

## AVSIM Commercial Aircraft Review

# *Piper PA-34-200T*

## *Seneca II*



### Product Information

**Publishers:** [Carenado](#)

**Description:** General aviation add-on aircraft.

**Download Size:**  
47 MB

**Format:**  
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**Simulation Type:**  
FSX

**Reviewed by:** [Bert Pieke](#) AVSIM Senior Staff Reviewer - September 19, 2009

### Introduction

The Seneca was developed as a twin-engine version of the Piper Cherokee Six. The prototype was a Cherokee Six that had wing-mounted engines installed, retaining its nose engine. The prototype was flown as a tri-motor aircraft in the initial stages of the test-flying program.

Certified on 7 May 1971 and introduced in late 1971 as a 1972 model, the PA-34-200 Seneca I, is powered by pair of Lycoming IO-360-C1E6 engines. The right-hand engine is a Lycoming LIO-360-C1E6 engine variant, the "L" in its designation indicating that the crankshaft turns in the opposite direction, giving the Seneca I counter-rotating engines. The counter-rotating engines eliminate the critical engine limitations of other light twins and make the aircraft more controllable in the event of a shut down or failure of either engine.

Responding to complaints about the aircraft's handling qualities, Piper introduced the PA-34-200T Seneca II. The aircraft was certified on July 18, 1974 and introduced as a 1975 model. The new model incorporates changes to the aircraft's control surfaces, including enlarged and balanced ailerons, the addition of a rudder anti-servo tab, and a stabilator bob weight.

The "T" in the new model designation reflects a change to turbocharged, six cylinder Continental TSIO-360E or EB engines for improved performance, particularly at higher altitudes. The Seneca II retained the counter-rotating engine arrangement of the earlier Seneca I.

The Seneca II also introduced "club seating" whereby the two center-row seats face rearwards and the two back seats face forward allowing more legroom in the passenger cabin. Gross weights are 4570 lbs (2073 kg) for takeoff and 4342 lbs (1969 kg) for landing, with all weight in excess of 4000 lbs required to be fuel.

This is the first twin to be released by Carenado, who have a reputation for releasing well built GA single engine add-on aircraft, so I was keen to see how they had done with this one!

### Installation & Documentation:

Installation is straightforward, you download the installer from the [Carenado](#) site, run the program and you are ready to fly.

You end up with four different paint jobs, all quite attractive, and with an inviting exterior as well as a great looking virtual cockpit. Following in the tradition of other recent releases, no 2D cockpit is offered.

The documentation consists of three documents: a pilot's checklist, emergency procedures, and a user's guide for the virtual cockpit.

### Flying the PA-34 Seneca:

First thing I do after moving the seat to make myself comfortable in the cockpit, is to check the takeoff trim setting. Based on past experience, some aircraft can be hard to get off the ground without a generous helping of "up" elevator trim. In this aircraft, the trim indicator is on the floor between the seats, and not only do you need to move your eye point to see down, you also need to turn on the dome light to see the indicator arrow clearly.

With that accomplished, I pushed the throttles forward and easily pulled off the runway at 90 knots. First impression is that the aircraft is very maneuverable. Only small control inputs are required to control the airplane. Some early users complained about the handling feeling twitchy, and in response, Carenado released a patch with more subdued control responses. These changes were made in the aircraft.cfg file and can be adjusted back if you like the livelier feel.

Every aircraft handles differently, and I am of the school that you fly the airplane "as is" and adjust your flying style as required, rather than changing the airplane to suit your flying preferences. Having said that, I was surprised at the violent pitch rocking motion of the airplane in reaction to changes in the prop control, and I did reduce this response a bit to avoid having to reach for the barf bag whenever I adjusted the RPM setting.

Other than that, I really enjoyed flying the Seneca. The cockpit is in the "well worn" style with none of the "straight from the factory" looks, and this immediately caused me to look in my avionics grab bag for some upgrades from the 70s instruments that are part of the package.

The autopilot is a Piper version of a Century 31 or 41 design. It engages an attitude hold when first switched on, and allows for pitch adjustments with an up/down rocker switch. The early shipping version I got from Carenado had some problems with this control which seems to be close to real aircraft behavior, as I found when searching for guidance on Google.

Several real world owners of the airplane offered advice about replacing the wiring on this autopilot and one owner was of the opinion that exchanging the whole thing with an STEC unit might be the better course. I tried installing a

Test System
Q6600 @ 3.2 GHz 2 GB DDR 800 Ram Nvidia 9600GT 512MB Video Card 22" LCD monitor 1680x1050 resolution CH Products USB Yoke WindowsXP Professional FSX run with "fps limiter" application set at 24 fps and freeway traffic set at zero
<b>Flying Time:</b> 15 hours

Bendix-King autopilot which worked fine, but with some input from yours truly, Carenado released a reworked Century unit which proved more reliable and is now my favorite for this airplane.

A small bug remains to this day, in that the AP annunciator cannot display ALT and NAV concurrently, and although this seems like an easy thing to fix, I have been advised that it is on a "long list" of requests, so this could take a while..

Here are pictures of the original avionics as shipped, my Bendix King adaptation, and then my final avionics suite, going back to the original (but upgraded) autopilot and installing a Bendix King KI-526 attitude indicator and a Century HSI which I found in my collection. (The KI-256 is made by Reality-XP and the Century HSI by Flight1).



It seems unavoidable to compare the Seneca to the Beech Duke which was released by RealAir at around the same time. After having little to choose from in terms of twin engine GA aircraft, other than the FSX Baron and the Eaglesoft Twin Comanche, here we have two new, beautifully built six passenger twin aircraft!

After flying both for quite a while now, I must say that I do not have a clear favorite. The Duke is gorgeous and the integration of the RXP Garmin GPS sets a new standard for avionics in an FSX aircraft. However, the Seneca with all it's 70s retro look grows on you and gets really comfortable after a while. I would happily take either aircraft on an extended journey.

If you have a less powerful system, the Carenado Seneca may be worth a try, since it requires less horsepower to run. If you are picky about flying characteristics, on the other hand, the Duke has a refined flight model and is a treat to fly.

### **Animations and special effects:**

If you own any of the Carenado Piper singles, like the Arrow or Archer, you'll be familiar with the Carenado style of aircraft design and build. The Seneca follows in this same path, a very well done exterior with all the bits and pieces you might want. The control surfaces move, the pilot is nicely animated, and the little antenna vibrates and moves in the wind.

The cockpit is nicely done, with rounded corners and nice textures wherever you look. A click removes the yoke which I appreciate. The night lighting is quite pleasing. With both the dome light and the instrument lighting on, it creates a nice subdued lighting effect which does not take away from the ambient lighting in the scenery. After complaining about the HSI in the Archer, I was pleased to see that the knobs in the Seneca are easily adjustable by using the mouse wheel, without having to search for a finicky click-spot. Thank you Carenado!



Ready for take-off



Exterior detail 1



Exterior detail 2



Exterior detail 3



Cockpit by night 1



Cockpit by night 2

As you can tell from the screen shots: A nice, well rounded design that grows on you, as you fly it more and more.

### Summary:

The Carenado Seneca is a really well built FSX add-on. It looks like a real life 1970s Seneca, scratches, dents and all.

I like the Carenado style of cockpit design. The instruments are the original units, but can be replaced if the owner wants to do an avionics upgrade. This is very much like buying a real world, 30 year old airplane - you have to be prepared to invest some money to get it into top IFR flying condition.

This is an airplane I fly often, and once Carenado ships an updated AP annunciator, or I find a replacement unit that fits in the panel, I'll have no complaints.

### What I Like About The Piper Seneca II

- Carenado produces another product in the Piper family
- It is a twin!
- Pleasant environment in the cockpit for both day and night flying
- Reasonable pricing

### What I Don't Like About The Piper Seneca II

- Avionics take a bit of work to get into my favorite configuration; for some, though, this could be a plus!
- Violent pitch responses to changes in the Prop control

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[\(adobe acrobat required\)](#)

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