

My Waix Equipment List

Throughout the build of my Waix, I spent many hours performing research on the different equipment and avionics options that I would eventually install on my airplane. As any homebuilder knows, there is an almost endless array of options available in today's marketplace, so choosing specific parts proved to be no easy task. Given the VFR only nature of my airplane, I knew I wasn't going to add in a lot of redundancy, so I wanted to make sure the different components I would install in my airplane were safe, reliable, light in weight, and as a final goal, inexpensive to purchase.

In the end, I settled on the following avionics and options for my airplane:

MGL Stratomaster Ultra XL

Purchased From: Sonex online web store

Current Cost: N/A. (No longer an available option)

Pros/Cons: I have been very satisfied with this all-inclusive model. It has a monochrome only display (black and white), but the screen is very easy to read, even in direct sunlight. For those who have not seen this model, it includes all necessary flight instruments needed for VFR flight as well as all engine gauges, all in one display. I have enjoyed the built in screen adjustment/modification ability to move dials and gauges around the display to fit my personnel preferences. The system is light weight, easy to install, and I have had no issues to date. I also purchased the fuel flow sender unit and fuel quantity probe from the Sonex web store, as well as the now discontinued MGL SP4 AHRS unit from the MGL company which provides

me a digital artificial horizon. Even though I have no intention of flying my Waix in IFR conditions, I appreciate the added safety benefits of having an artificial horizon. I do not believe this model is being manufactured anymore, so there is no availability to purchase this model new, but after my experience with MGL and my Stratomaster Ultra XL I certainly encourage builders to consider the MGL systems.

Flightline FL-760 Transceiver

Purchased From: Aircraft Spruce

Current Cost: \$699.00

Pros/Cons: Despite being one of the lowest cost options available for a panel mounted transceiver, I have nothing but good things to report on the FL-760 radio. The unit is small and light enough that it does not require a radio tray; rather, you simply screw this radio into the face of the instrument panel itself using the four supplied screws. Wiring the radio itself was easy following the included directions, and the radio has worked perfectly since day one. This radio uses the industry standard primary/standby flip-flop radio tuning abilities, and has an easy to read display. One option this radio (among a lot of other radios) contains that I truly appreciate is a small light on the face of the radio that turns red when you are receiving a transmission, and turns green when you actually transmit. In my opinion, this minimizes the chance of locking up a frequency with a stuck microphone button. One note of caution: when I first installed the radio antenna, I placed it per the Sonex plans and ran the antenna along the front windshield bow inside the cockpit. This provided acceptable reception, but after relocating the antenna to the top of the fuselage turtledeck, my reception was drastically enhanced. I

can easily hear and talk to aircraft over 100 miles away with excellent clarity. This radio does include a built in intercom but I do not use this feature, and so cannot make a comment on its quality. Overall, I love this radio and am very glad I purchased it.

FlightCom 403LSA Intercom

Purchased From: Aircraft Spruce

Current Cost: \$189.00

Pros/Cons: After a lot of consideration, I finally decided to purchase this intercom system for two basic reasons. First, I wanted to make sure I had a good intercom built into the panel for ease of communication when two people are in the airplane. On more than one occasion, I've dealt with poor intercoms while providing flight instruction in other airplanes, and I did not want to run into that situation in my own airplane. Since the Sonex series are all two seat airplanes, the 403LSA model with its two seat intercom ability fits into the panel perfectly. The second reason for the purchase of this model was the ability to add in a music input into the intercom. The 403LSA has a music input with automatic interrupt, so anytime a transmission is made or received, it automatically mutes the music until the transmission ends. Overall the 403LSA has been an excellent addition to the panel and works very well with my FL-760 radio. For the price, I highly recommend it.

Aveo Powerburst LED Nav/Strobe Light

Purchased From: Aircraft Spruce

Current Cost: \$384.00

Pros/Cons: With the advent of modern, LED based lighting systems, I wanted to make sure to add a set of position/strobe lights to the wingtips of my WaieX.

While I don't have plans to fly my airplane in the middle of the night, I've always enjoyed evening flights around dusk when the winds are calm, and wanted to add a basic lighting system for the safety considerations of these evening flights. The Aveo Powerburst lights fit my requirements perfectly as they contain both a strobe light, as well as either green or red and white position light setup, all in a very small, lightweight package. Wiring these lights is incredibly easy as there is no additional outside strobe power pack requirements that can be found in the older designs. Simply run one wire to power the position lights, a second wire for the strobe lights, and ground the lights as needed and you're done! Power draw is minimal which works very well in the Sonex with its built in 20 amp alternator. I have received many positive remarks from other pilots about the brightness of these tiny lights, even from long distances away. To mount these lights on the fiberglass wingtips of my Waix, I bought the \$19.99 set of wingtip lighting pods from www.gaugepods.com which work perfectly. I highly recommend the Aveo Powerburst lighting system, especially if you will be flying in any congested airspace.

Vans RV Fresh Air Vents

Purchased From: Vans Aircraft

Current Cost: \$76.00

Pros/Cons: Given the bubble canopy of the Sonex aircraft and the greenhouse effects inside the cockpit during the summer, I wanted to include a fresh air vent system that provides a lot of air to myself and my passengers. The fresh air vents from Vans aircraft have been used by Sonex builders for a while and provide excellent air circulation for occupants inside

the airplane. I purchased the complete fresh air vent kit which includes the NACA ducts, air vents themselves, and SCAT-style tubing to connect the ducts to the vents. These vents have been wonderful and do provide a lot of cooling air in the summertime, yet still seal well enough you don't get cold air in the winter time. I have been very impressed and highly recommend this system, but I do recommend being careful with the NACA vent placement when installing them on the side of the fuselage. Remember to position them far enough forward on the fuselage so they do not cause any interference with the flap and/or brake handles on the pilot's side of the fuselage.

Ameri-King AK-450 ELT

Purchased From: Aircraft Spruce

Current Cost: \$189.00

Pros/Cons: I can't tell you much about this unit as I hope I never have to test it out! In order to be legal in a two seat airplane, I chose the cheapest ELT available and mounted it in the aft fuselage behind the cockpit. I did run the remote ELT activation head to the instrument panel itself, and can say that the AK-450 is easy to mount in almost any location. Small in size and as an added benefit it comes with its own mounting bracket.

RitchieSport Compass

Purchased From: local boating store

Current Cost: Around \$40.00

Pros/Cons: Following the advice of Sonex legend Tony Spicer, I went to my local boating store and purchased the X-10-M bracket mounted RitchieSport marine compass. This was installed with the double sided tape to the top of my glareshield and has been an

excellent addition to my panel. Easy to read and very accurate, I have had no issues with this compass. It has an internal backlight for night time use, but I did not wire that option up. This compass has been an excellent addition to my panel!

And there you have it! Overall, I've been very satisfied with my instrument panel and avionics options and couldn't really think of anything I'd like to change. All of my avionics have functioned perfectly since I built my panel, and I believe I accomplished my goal of keeping things inexpensive, light in weight, yet fully functional.

If anyone has any questions or comments, please email me at any time!

Thank you,

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