

HUGHES H-1

RETRACTABLE LANDING GEAR

INSTALLATION INSTRUCTIONS

Congratulations on your decision to add retractable landing gear to your RC model of the Hughes H-1.

Though originally conceived simply for speed, the Hughes H-1 also incorporated many new features that influenced the design of high-performance aircraft for years, not the least of which was its retractable landing gear.



TABLE OF CONTENTS

Important Safety Precautions	1	Installation Instructions	2
Warranty, Liability Waiver, and Return Policy	1	Final Setup & Adjustment	4
Parts List	2	How to order Replacement Parts	5

IMPORTANT SAFETY PRECAUTIONS TO PROTECT YOUR MODEL, YOURSELF & OTHERS

1. Please review all safety instructions included with your model of the Hughes H-1 before operating your model airplane.
2. Install the retractable landing gear according to these instructions. We recommend that you do not alter or modify the model beyond what is specified 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 about the instructions, before you proceed with assembly of this product, contact us at (562) 802-0680, Monday through Friday, except national holidays, between 8:30 AM to 5 PM Pacific time.

WARRANTY, LIABILITY WAIVER, AND RETURN POLICY

Maxford USA guarantees this retract kit to be free from defects in material and workmanship at the time of purchase. All of our products have been inspected in our factory and are checked again when shipped from our warehouse.

However, Maxford USA cannot directly control any of the materials you may use or your final assembly process. Therefore, Maxford USA CANNOT 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 in item 2 on the next page.



If you think there is any shipping damage or missing part(s), please read our after-sales service and return policy as outlined below.

1. Inspect your order upon delivery for any shipping damage or missing part. If you find a problem you must contact us within 10 days from receipt of your purchase by calling (562) 802-0680, Monday through Friday, except holidays, between the hours of 8:30 AM and 5 PM Pacific time. During this telephone conversation, and with your support, we will determine how to resolve your concern. (Note: Maxford USA Li-Po batteries are sold without warranty and are not eligible for return or credit.)
2. To request an RMA#, call (562) 802-0680, Monday through Friday, except holidays, between the hours of 8:30 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 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 90723-3917

(IMPORTANT: If issued by Maxford USA RC Model Mfg, Inc., print the RMA# on the package near the above address.)

PARTS LIST

1. Items you must supply to complete the Hughes H-1:

- Receiver/transmitter with a min. of 5 channels for aileron, elevator, rudder, throttle and retracts.
- 1 ea. retract-servo (HS-65HB, HS-81 or HS-82 MG).
- 6-inch servo-wire extension for retracts.
- Thin cyanoacrylate (CA) adhesive, 5-minute epoxy glue and Loctite Screw Lock or equivalent compound.
- Masking tape, common hand tools, a black marking pen (and possibly a piece of 1/16-inch and 3/16-inch plywood, depending on your choice of retract servo).

2. Items included in the Hughes H-1 retractable landing gear package:

- Light-weight mechanical retractable landing gear, sized to fit in the Hughes H-1's wing.
- This illustrated instruction manual.

NOTE: The Hughes H-1's ARF package contains the retract servo's pushrods and all required self-threading screws (except for the screws supplied with the servos.)

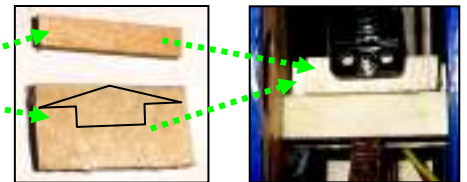
HUGHES H-1 RETRACTABLE LANDING GEAR INSTALLATION INSTRUCTIONS

(Note: The following instructions replace #35 in the instruction manual supplied with the Hughes H-1.)

- 35.1. Install your retract servo between the servo mounting rails at the center front of the H-1's wing. (NOTE: The space between the servo rails fits HS-81 and HS-82 MG servos. If you use of an HS-65HB or other smaller-sized servo, reduce the space between the retract servo rails as follows: Fit and glue a piece of 1/16-inch plywood under the



front rail with enough wood projecting toward the rear rail to fill the gap between the front rail and your servo. Then cut and glue a piece of 3/16-inch plywood behind the front servo rail and on top of the 1/16-inch plywood and secure your retract servo to this piece of 3/16-inch plywood with a screw.)



35.2. Prepare the two mechanical retract assemblies by forming an axle at 90 degrees to the strut at 4 5/16-inches (11 cm.) from where the strut projects from its plastic mount.

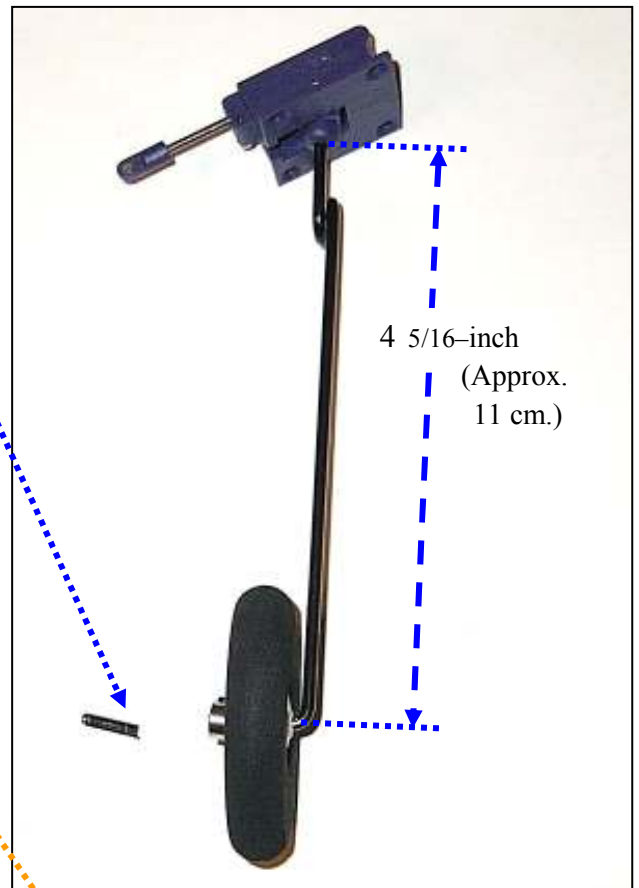
35.3. Mount a wheel to each axle with a wheel collar and secure each collar's screw with Loctite Screw Lock or equivalent compound (or apply a drop of CA adhesive where each collar touches the axle).

35.4. Cut off and discard the axle's excess length protruding beyond the surface of the wheel collar.

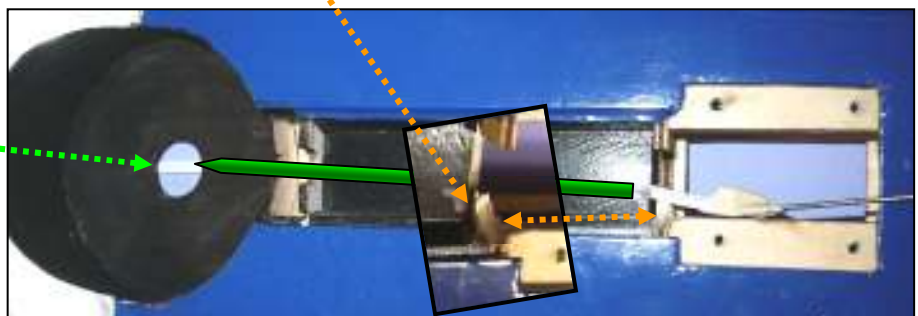
35.5. Remove and discard the piece of masking tape that holds each of the fixed-landing-gear mounts into the wing. Lift out and discard the fixed-landing-gear mounts.

35.6. Make space for the retractable-landing-gear strut's coil inboard of the landing gear mount openings by cutting (or grinding) away some the plywood at the coil (rear) side of the opening for the strut. Apply black marker to the edges of the landing gear mount openings.

35.7. Use masking tape to attach a 6-inch length of twist-tie from the Hughes H-1's carton box (or equiv. flexible wire) to each of the retract servo's pushrods, then insert each of the twist-



tie/pushrod wires into the openings where you removed the fixed-landing-gear mounts, and guide each twist-tie/pushrod wire through the wing, behind the wheel well, and toward the openings cut in the ribs nearest the center of the wing. Guide one retract pushrod through the front/first opening in the rib and guide the other retract servo pushrod through the second opening. (If you have trouble guiding a twist-tie/pushrod wire through the wing from the opening where you removed the fixed-landing-gear mount, try reversing the route by inserting the twist-tie/pushrod wires into the wing through the openings in the ribs nearest the center of the wing and guiding the wires through the wing to the opening where you removed the fixed-landing-gear mount.)



35.8. Position each strut's coil toward the back of the wing and attach the pushrod Z-bends to each retract's activation rod. (To be able to accomplish #35.10: In the wing's center section, one retract pushrod must have its Z-bend 'up' and the other must have its Z-bend 'down'.)

35.9. Lower the retracts into the landing-gear-mount openings and use 4 ea. 1/2-inch screws to attach each landing-gear assembly to the wing.



35.10. Twist the retract servo's control arm to attach both pushrod Z-bends to the servo's arm. Then push the control arm onto the retract servo's output shaft, and secure the control arm to the retract servo with a screw.

35.11. Move the landing gear to the UP (retracted) position and use the openings in the wing as a guide to position a landing-gear legging onto each strut. Lower the landing gear and secure each landing-gear legging to its strut by installing two 3/16-inch screws through each legging mount and into its corresponding attachment point on each of the leggings.

35.12. FINAL SETUP & ADJUSTMENT: Switch ON your transmitter, connect the retract servo to your receiver, connect the receiver to a battery and switch ON your receiver. (Do *NOT* connect your motor/ESC and LiPo battery at this time.) Use your transmitter to cycle the retracts UP and DOWN while observing their movement and alignment:

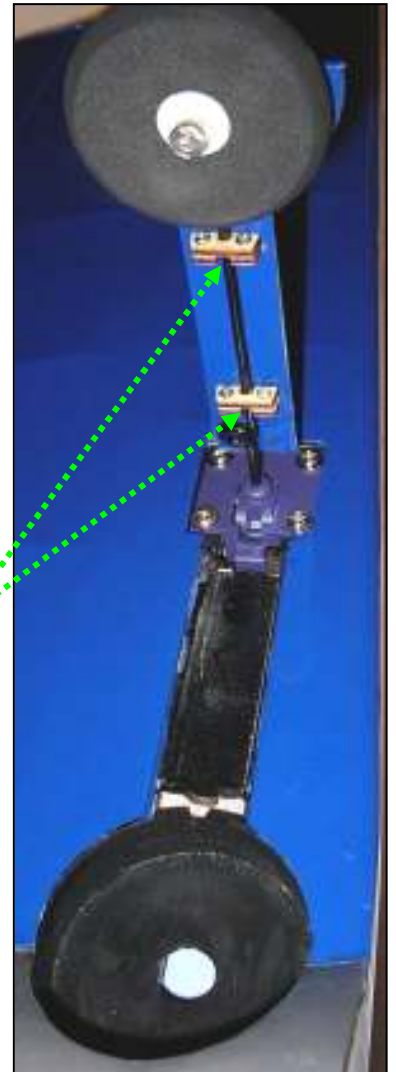
- a) Make any small adjustments you find necessary to properly position each strut by loosening the 4 ea. 1/2-inch mounting screws to slightly shift the retract assembly in its wing mount. (Then re-tighten the 4 ea. 1/2-inch mounting screws and secure them with Loctite Screw Lock or equivalent compound or apply a drop of CA adhesive where the head of each screw touches the plastic retract mechanism.) Also, being careful to not apply any twisting or bending force to the plastic mechanism and NOT bending the strut itself, you may slightly bend each strut's coil to fine-tune the angle and direction each strut exits its coil. And, at the same time ...
- b) At your transmitter, change any necessary servo travel, limit, or direction settings. (Please review your radio's instruction manual if you require assistance with any radio-related servo-adjustment questions.)
- c) Once you are satisfied with the landing-gear's strut alignment and servo travel, leave the retracts in their DOWN position, disconnect your receiver battery and receiver, and switch OFF your transmitter. Secure the landing-gear leggings from accidentally moving on the struts by applying a drop of CA adhesive where each of the landing-gear legging mounts touches a landing gear strut.

Congratulations, you have completed retractable landing gear assembly!

REMINDER:

AN IMPORTANT NOTICE TO OUR CUSTOMERS!

The model airplane on which these retracts are mounted is NOT just a toy. Any testing or flying of this model airplane is done entirely at your own risk.



**For replacement parts, servos, batteries, brushless motors, electronic speed controls,
and a wide variety of other high-quality RC hobby items, visit us online at –
<http://www.maxfordusa.com>**

ENJOY YOUR HOBBY AND FLY SAFELY!

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