Impulse xp

1.40-1.70 cu. in. displacement 4-stroke
Requires: 4 channel radio w/ 5 servos

**Specifications**

<table>
<thead>
<tr>
<th>Component</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Span</td>
<td>75 in / 1910 mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>1028 sq in / 66.3 sq dm</td>
</tr>
<tr>
<td>Flying Weight</td>
<td>9.9-10.3 lbs / 4500-4700 g</td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>77.5 in / 1965 mm</td>
</tr>
</tbody>
</table>

*Specifications are subject to change without notice.*

MADE IN CHINA
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:

- **A/B**: Apply epoxy glue.
- **C/A**: Apply instant glue (C.A. glue, super glue.)
- **N.I.**: Must be purchased separately!
- **L/R**: Assemble left and right sides the same way.
- **!/W**: Pay close attention here!
- **Cut off shaded portion.**
- **Ensure smooth non-binding movement while assembling.**
- **Cut off shaded portion covering film.**
- **Pierce the shaded portion covering film.**
- **Pay close attention here!**
- **Warning!** Do not overlook this symbol!
Parts List

1. MAIN WING -- 1 set
C.A. HING -- 14 pcs

2. PUSHROD M2x115mm w/Threads (For Aileron Servo) -- 2 pcs
FUEL TUBE Ø6x5mm -- 4 pcs
CLEVIS L-- 4 pcs
SCREW PB2x30mm -- 6 pcs
TRI-HORN M3x14mm (L) -- 2 sets

3. FUSELAGE -- 1 pc.
STABILIZER & ELEVATOR -- 1 set
STABILIZER TUBE Ø12x300mm -- 1 pc.
WIRE Ø3x100mm -- 1 pc.
SCREW PA2.5x18mm -- 2 pcs
WASHER Ø2.1mm w/set screw -- 1 set
C.A. HING -- 8 pcs
COPPER TUBE d2.5xD3.2x8mm (For Rudder) -- 2 pcs
EYE SCREW M2.5x8x25mm -- 2 pcs
WIRE Ø1x1050mm (For Rudder) -- 2 pcs
EYE SCREW M2.5x8x25mm -- 2 pcs
COPPER TUBE d2.5xD3.2x8mm -- 2 pcs

4. RUDDER -- 1 pc.
C.A. HING -- 4 pcs

5. TAIL LANDING GEAR Ø2mm -- 1 set
MAIN WHEEL Ø55mm -- 2 pcs
WHEEL PANTS -- 1 pair
COLLAR Ø4.1mm w/ set screw -- 2 sets
PLASTIC COLLAR d4,1xØ8x3mm -- 4 pcs
SOCKET HEAD SCREW M3x15mm -- 4 pcs
AXLE SHAFT Ø4x49mm -- 2 pcs
SCREW PA3x12mm -- 2 pcs
WASHER d3.2xØ12mm -- 4 pcs
WASHER d5xØ12mm -- 4 pcs
M5 NYLON INSERT LOCK NUT -- 2 pcs

6. MAIN LANDING GEAR -- 1 pair
MAIN WHEEL Ø55mm -- 2 pcs
WHEEL PANTS -- 1 pair
COLLAR Ø4.1mm w/ set screw -- 2 sets
PLASTIC COLLAR d4,1xØ8x3mm -- 4 pcs
SOCKET HEAD SCREW M3x15mm -- 4 pcs
AXLE SHAFT Ø4x49mm -- 2 pcs
SCREW PA3x12mm -- 2 pcs
WASHER d3.2xØ12mm -- 4 pcs
WASHER d5xØ12mm -- 4 pcs
M5 NYLON INSERT LOCK NUT -- 2 pcs

7. SWIVEL CLEVIS HORN FAIRING PL410020 -- 1 set
HEAVY DUTY CLEVIS PL4112200 -- 2 sets
HEAVY DUTY HORN BRACKET PL4112400 -- 2 sets
SCREW M4x80mm -- 1 pc.
M4 NYLON INSERT LOCK NUT -- 2 pcs
WIRE Ø1x1050mm (For Rudder) -- 2 pcs
EYE SCREW M2.5x8x25mm -- 2 pcs
COPPER TUBE d2.5xD3.2x8mm -- 2 pcs

8. PUSHROD M2x192mm w/Threads (For Elevator) -- 2 pcs
PUSHROD M3x725mm w/Threads (For Elevator) -- 1 pcs
TRI-HORN M3x14mm(L) -- 2 sets
SCREW PB2x25mm -- 6 pcs
HEAVY DUTY CLEVIS PL4112000 -- 1 set
CLEVIS PL4112103(L) -- 4 pcs
FUEL TUBE Ø6x5mm -- 4 pcs
SCREW KA2x12mm -- 4 pcs
ELEVATOR BELLCRANK SET -- 1 set
SCREW PA3.5x8mm -- 2 pcs
BALL BEARING -- 2 pcs

9. LINKAGE CONNECTOR 2.1mm -- 1 set

10. ALUMINIUM PLATE 10x10x26mm -- 2 pcs
SOCKET HEAD SCREW M3x25 -- 2 pcs
SOCKET HEAD SCREW M4x25 -- 2 pcs

11. FUEL TANK 500cc -- 1 set
CABLE TIE(For Fuel Tank) -- 2 pcs
THROTTLE PUSHWIRE Ø1.2x320mm -- 1 pc.
PLASTIC TUBE d2xØ3x200mm -- 1 pc.
PLYWOOD 3x4x61mm(For Throttle Servo) -- 1 pc.
BALSA 6x6x15mm(For Throttle Servo Stand) -- 2 pcs

12. UNDER COWLING -- 1 pc.
BELLY PAN -- 1 pc
SPINNER Ø90mm (w/alu. back plate) -- 1 set
SCREW PWM2.5x12mm -- 2 pcs

13. WING INCIDENCE ANGLE ADJUSTER -- 2 pcs
SPONGE 60x70x122mm -- 1 pc
COPPER TUBE D2.5x3.2x8mm (For Rudder) -- 2 pcs
HEAVY DUTY SERVO HORN PL4120600 -- 1 set
HEAVY DUTY CLEVIS PL4112200 -- 3 sets
EYE SCREW M2.5x8x25mm -- 2 pcs
SOCKET HEAD SCREW 3x30mm -- 2 pcs
M3 NYLON INSERT LOCK NUT -- 2 pcs
PLYWOOD 3x12x130mm(For Elevator Pushrod) -- 1 pc.

14. WING TUBE D24x64mm -- 1 pc.
SOCKET HEAD SCREW M6x20mm -- 4 pcs
WASHER d6.1xD15mm -- 4 pcs

15. COCKPIT -- 1 pc.
SCREW PWM2.5x12mm -- 2 pcs
ONE SIDE STICKER SPONGE -- 1 set
1 Main Wing

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

2 Aileron Servo

3 Stabilizer / Elevator

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

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

5 Tail Landing Gear

PA3 x 10mm Screw 2
2.1mm Collar 1

6 Main Landing Gear

M3x15mm SOCKET HEAD SCREW 4
Øx49mm Axle Shaft 2
PA3 x 12 mm Screw 2
d4.1xD8x3mm Collar 4
d5xD12mm Washer 4
d3.2xD12mm Washer 4
M5 Nylon Insert Lock Nut 2
4.1mm Wheel Collar 2
7 Rudder Pullwire

- M4x80mm Screw
- M4 Nylon Insert Lock Nut
- Copper Tube
- Wire
- Press down the center 1/3 portion

8 Elevator Pushrod

- PB 2 x 25 mm Screw
- KA 2 x 12 mm Screw
- PA 3.5 x 8 mm Screw

- Elevator Linkage

---

Completed

---

Elevator Pushrod

- M2x192mm

---

Bottom View
9 Servo Set

**LINKAGE CONNECTOR**

- 3 x 3mm Set Screw: 1
- Linkage Connector: 1
- M2 Nut: 1
- 2mm Washer: 2

- Set Screw 3mm: Included with the radio Set.

10 Engine

**Aluminum Plate**

- M4x25mm SOCKET HEAD SCREW: 2
- M3x25mm SOCKET HEAD SCREW: 2

11 Fuel Tank

- Cable Tie
- Fuel Tank 500cc
- Balsa 6x6x61mm
- Plywood 3x4x61mm
- Throttle Pushwire Ø1.2x320mm
- Throttle Servo
- Fuel Tank 500cc
12 UNDER COWLING & BELLY PAN

- PWM2.5 x 12 mm Screw
- Under Cowling
- Belly Pan
- Spinner Ø 90mm
- Completed

13 Radio Equipment

- Install and arrange the servos shown in the diagram.
- Wing Incidence Angle Adjuster
- M3 x 30mm
- M3 Nylon Insert Lock Nut
- Outside
- Inside
- Eye Screw M2.5 x 25mm
- Wire Copper Tube
- Press down the center 1/3 portion
- Plywood 3x12x130mm
- Elevator Pushrod M3 x 725mm
- Elevator Bell Crank Set
14 Wing Installation

- Center wing tube in airplane. Slide wings onto fuse and secure with M6x20mm Socket Head Screws and d6.1xD15mm washers. You must use blue lock tite on the screws.

15 Cockpit

- Completed
16 Wing Setting

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

To increase incidence angle, loose bottom set screw and then tighten top set screw. To reduce incidence angle, loose top set screw and then tighten bottom set screw. Don’t over tighten set screws as the incidence angle adjuster are made of plastics.
The ideal C.G. position is 180mm (7.09 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.

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

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.

# Impulse xp is specially designed to be powered by 4C 1.40 - 1.70 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.

# Check and re-tighten up all factory assembled screws, use thread locker if necessary.
After fastening the round nut, make sure that the linkage connector can rotate freely.

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.

Shoulder

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.