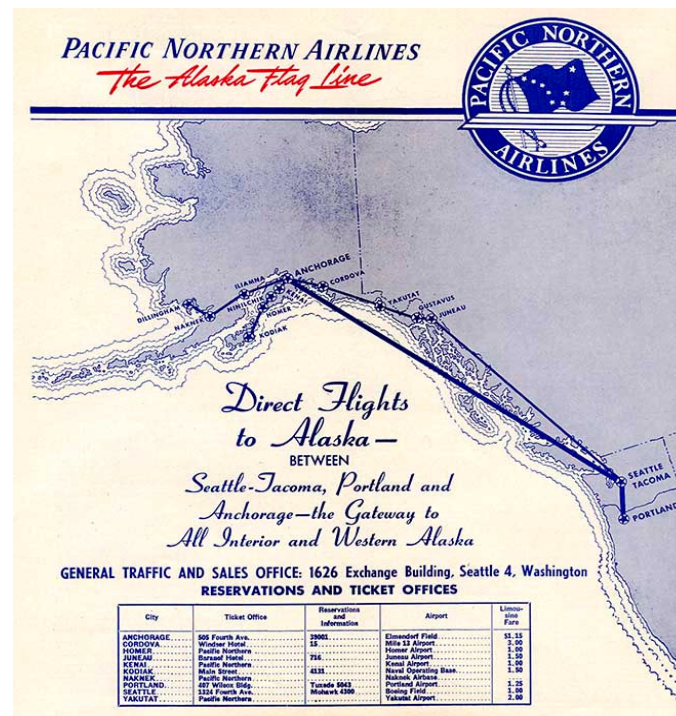


# Pacific Northern Airlines for DC-3 Airways



## **General Notes**

Welcome to Pacific Northern Airlines for DC-3 Airways. These flights have complied from scans of the 1949 and 1951 timetables of PNA. PNA operated from 1947 until being merged into Western Airlines in 1967. You can read more about PNA at <http://www.geocities.com/alaskanheritage/PNAhistory.html>.

All flights have been designed with NDB to NDB navigation where practical given the limits of FS. In a few cases I have used VORs because of the very poor reception range of some NDBs in FS and the need for positive navigational guidance in areas near high terrain. Please be aware that almost all of these flights are in the vicinity of high terrain. To the extent practical I have outlined the necessary minimum altitudes and departure procedures necessary for terrain clearance. For detailed information and IAPs please consult the appropriate charts. These routes generally follow modern "color" airways which I believe are probably similar to the 1951 routes although they are only educated guesses as to what the original routes might have been. Use of real weather is encouraged. Also consider doing these flights VFR if the weather allows.

*Everything in this document is for entertainment flight simulation ONLY - not for any type of real world navigation! All information is provided "as is" - some information may be incorrect. Copyright 2006 DC3 Airways.*

### **1949 - 1951 Pacific Northern Airlines Flights Number 1, 2, 9 and 10**

These flights operated between Juneau and Anchorage (Merrill Field). Flights 1 & 2 stopped in Yakutat and Cordova with a "flag stop" at Gustavus. Flights 9 & 10 operated as "extra sections" with either direct service between Anchorage and Juneau or "flag stops" at Yakutat and/or Cordova. All legs operated in both directions. These are all day flights. Equipment was DC-3s but DC-4s may have been used in later years.

The Juneau airport is surrounded by high terrain in almost all directions. All flights departing Juneau under instrument conditions must follow the following procedure - alternatively use the modern chart for the JUNEAU2 departure (JNU2). A familiarization flight in good weather is recommended.

***DC3 Airways Juneau Departure Procedure: If at all possible depart rwy 26. Rwy 8 departures must reverse course visually immediately after departure thence . . . Proceed direct CGL NDB (212) 3.9 nm, heading 242. Thence outbound the 242 bearing from CGL for 6.0nm (isec BARLO) to turn left to intercept the 197 bearing of EEF NDB (391) inbound (16nm to EEF). Climb to at or above 5,500' MSL before turning left to EEF.***

<b>Flight</b>	<b>From - To</b>	<b>NM</b>	<b>Decsription</b>	<b>Airport Identifiers (ICAO)</b>
PNA-1-A	Juneau - Yakutat	207	Juneau Departure Procedure (above) to EEF NDB (391). Proceed outbound along the 243 bearing of EEF NDB 71nm then turning right (isec HAPIT) to intercept the 290 bearing of the YAK VOR (133.30) inbound (103 nm). Minimum altitude 6,000' MSL. YAK VOR is located on the field. If you prefer you can ignore the YAK VOR and fly DR on a 290 heading from HAPIT until receiving OCC NDB (385). OCC NDB is 3 nm West of the airport. Extensive high terrain Northeast of this route - use caution.	PAJN - PAYA
PNA-1-B	Yakutat - Cordova	186	Depart to the W-SW (high terrain N and E) to join the 260 bearing of the YAK VOR (133.30) outbound for 141nm (isec FORAT). Cross FORAT at or above 6,000' MSL. Turn right to follow the 268 bearing of the GCR NDB (404) inbound 44 nm to the field. The GCR NDB is located on the field. You can descend to 1,500' MSL once within 10 nm of the airport on the 268 bearing of GCR NDB. High terrain to the N of the approach path and beyond the field.	PAYA - PACV
PNA-1-C	Cordova - Anchorage	155	Immediately after departure turn SW to join the 200 bearing of the GCR NDB (404) outbound for 9 nm (isec EYAKS) for terrain clearance. Cross EYAKS at or above 2,500' MSL. Then turn right to join the 249 bearing of the HBK NDB (362) inbound. Cross HBK at or above 5,000' MSL. Proceed outbound on the 259 bearing of HBK for 82 nm climbing to at least 10,000' MSL within 30 nm of the HBK NDB. Turn right to join the 278 bearing of the CMQ NDB (338) inbound. Unless able to maintian terrain clearance visually maintain 10,000' MSL from 25 nm west of HBK until CMQ. Descend West of CMQ. Merrill field is 6 nm NE of the CMQ NDB (041 heading).	PACV - PAMR
PNA-1-D	Juneau - Gustavus	47	Juneau Departure Procedure (above) to EEF NDB (391). At EEF turn right via EEF 290 bearing outbound then direct GAV NDB (219). Airport is 21 nm from EEF.	PAJN - PAGS

PNA-1-E	Gustavus - Yakutat	196	Join the 106 bearing of the EEF NDB (391) inbound immediately after departure. Rwy 29 departures turn LEFT - high terrain to the North of the field. At EEF NDB turn right to join the 243 bearing outbound thence as per flight PNA-1-A above.	PAGS - PAYA
PNA-9	Juneau - Anchorage	535	Proceed as in flight PNA-1-A until overhead YAK VOR. Thence outbound via the 254 bearing of OCC NDB (385) for 90 nm (some DR). Turn right to course 263 direct HBK NDB (362) when able (198 nm from OCC). Depart HBK NDB via the 259 bearing. Fly 82nm then turn right to course 278 direct CMQ NDB (338) when able. Unless able to maintain terrain clearance visually maintain 10,000' MSL from 25 nm west of HBK until CMQ. Descend West of CMQ. Merrill field is 6 nm NE of the CMQ NDB (041 heading).	PAJN - PAMR
PNA-9-A	Juneau - Cordova	386	Proceed as in flight PNA-1-A until overhead YAK VOR. Thence as per flight PNA-1-B.	PAJN -PACV
PNA-9-B	Yakutat - Anchorage	335	After departure proceed outbound via the 254 bearing of OCC NDB (385) for 90 nm (some DR). Turn right to course 263 direct HBK NDB (362) when able (198 nm from OCC). Depart HBK NDB via the 259 bearing. Fly 82 nm then turn right to course 278 direct CMQ NDB (338) when able. Unless able to maintain terrain clearance visually maintain 10,000' MSL from 25 nm west of HBK until CMQ. Descend West of CMQ. Merrill field is 6 nm NE of the CMQ NDB (041 heading).	PAYA -PAMR

## 1949 - 1951 Pacific Northern Airlines Flights Number 3/4, 5/6, 7/8 and 25/26

These flights operated between Anchorage (Merrill Field) and multiple points in SW Alaska. Flights 3 & 4 operated from Anchorage to Homer and back via Kenai, Kasilof and Ninilchik. Flights 5, 6, 7, 8, 25 & 26 operated from Anchorage to Kodiak with additional service to Ilimana, Naknek Airbase (King Salmon) and Dillingham. As best I can determine except for flights 3 & 4 (which I have included) these were all DC-3 flights at this time. All legs operated in both directions. All are daylight flights except perhaps in midwinter when some of the early legs south from Anchorage would have been in darkness.

<b>Flight</b>	<b>From - To</b>	<b>NM</b>	<b>Decsription</b>	<b>Airport Identifiers (ICAO)</b>
PNA-6-A	Anchorage - Homer	109	Depart PAMR hdg 220 direct CMQ NDB (338). Depart CMQ NDB hdg 187 then direct OLT NDB (346) - 49 nm. Depart OLT NDB hdg 178 direct ACE NDB (277) 54 nm. PAHO is 0.8 nm from ACE NDB hdg 047. Minimum alt 5,000' MSL	PAMR -PAHO
PNA-6-B	Homer - Kodiak	121	After departure join the 210 bearing of the ACE NDB (277) outbound for 12 nm (isec OLSON). Cross OLSON at or above 3,400' MSL. Then turn left heading 140 to join the 170 bearing of the ACE NDB outbound (minimum altitude 6,000' MSL). Then direct RWO NDB (394) - 115 nm. Unless able to proceed visually maintain 5,500' MSL until crossing RWO. Turn left outbound on the 048 bearing from RWO where you can descend safely to 1600' MSL in a left procedure turn turning to track the 228 bearing of RWO inbound crossing RWO at 1600'. Continue tracking the 228 bearing outbound descending to 1000' MSL looking for the airport at 12 to 1 o'clock. If not in sight by 3nm after crossing RWO execute the missed approach by turning left direct RWO and climbing to 3700' MSL. PADQ is 6 nm SW of RWO bearing 233.	PAHO - PADQ
PNA-6-C	Anchorage - Kenai	57	Depart PAMR hdg 220 direct CMQ NDB (338). Depart CMQ hdg 200 then direct IWW NDB (379). PAEN in 1.8 nm S of IWW hdg 189.	PAMR - PAEN
PNA-6-D	Kenai - Homer	57	Depart PAEN hdg 165 direct ACE NDB (277). PAHO is 0.8 nm from ACE NDB hdg 047.	PAEN - PAHO
PNA-4-A	Kenai - Kasilof	13	Kasilof (5KS) is 13.2 nm SE of PAEN - course 159	PAEN - 5KS

PNA-4-B	Kasilof - Ninilchik	22	Ninilchik (NIN) is 22 nm S of 5KS - course 183	5KS - NIN
PNA-4-C	Ninilchik - Homer	24	Depart NIN hdg 150 direct ACE NDB (277). PAHO is 0.8 nm from ACE NDB hdg 047.	NIN - PAHO
PNA-5-A	Kodiak - Naknek	163	Depart PADQ hdg 53 direct RWO NDB (394). Proceed outbound along the 010 bearing of RWO until above 4,000' MSL. Then turn left to join the 271 bearing of RWO outbound. Climb to at or above 10,000' MSL before crossing 20 nm from RWO. Thence direct AK NDB (355) - 153 nm from RWO NDB. PAKN is 5.4 nm E of AK NDB course 112.	PADQ - PAKN
PNA-5-B	Naknek - Homer	183	Depart PAKN direct AK NDB (355) hdg 292, 5.4 nm. Thence via the 033 bearing of AK outbound for 89 nm (isec NOSKY). Turn right hdg 065 direct ACE NDB (277) when able. PAHO is 0.8 nm from ACE NDB hdg 047. Minimum altitude 6,000' MSL	PAKN - PAHO
PNA-7-A	Naknek - Iliamna	89	Depart PAKN direct AK NDB (355) hdg 292, 5.4 nm. Thence via the 022 bearing of AK outbound then direct ILI NDB (411). ILI NDB is 0.4 nm from the airport hdg 088.	PAKN - PAIL
PNA-7-B	Iliamna - Homer	108	Depart to the SE to join the 102 bearing of ILI NDB (411) outbound for 18 nm (isec NOSKY). Turn right hdg 065 direct ACE NDB (277) when able. PAHO is 0.8 nm from ACE NDB hdg 047. Minimum altitude 6,000' MSL	PAIL - PAHO
PNA-8-A	Naknek - Dillingham	66	Depart PAKN direct AK NDB (355) hdg 292, 5.4 nm. Thence via the 270 bearing of AK outbound until direct BTS NDB (429). BTS NDB is 3.1 nm S of the airport hdg 010.	PAKN - PADL

## 1951 Pacific Northern Airlines Flights 40 & 41 (DC4 only)

In 1951 PNA flight 41 left Portland OR at 0700 (PST - GMT -8h) arriving Seattle-Tacoma at 0755. It departed KSEA at 0900 (PST) arriving Anchorage 1430 (AST - GMT -10h at the time) - 7.5 h scheduled enroute. Flight 40 left Anchorage at 1730 (AST) arriving Seattle-Tacoma 0300 (PST) the next morning. It continued to arrive in Portland OR at 0425 (PST).

<b>Flight</b>	<b>From - To</b>	<b>NM</b>	<b>Decsription</b>	<b>Airport Identifiers (ICAO)</b>
PNA-41-A	Portland - Seattle	119	Depart KPDX heading 320 direct LSO NDB (256), 37 nm. Proceed outbound via the 350 bearing of LSO then direct GR NDB (216), 61 nm. KSEA is 22 nm NE of GR NDB heading 014.	KPDX - KSEA
PNA-41-B	Seattle - Anchorage	1304	Depart Seattle hdg 323 direct BF NDB (362). Then outbound via bearing 310 direct FHR NDB (284). Then direct AP NDB (378) and thence direct YCD NDB (251). Proceed outbound on the 290 bearing of YCD (minimum alt 7,000' MSL) until direct QQ NDB (400). Then outbound the 280 bearing QQ NDB until direct ZT NDB (242) - minimum altitude 10,000' MSL. Proceed outbound along the 292 bearing of ZT and via DR until direct ZP NDB (368) - 220 nm - minimum altitude 5,000' MSL. Then outbound via the 306 bearing ZP and via DR until direct SIT NDB (358) - 255 nm - minimum altitude 6,000' MSL. Then via the 295 radial outbound SIT NDB and DR until direct OCC NDB (385) - 209 nm. Proceed outbound via the 254 radial of OCC NDB (385) for 90 nm (some DR). Turn right to course 263 direct HBK NDB (362) when able (198 nm from OCC). Depart HBK NDB via the 259 bearing. Fly 82 nm then turn right to course 278 direct CMQ NDB (338) when able. Unless able to maintian terrain clearance visually maintain 10,000' MSL from 25 nm west of HBK until CMQ. Descend West of CMQ. Merrill field is 6 nm NE of the CMQ NDB.	KSEA- PAMR