



Canadian Virtual Airlines Pilot Training Program

Phase 2 - RegionalJet Training Lesson Plan rj03 – IFR approaches

Requirements

Project Opensky CRJ-200
ProjectFokker 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 ProjectOpenskyCRJ 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 RJ series aircraft.

Outline

This flight in the RJ series will allow you to fly various instrument approaches. 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. One video recorded segment of this flight is required - when video recording use 1 second recording interval. This flight should take approximately 45 minutes to complete.

Discussion

Instrument approach procedures are basically grouped into 2 broad categories. Non-precision approaches do not provide the pilot with vertical guidance to the ground. Precision approaches do provide a glide path and vertical descent information. Non-precision approaches include – NDB, VOR, LOC, LOC(BC), GPS, TACAN while precision are the ILS, MLS and PAR. Both types require you to place your aircraft at an *initial approach fix* (IAF) at a given altitude. In a non-precision approach you descend based on altitudes on the approach chart to cross certain fixes at given altitudes eventually leading to a *minimum descent altitude* (MDA) where you either sight the landing environment and carry out your landing – or carry out a missed approach. A precision approach guides you both laterally and vertically to a *decision height* (DH) where, again, the transition to the visual landing or a missed approach is carried out. In this flight profile we will carry out 1 non-precision approach – a full procedure VOR/DME approach to rwy13R and 1 precision approach – a straight in ILS to rwy31L.

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 120

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.

- (i) takeoff - retract gear/flaps on schedule and establish a 2000fpm climb at 250kias
- (ii) at 3000'ASL level off and maintain 250kias
- (iii) make a right turn and track direct to the YPG VOR

approach #1 – full procedure VOR/DME 13R

- upon passing overhead the YPG VOR slow to 210kias and descend to 2300'ASL
- track outbound on the 300R of the YPG VOR
- at 5DME you will be at AGBID fix
- the chart indicates right hand procedure turn within 10 miles of AGBID
- at 8DME turn right H345 – hold H345 for 60 seconds
- turn left H165 – slow to 180kias – descend to 1700'ASL
- watch NAV track indicator carefully – intercept the 300R and track it inbound
- upon intercepting the 300R reduce to 165kias – flaps 1 notch
- you may not descend below 1700'ASL until passing 5DME inbound
- at 5DME slow to final approach speed – extend gear/flaps – descend to MDA 1260'ASL
- carry out a low approach or touch and go rwy13R

- (iv) takeoff – retract gear/flaps on schedule and establish a 200fpm climb at 250kias
- (v) at 1500'ASL turn right H060
- (vi) at 3000'ASL level off and maintain 250kias
- (vii) reset NAV1 to YPG 109.7 OBS setting 307 – set NAV2 to YPG 114.6
- (viii) at 10DME from YPG turn right H130 – reduce speed to 210kias

approach #2 – straight in ILS 31L

- at 20 DME YPG turn right H280
- reduce speed to 180kias and descend to 2500'ASL
- *****COMMENCE VIDEO RECORDING*****
- intercept the localizer and fly a straight in ILS31L
- carry out a full stop landing
- *****STOP VIDEO RECORDING*****
- name the fsr recording CVAxrj03.fsr**
- (ix) exit the runway, taxi to the ramp and shut down

Conclusion

This flight allowed you to acclimatize to RJ flying and instrument approach 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 CVArj03– include the zipped FSR recording you took of the ILS approach procedure labeled CVAxrj03.zip. 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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Jan 2005