

# HYDROFLY 2



## ***Flight Manual***



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Worldwide leader in radio control entertainment™

**[www.megatech.com](http://www.megatech.com)**

If you have questions about operating or assembling your new Megatech product...  
Please Call Megatech First!

## **DO NOT RETURN THIS PRODUCT TO THE STORE**

*Call our Service Department at:*

*(888) MEGA-911 or (201)662-8500*

*or email to: [support@megatech.com](mailto:support@megatech.com)*

*9:30am - 5:30pm, EST Monday through Friday (except holidays)*

Technical assistance is also available on the web at [www.megatech.com](http://www.megatech.com)

## **READ ENTIRE MANUAL FIRST BEFORE ATTEMPTING TO FLY**

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**Important! Before you begin, please read all safety precautions and warnings. Failure to comply with any of the following could lead to bodily harm or injury. The Megatech Hydro-Fly is not intended for those under 12 years of age without proper adult supervision.**

## **SAFETY PRECAUTIONS**

### **TRANSMITTER SAFETY**

This device complies with part 15 of FCC rules.

Operation subject to the following two conditions:

- (1) This device may not cause harmful interference and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### **SAFETY GUIDELINES**

- Before you begin to fly look at the frequency sticker on the back of your transmitter & make sure no one in the area is on the same frequency.
- You alone are responsible for operating your model in a safe manner. When flying, you are responsible for your own safety and the safety of others around you. Follow these basic safety guidelines at all times.
- When operating always be aware of the spinning propeller. Be careful not to let the Hydro-Fly to come close to your person, others and/or loose clothing.
- Always fly your airplane in a wide-open area. You'll need at least 300ft worth of area that is free from obstructions such as buildings, electric power lines, trees, roads, other people and vehicles.
- Do not fly around people who are unaware that you are flying a model airplane, and never fly over people's heads.
- Do not fly your model if other models are being operated in the area on the same frequency.
- Do not attempt to disassemble any of the model's components or allow them to get wet. Electrical damage may occur.
- Never fly your model from roadways, parking lots, or after dark.
- Keep spectators behind you when flying.
- Before flying, make sure you perform a range check to be sure you can maintain control at least 50-feet from the transmitter to the model with the transmitter antenna extended.
- Since your model is controlled by a radio link it is very important to always keep fresh "AA" alkaline batteries in the transmitter.
- Never use solvents or liquid cleaners to clean this model. Doing so may damage the unit or electronics. Only use a dry, soft cloth for cleaning.

### **RECHARGEABLE BATTERY WARNINGS AND PRECAUTIONS**

- ALLOW BATTERY TO COOL COMPLETELY BEFORE ATTEMPTING TO CHARGE AND DISCHARGE
- Never have the vehicle engine running during the charging process. This may cause overcharging and a possible fire.
- Never leave battery unattended while charging.
- Never attempt to charge a battery that appears damaged.
- Never charge longer than 30 minutes.
- Never place a charging battery on your cars seats or console, but rather a flame & heat resistant material such as an oven mitt.



Nickel-metal hydride batteries must be disposed of properly. For current regulations in your area and proper disposal sites please call 1-800-822-8837 or visit [www.rbrc.org](http://www.rbrc.org)

## PACKAGE CONTENTS

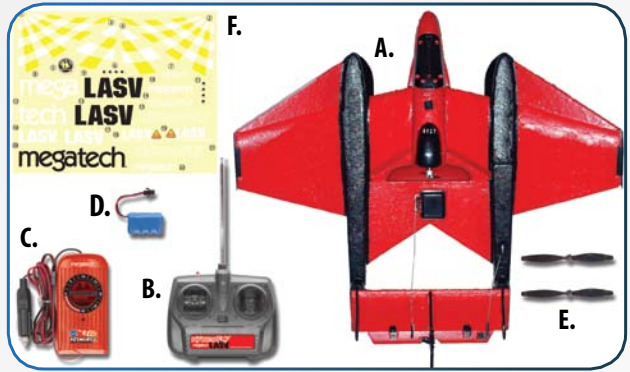
Before getting started you will need:

- 8 "AA" Alkaline batteries (*sold separately*)

First make sure the contents of your package are complete:

- A. Hydro Fuselage
- B. Transmitter with Antenna
- C. DC Quick Charger
- D. Battery Flight Pack
- E. 2 Spare propellers
- F. Decals

Repair Glue (not shown)



## INSTALLING THE BATTERIES

Transmitter requires 8-'AA' Alkaline batteries (sold separately).

- 1) Remove the battery compartment cover located on the back of the transmitter by sliding it down.
- 2) Insert 8 "AA" 1.5 Volt Alkaline batteries. Be sure to match the '+' and '-' polarity symbols in the transmitter with each battery.
- 3) Replace battery compartment cover.
- 4) Check the Transmitter Antenna and make sure it is secure.
- 5) Turn the transmitter 'Power' switch to the 'ON' position. The red and green LED lights will illuminate."



**NOTE: If the LED does NOT illuminate, do NOT attempt to fly your Hydro-Fly. Make sure you are using all fresh alkaline batteries and check the batteries for correct polarity placement. If LED still fails, contact Megatech at 1-888-634-2911.**

## CAUTION

### READ THIS SECTION BEFORE CHARGING YOUR BATTERY PACK FOR THE FIRST TIME!

- ALLOW BATTERY TO COOL COMPLETELY BEFORE ATTEMPTING TO CHARGE AND DISCHARGE.
- Never have the vehicle engine running during the charging process. This may cause overcharging and a possible fire.
- Never leave the model unattended while charging.
- Do not charge battery more than 30 minutes. Charging longer may damage the battery.
- Use care when handling flight pack after charge or discharge since battery may be hot.

## CHARGING YOUR HYDRO-FLY

**NOTE: MAKE SURE BATTERY IS COMPLETELY COOL AND FULLY DISCHARGED BEFORE ATTEMPTING TO CHARGE. FAILURE TO DO SO MAY CAUSE PERMANENT DAMAGE TO THE BATTERY AND POSSIBLE BODILY HARM.**

- 1) Remove battery from airplane. (Do NOT leave battery inside the airplane while charging)
- 2) Plug battery into the charger.
- 3) Make sure motor is not running and plug charger into the vehicle cigarette lighter.
- 4) Rotate timer dial to the 30 minute mark. The LED will illuminate.
- 5) Once the LED goes out, the battery will be warm to the touch and is completely charged. Disconnect at once.



## INSTALLING THE FLIGHT PACK

- 1) Gently pull back on the black latch lever located on top of the battery hatch on the front of the Hydro-Fly fuselage.
- 2) While holding the latch lever, lift and open the battery hatch.
- 3) Place battery into fuselage with the battery wire facing forward as shown.
- 4) Attach the battery connector to the connector inside the fuselage.
- 5) Pull back on the latch lever and gently close the hatch cover until the front section is secure.
- 6) Once secure, release the latch lever until the latch locks into place.



## CYCLING BATTERY PACK

**NOTE: FOR PEAK PERFORMANCE AND OPTIMUM FLIGHT DURATION, IT IS IMPORTANT TO CYCLE THE RECHARGEABLE FLIGHT PACK 3 TIMES BEFORE FLYING. CYCLING IS ONLY REQUIRED FOR THE INITIAL FLIGHT.**

- 1) Charge the battery pack as shown above.
- 2) Make sure airplane & transmitter are powered 'OFF'.
- 3) Securely hold the airplane's fuselage underneath the wings with the nose facing away from you. Be sure it is as far away as possible from your person and any loose clothing or jewelry.
- 4) Turn the transmitter to the 'ON' position.
- 5) Install the flight pack into the fuselage and connect the battery.
- 6) Push the left hand stick of the transmitter (the throttle stick) completely back and then forward. The motor should run until the battery is fully discharged. Let the plane turn off on its own or if needed pull the throttle stick back a few times until the plane turns off. **DO NOT EXCEED HALF THROTTLE WHEN CYCLING.**
- 7) Remove the battery from the plane and allow the battery to cool **COMPLETELY.**
- 8) Recharge the battery and repeat process 2 more times.



The transmitter is always the first thing ON and the last thing OFF. This is to prevent accidental motor startup. For proper startup instructions please refer to page 8.

## PRE-FLIGHT CHECK

**Important Tip:** Always perform the motor-check and radio-range check with the help of a friend or parent. Doing so alone may cause the model to get away from you and cause damage.

### RADIO RANGE CHECK

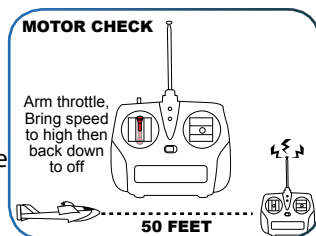
- 1) Make sure both the airplane and transmitter power are 'OFF'.
- 2) Turn the switch on the transmitter to the 'ON' position and extend the antenna fully.
- 3) Plug a charged battery into the airplane battery compartment.
- 4) Have a friend/parent hold the airplane's fuselage under the wings with the nose pointing away from him/her and away from their person and loose clothing.
- 5) Walk 50-ft away from airplane.

## IMPORTANT

The Hydrofly is equipped with a "Motor-Safety" feature so the motor can not be accidentally turned on. Arm the motor by moving the left hand stick all the way down, then up - this will activate the throttle and the motor will run. The Hydrofly is equipped with a 4-step throttle. Each time you push the left stick up and release to neutral, it advances one step; from Off to Low to Medium to Medium-High to High. The motor power is lowered in the same fashion. Pull the left stick down and let it return to neutral. Each time you do this the power is reduced by one step; High to Medium-High to Medium to Low to Off.

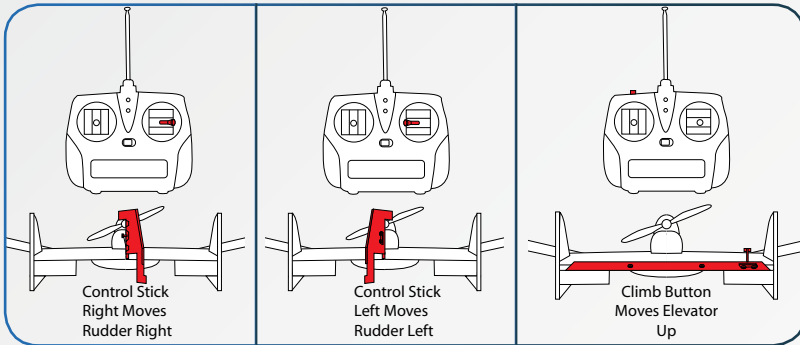
### MOTOR CHECK

- 1) Move the left hand stick of the transmitter (the throttle stick) all the way down and then forward. The motor should start running.
- 2) Bring the motor speed to high then back down until the motor turns off.



## RUDDER CONTROL CHECK - (WITH THE NOSE POINTING AWAY FROM YOU)

- Move the rudder control stick to the right—the rudder should move to the right.
- Move the rudder control stick to the left—the rudder should move to the left.
- Press the vertical climb button and the elevator will move up.

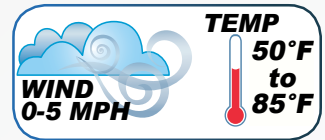


**NOTE: If your airplane does not respond from 50 feet away do NOT attempt to fly. Contact Megatech at 1-888-634-2911 for further assistance.**

## FLIGHT SCHOOL

### 1) Choose a Flying Site & Weather Conditions

- Choose a large soft grassy open area to fly in such as a football or soccer field. Do not fly in the street or in a parking lot.
- Never fly near cars, people, pets, power lines, trees, houses, buildings or water.
- Be sure to keep your hands, eyes and face away from air intake, exhaust and jet impeller blades.
- Choose a day with little or no wind. Do not fly in wind greater than 5mph. Humidity and temperature must be comfortable (around 50°F-85°F degrees) so that the air is fairly dense.
- Your altitude should be less than 3,000-feet above sea level.



### 2) Pre-Flight Checklist (Perform in order listed)

- Fully extend transmitter antenna.  
**REMEMBER: Your transmitter is always the first thing on and the last thing off.**
- Turn the transmitter power switch to the 'ON' position.
- Install fully charged battery pack into fuselage.
- Holding the plane away from you, move the rudder control stick to ensure that the rudder moves left and right accordingly.
- Push the vertical climb button to make sure the elevator moves up and release button to see if elevator returns to level.
- Pull the throttle stick back and then forward to test motor. Once the motor turns ON, check all 4 throttle steps. When complete, pull throttle stick back until the motor turns off.



### 3) Driving your Hydro-Fly

- Find a large open smooth surface before you begin.
- With the transmitter ON and a freshly charged battery installed, arm the throttle and start to advance the throttle until the Hydro-Fly starts to move away from you.
- Advancing the throttle makes you gain speed & lowering the throttle makes you lose speed.
- To turn, move the rudder stick left or right. The faster it is moving the wider the turn.
- To stop, move the throttle stick down until the propeller stops spinning."

**NOTE: Learning how your Hydro-fly operates on the ground as a car should be mastered before attempting to fly or operate as a boat. This section will explain how to operate the throttle as well as teach you how to use the rudder.**

### 4) Hand Launching Airplane

- Always launch your airplane INTO the wind, so begin with the wind blowing in your face.
- Hold the plane's fuselage in the center directly under the main wings.
- Start with plane above your shoulders.
- The transmitter has a safety arming feature. First turn transmitter power ON.
- Then plug the battery into the fuselage and secure the battery hatch.
- To activate the transmitter pull the left hand stick all the way down then let it return to the starting position.
- Step the throttle all the way to high so the propeller is spinning at full speed.
- Using the horizon as a 0-degree point of reference, take a running start and toss the plane at a 5 degree upward angle into the wind. Use about the same force it takes to throw a dart at a dart board.
- Your Hydro-Fly will begin to elevate into the air. If your Hydro-Fly does NOT elevate right away, push the red vertical climb button located on the upper left of your transmitter. Press and hold the vertical climb button until Hydro-Fly is elevated, then release button.

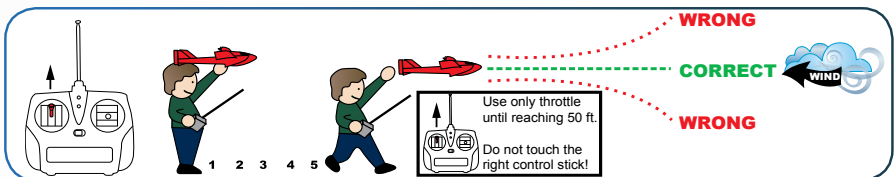


**NOTE: It is not recommended to touch the rudder control stick until you have reached sufficient altitude. Doing so may cause the plane to crash (We suggest about 50ft).**

### 5) Ground Launching Airplane

First determine the direction the wind is blowing. Position the Hydro-Fly on a smooth long surface facing into the wind

- The transmitter has a safety arming feature. First turn transmitter on, then plug in battery. To activate transmitter pull the left hand stick all the way down then let it return to the starting position.
- Step the throttle all the way to high so the propeller is spinning at full speed
- Your Hydro-Fly will elevate into the air. If your Hydro-Fly does NOT elevate within 10 seconds, push the red launch button located on the upper left of your transmitter.
- Press and hold launch button until Hydro-Fly is elevated, then release button.



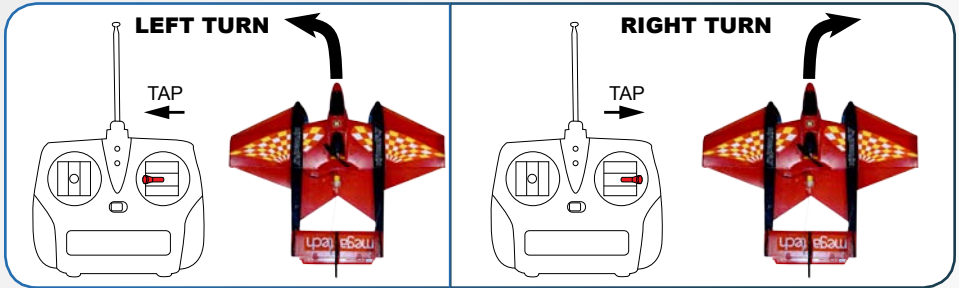
## 6) Turning

- Once your airplane has reached 50 feet above the ground you are ready to begin turning. You want to keep the model within 100 feet of you at all times.

**TIP: Beginners Start with large oval circle patterns while learning.**

**Left Turn:** Keep the throttle step at 3 or 4 for better control in the air. Gently pulse/tap the rudder control stick to the LEFT 1-2 times, allowing it to return to the center.

**Right Turn:** Keep the throttle step at 3 or 4 for better control in the air. Gently pulse/tap the rudder control stick to the RIGHT 1-2 times, allowing it to return to the center.



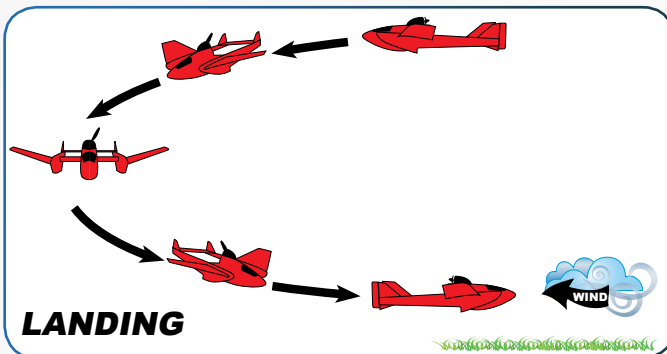
**WARNING: Holding the right control stick to the right or left for more than 1-2 seconds at a time may cause the airplane to crash.**

## 7) Landing

When you notice the nose of the airplane drop slightly or it is unable to climb, it is time to land. You will still have enough power over the controls to set the airplane up for a landing.

- Set your plane up to face into the wind by making very gentle shallow turns.
- Once you are on the final landing approach and your plane is facing into the wind, gently let the airplane glide to the ground on its own. Only use minor controls to keep the wingtips level until the plane touches down.

**NOTE: When you are a couple of feet off the ground step the throttle down to off and let the plane touch down.**



## ADJUSTING YOUR HYDROFLY

**NOTE:** If the airplane slowly turns to the left or the right adjust the rudder clevis as per the instructions below.

### Rudder Clevis Adjustment

- 1) Detach the rear rudder clevis from the control horn on the airplane.
- 2) If plane goes to the right adjust the clevis one full turn clockwise.
- 3) If the plane goes to the left adjust the clevis one full turn counter clockwise.

**NOTE:** If the airplane nose dives or stalls without control input adjust the elevator clevis as per the instructions below.

### Elevator Clevis Adjustment

- 1) Detach the rear elevator clevis from the control horn on the airplane.
- 2) If plane climbs too steep and stalls without control input adjust the clevis one full turn counter clockwise.
- 3) If the plane nose dives adjust the clevis one full turn clockwise.

**Note :** Repeat process until plane fly's straight and level.



## FLIGHT TIPS

- Keep the plane flying out in front of you and don't let it pass overhead if possible. This can be very disorienting.
- Flying toward you can be very tricky because the airplane will appear to be turning in the wrong direction. To regain orientation, imagine you are sitting in the pilot seat of the airplane.
- If the airplane gains too much altitude, try releasing the throttle and continue gliding and turning until you reach a more comfortable altitude.
- Learn to fly oval circle patterns out in front of you in both directions while maintaining altitude, then advance to practicing figure eights.
- As your flying skill improves, you will recognize air thermals (rising pockets of air) that will greatly increase your flight time.
- Avoid the tendency to try and "steer" the model airplane around the sky. It's not a car. The best way to think of it is redirecting the model's flight path rather than steering. As much as possible, let the model fly on its own, only redirecting its flight path when necessary. This will help you overcome the tendency to over-control the model.
- After the model has been hand-launched, keep it going in a straight line with whatever corrections are needed until about fifty feet of altitude has been reached. Then, and only then, attempt to make a turn. Because altitude is lost during any turn, turning too soon, and too low, can cause your model to hit the ground.

## SPARE PARTS LIST

Spare, repair and replacement parts are readily available for your aircraft. Should you need parts, visit your local hobby dealer first. If unavailable, you may order directly from Megatech. Use this sheet as a guide.

PART#	DESCRIPTION
MTC38045	DC 30 MINUTE QUICK CHARGER
MTC3973	9.6V 8-CELL NI-MH BATTERY PACK
MTC950701	PROPELLER (3)
MTC950702	MOTOR, MOTOR HATCH, MOUNTING BRACKET, AND SCREWS
MTC950703	TRANSMITTER ANTENNA AND BATTERY COVER
MTC950706	RECEIVER/ESC IN WATERPROOF CASE (STATE CHANNEL)
MTC950707	PROPELLER SHAFT HOLDER
MTC950708	REPLACEMENT BOTTOM SKIDS
MTC950712	WING TIP SHIELD BLACK (2)
MTC950901	BATTERY HATCH
MTC950902	ELEVATOR ACTUATOR
MTC950903	RUDDER ACTUATOR
MTC950904	RUDDER AND VERTICAL FIN W HORN
MTC950905	CLEVIS (2) AND HORNS (2)
MTC950906	REPAIR GLUE
MTC950907	PUSH RODS (RUDDER AND ELEVATOR)
MTC950910	AC AND BATTERY COMBO NEW

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## TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Plane nose dives	May have not launched correctly	Make sure you are launching the plane up, out and level. Also make sure you have tried a running start.
	Rear tail clevis may need adjustment.	See page 10 for proper adjustment
	May need to use vertical climb button	Use vertical climb button as needed in order to keep the nose up
Plane is climbing and stalling	To much throttle	Reduce the throttle and let the plane glide until the nose becomes parallel with the ground, then increase throttle again.
	Elevator tail clevis may need adjustment.	See page 10 for proper adjustment
Short flight duration	Batteries are exhausted	Recharge the battery, see page 5
	Battery may need to be cycled	Cycle the battery, see page 6
No power to radio control transmitter or charger	Batteries are incorrectly installed in the Transmitter	Make sure batteries are installed in the correct direction
	Batteries are exhausted	Replace the batteries with new alkaline batteries
	Power switch is in the "off" position	Move power switch to the "on" position
No Power to the Charger	Battery not connected properly	Double check connection
	Vehicle accessory power is not turned on	Check vehicle manual to confirm proper operation of the 12v power source
Hydro-Fly is not flying high enough	Flight Pack is exhausted	Recharge the Flight pack, see page 5
	You are not using constant throttle control	Increase throttle stick control to allow plane to climb or for plane to fly at desired altitude
Hydro-Fly crashed to the ground while landing	You may have reduced the throttle too quickly or too much	Lower the throttle stick more gradually to allow the plane to slowly glide for a landing



## Limited Warranty

Megatech® International guarantees this item to be free from defects for a period of 90 days from date of purchase. If any component of this product fails to function properly due to defects in materials or manufacturing process during this 90 day period, the manufacturer's obligations are limited and manufacturer can choose to either repair or replace the item.

This warranty is void if the product in question has been altered or repaired by anyone other than Megatech International or an authorized agent.

Under no circumstances will Megatech International or any of its representatives be held liable for injury to persons or property damage resulting from assembly or use of the product. Megatech is not liable if any outside radio frequencies interfere with the product's frequency causing loss of control. Megatech International will not be held liable for any injury to persons or property damage resulting from an out-of-control model caused by use or misuse of the product. Megatech International expressly excludes any and all express warranties not specifically stated here and all implied warranties of merchantability and fitness for a particular purpose. There are no warranties which extend beyond the description of the warranties contained herein.

Contact the Megatech International Service Department before returning any item that is defective according to the limitations listed above. Please be sure to pack the returned item(s) carefully. The customer must return the product along with proof of purchase, a letter describing the problem and the customer's address and telephone number. At this point in time we will either repair the defective part or replace it and return it to the customer. Return shipping and handling in the 48 contiguous states is \$12.99. Shipping outside of the 48 states will be quoted by location.

This warranty does not cover any damage caused by use, misuse, alteration, accident, or neglect, nor does it cover normal wear and tear of the product. Product returned to us which falls under this category will be submitted to our service department for repair. We reserve the right to charge any service and parts fees incurred when repairing the item.

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