

SUPER-TRANSPORTABLE 38 INCH WINGSPAN EP ARF R/C SPORT-SCALE
CURTISS JN-4 “JENNY”
INSTRUCTION MANUAL



The Curtiss JN-4 "Jenny" two-seat biplane was one of the most popular airplanes of all time. Jennys were the primary trainer for 95% of all World War I United States and Canadian pilots, and they were used in flying schools in Australia, the United Kingdom and France. The Jenny was the first mass-produced airplane; by the time Armistice was declared in 1918, well over 6,000 JN-4s had been built.

After the war thousands of surplus Jennys were sold to private owners at bargain prices. Charles Lindbergh's first airplane was a surplus Jenny – purchased in 1923 for \$500.

Today, only about 50 Jennys survive in museums or in the hands of a few fortunate private owners.

This super-transportable ARF model of the Jenny is close in scale to the actual JN-4 Jenny (although some necessary changes were made to meet the needs of RC pilots). It includes a custom-fit, foam-lined aluminum carrying case and is recommended for semi-scale RC enthusiasts with intermediate assembly and flying skills.

*We invite you to enjoy the pride of ownership and the joy of flying
 this beautiful model of the famous JN-4 Jenny.*



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I. SAFETY PRECAUTIONS & ASSEMBLY TIPS:

(IMPORTANT – READ THIS SECTION BEFORE YOU BEGIN ASSEMBLY)

1. This product should not be considered a toy, but rather a sophisticated, working model that functions much like a full-scale airplane. Because of its performance capabilities, this product, if not assembled and operated correctly, could cause injury to you or spectators and damage to property. Maxford USA provides you with a high-quality, thoroughly tested model airplane kit with assembly instructions. However, the quality and capabilities of your finished model airplane depend on how you assemble it, and your safety depends on how you use and fly it. Any testing or flying of this model airplane is done entirely at your own risk.
2. Assemble this model airplane according to these instructions. Do not alter or modify the model beyond the assembly and power system options covered in these instructions, 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 or concern about these instructions, before you proceed with assembly of this product, contact your dealer, or speak to a Maxford USA customer service representative at 562-529-3988 (Monday through Friday, except national holidays, 9 AM to 5 PM Pacific time).
3. While this kit has been flight-tested to meet or exceed our rigid performance and reliability standards in normal use, if you elect to perform any extremely high-stress flying, such as racing or advanced aerobatics, or if you install a larger power system than specified, you (the buyer or user of this product) are solely responsible for taking any and all necessary steps to reinforce the high-stress points and/or substitute hardware that is more suitable for such increased stresses.
4. Throughout the lifetime of this model, use only the Maxford USA-supplied or a same-sized motor and a new or well-maintained radio control system and batteries recommended by Maxford USA or your radio system.
5. It is your responsibility to install the receiver and connect the R/C components in such a way that this model airplane passes all applicable safety/range tests and that the power system and controls operate correctly and smoothly.
6. Recheck the operation of this model airplane before every flight to ensure that all equipment is still operating correctly and that the model has remained structurally sound. Also before every flight, check all electrical, control and structural connections; do not fly without replacing any that you find damaged or worn.
7. Before you begin assembly of this model airplane, read all instructions and test-fit each part to ensure you fully understand the instructions and that no parts are missing, damaged or unsatisfactory.
(Note: Temperature and/or humidity differences between the factory, our warehouse and your home or workshop may indicate the need for slight adjustments to the wing saddle, cabane struts and/or the horizontal stabilizer's mounting platform to ensure the wing is parallel to the horizontal stabilizer; however, we recommend you contact us before you attempt any such adjustments.)
8. If you are not an experienced R/C pilot or have not flown this type of model before, we strongly urge you to get assistance from an experienced R/C pilot.
9. To help ensure the security of your servo connections, we recommend use of optional Maxford USA servo extension safety clips. (This JN-4 includes two preinstalled servo safety clips, one for each aileron servo extender cable).
10. You may apply 30-minute epoxy to permanently attach critical parts (such as where the horizontal and vertical stabilizer attach at the end of the fuselage) and apply a thread-lock compound to secure the motor's mounting hardware from vibration.
11. If you have concern about the security of any factory fabrication procedure(s), you may apply 30-minute epoxy around the perimeter of such part(s) as an extra safety precaution.
12. This model includes some plastic, fiberglass and/or carbon-fiber reinforced parts. If you drill, grind or sand such a part, always wear safety goggles, a particle mask and rubber gloves to guard yourself from eye, skin and respiratory-tract irritation and never blow into the part (the dust may blow back into your face).
13. Check the Mylar covering material's joints and surfaces; if necessary, carefully use a dedicated covering-material iron (do NOT set the iron's temperature too high) to secure the edges and to tighten any loosened areas. Recheck and retighten from time to time.



14. **LITHIUM BATTERY HANDLING & USAGE: WARNING!!** Read all instructions included with your battery and charger. Failure to follow all instructions could result in permanent damage to the battery, its surroundings, and bodily harm! If you crash this model airplane, check whether the LiPo battery is damaged. Do NOT attempt to use and do not attempt to recharge a damaged LiPo battery. In general ...

ALWAYS KEEP THE BATTERY OUT OF REACH OF CHILDREN.

ONLY use a LiPo approved charger.

(NEVER use a NiCd/NiMH charger!)

ALWAYS set the charger's output to match the battery's voltage and mAh ratings.

ALWAYS charge through the battery's "charge" connector. (NEVER charge through the battery's "discharge" leads.)

ALWAYS charge in a fireproof location.

NEVER place the battery on combustible materials or leave it unattended during charge.

NEVER charge a LiPo battery in excess of 4.2V per cell.

NEVER discharge a LiPo battery to less than 2.5V per cell.

NEVER allow the battery's temperature to exceed 150° F (65° C).

NEVER charge at a current greater than 1C. (For example, in the case of a 900 mAh battery, the 1C rate is 0.9 amps.)

NEVER trickle charge a LiPo battery.

NEVER disassemble or modify pack wiring in any way or puncture cells.

II. WARRANTY, LIABILITY WAIVER & RETURN POLICY:

Maxford USA guarantees this kit to be free from defects in material and workmanship at the time of purchase. All our products have been inspected in our factory and are checked again when shipped from our warehouse. However, Maxford USA cannot directly control the materials you may use nor your final assembly process. Therefore, Maxford USA can NOT in any way guarantee the performance of your finished model airplane. Furthermore, in purchasing this product, you (the buyer or user of this product) exempt, waive, and relieve Maxford USA from all current or future liability for any personal injury, property damage, or wrongful death, and if you (the buyer or user of this product) are involved in any claim or suit, you will not sue Maxford USA or any of its representatives.

If you do not fully accept the above liability and waiver, you may request a return-merchandise authorization number (RMA#) as explained below in item 2.

If you think there is a missing, damaged or unsatisfactory part, please read our after-sales service and return policy:

1. Inspect your order upon delivery for any missing, damaged or unsatisfactory part(s). If you believe there is a problem, you must call us at 562-529-3988 (Monday through Friday except holidays, between the hours of 9 AM and 5 PM Pacific time) before you begin assembly and within 10 days from receipt of your purchase. During this telephone conversation, and with your support, we will determine how to resolve your concern.
2. To request a return-merchandise authorization number (RMA#), call 562-529-3988 (Monday through Friday except holidays, between the hours of 9 AM to 5 PM Pacific time). If we elect to issue you an RMA#, you must clearly mark this RMA# on the outside of the package. (No return or exchange will be authorized after 10 days from the date of your receipt of the product; any package delivered to us without a Maxford USA RMA# is subject to being returned to the sender, as received, with return postage payable upon delivery.) Returned merchandise must be in its original condition as received from Maxford USA, with no assembly or modification, in the product's original packing materials, complete with all manuals and accessories. Return shipping and insurance charges must be prepaid by you, the buyer.
3. Returned merchandise that is accepted by Maxford USA for credit is subject to a 10% to 20% restocking fee (the final amount will be determined by Maxford USA upon receipt and examination of the returned merchandise).

Return Address:

**Maxford USA RC Model Mfg, Inc.
15247 Texaco Avenue
Paramount, CA 90723**

IMPORTANT: Print the RMA# issued by Maxford USA near the above address.

III. SPECIFICATIONS:^{*}

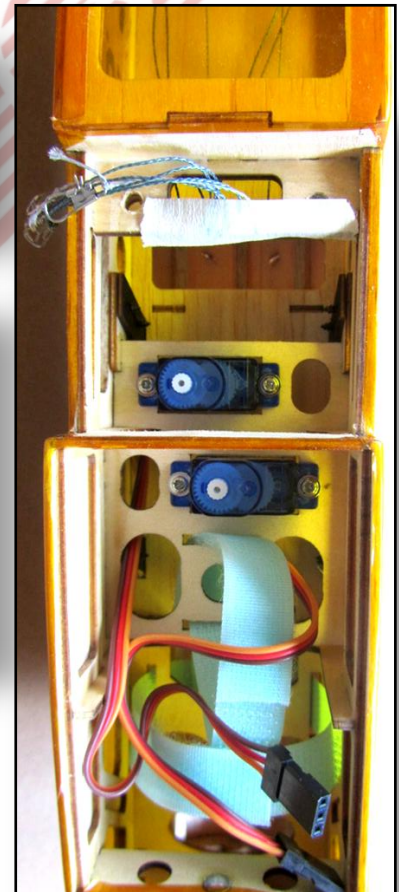
Wingspan	38 inches
Wing area	297 sq. inches (combined, top and bottom wings)
Length	23 inches (includes propeller on the supplied outer-rotor motor)
Flying weight	17 ounces
Power system	CF2822 outer-rotor motor (1,200 RPM/V, ≤16A) and 18A ESC (both are included)
Battery	2S 900 mAh LiPo battery (included) or optional 3S 900 mAh LiPo battery
Propeller	SF 9 x 6 (included)
Radio (not included)	Recommended: 6 channel or greater 'Computer Radio' (min. of 4 channels)
Servos	4 mini servos (all servos are included and preinstalled)

Also includes two preinstalled aileron servo extensions & two preinstalled servo extension safety clips.

^{*}(Dimensions and weights are approximate.)

IV. SPECIAL FEATURES:

- Prepainted cowl with simulated engine rocker arms, exhaust pipes and louvers.
- Realistic looking pretrimmed windshields.
- Carbon fiber leading edges on both wings.
- The wings are removable in left and right pairs for storage and transport in the included custom-fit, foam-lined aluminum case.
- The wings easily reattach for quick in-field setup; the lower wing panels are secured to the fuselage with easily accessible bolts and the top wing panels anchor to the center section with permanent magnets.
- Simulated wing wires are included and preinstalled.
- Fuselage, wings and empennage are jig-assembled, laser-cut balsa and light plywood; the preapplied finish is a quality Mylar covering material.
- Both elevators and the rudder are operated by pull-pull cables (all six pull-pull cables are prerouted at the factory through the fuselage).
- Plywood motor mounting box with premounted outer-rotor brushless motor and presoldered motor & ESC connectors.
- Scale markings are included and preapplied.
- Included scale-looking landing gear and wheels.



V. PARTS LIST:

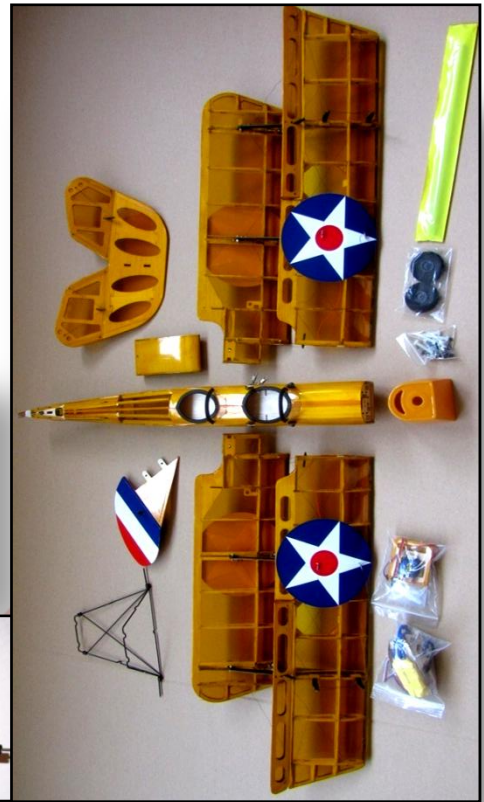
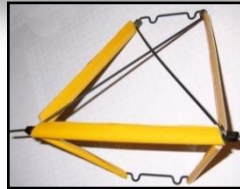
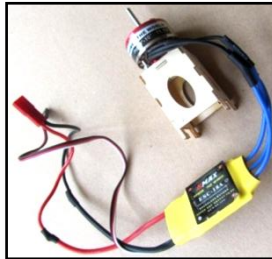
1. Items you must supply

- Thread-locking compound, epoxy and/or cyanoacrylate (CA) adhesives, masking tape and common hand tools (such as screwdrivers, long-nosed and cutting pliers, etc.).
- Battery charger for the included LiPo battery.
- A six (or more) channel 'computer radio' receiver and transmitter. (Minimum is a four-channel non-computer radio control system.)
- Options: 3 cell 900 mAh LiPo battery; if you use a non-computer radio, you will also need to add a 6-inch Y-cable to connect the aileron servos to your receiver's aileron channel.

2. Included items

- Four preinstalled servos (with extender cables and safety clips for the aileron servos).
- Electric power system including a motor mounting box, premounted brushless outer-rotor electric motor and matching electronic speed control (ESC) with presoldered battery and ESC connectors, and a propeller.
- Premounted windshields, cabanes, struts, and fully prestrung wing- and empennage-wires.
- All required rudder and elevator pull-pull cables, aileron pushrods and related control horns and linkages.
- Pretrimmed front and rear windshields and cowl with premounted simulated engine and exhaust pipes.
- Prehinged rudder, elevators and ailerons.
- Scale-looking landing gear with wheels.
- Preapplied scale markings.
- Custom-fit, foam-lined aluminum case.
- This illustrated Instruction Manual.

Note: To maximize visibility of details, semi-transparent covering material has been used for many of the photos throughout these instructions.



VI. ASSEMBLY INSTRUCTIONS:

A. GENERAL

1. Follow the instruction sequence to avoid repeating steps.
2. Before installing a 2 mm sheet metal (SM) screw or #1 wood screw, drill a #56 / .046 inch pilot hole.
3. Although all servos are precentered at the factory, we recommend you check servo centering using your own radio before securing the rudder and elevator pull-pull cables and aileron pushrods.
4. Pull-pull cable installation:
 - a) Tie a slip knot at the horn end of the pull-pull cable.
 - b) Install a snap hook on the control horn and connect a spring between the pull-pull cable and snap hook. (See the rudder or elevator instructions for details.)
 - c) As you pull on the cable from the tail end to tighten the pull-pull cables and center the elevators and rudder, do not pull the servo arms out of their centered positions.
 - d) Once the pull-pull cables are adjusted (*i.e.*, the elevators, rudder and servos are centered), secure both ends of each cable with a drop of thin CA on each knot, and keep tension on the cable until the CA dries.

B. FUSELAGE

1. **Motor** – Observe the marking on the three wires between the ESC and the motor, then disconnect the ESC from the motor, position the ESC inside the fuselage on the ‘floor’ of the battery compartment, and guide its motor wires out through the opening in the firewall. Insert the tabs on the motor mounting box into the vertical slots in the firewall, then slide the mount down until firmly seated in the slots. (If the slots require any filing, be careful to not make the tabs fit too loose.) Reconnect the ESC’s three wires to the motor as originally connected at the factory. We recommend you confirm that the motor runs in the correct direction as follows: Connect the ESC’s throttle lead to your radio receiver’s throttle channel; switch ON your transmitter and set transmitter’s throttle and throttle trim controls to minimum; with no propeller on the motor, switch ON your transmitter and connect the ESC to the battery; after a series of initialization sounds, slowly raise the transmitter’s throttle to no more than 25% of maximum. Carefully run the motor slowly and only for the few seconds necessary to observe its direction of rotation.



If the motor rotated in the clockwise (correct) direction as viewed from the rear of the airplane, return the throttle to minimum, disconnect the ESC from the battery, switch OFF the transmitter, and set your battery and transmitter aside. However, if the motor powered up in the counterclockwise (wrong) direction, return the throttle control to minimum, disconnect the ESC from the battery, swap either two of the three ESC-to-motor wires, and repeat the above procedure to ensure the motor rotates in the correct direction. Use epoxy to secure the motor mount to the firewall. (NOTE: Some customers report they also like to epoxy a 3/4 inch long piece of scrap wood to each side of the motor mount to help secure it to the firewall.)

2. **Cowl** – Install the cowl over the motor and onto the fuselage. Position the cowl and temporarily tape it into position so the motor shaft protrudes approximately 1 inch beyond the face of the cowl. Install three 2mm SM screws through the cowl and into the edge of the firewall (position these screws at the top center and on each side of the fuselage, approximately 1 inch from the bottom edge of the cowl).

3. **Horizontal & Vertical Stabilizers** – Move the pull-pull control lines from the rear of the fuselage and re-tape them forward of the tail. Insert the tabs at the base of the vertical stabilizer into the slots in the horizontal stabilizer. Slide this assembly into the top rear of the fuselage. Align the holes in the vertical stabilizer's tabs with the holes in the sides of the fuselage under the horizontal stabilizer. HINT: Use two straight pins (not provided) to puncture the covering material and align these holes. Once they are aligned, remove the forward pin and insert the long 2 mm bolt with a washer under its head through the hole; place a washer and nut on the bolt and tighten (be careful to not crush the wood). Repeat this process for the rear pin using the shorter 2 mm bolt. Apply a drop of threadlock compound or thin CA on each bolt and nut.



4. **Tail Skid** – Insert the straight end of the tail skid into the predrilled hole in the bottom rear of the fuselage. Install a 2 mm short SM screw in the center of the tail skid's U-shaped bend to secure the skid to the fuselage.

5. **Rudder Pull-Pull Control Lines** – a) Using the rear-mounted servo, attach the pretied rudder line snap hooks to the outer most holes in the servo arm. b) Place a piece of 1/4 inch x 3/8 inch scrap wood across the vertical stabilizer and the rudder to secure the rudder in 'neutral' alignment and hold it in position with masking tape or plastic or rubber-tipped light duty clamps. c) Prepare the rudder control lines per the general instructions. d) Tighten one of the rudder lines so that the coil spring expands approx. 1/8 inch, then place a drop of thin CA on the knots. e) Remove the scrap wood from the rudder and tighten the opposite control line until the rudder is centered, then apply a drop of thin CA onto the knots.

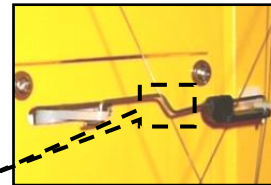
6. **Elevator Pull-Pull Control Lines** – a) Using the forward-mounted servo, install the pretied elevator line snap hooks to the outer most holes in the servo arm with the control lines from the elevator's upper control horns on one end of the servo arm and the control lines from elevator's lower control horns on the servo arm's opposite side. b) Place 1/4 inch x 3/8 inch scrap wood across the horizontal stabilizer and the elevators to secure the elevators in 'neutral' alignment and hold them in position with masking tape or plastic or rubber-tipped light duty clamps. c) Prepare the elevator control lines per the general instructions. d) Separately tighten each of the lower elevator lines so that the coil springs expand approx. 1/8 inch, then place a drop of thin CA on the knots. e) Remove the scrap wood from the elevators and tighten the opposite control lines until the elevators are centered, then place a small drop of thin CA on the knots.

- C. **AILERONS** – Install the aileron control horns by puncturing the covering over the pre-drilled holes in the ailerons (in-line with the servo arms). Secure each horn with thin CA. Install the Z-bend in each aileron push rod into the outer hole of each servo arm. Slide a plastic pushrod keeper onto the straight end of the pushrod. Being careful to not move the aileron servos from their centered positions and with the ailerons centered (in a neutral position), use pliers to form a sharp 90-degree bend in the end of each pushrod to fit into



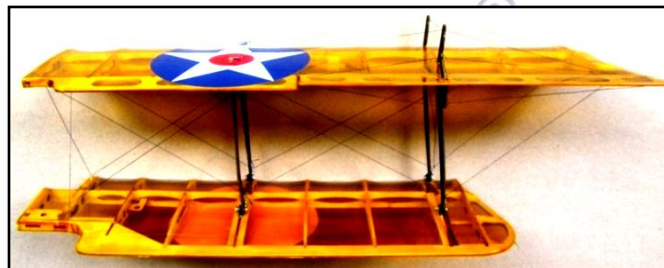
the outer hole of each aileron control horn. Guide the bent ends of each rod through the outer hole in each aileron horn. Cut the bent end of each aileron's pushrod to a length of approx. 3/16 inch. Secure the aileron pushrods to the aileron control horns by bringing the end of each pushrod keeper over the bent end of its pushrod.

NOTE: If either aileron pushrod did not get bent at exactly the right place and one or both is too long, fine-tune the length of the too-long pushrod(s) with small bends; you might also use your computer radio's features to set each aileron's position, throw and/or differential.



D. FINAL ASSEMBLY

1. **Radio Equipment, Wing & Fuselage** – Install the top wing's center section using the supplied cabane struts and 4 ea. 2x8 M2 screws. Connect the ESC, elevator and rudder servos and position your receiver on the tray in front of the elevator servo. Align the top wing panel's root ribs with the top wing's center section on the wing rod. As each top wing panel nears the center section, guide its aileron extension into the center section and down into the fuselage. Bring the root ribs of the bottom wing panels together on the lower wing rod as you permit the preinstalled magnets to secure the top wing panels to the center section. Connect the left and right aileron extensions to your receiver.



(NOTE: If you are not using a computer radio that has a separate input for each aileron servo, use an optional 6-inch Y-cable to combine the two aileron extensions and connect the Y-cable to your receiver's aileron channel.) Secure the receiver with hook and loop material. Position the ESC's battery connector within reach inside the battery compartment in front of the receiver.

2. **Landing Gear** – Insert the nylon wing bolts through the bottom wing panels, position the landing gear's rear crossmember under the heads of the bolts, and tighten the bolts and landing gear against the wing. Secure the landing gear's front crossmember to the fuselage with the remaining two nylon bolts.

E. FINISHING TOUCHES

1. **Insignia & Markings** – Ensure all preapplied stick-on insignias and markings are securely pressed into position.
2. **Propeller** – Balance the supplied propeller, then use a supplied O-ring and prop. adaptor hardware to attach the propeller to the motor.
3. **Battery** – After you charge the battery, place it on top of the ESC and use hook and loop material to anchor the battery and ESC in position. Close the battery compartment with the provided hatch.



Congratulations! Assembly is finished!

VII. SETUP & ADJUSTMENTS:

- A. For the initial flight, set the Jenny's **center of gravity (CG)** so the model hangs level (neither nose-up nor nose-down) when suspended 1 1/2 inches (37 mm) back from the leading edge of the top wing. Add any necessary weight to balance the aircraft before flying.
- B. If you are **using a computer radio**, for your initial flight, set all linkages for maximum possible deflections and soften the aileron's and elevator's control throws by applying 60% exponential (30% exponential for the rudder). If you **use a non-computer radio**, adjust the control throws to no more than the following:

Ailerons	±1/2 inch
Elevator	±1/2 inch
Rudder	±1/2 inch

- C. Check/adjust **servo centering, direction and endpoint settings**. Review your radio's instruction manual if you require assistance with any radio-related setup and/or servo-adjustment questions.

D. Trim adjustments: The ailerons and rudder may require very little trim adjustments (you will likely be able to leave them close to center-neutral, as assembled). However, be prepared to set the elevator trim depending on how slow or fast you may like to fly. For example, if you generally fly low and slow at scale-looking speeds, your Jenny's elevator might need a small amount of uptrim.

E. Preparation for Transport (and Field Setup):

1. **Remove the screws** that secure the lower wing panels and the landing gear's rear cross-member to the fuselage. (Safely set aside these screws for future use.) While gently pulling to overcome the magnetic force holding the top wing panels to the center section, pull each set of top-and-bottom left and top-and-bot-



tom right wing panels away from the center section and the fuselage. Do NOT disconnect the aileron servo extensions; instead, simply 'drape' each extension's excess wire between the wing panel assemblies and the fuselage as you pack your Jenny in its supplied aluminum case to await its next flight.

2. **Reattach the wings** by reversing the above procedure. As you align the left and right sets of wing panels to the fuselage and to the top wing center section on the wing rods, feed each aileron servo extension's excess wire back into the top wing panels and down into the fuselage. Then, with the wing panels and aileron extensions neatly in position, reinstall the bolts to secure the bottom wing and landing gear to the fuselage.

VIII. PREFLIGHT CHECKS:

1. **Double-check the security of the motor-mounting box** and firewall and make certain that all screws and other connections are secure throughout the air frame.
2. **Double-check the control directions and amount of control throw** of the ailerons, elevator and rudder.
3. As with all radio-controlled model airplanes, this model must pass the **radio range ground check** recommended by your radio's manufacturer or you may not fly safely.
4. For your safety, get into the habit of always moving your transmitter's **throttle to minimum** before turning ON your transmitter and carefully operate your radio and power systems according to the manufacturer's instructions.

Manufactured by:

Maxford USA RC Model Mfg, Inc.
15247 Texaco Avenue
Paramount, CA 90723

Telephone (voice) (562) 529-3988
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Toll free (orders only) (866) 706-8288
Website www.maxfordusa.com

For replacement parts, check our Website at www.maxfordusa.com

*NOTES: Our "Jenny" is also available with wingspans of 50 and 105 inches – See our Website for details.
This product is NOT a toy. Any use of this product is done at your own risk.
Please enjoy your hobby and fly safely!*