0.40-0.46 cu. in. displacement 2-stroke
Requires: 4 - channel radio w/ 5 standard servos

Specifications

<table>
<thead>
<tr>
<th></th>
<th>54 in / 1370 mm</th>
<th>556 sq in / 35.9 sq dm</th>
<th>5 lb / 2200 g</th>
<th>48 in / 1220 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Span</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Wing Area</td>
<td></td>
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<tr>
<td>Flying Weight</td>
<td></td>
<td></td>
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<tr>
<td>Fuselage Length</td>
<td></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.
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. **Wing Joiner** Ø6x26x147mm – 1 pc.
3. **Clevis** – 2 pcs
4. **Fuselage** – 1 pc.
5. **Vertical Fin & Rudder** – 1 set
6. **Main Landing Gear** – 1 set
7. **Tail Landing Gear** – 1 set
8. **Engine Mount** PL5111030 – 1 set
9. **Fuel Tank** 260cc – 1 set
10. **Linkage Connector** Ø2.1mm w/ set screw – 1 set
11. **Pushrod** Ø1.8x700mm w/ Threads (For Elevator) – 1 pc.
12. **Pushrod** Ø1.8x700mm w/ Threads (For Rudder) – 1 pc.
13. **Socket Head Screw** M3x25mm – 4 pcs
14. **Screw PWA2.6x12mm** – 4 pcs
15. **Screw PWA2.3x8mm** – 4 pcs
16. **Sockethead Screw** M3x25mm – 4 pcs
17. **Screw PWA2.6x12mm** – 4 pcs
18. **Decals A235DEC** – 1 set

### Covering:
- **Black Color Scheme:**
  - TOUGHON STL100 WHITE
  - TOUGHON STL201 BLACK
  - TOUGHON STL311 FERRARI RED
- **Orange Color Scheme:**
  - TOUGHON STL100 WHITE
  - TOUGHON STL311 FERRARI RED
  - TOUGHON STL422 CHECKER(ORANGE / WHITE)
- **Green Color Scheme:**
  - TOUGHON STL100 WHITE
  - TOUGHON STL422 CHECKER(GREEN / WHITE)
  - TOUGHON STL452 CHECKER(BLUE / WHITE)
- **White Color Scheme:**
  - TOUGHON STL100 WHITE
  - TOUGHON STL311 FERRARI RED
  - TOUGHON STL422 CHECKER(ORANGE / WHITE)
  - TOUGHON STL452 CHECKER(BLUE / WHITE)
  - TOUGHON STLS311 FERRARI RED

### Other Parts:
- **Double-Sided Tape** – 1 pc.
- **Transparent 3D Template** – 1 pc.
- **Canopy** – 1 pc.
- **Silicone Grommet** d1.5xD6.5mm – 4 pcs
- **Cable Tie** 1.5x5x400mm (For Fuel Tank) – 1 pc.
- **Double-Sided Tape** – 40x100mm – 1 pc.

### Additional Parts:
- **Aluminum Tail Wheel** Ø25mm – 1 pc.
- **Pushrod** Ø1.8x135mm w/ Threads (For Aileron) – 2 pcs
- **FUEL TUBE Ø6x5mm** – 4 pcs
- **Straper** – 2 pcs
- **FUEL TUBE Ø6x5mm** – 1 pc.
- **TRI-HORN M3x14mm (S)** – 2 sets
- **WASHER d3xD7mm** – 8 pcs
- **M3 Nut** – 8 pcs
- **SPINNER Ø52mm**
- **Cowlung** – 1 pc.
- **Sponge 60x70x80mm** – 1 pc.
- **Stabilizer & Elevator** – 1 set
- **Reinforcement Plate** – 1 pc.
- **Plastic Tube** d2xD3x230mm – 1 pc.
- **Silicone Grommet** d1.5xD6.5mm – 4 pcs
- **Plywood 2x22x78mm (For Wing Protection)** – 1 pc.
- **Canopy** – 1 pc.
- **Silicone Grommet** d1.5xD6.5mm – 4 pcs
- **PLASTIC TUBE d2xD3x230mm** – 1 pc.
- **WASHER d4xD12mm** – 2 pcs
- **WASHER d3xD7mm** – 8 pcs
- **M3 Nut** – 8 pcs
- **PC001063A** (for blue and green color scheme) – 1 pc.
- **PC001063B** (for black and orange color scheme) – 1 pc.
- **Clevis** – 2 pcs
- **Straper** – 2 pcs
- **FUEL TUBE Ø6x5mm** – 2 pcs
- **Tri-Horn M3x14mm (S)** – 2 sets
- **WASHER d3xD7mm** – 8 pcs
- **M3 Nut** – 8 pcs
- **PC001063A** (for blue and green color scheme) – 1 pc.
- **PC001063B** (for black and orange color scheme) – 1 pc.
1. **Main Wing**

- Please install aileron servos at bottom of wing.

2. **Main Wing**

- Please dry fit wing joiner into left and right wing to make sure they fit with the proper dihedral angle, mark the wing joiner if necessary. Apply epoxy glue to both sides of all surfaces in contact. Use a stick to apply the glue to inner side of wing joiner sleeve, and apply the glue to wing joiner before putting them together. Wing joiner not glued properly will lead to wing failure and plane crash.

3. **Aileron Servo**

- Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.
4 Stabilizer / Elevator

Use thread locker when tightening screw. Don’t use excessive force as you are dealing with balsa.

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

Completed
6 Main Landing Gear

- 4.1mm Collar: 4
- PA3 x 10mm Screw: 4
- M3 x 3mm Set Screw
- 4.1mm Collar

7 Tail Landing Gear

- PA3 X 8mm Screw: 2
- PM2 x 8mm Screw: 1
- M2 Nut: 1
- 2.1mm Collar: 1
- 1.5mm Screw

- Aluminum Reinforcement Plate
- M2 Nut
- PM2 x 8mm
- 2.1mm Collar
- 3mm Set Screw

- PA3 X 8mm
- 1.5mm

- Bottom View
- Completed
8 Engine Mount

- Apply thread locker to screws.

! Blind nuts are off-centered to keep the spinner at the fuselage axis.

9 Fuel Tank

CABLE TIE 1.5x5x400mm

DOUBLE-SIDED TAPE 40x100mm

Fuel Tank 260cc

10 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.
11 Elevator Pushrod

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

12 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.
13 Engine

- M3 x 25mm Socket Head Screw: 4
- d3 x D7mm Washer: 8
- M3 Nut: 8

N.I.

14 Radio Equipment

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

N.I. Battery  N.I. Switch  N.I. Throttle Servo  Rudder Servo  N.I.

N.I. Receiver  Throttle Pushwire Ø1.2x360mm  N.I. Elevator Servo  N.I.

Plastic Tube d2 x D3 x 230mm  Rudder Pushrod  Elevator Pushrod

Charge Receptacles KP0041300

N.I.

N.I. Front

Sponge

- Installed Engine Position

- Bottom View

100mm  3.9 in
15 Main Wing
- M4 x 30mm Socket Head Screw: 2
- d4 x D12mm Washer: 2

16 Canopy & Pilot
- PWA2.3 X 8mm Screw: 4
- d1.5 x D6.5mm Silicon Grommet: 4
- Apply double-sided tape

First insert the grommet to the canopy then apply screw.

17 Cowling
- PWA2.6 X 12mm Screw: 4
- d1.5 x D6.5mm Silicon Grommet: 4
- Spinner Ø52mm

P.9
Wing Setting

- Adjust the wing and fuselage configuration as shown in the diagrams.
19 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.

20 C.G.

The ideal C.G. position is 85mm (3.35 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.

# LA Racer-40 is specially designed to be powered by 2C 0.40-0.46 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.
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.

Shoulder

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, 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.

2.

3.

4.

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)

180mm Extension

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

180mm Y-Cord

<table>
<thead>
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<th>Size</th>
<th>Package</th>
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</thead>
<tbody>
<tr>
<td>KW0021800</td>
<td>180mm</td>
<td>1 pc</td>
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</table>

Fuel Filler

<table>
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</thead>
<tbody>
<tr>
<td>PL8110030</td>
<td>15 x 22 x 49mm</td>
<td>1 x 1 pc</td>
</tr>
</tbody>
</table>

Clevis Wrench

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL8210010</td>
<td></td>
<td>1 set</td>
</tr>
</tbody>
</table>

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

Charge Receptacles

<table>
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<th>Code No.</th>
<th>Size</th>
<th>Package</th>
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<tbody>
<tr>
<td>KP0041300</td>
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Field Stand

<table>
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<tr>
<th>Code No.</th>
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<tbody>
<tr>
<td>MS9111430</td>
<td>600 x 240 x 310mm</td>
<td>1 pc</td>
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Standard Servo

<table>
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<tbody>
<tr>
<td>SV4031</td>
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</tr>
</tbody>
</table>

Speed: 0.17 sec / 60° @4.8V
0.14 sec / 60° @6.0V
Torque: 3.2kg.cm / 44.8 oz - in @4.8V
4.1kg.cm / 57.4 oz - in @6.0V
Size: 40.6 x 20 x 37mm /
1.60 x 0.79 x 1.46 in
Weight: 39.4 g / 1.39 oz