

## Serpent 300030

# Serpent F190 1/8 4WD Electric Formula 1 Car Kit Instruction Manual

Model: 300030

## INTRODUCTION

This manual provides detailed instructions for the assembly, operation, and maintenance of your Serpent F190 1/8 4WD Electric Formula 1 Car Kit. Please read this manual thoroughly before beginning assembly or operation to ensure proper function and safety. The F190 is engineered for maximum performance, featuring carbon fiber components, aluminum bulkheads, and advanced suspension geometry for precision and agility on the track.

## PACKAGE CONTENTS

The Serpent F190 kit includes the following components:

- Carbon Fiber Chassis and Bulkheads
- Transparent PC Car Body Shell
- High-Performance Rubber Tires and Wheels
- Solid Front Spool
- 7075-T6 Aluminum Motor Mount with Slide Mechanism
- Oil-Filled Coil-Over Shocks
- Front Push-Rod Shock Geometry Components
- Rear Pull-Rod Shock Geometry Components
- Adjustable Caster Blocks
- Aerodynamic Front and Rear Wings, Underfloor, and Diffuser
- Product Manual (this document)

*Note: Electronics (motor, ESC, battery, servo, receiver, transmitter) are not included and must be purchased*

separately.



Image: All components included in the Serpent F190 1/8 4WD Electric Formula 1 Car Kit, neatly organized in bags alongside the chassis, wheels, and body shell.

## SAFETY INFORMATION

**WARNING:** This product is a high-performance remote-controlled vehicle kit. It is not a toy. Adult supervision is required. Improper assembly or operation can result in injury or damage.

- **Battery Safety:** This kit does not include a battery. Always use batteries recommended by the manufacturer of your chosen electronics. Follow all battery charging, handling, and storage instructions provided by the battery manufacturer. Never leave charging batteries unattended.
- **Electronics:** Ensure all electronic components (motor, ESC, servo, receiver) are correctly installed and configured according to their respective manuals. Incorrect wiring can cause damage or fire.
- **Assembly:** Follow all assembly steps carefully. Use appropriate tools and ensure all screws are tightened securely.
- **Operation Area:** Operate the vehicle in open areas away from people, pets, and obstacles. Avoid public roads and areas with traffic.
- **Moving Parts:** Keep fingers, hair, and loose clothing away from rotating parts such as wheels, gears, and drive shafts.
- **Heat:** Electronic components, especially the motor and ESC, can become very hot during operation. Allow them to cool before handling.

## SETUP

The Serpent F190 is a kit that requires assembly and installation of electronics. Follow these general steps:

1. **Chassis Assembly:** Begin by assembling the carbon fiber chassis and aluminum bulkheads. Refer to the detailed diagrams for correct component placement and screw tightening.
2. **Suspension Installation:** Install the front push-rod and rear pull-rod suspension systems, including the oil-filled shocks. Adjust caster, camber, and Ackerman geometry as desired for initial setup.
3. **Drivetrain Assembly:** Assemble the main drivetrain, including the solid front spool and rear differential. Ensure all gears mesh smoothly.
4. **Motor Mount:** Install the 7075-T6 aluminum motor mount. This mount features a slide mechanism for easy gear mesh adjustment.
5. **Electronics Installation:** Mount your chosen brushless motor, Electronic Speed Controller (ESC), steering servo, receiver, and battery (not included). Ensure all wiring is neat and secure, avoiding interference with moving parts.
6. **Tire and Wheel Assembly:** Mount the high-performance rubber tires onto the wheels.
7. **Body Shell Preparation:** Trim and paint the transparent PC car body shell according to your preference. Install the aerodynamic elements such as the front and rear wings, underfloor, and diffuser.
8. **Radio System Setup:** Bind your receiver to your transmitter. Calibrate the ESC and steering servo according to their respective manuals.



Image: An assembled Serpent F190 chassis, showcasing the carbon fiber structure, suspension components, and drivetrain layout.

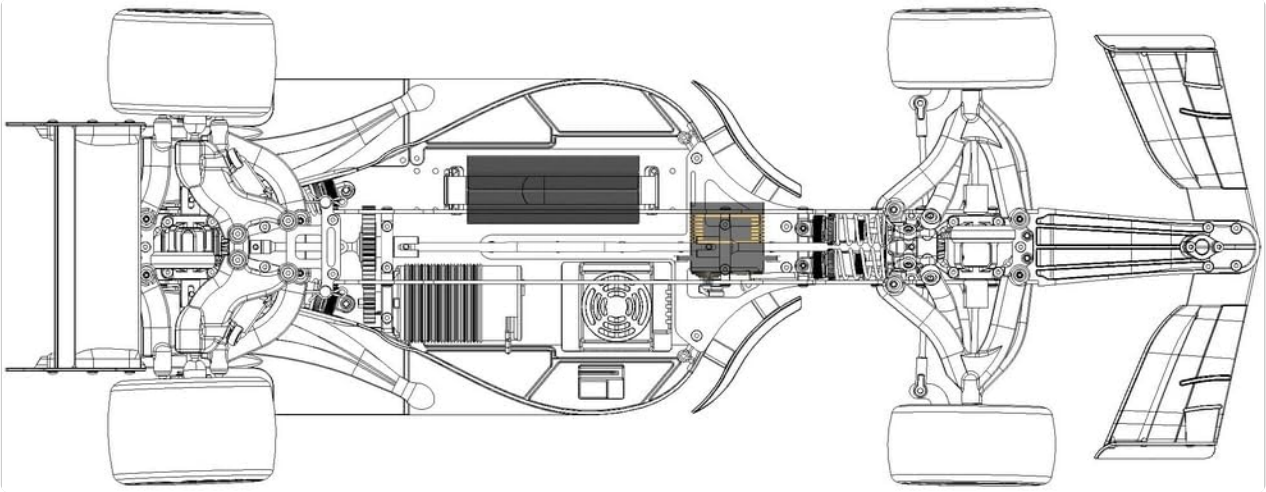


Image: A technical diagram of the Serpent F190 chassis, illustrating the placement of key components like the motor, battery, and electronic speed controller.

## OPERATING INSTRUCTIONS

Once your Serpent F190 is fully assembled and electronics are installed and calibrated, follow these steps for operation:

1. **Power On:** Turn on your transmitter first, then connect the battery to the ESC on the vehicle.
2. **Pre-Run Check:** Verify that the steering and throttle respond correctly to transmitter inputs. Check for any loose screws or damaged parts.
3. **Driving:** Use the throttle trigger for acceleration and braking. Use the steering wheel for directional control. Start with gentle inputs to familiarize yourself with the vehicle's handling characteristics.
4. **Adjustments:** The F190 offers extensive tuning options. Experiment with adjustable camber, caster, and Ackerman geometry to optimize performance for different track conditions and driving styles.
5. **Power Off:** Disconnect the battery from the ESC first, then turn off your transmitter.



Image: The fully assembled Serpent F190 1/8 4WD Electric Formula 1 Car, showcasing its sleek design and readiness for track use.

## MAINTENANCE

Regular maintenance is crucial for the longevity and performance of your Serpent F190:

- **Cleaning:** After each run, clean the vehicle to remove dirt, dust, and debris. Use a soft brush or compressed air. Avoid using water directly on electronics.
- **Screw Check:** Periodically check all screws and fasteners for tightness. Vibrations during operation can cause them to loosen.
- **Drivetrain Inspection:** Inspect gears, drive shafts, and bearings for wear or damage. Lubricate moving parts as needed with appropriate RC lubricants.
- **Shock Maintenance:** Check the oil-filled shocks for leaks and proper damping. Replace shock oil and O-rings as necessary.
- **Tire Wear:** Monitor tire wear and replace worn tires to maintain optimal grip and handling.
- **Electronics Care:** Keep electronic components clean and dry. Ensure proper ventilation to prevent overheating.

## TROUBLESHOOTING



If you encounter issues with your Serpent F190, refer to the following common troubleshooting tips:

Problem	Possible Cause	Solution
Vehicle does not respond	Low battery, loose connection, unbinded radio	Charge battery, check all connections, re-bind radio system
Poor steering response	Incorrect trim, damaged servo, loose steering linkages	Adjust steering trim, inspect/replace servo, tighten linkages
Motor overheating	Incorrect gearing, excessive load, poor ventilation	Check gear mesh, reduce load, ensure proper airflow to motor/ESC
Unusual noises from drivetrain	Damaged gears, debris in gears, worn bearings	Inspect/replace gears, clean drivetrain, replace worn bearings

## SPECIFICATIONS

- **Brand:** Serpent
- **Model Number:** 300030
- **Scale:** 1/8
- **Drive:** 4WD Electric
- **Chassis Material:** Carbon Fiber
- **Bulkhead Material:** Aluminum
- **Motor Mount:** 7075-T6 Aluminum with Slide
- **Suspension:** Front Push-Rod, Rear Pull-Rod with Oil-Filled Shocks
- **Front Spool:** Solid
- **Recommended Age:** 16 years and up
- **Item Weight:** 5.79 pounds
- **Product Dimensions:** 1 x 1 x 1 inches (Note: These dimensions appear to be placeholder values and may not reflect the actual product size.)

## MEDIA GALLERY

### Product Images



Image: A top-down view of the Serpent F190 chassis, highlighting the central drivetrain and suspension arms.



Image: The underside of the Serpent F190 chassis, showing the flat carbon fiber base and protective elements.



Image: A direct front view of the Serpent F190, emphasizing the front wing and suspension components.



Image: The Serpent F190 with its transparent PC body shell installed, allowing a view of the internal chassis and electronics layout.

## Official Product Videos

Video: An official product video showcasing the Serpent F190 1/8 4WD Electric Formula 1 Car in action on a track, demonstrating its speed and handling capabilities.

## WARRANTY AND SUPPORT

For warranty information, technical support, and spare parts, please refer to the official Serpent website or contact your authorized dealer. Keep your purchase receipt as proof of purchase for any warranty claims.  
Manufacturer: Serpent