INSTRUCTION MANUAL

La·Racer - 40

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Span</td>
<td>54 in / 1370 mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>556 sq in / 35.9 sq dm</td>
</tr>
<tr>
<td>Flying Weight</td>
<td>5 lb / 2200 g</td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>48 in / 1220 mm</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 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.

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

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

FACTORY PRE-FABRICATED
ALMOST-READY-TO-FLY (ARF) SERIES
MADE IN CHINA

A235PO29401308
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:

- **Apply epoxy glue.**
- **Apply thread locker**
- **Apply instant glue (C.A.glue, super glue.)**
- **Ensure smooth non-binding movement while assembling.**
- **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 6x26x147mm – 1 pc.
3. CLEVIS PL4112103 – 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 PL1111260 – 1 set
10. LINKAGE CONNECTOR Ø2.1mm w/ 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. STRAPER PL4112102 – 2 pcs
15. SCREW PB2x10mm – 3 pcs
16. DECALS A235DEC – 1 set

COVERING:

- BLACK COLOR SCHEME:
  - TOUGHLOW ST100 WHITE
  - TOUGHLOW ST100 BLACK
  - TOUGHLOW ST100 FERRARI RED
  - TOUGHLOW ST100 CHECKER (BLACK / WHITE)
  - TOUGHLOW ST100 CHECKER (FERRARI RED / WHITE)

- ORANGE COLOR SCHEME:
  - TOUGHLOW ST100 WHITE
  - TOUGHLOW ST100 FERRARI RED
  - TOUGHLOW ST100 CHECKER (ORANGE / WHITE)

- GREEN COLOR SCHEME:
  - TOUGHLOW ST100 WHITE
  - TOUGHLOW ST100 GREEN
  - TOUGHLOW ST100 FERRARI RED
  - TOUGHLOW ST100 CHECKER (ORANGE / WHITE)

- BLUE COLOR SCHEME:
  - TOUGHLOW ST100 WHITE
  - TOUGHLOW ST100 GREEN
  - TOUGHLOW ST100 FERRARI RED
  - TOUGHLOW ST100 CHECKER (BLUE / WHITE)

- PC001063B (for black and orange color scheme) – 1 pc.
- PC001063B (for black and orange color scheme) – 1 pc.
1 Main Wing

- Please install aileron servos at bottom of wing

Aileron servo lead

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.

Wing Joiner 6 x 26 x 147mm

Completed

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.

PB2x14mm Screw 4
PB2x12mm Screw 2

Pre-glued

A235PO29401308
4 Stabilizer / Elevator

**PM3 x 25mm Screw**
- 2

**d3 x D7mm Washer**
- 2

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.

- **Bottom View**

5 Vertical Fin & Rudder

- **Completed**
6 **Main Landing Gear**

Ø1mm pilot holes are pre-drilled. Please look for pin-hole marks at under side of fuselage.

- M3x14mm Socket Head Screw
- 4.1mm Collar
- PM4x38mm Screw
- M4 Nut
- d3.2xD12mm Washer
- d4xD9mm Washer
- Quick Release Nylon Rivet
- KA2. 3x8mm Screw

- M3 x14mm
- Washer d3.2xD12mm

![Bottom View](image)

7 **Tail Landing Gear**

- PA3 X 8mm Screw
- PM2 x10mm Screw
- M2 Nut
- 2.1mm Collar

- PA3 X 8mm

![Bottom View](image)
This step is for electric powered. Please follow step 8, 9, 10, 13, 17 if your model is engine powered.

- **Optional Electric Power Package**

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

Battery Cover

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

Install and arrange the servo as shown in the diagram.

14 Radio Equipment

Install and arrange the servo as shown in the diagram.
1.5 Main Wing
- HM4 x 30mm Screw - 2
- d4 x D12mm Washer - 2

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

1.7 Cowling
- PWA2.6 x 12mm Screw - 4
- d1.5 x D6.5mm Silicon Grommet - 4

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

- Spinners ø52mm

- Fuel Filler PL8110030
18 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.

- Elevator: 15mm
- Rudder: 20mm
- Ailerons: 6mm

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.

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.

# 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.

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.

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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</tbody>
</table>

180mm Y-Cord

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

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<th>Size</th>
<th>Package</th>
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</thead>
<tbody>
<tr>
<td>KP0041300</td>
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<td></td>
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</table>

Field Stand

<table>
<thead>
<tr>
<th>Code No.</th>
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<th>Package</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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</tbody>
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Fuel Filler

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</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>
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<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.

Standard Servo

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>SV4031</td>
<td></td>
<td></td>
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</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: 40.8 x 20 x 37mm /
1.60 x 0.79 x 1.46 in
Weight: 39.4 g / 1.39 oz
Ducted Fan

Pattern

Warbirds

Funfly

Scale

Electric

Sports

Glider

Trainer

Boat

Accessories

Covering

(Lightex / Toughlon)