50CC PIPER CUB (A037)

Requires: 50cc gasoline engine, 4-channel radio w/ 6 high torque servos.

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Wing Span</td>
<td>118 in / 3000 mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>1990 sq in / 128 sq dm</td>
</tr>
<tr>
<td>Flying Weight</td>
<td>18.5 lbs / 8450 g</td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>75 in / 1900 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.
Read through the manual before you begin, so you will have an overall idea of what to do.

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.

Symbols used throughout this instruction manual comprise of the following:

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

1. **MAIN WING** -- 1 pair
2. **SERVO MOUNTING PANEL** (For Aileron) PL5310010 -- 1 pair
3. **SERVO MOUNTING PANEL** (For Aileron) PL5310010 -- 1 pair
4. **HEAVY DUTY CLEVIS PL4112200** -- 4 sets
5. **SOCKET HEAD SCREW M4x60mm** -- 2 pcs
6. **SCREW PWA2.3x8mm** -- 8 pcs
7. **M4 NYLON INSERT LOCK NUT** -- 2 pcs
8. **HEAVY DUTY HORN PLATE PL4112400** -- 2 sets
9. **PUSHROD M3xD5x113mm w/Threads (For Aileron)** -- 2 pcs
10. **HEAVY DUTY HORN PLATE PL4112400** -- 2 sets
11. **HEAVY DUTY SERVO HORN PL4120250** -- 2 sets
12. **PUSHROD M3xD5x126mm w/Threads (For Elevator)** -- 1 pc.
13. **SOCKET HEAD SCREW M4x50mm** -- 2 pcs
14. **M4 NYLON INSERT LOCK NUT** -- 1 pc.
15. **PUSHROD M3xD5x170mm w/Threads (For Elevator)** -- 2 pcs
16. **SCREW PM2x16mm -- 6 pcs**
17. **WASHER d2xD5mm -- 12 pcs**
18. **SCREW PA4x20mm -- 2 pcs**
19. **WASHER d4xD9mm -- 4 pcs**
20. **MOUNTING PLATE 5x15mm PL4114015 -- 2 pcs**
21. **WING TUBE Ø22x80mm -- 2 pcs**
22. **SELF-TIGHTENING LATCHING PIN PL9120010 -- 4 pcs**
23. **M3x8mm SET SCREW -- 4 pcs**
24. **CABLE TIE 1.5x8x500mm -- 1 pc.**
25. **DOUBLE-SIDED TAPE 40x180mm -- 1 pc.**

### Covering:
- **TOUGHON STL 331 CUB YELLOW**
- **LIGHTEX SGX 201 BLACK**
1. Main Wing

- Aileron Servo Lead

Bottom View

2. Aileron Servos

- M4x60mm Socket Head Screw 2
- PWA 2.3x8mm Screw 8
- M4 Nylon Insert Lock Nut 2

- M4x60mm M4 Nylon Insert Lock Nut
- M2 x 10mm Heavy Duty Clevis
- Pushrod M2 x 10mm
- PA1.7 x 8mm
- Heavy Duty Horn Bracket
- M4 x 60mm

- PWA 2.3x8mm Pushrod w/ Threads (for Aileron) M3xD5x113mm

Bottom View

Completed
### 3 Wing Struts

- **M3x18mm Socket Head Screw**: 8
- **M4x18mm Socket Head Screw**: 4
- **d4.5x9mm Washer**: 4
- **d3x7mm Washer**: 12
- **M3 Nylon Insert Lock Nut**: 4

#### Bottom View

- M3x18mm
- M3x18mm
- d3x7mm Washer
- M3 Nylon Insert Lock Nut
- d4.5x9mm Washer

### 4 Fuselage

- **M4x18mm**: Completed

#### Bottom View

- Covering 30x550mm

#### Completed
5 Stabilizer & Elevator

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

Stabilizer Tube Ø4x170mm

PWM2.5x12mm Screw 2

Stabilizer & Elevator

6 Vertical Fin & Rudder

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

PWM2.5x12mm
Please refer to the attached sheet for usage of the transparent 3D template.

First insert the grommet to the cowling then apply screw.

Completed
15 Flying Wire

- PM2x16mm Screw 6
- PM2x8mm Screw 6
- M2 Nut 6
- d2xD5mm Washer 12
- Press down the center 1/3 portion

16 Windows

- Balsa Rod d6x190mm
- Securely glue the windows to the fuselage.

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 Radio Equipment

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

- Bottom View

Plywood 3x161.5x252mm
Balsa 10x10x240mm

19 Pilot

- PM2x14mm Screw

- PM2x12mm Screw

- PC001102A

20 Wind Shield

- PM2x14mm Screw

- M2 Nylon Insert Lock Nut

- d2 x D5mm Washer

- Washer d2 x D5mm

- Mounting Plate

- M2 Nylon Insert Lock Nut
21 Main Wing

- **M3 x 8mm Set Screw**: 4
- Lead to Aileron Servo
- Wing Tube Ø22x825mm
- Wire Ø0.8mm
- Set Screw M3x8mm
- Self Tightening Wing Latch
- Set Screw M3x8mm
- Wing Tube PWA2x8mm
- Completed

22 Wing Struts

- **PM4x12mm Screw**: 2
- **d4x D12mm Washer**: 2
- **M4 NYLON INSERT LOCK NUT**: 2
- **HM4x12mm**: 2
- Washer d4xD12mm
- **M4 NYLON INSERT LOCK NUT**: 2
23 Wing Setting

- Adjust the wing and fuselage configuration as shown in the diagrams.
24 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

25 C.G.

The ideal C.G. position is 124mm (4.9in.) 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.

# **50CC PIPER CUB** is specially designed to be powered by 50c.c. gasoline 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.
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. Cut the transparent 3D template to fit your engine and exhaust pipe.
2. Slide onto the actual cowling.
3. Use as template to mark the openings required for final cutting.
4. Simply cut the openings into the cowling.