Super Frontier-40

0.40-0.50 cu.in. displacement 2-cycle
0.48-0.52 cu.in. displacement 4-cycle
Radio required: 4 channels, 4 servos airplane radio

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Span</td>
<td>64.0 in / 1630 mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>704 sq in / 45.4 sq dm</td>
</tr>
<tr>
<td>Flying Weight</td>
<td>5.5-6.2 lbs / 2500-2800 g</td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>48.0 in / 1220 mm</td>
</tr>
</tbody>
</table>

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
www.theworldmodels.com
Super Frontier-40

INDEX

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

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

ASSEMBLY ............................................................... P. 3 - 11

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.
- **C.A**: Apply instant glue (C.A.glue, super glue.)
- **L/R**: Assemble left and right sides the same way.
- **Circle**: Ensure smooth non-binding movement while assembling.
- **Peel off**: Peel off shaded portion covering film.
- **Cut off**: Cut off shaded portion.
- **Drill holes**: Drill holes with the specified diameter (here: 3mm).
- **N.I.**: Must be purchased separately!
- **Pay close attention here!**: Pay close attention here!
- **Warning!**: Do not overlook this symbol!
Parts List

1. FUSELAGE -- 1 pc.
2. MAIN WING (w/Wing Joiner) -- 1 pair
3. STABILIZER & ELEVATOR -- 1 set
4. VERTICAL FIN & RUDDER -- 1 set
5. SPINNER Ø57mm -- 1 set
6. ENGINE MOUNT PL5111-030 -- 1 set
7. FUEL TANK 380cc -- 1 pc
8. SPONGE (For Radio Equipment) -- 2 pcs
9. FRONT LANDING GEAR -- 1 pc
10. MAIN LANDING GEAR -- 1 pair
11. WHEEL Ø65mm -- 3 pcs

12. PUSHROD:
   WOODEN ROD Ø8x380mm (For Rudder Servo) -- 1 pc
   WOODEN ROD Ø8x430mm (For Elevator Servo) -- 1 pc
   METAL ROD Ø1.8x130mm w/Threads (For Aileron Servo) -- 2 pcs
   METAL ROD Ø1.8x145mm (For Elevator Servo) -- 2 pcs
   METAL ROD Ø1.8x155mm (For Rudder Servo) -- 2 pcs
   METAL ROD Ø1.8x290mm w/Threads (For Rudder Servo) -- 1 pc
   METAL ROD Ø1.8x230mm w/Threads (For Elevator Servo) -- 1 pc

13. PUSHWIRE:
   FRONT WHEEL PUSHWIRE Ø1.2x420mm -- 1 pc
   THROTTLE PUSHWIRE Ø1.2x460mm (w/Plastic Tube) -- 1 set

14. WOODEN PARTS:
   BALSA 10x10x84mm (For Fixing Fuel Tank) -- 1 pc
   WOOD 6x6x18mm (For Front Landing Gear) -- 1 pc
   PLYWOOD 1.5x25x115mm (Wing Protection) -- 1 pc
   PLYWOOD 3x8x21mm (For Aileron Servo) -- 2 pcs
   PLYWOOD 3x47x57mm (Aileron Servo Box) -- 1 pc
   WING JOINER 9x23.7x200mm -- 1 pc
   WOODEN ROD Ø8x130mm (For Fixing Main Wing) -- 2 pcs

15. PLASTIC PARTS:
   CLEVIS -- 4 pcs
   PLATE -- 2 pcs
   RING Ø2.6mm -- 2 pcs
   STEERING ARM -- 1 pc
   STRAPER -- 3 pcs
   HORN -- 2 sets

16. METAL PARTS:
   LINKAGE CONNECTOR 2.1mm -- 3 SETS
   COLLAR 4.1mm w/set screw -- 8 sets
   NUT 3mm -- 8 pcs
   SCREW PA3x12mm -- 4 pcs
   SCREW PM3x12mm -- 4 pcs
   SCREW PM3x50mm -- 1 pc
   SCREW PM3x22mm -- 4 pcs
   SCREW PM3x25mm -- 4 pcs
   SCREW PM3x45mm -- 1 pc
   WASHER 3mm -- 12 pcs
   WASHER d3x12mm -- 2 pcs

17. FUEL TUBE Ø6x5mm -- 7 pcs
    HEAT-SHRINK TUBE Ø6x40mm -- 4 pcs

18. RUBBER BAND 60x6mm -- 8 pcs

19. DECALS -- 1 set
1 Main Wing

2 Main Wing

Cut out to fit in the aileron servo.

3 Aileron Servo

Plywood 3x8x20mm

Cut away

N.I.

1.5mm

AB

AB

Peel off shaded portion covering film.
4 Main Wing

Mark center line of Wing Joiner and glue to Wing installed with Servo.
(One side only for detachable Wing.)

5 Aileron Servo

Fuel Tube 06x5mm
Straper

6 Stabilizer

Pre-glued
7. **Vertical Fin / Stabilizer**

- PM3x 45mm Screw: 1
- d3 x D12mm Washer: 2
- PM3x 50mm Screw: 1

Use thread locker when tightening screws. Don't use excessive force as you are dealing with balsa.

8. **Engine Mount / Fuel Tank**

- PM3x 22mm Screw: 4
- 3mm Washer: 4

Fuel Tank 380cc

Install balsa 10x10x84mm (For fixing fuel tank)

- Top View

9. **Front Wheel**

- 3mm Set Screw: 4
- 4.1mm Collar: 4

6x6x18mm Wood

- Front View

P.5
10 Landing Gear

PA3 x 12mm Screw

4

11 Landing Gear

3mm Set Screw

4

4.1mm Collar

4

3mm Set Screw

12 Engine

Throttle Pushwire w/plastic tube

PM3 x 25mm Screw

4

3mm Washer

8

3mm Nut

8

If the engine throttle control is on the opposite side, install the throttle pushwire accordingly.

Install the throttle servo with the drive pinion on the same side of throttle pushwire.

Raise throttle servo is necessary to provide clearance between throttle and front wheel pushwires.
13 Rudder Pushrod

- 1.8x155mm Heat-shrink Tube
- 1.8x290mm Clevis
- 8x380mm Be Careful not to scorch the heat-shrink tube
- 760mm COMPLETED

14 Elevator Pushrod

- 1.8x145mm Heat-shrink Tube
- 1.8x230mm Clevis
- 8x430mm Be careful not to scorch the heat-shrink tube
- 750mm COMPLETED

15 Servo Set

- LINKAGE CONNECTOR
  - 3 x 3mm Set Screw 3
  - Linkage Connector 3
  - 2mm Nut 3
  - 2mm Washer 6

Throttle Pushwire, Rudder Pushrod. Included with the Radio Set.
Throttle Servo, Rudder Servo.

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

17 Radio Equipment
- Install and arrange the servo as shown in the diagram.

18 Radio Equipment
- Install Sponge for inserting Battery and Receiver.
19 Rudder Pushrod

- PM2x 12mm Screw × 2
- Rudder horn
  - Line up the holes of the horn to the edge of the rudder.
  - See diagram.

20 Elevator Pushrod

- PM2x 12mm Screw × 2
- Elevator horn
  - Line up the holes of the horn to the edge of the elevator.
  - See diagram.

21 Main Wing

- Wooden Rod Ø8x130mm
- Equal length on both sides, then apply CA glue.
22 Main Wing

*Before every take-off, put this plywood here to protect the wings.*

Plywood 1.5x25x115mm

23 Main Wing

*Mount the rubber bands following step one to step four and repeat once. In total, eight rubber bands are used for mounting.*

Rubber Band

60x8mm Rudder Band

24 Wing Setting

Adjust the wing and fuselage configuration as in the diagrams.
25 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.

Rudder

Elevator

Aileron

26 C.G.

The ideal C.G. position is 90mm (3.54 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.

90mm

3.54 in.

C.G.

¡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.

# Super Frontier-40 is specially designed to be powered by 2C 0.40-0.50 or 4C 0.48-0.52 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.