FLIGHTSTAR

Congratulations on your selection of
FLIGHTSTAR II AIRCRAFT !

FLIGHTSTAR, Inc.
IS READY TO HELP YOU GET INTO THE AIR AND STAY THERE !

Having just purchased your kit, you are no doubt eager to begin assembling the aircraft as soon as possible. However, prior to fabrication, spend a few minutes reading the assembly procedures outlined in each section. This will be time well spent, ensuring an easier assembly of your aircraft. Remember that your ***FLIGHTSTAR, Inc.*** dealer stands ready to assist you in whatever way possible. Have your dealer inspect your aircraft prior to flying.

Changes in Airworthiness Directives (AD's), regarding parts and procedures, that originate after printing, will be inserted at the end of Chapter 1, in a section especially set aside for such. Please review this section and make necessary changes, if any, before beginning aircraft assembly.

November 1999

✓ NO WARRANTIES DISCLAIMER

THE USE OF AIRCRAFT IN GENERAL, AND THE PRODUCT SOLD BY THE SELLER IN PARTICULAR, INVOLVE CONSIDERABLE INHERENT RISK OF PROPERTY DAMAGE, PERSONAL INJURY, AND DEATH. THE BUYER ASSUMES ALL RISKS ASSOCIATED WITH THE USE OF THE PRODUCT.

It is expressly understood and agreed that the seller shall in no way be deemed or held liable or accountable to the buyer, any subsequent user, or other person for property damage or personal injury arising out of resulting from the use of the product sold by seller, whether upon or under any guaranties or warranties, expressed or implied, statutory, by operation of law or otherwise, beyond that expressed herein. It is sold with all faults and WITHOUT ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, expressed or implied for the particular purpose the buyer intends to use it.

The liability of the seller is limited to the replacement of defective parts found upon examination by the manufacturer to be defective in material or workmanship within 90 days after purchase, and which has not been caused by accident, striking, improper use, alteration, tampering, excessive use, misuse or abuse.

The damages of the buyer and / or the user shall be deemed liquidated in the costs of replacement as stated above. The seller and or manufacturer shall in no event be liable for personal injuries or for any other damages, whether direct or consequential to any person or property, and shall have no liability in connection with this product. The seller further DISCLAIMS and the buyer and / or user hereby WAIVES any such liability.

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✓ Chapter 1

✓ DESCRIPTION AND OPERATION

✓ DESCRIPTION

The ***FLIGHTSTAR II & IISL*** are designed, manufactured and distributed by ***FLIGHTSTAR, Inc.*** The ***FLIGHTSTAR II & IISL*** are Ultralight-type Light planes with a conventional three axis control system. All control and lifting surfaces are gap-sealed and double surfaced. The engine, located in front of and above the cabin is a two cylinder, two or four cycle, horizontal output shaft system. A helical gear reduction system transmits rotational energy to a fixed pitch, two bladed wood or ground adjustable composite bladed propeller. The throttle is located on the left side of both pilots. The dual control sticks are located between both pilots' legs, controlling the pitch and roll axis. Rudder pedals control the yaw axis and the steerable nose wheel. The flight control system utilizes Teleflex type push-pulls and aircraft control cables to actuate the control surfaces.

✓ OPERATIONAL INFORMATION

For operational information, please refer to the flight manual section of this manual and the ROTAX OR HKS OPERATORS MANUAL for your specific engine.

✓ Chapter 1

✓ SPECIFICATIONS AND SYSTEM DESCRIPTION

✓ FLIGHTSTAR II & IISL SPECIFICATIONS

✓ POWER PLANT	ROTAX 503FA, 2 cylinder, 2 cycle, CDI ignition, 48 HP - 54 HP @ 6400 RPM. 2.58/1 or 3.0/1 reduction. ROTAX 582LC, 2 cylinder, 2 cycle, CDI ignition, 64 P @ 6400 RPM. 2.58/1 or 3.0/1 reduction. HKS 700E, 2 cylinder, 4 cycle, CDI ignition, 60 HP @ 6200 RPM. 2.58 or 3.47 to 1 reduction.
✓ PROPELLER	68" x 32" pitch, two blade wood, standard with Rotax 503 66" - 70 x ground adjustable pitch, two or three blade. Optional on all engines.
✓ WING SPAN	32 Ft.
✓ LENGTH	19 Ft.
✓ WING LOADING	6.1 Lbs. Ft. Sq. @ Gross
✓ POWER LOADING	16.2 Lbs. Ft. Sq. @ Gross
✓ EMPTY WEIGHT	365 –490 Lbs.
✓ GROSS WEIGHT	950 Lbs.
✓ USEFUL LOAD	585 - 460 Lbs.
✓ FUEL CAPACITY	10 Gallons

✓ SYSTEM PHYSICAL DESCRIPTIONS

✓ ENGINE

The ***FLIGHTSTAR II & IISL*** are powered by two cylinder, two cycle or four cycle engines rated at 48 HP, 54 HP, 60 HP and 64 HP. A two cycle engine requires a mixture of gasoline and oil for energy and lubrication. A four stroke engine requires an oil supply for lubrication. The engine is started by a manual starter or an electrical starter system.

✓ Chapter 1 Specifications & System Description

✓ FUEL SYSTEM

Fuel is supplied to the engine from a single 10 gallon fuel tank located behind the pilot seats. The fuel system is primed by an in-line primer bulb. This provides fuel at the inlet to a diaphragm operated fuel pump, which is located near the engine. The fuel pump sends fuel under pressure to the carburetor. Energy to operate the fuel pump is supplied by a pulse line connected to the engine crankcase. The HKS requires the use of a lift pump located near the fuel tank.

✓ ELECTRICAL SYSTEM

Electrical energy for engine ignition operation is provided by a dual capacitive discharge ignition system (CDI system), integral to the engine. A lighting coil provides additional electricity for charging, and also for operation accessory equipment and instruments.

The aircraft are equipped with a dual ignition system. The dual ignition switches and the optional starting switch is located on the instrument panel. The starting switch is operated by a keyed switch (Rotax) and a push button switch on the HKS.

✓ PROPELLER

The standard propeller is a fixed pitch, two bladed type, utilized in a tractor configuration. It is secured to the output shaft of the reduction drive. The diameter is 68" with a fixed pitch of 32" or 34" (Rotax 503). The optional propellers are two or three bladed ground adjustable pitch type.

✓ LANDING GEAR

The tricycle landing gear contains a steerable nose wheel and utilizes shock cord for main gear shock absorption. The nose wheel steering is controlled by the rudder pedals.

✓ THROTTLE CONTROL

The throttle control is located on the left of both pilots. Engine idling (lowest RPM) is accomplished by placing the throttle lever in the most rearward position. Full power (highest RPM) is accomplished by placing the throttle lever all the way forward.

✓ FLIGHT CONTROLS

The control stick is located between both pilot's legs, operating the pitch and roll axes. The rudder pedals are conventional; controlling the yaw axis.

✓ Chapter 1 Specifications & System Description

✓ SAFETY

The intention of this section is to provide some general information concerning the hazards one might encounter while operating the ***FLIGHTSTAR II & IISL.*** THIS SECTION DOES NOT REPLACE THE FLIGHT MANUAL. It is not meant to inform the owner / operators of all aspects of safety with regard to operating an aircraft. The owner / operators do so at their own risk. SEE NO WARRANTIES WAIVER-DISCLAIMER Page 1-2.

Special attention should be given to the following areas when the ***FLIGHTSTAR II & IISL*** are operated on the ground.

WARNING: PERSONNEL SHOULD BE MADE AWARE OF THE DANGER AREAS COMMON TO THE *FLIGHTSTAR II & IISL* AND ALL AIRCRAFT. SERIOUS INJURY OR DEATH MAY RESULT IF THESE RECOMMENDATIONS ARE NOT FOLLOWED.

- Operating an Ultralight type aircraft requires the owner / operator to handle gasoline during the refueling operation. In our society, this is a common place event. However, in the distracting setting of an airpark, one can forget the seriousness of this act. AVOID HOT COMPONENTS, ANY CHANCE OF SPARKS, LIT CIGARETTES OR ANY FLAME. Always use a clean, OSHA approved fuel can. Always confirm adequate oil mix or quantity.

- It should be noted that hot exhaust components can create a burn hazard. Care should be taken by individuals starting the engine and / or adjusting the carburetor. The exhaust components should be avoided after the engine has been run. It takes some time for them to cool down.

- The most dangerous area of special interest to ground personnel and spectators, deals with the propeller. The propeller is not guarded by any structure. It is important that while the propeller is rotating, personnel stand clear. The pilot should never leave the aircraft; nor allow personnel near, while the engine is running.

- Blast from the rotating propeller is another hazard common to a propeller driven aircraft. The propeller has the capability to propel small objects at great speed, which can create a missile hazard. Personnel should maintain a safe distance from the rear and sides of the aircraft when the engine is running.

Note that the ***FLIGHTSTAR II & IISL*** are 3 axis aircraft that requires the same pilot reflexes and coordination as a heavier aircraft. These skills are only learned through proper training. Never fly an aircraft when over tired, intoxicated or under unusual mental stress.

A RECREATIONAL AIRCRAFT IS USED FOR FUN, BUT IT IS NOT A TOY !