Warning! This model is not a toy. It is designed for maximum performance. Please seek advice if one is not familiar with this kind of electric powered precision model. Operating this model without prior preparation may cause injuries. Remember, safety is the most important thing. Always keep this instruction manual at hand for quick reference.

*Specifications are subject to change without notice.*
BEFORE YOU BEGIN

1. Read through the manual before you begin, so you will have an overall idea of what to do.

2. Check all parts. If you find any defective or missing parts contact your local dealer. Please DRY FIT and check for defects for all parts that will require CA or Epoxy for final assembly. Any parts you find to be defective after the gluing process may be difficult to remove for warranty replacement. The manufacturer will replace any defective parts, but will not extend to the parts that are good before gluing to defective parts during assembly. Warranty will not cover any parts modified by customer.

3. Symbols used throughout this instruction manual comprise of the following:

- **Apply epoxy glue.**
- **Apply instant glue (C.A.glue, super glue.)**
- **Apply thread locker**
- **Ensure smooth non-binding movement while assembling.**
- **Assemble left and right sides the same way.**
- **Cut off shaded portion.**
- **Peel off shaded portion covering film.**
- **Must be purchased separately!**
- **Drill holes with the specified diameter (here: 3mm).**
- **Pierce the shaded portion covering film.**
- **Pay close attention here!**
- **Warning!** Do not overlook this symbol!
### Parts List

1. **MAIN WING** -- 1 pair
   - SCREW PWA2x8mm -- 8 pcs
   - PLYWOOD 2x52x80mm (For Aileron Servo) -- 1 pair
   - Balsa 8x18x21mm (For Aileron Servo) -- 4 pcs

2. **SCREW PB2x18mm** -- 6 pcs
   - FUEL TUBE Ø6x5mm -- 4 pcs
   - CLEVIS PL4112103 -- 2 pcs
   - STRAPER PL4112102 -- 2 pcs
   - TRI-HORN M3x14mm PL4111185 -- 2 sets
   - PUSHROD Ø1.8x100mm w/ Threads (For Aileron) -- 2 pcs

3. **PLYWOOD 2x30x120mm (Wing Protection)** -- 1 pc.
   - WING TUBE Ø9.6x271mm -- 1 pc.

4. **SCREW M3x18mm** -- 4 pcs
   - MAIN WING STRUTS -- 1 pair

5. **FUSELAGE** -- 1 pc.
   - VERTICAL FIN & RUDDER -- 1 set
   - STABILIZER & ELEVATOR -- 1 set

6. **SCREW PA4x12mm** -- 2 pcs
   - TAIL LANDING GEAR -- 1 set
   - TAIL WHEEL Ø25mm -- 1 pc.
   - COLLAR Ø2.1mm w/ set screw -- 1 set
   - SCREW PM2x12mm -- 1 pc.
   - M2 NUT -- 1 pc.
   - ALUMINUM PLATE 0.5mm -- 1 pc.

7. **ENGINE MOUNT PL5111050** -- 1 set
   - SOCKET HEAD SCREW M4x25mm -- 4 pcs
   - WASHER d4.5xD9mm -- 4 pcs

8. **SCREW M3x25mm** -- 4 pcs
   - WASHER d3xD7mm -- 8 pcs
   - M3 NUT -- 8 pcs
   - THROTTLE PUSH WIRE Ø1.2x340mm -- 1 pc.
   - PLASTIC TUBE d2xD3x250mm -- 1 pc.

9. **FUEL TANK 260cc** -- 1 set
   - CABLE TIE (For Fuel Tank) 1.5x5x400mm -- 1 pc.
   - DOUBLE-SIDED TAPE 40x100mm -- 1 pc.

10. **SCREW M3x16mm** -- 2 pcs
    - SCREW PWA3x8mm -- 6 pcs
    - WASHER d3xD7mm -- 2 pcs
    - M3 NUT -- 2 pcs
    - ALUMINUM PLATE 2mm -- 2 pcs
    - MAIN LANDING GEAR -- 1 set
    - MOUNTING PLATE 12x20mm PL4114020 -- 4 pcs

11. **SCREW PA1.7x8mm** -- 6 pcs
    - MAIN WHEEL PL3112080 -- 2 sets
    - COLLAR Ø3.3mm w/ set screw -- 4 sets
    - SCREW PM2x8mm -- 6 pcs
    - WASHER d2xD5mm -- 6 pcs
    - M2 NUT -- 6 pcs
    - COPPER PLATE 0.5mm -- 6 pcs
    - Balsa 2x102x113mm (Main Landing Gear Cover) -- 1 pair

12. **SCREW PWA2.3x8mm** -- 4 pcs
    - WIND SHIELD -- 1 pc.
    - SILICON GROMMET d1.5xD6.5mm -- 4 pcs
    - SIDE WINDOWS -- 1 pair

13. **COWLING** -- 1 pc.
    - TRANSPARENT DUMMY COWLING -- 1 pc.
    - SCREW PWA2.6x12mm -- 4 pcs
    - SILICON GROMMET d1.5xD6.5mm -- 4 pcs
    - DUMMY ENGINE COVER -- 1 pair

14. **LINKAGE CONNECTOR Ø2.1x6mm HW7111060** -- 1 set

15. **PUSHROD Ø1.8x115mm (For Elevator)** -- 1 pc.
    - PUSHROD CONNECTOR PL4410010 1.5x9x20mm -- 1 set
    - SPONGE 60x70x105mm -- 1 pc.
    - PLYWOOD 3x57x115mm (For Fuselage Servos) -- 1 pc.
    - Balsa 6x8x108mm (For Fuselage Servos Stand) -- 2 pcs
    - STRAPER PL4112102 -- 2 pcs
    - FUEL TUBE Ø6x5mm -- 2 pcs

16. **SCREW PB2x12mm** -- 9 pcs
    - FUEL TUBE Ø6x5mm -- 3 pcs
    - CLEVIS PL4112103 -- 3 pcs
    - TRI-HORN M3x14mm PL4111185 -- 3 sets
    - PUSHROD Ø1.8x735mm w/ Threads (For Aileron) -- 1 pc.
    - PUSHROD Ø1.8x645mm w/ Threads (For Elevator) -- 2 pcs

17. **BALSA 3x45x112mm (For Pilot)** -- 1 pc.
    - Balsa 6x8x45mm (For Pilot Stand) -- 2 pcs
    - SCREW PWA2.8mm -- 4 pcs
    - PILOT PC001063B -- 1 pc.

18. **SCREW HM4x30mm** -- 2 pcs
    - WASHER d4xD15mm -- 2 pcs
    - SCREW M3x10mm -- 2 pcs
    - M3 NYLON INSERT LOCK NUT -- 2 pcs

19. **DECALS: A001SDEC** -- 1 set

20. **COVERING:**
    - LIGHTEX SGX 331 CUB YELLOW
    - LIGHTEX SGX 201 BLACK
    - TOUGHLON STL 331 CUB YELLOW
1 Main Wing

Cut away covering for installing the servo as shown. Use the fishing line supplied inside the wing to lead the servo lead to the openings of wing center.

2 Main Wing

Make a slot into the hatch for the servo horn to come out.

3 Main Wing

Ø1mm pilot holes for The World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.
4 Main Wing

Join the wing halves by using the aluminium tube supplied.
Strengthen both holes for the screws with a piece of plywood.

5 Wing Struts

6 Vertical Fin / Horizontal Stabilizer

Temporary install the main wing, adjust leveling of the stabilizer to make it as parallel to the main wing as possible.

Make sure vertical fin and stabilizer are at right angles.
7 Tail Landing Gear

- PA3x12mm Screw: 2
- 3mm Set Screw: 1
- 2.1mm Collar: 1
- PM2x12mm Screw: 1
- M2 Nut: 1

3mm Set Screw
PA3 x 12mm
PM2 x 12 mm

8 Engine Mount

- M4x25mm Socket Head Screw: 4
- d4.5xD9mm Washer: 4

M4x25mm

9 Engine

- M3x25mm Screw: 4
- 3mm Washer: 8
- M3 Nut: 8

Lead the 1.2mm throttle rod through the plastic tube and attach the throttle rod to the throttle lever on the engine.
13 Canopy

- Securely glue the windows to the fuselage.
- Use PWA2.3x8mm screws and d1.5x6.5mm silicon grommets.

14 Cowling

- First insert the grommet to the cowling then apply screw.
- Trim the cowling for the engine head to project.
- Use PWA2.6x12mm screws and d1.5x6.5mm silicon grommets.

15 Servo Set

- Please refer to the attached sheet for linkage connector installation.
- Use 3x3mm set screws, linkage connectors, M2 nuts, and 2mm washers.

Please refer to the attached sheet for usage of the transparent 3D template.
16 Radio Equipment

- Install and arrange the servos as shown in the diagram.

17 Rudder & Elevator Pushrod

- Ø1mm pilot holes for The World Models tri-horn are pre-drilled. Please look for pin-hole marks at the under side of control surfaces.

Set the pushrods as shown in the diagram.

- Bottom View
20 Wing Setting

In order to obtain the wing and fuselage configuration as in the diagrams, insert reinforcement plates between the wing and fuselage if necessary.

![Diagram showing wing setting](image)

- C = C'
- D = D'
- A = A'
- B = B'

- Securely attach the main wing

21 Control Throws

Adjust the control throws as shown in the diagram. These throws are good for general flying. You can adjust according to your personal preference.

![Diagram showing control throws](image)

- **Rudder**: 25mm 25mm
- **Elevator**: 20mm 20mm
- **Aileron**: 10mm 10mm

22 C.G.

The ideal C.G. position is **70mm (2.76 in)** behind the leading edge measured at where the wing meets the fuselage. In order to obtain the C.G. specified, add weight to the fuselage or move the battery position. Check the C.G. before flying.

![Diagram showing C.G.](image)

- **70mm**: 2.76 in.
Important Safety Precautions

# First time flyer should never fly by himself / herself. Assistance from experienced flyer is absolutely necessary.

# Pre-flight adjustment must be done before flying, it is very dangerous to fly a badly pre-adjusted aircraft.

# PIPER J - 3 CUB 48S is specially designed to be powered by 2C 0.40-0.46 or 4C 0.52-0.56 engine, using a more powerful engine does not mean better performance. In fact, over powered engine may cause severe damage and injuries.

# Make sure the air field is spacious, never fly the plane too close to people and never get too close to a running propeller.

# If you find wrinkles on the covering as a result of weather changes, you can use hot iron to remove the wrinkles. Please begin with lower temperature setting and gradually raise the temperature until the wrinkles are gone. Too hot an iron may damage the covering. Don't use hot iron near the seams or edges, hot iron will melt the glue and shrink the covering at the same time, causing the seams to pull away.

# Check and re-tighten up all factory assembled screws, use thread locker if necessary.
After fastening the round nut, make sure that the linkage connector can rotate freely.

Drill 2mm hole at servo horn.

Insert linkage connector into servo horn.

Make sure shoulder of screw is cleared from servo horn. Add washer to reduce play if necessary.

Tighten up the round nut against the shoulder. Apply CA or permanent thread locker.

After fastening the round nut, make sure that the linkage connector can rotate freely.
Product Registration Form (US Customers)

We would like to share with you any relevant information regarding your model, including product news and free upgrade parts when applicable. Please fill in the following and send to AirBorne Models, 4749-K, Bennett Drive, Livermore, CA 94551 USA.

1. Name:__________________________________________________________

2. Address:________________________________________________________

3. Phone #:________________________ E-mail: _________________________

4. Model:__________________________________________________________

   Wing QC# __________, Fuselage QC# ____________________________
   (QC numbers are stamped on wing and fuselage)

5. Date of Purchase:________________________________________________

6. Store Name:_____________________________________________________

Please call AirBorne Models at 925 371 0922 for any assistance in filling this form. Thank you very much for purchasing our product.
Usage of the transparent 3D template

This transparent 3D template is used for position guidance of the actual cutting of the pre-painted cowling.

Simply cut the transparent 3D template to fit your engine and exhaust pipe, then slide onto the actual cowling and use as template to mark the openings required for final cutting.
Ducted Fan

Warbirds

Scale

Sports

Trainer

Accessories

Covering
(Lightex / Toughlon)

Funfly

Electric

Glider

Boat

Pattern