Zen 90 禅

0.60 cu.in. displacement 2-cycle
0.91 - 1.20 cu.in. displacement 4-cycle
Radio required: 5 channels, 6 servos airplane radio

Specifications:
- Wing Span: 64.6 in/1640mm
- Wing Area: 789sqin /51sq dm
- Flying Weight: 8.4 lbs / 3800g
- Fuselage Length: 65.6in/1665mm

*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.

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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.
- **3mm**: Peel off shaded portion covering film.
- **N.I.**: Drill holes with the specified diameter (here: 3mm).
- **!**: Pay close attention here!
- **CA**: Apply instant glue (C.A.glue, super glue.)
- **! Warning!**: Ensure smooth non-binding movement while assembling.
- **!** Cut off shaded portion.
- **!** Must be purchased separately!
- **!** Pierce the shaded portion covering film.
Parts List

1. FUSELAGE & BELLY PAN -- 1 set.
2. MAIN WING -- 1 pc.
3. STABILIZER & ELEVATOR -- 1 set
4. RUDDER -- 1 pc.
5. CANOPY -- 1 set
6. COWLING -- 1pc.
   TRANSPARENT DUMMY COWLING -- 1 pc.
7. PILOT -- (SPC001063A) -- 1 pc.
8. ALUMINUM SPINNER Ø70mm -- 1 pc.
9. ENGINE MOUNT PL 5911-120 -- 1 set
10. FUEL TANK 380cc -- 1 set
11. SPONGE 10 x 80 x 200mm (For Radio Equipment) -- 2 pcs
12. TAIL LANDING GEAR -- 1 set
13. MAIN WHEEL Ø55mm -- 2 pcs
14. TAIL WHEEL Ø25mm -- 1 pc.
15. PUSHROD & PULLWIRE:--
   COPPER TUBE d2.0 x D2.4 x 8mm (For Rudder) -- 4 pcs
   METAL ROD Ø 1.8 x 27mm (For Rudder) -- 2 pcs
   METAL ROD Ø 1.8 x 27mm w/Threads (For Rudder) -- 2 pcs
   METAL ROD Ø 1.8 x 80mm (For Elevator) -- 1 pc.
   METAL ROD Ø 1.8 x 110mm w/Threads (For Aileron) -- 2 pcs
   METAL ROD Ø 1.8 x 193mm w/Threads (For Elevator) -- 1 pc.
   METAL ROD Ø 1.8 x 196mm w/Threads (For Elevator) -- 1 pc.
   PLASTIC TUBE d2 x D3 x 830mm (For Elevator) -- 2 pcs
   PLASTIC TUBE d2.5 x D4 x 50mm (For Elevator) -- 2 pcs
   WIRE Ø0.8 x 920mm (For Rudder) -- 2 pcs
   WOODEN ROD Ø8 x 650mm (For Elevator) -- 1 pc.
16. THROTTLE PUSHWIRE Ø1.2 x 320mm
   w/ Plastic tube d2 x D3 x 180mm -- 1 set
17. WOODEN PARTS:--
   BALSA 8 x 8 x 98mm (For Fixing Fuel Tank) -- 1 pc.
   PLYWOOD 3 x 61 x 96mm (For Throttle Servo) -- 1 pc.
18. PLASTIC PARTS:--
   CLEVİS -- 6 pcs
   PLASTİC PLATE d1.5 x D6.5mm
   (For Cowling & Canopy) -- 11 pcs
   TRI-HORN M3 x 14mm(L) -- 4 sets
   TRI-HORN M3 x 14mm(L) (Non-Base For Rudder) -- 2 sets
   STRAPER -- 3 pcs
19. METAL PARTS:--
   LINKAGE CONNECTOR 2.1mm -- 3 sets
   COLLAR 2.1mm w/set screw 1 set
   COLLAR 4.6mm w/set screw -- 2 sets
   COPPER TUBE d4.2 x D6 x 16mm
   (For Engine Mount) -- 4 pcs
   NUT 2mm -- 3 pcs
   SCREW PA3 x 12mm -- 2 pcs
   SCREW PM3 x 20mm -- 9 pcs
   SCREW PM2 x 25mm -- 9 pcs
   SCREW PM 4 x 35mm -- 2 pcs
   SCREW PWA2.3 x8mm -- 6 pcs
   SCREW PWA2.6 x 12mm -- 5 pcs
   SOCKET HEAD SCREW M4 x 30mm -- 4 pcs
   WASHER d4 x D15mm -- 6 pcs
20. ANTI-VIBRATION MOUNT 4C-120 -- 1 set
   (INCLUDE: SOCKET HEAD SCREW M3 x 35mm -- 4 pcs
   SCREW KM3 x 20mm -- 8 pcs
   WASHER d3 x D12mm -- 8 pcs
   NYLON INSERT LOCK NUT 3mm -- 12 pcs)
21. FUEL TUBE Ø8 x 5mm -- 9 pcs
   HEAT-SHRINK TUBE Ø8 x 40mm -- 2 pcs
22. DECALS: P/N; ST200 029 -- 1 set
1. Main Wing

Peel off shaded portion covering film.

2. Aileron Servo

Peel off shaded portion covering film.

3. Aileron Servo

PM 2 x 25mm Screw

*6

Straper:

*1.8 x 110mm

Fuel Tube:

*6 x 5mm

Ring

Tri-horn

PM 2 x 25mm

2mm

Clevis
4 Main Landing Gear

KA 3 x 14mm Screw — 8
3mm Set Screw — 2
4.6mm Collar — 2

5 Landing Gear Servo

LINKAGE CONNECTOR
3 x 3mm Set Screw — 2
Linkage Connector — 2
2mm Nut — 2
2mm Washer — 2

Wheels up position
Wheels down position

6 Stabilizer

Temporary install the main wing, adjust leveling of the stabilizer to make it as parallel to the main wing as possible.
7. Vertical Fin / Rudder

8. Tail Landing Gear

- PA3 x 12mm Screw: 2
- 3mm Set Screw: 1
- 2.1mm Collar: 1

9. Engine Mount

- M4 x 30mm Screw: 4
- 4mm Washer: 4
- d4.2 x D6 x 16mm Copper Tube: 4

Engine Mount PL 5911120

- Apply thread locker to screws.
13 Elevator Pushrod

14 Servo Set

15 Rudder Pullwire

Please refer to attached sheet for linkage connector installation.
16 Radio Equipment

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

17 Elevator Pushrod

- Bottom View

18 Ming Wing

- Bottom View
19 Cowing

PWA2.6 x 12mm Screw
5

d1.5 x D6.5mm Plastic Plate
5

PWA2.6 x 12mm

20 Belly Pan

20 Canopy

PWA2.3 x 8mm Screw
6

d1.5 x D6.5mm Plastic Plate
6

PWA2.3 x 8mm
22 Wing Setting

Adjust the wing and fuselage configuration as in the diagrams.

23 Control throws

Elevator

21mm

21mm

Rudder

55mm

55mm

Aileron

14mm

14mm

24 C.G.

The ideal C.G. position is 160mm (6.3 in) behind the leading edge, measured at where the wing meets the fuselage. In order to obtain the C.G. specified, move the battery in the fuselage if required. 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.

# Zen 90 is specially designed to be powered by 4C 0.91 - 1.20 engine, using a more powerful engine does not mean better performance. In fact, overpowered 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.

ANTI-VIBRATION MOUNT INSTALLATION

For Engine Mount (PL5911120)

Make sure the rounded edges are facing the shock absorbing SILICON PAD.

1. KM 3 x 20mm Screw
2. Copper Tube
3. 3mm Nylon Insert Lock Nut
4. 3mm Washer
5. PM 3 x 35mm Screw

Landing gear

Should you need to bend the landing gear wire, use the radio control to open or close the gear to 25% from fully retracted position and switch off the receiver. It is safer to bend the wire in this position. Bending the wire in fully open position may damage the supporting structure.
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. Simply cut the transparent 3D template to fit your engine and exhaust pipe,
2. then slide onto the actual cowling and use as template to mark the openings required for final cutting.