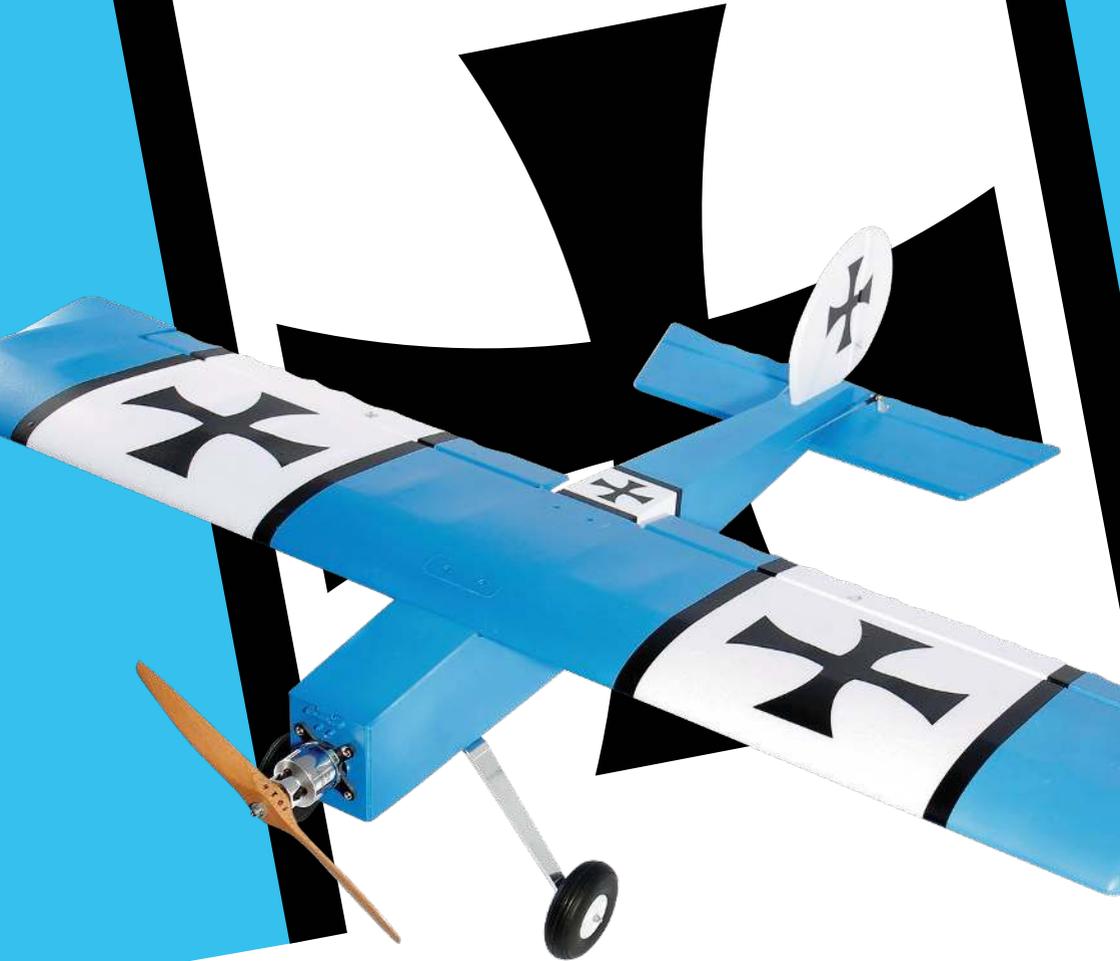


Duraflly Ugly Stick

VERSION 2

... PLUG AND FLY ...

INSTRUCTION MANUAL



Please read this manual carefully before operating this plane.





WARNING:

Read this instruction manual fully so as to become completely familiar with the features of this product before operating. Failure to operate this product correctly could result in damage to the product, personal property and cause serious injury. This is a sophisticated hobby product and is NOT a toy. It must always be operated with caution, common sense and some basic mechanical ability. This manual provides instructions as to the assembly, safe operation and maintenance of this hobby product. It is highly recommended that you follow and read fully the instructions and warnings stated in this manual including safety, assembly, set-up and flying guidelines in order to operate this product correctly and avoid damage or serious injury.

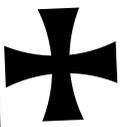
SAFETY PRECAUTIONS:

As the user of this product you and you alone are responsible for operating it in a manner that does not endanger yourself and others around you or result in damage to the product or property of others. This product is operated via a radio controlled system that in some cases can be subject to interference from sources outside of your control. Interference may result in a momentary loss of control so it is always recommended that this product be used in a suitably open outdoor space.

- This is a radio controlled flying model and as such must always be flown with caution and care. This is not a toy.
- The Ugly Stick brief was to design a model for intermediate to advanced pilots.
- Always exercise great caution when using the recommended battery to power this product. For full safety notes and operating procedures, please see information provided by your battery supplier.
- Take great care when connecting/disconnecting the battery. See battery supplier for full safety procedures.
- Never power up the model in confined spaces and always keep the propeller clear of obstructions.
- This product is not a toy. Children must be accompanied by an adult at all times if operating this product.
- Only fly this model in an open area away from crowds, people, buildings, tree's, power lines and obstructions.
- Always put safety first when operating this model and consider the warnings stated above.
- The supplier/manufacturer accepts no responsibility for damage or injury caused through the use of the product. Not suitable for children under the age of 14. THIS IS NOT A TOY.

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Duraflly Ugly Stick

VERSION 2

INTRODUCTION:

Thank you for purchasing the Duraflly Ugly Stick version 2. The Ugly Stick design has been a popular nitro sports model for almost half a century and this iconic airframe is known throughout the RC world for its exceptional flight characteristics and charming yet simple lines.

With the Duraflly Ugly Stick V2, you too can now experience what made this great model a classic, but with benefit of modern electronics, EPO construction and now with the V2, a lighter airframe and more powerful motor. No building, no tuning, no cleaning! the Ugly Stick V2 is an impressively authentic electric PnP interpretation of this classic RC subject. From the perfectly captured outline of the design and trademark decals, the Ugly Stick V2 from Duraflly has it all.

The Ugly Stick V2 comes with all electronics pre-installed, all major components assembled for you and a full compliment of tools and accessories included. No glue is provided, as none is needed! The Ugly Stick V2 bolts and screws together in just a few easy steps, multiple access hatches also allow for easy access to all internal electronics.

With this latest version you'll be rewarded with an extremely well balanced and enjoyable sports model in the air and a great conversation piece on the ground, thanks to the ultra high level of design and authenticity Duraflly has achieved with the Ugly Stick Version 2.



SPECIFICATIONS:

Wingspan: 1100mm (43.3")

Length: 950mm (37.4")

Flying weight: 1050g (37oz)

Controls: 4 channel (Ailerons, Elevator, Motor Control, Rudder) ESC:

Duraflly 30amp (pre-installed)

Motor: 3536 900kv Brushless outrunner (pre-installed)

Prop: Duraflly wooden 10x6

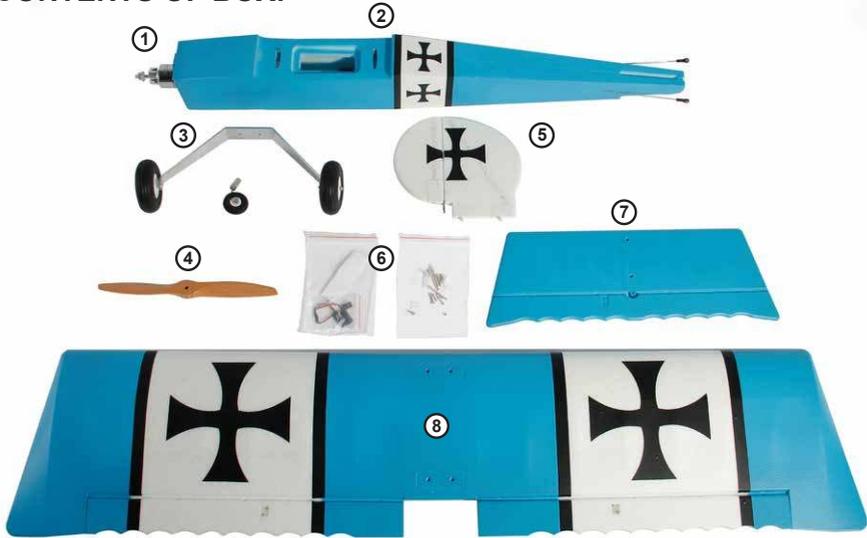
Battery recommended: 2600-3000mah 11.1v 3S Lipo

Radio System: Min 4 channel Rx and Tx required.

V2 Features:

- Lighter airframe with more powerful brushless motor
- Larger battery compartment
- All pushrods utilize balllink connections
- Longer flight times
- New hi-viz color scheme

CONTENTS OF BOX:



- | | |
|-----------------|--------------------|
| 1. Motor | 5. Vertical Stab |
| 2. Fuselage | 6. Accessories Set |
| 3. Landing Gear | 7. Horizontal Stab |
| 4. Propeller | 8. Main Wing |

REQUIRED TO COMPLETE MODEL:

In its 'Plug n Fly' format the Ugly Stick V2 requires some additional electronic components to get it flight ready. Duraflly recommends the products below for optimum performance and great value. Available at hobbyking.com



OrangeRx Tx6i Mode 2
6ch 2.4GHz DSM2/DSMX
Compatible Radio System



Turnigy TGY-i6 Mode 2 AFHDS
Transmitter and 6CH Receiver



OrangeRx R610V2 DSM2 Compatible
6CH 2.4GHz Receiver w/CPPM



Turnigy Graphene Professional
3000mAh 3S 15C Battery Pack



Turnigy Graphene Panther
3000mAh 3S 75C Battery Pack



Turnigy Nano-Tech 3000mAh
3S 70C Battery Pack

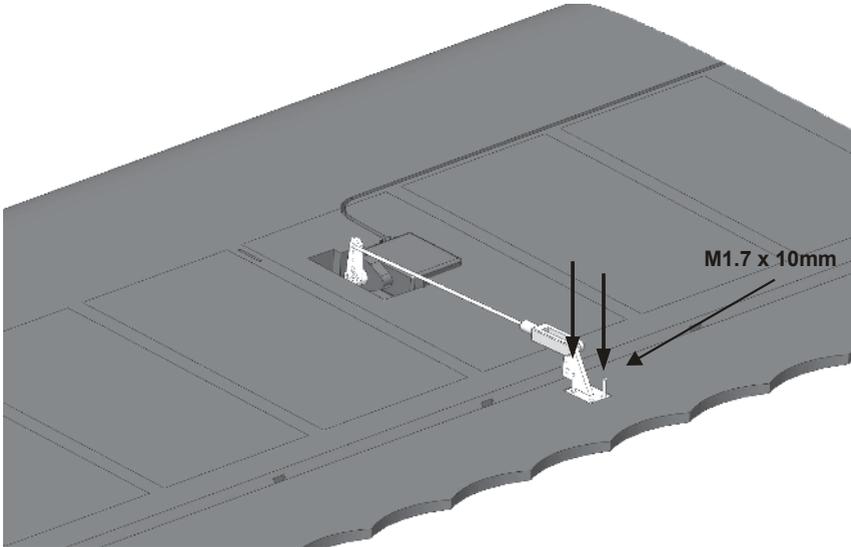


Duraflly Ugly Stick

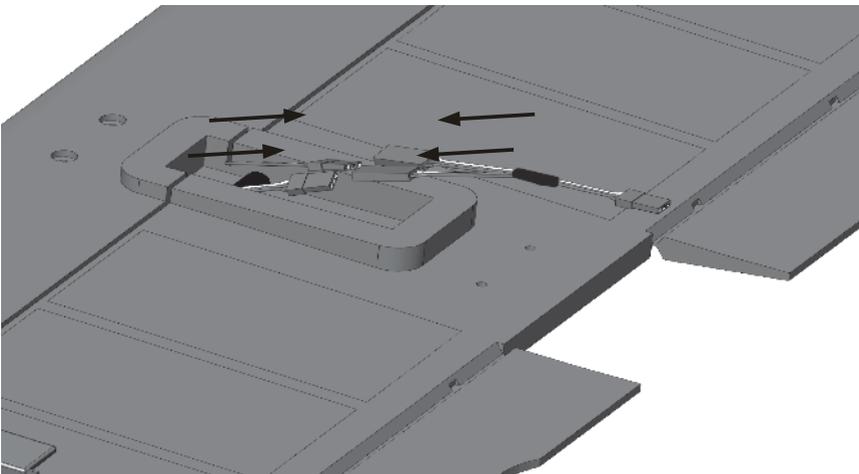
VERSION 2

ASSEMBLY:

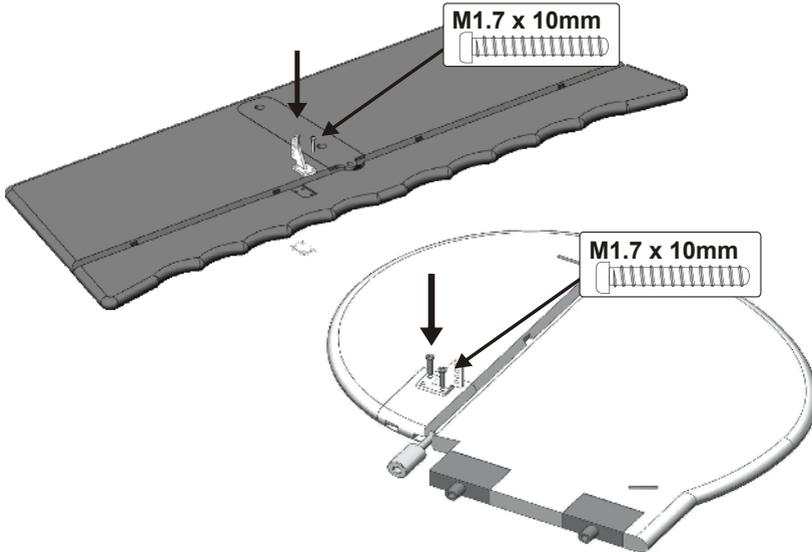
1. Locate the bag marked 'Aileron' and install aileron control horns and rods for each side of the wing as shown. Ensure the servo horn is at 90 degrees to the wing when installing the control rod.



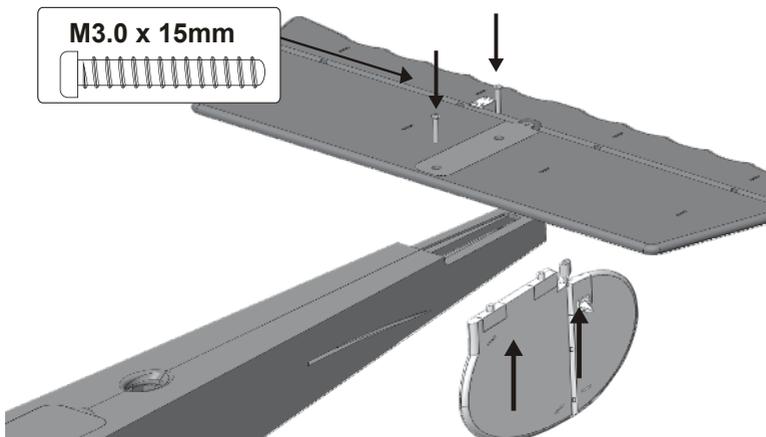
2. Now connect the supplied Y-lead to the aileron servos and set the wing aside for later.



3. Following the illustration below, screw the remaining control horns to both the elevator and rudder control surfaces until firmly installed.



4. Turn the fuselage over and with the supplied screws, secure the horizontal and vertical tail plane to the rear of the fuselage as shown. Connect the pre-installed control rods to the control horns. Ensure the tail is firmly secured and aligned.

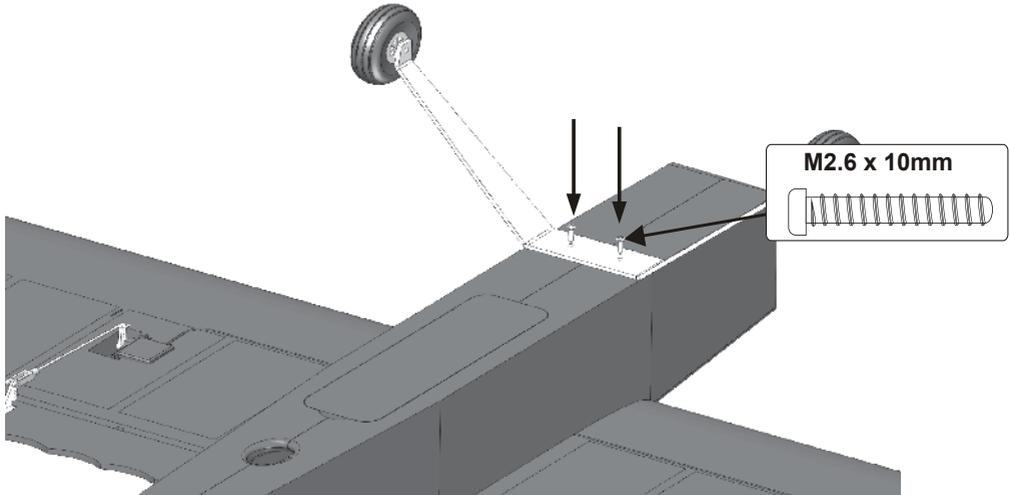




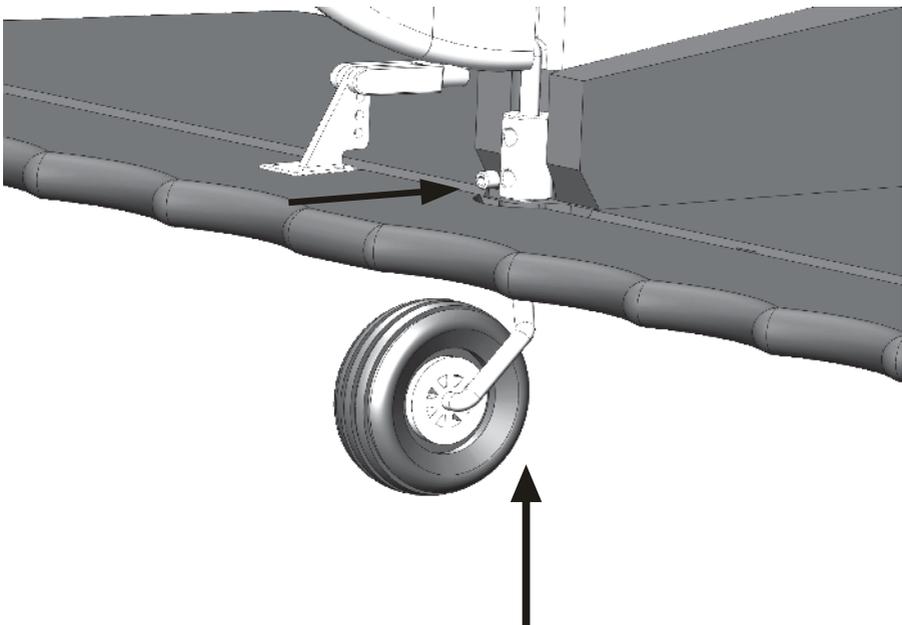
Duraflly Ugly Stick

VERSION 2

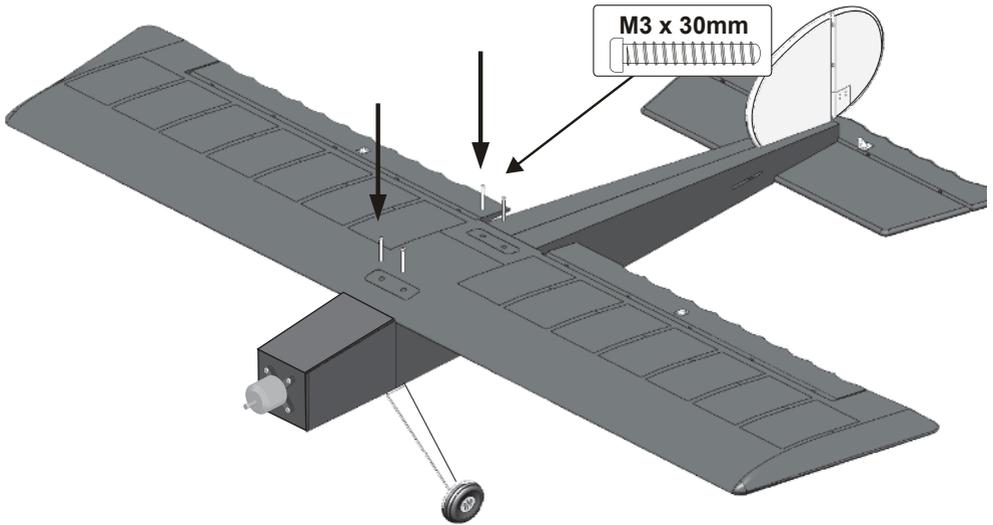
5. With the supplied M2.6x10mm screws, attach the landing gear to the plastic plate on the underside of the fuselage. Screw down firmly to avoid any play at the mounting point.



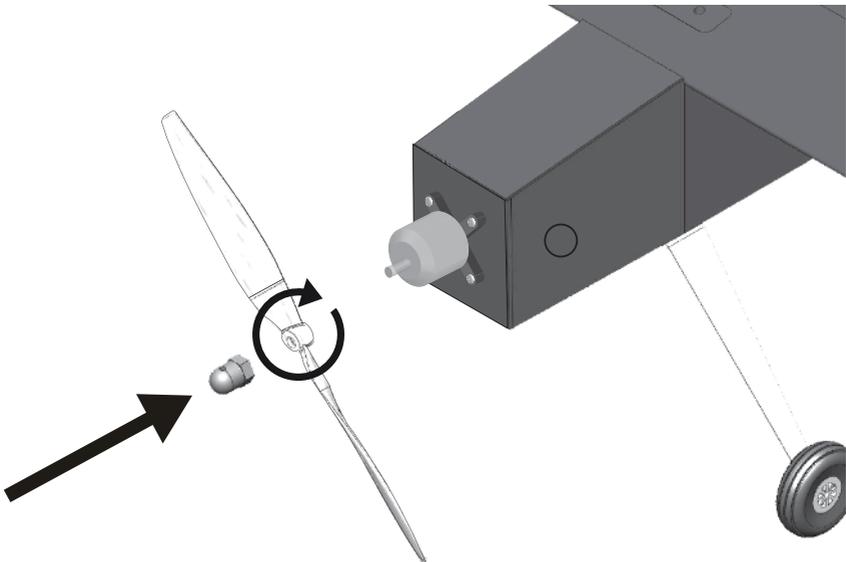
6. Install the tail wheel up through the elevator and tighten into the metal collet with the supplied hex tool as shown. Ensure the tail wheel is directly inline with the rudder when secured.



7. Now mount the wing to the fuselage using the four M3x30mm machine screws provided. Make sure no servo wires are caught between the wing and the fuselage when the two are tightened together.



8. The final stage of assembly is to mount the propeller. Install the propeller onto the motor shaft and firmly tighten into place (see note below before doing this).





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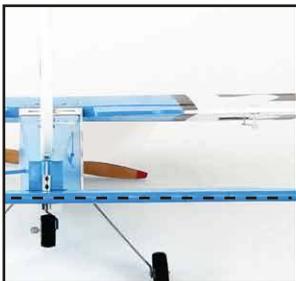
Assembly of your Duraflly Ugly Stick V2 is now complete. Before you move onto the final set-up of the model, we suggest you perform a final check on all screws, bolts and components to ensure all are secure and firmly in place.



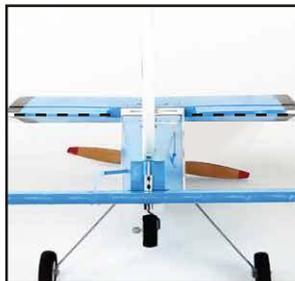
SETTING UP YOUR MODEL:

1. With your receiver installed and all servos plugged into their corresponding channels, and propeller removed (see note below) connect the flight battery to the ESC to power up the model. With the model now armed, ensure all servos are centered and all control surfaces are level. If not, adjust by turning the control clevis's by hand accordingly until the control surfaces are level as shown. If using a computer transmitter fine tuning can also be done by using your transmitters sub trim function.

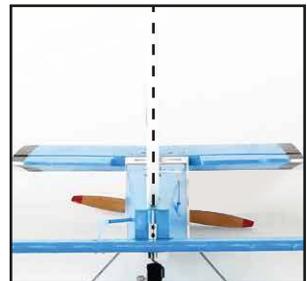
Note: For safety reasons, it is advised that this is done with the prop removed from the model.



Elevator



Ailerons



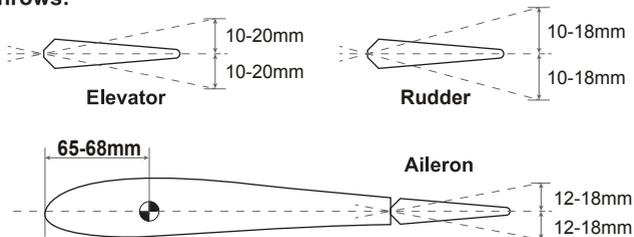
Rudder

2. Check all control surfaces are moving in the correct direction with the applicable stick input (see below)

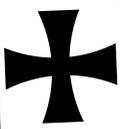
 	<p>Roll left</p> <p>Roll right</p>	 	<p>Aileron (Roll)</p>
 	<p>Pitch up</p> <p>Pitch down</p>	 	<p>Elevator (Pitch)</p>
 	<p>Yaw left</p> <p>Yaw right</p>	 	<p>Rudder (Yaw)</p>

3. The Durafly Ugly Stick V2 handles very well in flight but requires setting up beforehand. Please follow the recommended settings below for good all round flight performance

Control throws:



- * Elevator 'low rates' 10mm 'high rates' 20mm in either direction from neutral.
- * Aileron 'low rates' 10mm 'high rates' 18mm in either direction from neutral.
- * Rudder 'low rates' 12mm 'high rates' 18mm in either direction from neutral

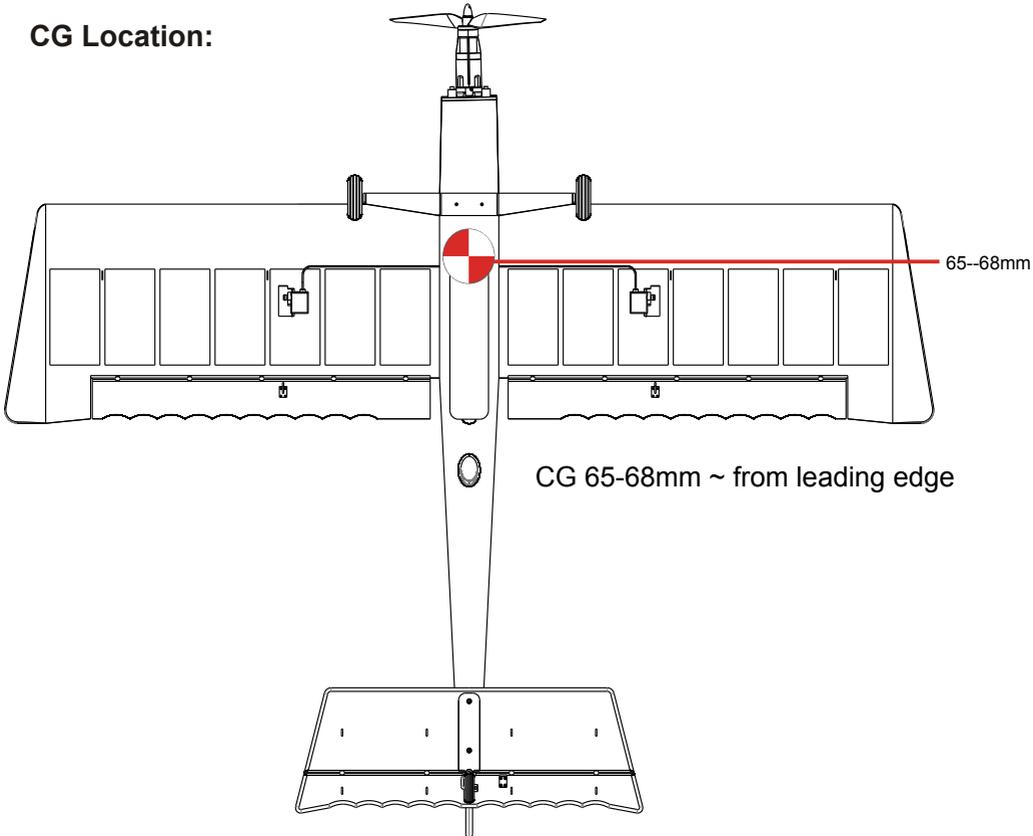


Duraflly Ugly Stick

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4. Suggested center of gravity (CG) for the Ugly Stick V2 is approximately 65-68mm from the leading edge of wing (on the aileron servo wire). We recommend the heaviest 3s pack you can fit in the Ugly Stick, you will need at least a 2600mah 3S, a Graphene Panther 3000mah is ideal, even then you may need to add a small amount of weight to the nose to get the model to balance.

CG Location:



With assembly and set-up now complete your Duraflly Ugly Stick V2 should now be ready for flight. However we recommend you read and follow the advice given in the following stages of this manual before flying your model.

MODEL FLYING PRECAUTIONS.

- Select your flying area carefully and always choose an open space that is unobstructed from trees and buildings and is away from crowded areas. Avoid flying in areas where there are roads, electric or telephone poles and wires, water or within close proximity of full size air traffic.
- Do not fly the model in poor weather such as high winds, low visibility, inclement temperatures or in rain or storms.
- Never attempt to catch the model whilst it's flying. Even a slow moving model can cause harm or injury to yourself or others and risks damaging the model.
- This model is recommended for children no younger than 14yrs of age. All children no matter what age should always be supervised by a capable and responsible adult when operating this model.
- Always unplug your model battery when not in use, never leave the battery installed in the model.
- Remember to keep clear of the propeller at all times when your flight battery is connected.
- Before flying always turn on your transmitter first, only then plug in your flight battery.
- After flying always unplug the flight battery first, then switch off your transmitter.
- Exercise caution when charging your batteries, follow in full your battery manufacturers safety guidelines when doing so.



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PRE-FLIGHT CHECKS:

1. Always range check your model before any flight (especially when flying a new model for the first time). Follow your radio manufacturers guidelines for performing this check.
2. Check that all screw/bolts and mounting points are firmly secured, including control horns and clevises.
3. Only fly with fully charged batteries (both in your radio transmitter and model). Failure to do so could result in loss of control, damage to the model and/or persons/property around you. Check your batteries are fully charged.
4. With the model powered up (transmitter on first, then receiver/model) check that all control surfaces are free from damage/obstructions and check that they move freely with no snagging and in the correct directions.
5. Inspect the model and prop for any damage that may have occurred during transit and listen for any unusual sounds from the electronics when powered up. If in doubt, do not fly.
6. With the model held securely and the prop free of obstructions, increase the throttle just slightly to confirm the rotation of the prop is correct. The model should want to pull straight forward with throttle.
7. If this is your first flight with the model double check the C/G is at the correct position. If not adjust battery position inside model accordingly.
8. If you are an inexperienced model pilot seek the help and assistance of an experienced pilot to perform these final checks and to test fly the model for you.

FLYING THE UGLY STICK V2:

The Durafly Ugly Stick V2 not only looks as good as the original, but flies just as well, capturing perfectly those excellent flight qualities that established the Ugly Stick as such a popular RC sports flyer all those years ago.

The Ugly Stick V2 requires no special flying considerations as it is such a well mannered sports model suitable for both novice and experienced flyer's alike. The model has a good range of speed and is just as happy flying at low throttle as she is at high. At the lower end of the speed range the Ugly Stick exhibits no bad stall tendencies and can be flown comfortably at half throttle if desired. However when you wish to experience the full flying capabilities of the Ugly Stick V2, full throttle flying is even more fun and all manner of sports aerobatic maneuvers are achievable with the model.

Thanks to the steerable tail wheel and the wide stance of the main gear, the Ugly Stick V2 handles very well on the ground and take off is always very straight and controlled either on paved or grass surfaces. With good acceleration and plenty of power your Ugly Stick V2 will be airborne within a few feet and with less than 3/4 throttle. Once in the air you'll be rewarded with an airframe that goes exactly where you point it and tracks very true in flight. Eve. If required the Ugly Stick V2 can also be hand launched with ease at full throttle and with nothing more than a over arm launch from standing.

Flight times on the recommended 2600-3000mah 3S lipo will range from 8 to 12 minutes or even longer depending on your use of throttle and with its low current draw, the power system will be barely warm to the touch after each flight. When it is time to land, the Ugly Stick V2 is comfort-able in either a power on or power off approach, depending on your preference and circumstance. The model will glide power off and you'll remain comfortably in control in either situation all the way down.

Happy flying and thank you for choosing Durafly.



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SPARE PARTS LISTING:



Fuselage

9306000503-0



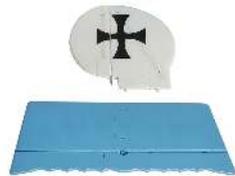
Main wing

9306000506-0



Landing gear

9306000505-0



**Horizontal stabilizer &
fin**

9306000504-0

TROUBLE SHOOTING:

Problem	Cause	Solution
Motor does not run	<ol style="list-style-type: none"> 1. Battery is not fully charged. 2. Transmitter battery low. 3. Motors not connected. 4. The motor is damaged. 5. Receiver is not bound to Tx. 6. ESC in set-up mode. 	<ol style="list-style-type: none"> 1. Charge the batteries. 2. Install a full charged battery. 3. Check for connection between the ESC and motor. 4. Replace motor. 5. Consult Radio manual and go through bind procedure again. 6. Hold model and move throttle to full position then back down to idle.
<u>Model moves backwards</u>	<ol style="list-style-type: none"> 1. Prop installed backwards 	<ol style="list-style-type: none"> 1. Turn the prop around .
<u>Control surfaces not moving with stick input</u>	<ol style="list-style-type: none"> 1. The servo lead is connected to Rx incorrectly. 2. The servo is damaged. 	<ol style="list-style-type: none"> 1. Make sure the servo leads are connect properly. 2. Replace servo.
<u>Model does not fly straight</u>	<ol style="list-style-type: none"> 1. Control surfaces not centered. 2. CG is not in the correct position. 	<ol style="list-style-type: none"> 1. Adjust the trims on the transmitter. 2. Re-position battery as suggested.
<u>Model does not climb well</u>	<ol style="list-style-type: none"> 1. The battery is not fully charged. 2. Elevator servo is reversed. 3. CG too far forward. 	<ol style="list-style-type: none"> 1. Charge the battery. 2. Change servo direction via Tx. 3. Move battery backwards.
<u>Limited Radio Range</u>	<ol style="list-style-type: none"> 1. Transmitter/Receiver batteries are flat. 	<ol style="list-style-type: none"> 1. Charge/replace batteries.