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.

### 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>
</tr>
</tbody>
</table>

* Specifications are subject to change without notice.*

**Requires:** 80 c.c. gasoline engine, 5-channel radio w/ 8 high torque servos.
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.
- **C.A**: Apply instant glue (C.A. glue, super glue.)
- **N.I.**: Must be purchased separately!
- **L/R**: Assemble left and right sides the same way.
- **Pierce the shaded portion covering film.**
- **Cut off shaded portion.**
- **Drill holes with the specified diameter (here: 3mm).**
- **Pay close attention here!**
- **Warning**: Do not overlook this symbol!
# Parts List

1. **MAIN WING** – 1 pair
   - HEAVY DUTY MOUNTING PANEL (For Aileron) – 2 pairs
   - SOCKET HEAD SCREW M4x60mm – 4 pcs
   - SCREW PWA2.3x8mm – 16 pcs
   - M4 NYLON INSERT LOCK NUT – 4 pcs
   - HEAVY DUTY HORN BRACKET PL4120300 – 4 sets
   - HEAVY DUTY SERVO HORN PL4120200 – 4 sets
   - PUSHROD Ø2.3x129mm w/ Threads (For Aileron) – 2 pcs
   - PUSHROD Ø2.3x108mm w/ Threads (For Flap Servo) – 2 pcs
   - SWIVEL CLEVIS HORN FAIRING PL4610010 – 4 sets

2. **SERVO MOUNTING PANEL (For Aileron)** – 2 pairs
   - HEAVY DUTY CLEVIS PL4112200 – 8 sets
   - SOCKET HEAD SCREW M4x60mm – 4 pcs
   - SCREW PWA2.3x8mm – 16 pcs
   - M4 NYLON INSERT LOCK NUT – 4 pcs
   - HEAVY DUTY HORN BRACKET PL4120300 – 4 sets
   - HEAVY DUTY SERVO HORN PL4120200 – 4 sets
   - PUSHROD Ø2.3x129mm w/ Threads (For Aileron) – 2 pcs
   - PUSHROD Ø2.3x108mm w/ Threads (For Flap Servo) – 2 pcs
   - SWIVEL CLEVIS HORN FAIRING PL4610010 – 4 sets

3. **COVERING**:
   - TOUGHLON STL 100 WHITE
   - TOUGHLON STL 312 BRIGHT RED

4. **SCREW HM4x20mm** – 4 pcs
   - SOCKET HEAD SCREW M4x20mm – 8 pcs
   - WIRE BRACKET Ø4mm PL5330040W – 8 pcs
   - MAIN WING STRUTS – 1 pair
   - WING STRUT WIRE Ø4mm – 2 pcs
   - WASHER d3xD7mm – 12 pcs
   - WASHER d4xD12mm – 4 pcs

5. **FUSELAGE** – 1 pc.
   - STABILIZER & ELEVATOR – 1 set
   - SOCKET HEAD SCREW M3x20mm – 8 pcs
   - WIRE BRACKET Ø6mm PL5330060W – 8 pcs

6. **VERTICAL FIN & RUDDER** – 1 set
   - SCREW HM4x18mm – 2 pcs
   - SCREW PA4x14mm – 12 pcs
   - SCREW PA4x20mm – 2 pcs
   - WASHER d4xD12mm – 2 pcs
   - WASHER d4xD9mm – 2 pcs
   - MOUNTING PLATE 12x20mm – 6 pcs
   - ALUMINUM PLATE 3x15x77mm – 2 pcs

7. **MAIN LANDING GEAR** – 1 set
   - SCREW HM4x18mm – 2 pcs
   - SCREW PA4x20mm – 2 pcs
   - WASHER d4xD12mm – 2 pcs
   - WASHER d4xD9mm – 2 pcs
   - MOUNTING PLATE 12x20mm – 6 pcs
   - ALUMINUM PLATE 3x15x77mm – 2 pcs

8. **Screw PA4x14mm** – 12 pcs
   - WASHER d3xD7mm – 16 pcs
   - M4 NUT – 8 pcs
   - COLLAR Ø6.1mm w/ set screw – 4 sets
   - LARGE SCALE CAPTIVE AIR WHEELS Ø140mm (PL3115140) – 2 sets
   - PLYWOOD 3x196x280mm (Main Landing Gear Cover) – 1 pair
   - WIRE BRACKET Ø6mm PL5330060W – 8 pcs

9. **BLIND NUT M6** – 4 pcs
   - WASHER d6xD15mm – 4 pcs
   - SOCKET HEAD SCREW M6x30mm – 4 pcs

10. **COWLING** – 1 pc.
    - TRANSPARENT 3D TEMPLATE – 1 pc.
    - SCREW PA3x12mm – 4 pcs
    - WASHER d3xD7mm – 4 pcs
    - SILICON GROMMET d5xD8.5mm – 4 pcs

11. **FUEL TANK 1500cc (PL1121500G-gasoline)** – 1 set
    - CABLE TIE (For Fuel Tank) 1.5x8x500mm – 1 pc.
    - DOUBLE-SIDED TAPE 40x160mm – 1 pc.

12. **PUSHROD Ø2.3x215mm w/ Threads (For Elevator)** – 2 pcs
    - SOCKET HEAD SCREW M4x50mm – 2 pcs
    - M4 NYLON INSERT LOCK NUT – 2 pcs
    - SWIVEL CLEVIS HORN FAIRING PL4610010 – 2 sets
    - HEAVY DUTY HORN BRACKET PL4120140 – 2 sets
    - HEAVY DUTY SERVO HORN PL4120250 – 2 sets
    - HEAVY DUTY CLEVIS PL4112200 – 4 sets

13. **PUSHROD Ø2.3x170mm w/ Threads (For Rudder)** – 1 pc.
    - SOCKET HEAD SCREW M4x50mm – 1 pc.
    - M4 NYLON INSERT LOCK NUT – 1 pc.
    - SWIVEL CLEVIS HORN FAIRING PL4610010 – 1 set
    - HEAVY DUTY HORN BRACKET PL4120140 – 1 set
    - HEAVY DUTY SERVO HORN PL4120250 – 1 set
    - HEAVY DUTY CLEVIS PL4112200 – 2 sets

14. **SCREW PM2x18mm** – 12 pcs
    - WASHER d2xD5mm – 24 pcs
    - M2 NUT – 12 pcs
    - CLEVIS – 12 pcs
    - WIRE Ø1x200mm – 1 pc.
    - FLYING WIRE BRACKET – 12 pcs
    - CLIP PIN – 12 pcs
    - EYE SCREW – 6 pcs
    - COPPER TUBE Ø2.5x3.2x8mm (For Rudder) – 16 pcs

15. **SIDE WINDOWS** – 1 pair

16. **LINKAGE CONNECTOR Ø2.1mm w/ set screw** – 1 set

17. **PLYWOOD 3x196x444mm** (For Cockpit Base Panel) – 1 pc.
    - SCREW PM2x14mm – 2 pcs
    - COPPER PLATE (For Stays on Tail Fueslage Bottom) 1.5x12x60mm – 1 pc.
    - SCREW Pa3x18mm – 3 pcs
    - SCREW PWA2.5x12mm – 2 pcs

18. **Pilots**
    - PLASTIC TUBE Ø2.5x4d3x300mm – 1 pc.
    - COPPER TUBE Ø2.5xD3xD8.5mm – 4 pcs
    - COPPER TUBE Ø2.5xD3x3.2x3.2x8mm – 16 pcs

19. **FUSELAGE** – 1 pc.
    - WIND SHIELD – 1 pc.
    - M2 NYLON INSERT LOCK NUT – 2 pcs
    - SCREW PWA2.5x12mm – 2 pcs
    - WASHER d2xD5mm – 4 pcs
    - MOUNTING PLATE 5x15mm – 2 pcs
    - WASHER d4xD25mm – 2 pcs
    - WASHER d4xD9mm – 2 pcs
    - COPPER TUBE Ø2.5xD2.5xD3.2x8mm – 16 pcs

20. **PERSONAL TANK** – 1 set
    - SCREW PM2x12mm – 4 pcs
    - ALUMINUM PLATE 3x15x77mm – 2 pcs
    - COPPER TUBE Ø2.5xD3.2x8mm – 4 pcs
    - COPPER TUBE Ø2.5xD3x3.2x8mm – 16 pcs
    - COPPER TUBE Ø2.5xD5xD3.2x8mm – 4 pcs
    - COPPER TUBE Ø2.5xD5x3.2x8mm – 16 pcs
    - COPPER TUBE Ø2.5xD5xD3.2x8mm – 4 pcs

21. **WIND SCREEN** – 1 pc.
    - M2 NYLON INSERT LOCK NUT – 2 pcs
    - SCREW PWA2x12mm – 2 pcs
    - WASHER d2xD5mm – 4 pcs
    - MOUNTING PLATE 5x15mm – 2 pcs
    - BALSAS ROD Ø8x220 – 2 pcs
    - WIRE Ø2.5x12mm – 2 pcs
    - SELF-TIGHTENING LATCHING PIN PL9120010 – 4 pcs
    - WIRE Ø0.8mm – 1 pc.
    - M3x8mm SET SCREW – 4 pcs

22. **SCREW HM4x15mm** – 2 pcs
    - WASHER d4xD12mm – 2 pcs
    - M4 NYLON INSERT LOCK NUT – 2 pcs

23. **DECALS**
    - A186SRDEC – 1 set

**COVERING:**
- TOUGHLON STL 100 WHITE
- TOUGHLON STL 312 BRIGHT RED
1. Main Wing

- Aileron & Flap Servo Lead

- Bottom View

2. Aileron & Flap Servo

- M4x60mm Socket Head Screw 4
- M4 Nylon Insert Lock Nut 4
- PWA2.3 x 8mm Screw 16

- M2x8mm PL4120300
- M2 NUT

- SERVO MOUNTING PANEL

- Heavy Duty Horn Bracket
- M4 Nylon Insert Lock Nut
- Pushrod Ø2.3x129mm
- M4 x 60mm
- PA1.7x8mm
### 3 Wing Struts

- **HM4x20mm Screw**: 4
- **M3x20mm Socket Head Screw**: 8
- **d4xD12mm Washer**: 4
- **d3xD7mm Washer**: 12
- **M3 Nylon Insert Lock Nut**: 4

![Bottom View](image)

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

### 4 Stabilizer & Elevator

- **PWM2.5x12mm Screw**: 2

![Bottom View](image)

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

### 5 Vertical Fin & Rudder

- **A186SRPO29391309 P.4**
6 Tail Landing Gear

- PA3x18mm Screw (3)
- PWA2.5x12mm Screw (2)

Bottom View

7 Main Landing Gear

- HM4x18mm Screw (2)
- PA3x14mm Screw (12)
- PA4x20mm Screw (2)
- d4xD12mm Washer (2)
- d4xD9mm Washer (2)

Front View

8 Landing Gear

- 3mm Set Screw (4)
- PA1.7x8mm Screw (6)
- 6.1mm Collar (4)
- PM3x12mm Screw (8)
- d3xD7mm Washer (16)
- M3 Nut (8)

Bottom View
9 Engine

- M6x30mm Socket Head Screw: 4
- d6xD15mm Washer: 4
- M6 Blind Nut: 4

First insert the grommet to the cowling then apply screw.

10 Cowling

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

- Please refer to the attached sheet for usage of the transparent 3D template.
11 Fuel Tank

CABLE TIE
1.5x8x500mm

DOUBLE-SIDED
40x160mm

Fuel Tank
1500cc

Completed

12 Elevator Pushrod

M4x50mm Socket Head Screw
2
M4 Nylon Insert Lock Nut
2

M2 Nut

Heavy Duty Horn Bracket

M4 Nylon Insert Lock Nut

Elevator Pushrod

M2x8mm

M4x50mm

PA1.7x8mm

M2x10mm

M2 Nut

Heavy Duty Clevis

13 Rudder Pushrod

M4x50mm Socket Head Screw
1
M4 Nylon Insert Lock Nut
1

M4 Nylon Insert Lock Nut

M2 Nut

Heavy Duty Horn Bracket

M4x50mm

M2x10mm

Heavy Duty Clevis

PA1.7x8mm

Completed

A186SRPO29391309

P.7
14 Flying Wire

Securely glue the windows to the fuselage.

15 Windows

Window A

Window B

16 Servo Set

Please refer to the attached sheet for linkage connector installation.
- Install and arrange the servos as shown in the diagram.

Radio Equipment

Pilot

Wind Shield

Apply thick CA or Canopy glue.
20 Main Wing

- M3 x 8mm Set Screw
- Wire Ø0.8mm Set Screw M3x8mm
- Set Screw M3X8mm
- Self Tightening Wing Latch Set Screw M3X8mm
- Wing Tube PWA2: 3x12mm

21 Wing Struts

- HM4x15mm Screw 2
- d4xD12mm Washer 2
- M4 NYLON INSERT LOCK NUT 2
Wing Setting

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

A = A'  B = B'  C = C'
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**
  - Away from fuselage: 65mm, 65mm

- **Elevator**
  - 50mm, 50mm

- **Flaps (near fuselage)**
  - 60mm

- **Ailerons (away from fuselage)**
  - 40mm, 40mm

---

C.G.

The ideal C.G. position is **150mm (5.9 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.

---

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.**

- **# 1/3 SUPER CUB is specially designed to be powered by 80C.C. gasoline 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.**
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.
### Optional Parts

#### ( ACCESSORIES )

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
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</thead>
<tbody>
<tr>
<td>KW0011800</td>
<td>180mm</td>
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</table>

**180mm Extension**

**Clevis Wrench**

<table>
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<th>Size</th>
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<tbody>
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<td>PL8210010</td>
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</table>

**180mm Y-Cord**

- Small Clevis
- Large Clevis

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

**Field Stand**

<table>
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<th>Size</th>
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<tr>
<td>MS9111450</td>
<td>600X240X350mm</td>
<td>1pc</td>
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**Charge Receptacles**

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<td>KP0041300</td>
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