



CARENADO SENECA II V3.0 FOR X-PLANE

This plane uses a plug-in system to drive a number of systems and effects. This read me outlines a few of these systems, and how users can make the most of them.

Throttle, RPM, and mixture controls

In the real world, a pilot can use one hand to control the left and right throttle levers individually.

This plane features an innovative system which emulates the ability to flexibly control the individual throttle levers with a single click-and-drag motion. Simply click between the two levers and drag.

Dragging in the vertical direction will move both throttles forward/backward simultaneously, while dragging in the horizontal direction will move one throttle forward while the other one is pulled back.

To synchronize the left and right throttle handles, simply click on the zone midway between the two levers.

The two-axis manipulation mode for these handles is limited to a 20% difference between the two handles. If more difference is needed, one can also use individual throttle control.

Individual throttle control simply requires aiming a little more outward towards the lever you wish to control individually.

This system does not interfere with hardware throttle systems.

The RPM levers and the mixture levers also use this method of two-axis manipulation.

Prop discs

This plane features innovative prop disc representations. The three different RPM phases smoothly fade in and out, showing the prop in different levels of blurriness to accurately represent their rotational speed. Also, a side view has been implemented, which gradually fades into view, as the camera progresses towards side view. This implementation features an almost holographic appearance, which also responds visually to blade pitch settings. A feathered prop will cause the side view to appear thick, while a regular full-RPM set prop will appear thin from the side.

This system is dependent on X-Plane's internal engine to display properly, and has been known to not work as expected on certain Windows systems. Mac and Linux systems should display the side view properly, although sometimes it seems as though a plug-in reset may be required.



Cameras and Viewpoints

This plane features a 2D pop-up window that allows for the selection of pre-set viewpoint snap points. The 2D pop-up window can be called up by clicking on the left sticker above the engine annunciator lights underneath the glare shield.

This window will stay in position relative to the computer's monitor, and is also usable when in exterior views. It can be resized, by clicking and dragging on the bottom right corner, and can be closed by clicking on the top right corner.

Alternately, a keyboard shortcut can be assigned to this window. Simply go to "Settings> Joystick, keys, & equipment", then select the "Keys" tab, then press the button at the bottom, labeled "Add new key assignment" to add a new keyboard short cut. To the left, a new button will appear, labeled "<NONE>". Selecting this button with the mouse will allow you to enter a keyboard shortcut. To assign a function to this keyboard shortcut, locate the "custom cmnds from plug-ins" window at the top right, and click on the square just left of the text box. >From the drop-down menu, go all the way to the top directory, and then select "XAP/Panels/0". This should bind your assigned keyboard shortcut to the pop-up window.

The pop-up's viewpoints feature smooth transitions from one viewpoint to the next, and really assist in flying the plane. The field of view can also be controlled via this pop-up menu.

To assign individual views to keyboard shortcuts, follow the procedure above, but assign the different keys to "Cameras>1, 2, 3, 4, 5, 6, or 7."

Autopilot Pop-up

Since the autopilot's position is located somewhat out of view, this plane has a 2D pop-up representation of the autopilot, for easier operation, while using both inside views and outside views. It can be called up by clicking on the right sticker above the engine annunciator lights underneath the glare shield. As with the viewpoint pop-up menu, this one can be scaled and closed from within the 2D window.

A keyboard shortcut can be applied to this pop-up as well. Simply follow the procedure outlined in the "Cameras and Viewpoints" section (above), and assign the key to "XAP/Panels/1".



Sounds

This aircraft is equipped with full 3D sound. Many subtleties in the sounds have been implemented, such as:

- Walk-around effect in exterior views. Right engine pans to left speaker when viewing from the front.
- Doppler and distance effects implemented.
- Low RPM sounds have their distinct throaty sputtering sound, while high-RPM sounds take over when power is applied. Sounds were recorded from the real plane.
- Starter sound and false-starter sound programmed to kick in when diverse criteria are met.
- Distinct sound during shutdown.
- Exterior sounds can be heard through open pilot window and through open passenger door.
- Ratchet sounds of NAVCOM radios are to-the-digit precise, providing aural feedback for more precise control over frequency entries.
- Realistic gyro spin-up at Master Power switch activation.
- Sounds can be de-activated along with X-Plane's sounds (in the "Settings>Sound" menu).

Night Lighting

In this plane, every effort has been made to provide realistic night lighting. The plug-in drives aspects of the lighting that don't look realistic during the daytime, and are therefore activated when it's night time in the sim. In general, bulbs will light up, regardless of day/night time, but their resulting illuminations only work at night. Expect to see strobe halos, ice light beam, inner cabin illumination, NAV light reflections, beacon reflection, instrument glass reflections, etc. only at night.

A tip: to navigate around a "cold and dark" cockpit at night, use the "i" key, to emulate night vision goggles. In the real world, the pilot has the benefit of tactile feedback, which is not available in a simulated environment. Night vision goggles will help orient you inside a cold and dark cockpit at night, until you find all the light switches.



Miscellaneous

- NAVCOM radios jump over unused frequencies. (Not normally the case with manipulator-based frequency knobs).
- Doors close beyond 18 Kts IAS.
- Wheels don't eternally spin after take-off

Troubleshooting

This plug-in is designed for Windows, Mac, and Linux, and has been tested extensively on all platforms. However, plug-ins sometimes step on each other's toes, so if there are signs of trouble, or things relating to the plug-in aren't working as expected, please try some of the following tips:

The easiest way to recognize that the plug-in is not working properly is, if the sound isn't working, or to look at the visualization of the prop disc. If it has lines and patterns on it that don't look like a spinning prop, then there's a problem. The first thing to try to do is to "cycle" or reset the plug-in:

- In X-Plane's "Plugins" menu, select "Plugin admin>Enable/Disable".
- Locate the check box beside "SASL".
- Un-check and re-check it.

In case a conflict with other plug-ins is suspected, a process of elimination can help find the culprit. Un-checking all the active plug-ins except for this plane's SASL plug-in can help narrow down the plug-in responsible for the conflict. Once it is identified, it can be de-activated (by taking it out of the "Plug-ins" folder in X-Plane's "Resources" directory.)

Sometimes, however, de-activating plug-ins while the sim is running (i.e. without a sim restart) will not be a sufficient measure to eliminating the possibility of plug-in conflict. If the problem persists, please go through the process of taking other plug-ins out of X-Plane's "Resources" directory, until only the SASL plugin is displayed in the "Enable/Disable" pop-up window. (It is recommended to keep a backup copy of these plug-ins in a separate folder.) If this doesn't solve the plug-in problems, please notify Carenado by using their bug report form:

<http://carenado.zendesk.com>

Filing a bug report with this information will help us narrow things down by a large margin as well, and help us assist other clients.

The rest of the features should be pretty familiar for anyone having used X-Plane.

Have fun!

Sincerely,

The Carenado team