May 2006 Edition

Delta **FLY!**

In this issue...
- From the AIM/FAR
- International Flying / NAT
- PPL Course Q & A
...and more!

May 2006

Issue #7

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Wilco/Feelthere 777 rotating Runway 18L at KCVG – Matt Reamy

April's Features:

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From the President's Desk

Terry Eshenour - President, Senior Captain 777

I reported last month that Delta Virtual Airlines was hard at work flying. We had some of the busiest days for the airline in our history.

April became the month for learning. Under the leadership of George Lewis, Vice President and Director of Training, the Flight Academy opened its classroom doors for the first time. After 30 days, the Academy has 125 pilots enrolled.

The Flight Academy has three Certified Flight Instructors, Vince Carlo, Scott Clarke, and Chris Williams. The first course offered is a Private Pilot License. George Lewis and crew have plans underway to offer additional instruction units.

Now for the capstone of accomplishments Andrew Rogers completed the Private Pilot Course and became the Academy's first graduate. Congratulations to Andrew Rogers who will now go down in the annals of Delta Virtual Airlines history.

A new technology feature that went into service this past month is live ACARS Google Earth map. Google Earth users can now follow Delta Virtual Airlines pilots' progress real time with flight tag reports. One recent Saturday morning I was able to follow the progress of two Delta Virtual Airlines pilots as they made their way across China on a long haul to Hong Kong out of Paris.

In a few weeks, we will be launching improved Delta Virtual Airlines flight schedules that will be updated monthly. 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. You will receive an announcement shortly with more details.

Thank you for flying Delta Virtual Airlines,

Terry Eshenour
President, Senior Captain 777
DVA057

From Delta FLY!'s Editor

Matt Reamy - Editor In Chief, Sen. Cpt. 777

Well, May is upon us. The last month of school for most students, the beginning of summer vacation… and hence traffic increases on VATSIM and IVAO. With all the free time our younger pilots are going to have, I'm sure we'll see large jumps in online traffic. Remember as you're out there, that you represent Delta Virtual. Always act professionally toward the controllers and other pilots online, no matter what network you use to fly. If you're not happy with the service you get from a controller, thank him anyway when you leave his airspace.

We got some good feedback this past month on our previous issues. It's good to hear from the pilot corps here at DVA. I can't stress it enough that this exists for you; and if you want something that we're not providing, drop us a line and let us know. We'll look into making things happen for you.

This month's issue is a bit shorter than usual. All of us on the staff have had an increase of real world distractions and responsibilities. George Lewis has penned the answers to some of the questions he's most frequently asked regarding the Flight Training Academy's Private Pilot Course. I've written a short article on NAT Plot and some of the features I find most useful. As a preview, I've noticed that several of our pilots still use the default GPS for navigation. I simply didn't have enough time to get a tutorial on that finished for this issue, but I hope to have it completed for those of you who still use it for next month. Also included in this month's issue is a segment from the Aeronautical Information Manual on VORs.

Enjoy this month's issue. Safe and happy flying.

Matt Reamy
DVA1267
Editor In Chief
Delta FLY

Dave High

From the Flight Academy

George Lewis - V.P. & Director of Training

As many of you have no doubt noticed, the Flight Academy has finally opened! We saw over 120 pilots register for the Private Pilot course in the first 30 days of operation. That is an astounding number and it shows that DVA members are interested in learning how to fly airplanes, which doesn't surprise me considering that we all love flying!

Many of you that enrolled may be wondering what to do next. Some of you haven't yet signed up and are not sure if they want to do this or not. Others are not sure if this is mandatory or voluntary. I'll try to answer those and other questions that have arisen since the opening of the DVA Flight Academy in the PPL Course Questions article in this month's edition of the Delta FLY!

I would also like to give a special welcome to Scott Clarke, our newest DVA CFI, who is a real world pilot and has lots of flying experience. Many of you have already met Scott and have flown with him. Scott has been a tremendous help to the DVA Flight Academy and has made many behind the scenes contributions and I want to publicly acknowledge his accomplishments and work ethic. He truly loves to teach students how to fly and when you go up with him for a flight lesson, you'll see what I mean! Thank you Scott!

Andrew Rogers is our first official DVA Flight Academy graduate! He passed his checkride on the 2nd of May 2006 and is also the first student to successfully pass the PPL Written Exam. Congratulations Andrew!

Remember also that we have a Mentor Program in place. What is the Mentor Program? Well, if you need help with something, you simply send me an email to training@deltava.org and let me know what you need help in, and I'll get you setup with a mentor, who is someone experienced in the area you are seeking help in, that is willing to help others. It's also a great way to make some new friends!

Of course, if anyone has any questions, please don't hesitate to email me at training@deltava.org

I look forward to the opportunity to help each and every one of you that seeks to increase their aviation knowledge and skill set. We'll see you soon at the DVA Flight Academy!

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

Larry Foltran

1-1-3. VHF Omni-directional Range (VOR)

a. VORs operate within the 108.0 to 117.95 MHz frequency band and have a power output necessary to provide coverage within their assigned operational service volume. They are subject to line-of-sight restrictions, and the range varies proportionally to the altitude of the receiving equipment.

NOTE-

Normal service ranges for the various classes of VORs are given in Navigational Aid (NAVAID) Service Volumes, paragraph 1-1-8.

b. Most VORs are equipped for voice transmission on the VOR frequency. VORs without voice capability are indicated by the letter "W" (without voice) included in the class designator (VORW).

c. The only positive method of identifying a VOR is by its Morse Code identification or by the recorded automatic voice identification which is always indicated by use of the word "VOR" following the range's name. Reliance on determining the identification of an omnirange should never be placed on listening to voice transmissions by the Flight Service Station (FSS) (or approach control facility) involved. Many FSSs remotely operate several omniranges with different names. In some cases, none of the VORs have the name of the "parent" FSS. During periods of maintenance, the facility may radiate a T-E-S-T code (- • ••• -) or the code may be removed.

d. Voice identification has been added to numerous VORs. The transmission consists of a voice announcement, "AIRVILLE VOR" alternating with the usual Morse Code identification.

e. The effectiveness of the VOR depends upon proper use and adjustment of both ground and airborne equipment.

1. **Accuracy**. The accuracy of course alignment of the VOR is excellent, being generally plus or minus 1 degree.

2. **Roughness**. On some VORs, minor course roughness may be observed, evidenced by course needle or brief flag alarm activity (some receivers are more susceptible to these irregularities than others). At a few stations, usually in mountainous terrain, the pilot may occasionally observe a brief course needle oscillation, similar to the indication of "approaching station." Pilots flying over unfamiliar routes are cautioned to be on the alert for these vagaries, and in particular, to use the "to/from" indicator to determine positive station passage.

(a) Certain propeller revolutions per minute (RPM) settings or helicopter rotor speeds can cause the VOR Course Deviation Indicator to fluctuate as much as plus or minus six degrees. Slight changes to the RPM setting will normally smooth out this roughness. Pilots are urged to check for this modulation phenomenon prior to reporting a VOR station or aircraft equipment for unsatisfactory operation.

1-1-4. VOR Receiver Check

a. The FAA VOR test facility (VOT) transmits a test signal which provides users a convenient means to determine the operational status and accuracy of a VOR receiver while on the ground where a VOT is located. The airborne use of VOT is permitted; however, its use is strictly limited to those areas/altitudes specifically authorized in the A/FD or appropriate supplement.

b. To use the VOT service, tune in the VOT frequency on your VOR receiver. With the Course Deviation Indicator (CDI) centered, the omni-bearing selector should read 0 degrees with the to/from indication showing "from" or the omni-bearing selector should read 180 degrees with the to/from indication showing "to." Should the VOR receiver operate an RMI (Radio Magnetic Indicator), it will indicate 180 degrees on any omni-bearing selector (OBS) setting. Two means of identification are used. One is a series of dots and the other is a continuous tone. Information concerning an individual test signal can be obtained from the local FSS.

c. Periodic VOR receiver calibration is most important. If a receiver's Automatic Gain Control or modulation circuit deteriorates, it is possible for it to display acceptable accuracy and sensitivity close into the VOR or VOT and display out-of-tolerance readings when located at greater distances where weaker signal areas exist. The likelihood of this deterioration varies between receivers, and is generally considered a function of time. The best assurance of

having an accurate receiver is periodic calibration. Yearly intervals are recommended at which time an authorized repair facility should recalibrate the receiver to the manufacturer's specifications.

d. Federal Aviation Regulations (14 CFR Section 91.171) provides for certain VOR equipment accuracy checks prior to flight under instrument flight rules. To comply with this requirement and to ensure satisfactory operation of the airborne system, the FAA has provided pilots with the following means of checking VOR receiver accuracy:

1. VOT or a radiated test signal from an appropriately rated radio repair station.

2. Certified airborne check points.

3. Certified check points on the airport surface.

e. A radiated VOT from an appropriately rated radio repair station serves the same purpose as an FAA VOR signal and the check is made in much the same manner as a VOT with the following differences:

1. The frequency normally approved by the Federal Communications Commission is 108.0 MHz.

2. Repair stations are not permitted to radiate the VOR test signal continuously; consequently, the owner or operator must make arrangements with the repair station to have the test signal transmitted. This service is not provided by all radio repair stations. The aircraft owner or operator must determine which repair station in the local area provides this service. A representative of the repair station must make an entry into the aircraft logbook or other permanent record certifying to the radial accuracy and the date of transmission. The owner, operator or representative of the repair station may accomplish the necessary checks in the aircraft and make a logbook entry stating the results. It is necessary to verify which test radial is being transmitted and whether you should get a "to" or "from" indication.

f. Airborne and ground check points consist of certified radials that should be received at specific points on the airport surface or over specific landmarks while airborne in the immediate vicinity of the airport.

1. Should an error in excess of plus or minus 4 degrees be indicated through use of a ground check, or plus or minus 6 degrees using the airborne check, Instrument Flight Rules (IFR) flight shall not be attempted without first correcting the source of the error.

CAUTION-

No correction other than the correction card figures supplied by the manufacturer should be applied in making these VOR receiver checks.

2. Locations of airborne check points, ground check points and VOTs are published in the A/FD and are depicted on the A/G voice communications panels on the FAA IFR area chart and IFR enroute low altitude chart.

3. If a dual system VOR (units independent of each other except for the antenna) is installed in the aircraft, one system may be checked against the other. Turn both systems to the same VOR ground facility and note the indicated bearing to that station. The maximum permissible variations between the two indicated bearings is 4 degrees.

International Flying
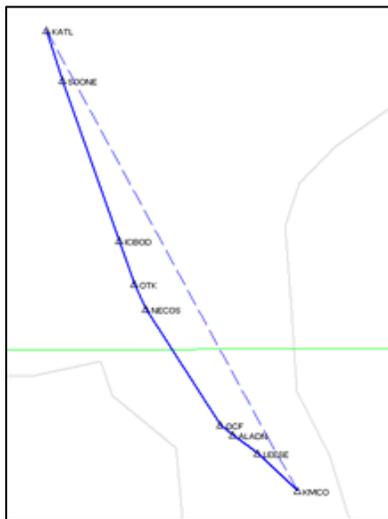## NAT Plot

Matt Reamy - Editor In Chief, Sen. Cpt. 777

By now you should have a good understanding of flight planning and what's available to you in aiding your flight planning process. One of the tools I briefly touched on during my series of articles on flight planning was NAT Plot (http://ourworld.cs.com/bobraemer/ownnav/id25.htm?f=fs).

I find this program invaluable on a number of
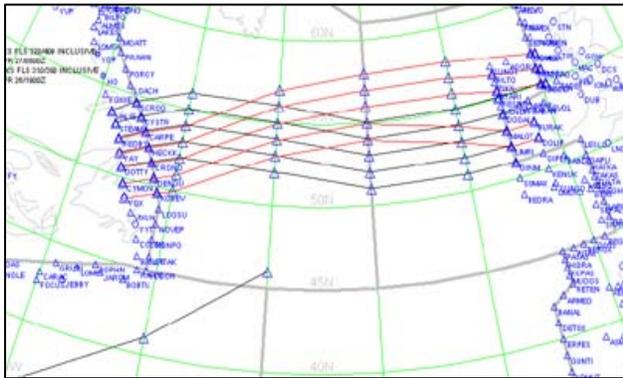
different levels. On its most basic level, NAT Plot is a utility that decodes North Atlantic Track messages and displays them in a visual format. If this is all you're using the program for, you're not utilizing it to its full potential. NAT Plot can be used for so many more things.

Not everyone has or has access to US Enroute charts. For those that don't have them, NAT

Plot can be used as a substitute. I typically use it to display my route after I have built my flight plan to ensure that I have the route I want. NAT Plot can read the default .pln files and depict your route. You have the option of printing the route out through NAT Plot, and you've got a great substitute for a chart.

If you download all the data that is available for use with NAT Plot, you'll see it's capable of displaying VORs, NDBs, Airways, and other useful information. Furthermore, it has extensive documentation included. I'll try to go into the features I find most useful to me in my flight planning.

I typically use FSBuild to actually create the flight plan for me, whether I allow it to auto-generate my route or more likely input my flight plan and have it build it. Once I'm finished building my route, I give it a spin in NAT Plot. With no advanced options enabled, it shows each of the way points on your flight plan. Using this, you can also display a SID or STAR included in your route. Since these charts are readily available from various sources online, it's advisable to actually get the charts you'd need for the SID or STAR.

An extremely useful feature of NAT Plot is the distance calculator. Since position reporting is a required part of flying in an Oceanic Center's
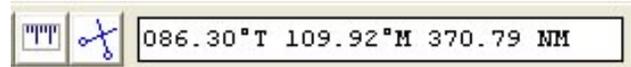
airspace, it's good practice to have the distances between waypoints readily available for ease of calculation. Click on each of the two waypoints that you're trying to measure. Once finished, click on the ruler icon and your distance is displayed at the end of the box to the right. If you print off your flight route, you can simply write these down between the two way points and once you're ready to calculate your estimates, they are already there. It helps eliminate estimate errors. Though Oceanic Centers are rarely online, it's never a bad idea to do this anyway. If you've already worked out your position report estimates, you'll be ready to go on those occasions when you do need to do them.

There are several files to download to use with NAT Plot including airways, distances, and navaids. You must download all of them for all the features of NAT Plot to be used. Installation simply consists of unzipping the files into

whatever directory you've placed NAT Plot. Each is turned on or off in the same manner. In the Properties dialog box, click on the DAFIF tab. Simply check those you want to display.

By default, NAT Plot displays several standard routes when loaded. The program is somewhat customizable, and the documentation for this is found with the program download. I'm not going to go into it here; though I'm available if you have questions about the included documentation.

I personally dislike the clutter found by default on the NAT Plot display. In the Properties dialog box, under the Routes tab, you can check or uncheck the routes you'd like displayed. There are several types of routes included by default.

One final note: NAT Plot won't display the NAT or PACOT tracks if you don't download them for loading. You can get track messages from the FAA at https://pilotweb.nas.faa.gov/trackmain.html or you can find a link to them in your Pilot Center.

As with any other program you're unfamiliar with, it's always advisable to read the manual to ensure you understand all of the features the program has to offer. This program is an invaluable tool in my flight planning process, and I've outlined a couple of features that I use on a regular basis; but this is by no means a comprehensive list of NAT Plot's uses.

Charly Aczue

PPL Course Questions & Answers
George Lewis - V.P. & Director of Training

Many of you that enrolled in the Private Pilot (PPL) Course may be wondering what to do next. Some of you haven't yet signed up and are not sure if they want to do this or not. Others are not sure if this is mandatory or voluntary. I'll try to answer those and other questions that have arisen since the opening of the DVA Flight Academy.

Q: Is the DVA Flight Academy mandatory?
A: No. Participation in the DVA Flight Academy is strictly voluntary. You can enroll if you choose and you can even withdraw by sending me an email at training@deltava.org

Q: I don't have voice – can I still complete the PPL course?
A: No. Without voice you're gonna have a hard time completing the course. However, we are working behind the scenes to provide options for those with no voice capability to at least give you some training, such as training videos.

Q: I have FS2002 – will this work for flight instruction?
A: No. We have discovered that fsnet/copilot doesn't work in FS2002. We are developing training videos to help those with FS2002 to learn some of the techniques, but we can't provide flight instruction in FS2002.

Q: Are we required to fly online?
A: Yes – at least once. Part of the PPL training is learning ATC communications. The CFI will work with you to bring you up to speed to interact with ATC. In fact, two of our CFIs work ATC in the VATSIM world. They will teach you what to do, so no worries! There is one required cross country VFR flight on ACARS/Online required.

Q: I signed up for the PPL Course – now what?

A: After you sign up, you will get enrolled. You will also get an email with comments from me that details what is expected and how to get going. You can also download the PPL manual and begin reading it from the beginning and work your way towards the back.

You can request flight instruction at any time with the instructor and in fact, I recommend requesting flight instruction pretty soon after enrolling. To interact with the instructors or request instruction, simply go to the Flight Academy course you are enrolled in, and type in the "new comment" box and save the comment. This will send an email to all of the CFIs and someone will respond to your question/request shortly.

Before going up for flight instruction, you should download and install the DVA EMB-120 from the fleet library and take it up and play with it, as this is the airplane we will be flying during flight training.

For flight training we will be using voice. You will need the Teamspeak client and also FSNET/COPILOT from www.gates.to which has a free trial period, but you will need to register on the website, download the fsnet_110 zip file (or, if a new version has come out since then, you will need the newest one) and install it and activate the software via an email they send you after registration. You will need to use the username and password from the gates.to website registration to use the fsnet/copilot software.

Before attempting to take the PPL Written Exam, remember to read the manual at least once. Seriously, if you read the thing, you'll probably pass the test the first time around with little or no problems. I can always tell when someone takes the exam and hasn't taken the time to read the manual. I wrote the manual with good useful information for you to learn about flying. I tried very hard not to load it up with useless boring stuff you'll never use. Most if not all test questions will come from material from the PPL Manual.

There are a couple of changes we'll be making in version 2 of the manual, but the big one is clearance delivery. Class B airspace requires the use of clearance delivery no matter if you are IFR or VFR. In the manual I wrote that clearance delivery isn't needed. The revision of the manual in the future will clarify this.

There are a couple of requirements in the course – they are as follows:

Primary Flight Maneuvers.
Pilot can fly the airplane manually in straight and level flight using trim. Turns, climbs, descents, slow flight, can hit a heading, altitude and airspeed.

Traffic Pattern.
Pilot can fly the VFR traffic pattern and perform stop and goes and touch and goes.

VFR Flight Planning.
Pilot can plan VFR flights using radio navigation aids via Flight Sim's flight planner and give the necessary information to the instructor.

VFR NDB Cross Country Flight.
Pilot has performed a solo VFR NDB cross country flight using ACARS. Online flying is not a requirement for this flight.

VFR VOR Cross Country Flight.
Pilot has performed a solo VFR VOR cross country flight using ACARS. Online flying is not a requirement for this flight.

Online cross country flight.
Pilot has performed a solo VFR cross country flight online using IVAO or VATSIM and ACARS.

Checkride Review.
The Pilot has satisfactorily completed a checkride review by an instructor and is ready to take the checkride. The pilot should pass the PPL Written Exam before completing the checkride review.

After these are accomplished, the CFI will schedule you for a check ride with an examiner, who will go up with you in fsnet/copilot for the checkride. The checkride will be a cross country flight that the examiner will ask you to

flight plan. The examiner will inform you of what is expected on the check ride, but basically it's the XC flight with an interruption somewhere along the way to perform some basic flight maneuvers and some pattern work at an airport of the examiner's choosing. After this, the XC flight resumes and you finish the flight.

Q: What is taught in the PPL Course?
A: We teach you how to fly the airplane. We teach you how to navigate. We teach you how to make your own flight plans. We teach you to be in control of the airplane instead of the other way around. These techniques work not only in the EMB-120 but also whatever airplane you normally fly.

Q: I have graduated from the PPL Course – what's next?
A: The PPL course is the first of many upcoming courses. The next one after the PPL will be the Commercial course, where we will prepare you for IFR flying and tighten up your flying abilities. After that will be the IFR rating, which may very well be the toughest course – it will be hardcore and teach IFR stuff. Then there will be an online flying rating and a transoceanic rating

Q: Can I learn how to navigate using the VORs so I can fly the older birds?
A: Yes. The PPL course teaches basic VOR, NDB and DME navigation. There will be a NON-Prerequisite course teaching VOR navigation and will give you a VOR rating. This will cover navigation taught in the PPL, Commercial and some of the IFR stuff as well.

Q: Can I learn how to navigate using the FMC so I can fly some of the newer birds?
A: Yes. There will be a NON-Prerequisite course coming out that will teach how to use the payware FMC systems. The first two FMC courses are going to be the PMDG 738 and the LDS 763 systems. These will require however that you already own this aircraft. More details on the future upcoming courses will emerge in the future.

Q: I signed up for the PPL course but I want to withdraw – what do I do?

A: Simply send a new comment, just like you would for flight instruction, requesting that you be removed from the course. It's not mandatory but I would like to know the reason for withdrawal, so that we can make changes if necessary to make the program useful for more people.

Folks, I hope some of these questions/answers took care of something you had on your mind concerning the Flight Academy. If you have further questions, email them to me at training@deltava.org