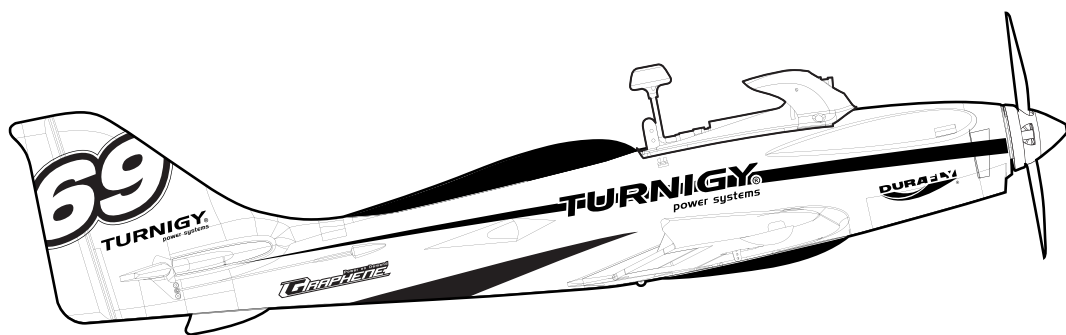
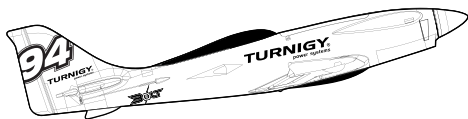
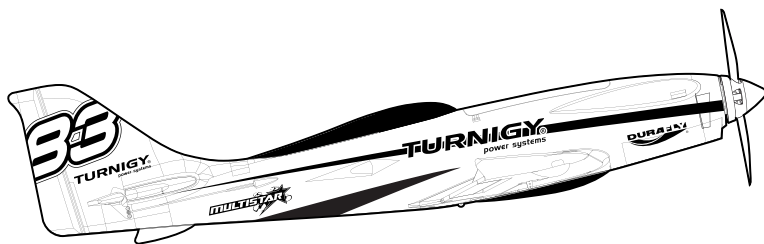




EXTRA

(PNF)

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 the 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 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.
- This model is designed 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 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, trees, 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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INTRODUCTION:

Thank you for purchasing this EFXTRA from Duraflly. The EFXTRA have been designed from the ground up to offer the speed (110mph) and strength normally reserved for high end full composite models together with the agility and stability you'd expect from any good sports model. In addition to this you of course get the convenience, quality and uniqueness only an EPO model from Duraflly can offer. Add to this the new FPV race canopy and slope nose cone included in the box and you get a exhilarating experience, however you choose to fly.

With a minimal part count and assembly, the EFXTRA simply clips and screws together in less time then it takes to charge a battery. In the air the EFXTRA will reach 110mph+ (4S) and feel exceptionally stable and controlled whilst doing so. Yet unlike most speed machines, it also has exceptional slow speed handling and performance. With its 4 channel control the EFXTRA is also very aerobatic. BIG loops, fast rolls, incredibly locked in knife edges, snaps and spins, the EFXTRA can do them all and more. Its only limit, is you!

With the EFXTRA you get a model that flies with precision and authority straight out of the box and one that will excite and awe pilot and spectator alike!



SPECIFICATIONS:

Wingspan: 970mm (38.1")

Length: 760mm (30.2")

Flying weight: 720g (25.3oz)

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

ESC: Aerostar 60amp (pre-installed)

Motor: Aerostar 3536 1780kv Brushless outrunner (pre-installed)

Prop: Grey 8x6 (3S), black 7x6.5 (4S), included.

Battery: 1800-2400mah 14.8v 4S lipo (30c min) on supplied 7x6.5

2200-2700mah 11.1v 3S lipo (30c min) on supplied 8x6

Radio system: Minimum 4 channel Rx and Tx required

CONTENT:



- | | |
|-----------------------------------|--|
| 1. Wing | 6. Control and mounting accessories |
| 2. Fuselage | 7. Aileron covers and fuselage scratch plate |
| 3. Horizontal stabilizer | 8. Slope nose cone. |
| 4. Propellers (4S 7x6.5 & 3S 8x6) | 9. FPV mounting tray |
| 5. Aluminum Spinner | 10. FPV canopy |

REQUIRED TO COMPLETE MODEL:

In the 'PnF' format the EFXTRA will still require some additional electronic components to be ready for flight. Duraflly recommends the products below for optimum performance and great value. Available at www.hobbyking.com



Turnigy 9XR Pro 2.4GHz
Transmitter
Part No. 171000414-0



Orange Rx R618XL 6CH
2.4GHz Receiver:
Part No. 9171000898-0



Zippy Compact
2700mah 3S 40C:
Part No. 9067000031-0



Turnigy Bolt
2400mah 4S 30-130C:
Part No. 9210000108-0

REQUIRED FOR OPTIONAL FPV CANOPY:



Turnigy HS1177 CCD
FPV Camera:
Part No. 9805000001-0



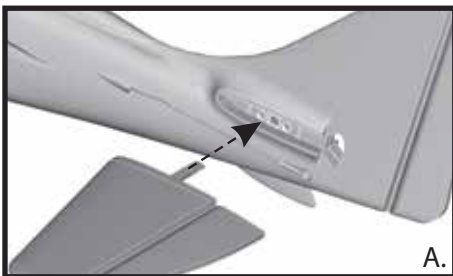
Quantum Elite X40-6
600mw 5.8ghz VTX:
Part No. 9704000008-0



Aomway 5.8ghz Clover
leaf antenna set (SMA):
Part No. 523000025-0

ASSEMBLY :

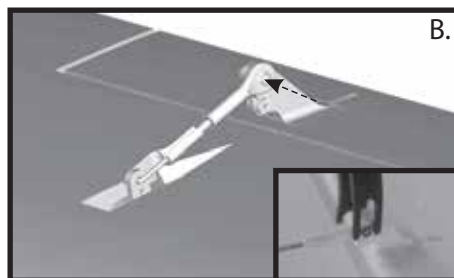
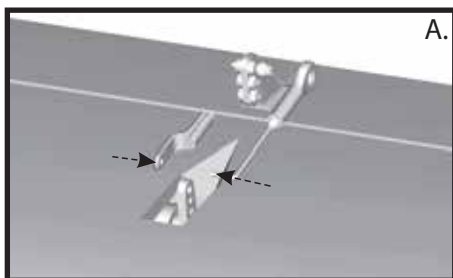
1. Locate the two horizontal tail halves and slide the left hand tail firmly into the plastic housing at the rear of the fuselage as shown (A). Install the other half of the tail ensuring both pieces lock into one another by pushing both firmly together from the tips and center to ensure good firm fit (B). Use contact glue for extra security if desired.



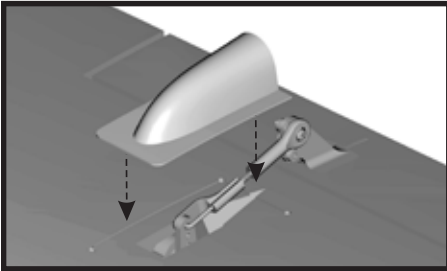
2. Using a pair of pliers (ball link pliers ideally) connect the elevator and rudder push rod to the control horn as shown (A). To ensure both the elevator and rudder are neutral (with the servo's centered) you may loosen the grub screw of the piano wire faster until both surfaces are neutral if required. Tighten firmly when done (B).



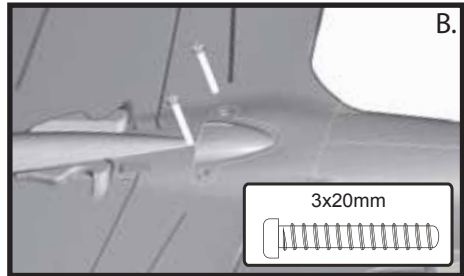
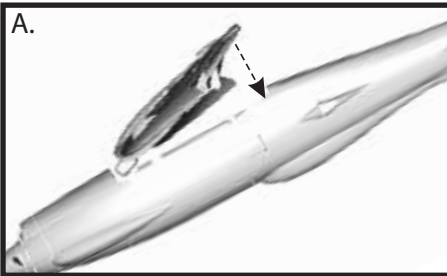
4. Locate the aileron push rods and remove the plastic swing keepers from the rods and insert the bent end of the rod into the top hole of the servo horn (A). Make sure the servo arm is at 90 degree to the wing (centered) before you connect the push rod. Re-attach the swing keepers to secure the push rods to the servo then connect the ball link to the aileron control horn with pliers (B).



5. With the aileron now connected and centered, peel the paper backing off the bottom of the aileron covers and affix each cover squarely in place as shown.



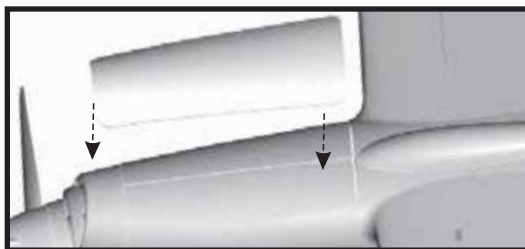
6. Connect the supplied Y-lead to the aileron servos then mount the wing to the fuselage (A). Using the two 3x20mm bolts, screw the wing firmly to the fuselage ensure no servo wires or ESC wires caught between the wing and fuselage as it closes (B).



7. Install your receiver in the fuselage between the servo's as shown and connect all servo wires. This space is tailor made for the recommended ORX receiver though any other 4-6ch receiver can of course be used.

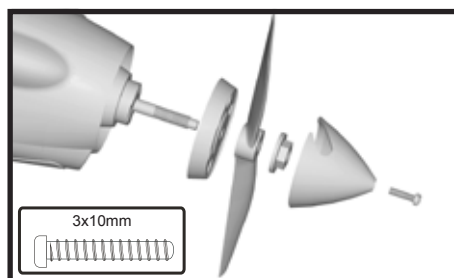


8. Affix the clear plastic 'fuselage scratch plate' to the underside of the nose of the fuselage by removing the paper backing from the double sided tape and pressing into position as shown. This PVC scratch plate will help protect the foam in this high impact area.



9. Install the spinner back plate on to the motor shaft ensuring the notches on the rear of the back plate align with the shaft's base. Secure your supplied prop of choice (the black 7x6.5 for 4S, or the grey 8x6 for 3S) with the prop nut and then secure the spinner as shown below using the M3 bolt (3x10mm) provided.

Note: Double check your prop is balanced before installing. An unbalanced prop can cause excess vibration and a loss in efficiency.

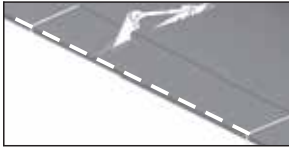


**Basic assembly of your EFXTRA is now complete.
Please perform a final check on all screws, bolts and components ensuring all are secure and firmly in place.**



SETTING UP YOUR MODEL:

1. Before getting started, bind your receiver to your transmitter. Please refers to your Transmitter Manual for the operation procedures. Make sure all the control sticks are in neutral position(Rudder, elevator andailérons) and the throttle in the OFF position. Turn on the transmitter make sure all the trims and the sub trims (For computerized TX) are in neutral position, and then power on the ESC for the control system testing. For safety reasons, it's advised that this is done with the propeller removed.



Aileron

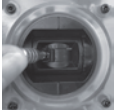
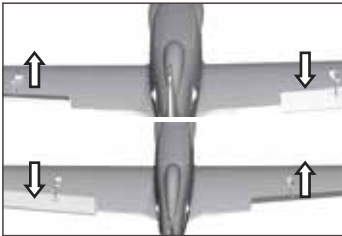
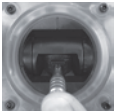
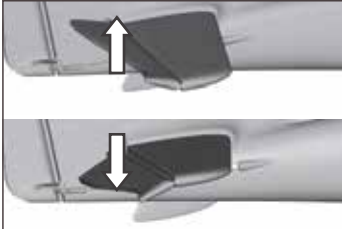
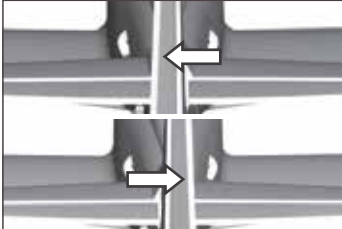


Elevator



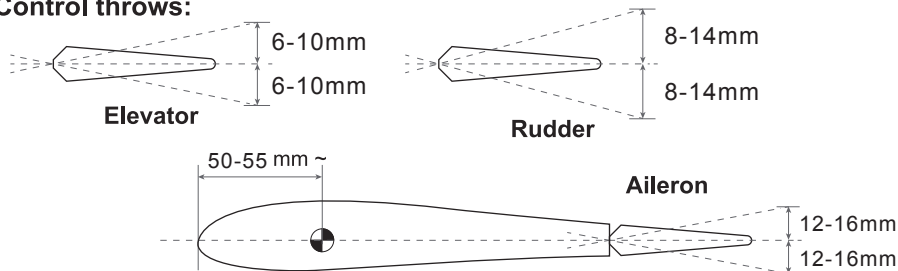
Rudder

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

 	Roll left Roll right		Aileron (Roll)
 	Pitch up Pitch down		Elevator (Pitch)
 	Yaw left Yaw right		Rudder (Yaw)

3. The **EFXTRA** handles very well in flight but needs setting up beforehand. Please follow the recommended settings below for good all round performance.

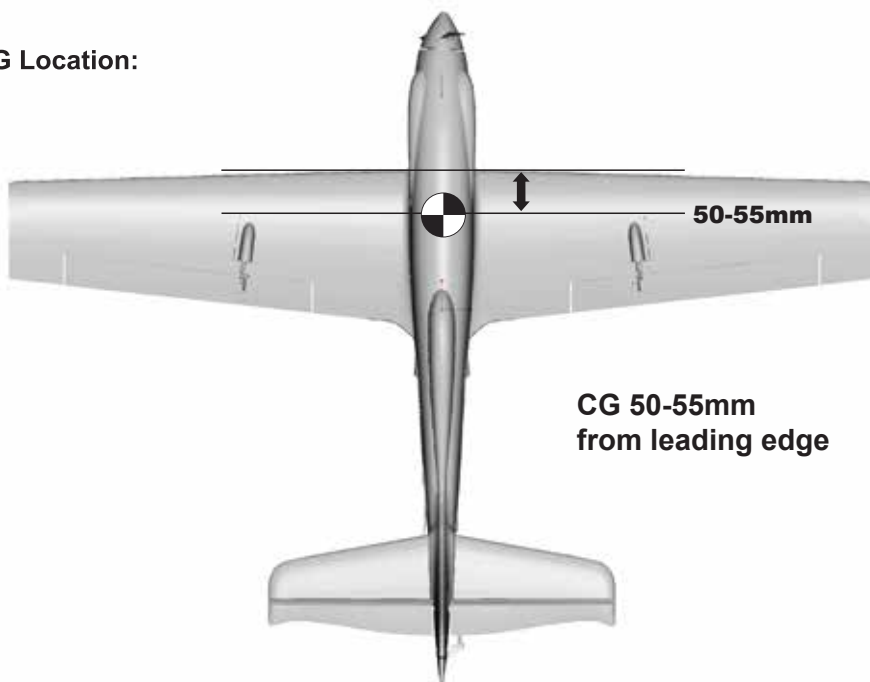
Control throws:



- * Elevator 'low rates' 6 mm 'high rates' 10mm in either direction from neutral.
- * Rudder 'low rates' 8 mm 'high rates' 14 mm in either direction from neutral.
- * Aileron 'low rates' 12mm 'high rates' 16 mm in either direction from neutral

4. The recommended center of gravity (CG) for the EFXTRA is approximately 50-55 mm from the leading edge of the wing. With either 3 or 4S installed and pushed as far forwards as possible, your EFXTRA should balance out at this point. To adjust the CG weight can be added or taken away from the nose or tail respectively. Be sure to perform the balance check with the model up side down.

CG Location:



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

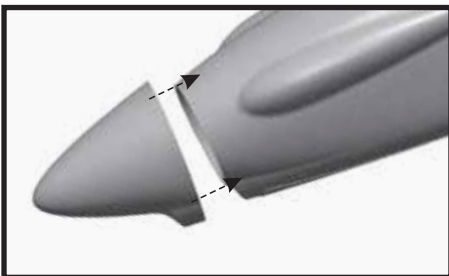


EFXTRA optional parts:

Your EFXTRA comes with optional extra's that really enhance the FUN factor of the EFXTRA. An FPV canopy for mounting your own FPV equipment in and ripping up the race track and a slope nose cone to convert your powered EFXTRA into a silent slope speed machine. Both are detailed below:

SLOPE NOSE CONE:

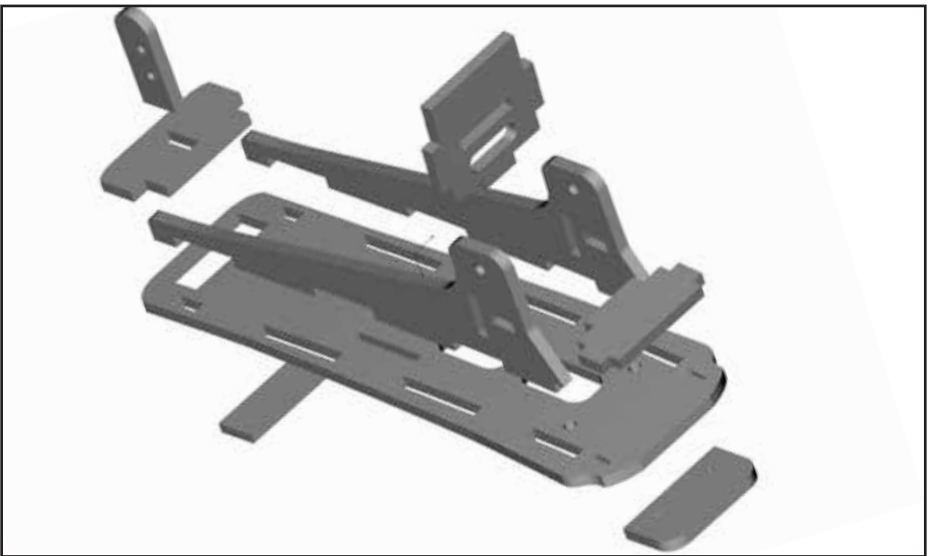
To convert your EFXTRA into a slope soaring model you simply need to remove the prop and spinner and replace with the included plastic slope nose cone. Secure in place with some low tack clear tape as shown. When flying, just install your lipo as you would for the powered version and you are ready to hit the slopes.



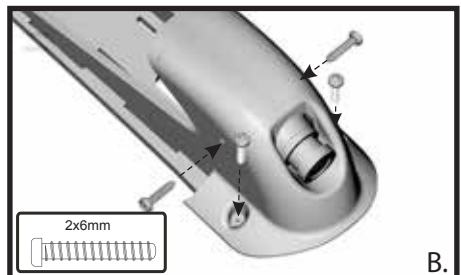
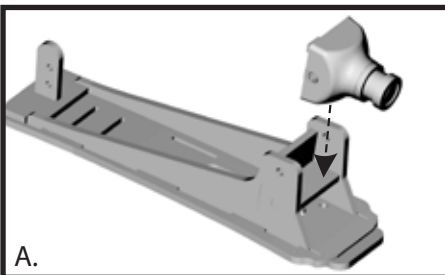
FPV Canopy:

High speed FPV flying opens up a whole new level of enjoyment with the EFXTRA, add the recommended FPV equipment to the provided FPV canopy and you have yourself a rock solid and 100mph plus FPV racer. Follow the below assembly stages and you'll be experiencing high speed FPV in no time.

1. Cut each plywood component from the framing and remove all tabs. Assemble parts as shown below, gluing together with CA (super) glue. Before you glue the magnet in place ensure it is the correct orientation to the receiving magnet on the fuselage.



2. Install your FPV VTX and camera (HS1177 recommended) as shown. The VTX can be secured with cable ties if desired (A). Position the FPV canopy over the camera and secure in place using the 2x6mm screws as shown (B). Use of hot glue is recommended for extra security and to reduce vibration in the camera.



3. With all FPV components installed and secure on the FPV pod insert on fuselage in place of the battery hatch and ensure the canopy fits firmly and aligns as show below. To power your VTX, it is recommended that you make up a power lead that can run from the balance tab of your lipo to the power port of the VTX.



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, not 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.
- Please 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 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.

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 EFXTRA:

Duraflly's EFXTRA delivers stunning looks and performance and go far beyond all expectations for a EPO model of this class, especially when in the air.

Out of the box you have on offer 110mph+ performance if desired, yet very reassuring stability and handling at low speeds too. For this reason an EFXTRA can be flown by both intermediate and experienced pilots alike. If you are an intermediate pilot it is suggested you start with the supplied 8X6 prop and fly on a 3S 2200-2600mah lipo. If however you are an experienced pilot, the supplied 7X6.5 black prop running on 1800-2400mah 4S should be your set-up of choice.

Getting airborne with the EFXTRA takes very little effort. On both 3 and 4S set-ups your EFXTRA will soon be flying from a simple yet firm underarm hand launch. When launching, power-up the motor to 3/4 throttle and launch your EFXTRA whilst holding in some up elevator. As soon as you release the EFXTRA, advance the throttle to full quickly and maintain a now reduced amount of up elevator. Very soon after launching you will see just how rock solid the EFXTRA is in flight, but keep in mind the EFXTRA gets small quickly at full throttle!

The EFXTRA is build for speed and nothing is more impressive than a full throttle dive from upon high right down the center of the flight line at 110mph+ followed by a full power rolling climb. Equally as impressive is the EFXTRA's aerobatic ability thanks to the powerful elevator, ailerons and rudder. BIG loops, fast rolls, snaps and spins look great and are a lot of fun. However one of the most impressive aerobatic maneuvers for the EFXTRA is the knife edge. You will be amazed just how well the EFX performs in a knife edge, so try it! Your EFXTRA model is also incredibly strong and handles with ease high G maneuvers such as high speed turns rolls and snaps.

A true testament to the EFXTRA's design however is its slow flying ability and how well it handles even without power. This is in no way more apparent than when landing. Though the EFXTRA does have a relatively high glide rate, it benefits from a very low stall speed, so you can comfortably increase elevator input at slow speeds without the risk of a stall. With the higher demand 4S set-up, flight times are typically 4-5 minutes with mixed throttle use. On 3S 2600mah you can expect flight times in excess of 6 minutes with varied throttle use.

What ever set-up you choose and however you prefer to fly, your EFXTRA will perform and deliver time and time again.

Happy flying and thank you for choosing Duraflly.



EFXTRA tips:

1. If the stock set still isn't given you enough speed, the stock motor in the EFXTRA is the perfect motor for 6S to give you 150mph+ HOWEVER, you will need to change the prop to a 5.5x5.5 and change the ESC for one rated at 80amps. With a 1500mah 6S, you can expect flight times of not more than 3mins, but what a 3mins that will be!
2. It is only recommend to hand launch the EFXTRA with an under arm launch. This not to say it is impossible to launch it over arm (it isn't), its just far more easier underarm.
3. For optimum flight performance and component longevity it is highly recommended that you always fly with a balanced prop. This is especially true with your EFXTRA due to the high performance nature of the model and fast speeds at which it operates. The supplied props should be close to balanced out of the box, but it is always good to check first. If you replace the propeller with one of your own choosing, please be sure to balance it before hand.
4. Flight packs of a 30C constant discharge rate or higher are the only lipo's we recommend you use in both 3 and 4S set-ups. Not only will a higher rated pack give better performance but it will also result in cooling running components and increased run times.
5. Because of the high current demands on of the EFXTRA, if you choose to fly your entire flight at full throttle, it is recommended that you allow time in between flights for the motor and ESC to cool.
6. 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 and a reduction in potential signal interference (noise).
7. Inspect the propeller and all 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 before your next flight.

Thank you for purchasing the Duraflly EFXTRA We hope you'll have many adrenaline filled days flying and look forward to bringing you more Duraflly 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(Red):
Part No.
9499000145-0



Fuselage(Blue):
Part No.
9499000166-0



Fuselage(Green):
Part No.
9499000144-0



Main Wing
Part No.
9499000146-0



Hatch Cover(Red):
Part No.
9499000148-0



Hatch Cover(Blue):
Part No.
9499000167-0



Hatch Cover(Green):
Part No.
9499000147-0



Horizontal Stab:
Part No.
9499000027-0



Cowl(Red):
Part No
9499000150-0



Cowl(Blue):
Part No
9499000168-0



Cowl(Green):
Part no
9499000149-0



Spinner set:
Part No
9499000151-0



EFXTRA prop shaft
Part No.
9499000153-0



FPV Canopy kit
Part No.
9499000154-0



Motor X mount
Part No.
9499000157-0



PVC covers:
Part No.
9499000032-0



Hardware:
Part No.
9499000033-0



Sticker(Red):
Part No.
9499000156-0



Sticker(Blue):
Part No.
9499000165-0



Sticker(Green):
Part No.
9499000155-0



EFXTRA motor:
Part No.
9499000152-0



Aerostar 60a ESC:
Part No.
9164000038-0



3S 8x6 prop set:
Part No.
074000131

TROUBLE SHOOTING:

Problem	Cause	Solution
Motor does not turn	1. Battery is not fully charged. 2. Transmitter battery low. 3. Motor not connected. 4. The motor is damaged. 5. Receiver is not bound to Tx. 6. ESC in set-up mode.	1. Charge the battery. 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>	1. Prop installed backwards	1. Ask Bruce.
<u>Control surfaces not moving with stick input</u>	1. The servo lead is connected to Rx incorrectly. 2. The servo is damaged.	1. Make sure the servo leads are connect properly. 2. Replace servo.
<u>Model doesn't fly straight</u>	1. Control surfaces not centered. 2. CoG is not in the correct position.	1. Adjust the trims on the transmitter. 2. Re-position lipo as suggested.
<u>Model does not climb well</u>	1. The battery is not fully charged. 2. Elevator servo is reversed. 3. CG too far backwards.	1. Charge the battery. 2. Change servo direction via Tx. 3. Move battery forwards.
<u>Limited Radio range</u>	1. Transmitter/Receiver batteries are flat.	1. charge/replace batteries.

CONTACT:

For more information on this model and the entire range from Duraflly please visit us at:

- www.duraflly.com

Or see our Facebook page at:

- www.facebook.com/duraflly

And don't forget you can see the product video for this model and the entire Duraflly range at:

- www.youtube.com/hobbykinglive

For your next Duraflly purchase be sure to visit:

- www.hobbyking.com

To watch the promo for the EFXTRA, [click here](#)

To watch the product profile for the EFXTRA, [click here](#)

NOTES:

NOTES:

