

APPROACH CONTROL (APP) 21 NOV 2006
POSITION CERTIFICATION GUIDE (PCG)

West Coast ATC Approach Control PCG

Course Objective: Trainee will learn the responsibilities and functions of the Approach 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

Approach Control

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

Overview of the Approach Control Function

[TR: WCATC 7110.65 Chapter 7](#)

Objective:	The trainee must understand the responsibilities of the Approach Control position and how it is utilized at WestCoastATC.
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As an Approach/Arrival controller separation and the efficient flow of traffic is your prime responsibility. As an Approach/Arrival Controller you have the responsibility to setup and issue certain instructions to ensure the safe and expeditious flow of traffic within your airspace.

An Approach Controller controls all IFR aircraft within the Terminal area's delegated airspace. This airspace will include the primary airport and may include other "satellite" or smaller airports. Approach provides vectors to the airport and issues approach clearances to those airports. An Approach controller also works with the Local controller and Departure controller to ensure a smooth flow of traffic in and out of all surrounding airports. An Approach Controller will assume the responsibilities of a Departure controller if one is not available.

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 7](#)

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 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.*"

Coordination

TR: WCATC 7110.65 Chapter 7

Objective:	The trainee must understand the proper way to coordinate with other positions in the WestCoastATC Airspace system.
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If an aircraft is on a published Arrival procedure or STAR then your job is a lot easier. You can coordinate with the Center controller for a specific point of handoff.

If an aircraft is not on a published arrival then you should setup and altitude and point of transfer at the beginning of a session to ensure the smooth flow of traffic.

As a Approach 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)
- Traffic (LC, CTR)
- Handoffs (LC, 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 7

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."

Radar Separation

TR: [WCATC 7110.65 Chapter 7](#)

Objective:	The trainee must understand the proper procedures and be able to apply them when involving helicopters.
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When you coordinate the flow of traffic with the tower controller you want to ensure that you have sufficient spacing between arrivals. 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.

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

Vectoring of Aircraft

TR: WCATC 7110.65 Chapter 7

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. Normally round it to either the nearest 5 or 10 degree to make it easier and it usually suffices.

Arrival Procedures

TR: WCATC 7110.65 Chapter 7

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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If a pilot has filed a STAR and you want him to descend as published in the arrival tell the pilot to "*Descend via the (NAME) arrival.*"

If there are no altitudes published in the STAR you must assign one. If the altitude restriction on the STAR reads "Expect Clearance to cross (XXX) at 10,000" then you must issue that crossing restriction in your descent clearance. If it states to cross a certain point then they can descend as published if that is what you say but if it says expect then you must issue the altitude you want the aircraft at.

You must ensure that the pilot has the correct arrival information as soon as possible after initial contact unless the aircraft states that they have the correct ATIS code.

The Arrival information consists of:

Runway in use.

Wind.

Altimeter setting.

Ceiling and visibility if below VFR.

Type approach to expect.

When you are vectoring and aircraft to the instrument final approach course you must remember the following:

The aircraft must intercept final at least 3 miles from the Final Approach Fix (OM) at an angle of no more than 30 degrees.

When an aircraft is to a point where you are ready to clear the aircraft for approach you must issue the following things, this is called "PTAC":

Position (from the airport or fix).

Turn (to an appropriate intercept heading).

Altitude (that the aircraft should maintain until established on the approach)

Clearance for the approach.

Example -

"one two miles from Springdale airport, turn right heading 20, maintain 3000 until established on the localizer, cleared ILS Approach Runway 18."

Once you have cleared the aircraft for approach and in your judgment he is going to intercept the final approach correctly then handoff the aircraft to TWR. It is a common misconception that you need them to report established on the Localizer prior to switching them. If the aircraft misses the approach course the Tower will coordinate with you and switch him back for a new approach.

Approach Clearance Procedures

TR: WCATC 7110.65 Chapter 7, FAAO 7110.65 Chapter 5 section 9all

Objective:	The trainee must understand the different types of approach clearances and how to issue them.
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Straight in Approach

To require an aircraft to fly a particular instrument approach, use the name of the approach in the approach clearance,

"CLEARED VOR RUNWAY 36 APPROACH."

Circling Approach

A circling approach is where the approach is made to one runway and once at a specific point on final (when the pilot sees the airport) the aircraft circles to land on another runway.

"Cleared ILS Approach runway 18 circle to runway 36."

Visual Approach

A visual approach is an ATC authorization for an aircraft on an IFR flight plan to proceed visually to the airport of intended landing; it is not an instrument approach procedure.

Vector an aircraft for a Visual approach only if the weather is VFR. In your opinion the weather must be sufficient for the aircraft to report the airport in site from a reasonable amount of distance from the airport.

(Callsign) Fly heading XXX vector for Visual Approach to Runway/Airport XXX.

N14568, Fly heading 220, vector for Visual Approach to Runway 22L.

When the aircraft is within about 15 miles of the airport notify the pilot of the distance from the field and ask for the pilot to report the airport in sight.

(Callsign) (Airport name) airport is in your (o'clock or direction), XX miles, report airport in sight.

N14568, Memphis airport is in your 12 o'clock, 12 miles, report airport in sight.

When the pilot reports the airport in sight you may clear the aircraft for the visual approach.

(Callsign) (instructions if appropriate) cleared Visual Approach Runway XXX.

N14568, follow B747 3 mile final, cleared Visual Approach Runway 22L.

Special VFR and Class B/Class C Service

TR: [WCATC 7110.65 Chapter 7](#), [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.
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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."

Holding procedures

TR: [WCATC 7110.65 Chapter 7](#), [FAAO 7110.65 Chapter 4 section 6all](#)

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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Holding instructions consist of the following five (5) items:

1. Holding Fix and cardinal direction (N, S, E, W, etc.).
2. Holding course.
3. Leg length in miles or minutes.
4. Direction of turns.
5. Expect Further Clearance time.

“Cleared to the Razorback VOR, *hold to the south, 5 mile legs, right turns, expect further clearance at 2245Z.*”

You may use as a holding fix a location which the pilot can determine by visual reference to the surface if he/she is familiar with it.

PHRASEOLOGY-

HOLD AT (location) UNTIL (time or other condition.)

Transfer of Control/Communications

[TR: WCATC 7110.65 Chapter 7](#)

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 an arriving aircraft is about 5-8 miles from the arrival airport and is on a visual approach the Approach controller should switch the aircraft to the Tower controller's frequency.

When an arriving aircraft is about 10-15 miles from the arrival airport and is on a instrument approach the Approach controller should switch the aircraft to the Tower controller's frequency.

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

VAA_001 (Pronounced Allied One), Contact Memphis Tower 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.