Tai Ji - 40S

0.40 cu. in. displacement 2-cycle
0.52 cu. in. displacement 4-cycle

Radio required: 5 channels, 6 servos airplane radio

Specifications

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Wing Span</td>
<td>55.0 in / 1400mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>584 sq. in. / 37.7 sq. dm</td>
</tr>
<tr>
<td>Flying Weight</td>
<td>5.5 lbs / 2600 g</td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>55 in. / 1400mm</td>
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</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.

THE WORLD MODELS
MANUFACTURING CO. LTD.
FACTORY PRE-FABRICATED
ALMOST-READY-TO-FLY(ARF) SERIES
MADE IN CHINA
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Tai Ji - 40S

INDEX

BEFORE YOU BEGIN ---------------------------------------- P. 1

PARTS LIST --------------------------------------------- P. 2

ASSEMBLY --------------------------------------------- P. 3-10

SAFETY PRECAUTIONS ----------------------------------- P. 11

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 be difficult to extend to the good parts that are good before gluing to defective parts during assembly.

3. Symbols used throughout this instruction manual comprise of the following:

   - AB: Apply epoxy glue.
   - L/R: Assemble left and right sides the same way.
   - Peel off shaded portion covering film.
   - Drill holes with the specified diameter (here: 3 mm).
   - !: Pay close attention here!
   - !: Warning!
   - Cut off shaded portion.
   - Ensure smooth non-binding movement while assembling.
   - !: Must be purchased separately!
   - Pierce the shaded portion covering film.
Parts List

1. FUSELAGE -- 1 pc.
2. MAIN WING -- 1 pair
3. STABILIZER & ELEVATOR -- 1 set
4. VERTICAL FIN & RUDDER -- 1 set
5. CANOPY -- 1 set
6. COWLING -- 1 pc.
7. PILOT(#)PC001050B) -- 1 pc.
8. SPINNER Ø57mm -- 1 pc.
9. ENGINE MOUNT PL511-050 -- 1 set
10. FUEL TANK 320cc -- 1 set
11. SPONGE 10.80 x 200mm (For Radio Equipment) -- 2 pcs
12. TAIL LANDING GEAR -- 1 set
13. MAIN WHEEL Ø50mm -- 2 pcs
14. TAIL WHEEL Ø23mm -- 1 pc
15. PUSHROD, PULLWIRE & PULLWIRE:
   COPPER TUBE Ø2.0 x Ø2.0 x 5mm (For Rudder) -- 4 pcs.
   METAL ROÌ Ø1.5 x 27mm (For Rudder) -- 2 pcs.
   METAL ROD Ø1.8 x 27mm w/Threads (For Elevator) -- 2 pcs.
   METAL ROD Ø1.8 x 90mm w/Threads (For Aileron) -- 2 pcs.
   METAL ROD Ø1.8 x 100mm (For Elevator) -- 1 pc.
   METAL ROD Ø1.8 x 175mm w/Threads (For Elevator) -- 1 pc.
   METAL ROD Ø1.8 x 180mm w/Threads (For Elevator) -- 1 pc.
   PLASTIC TUBE Ø2 x Ø3.5 x 50mm (For Rudder) -- 2 pcs.
   PLASTIC TUBE Ø3 x Ø3 x 50mm (For Rudder) -- 2 pcs.
   WIRE Ø0.8 x 750mm (For Rudder) -- 2 pcs.
   WOODEN ROD Ø8 x 580mm (For Elevator) -- 1 pc.
16. THROTTLE PULLWIRE Ø1.2 x 105mm w/Plastic tube Ø2 x Ø3 x 240mm -- 1 set
17. METAL ROD Ø1.8 x 105mm w/Plastic tube Ø2 x Ø3 x 105mm (For Belly Pan) -- 1 set
18. WOODEN PARTS:
   BALSÅ Ø8 x 8 x 75.5 mm (For Fixing Fuel Tank) -- 1 pc.
   BALSÅ Ø5 x 5 x 57.5 mm (For Servos Stand) -- 4 pcs.
   BALSÅ Ø6 x 10 x 60 mm (For Rudder Servo Stand) -- 2 pcs.
   PLYWOOD Ø3 x 57 x 91 mm (For Elevator Servo Stand) -- 2 pcs.
   PLYWOOD Ø3 x 60 x 88 mm (For Elevator Servo Stand) -- 2 pcs.
19. PLASTIC PARTS:
   CLEVIS -- 6 pcs
   HORN -- 4 sets
   HORN (w/o Base For Rudder) -- 2 sets
   STRAPER -- 3 pcs
   SILICONE GROMMET Ø1.5 x Ø6.5mm
   (For Cowl & Canopy) -- 10 pcs
20. METAL PARTS:
   LINKAGE CONNECTOR Ø2.1mm -- 3 sets
   COLLAR Ø2.1mm w/set screw -- 1 set
   COLLAR Ø4.1mm w/set screw -- 2 sets
   NUT Ø2mm -- 2 pcs.
   NUT Ø3.5mm -- 8 pcs
   SCREW PA3 x Ø3mm -- 2 pcs
   SCREW PM2 x Ø4mm -- 4 pcs
   SCREW PM2 x Ø4mm -- 4 pcs
   SCREW PM3 x Ø4mm -- 4 pcs
   SCREW PM3 x Ø4mm -- 4 pcs
   SCREW PM4 x Ø4mm -- 2 pcs
   SCREW PM4 x Ø4mm -- 4 pcs
   SCREW PWA2.3 x Ø3mm -- 4 pcs
   WASHER Ø3.5 x Ø4mm -- 8 pcs
   WASHER Ø4 x Ø3mm -- 4 pcs
   WASHER Ø4 x Ø3mm -- 2 pcs
21. FUEL TUBE Ø6 x 5mm -- 9 pcs
    HEAT-SHRINK TUBE Ø8 x 40mm -- 2 pcs
22. DECALS (P/N: ST200 058) -- 1 set
1 Main Wing

- Peel off shaded portion covering film

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

2 Aileron Servo

- Peel off shaded portion covering film.

3 Aileron Servo

- PM 2×20mm Screw

- Fuel Tube Ø1.8×90mm

- PM2×20mm

- Ø6.5mm
4 Main Landing Gear

- KA3x14mm Screw
- 3mm Set Screw
- 4.1mm Collar

L/R

5 Landing Gear Servo

- Linkage Connector
  - 3mm Set Screw
  - Linkage Connector
  - 2mm Nut
  - 2mm Washer

- N.L.
- Wheels up position
- Wheels down position

6 Stabilizer

- AB
- A
- A'
- A = A'
7 Vertical Fin/Rudder

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

8 Tail Landing Gear

- PA3x12mm Screw: 2
- 3mm Set Screw: 1
- 2.1mm Collar: 1

9 Engine Mount

- PM4x25mm Screw: 4
- 4mm Washer: 4

Engine Mount: PL 5111-050
10 Fuel Tank

- Fuel Tank 320cc

11 Engine

- PM3.5×30mm Screw: 4
- d3.5−D8mm Washer: 8
- 3.5mm Nut: 8

- Install Balsa & Plywood for fixing fuel tank
  Balsa 8−8−74.5mm

- Bottom View

12 Elevator Pushrod

- 1.8×120mm Heat-shrink Tube
- 1.8×180mm Clevis
- 1.8×175mm Fuel Tube

- Be careful not to scorch the heat-shrink tube!

Completed
13 Elevator Pushrod

- Plastic Tube d2-D3 = 800mm
- Elevator Pushrod

14 Elevator Pushrod

- PM 2x16mm Screw
- Bottom View

15 Servo Set

- Throttle Pushwire
- 3mm Nut
- 2mm Washer
- N.I. Trottle Servo

! Please refer to attached sheet for linkage connector installation.
16 Rudder Pushwire

- PM 2x20mm Screw
- 2mm Nut

Copper Tube
Fuel Tube
Plastic Tube d2x2 = 50mm
PM2 x 20mm

17 Radio Equipment

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

- Balsa 5 x 5 x 57mm
- Plywood 3 x 60 x 88mm
- Plywood 3 x 57 x 91mm

Clamp the copper tube

18 Main Wing

- PM4x35mm Screw
- d4xD15mm Washer

Sleeve
Metal Rod 1.8x105mm
Plastic Tube d2xD3 = 165mm
3mm Set Screw

P.8
19 Cowling
- PWA2.6 x 12 mm Screw
  - 4
- d1.5 x D6.5 mm Silicon Grommet
  - 4

20 Belly Pan
- Belly Pan
- L/R

21 Canopy
- PWA2.3 x 8 mm Screw
  - 6
- d1.5 x D6.5 mm Silicon Grommet
  - 6
- Pilot
- 3.5mm
22 Wing Setting
Adjust the wing and fuselage configuration as in the diagrams.

23 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
  - 24.5mm
  - 24.5mm

- Rudder
  - 75.7mm
  - 75.7mm

- Aileron
  - 14mm
  - 14mm

24 C.G
The ideal C.G. Position is 135mm (5.31in.) 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.
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.

# Tai Ji - 40S is specially designed to be powered by 2C 0.40 or 4C 0.52 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.

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