



## Unit II – Clearance Delivery

### 1- Introduction

The function of the Clearance Delivery controller is to issue an IFR clearance to aircraft planning to depart IFR, and to gather and issue flight information to aircraft requesting to depart VFR. If a flight plan needs to be modified, the controller must issue the changes to the pilot promptly. Failing to catch an inappropriate routing can lead to confusion between the pilot and the departure controller once the aircraft is airborne. With all the different methods VATSIM pilots use to generate a routing, the controller will encounter many acceptable variations of a route to the same destination. The clearance delivery controller must become familiar with all of the different formats of which flight plans may be filed.

### 2- Clearance Format

All IFR clearances should be issued in the same format. The method of delivering is outlined through the abbreviation CRAFT.

- C > Clearance Limit
- R > Route
- A > Altitude
- F > Freq
- T > Transponder and Special Information

#### Clearance Limit

The clearance limit issued to an aircraft departing from any airport shall be the destination airport. A flight plan containing more than one airport is called a “round robin” flight. The controller is to clear the aircraft to the final destination airport on a round robin flight, which may even be back to departure airport in some cases.

#### Route/SID

SID stands for Standard Instrument Departure. SIDs in Bosnia & Herzegovina take the pilot directly to their first fix along their planned route. Not all pilots have access to, or the ability to fly a SID. When this situation arises, the controller must issue full, detailed departure instructions to the aircraft, which **may** simulate the appropriate SID procedure that they would normally be assigned. These instructions are explained in the ‘Departure Instructions’ section found below

Remember to use judgment before simply issuing a SID to a pilot. By looking at the filed flight plan the controller must decide if they will need to confirm that the pilot has, and is able to fly a SID. A pilot that does not know what a SID is and simply repeats the SID name in the readback of their clearance may fly unpredictably on departure. A pilot that does not realize what they will be expected to do on departure by ATC even though they read back the name of a SID may decide to depart and turn on course climbing to their filed cruise altitude without notice. This can result with the Approach controllers having losses of separation with other aircraft inside there area.



A controller able to accept the route that the pilot has originally filed should use the term "Flight Planned Route" when issuing the clearance. If unable, then once the route amendments have been made, the newly issued portion of the route shall be stated explicitly as part of the clearance so as to avoid any confusion. The controller is to refile any route revision on ASRC/VRC/Euroscope so that it is updated on the VATSIM system.

#### Altitude

The SIDs themselves may state an initial altitude on them. In this case, an initial altitude need not be given. In all other cases, pilots should be given an initial altitude/flight level that is acceptable.

#### Frequency

The departure frequency should be given although not very necessary. If you are the only controllers online then the departure frequency should be obvious.

#### Transponder/Special Information

The only piece of special information issued is the aircraft's four digit SSR or transponder code. The transponder or 'squawk' code assigned is to be unique for each aircraft and selected from the banks of squawk codes allocated for use by the vACC. For our purposes the codes are:

IFR Flights: 5170-5177

VFR Flight: 7000-7077

### 3- Aircraft Unable to Fly a SID

Aircraft that do not have, or are unable to fly a SID must be given a full, detailed departure clearance, which explicitly states their initial climb-out altitude. To remain consistent with direction of take-offs, initial altitudes should be appropriate with the direction of the take-off considering the MSA (Minimum Safe Altitude) within that direction. Example, Aircraft departing runway 30 has an initial altitude of at least 6000-9000ft towards the north, 8100ft West, 8000ft East, and South 10000ft.

### 4- Approving and Amending of Flight Plans

The most important aspect of the Clearance Delivery position is being able to quickly recognize an appropriate versus an inappropriate flight plan, and be able to provide an alternate routing to the pilot. In addition to the filed route, the requested cruise altitude must be verified for direction of flight and corrected when necessary. The controller must become familiar with the different formats that pilots file flight plans with. Some appear with only fixes, VORs and NDBs while others may be comprised of a combination of Victor and High Level Jet Routes.



It is important to realize that when a route amendment is issued to a pilot, the clearance delivery controller must link their amendment to the pilot's original route at a common point. In the above example the controller cannot simply issue "change your route to start with BOSNA". The change needs to be issued so there is no doubt as to where the change over to the pilot's original route will begin.

Example: Pilot submits route "KG - KOMAR" > thus "Route change – amendment BOSNA - KOMAR". This amendment contains BOSNA as the location as to where the pilot can continue with their originally filed route.

The clearance delivery controller should negotiate a proper cruise altitude or flight level with the pilot rather than simply assigning one. The reason for denial of the filed cruise level or altitude should be given. Also, the reason for any route change from the originally filed flight plan should be explained if possible to the pilot. Once any required changes have been made, only then should they issue a pre-departure clearance to the pilot. The controller should try and minimize the extent to which a filed route is changed. There is a database of routes which are 'preferred' routes and they are the routes which ATC encourages pilots to file for their flight. However the preferred routes are not the only routes which may be filed and approved and it is not an accepted practice for Clearance to issue changes to filed routes based simply on the fact the pilot did not file the preferred route to their destination.

#### 5- Readback of IFR clearance

A readback on a clearance issued to an aircraft containing a SID must include both the SID and transponder code. It is not mandatory for any other details to be readback to the controller. If a route amendment was issued, it is necessary to obtain a readback on the new route. An aircraft that is not able to fly a SID must readback the transponder code and also the initial altitude they are authorized to climb to after departure.

#### 11- VFR aircraft

The clearance delivery controller may be contacted by aircraft intending to depart Pearson for VFR flight. As in the case of each departing IFR aircraft, each VFR aircraft must have a unique transponder code assigned to them. VFR aircraft are to be assigned a transponder code in the 7000 block. A departing VFR aircraft should be informed of the runway they can anticipate for departure, and be assigned an initial climb-out altitude and transponder code. The controller must ensure that a VFR aircraft has filed an appropriate cruising altitude for their flight if they intend to fly enroute to another location, and obtain a readback on the initial altitude assigned to them. If the current weather conditions are such that VFR flight is not permitted, the controller should inform the aircraft of the current weather and ask what the aircraft's intentions are.



## Clearance Delivery Phraseology

Altitudes issued to pilots by Clearance Delivery:

### 1- IFR WITH A SID

CTN123 is Cleared to (**Destination**) via (**SID**) Standard Instrument Departure or you can say "S-I-D". Initial climb (**Altitude/Flight Level**). Departure runway (**Runway**), Squawk (**SSR code**).

When ever the word "CLEARED" is introduced , a full read back of clearance is required.

### 2- IFR WITHOUT A SID

CTN123 is cleared to (**Destination**) via (**Flight planned**) route. After departure climb to (**Altitude/Flight level**). Departure runway (**Runway**), after departure, climb on runway heading until passing (**MSA of direction of flight**), Squawk (**SSR code**).

### 3- VFR DEPARTURE INSTRUCTIONS

In general pilots, when flying VFR in CTZ (Controlled Zone), should state his intentions i.e. after departure request right turnout heading 330\* or request direct to "a place/point". Or fly a circuit pattern etc. Thus your task is to try to approve partly or if not the entire request taking into consideration of other traffic and factors that could breach the safety of the aircraft and other aircraft.

#### To an airport

9A-ABC, VFR flight plan (**To Airport**) approved, departure runway (**Runway**), when airborne, (**Instruction to leave Controlled Zone/Limits**), squawk (**SSR code for VFR**)

Note: Instructions to leave CZ may consist of altitude/routing limits within Zone Boundary. But only imply if "necessary" thus take into consideration pilot's request. Even though a flight plan is present!

#### Flights within Zone Boundary of CTZ

T9-ABC, Cleared VFR flight in Controlled Zone, (**Limits/Instruction if necessary**), departure runway (**Runway**), squawk (**SSR code for VFR**).

#### Training Flights – Circuit Pattern

T9-ABC, Cleared for VFR training flight, runway (**runway**) (**left/right**) hand circuit height (**altitude**), (**SSR code for VFR**).



How it is done in practice:

## 1 – IFR WITH A SID

 Sarajevo Tower, Dobar-dan, CTN123, request IFR clearance to Zagreb.

 CTN123, Sarajevo Tower, dobar-dan, cleared to Zagreb via the BOSNA 1 ALPHA SID, initial climb flight level 160, departure runway 30, squawk 5170.

 Cleared to Zagreb, via the BOSNA 1 ALPHA Standard Instrument Departure, initial climb flight level 160 (ONE-SIX-ZERO), departure runway 30, Squawk 5170, CTN123.

 ATC clearance copied correct.

## 2 – IFR WITHOUT A SID

 Sarajevo Tower, BON123, request IFR clearance to Belgrade, we are unable to follow published SID routes.

 BON123, is cleared to Beograd via flight planned route. After departure climb to 6000 (six-thousand) feet. Departure runway is 30, after departure, climb on runway heading until passing 6000ft, Squawk 5170.

 Cleared to Beograd via flight planned route. After departure climb to 6000 feet. Departure runway is 30, after departure, climb on runway heading until passing 6000ft, Squawk 5170.

 Clearance copied correct.

## 3 – VFR DEPARTURE INSTRUCTIONS

To an airport

 Sarajevo Tower, 9A-ABC, request VFR direct to Split.

 9A-ABC, Sarajevo Tower, VFR flight plan to Split approved, departure runway 30, when airborne, leave the runway centerline to the West, report when leaving Zone Boundary, Squawk 7000.

 VFR flight plan to Split is approved, departure runway 30 copy, when airborne, leave the runway centerline to the West, will report when leaving Zone Boundary, Squawk 7000. 9A-ABC.



#### Flights within Zone Boundary of CTZ

 Sarajevo Tower, T9-IRH, request VFR flight over Sarajevo city for sight seeing purposes.

 T9-IRH, roger, cleared VFR flight in Controlled Zone, not above 4800ft; remain clear of runway centerline, departure runway 30, Squawk 7000.

 Cleared VFR flight in Controlled Zone, not above 4800ft; will remain clear of runway centerline, departure runway 30, Squawk 7000.

 Clearance copied correct.

#### Training Flights – Circuit Pattern

 Sarajevo Tower, T9-IRH, request to join circuit for training flight.

 T9-IRH, Sarajevo Tower, Cleared for VFR training flight, runway 12 left hand circuit height 3000ft, Squawk 7000.

 Runway 12 left hand circuit height 3000ft copied, Squawk 7000. T9H.

 Clearance copied correct.

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Needless to mention that the weather needs to meet minimum VMC at all times to allow a VFR flight from taking place.

No person may operate an aircraft under basic VFR when the flight visibility is less, or at a distance from clouds that is less, than that prescribed for the corresponding altitude and class of airspace. If they are not met then the flight must be flown under IFR.

	Class B	Class C, D, E
<b>Visibility</b>	At or above FL100: 8 km Below FL100: 5 km	At or above FL100: 8 km Below FL100: 5 km
<b>Clouds</b>	Clear of clouds	Horizontal distance minimum 1500m Vertical distance minimum 300m (1000ft)
	<b>Class F &amp; G</b>	
	Above 3000ft MSL or 1000ft AGL whichever is higher	At or below 3000ft MSL or 1000ft AGL whichever is higher
<b>Visibility</b>	5 km	3 km
<b>Clouds</b>	Horizontal distance minimum: 1500m Vertical distance minimum: 300m	Clear of clouds and ground in sight

**TIPS:**

If unable to provide Pilot straight away a clearance, ask the pilot to "standby", which means its not a YES or a NO. For example; Tower, 123, request IFR to Zagreb. 123, Tower, standby. And then when you are ready call the a/c with approval or what ever.