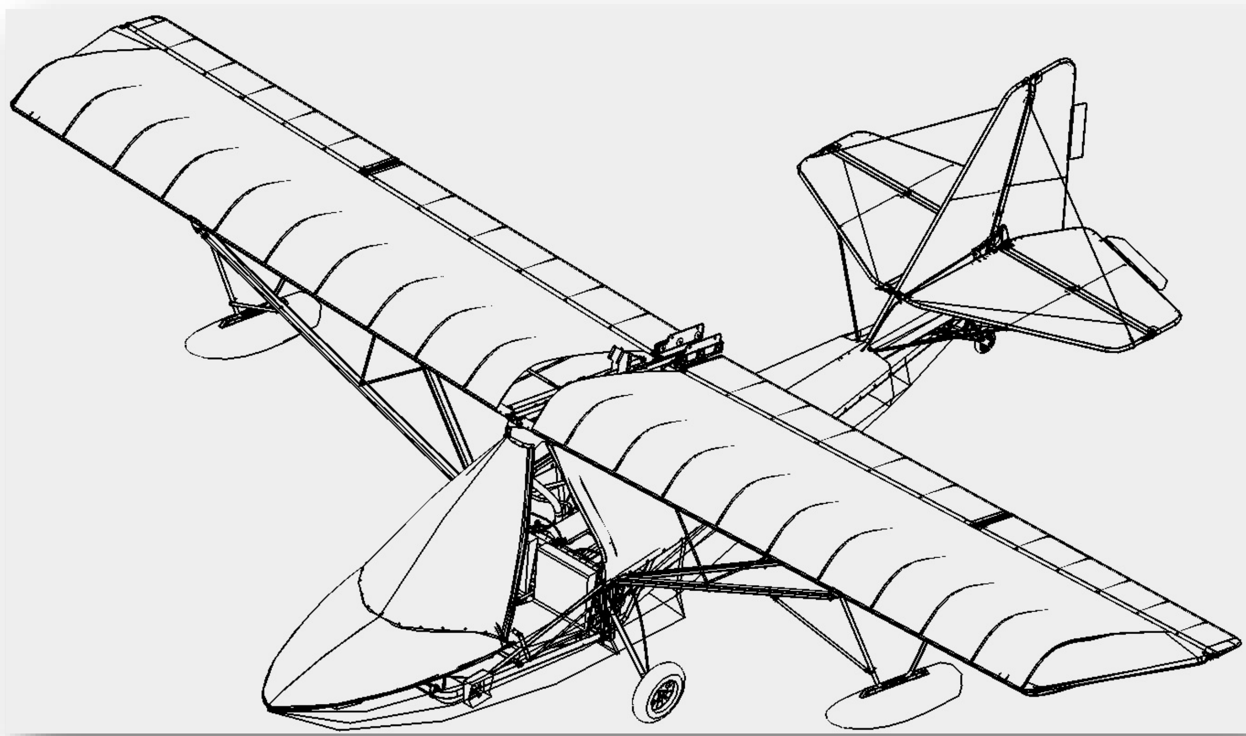
AVENTURA II
Flight Training Supplement (FTS)



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Aero Adventure or Aero Adventure Kit – Engine– Production Number

Example: AA2S17001

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1 GENERAL

1.1 Read this before your first training flight

This document is provided to supplement the information provided in the Aircraft Operating Instructions (AOI-Flight Manual) but does not replace it. Specific information on operation of the engine and systems are provided in the AOI. Specific information on maintenance is contained in the Aero Adventure LLC AVENTURA II Maintenance Manual provided with each aircraft.

Please pay attention to the pre-flight check and maintenance instructions for the aircraft, the Rotax ® engine, the MAGNUM emergency parachute system, and the operation manuals for other installed equipment such as the Garmin G5, and WingBug.

Do not attempt to learn the basics of these systems in the aircraft. Preparing by studying the basic operation of this equipment prior to your first transition training flight will be time well spent.

Flying the AVENTURA II must always be done with the possibility of a safe landing due to the loss of the engine power.

The Aero Adventure LLC AVENTURA II is a VFR aircraft only. Because of the long range of the AVENTURA II, flight into vastly different weather patterns and meteorological conditions can occur. The entry into bad weather with IMC conditions by VFR pilots and aircraft is extremely dangerous. As the owner or operator of an aircraft you are responsible for the safety of your passenger and yourself. Do not attempt to operate the AVENTURA II in any manner that would endanger the aircraft, the occupants or persons on the ground.

! WARNING
Use alkali-free cleaning products only to clean both the structure and the windows!

1.2 Manufacturer

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2 LIGHT SPORT AIRCRAFT PRIMER

Light Sport Aircraft may seem familiar to us by their appearance, but they are in fact quite different from the traditional aircraft we are used to. First, LSAs weigh significantly less than many aircraft. With a typical empty weight of 850 pounds and a take-off weight of up to 1430 pounds, they are indeed light aircraft. The light weight, coupled with a generous wing surface area, means that they have a low wing loading making them more susceptible to wind currents than larger, more heavily loaded aircraft. A good pilot needs to remain vigilant from the time the aircraft first moves under its own power, until after the landing is complete and the aircraft is brought to a full stop.

Also, the weight constraints of designing and building a safe and practical LSA mean that only a certain amount of the design can be devoted to shock-absorbing, ground maneuvering, equipment (the landing gear). It is a good idea for us to try to raise our game a little by constantly seeking to improve our flying skills (in this case our landing technique) so that we may continue to enjoy many happy accident-free hours of operation.

Next, many LSAs are built to be more ergonomic and have larger windows than older aircraft. Seated inside them, you will find yourself in a more reclined position, with new viewing angles, and able to see more of the outside world. You may find this to be quite an adjustment to make coming from older design aircraft that could often impart the impression of sitting at an office desk with a less than ideal view out the window.

It is important to become familiar with the sight picture (the view) when looking out the windows of your aircraft before your first flight and you will find that your landings are directionally more consistent and you are better able to judge your roundout. Remember that it’s been said that the main wheels are for landing, the tailwheel is only for steering on the ground.

With different flight characteristics, different control placement and new glass panel avionics, the transition can be more than many expect. Do not rush through your transition training until you are thoroughly comfortable in all aspects of the aircraft.

LSAs are often capable of flying at a relatively wide range of speeds: from surprisingly slow, to rather fast. Make it a goal to become comfortable and safe at both ends of the speed range. At slow speeds, become familiar with aircraft’s flight characteristics at different flap settings and learn to recognize the onset of a stall. Learn and practice correct stall recovery technique for your particular aircraft.

At high speeds, watch where you are going! Things can happen fast. You can cover more distance and find yourself in un-favorable weather areas before you know it. Light Sport Aircraft are a ushering in a new and exciting era in aviation. From modern construction techniques to sophisticated avionics to new and improved medical certification requirements, everything seems to be changing. To continue this exciting new trend, it is important that we strive for higher level of safety and proficiency in all our flying activities. The Aventura II SLSA adds the additional dimension of amphibious operation. Factors like repositional landing gear, approach to landing and departures from water, lower flight over terrain, operation on water, and other unique capabilities require even more familiarity, situational awareness, and training.

3 LSA TRANSITION SYLLABUS

3.1 Overview

The objective of transition training is for a pilot to develop the knowledge, skill and proficiency to operate a heretofore unfamiliar model of aircraft. The training should not be limited to flight training but should also include ground training. The syllabus used should be effective and tailored to the student's individual experience and needs. Previously learned skills may be useful in the learning process but differences should be emphasized. At the end of the course, the transitioning pilot should be able to demonstrate having reached the objective and meeting the standards by the use of oral, written and flight testing.

The training should include but not be limited to:
- The aircraft systems specific to the model of aircraft.
- The flight characteristics and limitations
- The care and cleaning of aircraft made from modern materials.
- Modern aircraft engines
- Responsibilities of Owners and Operators of Light Sport Aircraft.

Information pertaining to transition training can be obtained from government publications as well as from leading industry organizations.

3.2 Objective

The overall objective of the transition training is to obtain the required knowledge and skill level to safely operate an AVENTURA II.

3.3 Completion Standards

At the end of the course, the transitioning pilot should be able to demonstrate having reached the course objectives and meeting the completion standards by the use of oral, written and flight testing. The student will demonstrate knowledge of the Aircraft Operating Instructions manual, the aircraft systems and limitations, and the regulations pertaining to Light Sport aircraft and airmen. The demonstration will include emergency as well normal procedures.

3.4 Areas of Operation and Tasks

In a manner similar to Practical Test Standards put forth by the FAA, the instructor will establish Areas of Operation corresponding to specific areas of knowledge and/or skill needed by the student to complete the transition training. Within each Area of Operation the instructor will identify specific Tasks that can be completed by the student in order to demonstrate proficiency.

3.5 Ground Training

Systems and Limitations

The instructor should not only provide an overview of the aircraft, but also an in-depth description of the aircraft systems, their operation and their limitations. The description should include a discussion on how the systems may be different from what the student has previously experienced.

Areas of operation

I. Aircraft overview
II. Flight and system controls
III. Flight Instruments
IV. Performance and Limitations
V. Powerplant
VI. Electrical system
VII. Fuel System
VIII. Landing Gear
IX. Weight and Balance
X. Specific avionics installed

3.6 Flight Training

Preflight

The purpose of a preflight inspection is to determine the airworthiness of an aircraft in preparation for flight. The transitioning student must learn to assess the overall condition of the aircraft and establish its maintenance status. Items of note are: documents, placards and inoperative equipment.

Flight Training Standards

Upon completion of flight training, the student will demonstrate a skill level appropriate to the Light Sport Pilot Practical Test Standards or to the level of pilot certificate held, if higher.

Areas of Operation

I. Flight planning for Light Sport Aircraft
II. Preflight procedures
III. Surface operations
IV. Takeoff, Landings and Go-arounds
V. Navigation
VI. Slow flight
VII. Emergency procedures
VIII. Post flight procedures

4 NORMAL FLIGHT PROCEDURES

The AVENTURA II is a Unique aircraft that has Unique characteristics and procedures. The aircraft is aerodynamically very dirty and pilots being transitioned to the AVENTURA II need to be trained to manage their airspeed carefully.

The rapid acceleration to takeoff, high thrust line, and the angle of climb is different from conventional aircraft. Attention to the flap limitation speeds is needed during climbing flight.

Landing the AVENTURA II requires attention to controlling and managing airspeed in the pattern and final approach to landing. After practice, the AVENTURA II can be landed in very small areas safely.

This section is an outline of typical procedures for flying a AVENTURA II. It is represented here as a primer-overview only. More detailed explanations including emergency procedures are listed in the Aircraft Operating Instruction (AOI) manual provided with the AVENTURA II

4.1 Take-off

If the runway and approach to the runway are clear. Roll out to the take-off position.

- If it is possible, take-off directly into the wind.
- The maximum direct crosswind component at take-off is 18 mph (16 kts) (See Item 2 of Performance Limitations).
- Confirm the tail wheel is centered.
- Controls in proper position for takeoff.
- Apply the throttle smoothly to fully open (forward).
- Engine speed: approx. 5500-5800 RPM
- Flaps: 10º (0º is fine on longer runways)
- Upon initial acceleration hold the stick back, keeping the tail wheel on the surface
- As soon as the airplane accelerates, gently release pressure on the control stick – keep the tail wheel slightly elevated until the airplane takes off.
- After take-off, release the back pressure on the stick slowly as airspeed builds to 70 mph (61 kts) At initial climb speed up to 70 mph (61 kts) Climb to a minimum height of 650 ft. in straight ahead flight before attempting to turn the aircraft.
- Do not reduce the flaps to below 0º with less than 60mph (52 kts) airspeed.

4.2 Climb

- Slowly decrease the flaps to 0º - increase the climb speed to 75 mph (65 kts)

4.3 Limitations (for a complete list of limitations please refer to the AOI)

- The AVENTURA II is not certified for aerobatics.
- Flights are only to be made under VFR conditions.
- Night flights require special optional equipment.
- Flights in icing conditions not allowed.
- Steep turns beyond 60 Degrees are prohibited.
- In gusty wind or wind speed more than 20 mph (17 kts) flight operations should be stopped.

4.4 Cruising Flight

During cruising flight, an RPM of 4200 – 5500 RPM should be used (redline is 5800 RPM, Refer to the Rotax manual for engine operation guidelines). The maximum permissible speed of 105 mph should not be exceeded.

During cruising flight, monitor your fuel consumption and total fuel on board for flight planning. Fuel consumption at typical cruising flight is about 4.7 gallons (18L) per hour.

For normal cruising flight, bring the airplane to the desired cruising speed in level flight by observing the VSI or the altimeter. Adjust the throttle and trim to hold altitude.

4.5 Banked Turn

Each turn should be made with the coordinated use of the rudder followed with aileron if needed. Steep turns in excess of 60 degrees are not recommended. At lower speeds in tight turns, the airplane loses altitude quickly. Banked turns with more than 30º of banking should not be carried out less than 62 mph (54 kts) If the airplane enters an inadvertent spin, push the rudder opposite the spin direction. Position the control stick in neutral position for recovery. After the spin rotation stops, recover to level flight carefully to not exceed Vne, or the load limits of the aircraft.

4.6 Stalls

The AVENTURA II is very docile in stalls. The loss in altitude during stalls is approx. 50ft, with a maximum pitch down of 20º. The aircraft is resistant to stalling in clean-cruise configuration.

The stall speed at 648 kg (1430 lbs) gross weight is:

No Flaps – Power on – 38 mph (33 kts)
Power off – 33 mph (29 kts)

½ Flaps - Power on – 30 mph (26 kts)
Power off - 30 mph (26 kts)

Full Flaps – Power on – 24 mph (21 kts)
Power off – 24 mph (21 kts)

The stall is noted through light buffeting. At 3 mph (2 kts) above the stall speed, the rudder becomes “soft”. When flying close to stall speed, only the rudder and elevator are fully controllable. The ailerons have less effectiveness in very slow flight. The airplane loses about 50 ft. in altitude during a stall. Close to the ground, do not fly slower than a minimum speed of about 71 mph (62 kts).

In the case of a stall-spin entered through crossed controls, oppose a spin with opposite rudder input. Center the ailerons and elevator until the rotation stops, then level out the airplane gently.

If the attempt to level out the airplane fails or leveling out is doubtful because of too low altitude, the emergency parachute system should be actuated.

4.7 Approach and Landing

Land into the wind, or the runway with the least crosswind if possible. The final approach to landing is to be carried out in level attitude.

Engine power at:	about 20-30 %	.
Approach speed	about 65 mph (56 kts)	with experience, a slightly slower approach speed can be used.
Flaps	from 0º to 15º	

At the distance of 3 ft. over the ground, level off and fly the airplane to the ground and land the airplane gently. If engine cools too much in descent with the engine at idle and won’t increase RPM, pull the choke and then increase throttle. Close the choke again.

When landing with a crosswind, perform a crabbing approach or slip carefully. The flights over obstacles during approach to landing should be avoided.

4.8 Control of the Emergency Location Transmitter ELT (if equipped)

Before switching off the radio equipment, adjust frequency to the international emergency frequency 121.5 and check if the ELT is activated.

4.9 Engine stop

Under normal conditions, the engine is sufficiently cooled during the landing approach and rollout, therefore it can be stopped through ignition switching off. The radios and instruments should be switched off <u>before</u> stopping the engine.

5 STANDARD EQUIPMENT

This chapter provides brief information about standard equipment installed on the aircraft.

Warning: This is supplemental information for convenience only, the binding information is given in the instrument manuals.

5.1 Glass Cockpit: Garmin G5

The primary flight instruments on your G5 display are generated using a group of calibrated sensors. All of them are solid state – that is, there are no moving parts. These sensors include accelerometers, which measure forces in all three directions; rotational rate sensors, which sense rotation about all three axes; pressure transducers for measuring air data; and magnetometers on all three axes for measuring magnetic heading.

The G5 Electronic Flight Instrument is installed as an attitude display indicator (ADI) and/or horizontal situation indicator (HSI). The G5 contains integrated attitude/air data sensors that provide display of attitude and secondary display of air data information. The G5 can also be interfaced to an external sensor to provide heading information. The G5 features a bright, sunlight readable, 3.5-inch color display. In the case of aircraft power loss, the G5 battery sustains the G5 flight display with up to 4 hours of power.

5.2 WingBug

The primary flight instruments on your WingBug display are generated using a group of calibrated sensors. All of them are solid state – that is, there are no moving parts. These sensors include accelerometers, which measure forces in all three directions; rotational rate sensors, which sense rotation about all three axes; pressure transducers for measuring air data; and magnetometers on all three axes for measuring magnetic heading.

WingBug is a WiFi-enabled Pitot Static ADAHRS system that is personal, portable, and light-weight with recording capabilities. It is a fully self-encompassed device that is wireless. It’s internal battery is rechargeable and provides a 12 hour battery life.

(NOTE: For pilot and passenger safety, this is not a tablet GPS created ground speed based instrument simulation. Your indicated airspeed is obtained and displayed with a Pitot Static system which is critical to safe aircraft maneuvering. This provides the added benefit of true and accurate flight instrument redundancy, should a primary system fail.)

5.3 Hobbs Hour Meter

Record and track the total elapsed time that aircraft is in use. These escapement - controlled DC hour meters are electrically powered with jewelled movement, shockproof odometer and permanently lubricated parts. Total digital quartz readout is 9999.9 hours. Easy-to-read white numerals on black face dials. Sealed against dirt and moisture.

5.4 Backup Instrumentation including:

- Analog airspeed indicator
- WingBug

5.5 Radio: FL-760 installed with antenna

The Flightline FL-760 is made to take up minimal space and use less power. It can be installed in a standard instrument hole measuring 2 1/4". The voice activated intercom and manual squelch control available on the FL-760 are even effective in the loud conditions that are common in a light aircraft. The display on the FL-760 uses backlighting to make it easier to see, and it can be used to "flip/flop" between frequencies and it also has an instant 121.50 emergency frequency key. You can scan quickly through your most used channels on the FL-760 by programming up to 32 memory channels and using the convenient "scan mode." The FL-760 has a com frequency range of 118.00 to 136.975 MHz and comes with a 5 watt transmitter and 11-33v power supply.

5.6 Transponder: STRATUS ES Mode A/C installed with antenna

The Stratus ES is a panel-mounted transponder with the addition of altitude reporting and timing functions. The transponder is a radio transmitter and receiver that operates on radar frequencies, receiving ground radar or TCAS interrogations at 1030 MHz and transmitting a coded response of pulses to ground-based radar on a frequency of 1090 MHz.

5.7 Altitude Encoder: ACK A30 (Classic)

The operation of the A-30 Digitizer is controlled by the aircraft transponder. Place the transponder in the altitude reporting mode to transmit altitude data. Model A-30 digitizers which transmit RS 232 data (mod 8 and above) provide continuous data to RS 232 devices.

5.8 GPS: WingBug

The WingBug provides GPS data to any navigation App, In addition, it provides ADSB IN information.

5.9 ELT: Ameriking AK450 (Installation and operation manual)

The AK-450 ELT, Emergency Locator Transmitter, is state of the art CMOS technology, long lasting, solid state based equipment. It is extremely reliable, with the highest standards of quality, designed to meet TSO-C91a requirements for critical applications.

The entire ELT system is self powered by its own internal Batteries. Interface with the Aircraft Electrical Power System is not required.

The AK-450 ELT is automatically activated upon sensing a change of velocity of 3.5 +/- 0.5 Feet/Second, along its longitudinal axis (Automatic Fixed - ELT (AF) Configuration). It is designed to be removed from the Aircraft and used as a personal locating device when it is necessary to leave the scene of the accident (Automatic Portable - ELT (AP) Configuration).

5.10 Intercom: Flightcom

The Flightcom IISX is the world's most popular 2-place, portable intercom. The modular design offers expansion capability to the backseat if needed.

- Expandable to 4-place portable with an optional SR-4 expansion module
- Auxiliary inputs and outputs for music or recording flight information
- Low-battery indicator and pilot isolate
- Uses aircraft power or 9-volt battery

With few controls for the pilot to use, the operation of the PM 3000 is very straightforward, yet the unit outperforms its much more complicated competition. Although there is only one volume control knob, when an adjustment is made to the volume control, all output amplifiers are being changed simultaneously. Likewise, when the squelch control knob is adjusted, several VOX circuits are being changed at the same time. Since the system is designed to use modern stereo headsets, it is not necessary to balance the volume and squelch controls at the intercom.

6 MAGNUM PARACHUTE SYSTEM (if equipped)

The specific operating instructions and limitations for the *MAGNUM* 1350 HS parachute are located in the *MAGNUM* owner's manual supplied in the aircraft documents. More specific information is also located in the Aircraft Operating Instructions.

The *MAGNUM* parachute system included in the AVENTURA II is a very high performance system. The Vne of the parachute system is above the Vne of the aircraft. In an emergency, the parachute system should be activated even if at a very low altitude.

Before activating, if it is possible, stop the engine and tighten the pilot and passenger seat belts harnesses. The parachute system handle is located in the central console between the seats. To activate the system, the handle has to be pulled to the stop.

The history of emergency parachute use in light aircraft has shown that pilots have to be mentally prepared to use of the system before the need arises. The process of looking reaching and pulling is a way to practice mentally, the physical action of activation.

Briefing your passenger on the use of the system is important in the unlikely event of the pilot being incapacitated. Make certain to always replace the safety pin in the activation handle on the ground.

7 PERFORMANCE

Performance data is based on an aircraft in good condition and correct settings. Even the smallest adjustments to the controls or the omission of a small piece of fairing can adversely affect aircraft performance. Sufficient reserve should be added to the data given in this handbook to cover all such possibilities.

Performance data for MTOW @ 600 kg (1320 lbs)

Take-off roll	flaps 15°	250 ft	(76 m)
Take-off distance to clear 50ft obstacle	flaps 15°	350 ft	(107 m)
	Mowed, level, dry grass runway or pavement (It does not make a noticeable difference on this aircraft)		
Take-off speed	flaps 15°	54 mph (47 kts)	
	flaps 0°	62 mph (54 kts)	
Best rate-of-climb	flaps 15°	70 mph (61 kts)	
	3.7 m/s	740 ft/min	
	flaps 0°	71 mph	
	4.0 m/s	800 ft/min	
Best angle-of-climb	flaps 15°	60 mph (52 kts) approx. 8:1	
	flaps 0°	63 mph (55 kts) approx. 8:1	
Maximum level speed v_H	flaps 0°	105 mph (91 kts)@ 5500 rpm	
Maximum range @ 75 mph		330 miles (287 nm)	
Maximum speed - Vne		105 mph (91kts)	
	flaps 0°; @ 5300 rpm		

All performance data are based on standard atmosphere at sea-level and the Sterna propeller. They are also based on the procedures described in the AOI. Higher runway elevations, higher temperatures and other propellers can lead to considerable differences in the data!