

# T-28 TROJAN

## INSTRUCTION MANUAL (PNF)



Please read this manual carefully  
before operating this plane.

**DURAFLY**<sup>®</sup>



## 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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# T-28 TROJAN

## INTRODUCTION

Thank you for purchasing the Duraflly T-28 Trojan. This airplane was built based on the original North American Aviation T-28 Trojan.

With the Duraflly T-28 Trojan you can now experience what made this great model a classic. From the perfectly captured outline to the super scale details. The T-28 Trojan uses environmentally safe water-based paint, with retractable landing gear, LED Navigational Lighting sytem, under fuselage air brake, and even the stickers are 100% the same as the original. Like all other Duraflly models, the T-28 Trojan also has all electronics pre-installed, all major components assembled for you, and a full compliment of tools and accessories included. No glue is provided, since none is needed! The T-28 Trojan screws together in just 6 easy steps, with multiple hatches allowing easy access to internal electronics. We went one step further and included a wooden camera holder allowing you to install your FPV equipment and experience the thrill of flying your T-28 Trojan in a whole different way!

The Duraflly T-28 Trojan, you deserve to have one.



## SPECIFICATION

- Wingspan: 1100mm (43.3in)
- Length: 930mm (35.4in)
- Flying Weight: 1460g (52oz)
- Controls: 7 Channel (Ail, Ele, Thro, Rud, Flap, Gear, Airbrake)
- Motor: Aerostar 3536 750Kv brushless outrunner.
- Prop: 10x6 3-Blade
- ESC: Aerostar 40amp
- Battery: 4S 14.8V 25C 2200mah 4S
- Channels: 7 Channel Tx and Rx

## CONTENTS



1. Fuselage
2. Main Wing
3. Horizontal tail

4. Propeller
5. Wood Camera Holder
6. Accessories Set

## REQUIRED TO COMPLETE MODEL:

In its 'Plug n Fly' format the T-28 still requires some additional electronic components to get it 'flight ready'. Durafly recommends the products below for optimum performance and great value.

Available at [hobbyking.com](http://hobbyking.com)



OrangeRx T-SIX 2.4GHz 6CH  
Programmable Tx:  
Part No. 9403000001 Mode 1  
9403000002 Mode 2



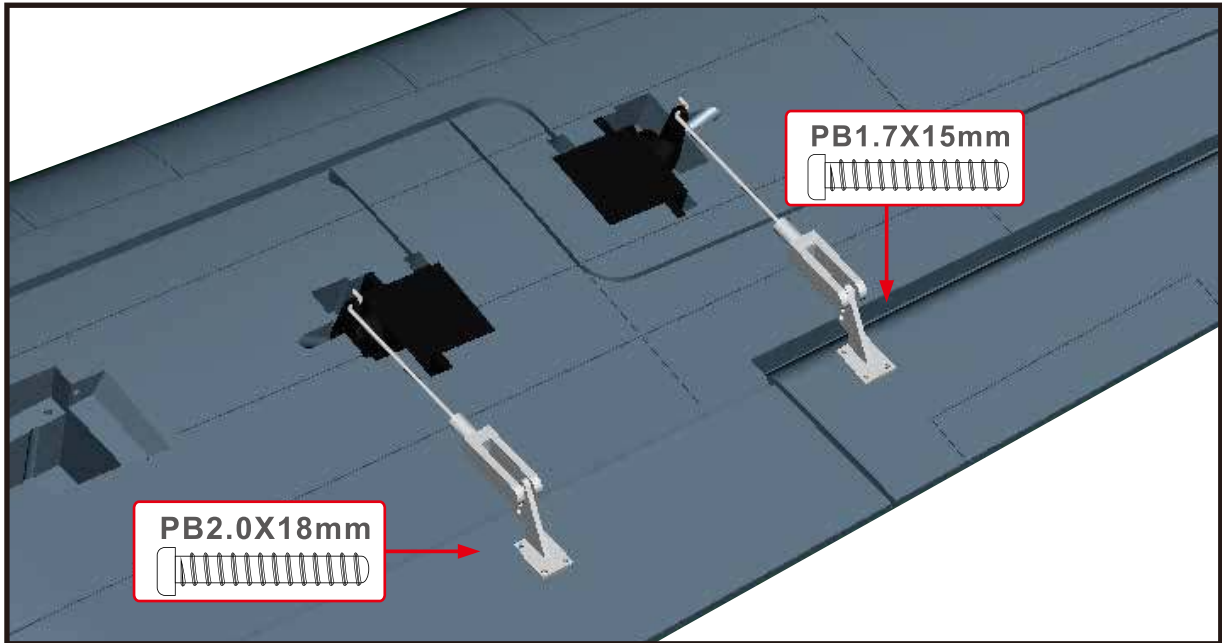
OrangeRX R620X  
6Ch 2.4Ghz:  
Part No. 9171000757-0



Turnigy 2200mAh  
4S 14.4V 30C Lipo:  
Part No. T2200.4S.30

## ASSEMBLY

1. Locate the bag marked "Aileron" and "Flap". Install aileron and flap 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 rod.

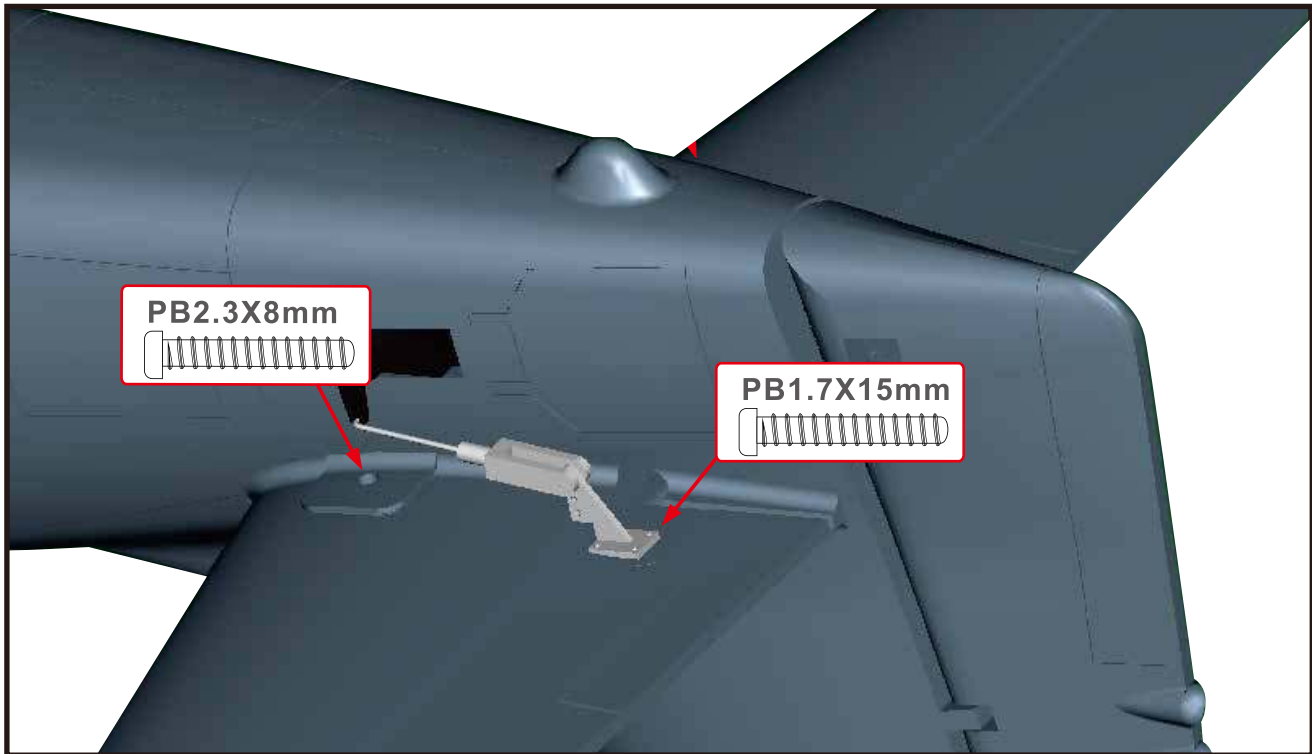


2. Install the horizontal tail to the fuselage as shown.

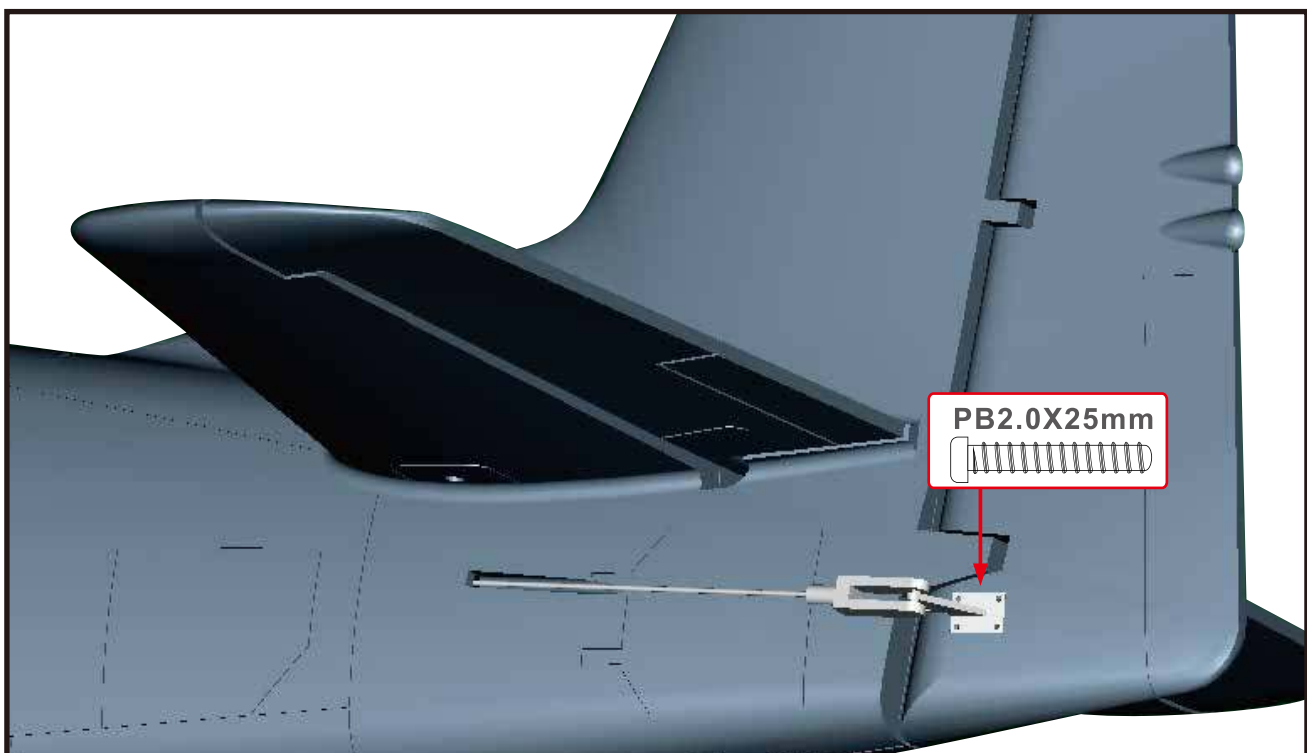




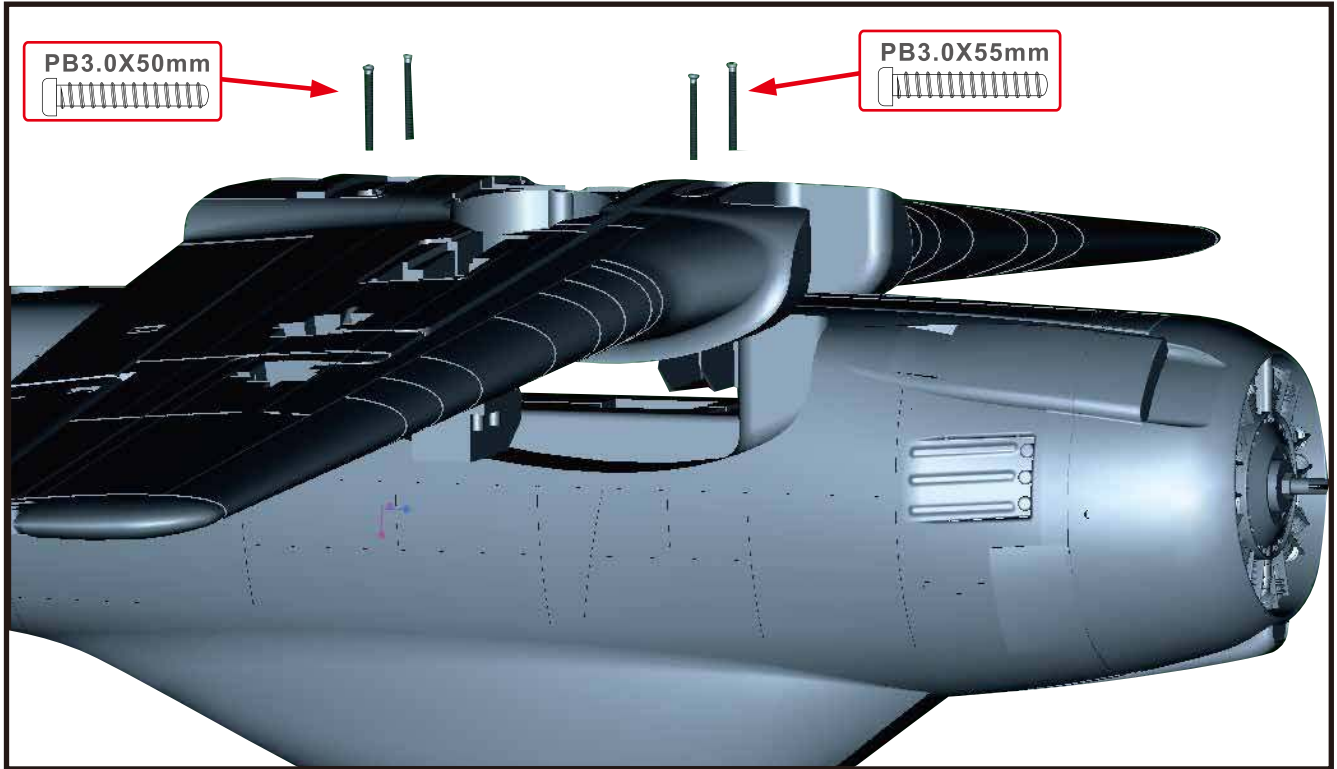
3. Locate the bag marked “Elevator” Install horizontal tail, control horns and rods with the supplied bolts as shown. Ensure tail is firmly secured and aligned.



4. Locate the bag marked “Rudder” Install the control horns on the vertical tail. Connecting the pre installed control rods to the outer hold of the control horn.



5. Mount the wing to the fuselage with the supplied bolts. Make sure to feed servo wires into passage to fuselage compartment, ensuring no wires are pinched in the wing saddle.



6. The final stage of assembly is to mount propeller. Slide prop onto motor shaft, engaging molded hex detail on back of propeller to hex fitting on prop shaft. Tighten prop nut to shaft firmly by hand.



**Note:** It is recommended that you balance the prop and spinner before installing for optimum performance and efficiency.



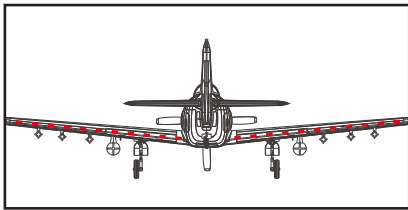


**Congratulations, basic assembly of your T-28 Trojan is now complete. Please perform a final check on all screws, bolts and components, ensuring all are secure and firmly in place.**

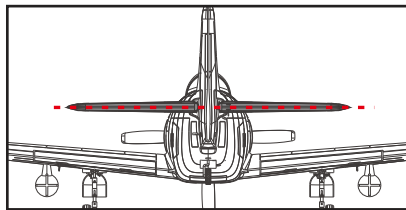
## SETTING UP YOUR MODEL:

1. With your receiver installed and all servos plugged into their corresponding channels, connect the flight battery to the ESC to power up the electronics. With the model now armed, ensure all servos are centered and all control surfaces are level. If not, adjust by turning the control clevises by hand accordingly until the control surfaces are level as shown.

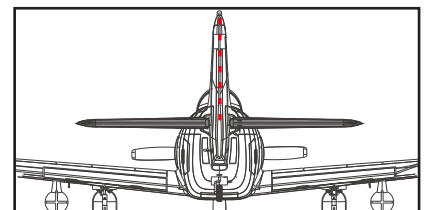
**Note:** For safety reasons, it is advised that this is done with the prop removed from the model.



Ailerons and Flaps



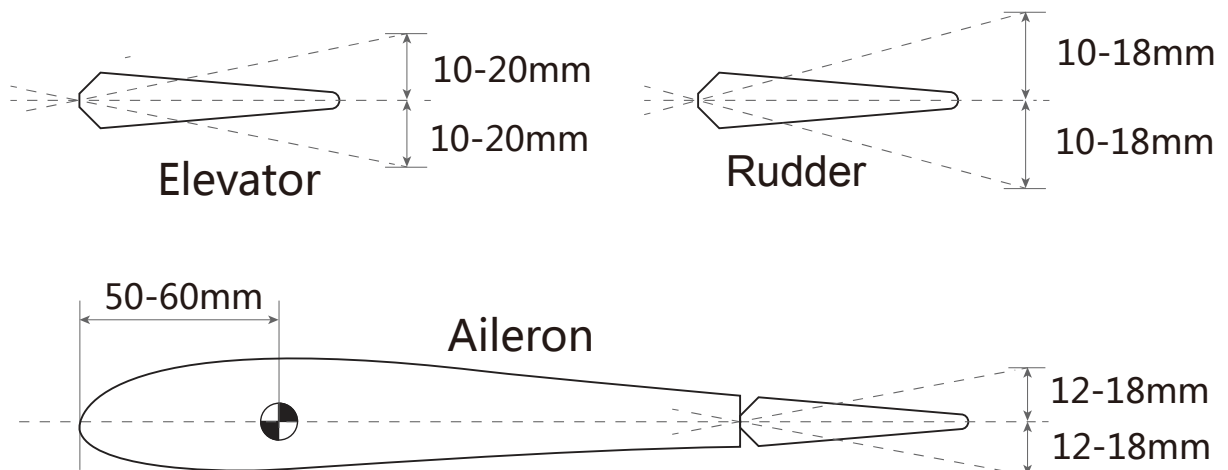
Elevator



Rudder

3. The T-28 Trojan handles very well in flight warbird high speed handling, trainer-like low speed. Before you fly your T-28 Trojan please follow the recommended settings below for optimum handling and performance..

## Control throws:

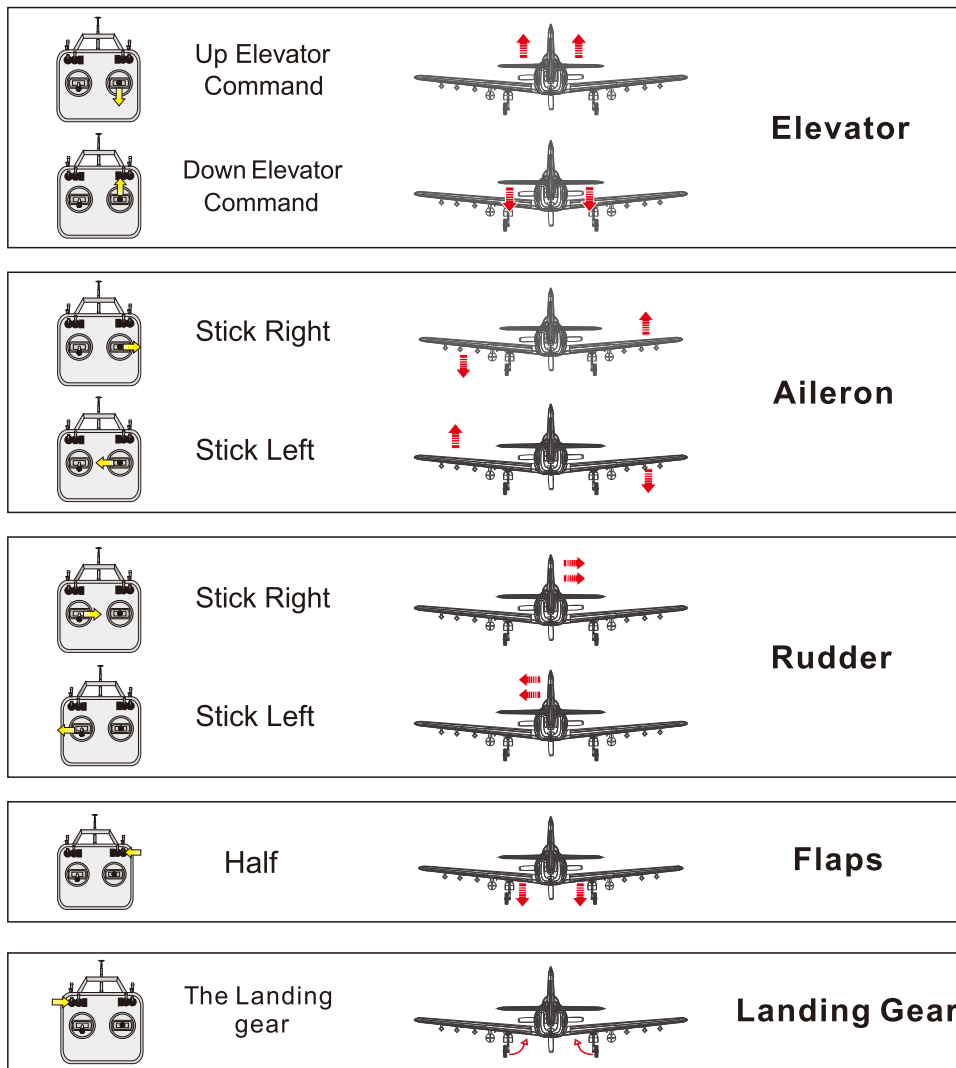


\*Elevator 'low rates' 10mm 'high rates' 20mm in either direction from neutral.

\*Rudder 'low rates' 10mm 'high rates' 18mm in either direction from neutral.

\*Aileron 'low rates' 12mm 'high rates' 18mm in either direction from neutral.

2. Check control surfaces for proper movement with applicable stick input. A reversed control could lead to loss of control and damage to the model.



4. Linear power delivery is important to optimal flight performance. Calibrate the ESC using the instructions below when switching to a new transmitter.

A. Switch ON the transmitter and move throttle stick to 100%. (Full Throttle)

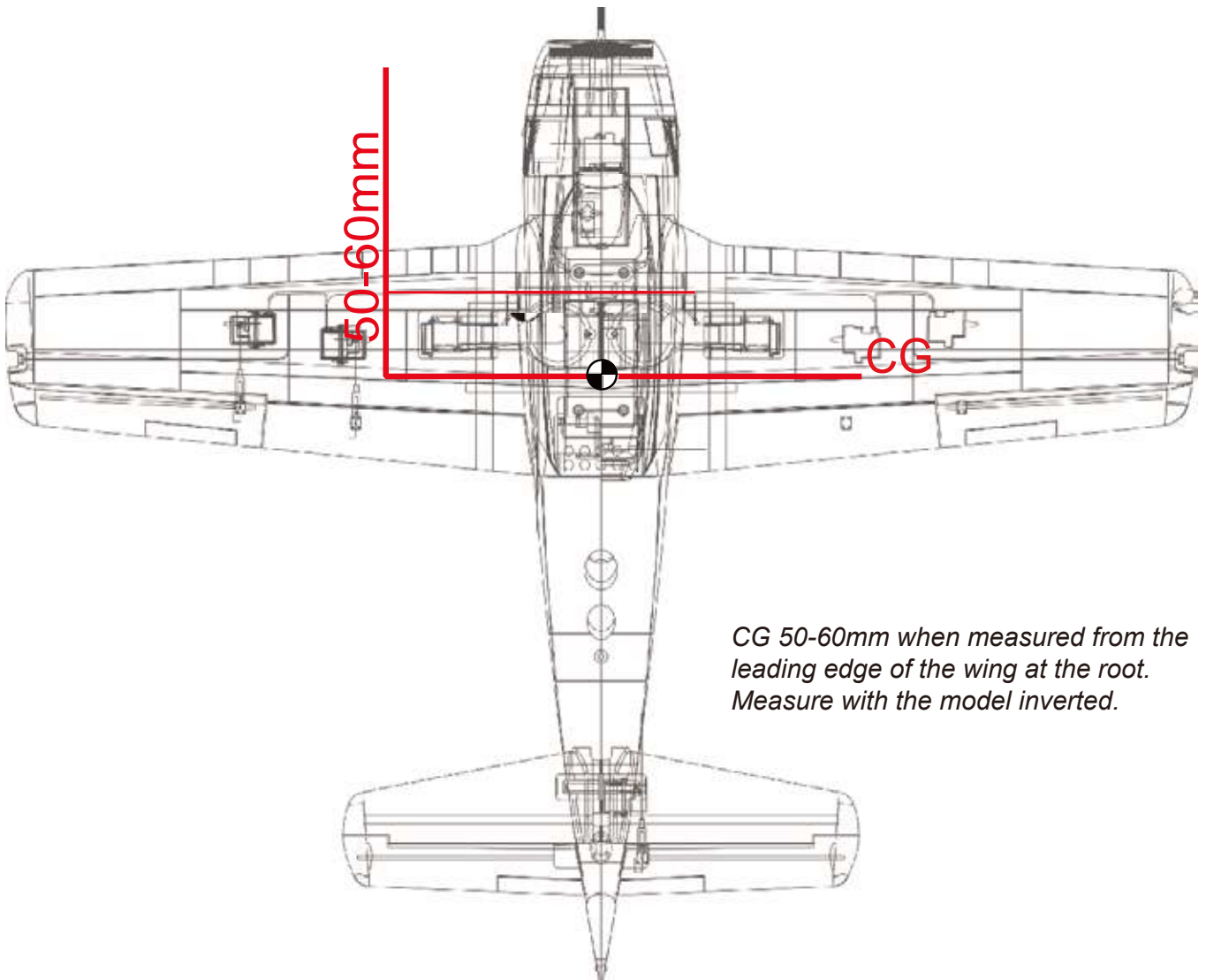
B. Connect flight battery pack and wait about 2 seconds.

C. The ESC will emit a 'beep-beep' tone meaning the high point of the throttle range has been set.

D. After the tone is emitted, move the throttle stick back to low throttle. You will hear the regular initialization beeps indicating the number of cells in the battery.

E. After the initialization tone from low throttle, regular throttle control is available.

5. The center gravity (CG) for the T-28 Trojan is approximately 50-60mm from the leading edge of the wing. Using the recommended Turnigy 4S 14.8V 2200mah LiPo, the correct CG can be attained quite easily due to the ample battery space. If using larger capacity batteries, you may need to shift the battery backwards more to attain the correct CG.



*CG 50-60mm when measured from the leading edge of the wing at the root. Measure with the model inverted.*

**With assembly and set-up now complete, your Durafly T-28 Trojan should now be ready for flight. However we recommend you read and follow the advice given in the following pages of this manual before flying your T-28 Trojan.**

## 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/or others and risks damage to the model.
- This model is recommended for children no younger than 14 year 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 manufacturer's 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 manufacturer's 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 surfaces 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 are 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.



# T-28 TROJAN

## Flying the T-28 Trojan

The Duraflly T-28 Trojan not only looks good as the original, but flies just as well; capturing perfectly those excellent flight qualities that established the it as such a popular RC sport model all those years ago.

The T-28 Trojan requires no special flying considerations as it is such a well mannered sport model suitable for both novice and experienced fliers alike. The model has a good range of speed and is just as happy fling at low throttle as she is full throttle. At the lower end of the speed range the T-28 Trojan 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 T-28 Trojan, full throttle flying is even more fun and all manner of sport aerobatic maneuvers are achievable with the model.

Thanks to the retractable landing gear, the T-28 Trojan handles very well on the ground and take off is always very straight and controlled on either pavement or grass surfaces, plus the Trojan flies better and faster after retracting the gear. With good acceleration and plenty of power, your T-28 Trojan will be airborne within a few feet with less than 3/4 throttle. Once in the air you'll be rewarded with an airframe that goes exactly where you point it, tracking very true in flight. If required, the T-28 can also be hand launched with ease at full throttle with nothing more than an over arm launch from standing.

Flight times on the recommended 4S 14.8V 2200mah LiPo ranges from 6~9 minutes depending on your throttle usage. 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 Trojan is comfortable in either a power on, or power off approach depending on your preference and circumstance. The model will glide power off remaining comfortably in control in either situation all the way down.

Happy flying and thank you for choosing Duraflly.



## **T-28 Trojan TIPS**

When handling the T-28 Trojan 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 T-28 Trojan by design has flat sides and hard edges that are vulnerable as painted EPO. Over time these edges can get worn down if handled so it is best to avoid handling the T-28 by any surface other than the wing.

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.

For optimum flight performance and model longevity it is recommended that you always fly with a balanced prop. This is especially true with the T-28 as a badly balanced prop can damage the 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.

Flight packs of 25C discharge rate or higher are recommended for use in the T-28 to ensure the optimal performance in flight and from the power system.

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.

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 fittings must be tightened.

**Thank you again for purchasing the Durafly T-28 Trojan. 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 T-28 Trojan



Fuselage  
Part No:  
**9306000235-0**



Main Wing Set  
Part No:  
**9306000236-0**



Horizontal Tail  
Part No:  
**936000237-0**



Cowl  
Part No:  
**9306000238-0**



Propeller  
Part No:  
**9306000239-0**



Motor  
Part No:  
**9306000240-0**



Canopy  
Part No:  
**9306000241-0**



Nose Gear Retract  
Part No:  
**9306000242-0**



Main Gear Retract Set  
Part No:  
**9306000243-0**



Accessories Set  
Part No:  
**9306000244-0**



Decal Set  
Part No:  
**9306000245-0**



Prop Adapter Set  
Part No:  
**9306000246-0**

## TROUBLE SHOOTING:

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

## CONTACT:

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

- [www.duraflly.com](http://www.duraflly.com)

Or see our Facebook page at:

- [www.facebook.com/duraflly](http://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](http://www.youtube.com/hobbykinglive)

For your next Duraflly purchase be sure to visit:

- [www.hobbyking.com](http://www.hobbyking.com)

If you wish to contact us directly please email:

- [duraflly@hobbyking.com](mailto:duraflly@hobbyking.com)



**NOTES:**

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