

An ICY CHARTER to ANTARCTICA, FS9/2004 only

DC3 Airways has been awarded a contract to provide a ferry service for Cargo, Exploration Teams and Relief Crews between the tip of South America to the bases on the desolate sixth continent known as Antarctica. You will be flying in an area where the wind seldom drops below gale force and landing on oil-soaked gravel and ice runways. DC3s, with Turbo Prop engines and skis, which retract to approx 5 inches below the wheels from the axle line, still fly this route today.

You will be based at the town of Punta Arenas, the most southerly International Airport in the world. It is situated on the Northwest side of the Magellan Strait passage, between South America and the island of 'Tierra del Fuego' (Land of Fire). In real life, this airport closes during the winter months.

Unlike the Arctic, there is no habitation south of Isla Rey Jorge, which is only at S62°11" and its approximate equivalent in the Northern Hemisphere is Keflavik, Iceland.



DC3 Classic on Petrel's Ice Runway

Antarctica's land mass is bigger than Australia and the Ice doubles it further in size (View in Globe mode on FSNavigator). If all the ice were to melt, all the Oceans would rise by 135ft. There are quite a few mountains here and the South Pole itself is 9,300 ft above sea level and the OAT there can drop to minus 70° C.

NOTAMs

- Flights are made up for the 'Bare Metal' and 'Classic' DC3s using the default MS panel. Use NAV1 (red) for ADF and NAV2 (green) for VOR settings and adjust the Radio Compass each time you change heading.
- Fuel based on 96 gals per hour at 145 knots (4 lbs/mile) plus 80 gals reserve unless advised otherwise.
- Flights are in daylight only and use DC3 Airways Southern Hemisphere Spring, Summer or Fall weather, definitely not Winter as runways are not lit.
- Brakes do not work when landing on ice runways, the aircraft is on skis.
- Fuel is stored below ground and is available at all Bases. Do not take on more than the required amount; it costs \$5.00 a gallon.
- Read Tech Ed's article on "Landing on Short Fields".
- Beware of strong head, tail & crosswinds.

An ICY CHARTER to ANTARCTICA, FS9/2004 only**Leg 1 Punta Arenas to Ushuaia**

This leg takes you from Punta Arenas, passing over Magellan's Strait then across Tierra del Fuego, and land at Ushuaia, Argentina to pick up passengers, freight, etc. Fuel required: 400 gals (2400 lbs)

From – To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 25	Init. Hdg – 254deg	Init. Alt – 7,500ft	Apt Elev. – 137ft			
Punta Arenas (SCCI) Chile To Ushuaia (SAWH) Argentina	Departure (07:30 hrs): To Fix 01. After take off continue on runway heading 254deg until 1,500ft MSL.....				254	5.7	00+03
	Enroute: To Porvenir [CFM] NDB, 340.0. Turn left to 108deg. Direct to NDB.....				108	27.3	00+13
	To Puerto Williams [PWL] VOR/DME 114.90. Turn right, intercept PWL 121R, fly towards VOR...				123	109.4	00+ 41
	When PWL DME reads 30 nm, descend to 2800ft. Set Nav 1 to 111.30.....				123	30	00+14
	When DME reads 14nm, turn to Hdg 164°and intercept ILS for Ushuaia.....				164	3.8	00+02
	Approach: Turn right to 252° for a visual approach to runway				252	12.9	00+7
	Land: Ushuaia est Aeronaval runway 25 Length: 9162ft Width: 148ft Surface: Concrete						
Flight: 549-04-01	Arrival Airport Elev. – 91ft				Estimated totals for this flight>>>		
						188nm	01+20

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Leg 2 Ushuaia to Isla Rey Jorge

This leg takes you past Cape Horn at the tip of South America, then crossing that part of the Southern Ocean known as "Drake's Passage" to Isla Rey Jorge on the Antarctic Peninsula.

Notes:

- **Fuel to maximum.**
- **Strong tail winds can shorten the trip by 1 hour**

From – To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 25	Init. Hdg – 252deg	Init. Alt – 7,500ft	Apt Elev. – 91ft			
Ushuaia (SAWH) Argentina To Isla Rey Jorge (SCRM) Antarctica	Departure (09:30 hrs): Set Nav 1 to 114.90 PWL After take off continue on runway heading 252deg until 1,000ft MSL.....				252	4.0	00+03
	Enroute: Make a smooth left turn to hdg 080° Puerto Williams [PWL] VOR/DME 114.90. Direct to VOR..... To Fix 02. Turn right and track 140R outbound from PWL. When you lose the signal from PWL turn left to 135deg and retune Nav 1 to Isla Rey Jorge [IRJ] VOR/DME 113.30..... After about 1 hour you should intercept IRJ VOR131R.....				080	22.6	00+13
					140		
					135		
	Start your descent to 1,000ft MSL when the DME reads 38nm. Waypoint reached when the DME reads 7.5nm.....				131	536	03+42
	Approach: To Fix 03. Turn right to 150deg and reset the OBS to 110deg. Waypoint reached when the OBS needle centres..... To runway. Turn left to 110deg for a visual approach..... Note that Teniente R Marsh Martin has Approach Light System (ALS).				150	4.6	00+02
				110	3.0	00+02	
Land: Teniente R Marsh Martin runway 11 Length: 4,227ft Width: 128ft Surface: Gravel							
Flight: 549-04-02	Arrival Airport Elev. – 65ft						

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Leg 3 Isla Rey Jorge to Palmer Station - ICAO code NZ0B ←calls for zero, not letter O.

The next 4 flights can be accomplished in one day if you depart from Isla Rey Jorge 30 mins after Dawn

NOTE: There are no navigation aids at Palmer Station!!!

Fuel required: 600 galls (3,600 lbs) to allow for three attempts at landing, aborting the flight and returning to Isla Rey Jorge.

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 11	Init. Hdg – 113deg	Init. Alt – 8,500ft	Apt Elev. – 65ft			
Isla Rey Jorge (SCRM) Antarctica To Palmer Station (NZ0B) Antarctica	Departure (Dawn + 30 mins): Before take off tune ADF to IRJ NDB, 360.0, NAV1 to IRJ VOR/DME, 113.30, set OBS to 206deg To IRJ NDB. Turn right to 118deg. Direct to NDB.....				118	1.2	00+01
	Enroute: To Fix 01. Turn right to 226deg and intercept IRJ VOR 206R.....				226	2.1	00+01
	To Fix 02. Turn left to 206deg and track 206R outbound from IRJ. Waypoint reached when the DME reads 100nm.....				206	98.5	00+44
	To Fix 03. Turn left to 191deg and start your descent to 3,500ft. Follow just off the coastline of the island on your right and keep over the water.....				191	57.8	00+27
	To Fix 04. Turn right to 217deg passing through the channel between the Islands, which are the large (last) one on your right and the smaller one in the channel on your left.....				217	46.4	00+22
	Approach: To Palmer Station. Continue to follow the coastline of the island on your right, and shortly after turning to about 280deg you should see the pale blue/white colored ice runway at S64.45° W64.02° (press SHIFT-Z for details at top left of screen) in front of you. It is incredibly difficult to pick the airfield out from the surrounding snow – it's towards the seaward end of the large headland, which should be about 10nm in front of you. Descend to 1,500ft and slow to 120kts.....				280	11.9	00+06
	To Fix 05. Turn left to runway reciprocal 191deg and fly Hdg for 2 minutes.....				191	4.0	00+02
	To runway. Commence a procedure turn. Make a right 45deg turn to 236deg and fly Hdg for one minute. Make a left 180deg turn to 056deg. When you can see the runway out of the left cockpit window (it's in a shelf cut into the surrounding ice fields, near a waterfall into the sea) turn left to runway Hdg 011deg for a visual approach. Reduce speed to 70 kts for touchdown. An overshoot into the snow at the other end is permissible NOTE: You must abort if you realize you are not going to make it, <u>before reaching the runway threshold!!! Mountain cliff face at the other end.</u>				Final Hdg 011	9.2	00+05
	Land: Palmer Station runway 1 Length: 2,500ft Width: 100ft Surface: Ice						
Flight: 549-04-03	Arrival Airport Elev. – 147ft					231nm	01+48
	Estimated totals for this flight>>>						

An ICY CHARTER to ANTARCTICA, FS9/2004 onlyLeg 4. Palmer Station to Base Marambio.

ICAO code NZ0A ←calls for zero, not letter O.

Fuel required: 334 gals (2,000 lbs).

From – To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 19ft	Init. Hdg – 191deg	Init. Alt – 7,500ft	Apt Elev. – 147ft			
Palmer Station (NZ0B) Antarctica To Base Marambio (SAWB) Antarctica	Departure: Before take off tune ADF to MBI NDB, 330.0 and NAV1 to MBI VOR/DME, 117.90, set the OBS to 056deg. To Fix 01. After take off continue on runway heading 191deg until 1,000ft MSL.....				191	4.3	00+02
	Enroute: To Fix 02. Turn left to 115deg, climb to 7,500ft and maintain this heading until you are over the large island ahead.....				115	50.2	00+23
	Turn to hdg 056° and intercept the MBI 054R to Fix 03.....				056	154.0	01+09
	Commence descent to 3,000ft when the DME reads 34nm. Waypoint at MBI DME 12.4.....						
	Approach: To Fix 04. Turn left to 042deg – you will see the runway on top of the hill in front of you.....				042	5.4	00+03
	To runway. Turn right to 059deg for a visual approach. This is a tricky approach as runway is on top of the hill. Be careful of Tsunami waves washing onto front of runway. Keep speed to 80kts...				059	7.0	00+03
	Missed approach: Talk to ATC for directions						
	Land: Base Marambio runway 8 Length: 4,134ft Width: 115 ft Surface: Gravel						
Flight: 549-04-04	Arrival Airport Elev. – 761ft Estimated totals for this flight>>>					221nm	01+40

An ICY CHARTER to ANTARCTICA, FS9/2004 onlyLeg 5 Base Marambio to Petrel

NZ0A ← Calls for zero, not letter O

Marambio and Petrel NDBs have the same frequency, needle will swing over approx 22nm from Petrel.

Fuel required: 150 gals (900 lbs).

From – To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 6	Init. Hdg – 060deg	Init. Alt – 2,500ft	Apt Elev. – 761ft			
Base Marambio (SAWB) Antarctica To Petrel (NZ0A) Antarctica	Departure: Before take off tune ADF to MBI/PET NDB, 330.0 and NAV1 to MBI VOR/DME, 117.90, set the OBS to 358deg. To Fix 01. After take off continue on runway heading 059deg until 1,500ft MSL.....				059	3.7	00+02
	Enroute: To Fix 02. Turn left to 330deg. Waypoint reached when the OBS needle centers..... To Fix 03. Turn right and track MBI 358R. Watch RMI needle for swing over from MBI to PET beacons, you are then 22 miles from Petrel, descend to 1,000ft. Waypoint reached when the RMI reads 060deg. You are approx 4.5 miles from the runway.....				330	5.5	00+03
	Approach: To runway. Turn right to 079deg for a visual approach.....				358	38.3	00+18
	Land: Petrel runway 8 Length: 3,500ft Width: 100ft Surface: Ice				079	4.4	00+02
Flight: 549-04-05	Arrival Airport Elev. – 16 ft				Estimated totals for this flight>>>		52nm 00+25

An ICY CHARTER to ANTARCTICA, FS9/2004 only**Leg 6 Petrel to Isla Rey Jorge**

NZ0A ← Calls for zero, not letter O

Fuel required: 300 gals (1800 lbs).

From – To	Flight Description. "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 26	Init. Hdg – 259deg	Init. Alt – 4,500ft	Apt Elev. – 16ft			
Petrel (NZ0A) Antarctica To Isla Rey Jorge (SCRM) Antarctica	Departure : Before take off tune ADF to PET NDB, 330.0 and NAV1 to IRJ 113.30, set the OBS to 304deg. Note take off time To Fix 01. After take off continue on runway heading 259deg until 1,500ft MSL.....				259	4.2	00+02
	Enroute: To Fix 02. Turn right to 304deg. Fly direct to IRJ NDB, set NDB to IRJ 360.0 set identicall.....				304		
	When IRJ NDB picked up, head towards the beacon.....				304	80.0	00+36
	When DME reads 25nm, descend to 1,000ft and make a visual approach.....				304	25.0	00+17
	Approach: To runway. Turn left to 297deg for a visual approach.....				297	0.5	00+01
	Land: Teniente R Marsh Martin runway 29 Length: 8,497ft Width: 150ft Surface: Gravel						
Flight: 549-04-06	Arrival Airport Elev. – 148ft Estimated totals for this flight>>>					109nm	00.50

Overnight here and depart for home in the morning.

An ICY CHARTER to ANTARCTICA, FS9/2004 only**Leg 7Isla Rey Jorge to Rio Grande**

Long flight over the Ocean – Beware of strong head and switching cross winds on this leg. Can take up to 1 hour longer than scheduled

Fuel required: Maximum

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 29	Init. Hdg – 290deg	Init. Alt – 6,500ft	Apt Elev. – 148ft			
Isla Rey Jorge (SCRM) Antarctica To Rio Grande (SAWE) Argentina	Departure (Dawn + 30mins):						
	Before take off tune NAV1 to IRJ VOR 113.30, set the OBS to 311deg. To Fix 01. After take off continue on runway heading 290deg until 1,000ft MSL.....				290	3.7	00+02
	Enroute:						
	To PWL VOR 114.90. Turn right to 311deg and intercept IRJ outbound 311R and maintain hdg. When you lose the signal from IRJ VOR change hdg to 317deg and retune Nav 1 to Puerto Williams PWL VOR 114.90. After about 1 hour you should intercept PWL VOR 321R. Head direct to VOR.....				311 317		
	After station passage, track PWL VOR OB radial 353deg. When DME reads 42nm from PWL, commence descent to 2,500ft and maintain hdg 353deg.....				321	508.7	03+43
	Set NAV1 to 109.50 Rio Grande ILS which has DME.....				353	42.0	00+17
					353	28.2	00+14
	Approach:						
	To runway. Intercept the ILS for an instrument landing.....				254	11.8	00+05
	Land: Rio Grande runway 25						
	Length: 6,546ft Width: 131ft Surface: Asphalt						
Flight: 549-04-07	Arrival Airport Elev. – 66ft					594nm	04+21
	Estimated totals for this flight>>>						

An ICY CHARTER to ANTARCTICA, FS9/2004 only**Leg 8 Rio Grande to Puntas Arenas**

A short hop across Tierra Del Fuego and the Magellan Strait back to home base.

Fuel required: 300 Gals (1,800 lbs)

From – To	<u>Flight Description.</u> "Allocated runways and related information may change when flying online or using Real Weather"				Course (Leg) Deg	Distance (Leg) nm	ETE (leg) HH+MM
	Dep. Rwy – 25	Init. Hdg – 254deg	Init. Alt – 4,500ft	Apt Elev. – 66ft			
Rio Grande (SAWE) Argentina To Punta Arenas (SCCI) Chile	Departure: Before take off tune NAV1 to NAS 114.10, NDB to CFM 340.0. To Fix 01. After take off continue on runway heading until 1,000ft MSL.....				254	4.0	00+02
	Enroute: Turn right to 274 deg and intercept CFM NDB fly towards beacon..... After station passage, turn to hdg 292 and commence descent to 1,000ft. Set NDB to 327.0 for CO beacon and fly to there and make a visual approach.....				274	94.9	00+42
	Approach: To runway. Visual approach to Rwy 30.....				292	21.8	00+10
	Land: Rio Grande runway 30 Length: 6,546ft Width: 131ft Surface: Asphalt				304	0.8	00+00
Flight: 549-04-08	Arrival Airport Elev. – 66ft				Estimated totals for this flight>>>		122nm 00+54