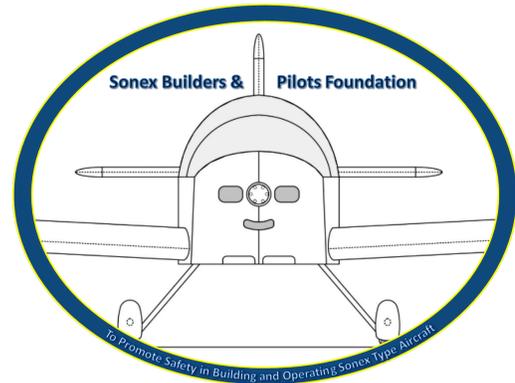




sonex
aircraft LLC

www.SonexAircraft.com

Published in
conjunction with:



www.SonexFoundation.org

Flight Training Syllabus

Introduction

This training syllabus is designed for pilots who desire to transition into the Sonex series of experimental aircraft. This includes the conventional tail Sonex, the Y-tail Waixex, the Xenos powered glider, and the single seat Onex. All airplanes except the Xenos can be assembled in either a conventional gear or a tricycle gear configuration.

EXPERIMENTAL:

Aircraft used for this course are certificated by the FAA in the EXPERIMENTAL category under 14 CFR 21.191. They do not comply with the safety requirements for standard aircraft.

Proper transition training is a vital element in the process, which helps to ensure the protection of individuals, families, friends, aircraft, and the ability to continue to enjoy our freedom to dream, design, build, and fly. Transition training is typically an expectation, and sometimes a requirement, in order to obtain insurability. Applicants having an insurance quote should reveal the terms to the instructor. Every effort will be made to train to the requirement of the insurance company.

Overview

This training Syllabus is designed to provide guidance for flight instructors to offer transition training in the Sonex line of experimental aircraft.

Federal aviation regulations section 91.319(a) prohibits the for-hire use of experimental aircraft unless a deviation is provided in the form of a Letter Of Deviation Authority (LODA) issued by the FAA. The LODA allows type-specific transition training to be offered for hire in the specific aircraft listed in the LODA. The instructor providing the training must also be listed in the LODA.

LODAs do not permit flight training leading to the issuance of a pilot certificate or endorsement (i.e., tailwheel). Training for aerobatic flight maneuvers is also prohibited. Flight training considered acceptable under a LODA consists of, but is not limited to:

- Initial or recurrent flight training for the operation of a specific make and model of experimental aircraft.
- Training for a flight review in a specific make and model of experimental aircraft.
- Instrument competency training for specific make and model experimental aircraft.
- Formation training for specific make and model experimental aircraft.

Prerequisites For Instructors

All Flight Instructors must meet the following minimum requirements:

1. Hold a current Certified Flight Instructor certificate or a current Sport Pilot Flight Instructor certificate.
2. Have a minimum of 5 hours flight time in the type of training aircraft being used.
3. Meet all currency requirements outlined in 14 CFR Part 61.
4. Meet medical certification requirements called out in 14 CFR Part 61 as they pertain to the training being given.
5. Possess a Letter Of Deviation Authority (LODA) from the cognizant FAA Flight Standards District Office (FSDO) listing the specific aircraft being used for the training and the instructor.

Prerequisites For Applicants

Transitioning pilots are required to hold at least a sport pilot certificate. If the pilot wishes to transition into a conventional gear (tailwheel) aircraft, the pilot must meet the requirements of 14 CFR 61.31(i).

Course Outline

Ground Lessons

1. Introduction to Training and Aircraft Preflight
2. Basic Flight Maneuvers
3. Takeoff and Landing
4. Flight review Discussion (Optional)

Flight Lessons

1. Basic Introduction and Flight Demonstration
2. Basic Maneuvers
3. Takeoff and Landing
4. Flight Review (Optional)

Sonex Training Syllabus

Ground Lesson #1: Introduction and Aircraft Preflight

Objective: Introduce student to the Sonex series of aircraft by discussing aircraft history, building procedures, and aircraft preflight techniques.

Planned Time: 1-2 hours.

Content:

- *Sonex LLC history.*
 - John and Jeremy Monnett history
 - History of different designs

- *Building Techniques.*
 - 6061-T6 aluminum construction
 - Commercial grade SS pulled rivets
 - Required tooling and procedures

- *Aircraft Airworthiness*
 - Airworthiness Certificate
 - Operating Limitations
 - Weight and Balance
 - Maximum Gross Weight
 - Empty Weight
 - CG Range

- *Aircraft Preflight.*
 - Entry and exit procedures
 - Canopy latch
 - Emergency egress
 - Checking fluid levels
 - General aircraft inspection

Completion Standards: Student will become familiar with aircraft history, building procedures, and aircraft preflight techniques by written and/or oral quizzing.

Sonex Training Syllabus

Ground Lesson #2: Basic Flight Maneuvers

Objective: Introduce student to the performance and handling qualities of the Sonex series of aircraft.

Planned Time: 1-2 Hours

Content:

- *Ground Handling*
 - Taxiing
 - Position of Controls

- *Normal and/or Crosswind Takeoff.*
 - Position of controls
 - Directional control

- *Short and/or Soft Field Takeoff.*
 - Position of controls
 - Acceleration and lift-off
 - Initial climb

- *Basic Flight Maneuvers*
 - Normal climbs and descents
 - Shallow and normal bank turns

- *Performance Maneuvers.*
 - Slow Flight
 - Steep Turns

- *Stalls*
 - Power off stalls
 - Different flap settings
 - Power on stalls

- *Emergencies*
 - Engine failure from low and high altitudes
 - Engine failure from pattern altitude
 - Electrical system malfunction

- *Normal and/or Crosswind Landing.*
 - Normal procedures
 - Abnormal situations

- *Short and/or Soft Field Landing.*
 - Normal procedures
 - Abnormal situations

Completion Standards: Student will become familiar with aircraft flight maneuvers as demonstrated by written and/or oral exam.

Sonex Training Syllabus

Ground Lesson #3: Flight Review (Optional)

Objective: Student will complete the ground portion of a Flight Review as required by 14 CFR 61.56.

Planned Time: As needed (14 CFR 61.56 requires a minimum of 1.0 hour of ground instruction.)

Content: (Suggested Topics: Refer to 14 CFR 61.56)

- A review of the current general operating and flight rules of 14 CFR part 91
- A review of general aviation security (TFRs, aircraft security, and airport security).
- A review of those maneuvers and procedures that, at the discretion of the person giving the review, are necessary for the pilot to demonstrate the safe exercise of the privileges of the pilot certificate.

Completion Standards: Student will show satisfactorily knowledge to meet flight review requirements.

Sonex Training Syllabus

Flight Lesson #1: Basic Introduction and Flight Demonstration

Objective: Introduce student to the flight characteristics of the Sonex series of aircraft by introducing basic flight aircraft control techniques and procedures.

Planned Time: As Needed

Content:

- *Aircraft Preflight*
 - Normal procedures and techniques
 - Standard entry and exit procedures
 - Cockpit familiarization
 - Checklist usage

- *Engine Start, Taxi and Run-up*
 - Cold start
 - Hot start
 - Control positioning

- *Normal Takeoff and Climb (Demonstrated)*
 - Normal operations
 - Aborted takeoff procedures

- *Aircraft Familiarization*
 - Basic aircraft control
 - Effect of trim
 - Engine operation

- *Normal Descent and Landing (Demonstrated)*
 - Normal operations
 - Effect of flaps
 - Effect of wind

- *Shut Down and Securing Aircraft*

Note: Instructor may repeat lesson if necessary to ensure student attains mastery of aircraft control necessary to move onto next lesson.

Completion Standards: Student will become familiar with the performance and handling characteristics of the Sonex aircraft. Maneuvers will be performed within practical test standards applicable to the pilot certificate held by the student.

Sonex Training Syllabus

Flight Lesson #2: Basic Maneuvers

Objective: Introduce student to the flight characteristics of the Sonex series of aircraft by introducing basic flight maneuvers and procedures. This lesson is to be completed after student completes flight lesson #1.

Planned Time: As Needed

Content:

- *Basic Flight Maneuvers*
 - Straight and level flight
 - Normal climbs and descents
 - Shallow and normal turns

- *Performance Maneuvers*
 - Steep turns
 - Slow flight

- *Stall Maneuvers*
 - Power off stalls
 - Effect of flap settings
 - Power on stalls

- *Ground Reference Maneuvers*
 - S-turns across a road
 - Turns around a point
 - Rectangular course

Note: Instructor may repeat lesson if necessary to ensure student attains mastery of aircraft control necessary to move onto next lesson.

Completion Standards: Student will become familiar with the performance and handling characteristics of the Sonex aircraft. Maneuvers will be performed within practical test standards applicable to the pilot certificate held by the student.

Sonex Training Syllabus

Flight Lesson #3: Takeoff and Landing

Objective: Introduce student to the flight characteristics of the Sonex series of aircraft by introducing basic flight maneuvers and procedures. This lesson is to be completed after student completes flight lesson #2.

Planned Time: As Needed

Content:

- *Takeoff Maneuvers*
 - Normal and crosswind procedures
 - Short field and soft field procedures

- *Landing Maneuvers*
 - Normal and crosswind procedures
 - Short field and soft field procedures

- *Emergency Procedures*
 - Complete power loss
 - Partial power loss
 - electrical system failure

Note: Instructor may repeat lesson if necessary to ensure student attains mastery of aircraft control necessary to move onto next lesson.

Completion Standards: Student will become familiar with the performance and handling characteristics of the Sonex aircraft. Maneuvers will be performed within practical test standards applicable to the pilot certificate held by the student.

Sonex Training Syllabus

Flight Lesson #4: Flight Review (Optional)

Objective: Complete student training and provide required Flight Review via FAR 61.56. This lesson is to be completed after student completes flight lesson #3.

Planned Time: As Needed (14 CFR 61.56 requires a minimum of 1.0 hour of flight instruction.)

Content:

- As needed to complete requirements of 14 CFR 61.56

Completion Standards: Student will satisfactorily complete Flight Review as required by 14 CFR 61.56. Maneuvers will be performed within practical test standards applicable to the pilot certificate held by the student.

Sonex Training Syllabus

Syllabus Revision Log

Rev. A (5.21.13): Page 2 – added specific wording prohibiting aerobatic flight instruction, per FAA LODA guidance.