

DEPARTURE CONTROL (DEP) 19 NOV 2006
POSITION CERTIFICATION GUIDE (PCG)

West Coast ATC Departure Control PCG

Course Objective: Trainee will learn the responsibilities and functions of the Departure Control Position at WestCoastATC.

Time Limits For General Knowledge Training	
Apprentice Controller:	Training Time
	Instructional Time: 30 minutes
	Practical Application: 1 hour and 30 minutes

Departure Control

- Overview of the Departure Control position
- Radar Identification and Radar Service Termination
- Coordination
- Traffic Advisories
- IR Departure Separation
- Vectoring of Aircraft
- Departure Procedures
- Special VFR and Class B/Class C Service
- Transfer of Control/Communications

Overview of the Departure Control Function

[TR: WCATC 7110.65 Chapter 4](#)

Objective:	The trainee must understand the responsibilities of the Departure Control position and how it is utilized at WestCoastATC.
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As a departure controller you will control all IFR aircraft within your portion of the Approach Control's delegated airspace. The Departure controller ensures that the aircraft gets established on the correct course off departure and begins its climb to the aircrafts final altitude in a safe and expeditious manner.

While every airport's airspace varies, Approach and Departure controllers usually handle traffic in a 30 to 60 nautical mile radius from the primary airport and from the surface up to 15,000 feet. The actual airspace boundaries and altitudes assigned to a TRACON are based on factors such as traffic flows and terrain, and vary widely from airport to airport.

Radar Identification and Radar Service Termination

TR: [WCATC 7110.65 Chapter 4](#)

Objective:	The trainee must understand how to properly identify and terminate control of an aircraft in their airspace.
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Using FSNAV you will always be able to see an aircraft if they are connected to our ATC Servers. However sometimes an aircraft will be on TeamSpeak, get removed from the FSHost server and still be flying. Therefore, it is important that you radar identify the aircraft as soon as possible.

The two areas in which you tell an aircraft "Radar Contact" are on initial contact after departure and on initial contact if the aircraft is a coming into your airspace after being uncontrolled. It is not necessary to tell the aircraft "radar contact" if it was handed off to you by another controller.

When an aircraft is leaving your airspace and there are no adjacent ATC facilities to handoff to, or when you will no longer provide ATC service, use the term "*Radar Services terminated, advisory frequency change is approved, Unicom 118.5.*"

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Coordination

TR: [WCATC 7110.65 Chapter 4](#), [FAAO 7110.65 Chapter 5 section 4all](#)

Objective:	The trainee must understand the proper way to coordinate with other positions in the WestCoastATC Airspace system.
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As a Departure Controller you can be coordinating with several positions through out a session. The key is to be clear, professional, and ensure that what ever is said is understood. Things that should be coordinated with other positions are:

- The landing and departing runways at a controlled airport (LC/Twr)
- The current ATIS code (CD)
- Departure Releases (LC/Twr)
- Traffic (LC, APP, CTR)
- Handoffs (LC, APP, CTR)

You should use the same format that you learned in the General Knowledge course when coordinating with other positions. Here are some sample terms that are used when coordinating between positions:

a. *Handoff.* An action taken to transfer the radar identification of an aircraft from one controller to another controller if the aircraft will enter the receiving controller's airspace and radio communications with the aircraft will be transferred.

b. *Point Out.* A physical or automated action taken by a controller to transfer the radar identification of an aircraft to another controller if the aircraft will or may enter the airspace or protected airspace of another controller and radio communications will not be transferred.

c. *Point Out Approved.* The term used to inform the controller initiating a point out that the aircraft is identified and that approval is granted for the aircraft to enter the receiving controller's airspace, as coordinated, without a communications transfer or the appropriate automated system response.

d. *Traffic.* A term used to transfer radar identification of an aircraft to another controller for the purpose of coordinating separation action.

f. *Traffic Observed.* The term used to inform the controller issuing the traffic restrictions that the traffic is identified and that the restrictions issued are understood and will be complied with.

Traffic Advisories

[TR: WCATC 7110.65 Chapter 4, FAAO 7110.65 Chapter 2 section 1all](#)

Objective: The trainee must understand what information is required and how to issue Traffic Advisories.

When issuing traffic advisories do so in a manner in which the pilot will understand and have sufficient time to avoid that traffic if necessary. You can use Traffic calls as a way of sequencing as well.

You may describe the position of traffic such as "to your right" or "ahead of you."

EXAMPLE-

"Traffic, U.S. Air MD-Eighty on downwind leg to your left."

"King Air inbound from outer marker on straight-in approach to runway one seven."

Issue traffic advisories to those aircraft on your frequency when in your judgment their proximity warrants it.

PHRASEOLOGY-

TRAFFIC, (number) O'CLOCK, (number) MILES, (direction)-BOUND, (type of aircraft, (altitude)).

EXAMPLE-

"Traffic, eleven o'clock, one zero miles, southbound, converging, Boeing Seven Twenty Seven, one seven thousand."

IFR Departure Separation

TR: [WCATC 7110.65 Chapter 4](#), [FAAO 7110.65 Chapter 5 section 5all](#)

Objective: The trainee must understand the proper separation that is required for an IFR Dperature and how to apply it.

When you coordinate the flow of traffic with the tower controller you want to ensure that you have sufficient spacing between departures. Here are some standards that must be adhered to when it involves separation and spacing.

The minimum separation between non-heavy aircraft of the same weight class are:

- When less than 40 NM from the center of the primary airport in which the Terminal approach facility is located - 3 NM
- When 40 NM or more from the center of the of the primary airport in which the Terminal approach facility is located - 5 NM

When Heavy or dissimilar weight classes are involved:

- Heavy behind Heavy - 4 NM.
- Large or Heavy behind B757 - 4 NM.
- Small behind a B757 - 5 NM.
- Small or Large behind a Heavy - 5 NM.

Between aircraft departing from the same airport when initial headings differ by 15 degrees or more - 1 NM.

The minimum altitude separation used by Departure Control is 1,000 feet.

Vectoring of Aircraft

[TR: WCATC 7110.65 Chapter 4, FAAO 7110.65 Chapter 5 section 6all](#)

Objective:	The trainee must understand the proper way to vector an aircraft while operating in the Departure controller's airspace.
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When vectoring an aircraft you must visualize where you would like the aircraft to go. This takes time and will get easier with experience. The key in air traffic is to give on the necessary amount of turns. That means make it as easy for both you and the pilot as possible and keep the turns to a minimum.

When vectoring issue the direction to turn and heading, e.g. "*turn right heading 090.*" If you tell an aircraft to "*FLY HEADING*" the pilot should make his turn in the shortest direction.

When you are vectoring an aircraft you must also tell the aircraft why you're vectoring him and if appropriate, what he is expected to do at the end of the vector, unless it is the initial vector for a departure

Example –

"VECTORS FOR DESCENT"

or

"Proceed direct the Razorback VOR AND RESUME OWN NAVIGATION"

In the old days we were taught to use what is called the pen technique to determine headings. It is when you take a pen and place it on the aircraft and then the direction you want him to proceed. You then bring it to the center of the screen and using the degrees determines a good heading. A feature that FSNAV has to help you get started is when you click and drag from the aircraft to the point you want him to go it shows distance and headings so you can use that to get a more accurate heading. I normally round it to either the nearest 5 or 10 degree to make it easier and it usually suffices.

Departure Procedures

[TR: WCATC 7110.65 Chapter 4, FAAO 7110.65 Chapter 4 section 3all](#)

Objective:	The trainee must understand the procedures that must be followed while operating in the Departure Controller's position.
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Avoid using the term "takeoff" except to actually clear an aircraft for takeoff or to cancel a takeoff clearance. Use such terms as "depart," "departure," or "fly" in clearances when necessary.

Assign departure restrictions, clearance void times, hold for release, or release times when necessary to separate departures from other traffic or to restrict or regulate the departure flow.

After coordinating with a controller you may issue certain instructions to have an aircraft conduct when he is cleared for takeoff. Here at WestCoastATC unless otherwise stated all aircraft get Runway heading as there departure instructions and to climb and maintain an altitude that is normally about 4000 ft above ground level (AGL).

Under ideal conditions, all departures should be established on or on a vector which will intercept their filed route before you transfer them to the center controller.

Special VFR and Class B/Class C Service

[TR: WCATC 7110.65 Chapter 4, FAAO 7110.65 Chapter 5 section 6all](#)

Objective: The trainee must understand how to apply Special VFR in both the Class B and C airspaces.

In the general knowledge phase you learned about Special VFR and the weather minimums in which aircraft may operate as Special VFR. As an approach controller you handle Special VFR and VFR for that matter the same as IFR aircraft inside of class B and C airspaces. They may or may not except your altitude restrictions and headings because they have to remain VFR but you still must separate IFR aircraft from the Special VFR while it is in the Surface Area. You will tell an aircraft that is operating under Special VFR conditions the following:

"N12345, Cleared (to enter/out of, through) the class (Bravo, Charlie, Delta) airspace, maintain VFR at all times. "

As stated above under most circumstances VFR aircraft in a Class B or C Airspace are handled the same as IFR aircraft. As stated above the pilot is still required to maintain VFR at all times so he may be unable to except any headings or altitudes that you assign him.

In Class B Airspace VFR aircraft require a clearance

Example –

"Cleared (to enter/out of, through) the class bravo airspace."

You must also tell the aircraft when it is leaving your airspace.

Example-

N12345 you are leaving the class Bravo airspace, resume own navigation, radar services terminated, squawk 1200, advisor y frequency change approved 118.5 Unicom."

Transfer of Control/Communications

TR: [WCATC 7110.65 Chapter 4](#)

Objective:	The trainee must understand the point in which he may transfer the control/communications of an aircraft to another controller or Unicom.
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When a departing aircraft is approximately three to four thousand feet below the center controllers airspace or within about five to ten miles from reaching the 60 mile airspace border the departure controller should switch the aircraft to the center controller's frequency.

(Callsign) Contact (Center Name) Center on XXX.XX (include TS channel or this channel).

VAA_001 (Pronounced Allied One), Contact Memphis Center on TS channel 122.55, Good flight.

If the adjacent airspace is uncontrolled then you would tell the aircraft:

(Callsign) Radar Services terminated, resume own navigation, squawk VFR, advisory frequency change is approved Unicom 118.5.

VAA_001 (Pronounced Allied One), Radar Services terminated, resume own navigation, squawk VFR, advisory frequency change is approved Unicom 118.5, Good flight.