



Canadian Virtual Airlines Pilot Training Program

Phase 2 - RegionalJet Training Lesson Plan rj04 – IFR departures

Requirements

Project Opensky CRJ-200
Project Fokker F100
Wilco/FeelThere (payware) Canadair CRJ-200
VATSIM connection for online flight (optional)
FSR video flight recording for Instructor review

Tolerances

Altitude +/- 200' Speed +/- 20 kias Heading +/- 10°
Use of autopilot assist is allowed except where noted

****NOTE**** -- Autopilot assist is allowed for this lesson with the exception of autothrottle. The CRJ-200 series does not have this capability which is accurately modeled in the FeelThere model. The ProjectOpensky CRJ and ProjectFokker F100 do have autothrottle capability but the aircraft does not smoothly maintain the preselected speed but rather 'chases' the speed above and below significantly reducing engine mean time between failure (MTBF) values. For this reason CVA does not allow the use of autothrottle on its CRJ series 200 aircraft.

Outline

This flight in the RJ series will allow you to fly detailed IFR departure profiles. Tolerances for this flight are listed above and will be decreased for future flights. You may fly this, and other, flight profiles as many times as you wish until you are comfortable with the teaching points. No video recorded segment of this flight is required.

Discussion

As you will now be flying routes into the continental US it is extremely important that you can fly detailed, and occasionally difficult, Standard Instrument Departure (SID) procedures. While most Canadian SIDs are relatively simple, normally 'fly runway heading to a given altitude', US SIDs frequently involve several course changes and the ability to track certain VOR radials and follow altitude and speed restrictions. At non-radar serviced Canadian airports Air Traffic Controllers often utilize detailed procedural departure restrictions to deconflict departing IFR aircraft from arrivals. These are the skills we will develop throughout this lesson.

PreFlight

Set weather to daytime no winds – ceiling 1000' overcast and visibility 3 miles

Set aircraft fuel to 50% volume

Place your aircraft at Portage la Prairie - CYPG on the main ramp.

NAV/COMM Nav1 YPG VOR 114.6 OBS setting 360

Nav2 YWG VOR 115.5

ADF PG NDB 353

TXPNDR 2200 (or as assigned by online ATC)

If you are flying this profile on the VATSIM network file an IFR flight plan CYPG to CYPG local training. Your callsign is CVAxT where the xx is the last 2 digits of your CVA ID number. Voice callsign will be "CanadianxxTrainer".

FlightProfile

Carry out a normal preflight inspection – weight and balance check with 2500lbs fuel per side.

The 5000lb fuel load should give you an endurance of 1+15 hours as the basic fuel consumption is approximately 4000 lbs/hr. This flight should take roughly 45 minutes to complete. Between each maneuver allow such time as necessary for the aircraft to stabilize in the new flight envelope. Commence a normal engine start routine. Taxi from the ramp to rwy 13R – do not exceed 20 knots taxiing speed. Upon completion of your pre takeoff checks line up on 13R.

Departure procedure #1 – rwy 13R

Here are your departure instructions...

“depart runway 13R – at 2 DME turn left H330° to intercept the YPG 360 radial
track the 360 until intercepting the YWG 290 radial
track the YWG 290 radial inbound to the YWG VOR
maintain FL210 – not above 4000' until established on the YPG 360 radial
cross 20DME north of the YPG VOR at 6000' or below”

- (i) takeoff - retract gear/flaps on schedule and establish a 2000fpm climb at 250kias
- (ii) comply with the lateral and vertical requirements of the departure instructions

- once established at FL210 and inbound YWG – turn right proceed direct the YPG VOR
- descend and carry out a full procedure VOR/DME approach to rwy13R
- land and roll out to the end of 31L
- do a 180 on the runway and set up for another departure procedure

NAV/COMM Nav1 YPG VOR 114.6 OBS setting 240

Nav2 YBR VOR 113.8

Departure procedure #2 – rwy 31L

Here are your departure instructions...

“depart runway 31L – climb runway heading to 5 DME
at 5 DME turn left H220° to intercept the YPG 250 radial
track the YPG 250 until intercepting the YBR 120 radial
track the YBR 120 radial inbound to the YBR VOR
maintain FL200 – not above 2500' until 5 DME from the YPG VOR
cross 17DME west of the YPG VOR at 8000' or above”

- (iii) takeoff - retract gear/flaps on schedule and establish a climb at 250kias
- (iv) comply with the lateral and vertical requirements of the departure instructions

- once established at FL200 and inbound YBR – turn right proceed direct the YPG VOR
- descend and carry out a full procedure ILS approach to rwy31L
- carry out a full stop landing

(v) exit the runway, taxi to the ramp and shut down

Conclusion

This flight allowed you fly two detailed departure procedures. File your appropriate flight time with CVA through normal channels. File an additional PIREP via email with your designated Instructor Pilot indicating you have successfully (or unsuccessfully) completed CVArj04. Should you require online/offline assistance or have questions as to the procedures for handling the RJ contact your instructor for guidance and/or schedule an online training flight.

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