

Add-on for  
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GLOBAL

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# CRJ 200



## Addendum

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# **CRJ-200**

## **Addendum**

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**Note:**

This addendum should be used in combination with the original tutorial flight which was written for the 1.1 software. Many functions of the FMS were improved significantly, causing a few changes in how you use them. So whenever the original manual describes the use of the FMS, please consult this addendum to learn how it works in the latest version, which is a better reflection of the real thing.

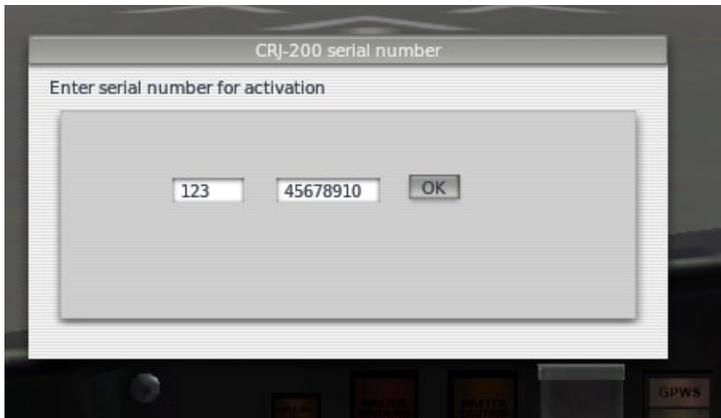
## Activation

Along with your download or DVD purchase, you will have received a serial number which looks like this:

123-45678910

When you load the CRJ in X-Plane for the very first time, you will see a window where you have to enter this code. You enter the first digit sequence in the first input prompt, and the second digit sequence after the dash in the second input prompt. Don't enter the dash.

The window should look like this before you press Okay:



## **Navdata**

The CRJ-200 ships with an initial set of navigational (AIRAC) data, that also includes terminal procedures. For this tutorial flight it is crucial that you use this included navdata. Otherwise airway or procedure names will be different. Once you have completed this tutorial and feel confident to fly on VATSIM or IVAO, you may update your navdata to be consistent with other network users. You do this by purchasing a "cycle" on [www.navigraph.com](http://www.navigraph.com). Various data formats are offered. The one for the CRJ is labelled "vasFMC Flightmanagment/JRollon CRJ-200 – native\*\*". You can download it as zip file, which you have to extract. The extracted data consists of various files (such as "Airports.txt" and folders. Drag all these, files and folders, into your X-Plane/Aircraft/CRJ-200/plugins/CRJAvionics/navdata folder. It will ask you to overwrite the content that is already there. Allow it to replace/overwrite the data. You will then have the latest cycle installed.



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## Cold & Dark vs Engines Running

The tutorial assumes you have configured X-Plane to start up in cold&dark mode. The option is in Settings - Operations and Warnings where the checkbox says "Start each flight with engines running". If the checkmark is set, the CRJ will load completely configured and all systems ready for takeoff. If the checkmark is not set, the CRJ will load the systems in a cold and dark state. For this tutorial, we need the cold and dark state. So if the checkmark is set, uncheck it now and restart X-Plane.

## Pilot View plugin

All panels, including the CDU, can also be used in 3D view. However, mouse or keyboard navigation in 3D view is a bit cumbersome and slows down your reaction in complex situations like an instrument approach. For that reason, the CRJ comes with a configuration file for the pilot view plugin, which lets you use keyboard shortcuts to get fixed, 2d-like views of certain panel sections. To install pilot view, go to this webpage [http://www.xpluginsdk.org/pilot\\_view.htm](http://www.xpluginsdk.org/pilot_view.htm) and download the latest version of Pilot View for your operating system.

## Remote CDU

As the CDU is probably the most needed popup panel during flight operations, we also made it available to be used on a second monitor, second PC, or a tablet computer device like the Apple iPad. Look at the files Manual/Remote-CDU-Howto.pdf for detailed usage instructions.

## Entering a flight plan

Note that entering the first leg has moved from the RLSK1 position of the second flight plan page to the RLSK4 position of the first page.

The first leg of our flightplan is "direct UNSOL". So we type the waypoint name "UNSOL" and press RLSK4 to insert it as the first "to" waypoint. Note that "DIRECT" will appear on the left, indicating we are going direct to this waypoint because Salamanca has no published SIDs (Standard Instrument Departures). The flightplan page now looks like this:

```

MOD FPLN                               1/2
  ORIGIN  DIST      DEST
LESA      256      LEVC
  ROUTE
-----
                                ORIG RWY
  VIA                                TO
DIRECT                                UNSOL
-----
<COPY ACTIVE                       FLT NO
-----
                                PERF INIT>
[                                     ]
                                EXEC

```

(Fig 25)



The next leg is the A33 airway to the waypoint CENTA. But we don't have any more input fields left on this page! You might have noticed that on the top right the indication has changed from 1/1 to 1/2, indicating we now have a second page of flightplan information that we can access. To do so, we press the NEXT PAGE button.

Enter the airway identifier A33 into the scratchpad, and press LLSK1 to insert it into the flightplan. You will notice a discontinuity appearing below it:



(Fig 26)

This indicates that the FMS doesn't know in which direction we are taking the airway and where we are going to leave it. To solve the discontinuity we need to enter the waypoint CENTA and press the RLSK1 to fill the prompt. Now the discontinuity will have vanished and the FMS knows we are taking the A33 airway from UNSOL to CENTA.

## ACT vs MOD flightplans

By the way, did you notice the word "EXEC" appearing in the message line below the scratchpad? Also, the blue ACT designator of the flightplan was replaced by a white MOD. Whenever you edit the flightplan by inserting or deleting points or airways, by changing runways or procedures or performing directs, you modify a temporary flightplan, while the plane on autopilot will still follow the old flightplan. This way you can review your changes and make sure your new route is correct before the autopilot starts tracking it. To set a route active, so the autopilot can follow it, you must execute it. You do this by pressing the EXEC button. If you are however dissatisfied with a change you made, because you inserted a wrong waypoint, you can go back to the old active route by pressing the LLSK6 when there is a "<CANCEL MOD" prompt next to it. This will revert all your changes since the last EXEC and you can start all over with editing.

## Saving and loading flightplans

To save the route, we press FPLN to go to the flightplan page. Then we enter a name for the route in the scratchpad, so type LESALEVC. Then press LLSK5 to copy the active route to the file.

```

ACT FPLN                               1/2
  ORIGIN  DIST          DEST
LESA      256          LEVC
  ROUTE
-----
                                ORIG RWY
                                03
  VIA                                TO
DIRECT                                UNSOL
-----
                                FLT NO
<COPY ACTIVE                        -----
                                PERF INIT>
[ROUTE SAVED                        ]

```

(Fig 35)



The routes are stored in the CRJ-200/plugins/CRJAvionics/routes folder. If you want to load the route at a later point, type the name in the scratchpad and press LLSK2 to load it as a company route.

## New location of display frames

Tip: if you want hide the frame of the displays you can go to Aircraft/CRJ-200/plugins/CRJAvionics/Resources folder, and rename the file DisplayFrame.tga to DisplayFrame.tga.off.

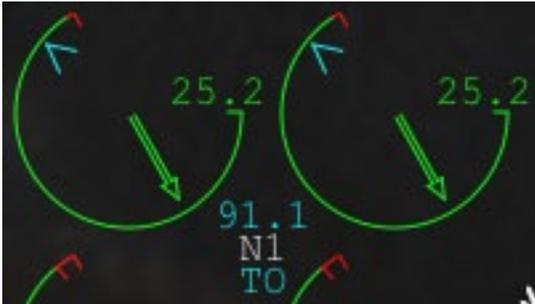
## Thrust limiter modes

To set a thrust limit via the CDU, press the PERF key, go to the Thrust Limits page, and enter the outside air temperature. Type 20 into the scratchpad and press RLSK4. Roughly 91.2 percent will appear in the T/O field (depending on whether you use X-Plane 9 or 10). To activate the limit, press LLSK1 so the limit is marked ACT.



(Fig 76)

Take a look at the primary EICAS and you will notice the limiter mark on the N1 gauge. The FADEC controller will keep the N1 at or below the limit.



(Fig 77)

## STAR transitions and IAPs

Note that both the STAR and the Approach selection require you to select a transition, even if there is only one, to become active. If you enter a STAR and wonder why it doesn't appear on the LEGS page, make sure you selected a transition, by pressing PREV PAGE until you see the list of transitions. European airports don't have STAR transitions, so there was none we could select for CENT1C. In the U.S. STAR transitions are common however, so please make sure to select one.



## Holdings

The flexibility of holdings has improved significantly. Here's the new procedure to enter one:

- Press the HOLD key on the CDU. That will display the ACT FPLN HOLD page and it shows the holding parameters for the Holding after our eventual missed approach. But we don't want to edit the missed approach holding, that's why we press RLSK5 "NEW HOLD".
- Now we see the LEGS page again, but with a prompt of five boxes at the bottom. Here we need to insert the waypoint for our holding. We could also make a holding at the present position of the aircraft, by pressing RLSK6 (present position), but we don't want that.



(Fig 91)

- Press the LLSK adjacent to CLS waypoint. Be sure to select CLS, not the (CLS) waypoint, because that's a DME intercept waypoint. We want the CLS VOR itself!
- Press LLSK6 to enter CLS at the prompt. Now the MOD FPLN HOLD page will appear where we can see all parameters.



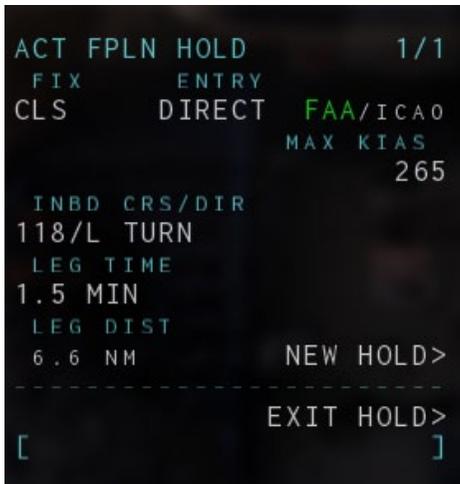
(Fig 92)

- Remember we were requested to make a left holding! To make a left turn, enter /L (slash L) in the scratchpad and press LLSK3.
- When you are satisfied with the parameters, press EXEC. You can now see the holding on the MFD display.



To exit a hold do the following:

Press the HOLD key and you will see the HOLD LIST page. Press the LLSK1 to select the holding at CLS (remember the other holding is the one from the missed approach). On the ACT FPLN HOLD page we press RLSK6 to arm the exit (the prompt changes as another press would cancel the exit again).



(Fig 96)

The plane will proceed to complete the second holding, and once over CLS again, resume tracking the rest of the route.

## Direct-to

The DIR-INTC button on the CDU is now active and lets you select a direct-to more easily than before on the LEGS page. But beware: Many SIDs and STARs contain conditional waypoints that have no fixed geographical location, such as a heading to an altitude leg or a vectors leg. Although these types of waypoints show on the ACT DIRECT TO page, they cannot be selected for DIRECT-TO navigation.

# XPLANE 10

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