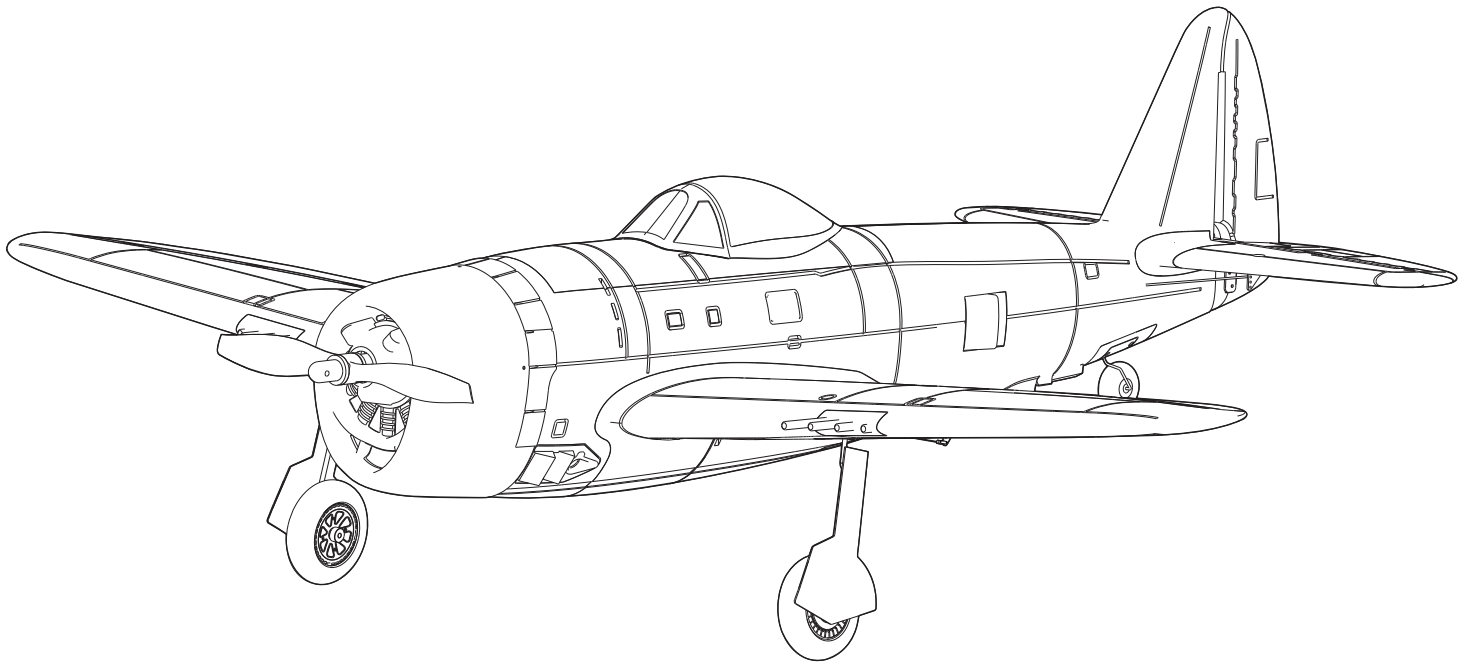




P-47 THUNDERBOLT

Instruction Manual • Bedienungsanleitung • Manuel d'utilisation • Manuale di Istruzioni



BIND-N-FLY SPEKTRUM DSM TECHNOLOGY

PLUG-N-PLAY



NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of Horizon Hobby, Inc. For up-to-date product literature, visit horizonhobby.com and click on the support tab for this product.

Meaning of Special Language

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND a little or no possibility of injury.

CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

WARNING: Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury.



WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

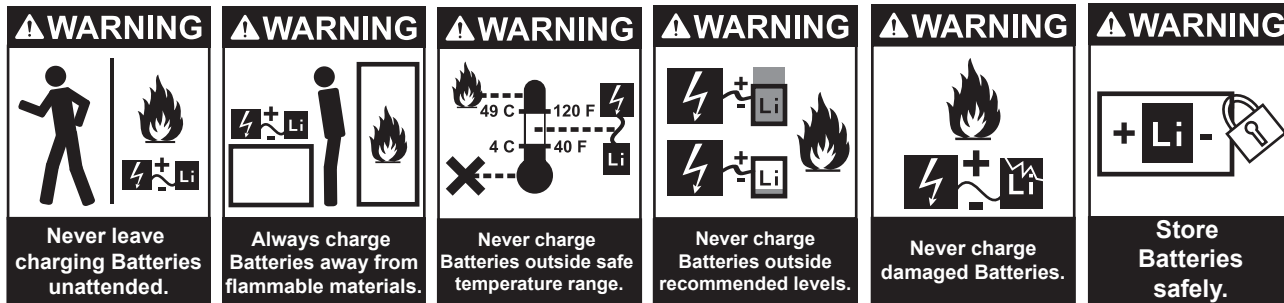
This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not attempt disassembly, use with incompatible components or augment product in any way without the approval of Horizon Hobby, Inc. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

Additional Safety Precautions and Warnings

Age Recommendation: Not for children under 14 years. This is not a toy.

- Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.
- Never operate your model with low transmitter batteries.

Battery Warnings



The Battery Charger included with your aircraft is designed to safely charge the Li-Po battery.

⚠ CAUTION: All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in a fire, personal injury, and/or property damage.

- By handling, charging or using the included Li-Po battery you assume all risks associated with lithium batteries. If you do not agree with these conditions, return your complete model in new, unused condition to the place of purchase immediately.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.

- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of 40--120° F. Do not store battery or model in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- NEVER USE A Ni-Cd OR Ni-MH CHARGER. Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and/or property damage.
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.

The P-47 Thunderbolt, "The Jug", was one of the fastest and largest single-engine US fighters during World War II. With eight .50-caliber machine guns and heavy armor, the Thunderbolt could give and take tremendous damage and still bring its pilot home safe. The Thunderbolt was used in about every type of mission, from dogfighting to bomber, to escort and ground attack, the P-47 could do it all. From the trim scheme of the 404th Fighter Group, to the dummy radial engine, .50 caliber gun barrels, scale air exits through the turbocharger exhaust and intercooler doors and detailed cockpit area, ParkZone brings this famous fighter to life loaded with scale detail.

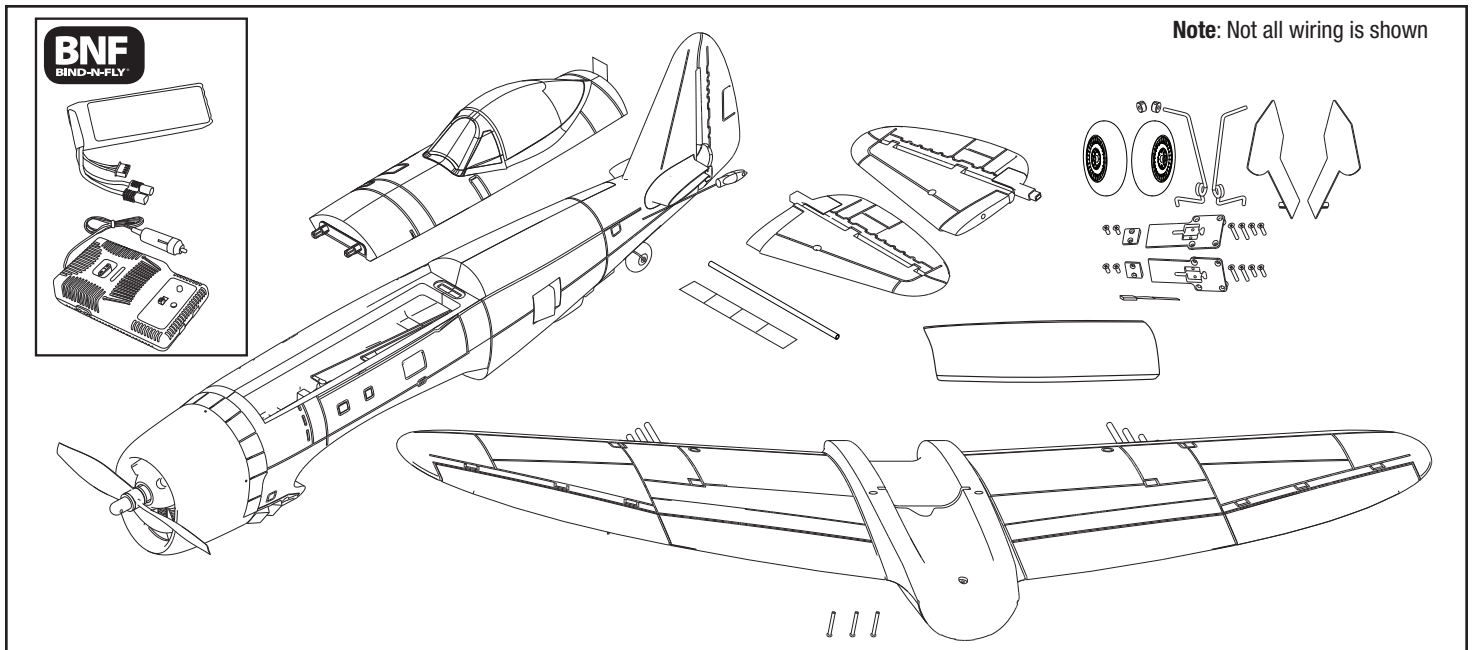


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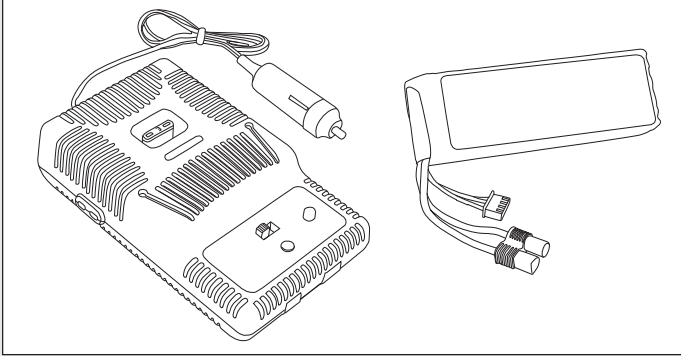
Thunderbolt Specifications	
Wingspan	42.2 in (1070mm)
Length	36.9 in (940mm)
Weight (RTF)	40.0 oz (1130 g) 42.5 oz (1200 g) with retracts and flap servos
Center of Gravity	60.0mm (±2mm) from leading edge at wing root

To register your product online, visit www.parkzone.com

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Charging the Flight Battery

Your Thunderbolt comes with a DC balancing charger and 3S Li-Po battery. You must charge the included Li-Po battery pack with a Li-Po specific charger only (such as the included charger). Never leave the battery and charger unattended during the charge process. Failure to follow the instructions properly could result in a fire. When charging, make certain the battery is on a heat-resistant surface. Charge the flight battery while assembling the aircraft. Install the fully charged battery to perform control tests and binding.



DC Li-Po Balancing Charger Features

- Charges 2- to 3-cell lithium polymer battery packs
- Variable charge rates from 300mAh to 2-amp
- Simple single push-button operation
- LED charge status indicator
- LED cell balance indicator
- Audible beeper indicates power and charge status
- 12V accessory outlet input cord

Specifications

- Input power: 12V DC, 3-amp
- Charges 2- to 3-cell Li-Po packs with minimum capacity of 300mAh

3S 11.1V 2200mAh Li-Po Battery Pack (PKZ1029)

The ParkZone® 3S Li-Po battery pack features a balancing lead that allows you to safely charge your battery pack when used with the included ParkZone Li-Po balancing charger.

The Battery Charging Process

1. Charge only batteries that are cool to the touch and are not damaged. Look at the battery to make sure it is not damaged e.g., swollen, bent, broken or punctured.
2. Attach the input cord of the charger to the appropriate power supply (12V accessory outlet).
3. When the Li-Po charger has been correctly powered up, there will be an approximate 3-second delay, then an audible “beep” and the green (ready) LED will flash.
4. Turn the control on the Amps selector so the arrow points to the charging rate required for the Battery (see chart, for example the Thunderbolt’s 2200mAh Li-Po battery will charge at 2.0 amps). DO NOT change the charge rate once the battery begins charging.
5. Move the cell selector switch to 2-cell or 3-cell for your battery.
6. Connect the Balancing Lead of the Battery to the 2-cell (it has 3 pins) or 3-cell (it has 4 pins) charger port.
7. The green and red LEDs may flash during the charging process, when the charger is balancing cells. Balancing prolongs the life of the battery.
8. When the battery is fully charged, there will be an audible beep for about 3 seconds, and the green LED will shine continuously.
9. Always unplug the battery from the charger immediately upon completion of charging.

CAUTION: Overcharging a battery can cause a fire.

Note: Attempting to charge an over-discharged battery will cause the charger to repeatedly flash and beep, indicating an error has occurred.

Battery Capacity	Maximum Charge Rate
300-400mAh	300mA
500-1000mAh	500mA
1000-1500mAh	1A
1500-2000mAh	1.5A
2000mAh +	2.0A



WARNING: Failure to use the proper charger for a Li-Po battery can result in serious damage, and if left charging long enough, will cause a fire. ALWAYS use **caution** when charging Li-Po batteries.



WARNING: Selecting a charge rate higher than 1x (one times) the battery capacity may cause a fire.

Low Voltage Cutoff (LVC)

When a Li-Po battery is discharged below 3V per cell, it will not hold a charge. The ESC protects the flight battery from over-discharge using Low Voltage Cutoff (LVC). Before the battery charge decreases too much, LVC removes power supply from the motor. Power to the motor pulses, showing that some battery power is reserved for flight control and safe landing.

When the motor pulses, land the aircraft immediately and recharge the flight battery.

Disconnect and remove the Li-Po battery from the aircraft after use to prevent trickle discharge. Fully charge your Li-Po battery before storing it. During storage make sure battery charge does not go below 3V per cell.

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Transmitter and Receiver Binding

Binding is the process of programming the receiver of the control unit to recognize the GUID (Globally Unique Identifier) code of a single specific transmitter. You need to 'bind' your chosen Spektrum™ DSM2™ technology equipped aircraft transmitter to the receiver for proper operation.

Note: Any JR® or Spektrum full range DSM2™ transmitter can bind to the Spektrum AR600 receiver. Please visit www.bindnfly.com for a complete list of compatible transmitters.


BIND PLUG

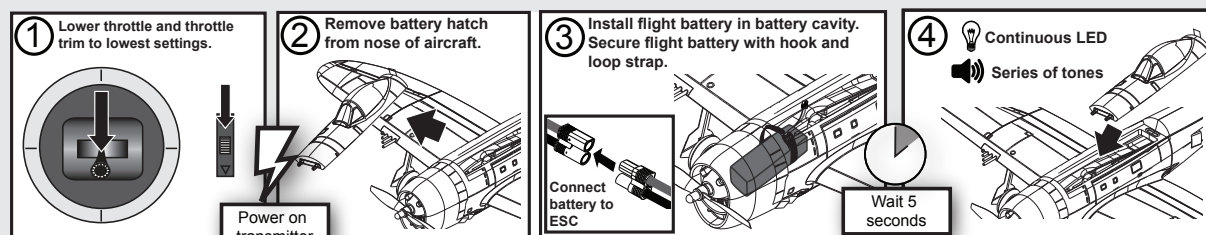
Note: When using a Futaba transmitter with a Spektrum DSM2 module, you must reverse the throttle channel.

✓	Binding Procedure Reference Table
1.	Read transmitter instructions for binding to a receiver (location of transmitter's Bind control).
2.	Make sure transmitter is powered off.
3.	Install a bind plug in the receiver bind port.
4.	Connect the flight battery to the ESC. The receiver LED will begin to flash rapidly.
5.	Move the transmitter controls to neutral (flight controls: rudder, elevators and ailerons) or to low positions (throttle, throttle trim, and flight control trims).*
6.	Power on the transmitter while holding the transmitter bind button or switch. Refer to your transmitter's manual for binding button or switch instructions.
7.	When the receiver binds to the transmitter, the light on the receiver will be solid and the ESC will produce a series of sounds. The series of sounds is a long tone, then 3 short tones that confirm the LVC is set for the ESC.
8.	Remove the bind plug from the receiver in the battery compartment.
9.	Safely store the bind plug (some owners attach the bind plug to their transmitter using two-part loops and clips).
10.	The receiver should keep the binding to the transmitter until another binding is done.

* The throttle will not arm if the transmitter's throttle control is not put at the lowest position.

If you encounter problems, obey binding instructions and refer to transmitter troubleshooting guide for other instructions. If needed, contact the appropriate Horizon Product Support office.

Before Flight



Note: Always disconnect the Li-Po from the receiver of the aircraft when not flying. Failure to do so will render the battery unusable.

CAUTION: When armed, the motor will turn the propeller in response to any throttle movement. When the aircraft does not respond, binding or rebinding may be required.

PNP
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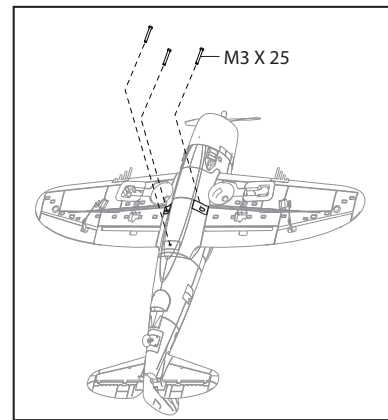
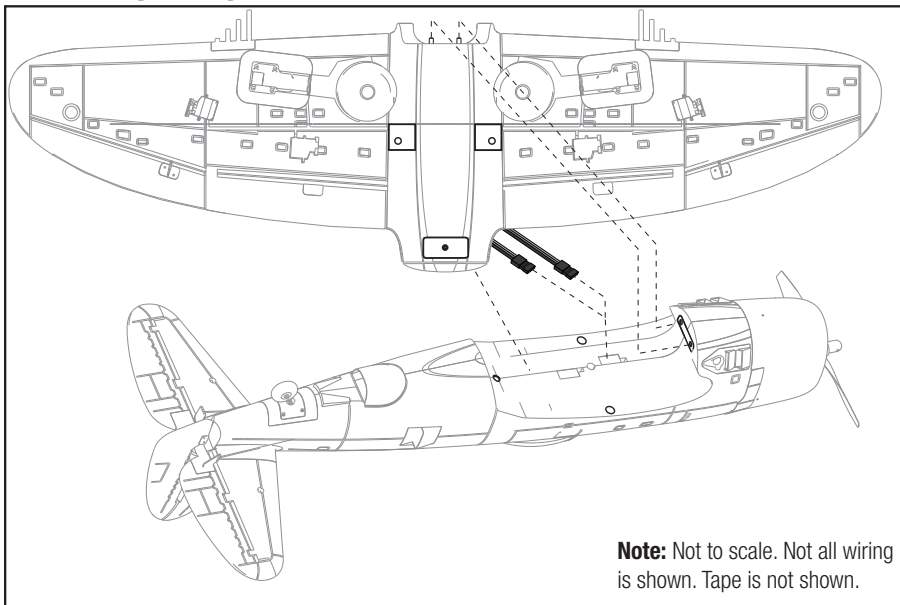
Installing a Receiver

1. Install your park flyer or full range receiver in the fuselage using hook and loop tape or double-sided servo tape.
2. Attach the elevator and rudder servo connectors to the appropriate channels of the receiver.
3. Attach the aileron Y-harness to the aileron channel of the receiver.
4. Attach the ESC connector to the throttle channel of the receiver.

Battery Selection and Installation

1. We recommend the ParkZone 2200mAh 11.1V 25C Li-Po battery (PKZ1029).
2. If using another battery, the battery must be at least a 25C 2200mAh battery.
3. Your battery should be approximately the same capacity, dimensions and weight as the ParkZone Li-Po battery to fit in the fuselage without changing the center of gravity a large amount.

Installing Wings



1. Where installed, remove canopy hatch from fuselage.
2. Turn aircraft over so bottom of fuselage faces up.
3. Put wing's guide pins in fuselage plate holes.
4. Where used, put aileron, flap and landing gear connectors in hole in fuselage.
5. Align and attach wing to fuselage using 3 screws.

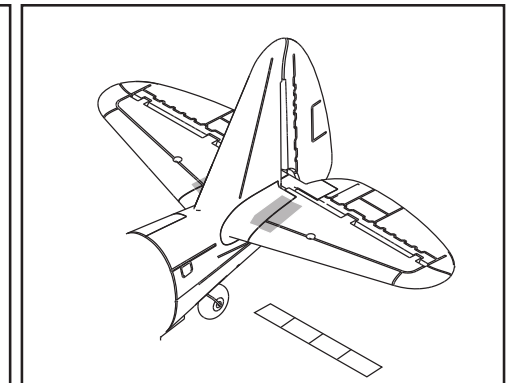
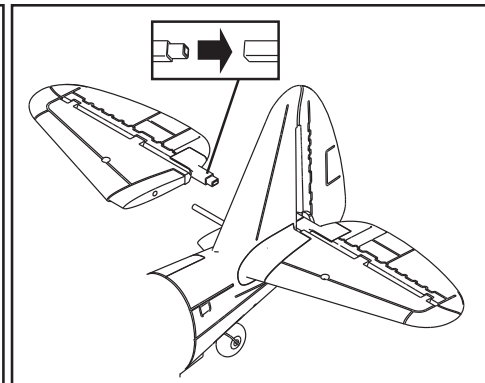
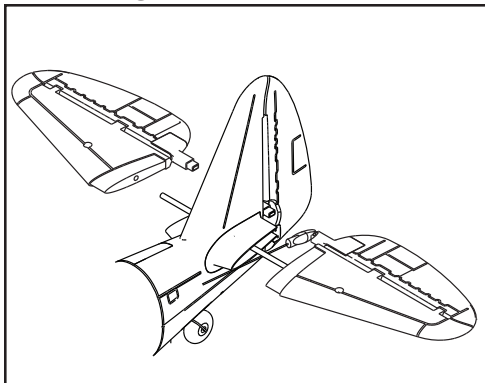
Note: Make sure connectors do not fall out of fuselage after wing is installed.

CAUTION: Do NOT crush or otherwise damage wiring when attaching wing to fuselage.

6. Turn assembled fuselage and wing so the bottom of the wing is down.
7. Where used, connect aileron, flap and landing gear connectors to the receiver or Y-harnesses.
8. Where needed, disassemble in reverse order.

Note: There is no difference between 2 connections on a Y-harness. Left and right servo connectors do not have to be connected to a particular side of a Y-harness.

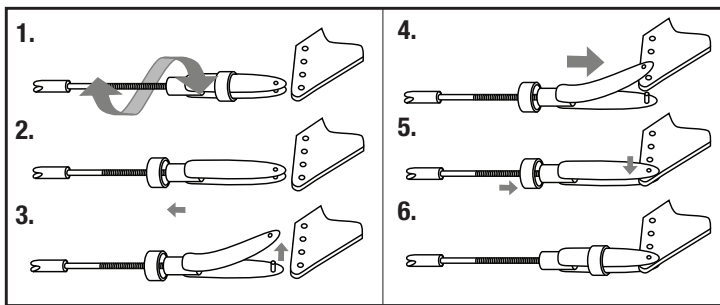
Installing Horizontal Tail



1. Install tube in hole in fuselage.
2. Install left horizontal tail on tube.
3. Install left horizontal tail in fuselage mount.
4. Install right horizontal tail on tube, in mount and on connector with left tail panel.

5. Apply 4 pieces of tape on fuselage mounts and top and bottom of horizontal tail.
6. Attach clevis to elevator control horn (see manual instructions for clevis connection).
7. When needed, disassemble in reverse order.

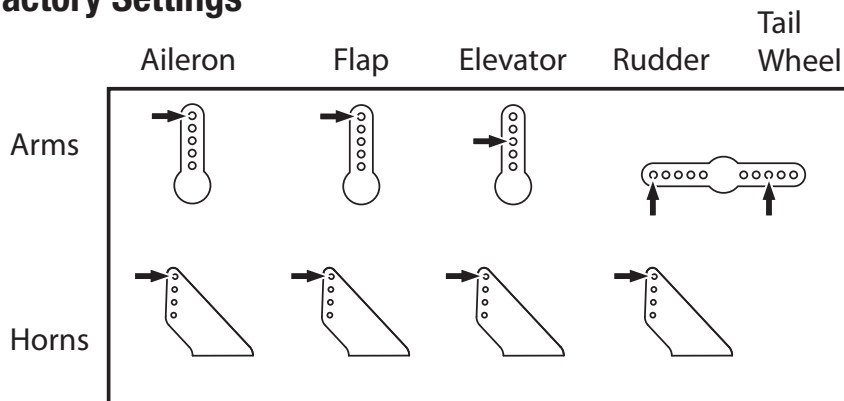
Installing Clevises on Control Horns



Tip: Turn the clevis clockwise or counterclockwise on the connector. Make sure transmitter trims are centered before making this adjustment.

- Pull the elastic band from the clevis to the connector.
- Carefully spread the clevis and put the clevis pin in a selected hole in the control horn.
- Move the elastic band to hold the clevis on the control horn.

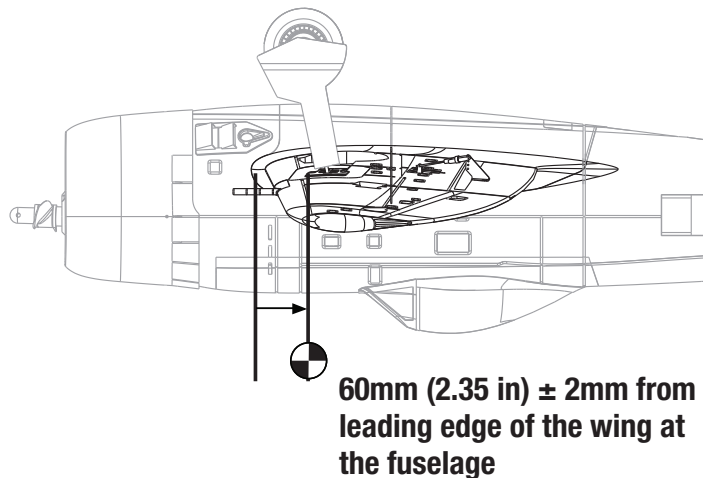
Factory Settings



Note: Not to scale

Adjusting Center of Gravity (CG)

Install battery all the way forward in the fuselage using the hook and loop strap. Turn the model until landing gear faces up to find balance most easily.



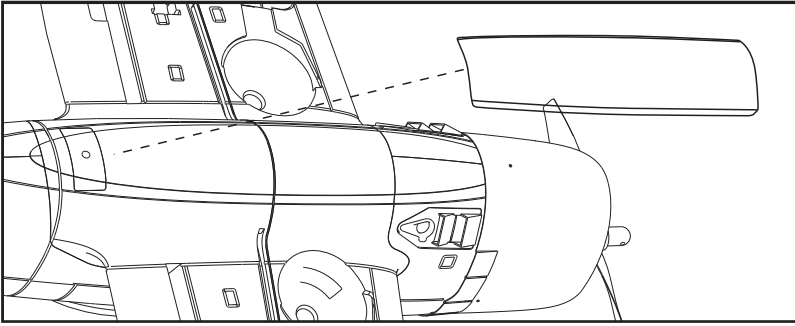
First Flight Preparation

- Remove and inspect contents
- Read this instruction manual thoroughly
- Bind aircraft to your transmitter
- Install the flight battery in the aircraft (once it has been fully charged)
- Make sure connectors move freely
- Perform the Control Direction Test with the transmitter
- Adjust flight controls and transmitter
- Adjust battery for center of gravity (CG)
- Perform a radio system Range Check
- Find a safe and open area
- Plan flight for flying field conditions

Maintenance After Flying

- Disconnect flight battery from ESC (Required for Safety)
- Turn off transmitter
- Remove flight battery from aircraft
- Recharge flight battery
- Repair or replace all damaged parts
- Store flight battery apart from aircraft and monitor the battery charge
- Make note of flight conditions and flight plan results, planning for future flights

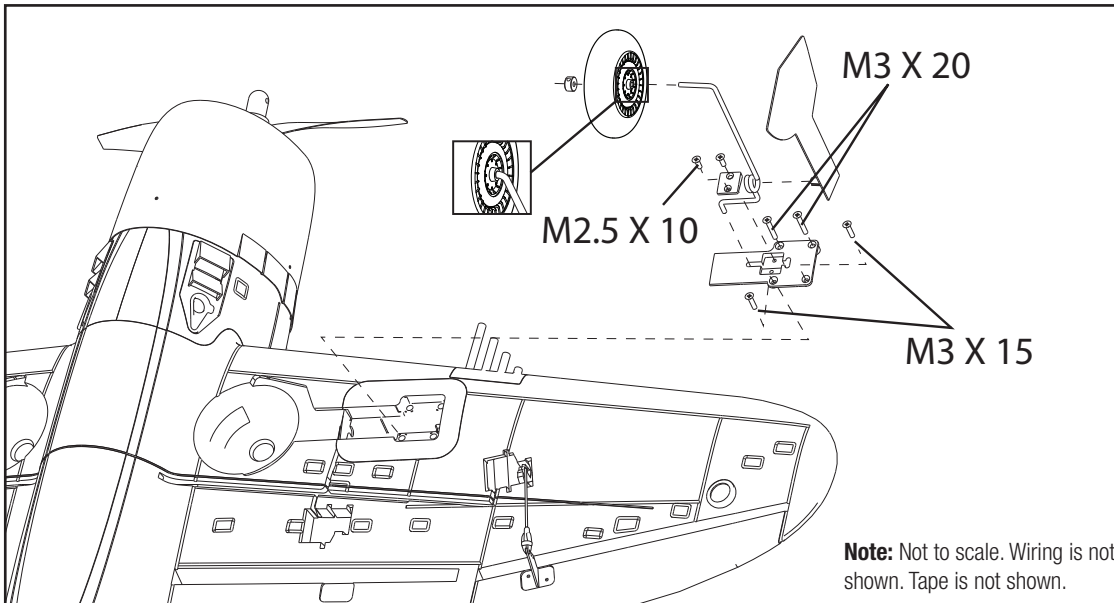
Belly Skid



Attach clear plastic belly skid to bottom of fuselage using double-sided tape.

Note: The belly skid is recommended if flying without landing gear.

Landing Gear



Note: The short screws M3 x 15 are installed in the two rear holes when using the fixed gear or the two front holes if using optional retractable landing gear.

Note: Not to scale. Wiring is not shown. Tape is not shown.

Installation

1. Install left landing gear plate in wing using 4 screws.

Note: The short screw (M3 X 15) is installed in the rear holes of the fixed landing gear.

2. Install landing gear strut in plate.

3. Install cover on strut using 2 screws.

4. Install wheel on strut using collar.

Note: Make sure bushing side of the wheel is toward the bend in the strut.

5. Tighten setscrew in collar.

Note: Threadlock may be required to keep the collar on the strut.

6. Install right landing gear the same as left landing gear.

Note: Refer to other instructions for retractable landing gear installation.

Removal

1. Loosen setscrew in collar.

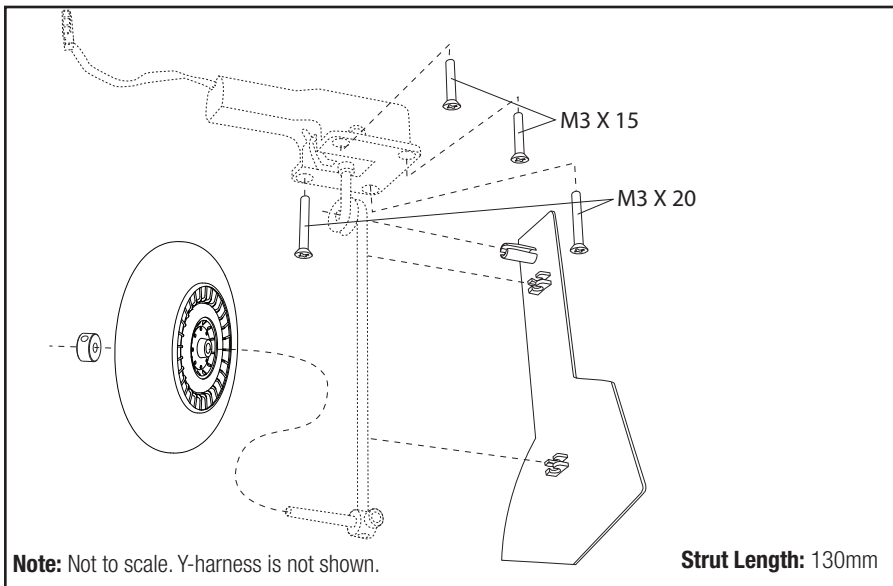
2. Remove collar and wheel from strut.

3. Remove 2 screws and cover from plate.

4. Remove strut from plate.

5. Remove 4 screws and plate from wing.

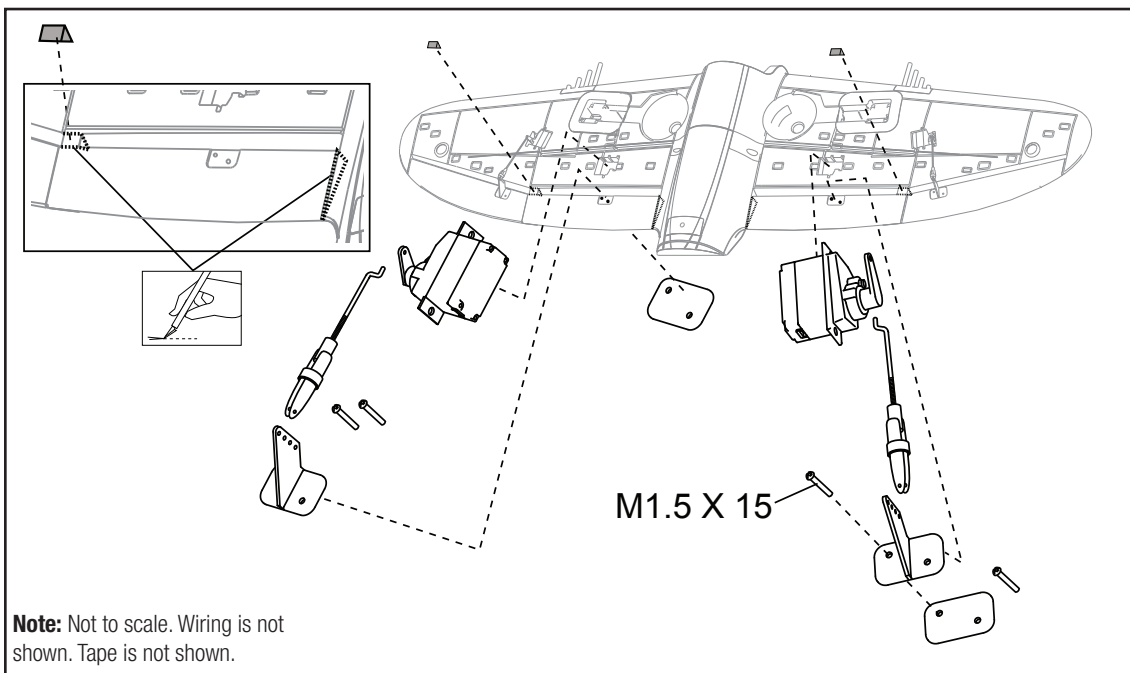
Optional Retractable Landing Gear



Remove fixed landing gear mount and reuse existing parts (see illustration) to install optional retractable landing gear (EFLG100, sold separately). See installation instructions included with optional landing gear.

Note: The short screws (M3x15) are installed in the two front holes.

Optional Flaps



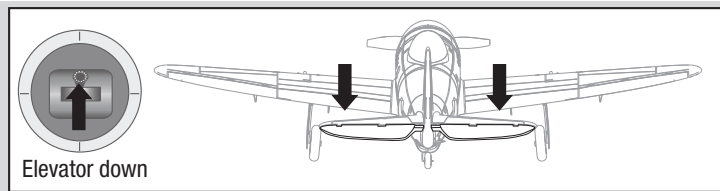
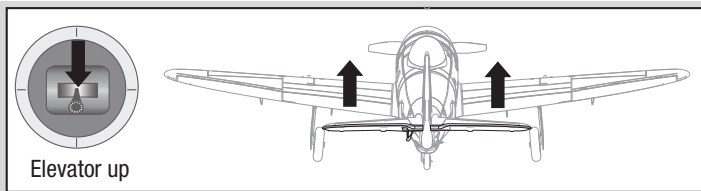
1. Remove wing from fuselage.
2. Install left and right flap servo (PKZ1081 x 2, sold separately) in pocket using hot glue or double-sided tape.
3. Install left and right control horn and plate on wing using 2 screws.
4. Carefully cut wedge of foam from flap hinge near aileron hinge (see illustration).
5. Carefully cut small amount of foam at flap and wing root so flap moves freely (see illustration).
6. Move tape to put servo wires in wing channel.
7. Put flap servo wire in wing channel with aileron wire.
8. Put flap servo connector in hole at wing root.
9. Put tape over channel.
10. Cut a small amount of tape at flap servo to let servo arm move freely.

11. Install connector and clevis in outer hole in servo arm and outer hole in control horn.
 12. Adjust clevis so flap is not pulled fully against the wing at the hinge when flap is operated.
 13. Enable flap operation on right side of wing using these instructions.
 14. Put servo connectors in fuselage.
 15. Attach wing to fuselage.
- ⚠ CAUTION:** Make sure wires are not crushed, or otherwise damaged, when wing is attached to fuselage.
16. Attach servo connectors to correct receiver channels or Y-harnesses.
 17. Do a control test of flaps using your aircraft and transmitter.
- Note:** Disconnect the clevis from the flap control horn when initially setting up the flaps to avoid potentially binding the control surface during setup.

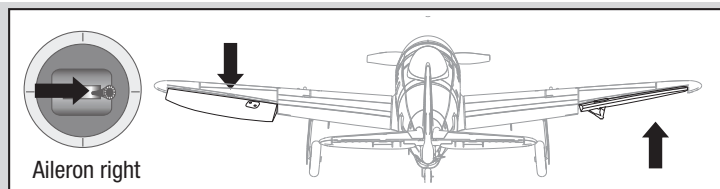
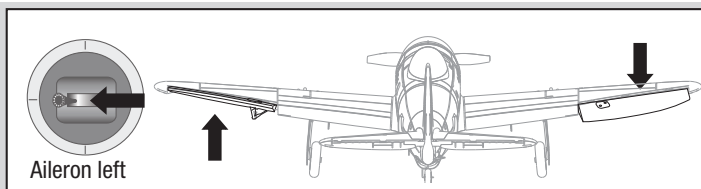
Control Direction Test

Bind your aircraft and transmitter before doing these tests. Move the controls on the transmitter to make sure aircraft control surfaces move correctly.

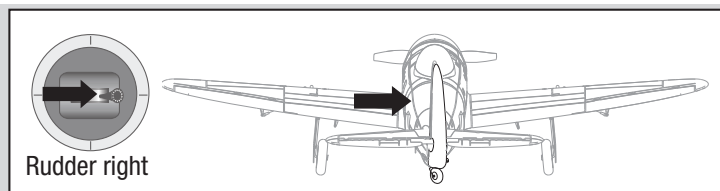
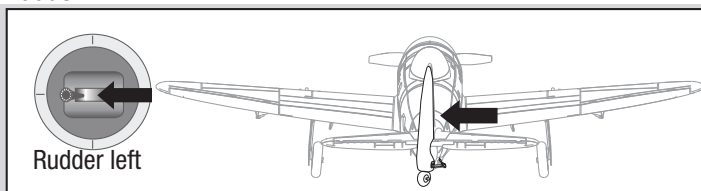
Elevator



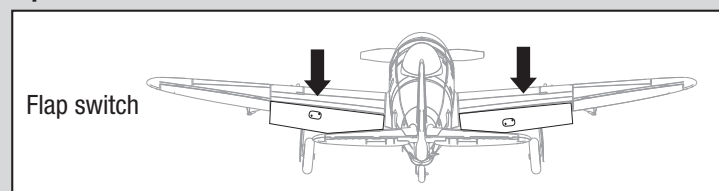
Aileron



Rudder



Flaps

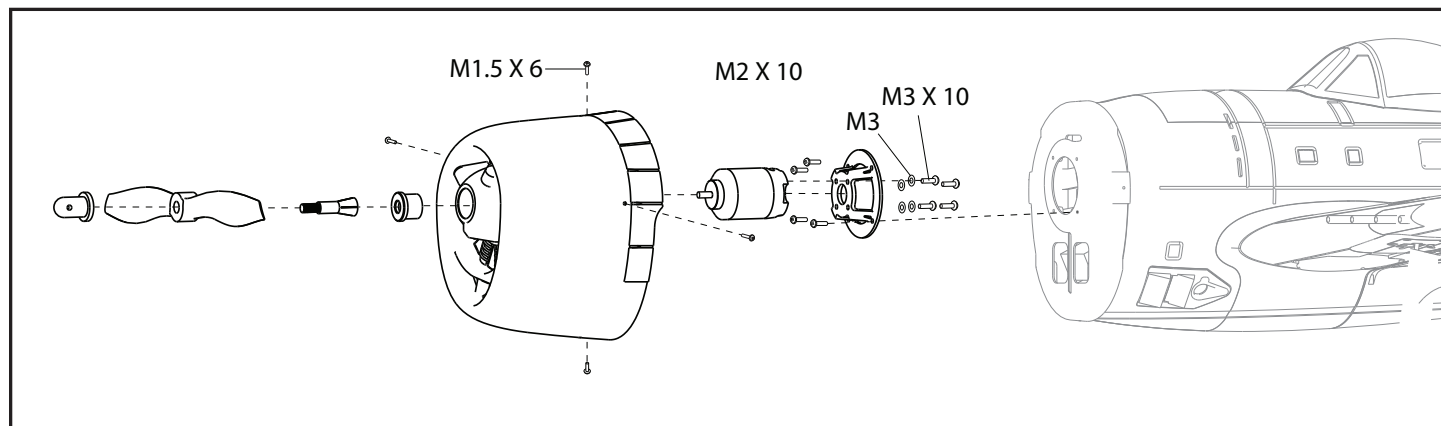


Dual Rates

	High Rate	Low Rate
Aileron	11mm up/down	7mm up/down
Elevator	12mm up/down	8mm up/down
Rudder	20mm left/right	15mm left/right

	1/2 or Takeoff Flap	Full Flap
Flap down	15mm down	25mm

Service of Power Components



CAUTION: DO NOT handle the motor or ESC while the flight battery is connected to the ESC. Personal injury could result.

Disassembly

1. Remove spinner nut, propeller, backplate and collet from the motor shaft.
Note: A tool is required to turn the spinner nut.
2. Remove 4 screws from cowling.
3. Carefully remove cowling from fuselage.
Note: Paint may keep cowling attached to the fuselage.
4. Remove 4 screws from motor mount and fuselage.
5. Disconnect motor wires from ESC wires.
6. Remove 4 screws and motor from motor mount.
Note: Keep rubber washers attached to the motor mount when removing screws and motor from motor mount.

Assembly

1. Attach motor to motor mount using 4 rubber washers and 4 screws.
2. Correctly align wire colors and connect motor to ESC.
3. Attach motor mount to fuselage using 4 screws.
4. Attach cowling to fuselage using 4 screws.
5. Attach collet, backplate and propeller to motor shaft using spinner nut.
Notice: The propeller side with the numbers for diameter and pitch (for example 9.5 x 7.5) should face out from the backplate.
Note: Tool required to tighten spinner nut on collet.

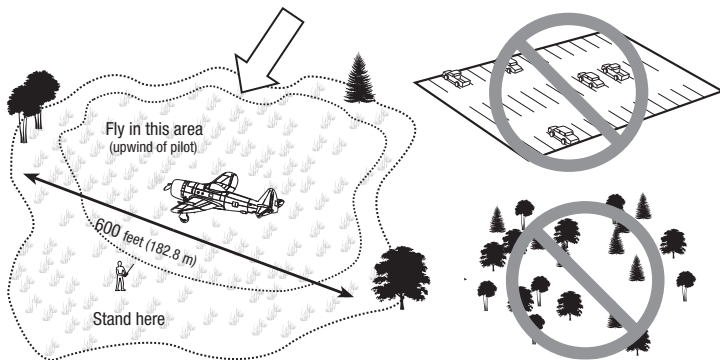
Flying Tips and Repairs

Range Check your Radio System

After final assembly, range check the radio system with the Thunderbolt. Refer to your specific transmitter instruction manual for range test information.

Flying

Always choose a wide-open space for flying your ParkZone Thunderbolt. It is ideal for you to fly at a sanctioned flying field. If you are not flying at an approved site, always avoid flying near houses, trees, wires and buildings. You should also be careful to avoid flying in areas where there are many people, such as busy parks, schoolyards, or soccer fields. Consult local laws and ordinances before choosing a location to fly your aircraft.



Landing

The P-47 is easiest to land doing a wheel landing (two point). A wheel landing (two point) is when the airplane touches down on the main landing gear first with the tailwheel off the ground. The P-47 can be landed in three-point attitude, where all three wheels touch down at the same time, but the wheel landing is easier to accomplish. Fly the airplane down to the ground using 1/4 - 1/3 throttle to allow for enough energy for a proper flare. Once the airplane touches down, reduce back pressure on the elevator stick to prevent the plane from becoming airborne again.

Flaps

When using the optional flaps, the takeoffs and landings are shorter. When taking off, the tail will come off the ground quicker for better rudder control during the takeoff roll.

During landing, the flaps allow a landing approach to be steeper with the ability to use more throttle. The flaps make the plane come in at a slower airspeed and make it easier to flare and settle in for a smooth landing.

When deploying the flaps, slow the aircraft down to 1/4 throttle. If the flaps are deployed when the aircraft is at a higher speed, the aircraft will pitch up. If your transmitter is capable, a slight amount of down elevator to flap mixing will reduce the pitch up tendency.



Repairs

Thanks to the Z-foam™ construction of the Thunderbolt, repairs to the foam can be made using virtually any adhesive (hot glue, regular CA, epoxy, etc). When parts are not repairable, see the Replacement Parts List for ordering by item number.

AMA National Model Aircraft Safety Code

Effective January 1, 2010

GENERAL

A model aircraft shall be defined as a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations established in this code and is intended to be used exclusively for sport, recreation, and/or competition.

1. I will not willfully fly my model aircraft in a careless or reckless manner, and will abide by this Safety Code and any additional rules specific to flying sites.
2. I will yield the right-of-way to man-carrying aircraft and will see and avoid all aircraft, utilizing a spotter when appropriate. (See AMA Document #540-D on See and Avoid Guidance.)
3. I will not fly my model aircraft higher than approximately 400 feet above ground level, when within three (3) miles of an airport without notifying the airport operator.
4. The maximum takeoff weight of a model aircraft, including fuel, is 55 pounds, except for those flown under the AMA Experimental Aircraft Rules.
5. I will not fly my model aircraft in sanctioned events, air shows, or model demonstrations unless I have previously proven that my aircraft, control system, and piloting skills are adequate by successfully executing all maneuvers intended or anticipated in the specific event. If I am not a proficient pilot, I will not fly in these events unless assisted by an experienced pilot.
6. I will not fly my model aircraft unless it is identified with my name and address, or AMA number, inside or affixed to the outside of the model aircraft. This does not apply to model aircraft flown indoors.
7. I will not operate model aircraft with metal-blade propellers.
8. I will not operate model aircraft carrying pyrotechnic devices which explode or burn, or any device, which propels a projectile of any kind. Exceptions include Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight. Rocket motors up to a G-series size may be used, provided they remain firmly attached to the model aircraft during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code; however, they may not be launched from model aircraft. Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document.
9. I will not operate my model aircraft while under the influence of alcohol or while using any drug which could adversely affect my ability to safely control the model.
10. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

Please see your local or regional modeling association's guidelines for proper, safe operation of your model aircraft.

Troubleshooting Guide

Problem	Possible Cause	Solution
Aircraft will not respond to throttle but responds to other controls	Throttle not at idle and/or throttle trim too high.	Reset controls with throttle stick and throttle trim at lowest setting
	Throttle channel is reversed	Reverse throttle channel on transmitter
Extra propeller noise or extra vibration	Damaged propeller and spinner, collet or motor	Replace damaged parts
	Propeller is out of balance	Balance or replace propeller
Reduced flight time or aircraft underpowered	Flight battery charge is low	Completely recharge flight battery
	Propeller installed backwards	Install propeller with numbers facing forward
	Flight battery damaged	Replace flight battery and follow flight battery instructions
	Flight conditions may be too cold	Make sure battery is warm before use
	Battery capacity may be low for flight conditions	Replace battery or use a larger capacity battery
Aircraft will not link to transmitter	Transmitter too near aircraft during binding process	Move powered transmitter a few feet from aircraft, disconnect and reconnect flight battery to aircraft
	Aircraft not bound to transmitter	Bind transmitter to aircraft receiver
	Aircraft bound to different model memory (ModelMatch radios only)	Select correct model memory on transmitter
	Flight battery/Transmitter battery charge is too low	Replace/recharge batteries
Control surface does not move	Control surface, control horn, linkage or servo damage	Replace or repair damaged parts and adjust controls
	Wire damaged or connections loose	Do a check of wires and connections, connect or replace as needed
	Transmitter not bound correctly or incorrect model selected	Re-bind or select correct model in transmitter
	Control trim out of adjustment	Adjust trims to restore full control
Controls reversed	Transmitter settings reversed	Do the Control Direction Test and adjust controls on transmitter appropriately
Motor loses power	Damage to motor, propeller shaft or power components	Do a check of batteries, transmitter, receiver, motor and wiring for damage (replace as needed)
Motor power pulses then motor loses power	ESC uses default soft Low Voltage Cutoff (LVC)	Recharge flight battery or replace battery that is no longer performing

Replacement Parts

To purchase directly from Horizon Hobby, please visit www.horizonhobby.com or call Horizon's Consumer Sales Division: (800) 338-4639

Number	Description
PKZ1012	Propeller: 9.5 x 7.5 inch
PKZ5301	Spinner Nut and Collet: P-47 Thunderbolt
PKZ5302	Main Landing Gear Set with Mounts: P-47 Thunderbolt
PKZ5303	Main Landing Gear without Mounts: P-47 Thunderbolt
PKZ5304	Main Landing Gear Mounts: P-47 Thunderbolt
PKZ5305	Main Landing Gear Wheels: P-47 Thunderbolt
PKZ5306	Main Landing Gear doors: P-47 Thunderbolt
PKZ5307	Tail Wheel Set: P-47 Thunderbolt
PKZ5308	Top Hatch with Canopy and Pilot: P-47 Thunderbolt
PKZ5309	Pilot: P-47 Thunderbolt
PKZ5311	Pushrods with Clevis: P-47 Thunderbolt
PKZ5312	Painted Horizontal Tail: P-47 Thunderbolt
PKZ5313	Painted Cowl: P-47 Thunderbolt
PKZ5314	Firewall: P-47 Thunderbolt
PKZ5316	Motor Mount: P-47 Thunderbolt
PKZ5320	Painted Wing (No Servo): P-47 Thunderbolt
PKZ5367	Painted Bare Fuselage: P-47 Thunderbolt
EFLA1030	30-Amp Pro SB Brushless ESC
PKZ5116	15BL Outrunner 950Kv
PKZ5104	Replacement Motor Shaft

Number	Description
PKZ1090	DSV130 3-Wire Digital Servo Metal Gear (Elevator and Rudder)
PKZ1081	SV80 Long Lead Servo (Ailerons and Optional Flaps)
PKZ1029	11.1V 2200mAh Li-Po battery
EFLAEC302	EC3 Battery Connector, Female (2)
EFLAEC303	EC3 Device/Battery Connector, Male/Female

Optional Parts

Number	Description
EFLC505	1- To 5-cell Li-Po battery charger with balancer
PKZ5317	Pre-bent retract landing gear strut (2)
PKZ5315	Flap pushrod set: P-47 Thunderbolt
EFLG100	10-15 Main Electric Retracts
PKZ1040	2-3S Variable Rate Balancing Fast Charger
PKZ4421	Clevis set (4)
PKZ5318	Control horn set (5)
PKZ5319	Clear plastic belly skid
SPMAR600	DSM2 6-channel Sport Receiver
SPMR5500	DX5e 5-channel Transmitter only
SPMR6600	DX6i 6-channel Transmitter only
SPMR7700	DX7 7-channel Transmitter only
SPM8800	DX8 Transmitter with AR8000 Receiver

Warranty and Repair Policy

Warranty Period

Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warrants that the Products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

Limited Warranty

Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for all warranty claims.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c) Purchaser Remedy- Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any Product by Purchaser must be approved in writing by Horizon before shipment.

Damage Limits

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new and unused condition to the place of purchase.

Law: These Terms are governed by Illinois law (without regard to conflict of law principles).

Warranty Services

Questions, Assistance, and Repairs

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a Product Support representative. You may also find information on our website at www.horizonhobby.com.

Inspection or Repairs

If this Product needs to be inspected or repaired, please use the Horizon Online Repair Request submission process found on our website or call Horizon to obtain a Return Merchandise Authorization (RMA) number. Pack the Product securely using a shipping carton. Please Note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon is not responsible for merchandise until it arrives and is accepted at our facility. An Online Repair Request is available at www.horizonhobby.com <http://www.horizonhobby.com> under the Repairs tab. If you do not have internet access, please contact Horizon Product Support to obtain a RMA number along with instructions for submitting your product for repair. When calling Horizon, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Horizon, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

Notice: Do not ship batteries to Horizon. If you have any issue with a battery, please contact the appropriate Horizon Product Support office.

Warranty Inspection and Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon.

Non-Warranty Repairs

Should your repair not be covered by warranty the repair will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Horizon for inspection or repair, you are agreeing to Horizon's Terms and Conditions found on our website under the Repairs tab.

Contact Information

Country of Purchase	Horizon Hobby	Address	Phone Number / Email Address
United States of America	Horizon Service Center (Electronics and engines)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 Online Repair Request: visit www.horizonhobby.com/repairs
	Horizon Product Support (All other products)	4105 Fieldstone Rd Champaign, Illinois 61822 USA	877-504-0233 productsupport@horizonhobby.com
United Kingdom	Horizon Hobby Limited	Units 1-4 Ployters Rd Staple Tye Harlow, Essex CM18 7NS United Kingdom	+44 (0) 1279 641 097 sales@horizonhobby.co.uk
Germany	Horizon Technischer Service	Hamburger Str. 10 25335 Elmshorn Germany	+49 4121 46199 66 service@horizonhobby.de
France	Horizon Hobby SAS	14 Rue Gustave Eiffel Zone d'Activité du Réveil Matin 91230 Montgeron	+33 (0) 1 60 47 44 70 infofrance@horizonhobby.com

Compliance Information for the European Union

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)

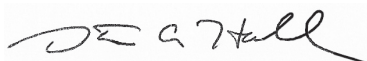
No. HH2010083004

CE Product(s): PKZ P-47 Thunderbolt BNF/PNP
Item Number(s): PKZ5380, PKZ5375
Equipment class: 1

The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC:

EN 301 489 General EMC requirements

Signed for and on behalf of:
Horizon Hobby, Inc.
Champaign, IL USA
Aug 30, 2010



Steven A. Hall
Vice President
International Operations and
Risk Management
Horizon Hobby, Inc.



Instructions for disposal of WEEE by users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

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PKZ5380, PKZ5375

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