

Xtra



Easy™

INSTRUCTION MANUAL

Ver. 1.0



- Ready-to-fly in less than one hour
- Comes with engine, radio, and control linkages installed.
- No glue required for assembly (no smell, no mess)
- Pre-covered and trimmed in genuine UltraCote®
- Three fun options available: Sailplane Launch, Photo OP, Drop Box (Action figure and camera not included)

Additional items required to get the Xtra Easy into the air:

- Hangar 9 Field Kit, which includes glow plugs, fuel pump, 4-way wrench, glow plug igniter with charger, Start Stick and tote box (Part HANSTART)
- Glow Fuel (10% or 15% nitro content recommended) (HAN3109-3115)

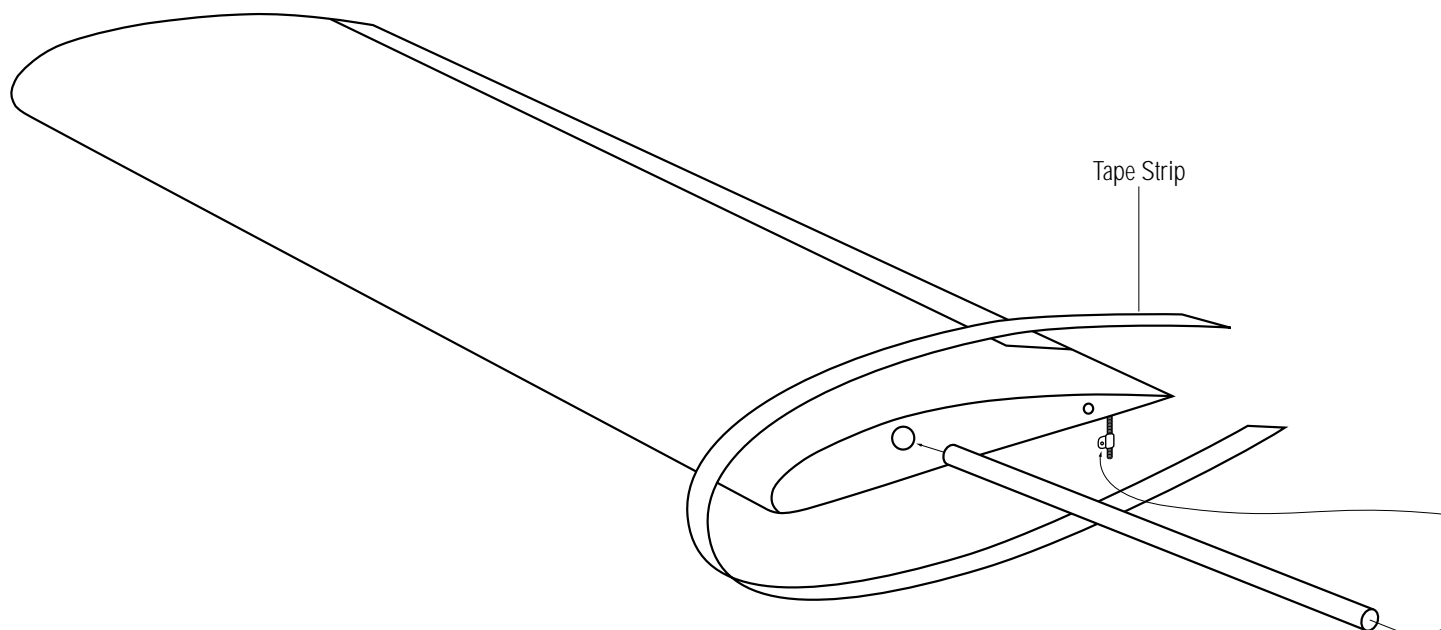


Specifications:

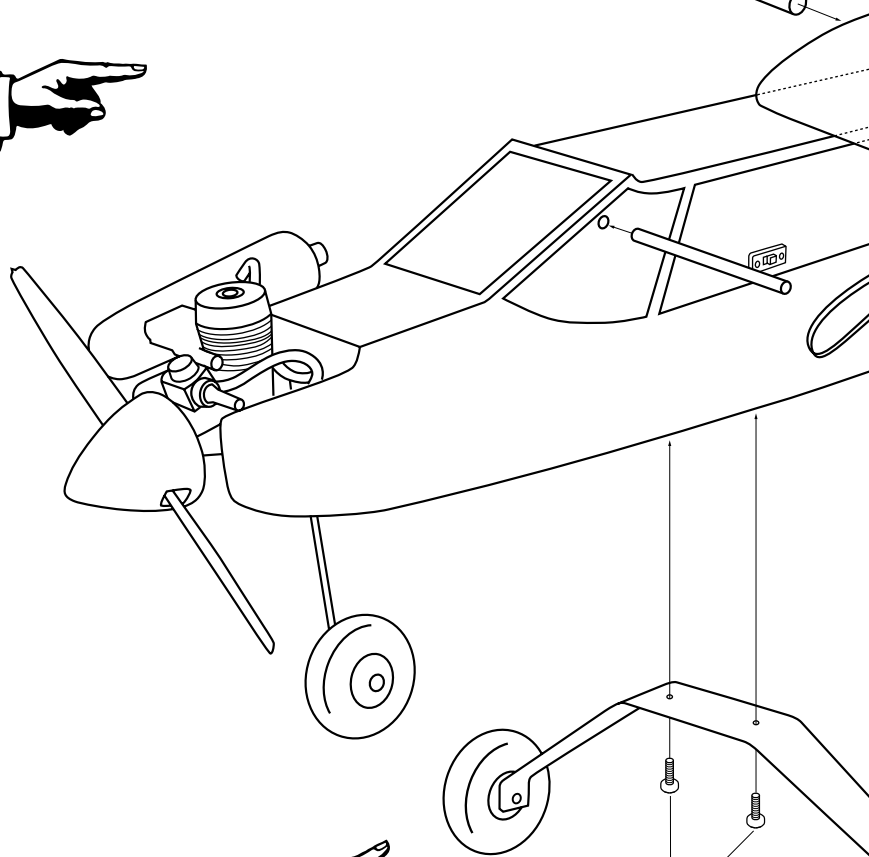
- Wingspan: 69"
- Length: 55"
- Wing Area: Standard: 793 sq. in.
- Weight (Approximate): 6 1/4-7 lbs.
- Engine Supplied: MDS .40 2-Cycle Engine

RTF™

READY-TO-FLY



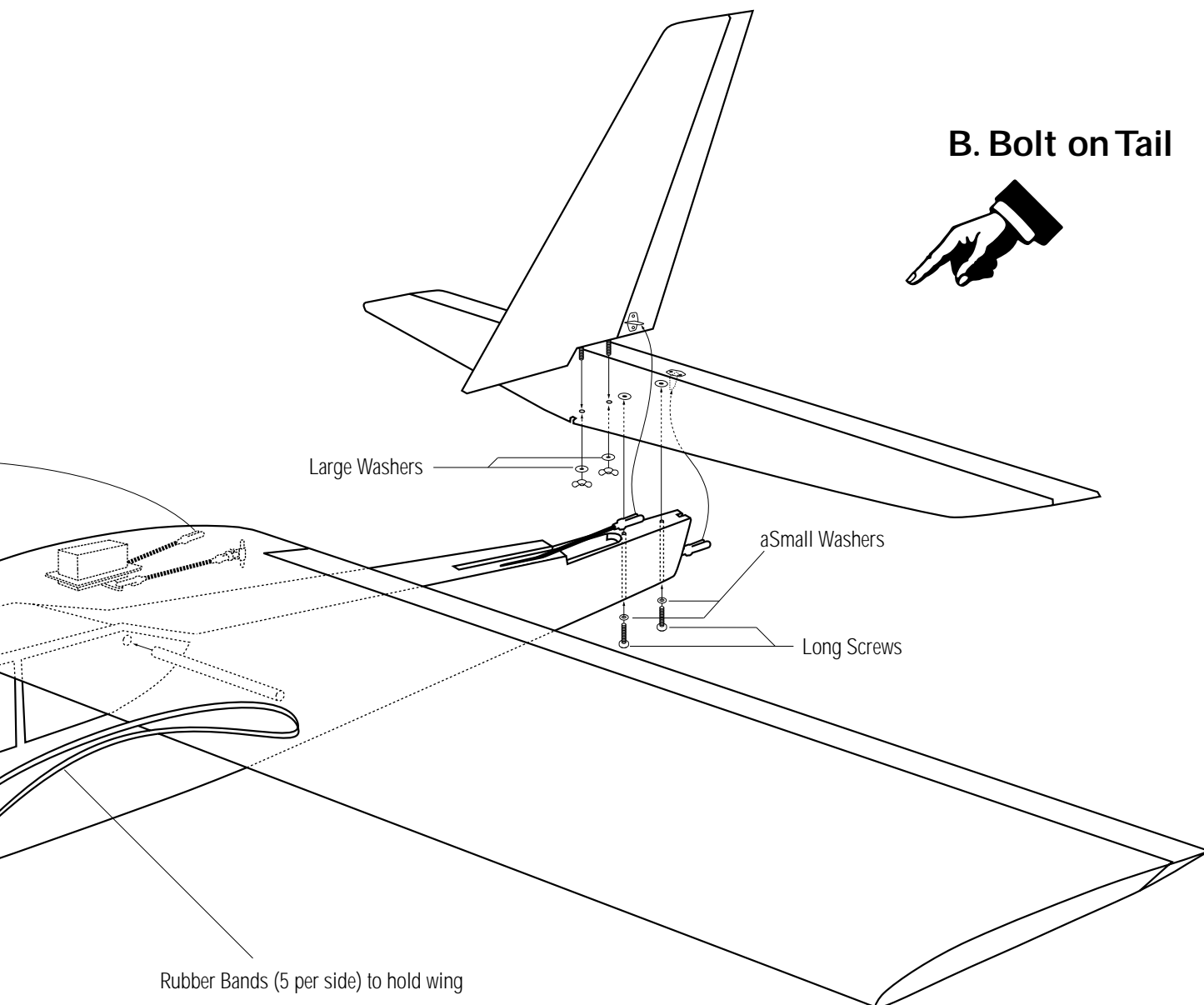
A. Assemble Wing



C. Mount Main Landing Gear



Short Screws



Assembly Diagram

For reference only. Please carefully read the manual for detailed instructions.

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Major Parts Layout

Wings (HAN1302)

Note: The replacement parts consist of wings only; servo/linkages not included.

Tail Assembly (HAN1304)

Horizontal Stabilizer w/elevator
Vertical Stabilizer w/rudder

Wing Tube (HAN1303)

Engine MDS FS Pro .40 (MDSE04001) w/muffler

Propeller (MAS1060) 10" x 6"

Nose Gear (HAN1306)



Fuselage (HAN1301) Replacement does not include motor or radio.

Main Landing Gear (HAN1305) w/wheels

Transmitter (JR 421EX)

#64 Rubber Bands

Wing Dowels

Radio Frequency Identifiers

Servo accessories

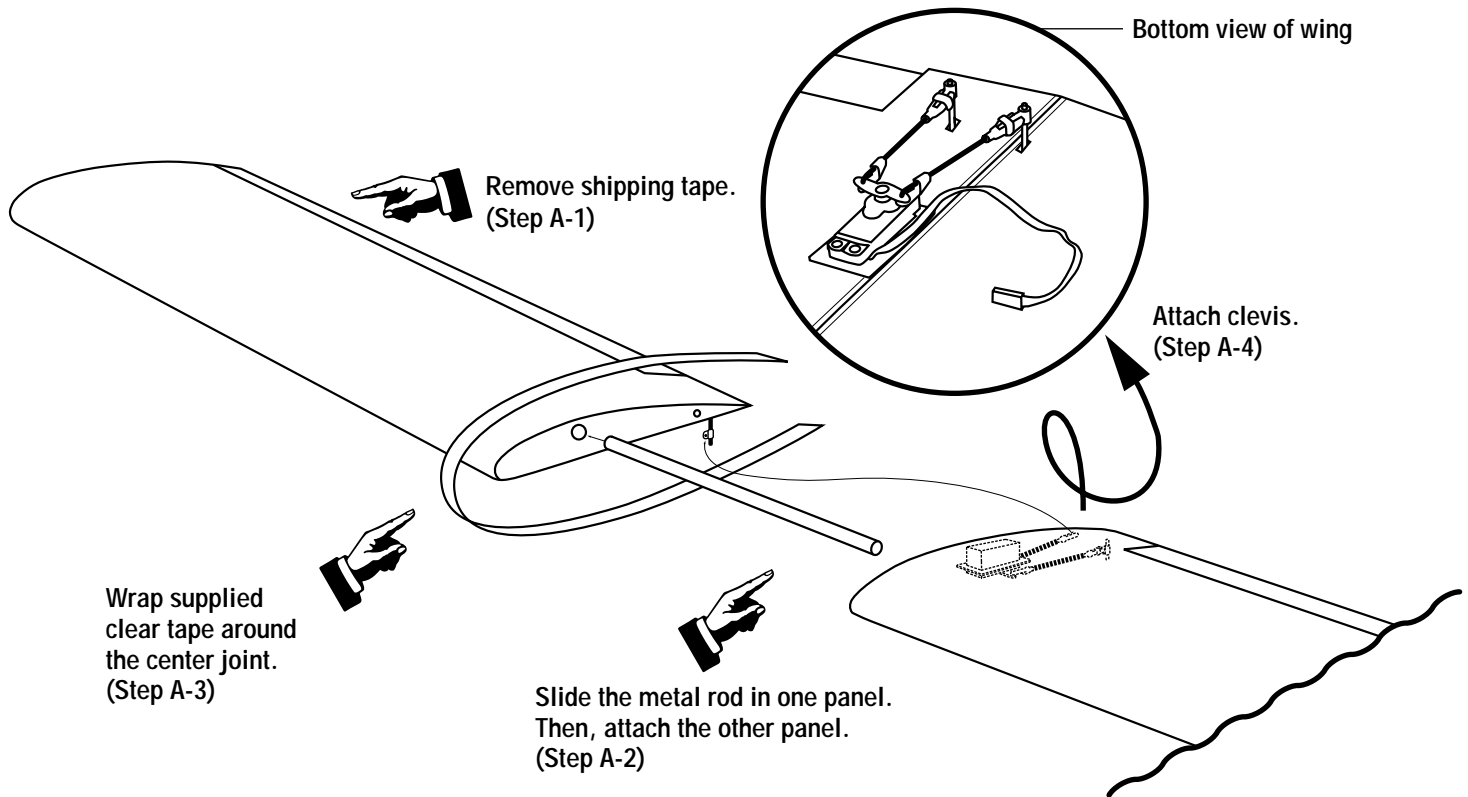
Tx/Rx Charger

Central Wing Tape

Tail & Landing Gear Hardware

Misc. Package

Step A: Assembly of the Wing



Carefully remove the contents from the box. It's recommended that you charge the transmitter and receiver batteries for 16 hours, as per the instruction included with the radio.

Step A-1

To assemble the wing, first remove the wings from their protective plastic bag. Remove the pieces of tape holding each aileron in place. The hinges of the ailerons have already been glued in place. Flex the ailerons back and forth to make sure movement is free.

Step A-2

Locate the aluminum tube and carefully slide it into one of the holes in either of the wing halves. The fit may be snug, so use a gentle twisting motion. One wing has a short metal pin projecting from the area near the trailing edge. This is used to key the wings together. Slide the other wing half onto the aluminum tube until the wing is joined. Be sure the metal pin fits into the hole in the other wing half.

Step A-3

Locate the clear tape and apply to the center joint of the wing, around the top and bottom.

Step A-4

The aileron servo lead has been tied around the aileron linkages to keep them from moving during shipment. There is a tag identifying the lead as the aileron lead. Untie the lead so it is free and the aileron linkages are free. One of the aileron linkages has already been attached. A small piece of tubing (clevis keeper) is used to hold the clevis closed. This is done to prevent accidental opening of the clevis in flight.

Connect the other aileron linkage being sure the clevis is securely snapped. Position the small piece of tubing to hold the clevis closed.

Congratulations! You have just completed assembly of the wing.

Step B: Installing the Tail Assembly

Locate the horizontal stabilizer and the vertical stabilizer. The rudder and elevator are already attached and hinged. The control horns are also attached.

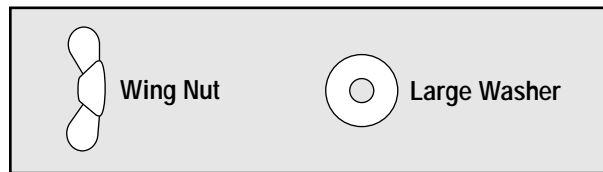
Remove any shipping tape that might be holding the rudder and elevator in place. Check to make sure these control surfaces move freely.

Step B-1

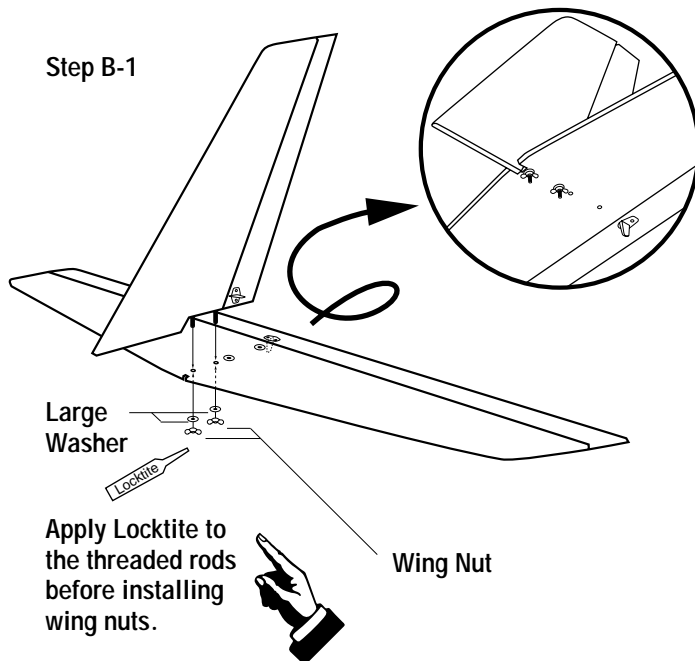
Begin by installing the vertical stabilizer onto the horizontal stabilizer. Insert the threaded rods in the vertical stabilizer through the holes in the horizontal stabilizer.

Locate the two large washers and the two wing nuts. Use them to secure the horizontal stabilizer to the vertical stabilizer.

Be sure to apply a small drop of Locktite (included) to the threaded rods before tightening the wing nuts.



Step B-1



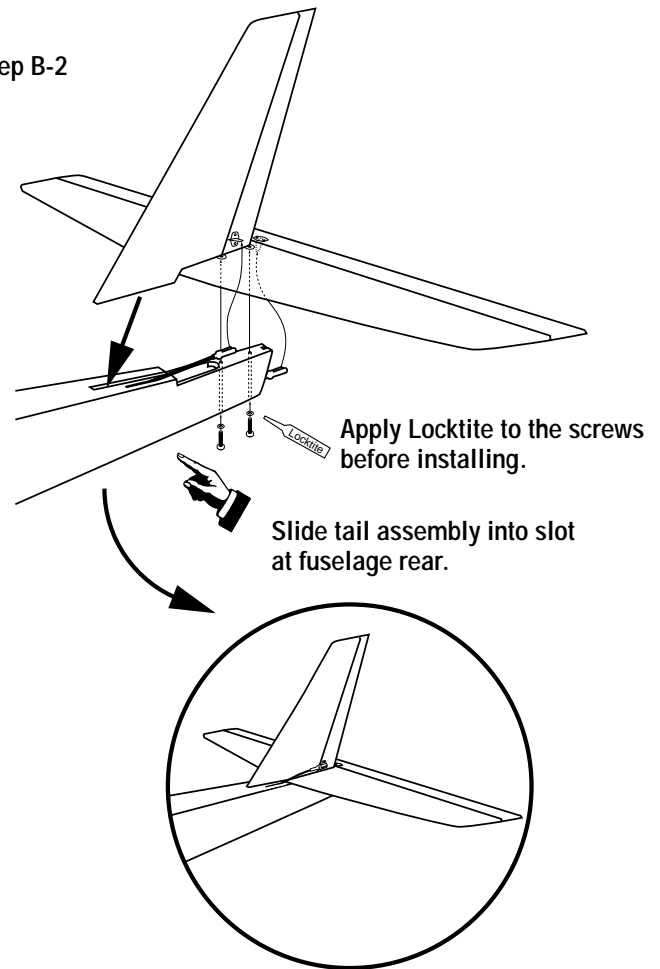
Attach the vertical stabilizer to the horizontal stabilizer using washer and wing nut.

Step B-2

Slide the tail assembly into the groove on the rear fuselage top. Lift the rudder pushrod so it passes on top of the horizontal stabilizer.



Step B-2

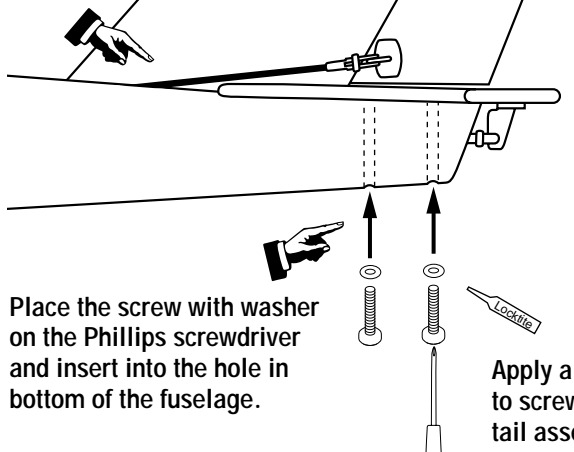


Step B-3

Install a small washer on each of the two small screws. Apply Loctite (included) to the small screws. Then, place the screw on a standard Phillips screwdriver. **Hint: It is helpful to use a good #2 magnetic screwdriver.** Insert through the holes in the bottom of fuselage and into the mounting holes into the horizontal stabilizer. Securely tighten, then check that the stabilizer is firmly fixed to the fuselage.

Step B-3

Note: The rudder pushrod is positioned above horizontal stabilizer.

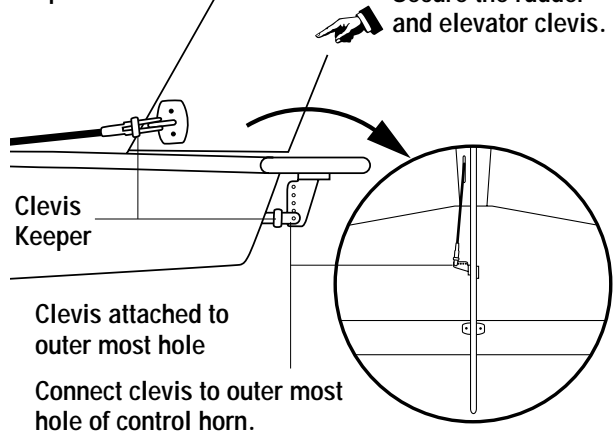


Step B-4

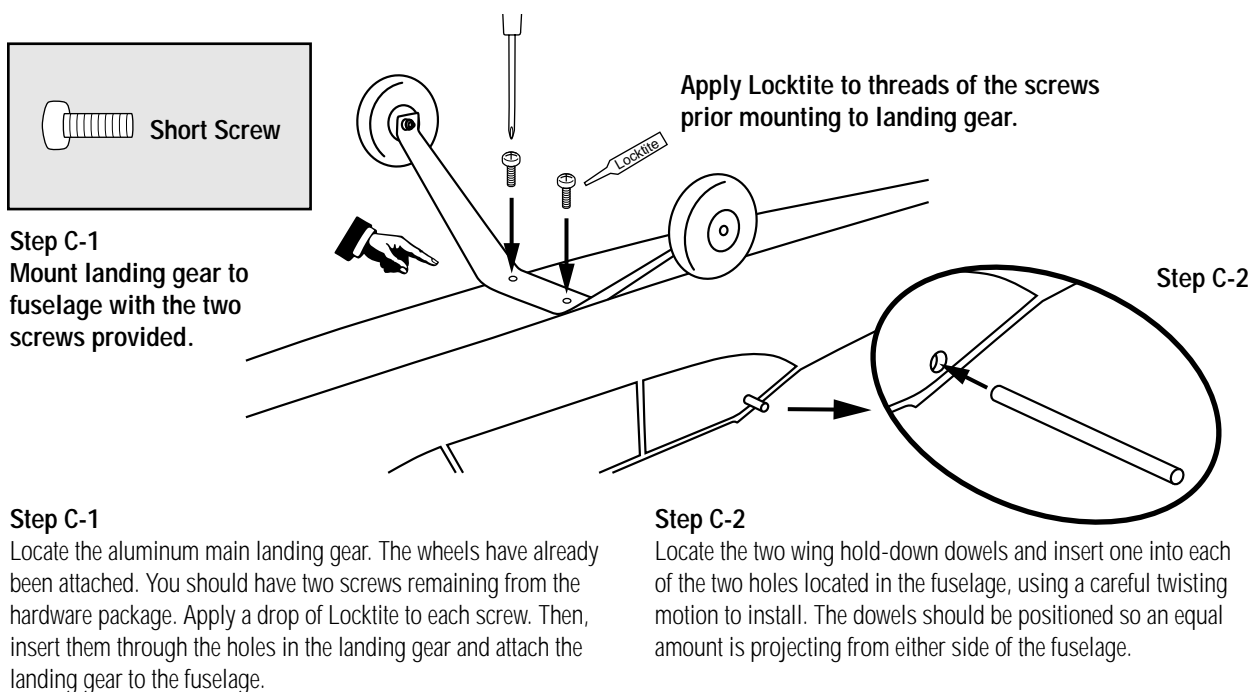
Connect the rudder and elevator pushrod clevises to the rudder and elevator control horns at the outer most hole. See illustration below.

Be sure to check to make sure the clevis keepers are over each clevis. This prevents the clevis from coming open accidentally during flight.

Step B-4



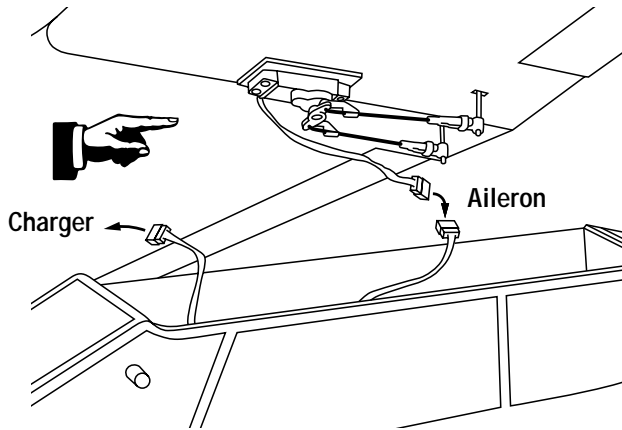
Step C: Installing the Main Landing Gear/Wing Hold Down Dowels



Final Assembly

Plug the aileron servo connector into the connector marked "aileron" located in the fuselage. This will connect the aileron servo in the wing to the aileron channel of your receiver.

Temporarily attach the wing to the fuselage by stretching a rubber band from wing hold-down dowels starting at the leading edge of the wing back to the trailing edge of the wing. For now, use just two rubber bands to mount the wing in position.



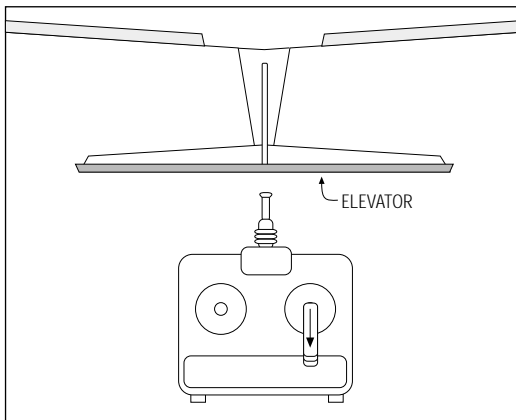
Pre-flight Checks

The correct servo directions are pre-adjusted, but it's a good idea to confirm the correct direction. After charging the transmitter and receiver batteries per the instruction included with the radio, turn on the transmitter and airplane and check that the controls are moving in the correct direction, as per the illustration below.

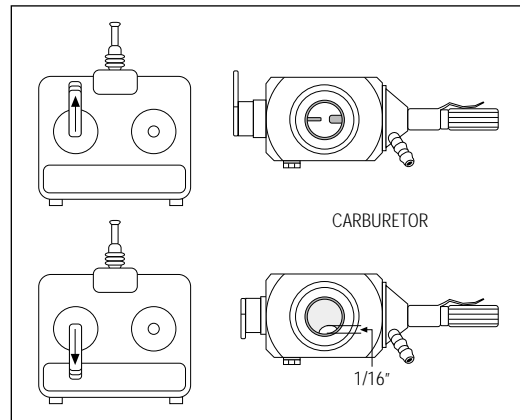
Moving the right stick down should cause the elevator to move upward. Moving the right stick to the right should move the right

aileron up (looking from the back of the airplane). Moving the left stick to the right should move the rudder to the right. Now, check the throttle. Look into the carburetor. With the throttle (left stick) in the upper position, the carburetor should be fully open.

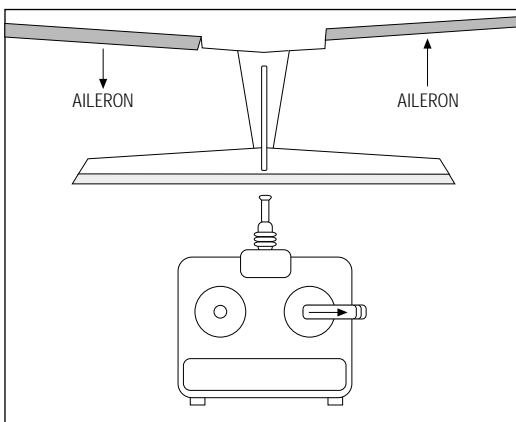
If any of the above controls are working in the wrong direction, consult the 421EX radio manual on servo reversing.



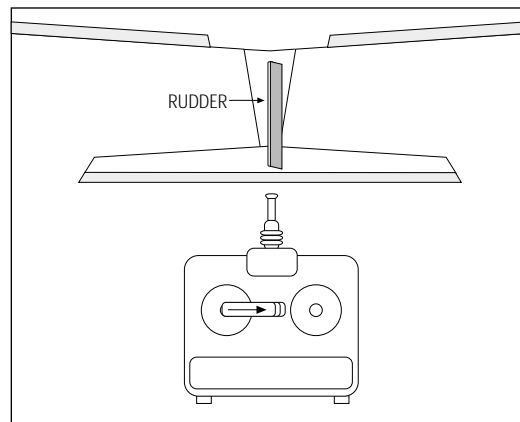
ELEVATOR



THROTTLE

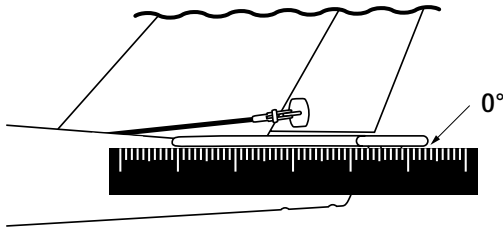


AILERON



RUDDER

It is very important that you make sure the control surfaces (rudder, elevator and ailerons) are at 0 degrees when the transmitter control sticks and trim switches are centered. Turn on your transmitter and receiver. Make sure the rudder, elevator and aileron sticks are centered and the trim switches are centered. Make sure the throttle, aileron, rudder and elevator travel adjusts are set at 100%. Use a ruler to place against the control surfaces to see if there are any deflections from the center (0 degrees).



Adjustments to the control surfaces can be made by threading the clevis in or out on the control rod. Threading in causes the surface to move toward the rod. Threading out causes the surface to move away from the rod. Set the control surfaces (except throttle) to 0 degrees.

Before each flight, check the screws and nuts that secure the metal plate holding the motor in place on the metal motor mount.

Make sure the prop nut is tight by first removing the screws holding the front of the spinner. Once the spinner is removed, use your prop wrench to make sure the prop nut is tight against the propeller and washer on the crankshaft of the engine.



The motor high speed and low speed needle valves have been pre-set at the factory. Refer to the motor operating instructions on how to fine-tune the carburetor. Make any adjustments to the high-speed needle valve in small increments (one or two "clicks" at a time). You should be able to easily start the engine with the present carburetor settings. Read through the engine operating instructions prior to starting your engine.

The Xtra Easy has been balanced at the factory. If for some reason changes are made in battery location or a different engine is installed, you will need to make sure the balance of the aircraft is correct before attempting to fly it. The balance point (or center of gravity) of the Xtra Easy is a range of 3 1/8" to 3 5/8" from the leading edge of the wing. If you have to add weight to the nose or tail, use the stick-on variety sold at your local hobby shop.

Make sure the clevises are connected to the outer hole of the control horn of the rudder and elevator control horns and that the clevis keepers are in place.

Xtra Easy Control Throw Specifications

Elevator	3/8" up	3/8" down
Rudder	3/4" right (Measured at the bottom of the rudder)	3/4" left
Ailerons	1/4" up	1/4" down

To achieve these throws with 100% travel adjust in the transmitter, the linkages need to be hooked up in the following manner:

- **Elevator:** At the control surface, use the outermost hole on the control horn. At the servo, use the hole 8mm out from the center at the servo arm. This is the innermost hole on the "X" arm.

- **Rudder/Nose wheel:** At the control surface, use the outermost hole on the control horn. At the servo, use the 8mm hole out from the center of the servo arm. This is the innermost hole in the "X" arm. The nose wheel is located 11mm out from the center on the servo arm and at the outermost hole on the nose wheel steering arm.

- **Ailerons:** At the torque rod, the nylon horn bracket needs to be screwed on the torque rod such that it is 17mm from the surface of the wing. At the servo, use the hole 8mm out from the center at the servo arm. This is the innermost hole on the "X" arm. This gives the exact throw given above.

- **Throttle:** At the carburetor, use the innermost hole. At the servo, a location of 12mm from center should be used.

Pre-Flight Checks at the Flying Field

Important: Be sure your batteries are fully charged, per the instructions included with your radio system.

Perform a ground range check before each day's flying. Proceed as follows:

- Do not extend the transmitter antenna. Turn the transmitter "ON."
- Turn the model "ON."
- Slowly walk away from the model while moving the control surfaces. The aircraft should function properly at a distance of 75–100 feet.
- Make sure all trim levers on the transmitter are in the proper position.
- Check to be sure all servo and switch harness plugs are secure in the receiver.

Starting the Engine: General procedures (refer to engine operating instructions)

- Fill the tank with fuel.
- Open the throttle (turn ON the transmitter and receiver; move the throttle stick to center position).
- Choke the engine (place thumb over carburetor and rotate prop several times).
- Reduce throttle to an idle position.
- Connect the glow-plug ignitor.
- Use a "Chicken Stick" or an electric starter to turn engine over.
- To stop the engine after it starts, simply pinch the fuel line until the engine stops due to lack of fuel.
- Refer again to the operating instructions on how to adjust the high-speed needle valve.

Flight Instructions

For first-time pilots, the thought of flying their Xtra Easy through loops, rolls, and perfect three-point landings can be thrilling. Learning to fly, however, takes time, patience, and most importantly, a good instructor. If you're a first-time pilot, don't try to fly the Xtra Easy alone. Seek an experienced instructor. Your local hobby shop can put you in touch with an instructor in your area who can fly and trim your Xtra Easy, and then give you your first chance on the "sticks" with very little risk of damage to the airplane. We cannot overemphasize the importance of having a qualified instructor to help you through your first flight. Don't try it alone!

The JR 421EX system has a built-in trainer system or "buddy box" option. The transmitter can be used with any JR transmitter and a trainer cord (JRPA130). Use of the "buddy box" for the first few flights is highly recommended.

Experienced pilots will find the Xtra Easy to be a confidence inspiring airplane. Super stable and slow flight characteristics make pinpoint landings a breeze. At full throttle, the Xtra Easy is more than capable of most sport aerobatic maneuvers. The self-righting stability of the Xtra Easy helps to make it one of the easiest airplanes you'll ever fly.

Repair Information

In the misfortune of a crash or broken part, see your local hobby dealer for replacement parts.

Propeller Safety Instructions



IMPORTANT!

1. Before using, remove any flash along the edges of the propeller by scraping it with a sharp knife.
2. Only use a "Chicken Stick" or electric starter to start the engine, then make adjustments to the carburetor from behind the engine.
3. Keep spectators at least 20 feet away and out of the path of a rotating propeller.
4. Wear safety glasses and hand protection when operating model engines. Do not permit any objects to touch a turning propeller. Remain clear of the propeller arc.
5. To stop the engine, cut off the fuel supply in accordance with the manufacturer's instructions. In any case, DO NOT stop the propeller with your hand or other object.
6. Inspect the propeller after each flight. Discard any propeller that has nicks, scratches, or any other visible defect. DO NOT repair, alter, or in any way modify a propeller.

WARNING

A rotating propeller can cause serious personal injury.
Follow these instructions carefully!

AMA Safety Code

Official AMA National Model Aircraft Safety Code
Effective January 1, 1999
Model flying MUST be in accordance with this Code in
order for AMA Liability Protection to Apply

General

1. I will not fly my model aircraft in sanctioned events, air shows, or model flying demonstrations until it has been proven airworthy by having been previously, successfully flight tested.
2. I will not fly my model higher than approximately 400 feet within 3 miles of an airport without notifying the airport operator. I will give right-of-way and avoid flying in the proximity of full-scale aircraft. Where necessary, an observer shall be utilized to supervise flying to avoid having models fly in the proximity of full-scale aircraft.
3. Where established, I will abide by the safety rules for the flying site I use, and I will not willfully and deliberately fly my models in a careless, reckless and/or dangerous manner.
4. At all flying sites, a straight or curved line(s) must be established in front of which all flying takes place with the other side for spectators. Only personnel involved with flying the aircraft are allowed in front of the flight line. Flying over the spectator side of the line is prohibited, unless beyond the control of the pilot(s). In any case, the maximum permissible takeoff weight of the model is 55 pounds.
5. At air shows or model flying demonstrations, a single straight line must be established — one side which is for flying, with the other side for spectators. Only those persons accredited by the contest director or other appropriate official as necessary for flight operations or as having duties or functions relating to the conduct of the show or demonstration are to be permitted on the flying side of the line. The only exceptions which may be permitted to the single straight line requirements, under special circumstances involving consideration of site conditions and model size, weight, speed, and power, must be jointly approved by the AMA President and the Executive Director.
6. Under all circumstances, if my model weighs over 20 pounds, I will fly it in accordance with paragraph 5 of this section of the AMA Safety Code.
7. I will not fly my model unless it is identified with my name and address or AMA number, on or in the model. Note: This does not apply to models flown indoors.
8. I will not operate models with metal-bladed propellers or with gaseous boosts, in which gases other than air enter their internal combustion engine(s); nor will I operate models with extremely hazardous fuels, such as those containing tetranitromethane or hydrazine.
9. I will not operate models with pyrotechnics (any device that explodes, burns, or propels a projectile of any kind) including, but not limited to, rockets, explosive bombs dropped from models, smoke bombs, all explosive gases (such as hydrogen-filled balloons), ground mounted devices launching a projectile. The only exceptions permitted are rockets flown in accordance with the National Model Rocketry Safety Code or those permanently attached (as per JATO use); also those items authorized for Air Show Team use as defined by AST Advisory Committee (document available from AMA HQ). In any case, models using rocket motors as primary means of propulsion, are limited to a maximum weight of 3.3 pounds and a G series motor. Note: A model aircraft is an aircraft, with or without an engine, not able to carry a human being.
10. I will not operate any turbo jet engine (axial or centrifugal flow) unless I have obtained a special waiver for such specific operations from the AMA President and Executive Director and I will abide by any restriction(s) imposed for such operation by them. (Note: This does not apply to ducted fan models using piston engines or electric motors.)
11. I will not consume alcoholic beverages prior to, nor during, participation in any model operations.

Radio Control

1. I will have completed a successful radio equipment ground range check before the first flight of a new or repaired model.
2. I will not fly my model aircraft in the presence of spectators until I become a qualified flier, unless assisted by an experienced helper.
3. I will perform my initial turn after takeoff away from the pit or spectator areas, and I will not thereafter fly over pit or spectator areas, unless beyond my control.
4. I will operate my model using only radio control frequencies currently allowed by the Federal Communications Commission. (Only properly licensed Amateurs are authorized to operate equipment on Amateur Band frequencies.)
5. I will not knowingly operate an R/C system within 3 miles of a pre-existing model club-flying site without a frequency sharing agreement with that club.
6. I will not fly my model aircraft in any racing competition, which allows models over 20 pounds, unless that competition event is AMA sanctioned. (Competition is defined as any situation where a winner is determined.)
7. Every organization racing event requires that all officials, callers, and contestants must properly wear helmets, which are OSHA, DOT, ANSL, SNELL, NOCSAE or comparable standard while on the racecourse. In addition, all officials occupying safety cages must wear protective eyewear.

Glossary of Terms

- **Ailerons:** Each side of this airplane has a hinged control surface, called an aileron, located on the trailing edge of the wing. Move the aileron stick on the transmitter left, the left aileron moves up and the right aileron moves down. Moving the left aileron up causes more drag and less lift causing the wing to drop down. When the right aileron moves down, more lift is created, causing the wing to rise. This interaction causes the airplane turn or roll to the left. Perform the opposite actions, and the airplane will roll to the right. This is how you control the airplane's direction in flight.
- **Carburetor:** By adjusting the needle valve in the carburetor, you control the engine's lean/rich fuel mixture and determine the airplane's speed.
- **Charger:** This is the device used to charge/recharge batteries. If NiCad batteries are provided with the radio, a charger is usually provided as well.
- **Clevis:** The Clevis connects the wire end of the pushrod to the control horn of the control surface. A small clip, the clevis has fine threads so that you can adjust the length of the pushrod.
- **Clunk:** Located in the fuel tank, a clunk is weighted and ensures that the intake line has a steady supply of fuel.
- **Computer Radio:** By using advanced programming functions of the transmitter, you can adjust the airplane without changing any mechanical structures.
- **Control Horn:** This arm connects the control surface to the clevis and pushrod.
- **Control Surfaces:** The moveable part of the wing and tail that causes the aircraft to roll (aileron), pitch (elevator), or yaw (rudder).
- **Dead Stick:** When the airplane is in flight gliding, without the engine running, it is called "dead stick".
- **Dihedral:** The degree of angle (V-shaped bend) at which the wings intersect the plane is called dihedral. More dihedral gives an airplane more aerodynamic stability. Some sailplanes and trainer planes with large dihedral dispense with ailerons and use only the rudder to control the roll and yaw.
- **Electric Starter:** This is the small motor commonly used to start the airplane's engine.
- **Elevator:** The hinged control surface functions as an elevator, which you adjust to control the airplane's pitch axis. Pulling the transmitter's control stick toward the bottom of the transmitter adjusts the elevator upward, and the airplane begins to climb. Push the control stick forward, and the airplane begins to dive.
- **Expanded Scale Voltmeter (ESV):** This device is used to check the voltage of the battery pack.
- **Flight Box:** The box in which you store and transport your flying equipment is called a flight box.
- **Flight Pack or Airborne Pack:** These interchangeable terms describe the radio equipment that is installed on the airplane.
- **Fuel Overflow Line (Vent):** This line pressures the fuel tank and provides an even fuel flow to the engine. It also functions as an overflow line when the fuel tank is full.
- **Fuel Pickup Line:** This line connects the fuel tank to the carburetor, usually with a clunk on the tank end to keep the fuel flowing while the aircraft is in flight.
- **Fuselage:** The main body of an airplane.
- **Glow Plug Clip/Battery:** A 1.2-Volt battery with a clip which is connected to your engine's glow plug and is used to start the engine. You remove it once the engine is running smoothly.
- **High Wing:** The term describes an airplane that has its wings mounted on the top of the fuselage.
- **Hinge:** The hinges are the moving blades on the control surface that allow you to control the airplane's movement. All hinges must be glued properly and securely to prevent the airplane from crashing. (This has already been done for you on the Extra Easy.)
- **Horizontal Stabilizer:** The horizontal surface of the tail gives the airplane stability while in flight.
- **Leading Edge:** The front of a flying surface.
- **Main Landing Gear:** The wheel and gear assembly the airplane uses to land. It is attached to the bottom of the fuselage.
- **Muffler:** This device muffles engine noise and increases the back pressure from the engine's exhaust stack, which can improve the airplane's performance at low speeds. Mufflers are usually required by R/C Clubs.
- **Needle Valve:** This mechanism within the carburetor adjusts the fuel mixture and throttle. Refer to your engine's manufacturer instructions for directions on how to adjust the needle valve.
- **NiCad:** This abbreviation stands for Nickel Cadmium, the chemical compound used in rechargeable batteries.
- **Nitro:** Short for nitromethane, a fuel additive that improves an airplane's high-speed performance. Check your engine's instructions to determine the ideal nitro content for your engine.
- **Nose Gear:** The part of the landing gear that is attached to the nose of the fuselage. The nose gear is usually connected to the rudder servo to help you steer the airplane on the ground.
- **Pitch Axis:** The horizontal plane on which the airplane's nose is raised or lowered. By adjusting the elevator, you can raise the airplane's nose above the pitch axis (climb) or lower it below the pitch axis (dive).

- **Pushrod:** The rigid mechanism that transfers movement from the servo to the control surface.
- **Receiver (Rx):** The receiver unit in the airplane receives your signals from the ground transmitter and passes the instructions along to the airplane's servos.
- **Roll Axis:** The horizontal plane on which the airplane's wings are raised or lowered. By adjusting the ailerons, you can drop a wing tip below the roll axis and cause the airplane to bank or roll.
- **Rudder:** The hinged control surface on the vertical stabilizer that controls the airplane's yaw. Moving the rudder to the left causes the airplane to yaw left; moving the rudder to the right causes it to yaw right.
- **Servo:** The servo transforms your ground commands into physical adjustments of the airplane while it's in the air.
- **Servo Output Arm:** A removable arm or wheel that connects the servo to the pushrod — also called servo horn.
- **Spinner:** Term describing the nose cone that covers the propeller hub.
- **Switch Harness:** This switch is commonly located on the fuselage and governs the ON/OFF mechanism for the flight pack.
- **Tachometer:** A device that measures the engine's rpm (rotation per minute) by counting light impulses that pass through the spinning propeller.
- **Thread Locker:** A liquid that solidifies; used to prevent screws from loosening due to vibration.
- **Torque Rods:** Inserted into the ailerons, these rigid wire rods run along the wing's trailing edge, then bend downward and connect to the pushrods.
- **Trainer Airplane:** Designed to fly with high stability at low speeds, a trainer model airplane allows new users some extra reaction time as they learn to control the airplane's movements.
- **Transmitter (Tx):** The device used on the ground to transmit instructions to the airplane. Three transmitter modes are used in model airplanes. The most common is Mode II, where the left stick controls the throttle and rudder, and the right stick controls the elevator and ailerons.
- **Vertical Stabilizer:** The vertical surface of the tail gives the airplane stability while in flight.
- **Wheel Collar:** The round retaining piece that anchors wheels in place on the wheel axle.
- **Wing:** Because wings provide the primary lift force on an airplane, adjustments to the wings affect the airplane's movements while in flight.
- **Yaw Axis:** The vertical plane through which the airplane's nose passes as it yaws to the left or to the right. The rudder controls the yaw axis.
- **Z-Bend:** The wire ends of pushrods have Z-shaped bends, which attach to the servo.

Fun Options

(Available separately)

Hangar 9's "Fun Options" bolt directly on the Xtra Easy. The Xtra Easy comes with "pre-installed" blind nuts that allow you to easily bolt on the Drop Box and Photo OP.

Sailplane Launch

Now you can take a friend's 2-meter (or smaller) sailplane, such as Hangar 9's Aspire, up to amazing altitudes in no time. Great team act that makes sailplane flying fun at powered fields.
HAN1325

Drop Box

With a youngster's parachute-equipped action figure placed in the drop box, the game is to see if you can judge the wind drift accurately enough to catch the figure — before it hits the ground! Or, drop paintballs, candy, ping pong balls, streamers — whatever's fun and safe.
HAN1326

Photo OP

With an inexpensive camera like the Kodak® MAX or FujiFilm® Quick Snap™, you can take aerial pictures of your flying site — you won't believe what things look like from a bird's-eye view!
HAN 1327

