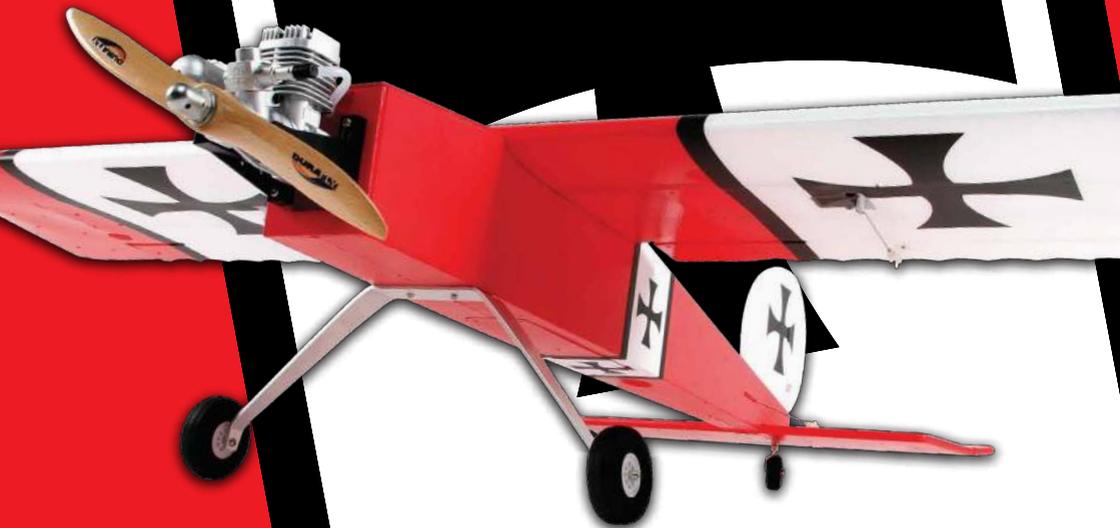


Das Ugly Stik

... PLUG AND FLY ...

INSTRUCTION MANUAL



Please read this manual carefully before operating this plane.

DURAFLY
®



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 the the assembly, safe operation and maintainence of this hobby product. It is highly reccommended 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 outdoors 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 is designed for intermediate to advanced pilots.
- Always exersie 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 safty procedures.
- Never power up the model in confined spaces and always keep the props 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.

Contents

Introduction	1
Specifications	1
Contents of box	2
Required to complete	2
Assembly	3-7
Setting up your model	7-9
Model flying precautions	10
Pre-flight checks	11
Flying the Ugly Stik	12
UglyStik tips	13
Spare parts listing	14
Trouble shooting	15
Contact information	16



Das Ugly Stik

INTRODUCTION:

Thank you for purchasing the Duraflly Retro Series 'Das Ugly Stik'. The Ugly Stik 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 Retro Series Ugly Stik, you too can now experience what made this great model a classic, but with benefit of modern electronics and EPO construction. No building, no tuning, no cleaning! Das Ugly Stik is a impressively authentic electric PnF interpretation of this classic RC subject. From the perfectly captured outline of the design to the exceptionally convincing dummy nitro engine, Das Ugly Stik from Duraflly has it all.

Like all Retro Series models before it, Das Ugly Stik 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 Stik bolts and screws together in just 8 easy steps and multiple access hatches allow for easy access to all internal electronics.

With this latest Retro Series model, 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 'Das Ugly Stik'.



SPECIFICATIONS:

Wingspan: 1100mm (43.3")

Length: 950mm (37.4")

Flying weight: 1050g (37oz)

Controls: 4 channel (Ailerons, Elevator, Throttle, Rudder)

ESC: Duraflly 30amp (pre-installed)

Motor: 3536 1000kv Brushless outrunner (pre-installed)

Prop: Duraflly wooden 10x6

Battery recommended: 2200mah 11.1v 3S lipo (25C min)

Radio System: Min 4 channel Rx and Tx required.

CONTENTS OF BOX:



1. Dummy Engine
2. Fuselage
3. Landing Gear
4. Propeller

5. Vertical Stab
6. Accessories Set
7. Horizontal Stab
8. Main Wing

REQUIRED TO COMPLETE MODEL:

In its 'Plug n Fly' format Das Ugly Stik 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 T-SIX 2.4GHz 6CH
Programmable Tx:
Part No. 9403000001 Mode 1
9403000002 Mode 2



Turnigy 2200mAh
3S 30C Lipo:
Part No. T2200.3S.30



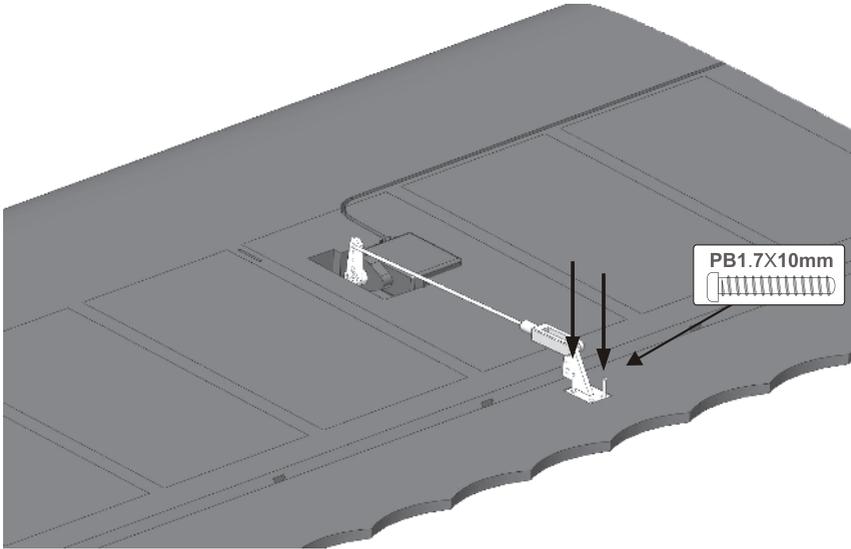
OrangeRx R620 6Ch 2.4Ghz
Receiver R620:
Part No. R620



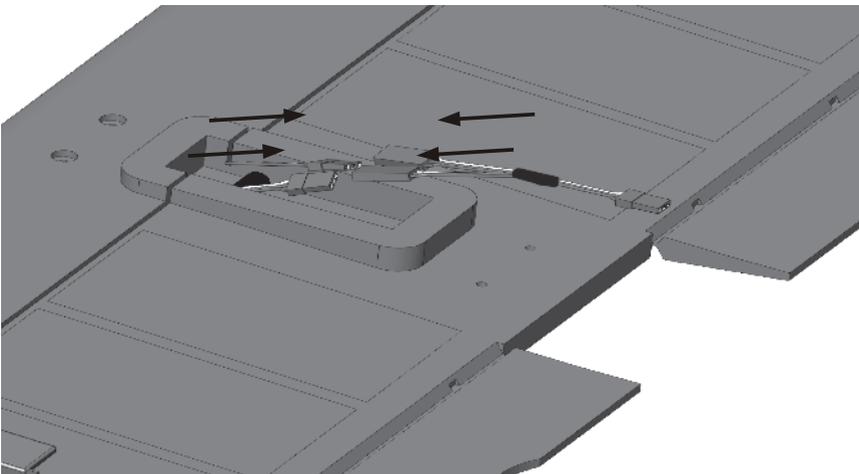
Das Ugly Stik

ASSEMBLY:

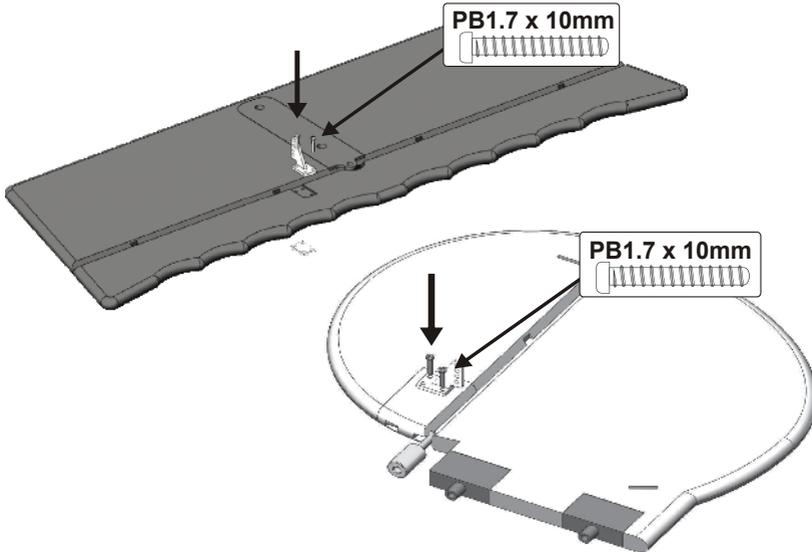
1. Locate the bag marked 'Aileron' and install aileron control horns and rods for each side of the wing as shown. Ensure the servo horn is at 90 degrees to the wing when installing the control rod.



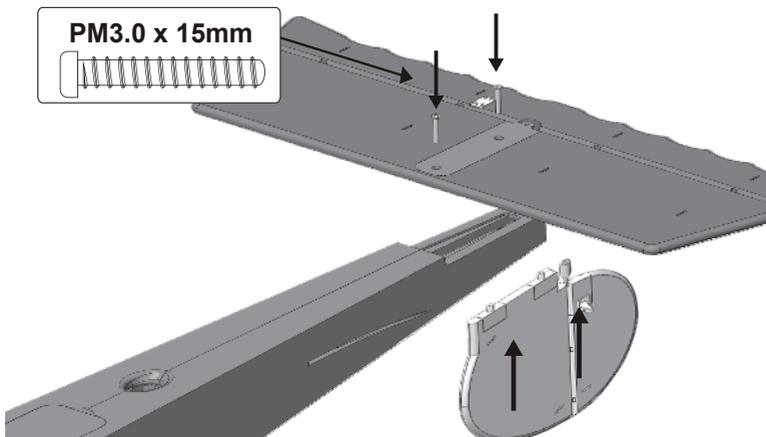
2. Now connect the supplied Y-lead to the aileron servos and set the wing aside for later.



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



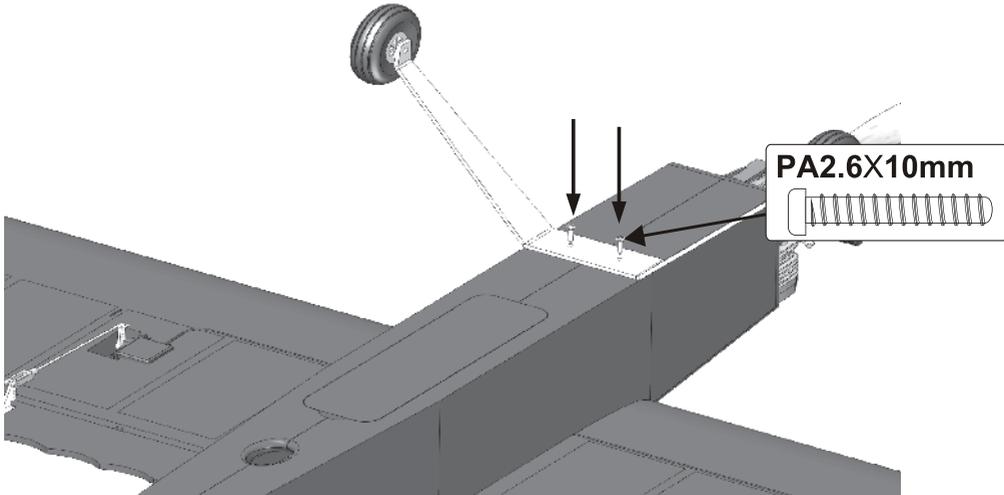
4. Turn the fuselage over and with the supplied bolts, secure the horizontal and vertical tail plane to the rear of the fuselage as shown, connecting the pre-installed control rods to the control horns. Ensure the tail is firmly secured and aligned.



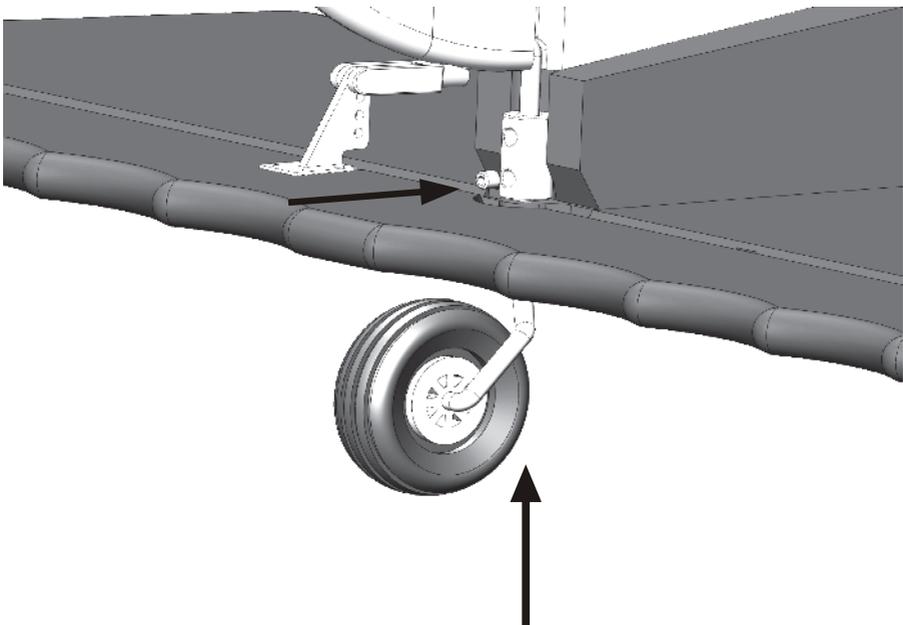


Das Ugly Stik

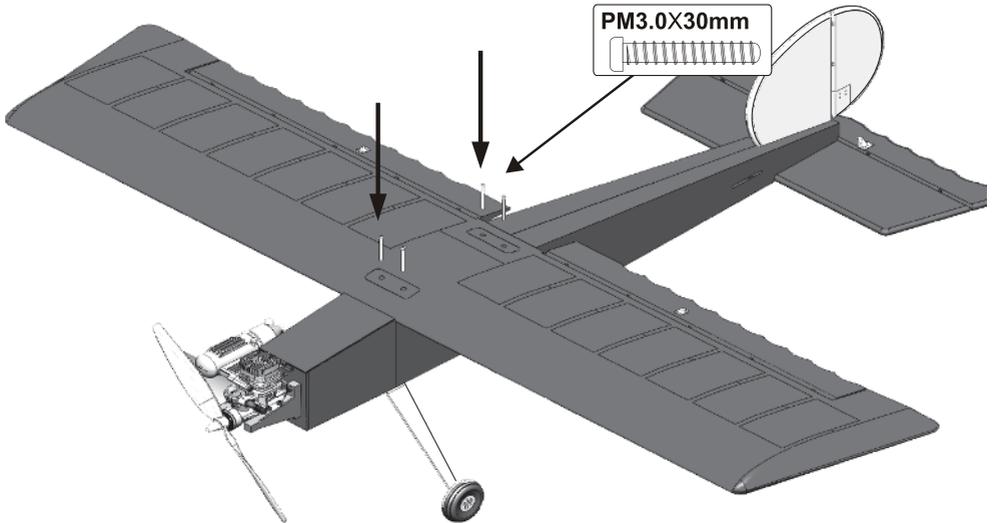
5. With the supplied 2.6x10mm screws, attach the landing gear to the plastic plate on the underside of the fuselage. Screw down firmly to avoid any play at the mounting point.



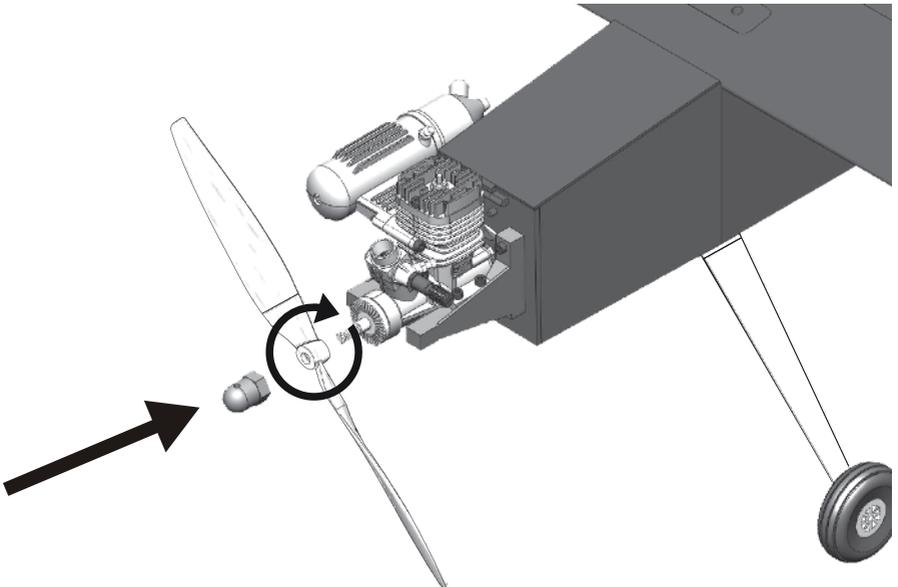
6. Install the tail wheel up through the elevator and tighten into the metal collet with the supplied hex tool as shown. Ensure the tail wheel is directly inline with the rudder when secured.



7. Now mount the wing to the fuselage using the four 3x30mm bolts 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. Slide the prop onto the motor shaft and tighten firmly in place. **Note:** The Durafly logo on the prop faces outwards.





Das Ugly Stik

Assembly of your Durafly Ugly Stik 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, connect the flight battery to the ESC to power up the model. With the model now armed, ensure all servo's 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.

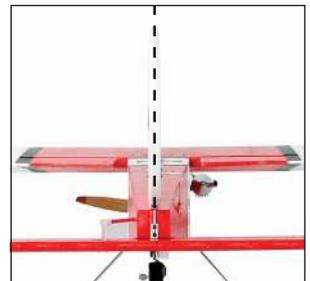
Note: For safety reasons, it is advised that this is done with the prop removed from the model.



Elevator



Ailerons



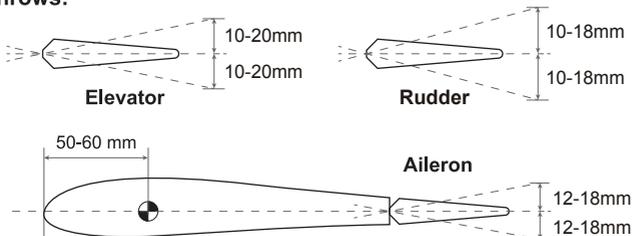
Rudder

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. Das UglyStik 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.

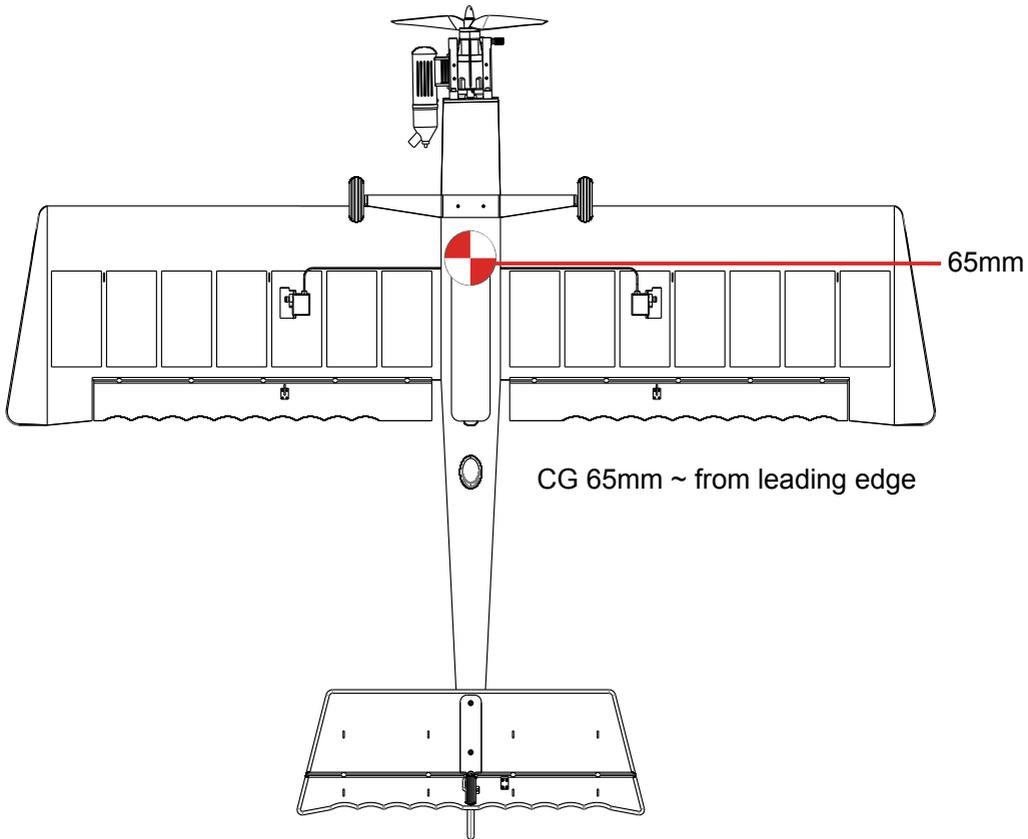
* Rudder 'low rates' 12mm 'high rates' 18mm in either direction from neutral



Das Ugly Stik

4. Suggested center of gravity (CG) for Das Ugly Stik is approximately 65mm from the leading edge of wing (on the aileron servo wire). With a 2200mah 3S lipo installed via the underside battery hatch and pushed as far forward as possible the model should balance at this point. The C/G can be adjusted to suit your own flying style by moving the battery backwards or by adding some weight to the nose of the model.

CG Location:



With assembly and set-up now complete your Durafly UglyStik 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 flight area carefully. Always choose an open space that is unobstructed from trees and buildings and away from crowded areas. Avoid flying in areas with roads, electric/telephone poles/wires and water near by or within close proximity to full size air traffic.
- Do not fly this model in poor weather. High winds, low visibility, inclement temperatures, rain and storms are to be avoided.
- Never attempt to catch this model whilst in flight. Even a slow moving model can cause harm to yourself and/others and risks damage to the model.
- This model is recommended for children no younger than 14 years old. 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 then plug your flight battery into the model.
- After flying, always unplug your flight battery first then turn off your radio transmitter.
- Exercise caution when charging your batteries and follow in full your battery manufacturers safety guideline when doing so.



Das Ugly Stik

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 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 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 surface are free from damage/obstructions, moving in the correct directions and freely with stick input.
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 rotations 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 STIK:

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

Das Ugly Stik requires no special flying considerations as it is such a well mannered sports model suitable for both novice and experienced flyers 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 Stik 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 Das Ugly Stik, 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 Stik 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 Stik 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. Even more impressive is the sight of its electric powered nitro engine as it flies pass in near silence. This unique feature of the DuraFly Ugly Stik will never get old and always impresses. If required the Ugly Stik 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 2200mah 3S lipo range from 6-9 minutes, depending on your use of throttle and with its low current draw, the power system is always barely warm to the touch after each flight. When it is time to land, the Ugly Stik is comfortable 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.

Don't forget to make a point of stopping and starting the Ugly Stiks electric nitro engine in flight or when on the ground, its entertaining for all to see and is part of what makes the Retro Series Ugly Stik from DuraFly so special.

Happy flying and thank you for choosing DuraFly.



Das Ugly Stik

UGLY STIK TIPS:

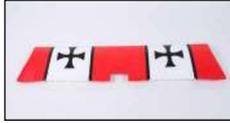
1. When handling the Ugly Stik it is recommended that you do so only from the leading edge of the wing to avoid wear to the edges of the fuselage. The Ugly Stik by design has flat sides and hard edges to the fuselage, edges that are vulnerable as painted EPO. Over time these edges can get worn down if handled so it is best to try and avoid handling the UglyStik by any surface other than the wing.
2. It is HIGHLY recommended to use a piece of foam or sponge behind the battery when installed in the fuselage to keep the lipo from sliding backwards during flight.
3. For optimum flight performance and model longevity it is highly recommend that you always fly with a balanced prop. This is especially true with the Ugly Stik as a badly balanced prop can damage the dummy nitro engine and electric power system of this model. The supplied prop should be balanced, but it is always good to check first. If you replace the propeller with your own choice of prop, please be sure to balance it beforehand.
4. Flight packs of 25C discharge rate or above are recommended for use in the UglyStik to ensure optimal performance in flight and from the power system.
5. Keep all leads within the fuselage area as tidy as possible. Tidy wires not only look better, but also allow for easier access to all internal components, better battery installation, increased airflow around electronics and a reduction in potential electronic signal interference (noise).
6. Inspect the propeller and mounting nut/bolts frequently, especially if you have suffered a hard landing or the prop has been knocked. If the prop is in any way damaged it must be replaced and any loose fixings must be tightened.

Thank you again for purchasing the Durafly Retro Series Ugly Stik. We hope you'll have many happy days of flying and look forward to bringing you more Durafly models in the future.

Don't forget, spare parts are available for this model, please see the next page for details.

SPARE PARTS LISTING:**Fuselage**

9306000098-0

**Main wing**

9306000099-0

**Horizontal stabiliser**

9306000100-0

**Vertical stabiliser**

9306000101-0

**Battery hatch**

9306000102-0

**Dummy engine**

9306000103-0

**Landing gear**

9306000104-0

**Accessories set**

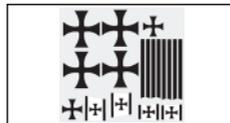
9306000105-0

**Propeller**

9306000106-0

**Prop nut set**

9306000107-0

**Sticker sheet**

9306000108-0

**Motor**

9306000109-0



Das Ugly Stik

TROUBLE SHOOTING:

Problem	Cause	Solution
Motor does not turn	<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 props 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. CoG is not in the correct position.	<ol style="list-style-type: none">1. Adjust the trims on the transmitter.2. Re-position lipo 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 backwards.	<ol style="list-style-type: none">1. Charge the battery.2. Change servo direction via Tx.3. Move battery forwards.
<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.