Thermal Rider EP

Requires: 3-channel radio w/ 2 mini servos, Outrunner Motor KM0283010 w/ Propeller Adaptor HW2340100 20A brushless ESC, 3 cells 11.1V 2100mAh Li-Po battery & charger.

<table>
<thead>
<tr>
<th>Specifications</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Wing Span</td>
<td>78 in / 1980 mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>665 sq in / 42.9 sq dm</td>
</tr>
<tr>
<td>Flying Weight</td>
<td>32 oz / 900g</td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>40 in / 1020mm</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.
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 instant glue (C.A. glue, super glue.)**
- **Apply thread locker**
- **Must be purchased separately!**
- **Assemble left and right sides the same way.**
- **Ensure smooth non-binding movement while assembling.**
- **Peel off shaded portion covering film.**
- **Cut off shaded portion.**
- **Drill holes with the specified diameter (here: 3mm).**
- **Pierce the shaded portion covering film.**
- **Pay close attention here!**
- **Warning! Do not overlook this symbol!**
1. MAIN WING—1 set  
   WING JOINER Ø6x226mm—1 pc.
2. STABILIZER & ELEVATOR—1 set
3. VERTICAL FIN & RUDDER—1 set
4. PUSHROD Ø1.4x618mm w/ Threads (For Elevator)—1 pc.  
   SCREW PB2x10mm—2 pcs  
   FUEL TUBE d2xD4x4mm—1 pc.  
   CLEVIS—1 pc.  
   HORN—1 set  
5. PUSHROD Ø1.4x563mm w/ Threads (For Rudder)—1 pc.  
   SCREW PB2x10mm—2 pcs  
   FUEL TUBE d2xD4x4mm—1 pc.  
   CLEVIS—1 pc.  
   HORN—1 set  
6. SCREW PM3x6mm—4 pcs  
   WASHER d3xD7mm—4 pcs  
   FOLDING RPOPELLER SET PL6314020—1 set  
   COWLING—1 pc.  
   SCREW PWA2X8 mm—4 pcs  
   SPINNER Ø45mm—1 set
7. SPONGE 10x50x150mm—2 pcs  
   DOUBLE-SIDED TAPE (30x35mm)—1 pc.  
   BATTERY TIE—1 pc.  
   STRAPER—2 pcs  
   FUEL TUBE d2xD4x4mm—2 pcs
8. PVC PLATE 0.8x25x55mm (Wing Protection)—1 pc.  
   WASHER d2.5xD8mm—2 pcs  
   SCREW PM2.5x16mm—2 pcs
9. CANOPY—1 set
10. DECALS : DECE201—1 set
11. COVERING:  
   LIGHTEX SGX 312 Bright Red  
   LIGHTEX SGX 040 Transparent Green  
   LIGHTEX SGX 100 White  
   LIGHTEX SGX 330 Cadmium Yellow  
   LIGHTEX SGX 000 Transparent  
   LIGHTEX SGX 240 Green
1 Main Wing

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

2 Stabilizer & Elevator

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

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

*Also refer to step 10 Wing Setting

Completed

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

Completed
4 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.

5 Rudder Pushrod

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

Optional Parts
- PM3x6mm Screw: 4
- PM2x12mm Screw: 2
- PWA2x8mm Screw: 4
- d3xD7mm Washer: 4

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.

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

Printed in Taiwan
7 Radio Equipment

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

8 Main Wing

- PM2.5 x 16mm Screw
- d2.5 x D8mm Washer
- Peel off shaded portion covering film.

9 Canopy

- Completed
10 Wing Setting

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

A=A'  B=B'  C=C'

11 Control Throws

- Rudder: 30mm 30mm
- Elevator: 15mm 15mm

Adjust the control throws as shown in the diagram. These throws are good for general flying. You can adjust according to your personal preference.
The ideal C.G. position is 75mm (2.95 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.

# **Thermal Rider 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.

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.
## Optional Parts

### (3WM ACCESSORIES)

<table>
<thead>
<tr>
<th>Part Description</th>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 - Pin EZ Connector</td>
<td>KP0011310</td>
<td>40A Max. Current</td>
<td>1 set</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 - Pin EZ Connector</td>
<td>KP0011210</td>
<td>40A Max. Current</td>
<td>1 set</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clevis Wrench</td>
<td>PI8210010</td>
<td></td>
<td>1 set</td>
</tr>
<tr>
<td>Special tool for clevis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>installation.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Suitable for</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>standard and small</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(EP) clevis.</td>
<td></td>
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<tr>
<td>Propeller Adaptor Wrench</td>
<td>HW2340100</td>
<td>d3xD5</td>
<td>1 set</td>
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<tr>
<td>Outrunner 28/30</td>
<td>KM0283010</td>
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<td>1 pc</td>
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<tr>
<td>Brushless ESC</td>
<td>KC2025A02A</td>
<td>24x45x11mm</td>
<td>1 pc</td>
</tr>
</tbody>
</table>

- **Voltage Range**: 5.6 ~ 16.8V
- **Current**: 25A continuous
- **Current (Burst, >10 seconds)**: 35A
- **Weight**: 24 g
  (with wires and connector)
- **BEC**: 5V / 2A
- **Low Voltage Cut-off**: /
- **Light weight with low internal resistance**
  for high current operation
- **BEC function for Li-Ion / Li-poly**
  2 ~ 4 cells; Nimh / Nicd 5 ~ 12 cells operation.
- **Low battery voltage auto cut off to reserve power to the servos.**
- **Safe start up motor.**
Ducted Fan      Pattern
Warbirds       Funfly
Scale          Electric
Sports         Glider
Trainer        Boat

Accessories

Covering
(Lightex / Toughlon)