29% CAP 232

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

Specifications

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Wing Span</td>
<td>85 in / 2160 mm</td>
<td></td>
</tr>
<tr>
<td>Wing Area</td>
<td>1302 sq in / 84 sq dm</td>
<td></td>
</tr>
<tr>
<td>Flying Weight</td>
<td>16.7 lbs / 7560 g</td>
<td></td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>78 in / 1985 mm</td>
<td></td>
</tr>
</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 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.
29% CAP 232

BEFORE YOU BEGIN

- 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:

  - **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.
  - **3mm**: Drill holes with the specified diameter (here: 3mm).
  - **Pierce the shaded portion covering film.**
  - **Cut off shaded portion.**
  - **Pay close attention here!**
  - **Warning!**: Do not overlook this symbol!
## Parts List

1. **MAIN WING** — 1 pair

2. **SOCKET HEAD SCREW M4×60mm** — 2 pcs
   - M4 Nylon Insert Lock Nut — 2 pcs
   - SWIVEL CLEVIS HORN FAIRING PL4610010 — 2 sets
   - PUSHROD M3×70mm w/ Threads (For Aileron Servo) — 2 pcs
   - HEAVY DUTY HORN BRACKET PL4112400 — 2 pcs
   - HEAVY DUTY CLEVIS PL4112200 — 4 sets
   - TRI - HORN PL4120300 — 2 sets
   - SERVO MOUNTING PANEL PL5310010 — 1 pair
   - SCREW PWA2.3×8mm — 8 pcs

3. **STABILIZER & ELEVATOR** — 1 set
   - STABILIZER TUBE Ø1.5×5.350mm — 1 pc.
   - SCREW PA3x14mm — 2 pcs
   - WASHER d3×D7mm — 2 pcs
   - FUSELAGE — 1 pc.
   - SCREW PA3x14mm — 2 pcs

4. **SOCKET HEAD SCREW M4×80mm** — 2 pcs
   - M4 Nylon Insert Lock Nut — 2 pcs
   - SWIVEL CLEVIS HORN FAIRING PL4610010 — 2 sets
   - PUSHROD M3×75mm w/ Threads (For Elevator) — 2 pcs
   - HEAVY DUTY CLEVIS PL4112200 — 4 sets
   - TRI - HORN PL4120300 — 2 sets
   - HEAVY DUTY HORN BRACKET PL4112400 — 2 pcs
   - SERVO MOUNTING PANEL PL5310010 — 1 pair
   - SCREW PWA2.3×8mm — 8 pcs

5. **Vertical Fin & Rudder** — 1 set

6. **TAIL LANDING GEAR PL3410020** — 1 set

7. **THREADED ROD M4×100mm** — 1 pc.
   - M4 Nylon Insert Lock Nut — 2 pcs
   - SWIVEL CLEVIS HORN FAIRING PL4610020 — 1 set
   - EYE SCREW M2.5×8×25mm — 2 pcs
   - WIRE Ø1×1000mm — 2 pcs
   - COPPER TUBE d2.5×D3.2×8mm — 2 pcs
   - HEAVY DUTY CLEVIS PL4112200 — 2 sets
   - HEAVY DUTY HORN BRACKET PL4112400 — 2 pcs

8. **ENGINE BOX** — 1 set
   - LIGHTEX SGX 202 GRAY
   - LIGHTEX SGX 240 GREEN
   - LIGHTEX SGX 311 FERRARI RED
   - LIGHTEX SGX 331 CUB YELLOW
   - TOUGHLON STL 100 WHITE
   - LIGHTEX SGX 331 CUB YELLOW
   - LIGHTEX SGX 240 GREEN
   - LIGHTEX SGX 202 GRAY

9. **MAIN LANDING GEAR** — 1 pc.
   - SOCKET HEAD SCREW HM3×18mm — 4 pcs
   - WASHER d4.5×D9mm — 4 pcs
   - WHEEL PANTS — 1 pair
   - WHEEL Ø95mm — 2 pcs
   - COLLAR Ø5.1mm w/screw — 4 pcs
   - AXLE SHAFT Ø5×47mm — 2 pcs
   - M8 NYLON INSERT LOCK NUT — 2 pcs
   - SOCKET HEAD SCREW HM3×16mm — 4 pcs
   - WASHER d3×D7mm — 4 pcs

10. **FUEL TANK 800CC PL1111800G** — 1 set
    - CABLE TIE (For Fuel Tank) 1.5×4×400mm — 2 pcs

11. **BLIND NUT M6** — 4 pcs
    - SOCKET HEAD SCREW M6×50mm — 4 pcs
    - SCREW PWA2×12mm — 4 pcs
    - WASHER d6×D15mm — 4 pcs
    - PLASTIC TUBE d2.5×D4×250mm — 1 pc.
    - EYE SCREW M2×8×25mm — 2 pcs
    - COPPER TUBE d2.5×D3.2×8mm — 2 pcs
    - HEAVY DUTY CLEVIS PL4112200 — 2 sets
    - TRI - HORN PL4120300 — 1 set

12. **TOP COWLING** — 1 pc.
    - UNDER COWLING — 1 pc.
    - TRANSPARENT DUMMY COWLING — 1 pc.
    - SCREW PA3×12mm — 6 pcs
    - SILICON GROMMET PL1285135 d2.5×D8.5mm — 6 pcs
    - WASHER d3×D7mm — 6 pcs
    - SPINNER PL22W0890 Ø89mm — 1 set
    - QUICK RELEASE NYLON RIVET PL1208042 d2xD8mm — 12 sets
    - SCREW KA2.3×8mm — 12 pcs

13. **WING TUBE Ø32×770mm** — 1 pc.
    - SELF TIGHTENING WING LATCH — 2 pcs
    - WIRE Ø0.8mm — 2 pcs
    - COVER — 1 pair

14. **COCKPIT** — 1 set
    - CANOPY — 1 pc.
    - SOCKET HEAD SCREW HM3×15mm — 2 pcs
    - WASHER d3×D7mm — 2 pcs
    - PILOT PC101110E — 1 set

17. **DECALS: A301DEC** — 1 set

- **COVERING:**
  - TOUGHLON STL 100 WHITE
  - LIGHTEX SGX 331 CUB YELLOW
  - LIGHTEX SGX 311 FERRARI RED
  - LIGHTEX SGX 240 GREEN
  - LIGHTEX SGX 202 GRAY
1 Main Wing

Lead to Aileron Servo

Bottom View

L/R

2 Aileron Servos

M4x60mm Socket Head Screw 2
PWA2.3x8mm Screw 8
M4 Nylon Insert Lock Nut 2

M2x8mm Socket Head Screw
M2 Nylon Insert Lock Nut

M2 Nylon Insert Lock Nut

Heavy Duty Horn Bracket
M4 Nylon Insert Lock Nut

M2 Nylon Insert Lock Nut

M2x10mm

Heavy Duty Clevis

M2x10mm

Pushrod

M3x70mm

Pushrod

M3x70mm

M4x60mm

PA1.7x8mm

PWA2.3x8mm

Bottom View

Bottom View

Bottom View

Bottom View

Factory Pre-glued
3 Stabilizer & Elevator

- **PA3x14mm Screw**: 2
- **d3xD7mm Washer**: 2
- **Factory Pre-glued**

![Diagram of Stabilizer & Elevator](image)

4 Elevator Pushrod

- **PWA2.3x8mm Screw**: 8
- **M4x60mm Socket Head Screw**: 2
- **M4 Nylon Insert Lock Nut**: 2

![Diagram of Elevator Pushrod](image)
5 Vertical Fin & Rudder

6 Tail Landing Gear

PA3x14mm Screw 3
PWA2.6x12mm Screw 3

M3x3mm Set Screw

3.1mm Collar
7 Rudder Pullwire

- M4x100mm Threaded Rod: 1
- M4 Nylon Insert Lock Nut: 2

1. Press down the center 1/3 portion
2. Heavy Duty Horn Bracket
3. M4x100mm Threaded Rod
4. M2 Nylon Insert Lock Nut
5. PA1.7x8mm Eye Screw
6. M2x10mm Heavy Duty Clevis
7. Copper Tube

Final View:
- Bottom View
- Completed
Engine Box

- Use epoxy to glue all parts together.

Please note right & down thrust angle of firewall.
9 Main Landing Gear

- Ø5x47mm Axle Shaft: 2
- HM4x18mm Socket Head Screw: 4
- HM3x16mm Socket Head Screw: 4
- Ø5.1mm Collar: 4
- M8 Nylon Insert Lock Nut: 2
- d4.5xD9mm Washer: 4
- d3xD7mm Washer: 4

10 Fuel Tank

- CABLE TIE (For Fuel Tank): 1.5x4x400mm
- Fuel Tank: 800cc
11 Engine

- M6 Blind Nut 4
- M6x50mm Socket Head Screw 4
- d6xD15mm Washer 4
- PWA2x12mm Screw 4
- Center line of firewall
  - 6mm
  - Engine thrust line
- Plywood(F2B) 2x60.8x148mm
- Plastic Tube d2.5xD4x250mm

12 Servo Set

- 3 x 3mm Set Screw 1
- Linkage Connector 1
- M2 Nut 1
- 2mm Washer 2

Please refer to attached sheet for linkage connector installation.
13 **Radio Equipment**

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

![Diagram showing radio equipment setup](image_url)

**14 Cowling & Spinner**

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

![Diagram showing cowling and spinner setup](image_url)

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**Materials**

- PA3x12mm Screw: 6
- KA2.3x8mm Screw: 12
- d3xD7mm Washer: 6
- d2.5xD8.5mm Silicon Grommet: 6
- d2xD8mm Quick Release Nylon Rivet: 12

**Completed**
**Main Wing**

- **Wing Tube Ø32x770mm**
- Lead to Aileron Servo
- Wire Ø0.8mm
- Set Screw M3X6mm
- Self Tightening Wing Latch
- PWA2x8mm
- Completed
**16 Cockpit & Pilot**

- **HM3x15mm Socket Head Screw**: 2
- **d3xD7mm Washer**: 2

![Decals](image)

**Steps**

1. Decals
2. Pilot PC10110E
3. Apply thick CA or Canopy glue.
4. [Image of complete cockpit]
5. d3xD7mm Washer
   - HM3x15mm Socket Head Screw

**Completed**
Wing Setting & Decals

- Adjust the wing and fuselage configuration as shown in the diagrams.
18 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

60 mm  
60 mm

Elevator

30 mm  
30 mm

Aileron

25 mm  
25 mm

19 C.G.

The ideal C.G. position is 153mm (6 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.

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.

# 29% CAP 232 is specially designed to be powered by 50 c.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.
After fastening the round nut, make sure that the linkage connector can rotate freely.

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, 2403 Research Drive, Livermore, CA 94550 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

<table>
<thead>
<tr>
<th>Optional Parts</th>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>180mm Extension</td>
<td>KW0011800</td>
<td>180mm</td>
<td>1 set</td>
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<tr>
<td>180mm Y-Cord</td>
<td>KW0021800</td>
<td>180mm</td>
<td>1 pc</td>
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<tr>
<td>Charge Receptacles</td>
<td>KP0041300</td>
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</tr>
<tr>
<td>Clevis Wrench</td>
<td>PL8210010</td>
<td></td>
<td>1 set</td>
</tr>
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</table>

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

Field Stand
MS9111430  600 x 240 x 310mm  1 pc
Ducted Fan          Pattern

Warbirds           Funfly

Scale              Electric

Sports             Glider

Trainer            Boat

Accessories

Covering
   (Lightex / Toughlon)