

50" Curtis Jenny Electric Scale ARF Instruction Manual



Specs:

Wing Span: 50"

Overall length: 33"

Wing area: 364 sq. in

Ready to fly weight: 34 oz

Motor/Engine:

Electric: Uranus-35425 brushless outrunner motor, Prop: EP 11x6, 12x6
Glow: .15-.21 glow engine, Prop: 8x4, 9x4, fuel tank: 100 ml (about 3.4 oz)

Radio required: 4ch, 4-5 mini servos

Maxford USA

An important notice to our customers!

This product is NOT a toy. Any test, flight and later flight by this product are done at your own risk. Please enjoy your hobby and fly safely!

Waiver

Maxford USA provides high quality, thoroughly tested model airplane kits, but ultimately the quality and capability of your finished model airplane depends on how you build it. Maxford USA can NOT in any way guarantee the performance of your finished model airplane.

Maxford USA will not accept liability for personal injury, property damage, or wrongful death caused by negligent use of this product.

Return Policy

Maxford USA guarantees this kit to be free from defects in both material and workmanship at the date of purchase. Maxford USA has no control over the final assembly or material used for final assembly. All of our products are inspected in our factory and are checked again when shipped from our warehouse. If you think there is any missing part or shipping damage, please read our return policy as below.

1. Your order should be inspected upon delivery for any shipping damage, missing parts or boxes and you should contact us within 10 days from receipt if there is a problem. No return or exchange after 10 days.
2. You must call us to get a RMA# (return merchandise authorization number) before you send the package back to us. The RMA# must be clearly marked outside of the package.
3. The return item must be in original and good condition (NOT assembled or modified) with original packing material, manuals and accessories.
4. All shipping and insurance must be prepaid.
5. A 10~20% restocking fee might be charged.
6. No return for Li-Po batteries.

Return Address:
Maxford USA Corp.
13909 Artesia Blvd.
Cerritos, CA 90703
Tel: 562-802-0680
Fax: 562-802-0650

IMPORTANT SAFETY PRECAUTIONS TO PROTECT YOUR MODEL, YOURSELF & OTHERS

1. This product should not be considered as a toy, but rather a sophisticated, working model that functions much like a full-scale airplane. Because of its performance capabilities, the model airplane, if not assembled and operated correctly, could possibly cause injury to you or spectators and damage to property.
2. Assemble the model airplane according to the instructions. Do not alter or modify the model, as doing so may result in an unsafe or unworkable model. In a few cases the instructions may differ slightly from the photos. In those instances the written instructions should be considered as correct. If you have any question about this instruction, contact us before you assemble the model.
3. Take time to build straight, TRUE and STRONG.
4. Maxford USA recommends that you use a good quality radio system and our recommended or same sized good quality motor and components throughout the building process.
5. Install all R/C and other components correctly so that the model operates correctly on the ground and in the air.
6. Always check the operation of the model before every flight to insure that all equipment is operating and that the model has remained structurally sound. Always check clevises or other connectors and replace them if necessary.
7. If you are not an experienced pilot or have not flown this type of model before, we recommend that you get the assistance of an experienced pilot.
8. While this kit has been flight tested to exceed normal use, if the plane will be used for extremely high stress flying, such as racing, or if a motor larger than one in the recommended range is used, the modeler is responsible for taking steps to reinforce the high stress points and/or substituting hardware more suitable for the increased stress.

WARNING

Some parts included in this kit are made of fiberglass, the fiber of which may cause eye, skin and respiratory tract irritation. Never blow into a part to remove fiberglass dust, as the dust will blow back into your eyes. Always wear safety goggles, a particle mask and rubber gloves when grinding, drilling and sanding fiberglass parts.

LITHIUM BATTERY HANDLING & USAGE

WARNING!! Read the entire instruction sheet included with the battery. Failure to follow all instructions could cause permanent damage to the battery and its surroundings, and cause bodily harm!

- ONLY use a Li-Po approved charger. NEVER use a NiCd/NiMH peak charger!
- NEVER charge in excess of 4.20V per cell.
- ONLY charge through the "charge" lead. NEVER charge through the "discharge" lead.
- NEVER charge at currents greater than 1C.
- ALWAYS set charger's output volts to match battery volts.
- ALWAYS charge in a fireproof location.
- NEVER trickle charge.
- NEVER allow battery temperature to exceed 150° F (65° C).
- NEVER disassemble or modify pack wiring in any way or puncture cells.

- NEVER discharge below 2.5V per cell.
- NEVER place on combustible materials or leave unattended during charge or discharge.
- If you crash the plane, always check if the Li-Po battery is damaged. Do NOT try to use or charge a damaged Li-Po battery.
 - ALWAYS KEEP OUT OF REACH OF CHILDREN.

PARTS LIST

Wing set in one-piece with carbon fiber leading edges
 Fuselage 1 piece
 Vertical Stabilizer with pre-hinged rudder
 Horizontal Stabilizer with pre-hinged elevator
 Motor mounts for electric and glow
 Landing gear with wheels and tailskid
 Fiberglass Cowl
 Hardware and accessories bag
 Repair bag

Other items you need to assemble this model

4 pieces HS-SG90 mini servos or equivalent (5 for a glow powered model)
 12" servo extensions and 6" Y cable
 .15-.21 Glow engine, 3 oz fuel tank, and prop
or
 Electric outrunner motor and ESC
 3 cell 1320 (or more) mAh Li-Po battery
 Li-Po Battery Charger
 Receiver and Transmitter

Special Features

Carbon fiber leading edge on both wings
 Carbon fiber wing skids on the bottom of lower wings
 Wing in one piece, all wires are pre-installed
 Pre-installed pull-pull tail wires

Before you begin:

- Read the instructions completely before beginning assembly.
- Don't work when tired. Many aircraft (including full sized ones) have crashed because of errors made by tired builders.

-Always work in a well ventilated and lighted area.

Start to Assemble your Jenny

Horizontal & Vertical Stabilizers – Move control lines from atop the rear of the fuselage and re-tape beneath the tail.



Control lines as shipped.

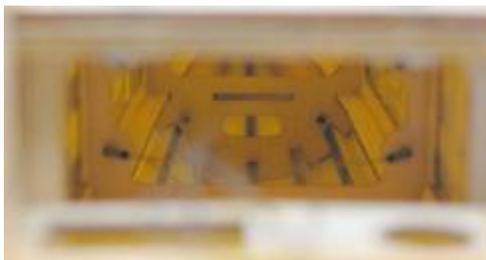
Insert the tab on vertical stabilizer (V Stab) into the slot on the horizontal stabilizer (H Stab). Slide assembly into the top rear of the fuselage, then toward the nose to align the hole in the tab with pin-hole in the side of the fuselage beneath the H Stab.



Pin-hole in covering hides the hole for the $\frac{3}{4}$ " bolt.



Insert the $\frac{3}{4}$ " bolt through the three holes. Place a washer and a nut on the bolt and tighten. Do not crush the wood under the screw. Place a small drop of thin CA at the end of the screw and nut.



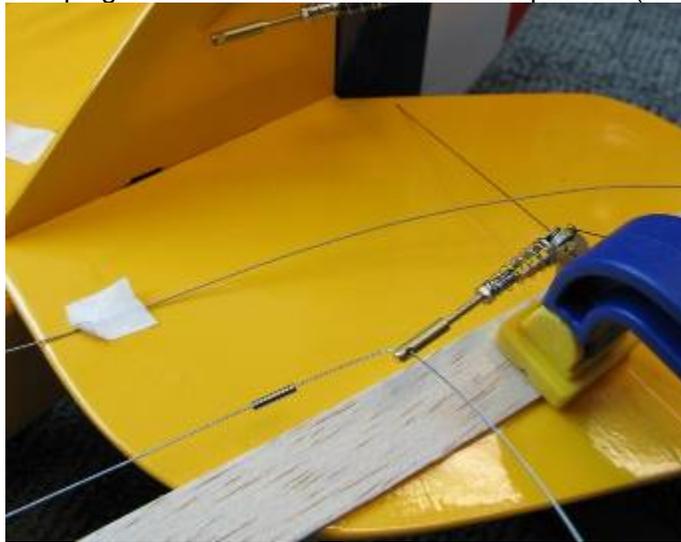
**Rudder lines come through rear bulkhead.
Elevator lines come through the edge of the
closer bulkhead.**

Make sure the control lines in the fuselage are not tangled, then attach the clips to the servo arms and mount the arms on the servos.

Elevator & rudder control-line connection guidelines

The following general procedure will be done six times – once for each of the rudder and elevator control lines. More detailed control-surface-specific instructions are provided in subsequent paragraphs; **do not perform these steps until you read those sections thoroughly**. The rudder and elevator control lines will be connected (with the assistance of a steel clevis that's threaded onto a small brass pullrod) to the curved wooden horns that are mounted through the control surfaces.. This connection procedure should be performed only after

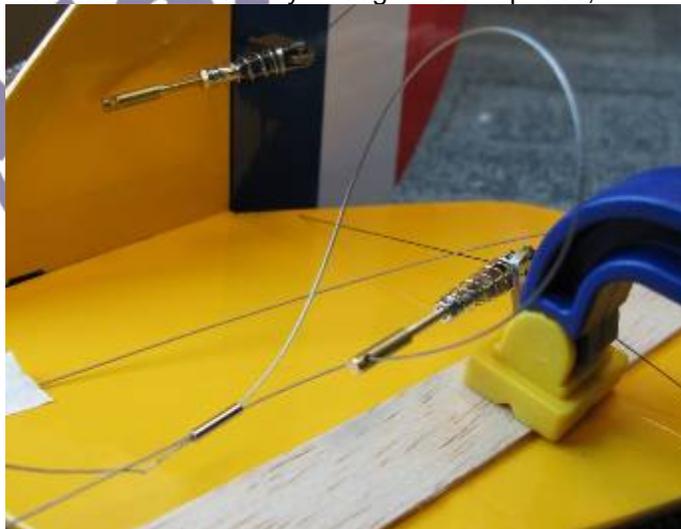
- i. clamping the servo arm into a neutral position (or activate the radio system)
- ii. clamping the control surface into a neutral position (in-line with its stabilizer), and



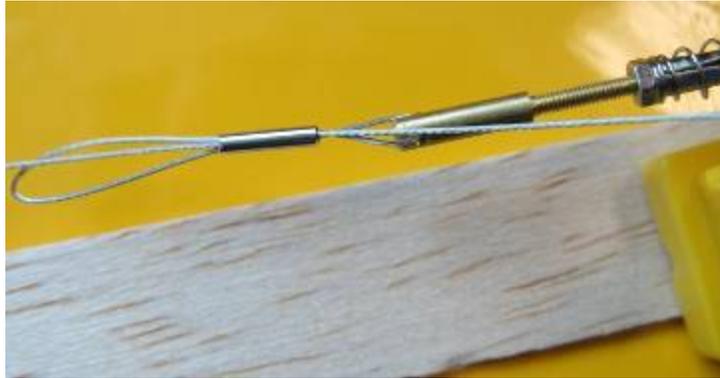
- iii. attaching the steel clevis to the hole in the wooden control horn (pull back the spring to open the clevis).

Each control line is inserted

- i. first through a narrow, 1cm-long crimp tube,
- ii. then through the hole in the brass pullrod,
- iii. then back the other way through the crimp tube,



- iv. where the end of the line is looped back through the crimp tube for a third and final time.



- v. Pull the final loop close to the tube to tighten the linkage, then squeeze the tube with a pair of pliers to crimp it together permanently



Initial line length adjustment is done by pulling the line taught (after the other end is connected to the servo horn) then crushing the crimp tube flat with a pair of pliers to keep the line from moving further. (For an example of a crimped control line, see the pre-tied rudder control lines where they connect to the servo horn.) After crimping, excess control line can be clipped off at the end of the crimp tube. Fine-tuning of control-line length is accomplished by removing the clevis from the control horn and rotating it in or out over the threaded brass pullrod. When neutral deflection is achieved with the radio on at neutral trim, apply thread-lock to the clevis and brass rod.

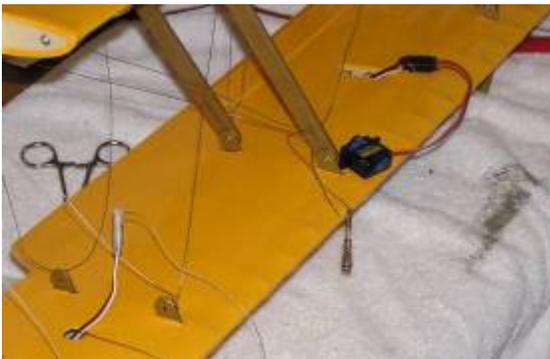
Elevator Control Lines

- a) The two pre-tied snap-hooks that each pull two lines control the elevators. Using the rearward mounted servo, install the elevator line snap hooks to the outermost holes on opposite ends of the servo arm. It is easier to attach the snap-hooks when the arm is outside the airframe (and off the servo). As long as you can reverse the direction of your servos later, it doesn't matter which arm gets the "up" elevator hook.
- b) Attach the servo arm to the centered servo so that the arms point to the sides of the fuselage. Block both arms from movement for the purpose of line connection.
- c) Place sturdy balsa strips across the H Stab and Elevators then clamp using plastic or rubber tipped light duty clamps.
- d) Prepare the elevator control lines per the control-line guidelines above.
- e) Tighten each of the lower elevator lines then crimp the tube over the line.
- f) Remove clamps and balsa from the elevators. Remove the shims or blocks holding the servo arm.

Rudder Control Lines

- a) The two pre-tied snap-hooks that pull just a single line control the rudder. Using the forward mounted servo, install the rudder line snap hooks to the outer most holes in the servo arm. (This is also more easily done with the arm off the servo.)
- b) Attach the servo arm to the centered servo so that the arms point to the sides of the fuselage. Block both arms from movement for the purpose of line connection.
- c) Place sturdy balsa strips across the V Stab and rudder then clamp using plastic or rubber tipped light duty clamps.
- d) Prepare the rudder control lines per the control-line guidelines above.
- e) Tighten each rudder line and crimp the tube over the lines.
- f) Remove clamps and balsa from the rudder. Remove the shims or blocks holding the servo**

Aileron Servo Installation



-Attach the extensions (not supplied) to your aileron servos. (To keep the extensions from becoming disconnected tie the extensions to the servo leads with fishing line, and apply a drop of CA to the knot.) Tie and tape the extensions to the pre-inserted pull through strings and thread them through the wings to the exit hole in the center.

-With the leads in the wing, trim the bay as needed to fit your servo. (Be careful not to cut through the servo wire.)

-Mount the aileron servos with the spine toward the trailing edge of the wing and pull the rest of the servo extension through the wing.

-Attach the aileron control horns. Be careful that glue does not seep through the holes and stain the top of the aileron.

-Center the servo, attach the aileron servo arm, and thread the aileron control rod through the arm.

-Slide the e/z link onto the servo linkage. Carefully measure the linkage and make a 90° bend into the control horn. Insert the link into the control horn and the e/z link. Trim as needed.

Radio Installation



- Install the rudder and elevator servos into the fuselage. The rudder servo goes in the aft most cut out and the elevator servo in the middle. If you are using a gas engine the throttle servo goes in the most forward hole.
- Open the battery hatch. The receiver can be velcroed into position forward of the throttle servo.

Control Cable Installation



- Tape the ends of the elevator and rudder cables together so you don't pull them out of their holes in the fuselage.
- It is best if you start installation with the rudder servo since the elevator cables run across the top of the rudder servo.
- Center the rudder servo and attach the control cables to the servo arm. When doing so make sure you do not pull the control cables out of their fuselage exits. Mount the arm onto the servo.
- Repeat for the elevator servo. Make sure the cables have clean runs inside the fuselage and are not tangled.
- Attach the clevises to the elevator and rudder control horns.

In the next step it is CRITICAL that you TAKE YOUR TIME AND TRIPLE CHECK YOUR WORK before proceeding past each step!!!



-Slide a swag fitting onto a rudder cable. Run it through the rudder control link and back through the swag fitting. **DO NOT CRIMP AT THIS TIME!!!** The cables will be run through their swag collars one more time, but only after everything is checked for alignment.

-Repeat for the other rudder cable and all 4 elevator cables. Make sure both elevators are symmetrical.

-Check the control runs inside the fuselage. Again check to make sure that all the cables have clean runs and are not tangled. If they are, undo the fitting, clear the tangle and rerun the swag. **DO NOT CRIMP THE SWAG FITTINGS YET!!!!**

-When all the runs are clean and the cables are not tangled, make sure the elevators, rudder and their servos are centered. Loop the cables back through the swag fittings a final time.

-Make an absolute final check that all the runs are clean and the cables are not tangled. Make sure the elevators, rudder and their servos are centered.

-Carefully pinch the swag collars closed, and trim off the excess control cable.



-The aileron "Y-harness" can either be run through the cooling hole in front of the forward cockpit, or a small hole can be made in the floorboard.

-It helps make the model look nice if you paint or stain the balsa in the cockpit area.

If you are using a gas engine: The radio on/off switch can be mounted in your choice of position. It is recommended that the radio battery pack is velcroed as far forward as possible for cg purposes.

Engine Attachment

-Assemble and mount your electric motor or glow engine/fuel tank as provided by the manufacturer's instructions.

-For electric motors it is recommended that the ESC be mounted in the top of the forward compartment with a velcro strap for flow-through cooling.



Wing Attachment

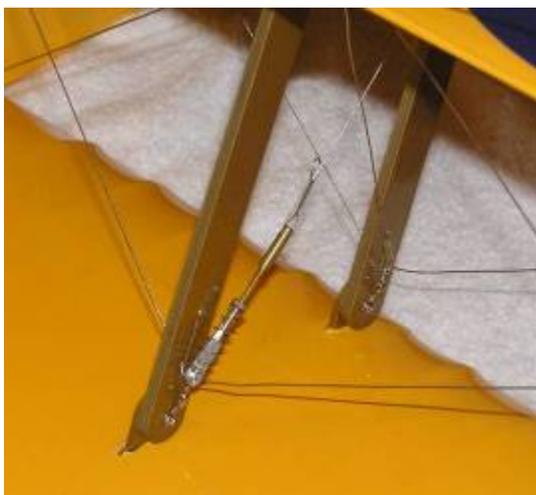


- Unscrew the front cabane struts and partially lower them into the fuselage.
- Adjust the wings to give you as much room as possible.
- Loosen the wing wires to give you room for the cabane struts.
- Carefully slide the fuselage through the wings from the back. It helps to turn the fuselage about 30° and straighten it when in position.
- Temporarily insert and attach one nylon screw into the wing trailing edge attachment. Do not fully tighten yet.



-Screw the 2 nylon bolts into the lower wing leading edges from inside the battery compartment.

-Raise and screw the front cabane struts back into position. Bolt the cabane struts to the upper wing cabane mounts.



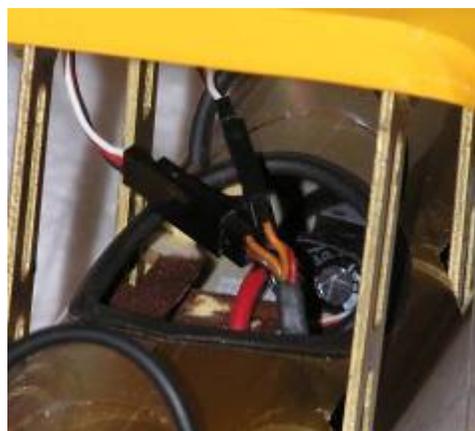
-Attach the wing flying wire clevis to the lower aft inner wing strut swivel. Do not attach it to the wing wires!!

-Tighten the wing wires, and crimp the swag fitting closed like you did with the elevator and rudder control cable links.

-Tighten all wing and cabane strut bolts. Put a drop of thread lock on them.

-Attach the aileron servo leads to the aileron y-harness.

-You may add two pilot figures if you want.



Cowling

- Fit the cowling to the fuselage by trimming it to fit around your propeller shaft.
- When the cowling fits, remove it from the fuselage and drill 1/16" pilot holes for the cowling attachment screws.
- Tape the cowling to the fuselage, carefully aligning it around the propeller shaft, and screw it into place with 4 screws.
- Remove the screws. Put a drop of thin CA into the holes to reinforce them. While the CA is drying paint the screw heads with flat black paint to match the rest of the screws on the model.
- When the paint and the CA is dry reattach the cowling with the screws.
- Separate the 4 drag wires attached to the front of the cowling from each other.
- Remove the spring from a drag wire and attach it to the corresponding swivel on the front inner wing strut. Do not attach it to the wing wire!
- Tie the drag wire to the spring. You want it to be taut, but not so tight that it pulls the cowling out of alignment.
- Repeat for the other 3 wires.
- When complete, check the cowling alignment, crimp the spring around the drag wire, put a drop of CA on the knot and trim any excess string. **DO NOT** crimp the spring around the wing strut swivel! You need to be able to remove the cowling.

Landing Gear



-Use either an aircraft stand or rest the upper wing center section on a block of foam between the upper wing support wires.

-Remove the wing root attachment screw you previously inserted during the wing/fuselage assembly.

-Attach the landing gear using 4 nylon screws and tighten.



-Place a wheel on the axle. Carefully push the wheel so the cover compresses slightly.

-Place a wheel collar on the axle, and tighten with a .035" allen wrench. Remember to put threadlock on the screw.

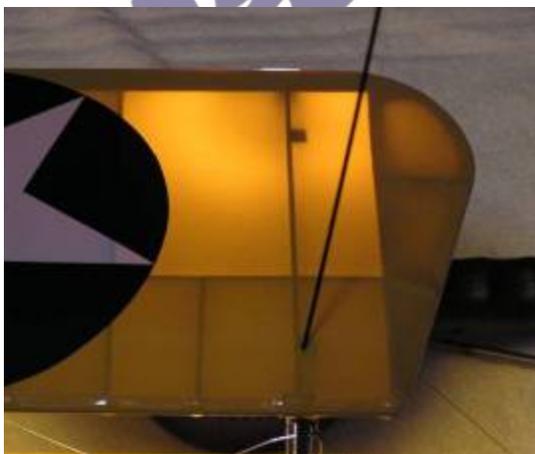
-Carefully uncompress the wheel cover. When the cover uncompresses it will hide the wheel collar.

-Screw the tailskid into position at the back of the aircraft with 2 screws.



-Shine a strong light through the top of the bottom wing to help locate the two wingtip skid mounting blocks. (There should also be two small holes poked into the covering material.)

-Insert the 2 carbon fiber rods into the blocks and glue them into place.



Balancing the Jenny

-Mount the battery in the front compartment (but do not plug it in!) fasten the hatch, and attach the prop.

-Your Jenny should balance at 2.00" behind the leading edge of the top wing. (approximately at the main wing spar.) If tail weight is needed you should consider a larger capacity and weight battery before adding lead to the nose.

Final check before flying

Before the first flight

-Check all nuts, bolts, screws, and clevises.

-Check the controls for proper operation. (Even real airplanes-such as the early models of the F-117 and SR-71-crashed due to the controls being reversed.)

At the field

-With the aircraft properly restrained, perform a range check with the motor running and the prop attached. You should be able to get at least 100' away from the model with your transmitter's antenna stowed with reliable control.

-If possible, have another modeler check your Jenny over. Smart pilots never mind a second opinion.

**Hopefully you will never need them,
but for replacement parts check our web site at**

www.maxfordusa.com

Want More Fun?

Our Curtiss Jenny Scale ARF is also available with wing spans of 38" and 105". Check our web site at www.maxfordusa.com for more details.



An important notice to our customers!

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Special thanks for

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