1/4 Piper J-3 Cub

Requires: 0.91 cu. in. displacement 2-stroke
1.20 - 1.60 cu. in. displacement 4-stroke
4-channel radio w/ 4 high torque servos
and 1 standard servo (throttle)

### Specifications

- **Wing Span**: 104.0 in / 2640 mm
- **Wing Area**: 1586 sq in / 102.3 sq dm
- **Flying Weight**: 14.0-16.0 lbs / 6400-7300 g
- **Fuselage Length**: 65.0 in / 1650 mm

*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 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.
1/4 Piper J-3 Cub

INDEX

BEFORE YOU BEGIN ........................................... P.1
PARTS LIST ......................................................... P.2
ASSEMBLY ......................................................... P.3-P.13
SAFETY PRECAUTIONS ....................................... P.13

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 :-

- **AB**: Apply epoxy glue.
- **CA**: Apply instant glue (C.A.glue, super glue.)
- **N.I.**: Must be purchased separately!
- **L/R**: 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. PUSHROD Ø1.8x120mm w/ Threads(For Aileron Servo) -- 2 pcs
   - FUEL TUBE Ø6x55mm -- 4 pcs
   - STRAPER PL4112102 -- 2 pcs
   - SCREW PB2x30mm -- 6 pcs
   - SCREW PWA2x8mm -- 8 pcs
   - SERVO MOUNTING PANEL PL5310000 -- 1 pair
   - CLEVIS PL4112103 -- 2 pcs
   - TRI-HORN M3x22mm(L) -- 2 sets
3. SOCKET HEAD SCREW M3x15mm -- 12 pcs
   - WASHER d3xD7mm -- 4 pcs
   - MAIN WING STRUTS -- 1 set
   - WIRE BRACKET Ø3mm PL5330050Y -- 8 pcs
4. **FUSELAGE** -- 1 pc.
   - FUEL TANK 450cc -- 1 set
   - CABLE TIE(For Fuel Tank) 1.5x5x400mm -- 1 pc.
   - DOUBLE-SIDED TAPE 40x100mm -- 1pc.
5. **ENGINE MOUNT** PL5111080 -- 1 set
   - SOCKET HEAD SCREW M4x30mm -- 4 pcs
   - WASHER d4.2xD14.5mm -- 4 pcs
   - M4 BLIND NUT -- 4 pcs
6. **ALUMINUM PLATE(For Engine Mount)** -- 1 pc.
   - ANTI-VIBRATION MOUNT PL5214094 -- 1 set
   - INCLUDE: SOCKET HEAD SCREW M4x35mm -- 4 pcs
   - SCREW K5x20mm -- 8 pcs
   - WASHER d4x12mm -- 8 pcs
   - NYLON INSERT LOCK NUT M3 -- 8 pcs
   - NYLON INSERT LOCK M4 -- 4 pcs
   - THRROTTLE PUSHWIRE Ø1.2x480mm -- 1 pc.
   - PLASTIC TUBE Ø2x3.2x300mm -- 1 pc.
7. **SCREW PWA2.6x12mm -- 4 pcs**
   - SILICON GROMMET Ø1.5x30.5mm(For Cowling) -- 4 pcs
   - DUMMY ENGINE COVER -- 1 pair
   - COWLING -- 1 pc.
   - TRANSPARENT 3D TEMPLATE -- 1 pc.
8. **SCREW PA3x12mm -- 2 pcs**
   - SOCKET HEAD SCREW M3x13mm -- 2 pcs
   - WASHER d3x27mm -- 2 pcs
   - ALUMINUM PLATE 2mm -- 2 pcs
9. **MAIN LANDING GEAR** -- 1 set
   - SCREW PA3x12mm -- 12 pcs
   - WASHER d3x27mm -- 12 pcs
   - MOUNTING PLATE 12x20mm -- 6 pcs
10. **SCREW PA1.7x8mm -- 6 pcs**
    - SCREW PM3x13mm -- 8 pcs
    - WASHER d3xD7mm -- 16 pcs
    - M3 NUT -- 8 pcs
    - COLLAR Ø4.6mm w/ set screw -- 4 sets
11. **STABILIZER & ELEVATOR** -- 1 set
    - MAIN WHEELS(CUB) Ø107mm -- 2 sets
    - PLYWOOD 3x145x17mm(Main Landing Gear Cover) -- 1 pair
    - WIRE BRACKET Ø5mm PL5330050Y -- 8 pcs
12. **VERTICAL FIN & RUDDER** -- 1 set
13. **TAIL GEAR ASSEMBLY** 11-22LBS PL3410021 -- 1 set
    - SCREW PA3x14mm -- 3 pcs
    - SCREW PWA2x12mm -- 3 pcs
    - ALUMINUM PLATE(For Staying on Tail Fuselage Bottom) 1.5x10x34mm -- 1 pc.
14. **FLYING WIRE Ø1x1300mm -- 1 pc.**
    - FLYING WIRE BRACKET -- 6 pcs
    - FLYING WIRE BRACKET CLEVIS -- 4 pcs
    - EYE SCREW M1.5x6x12mm -- 4 pcs
    - SCREW M4x16mm -- 6 pcs
    - SCREW M4x8mm -- 4 pcs
    - M2 NUT -- 6 pcs
    - WASHER Ø2xD5mm -- 6 pcs
    - COPPER TUBE Ø2.5xD3.2x8mm(For Rudder) -- 8 pcs
15. **SCREW PB2x16mm -- 3 pcs**
    - FUEL TUBE Ø6x55mm -- 1 pc.
    - CLEVIS PL4112103 -- 1 pc.
    - TRI-HORN M3x22mm(L) -- 1 set
    - PUSHROD Ø1.8x1065mm w/ Threads(For Elevator Servo) -- 1 pc.
16. **SCREW PB2x16mm -- 6 pcs**
    - FUEL TUBE Ø6x55mm -- 2 pcs
    - CLEVIS PL4112103 -- 2 pcs
    - TRI-HORN M3x22mm(L) -- 2 sets
    - PUSHROD Ø1.8x955mm w/ Threads(For Elevator Servo) -- 2 pcs
17. **LINKAGE CONNECTOR Ø2.1mm -- 1 set**
18. **PLYWOOD 3x152x218mm(For Fuselage Servo)** -- 1 pc
19. **FUEL TUBE Ø6x55mm -- 2 pcs**
    - STRAPER PL4112102 -- 2 pcs
    - PUSHROD Ø1.8x855mm(For Elevator) -- 1 pc.
    - PUSHROD CONNECTOR 4x9x20mm -- 1 set
    - SPONGE 10x80x200mm -- 2 pcs
20. **SCREW PWA2x12mm -- 4 pcs**
    - PILOT PC001102A -- 1 set
    - SIDE WINDOWS -- 1 pair
    - COCKPIT BASE PANEL 3x145x165mm -- 2 pcs
21. **SCREW PWA2.3x12mm -- 10 pcs**
    - SILICON GROMMET Ø1.5x25.6mm(For Wind Shield) -- 4 pcs
    - WIND SHIELD -- 1 pc.
22. **WING TUBE Ø16x61mm -- 2 pcs**
    - SELF-TIGHTENING LATCHING PIN PL9120010 -- 4 pcs
    - WIRE Ø0.8mm -- 4 pcs
    - M3x8mm SET SCREW -- 4 pcs
23. **SOCKET HEAD SCREW M3x8mm -- 2 pcs**
    - WASHER d3xD7mm -- 4 pcs
    - M3 NYLON INSERT LOCK NUT -- 2 pcs
24. **DECALS: A053DEC -- 1 set**

---

**COVERING:**
- TOUGHLON STL 331 CUB YELLOW
- TOUGHLON STL 201 BLACK
1 Main Wing

- Aileron Servo Lead
- Pre-glued
- Ø1mm pilot holes for World Models tri-horn are pre-drilled.
- Bottom View

2 Aileron Servo

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

- PB2x30mm Screw
- PWA2x8mm Screw
- PWA2x8mm
- Straper Fuel Tube Ø6x5mm
- Fuel Tube Ø6x5mm
- Tri-Horn M3x22mm
- Pushrod Ø1.8x120mm
- N.I.
- Bottom View
### 3 Main Wing

- M3x15mm Socket Head Screw: 12
- d3xD7mm Washer: 8
- M3 Nylon Insert Lock Nut: 4

![Main Wing Diagram]

**Bottom View**

### 4 Fuel Tank

- Cable Tie (For Fuel Tank): 1.5x5x400mm
- Double-sided Tape 40x100mm

![Fuel Tank Diagram]

1. Cable Tie (For Fuel Tank): 1.5x5x400mm
2. Double-sided Tape 40x100mm
3. Completed
5 Engine Mount

- M4x30mm Socket Head Screw x 4
- d4.2xD14.5mm Washer x 4
- M4 Blind Nut x 4

6 Engine

- M4x35mm Socket Head Screw x 4
- KM3x20mm Screw x 8
- d4xD12mm Washer x 8

Antivibration Mount Installation

1. Copper Tube d4.1xD5x67.2mm
2. Copper Tube d3.1xD4x7.2mm

Make sure the rounded edges are facing the shock absorbing SILICON PAD.

Installed Engine Position

- 147mm 5.79 in.
- Throttle Pushwire Ø1.2x480mm
- Plastic Tube d2xD3x300mm
7 Cowling

- PWA2.6x12mm Screw (4)
- d1.5xD6.5mm Silicon Grommet (4)

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

8 Wing Struts Mounting Bracket

- PA3x12mm Screw (2)
- M3x14mm Socket Head Screw (2)
- d3xD7mm Washer (2)
- Aluminum Plate 2mm
- M3x14mm
- Washer d3xD7mm

Bottom View

9 Main Landing Gear

- PA3x12mm Screw (12)
- d3xD7mm Washer (12)

Bottom View
10 Main Landing Gear

PA1.7x8mm Screw 6
PM3x13mm Screw 8
d3xD7mm Washer 16
M3 Nut 8
3mm Set Screw 4
4.6mm Wheel Collar 4

PM3x13mm
Washer
d3xD7mm
M3 Nut

Bottom View

L/R

11 Stabilizer & Elevator

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

12 Vertical Fin / Rudder

16mm x 7mm
Washer
d3xD7mm
PM3x13mm
PA1.7x8mm
Wire Bracket
13 Tail Landing Gear

- PA3x14mm Screw (3)
- PWA2x12mm Screw (3)

14 Flying Wire

- PM2x16mm Screw (6)
- PM2x8mm Screw (4)
- M2 Nut (6)
- d2xD5mm Washer (6)

15 Rudder Pushrod

- PB2x16mm Screw (3)

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

PB2x16mm Screw

18

PB2x16mm

17 Servo Set

3x3mm Set Screw

2

Linkage Connector

1

M2 Nut

1

2mm Washer

2

Notes:

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

17 Servo Set

3x3mm Set Screw

1

Linkage Connector

1

M2 Nut

1

2mm Washer

2

Please refer to the attached sheet for linkage connector installation.

18 Servo Tray

Servo Tray

Plywood 3x152x218mm
19 Radio Equipment

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

20 Windows

- Left Side

21 Wind Shield

- Peel off shaded portion covering film.
22 Main Wing

- M3 x 8mm Set Screw
- Wire Ø0.8mm
- 3mm Set Screw
- Self Tightening Wing Latch
- Set Screw M3x8mm
- Wing Tube
- Lead to Aileron Servo
- Wing Tube D16x661mm
- Completed

23 Main Wing

- M3x8mm Socket Head Screw
- d3xD7mm Washer
- M3 Nylon Inert Lock Nut
- M3 Nylon Inert Lock Nut
- Washer d3xD7mm
- M3x8mm
24 Wing Setting

A=A'  B=B'

25 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

Elevator

Aileron

26 C.G.

The ideal C.G. position is 112mm (4.41 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.

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.
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.

# 1/4 Piper J-3 Cub is specially designed to be powered by 2C 0.91 or 4C 1.20 - 1.60 engine, using a morepowerful 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.
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.
**Optional Parts**

**ACCESSORIES**

### 180mm Extension
- **Code No.** KW0011800
- **Size** 180mm
- **Package** 1 set

![180mm Extension Image](Image)

### 180mm Y-Cord
- **Code No.** KW0021800
- **Size** 180mm
- **Package** 1 pc

![180mm Y-Cord Image](Image)

### Fuel Filter
- **Code No.** PL8110030
- **Size** 15 x 22 x 49mm
- **Package** 1 x 1 pc

![Fuel Filter Image](Image)

### Clevis Wrench
- **Code No.** PL8210010
- **Package** 1 set

Special tool for clevis installation. Suitable for standard and small (EP)clevis.

![Clevis Wrench Image](Image)

### Charge Receptacles
- **Code No.** KP0041300

![Charge Receptacles Image](Image)

### Field Stand
- **Code No.** MS9111430
- **Size** 600 x 240 x 310mm
- **Package** 1 pc

![Field Stand Image](Image)

### Standard Servo
- **Code No.** SV4031
- **Speed**: 0.17 sec / 60° @4.8V
- **Torque**: 3.2kg.cm / 44.8 oz - in @4.8V
- **4.1kg.cm / 57.4 oz - in @6.0V**
- **Size**: 40.6 x 20 x 37mm
- **Weight**: 39.4 g / 1.39 oz
## Optional Parts

### ACCESSORIES

**Silicon Tubes**
- **Code No.:** PT1113040
  - **Size:** D4xd2mm 1m
  - **Package:** Transparent
- **Code No.:** PT1113060
  - **Size:** D6xd2.5mm 1m
  - **Package:** Transparent blue
- **Code No.:** PT1113082
  - **Size:** D6xd3.2mm 1m
  - **Package:** Red

**Wind sock**
- **Code No.:** AT3001052
  - **Size:** D260x900mm
  - **Package:** 1 pc

**Fuel Filter**
- **Code No.:** HW7120100
  - **Size:**
  - **Package:** 1 pc

**Wooden Field Stand (Painted)**
- **Code No.:** WF9112400
  - **Size:** 41-72x28x46.5cm
  - **Package:** 1 set

**Wooden Field Box**
- **Code No.:** WCR572032
  - **Size:** 57-92x20x32mm
  - **Package:** 1 set
- **Code No.:** WCC572032
  - **Size:** 57-92x20x32mm
  - **Package:** 1 set

**Detachable Transmitter Stand**
- **Code No.:** MS9111500
  - **Size:** 200x115mm
  - **Package:** 1 set

**Adjustable Wheel Chock**
- **Code No.:** MS6120040
  - **Size:** D40-90mm
  - **Package:** 1 pr

**Accessories Box with assorted screws and hardwares**
- **Code No.:** PB2000618
  - **Size:** 210x115x35mm
  - **Package:** 1 set