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**EXPERIMENTAL EXHIBITION vs. EAB CERTIFICATION SUMMARY:**

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**SubSonex Certification: Experimental Exhibition Kit vs.  
EAB Kit – Which One is Best for You?**

January 10, 2017 RevB (reviewed for FAA order 8130.2J)

The SubSonex kit can be purchased in one of two configurations. Customers may choose either a kit intended for certification as an experimental amateur-built aircraft or an experimental exhibition aircraft. There are pros and cons to each certification category. What follows is a comparison of the two options.

(NOTE: A customer may choose an amateur-built kit and later decide to switch to exhibition certification, but a kit intended for exhibition certification cannot be made eligible for amateur-built certification as it will be provided too complete for EAB.)

**First, there are some ways in which the two categories are identical:**

- Since the aircraft is originally issued an experimental airworthiness certificate there is no restriction on who performs maintenance, repair, or modification. Anyone, regardless of what (if any) FAA certificate is held, may perform these functions. Thus, there is no need to take the aircraft to an FAA certificated mechanic for general maintenance or repair.
- Since the aircraft holds an experimental airworthiness certificate it may not be operated outside US airspace without specific permission. (More details on this in the “differences” section below.)
- Aircraft may not carry persons or property for compensation or hire. (Since the SubSonex is a single seat aircraft with limited cargo capacity, this restriction should not be an issue.)
- Aircraft will be required to complete a “phase 1” flight test program in a restricted area of operation.
- Since the SubSonex is powered by a turbojet engine, the pilot will need a specific “Letter of Authorization” (LOA) in order to operate the aircraft. The FAA now places LOAs directly on a pilot’s certificate, in much the same way as a type rating for standard category aircraft. Issuance of LOAs are handled individually by FAA Flight Standards District Offices on a case-by-case basis.

## **Now let's look at the major differences between amateur-built and exhibition certification:**

### **Construction:**

For amateur-built certification, the major portion (i.e., greater than 50%) of the construction tasks must be completed by amateur builders. The builder may not hire a professional builder or shop to complete the aircraft. There is no such restriction for exhibition certification. A customer who chooses exhibition certification may hire a professional builder or shop to complete any portion up to and including the entire aircraft.

### **Inspection:**

The primary builder of an amateur-built aircraft is eligible for a repairman certificate authorizing the builder to perform the condition inspection on the aircraft each year. There are no repairman certificates for exhibition aircraft, so customers who choose exhibition certification will need to employ an A&P mechanic to perform the condition inspection each year. (The A&P mechanic need not hold an inspection authorization (IA). An A&P certificate is sufficient.)

### **Foreign Operation:**

Permission must be obtained in order to operate a US experimental aircraft outside US airspace. In the case of amateur-built aircraft, there are blanket authorizations in place for operating in Canadian or Bahamian airspace, so no individual authorization is needed for those airspaces. Operators of exhibition aircraft need to obtain specific, individual authorization to operate in foreign airspace, including that of Canada or the Bahamas.

### **Foreign Certification:**

Many countries outside the US have regulations allowing the certification of amateur-built aircraft. These regulations are typically very similar to US amateur-built certification requirements. Thus, certificating a US amateur-built kit in other countries is common. Exhibition certification has no international standardization, so certification of an exhibition kit in countries outside the US would be handled on a case-by-case basis, and may or may not be possible.

### **Program Letter:**

Amateur-built certification requires one program letter, included in the initial certification application package. Exhibition aircraft require a program letter to be submitted annually to the cognizant FAA Flight Standards District Office. This program letter contains information identifying the aircraft, its home base, events that the aircraft plans to attend, and the person responsible for maintenance and inspection of the aircraft (typically the owner).

### **Densely populated Areas:**

In general, experimental aircraft are prohibited from operating over densely populated areas and in congested airways except for takeoff and landing. This is especially true during "phase 1" flight testing. Once flight testing is completed, amateur-built aircraft are allowed to operate over densely populated areas so long as "sufficient altitude is maintained to affect a safe emergency landing in the event of a power unit failure, without hazard to persons or property on the ground." Exhibition aircraft are still required to avoid densely populated and congested areas, even after completing "phase 1" flight testing.

**Summary:**

The major difference between amateur-built and exhibition certification lies in who must construct the major portion of the aircraft. The choice of whether or not the customer wishes to hire a professional builder or shop to complete the aircraft will typically be the deciding factor. For customers outside the US, the certification requirements of amateur-built aircraft as opposed to other experimental aircraft may be a deciding factor. All other differences are relatively minor.

**Note that this documentation is only intended as summary guide to help customers understand the applicable rules, and does not represent a full copy or interpretation of the FAA order. The most up-to-date full guidance can be obtained from**

**<http://www.faa.gov>**