CLIPPED WING CUB EP

Requires: 4-channel radio w/ 4 micro servos, Outrunner Motor w/ Propeller Adaptor 20A Brushless ESC, 3 cells 11.1V 2100 mAh Li-Po battery & charger.

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Measurement</th>
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<tbody>
<tr>
<td>Wing Span</td>
<td>40 in / 1016 mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>272.8 sq in / 17.6 sq dm</td>
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<tr>
<td>Flying Weight</td>
<td>28 oz / 800 g</td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>30.0 in / 760 mm</td>
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*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.
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.)
- **Apply thread locker**
- **Ensure smooth non-binding movement while assembling.**
- **L/R**: Assemble left and right sides the same way.
- **Cut off shaded portion.**
- **Peel off shaded portion covering film.**
- **Must be purchased separately!**
- **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. HORN PL4113102 -- 2 sets
   CLEVIS PL4112105 -- 2 pcs
   STRAPER PL4112106 -- 2 pcs
   FUEL TUBE d2xD4x4mm -- 4 pcs
   SCREW PB2x14mm -- 4 pcs
   SCREW PA1.7x8mm -- 8 pcs
   PUSHROD Ø1.4x69mm w/ Threads (For Aileron) -- 2 pcs
   SERVO MOUNTING PANEL PL5310020 -- 1 pair
3. STABILIZER & ELEVATOR -- 1 set
   FUSELAGE -- 1 pc.
   SCREW PB2x8mm -- 2 pcs
   ELEVATOR LINK PL4510010 -- 1 set
   BALSA 6x7x8mm -- 1 pc.
4. VERTICAL FIN & RUDDER -- 1 set
5. TAIL LANDING GEAR PC3410030 -- 1 set
   SCREW PA2x8mm -- 2 pcs
   ALUMINUM PLATE 0.3mm -- 1 pc.
   SCREW PM2x8mm -- 1 pc.
   M2 NUT -- 1 pc.
   TAIL WHEEL Ø23mm -- 1 pc.
6. FUEL TUBE d2xD4x4mm -- 1 pc.
   CLEVIS -- 1 pc.
   HORN -- 1 set
   SCREW PB2x8mm -- 2 pcs
   PUSHROD Ø1.4x413mm w/ Threads (For Rudder) -- 1 pc.
7. PUSHROD Ø1.4x403mm w/ Threads (For Elevator) -- 1 pc.
   FUEL TUBE d2xD4x4mm -- 1 pc.
   CLEVIS -- 1 pc.
8. FOLDING PROPELLER SET PL6315031 (9x6) -- 1 pair
   EP SPINNER Ø28mm -- 1 set
   SCREW M3x6mm -- 4 pcs
   WASHER d3xD7mm -- 4 pcs
   SCREW PWA2x8mm -- 4 pcs
   COWLING -- 1 pc.
   DUMMY ENGINE COVER 0.5mmPVC -- 1 pair
9. WIND SHIELD & SIDE WINDOWS -- 1 set
10. SPONGE 10x50x150mm -- 2 pcs
11. MAIN WHEEL Ø50mm -- 2 pcs
12. MAIN WING Ø50mm PL3111500 -- 1 pair
13. FUEL TUBE d2xD4x4mm -- 1 pc.
14. DECALS E139CSXMDEC -- 1 set

COVERING:

RED COLOR SCHEME:
LIGHTEX SGX 311 FERRARI RED
LIGHTEX SGX 100 WHITE

BLUE COLOR SCHEME:
LIGHTEX SGX 251 SKY BLUE
LIGHTEX SGX 100 WHITE

CUB YELLOW COLOR SCHEME:
LIGHTEX SGX 331 CUB YELLOW
LIGHTEX SGX 201 BLACK
1 Main Wing

- Apply instant type CA glue to both sides of each hinge.

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

2 Aileron Servo

- Please choose either 02L & 02R or 03L & 03R or 04L & 04R that suits your servo.
3 Stabilizer & Elevator

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

- Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.
- Apply instant type CA glue to both sides of each hinge.

4 Vertical Fin & Rudder

- Apply instant type CA glue to both sides of each hinge.
5 Tail Landing Gear

- PA2x8mm Screw (2)
- PM2x8mm Screw (1)
- M2 Nut (1)

![Bottom View]

6 Rudder Pushrod

- ø1mm pilot holes for World Models tri-horn are pre-drilled.
- Please look for pin-hole marks at under side of control surfaces.

![Bottom View]

7 Elevator Pushrod

![Bottom View]
8 Outrunner Motor / Cowling

- Make sure rotating motor casing is not in contact with wirings or anything.

- Don’t over-tighten the PM2 screws, too much stress on the screws could split the firewall.

<table>
<thead>
<tr>
<th>M3x6mm Screw</th>
<th>4</th>
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<tbody>
<tr>
<td>d3xD7mm Washer</td>
<td>4</td>
</tr>
<tr>
<td>PWA2x8mm Screw</td>
<td>4</td>
</tr>
<tr>
<td>PA2x6mm Screw</td>
<td>2</td>
</tr>
</tbody>
</table>

- Don’t over-tighten the PM2 screws, let the propeller blades align themselves when spinning.

N.I. Optional Parts

- Outrunner Motor 28/30 KM0283010
- Propeller Adaptor (d3xD5) HW2340100

- Don’t over-tighten the PM3 screws, too much stress on the screws could split the firewall.

1. 20A Brushless ESC TWM KC202SA02A
2. M3x6mm d3xD7mm Washer
3. PM2x12mm PM2x12mm
4. M5 Nut
5. Dummy Engine Cover Ø28mm PWA2x8mm PA2x6mm

Completed
9 Wind Shield / Side Window

PWA2x8mm Screw

PWA2x8mm

10 Radio Equipment

Elevator Pushrod Ø1.4x403mm

N.I. Receiver N.I. Elevator Servo N.I. Battery

Rudder Pushrod Ø1.4x413mm

Sponge

Fuel Tube d2xD4x4mm

N.I. Rudder Servo

Straper

Bottom View

Battery Tie

N.I. 20A Speed Controller
11 Main Landing Gear

- PA2.6x10mm Screw (6)
- 2.6mm Collar (4)
- PM2x6mm Screw (4)
- d2xD5mm Washer (5)
- M2 NUT (4)
- PM2x10mm Screw (4)
- M2 NYLON INSERT LOCK NUT (1)

Bottom View

12 Main Wing

- PM2.5x25mm Screw (2)
- d2.6xD7mm Washer (2)

13 Wing Struts

- PA2.3x8mm Screw (6)
Adjust the wing and fuselage configuration as shown in the diagrams.
**15 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
    - 15mm
    - 15mm
  - Aileron
    - 10mm
    - 10mm

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**16 C.G.**

The ideal C.G. position is 50mm (2.0 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.

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**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.

# **CLIPPED WING CUB EP** is specially designed to be powered by KM0283010 Outrunner Motor.

# Make sure the air field is spacious, never fly the plane too close to people and never get too close to a running propeller. Extreme caution should be exercised when working with electric powered models. Make sure the propeller is cleared of all objects, especially your hands before connecting the battery to the model. Make sure you understand the operation of the ESC (Electronic Speed Control) by studying the ESC manual. Once you plug in the battery for electric powered model, always treat the propeller as a rotating one, as accidental movement of the throttle stick will spin the propeller and could cause injuries.

# 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.

Ducted Fan  Pattern

Warbirds  Funfly

Scale  Electric

Sports  Glider

Trainer  Boat

Accessories

Covering
(Lightex / Toughlon)