1/3 PIPER J-3 CUB

Requires: 80cc gasoline engine, 4-channel radio w/ 6 high torque servos.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Wing Span</td>
<td>141 in / 3580 mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>2821 sq in / 182 sq dm</td>
</tr>
<tr>
<td>Flying Weight</td>
<td>28.5 lbs / 13000 g</td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>91 in / 2310 mm</td>
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</tbody>
</table>

* Specifications are subject to change without notice. *

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 engine 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.
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**
- **Must be purchased separately !**
- **Assemble left and right sides the same way.**
- **Ensure smooth non-binding movement while assembling.**
- **Peel off shaded portion covering film.**
- **Cut off shaded portion.**
- **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

2. SERVO MOUNTING PANEL (For Aileron) -- 1 pair
   HEAVY DUTY CLEVIS HORN BRACKET PL4112400 -- 2 sets
   M4 NYLON INSERT LOCK NUT -- 2 pcs
   SWIVEL CLEVIS HORN FAIRING PL4610010 -- 2 sets
   HEAVY DUTY SERVO HORN PL4120300 -- 2 sets
   HEAVY DUTY CLEVIS PL4112200 -- 4 sets

3. SOCKET HEAD SCREW M4x30mm -- 4 pcs
   SOCKET HEAD SCREW M3x20mm -- 8 pcs
   WIRE BRACKET PL5330040Y -- 8 pcs
   M3 NYLON INSERT LOCK NUT -- 4 pcs
   WASHER d3x0.7mm -- 12 pcs
   WASHER d4x0.12mm -- 4 pcs

4. FUSELAGE -- 1 pc.
   STABILIZER & ELEVATOR -- 1 set
   SCREW PWM2.5x12mm -- 2 pcs
   STABILIZER WIRE Ø4x200mm -- 2 pcs

5. VERTICAL FIN & RUDDER -- 1 set

6. TAIL GEAR ASSEMBLY (PL3410032) -- 1 set
   COPPER PLATE (For Stays on Tail Fueslage Bottom) 3x12x110mm -- 1 pc.
   SCREW PA3x18mm -- 3 pcs
   SCREW PW2.5x12mm -- 2 pcs
   ALUMINUM PLATE 1.5x10x60mm -- 1 pc.
   SPRING Ø5.2x49mm -- 2 pcs

7. MAIN LANDING GEAR -- 1 set
   SCREW HM4x18mm -- 2 pcs
   SCREW PA3x14mm -- 12 pc.
   SCREW PA4x20mm -- 2 pcs
   WASHER d4x0.12mm -- 2 pcs
   WASHER d4x0.09mm -- 2 pcs
   MOUNTING PLATE 15x20mm PL4114020 -- 6 pcs
   ALUMINUM PLATE 3x15x77mm -- 2 pcs

8. SCREW PA1.7x8mm -- 6 pcs
   SCREW PM3x12mm -- 8 pcs
   WASHER d3x0.7mm -- 16 pcs
   M3 NUT -- 8 pcs
   COLLAR Ø6.1mm w/screw -- 4 sets
   LARGE SCALE CAPTIVE AIR WHEELS Ø140mm -- 2 sets
   WIRE Ø1x4200mm -- 1 pc.
   FLYING WIRE BRACKET -- 12 pcs
   CLIP PIN Ø0.8x23mm -- 6 pcs
   EYE SCREW -- 12 pcs
   COPPER TUBE d2.5x0.3x28mm (For Rudder) -- 16 pcs

9. BLIND NUT M8 -- 4 pcs
   WASHER d8x0.15mm -- 4 pcs
   SOCKET HEAD SCREW M6x30mm -- 4 pcs

10. COWLING -- 1 pc.
    TRANSPARENT 3D TEMPLATE -- 1 pc.
    SCREW PA3x12mm -- 4 pcs
    WASHER d3x0.7mm -- 4 pcs
    SILICON GROMMET d2.5xD8.5mm -- 4 pcs
    DUMMY ENGINE COVER -- 1 pair

11. FUEL TANK 1500cc PL1121500G -- 1 set
    CABLE TIE 1.5x8x500mm -- 1 pc.
    DOUBLE-SIDED TAPE 40x180mm -- 1 pc.

12. PUSHROD Ø2.3x215mm w/ Threads (For Elevator) -- 2 pcs
    SOCKET HEAD SCREW M4x20mm -- 2 pcs
    M4 NYLON INSERT LOCK NUT -- 2 pcs
    SWIVEL CLEVIS HORN FAIRING PL4610010 -- 2 sets
    HEAVY DUTY HORN BRACKET PL4112400 -- 2 sets
    HEAVY DUTY SERVO HORN PL4120300 -- 2 sets
    HEAVY DUTY CLEVIS PL4112200 -- 4 sets

13. PUSHROD Ø2.3x170mm w/ Threads (For Rudder) -- 1 pc.
    SOCKET HEAD SCREW M4x25mm -- 1 pc.
    M4 NYLON INSERT LOCK NUT -- 1 pc.
    SWIVEL CLEVIS HORN FAIRING PL4610010 -- 1 set
    HEAVY DUTY HORN BRACKET PL4112400 -- 1 set
    HEAVY DUTY SERVO HORN PL4120300 -- 1 set
    HEAVY DUTY CLEVIS PL4112200 -- 2 set

14. SCREW PM2x18mm -- 12 pcs
    WASHER d2x0.04mm -- 24 pcs
    M2 NYLON INSERT LOCK NUT -- 12 pcs
    CLEVIS -- 12 pcs
    WIRE Ø1x4200mm -- 1 pc.
    FLYING WIRE BRACKET -- 12 pcs
    CLIP PIN Ø0.8x23mm -- 6 pcs
    EYE SCREW -- 12 pcs
    COPPER TUBE d2.5x0.3x28mm (For Rudder) -- 16 pcs

15. SIDE WINDOWS -- 1 pair

16. LINKAGE CONNECTOR Ø2.1mm w/ set screw -- 1 set

17. PLYWOOD 3x196x304mm (For Fuselage Servos) -- 1 pc.
    PLYWOOD 3x10x160mm (For Fuselage Servo Stand) -- 2 pcs
    BALSA 10x10x288mm (For Fuselage Servo Stand) -- 2 pcs
    SPONGE 10x80x200mm -- 2 pcs
    THROTTLE PUSHWIRE Ø1.8x480mm -- 1 pc.
    PLASTIC TUBE d2x3x300mm -- 1 pc.

18. PILOT PC101110A -- 1 set
    SCREW PW2.5x12mm -- 4 pcs
    COCKPIT BASE PANEL 3x196x444mm -- 1 pc.
    WOOD 10x10x443mm (For Cockpit Base Panel) -- 2 pcs

19. WIND SHIELD -- 1 pc.
    M4 NYLON INSERT LOCK NUT -- 2 pcs
    SCREW PM2x14mm -- 4 pcs
    WASHER d2x0.05mm -- 4 pcs
    MOUNTING PLATE 5x15mm PL4114015 -- 2 pcs

20. WING TUBE Ø22x976mm -- 2 pcs
    SELF-TIGHTENING LATCHING PIN PL9120010 -- 4 pcs
    WIRE Ø0.8mm -- 2 pair
    M3x8mm SET SCREW -- 4 pcs

21. SCREW HM4x15mm -- 2 pcs
    WASHER d4x0.12mm -- 2 pcs
    M4 NYLON INSERT LOCK NUT -- 2 pcs

22. DECALS: A186RDEC -- 1 set

COVERING:
TOUGHON STL 331 CUB YELLOW LIGHTEX SGX 201 BLACK
1 Main Wing

- Aileron Servo Lead

2 Aileron servo

- M4x60mm Socket Head Screw: 2
- M4 Nylon Insert Lock Nut: 2
- PWA2.3x8mm Screw: 8

- Heavy Duty Horn Bracket
- M2 Nylon Insert Lock Nut
- Heavy Duty Clevis
- M2x10mm
- Pushrod Ø2.3x129mm
- M4x60mm
- PA1.7x8mm
- PWA2.3x8mm

- M2x10mm Heavy Duty Clevis
- M2 Nylon Insert Lock Nut

Bottom View

L/R
3 Wing Struts

- M4x20mm Socket Head Screw
- M3x20mm Socket Head Screw
- d4xD12mm Washer
- d3xD7mm Washer
- M3 Nylon Insert Lock Nut

L/R • Bottom View

4 Stabilizer & Elevator

- PWM2.5x12mm Screw

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

Completed

5 Vertical Fin & Rudder

- Remove coverings for all surfaces in contact before applying A/B epoxy glue.

Completed
6 Tail Landing Gear

- PA3x18 mm Screw
- PWA2.5x12 mm Screw
- Aluminum Plate 3x15x77 mm
- Bottom View

7 Main Landing Gear

- HM4x18 mm Screw
- PA 3x14 mm Screw
- PA 4x20 mm Screw
- d4 x D12 mm Washer
- d4 x D9 mm Washer
- Aluminum Plate 3x15x77 mm
- Bottom View

8 Landing Gear

- 3mm Set Screw
- PA1.7x8 mm Screw
- D6.1 mm Collar
- PM3x12 mm Screw
- d3xD7 mm Washer
- M3 Nut
- Main Langing Gear Cover
- Wire Bracket Ø6
- Wheel Ø140 mm
- Wheel Cover
- M3 x 3 mm Set Screw
- M3 x 3 mm Set Screw
- 6.1 mm Collar
- 6.1 mm Collar
- PA1.7x8 mm
- Washer d3xD7 mm
- PM3x12 mm
- M3 Nut
- Main Langing Gear Cover
- Bottom View
9 Engine

- M6x30 SOCKET HEAD SCREW: 4
- d6xD15mm Washer: 4
- M6 Blind Nut: 4

10 Cowling

- PA3x12mm Screw: 4
- d2.5x8.5mm Silicon Grommet: 4
- d3xD7mm Washer: 16

- Please refer to the attached sheet for usage of the transparent 3D template.
- First insert the grommet to the cowling then apply screw.

Completed
14 Flying Wire

- PM2x18mm Screw (x12)
- M2 Nut (x2)
- d2xD5mm Washer (x2)

15 Windows

- Window A
- Window B

- Securely glue the windows to the fuselage.

16 Servo Set

- 3x3mm Set Screw (x1)
- Linkage Connector (x1)
- M2 Nut (x1)
- 2mm Washer (x2)
- Copper Tube

- Please refer to the attached sheet for linkage connector installation.
**17 Radio Equipment**

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

**18 Pilot**

- PWA 2x12mm Screw
- PWA2x12mm Screw
- PC10110A

**19 Wind Shield**

- M2 NYLON INSERT LOCK NUT
- PM2x14mm Screw
- d2 x D5mm Washer
Main Wing

- Set Screw M3x8mm
- Wire Ø0.8mm Set Screw M3x8mm
- Self Tightening Wing Latch Set Screw M3x8mm

Wing Tube Ø22x976mm Lead to Aileron Servo

Set Screw M3x8mm

Wing Tube PWA2.3x12mm

Completed

Wing Struts

- HM4x15mm Screw 2
- d4x D12mm Washer 2
- M4 NYLON INSERT LOCK NUT 2

HM4x15mm Washer d4xD12mm

M4 NYLON INSERT LOCK NUT

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22 Wing Setting

- Adjust the wing and fuselage configuration as shown in the diagrams.

A = A'  B = B'  C = C'

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23 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.

- **Rudder**: 65mm 65mm
- **Elevator**: 50mm 50mm
- **Aileron**: 40mm 40mm

24 C.G.

The ideal C.G. position is 150mm (5.9in.) 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.

If you are converting this model to electric, please move the C.G. forward 10% of current C.G. distance from leading edge to compensate for weight of fuel.

**Warning!**

**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.
- # 1/2 Piper J-3 Cub is specially designed to be powered by 80c.c. engine, using a more powerful engine does not mean better performance. In fact, over powered engine may cause structural 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.
LINKAGE CONNECTOR
HW7111050 & HW7111060

Drill 2mm hole at servo horn.

Insert linkage connector into servo horn.

Shoulder

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.

1. 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          Pattern

Warbirds            Funfly

Scale               Electric

Sports              Glider

Trainer             Boat

Accessories

Covering (Lightex/ Toughton)

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