Spacewalker

Instruction

Read these instructions carefully before use.
Please keep these instructions after assembling.

Safety precautions

This radio control model is not a toy!
Not suitable for persons under 14 years!

* First-time builders should seek advice from people having building experience in order to assemble the model correctly and to produce its performance to full extent.
* Assemble this kit only in places out of children's reach!
* Take enough safety precautions prior to operating this model. You are responsible for this model's assembly and safe operation!
* Always keep this instruction manual ready at hand for quick reference, even after completing the assembly.
Safety Information

Flying models are not toys, and should only be operated by responsible clear thinking people. Assembling and maintaining models requires a basic level of technical skill, and a sensible logical approach.

Any error in building, repairing or maintaining the model could result in serious injury or damage. Technical problems or an incorrectly assembled model may lead to the propeller unexpectedly beginning to turn. Always stay out of the vicinity of rotating propellers and never allow any item to come into contact with a spinning prop. As neither the manufacturer or the dealer has any influence over the way that models are operated they can accept no responsibility for and damage caused.

If this model is the first radio controlled model which you are attempting to build or fly, you should secure the assistance of an experienced model pilot. Your local dealer will be able to assist you in locating your local model aircraft club or experienced pilots in your area. NEVER fly your model over people and never operate the model in a way which may endanger people or animals. Before your first flight you should conduct a range check of the radio control system, secure the model to a solid object, and ensure that you have full control of all functions with the antennae collapsed over a distance of at least 25 metres. Before and after every flight inspect the model for damage, and rectify any faults before you attempt to take off. The operator is responsible for any damage caused by the operation of flying models.

Always observe any local laws regarding the operation of model aircraft.

General Information

As the company JAMARA e.K. has no influence over the use, maintenance or conditions under which our products will operate, we accept no responsibility for any damage caused be it of a physical, financial or theoretical nature.

JAMARA e.K. will accept no claim against it which results directly or indirectly from the operation or use of its products. Your Statutory Rights apply, any claim made against us will be based solely on the retail price of the product, and limited to the model only. This will not apply if we are proved to be legally responsible or when gross negligence can be proved.

Technical data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wing span</td>
<td>~ 990 mm</td>
</tr>
<tr>
<td>Length</td>
<td>~ 690 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>~ 600 – 650 g</td>
</tr>
<tr>
<td>RC</td>
<td>4 channel / 4 servos</td>
</tr>
<tr>
<td>Motor</td>
<td>Electric Motor</td>
</tr>
</tbody>
</table>

Highlights:

- Laser cut kit
- Ideal to have with you at all times
- Prepared for retracts (only Bonanza)
- Aileron, elevator, vertical fin and throttle
- Fuselage made of balsa and plywood
- Wings made of wood in rib construction

Attention!

In some countries it is a legal requirement to carry third Party indemnity insurance when operating a radio controlled model. Please ask your local dealer, governing body or your insurance company for details.

Attention!

Switch the transmitter on first then the model. When you are finished first switch off the model then the transmitter.
Kit Contents:
- CNC LASER cut formers and ribs, strip wood, selected light weight balsa sheet and aircraft grade plywood.
- Fitting kit including wheels, undercarriage, horns and hinges.
- Clear canopy.
- Instructions.

1. For the drive-in nut to have more support, the holes are doubled with a ply ring. Insert the nuts from the top and secure with a little glue.

2. Doubled the undercarriage mount.

3. The two ribs glued at right angles. The vertical groove is facing the back and later takes the „surface anchors“ on.

4. Now place the servo board flat and glue the unit built at right angles.
5. Wing support, rib and screw holder are mounted.

6. Turn the frame.

7. The battery board and motor support are vertical to each other and mounted to the frame.

8. Side pieces are glued. The top balsa piece (cockpit back plate) is glued.

9. Insert the both left over fuselage pieces. Every part should be aligned, fixed and glued. The top fuselage piece is glued in place for better alignment.

10. The elevator support is glued.
11. 3 x 4 mm borders (brown edge facing up) are glued.

Tip:
The borders are 1 mm further up compared to the frame. They are sanded slightly.

12. A border is glued to the centre of the underside. Looking at part F4, it is sanded from the border to the outside.

13. The side borders are fitted and glued.

14. In the front fuselage part, a 4mm balsa border is fitted along the edge, glued and sanded.

15. The 2 mm balsa covering is formed and glued into place.

16. From 2 x 6 mm balsa pieces the fuselage nose is glued into place.
17. The fuselage nose is sanded.

18. Lay the lid frame in the fuselage and placed the balsa pieces on top. To prevent lid frame being stuck to the fuselage, a sheet of paper or plastic wrap is placed in between. 3 x 4 mm strips are drawn (note position).

19. The cover is laid flat on the building board and fixed.

20. The planking of the lid is done from outside to the inside. To avoid tipping up, balsa sheets are glued to the outside.

21. Balsa is later put in place from the inside.

22. Sand edges.
23. To bend the undercarriage wire, use the cut-out from the support as reference.

24. It is recommended to apply a dummy empennage made of 4 mm balsa rest. It is applied and removed later. This will help you to align the empennage.

25. Small pieces of 6 mm balsa are cut, placed on the fuselage and glued at the front. The shape is not important as it will be done by sanding later on.

26. The rear incl. dummy empennage is now sanded.

27. After removing the dummy the gaps for the empennage appear.

28. The undercarriage is fixed with a piece of ply.
29. The Bowden wire (not incl.) is installed.

30. Assembly elevator and rudder servo.

31. Carve 1,5mm into the ribs the covering foil will lay on later. This will avoid edges in the foil later on.

32. Mount the rear wheel wire to the rudder.

33. Both elevator pieces are connected with 1,5mm spring wire.

34. Spring wire sunk-in elevator.
35. Template for cockpit window.

36. The cockpit window is folded along the diagonal edge.

37. The undercarriage covering is made of 3 layers of balsa. The first piece is made of 1,5 mm balsa with a little overlay. For filling, use 3 mm balsa.

38. Last step is to apply a 1,5 mm balsa piece and sand all edges.

39. “Cylinder head”

40. Mounting the wheel pants
   Two pieces of 4 x 6 mm balsa are needed. The wheel pants are later glued to the undercarriage wire.
41. Sanded wheel pants.

42. The rudders are sanded either on one side for paper hinges or both sides for plastic hinges.

43. Supports for the wing spar are glued into place.

44. Ribs are applied to the wing spar in sequence R2 – R9.

45. Insert the last wing spar.

**Tip:**
The wing can also be built on the plan. However, a line in right angle on the building board is efficient as well. Make sure to glue once everything is aligned.

46. Rudder bars are applied to the grooves in an angle.
47. The servo frame is 1.5 mm higher than the wing spar. The planking later one will even it out.

48. Rib No. 1 in a right angle to the wing spar.

49. Some ribs are higher than the wing spar. Also this part is evened out later on by planking.

50. Start with the front lower planking. To do so, the plan should be fixed to the building board.

51. The top planking is fixed with tape.

52. Damp balsa is easier to bend.
53. If all is dried, start with the inner/ lower planking.

54. The final edge is filled approx 25 mm upwards so the wing screws do not push through.

55. Final edge and ribs are supported with small balsa triangles.

56. Top planking of the wing.

57. Now the leading edge can be applied and sanded. Before doing so, make sure all is aligned properly.

58. The free space between R1 and R2 is filled with 4 mm wood and sanded.
59. Sand the final edge.

60. The tip is made of 4 layers with 6 mm wood each layer.

61. Sand the curved edge.

62. Curved edge

63. Now the curved edge is sanded right to its original shape.

64. Cut out the aileron and sand it.
65. Now the wings can be put together.

66. If the main wings do not fit the fuselage...

67. ... a 4 mm piece of wood is applied until...

68. ...... the main wings fit the fuselage nicely.

69. To avoid creases in the covering foil around the rudder horn, a frame is build from 1,5mm balsa. Once the model is covered this gap can be cut out for the rudder horn to be fitted.

70. Servo mounting.
71. Assemble the elevator and rudder servo as shown.

72. The finished build shell.

**Set-up:**

- Aileron: +/- 10 mm deflection
- Elevator: +/- 10 mm deflection
- Rudder: +/- 25 mm deflection
- CG: 40 mm from the nose
- Down thrust: ~ 2° down (already installed)
- Traction: ~ 2 - 2.5° to the right (depending on motor and propeller)

**Recommended Accessories**

- **Ord. No. 13 2217**
  Motor A2217/8-BI
- **Ord. No. 08 1925**
  Controller Xetronic 25A
- **Ord. No. 34 0056**
  Propeller
  APC electro 9 x 6
- **Ord. No. 14 1368**
  Battery
  LiPoStar Turbo 1800mAh 3N
- **Ord. No. 17 4412**
  4 x Servo
  XT-9
- **Ord. No. 17 7312**
  Tail Skid wheel steerable
  25 mm complete
Plane - The original sized plan can be found on the DVD
Plane - The original sized plan can be found on the DVD

Main wings
**Fuselage**

**SPACEWALKER I**

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*Plane - The original sized plan can be found on the DVD*
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