



Texada Island's AirBuzz Project





Attention Getter

Thirteen ft. high and twice that long, its exterior has recognizably something to do with aviation. It sports what appears to be an antique airliner nose and an upturned rear fuselage section like the venerable Hercules C-130. Without wings, but with a vertical stabilizer with a rudder and horizontal stabilator it looks like a stocky guppy. A bold, red thunderflash underscores a name on the top of the fuselage above the row of airliner type windows... "TEXADA AEROSPACE CAMP". On its trailer, the assembly of aluminum, strobe lights, a solar panel and tail section easily draws gawkers. Understandably, comments and questions follow. The most common one is, "What the heck is that?"

The AirBuzz Mk II flight simulator has recently become a common sight at regional airshows and public events on the West Coast of B.C. In its second year of existence it appeared at 15 public events. Over 20,000 people have seen it and over 350 people have experienced flying it. 56 youth learned to take off, fly and land the flight simulator. Many adults have "flown the AirBuzz Mk II. Many have expressed an interest in attending an adult version of the AeroSpace Camp.

One thing is sure, whether it's on the road, in the social or news media, or at an event... the unique, AirBuzz Mk II is a most visible signpost to draw attention. It is the simulator that stimulates interest about itself and Texada Island.

History of AirBuzz Mk II

The concept was hatched by an evolution of ideas during late summer of 2013. Bari Lewis, Pilot member of the Westview Flying Club saw it at the airport at Powell River. The owner had done some modifications to the hulk. A recycled part of the fuselage of an Embraer regional airliner, it was first fitted with a set of lightweight aluminum skids. It was to be a helicoptered portable shelter for search and rescue crews. The idea was abandoned so it sat, a deteriorating bin for housing a bunch of aviation junk.

Bari thought it could be used in some way by the Texada AeroSpace Camp. He contacted me about it. We flew to Powell River in his Cessna 150 to see what potential it had within the Camp's program.

After we looked at it, I was quite excited about it, but before anything it would have to be approved by the board of the Texada Arts, Culture and Tourism Society. It was quite daunting when we first looked at it, but we agreed something could be done. At first we imagined the fuselage section could be cleaned up and set up as a portable classroom, using the existing airline seats for the students. With a chalkboard or monitor screen, it would provide a good measure of realistic aviation ambiance for the students.



I brought the idea to the Board of Directors at TACT. With a bit of convincing, full support to go ahead was given. Bari and I enlisted Maurice Brunelle to help haul a trailer and together, we transported it to Texada Island. We noted that people expressed interest about the hulk on the ferry. Just as a cylindrical hulk on a trailer it attracted attention. Lots of it. The questions flooded in.

Embraer fuselage section being loaded For trip to Texada Island



“What is it? What will you do with it?”

The last question kept haunting me. What exactly would we do with it? The classroom concept would be a good idea, but there surely must be more that could be done.

I talked to Bari, and we discussed it over and again. We even made fun of it, calling it the “hulk” and the “cow”, really not quite knowing what and how to do it. Tons of work would be needed just to remove the thousand pounds of old seats and the mess of undetermined parts from the airplane it once was. Suddenly the lights went on!

The idea of putting in a flight simulator at one end was a most daunting one, but it was the one that really fired up our collective imagination. And that settled the “Hulk’s” fate...

The planning began to evolve, but the project needed some real creative horsepower. By chance, I met up with Richard Fahlman, an ex-movie set decorator. There was the horsepower.

I told him of the plan and he lit up like a rocket! Ideas for how to commence were quickly developed and he made two models, one in 1/8th scale out of Styrofoam and another in ¼ scale out of wood ribs and stringers. These looked very much like the nose section of a Douglas DC 3. He then began constructing the ribs of the real thing out of ¾ inch plywood in full scale. It was an enormous amount of work because it was all curved lines that had to be cut accurately.

Many hours of Richard’s work later, the project finally had a solid beginning. The next stage consisted of assembling the ribs on a frame so aluminum sheets could be cut, stretched and riveted to create a metal skin for the nose section. We needed someone to assemble and store the frame and a place where the skin could be attached. Richard had another project that had come on his plate, so the project had to find a new home and someone to assemble the frame. Our next stroke of fortune was not far away!



AirBuzz Mk II nose frame construction
Designed by Richard Fahlman,
Carpentry by Gerry Johnson.



The stroke was in the form of Gerry Johnson, who turned up to be the carpenter to assemble, and fit the frame. The plywood ribs were moved to his workshop. It was the New Year, and we decided that AirBuzz had to be assembled and ready well before June of 2014. That barely gave us 6 months. Over the winter, Bari Lewis, Gerry, Peter Teuner and I worked on the nose, interior, the electrical system and then the tail section. Bari designed and built the winch operated system to open and close the ramp for the rear door.

Sandra Sims created the electronics and connected the computer to its subsystems and controls. She not only made a lot of the black boxes for tying the system together electronically, she produced a video on how she did it!

Half a dozen other volunteers provided specialty assistance in fabricating the throttle quadrant and levers (Jack Oosterbrink), Vinyl lettering (Steve Croasdale), Harvey Johnson (aluminum welding on the skids) and others Pete Stiles, Doug Patton, occasionally provided help in schlepping, riveting, cleaning and more riveting.

Its flight deck, like the exterior resembling a Douglas DC 3 Dakota was designed in the old airliner's image and likeness. The instrument panel uses real (and some serviceable) a/c instruments and radios. The controls are all custom made, including rudder pedals with toe brakes, control yoke, pitch trim wheel and throttles, prop pitch controls and mixture levers. The interface uses a digital LED light system connected to the controls to provide inputs to the computer. The computer drives the virtual reality images that correspond to show the motion of the simulated movement of the airplane. At present, two monitors for the environment display are used. The flight deck seats, like the main part of the passenger cabin are from a retired Embraer 120 airliner.

AirBuzz Mk II flight deck



The addition of a third monitor and a more powerful computer is next on the agenda. The rear cargo door ramp is electrically winched open /closed and lots of goodies including real O₂ masks and other aviation related gear is installed in the fuselage. The assembly is 28 ft. long, with a 7.5 ft. diameter.

AirBuzz Mk II at Texada's Sandcastle Parade' 2015



So far, it has been built entirely and maintained by volunteers. Nearly all funding and equipment was donated by regular folks, the EAA chapter out of Chilliwack and local businesses. Additional grant-in aid funding was received from Powell River Regional district. The umbrella organization, Texada Arts, Culture and Tourism Society is the project's major sponsor and administers all the financial details.

Volunteers are presently building a hangar at CYGB to store the AirBuzz Mk II and its support equipment---Additionally, it will include a small machine shop/metal work station, an aviation library, model rocket assembly lab, the wind tunnel, and of course a small astronomy lab as well... telescopes, models of the solar system and a physics experiment lab. Plans are being made to mount an aviation/aerospace art display featuring Canadian AeroSpace Artists Association artists during the tourist season. Interactive and static aerospace related displays will top off the list of attractions at the new hangar.

Recently, a program to recruit people to help with instruction has been initiated, especially to help run the simulator and teach youth and interested adults about basic theory of flight, aviation sciences and metal work for this summer.

There is a strong possibility that in the near future the AirBuzz and Texada AeroSpace Camp projects will be run through the entire summer, for both...youth and adults too.

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TEXADA AEROSPACE CAMP

www.texada.org



Part Embraer airliner fuselage with a custom built DC 3 looking nose and Hercules tail sections, the AirBuzz Mk II provides a great platform for a realistic flight simulator. The "X-Plane" FS program is both challenging and realistic. Students can make simulated flights to anywhere on the planet.



The wind tunnel is computer controlled. It measures drag, speed, vibration and lift of airfoils. A specially mounted model airplane can be flown remotely in the tunnel



AirBuzz Mk I is a realistic flight simulator platform for younger children.