

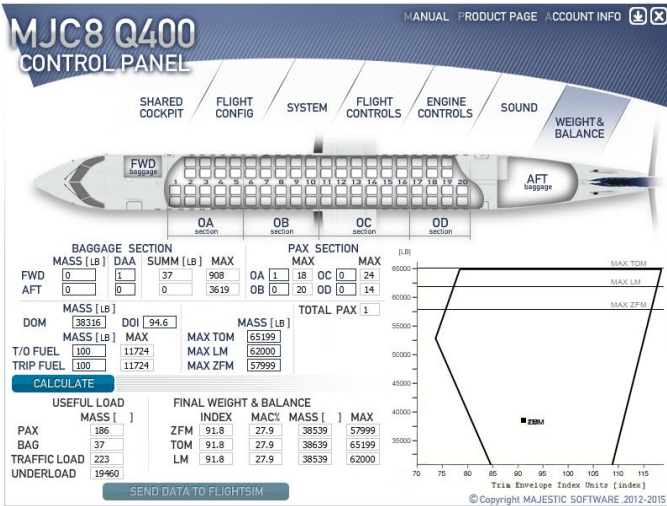
**WARNING – MAKE A BACKUP OF ALL FILES PRIOR EDITING SO YOU CAN UNDO CHANGES IF NEEDED**

**MJQ400 Weight Management with FSCaptain and PFPX**

**Setup**

The MJQ400 weight issue with FSCaptain results when multiple programs are used and each of those are using different values for passenger and cargo weights. Sometimes the empty weight of the aircraft has different values compounding the issue. This tutorial is specifically for operating Majestic’s Q400 with PFPX for flight planning along with FSCaptain. I would urge anyone to rename any file being modified by adding the extension “.original”. Example is “aircraft.cfg” would be renamed to “aircraft.cfg.original”.

**MJC8-Q400 Changes**



Unfortunately the MJC8-Q400 Control panel has hardcoded weights and does not factor in the Pilot Flying, First Officer (PF\_FO) or Flight Attendants (FA). PAX weight is set at 186 per. DAA weight is set at 37 per. These weights are not exact so the more PAX and DAA you add the larger the discrepancy. You cannot modify these values so weights have to be configured in PFPX and FSCaptain. Baggage we can compensate for during planning.

Only the DOM weight has to be modified. This value is arrived from the empty weight that is listed in the aircraft.cfg file which was 37572lbs, and then adding 744lbs, to account for the combined weight of the flight crew. New value is now 38316lbs. I decided to make the PF/FO and 2 the Flight Attendants match the adult weight at 186lbs (x4). This crew weight will come up over and over.

**Aircraft.cfg Changes**

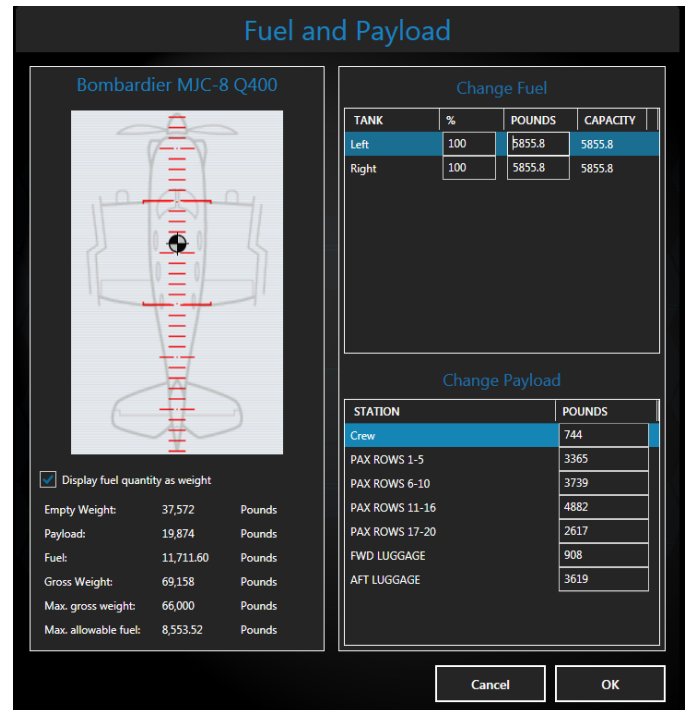
These should match your load map in FSCaptain. If PAX and Baggage weights are less then what FSCaptain has in the load map, then FSCaptain may not show a load plan on the manifest within the administrator.

```
[WEIGHT_AND_BALANCE]
max_gross_weight = 66000.0
empty_weight = 37572.48 // This is in fact DOM
max_number_of_stations = 20

//Weight (lbs), longitudinal, lateral, vertical
station_load.0 = 744.0, -29.0, 0.0, 0.0
station_load.1 = 3365.0, -29.0, 0.0, 0.0
station_load.2 = 3739.0, -29.0, 0.0, 0.0
station_load.3 = 4882.0, -29.0, 0.0, 0.0
station_load.4 = 2617.0, -29.0, 0.0, 0.0
station_load.5 = 908.0, -29.0, 0.0, 0.0
station_load.6 = 3619.0, -29.0, 0.0, 0.0

station_name.0 = "Crew"
station_name.1 = "PAX ROWS 1-5"
station_name.2 = "PAX ROWS 6-10"
station_name.3 = "PAX ROWS 11-16"
station_name.4 = "PAX ROWS 17-20"
station_name.5 = "FWD LUGGAGE"
station_name.6 = "AFT LUGGAGE"
```

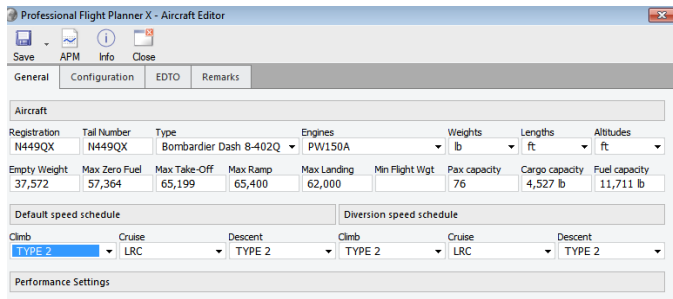
If everything is set up properly in the aircraft.cfg file your fuel and payload in the sim should show your station names and weights.



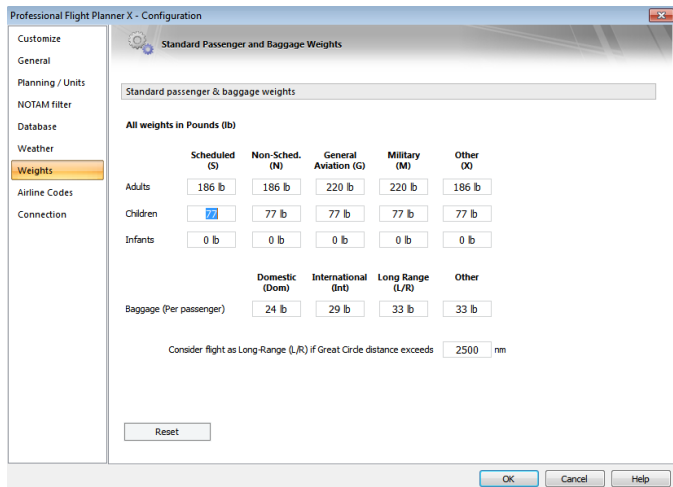
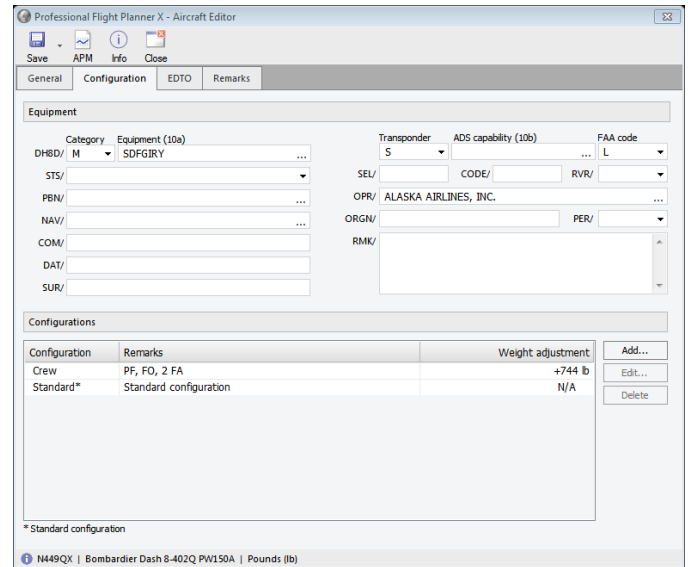
If everything is set up properly in the aircraft.cfg file your fuel and payload in the sim should show your station names and weights.

## PFPX Changes

Set up your aircraft as you normally would and for the Empty Weight, enter the weight that was listed in the aircraft.cfg file. No need to add the crew weight as we will want to keep some flexibility for our aircraft.



In the Configuration tab click add and Crew weight here. Click add then create the additional weight profile.



PAX Weights need to be 186 lbs. We need to only to modify adults for the types of flights we are flying (S, N, G, M, or X)

The baggage weights will be provided by FSCaptain later during actual planning so we don't need to adjust them.

## FSCaptain Changes

PAX weight. In the \FSCaptain\Config directory you will need to edit the file "Items.cfg". The very first entry is the passenger weight. Change the first number to 186 to look like below.

186,0,0-4,2,PAX,,Passenger,1000,0

## Aircraft Characteristics

The screenshot shows the 'Aircraft Characteristics' window for the aircraft 'mjc8q400'. Key settings include:

- Type:** DHC80
- Name:** Bombardier Dash 8 Q 400
- Reg:** [Empty]
- Configuration:** Volume Class: Medium (e.g. ERJ135)
- Passenger Seats:** 76
- Engines Type:** Turbo Prop
- Undercarriage:** Wheels
- Weights (LB):** Max Takeoff: 65199, Max Landing: 62000, Max Payload: 19367
- Runways (FT):** Min Takeoff (MTOW): 4232, Min Landing (MLW): 4232
- Performance:** Cruise Altitude (FT): 25000, Max Headwind (KT): 60, Climb Speed (KT): 185, Cruise Speed (KT): 350, Descent Speed (KT): 220, Climb Rate (FFM): 1500, Reliability (%): 99.9
- Fuel System:** Fuel Type: Jet A, Fuel Capacity (LB): 11724, Minimum Fuel (LB): 0, Fuel Flow CLB (PPH): 3180, Fuel Flow CRZ (PPH): 2100, Fuel Flow DES (PPH): 1200, Preload Min Fuel (%): 10.0
- Systems & Abilities:** Can Taxi on Grass, Combat Capable, Has Hydraulic Systems, Has Down GPWS, Has Retractable Gear, Has Seatbelt Sign - FS9, Has Seatbelt Sign - FSX/P3D, Is Helicopter, Is Pressurized, Entertainment: Music
- Crew & Duties:** Has a First Officer, Disable FD Callouts: Takeoff, Cleanup, Rollout, Cabin Crew: 2, Disable FA Announcements: Preflight, Inflight, Postflight, Cabin Service Alt (FT): 12000
- INDP Aircraft System Signals:** Battery, Autopilot, Exits, Engine Anticice, Parking Brakes, Ignition, Baro Altimeter, Flaps, Structural Anticice, Pressurization, Beacons, Landing Lights, Nav Lights, Strobe Lights

Nothing needs to be modified here but keep in mind your values for the Weights section should be the same if not very close.

## Load Maps

The screenshot shows the 'Load Maps' window for the aircraft 'mjc8q400'. Key settings include:

- Filename:** mjc8q400
- Type:** DHC80
- Name:** mjc8q400
- Static Load (lb):** 744
- Max Payload (lb):** 18708
- Exit Mapping:** Speed: 4, PAX: 1, 4, 4, 4, 4, Cargo: 2, 4, 4, 4, 4, Other: 4, 4, 4, 4

Stn	Active	Pri	Limit	Description	Type	Units	Size	Name	Value
0	<input checked="" type="checkbox"/>	0	744	Crew	C	4	186	Seat	744
1	<input checked="" type="checkbox"/>	1	3365	PAX Rows 1-5	Y	18	186	Seat	0
2	<input checked="" type="checkbox"/>	1	3739	PAX Rows 6-10	Y	20	186	Seat	0
3	<input checked="" type="checkbox"/>	1	4882	PAX Rows 11-16	Y	24	186	Seat	0
4	<input checked="" type="checkbox"/>	1	2617	PAX Rows 17-20	Y	14	186	Seat	0
5	<input checked="" type="checkbox"/>	1	908	Fwd Luggage	G	9	100	Pallet	0
6	<input checked="" type="checkbox"/>	1	3310	Aft Luggage	G	33	100	Pallet	0
7	<input type="checkbox"/>	0	0			0	0		0
8	<input type="checkbox"/>	0	0			0	0		0
9	<input type="checkbox"/>	0	0			0	0		0
10	<input type="checkbox"/>	0	0			0	0		0
11	<input type="checkbox"/>	0	0			0	0		0
12	<input type="checkbox"/>	0	0			0	0		0
13	<input type="checkbox"/>	0	0			0	0		0
14	<input type="checkbox"/>	0	0			0	0		0
15	<input type="checkbox"/>	0	0			0	0		0
16	<input type="checkbox"/>	0	0			0	0		0
17	<input type="checkbox"/>	0	0			0	0		0
18	<input type="checkbox"/>	0	0			0	0		0
19	<input type="checkbox"/>	0	0			0	0		0

**Fuel Tanks:**

- Center 1:
- Center 2:
- Center 3:
- Left Main:
- Left Aux:
- Left Tip:
- Right Main:
- Right Aux:
- Right Tip:
- External 1:
- External 2:

**Optional Overrides:**

- Passenger:
- Cargo:
- Passenger Seats: 76
- Cabin Crew: 2
- Jumpseats (Cargo): 0
- Do not play GPWS callouts:
- Suppress Auto Payload:
- Simulate Load:
- Suppress Auto Fuel Load:
- Suppress First Officer:
- Suppress Flight Attendant:
- No Slick Runways:

NOTE – LIMIT IS LARGER FOR UNIT\*SIZE error is for the PAX to account for the MJC8-Q400 Control Panel discrepancy and to match the aircraft.cfg weights for PAX and baggage stations. You can ignore this error when saving and hitting compute.

As for the baggage, I chose to make pallets.

## Planning

Once all these values are in FSCaptain, PFPX and the MJQ400, we can now start planning. First run your external weather program. Once loaded and the weather is updated, run FSCaptain and then run PFPX. Once you selected your flight, in this case Flight 2433, the View Release is where all the information you need is located for the weights. You need PAX count, baggage and cargo weights.

**Required**

Date: 15 June 2019

Aircraft Type: DHC8D mpc8q400

Load Factor: 70%

**Optional**

Departure: KBIL

Time Constraint: 60

CodeShare: JAS

**Flights**

Flight	Departs	To	Distance	HGD	Block	Payload	Fuel	Flags	Leg 2	Leg 3
2433	07:25L	KSEA Seattle-Tacoma Intl	576NM	294	210	1900LB	6239LB	76 PAX		
7170	Charter	KEVM Evanston-Lima Co.	262NM	202	122	1490LB	4564LB	54 PAX		
7183	Charter	KBFF Western Nebraska R.	318NM	136	127	1640LB	4684LB	63 PAX		
7462	Charter	KCAG Craig-Moffat	321NM	171	127	1740LB	4684LB	68 PAX		
7472	Charter	KLEW Lemmon Mun	268NM	086	118	1810LB	4364LB	72 PAX		
7465	Charter	KBPP Bowman Mun	214NM	082	109	1540LB	3920LB	57 PAX		

**Flight 2433 KBIL Billings: Logan Intl to KSEA Seattle-Tacoma Intl**

Altitude: 25000FT    Gndspeed: 350KT

VA Fit: 1    Alternate: KPDX    Destination Parking: GATE D 11 (19m)    Block Time and Fuel: 2:18 / 7025LB

Buttons: View Release, Commit, Reject, OK, Cancel, Apply

ALASKA AIR LINES    DISPATCH RELEASE    FSCAPTAIN 1.8.1

FLIGHT 2433 KBIL (BIL) -- KSEA (SEA) -- ALT KPDX (PDX) 15-JUN-19 07:25L ARRIVE 09:00L

AIRCRAFT (TBA)    TYPE DHC8D    ON:    OFF:    IN:   

CREW INFORMATION:

DISP: D B COOPER / (SIGNED)

PIC : RICHARD HARDMAN / (SIGNED)

FUEL CALCULATION    WEIGHT/FUEL BREAKDOWN

MIN    0LB    ZFW 56572LB

TAXI    260LB    25MIN    T/O FOB 6757LB (MAX: 11724LB)

KSEA    3862LB    113MIN    PLANNED TOW 63329LB (MAX: 65199LB)

KPDX    465LB    19MIN    ENROUTE BURN 3862LB (Burn 1329LB for MLW)

RSV    1050LB    30MIN    PLANNED LDW 59467LB (MAX: 62000LB)

HOLD    1050LB    30MIN    DESTINATION FOB 2765LB

EXTRA    0LB    ALTERNATE FOB 2100LB

TOTAL 6887LB    217MIN

NOTAMS:

KSEA DO NOT MISTAKE TWY "T" FOR LNDG SFC.

WEATHER INFORMATION:

\* METARS

KBIL 151353Z 21005KT 10SM FEW100 FEW240 17/09 A3003 RMK AO2 SLP147 T01670094

KSEA 151353Z 19004KT 10SM OVC005 12/10 A3009 RMK AO2 SLP195 T01220100

KPDX 151353Z VRB05KT 10SM OVC020 14/09 A3008 RMK AO2 SLP184 T01390089

\* Weather Aloft

FT	3000	06000	09000	12000	18000	24000	30000	34000	39000
ID									
KBIL:	2404	2504+12	2604+09	3325-01	3339-11	3251-22	3160-38	3165-48	3168-60
KSEA:	0803	1106+18	1506+14	2305+04	2109-11	2014-24	2024-40	2026-50	2124-60
KPDX:	1005	1214+18	1607+16	2508+04	1607-11	1811-24	1818-40	1821-50	1921-59

Buttons: Approve, OK, Print

KBIL KSEA KPDX

LOAD MANIFEST:

1)	4 Units	Fixed Weight	744LB
2)	76 PAX	Passengers	14136LB
3)	1 Lot	Baggage	2642LB
4)	1 Crate	Commercial Cargo	860LB
5)	1 Box	Automobile Tires	618LB
			*****
TOTAL PAYLOAD			19000LB

\* DHC8D Load Plan

STN	TYPE	UNITS	WEIGHT	DESCRIPTION
001	C	4/Seat	744LB	Crew
002	Y	18/Seat	3348LB	PAX Rows 1-5
003	Y	20/Seat	3720LB	PAX Rows 6-10
004	Y	24/Seat	4464LB	PAX Rows 11-16
005	Y	14/Seat	2604LB	PAX Rows 17-20
006	G	9/Pallet	883LB	Fwd Luggage
007	G	33/Pallet	3237LB	Aft Luggage

\* Load Summary

C FIXED	4	744LB
Y PAX/Y	76	14136LB
G CARGO	42	4120LB

REMARKS:

- CREW BOARDING SHOULD OCCUR FROM 06:35L TO 06:50L.
- PAX BOARDING MAY NOT BEGIN BEFORE 06:55L.
- PAX FLIGHT WITH MEAL SERVICE.
- AVERAGE SNACK SERVICE EST AT 15.0 MINUTES.
- NOTE TRANSITIONS: KBIL=18000 (TA), KSEA=FL180 (TL), KPDX=FL180 (TL).
- ARRIVAL WINDOW 21 MINS EARLY TO 7 MINS LATE.
- MINIMUM SAFE DISTANCE DEPARTING KBIL=2400FT.
- MINIMUM SAFE DISTANCE ARRIVING KSEA=1400FT.
- MINIMUM SAFE DISTANCE ARRIVING KPDX=1400FT.
- PERFORMANCE DATA REQUIRES TOC WITHIN 21 MINS AFTER TAKEOFF.

Buttons: Approve, OK, Print

The Load Manifest has your baggage and cargo weight for PFPX. Here the Baggage is 2642lbs. Total up the cargo items for your cargo weights. Here the two total up to 1478bs. As for the crew and passenger weight, it already matches now that we have the weights standardized. You just need the PAX Count which is 76.

The Load Plan is what you will need for entering into the MJC8-Q400 Control Panel. I would save this info somehow for later. If this does not show up, go back to the setup section of this tutorial. You might have missed some key weights.

Close the release by hitting OK – Do not hit Approve yet.

Once back in PFPX, on your planning page you enter for payload the PAX Count, baggage weight and the cargo weight found from FSCaptain into PFPX. Notice the configuration is "Crew" under aircraft which added our crew weight of 744lbs.

Once you're done planning, Compute flight and release.

Export the flight plan route.

The OFP of the computed flight. All we need from this page for FSCaptain is Release fuel and a Block time. In this plan we have 8186lbs of fuel and a planned block time of 2:52. Also we had to change our Alternate due to weight and fuel. It is now KPAE.

ALASKA AIRLINES, INC. FLIGHTPLAN - IFR AS2433 N449QX KBIL-KSEA

ALL WEIGHTS IN ROUNDS (LB) STD 15JUN/1325Z

OPF 2 - PREPARED 15JUN/1514Z BY RICHARD HARDMAN

AS2433/ASA2433 N449QX/DHC-8-402Q ROUTE: KBILKSEA-MAN

DEP: KBIL/BIL 28R ELEV 3662 FT CRUISE: LRC TTL G/C DIST: 577 NM  
 ARR: KSEA/SEA 16R ELEV 452 FT INIT ALT: FL240 TTL F/P DIST: 600 NM  
 FUEL BIAS: 136.4% TTL AIR DIST: 654 NM  
 AVG WIND CMP: HD022 KT

CONFIG	DOW	PAX	CARGO	TOTAL	ULOAD LIM	ZFW	TOW	LDW
CREW	38316	76	1478	18256	551 TOW	MAX 57364 PLN 56572 ACT .....	65199 64648 .....	62000 58687 .....

TRIP 5961 ..... 02:32  
 ALTN KPAE 351 ..... 00:10  
 FAR RSV 1764 ..... 00:45  
 MIN T/O 8076 ..... 03:28  
 EXTRA .....  
 TAXI 110 ..... 00:10  
 RELEASE 8186 ..... 03:38  
 ARR FUEL 2005 ..... 00:45

I ACCEPT THIS OPF AND I AM FAMILIAR WITH THE PLANNED ROUTE AND AERODROMES

FUEL TANK CAP 11711 LB / MAX EXTRA FUEL 551 LB LIM BY ENRTE  
 TRIP CORR FOR 1000 LB TOW INCR: N/A LB / 1000 LB TOW DECR: -43 LB  
 2000 FT LOWER: +165 LB / EET 02:35 CLB: TYPE 2 DES: TYPE 2

KBIL STD 13:25Z/07:25L ETD 13:25Z ACT OFBL .... EST T/O 13:35Z ACT T/O ....  
 KSEA STA 15:20Z/08:20L ETA 16:17Z ACT ONBL .... EST LDG 16:07Z ACT LDG ....  
 SKD 01:55 PLN 02:52 TTL BLCK .... EST FLT 02:32 TTL FLT .....

ATC ROUTE: N0269F240 DCT BIL DCT ARMY DCT ASHUW DCT HLN J136 MLP GLASRI

ALTERNATE PLANNING

ALTN/RWY	DIST	ALT/FL	MSA	COMP	TIME	FUEL	DIFF	ROUTE
KPAE/34L	29	6000	092	0	00:10	351	-	DCT

Release #2 [15/15:14z] Release #1 [15/12:47z]

Once back in FSCaptain click on "Select Plan", select it, then click recalculate. Take the release fuel and block time value from PFPX and override the values calculated by holding the shift key and click recalculate.

View the release now.

```

ALASKA AIR LINES      DISPATCH RELEASE      FSCAPTAIN 1.8.1
FLIGHT 2433 KBIL (BIL) -- KSEA (SEA) -- ALT KPAE (PAE) 15-JUN-19 07:25L ARRIVE 09:00L

AIRCRAFT (TBA)      OUT: _____      OFF: _____
TYPE DHC8D          ON: _____      IN: _____

CREW INFORMATION:
DISP: D B COOPER    / _____      (SIGNED)
PIC : RICHARD HARDMAN / _____      (SIGNED)

FUEL CALCULATION      WEIGHT/FUEL BREAKDOWN
MIN 0LB              ZFW 56572LB
TAXI 220LB          T/O FOB 8002LB (MAX: 11724LB)
KSEA 3929LB         PLANNED TOW 64574LB (MAX: 65199LB)
KPAE 665LB          ENROUTE BURN 3929LB (Burn 2574LB for MLW)
RSV 1050LB          PLANNED LDW 60645LB (MAX: 62000LB)
HOLD 1050LB         DESTINATION FOB 3963LB
EXTRA 1198LB        ALTERNATE FOB 3298LB
*****
TOTAL 8112LB        236MIN

NOTAMS:
KSEA DO NOT MISTAKE TWY "T" FOR LNDG SFC.

WEATHER INFORMATION:
* METARS
KBIL 151453Z 19000KT 10SM FEW100 FEW240 18/09 A3003 RMK AO2 SLP147
T01830094 51004
KSEA 151453Z 00000KT 10SM OVC005 12/10 A3010 RMK AO2 SLP197 T01220100
53002
KPAE 151453Z 00000KT 2SM BR OVC002 12/10 A3010 RMK AO2 SLP193
T01170100 53004

* Weather Aloft
FT 3000 06000 09000 12000 18000 24000 30000 34000 39000
ID -----
KBIL: KBIL 2404 2504+12 2604+09 3325-01 3339-11 3251-22 3160-38 3165-48 3168-60
  
```

Approve      **OK**      Print

All this is starting to pay off. The ZFW matches the ZFW of the PFPX data but the fuel is way off. Hit Ok to exit the release. Do not approve yet!!!

Hold the shift key and click recalculate again and view the release again.

```

ALASKA AIR LINES      DISPATCH RELEASE      FSCAPTAIN 1.8.1
FLIGHT 2433 KBIL (BIL) -- KSEA (SEA) -- ALT KPAE (PAE) 15-JUN-19 07:25L ARRIVE 09:00L

AIRCRAFT (TBA)      OUT: _____      OFF: _____
TYPE DHC8D          ON: _____      IN: _____

CREW INFORMATION:
DISP: D B COOPER    / _____      (SIGNED)
PIC : RICHARD HARDMAN / _____      (SIGNED)

FUEL CALCULATION      WEIGHT/FUEL BREAKDOWN
MIN 0LB              ZFW 56572LB
TAXI 220LB          T/O FOB 8076LB (MAX: 11724LB)
KSEA 3929LB         PLANNED TOW 64648LB (MAX: 65199LB)
KPAE 665LB          ENROUTE BURN 3929LB (Burn 2648LB for MLW)
RSV 1050LB          PLANNED LDW 60719LB (MAX: 62000LB)
HOLD 1050LB         DESTINATION FOB 4037LB
EXTRA 1272LB        ALTERNATE FOB 3372LB
*****
TOTAL 8186LB        236MIN

NOTAMS:
KSEA DO NOT MISTAKE TWY "T" FOR LNDG SFC.

WEATHER INFORMATION:
* METARS
KBIL 151453Z 19006KT 10SM FEW100 FEW240 18/09 A3003 RMK AO2 SLP147
T01830094 51004
KSEA 151453Z 00000KT 10SM OVC005 12/10 A3010 RMK AO2 SLP197 T01220100
53002
KPAE 151453Z 00000KT 2SM BR OVC002 12/10 A3010 RMK AO2 SLP193
T01170100 53004

* Weather Aloft
FT 3000 06000 09000 12000 18000 24000 30000 34000 39000
ID -----
KBIL: KBIL 2404 2504+12 2604+09 3325-01 3339-11 3251-22 3160-38 3165-48 3168-60
  
```

Approve      **OK**      Print

Now the fuel matches also with the planned takeoff weight of 64648lbs matching the PFPX value of 64648lbs. Now APPROVE the release!! COMMIT to the flight!!

Enter the values from the Load Plan for PAX and luggage into the MJC8-Q400 Control Panel. Did you save them?

\* DHC8D Load Plan

STN	TYPE	UNITS	WEIGHT	DESCRIPTION
001	C	4/Seat	744LB	Crew
002	Y	18/Seat	3348LB	PAX Rows 1-5
003	Y	20/Seat	3720LB	PAX Rows 6-10
004	Y	24/Seat	4464LB	PAX Rows 11-16
005	Y	14/Seat	2604LB	PAX Rows 17-20
006	G	9/Pallet	883LB	Fwd Luggage
007	G	33/Pallet	3237LB	Aft Luggage

The takeoff and trip fuel values are from the PFPX release. Once done hit calculate. If you need to move some weight around to bring it into trim, easiest way is to take PAX from OD and move them into OA.

Final Planning numbers from each program.

	ZFW	TOW	LDW
FSCAPTAIN	56572	64648	60719
PFPX	56572	64648	58687
MJC8-Q400	56644	64380	58869

**MJC8 Q400 CONTROL PANEL**

MANUAL    PRODUCT PAGE    ACCOUNT INFO

SHARED COCKPIT    FLIGHT CONFIG    SYSTEM    FLIGHT CONTROLS    ENGINE CONTROLS    SOUND    WEIGHT & BALANCE

FWD Luggage    AFT Luggage

BAGGAGE SECTION    PAX SECTION

MASS [LB]	DAA	SUMM [LB]	MAX	MASS [LB]	MAX	MAX	MAX
FWD 883	0	883	908	OA 18	18	OC 24	24
AFT 3237	0	3237	3619	OB 20	20	OD 14	14

DOM 38316    DOI 94.6    MASS [LB] 65199    TOTAL PAX 76

T/O FUEL 8186	11724	MAX TOM 65199
TRIP FUEL 5961	11724	MAX LM 62000
		MAX ZFM 57999

USEFUL LOAD    FINAL WEIGHT & BALANCE

MASS [ ]	INDEX	MAC%	MASS [ ]	MAX
PAX 14208	108	36.3	56644	57999
BAG 4120	106	36.3	64830	65199
TRAFFIC LOAD 18328	107	36.3	58869	62000
UNDERLOAD 369				

SEND DATA TO FLIGHTSIM

Teia Envelope Index Units [Index]    Copyright MAJESTIC SOFTWARE 2012-2015

Noticed the difference between the MJC8-Q400 ZFW and the rest? It's an extra 72lbs in this case. If you add 1 PAX to the MJQ400 it shows 186lbs. Add 10 PAX and its not 1860lbs. At 70 PAX x 186lbs our weight should be 13020lbs but it shows 13086lbs. For some reason the control panel has PAX and baggage weight as 186 point something so more PAX the more additional difference. Unfortunately we cannot overcome this. The DAA Baggage is the same way at 37 point something. This however we can overcome by setting it to zero and just entering weight values for FWD and AFT. Overall between FSCaptain which we need for the FCDU in flight, and the MJC8-Q400 which will send the weight to the plane, 72 lbs is good enough. Besides, no commercial flight that I know of is going to be spot on.

### Pre-Flight

Once inside P3DV4.5, setup your scenario and load. Once you in the sim, if you look at the Aircraft values all of them will be maxed out. No worries as we have not sent the data from the MJC8-Q400 Control Panel yet. Run the MJC8-Q400 Control Panel to send the weights to the sim. If you look now the weights have changed. Personally I never looks at these values at all.

**Fuel and Payload**

Bombardier MJC-8 Q400

TANK	%	POUNDS	CAPACITY
Left	100	5855.8	5855.8
Right	100	5855.8	5855.8

STATION	POUNDS
Crew	744
PAX ROWS 1-5	3365
PAX ROWS 6-10	3739
PAX ROWS 11-16	4882
PAX ROWS 17-20	2617
FWD LUGGAGE	908
AFT LUGGAGE	3619

Display fuel quantity as weight  
 Empty Weight: 37,572 Pounds  
 Payload: 19,874 Pounds  
 Fuel: 11,711.60 Pounds  
 Gross Weight: 69,158 Pounds  
 Max. gross weight: 66,000 Pounds  
 Max. allowable fuel: 8,553.52 Pounds

Cancel OK

(Before)

**Fuel and Payload**

Bombardier MJC-8 Q400

TANK	%	POUNDS	CAPACITY
Left	69.9	4093.47	5855.8
Right	69.9	4093.47	5855.8

STATION	POUNDS
Crew	878
PAX ROWS 1-5	3348
PAX ROWS 6-10	3720
PAX ROWS 11-16	4464
PAX ROWS 17-20	2604
FWD LUGGAGE	883
AFT LUGGAGE	3237

Display fuel quantity as weight  
 Empty Weight: 37,572 Pounds  
 Payload: 19,134 Pounds  
 Fuel: 8,186.95 Pounds  
 Gross Weight: 64,893 Pounds  
 Max. gross weight: 66,000 Pounds  
 Max. allowable fuel: 9,293.52 Pounds

Cancel OK

(After)

One thing you should notice is the crew weight that we had set as 744lbs is now 878lbs while all the other weights match. A difference of 134lbs. Remember the 72lbs that came from the MJC8-Q400 PAX disparity? There is part of it along with another 62lbs that came from nowhere.

Start the FCDU for FSCaptain and take a look at the manifest. Should be the same as when we planned the flight.



LOAD MANIFEST:

- 1) 4 Units Fixed Weight 744LB
- 2) 76 PAX Passengers 14136LB
- 3) 1 Lot Baggage 2642LB
- 4) 1 Crate Commercial Cargo 860LB
- 5) 1 Box Automobile Tires 618LB

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TOTAL PAYLOAD 19000LB

Before you allow passengers to board, you should enter the fuel data into the FMS/FMC from your OFP from PFPX. Enter the ZFW first. Enter ALT, FAR RSV (as Extra), then FUEL ONBOARD. TOTAL RESRVS will then calculate.



“Proceed” to use the FCDU to load the aircraft. Makes no difference if you select manual load or normal load. I prefer normal load. If you do reach the reconciliation screen after loading and it asks you to reconcile the load, select aircraft.



I was not prompted to reconcile and once the aircraft doors are closed you can start the flight and on the progress screen, more weight data is provided.



Final Numbers

	ZFW	TOW	LDW
FSCAPTAIN	56572	64648	60719
PFPX	56572	64648	58687
MJC8-Q400	56644	64380	58869
P3DV4	56706	64893	
FCDU	56706	64892	
FMS/FMC	56572	64758	

If you really wanted to get your weights exact in the sim, you could run the MJC8-Q400 once, figure out the difference, then subtract that from your AFT luggage weight, re-calculate and run it again. I'm OK with at most a few hundred pounds.