

Tutorial Flight #1: IFR – Optional Reading

This tutorial covers a basic flight from KBOS to KJFK, two Class B (“Class Bravo”) airports. The tutorial covers the entire flight, from setting up the aircraft in the briefing room to exiting correctly, but only covers Boston Virtual ATC procedures and radio communications – no navigation information, for example, is included. Don’t forget about BVA’s “Share the Cockpit” program, which allows you to perform a similar flight with an experienced BVA co-pilot. To enroll and be paired up with a BVA mentor, simply e-mail sharethecockpit@bostonvirtualatc.com.

1. The first step to a successful flight is setting up your callsign. When in the briefing room, choose your Aircraft Callsign to “None”, set your Flight Number to “0”, and then type in your three-letter ICAO identifier followed by your flight number.
2. Once you have your aircraft set up, choose your departure airport (KBOS) and select a gate or parking spot (not “Active Runway”) when given the choice. Then click “Join Session”.
3. Once your flight has loaded and you are parked at the gate, prepare your radios and set-up the aircraft. Then, file your flightplan in the chat box (the chat box is opened by pressing “Enter”). All flightplans should be entered in the following format:

+ FP | Callsign | Aircraft Type | IFR or VFR |
Departure Airport => Arrival Airport | Route of Flight |
Altitude | Estimated Time of Departure (optional)

4. For this example, we’ll use the following route (from www.simroutes.com).

+FP | UAL951 | B744 | IFR | KBOS => KJFK | BOSOX V419 V14
ORW V16 DPK JFK | **FL180** | (ETD 1220 Z)

This flightplan might look a bit scary, but you can download plans right into the FSX default GPS from Simroutes, and then just switch on your NAV hold switch to fly the route once you are cleared to your first waypoint.

Because of a bug in FSX, ATC won’t see your callsign correctly on the radar unless you follow this method. Common airline callsigns include DAL224 (Delta), AAL7811 (American), UAL951 (United), etc. A full list of ICAO identifiers can be found on the BVA Website.

Of course, pilots can always file DIRECT, but realistic routes are preferred. The website <http://www.simroutes.com> has great routes to and from many of BVA’s featured airports. You can also find all the charts you’ll ever need online.

Be careful when selecting your altitude. Remember, for IFR flights...

*ODD ALTITUDE = EASTBOUND
EVEN ALTITUDE = WESTBOUND*

Remember, the Flight Level (or “FL”) prefix only applies to altitudes of 18,000’ MSL or above. There’s no such thing as FL100.

The “Z” stands for Zulu time, which is EDT +4 hours (or EST +5 hours)

5. Now that you have your flightplan, you are ready to make your first contact with a BVA controller. You should still be parked at this point, with your engines off. Contact whichever controller is appropriate now – this could be BOS_CI_121.65_CMH or BOS_T_128.80_maveric or BOS_A_133.00_chrisfs. Remember, if there is a Boston Center online, you would contact them if no other positions were staffed. For this example, we'll assume BOS_CI_121.65_CMH is open.

“Boston Clearance Delivery (or “Boston Tower”, “Boston Approach”, etc.), United 951 Heavy request IFR clearance to Kennedy”.

An aircraft larger than a B757 is denoted with the postfix “HEAVY”.

*“United 951 Heavy, Boston Clearance Delivery. Cleared to the Kennedy Airport via the Logan 4 Departure, radar vectors BOSOX then as filed. **Maintain five thousand**, expect flight level one-eight-zero one-zero minutes after departure. Departure frequency is 133.00, **squawk 5134**.”*

*Pilots **must level off at 5,000'** (or whichever altitude is initially assigned) unless a specific climb instruction to climb higher has been given.*

“Cleared to Kennedy; Logan4, BOSOX, then as filed. Climbing five thousand, and we'll expect flight-level one-eight-zero ten minutes after departure. Departure is 133.00, squawk 5134, United 951 Heavy.”

“United 951 Heavy, readback is correct. Advise ready to taxi”.

The response you get from controllers will differ depending on whether they are covering a position below or actually running that position themselves.

This clearance is long, and you will need to listen carefully to the controller before reading back (acknowledging) the clearance. Although pilots are only required to read back the squawk code, most pilots will readback the full clearance anyway.

*The Logan4 departure is an ATC assigned departure, meaning you get “stuck” with it regardless of what you file. It is a simple departure, that can be downloaded from <http://www.airnav.com> or <http://www.myairplane.com>. Make sure to download **all pages**, and read the **description** if you are having trouble understanding what to do.*

Pilots assigned the Logan4 are expected to follow the chart without a further ATC instruction. Therefore, aircraft departing runway 22L are expected to make the right turn to 140° without an ATC instruction.

Please enter the squawk assigned, so the radar controller can identify your aircraft.

6. The next step is to listen to the current Automatic Terminal Information Service (ATIS). Sometimes it will be posted in the chat box; if not, use frequency 135.00 for BOSTON's ATIS. When you're ready to push (or to taxi, if you're not parked at a gate), you'll advise whichever controller you're talking to, and will once again get a different response depending on which positions are online. Whichever controller you're talking to, the exchange will still sound similar:

"Boston (Tower), United 951 Heavy ready to push, information Uniform."

Engine start is always at the discretion of the pilot; therefore, you do not need to request "push and start" from a controller.

"United 951 Heavy, give way to Delta traffic crossing left-to-right behind, then push your discretion. Advise ready to taxi".

7. Pushback (use Ctrl + P, and the buttons 1 or 2 to push left or right) at your discretion, and when your engines are started call the controller covering ground for your taxi instructions.

"Boston (Ground), United 951 Heavy ready to taxi."

If you haven't already informed the controller you have UNIFORM, do so now.

"United 951 Heavy, runway 22L, taxi via Kilo, Bravo, November. Hold short Runway 22R".

All pilots are required to read back hold short instructions. If you don't, you'll be asked to read them back.

"Taxi 22L via Bravo Kilo November, Hold Short Runway 22R. United 951 Heavy."

8. Taxi slowly, normally not faster than 15 knots or so. If you have any questions about the route, ask the controller. Don't forget to pick up your Airport Diagram as well – it makes navigating large and tricky airports much easier. Once you approach the runway, the ground controller will hand you off to the tower; if ground is offline, the tower (or approach or center) controller will give you a takeoff clearance.

You may hear several phraseologies in the takeoff (and runway crossing) clearance, including "Position and Hold" (which means you lineup at the end of the runway and wait for further takeoff clearance) or "No Delay" (which means you make your lineup and takeoff in one smooth movement – but never be so rushed to get off the runway that you endanger your takeoff). ATC will always advise how far out the traffic is, and if you wish to deny your clearance and wait until the incoming traffic has landed, that is your right as pilot in command.

9. After departure, follow the departure procedure. In this case, fly heading 036° to the Boston 4 DME (4 miles from the VOR), then turn right to heading 090° then climb to 5,000' (as prescribed on the Logan 4 Departure when departing runway 4R at Boston). Don't exceed 5,000' until the Departure (or Approach, or Center) controller gives you a climb higher.
10. From this point forward in the flight, follow ATC instructions. They will give you altitudes, headings, and expect you to follow without delay, and you will make their lives (and yours as well) if you follow their instructions as immediately as possible.

*One final note – if you are departing IFR from an uncontrolled airport (say only BOS_A_133.00_John7 is online), the departure is as if you were VFR. Fly until you enter Boston's airspace (you can see it on BVATC Live), contact your controller, and he/she will vector you in. **The only change is, because you don't know your IFR squawk code yet, leave it as 1200 if you're VFR, but change it to 2200 for IFR flights departing from uncontrolled airports.** This way, the controller knows you will be IFR when he/she first contacts you. Don't forget to file your flight plan before takeoff!*

11. Your flight plan is automatically closed by the tower controller on touchdown; you do not need to ask for it to be closed.
12. Once you are parked at the gate, say a quick goodbye to your controller if they aren't too busy, and make sure **you exit correctly**. Do not just click the "X" in the top right corner. **Instead, choose "Flights" > "End Flight", and go through the briefing room to "Leave Session" and "Sign Out" of Direct Connect mode – this will save many headaches for our controllers.**