

5 Aug 03

This Charter flight is a 3 hop route in British Columbia, Canada using NDB navigation. The source material is from the autobiography "By Dead Reckoning", by Ralph Lewis. A chapter in his book is dedicated to the DC-3. He calls it "A remarkable Flying Machine". It was on his first flying job, as a radio operator in a three man crew for the Air Transport Command, that he was introduced to the C-47 in 1942. This charter depicts one of the routes he flew, in the weather he frequently found himself. His words are such a tribute to the DC-3 and the "unbelievable punishment it could withstand in the air", that I have chosen to try to create the same conditions he described in his book. Ralph Lewis went on to gain a Navigator rating, and on C-87s and DC-4s, he navigated long over-water routes in the Pacific with primitive navigation aids during and after the big war. Conditions were comparable those that E.K. Gann described over the North Atlantic, as depicted in Peter Tucker's excellent Charter 196-01. I recommend that those who want to fly this charter realistically read Peter Tucker's tutorial on navigation using only NDBs if they are unfamiliar with pre-50's navigation techniques.

Ralph Lewis describes the typical weather along the Charter route as so bad that he had to keep track of up to 20 alternate airfields as potential landing sites. He wrote "Airport ceilings and visibility could go from suitable one minute to zero-zero the next". At that time the weather was reported by Morse Code, encrypted so the Japanese could not read it. He had to decrypt the five character code groups in real time. His only navigation aids were the compass and radio beacons. Anecdotally, he also describes the C-47's water boiler. It was his job to keep it running to supply heat to the cockpit. Also, he describes a 200 ft long trailing wire antenna that was reeled in and out of the DC-3 for long range communications.

INSTALLATION. This charter is set up to automatically start you in a Microsoft aircraft. To fly this charter, simply copy the 910-01.flt and 910-01.wx files to the C:\Program Files\Microsoft Games\Flight Simulator 9\Flights\other and select the flight "910-01" from the "Flights/Select a flight/Other" menu. This saves you the trouble of setting up the plane, location, and weather. The charter loads the Beech Baron 58 with a distorted cockpit. Just click on Aircraft, and select the DC-3 aircraft you plan to use and resave the flight. You can also override the pre-loaded weather with real time weather, or weather of your choice.

The flight starts at the Terminal in Ft. St. John, BC in freezing weather and light snow. Outside temperature is -10 C. VFR apply. The copilot has already started number 2 and the pax and cargo are loaded. The flight plans call for runways in the general direction of flight. Real weather has been downloaded and edited and installed in the flight for you. You may find the wind conditions for Ft St John by tuning the radio to ATIS. It will specify runway 11 as the active runway, so you need to make a U turn and taxi out for take-off. The estimated fuel consumption is 750 gallons to CYVQ, so full tanks are provided. The plane should be at its normal gross landing weight. This is not controlled by this .flt file. The weight is set in the aircraft.cfg file of the aircraft selected. If you use the R4D-6 Company aircraft, the dry weight is only about 19,000 pounds. You may add up to 2,000 pounds of passengers/cargo. Winds aloft are forecast at North East at 10-15 Knots. It is good practice to top off the tanks before starting the third leg. Good Luck.

In lieu of approach plates, consider the NDB near the airports to be both IAF and FAF points. If you need to lose speed or altitude (or wait for the weather to clear), enter a holding pattern at the IAF NDB until you are set up properly at 120 Knots. The FAF altitude and minimum altitudes for each approach are specified below. For a missed approach, make a climbing turn back to the IAF NDB and hold at 4000 ft.

For CBX2, the FAF is the NDB at 3000 ft, 120 KIAS. On final approach, if you can't see CBX2 at 2500 ft ASL, return to and hold at the NDB at 4000 ft. Caution: There is another airport just to the west of CBX2. To land to the east, overfly the airport from FAF and make a procedure turn and land. The game will specify the correct runway so you will land into the (surface) wind. To learn it, use the following procedure when you are near the IAF. Bring up

ATC by pressing the ~ key. Select "airport", select "announce full stop landing", select "announce position". The computer will figure the correct runway based on local wind conditions, and announce it as part of your position report.

The approach to CYFS is similar. Descend to 1500 ft over the NDB, at 120 Knots. In good weather, if you can see the airport in the distance, dog leg to the right and land on runway 30. Otherwise, go to the NDB and then land. Do not descend below 2400 ft ASL without visual ground contact. (You may need to be within 10 miles of the NDB to go below 2400 ft). [What I am trying to say is that in foul weather, you need to fly to the IAF at 2400 ft, then hold there descending to 1500 ft without getting beyond a 10 mile radius of the IAF. If, at 1500 ft you are still in the soup, you have to hold for a break in the weather, or climb back up to 2400 ft before leaving the holding pattern, to proceed to an alternate airport. Radio beacons (NDBs were rare in those days, so you would find several airports near them to make use of them.

The approach to CYVQ is similar. You may descend to 2000 ft if you remain to the south of the IAF. There are mountains to the north. Slow to 120 Knots. On final approach, do not descend below 700 ft ASL without visual contact with the ground.

Enjoy!

### Leg 1

See the notes on page 1 for details of the approach.

From – To	<b><u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"</b>				<b>Course (Leg) Deg</b>	<b>Distance (Leg) nm</b>	<b>ETE (leg) HH+MM</b>
	<b>Dep. Rwy – 11</b>	<b>Init. Hdg – 296deg</b>	<b>Init. Alt – 6,500ft</b>	<b>Apt Elev. – 2,276ft</b>			
Fort St John (CYXJ) Canada  To  Fort Nelson (CBX2) Canada	<b>Departure:</b> To XJ NDB, 326.0. After take off turn right to 296deg. Direct to NDB.....				296	9.0	00+05
	<b>Enroute:</b> To 3I NDB, 397.0. Turn right to 327deg. Commence 300fpm descent to 3,000ft ASL at ETE <sup>1</sup> - 11 min. Direct to NDB.....				327	151.7	01+00
	<b>Approach:</b> To runway. Turn left to 295deg and for a visual approach.....  Land: Fort Nelson runway 30      Length: 5,000ft      Width: 120ft      Surface: Oil treated				298	2.3	00+01
<b>Flight: 910-01-01</b>	<b>Arrival Airport Elev. – 1,856ft</b>					<b>163nm</b>	<b>01+06</b>

<sup>1</sup> Estimated Time Enroute

**Leg 2**

See the notes on page 2 for details of the approach.

From – To	<b><u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"</b>				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 30	Init. Hdg – 304deg	Init. Alt – 6,500ft	Apt Elev. – 1,856ft			
Fort Nelson (CBX2) Canada  To  Fort Simpson (CYFS) Canada	<b>Departure:</b> To L6 NDB, 308.0. After take off turn right to 304deg. Direct to NDB.....				304	6.6	00+03
	<b>Enroute:</b> To FS NDB, 375.0. Turn right to 331deg. Commence 300fpm descent to 1,500ft ASL at ETE - 16 min. Direct to NDB.....				331	171.7	01+09
	<b>Approach:</b> To runway. Make a visual approach as described in the notes.....  Land: Ft Simpson runway 31                      Length: 5,987ft                      Width: 146ft                      Surface: Asphalt					2.2	00+01
<b>Flight: 910-01-02</b>	<b>Arrival Airport Elev. – 554ft                      Estimated totals for this flight&gt;&gt;&gt;</b>					<b>181nm</b>	<b>01+13</b>

**Leg 3**

See the notes on page 2 for details of the approach.

From – To	<b><u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"</b>				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 31	Init. Hdg – 305deg	Init. Alt – 8,500ft	Apt Elev. – 554ft			
Fort Simpson (CYFS) Canada  To  Norman Wells (CYVQ) Canada	<b>Departure:</b> To FS NDB, 375.0. After take off continue on runway heading 305deg. Direct to NDB.....				305	2.2	00+01
	<b>Enroute:</b> To VQ NDB, 326.0. Turn left to 293deg. Commence 300fpm descent to 2,000ft ASL at ETE - 21min. Direct to NDB.....				293	253.2	01+42
	<b>Approach:</b> To runway. Turn left to 263deg for a visual approach as described in the notes.....  Land: Norman Wells runway 27                      Length: 5,980ft                      Width: 150ft                      Surface: Asphalt				263	3.2	00+01
<b>Flight: 910-01-03</b>	<b>Arrival Airport Elev. – 239ft                      Estimated totals for this flight&gt;&gt;&gt;</b>					<b>259nm</b>	<b>01+44</b>