AVSIM Commercial Aircraft Review

Lionheart Bellanca Super Viking

Product Information		
Publisher: Lionheart Creations, Ltd		
Description: GA Aircraft Add-on for FS2004.		
Download Size: 52.7 MB	**Format:** Executable auto install file	**Simulation Type:** FS 2004 only
Reviewed by: Zane Gard AVSIM Staff Reviewer - August 3, 2006		

Introduction

I feel like I am back with an old friend. After reviewing the Bellanca Collection just a couple months ago, I find myself in very familiar territory but this time in a much newer looking aircraft. William Ortis' latest creation is the culmination of his work recreating the line up of Guissepe Bellanca's aircraft design and production from the 1930's up to what the Downer factory designed and released in the 1960's. When Jay Downer took over the remnants of Bellanca's old factory, which was called

Northern Aircraft Corporation at the time, he put considerable finances and energy into updating the 230 Cruisair

Test System

Athlon 64 4000
Asus A8N SLI Premium
2GB DDR3200
Windows XP Pro
ATI Radeon x800 256MB
21" Sony Trinitron
1600x1200x32
14" Compaq V410
1028x768x32
CH Products Yoke
CH Products Pro Pedals
CH Throttle Quadrant
Aerosoft ACP Compact

Laptop

Compaq R4000
Athlon 64 3200
1GB DDR2700
Windows XP Home Ed
ATI Radeon Xpress 200M 128MB
15.4" widescreen
1280x800x32
Saitek ST90 Portable Joystick

Flying Time:
30 hours

into the tricycle gear model 260. He also wanted to get rid of that triple tail and create a more modern looking airframe with a single tail. He hired an engineering firm in Minneapolis that didn't really know a lot about aircraft tail volume coefficients so they just added up the areas of the three tails used on the 260 and came up with the giant swept tail that became the signature of the Viking series of aircraft.

The Viking did pull Bellanca/Downer out of financial trouble and it was an instant success. Priced lower than its competition, the Beechcraft Bonanza, the aviation press soon picked the Viking as one of its darlings and wrote very favorable reviews commenting on its high performance, impressive climb rate, efficiency and speed. Up until the mid 1970's, Bellanca liked to brag about how their wooden winged beauty had never had an airworthiness directive (AD) and had never had a wing failure compared to its metal winged competition. That unfortunately did change and with the failure of a couple of wings in flight brought the reality of wood wings, damp climates and dry rot out to be a major concern for owners, potential buyers and the FAA. Mandatory inspections became the norm and while Bellanca's wooden wings are very strong they are also not well suited to sitting outside in the weather and being neglected.

This latest Lionheart release is a single aircraft, the Super Viking in its mid 1970's glory. Bill could concentrate his attention on just one model this time and the added attention to detail is apparent. He also enlisted the help of flight dynamics guru Jerry Beckwith to work his magic. Jerry also updated the flight dynamics for the Bellanca Collection making them a real joy to fly as well.

Installation and Documentation

As with Lionheart's Bellanca Collection, you once again have the choice of purchasing directly using PayPal, after which, you will be emailed a code for installation or you can purchase via Flight1's wrapper. If you already own the Bellanca Collection from Lionheart you can get a 25% discount on the Super Viking, which is a nice way of saying thanks.

The current download is version 2 and is 52.7 MB in size. I once again had a direct purchase version which required unzipping the original download, this requires entering a separate code which is emailed to your purchase email address. In that new folder you will find the executable installation file and Read First html document which is really the manual, so don't throw it in the trash can after installation.

In that document there are installation instructions, screenshots explaining the instrument panel layout and checklists with walk-throughs for each stage of flight. There is even instructions for those using a slower computer on how to install the included DXT3 textures to help with frame rates.

There are two model options, one for Active Camera users which includes a full VC model for viewing around outside the aircraft, the other with a partial VC so your computer doesn't have to process all that information if you don't plan on looking at it from the outside.

Exterior Model

I commented in the Bellanca Collection review how you could look over William Ortis' earlier freeware aircraft and his later payware work and see the progression of his modeling skills. His latest work shows even better model smoothing and I have looked all over the VC, cabin and exterior and just can't find anything that looks out of place.



Looks classy and fast from any angle

This is top rate modeling and animating, so if you're into spot view and like to post incredible screenshots or investigating all over the virtual cabin, you're going to have a field day. I especially liked the way the model has just the right amount of dynamic shine for impressive sunrise/sunset shots showing the light reflections across the exterior surfaces without any funny breaks or out of place shadows.



It's all in the details | Distinctive profile | Nice lighting effects

The interior dome light even casts just the right amount of light out onto the wing surface. The exterior lighting is correctly placed without any mystery lights hanging out in space.

Panel

Bill's earlier work has utilized a mixture of stock MSFS gauges and some custom gauge programming. This time Scott Thomas did a full set of gauges, including radios, to give the cockpit a correct mid-1970's look. You can choose between a black, grey or chromate panels depending on which paint job you choose.

There are pop up panels for switches, radios, engine gauges, ADF and autopilot as well as a zoom for the six main flight gauges. They are all easy to read and nicely lit at night. You will notice that the pop up radio panel uses the default MSFS radio stack and the in-panel radios are different. I personally prefer the in-panel radios as they are more in keeping with what you would find in one of these aircraft.

One thing you will notice missing in the panel is a way to set power at altitude, you just have to lean until you hear the motor start to sputter and then richen back up a bit. The addition of an EGT or Fuel Flow or both would be a nice touch. Anyone with some experience editing panel.cfg files could place one of the default EGT's into the panel. If you have FS Panel Studio it would be even easier.

Clean, easy to read 2d panel

Popups for switches, engine and autopilot

Zooms for primary flight and radios

The VC is also nicely laid out and easy to read, not giving the fuzzy appearance or horrible grainy photoreal look of some panels I have seen. I found the VC gauge movement to be quite smooth and usable for flying solely from the VC, if that is your preference. There are several neat animations, including the crank for elevator trim overhead and the push/pull knobs for the heater over on the right side panel.

There is a really nice idea that is still hopefully on its way to completion. Click on the glove/map box and the door will open and out will swing a stalk with a PDA mounted to it. At present, this just displays a bitmap of a PDA screen and it does light up at night. If Bill can get the model right, this may eventually display a PDA type GPS display which I find a great idea and hope he gets it to work.

Notice the shipwreck as we pan through the VC

Credit: "shipwreck courtesy of Keith Giveans' Adventure Pack Vol. 1"

This is one of the first aircraft I can think of to have animations for the oxygen mask on the pilot. Turn on the oxygen system in the VC and an oxygen mask will appear on the pilot from the exterior view. The normally aspirated Viking has a service ceiling of 20,000 feet, so although this model isn't turbocharged, it certainly is capable of taking little jaunts up to 14,000 or 15,000 feet to clear some mountain passes.

The pilot will don an oxygen mask when you turn on the oxygen switch in the VC

What I am critical about is the disparity between the 2D switch panel and the switches modeled in the VC. These, in my opinion, should match because sometimes you have to go to the 2D panel to find the switch you are looking for and their order is even different. Lionheart has also followed suit with other developers tying the panel lighting to exterior light switches. The Nav light switch will also turn on the panel lighting in the 2D panel. The Strobes switch will turn on the panel dome light in the VC.

I know if a developer doesn't include an option for lighting up the VC, people complain because it looks too dark in some daytime lighting situations. I found the VC dome lighting to be too bright for my tastes and personally didn't like it being tied to the strobes. This can be altered in the aircraft.cfg file, if you know how.

Strobes/dome on and off in two different lighting situations, I found it a little too bright for my tastes

The night lighting in the VC does look nice if you leave the Strobe switch in the "off" position. Where the panel lighting problem exists in this aircraft is like many other MSFS models and that is the dusk/dawn lighting. This is not necessarily the fault of the designer and is more in the way MSFS will enable/disable lighting effects at this transition period. Some developers have even made the night lighting effects so you can turn them on in daytime which really looks funny and out of place. There will be a period at dusk or dawn where the panel will either be too dark or too bright, if you have the dome/strobe switch on and the night lighting effects for the gauges just won't be active yet.

		
Nice backlit gauges at night	The PDA is neat idea, now let's put a GPS in it	Night landing at Stark's Twin Oaks

Sounds

We once again get a unique sound set for the Viking. This has a little deeper sound than the Bellanca 260, although I also noticed it doesn't have as much of a "bite" to the prop sound at high rpm. I kind of miss that "bite", as it is one of the things I remember about how the Viking would sound on takeoff when heard from the ground.

Airfile

Jerry Beckwith is a name synonymous with good airfiles and he has captured the fun feel of flying the Bellanca very well. Advertisements for the Viking always talked about it being as easy to fly as your trainer. Real life reviews of the aircraft did find it a delight to fly but not quite that easy to control in the pattern as your average trainer. One area that Jerry was able to design into the Viking airfile is the aircraft's tendency to pitch down on power application, which also means the reverse happens when you pull the power off.

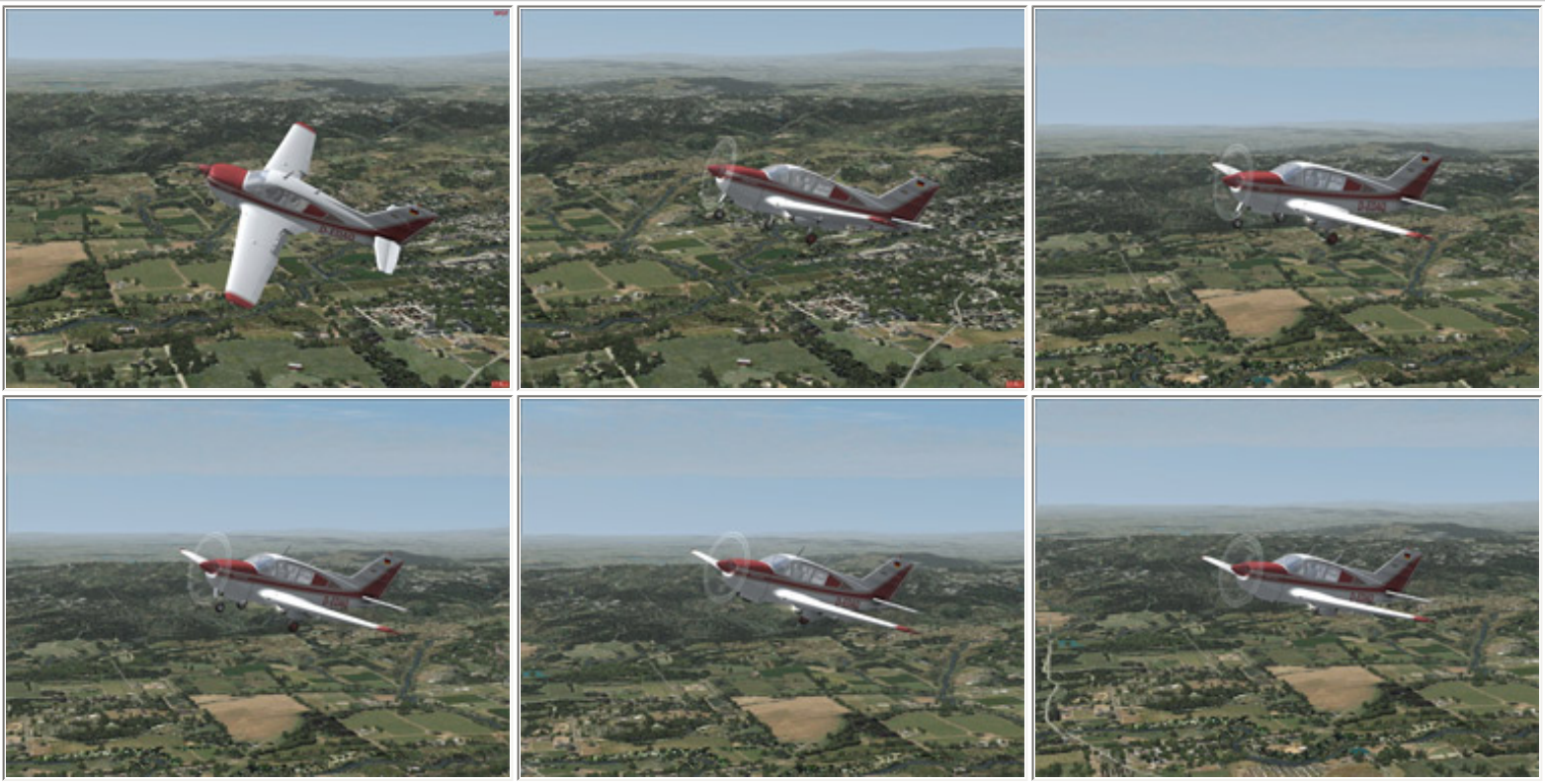
This is nice for chopping power right before you flair to bring the nose up but you do have to watch it when on short final in gusty winds because each time you change the power setting, you will have to retrim or hold pressure on the yolk. You will really notice it if practicing a go-around or missed approach. That nose will come down as you ease the power on and you have to be ready to bring it back up to climb.


Doing a wing over… oh what fun this thing is

Slow speed handling is good and starts to mush as you approach stall speed. I found that the airfile handled accelerated stalls, clean and dirty stalls all very realistically. I especially liked the little wing drop you would get in a dirty stall if you really let the speed bleed off. I also found that like the real Viking, this thing will really climb and it is not uncommon to see 1,600 fpm or better at lower altitudes.

The Viking was not approved for aerobatics but it did have a wing that could handle it. I recall an old ad that showed a Viking climbing vertically. If you read some of the historical accounts of the Vikings development, you know that the test pilots were regularly performing Chandels, Immelmans and Lazy-8's during the certification process. I found it to handle wing-overs with ease as evidenced in my screenshots… don't let your friendly FAA authorities catch you doing this!

Accelerated stall clean	Stall clean	Stall dirty, note wing drop



Progression of last stall viewed from spot plane, left wing drops, nose down, power on, flaps to 25° and gear up then fully retract flaps

Let's Take A Short Flight

We are going to take a short hop today in Northwest Oregon, from Valley View airport just 20 nm southeast of Portland over to McMinnville where the Hughes H1 Hercules is proudly displayed in the Evergreen Museum. Mark Smith has uploaded a nice scenery enhancement of the Valley View airport and if you like to fly around the Williamette Valley area of Oregon, I recommend it.

Tied down and covered

OK, let's get in now and fly


Taxiing out on a gloomy day

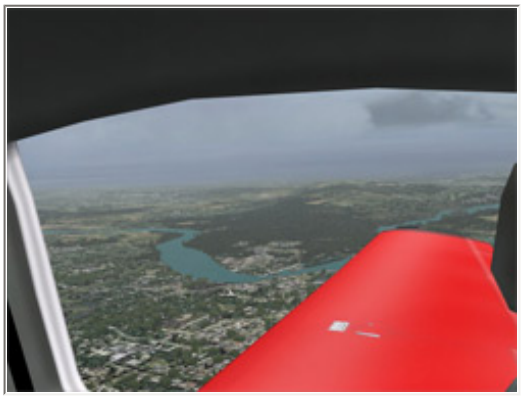
It is a typical morning in the Pacific Northwest, which means there are low ceilings, a light misting rain and light winds. ASv6 reproduces the weather and cloud textures nicely for this and BEV handles ground textures for flying in this part of the country better than any other texture enhancement I have found… remember I do fly up here in real life.


That's a narrow runway alright


Boy, this thing can climb


Turn towards McMinnville

We find 9732E parked where I last left her, tied down with the canopy cover on. Cover off and a quick preflight and we are ready to leave. This is a non-tower airport and so is our destination, so we'll just be monitoring Unicom frequencies and giving position and announcing our intentions. We're going to stay under this cloud deck too, so we'll just be in scud running along at 2,000 feet.


Scooting along under the cloud deck, that's Oregon flying for ya

Valley View is a pretty narrow strip but we're soon zooming down the runway and climbing like that little Viking does so well. In a little over a minute, we're at cruising altitude and adjusting the engine settings so we keep our cruise right at the yellow line, 23 inches and 2,300 rpm ought to do it.

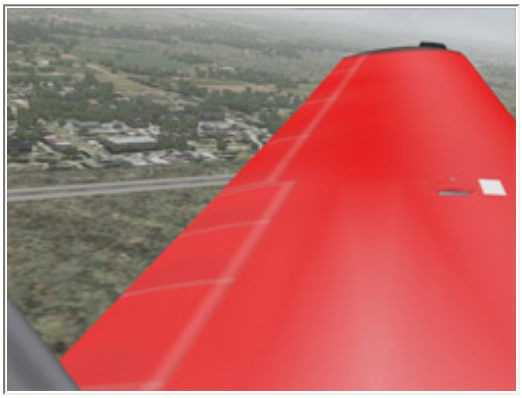
23 squared and we're into the yellow

Crossing Aurora midfield

Turning to intercept ILS for 22 KMMV


Decided to go around at the missed approach point, there's that climb rate again

We're going to zip directly over Aurora so I announce our transition on their unicom, then set up to practice an instrument approach into McMinnville. Following the published routine, we briefly climb to 2,100 feet and intercept the ILS for runway 22. This little plane is so much fun to hand fly, I decide to do a missed approach. At 400 feet (the MA point) I announce a go-around, gear up, flaps to 25° and power to full. Instead of doing the full missed approach, I climb to 1,200 feet pattern altitude and announce turning crosswind and continue now flying a regular visual pattern, this time to a full stop landing.



See the gliders lined up on runway 17/35

Flew a tight pattern for runway 22

Turn to final

Rolling out, hope fuel's cheap today

Conclusion

If you are after a nice, fast, four seater with good economy that hasn't really been well modeled for FS yet, this is a good choice. You will enjoy the nicely detailed exterior model and full VC interior, you even have a choice between male or female pilot. The flight characteristics are just pure fun and it will handle operating out of some pretty small fields.

Lionheart has created another winner and this unfortunately caps the Bellanca lineup. Yes, there were developmental drawings for a 500shp turboprop Viking that was pressurized and there was even a plan for a single seat military trainer based on the Viking airframe, but both of these never made it past the drawing board.

Now if Bill got it in his head to do a Bellanca prototype series of both of these I wouldn't complain but he is currently hard at work on other new and exciting projects.

What I Like About FSC

- Nicely finished 3d model with full animations and night lighting
- Clear panels with pop-ups to zoom some gauges
- Nicely modeled VC with easy to read panel and smooth gauge movement
- Good authentic sound set
- Flight dynamics that are realistic and capture the Viking's fun feel

What I Don't Like About FSC

- Strobe switch tied to VC dome light which is also too bright
- Neat little animated PDA is not functional for GPS display
- No EGT or Fuel Flow gauge for setting power

Printing

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Viking

(adobe acrobat required)

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