

Pilot Tutorial for flying in CZZY Airspace - DEPARTING CYYZ

The purpose of this tutorial is to assist pilots in flying successfully within the CZZY Airspace. The airspace is huge, covering an area equal to the size of California and Texas *combined*! While the primary focus will be on Canada's largest airport CYYZ, it will touch on the other airports in the region in brief. This tutorial is not designed to cover how to fly on the VATSIM network, please consult the PRC on the main VATSIM website as there is a wealth of information there to assist you.

OK, lets get started.

General Tips for flying in CZZY

- Always contact the active controller online regardless of the type of flying you will be doing (IFR or VFR). If you are outside of the controller's airspace or flying in uncontrolled airspace the controller will advise. This is particularly important for VFR aircraft flying in the Class C airspace around Toronto (within 26 miles of CYYZ) as this highly congested airspace where all aircraft are controlled regardless if they are IFR or VFR. (check this fact)
- Do NOT accept any controller request that you do not understand. If you need clarification please ask for it and our staff of friendly controllers will be more than happy to assist you.
- Please minimize communication to controllers in Private Messages, as controllers prefer to control over the main frequency as this reduces controller workload.
- If you receive a message saying, "*please contact me*", all it means is that you are in controllers airspace and he is contacting you to control your aircraft. **It does not mean that you have done anything wrong!**
- If possible, please operate in at least Voice Receive mode. This will save the controllers a significant amount of work. It is understood that this is not always possible, however, it is highly recommended.
- And finally, please be patient, there are times when a controller may be covering multiple positions and handling a very high workload. Your request will be handled in priority.

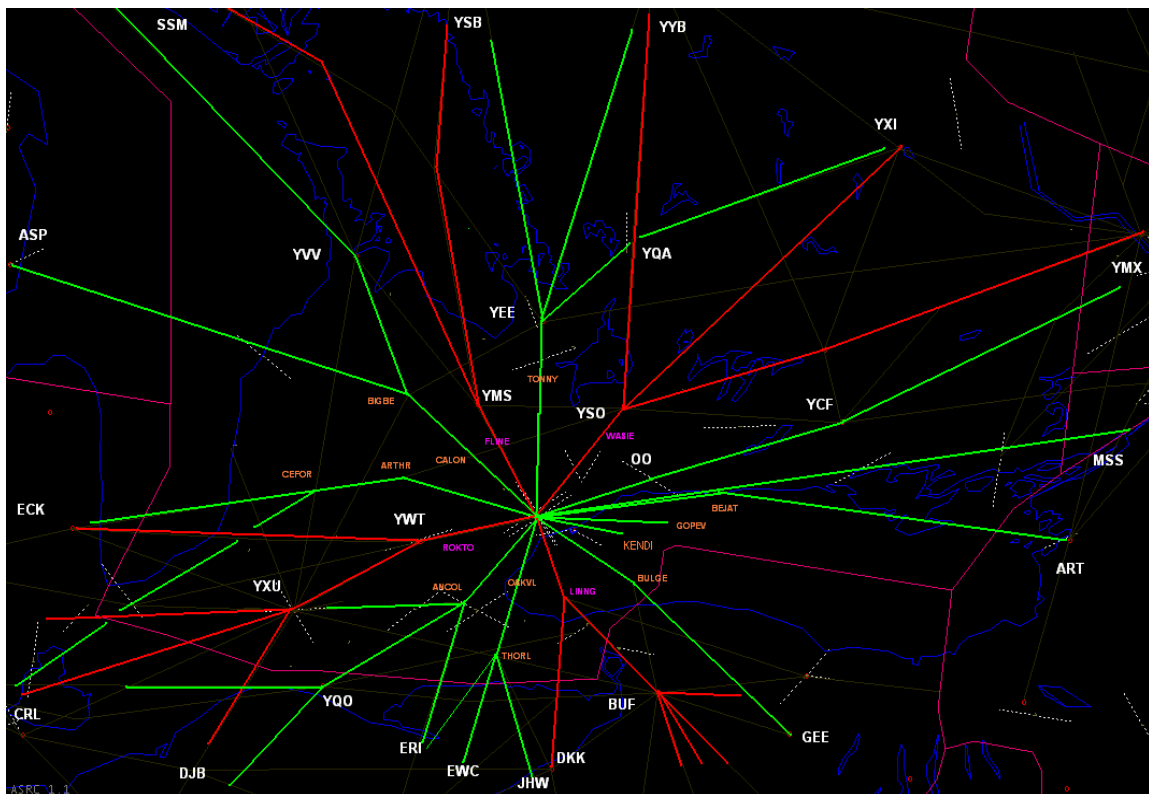
DID YOU KNOW?

ALL OF THE REQUIRED CHARTS ARE AVAILABLE ON OUR WEBSITE AT WWW.CYZZ.CA

Departing CYYZ

The first part of any flight is the flightplan. One of the biggest challenges controllers at CYYZ face are flight plans that route departing aircraft out through the arrival corridor and need to be corrected. Unfortunately the default flight planner in FS2004 and FSX is guilty of this as are many of the freeware and payware flight planners available. Be sure to get an appropriate flightplan from either www.simroutes.com or from www.flightaware.com.

The chart below shows the traffic flows into (red) and out of (green) CYYZ and makes it very obvious why departures through Buffalo (BUF), Simcoe (YSO), Mansfield (YMS) and Waterloo/London (YWT/YXU) are not acceptable.



For the purpose of this tutorial, we will be flying to Boston using the following flightplan. You will notice that the flightplan does NOT contain a departure SID. This will be assigned by the clearance delivery controller.

CYYZ BULGE V252 WELTI J16 HANKK J16 ALB GDM3 KBOS

Clearance Delivery:

PILOT: "Toronto Clearance Delivery, Air Canada 456 requesting IFR clearance to Boston"

ATC: "Air Canada 456, cleared to Boston via the Lester 7 departure, flight planned route, depart runway 24R, squawk 6613"

PILOT: "Roger, cleared to Boston via the Lester 7 departure, flight planned route, depart runway 24R, squawk 6613, Air Canada 456"

ATC: "Air Canada 456, your readback is correct, push and start at your discretion, contact ground on 121.65 for taxi"

PILOT: "OK thanks, we will contact ground for taxi, Air Canada 456"

GOTCHA – Please note that the aprons are NOT controlled so it is up to you to look for other traffic and keep a safe distance during pushback and taxi to the taxiway.

GOTCHA – If you do happen to file an invalid flight plan, expect the controller to request changes. This could be a result of the departure route you have requested or a result of an invalid flight level (remember EAST is ODD, WEST is EVEN)

Here is an example of an invalid flightplan

CYYZ BUF HANKK J16 ALB GDM3 KBOS

ATC: "Air Canada 456, your flightplan takes you out through arrival routes, are you able to accept the following change to your flightplan. BULGE, V252, WELTI, J16, then as filed?"

ATC: "Also, for your direction of flight I can offer Flight Level 330 or 350"

PILOT: "Toronto Delivery, ACA456 can accept the changes to the flightplan as follows BULGE, V252, WELTI, then as filed. Also we will take Flight Level 330"

ATC: "Air Canada 456, cleared to Boston via the Lester 7 departure, flight amended route, depart runway 24R, squawk 6613"

What if you don't have the departure chart?

Please notify the controller and you will be accommodated.

PILOT: "Delivery, Air Canada 456, looks like we do not have the Lester 7 chart on board tonight"

ATC: "Air Canada 456, not a problem sir, on departure fly runway heading, maintain 5000, expect vectors to BULGE"

PILOT: "Roger that, fly runway heading, maintain 5000, expect vectors to BULGE, Air Canada 456"

Taxi to the Active

Taxi operations are relatively straightforward at Toronto; however, it still pays to have the taxi chart handy. In our ongoing effort to keep aircraft from conflicting with one another, when Toronto is operating the EAST/WEST runways your runway assignment will generally be assigned based on the initial departure fix of your flightplan. Honestly, we are not purposely taxiing you all over the field to annoy you! If you are parked far from the runway (example the Fed Ex ramp), please request a different runway assignment and approval will be requested from the Departure controller.

GOTCHA – Please note that in Canada controllers are required to specifically give you hold short or crossing instructions for all runways and pilots are required to read back all hold short and crossing instructions.

ATC: "Air Canada 456, altimeter 2983, taxi to runway 06L via AK B D, cross runway 33R, hold short runway 06L"

PILOT: "Taxi to 06L via AK B D, cross runway 33R, hold short 06L"

Takeoff

As you taxi to the active runway you will be asked to contact the tower.

ATC: "Air Canada 456 contact Toronto Tower on 118.70"

PILOT: "Over to tower 118.70, Air Canada 456"

GOTCHA – Please make sure you are fully ready to go before accepting your takeoff clearance. Nothing is more annoying to controllers and other pilots than an aircraft sitting on the runway and not taking off. Remember that there may be aircraft on rather short final when you are given your takeoff clearance.

Scenario #1

PILOT: "Tower, Air Canada 456, holding short runway 24R, ready to go"

ATC: "Air Canada 456, contact Departure when airborne on 132.80, winds 280 at 10, cleared for takeoff runway 24R"

PILOT: "Contact departure airborne, Copy the winds, Cleared for takeoff runway 24R, Air Canada 456"

Scenario#2

PILOT: "Tower, Air Canada 456, holding short runway 24R, we need one to two minutes before we are ready to go"

ATC: "Air Canada 456, continue holding short, advise ready to go. Westjet 128, call Departure once airborne 128.80, Winds 280 at 10, clear for takeoff runway 24R"

Westjet 128: "Copy the winds, Call Departure once airborne, Clear for takeoff runway 24R, Westjet 128"

PILOT: "Tower, Air Canada 456, we have completed our checklist and now ready for takeoff"

ATC: "Air Canada456, contact Departure when airborne on 128.80, winds 280 at 10, cleared for takeoff runway 24R, caution A330 on 5 mile final"

PILOT: “Departure once airborne, Copy the winds, Cleared for takeoff runway 24R, Air Canada 456.

Exceptions of the noise abatement rules

Props and some noise abatement approved jets (such as the Bombardier RJ100) are exempt from the noise abatement rules. Also, to accommodate faster jets, props are usually given a turn immediately after departure. Following is a typical takeoff clearance given to a departing Dash 8 turboprop.

ATC: “Jazz 1029, contact Departure airborne, wind 280 at 10, turn left heading 180, clear for takeoff runway 24R”

PILOT: “Copy the winds, contact Departure airborne, turn left heading 180, clear for takeoff runway 24R, Jazz 1029”

The departing turboprop is expected to initiate the turn to 180 degrees when safely able and when they are at least 500' above the ground after takeoff. If you have had an opportunity to plane watch at CYYZ you will observe a steady stream of Jazz Dash 8's turning off the runway heading almost immediately after takeoff.

Departure

OK, you have successfully defied gravity and you are now climbing out of Toronto and are with the Departure controller. Before we go ahead with a script we need to look at the chart and take note of three critically important pieces of information.

Critical Item #1 – As you fly out on the SID and are established on the departure heading DO NOT begin turning on course. You will be assigned vectors on course by the controller

Critical Item #2 – Noise abatement for JETS is 3600ft. If assigned a turn by ATC note that you may NOT turn below 3600ft.

Critical Item #3 – Initial altitude for JETS is 5000ft, for PROPS its 3000ft.

Please see the chart on the next page where these three items have been highlighted.

CANADA AIR PILOT

Effective 0901Z 20 NOVEMBER 2008 to 0901Z 15 JANUARY 2009

SID (VECTOR)

LESTER SEVEN DEP (LEST 7.)

TORONTO/LESTER B. PEARSON INTL
TORONTO ON

ATIS 120.825
CLNC DEL 121.3
GND 118.0 119.1 121.9 121.65 275.8
TORONTO TWR 118.7 118.35 236.6
DEP 128.8 127.575 363.8

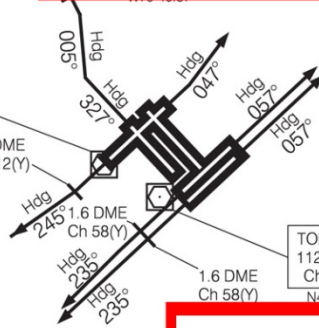
TURBO-JET/FAN AIRCRAFT ONLY

**JET ACFT MAINTAIN 5000' ASL.
NON-JET ACFT MAINTAIN 3000' ASL.**

UNLESS OTHERWISE
ASSIGNED BY ATC:
**JET ACFT MAINTAIN 5000' ASL.
NON-JET ACFT MAINTAIN 3000' ASL.**

DO NOT EXCEED 250K
UNTIL ABOVE 10,000' ASL.

PEARSON
116.55 YTP
Ch 112(Y)
N43 40.30
W79 39.85



CAUTION:
RWY 05, 06L, 06R, 24L, 24R, 23 DEPARTURES:
Simultaneous parallel departures in use.

Chart not to scale

DEPARTURE ROUTE DESCRIPTION

Unless otherwise assigned by ATC:

- Rwy 05:** Climb hdg 057°. At 1000' ASL turn left hdg 047° or assigned hdg for vectors to assigned route. Maintain: 5000' ASL jet acft, 3000' ASL non-jet acft.
- Rwy 06L:** Climb hdg 057° or assigned hdg for vectors to assigned route. Maintain: 5000' ASL jet acft, 3000' ASL non-jet acft.
- Rwy 06R:** Climb hdg 057° or assigned hdg for vectors to assigned route. Maintain: 5000' ASL jet acft, 3000' ASL non-jet acft.
- Rwy 24L:** Climb hdg 237°. At 1.6 DME Ch 58(Y) turn left hdg 235° or assigned hdg for vectors to assigned route. Maintain: 5000' ASL jet acft, 3000' ASL non-jet acft.
- Rwy 24R:** Climb hdg 237°. At 1.6 DME Ch 58(Y) turn left hdg 235° or assigned hdg for vectors to assigned route. Maintain: 5000' ASL jet acft, 3000' ASL non-jet acft.
- Rwy 23:** Climb hdg 237°. At 1.9 DME Ch 112(Y) turn right hdg 245° or assigned hdg for vectors to assigned route. Maintain: 5000' ASL jet acft, 3000' ASL non-jet acft.
- Rwy 33L:** Climb rwy hdg 327° to 1100' ASL. Turn right hdg 005° to intercept YYZ R-343 outbound. Track YYZ R-343 outbound for vectors to assigned route. Maintain: 5000' ASL jet acft, 3000' ASL non-jet acft.

**Climb hdg 057° or assigned hdg for vectors to assigned route.
5000' ASL jet acft, 3000' ASL non-jet acft.**

**for noise abatement no unauthorized turns below 3600' ASL,
procedures Section D, 1 d)**

NOTE:

Rwys 05, 06L, 06R, 23, 24L, 24R departures: for noise abatement no unauthorized turns below 3600' ASL, except as described in Noise Abatement Procedures Section D, 1 d).
Rwy 33L departure: for noise abatement no unauthorized turns below 3600' ASL nor prior to MALTN INTXN. Non-jet aircraft commence turn assigned at take-off at 1100' ASL (0700-2300 local).

COMMUNICATIONS FAILURE

On recognition of a failure 20 minutes or less after take-off and in IFR weather conditions proceed as follows:

1. Transponder Mode A/3 7600;
2. Beyond 10 DME YYZ proceed directly on course;
3. Do not climb above last assigned altitude for 5 minutes after recognition of failure, then;
4. Climb to flight plan altitude.

LESTER SEVEN DEP (LEST 7.)

TORONTO ON

TORONTO/LESTER B. PEARSON INTL

EFF 8 JUN 06

CHANGE: ATIS frequency removed

NAD83

All right, so now you know when to expect a turn and why!

PILOT: "Toronto Departure, Air Canada 456 is out of 2000 ft for 5"

ATC: "Air Canada 456, Radar identified, climb to 7000"

PILOT: "Climb to 7000, Air Canada 456"

Once you reach 3600 ft (or thereabouts depending on traffic):

ATC: "Air Canada 456, turn left heading 170"

PILOT: "Left 170, Air Canada 456"

Another way you may hear it:

"Toronto Departure, Air Canada 456 is out of 2000 ft for 5"

ATC: "Air Canada 456, Radar identified, passing 3600 ft, turn left heading 170, climb to 7000"

PILOT: "Left heading 170 after 3600, climb to 7000, Air Canada 456"

You should now expect the departure controller to turn you on course toward your first fix and also to start climbing your aircraft before turning you over to the Center controller.

ATC: "Air Canada456, turn left direct BULGE on course, climb to FL230"

PILOT: "Left direct BULGE and up to FL230, Air Canada 456"

GOTCHA – Please note that if you are flying EASTBOUND with initial fix of GOPEV, KENDI, BEJAT, etc. You will not be directed to these fixes, you will instead be given a heading to follow. The Center controller will then give you an instruction on course to one of these fixes or the next one in your route.

Enroute

After the Departure controller turns you on course and climbs you up to an intermediate altitude you will be handed off to the Center controller.

ATC: "Air Canada 456, contact Toronto Center on 125.77"

PILOT: "Center on 125.77, Air Canada 456"

PILOT: "Toronto Center, Air Canada 456 climbing to FL230, direct BULGE."

ATC: "Air Canada 456, good evening, climb to FL330, proceed on course"

PILOT: "Climb to FL330, on course, Air Canada 456"

The Center controller will also hand you off to adjacent centers as you reach the edge of the controller's airspace.

ATC: "Air Canada 456 contact Cleveland Center now on 134.90, goodnight"

PILOT: "Cleveland Center 134.90, Air Canada 456, bye"

Well congratulations, you have successfully navigated your way through a typical departure from Toronto Pearson Airport on the way to your destination.

Remember that not everything and all scenarios could be covered in this tutorial. If you have questions, please ask the controller on duty. The controllers at CZZZ are highly trained, some are real world controllers, and are always willing to help pilots make their flying experience within the airspace enjoyable and educational.

On behalf of the staff and controllers at CZZZ, we hope you have enjoyed this tutorial, we look forward to seeing you flying in our airspace and please remember that we are available to answer and questions you may have.

Blue Skies!

