Welcome to the Serpent owners network!

By buying the Cobra GTe, you have become part of the fast growing base of Serpent drivers around the world, active in most classes of rc car racing. Serpent racers share their knowledge and experiences on the tracks and on the internet, so join in!

The Serpent Cobra GTe is a high-end racing car, for competition purposes. The Serpent Cobra GTe offers state of the art specifications and leads the way in 1/8 electric on-road chassis design, using all the knowledge our designers have gathered from racing on-road cars for over 30 years, into this design too. Continuously pushing the performance envelope. Designed, tested and raced by Billy Easton, USA. World Champion.

All information about the Serpent Cobra GTe is accessible from the Serpent Cobra GTe product page which can be found on Serpent.com and can be accessed by simply typing serpent.com/600040 into your web browsers address bar.

From the Serpent Cobra GTe product page you will find the very latest information about your car: reports by team drivers and other experts, tips and tricks, setups, image gallery and downloadable files including the latest version of the instruction manual is available as downloadable PDF-files.

Enjoy assembly, preparations and racing!

Team Serpent

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Safety
Read and take note of the ‘Read this First section’ before proceeding to assemble the car-kit. This car-kit is intended for persons aged 16 or older.

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.

Instructions, how to use
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 later on in the assembly process.

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.

SETUP
In certain assembly steps you need to make basic adjustments, which will give you a good initial setup for your Serpent S811-B. Fine-tuning the initial setup is an essential part of building a high-performance racecar like your S811-B.

Exploded views and partslist
The exploded views and parts lists for the Serpent S811-B 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. The parts lists indicate the part number and name of each part for easy reference when ordering.

Read this first!
- This is a highly technical hobby product, intended to be used in a safe racing environment. This car is capable of speeds in excess of 80 kph or 50mph. Please follow these guidelines when building and operating this model.
- Parental guidance is required when the builder/user of this car is under 16.
- Follow the building instructions. If in doubt, contact your dealer or importer.
- Be sure to use the proper tools when assembling the car. Always exercise caution when using electric tools, knives and other sharp objects.
- Be careful when using liquids like lubrication oil, fuel or glue. Do not swallow.
- Follow the manufacturer’s instruction in case you experience irritation after using the product.
- Be careful when operating the car. Stay away from any rotating parts such as wheels, gears and transmission. Stay away from motor, engine and exhaust pipe system or speedo during and immediately after use, as these parts may be very hot. We advise to use protective hand gloves.
- Only operate this car in a safe environment, like a special racing track or a closed parking lot. Avoid using this car on public roads, crowded places or near infants.
- Before operating this car, always check the mechanical status of the car. Also check that the transmitter and receiver frequencies correspond and are not used by any other racer at the same time. Check that the batteries of the transmitter and receiver are fully charged.
- After use, always check all the mechanics of the car. We advise to clean the car immediately after use, and inspect the parts for wear or fractures. Replace when necessary. Do not use water, methanol, thinner or other solvents to clean the car.
- Empty the fuel tank (depending on model) if needed and disconnect the receiver battery.
- Store the car in a dry and heated place to avoid corrosion of metal parts.
- Avoid using this car in wet conditions as the water will cause corrosion on the metal parts and bearings and these parts will cease to function properly. If driven in the wet, ensure that all the electric equipment is waterproofed and after use, that all moving parts are dried immediately.

USING THE MANUAL

Apply transmission grease (Grey) included

CA Glue* (Red) NOT included

Threadlock* (Blue) NOT included

Apply silicone oil included

Step number; the order in which you should assemble the indicated parts
Length after assembly / Gap between two items
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
Press/Insert one item into another
Connect one item to another
Differential Center

Use silicone oil to hold seal in position.

Add 2mm oil before assembling the gear.

Check default SET-UP sheet for CST value of the silicone oil.
Differential Front/ Rear

1. Use silicone oil to hold seal in position.

8x14x4 flanged

2. Use silicone oil to fill just over the gear shaft.

Check default SET-UP sheet for CST value of the silicone oil.
CENTER DIFF MOUNT
Use 14x15.6x0.2 shims to adjust the proper gear mesh.

Use 13x19x4 for M4x4.

Use transmission grease.

Use threadlock on this screw.
proper insert orientation in the rear bracket, left and right equal type

proper insert orientation in the front bracket, left and right equal type
use threadlock on this screw

1. M3x4
2. 8x16x5
3. 2.5x17
4. M5x4
5. 2.5x15
6. M3x4
7. 15x21x4
8. M3x22
9. M3
10. Nylock nut
Use 14x15.6x0.2 shims to adjust the proper gear mesh.

TIP:
Use 14x15.6x0.2 shims to adjust the proper gear mesh.

use transmission grease

use threadlock on this screw

M3x16

M3x20

M3x16
proper insert orientation in the rear bracket

proper insert orientation in the front bracket

TIP

TIP

M3x16

M3x12 Flanged

competitionx

A WEB SITE FOR THE SERIOUS RACER
NOTE:
C-hubs show L or R indication

use transmission grease

use threadlock on this screw

Left hand side
use threadlock on these screws
Use shims to allow servolever to clear radiobox by 0.5 to 1.0mm (see step C6)

Insets:
23T Sanwa / KO / JR
24T Hitec
25T Futaba
Place locktight on M3x12 screw as well as M3x8

Adhesive

NOT INCLUDED

Adhesive

Adhesive

NOT INCLUDED
FRONT/REAR SHOCK ASSEMBLY

- Apply some silicone oil to assemble the O-rings
- Apply some silicon oil
- Apply some silicon oil
- Fill up with silicon oil
- Wait for air bubbles to escape
- Close top only 3/4
- Check default SET-UP sheet for CST value of silicone oil
- FRONT Yellow springs
- REAR Purple springs

- Close top fully
- Push all the way in

- M2.5x6
- Push membrane into the shock top
- 33mm

- Use some threadlock
SHOCK MOUNTING

Nylock M4 Flanged

M3x4

M3x8

M3x4

Nylock M4 Flanged

M3x8

M3x4
Use Threadlock on all of these screws.
WHEELS NOT INCLUDED
### December

**S811 GTE**

#### Manual & Decals
- Decal sheet S811 GT
- Manual S811 GTE

#### Ball Bearings
- Ballbearing 5x8 flanged SS (2)
- Ballbearing 5x8x2 (2)
- Ballbearing 5x10x4 SS (2)
- Ballbearing 6x10x3 SS (2)
- Ballbearing 15x21x4 SS (2)
- Ballbearing 13X19X4 SS (2)
- Ballbearing 8x14x4 flanged SS (2)
- Ballbearing 8x19x6 SS (2)
- Ballbearing 8x16x5 SS (2)

#### Bearingset 811-E
- Bearingset small S811 v2 (12)

#### Radio Installation / Battery
- Antenna rod black (2)
- Balljoint set (19)
- Battery radiobox 811-E
- Steering balljoint + lever 811-E
- Battery foam pad (2)
- Pivotball double straight (3)
- Servo spacers (8)

#### Radio Installation / Battery option
- Servo lever 23T 811-E alu
- Servo lever 24T 811-E alu
- Servo lever 25T 811-E alu

#### Servo Saver & Steering
- Servosaver spring
- O-ring servosaver nut (4)
- Servo saver set nylon (3)
- Balljoint set (19)
- Topdeck front carbon
- Steeringrack mount
- Servosaver adjust nut
- Servosaver shaft outer
- Steeringrack option 3
- Bolt steeringrack (2)
- Pivotball 6mm steering (4)
- Servosaver post (2)
- Spacer steering post (2)
- Steering balljoint + lever 811-E
- Steeringblock L+R V2
- Pivotball double straight (3)

#### Shock Absorbers
- Shock membrane (10)
- O-ring shock bottom (10)
- O-ring shock nut (10)
- Shock part frame nylon (10)
- Shock pistons (4x4)
- Adjust nut shock / oring (2)
- Shock top alu black (2)
- Shock mount (2)
- Washer shock shaft (4)
- Pivotball 6.75 double (4)
- Shock cartridge stepped (4)
- Shock cartridge (4)
- Shock revision set (20)
- Shock body alu 811GT (2)
- Shock shaft 811GT (2)
- Shockset fr/rr 811GT (2)

#### Shock Absorbers option
- Shock bushing delrin (4)
- Shock spring support alu (4)
- Shock top 7075 hard anodized (2)
- Shock pistons conical 6 hole (4)
- Shock pistons conical 8 hole (4)
- Shock pistons conical 10 hole (4)
- Membrane webbed silicone (4)
- Shock piston square 8 hole (4)

#### Shock Springs
- Spring Fr/RR Red 811GT 18lbs (2)
- Spring Fr/RR Purple 811GT 21lbs (2)
- Spring Fr/RR Yellow 811GT 29lbs (2)
- Spring Fr/RR White 811GT 31.5lbs (2)
- Spring Fr/RR Silver 811GT 34.5lbs (2)
- Spring Fr/RR Black 811GT 37lbs (2)

#### Chassis / Guards
- Chassis brace FR + RR 811-E
- Body post front 811GT (3)
- Bumper 811GT
- Bodymount rear 811GT
- Chassis alu 811GT
- Foam bumper 811GT

#### Chassis / Guards Optional
- Chassis brace front alu 811-E
- Chassis brace rear alu 811-E
- Chassis S811E hard anodized
- Transmision brace tube alu

#### Front Section
- Wheelaxle clip (4)
- Drive shaft 98mm (2)
- Hingepin (2)
- Washer/nut nylon M3 (12+15)
- Diff case front set
- Balljoint set (19)
- Suspension bracket inserts (30)
- Wishbone front L+R
- Topdeck front carbon
- Steeringrack mount
- Camberlink pivotball (4)
- Antirollbar nut (2)
- Suspension bracket alu FR RR std
- Suspension bracket alu FR FR std
- Shim conical M3x7.5x1 (10)
- Bolt steeringrack (2)
600183 Bushing suspension arm (4)
600185 Pivotball 7.5 double (4)
600186 Track rod M4x51 (2)
600187 Track rod M5x46 (2)
600190 Pin steering block (4)
600192 Pivotball antirollbar (2)
600193 Pivotball threaded antirollbar (2)
600197 Driveshaft insert (2)
600222 Wheel nut 17mm (4)
600224 Bolt shock (4)
600225 Droop screw (4)
600241 Antiroll bar front 2.5mm
600326 Special screw fr whisbone (4)
600365 Spacers 1.25mm + 2.5mm wheelbase (4+2)
600373 C-Hub truggy L+R
600381 Gear coupler rubber boot (2)
600427 Gear coupler V3
600473 Gear coupler sleeve (2)
600478 Wheelaxle FR V2 (2)
600481 Steeringblock L+R V2
600495 Diff pinion 13T
600499 Pivotball double straight (3)
600501 Complete FR/RR 44T diff
600503 Steeringblock-wheelaxle set 811 V2
600581 Body post front 811GT (3)
600584 Wheelhexagon set 811GT (2)
600612 Shocktower carbon fr 811GT
903343 Antirollbar Spacer 3mm (2)

**Front Section Optional**
600240 Antiroll bar front 2.3mm
600242 Antiroll bar front 2.7mm
600263 Washer M3 alu (12)
600269 Track rod M5x46 titanium (2)
600271 Track rod M4x51 titanium (2)
600273 Shock mount titanium (2)
600274 Wheelhexagon light -2mm (2)
600275 Wheelhexagon light -1mm (2)
600276 Wheelhexagon light -0mm (2)
600297 Lightweight wheel nut 17mm (4)
600309 Antiroll bar shaft FR
600311 Antiroll bar wire 1.8mm (2)
600312 Antiroll bar wire 2mm (2)
600313 Antiroll bar wire 2.1mm (2)
600314 Antiroll bar wire 2.3mm (2)
600315 Antiroll bar wire 2.5mm (2)
600316 Antiroll bar wire 2.7mm (2)
600336 Antiroll bar front 1.8mm
600337 Antiroll bar front 2.0mm
600343 Feature steering block alu (8)
600374 C-Hub truggy 14 L+R alu
600484 Antirollbar spacer alu (2)
600485 Pivotball anti roll bar (2)
600486 Bushing suspension arm fr alu (4)
600487 Bolt shock titanium (4)
600490 Hingepin fr / rr TiN coated (2)
600497 Steeringblock L+R V2 alu
600498 Delrin sleeve for alu upright/steeringblock (2)
600499 Wheelhexagon light +1mm /nut/pin (2)
600503 Wheelhexagon light +2mm /nut/pin (2)
600504 Wheelhexagon light +3mm /nut/pin (2)
600622 Pivotball antirollbar alu (4)
600611 Steeringblock Alu 0-Deg L+R

**Middle Section**
600100 Exhaust mounting wire (2)
600119 Center diff holder parts (3)
600131 Balljoint set (19)
600197 Driveshaft insert (2)
600198 Spurgear 46T
600381 Gear coupler rubber boot (2)
600443 Center diff cover 811-E
600444 Driveshaft center FR 811-E
600446 Motor mount set 811-E
600447 Motor slider 811-E
600471 Driveshaft center RR 811-E
600472 Gear coupler V3
600473 Gear coupler sleeve (2)

**Middle Section Option**
600279 Spur gear 44T
600280 Spur gear 46T
600286 Center diff holder alu (2)
600606 Spurgear 46T composite
600607 Spurgear 48T composite
600608 Spurgear 50T composite

**Rear Section**
600101 Wheelaxle clip (4)
600444 Driveshaft center FR 811-E
600108 Hingepin (2)
600126 Washer/nut nylon M3 (12+15)
600130 Diff case rear set
600131 Balljoint set (19)
600132 Suspension bracket inserts (30)
600134 Wishbone rear L+R
600155 Suspension bracket RR RR 3
600156 Suspension bracket RR FR 2
600168 Camberlink pivotball (4)
600174 Antirollbar nut (2)
600178 Shim conical M3x7.5x1 (10)
600185 Pivotball 7.5 double (4)
600188 Track rod M5x53 (2)
600189 Hingepin RR outer (2)
600192 Pivotball antrollbar (2)
600193 Pivotball threaded antrollbar (2)
600197 Driveshaft insert (2)
600222 Wheel nut 17mm (4)
600224 Bolt shock (4)
600225 Droop screw (4)
600237 Antiroll bar rear 2.3mm
600365 Spacers 1.25mm + 2.5mm wheelbase (4+2)
600365 Spacers 1.25mm + 2.5mm wheelbase (4+2)
600381 Gear coupler rubber boot (2)
600418 Upright truggy L+R
600472 Gear coupler V3
600473 Gear coupler sleeve (2)
600474 Wheelaxle RR V2 (2)
600475 Wheelaxle boot RR (2)
600477 Driveshaft RR V2 (2)
600495 Diff pinion 13T
600499 Pivotball double straight (3)
600501 Complete FR/RR 44T diff
600583 Body mount rear 811GT
600584 Wheelhexacon 811GT (2)
600613 Shocktower carbon rr 811GT
903343 Antirollbar Spacer 3mm (2)

**Rear Section Option**
600204 Bolt transmission brace rear (2)
600223 Wheelhexagon (4)
600238 Antiroll bar rear 2.5mm
600239 Antiroll bar rear 2.7mm
600261 Socket screw M3x8 (6)
600263 Washer M3 alu (12)
600255 Suspension bracket RR FR 2.5 - 4.5
600266 Suspension bracket RR RR HR 3
600267 Suspension bracket RR LL 3
600278 Track rod M5x53 titanium (2)
600273 Shock mount titanium (2)
600247 Wheelhexagon light -2mm (2)
600257 Wheelhexagon light -1mm (2)
600267 Wheelhexagon light -0mm (2)
600297 Lightweight wheel nut 17mm (4)
600308 Suspension bracket RR FR 2.5 - 4.5
600310 Antiroll bar shaft RR
600311 Antiroll bar wire 1.8mm (2)
Differential

110431 Shim 8x11x0.2 (10)
600147 Diff gasket (3)
600200 Diff outdrive (2)
600205 Shim 13x16x0.2 (10)
600208 Diff pin 10T (2)
600210 Diff pin outdrive (2)
600212 Shim 14x15.5x0.65 (10)
600213 Shim 6x11.75x0.2 (10)
600214 Shim 3.5x12x0.2 (10)
600215 Shim 8x11x0.2 (10)
600325 Diff uni wide (10)
600354 Shim 14x15.5x0.65 (4)
600356 Shim 14x15.5x0.2 (10)
600381 Gear coupler rubber boot (2)
600421 Oring centerdiff V2 (10)
600425 Diff housing V2
600472 Gear coupler V3
600473 Gear coupler sleeve (2)
600480 Diff gear 44T
600495 Diff pinion 13T
600501 Complete FR/RK 44T diff
600627 Diff gear 10T + 20T (4+2) V2

Differential Optional

600283 Diff pin 10T alu (2)
600281 Diff gear 43T
600211 Diff pinion 10T
600323 Diff Fr / Rr 43T
600606 Spur gear 46T composite
600607 Spur gear 48T composite
600608 Spur gear 50T composite

Pinions

600456 Pinion 16T

Pinions Optional

600452 Pinion 12T
600453 Pinion 13T
600454 Pinion 14T
600455 Pinion 15T
600457 Pinion 17T
600458 Pinion 18T
600459 Pinion 19T
600460 Pinion 20T

Body

1667 Body-clip medium (10)
600581 Body post front 811GT (3)
600583 Bodymount rear 811GT

FASTNERS

110100 Screw allen countersunk m3x10 (10)
110101 Screw allen countersunk m4x8 (10)
110102 Screw allen countersunk m4x10 (10)
110103 Screw allen countersunk m4x16 (10)
110104 Screw allen countersunk M3x8 (10)
110105 Screw allen countersunk M4x12 (10)
110106 Screw allen flanged roundhead m5x12 (10)
110107 Screw allen cilinderhead m3x16 (10)
110108 Screw allen roundhead m3x6 (10)
110109 Screw allen roundhead m3x10 (10)
110110 Screw allen roundhead m3x16 (10)
110111 Screw allen roundhead m3x14 (10)
110112 Screw allen roundhead m3x12 (10)
110113 Screw allen roundhead m4x8 (10)
110114 Setscrew allen m3x8 (10)
110115 Setscrew allen m3x4 (10)
110116 Setscrew allen m3x3 (10)
110117 Setscrew allen m3x12 (10)
110118 Setscrew allen m4x4 (10)
110119 Setscrew allen m4x6 (10)
110120 Setscrew allen m4x10 (10)
110121 Setscrew allen m5x6 (10)
110122 Screw allen countersunk m3x6 (10)
110123 Screw phillips head countersunk 3.5x13 (10)
110124 Screw allen countersunk m3x8 (10)
110125 Screw allen countersunk m3x20 (10)
110126 Screw allen countersunk m2.5x12 (10)
110127 Screw Allen countersunk m3x12 (10)
110128 Screw allen roundhead m3x5 (10)
110129 Screw allen cilinderhead m3x10 (10)
110130 Screw allen roundhead m2.5x6 (10)
110131 Screw allen roundhead m2.5x10 (10)
110132 Screw allen countersunk m3x16 (10)
110133 Screw phillips head countersunk 2.5x8 wide (10)
110134 Screw phillips head countersunk 2.5x10 wide (10)
110135 Screw allen countersunk m2.5x10 (10)
110136 Screw allen countersunk m2.5x8 (10)
110137 Setscrew allen m3x6 (10)
110138 Screw allen countersunk M4x14 (10)
110139 Screw Allen countersunk M3x40 (10)
110140 Screw allen roundhead M3x20 (10)
110141 Screw allen roundhead M3x22 (10)
110142 Screw allen roundhead M3x25 (10)
110143 Screw allen roundhead M4x18 (10)
110144 Screw allen roundhead M3x18 (10)
110145 Screw allen roundhead flanged M3x12 (10)
110146 Screw allen roundhead flanged M3x16 (10)
110147 Screw ph roundhead widethread 2.5x5 (10)
110148 Setscrew allen M5x4 (10)
110149 Screw allen countersunk M2x10 (10)
110150 Screw M6x12 nylon black (2)
110151 Screw allen cilinderhead M4x10 (10)
110152 Screw allen cilinderhead M3x8 (10)
110153 Screw allen roundhead M2.3x6 (10)
110154 Setscrew allen M3x10 (10)
110155 Setscrew allen M3x5 (10)
110156 Screw allen countersunk M2.2x6 (10)
110157 Screw allen countersunk M3x5 (10)
110158 Screw allen countersunk M3x15 (10)
110159 Screw allen countersunk M3x18 (10)
110160 Screw allen cilinderhead M2.2x12 (10)
110161 Screw allen cilinderhead M2x6 (10)
110162 Setscrew allen M3x2.5 (10)
110163 Setscrew allen M3x2 (10)
110164 Screw allen roundhead M3x4 (10)
110165 Screw allen cilinderhead M2x5 (10)
110166 Screw allen countersunk M2.5x5 (10)
110167 Screw allen roundhead flanged M3x18 (10)
110168 Screw allen roundhead flanged M3x5x10 (10)
110169 Screw allen roundhead flanged M4x10 (10)
110170 Screw allen roundhead flanged M3x28 (10)
110171 Screw ph countersunk widethread 2.5x15 (10)
110200 Pin 2.5x8 (10)
110201 Pin 3x12 (10)
110202 Pin 5x5 (10)
110203 Pin 3x14 (10)
110204 Pin 3x20 (10)
1891 Serpent medium promo decal 20x12.5 (2)
1893 Serpent decal XL (30x60cm)
1998 Cap serpent black-orange
1869 Pit-towel serpent orange 140x60cm
1872 Rucksack serpent (35x45cm) black
1873 Rucksack serpent (48x61cm) black
1883 Banner Serpent S-logo 200x100 nylon
190110 Sweater hooded serpent black (s)

MERCHANDISING
1891 Serpent medium promo decal 20x12.5 (2)
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DIFFERENTIAL ASSEMBLIES

Complete FR/RR 44T diff 600501
Complete center diff 46T 600324
Complete DIFF uni 600325

TRANSMISSION CENTER

A WEB SITE FOR THE SERIOUS RACER