



TUNDRA TPX

Durafly Tundra TPX

1050mm 'PNF-Lite' EPP Profile 3D/Aerobatic Tundra!



INSTRUCTION MANUAL



Please read this manual carefully before operating this plane.



DURAFly TUNDRA TPX

1050mm, PNF, EPP Profile Tundra!

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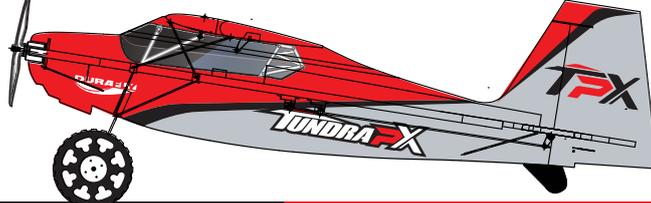
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SAFETY INSTRUCTIONS

1. Please read this manual carefully and follow the instructions before you use this products.
2. Our airplane is not a toy, it is only suitable for experienced pilots. If you are a novice then please only fly under the guidance of an experienced pilot.
3. Not recommended for children under 14 years old.
4. Please adjust and set up this plane according to the instructions and make sure to keep your body parts out of the rotating propeller all the times or it may cause damage to the plane or serious injuries to yourself.
5. Do not fly in thunderstorms, strong winds or bad weather.
6. Never fly R/C planes where there are overhead power lines, automobiles, near an airport, railway lines or near a highway.
7. Never fly R/C planes where there are crowds of people. Give yourself plenty of room for flying, this plane can fly at a very high speeds. Remember that you are responsible for others safety and the safe conduct of the flight.
8. Do not attempt to catch the plane when you are flying it.
9. The operator should bear full responsibility for the proper operation and usage with regards to this model. We at Hobbyking will not be responsible for any liability or loss due to improper use of this product.
10. Your model is classified as a 'drone' by most goverments now days. Check national and local laws and requirements for flying model aircraft before you attempt to fly it.



WARNING:

Read this instruction manual fully so as to become completely familiar with the features of the 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 on the assembly, safe operation and maintenance of this hobby product. It is highly recommended that you read and follow 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.



DURAFLY TUNDRA TPX

1050mm, PNF, EPP Profile Tundra!

INTRODUCTION

The Legend Reimagined: Bush Plane DNA Meets 3D Performance. The legend of the Tundra has been reimagined for a new generation of pilots. We have taken the bush-flying DNA of the world-famous Tundra series and fused it with the aggressive, lightweight performance of a 3D profile foamy

Meet the Durafly Tundra TPX—a standout in Hobbyking's RC plane lineup, built to turn your local flying site or indoor venue into a high-octane 3D flight playground. Whether you're a STOL enthusiast or a hardcore 3D pilot, the Durafly Tundra TPX delivers a flight envelope that is as wide as it is exciting.

Extreme Durability & Precision. Manufactured from tough EPP foam with a clever use of carbon reinforcements. The Tundra TPX is built for both extreme 3D flight and sports flying from rough surfaces. A full moving tail set-up for the elevator and oversized control surfaces for the rudder and ailerons, ensures the TPX has the ability to live up to its full 3D potential for those who want it. However, the extremely versatile design, once reducing the control throws, can be a very well behaved sports model or slow flyer!

Rugged All-Terrain Landing Gear. True to its Tundra heritage, the TPX comes with oversized EPP foam "Tundra style wheels" coupled with a high-tensile spring-steel landing gear. This setup offers excellent ground handling and toughness, so you can fly this STOL RC plane from tall grass, gravel, or dirt with complete confidence.

Versatile Power System (3S or 4S). The Durafly TPX has an impressive yet versatile set-up too! Its pre-installed 2212 1250KV brushless motor is suitable for 3S or 4S set-up giving you either unlimited vertical performance for full 3D flight on 4S, or respectable thrust for sports flying on 3S. Managing this power is a reliable Aerostar LITE 30A ESC, pre-fitted with an XT-30 connector. While some assembly is required due to the nature of its EPP profile design, all electronics are pre-installed so you'll be ready to fly with a few hours of work on the bench. Only the elevator system and wing require gluing for installation and some basic set-up on your radio.

The Durafly Tundra TPX would be an exciting addition to any pilot's collection, offering a unique blend of rugged bush-plane utility and extreme 3D capability.

Add the Tundra TPX to your RC hangar today and experience why Durafly continues to be a leader in innovative foam RC planes.

FEATURES:

- 1050mm wingspan for great visibility & wind stability
- High-strength EPP construction for maximum crash resilience
- Potent 4S power system for extreme vertical performance
- Classic Tundra STOL capability with oversized foam wheels & resilient gear
- Extreme 3D control throws for advanced aerobatic maneuvers
- Comprehensive carbon & metal reinforcement for ultimate rigidity
- Pre-installed Aerostar LITE 30A ESC and high-torque metal geared Servos
- PNF with pre-installed electronics and some glue assembly required.
- Wide Flight Envelope (Stable Slow Flight to Aggressive 3D)

SPECIFICATIONS:

- **Wingspan:** 1050mm (41")
- **Length:** 1000mm (39")
- **Flying Weight:** 450-500g
- **Motor:** 2212 1250KV brushless outrunner
- **ESC:** Aerostar LITE 30A w/XT-30
- **Servos:** 4 x 9g high torque
- **Propeller:** 9x4.7

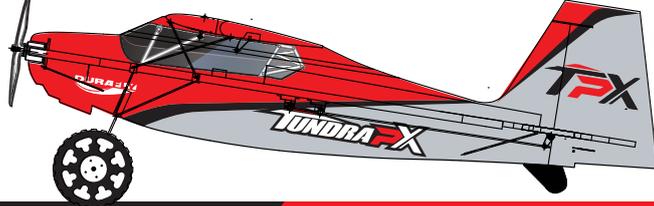
REQUIRED TO COMPLETE:

- **Super glue (CA), thin, medium, thick.**
- **Activator (kicker) for CA.**
- **Contact adhesive.**
- **Basic hand tools.**
- **2-4hrs assembly time.**
- **3-4S 400-800mAh LiPo battery (w/XT-30)**
- **4-6ch Receiver**



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2. Wing Set
3. Horizontal Stabilizer
4. 9x4.7 glass-filled nylon propeller
5. Velcro
6. Landing gear
7. Clear plastic control horns and spacers
8. EPP diagonal fuselage supports
9. Glass fiber wing struts



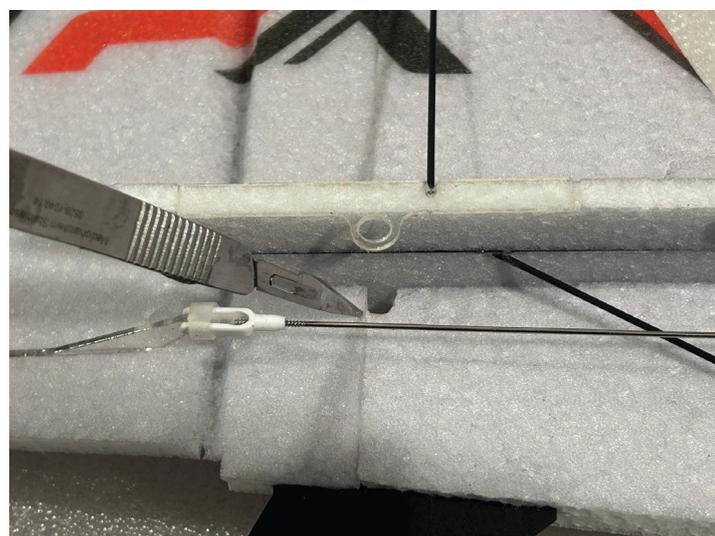
ASSEMBLY

Tail assembly:

The Durafly TPX features an all moving horizontal tail design for maximum deflection and authority in flight. This is a great design feature for 3D EPP models but also requires care when assembling and therefore is the most time absorbing section of the TPX build. Best practice is to study the images and instructions of the assembly manual carefully and dry fit everything before gluing. Also GREAT care must be taken when gluing the second half of the elevator to the spar to ensure glue doesn't prevent the all moving tail from moving freely.



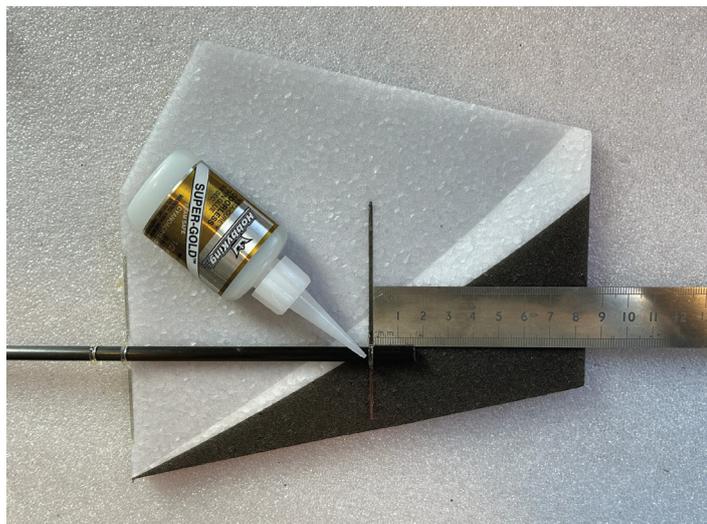
1. Using a round file, carefully file the hole of the elevator spar supports that are glued to either side of the fuselage. Do not file too much, the supports should be filed enough to allow the spar to move freely but not so much that the spar is loose. See photo.



2. Using a sharp modelling knife, remove some foam from the existing slot in the fuselage to allow the spar to pass through freely, but not so much that it is loose. See photo.



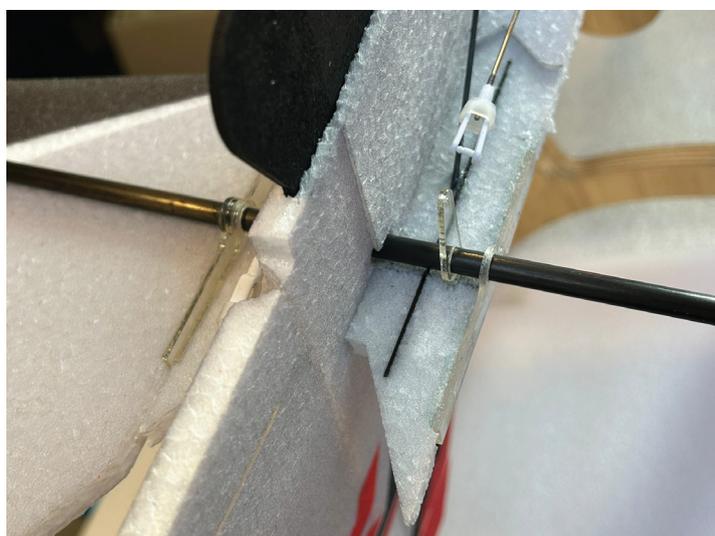
3. The clear plastic elevator control horn and elevator spacer rings have protective plastic on one side. This will need removing before these are used in the assembly of the elevator. See photo.



4. Locate the right side elevator half (right side looking from the back of the model forwards) and lay it top side down on a flat surface. Insert the elevator spar through each brackets hole (twisting as you push makes this easier). Align the end of the spar approximately 16mm from the end bracket. Before you glue in place **DOUBLE CHECK** you are gluing the right side elevator and not the left! Apply CA glue to the spar where it passes through each bracket. We suggest a small amount of thin first followed by medium-thick CA and then a spray of activator. Allow to dry fully. See photo.



5. Invert the fuselage and place it on a model stand to give you good clear access to the underside of the tail. Slide over the end of the spar one of the clear 'spacers' and then continue to slide the spar through the fuselage mounted bracket and all the way through the fuselage and out the other side. The spacer sets the gap required for the elevator to rotate free and evenly. It is strongly recommended to apply a small amount of grease to this spacer to help prevent the spacer and fuselage support bracket from being glued to the spar.



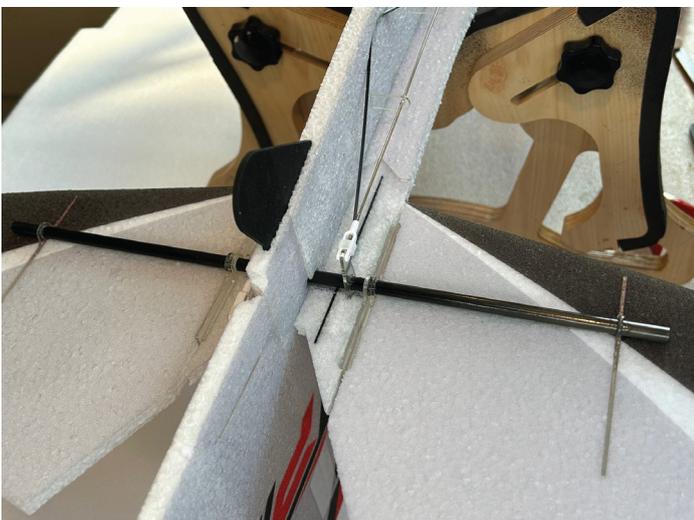
6. Slide the control horn, illustrated in step 3, onto the elevator spar as the rod passes through the hole in the fuselage. Continue to slide the rod through the elevator support bracket located on the left side of the fuselage, until the right side elevator rod stops. Next is to align the control horn before gluing in place. Make sure that the left elevator is level, then use the small cutout located on the left side of the fuselage as a guide to keep the control horn at 90 degrees pointing to the bottom of the fuselage. This slot will help approximate the control horn at 90 degrees without measuring. See photo.



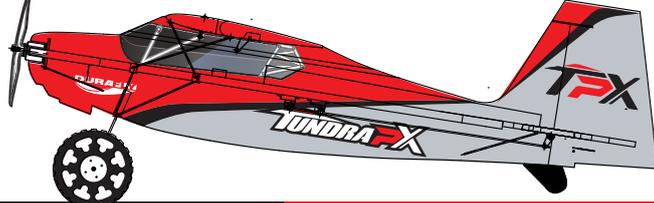
7. Once again ensure that your control horn is at 90 degree's to the elevator and then glue the horn to the elevator spar. It is recommended to apply the CA (medium) only to the the inner side of the horn so as to reduce the chance of glue running into the elevator spar support bracket. Once glued slide the other spacer onto the end of the spar, apply small amount of grease if preferred. See photo.



8. Insert the spar into the elevator brackets of the left side elevator and push it can be pushed no further. Check at this point that the elevator assembly moves freely and then align each elevator half precisely with each other and at 90 degree's to the fuselage and elevator control horn. Once the left side elevator is in placed and aligned, apply CA glue to both elevator brackets again ensuring no glue reaches the spacer or support bracket. For this reason thick CA glue is suggested for the inner most bracket closest to the spacer. See photo.



9. With all glue set and the elevator aligned and moving freely the assembly of the tail is now complete. The last step is to connect the elevator pushrod clevis to the elevator control horn. The centering of the servo can be done later during the receiver set-up stage. See photo.

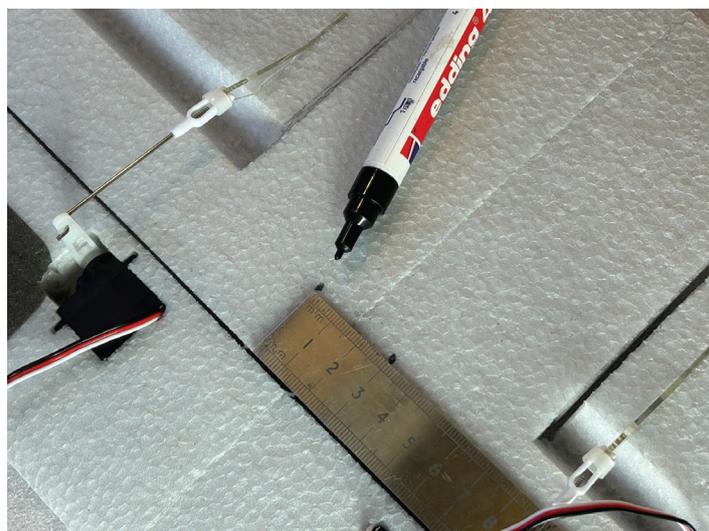


Wing installation:

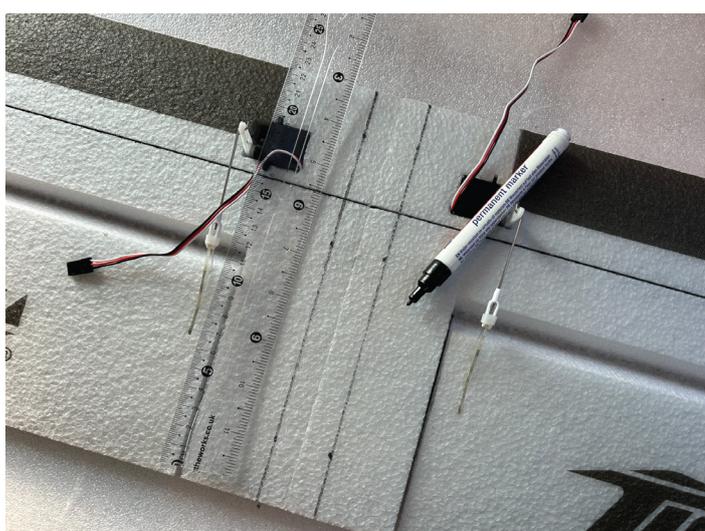
The wing installation requires thick CA glue to secure the wing to the fuselage and cutters to trim the carbon wing struts and some simple guidelines drawing on the wing before applying the glue to ensure alignment.



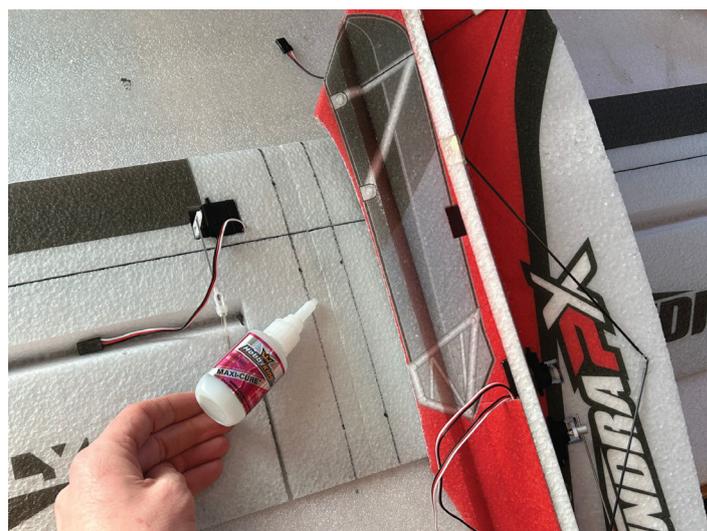
10. The wing saddle on the top of the fuselage is approximately 30mm wide. To aid alignment it is recommended to mark the wing with guidelines that align with the fuselage wing saddle when gluing. See photo.



11. With the wing placed faced top side down on a flat surface, mark 15mm either side of the wing centreline (wing join). Do this several times along the wing join. 15mm either side of the centre line equals 30mm (total width of the fuselage wing saddle). See photo.



12. Join the marks with a line drawn using a ruler either side of the wing join/center line. See photo.



13. With the wing still flat on a surface, dry fit the fuselage to the wing aligning the edge of the wing saddle to the lines you have just drawn on the wing. Once satisfied all is aligned, lift the fuselage and apply your choice of glue, though thick CA is recommended. See photo.



14. Wing the glue applied to the wing reposition the fuselage onto the wing and double check for alignment once more with the drawn lines. Once satisfied push down firmly on the fuselage and this wing and spray with kicker as required. See photo.



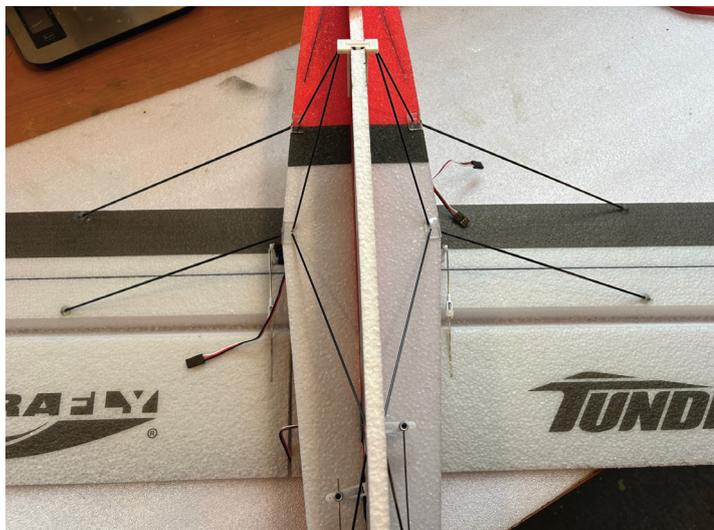
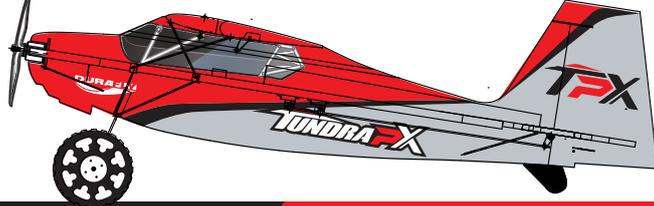
15. To add support and strength to the wing assembly carbon rods are supplied to act as wing struts. These are glued in place with CA and may require a small amount of trimming to get the the desired length. There are two wing struts for each side of the model, the shorter one for the rear of each side and the longer for the front.



16. Place the model upside down on a flat surface with the wing centre aligned with the edge of this surface/table (to account for the small amount of dihedral in the wing when installing the wing struts). Insert the shorter rear strut into the fuselage strut bracket first and then the wing strut bracket. Use CA glue to secure once satisfied with alignment. See photo.



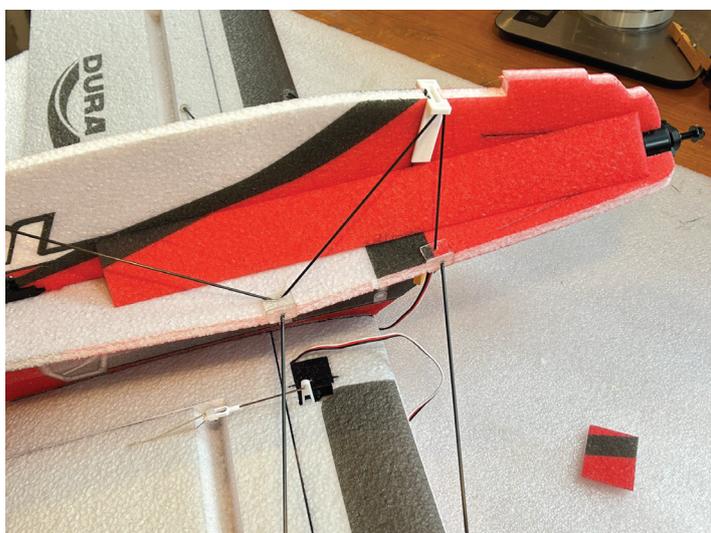
17. Now repeat this process for the longer front wing strut, noting that a small amount may need to be trimmed from this carbon rod to fit. Glue once set in place with CA. See photo.



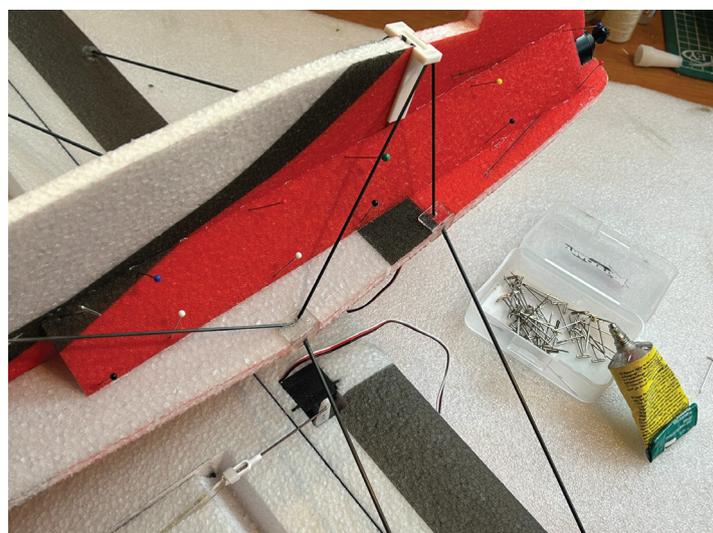
18. Now repeat this process for the other side of the model and then at this point the wing wing assembly is complete. See photo.



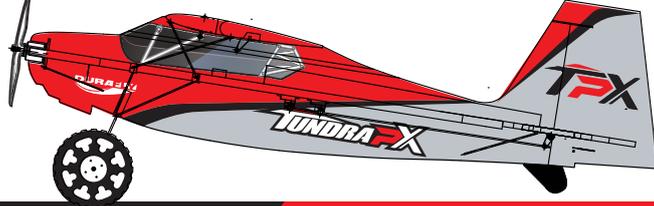
19. The design of the TPX's fuselage is typical of EPP profile models in that it uses a 90 degree cross section construction method. Additional support is provided for the front of the fuselage in the form of two painted thin strips of EPP foam to be glued in place. As this is a foam to foam glue joint, contact style glue is recommended.



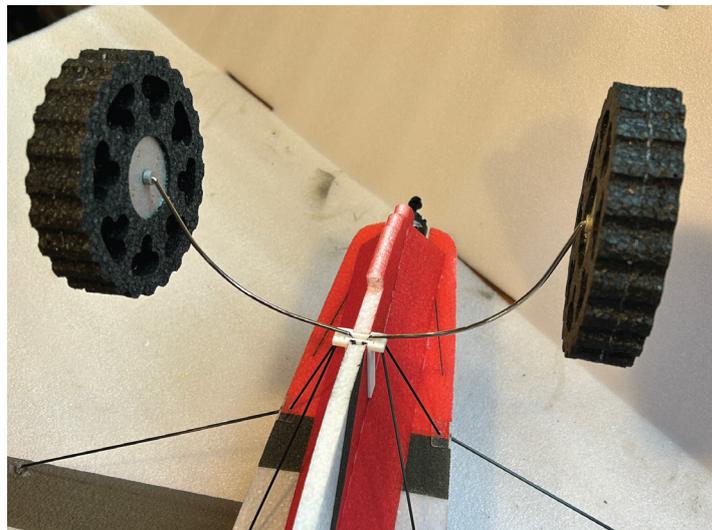
20. Slide a foam sheet into the along the front of one side of the fuselage and align to the paint pattern on it to that on the fuselage. Trim the length of this foam sheet as required. See photo.



21. Remove the now trimmed foam support sheet and apply contact glue to the edges the fit to the fuselage then reposition back on the fuselage and use pins to hold in place whilst the glue dries. Now repeat this process for the other side. See photo.



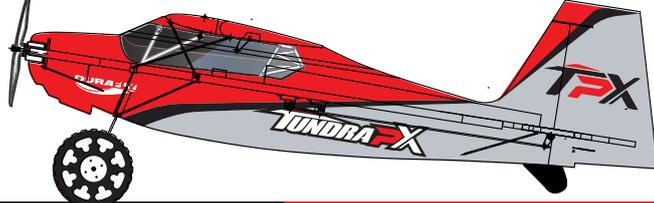
22. Squeeze the wheels together with one hand to compress the wire of the landing gear at the end. See photo.



23. With the landing gear still squeezed together, slot the landing gear wire into the opening of the landing gear bracket on the fuselage. Once fully inserted release your grip to allow the landing gear wire to open fully and lock in place. See photo.



The assembly of the Durafly TPX is now complete. You will now need to install your choice of receiver and finalise the set up of the model on your transmitter. Control throws, CG and battery recommendations can now be found below.

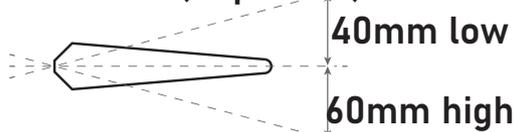


CONTROL THROWS LOW - HIGH

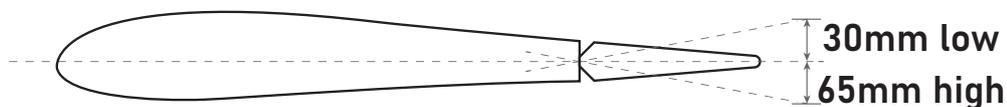
Elevator: 25mm low/50mm high
(Expo 30%)



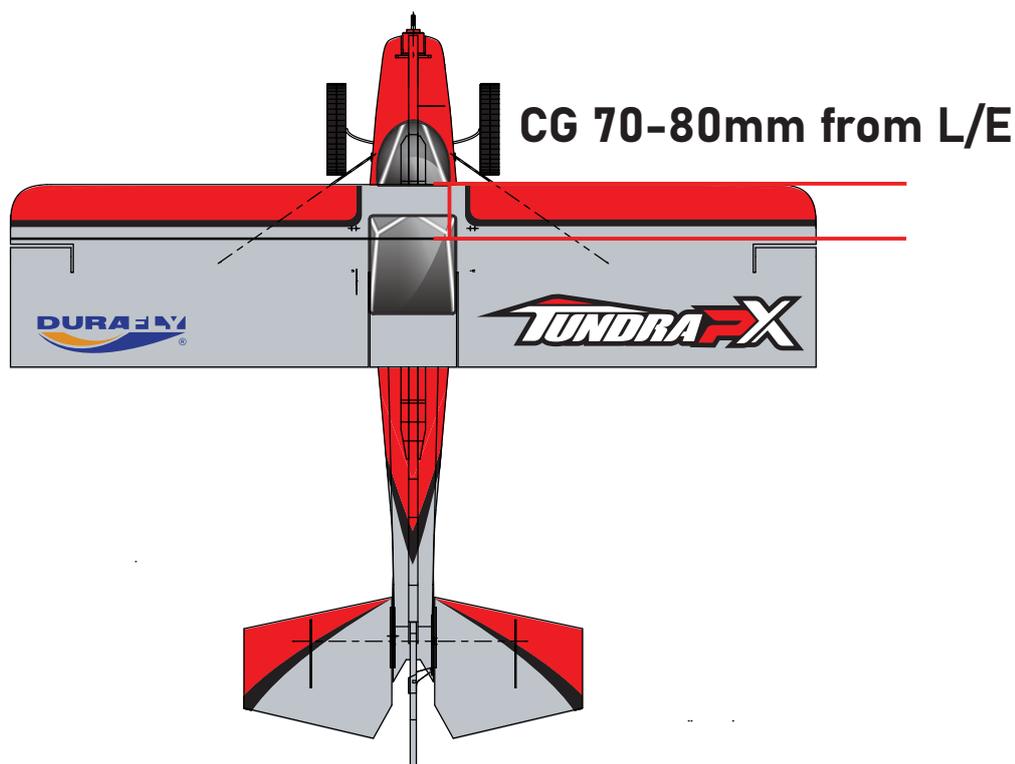
Rudder: 40mm low/60mm high
(Expo 30%)



Aileron: 30mm low/65mm high (Expo 30%)

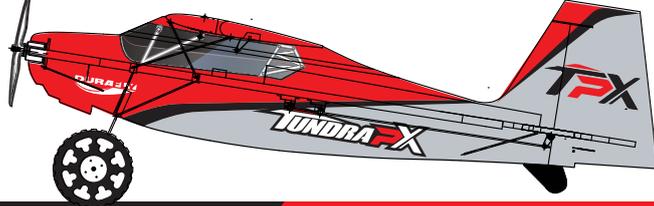


These are the recommended control throws, but they can be adjusted to your personal settings once you have test flown the model.



CG LOCATION

The recommended CG is 70~80mm measured from the leading edge of the wing as shown. To check the CG, balance the model on your fingertips underneath within the 70~80mm range. The model should balance slightly nose down, if not, adjust the position of the flight battery as necessary. We recommend for initial flights to balance the model nearer the 70mm mark, then as you get use to the flying characteristics, you can move the CG further back if you wish. Having the CG further back, will increase the agility of the Tundra TPX, nearer the forward mark it will improve the stability, especially in pitch.



RECOMMENDED ACCESSORIES



Turnigy/FrSky TWIN X14
ACCESS 2.4GHz Transmitter

SKU: 9236720209



FLYSKY Paladin PL18 Mode 1
2.4GHz AFHDS3 18CH Radio

SKU: 9114000086-0



Helloradiosky V16MAX ELRS
16 Channel Transmitter

SKU: 1043720004



Turnigy BoltX LiHV 4S 750mAh 15.2V
80C LiPo Battery Pack w/XT30

SKU: 9067160038



Turnigy BoltX LiHV 4S 550mAh 15.2V
80C LiPo Battery Pack w/XT30

SKU: 9067160034



Turnigy 700mAh 3S
60C Lipo Pack (XT30)

SKU: 9067000170-0



Aerostar RVS G2 ESC LCD
Programming Card & LiPo Cell Checker

SKU: 9164000056-0



HOTA (DC Input) P6 Dual Channel 1
6S LiPo/Li-ion/NiMH Smart Charger
with Mobile Charging Function

SKU: 1042400140



215x165x145mm LiPo Battery
Safety Guard Portable Anti-explosion
Waterproof Bag

SKU: 1042320006



DURAFly TUNDRA TPX

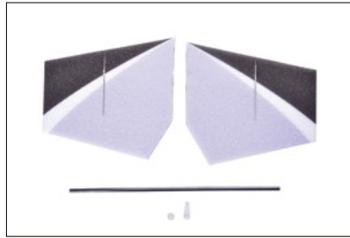
1050mm, PNF, EPP Profile Tundra!

A FULL RANGE OF SPARE PARTS IS AVAILABLE FOR THE Tundra TPX.

SPARE PARTS



EPP Tundra 1050mm
replacement vertical fin - Painted
SKU: 1021790040



EPP Tundra 1050mm
replacement horizontal stab - Painted
SKU: 1021790041



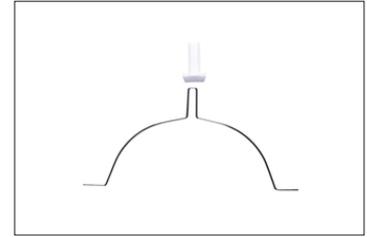
EPP Tundra 1050mm
replacement fuselage - Painted
SKU: 1021790042



EPP Tundra 1050mm
replacement main wing - Painted
SKU: 1021790043



EPP Tundra 1050mm
replacement propeller
SKU: 1021790044



EPP Tundra 1050mm
replacement landing gear steel strut
SKU: 1021790045



EPP Tundra 1050mm
replacement landing gear wheels (2pcs)
SKU: 1021790046



EPP Tundra 1050mm
replacement motor
SKU: 1021790047



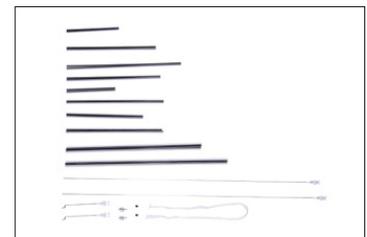
EPP Tundra 1050mm
replacement ESC
SKU: 1021790048



EPP Tundra 1050mm
replacement motor mount
SKU: 1021790049



EPP Tundra 1050mm
replacement prop adapter
SKU: 1021790050



EPP Tundra 1050mm replacement
hardware set (all push rod, control horns,
clevis, carbon fiber struts)
SKU: 1021790051

TUNDRA FX

DURAFly TUNDRA TPX

1050mm, PNF, EPP Profile Tundra!





Made in China

