



Fly First Class™

40-Size Floats

ASSEMBLY MANUAL

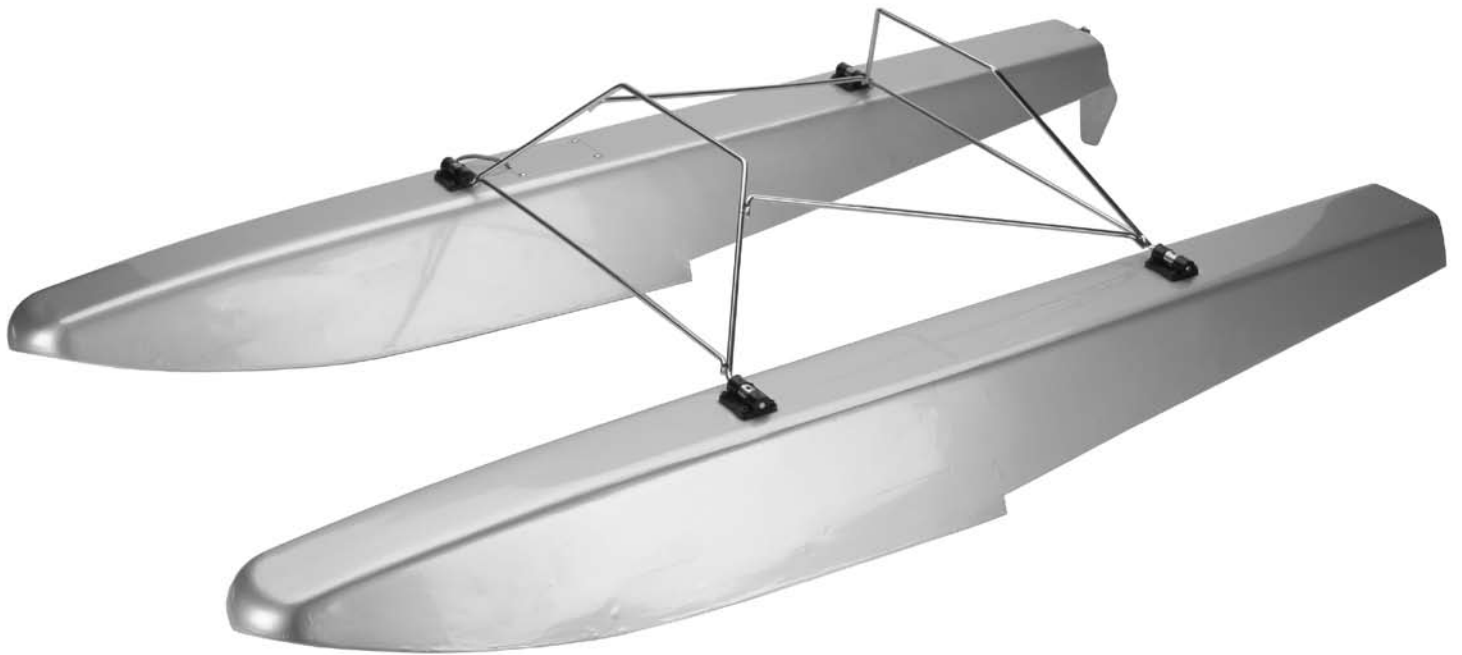


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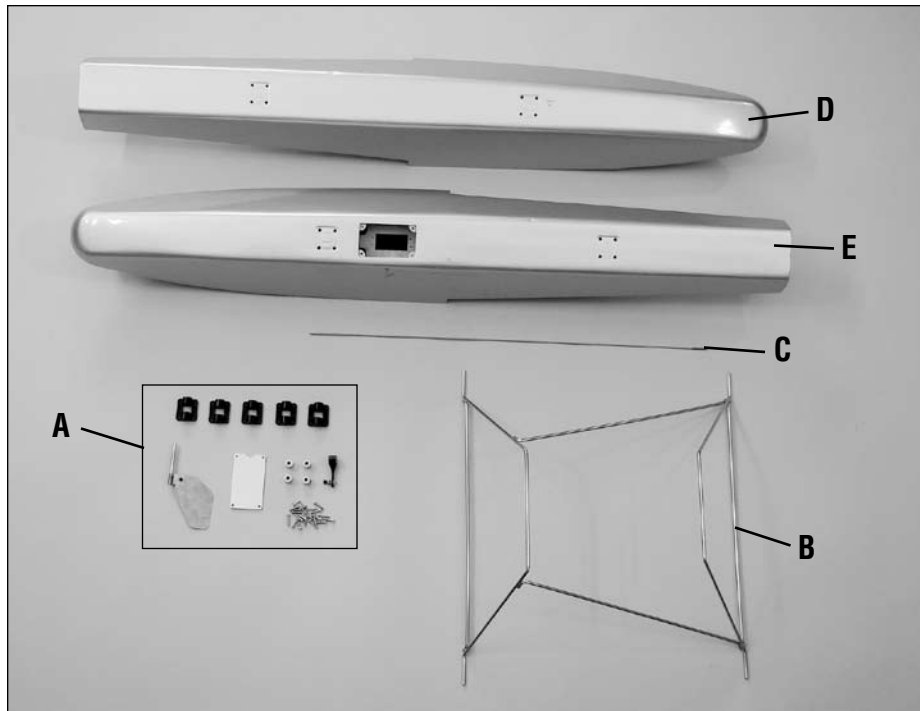
Instructions for Disposal of WEEE by Users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.



Contents of Kit

A.	HAN4016	Hardware Set
B.	HAN4017	Steel Strut Set
C.	HAN4018	Pushrod & Tube, Nylon Horn, EZ Connector
D.	HAN4019	Float w/o Servo Mount
E.	HAN4020	Float w/Servo Mount



Required Tools and Adhesives

Tools

- Drill
- Covering iron
- Phillips screwdriver
- Side cutters
- Heat gun
- Hobby knife
- Sandpaper
- Drill bit: 5/64-inch (2mm)
- Hex wrench: 1.5mm
- Tie wraps

Adhesives

- 30-minute Epoxy (HAN8002)
- Clear silicone
- Threadlock

Radio Equipment

- Standard size servo (JRPS537 or JSP20050)
- Charge Receptacle: Futaba (ERN124)
- Y-Harness (JSP98020)
- Charge Receptacle: JR (ERN147)

Warranty Period

Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warrants that the Products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

Limited Warranty

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c) Purchaser Remedy- Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any goods by Purchaser must be approved in writing by Horizon before shipment.

Damage Limits

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new and unused condition to the place of purchase.

Law: These Terms are governed by Illinois law (without regard to conflict of law principals).

Safety Precautions

This is a sophisticated hobby Product and not a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the Product or other property. This Product is not intended for use by children without direct adult supervision. The Product manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

Questions, Assistance, and Repairs

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a service technician.

Inspection or Repairs

If this Product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as **Horizon is not responsible for merchandise until it arrives and is accepted at our facility**. A Service Repair Request is available at www.horizonhobby.com on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

Warranty Inspection and Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon Hobby.

Non-Warranty Repairs

Should your repair not be covered by warranty the repair will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Please advise us of your preferred method of payment. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly. **Please note: non-warranty repair is only available on electronics and model engines.**

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822

All other Products requiring warranty inspection or repair should be shipped to the following address:

Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822

Please call 877-504-0233 with any questions or concerns regarding this product or warranty.

Safety, Precautions, and Warnings

Models are controlled by a radio signal that is subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is advisable to always keep a safe distance in all directions around your model, as this margin will help to avoid collisions or injury.

- Always operate your model in an open area away from cars, traffic, or people.
- Avoid operating your model in the street where injury or damage can occur.
- Never operate the model into the street or populated areas for any reason.
- Never operate your model with low transmitter batteries.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) that you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Moisture causes damage to electronics. Avoid water exposure to all equipment not specifically designed and protected for this purpose.

Using the Manual

This manual is divided into sections to help make assembly easier to understand, and to provide breaks between each major section. In addition, check boxes have been placed next to each step to keep track of each step completed. Steps with a single box () are performed once, while steps with two boxes () indicate that the step will require repeating, such as for a right or left wing panel, two servos, etc. Remember to take your time and follow the directions.

Before Starting Assembly

Before beginning the assembly of the 40-size floats, remove each part from its bag for inspection. Closely inspect the contents for damage. If you find any damaged or missing parts, contact the place of purchase.

If you find any wrinkles in the covering, use a heat gun or sealing iron to remove them. Use caution while working where the seams overlap to prevent separating the covering.



HAN101 – Sealing Iron

**HAN141 – Sealing Iron
Sock**



HAN100 – Heat Gun

HAN150 – Covering Glove

Fuselage Preparation

Required Parts

- Assembled fuselage
- Rear strut support
- Covering
- Main Strut
- Gear strap (2)

Required Tools and Adhesives

- Drill
- Covering iron
- Sandpaper
- Y-harness
- Drill bit: 5/64-inch (2mm)
- Charge Receptacle: Futaba (ERN124)
- Charge Receptacle: JR (ERN147)
- Hobby knife
- 30-minute epoxy
- Phillips screwdriver
- Heat gun

□ Step 1

Remove the landing gear from your Cub and place it in a safe place for use later. Use a hobby knife to trim the covering to allow access inside the fuselage. Only cut back enough to allow the rear strut support to fit inside the fuselage.



Note: Use a technique similar to this for most 40-size aircraft when mounting the floats.

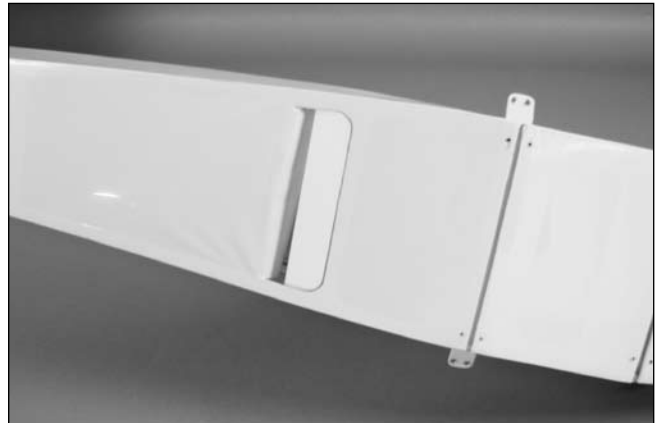
□ Step 2

Test fit the rear strut support inside the fuselage. The curved plywood will fit tight against the bottom of the fuselage. Sand the larger block as necessary so the rear support fits tight in the fuselage.



□ Step 3

Use 30-minute epoxy to glue the rear strut support in the fuselage. Allow the epoxy to fully cure before proceeding.



Fuselage Preparation

□ Step 4

Once the epoxy has fully cured, use a covering iron and the supplied covering to cover over the rear strut support.



□ Step 5

Attach the main gear to the bottom of the fuselage. Use the original screws and straps to secure the front of the strut to the fuselage. The rear will use the original screws, but you will need to drill four 5/64-inch (2mm) holes to secure the rear of the strut using the supplied gear straps.



□ Step 6

Install one end of a Y-harness into the Ernst charge receptacle. Mount the charge receptacle to the right side of the fuselage (viewed when sitting in the pilot seat) using the hardware provided with the receptacle. Connect the Y-harness to the rudder channel of the receiver and plug the rudder servo into the remaining lead of the harness.



Float Installation

Required Parts

- Assembled fuselage
- Strut mount (4)
- Pushrod wire
- Steering arm
- Water rudder mount
- 5/32-inch wheel collar w/setscrew (4)
- 3mm x 8mm machine screw (2)
- 2mm x 10mm sheet metal screw (4)
- 4-40 x 1/2-inch machine screw (20)
- Pushrod connector w/backplate
- Float (right and left)
- Rudder
- Clevis
- Servo hatch

Required Tools and Adhesives

- Side cutters
- Hex wrench: 1.5mm
- Servo w/hardware
- Y-harness
- Phillips screwdriver
- Threadlock
- Clear silicone

□ Step 1

Attach the strut mounts to the top of the left and right floats using four 4-40 x 1/2-inch machine screws for each strut mount.



Note: Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

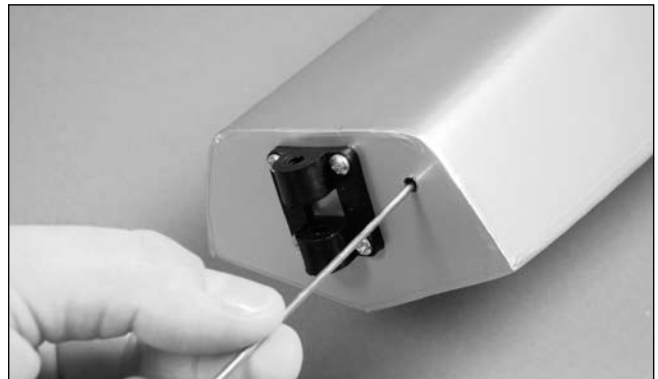
□ Step 2

Install the rudder servo into the right float using the hardware provided with the servo.



□ Step 3

Attach the water rudder mount to the rear of the right float using four 4-40 x 1/2-inch machine screws. Slide the pushrod wire into the pushrod tube threaded end first.



□ Step 4

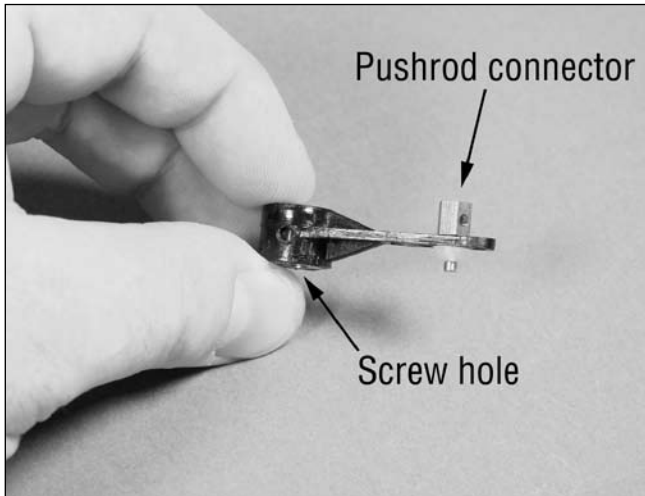
Thread a clevis onto the pushrod wire. Use side cutters to remove any excess arms from the servo horn. Attach the clevis to the servo arm and secure the arm to the servo.



Float Installation

□ Step 5

Install the pushrod connector to the center hole of the steering arm using the connector backplate. Make sure the hole for the screw in the arm is facing toward you and the connector is installed as shown.



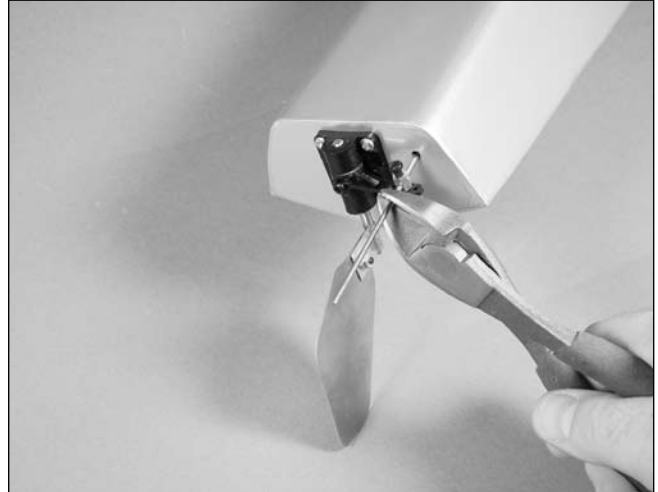
□ Step 6

Slide the pushrod connector onto the pushrod wire. With the steering arm in the mount, slide the rudder assembly up through the mount and through the steering arm.



□ Step 7

Use the radio to move the rudder servo fully to the right. With the steering arm almost touching the float, secure the brass pushrod connector and pushrod wire using a 3mm x 8mm machine screw. Center the servo using the radio and align the water rudder to the centerline of the float. Secure the steering arm to the water rudder shaft using a 3mm x 8mm machine screw. Use side cutters to trim the excess pushrod wire.



Note: Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

□ Step 8

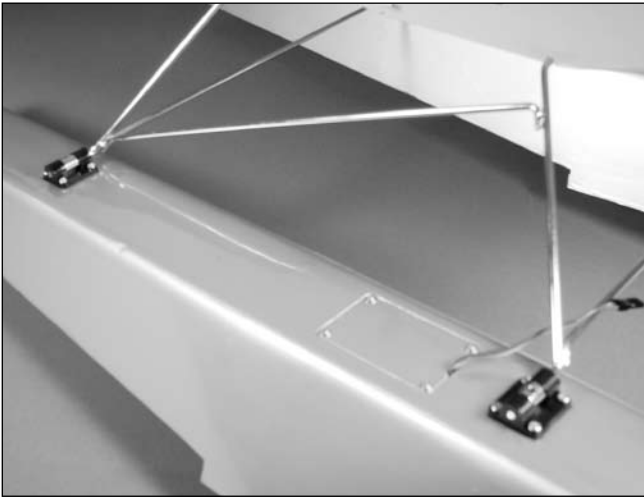
Cut a small notch in the servo hatch to clear the servo lead. Secure the hatch to the float using four 2mm x 10mm sheet metal screws. Use clear silicone to seal the opening where the servo lead exits the float.



Float Installation

□ Step 9

Attach the floats to the strut using four 5/32-inch wheel collars and a 1.5mm hex wrench.



Note: Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

□ Step 10

Plug the servo lead into the Ernst charge jack on the side of the fuselage. Use tie wraps to secure the servo lead to the strut.



□ Step 11

Now that your floats have been installed, you **MUST** verify that the Center of Gravity of your model is still correct. Use the Center of Gravity provided in the manual included with your particular aircraft.

Important: If installing on a model other than the Hangar 9 J-3 Cub, the floats should be installed such that the step in the float is located 1/2-inch (13mm) or less behind the CG of the model.

Float Flying

Flying from floats can be great fun. There are a few things to remember when you hit the lake. First, make sure you pick a location where you can take off and land parallel to the shore line with no obstructions. You will want to make sure you are taking off and landing into the wind.

Verify your water rudder is down and the engine is running. Set the plane into the water and begin to taxi out. It is common to hold full up elevator (back stick) during all taxi maneuvers. This helps to eliminate prop splash and keeps the water rudder deep in the water for improved steering. You may want to use a high rate for your rudder during this operation as well. You will switch to a low rate rudder for takeoff.

Taxi slowly to get the hang of the rudder. Once you have lined up for takeoff, set your rudder dual rate to low. The water rudder becomes very effective during takeoff. Apply full up elevator and apply throttle slowly at first. As the plane picks up speed, you will notice it coming up on step. At this time, you can relax the elevator input and fly off the water the same way you take off from hard ground.

Once in the air, you will find the plane to behave slightly different than before. The added weight below the model acts similar to a pendulum effect in flight. It will slightly effect the aerobatic performance as well. You will notice a higher power setting from normal due to the added drag and weight of the floats.

Landing on water is very similar to landing on hard ground. Set up like you normally would and turn onto final approach. Maintain power during the approach, as a plane with floats tends to land slightly faster than when equipped with landing gear. As you come down, begin to flair and hold it until touchdown. Once you have touched down on the water, as the plane slows down, begin to feed in up elevator as the plane settles. Once you are slowed down, taxi back to shore and get ready for another day at the lake.

Notes

2007 Official AMA

National Model Aircraft Safety Code

GENERAL

1) I will not fly my model aircraft in sanctioned events, air shows or model flying demonstrations until it has been proven to be 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) The maximum takeoff weight of a model is 55 pounds, except models flown under Experimental Aircraft rules.

5) I will not fly my model unless it is identified with my name and address or AMA number, on or in the model. (This does not apply to models while being flown indoors.)

6) 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.

7) 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), or 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 a primary means of propulsion are limited to a maximum weight of 3.3 pounds and a G series motor. (A model aircraft is defined as an aircraft with or without engine, not able to carry a human being.)

8) I will not consume alcoholic beverages prior to, nor during, participation in any model operations.

9) Children under 6 years old are only allowed on the flight line as a pilot or while receiving flight instruction.

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) 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 at or in the front of the flight line. Intentional flying behind the flight line is prohibited.

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.)

2007 Official AMA National Model Aircraft Safety Code

- 5) Flying sites separated by three miles or more are considered safe from site-to site interference, even when both sites use the same frequencies. Any circumstances under three miles separation require a frequency management arrangement, which may be either an allocation of specific frequencies for each site or testing to determine that freedom from interference exists. Allocation plans or interference test reports shall be signed by the parties involved and provided to AMA Headquarters. Documents of agreement and reports may exist between (1) two or more AMA Chartered Clubs, (2) AMA clubs and individual AMA members not associated with AMA Clubs, or (3) two or more individual AMA members.
- 6) For Combat, distance between combat engagement line and spectator line will be 500 feet per cubic inch of engine displacement. (Example: .40 engine = 200 feet.); electric motors will be based on equivalent combustion engine size. Additional safety requirements will be per the RC Combat section of the current Competition Regulations.
- 7) At air shows or model flying demonstrations, a single straight line must be established, one side of which is for flying, with the other side for spectators.
- 8) With the exception of events flown under AMA Competition rules, after launch, except for pilots or helpers being used, no powered model may be flown closer than 25 feet to any person.
- 9) Under no circumstances may a pilot or other person touch a powered model in flight.

Organized RC Racing Event

- 10) An RC racing event, whether or not an AMA Rule Book event, is one in which model aircraft compete in flight over a prescribed course with the objective of finishing the course faster to determine the winner.
 - A. In every organized racing event in which contestants, callers and officials are on the course:
 1. All officials, callers and contestants must properly wear helmets, which are OSHA, DOT, ANSI, SNELL or NOCSAE approved or comparable standard while on the racecourse.
 2. All officials will be off the course except for the starter and their assistant.
 3. "On the course" is defined to mean any area beyond the pilot/staging area where actual flying takes place.
 - B. I will not fly my model aircraft in any organized racing event which does not comply with paragraph A above or which allows models over 20 pounds unless that competition event is AMA sanctioned.
 - C. Distance from the pylon to the nearest spectator (line) will be in accordance with the current Competition Regulations under the RC Pylon Racing section for the specific event pending two or three pylon course layout.
- 11) RC night flying is limited to low-performance models (less than 100 mph). The models must be equipped with a lighting system that clearly defines the aircraft's position in the air at all times.



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