Super Frontier Senior

0.46 cu. in. displacement 2-cycle
Radio required: 4 - channel radio w/ 5 standard servos

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing Span</td>
<td>80.5 in / 2040mm</td>
</tr>
<tr>
<td>Wing Area</td>
<td>1232 sq in / 79.5 sq dm</td>
</tr>
<tr>
<td>Flying Weight</td>
<td>7.0 lbs / 3300g</td>
</tr>
<tr>
<td>Fuselage Length</td>
<td>65.5 in / 1670mm</td>
</tr>
</tbody>
</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.
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:

- **AB**: 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.
- **N.**: Ensure smooth non-binding movement while assembling.
- **Cut off shaded portion.**
- **Pay close attention here!**
- **Warning!** Do not overlook this symbol!
Parts List

1. MAIN WING -- 1 pair
2. SCREW PB2x20mm -- 4 pcs
   FUEL TUBE Ø6x5mm -- 4 pcs
   CLEVIS PL4112103 -- 2 pcs
   STRAPER PL411210Z -- 2 pcs
   HORN PL4113101 -- 2 pcs
   PUSHROD Ø1.8x130mm w/ Threads (For Aileron Servo) -- 2 pcs
3. WOODEN 12x22x346mm (Wing Joiner)(A) -- 1 set
   WOODEN Ø10x180.5mm (Wing Joiner)(B) -- 1 set
4. STABILIZER & ELEVATOR -- 1 set
   FUSELAGE -- 1 pc.
5. VERTICAL FIN & RUDDER -- 1 set
6. MAIN LANDING GEAR -- 1 set
   MAIN WHEEL Ø95mm -- 2 pcs
   COLLAR Ø4.1mm w/ set screw -- 4 sets
   MOUNTING PLATE 12x20mm -- 2 pcs
   SCREW PA 3x12mm -- 4 pcs
7. SOCKET HEAD SCREW M4x25mm -- 4 pcs
   WASHER d4xD9mm -- 4 pcs
   ENGINE MOUNT PL 5111050 -- 1 set
8. FUEL TANK 380cc PL1111380 -- 1 set
   BALSA 10x15x117mm (For Fixing Fuel Tank) -- 1 pc.
9. SCREW PA 3x14mm -- 4 pcs
   STEERING ARM STAND Ø4.7mm -- 1 pc.
   WOODEN 4x25x30mm (For Steering Arm Tank) -- 1 pc.
10. WIND SHIELD -- 1 pc.
    SCREW PWA 2.3x8mm -- 5 pcs
    SILICON GROMMET d1.5x6.5mm -- 5 pcs
11. FRONT LANDING GEAR -- 1 set
    FRONT WHEEL Ø95mm -- 1 pc.
    COLLAR Ø4.6mm -- 3 set
    STEERING ARM Ø4.6mm -- 1 set
    RIGHT ANGLE WHEEL SPACER PL41121040 -- 1 set
12. SOCKET HEAD SCREW M3x30mm -- 4 pcs
    WASHER d3xD7mm -- 8 pcs
    M3 NUT -- 2 pcs
    SPINNER Ø52mm -- 1 set
    THROTTLE PUSH WIRE Ø1.2x445mm -- 1 pc.
    PLASTIC TUBE d2xD3x200mm -- 1 pc.
13. SCREW PWA2.6x12mm -- 5 pcs
    SILICON GROMMET d1.5x6.5mm -- 5 pcs
    COWLING -- 1 pc.
    TRANSPARENT 3D TEMPLATE -- 1 pc.
14. SIDE WINDOWS -- 1 pair
15. LINKAGE CONNECTOR Ø2.1mm HW7111060 -- 2 sets
16. SPONGE 60x70x122mm -- 1 pc.
    FUEL TUBE Ø6x5mm -- 1 pc.
    STRAPER PL4112102 -- 1 pc.
    WIRE Ø1x1100mm (For Rudder) -- 2 pcs
    COPPER TUBE Ø2.5x3.2x8mm -- 2 pcs
    RIGGING Z BEND Ø1.8x27mm (For Rudder) -- 2 pcs
    FRONT WHEEL PUSHROD Ø1.6x320mm -- 1 pc.
    PUSH ROD Ø1.8x155mm w/ Threads (For Elevator Servo) -- 1 pc.
17. SCREW PB2x16mm -- 2 pcs
    FUEL TUBE Ø6x5mm -- 1 pc.
    CLEVIS PL4112103 -- 1 pc.
    HORN PL4113101 -- 1 set
18. SCREW PM2x16mm -- 2 pcs
    M2 NUT -- 2 pcs
    FUEL TUBE Ø6x5mm -- 2 pcs
    COPPER TUBE Ø2.5x3.2x8mm -- 2 pcs
    RIGGING COUPLER Ø1.8x27mm w/ Threads (For Rudder) -- 2 pcs
    HORN (w/ o-Base For Rudder) PL4113101 -- 2 pcs
    CLEVIS PL4112103 -- 2 pcs
19. PILOT PC001085B -- 1 set
    PLYWOOD 3x45x122mm (For Pilot) -- 1 pc.
    BALSA 6x6x45mm (For Pilot Stand) -- 2 pcs
20. SCREW PM3x30mm -- 2 pcs
    WASHER d3xD12mm -- 2 pcs
    PLYWOOD 3x40x120mm (For Wing Protection) -- 1 pc.
21. DECALS A088DEC -- 1 set

COVERING:

- LIGHTEX SGX 100 WHITE
- LIGHTEX SGX 251 SKY BLUE
- LIGHTEX SGX 251 BRIGHT RED
- LIGHTEX SGX 313 PINK
- LIGHTEX SGX 351 DARK BLUE
1. **Main Wing**

- Pre-glued

2. **Aileron Servo**

- Ø1mm pilot holes for World Models tri-horn are pre-drilled.
  - Please look for pin-hole marks at the under side of control surfaces.
  - **PB2x20mm Screw**: 4
  - **Pushrod**: Ø1.8x130mm
  - **Clevis Fuel Tube**: Ø6x5mm
  - **Aileron Servo Lead**: Peel off shaded portion covering film.

3. **Main Wing**

- Please dry fit wing joiner into left and right wing to make sure they fit with the proper dihedral angle. Mark the wing joiner if necessary. Apply epoxy glue to both sides of all surfaces in contact. Use a stick to apply the glue to inner side of wing joiner sleeve, and apply the glue to wing joiner before putting them together. Wing joiner not glued properly will lead to wing failure and plane crash.

- **Wing Joiner(A)**: 12x22x346mm
- **Wing Joiner(B)**: Ø10x180.5mm
**4 Stabilizer**

Temporary install the main wing, adjust leveling of the stabilizer to make it as parallel to the main wing as possible.

**5 Vertical Fin / Rudder**

**6 Landing Gear**

<table>
<thead>
<tr>
<th>Part</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA3x12mm Screw</td>
<td>4</td>
</tr>
<tr>
<td>3mm Set Screw</td>
<td>4</td>
</tr>
<tr>
<td>4.1mm Collar</td>
<td>4</td>
</tr>
</tbody>
</table>

4.1mm Collar

Main Landing Gear Ø4mm

3mm Set Screw

PA3x12mm

1.9mm
7 Engine Mount

- M4x25mm Socket Head Screw: 4
- d4xD9mm Washer: 4

8 Fuel Tank

- Install Balsa 10x15x117mm (For Fuel Tank Position Fixing)

9 Front Landing Gear

- PA3x14mm Screw: 4
- Steering Arm Stand: 2mm
13 Cowling

Trim the cowling so it will match your engine.

PWA2.6x12mm Screw  5

d1.5xD6.5mm Silicon Grommet  5

Silicon Grommet d1.5xD6.5mm

PWA2.6x12mm

14 Windows

Fuel Filler

PL8110030

L/R
**15 Servo Set**

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

3x3mm Set Screw

![Diagram of Servo Set](image)

N.I. Included with the radio Set.

Top Wheel Pushrod

PB2x16mm

Set Screw

![Bottom View of Servo Set](image)

Please refer to attached sheet for linkage connector installation.

**16 Radio Equipment**

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

![Diagram of Radio Equipment](image)

Top Wheel Pushrod

Front Wheel Pushrod

Spong 60x70x122mm

Plywood 9x57x122mm

Throttle Servo

Elevator Servo

Rudder Servo

Copper Tube

Fuel Tube Ø6x5mm

Charge Receptacles KP0041300

![Bottom View of Radio Equipment](image)

Please refer to attached sheet for linkage connector installation.

**17 Elevator Pushrod**

- **PB2x16mm Set Screw**

Line up the holes of the horn to the edge of the elevator. See diagram.

![Diagram of Elevator Pushrod](image)

Elevator Pushwire

Fuel Tube Ø6x5mm

![Bottom View of Elevator Pushrod](image)

Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at under side of control surfaces.

![Bottom View of Elevator Pushrod](image)
**18 Rudder Pullwire**

- PM2x16mm Screw: 2
- M2 Nut: 2

- Ø1mm pilot holes for World Models tri-horn are pre-drilled. Please look for pin-hole marks at side of control surfaces.

**19 Pilot**

- Balsa 6x6x45mm
- Plywood 3x45x122mm
- PC001085B

- Copper Tube 1.8 x 27mm
20 Main Wing

- PM3x30mm Screw: 2
- d3xD12mm Washer: 2

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

21 Wing Setting

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

**22 Control Throws**

- Elevator
- Rudder
- Aileron

The ideal C.G. position is 100mm (3.94 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.

**23 C.G.**

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 Senior** is specially designed to be powered by 2C 0.46 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.

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.

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.
Product Registration Form (US Customers)

We would like to share with you any relevant information regarding your model, including product news and free upgrade parts when applicable. Please fill in the following and send to AirBorne Models, 4749-K, Bennett Drive, Livermore, CA 94551 USA.

1. Name:_________________________________________________________

2. Address:________________________________________________________________

3. Phone #:____________________ E-mail: ______________________

4. Model:_________________________________________________________________

   Wing QC# _______ Fuselage QC# __________________________
   (QC numbers are stamped on wing and fuselage)

5. Date of Purchase:_____________________________________________________

6. Store Name:_________________________________________________________

Please call AirBorne Models at 925 371 0922 for any assistance in filling this form. Thank you very much for purchasing our product.
## Optional Parts

### Accessories

#### 180mm Extension

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW0011800</td>
<td>180mm</td>
<td>1 set</td>
</tr>
</tbody>
</table>

![180mm Extension](image)

#### 180mm Y-Cord

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>KW0021800</td>
<td>180mm</td>
<td>1 pc</td>
</tr>
</tbody>
</table>

![180mm Y-Cord](image)

#### Charge Receptacles

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>KP0041300</td>
<td></td>
</tr>
</tbody>
</table>

![Charge Receptacles](image)

#### Field Stand

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS9111450</td>
<td>600 x 240 x 350</td>
<td>1 pc</td>
</tr>
</tbody>
</table>

![Field Stand](image)

#### Fuel Filler

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL8110030</td>
<td>15 x 22 x 49mm</td>
<td>1 x 1 pc</td>
</tr>
</tbody>
</table>

![Fuel Filler](image)

#### Clevis Wrench

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL8210010</td>
<td>1 set</td>
</tr>
</tbody>
</table>

![Clevis Wrench](image)

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

#### Standard Servo

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Size</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>SV4031</td>
<td>40.6 x 20 x 37mm / 1.60 x 0.79 x 1.46 in</td>
<td>39.4 g / 1.39 oz</td>
</tr>
</tbody>
</table>

Speed: 0.17 sec / 60° @4.8V
0.14 sec / 60° @6.0V
Torque: 3.2kg.cm / 44.8 oz - in @4.8V
4.1kg.cm / 57.4 oz - in @6.0V
