HandyKing EP(40)

Specifications

Wing Span: 46.5 in / 1180 mm
Wing Area: 565 sq in / 36.4 sq dm
Flying Weight: 53 oz / 1500 g
Fuselage Length: 52 in / 1320 mm
Requires: 4-channel radio w/ 4 mini servos. Outrunner Motor KM0374810 w/ Propeller Adaptor HW2340102 40A Brushless ESC, 11x8E Propeller, 4 cells 14.8V 3200 mAh Li-Po battery & charger.

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.

* Specifications are subject to change without notice.*
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. For pre-assembled kits, please check proper functions of all servos on the ground before flying. Servo gears could be damaged when control surfaces are hit during transportation of models. The manufacturer will replace any servos due to manufacturer’s defect, but will not cover plane crashes due to damaged servos not detected before flying.

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!
Parts List

1. MAIN WING -- 1 pair
   - CLEVIS PL4112103 -- 2 pcs
   - STRAPER PL4112102 -- 2 pcs
   - FUEL TUBE D2.5xD6x5mm -- 4 pcs
   - HORN PL4113103 -- 2 pcs
   - PUSHROD Ø1.8x55mm w/ Threads (For Aileron) -- 2 pcs
   - SERVO MOUNTING PANEL PL5310030 -- 1 pair
   - SCREW PA1.7x8mm -- 8 pcs
   - FIBRE TAPE 17x540mm -- 2 pcs
   - PLYWOOD 50x50x2mm -- 2 pcs

2. FUSELAGE -- 1 set
   - STABILIZER & ELEVATOR -- 1 set
   - FIBRE TAPE 17x380mm -- 1 pc.

3. VERTICAL FIN & RUDDER -- 1 set
   - FIBRE TAPE 17x250mm -- 1 pc.
   - PLYWOOD 50x50x2mm -- 1 pc.

4. TAIL LANDING GEAR PL3410031 -- 1 set
   - SCREW PA2.6x10mm -- 2 pcs
   - COLLAR Ø2.1mm w/ Set Screw -- 1 set
   - PLYWOOD 50x50x2mm -- 1 pc.

5. MAIN LANDING GEAR -- 1 set
   - COLLAR Ø3.1mm w/ Set Screw -- 2 sets
   - MAIN WHEEL Ø62mm PL3111620 -- 2 pcs
   - SCREW PA2.6x10mm -- 1 pc.
   - PLYWOOD 46x33x3.4mm (For Main Landing Gear) -- 1 pc.
   - MAIN LANDING GEAR COVER -- 1 pair

6. SCREW PA1.7x8mm -- 4 pcs
   - FUEL TUBE d2.5xD6x5mm -- 2 pcs
   - CLEVIS PL4112103 -- 1 pc.
   - STRAPER PL4112102 -- 1 pc.
   - SERVO MOUNTING PANEL PL5310030(R) -- 1 pc.
   - HORN PL4113103 -- 1 pc.
   - PUSHROD Ø1.8x146mm w/ Threads (For Elevator) -- 1 pc.

7. SCREW PA1.7x8mm -- 4 pcs
   - FUEL TUBE d2.5xD6x5mm -- 2 pcs
   - CLEVIS PL4112103 -- 1 pc.
   - STRAPER PL4112102 -- 1 pc.
   - HORN PL4113103 -- 1 pc.
   - SERVO MOUNTING PANEL PL5310030(L) -- 1 pc.
   - PUSHROD Ø1.4x150mm w/ Threads (For Rudder) -- 1 pc.

8. SOCKET HEAD SCREW M3x10mm -- 4 pcs
   - WASHER d3xD7mm -- 4 pcs
   - SPINNER Ø52mm -- 1 set

9. WING TUBE Ø8x500mm -- 1 pc.
   - RUBBER BAND D4x30mm -- 2 pcs
   - HOOK Ø1.6x178mm -- 1 pc.

10. BATTERY COVER -- 1 pc.
    - BATTERY TIE 200mm -- 2 pcs
    - SPONGE 10x50x150mm -- 2 pcs
    - DOUBLE-SIDED TAPE 30x35mm (For Brushless ESC) -- 1 pc.

11. DECALS: GM055 DEC -- 1 set

GM055PO26641106
1 Aileron Servo

PA1.7x8mm Screw 8

Fibre Tape 17x540 mm

Plywood 50x50x2 mm

Aileron Servo Lead

Fibre Tape 17x540 mm

Fuel Tube d2.5xD6x5mm

Straper

Clevis

Pushrod Ø1.8x55mm

Horn

Fuel Tube d2.5xD6x5mm

Horn
2 Stabilizer & Elevator

- Joining surfaces should be clean and dry. Slightly roughen surfaces with sandpaper for best results.

3 Vertical Fin & Rudder

- Joining surfaces should be clean and dry. Slightly roughen surfaces with sandpaper for best results.

4 Tail Landing Gear

- Joining surfaces should be clean and dry. Slightly roughen surfaces with sandpaper for best results.

PA2.6x10mm Screw 2 2.1mm Collar 2

PA2.6x10mm Wheel Ø23mm

M3x3mm Set Screw 2.1mm Collar 2
5 Main Landing Gear

- PA2.6x10mm Screw
- 3.1mm Collar

- Bottom View

6 Elevator Pushrod

- PA1.7x8mm Screw

- Bottom View
7 Rudder Pushrod

**PA1.7x8 mm Screw**

![Diagram of rudder pushrod setup]

- Pushrod Ø1.8x150mm
- Clevis
- Fuel Tube d2.5xD6x5mm

8 Outrunner Motor / Spinner

**M3x10mm Socket Head Screw**  4

**d3xD7mm Washer**  4

- Enlarge opening for better cooling if necessary.
- Make sure rotating motor casing is not in contact with wirings or anything.

1. **M3x10mm**  
   - d3xD7mm Washer
   - Don’t over-tighten the M3 screws, too much stress on the screws could split the firewall.

2. **EZ Connector**  
   - Brushless ESC

3. **11x8E Propeller PL6211108**  
   - d6xD15mm Washer

4. **PA3x12mm**  
   - Ø52mm Spinner

**Optional Parts**

- Outrunner Motor 37/48 Deluxe KM0374810
- Propeller Adaptor HW2340102
- 11x8E Propeller PL6211108
- TWM HW3111 700 PROPEL LER ADAPTOR WRENCH
- TWM HW3111010 PROPEL LER ADAPTOR WRENCH

**Completed**

GM055PO26641106  
P.6
9 Main Wing

- Rubber Band

10 Radio Equipment

- Outrunner Motor
- Battery
- Receiver
- Sponge
- Battery Tie

- Brushless ESC
- Double Sided Tape
- Completed Fuselage Bottom

Install and arrange the equipment as shown in the picture.
Adjust the control throws as shown in the diagram. These throws are good for general flying. You can adjust according to your personal preference.
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.

# HandyKing EP(40) is specially designed to be powered by **KM0374810 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.

# Check and re-tighten up all factory assembled screws, use thread locker if necessary.

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**Warning!**

The ideal C.G. position is 130mm (5.1 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.

Optional Parts

(WMW ACCESSORIES)

3 - Pin EZ Connector

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP0011310</td>
<td>40A Max. Current</td>
<td>1 set</td>
</tr>
</tbody>
</table>

-ideal for electric models

2 - Pin EZ Connector

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP0011210</td>
<td>40A Max. Current</td>
<td>1 set</td>
</tr>
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</table>

-ideal for electric models

Propeller Adaptor Wrench

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW3111700</td>
<td></td>
<td>1 pc</td>
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</tbody>
</table>

Outrunner 37 / 48 Deluxe

<table>
<thead>
<tr>
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<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM0374810</td>
<td></td>
<td>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>PI8210010</td>
<td></td>
<td>1 set</td>
</tr>
</tbody>
</table>

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

Propeller Adaptor

<table>
<thead>
<tr>
<th>Code No.</th>
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<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>HW2340102</td>
<td>d5xD6</td>
<td>1 set</td>
</tr>
</tbody>
</table>

Outrunner 37 / 48 Deluxe

- Kv (rpm / V): 770
- Operating Power: 450 W
- Operating Voltage: 8.5 - 18V
- Operating Current: 30A
- Peak Current: 38A (max.15 sec.)
- Internal Resistance: 34 m ohms
- Diameter: 37.2 mm
- Length: 48.5 mm
- Weight: 172 g
- Shaft Diameter: 5 mm
- Shaft Length: 21 mm
- Mounting Screw:
  - M3 (Front) and M2.5 (Back)
- Distance of Mounting Holes:
  - 25mm (Front) and 15.5mm (Back)

40A Brushless ESC

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>KC2040A02</td>
<td>55 x 28 x12mm</td>
<td>1 pc</td>
</tr>
</tbody>
</table>

- Current : 40A continuous
- Burst current ( < 10 seconds) : 55A
- Weight : 33g (with wires)
- BEC output : 3A
- Input:
  - Li - ion / Li - poly 2 - 5 cells;
  - Nimh / Nicd 5 - 15 cells

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