LESSON 8 – TWO ARRIVALS

Version 2, 6-13-16 D. Logan

Note: to recreate the traffic as seen in the lesson, from an older schedule database, please download and install the files in ATCproTutorial traffic db files.zip. See included readme install instructions. To see the traffic, set the slider to "Custom" 100% instead of "Commercial" 100% (see below).

Welcome to Lesson 8 of ATCpro! *This lesson will demonstrate how to handle two arriving aircraft at the same time. We will be using a new facility, Miami, for this lesson.*

Let's get a new scenario setup on the Duty Desk.

Make the following settings:

Facility MIA - Miami

Weather: East flow, Wind 080 degrees at 5 knots, few clouds

Traffic: Departures - all set to 0%

      Arrivals - **Commercial** 100%,

Note: set to Custom 100% instead of Commercial 100% if custom traffic database is installed.

      Other – all set to 0%

Position: Now set Miami South Final to User control and all other positions to Computer control.

Time: set from your current time and day to 11:44 Saturday. You can right click and choose from the Previous Times menu.

Click the **Begin Your Shift** button.

When the program finishes loading, go ahead and **pause the sim** to rearrange the pop up windows and set up maps on the scope for our controlling session.

On the Comm panel Click on the TX SEL and RX SEL buttons on the 5th row, A, (if not already on). You can close this window to get it out of the way if you want.

Move and resize the Flight Information strip window and the Communications history window as desired as in previous lessons

Click on the Range button on the DCB and set it to 30. Click on the Place Center button and move the control area up to have better visibility on the screen.

Click on AIR SPC, then map 504 (A EAST).

Click on Maps, then ARR DEP, then KMIA, then map 227 (I 09, the ILS approach map for runway 9). Click Done.

Unpause the sim and I'll explain what's going on.

Listen to the briefing so we know that the scope is under our control.

You will see in the lower part of our airspace two aircraft with the green Sierra position datatag. Click on each of them to "quick look" and see full the datatag. **Pause the sim** again while I make a few comments.

It is important to realize that to be a successful controller you will need to be able to assess a situation developing on the scope with multiple aircraft, make a plan to handle it in a good way, and put the plan into action without delay. It is also good to set things up to be as forgiving as possible to allow for unknown factors such as a pilot responding slowly or incorrectly or yourself getting distracted momentarily and not attending to a command promptly. That is, to create spacing and headings for the aircraft so if you were unexpectedly unable to issue commands for a minute or two the aircraft would still have a margin of safety in separation. For example, to not put aircraft on a collision course at the same altitude, or have one aircraft following another at the minimum spacing so that if the leading plane made a wrong turn it would immediately cause a dangerous situation.

To use our current session as an example, there are two aircraft who are heading toward each other, bound for the same runway, American 9 94 and American 17 74. We need to make a plan for who will be the first in line to land and who will be next. This doesn't always depend on who is closest to the airport. It depends more on how to set up an orderly pattern of approach that always maintains separation. One rule of thumb is to keep separation by altitude as well as distance as much as possible. That way even if something doesn't quite workout with the horizontal spacing of one plane, you will still have vertical separation. Then you can descend each plane in turn as they get lined up for the runway.

For our session my plan will be to have American 9 94 first in line and American 17 74 2nd. I will be descending American 9 94 to 3000, the floor of my airspace, and reducing his speed to 180 knots. I will descend American 17 74 to 4000 to maintain vertical separation and also reduce his speed to 180 knots so they will have the same speed. American 9 94 will be able to maintain his current heading until turning onto the final approach course (it's usually best to minimize the commands given to the pilot). American 17 74 will be given a turn to heading of 360 to create a 4 or 5 mile separation from American 9 94. Let's see now how the plan works out. **Unpause the sim.**

In a minute American 17 74's tag will start flashing so I will go ahead and click on it to accept the handoff.

When he calls us on our frequency he will already be descending to 4000 so I will give him the command to slow him down to 180 knots according to our plan to have him 2nd in line:

 American 17 74, reduce speed to 180 knots.

(readback), slowing to 180, American 17 74.

Now American 9 94's datatag is flashing white and I will click on it to accept the handoff. Once he calls on my frequency I will give him his commands as 1st in line:

American 9 94, descend and maintain 3000, reduce speed to 180 knots.

(readback) 3000, slowing to180, American 9 94

Now we follow American 9 94 as he descends and moves to intersect the runway 9 centerline.

Now we give American 17 74 a turn toward the runway centerline:

American 17 74, turn right heading 360.

(readback) 360, American 17 74.

As American 9 94 gets close to the runway 9 centerline and the GRIT Tees fix I will give a turn to the final approach course:

American 9 94, turn right heading 090, report airport in sight, one o'clock, 1 2 miles,

(readback) 090, airport in sight, American 9 94

American 9 94 will report the airport in sight, then we can give the visual approach clearance:

American 9 94, cleared visual approach runway 9

(readback) visual approach runway 9, American 9 94

Now we can give the frequency change to Tower:

American 9 94, contact Miami Tower 123.9

(readback) Miami Tower on 123.9, American 9 94

Now American 17 74 is ready for his turn to the final approach course for runway 9:

American 17 74, Turn right heading 090, descend and maintain 3000

(readback) 090, descending to 3000, American 17 74.

American 17 74, report airport in sight, 12 o'clock, 1 2 miles.

(readback) airport in sight, American 17 74.

American 17 74 will report the airport in sight, by the GRIT Tees fix then we can give the visual approach clearance:

American 17 74, cleared visual approach runway 9

(readback) visual approach runway 9, American 17 74

Now we can give the frequency change to Tower:

American 17 74, contact Miami Tower 123.9

(readback) Miami Tower on 123.9, American 17 74

Now that the two arrivals are safely handed off to Tower the lesson is over. Notice that there is a steady stream of arrivals coming to our airspace. When you are up for the challenge go ahead and continue controlling the arrivals to runway 9. Feel free to take advantage of the training environment and pause the simulation to assess the situation. Unpause when you have figured out your plan and caught your breath. As you get more practice and confidence you will feel comfortable handling more aircraft at once and you won't need to pause. Another thing you can practice by running this session again is to try changing the order of American 17 74 and American 9 94 so that now American 17 74 is first in line. What would you have to do differently to keep them separated?

Good Luck!

In the next lesson 9 you will practice giving basic commands while controlling a single aircraft to gain more confidence with speaking over the radio. You can click the x in the upper right to end the lesson.