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

* 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:

- **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.
- ****: Ensure smooth non-binding movement while assembling.
- Cut off shaded portion.
- ****: Pierce the shaded portion covering film.
- **3mm**: 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

2. SERVO MOUNTING PANEL (For Aileron) -- 2 pairs
   HEAVY DUTY CLEVIS PL4112200 -- 8 sets
   SOCKET HEAD SCREW M4x50mm -- 4 pcs
   SCREW PWA2.5x18mm -- 2 pcs
   M4 NYLON INSERT LOCK NUT -- 2 pcs
   HEAVY DUTY HORN BRACKET PL4112400 -- 2 sets
   HEAVY DUTY SERVO HORN PL4120300 -- 4 sets
   PUSHROD Ø2.3x121mm w/ Threads (For Aileron) -- 2 pcs
   PUSHROD Ø2.3x108mm w/ Threads (For Flap Servo) -- 2 pcs

3. SCREW HM4x20mm -- 4 pcs
   SOCKET HEAD SCREW M3x20mm -- 8 pcs
   WIRE BRACKET Ø4mm PL5330040W -- 8 pcs
   MAIN WING STRUTS -- 1 pair

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

5. VERTICAL FIN & RUDDER -- 1 set
   COPPER PLATE (For Stays on Tail Fueslage Bottom) 3x12x110mm -- 1 pc.
   SCREW PA3x18mm -- 3 pcs
   SCREW PA4x20mm -- 2 pcs
   WASHER d4xD9mm -- 2 pcs
   MOUNTING PLATE 12x20mm -- 6 pcs
   ALUMINUM PLATE 3x15x77mm -- 2 pcs

6. SIDE WINDOWS -- 1 pair

7. PUSHROD Ø2.3x215mm w/ Threads (For Elevator) -- 2 pcs
   SOCKET HEAD SCREW M4x50mm -- 2 pcs
   M4 NYLON INSERT LOCK NUT -- 2 pcs
   HEAVY DUTY CLEVIS HORN FAIRING PL4610010 -- 4 sets

8. PUSHROD Ø2.3x170mm w/ Threads (For Rudder) -- 1 pc.
   SOCKET HEAD SCREW M4x50mm -- 1 pc.
   HEAVY DUTY CLEVIS HORN FAIRING PL4610010 -- 1 set
   HEAVY DUTY SERVO HORN PL4120250 -- 1 set
   HEAVY DUTY CLEVIS HORN FAIRING PL4112200 -- 2 sets

9. COVERING:
   TOUGHLON STL 100 WHITE
   TOUGHLON STL 312 BRIGHT RED

10. COWLING -- 1 pc.
    TRANSPARENT 3D TEMPLATE -- 1 pc.

11. FUEL TANK 1500cc (PL121500G-gasoline) -- 1 set
    CABLE TIE (For Fuel Tank) 1.5x8x500mm -- 1 pc.
    DOUBLE-SIDED TAPE 40x160mm -- 1 pc.
1 Main Wing

Aileron & Flap Servo Lead

Bottom View

2 Aileron & Flap Servo

M4 x 60mm Socket Head Screw
M4 Nylon Insert Lock Nut
PWA 2.3 x 8mm Screw

M2 x 8mm PL4120300
M2 Nut

M2 x 10mm
Heavy Duty Clevis
Pushrod Ø2.3 x 108mm

M2 Nylon Insert Lock Nut

PWA 2.3 x 8mm

Heavy Duty Horn Bracket
M4 Nylon Insert Lock Nut
M2 x 10mm
M4 x 60mm
PA 1.7 x 8mm

M2 x 8mm

SERVO MOUNTING PANEL

Bottom View
**3 Wing Struts**

- **HM4 x 20mm Screw**: 4
- **M3 x 20mm Socket Head Screw**: 8
- **d4 x D12mm Washer**: 4
- **d3 x D7mm Washer**: 12
- **M3 NYLON INSERT LOCK NUT**: 4

*Bottom View*

**4 Stabilizer & Elevator**

- **PWM2.5 x 12mm Screw**: 2

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

*Bottom View*

**5 Vertical Fin & Rudder**

*Bottom View*

COMPLETED
9 Engine

- M6x30mm Socket Head Screw (4)
- d6xD15mm Washer (4)
- M6 Blind Nut (4)

Socket Head Screw M6x30mm

Washer d6xD15mm

M6 Blind Nut

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.

- First insert the grommet to the cowling then apply screw.

207mm
8.15 in.

Fuselage

Cowling

d3xD7mm

PA3x12mm

d2.5x8.5mm Silicon Grommet

N.I.

L/R

COMPLETED
**11. Fuel Tank**

- CABLE TIE 1.5x8x500mm
- Fuel Tank 1500cc

**12. Elevator Pushrod**

- M4x50mm Socket Head Screw: 2
- M4 Nylon Insert Lock Nut: 2

- Heavy Duty Horn Bracket
- M2 Nylon Insert Lock Nut
- M4 Nylon Insert Lock Nut
- Heavy Duty Clevis
- M2x10mm
- M4x50mm
- PA1.7x8mm

**13. Rudder Pushrod**

- M4x50mm Socket Head Screw: 1
- M4 Nylon Insert Lock Nut: 1

- Heavy Duty Horn Bracket
- M2 Nylon Insert Lock Nut
- M4 Nylon Insert Lock Nut
- M4x50mm
- PA1.7x8mm
- Heavy Duty Clevis
- Pushrod M2x10mm
14 **Flying Wire**

- PM2x18mm Screw 12
- M2 Nut 12
- d2xD5mm Washer 24

PM2x18mm PM2x18mm d2xD5mm Washer

Press down the center 1/3 portion

15 **Windows**

Window A

COMPLETED

Securely glue the windows to the fuselage.

Window B

COMPLETED

16 **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.
17 Radio Equipment

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

18 Pilot

- Apply thick CA or Canopy glue.

19 Wind Shield

- Apply thick CA or Canopy glue.
### 20 Main Wing

**Materials Required**
- M3 x 8mm Set Screw
- Wire Ø0.8mm
- Self-Tightening Wing Latch

**Parts Assembly**
- Wing Tube 22x976mm
- Lead to Aileron Servo
- Wing Tube PWA2: 3x12mm

**Completed**

### 21 Wing Struts

**Materials Required**
- HM4x15mm Screw
- d4xD12mm Washer
- M4 NYLON INSERT LOCK NUT

**Parts Assembly**
- HM4x15mm
- Washer d4xD12mm
- M4 NYLON INSERT LOCK NUT
Wing Setting

- Adjust the wing and fuselage configuration as shown in the diagrams.
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**: 40mm, 65mm
- **Elevator**: 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.

Important Safety Precautions

- **Warning!**
- **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.

**LINKAGE CONNECTOR**

HW7111050 & HW7111060

- 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.
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
Pattern
Warbirds
Funfly
Scale
Electric
Sports
Glider
Trainer
Boat
Accessories
Covering
(Lightex / Toughlon)

The World Models
Manufacturing Co., Ltd.
www.theworldmodels.com