INTRODUCTION
Thank you very much for selecting this Serpent rc car and thus become a member of the ever growing worldwide Serpent racing family. Serpent started in 1980 and has been growing its product-line and fan-base ever since.

The Serpent Spyder SDX4 EVO is a state of the art 1/10 scale 4wd buggy which will give you the true Serpent racing experience. The assembly manual will guide you through all the steps to complete the car, so you can hit the track with a good base-set-up soonest. The Serpent design department succeeded to create a superbly performing car combined with ease of assembly and maintenance. The high quality standards of all parts and hardware will make racing your Serpent car a very rewarding activity!

Through our team, website and social media we will keep you up-to-date on all developments of the Serpent cars. We hope to meet you on the track and through our various media! Enjoy the drive!

Team Serpent
Multiple World Champions

INSTRUCTIONS
Serpent's long tradition of excellence extends to the instruction manuals, and this instruction manual is no exception. The easy-to-follow layout is richly illustrated with 3D-rendered full-color images to make your building experience quick and easy. Following the instructions will result in a well-built, high-performance race-car that will soon be able to unleash its full potential at the racetrack. The kit includes bags, with bagnumbers, which refer to the same step in the manual. Open only the indicated bag(s) per step and finish that part of the assembly. Remaining parts will be needed lateron in the assembly process.

PLASTIC PARTS
The Serpent moulded parts are very durable and hard. When assembling longer screws in new composite parts, make sure to use new hex bits in your (power) tools. Pre-threading also helps to avoid screw damage.

SETUP
In certain assembly steps you need to make basic adjustments, which will give you a good initial setup for your Serpent Spyder SDX4 EVO. Fine-tuning the initial setup is an essential part of building a high-performance race-car like your Serpent Spyder SDX4 EVO.

EXPLODED VIEWS AND PARTS LIST
The exploded views and parts lists for the Serpent Spyder SDX4 EVO are presented in the Reference Guide section in the back of this manual. The exploded views show all the parts of a particular assembly step along with the Serpent part number and hotlink to the Serpent website. Partnumbers in orange indicates that this part is an optional. Optionals part names and numbers are showed below.

CUSTOMER SERVICE
Serpent has made a strong effort to make this manual as complete and clear as possible. Additional info may be published in our website: www.serpent.com or you may ask your dealer or the Serpent distributor for advice, or email Serpent direct: info@serpent.com. The Serpent Facebook, Twitter and Youtube pages give additional means of support and communications.
HOW TO USE THE MANUAL

LINES DESCRIPTION
Each step contains a variety of numbers, lines, and symbols. The numbers represent the order in which the parts should be assembled. The lines are described below.

1 2 3
Step number; the order in which you should assemble the indicated parts

Length after assembly

Assembly path of one item into another

Group of items (within lines) should be assembled first

Direction the item should be moved

Glue one item to another

Connect one item to another

Gap between two items

Press/Insert one item into another

ICONS DESCRIPTION
Each step contains a variety of symbols described below.

Careful, read and check very well.

Apply a small amount of cyano glue. Use wear protection for eyes and hands.

Detail view to explain assembly or order of parts better.

Default set-up: This symbol indicates the default setup.

Grease: apply a small amount of grease to the parts shown.

Silicone grease: apply a small amount of grease to the parts shown.

Thread lock: apply a small amount on the parts shown. Before to apply the threadlock, make sure to degrease the parts very well, as otherwise the threadlock will not work.

Silicone oil: use the indicated silicone oil for the shocks and differentials.

Oil: apply a small amount of oil to the parts shown.

Left and right parts should be assembled in the same way.

Parts or items not included in the kit.

Optional part, not standard in the kit.
Follow step 1 to 5 twice to assemble 2 diffs, 1 for the front and 1 for the rear.
Check the default set-up sheet to find the right values for the silicone oil. Be aware that front and rear diff-settings may differ.

**STEP 2**

Add just enough oil to cover the large gear before assembling the small satellite gears and cross pins. Use the silicone oil supplied in the kit. For the correct cst value please check the default set-up sheet.
**STEP 3**

**STEP 4**

Fill the differential with silicone oil 1 mm above the crosspin, do NOT overfill. Use the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.

**STEP 5**

Do not overtighten the screws. There is always a gap between both sides of the diff housing.

- Fill the differential with silicone oil 1 mm above the crosspin, do NOT overfill. Use the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.

- Differential weight = 19.5 grams

- Use a digital scale to measure the exact amount of oil in the diff.

- Complete diff assembly
For the correct assembly of the rear suspension bracket follow the next instructions:
1- Assemble M3x18 screws to align the suspension bracket.
2- Fix the camber bracket with the M3x6 screw.
3- Remove M3x18 screw and proceed with step 7.
STEP 7

- M3x18
- M3x10
- M3x8
- M3x6
**STEP 8**

Nylock Nut M3

M3x18

**STEP 9**

**9.1**

M3x8

**9.2**

M3x8
The rear suspension bracket can be used in two different positions to adjust the anti-squat angle from 3 to 1 degrees.

**3 DEGREES**

**1 DEGREE**
**STEP 12**: Bag 2

13.1 Note the correct assembly of the bevel gear.

13.2

**STEP 13**

Assemble the REAR diff.

1. 10x15x4
2. 10x12x0.1
3. M3x8

**STEP 14**

1. 10x12x0.1
2. 10x15x4
3. M3x8

5x10x4

M3x8

10x15x4

Note the correct assembly of the bevel gear.
STEP 18

Nylock Nut M3

OIL

REAR DEFAULT WHEELBASE SHIMS
**STEP 19**

**STEPT 20**

### 20.1

REAR CAMBERLINK LENGTH

26.5 mm

### 20.2

**Pivotball long**

Nylock Nut M3

Nylock Nut M3
**22.1** L=R

**22.1** L=R

**Step 22**
- **Bag 4**
- **FRONT ASSEMBLY**
- **M2.5x4**
- **M2.5x4**

**Step 23**
- **FRONT ANTIROLL BAR ROD LENGTH**
- **5 mm**
- **3x6x0.5**
- **3x6x1**
- **3x6x0.1**
Note the correct assembly of the bevel gear.
29.1  
1. Place the caster shims in the bushings
2. Place the bushings and shims onto the casterblock.
3. Slide the steering block assembly onto the caster-block and fix with the M3x12 screws.

29.2  
1. Place the caster shims in the bushings
2. Place the bushings and shims onto the casterblock.
3. Slide the steering block assembly onto the caster-block and fix with the M3x12 screws.

29.3  
3x6x0.5

Nylock Nut M3

Nylock Nut M3

3x5x1

5x10x4

5x13x4

M3x6

5x13x4

M2x5

2x10

M3x6

M3x6

M2x5

3x6x0.5

M3x16
**STEP 30**

**STEP 31**

31.1 FRONT CAMBERLINK LENGTH

24 mm

31.2 Pivotball short

Pivotball long

Nylock Nut M3

**FRONT CAMBERLINK POSITION**

M3x8

3x6x1

Nylock Nut M3

3x5x1
**STEP 32**

**32.1**
- M3x6

**32.2**
- M3x6

**STEP 33**

**33.1**
- Nylock Nut M3
- STEERING ROD LENGTH: 24 mm

**33.2**
- Nylock Nut M3
- 3x6x1
Check how many teeth your servo spline has (23, 24 or 25) and use the right lever.
SLIPPER ASSEMBLY

STEP 38

SLIPPER INITIAL SETTING

0.5 to 1 mm

STEP 39

39.1

2x10

10x15x4 Flanged

39.2

2x10

10x15x4 Flanged

10x15x4 Flanged
The motormount and bulkhead can be used in two different positions to change the weight distribution.

**REAR MOTOR CONFIGURATION**

**DEFAULT**

**REAR MOTOR**

**FRONT**

**REAR**

**REAR FORWARD MOTOR**

**FRONT MOTOR CONFIGURATION**

**OPTIONAL**
In case of using the motormount and bulkhead in the forward position the SHORT driveshaft must be assembled in the FRONT and the LONG driveshaft must be assembled in the REAR.
STEP 42

42.1 REAR MOTOR CONFIGURATION DEFAULT

42.2 FRONT MOTOR CONFIGURATION OPTIONAL
STEP 43

43.1

43.2

STEERING LINK LENGTH
30 mm
**Step 44**

**Bag 9 FR Shocks / Bag 18 RR Shocks**

1. **44.1**
   - Use some silicone oil during the assembly.

2. **44.2**
   - Insert the o-ring inside the spring collar.

**Step 45**

1. **45.1**
   - Note the correct orientation of the shock spacers.
   - For the correct piston holes and size please check the default setup sheet.

2. **45.2**
   - Note the correct position of the o-ring.
   - Use some silicone oil during the assembly.

- **Nut M2**
- **2.5x6x0.5**
- **1.25mm**
- **0.75mm**
**STEP 46**

**46.1**

1- Fill up with silicone oil fully using the silicone oil supplied in the kit. For the correct cst value please check the default setupsheet.

2- Extend the shockrod fully

3- Move the shockrod slowly up and down to let ALL air bubbles escape.

4- Apply the gasket and cap and close fully.

**46.2**

1- Bleed: push the shockrod all the way in slowly, to allow excessive oil to escape.

2- With shockrod fully in, mount the o-ring and screw.

**STEP 47**

Shocks Length: Measure the shock length fully extended.

Assemble the spring and spring-cup (align correctly) to complete the shock.
**STEP 48**

Do not overtighten or squash bushing with the nut and note orientation of the lower shock pivot ball.

**M3 Plastic Nut Flanged**

**M3x12 Flanged**

**FRONT SHOCKS**

**DEFAULT POSITION**

**L-R**

**M3x20**

**M3x12 Flanged**

---

**STEP 49**

Do not overtighten or squash bushing with the M3 plastic nut.

**M3 Plastic Nut Flanged**

**M3x12 Flanged**

**REAR SHOCKS**

**DEFAULT POSITION**

**L-R**

**M3x20**

**M3x12 Flanged**
**FINAL ASSEMBLY**

**STEP 58**

**REAR MOTOR CONFIGURATION**

*DEFAULT*

Use double sided tape to mount the ESC and RX to the chassis.

**FRONT MOTOR CONFIGURATION**

*OPTIONAL*

To avoid the car to run backwards when using this configuration, there are 2 options:

1. Change the speedo setting to “REV” (= reverse), if your speedo allows this.
2. If not take out both differentials and turn them 180 degrees.

Use double sided tape to mount the ESC and RX to the chassis.
51.1 Rear Motor Configuration

**Default**

Pinion is not included in the kit. Assemble the proper pinion for your set-up.

- M3x10

51.2 Rear Motor Configuration

**Optional**

- M3x10

51.1 Front Motor Configuration

**Default**

Pinion is not included in the kit. Assemble the proper pinion for your set-up.

- M3x10

51.2 Front Motor Configuration

**Optional**

- M3x10
1- Rims included in the kit.
2- Rubber tyres not included in the kit.
3- Be sure to glue your rubber tyres to the wheels using Cyanoacrylate glue.
1- Cut the body along the cutting line with special scissors (not included). Make holes for the bodypost and antenna as needed with a body reamer (not included).

2- Before painting the body, apply the precut masking sheet elements to the inside of the body. Follow the cleaning & painting instructions supplied by the polycarbonate paint supplier you choose.

3- Apply the Serpent and Spyder logo-decals on the body and wing.
## INDEX

<table>
<thead>
<tr>
<th>Exploded View</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gear Diffs Exploded View</td>
<td>37</td>
</tr>
<tr>
<td>Slipper Exploded View</td>
<td>38</td>
</tr>
<tr>
<td>Front and Rear Gearboxes Exploded View</td>
<td>39</td>
</tr>
<tr>
<td>Central Exploded View</td>
<td>40</td>
</tr>
<tr>
<td>Transmission Exploded View</td>
<td>41</td>
</tr>
<tr>
<td>Rear Exploded View</td>
<td>42</td>
</tr>
<tr>
<td>Front Exploded View</td>
<td>43</td>
</tr>
<tr>
<td>Steering Exploded View</td>
<td>44</td>
</tr>
<tr>
<td>Final Exploded View</td>
<td>45</td>
</tr>
<tr>
<td>Team Serpent Network</td>
<td>46</td>
</tr>
</tbody>
</table>
GEARDIFF AND SLIPPER EXPLODED VIEW

GEARDIFF
500675 Geardiff set fr/rr V2 SDX

SLIPPER

500582 Slipper plates SDX (1+1+1)
500675 Geardiff set fr/rr V2 SDX
500676 Geardiff set center V2 SDX

500213 Spur gear 70T SRX2
500214 Spur gear 72T SRX2
500215 Spur gear 76T SRX2
500216 Spur gear 78T SRX2
500217 Spur gear 80T SRX2
500218 Spur gear 82T SRX2
500219 Spur gear 84T SRX2
500220 Spur gear 88T SRX2
500213 opt
500214 opt
500215 opt
500216 opt
500217 opt
500218 opt
500219 opt
500221 opt
500582 opt
500582 opt
FRONT EXPLODED VIEW

500611 Antirollbar FR 1.0mm SDX
500612 Antirollbar FR 1.2mm SDX
500614 Antirollbar FR 1.6mm SDX
500615 Antirollbar FR 1.8mm SDX
500611 opt Antirollbar FR 1.0mm SDX
500612 opt Antirollbar FR 1.2mm SDX
500614 opt Antirollbar FR 1.6mm SDX
500615 opt Antirollbar FR 1.8mm SDX
500544 opt C-hub 5deg L+R alu SDX
500625 opt C-hub 0deg (2) alu SDX
500626 opt C-hub 2deg L+R alu SDX
500627 opt Suspension bracket FR-FR plus 2 SDX
500627 opt Wishbone insert carbon FR Upper (2) SDX
500636 opt Wishbone insert carbon FR Upper (2) SDX
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www.dragon-rc.com

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