

Willy Nillies'  
Simple Series

# Pee Jay 250

## BETA KIT

**LESS THAN 250 Grams!**

**NO FAA REGISTRATION REQUIRED!**

**Laser Cut-Self Jigging!**

**4 in 1 Wing! Flat Plate, Clark Y, Semi or fully Symmetrical!**



### **Specifications:**

Wingspan: 20"

Wing Chord: Root 7.5", Tip 3.5"

Wing Area: 107.7 in/sq

Fuselage length: 17.625

Flying Weight Brushless or Glow: 6.5 to 7.5 ounces

Wing Loading: 8.69 to 10.03 oz/sq ft

Wing Cube Loading: 10 to 11.6



### **Features:**

Build as 2,3 or 4 channel

Built in servo tray in fuselage

**4 in 1 Wing! Flat Plate, Clark Y, Semi or fully Symmetrical!**

Easy access top hatch

Bolt on bottom hatch

Laser cut self-jigging construction - The entire airframe can be built ready to cover in less than 1 hour!

### **Includes:**

All wood pieces to build entire airframe.

2mm carbon fiber pushrods with attach fittings

Motor mount, mounting screws and washers

Universal motor mount for 1306/1407 quad motors

### **Recommended Equipment:**

2 or 3 each 2.5-to-5-gram servos

- setup for **SINGLE** aileron servo - 5-gram eMax 9051 recommended.

Power: 1407-2800kv brushless motor

-or Cox Pee Wee/Tee Dee .020 glow engine

For Brushless - 350 to 500 mah 2or 3s lipo battery

- minimum 12-amp ESC.

- Gemfan 5030, 6030 or equivalent

**THIS IS A BETA KIT! Very Basic BUILD INSTRUCTIONS are included. PLEASE CONTACT US WITH ALL QUESTIONS AND SUGGESTIONS!**



**MADE IN THE USA**

## WARRANTY

Willy Nillies guarantees this kit to be free from any defects in both material and workmanship at the time of purchase. This warranty does not cover ANY components or parts damaged by use or modification. In no case shall Willy Nillies' liability exceed the original cost of the purchased kit. Willy Nillies reserves the right to modify or change this warranty without notice.

## LIABILITY RELEASE

In that Willy Nillies has no control over the final assembly or material used for final assembly, no liability shall be assumed or accepted for any damage resulting from the use by the user of the final user assembled product. By the act of using the user-assembled product, the user accepts all resulting liability. If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return the kit immediately in new and unused condition.

## PRODUCT SUPPORT

This product has been designed to function properly and perform as advertised with the SUGGESTED power system, speed control, and servos, as described in advertisements and in this manual. For the proper electronics to complete this model, replacement parts, and product assembly questions, please contact us online at [www.WillyNillies.com](http://www.WillyNillies.com)

Our aircraft are built from self-jigging interlocking laser cut balsa and plywood parts. It's like a 3D jigsaw puzzle with instructions. Full size plans are NOT included or needed to assemble our kits. If the instructions are read beforehand and followed during the build, our kits can be built up and ready to fly in only 2 to 4 evenings.

We think you'll like the super simple construction and flying qualities of our kits and look forward to any feedback you might have.

Sincerely,  
Douglas Hart  
**Willy Nillies**  
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Marietta, IL 61459  
[www.WillyNillies.com](http://www.WillyNillies.com)  
Phone: 309.648.0449

**PLEASE VISIT OUR WEBSITE and Builders Group FOR CURRENT BUILD INSTRUCTIONS, VIDEOS AND UPDATES>**

<http://www.WillyNillies.com>

### General Building Tips

Balsa is a lightweight and fragile wood, so you do need to be careful with it; however, you will also need to use a little bit of force to make everything fit properly, so don't be too timid.

Do not remove any pieces from the balsa sheets until they're ready to be used. That way, parts won't get mixed up or disappear.

Join all of your pieces using thin CA (Cyanoacrylate) glue, unless we tell you otherwise. In general, only a small amount of CA is necessary to glue parts together. Use of a capillary tube is HIGHLY recommended.

Don't over force your pieces together. If they aren't fitting together properly, make sure you have the right pieces and they are oriented correctly. If needed, you can lightly sand the part to fit. On balsa "tabs", you can "pinch" the wood with your fingers to get them to fit in slots. (The tabs might be tighter sometimes, due to tolerances in wood thickness)

### Control Throws:

**Elevator:** .25" up/down, measured at the trailing edge immediately aft of the control horn.

**Rudder:** .35"+ right and left, measured at trailing edge immediately aft of the control horn.

**AILERON:** .1875" up and down, measured at the trailing edge, measured immediately aft of the inboard trailing edge.

**EXPO** - if you have a computer radio, we **HIGHLY** recommend setting the aileron, rudder and elevator on 20% expo minimum to help soften the effectiveness of the controls near center.

### Center of Gravity:

1. The best all around C of G is at 2.95 inches aft of the leading edge measured from the leading edge at the fuselage side. Adjust your battery forward or aft to achieve this placement for your first flights. **This is recommended MAX AFT CG. DO NOT GO ANY FURTHER BACK!!!**

### First Flights:

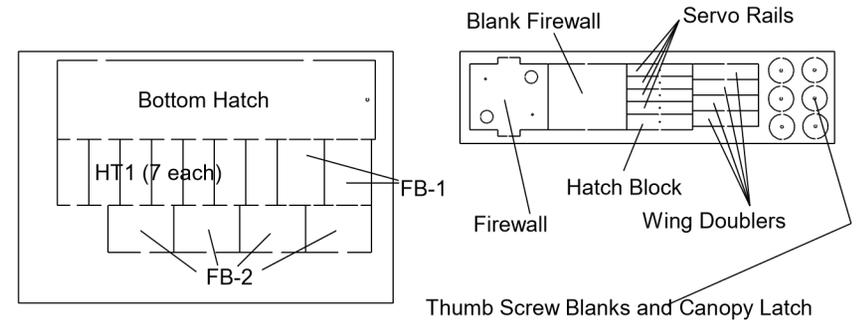
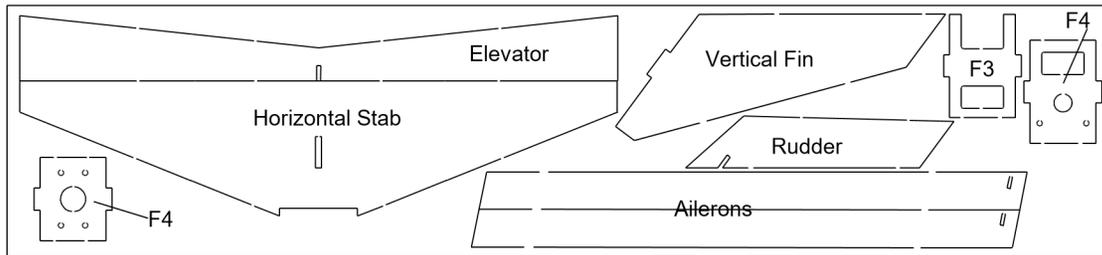
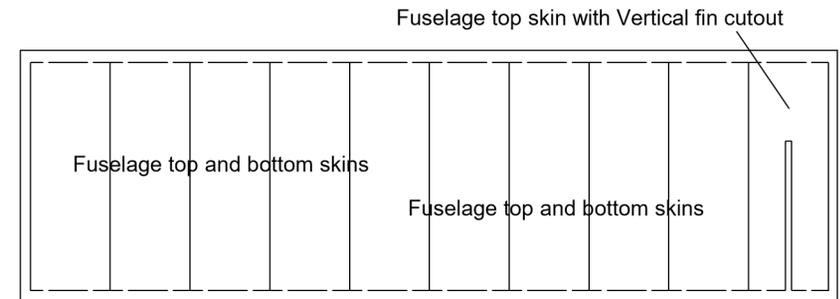
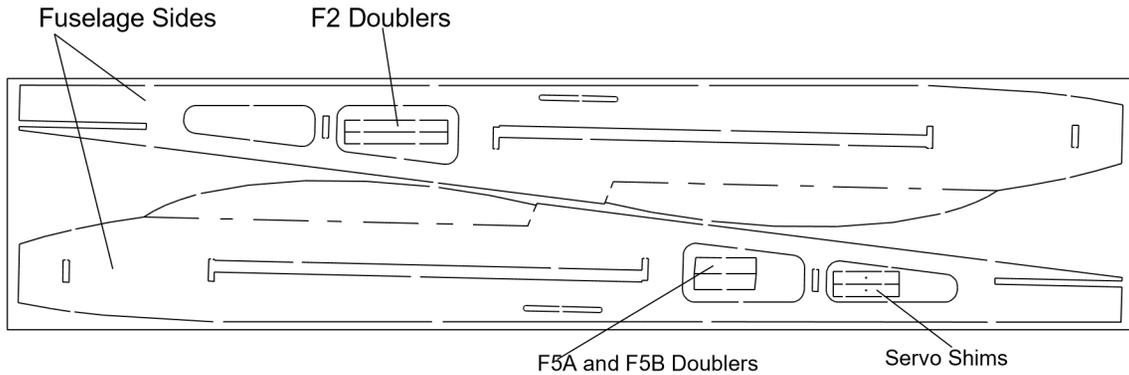
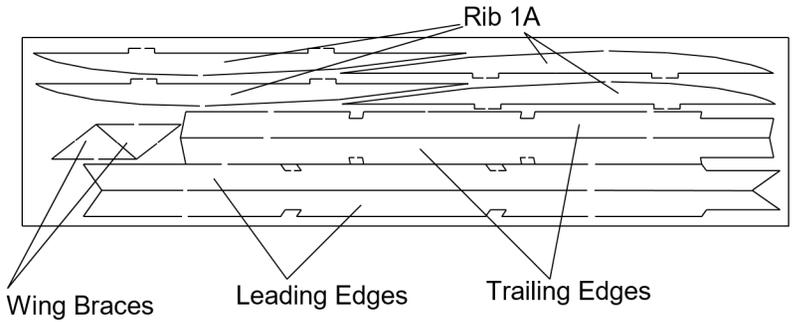
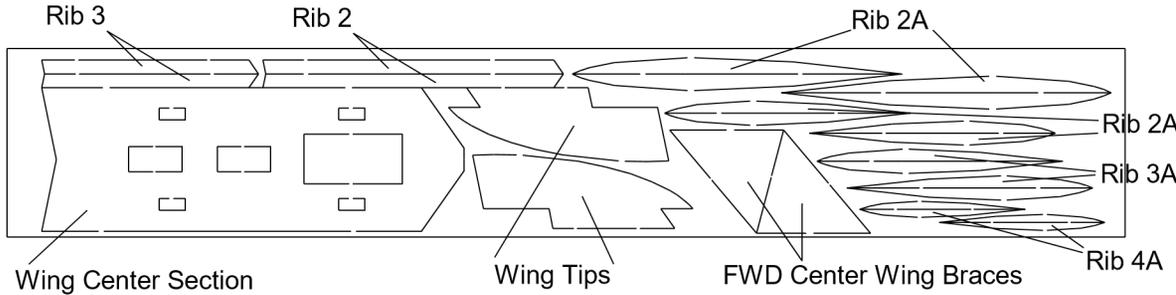
1. This model is a very fun and sporty type aircraft with a wide speed range. That said, don't be afraid of it! If you have followed our instructions and have set control throws accordingly with proper Center of Gravity, you will be rewarded with a very fun all around aircraft.

### Words of Caution:

1. This is a SMALL plane. KEEP IT CLOSE.
2. DO NOT LAUNCH AT FULL THROTTLE! The torque from the electric motor can roll the aircraft quickly!
3. Half throttle and a firm forward throw is all you need to get going. An under-hand toss works very well.
4. It is highly recommended that you use highly contrasting colors in your finish. Visibility and keeping orientation are very important.
5. That all said, if you manage your throttle at 50% or slightly less, it is a tame and gentle performer and a blast to fly at high power settings also!

Ephesians 2:8-9

# Pee Jay 250 Master Parts Map

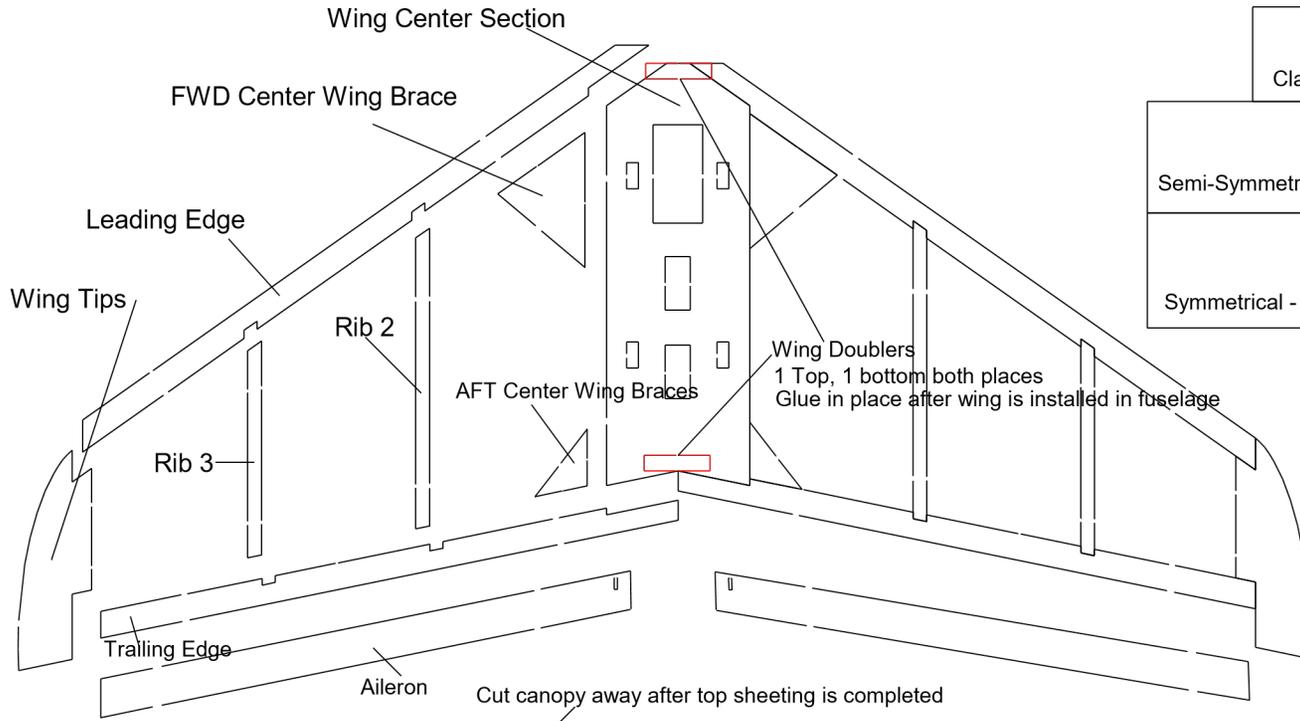


## HARDWARE Included:

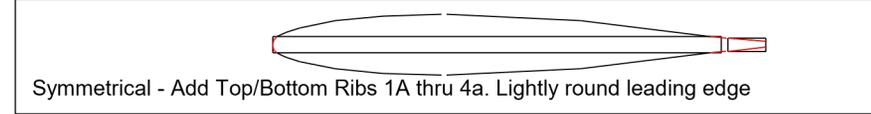
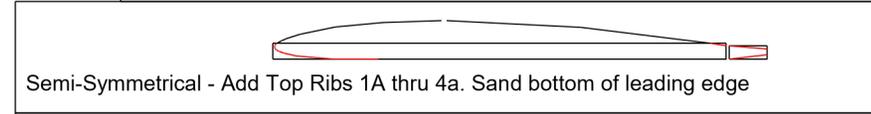
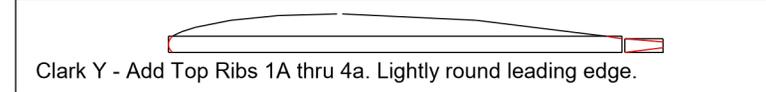
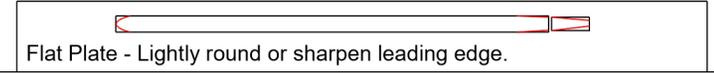
- 1) 2 lug motor mount
- 2) 2 each 2mm x 9.75" carbon rod pushrods
- 3) 4 each #2 x 1/2" wood screws
- 4) 4 each #2 washers
- 5) 6 each short Z bend .032 wires
- 6) 2 each long Z bend .032 wires
- 7) 6 inch piece of heatshrink for pushrod assembly
- 8) 4 pack of laser cut control horns
- 9) 4 " piece of triangle balsa (may be 4 each 1" lengths)
- 10) 4 " piece of music wire for canopy latch



# Pee Jay 250 Construction - Parts layout

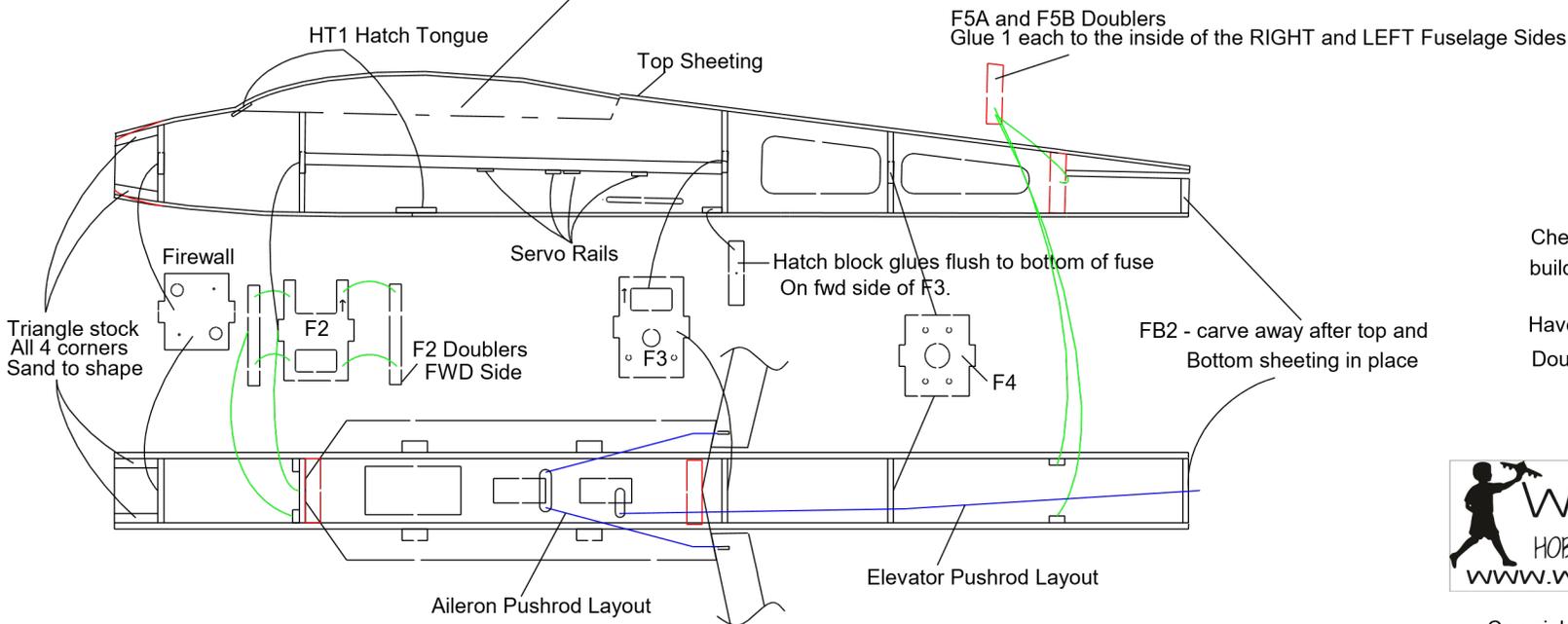
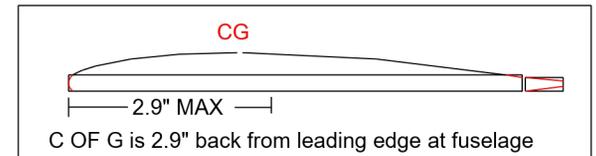


4 Airfoils to choose from to suit your style!



All Airfoils- Taper Trailind Edge As Shown

**WARNING!**  
**DO NOT INSTALL AIRFOIL RIBS OR WING DOUBLERS**  
 Until Fuselage is built and plate wing is glued in place  
 You will not be able to slide wing into place with ribs installed.



Check out our website and builders group for build pictures, updates and videos!

Have fun and God Bless,  
 Doug and Becky



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\* Use additional FB2 or FB1's to form battery box - position as needed for balance.