

# **How to Create a Charter Plus tips on using FSNavigator By Norman Hancock.**

**With help from Charles Wood, John Achor and Ron Bushell.**

**This guide assumes you are using FSNavigator 4.5x and FS2002.**

**Note: You will increase your success at properly creating charter flights and learning FSNavigator if you print this document rather than using it online.**

**Downloading, installing and flying charter flights are generally pretty easy. Creating a charter flight is also a straightforward process if one follows a few simple procedures. The most frequent complaint about charter flights (and regular-scheduled flights) is that the altitudes shown in the accompanying FSNavigator Flight Plans differ from those specified in the flight-description document. There is a solution! For this reason FSNavigator is the first topic here, primarily illustrating how to create Flight Plan files that accurately display your desired cruise altitudes, even when sent to another computer.**

## **FSNavigator**

If you follow my guide it will ensure that the flightplan you create will be produced under 'default' conditions and could be exported to a fellow pilot's computer. If that person has 'played the game' and is also using 'default' settings the flight plan you have created will appear to him exactly as you intended it.

Some details may be inserted in the flightplan in a different order to the one I have used. With experience you will no doubt find a way that suits you better than the route I have taken.

I am not a Guru in manipulating FSNavigator, or in the art of compiling charters. Just someone trying to pass on his accumulated experience!

### **1.**

The first and obvious thing is to start the flightsim. The aircraft you choose has no bearing on what happens while you are compiling the charter but you should select the Douglas DC-3 for completeness.

## 2.

Press F9 to start FSNavigator. You will be presented with the default setting of a graphic of the globe (or a world map if you changed to **that** format) in the lower panel while the two top panels will be blank.

At the bottom right is a small panel that displays the type of aircraft selected (if the status bar is 'ticked' to show this) and is the first and most important thing we must discuss.

It is this particular aircraft's flight envelope, or settings, that FSNavigator uses to calculate EOC (End of Climb), BOD (Beginning of Descent), cruise speed, maximum height, climb rate, descent rate, fuel burn rate, speed at touch down, overall flight time, and possibly several more that I cannot remember. To see what these settings are, 'click' on the little black aircraft towards the left on the top menu bar. A dialogue box with the name, 'Aircraft' will open.

In the top panel of the dialogue box there is a window marked 'name' with a scrollable list, accessed by clicking on the down pointing arrow to the right of the 'name' window. Scroll down to Douglas DC-3 and select it. The 'settings' in the centre panel of the 'Aircraft' dialogue box will change to whatever was previously selected (and saved) for our aircraft.

All the settings that you can see can be changed. I suggest that you change these now to the following settings. You won't drastically alter anything by doing this and no damage will be done if the settings remain afterwards. It will also give us conformity.

Douglas DC-3.

Tick the box – Autopilot without Airspeed Hold.

	Cruise	Climb	Touchdown
Indicated Air Speed [kts]	140	120	85
Altitude [ft]	11000		
			Descent
Rate [fpm]		500	500
Fuel flow [gal/h]	93	120	36

You must now 'click' on 'Save', wait a few moments for it to perform this. Then 'click' on 'OK'.

Under normal circumstances these settings should never again need to be changed unless you require the aircraft to operate at settings outside of this flight envelope. When flying around mountains, for instance.

**Very Important Note:** You can create your own aircraft in this dialogue window and save it with whatever parameters and aircraft name you wish. Say, DC-3! This is fine if you will never export your Flight Plan to another computer.

If you are creating a flight for DC-3 Airways you must always select the default 'Douglas DC-3' from the scrollable aircraft list in FSNavigator. If you choose another aircraft, your Flight Plan will not reliably retain all of your desired information, such as altitude, when exported to another computer.

OK, got it? When creating a Flight Plan, always first select "Douglas DC-3' from the scrollable aircraft list in FSNavigator.

### 3.

You've saved the flight parameters for your Douglas DC-3 aircraft (nominally a one-time operation) and that dialogue window is now closed. Let's continue the FSNavigator description assuming a flight from East Midlands Airport, EGNX, southeast to London's Heathrow Airport, EGLL. Since the flight is southeast, with no serious mountains in our flight path, we choose to cruise at 5500 ft. If you are unfamiliar with the altitude rules for VFR and IFR flight, they are explained a bit further below.

To the right of the little black aircraft on the top menu bar is a button with two little red arrows, 'click' on this. A dialogue box called 'Cruise Altitude/Speed' will open. This is effectively a part of the 'Aircraft' settings but look upon it as quick access to the variables you will need to change most frequently. The boxes for Cruise Altitude [ft] and Cruise Indicated Airspeed [kts] will display the same figures as saved in the Aircraft settings. To the right of these figures are 'advisory' figures. You will note that the advisory Altitude figure is [ $\leq 13200$ ]. When I was toying with the Aircraft settings, this figure changed also. It is 1.20 x the altitude figure you have set and I can only assume that it is to give a little latitude to the Altitude setting.

Now, change the Altitude to 5500 in the Cruise Altitude/Speed dialogue box, which is the maximum altitude we will use for this charter. As the flightplan is created, FSNavigator will use these figures in its calculations. Now 'click' on 'OK'. If you now have a quick look at the 'Aircraft' settings (clicking on the little black aircraft on the menu bar) you will see that the Altitude has remained at 11000 ft! The 'Aircraft' and 'Cruise Altitude/Speed' menus can also be accessed via the 'Plan' button on the centre column.

**4.**

We can now start to create the flightplan. In the top left panel is a box marked Id. Tick this and then click in the 'inputline' box. This will highlight whatever is in that box and now you can over-type EGNX (upper case or lower case, doesn't matter) and hit the 'enter' key. The panel below will display all the facilities at East Midlands Airport (EMA), UK. If you are using FS2002 it will also show all the 'gates'. To keep it simple 'right click' on Rwy ILS 9 and in the menu box that opens 'click' 'To Flightplan'. This can also be accomplished by the drag and drop method. The top right panel will spring to life and show Rwy 9 details. Go to the right panel and 'double left click' on Rwy 9. The globe in the lower panel will spin around and although you cannot see it yet, Rwy 9 is at the centre (or the world map will be centered on that runway if you have selected that view instead of the globe). 'Click' repeatedly on the + sign which is at the top of the column of function buttons to the right of the map panel to enlarge the view. EMA (EGNX) will appear at the centre of the panel.

Now, the way to create a very simple flightplan! Go again to the top left panel click in the box and replace EGNX with EGLL and hit 'enter'. All the facilities for London's Heathrow will appear. 'Right click' Rwy ILS 9L and 'click' 'To Flightplan'. The top right panel now shows a departure and arrival airport with EOC and BOD. On the map there is a straight line between EMA and Heathrow showing the EOC and BOD. These were all calculated from the settings that you entered in 'Aircraft'. You will also notice that the cruise altitude is 5500 ft and if you again take a look back at the little black aircraft settings in the top menu bar you will see that the figure still remains at 11000.

You have created a flightplan, not much of one. But it will improve. We will assume it is for a three year old so we don't want it to be too complicated.

**5.**

Let's save the Flightplan. This procedure is always exactly the same, however complicated the flight plan. For this exercise, name the file XXX-01 since it's your first flight plan, where XXX is your pilot number (less the DC3) as explained below.

Between the top panels is a column on which is written Plan, Edit, Options and Help. 'Left click' on Plan and a list will appear. Look down the list until you see 'Save As...' and 'click' on this, a dialogue box will open named 'Save As'.

The default 'Save In' folder is Plan, which is a folder within FSNavigator.

The panel lists all the FS2002 default plans plus the plans that have previously been saved.

In the 'File Name' panel give the charter a name of your own choice. Over write .fsn, it will add this extension itself when you 'Save'.

In the 'Save as Type' panel 'click' the down arrow to see the choice. Your choice has to be 'FSNavigator Flightplan [\*].fsm'.

In the 'Flightplan format' panel you have the choice of FSNavigator 3 or 4. Choose 3 as this enables the flight to be accepted by the earlier FSNav 3.0 'freeware' version. The creators of FSNavigator have chosen not to provide a 'freeware' version of their program that is compatible with FS2002. It is a worthwhile and almost essential outlay for serious 'Flight Simmers' like us and doesn't cost a great amount of money.

Now we can 'click' on 'Save'. Your plan is now saved and will appear along with all the others in the 'Plan' folder of FSNavigator from where it can be used whenever you wish to use it, or perhaps as part of a series of plans that will together become a charter.

This is a good point to mention the convention used by DC-3 Airways when allocating file names. When you look at the list of available charters you will notice variations on the theme used by 'certain' pilots but by and large please use the following notation:-

The first three digits are your allocated DCA pilot number followed by a dash and then a two digit number. **An example is. 134-01.fsm.** The two digit number allows sequentially allocated numbers for your charters. In this case it is my first charter. It will be obvious then, that your second charter will be **134-02.fsm.** A multi-leg charter has a further two digits added. **An example of this is. 134-02-01.fsm.** Again we use **01, 02 etc.** The reason for using two digits is to ensure that when charters consist of more than ten legs, the flight plans will appear in sequence when viewing the list of plans in FSNavigator.

## 6.

You may, or may not, be aware that the altitudes you maintain during flight are very, as in really very, strictly controlled. There are two ways you can fly from A to B. These are IFR (Instrument Flight Rules) and VFR (Visual Flight Rules) and each has its own convention with regard to the altitude you maintain during flight. These should be committed to memory and never ever transgressed unless under ATC guidance. The following rules are for the USA and Canada.

### **Altitude rules when flying IFR (Instrument Flight Rules) are:**

For a magnetic course of 0 (Zero) degrees to 179 degrees the altitudes at which you must fly are ODD thousands of feet. These are 3000ft, 5000ft, 7000ft etc.

For a magnetic course of 180 degrees to 359 degrees the altitudes at which you must fly are EVEN thousands of feet. These are 4000ft, 6000ft, 8000ft etc.

**Altitude rules when flying VFR (Visual Flight Rules)** adds 500ft to the IFR rules. So flying in an easterly direction you will fly at 3500ft, 5500ft, 7500ft etc. Likewise, flying in a westerly direction you will fly at 4500ft, 6500ft, 8500ft etc.

A simple rule to use as an aid to remembering is: **“Easterners are ODD”**. Not much of a rule but it may help to remind you, and no doubt most Easterners aren't really odd at all!

Another ‘rule’ is the ‘Quadrantal’ rule which is the system of cruising altitudes used in UK uncontrolled airspace below FL250. We will stick to the system as used in the USA and Canada.

## 7.

Now, we will create a flightplan and I will show how to manipulate altitudes within the plan to keep within the rules of flight.

You will plan a round-robin flight from East Midlands airport, EGNX, and return to East Midlands airport. This is a circular route and so includes both eastbound legs and westbound legs. Since the point of this section is to demonstrate how to manipulate altitudes within a flightplan, we will choose 6500 ft as our cruise altitude.

In FSNavigator ‘click’ on ‘Plan’ and then ‘New’. The previous plan will disappear, the slate will be wiped clean, and all flight parameters will revert back to the default values.

Always get in the habit of first verifying that your FSNavigator aircraft is the 'Douglas DC-3.' when preparing a flight plan for DC-3 Airways. Click on the black aircraft on the menu bar to check or change your aircraft.

Now click on the icon with the two arrows on the top menu bar. This brings up the 'Cruise Altitude/Speed dialogue box. Notice that 11000 ft, highlighted, appears in the top window, which is the default altitude for the 'Douglas DC-3.' Type in 6500 here, our initial chosen cruise altitude for this flightplan, and click OK.

In the top left panel ‘Inputline’ type in EGNX and hit ‘enter’. If you have previously exited Flight Simulator you must tick the Id box again in the upper left corner of FSNavigator. Right click Select ‘Rwy ILS 9’ and select ‘To Flightplan’.

In ‘Inputline’ next type EME. A vast column of results will appear, select the first one on the list which is ‘NDB EME East Midland.’ Again, ‘right click’ and select ‘To Flightplan’. I will mention here that frequently you will get results that show Nav aids at various locations but with the same name. If you know the location, then fine but sometimes it is trial and error to find the correct

one. Experience will show the way. Another way to place EME on the flightplan is to allow the mouse to hover over the Navaid, if you know where it is on the map. When the name appears 'right click' and from the pop-up options menu 'click' 'To Flightplan'. You can also perform the same task using the drag and drop method.

Using EME NDB as the first waypoint gives us a nice straight out departure and gives us time to perform necessary actions.

May I utter a few advisory words! Inserting a fix at approximately one mile (two miles is even better) from the end of the departure runway gives you the time to 'stabilise' the aircraft. That is, retract the undercarriage, set power settings and generally will allow you to adopt a position where the next action required is an easy step. How often have you lifted off from the runway in a commercial aircraft and turned hard right/left! If you have, then something was seriously wrong and I am pleased I wasn't with you!

If you choose to use the 'lazy' way of producing a charter and you enter into the flightplan the chosen runway, immediately followed by a first waypoint that isn't in line or close to being in line to the departure runway, by the time you have lifted off and stabilised, unless it is a straight out departure you could be two or more miles adrift from your desired course. Not exactly desirable!

To return to the task in hand! Use either of the methods previously mentioned to place GAM VOR Gamston into the flightplan. You will notice that a line has appeared on the map between EME and GAM. In the top right panel the plan will include all the selected elements. Notice that the Altitude tops out at 6500 ft (assuming you entered this figure in the 'Cruise Altitude/Speed' window as instructed). This is the incorrect altitude for the direction we want to fly. We have the choice of correcting it now, or later. I will choose later.

**Use either method again to place MCT VOR Manchester on the flightplan. Don't go any further with the plan at this stage.**

Remember to **save** your work often, **very often!**

## 8.

We can now fly as far as MCT VOR using this flightplan but unfortunately it breaks the altitude rules. We have departed EMA, climbed to 6500 ft, attained cruise speed and there we will stay throughout the flight unless we correct a few things.

We have broken the altitude rule for VFR flight in an easterly direction so this must be corrected within the plan. In the top right panel 'right click' on the first entry which is Rwy 9 East Midlands. From the options select 'Manual Settings'.

A dialogue box will open named 'Manual Waypoint Settings'. In the box 'Altitude after [ft]' enter 5500. There is no need to enter anything else so click 'OK'. You will now notice that all the 6500's have changed to 5500's.

We can legally fly to GAM VOR but we will be at an illegal altitude after the turn. Locate GAM in the flightplan and 'right click' on it. Again select 'Manual Settings'. In the Altitude crossing [ft] enter 5500. Though this isn't strictly necessary it doesn't hurt. In the 'Altitude after [ft]' enter 6500 and again click 'OK'. A look at the plan shows us that the altitudes as far as MCT VOR are now correct.

You should now realise that altitudes can quite easily be changed to stay within the flight rules.

I accept that I am now dealing with aspects of FSNavigator that aren't strictly part of the 'Charter' brief, but I need to mention 'Bearing Points'.

I have seen a number of charters that would have been enhanced by their use, so a mention, I think, will not go amiss. Find and enter into the plan, LIC NDB (Lichfield). If you haven't got the ILS option selected from the list on the right hand side of the map, then select it now. A look at the map will show that the route now passes near to the beginning of the ILS Approach Indicator for East Midlands Airport, our departure airport. Now 'right click' on the entry in the flight plan for LIC NDB and from the options select 'Bearing Point'. The line on the map will change to a lighter shade of grey. Allow the mouse pointer to hover over the light grey line where it passes the ILS indicator. 'Right click' and select 'To Flightplan'. The route line will now turn back to a dark grey up to that point. Now, choose whichever method you prefer to enter Rwy 9 East Midlands Airport into the plan. The route line will now be dark grey up to Rwy 9 at East Midlands Airport with a light grey offshoot to LIC NDB.

The way to fly to East Midlands from MCT VOR is to set the ADF to LIC NDB, 545.0 and NAV 1 to ILS Rwy 9, 109.35. Follow the ADF bearing (158deg) to LIC NDB until the Localiser needle starts to centre, then turn left to an ILS approach. A little experience is required here. Because the Localiser beam is so narrow it will not start indicating until you are very close to it and the ideal approach angle should preferably be at 45deg or less to the ILS heading. A tip here would be, when you are established on 158deg, reset the ADF to EMW NDB, 393.0. When the needle indicates that your bearing to the beacon is close to 093deg, say 098deg, you are nearing the ILS Localiser beam. Turn left to 139deg and intercept the localiser.

One final flightplan entry needed here ... we must land! So type EGNX into the inputline box, hit enter, then right-click on Rwy ILS 9 and send it to the flightplan.



**9.**

Another skill that is extremely useful for someone creating a charter is the ability to guide an aircraft accurately onto an Outbound Radial, or bearing, from a navaid that has been situated in the immediate vicinity of the departure airport. This is useful if the first waypoint is out of range and an accurate heading is required for the departure.

It is a fairly simple procedure and after a few attempts it will become second nature to you. It is important to follow the exact order demonstrated or you may end up with lines all over the map!

I will mention at this point that most actions can be accomplished by 'drag and drop' but to keep things clean and tidy I will omit that choice. With practice you will soon become aware of the easier ways to accomplish the end result.

I suggest that if you haven't already done so then open the zip file, 'Intercepting Radials' and preferably print out the four diagrams that have 'thoughtfully' been included!

The airport I have used for this demonstration is Hakodate, RJCH. Open FSNavigator and find the airport by ticking 'Id' and entering RJCH into the inputline. Hit 'enter' and the panel below will display the airport information for Hakodate. Double left click on the first entry shown, 'Airport RJCH Hakodate'. The map will now centre on the airport. Expand the map by repeatedly hitting the + button until the airport more or less fills the map.

**Step one.** 'Right click' on Rwy 12 and enter it into the flightplan. Now locate Rwy 30 with the mouse pointer and 'right click' and 'hold'. Draw a line on the Rwy heading southeast out from Rwy 30 for an indicated 1nm – watch the top right of the small rectangle for distance and heading info. (It doesn't have to be this figure. Very often there will be an NDB on the Rwy heading which would be the better choice). Having located the point and without moving the mouse or releasing your 'hold' on the right mouse button 'click' the left mouse button once. It will appear that you have cancelled everything but continue.

Without moving the mouse, 'click' the right mouse button once. A dialogue box will open and you can then freely move the mouse pointer down the list to 'To Flightplan'. 'Left click' and Fix 01 will appear on the flightplan. Your map will resemble diagram 1.

**Step two.** Move the mouse pointer to anywhere on the map that is roughly in line with the anticipated outbound course. Since we haven't told you where we're going for this flight, put the mouse pointer about due east of HWE VOR. 'Right click' and in the dialogue box that opens, 'left click' on 'To Flightplan'. Fix 02 will appear on the map and also in the flightplan.

Allow the mouse pointer to hover over HWE VOR, 112.30. When the descriptive window opens, 'right click' and scroll down to 'To Flightplan'. 'Left click' to enter it into the flightplan. The map will now look as if you are planning a devious route back to HWE VOR.

In the 'flightplan' panel locate with the mouse pointer the entry for HWE VOR. 'Right click' and in the dialogue box that opens, 'left click' on 'Bearing Point'. The colour of the line on the map between Fix 02 and HWE VOR will change to a light shade of grey and a small red indicator will appear on the entry in the flightplan for HWE. Your map will now resemble diagram 2.

**Step three.** You now need to locate your first waypoint. I have used OBE VOR, 109.65. This is roughly on a heading of 069degs and 120 miles distant from HWE VOR. 'Right click' on OBE VOR, scroll down to 'To Flightplan'. 'Left click' on the entry to enter it into the plan. (Or enter OBE on the input line of FSNavigator and then send OBE VOR to your flightplan). Your map will now resemble diagram 3.

**Step four.** This is the crucial step in the exercise. Allow the mouse pointer to hover over Fix 02 and when the descriptive window opens, 'left click' and 'hold'.

You can now, by moving the mouse around, move Fix 02 until it is at a point where it is exactly between HWE VOR and OBE VOR. If you look at the grey line you will see that two bearings are shown. These are the 'to' and 'from' radials from HWE VOR. You need to match the 'from' figure to that shown between Fix 02 and OBE VOR. Of course, as you move Fix 02 about, both figures will change so a little bit of fiddling is usually needed. You should finally have a figure of 249/69 displayed. Your map will now resemble diagram 4.

Now then, you obviously would not want the point to intercept the VOR radial midway between two VOR's that are 120 NM apart. Who wants ATC screaming at you to "Get on course, NOW!!" You can move Fix 02 along the line between HWE VOR and OBE VOR to give a good compromise between the angle of the turn away from Fix 01 and the angle required to intercept the Radial Outbound from HWE VOR. This should be a few NM from the first Navaid.

## 10.

Hopefully you have now learned a few of the tricks necessary to create a flightplan that can be sent to anyone or used as a charter, or as part of a charter that is guaranteed to open exactly as it was created and without errors. The proviso again being that the person using the plan must have the same aircraft and approximately the same settings as those used in creating the plan.

This article wasn't intended as a guide to using FSNavigator but explaining some aspects of the way it works has been necessary to ensure the knowledge required to create a flightplan.

**11.**

Having created a flightplan that you think would be the 'perfect' charter; you will want the world and his co-pilot to fly it. So, how is it done?

The first thing I require is the plan or plans (.fsn) files. If it is a single leg charter the .fsn file copied from the Plan folder of FSNavigator is fine. If it is a multi-leg charter it is best to create a separate folder to contain them and include it as part of the attachment. Remember the previously mentioned file naming conventions!

The next is a printable version of your flightplan in Word (preferred) or Excel. Do not send it as a pdf file as quite often some entries require alteration and unfortunately a pdf file may as well be cast in stone!

Don't get too carried away with describing the flight plan. **It shouldn't be necessary to explain basic flying techniques.** The decision of when to commence a descent is part of the preparations for the flight and there are numerous sources of advice on this topic, even in our own 'Downloads' section. Look through a selection of the charters already published to give yourself an idea of how you would create an informative and interesting plan.

**12**

The following example of a flightplan for a charter was created in Word and is the format That John Achor and I, with the approval of Charlie Woods have agreed will be the format for all new charters. The first full version posted is Bob Reid's 'The North American Golf Sweepstake'. A 'mini' tutorial called 'DC-3 Airways flightplan format' accompanies this tutorial.

From - To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg)	Distance (Leg)	ETE(leg) HH+MM
	Dep. Rwy-32L	Init. Hdg -304deg.	Init. Alt-6500ft	Apt Elev.-666ft.			
Chicago (KORD), Illinois, USA. to Minneapolis (KMSO), Minnesota, USA.	To JVL VOR, 114.30.....				304deg	64.3nm	00+28
	To MRJ NDB, 365.0. Descend to 5500ft.....				012deg	53.2nm	00+20
	To CHU NDB, 209.0. Climb to 6500ft. On station passage continue OB from CHU NDB on heading 290deg. until RS NDB received. ....				306deg	69.4nm	00+26
	To RS NDB, 329.0. ....				290deg	43.0nm	00+16
	To FOW VOR, 111.20. When DME reads 27nm commence 300fpm descent to 2000ft ASL.....				294deg	46.4nm	00+17
	Track to FCM VOR, 111.80. When DME reads 10nm, maintain heading and tune Nav1 to 109.30. Intercept the ILS and turn right to runway heading 042deg.				351deg	31.5nm	00+12
	Land Minneapolis Rwy 4. ....				042deg	12.3nm	00+05
<b>Flight No. 375-06-01</b>	<b>Arrival Airport Elev. - 839ft.</b>		<b>Estimated totals for flight&gt;&gt;&gt;</b>			<b>320 nm</b>	<b>02+04</b>

Make a note of the difference between 'To' and 'Track To'.

'To' means just what it says; you are flying 'To' that point **and beyond**.

'Track To' means you are flying 'Towards' that point but will change course or perform another action **before** the point is reached.

**Another Important Note.** FS2002 will not allow ADF radios to be tuned in increments of 0.1 KHz. When selecting an NDB for entry into an FS2002 flightplan use only those that use 0.5 KHz increments. 345.0 Or 345.5 are examples. If necessary use an alternative NDB, VOR or if flying VFR then a visual fix may suffice.

If you want to include a document that gives some background, consequently enhancing the charter or you feel that some aspects require clarification, again, include a Word document. There are some excellent charters that include documentaries. Without detracting from any of the others, check out Roger Hayes' Lewis and Clark Expedition or Malcolm Esterhuizen's Cape to Cairo.

You may include FSNavigator versions of your Flightplans. These will appear in Notepad and are obtained by clicking on 'Plan' in FSNavigator. Click on 'Export' and in the 'Export' window, click on 'Universal text'. A 'Save as' window will open to give you a choice of what to call your file and where to save it. Having made your choice 'click' on 'Save'.

I hope that the time you have spent reading this guide will prove useful to you. If you want to discuss an idea for a charter the address is the same as the one you will send your charter to and is, [dc3.charters@ntlworld.com](mailto:dc3.charters@ntlworld.com)

Enjoy your flying,  
Norm Hancock,  
VP Charters.