HBRC's CHALLENGER 300 FLYING GUIDE

So, you're tired of low and slow prop jobs. They may have "character," but let's face it, they are old and boring. You want something new, exciting, something different. You've come to the right place. The Challenger 300 (CL300) is everything the Cessna 208 Caravan is not. (Warning: that includes the operating costs, yikes!) This is not a guide of how to get the plane running. There are other guides available on the interwebs for that. This is a guide on how to squeeze the most out of the CL300.

PART 1: ASSIGNMENT SELECTION

The CL300 holds 8 whiny passengers or up to about 5600 kg of contraba… ahem ... legitimate cargo. Note that 5600 kg will leave you short on fuel, so generally plan on 5000 kg being the max cargo weight. The CL300 can be profitable flying green jobs between FBOs if the plane is filled. It is also possible to make some money flying VIP passenger jobs, but the best money is in cargo. Generally speaking, 3000-5000 kg flown between 400-900 NM.

PART 2: MISSION PLANNING

Okay, you've got your load of weed (herbal supplements) and are ready to start planning the flight.

-Fuel: Generally speaking, you will need 1 gallon for every 1 NM you need to fly. It is a little less than that, but it is a good rule of thumb

-FMC: Assuming you do not know how to program the FMC because let's face it, you don't. In case you don't know what it looks like, there is a picture below.

1) Click the "FLPN" button
2) If you see the "NAV DATA OUT OF DATE" hit the "CLR" button
3) Use the FMC keypad to type in the origin airport, for example "DUMB"
4) Hit the button on the left side next to the four empty boxes for origin (top left)
5) Type in the destination airport, for example "ASSS"
6) Hit the top right button to enter that input into "DEST"
7) Click on the "CRZ" button

Generally, you will cruise between FL410 (41,000 feet) and FL450 (45,000 feet) depending on weight with a full load flying at FL410. If you are flying a shorter distance, a good rule of thumb is 1000 feet for every 10 NM (so 250 NM flight would be at FL250). An optimal flight has you Top of Climb (TOC) right as you get to the Top of Descent (TOD), so play with those numbers as you get a feel for the plane.

8) Still with me? Good. Type in your desired cruise altitude (ex: "410" for FL410)
9) On the top right of the screen there will be "CRZ ALT", click the button next to it to enter the altitude
10) Click on the "DEP/ARR" button

11) Click the top left button next to “<DEP”
12) Select the departing runway and if you want, a SIDS (IN THAT ORDER) by clicking the buttons to the right and left of the FMC screen.
13) Click “EXEC”
14) Click the button next to “<DEP/ARR IDX”
15) Click the button to the fight of your destination “ARR>”, should be the second button on the right
16) If you want to use a STARS, select that first. If not, select your landing runway.
17) Click “EXEC”
18) Now it is time to clean up the flight plan. Click on “DIR/INTC”
19) Look for any gaps or discontinuities. If one exists, click the button to the left waypoint beneath it, then click the button on the blank line to move it up. If you are already on your departing runway, click the button to the left of the first waypoint, then click the top left button to set it as direct to that waypoint.
20) Don’t forget to hit the “EXEC”
21) That should do it, you can use the “LEGS” or “PROG” button to monitor the flight progress. “PROG” will give you the distance to the TOD.

PART 3: THE FLIGHT

TAKE-OFF

There was something else to do here, but I can't remember what it is….

Now for the easy part, because of all the hard work you did in part 2, the plane will almost fly itself. Taxi out to the runway, set flaps to 10 deg, elevator trim between 6 and 6.6, and push that throttle forward. Rotate at about 120 KIAS.

CLIMB

Raise the gear and flaps as you pick up altitude and speed and turn on the autopilot. Oh, you skipped that part of the CL300 manual too? *eye roll* FINE!

1) On the autopilot panel (top middle of the dash), 3rd button from the left is “NAVSRC”. Click that until the left display says “FMS” next to the little map thingy
2) In the center section, click “NAV” and “VNAV” which should then be displayed on the left screen above the nav ball along with the desired cruise altitude.
3) On the right side, click “AP”. The plane should now be flying itself.

It doesn’t have an autothrottle, so you will need to manage the power settings. By default, the DDen CL300 for X-Plane 11 climbs at 250 knots until 10,000 feet, then accelerates to 290 knots. When 290 knots equals Mach 0.74, it will switch to constant Mach.

CRUISE

Cruise speed is Mach 0.80 or 300 knots if you are flying below about FL330. At FL410, expect an N1 power setting between 80% and 85% depending on weight.

DESCENT

Keep an eye on the TOD, the plane will NOT start descending on its own. Sometimes clicking the “FLC” button on the autopilot panel will start the descent, if not use the “ALT” dial to select the bottom of descent altitude and then hit the “FLC” button. Be sure to throttle all the way back. This is a slick airplane. Use the spoilers if needed.

**** HBRC in no way <u>officially</u> recommends using the vertical speed mode and ignoring the OVERSPEED warnings****

HBRC recognizes the pilot in command of the airplane is in the best position to make decisions regarding the safe operation of the airplane.

APPROACH/LANDING

Max speeds

- Gear: 250 KIAS
- Flaps 1/2: 210 KIAS
- Flaps 3: 170 KIAS

Reference above and fly to about 130 knots on final with flaps at 30 degrees (Flaps 3). As you approach the threshold pull the power and touchdown at about 120 knots. Engage the thrust reversers and brakes if desired. Let’s finish the flight in FSE...oh, that’s what I forgot to do earlier.