Dispatcher’s Guide to Flight Planning

Wednesday, January 20th 2015 | 3:30pm – 5:00pm

PRESENTED BY:
Chad Patnode
Salvatore Funicella

Schedulers & Dispatchers Conference | Tampa, FL | January 19 – 22, 2016
Introduction

• This session is an extension to the PDP courses earlier this week.
• Our goal is to touch on common mistakes and confusions.
• We will not go item by item on the flight plan.
• This session is for you. Ask any questions to clarify the flight plan.
• Get involved with the mission planning and flight planning.
Mission Planning

- What is Mission Planning?
- Why Mission Plan?
- When should I Mission Plan?
- How do I Mission Plan?
Flight Planning

Regulations

• Part 91
• Part 91k
  – Management Specifications (MSpecs)
• Part 135
  – Operations Specifications (Op Specs)
• Aviation Operations Manual
## TAKE-OFF & OBSTACLE DEPARTURE PROCEDURE

### Rwy 9

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### Sources

91.1030(e), Op Spec C057 & C079, 135.217
Arrival Airport

- Curfew
  - Mandatory vs Voluntary
- Slot
- Weather / Approach procedure
- Standard Arrival Route (STAR)
FM121800 09010KT 1/4SM -SHSN OVC005

FM121800 09010KT 1/2SM -SHSN OVC001
HUH?

WHAT?

Sources: 135.225 & Op Spec C079
Alternate Airport

- Potential alternates should be identified in the Mission Planning process
- Airport Approval
- For Internationals, determine ground handler / Customs process ahead of time
You ALWAYS need an alternate…
…Unless you don’t…

• An instrument approach procedure is published AND

• Part 91.169 – 1-2-3 Rule. For ONE hour prior & after ETA, forecast ceiling must be TWO thousand feet above airport elevation and THREE miles visibility.

• Part 135.223 –
  – 1 hour before and 1 hour after ETA
  – Ceiling will be at least 1500 ft above lowest circling MDA
  – If a circling approach is not available or authorized, then ceiling will be 1500 ft above lowest straight in minimum, or 2000 ft above airport elevation, whichever is higher
  – Visibility at least 3 miles, or 2 miles more than lowest authorized minimum to be used, whichever is higher
An instrument approach procedure is published AND

Part 91.169 – 1-2-3 Rule. For ONE hour prior & after ETA, forecast ceiling must be TWO thousand feet above airport elevation and THREE miles visibility.

ETA 1900Z

KASE 121120Z 1212/1312 18007KT P6SM SKC FM121800 00000KT 3SM OVC100 FM130100 20005KT P6SM SCT250

KASE 121120Z 1212/1312 18007KT P6SM SKC FM121800 00000KT 3SM OVC020 FM130100 20005KT P6SM SCT250
Do we need an alternate (Part 135)?

• An instrument approach procedure is published AND
• Part 135.223 –
  – 1 hour before and 1 hour after ETA
  – Ceiling will be at least 1500 ft above lowest circling MDA
  – If a circling approach is not available or authorized, then ceiling will be 1500 ft above lowest straight in minimum, or 2000 ft above airport elevation, whichever is higher
  – Visibility at least 3 miles, or 2 miles more than lowest authorized minimum to be used, whichever is higher

ETA: 0900Z; Straight-in Cat C aircraft
KMIA 102343Z 1100/1124 30007KT P6SM FEW025 BKN150
FM110400 26010KT 3SM FEW017 BKN020 OVC050
FM110900 26010KT P6SM FEW040 BKN200
Ok, so we need an alternate…
how do we pick a good one?

- Part 91.169 – Alternate minima specified in the procedure, or if none specified:
  - Precision Approach Procedure: 600’ & 2SM
  - Non-precision Approach Procedure: 800’ & 2SM
- Part 135 (Op Spec C55) –
  - For airports with at least ONE operational navigational facility providing a straight-in non-precision or precision approach, or circling maneuver
    - Add 400’ & 1SM
  - For airports with at least TWO operational nav facilities with 2 different identifiers, each providing a straight in non-precision or precision approach (no circling) to two DIFFERENT runways.
    - Add 200’ to the higher approach & 1/2SM to the higher approach
**LSGG GENEVA COINTRIN**

AO496/15 - AD NOT TO BE PLANNED FOR DIV OR ALTN. SAT SUN H24, 19 DEC 00:00 2015 UNTIL 13 MAR 23:59 2016. CREATED: 05 NOV 08:59 2015

**EGLL/LHR**

**HEATHROW**

**1.1. ATIS**

- **D-ATIS Arrival** 113.750 115.1 128.07
- **D-ATIS Departure** 121.935 (Non-8.33KHz-equipped ACFT should contact Heathrow Delivery.)

**1.2. NOISE ABATEMENT PROCEDURES**

**1.2.1. GENERAL**

The following procedures may at any time be departed from to the extent necessary for avoiding immediate danger or for complying with ATC instructions. Every operator of ACFT using the AFT shall ensure at all times that ACFT are operated in a manner calculated to cause the least disturbance practicable in areas surrounding the AFT.

**1.2.2. PREFERENTIAL RUNWAY SYSTEM**

When tailwind component is not greater than 5 KT on RWys 27R/L, these RWys will be used in preference to RWys 09R/L provided the RWY surface is dry. Pilots asking for permission to use the RWY into the wind when RWys 27R/L are in use, should understand that their arrival or departure may be delayed.

**1.2.3. REVERSE THRUST**

Avoid use of reverse thrust between 2330-0600LT except for safety reasons.

**1.2.4. RUN-UP TESTS**

Run-up tests are controlled in accordance with instructions issued by Heathrow APT LTD.

**1.2.5. NIGHTTIME RESTRICTIONS**

Any ACFT which has a noise classification greater than 95.9 EPNdB may not be scheduled to take off or land between 2330-0600LT. Any ACFT which has a noise classification greater than 98.9 EPNdB may not be scheduled to take off or land between 2300-0700LT.

Any ACFT which has a noise classification greater than 95.9 EPNdB may not take off between 2300-0700LT, except between 2300-2330LT when take-off was delayed for reasons beyond control of the ACFT operator.

APT authority has not given notice to the ACFT operator prohibiting take-off. Any ACFT may not take off or be scheduled to land between 2300-0700LT where the operator of that ACFT has not provided (prior to its take-off or prior to its scheduled landing times as appropriate) sufficient information to enable the APT authority to verify its noise classification.

None of the provisions above shall apply to a take-off of landing which is made in

**Sources:** LSGG NOTAM, EGLL Airport Briefing Page, MKJS Airport Diagram
Part 91 Alternate Mins

- Part 91.169 – Alternate minima specified in the procedure, or if none specified:
  - Precision Approach Procedure: 600’ & 2SM
  - Non-precision Approach Procedure: 800’ & 2SM

01/004 – NAV ILS RWY 5 GP OTS WIE UFN
Part 135 Alternate Mins

FM112100 17006KT 3SM BKN010

• Part 135 (Op Spec C55) –
  – For airports with at least ONE operational navigational facility providing a straight-in non-precision / precision approach, or circling maneuver
    • Add 400’ & 1SM
Finding a Valid Alternate

• Part 135 (Op Spec C55)

For airports with at least ONE operational navigational facility providing a straight-in nonprecision or precision approach, or circling maneuver

• Add 400' & 1SM

For airports with at least TWO operational nav facilities with 2 different identifiers, each providing a straight in nonprecision or precision approach (no circling) to two DIFFERENT runways.

• Add 200' to the higher approach & 1/2SM to the higher approach
• Part 135 (Op Spec C055) –
  – For airports with at least ONE operational navigational facility providing a straight-in non-precision or precision approach, or circling maneuver
    • Add 400’ & 1SM
  – For airports with at least TWO operational nav facilities with 2 different identifiers, each providing a straight in non-precision or precision approach (no circling) to two DIFFERENT runways.
    • Add 200’ to the higher approach & 1/2SM to the higher approach

Cat C approach category aircraft; ETA 2200z
KGON 111740Z 1118/1218 27014G22KT P6SM FEW050
FM112200 05008KT 2SM OVC007
What about international flights?

- A flight to be conducted in accordance with Instrument Flight Rules shall not be commenced unless the available information indicates that conditions at the airport of intended landing or at least one (1) destination alternate will, at the estimated time of arrival, be at or above the airport operating minimums.

- No pilot may designate an alternate airport unless the weather reports or forecasts, or any combination thereof, indicate that the weather conditions will be at or above authorized alternate airport landing minimums for that airport at the estimated time of arrival.

Sources: ICAO Annex 6 Chapter 4
• A flight to be conducted in accordance with Instrument Flight Rules shall not be commenced unless the available information indicates that conditions at the airport of intended landing or at least one (1) destination alternate will, at the estimated time of arrival, be at or above the airport operating minimums.

• No pilot may designate an alternate airport unless the weather reports or forecasts, or any combination thereof, indicate that the weather conditions will be at or above authorized alternate airport landing minimums for that airport at the estimated time of arrival. (ICAO Annex 6, Chapter 4)

• Part 91.703 – Legal, but not smart. Don’t do that. Always have an alternate and always follow your standard alternate minimum criteria.

• Part 135.3 (2) – Not legal in eyes of FAA. While operating outside the United States, comply with Annex 2, Rules of the Air, to the Convention on International Civil Aviation or the regulations of any foreign country, whichever applies, and with any rules of parts 61 and 91 of this chapter and this part that are more restrictive than that Annex or those regulations and that can be complied with without violating that Annex or those regulations. Annex 2 is incorporated by reference in §91.703(b) of this chapter.

Sources: ICAO Annex 6 Chapter 4, 91.703, 135.3
What about international flights?
Determining Cruise Speed

- What is your company policy?
  - Save fuel
  - Or save time
- Slot validity
- Weather
- Fuel reserves
What does payload include?

- Crew weights?
- Crew luggage?
- Standard onboard stock?
- Augmented crewmember?
- Pax weights?
- Pax luggage?
- Fuel?
- Catering?
- Bedding?
How much fuel should we take?
It depends on the mission

- **Departure Fuel** - Set the departure fuel when you know how much the crew wants to takeoff with (ex 38000#)
- **Fuel Over Destination / Alternate** – Use this when you want to land with a certain amount of fuel (ex 8000#)
- **Extra Fuel** – Equals fuel in addition to destination, plus alternate, plus reserve (ex 8000#)
- **Max Available Fuel** – Fill ‘er up!
- **Takeoff Weight** – Total aircraft takeoff weight, not just fuel (ex 100000#)
- **Landing Weight** – Total aircraft landing weight (ex 70000#)
Cruising flight level?

• How do you choose an appropriate flight level?

• RVSM, what is it?
Flight Plan Routing
Why use SIDs & STARs?

- Increases ATC/Pilot communication
- Decreases ATC/ATC confusion
- Allows for efficient airport/airspace usage
- Gives pilots graphics and more time to brief
- Easily loads into FMS
- Sets emergency expectations
- Allows for published routes over obstacles (higher than standard climb gradient will be required)
Trans level: FL180  
Trans alt: 18000'

1. RADAR required.
2. ELIOT may be accessed by all type aircraft requesting a final altitude of 14,000' to 16,000'.
3. NEWEL may be accessed by turbojet aircraft only requesting a final altitude at or above FL180.
4. ZIMMZ may be accessed by all type aircraft requesting a final altitude at or above FL180.
4. Turboprops only.

PORTT THREE RNAV DEPARTURE
(PORTT3.PORTT)
(RWYS 22L/R)

SPEED: DO NOT EXCEED 220 KT
UNTIL CROSSING BAGGA

AFIVA
AT or above 4000'
GEYSER FOUR DEPARTURE (GEYSR4.NALSI) (RWY 1)

This DP requires take-off minimums:
Rwy 1: Standard (or lower than standard if authorized) with a minimum climb of 450’ per NM to 14000’; or 4400-3 for climb in visual conditions.
Rwy 19: Not authorized-ATC.

Standard Take-off Minimums

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Gnd speed-KT 75 100 150 200 250 300
450’ per NM 563 750 1125 1500 1875 2250

**STAR**

**ROUTING**

WILLO 4C
A1 DOMUT on 041° track via KATHY to AVANT, turn RIGHT, intercept GWC R-254 inbound to GWC, turn RIGHT, GWC R-087 to HOLLY, turn LEFT, intercept MID R-126 inbound to WILLO.

WILLO 3D
A1 BILNI on 107° track to KUMIL, turn LEFT, 081° track to AVANT, turn RIGHT, intercept GWC R-254 inbound to GWC, turn RIGHT, GWC R-087 to HOLLY, turn LEFT, intercept MID R-105 inbound to WILLO.

---

**NOT TO SCALE**

**HOLDING OVER**

**BILNI**

FL200

---

**WARNING**

Do not proceed beyond WILLO without ATC clearance.

---

**DECENT PLANNING**

Pilots should plan for possible descent clearance as follows:

- **WILLO 4C**: FL180 by KATHY, FL150 by GWC.
- **WILLO 3D**: FL270 by 16NM before BILNI.

**ACTUAL DESCENT CLEARANCE WILL BE AS DIRECTED BY ATC.**

---

**When MID VOR is U/S, the route will be to ASTRA.**

---

**SPEED RESTRICTION**

Cross SLP at 200 KT or less. Direct distance from WILLO is 10NM.
HOLDING OVER MOSIT

Direct distance from GIPO to: Zurich Apt 21 NM

HOLDING OVER GIPO
Above 14000’, 1 minute (non-standard)

CAUTION
High terrain EAST of D199 KLO. Compulsory to monitor 121.50 MHz during entire approach.

operational reasons.
ACFT exceeding noise index 96 are not admitted for departure between 2300-2330 LT.
ACFT with a non-stop flight distance of 2700 NM/5000 km and above and not exceeding noise index 98 are admitted for departure between 2300-2330 LT.
The Final Product: The Flight Plan
SUMMARY 06.11 FL 39 E/O 019296 PL 000900 TOW 081250 CRZ M83 RT MAN
SUMMARY 06.09 FL 37 E/O 019805 PL 000900 TOW 081250 CRZ M83 RT MAN

CLIMB: 22 MIN 0113 NM 2347 LBS
DESEND: 25 MIN 0158 NM 0508 LBS

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KTTN
N40 16.6 W074 48.8 3172 0500

DITCH
N39 47.6 W074 43.0
CLB CLB 23039 01 350 183 DCT 029 0.06 0.09 04016
CLB CLB M023 327 188 1500 3143 ........ 30230

HFD
114.90
N41 38.5 W072 32.8

410 -65 26070 02 467 073 030 0.03 0.30 01565
39 39 M09 P066 532 070 2988 ........ 28723

52N050W
N52 00.0 W050 00.0
410 -60 26079 01 473 088 DCT 131 0.15 2.36 01520
36 M03 P077 549 085 1000 1875 ........ 22237

..............
RECALL UWX 515483 FLT=2653 DT=6 ORG=KTNN DST=EGKK ACFT:
--- START-OF-PLAN RC 515483 PLNR FMT ID PF
TO RECALL THIS SATCOM FLIGHT PLAN USE U2653

FLT PLAN: 2653 KTN/EGKK MACH:M83 A/C: /GLF5 RC 515483
ETD: 06/14.00Z

DEPARTURE DATE/TIME ARRIVAL DATE/TIME - INCLUDES TAXI TIMES
06/14.00 (ZULU) 06/20.26 (ZULU)
06/09.00 (LOCAL) 06/20.26 (LOCAL)

FUEL TIME DIST ARRIVE TAKEOFF LAND AV PLD OPLWLT
DEST EGKK 018799 06.13 3172 20132 081250 062451 009900 048850
RESV 001965 00.45
ALTN EGSS 001135 00.20 0070 W/C MO12
HOLD 000000 00.00
REQD 022399 07.18
TAXI 005000
EXTRA 009601 03.40
TOTL 032000 11.08 TRK MAN

KTN DITCH V312 CYN J209 WHITE DCT DIXIE DCT MERIT DCT HFD J42 PUT
DCT TOPPS N277A TUDEP DCT 52N050W DCT 53N040W DCT 53N030W DCT
53N020W DCT MALOT DCT GISTI DCT NOLRA UM140 MERLY UL149 DIEL
UNS14 GIBSO UM17 BILNI WILLO3D EGKK

AVG WND COMP P065 MXSH 03/53N020W
TAS 471
KTN/0410/53N040W/0450/KUMIL/0180/GWC/0130
DEP ATIS

DEPT.............FUEL/OUT.........OUT............OFF.............
ARR.............FUEL/IN...........IN............ON.............
GND/MI.............BURNED............B/TIME...........F/TIME........
EQUAL TIME POINT DATA FOR LOSS OF ONE ENGINE
GANDER INTL (CYQK) / SHANNON (EINN)
FLIGHT LEVEL 310

ETP WAYPOINT AT N53 00.8 W039 41.0 W/C DIST TIME TO ORIGIN APT TO ETF WAYPOINT 1678 03.17
ETP WAYPOINT TO CYQK M79 612 02.34
ETP WAYPOINT TO EINN P114 1106 02.34

TAS AT FLIGHT LEVEL 310 310
TEMP AT FLIGHT LEVEL 310 ISA M07
FUEL BURN TO ETP WAYPOINT 02160
FUEL OVERHEAD TO ETP WAYPOINT 005981
FUEL REMAINING AT ETP ALTN 01479
TOTAL ETP FUEL REQUIRED 017321

EQUAL TIME POINT DATA FOR DEPRESSURIZATION
GANDER INTL (CYQK) / SHANNON (EINN)
FLIGHT LEVEL 100

ETP WAYPOINT AT N53 04.4 W037 46.2 W/C DIST TIME TO ORIGIN APT TO ETF WAYPOINT 1747 03.25
ETP WAYPOINT TO CYQK M54 679 02.45
ETP WAYPOINT TO EINN P79 1037 02.45

TAS AT FLIGHT LEVEL 100 300
TEMP AT FLIGHT LEVEL 100 ISA M05
FUEL BURN TO ETP WAYPOINT 11712
FUEL OVERHEAD TO ETP WAYPOINT 019788

ATTENTION: Universal does not store any data in connection with the calculation tools it has developed to support your emissions reporting obligations. It is your responsibility to retain all necessary emissions reporting data for the time period required by each regulatory agency.
(FPL) -IG
-GLF5/M-SBDE2E3FGHIJ1J2J4J5J6J7M1M2M3RWYX/HID1G1
-KTNTN1400
-N0467F410 DCT DITCH V312 CYN J209 WHITE DCT DIXIE DCT MERIT DCT
-HID J42 RUT DCT TOPPS N277A DCT TUDPE R52N050W/M083F410
53N040W/M083F450 53N030W 53N020W DCT MALOT/N0471F450 DCT GISTI
DCT NOPLA UM140 MERLY UL149 IDEL UN514 GISSO UN17 BILINI WILLO30
-EGK0613 EGSS
-PBN/A1B1C1D1L1O1S2 DOP/141206 REG/N83CP
-EET/02GO107 CZQX0141 EGGO10355 EISNO455 EGTO531
TUDPEP0221 52N050W0236 53N040W0316 53N030W0355 53N020W0435
SEL/AKFR CODE/AB5641 RVR/550 OPR/PFIZER PER/C RMK/SLT ID
A0852 MOROK U224 AKTO
-LGGA5650 LCPM
-PBN/B1C1D1L1O1S2 SUB/260B DOP/151130 E
-EET/CZQX0054 CZQX0141 EGGO10347 EISNO444 EGTO522 EBDU054
EDDU0616 LFFP0617 LFEK0639 LFMOO640 LSAA0642
-JOOPY0212 43N050W0221 52N040W0307 53N030W0347 54N020W0425
SEL/AKFR CODE/AB5641 RVR/550 OPR/PFIZER PER/C RMK/PPR 120105301A
GROUND HANDLER JET AVIATION ON GROUND UNTIL 1440 LOCAL DECEMBER 3
E/100E P/6 S/M D/2 24 YELLOW A/WHITE BLUE GOLD C/GILDERSLEEVE)

(FPL) -IG
-GLF5/M-SBDE2E3FGHIJ1J2J4J5J6J7M1M2M3RWYX/HBD1G1
-KTNTN3200
-N0495F410 DCT DITCH V312 CYN J150 HTC DCT BRADDD N255A
JOOPY/N0495F410 49N050W/M085F410 52N040W 53N030W 54N020W DCT
DOGAL/N0474F410 DCT EEKT DCT ORMAG DCT KONAN UL60 KOK UM150 DIK
A0852 MOROK U224 AKTO
-LGGA5650 LCPM
-PBN/B1C1D1L1O1S2 SUB/260B DOP/151130 E
-EET/CZQX0046 CZQX0119 EGGO10344 EISNO434 EBDU0452
EDDU0546 LFFP0542 LFEK0569 LFMO0569 LSAA0562
-JOOPY0212 43N050W0221 52N040W0307 53N030W0347 54N020W0425
SEL/AKFR CODE/AB5641 RVR/550 OPR/PFIZER PER/C RMK/PPR 120105301A
GROUND HANDLER JET AVIATION ON GROUND UNTIL 1440 LOCAL DECEMBER 3
E/100E P/6 S/M D/2 24 YELLOW A/WHITE BLUE GOLD C/GILDERSLEEVE)
Equal Time Points (ETPs)

• What are they?
• When do we use them?
• What makes a good ETP airport?
• Are they still acceptable on the day of flight?
What are the 3 types of ETPs?

### EQUAL TIME POINT DATA FOR LOSS OF ONE ENGINE

**GANDER INTL (CYQX) / SHANNON (EINN)**

**FLIGHT LEVEL 290**

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<tr>
<td>ETP WAYPOINT TO CYQX</td>
<td>M63</td>
<td>694</td>
<td>02.51</td>
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<td>ETP WAYPOINT TO EINN</td>
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<td>1025</td>
<td>02.51</td>
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| TAS AT FLIGHT LEVEL 290           | 306 |
| TEMP AT FLIGHT LEVEL 290          | ISA M05 |
| FUEL BURN TO ETP WAYPOINT        | 9497 |
| FUEL OVERHEAD ETP WAYPOINT       | 011813 |
| FUEL BURN FROM ETP TO ALTN        | 006767 |
| FUEL REMAINING AT ETP ALTN        | 005046 |
| TOTAL ETP FUEL REQUIRED          | 016264 |

### EQUAL TIME POINT DATA FOR DEPRESSURIZATION

**GANDER INTL (CYQX) / SHANNON (EINN)**

**FLIGHT LEVEL 100**

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<tr>
<td>ETP WAYPOINT TO CYQX</td>
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<td>740</td>
<td>03.13</td>
</tr>
<tr>
<td>ETP WAYPOINT TO EINN</td>
<td>F33</td>
<td>978</td>
<td>03.13</td>
</tr>
</tbody>
</table>

| TAS AT FLIGHT LEVEL 100           | 270 |
| TEMP AT FLIGHT LEVEL 100          | ISA M08 |
| FUEL BURN TO ETP WAYPOINT        | 9730 |
| FUEL OVERHEAD ETP WAYPOINT       | 011580 |
| FUEL BURN FROM ETP TO ALTN        | 008751 |
| FUEL REMAINING AT ETP ALTN        | 002830 |
| TOTAL ETP FUEL REQUIRED          | 018480 |

### EQUAL TIME POINT DATA FOR CRZ ALT

**GANDER INTL (CYQX) / SHANNON (EINN)**

**FLIGHT LEVEL 450**

<table>
<thead>
<tr>
<th>ETP WAYPOINT AT N52 05.6 W035 10.5</th>
<th>W/C</th>
<th>DIST</th>
<th>TIME TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIGIN APT TO ETP WAYPOINT</td>
<td>1703</td>
<td>03.02</td>
<td></td>
</tr>
<tr>
<td>ETP WAYPOINT TO CYQX</td>
<td>M62</td>
<td>761</td>
<td>01.49</td>
</tr>
<tr>
<td>ETP WAYPOINT TO EINN</td>
<td>F51</td>
<td>956</td>
<td>01.49</td>
</tr>
</tbody>
</table>

| TAS AT FLIGHT LEVEL 450           | 480 |
| TEMP AT FLIGHT LEVEL 450          | ISA P00 |
| FUEL BURN TO ETP WAYPOINT        | 9834 |
| FUEL OVERHEAD ETP WAYPOINT       | 011476 |
| FUEL BURN FROM ETP TO ALTN        | 004823 |
| FUEL REMAINING AT ETP ALTN        | 006653 |
| TOTAL ETP FUEL REQUIRED          | 014657 |
**EQUAL TIME POINT DATA FOR DEPRESSURIZATION**

**GANDER INTL (CYQX) / SHANNON (EINN)**  
**FLIGHT LEVEL 150**

<table>
<thead>
<tr>
<th>ETP WAYPOINT AT N51 53.7 W036 08.3</th>
<th>W/C</th>
<th>DIST</th>
<th>TIME TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIGIN APT TO ETP WAYPOINT</td>
<td>1666</td>
<td>02.58</td>
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</tr>
<tr>
<td>ETP WAYPOINT TO CYQX</td>
<td>M47</td>
<td>724</td>
<td>03.03</td>
</tr>
<tr>
<td>ETP WAYPOINT TO EINN</td>
<td>P40</td>
<td>994</td>
<td>03.03</td>
</tr>
<tr>
<td>TAS AT FLIGHT LEVEL 150</td>
<td>286</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEMP AT FLIGHT LEVEL 150</td>
<td>ISA M07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL BURN TO ETP WAYPOINT</td>
<td>9331</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL OVERHEAD ETP WAYPOINT</td>
<td>008339</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL BURN FROM ETP TO ALTN</td>
<td>007730</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL REMAINING AT ETP ALTN</td>
<td>000609</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL ETP FUEL REQUIRED</td>
<td>017061</td>
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<td></td>
</tr>
</tbody>
</table>

**FLIGHT LEVEL 290**

<table>
<thead>
<tr>
<th>ETP WAYPOINT AT N50 08.1 W029 27.6</th>
<th>W/C</th>
<th>DIST</th>
<th>TIME TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORIGIN APT TO ETP WAYPOINT</td>
<td>1933</td>
<td>03.11</td>
<td></td>
</tr>
<tr>
<td>ETP WAYPOINT TO LPLA</td>
<td>P01</td>
<td>690</td>
<td>02.14</td>
</tr>
<tr>
<td>ETP WAYPOINT TO EINN</td>
<td>P44</td>
<td>781</td>
<td>02.14</td>
</tr>
<tr>
<td>TAS AT FLIGHT LEVEL 290</td>
<td>307</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEMP AT FLIGHT LEVEL 290</td>
<td>ISA M07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL BURN TO ETP WAYPOINT</td>
<td>12453</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL OVERHEAD ETP WAYPOINT</td>
<td>013593</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL BURN FROM ETP TO ALTN</td>
<td>005557</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUEL REMAINING AT ETP ALTN</td>
<td>008037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL ETP FUEL REQUIRED</td>
<td>018009</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Evaluating the Flight Plan you Generated

- Review fuel reserves
- Compare against your Runway Analysis
- Compare against your slots
- Ensure that the route is valid
Evaluating the Generated Route

LONDON - MUMBAI

Sources: http://www.faa.gov/air_traffic/publications/us_restrictions/#restrictIR
Overflight Permits

• Determining if overflight permits are needed
• Obtaining overflight permits
• Flight planning over countries that require overflight permits
• Don’t forget about neighboring countries
• Acknowledging overflight permits in Item 18 of the flight plan
Special FARs & FIR NOTAMs

A1293/15 - 1. FL410 AND ABOVE NOT ABVL IN KARACHI FIR.
2. FROM FL160 TO FL180 AND FL230 TO FL260 (BOTH INCLUSIVE) ARE NOT ABVL IN KARACHI FIR ON FOLLOWING ATS ROUTE SEGMENT:
I) BETWEEN PARIET TO PANJGUR ON ATS ROUTE G206
II) BETWEEN PANJGUR TO DOSTI ON ATS ROUTE G210
III) BETWEEN PANJGUR TO ASVI ON ATS ROUTE G465
IV) BETWEEN JIWANI TO LATEN ON ATS ROUTE A791
V) BETWEEN PARIET TO JIWANI ON ATS ROUTE A325
VI) BETWEEN JIWANI TO PANJGUR ON ATS ROUTE G214
VII) BETWEEN PANJGUR TO DALABANDIN ON ATS ROUTE J711
VIII) BETWEEN ZAHIDAN TO GAZIR ON ATS ROUTE G452
IX) BETWEEN ZAHIDAN TO KALAT ON ATS ROUTE J717
X) BETWEEN KEBUD TO PANJGUR ON ATS ROUTE G208
XI) ON ATS ROUTE B505
XII) ON ATS ROUTE 1385. 30 DEC 06:05 2015 UNTIL 30 JUN 23:59 2016 ESTIMATED. CREATED: 30 DEC 06:05 2015

TJ25 - SAN JUAN (ARTCC,).PR.
A0010/15 (Issued for TJ25 PART 1 OF 2) - THE FOLLOWING PREFERRED ROUTES MUST BE FILLED BY AIRCRAFT OPERATING WITHIN THE SAN JUAN CTL/FIR:
A. TJ25/TRTQ:
1. NORTHEAST U.S. TO TRH/THOM:
   (A) CRUISE L461 TRH4 L461 DVM TRH4.
   (B) CRUISE L461 TRH4 L461 DVM TRTQ.
   (C) KEKRA L469 ODICL IDDO A638 DVM TRMCH.
   (D) KEKRA L469 ODICL IDDO A638 DVM TRTQ.
2. TRTQ/DVM TO NORTHEAST U.S.:
   (A) TRH4 DVM TRH4.
   (B) TRTQ DVM TRH4.
3. SOUTHEAST A.S. TO TRH/THOM:
   (A) IDDO DVM L469 DVM TRMCH.
   (B) IDDO DVM L469 DVM TRTQ.
B. TJS/TSK:
1. NORTHEAST U.S. TO TJS/TSK:
   (A) KEKRA L469 ODICL JETSS STT TJS.
   (B) KEKRA L469 ODICL STT TJS.
2. TJS/TSK TO NORTHEAST U.S.:
   (A) TJS/TSK.
   (B) TJS/TSK.
   (C) TJS/TSK.
   (D) TJS/TSK.
   (E) TJS/TSK.
   END PART 1 OF 2. 06 DEC 00:00 2015 UNTIL PERM. CREATED: 08 MAR 11 05 2015

Flight planning over the Atlantic

When are the tracks active?
Eastbound: 0100z – 0800z
Westbound: 1130z – 1900z

KSWF/0370/SCOTS/0390/ATSUR/0410/GIBSO/0270/BEGTO/0210/AVANT/0190
N0514F370 SWF7 HFD DCT SCUPP J575 TUSKY N85A SCOTS/N0517F390 N55A
RAFIN/M090F390 NATV ATSUR/M090F410 DCT LULOX/N0520F410 UP69 DAWLY UL620
GIBSO/N0357F270 LOREL2D
What is wrong with this?
Evaluating the Flight Plan You Generated
Anchorage, Alaska (PANC) – Beijing, China (ZBAA)

Sources: Tokyo Volcanic Ash Advisory Center http://ds.data.jma.go.jp/svd/vaac/data/index.html
1. TMI IS 002 AND OPERATORS ARE REMINDED TO INCLUDE THE TMI NUMBER AS PART OF THE OCEANIC CLEARANCE READ BACK.

2. ADS-C AND CPDLC MANDATED OTS ARE AS FOLLOWS
   TRACK A 350 360 370 380 390
   TRACK B 350 360 370 380 390
   TRACK C 350 360 370 380 390
   TRACK D 350 360 370 380 390
   TRACK E 350 360 370 380 390
   TRACK F 350 360 370 380 390

3. RLATSM OTS LEVELS 350-390. RLATSM TRACKS AS FOLLOWS
   TRACK C
   TRACK D
   TRACK E

END OF ADS-C AND CPDLC MANDATED OTS

END OF RLATSM OTS
Reduced Lateral Separation Minimum (RLATSM)
Reduced Lateral Separation Minimum (RLATSM)

QUESTIONS?