at the straight line route, I then go to the National Aeronautical Charting Office (NACO) website

http://www.naco.faa.gov/index.asp?xml=naco/online/d_tpp

Once I get here, I download the current departures (DP, or SID) from KSEA

Select a State to begin searching city and airport options:



Or, please choose one option, then click on Search.
More than one "Action Filter" may be selected.

For an explanation of the fields, click on the label.

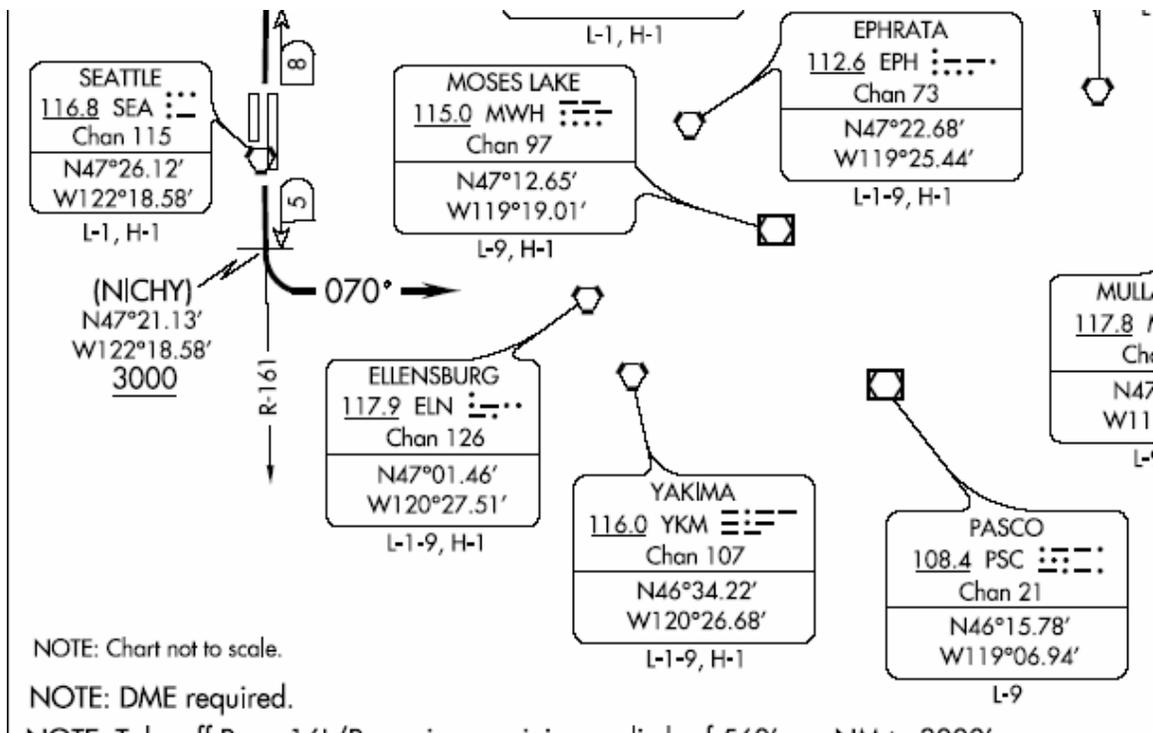
By Airport Identifier: FAA: ICAO:

I fly the Boeing 727 & don't use an FMC so I will ignore RNAV procedures, since they don't apply to me.

The NACO site is the original source of charts online – they are the makers of the charts. Everyone else is just using copies of the NACO charts. If you have a different website to obtain the charts, that's great, but you should give NACO a try.

I download all the departure charts from KSEA and all of the arrival charts from KSLC. I then open each PDF file and look at the direction the flight is going. I also look for these key navigation aids – VORs, along the route.

Look at the Mountain 5 departure, I notice the Yakima VOR, which is almost right on the route line.



The numbers below the YKM say L-1-9, H-1. These are the low altitude and high altitude charts that you can find these nav aids on.

So let's go to <http://www.myairplane.com> where they offer online viewing of low and high altitude charts. Keep in mind that they require Internet Explorer 6 and will not work with Firefox.

When you get there, on the bottom right corner you will notice you can choose charts to view.

It is much easier to purchase these charts at your local FBO or online at sportys <http://www.sportys.com> but these work pretty good and it's free to use.

After selecting H-1 from the drop down box, click submit and it'll bring up the chart.

VFR Sectionals
--Select a Chart--
Submit

VFR Terminal Area Charts
--Select a Chart--
Submit

IFR Enroute Charts
H-1
Submit

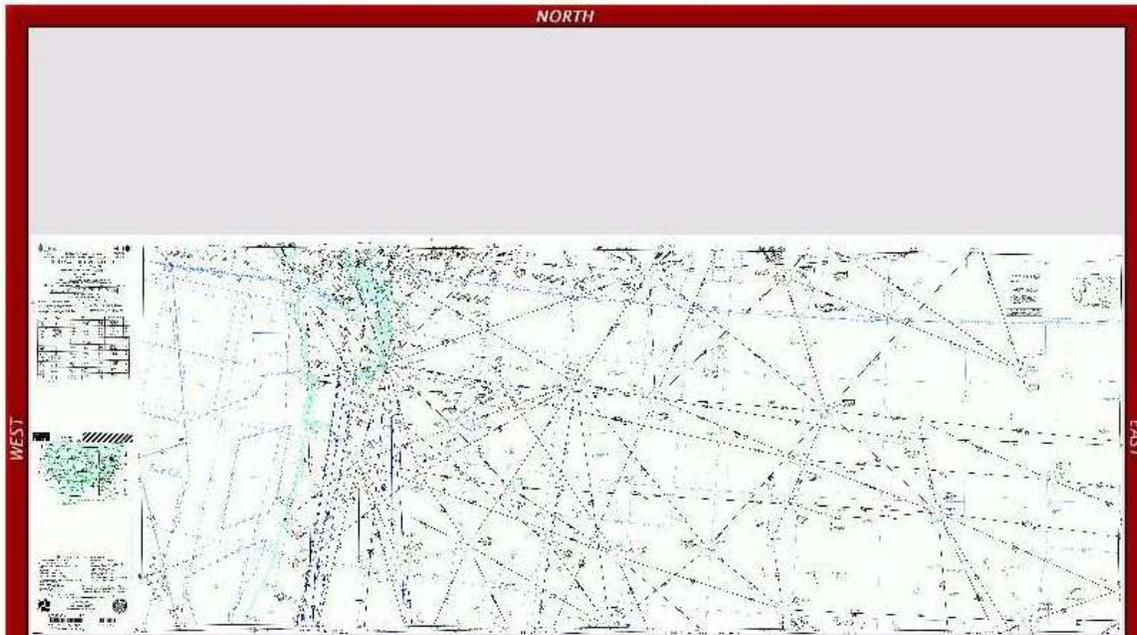
Chart Viewing requires
[Internet Explorer 6](#)

Initially the chart is not very readable.

VFR Sectionals Terminal Area Charts IFR Enroute Charts

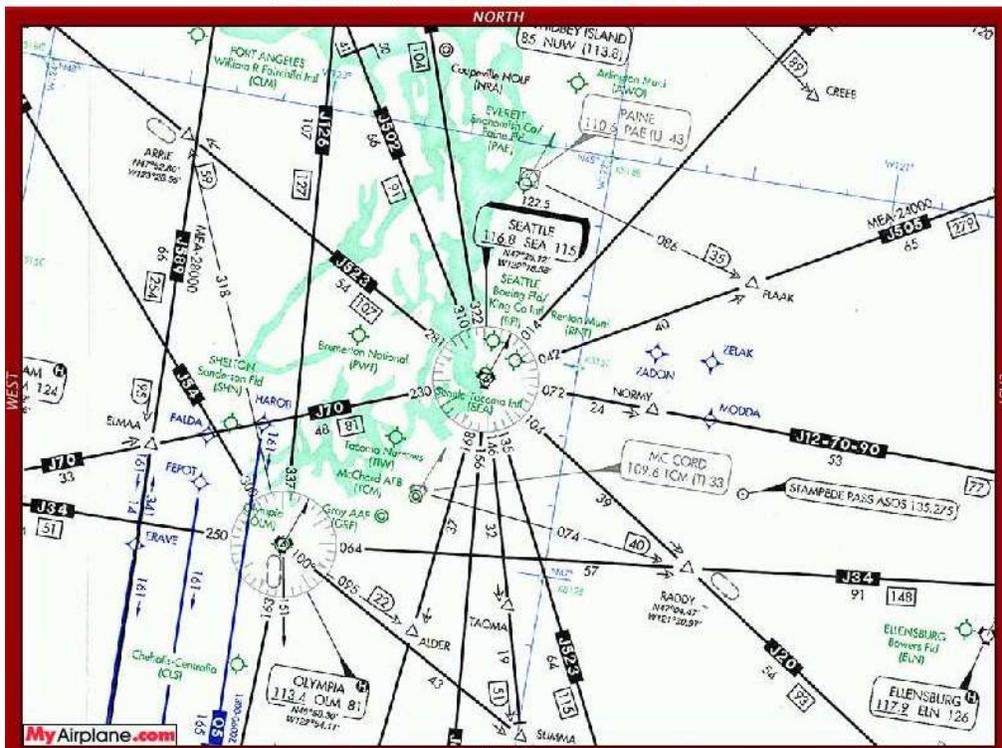
--Select a Chart-- --Select a Chart-- H-1

+ Pan

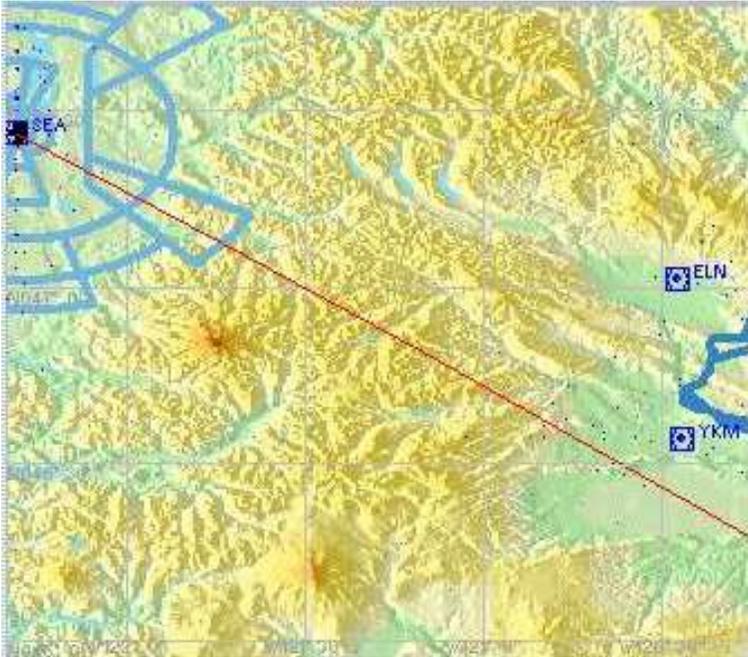


Make sure that the Zoom In button is pressed, then click on the chart, preferably near KSEA, which is to the northwest portion of the chart.

+ Pan



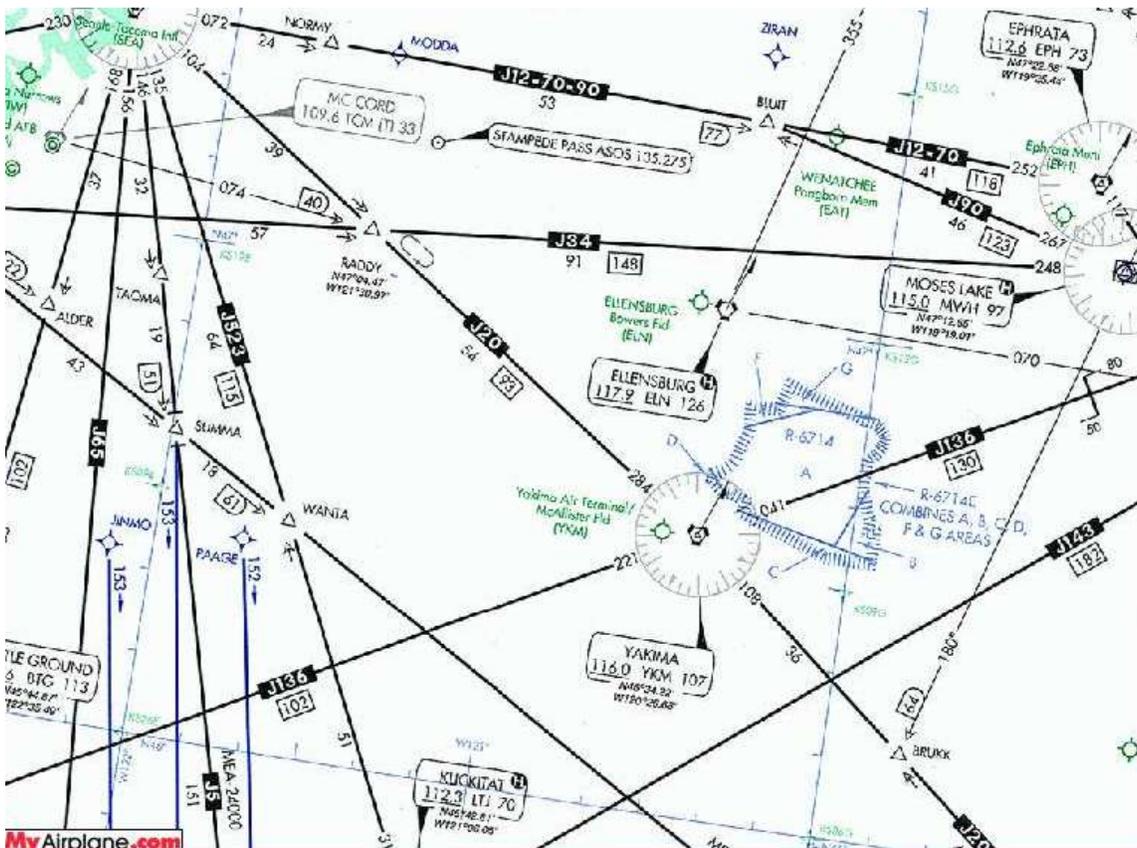
You can now see Seattle on the H-1 High Altitude Enroute Chart. Looking at the Flight Sim Flight Planner, we will try and get our bearings



Here we can see that the route line is heading to the southeast. We will want to look in that direction on the H-1 chart.

Looking in that direction, we see that the ELN VOR is in the view on the chart.

The ELN VOR is just north of the YKM VOR, so we'll want to look at the H-1 chart and find it by using the pan feature on the myairplane.com site

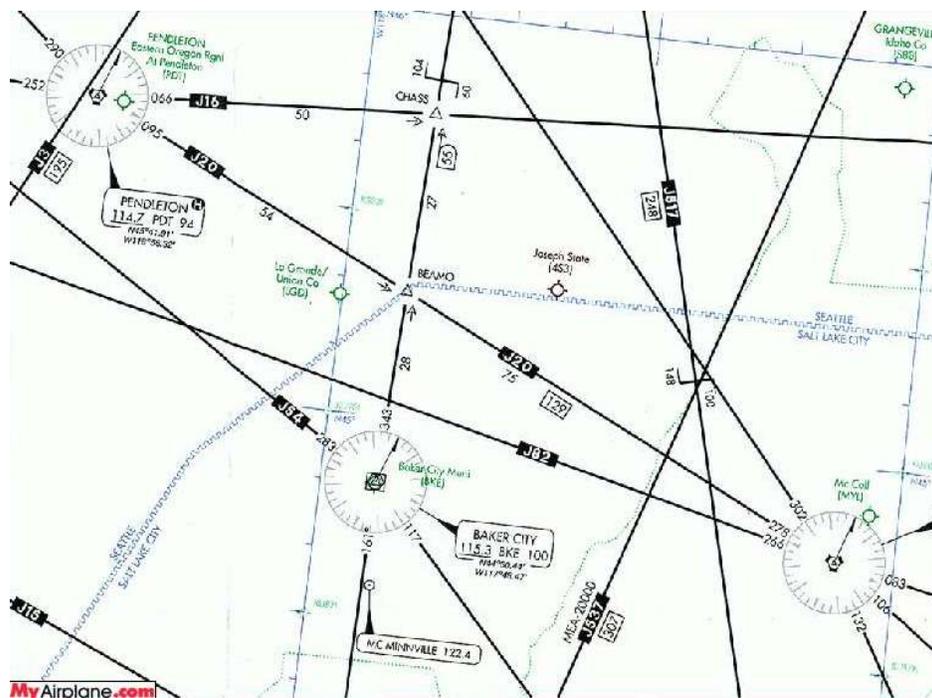


Panning to the south east, we now see the YKM VOR. The reason we're looking for this is because we found it on the Mountain 5 departure and want to see if this is a good route to KSLC.

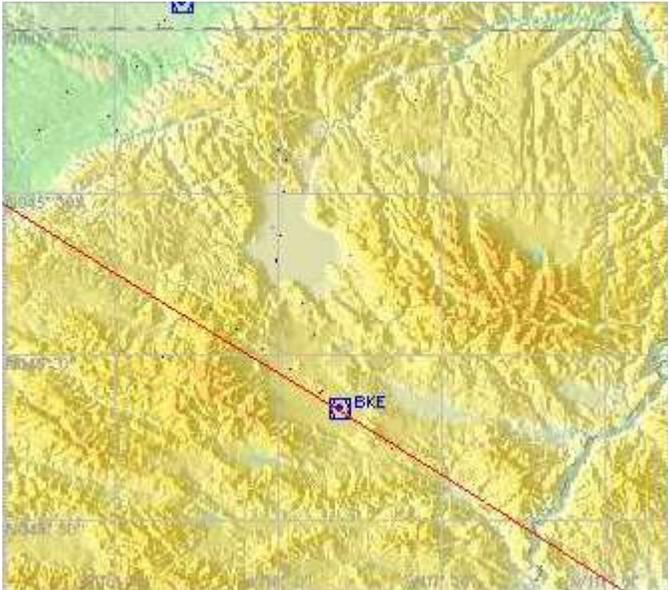
At this point we would follow the J20 jet airway and see where it takes us



It appears to take us to the PDT VOR. Next, we'll pan to the PDT VOR and have a look.



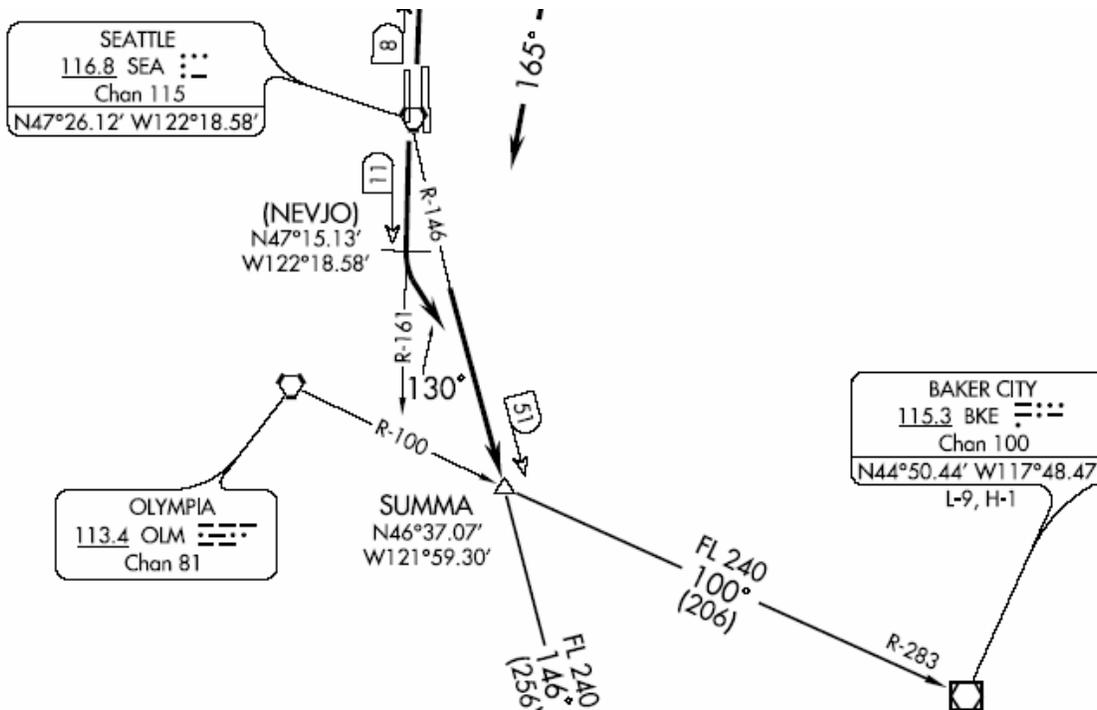
We see here that the J20 route continues on to another VOR to south east, but wait a minute, notice the Baker City BKE VOR? Let's look in flight sim again.



As you can see, this is why we look at the route and look for navigation aids.

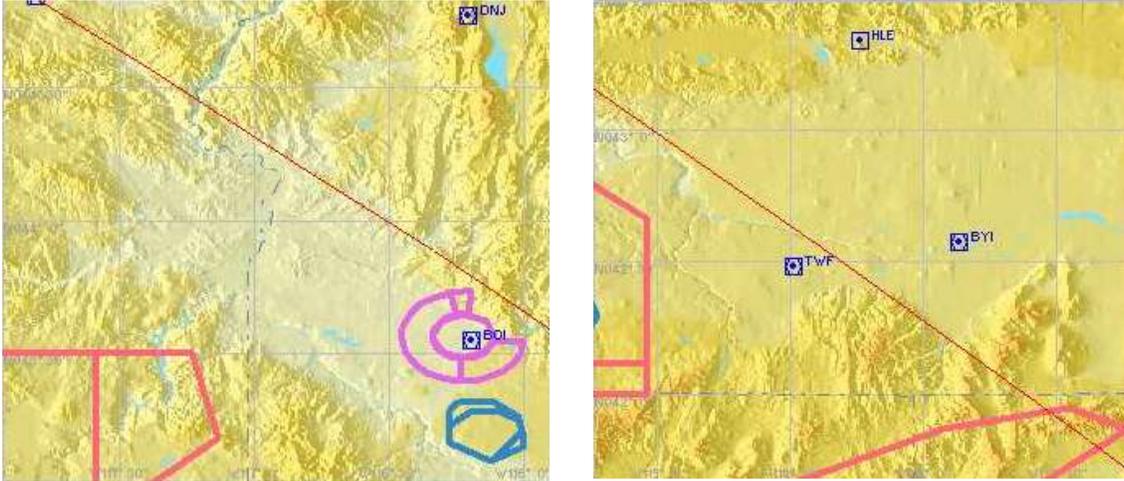
Not that YKM is a bad choice, but BKE is a better choice, because it is right on the route line.

Looking on the Mountain 5 departure, we don't see the BKE VOR. We could fly to the BKE VOR from the YKM VOR I suppose. However, let's look through the other departures and see if we can't find BKE on one of them.



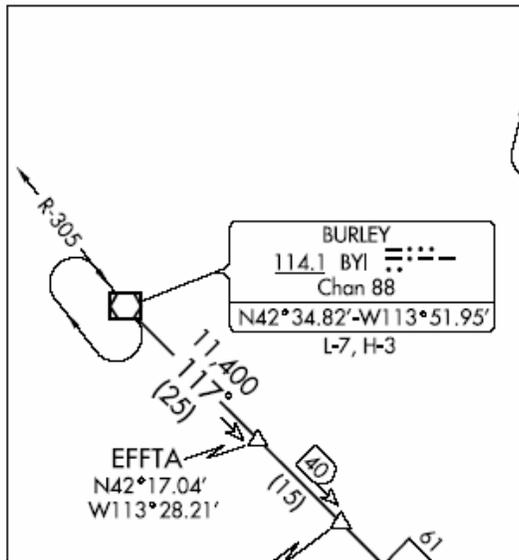
The SUMMA 6 departure does indeed list the BKE VOR. This is a better choice. We could still fly the Mountain 5 departure, but this is the departure we're going to look at. Just because it is on the route line and makes good sense to fly this departure, it still may not be the best pick. Why not?

It depends on the arrival. We now want to look at the flight sim flight planner route line and see what other navigation aids are along the route to KSLC and look at the arrival routes in the same manner, looking for the one closest and most convenient to our route line.



You can't see it very well here, but the VOR in the top left corner is BKE. The route line takes us by the BOI VOR and the TWF and BYI VORs. Ideally, this is the route we would like to take.

BEARR FOUR ARRIVAL

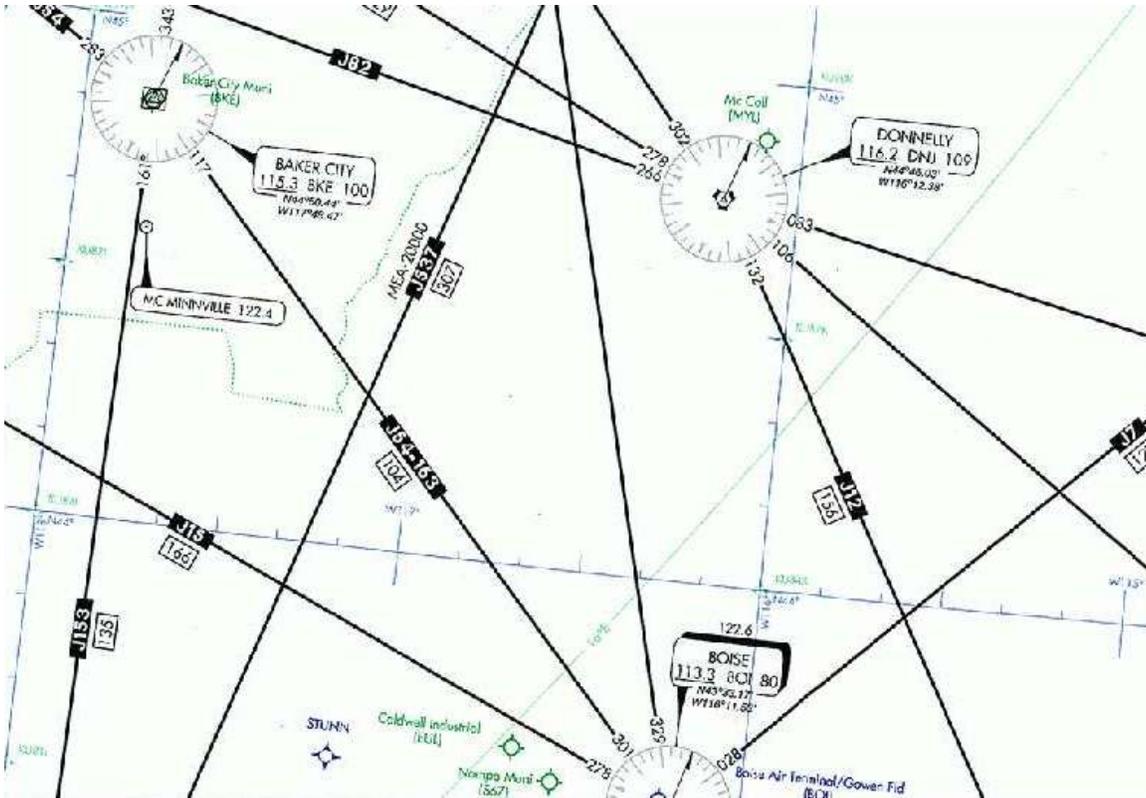


Looking at our STARS, we find that on the BEARR4 arrival, we can indeed hit the BYI VOR as a transition point.

So right now it looks like we have a good SID and a good STAR figured out. The SID is the SUMMA6.BKE and the STAR is the BYI.BEARR4.

The route line shows us that if we can fly a route that brings us by the BOI and TWF VORs, it will be nearly an idea straight flight.

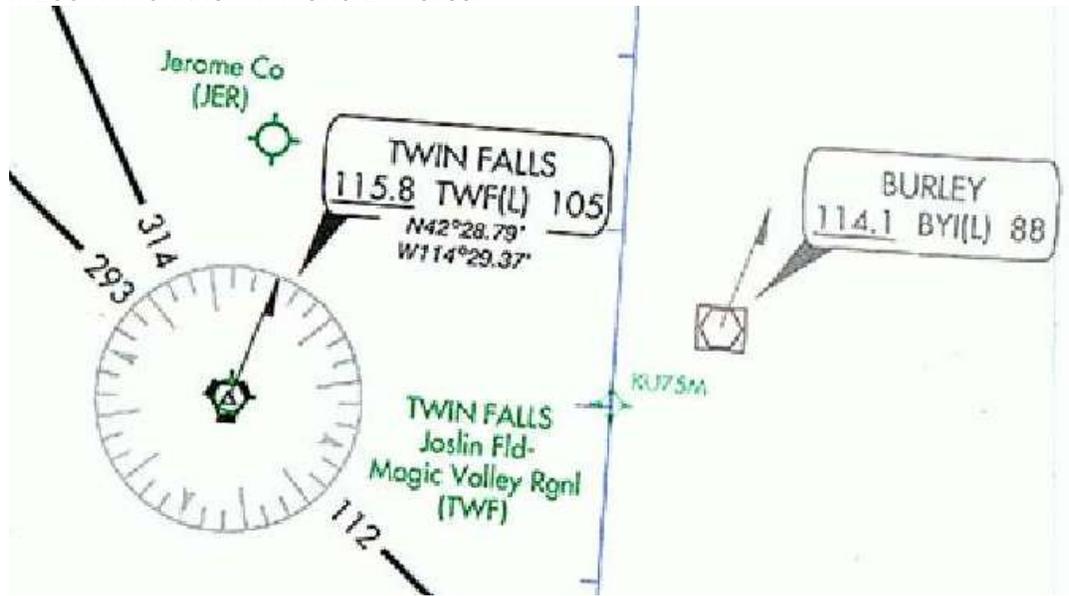
Let's now go back to the H-1 chart



Looking at the H-1 chart, we pan south east and we see that the J54-163 jet airway connects us to the BOI VOR. However, we have come to the end of the H-1 chart, so it's time to switch to the H-3 chart, where the BOI VOR continues. We need to look for a route from BOI to BYI.



There is no jet airway to the BYI VOR, but there is one to the TWF VOR via the J15 jet airway. Let's now zoom in on the TWF and BYI area.



One thing we notice is that both VORs have a (L) after their VOR name. This means they are low altitude VORs, and in Flight Sim 2004, that means a 60 NM range. We'll go to the flight sim planner and figure out the mileage and heading information from TWF to BYI.



TWF (115.80)	-D->	13500	109	445.0
				165.8
BYI (114.10)	-D->	13500	061	28.2
				137.5

By dragging the route line to the TWF and the BYI VORs, I was able to pull up the navigation log and determine that the heading to BYI from TWF is 061 and it is 28 NM away. This is all we're really looking for – the most important thing is that it's under 60 NM so we can track it with no problems.

At this point, we pretty much have our route. By looking at the departure and arrival charts and the H-1 and H-3 charts, we have determined our route from KSEA-KSLC will be:

SUMMA6.BKE J154-163 BOI J15 TWF BYI.BEARR4

This means we'll fly the SUMMA6 departure to the BKE VOR, then fly the J154-163 route to the BOI VOR, then fly the J15 jet airway to the TWF VOR, then direct to the BYI VOR, where we transition to the BEARR4 arrival. We fly the BEARR4 arrival all the way to KSLC, where ATC will give us vectors to land. If there is no ATC, we'll do it ourselves via Unicom.

This article covered how to find a good flight route, but there are still several other factors to consider, such as how many miles the trip is, weather, fuel planning, VOR radio frequencies and course headings to fly.

Good luck on your flight and I hope to see you in the skies soon!

Setting up the B763's FMC

Stephen Faison, DVA1760
Senior Captain, B763

Have you ever found yourself stuck or confused about a certain part of the FMC setup? Well, I'm here to solve your troubles and confusion. In this article, I'll show you how to correctly set up the FMC on the Level-D Simulations B767-300 from scratch to the very end before pushback with pictures to guide you.

The flight we'll be setting up for is the KATL-KJFK run. The route that we're using will include some Jet Airways, and your basic (RNAV) DP out of Atlanta and the STAR for KJFK. Here is the route: KATL DOOLY3 GRD J209 RDU J209 SAWED J121 SIE CAMRN4 KJFK. Our cruise altitude will be FL350.

This flight is just about 700nm so we'll be using just a tad over 40,000 lbs of fuel, including reserves, taxi fuel, holding fuel, etc. With 40,000 lbs of fuel, that should give us 50% of fuel in the left/right tanks. And after correctly setting up the Configuration Manager, our Zero Fuel Weight will be 264,800 lbs, our %MAC will be 19%, and our estimated Gross Weight will be around 304,882 lbs (for the actual Gross Weight, we will have to wait for the Fuel/Payload section in Flight Simulator to determine our exact Gross Weight.) Make sure you write these numbers down because we'll need them later for our FMC setup.

Note that it doesn't HAVE to be this exact number. Zero Fuel Weight depends on the number of passengers onboard and also the cargo weight, so your numbers might vary from mine

Ok, so start up FS, and we'll be on our way. Once you get FS open and setup with all your desires for airport, weather, etc., go to the Fuel/Payload button and open that. Since we're going to have 50% in each tank, and 0% in the center, go ahead and enter those numbers in the correct columns. The number I came out with after clicking OK after entering the numbers, was 305,500 lbs. Write this number down because, you'll be entering it in later.

Please note the following before we proceed: The procedures I am using for the FMC can be downloaded from this link - <http://www.planepath.com/html/lds.html>
Just install that download, and you're ready to go.

Ok, press Fly Now!

After setting up the cockpit from a cold and dark plane, we are ready to setup the FMC. Open the FMC, and you should see this

Just press the CLR button to get rid of "Verify Position" because we are about to do that now. To make it easier, you can do "Shift + K" and the FMC will show a "KA" at the upper left. This is "Keyboard Assistance" and you can use the keyboard to enter all the letters and digits to make life easier for you. After that, click the button next to FMC and double-check all the info on that page.



Then when you're ready, press POS INIT.

Enter the 4 ICAO codes for the airport you are at and you should see the coordinates show up to the right.

Then just click the button to the right of the coordinates that just showed up to put them in the scratch pad and then enter it into the lower right where the boxes are to set your IRS Position**, which lets the FMC know exactly where you are.

***Note that if you are not using cold and dark, and with the engines running, you can skip the IRS position entry because it will already be done for you*

After that's done, press Route. Go ahead and enter your Origin and Destination ICAO codes in the correct boxes and if you want to, enter a flight number.



Now go to the DEP/ARR page on your FMC and click the DEP button.

Choose your departure runway (I chose rwy 27R) and then choose the DOOLY3 with the GRD transition.

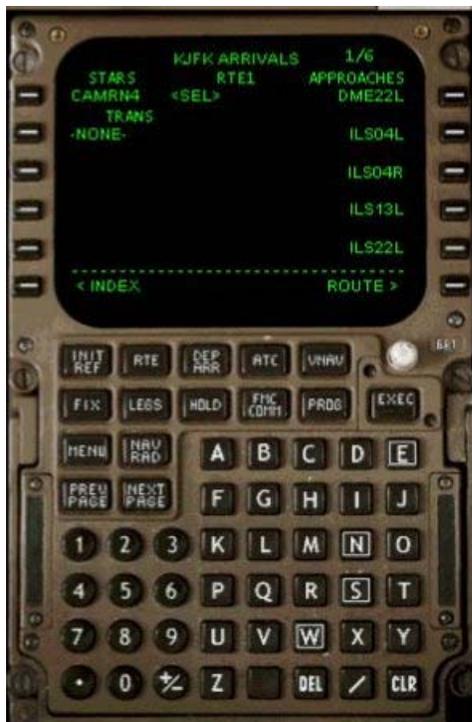
Now go back to the RTE page and then click "NEXT PAGE" to enter our route for this flight.

You should already see DOOLY3 on the left and GRD on the right. After GRD on our route, we have the J209 airway.

Remember to always put airways on the left, and your waypoints on the right.

So, next enter J209 on the left and then RDU on the right.

Then go ahead and enter the rest of the route up to SIE and it should look like this:



Ok, now we're ready to enter our STAR.

Go back to the DEP/ARR page and go to ARR for JFK and choose the CAMRN4 arrival.

For this STAR, there's only one transition which is the SIE VOR, so it should say NONE under the transition.

For most arrivals, you'll have to choose your transition from the list it gives.

Just to make sure you're doing ok, here's what you should be seeing:

Now, go back to the RTE page and activate it with the lower right button and you should see a light in the EXEC button.

After pressing Activate, press EXEC to fully activate your route in the FMC.

Now on your RTE page, PERF INIT should show up in the lower left. Click there, and you should see this.



Real world pilots will usually wait to enter the ZFW and GW a couple minutes before pushback, but I enter them now. So, this is where our numbers we've written down come in handy. For ZFW, enter 264.8 and your GW should automatically be calculated by the FMC and should be exactly or either .1 difference from what you've written down. The FMC gave me exact answer shows 305.5 for my Gross Weight. You'll notice that 40.7 is the fuel on board that has already been pre-calculated by the FMC. You can confirm the number by checking your overhead panel where the fuel system is located (the area with the digital numbers).

Now for our reserves, which is the minimum amount of fuel needed before the FMC will issue a warning to us. For this flight, we'll enter 2.5. Then for cruise, enter FL350. (You can also just enter 350 or 35000 - it all comes out to the same).

Now for Cost Index. A lot of people don't know the exact Cost Index to use. The normal Cost Index used by Delta for their 763's is 113. Every other plane type will be different. We don't need to change our Step Size since we won't be doing any Step Climbs this flight.

When you are all done with the PERF INIT page, it should look like this



Now, go to the Takeoff page. For this flight, we'll use Flaps 5, so enter 5 under flaps. The Thrust section is used for thrust duration on takeoff and sometimes climb out. You can go here to look at the performance tables - [http://ldsflyingclub.com/files.html](http://ldsfllyingclub.com/files.html) (Then download Performance Manuals). For this flight, we'll just enter 30 for thrust duration (*Note that this number is not calculated from the tables. It's just a number I chose to display to you*).

For our CG Trim section, you'll enter the %MAC here. So for this flight, it is 19% and after you enter that, you should get 4.0 for your stabilizer trim setting which can be set via the pedestal.

Your RWY should be entered already.

The /POS is just for more realism. This number will be 4 digits representing the number of feet from the threshold when you will engage the autothrottle on takeoff roll. In other words: *when you will engage the N1/EPR button on takeoff from the runway's threshold*.

You can enter whatever you like in there, and for this flight I'll just say, 50 feet. So you'd enter it as /0050, and you will get a "takeoff speeds deleted" message. This just means that the number you have just entered, might have changed your V-speeds on takeoff. Just press CLR to get rid of the message.

When this page is all finished, it should look like this:



And for you advanced B763 FMC users, if you go to the Next Page from the Takeoff Ref page, you can enter the current winds at the time and the section under RWY WIND will change to give you either a headwind or tailwind component for the runway you are departing.

Since the slope for runways in Flight Simulator isn't modeled, you won't need to worry about SLOPE/COND.

The Acceleration Height is generally 1,000 feet which is the altitude at which the plane will start to level off a bit and increase speed after engaging VNAV following your takeoff.

This is what mine looks like after completion



And that's all folks! I hope I have covered any questions or concerns that you have about your misunderstanding of the B763 FMC pre-flight setup. And if you have any questions regarding this article, feel free to email me at "sgfaison@gmail.com".



Installing and Using FSNET/Copilot

Jim Warner DVA 2533, CFI

By now I am sure you have heard of the DVA Flight Academy and the fact that we teach pilots how to fly using real world flight instruction methods. How we do this is a combination of voice via Teamspeak or MSN Messenger and fsnet/copilot. This wonderful program allows us to share the cockpit in real time. Copilot requires Flight Simulator 2004 and will not work with version 2000 or 2002.

Copilot is a unique program and requires a little bit of technical know-how to get it working correctly in most cases. We will try and cover that for you now.

Copilot, like just about any other software that uses the internet, requires certain ports to be open on your network to allow it to function properly. The IP port that needs to be allowed for fsnet/copilot is 6073.

If you have any kind of firewall software such as Windows XP Firewall, Zone Alarm Pro, you will have to figure out how to allow this port to be allowed.

In the event of a hardware setup such as a Linksys or D-Link router, you will also be dealing with NAT (network address translation), which basically just means that your PC(s) share one common public internet address. The PCs themselves use a non-public internet address which is **not-routable** over the internet.

Because of this, certain programs, such as fsnet/copilot, multiplayer FS9, etc., need a little help to work. You have to create an entry in your hardware setup that allows the port in question – in this case port 6073, to be forwarded to your PC. This means you'll need to know the actual internet (IP) address of your computer. To get this, you'll need to go to the command prompt and type **ipconfig** and enter to get the IP address. Most times, this will be something like 192.168.1.100 or something similar.

Close doesn't cut it

You have to know the actual address. Why? Because without it, you cannot use fsnet/copilot. Your router may have the address of 192.168.1.1 and this is where the data from the other person using copilot winds up – at your router. The router has to know where to send it. So suppose your PC was 192.168.1.103. This means you have to create a route for port 6073 to go to 192.168.1.103.

Things change

Sometimes your IP address changes. You may turn off or reboot your PC and go to use copilot and it doesn't work. You should check your IP address again using the **ipconfig** command. Chances are it is no longer 192.168.1.103. If this is the case, change your router setup to the new IP address.

Remember that you have to enable the port forwarding rule. Without enabling it, it just sets there and does nothing.

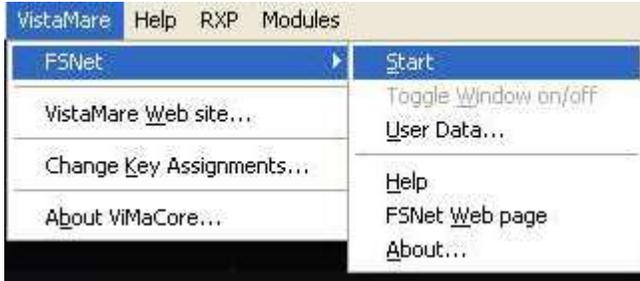
Getting the software installed

To install fsnet/copilot, you need to go <http://gates.to> and register. Why register? Because fsnet/copilot uses your gates.to registration username and password to use copilot. If you don't register, it won't work, period.

You'll have to give a valid internet address. The registration could take a little while to update. For this reason, if you are going flying with fsnet/copilot, I highly recommend that you register at least 24 hours in advance to avoid disappointment.

Once you register, download the fsnet_110.zip file and extract it and install it. Flight Simulator 2004 should not be running when you install it.

When we conduct a flight training session, the CFI will give you an IP address to join for the flight, which will be a multiplayer connection. Once this is established and you are on the same ramp as the CFI, you will start the fsnet/copilot software via the Vistamare menu, and choose **Start**

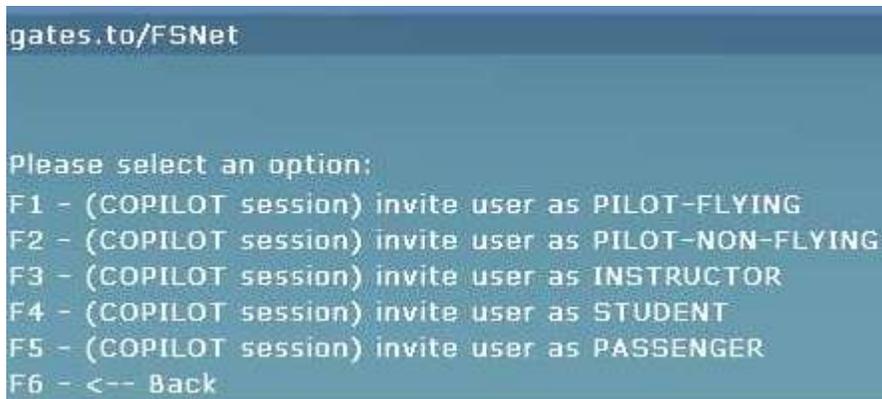


If this is your first time using Vistamare, you will be asked to enter your User Data, which is the username and password you registered at the gates.to website.

Using Copilot

Once you have installed fsnet/copilot and it is up and running, using it is a simple matter. There are basically two different types of interaction: the person doing the inviting and the person accepting. If you are accepting, it's pretty simple: press F1 to Accept or F2 to Refuse. If you don't press anything, it times out and is considered a refuse action.

If you are the person doing the inviting, you get this menu to work with:



What is the difference between all of these choices?

If you invite a user as a student, passenger or pilot non-flying, they will share your weather, fuel and weight settings, time and date, etc.

If you invite a user as pilot-flying or instructor, you will get their weather, fuel and weight settings, time and date, etc.

In the Flight Academy, we use the student option.

Once the person invites you, and you press F1 to accept, the two airplanes synch up, and one of you will get weather, time and date, etc., loaded up, depending on which option you or the other person chose.

Once this is done, congratulations, you are now sharing the same airplane!

What to expect

So now that you are connected, what can you expect to happen?

First, the joystick is disabled for the person who is not flying. This means your view hat for panning around or looking out of the airplane is disabled. You'll have to use the keyboard commands instead.

Second, the entire update depends on a fast connection to the internet. Sometimes the packets get messed up and suddenly it appears you are hopping on the runway, or flying in the ground, or going sideways, backwards or maybe even upside down or something similar to this for a few seconds. When the packets catch back up and synchronize, all is returned to normal.

Sometimes we have experienced that the student experiences brake failure and cannot slow the airplane down when on the runway.

The VSI appears to jump up and down like a pogo-stick on steroids. Looking at the altimeter shows that the airplane is in stable flight.

Some flights never have anything happen at all. Others have a few glitches and sometimes, a flight is just doomed to internet problems and you have all sorts of problems.

Not just for flight instruction

Fsnet/copilot isn't just for flight instruction. You can use it for sharing duties on a flight with a buddy. There are some things to keep in mind, however:

Fsnet/copilot isn't totally compatible with every airplane out there. Payware birds seem to have the most issues. The fleet installer birds at DVA should experience no problems so long as both pilots are flying the same airplane.

If you are flying on vatsim, the procedure for connection is that the first pilot connects to squawkbox, then disconnects. The other pilot connects to the other's PC via multiplayer. Both pilots then connect to copilot and then the first pilot connects to squawkbox and the second pilot will see all of the traffic from the first pilot's PC, since you are in his multiplayer session. ATC, ServInfo and other pilots only see the single airplane.

If you are sharing a flight on vatsim, keep in mind that only one of you gets to use squawkbox. If the second pilot wishes to monitor or interact with ATC, that he/she should download and install Roger Wilco, since you can't both be using SB3 at the same time.

Imagine showing off to your chief pilot your short field landings in your 757-200 or crabbing into a crosswind landing in your 727.... the possibilities to show off your piloting skills is unlimited. How about boasting to a friend that you made a tight short field landing after approaching over the mountains to that overseas airport?

Now you can take them on the flight with you and not only can you show them...you can then turn the plane over to them and let them try that approach or maneuver. Flying alone isn't as much fun as showing off with a friend and winning accolades in the water cooler.

This product won't break the piggy bank either. FSNet/CoPilot from gates.to has a trialware period of 4 free hours of CoPilot sessions. The Lite version allows only 2 users to share an aircraft at a time and is \$9.95 for an unlimited hours license. The MAX version allows up to 8 users to share an aircraft simultaneously for \$39.95 for an unlimited hours license and you also get the opportunity to earn free software based on the hours you fly with FSNet/CoPilot. You can check out this product at www.gates.to on the web.



Charly Azcue