FUSION
EX-1

Design by
Dustin Peckham
USA
CASTER
Racing

- 100% Pre-built
- Pistol grip transmitter with servo reverse and EPA function
- High torque ball raled steering servo 9kg
- 24 Rubber sealed ball bearings
- Countersunk T6 CNC-machined aluminium chassis
- CNC-machined T6 aluminium radioplate
- CNC-machined T6 aluminium centre diff. plate
- CNC-machined T6 aluminium servo saver plate
- CNC-machined T6 aluminium rear shock tower
- CNC-machined T6 aluminium front shock tower
- Glassfibre reinforced chassis stiffener FR&E
- Rear anti-roll bar
- CVJ universal joints front
- 43 differentials with 6 planetary gears
- Steel bevel gears
- Double disc brake
- 4 hydraulic hard coated aluminium constant volume shock absorbers
- Moulded side guards
- Dust proof receiver box
- Adjustable wing mount
- Pre-painted polycarbonate body

www.casterracing.com
Please read all instructions thoroughly before assembling the kit.

The contents are subject to change without prior notice due to product improvement and specification change.

Performance Features of the Fusion EX-1 Kit

- Extreme Low Diff. CG.
- Pro Steering Geometry Angle
- Two piece Pro Center Diff. mount
- Anodized F/R Aluminum Arm Holder
- 3.2mm Anodized Main Chassis
- Optional Shock Springs Included.
- CNC Spur, Crown and Pinion Gears
- 3 Shoe Clutch
- Low Profile Radio Box
- Front CVD
- Shock Shaft 3.5mm
- Decreased suspension travel to 7cm
- Lower OG Design through out the car
- Lay Down Steering Servo
- Full Bell Bearing through out the car
- Pro Turnbuckles
- Pro Brake Pad

Thank you and congratulations on your purchase of the Caster Racing Fusion EX-1 1/10th radio controlled model. Please read through this Instruction manual carefully before you attempt to assemble or operate your Fusion EX-1 RTR buggy kit. This manual contains building steps and instructions you will use to set up your RTR, Kit and Pro Fusion EX-1 RTR buggies. Follow the directions in this manual closely and take the time to study, reference and understand your Fusion EX-1R manual is the key to ensure the maximum performance and longevity from your new Fusion EX-1R. We hope that you will enjoy your new Caster Racing Buggy. If you ever have any questions or need help with your Fusion EX-1R, please feel free to contact our official Caster Racing dealers and distributors, as they will always be happy to help you. Good Luck and Enjoy the Racing Fun.

CAUTION!!!

Thank you for purchasing a Caster Racing Product.

Please read all instructions and familiarize yourself with the products and control before operation.

1. This product is not a toy, it is a high performance model product. It is important to familiarize yourself with the model, its manual, and its construction before assembly and operation. Adult supervision is necessary.
2. Always keep this instruction manual handy for your assembling and operation reference, even after completing the assembly.
3. Make sure all the screws are properly tightened and all the parts are checked after running the car for a long period of time.
4. For the best performance, it is important to make sure all the moveable parts work free without binding.
5. Do not operated model products in rainy, on public roads, near crowds, near airport, or near areas with restricted radio operation.
6. Always keep fuel away from heat and open flame. Only operated in open, well-ventilated area. Store fuel in cool, dry area. Keep the fuel bottle cap tightly closed. Clean up any leak or excess fuel before starting the engine.
7. This product, its parts and its construction tools can be harmful to your health. Always exercise extreme caution when assembling and or operating this product. Do not touch any moving parts of the model while operating.
8. Check your radio frequency with the proper operating frequency of the area or country. Always check to see if there are any modelers operating on the same frequency as yours. Also Check your radio for proper operation before operation a model.
Required Equipment for Assembly

Tools not included in Kit
- Cross Wrench
- Needle Nose Pliers
- Hobby Knife
- Phillips Screwdriver (No. 1, No. 2)
- Hobby Scissors

Included Tools
- 1.5mm Allen Wrench
- 2mm Allen Wrench
- 2.5mm Allen Wrench
- 3.0mm Allen Wrench

Additional Items needed for Completion
- 4X-8 Alkaline Batteries for Transmitter
- Battery
- Motor
- Servo
  - 9kg A-9849 Analog
  - 9kg C-9850 Digital
  - 138g C-9851 Digital

Assembly of the Front & Rear differentials

FUSION EX-1

CompetitionX
A Website for the Serious Racer

CASTER
Assembly of the front suspension

**FUSION EX-1**

**Front Arm**
Place the rubber pads through the front arm and upper bracket. Make sure the ears between the shock tower and upper bracket are flush. After tightening the bolts between the shock tower and upper bracket, ensure the flat sides of the rubber pads line up. Align the rubber pads properly. Check for free movement of the upper arm.
Tips and guide for running your Fusion EX-1

Congratulations on your purchase of the Caster Racing Fusion EX-1. Your new Fusion EX-1 should provide you with several years of high performance excitement with proper use and maintenance. Since it is a high performance vehicle, adult supervision is recommended for anyone under the age of 16. Depending on the parts you use, it is capable of speeds up to 70mph and can cause injury or even death if used in an unsafe manner.

The Fusion EX-1 Sport will require some additional parts. Getting the proper electric motor, electronic speed controller, and batteries are vital to its performance. You will have several choices and we have made several recommendations on our website. Please go to www.casteracingusa.com and join the forums for details. Improper parts will cause poor performance, excessive wear, and potential damage to your Fusion EX-1. Make sure you follow recommendations and directions provided.

1. Use only the parts recommended by Caster Racing and get them from a reputable hobby store. Using parts from other sources could result in damage to your Fusion EX-1. There could be a potential risk of electrical shorts, battery explosions, or even fire if you install or use these parts improperly.
2. Always follow the manufacturer's instructions for charging, discharging, programming, and usage and adhere to all safety rules they provide. Make sure there are no potential short circuits and make sure the batteries are properly charged before use.

Radio System:

In order to run your Caster Fusion EX-1 without any loss of control, please make sure you have check the following requirements:

1. It is important that all the batteries are fresh or fully charged.
2. Always check the path and condition of the battery pack wires as well as the switch wires. A broken wire can cause a short circuit and lead to a loss of control.
3. Turn on the transmitter, and then turn on the car receiver battery pack switch to check the steering servos movement and the esc controller operation.
4. Turn the steering wheel on the transmitter left and right. The front wheels should turn left and right (when viewed from behind). Use the steering trim adjustment to set the neutral (wheels pointing straight ahead) setting on your car. If your servos move very slowly, check your batteries.
5. Pull the throttle trigger, the wheels should spin forward. Push the throttle trigger forward. This will activate the brakes. Please use the throttle trim adjustment to set the neutral setting on your car. (Read the instructions that come with your radio.)
6. If the vehicle is not responding in regards to movement, double check your wiring and refer to the troubleshooting manual of your electronic speed controller. Otherwise, call our phone number or go online for tech support.
Warning

1. Improper operations may cause personal and/or property damage. Caster Racing and its distributor have no control over damage resulting from shipping, improper construction, or improper usage.

Motor:

For proper motor break-in procedure, please refer to the manual of your motor and electronic speed controller.

1. Never run your vehicle without the batteries properly charged and maintained.
2. The parts around and including the motor could be dangerously hot after operation. Do not touch it without any protection!

OPERATING YOUR FUSION RC CAR:

The 1/10th scale electric car runs at a very fast speed, and uses expensive parts. It is designed for r/c racing applications and is not a toy. Operate the model in the area with safety in mind. Make sure there is no personal injury, no property damage, and there are no accidents.

Checklist Before Running

1. Be sure to tighten screws securely and install all parts.
2. Ensure all moving parts move without binding. Are they greased or siliconed to prevent binding?
3. Ensure all electronics are properly secured and trimmed correctly.
4. Turn on the switch of the receiver and transmitters, and make sure whether the steering servo linkages move without binding and that the electronic speed controller is working properly.
5. Check the radio batteries are fresh and make sure they are fresh enough to operate the model.
6. Check if there is someone on the same frequency.

IMPORTANT III Do not operate the Car under these situations III

1. Near Children
2. Early morning and late night.
3. Near railroad tracks, streets, schools, or anywhere where people might get hit accidentally.
4. When the batteries of the transmitter and/or receiver are weak.
5. When the model car is behaving strangely due to other people on the same frequency or low voltage issues.

Starting Procedures

1. Make sure the batteries are fresh.
2. Turn on the switch of the transmitter and receiver.
3. Make sure the steering servo and e.s.s work normally and adjust them correctly.

Finishing Procedures

1. Turn off the receiver and transmitter switch.
2. Remove batteries for storage and follow manufacturer recommendations for charging/discharging batteries.

Maintenance

1. Before storing your car away, Wipe off dirt and oil and grease all moving parts.
2. Check for loose screws and parts and tighten them accordingly.
# FUSION EX-1 Blank Setup Sheet

## 1/8 OFF-ROAD NITRO BUGGY

### CASTER RACING TEAM

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
<th>Track:</th>
<th>Weather:</th>
</tr>
</thead>
</table>

### Track Width: _______mm

<table>
<thead>
<tr>
<th>Camber Angle:</th>
<th>Upper Arm Spacers:</th>
<th>Toe Angle:</th>
<th>Rebound:</th>
<th>Anti-roll Bar:</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______°</td>
<td>_______mm</td>
<td>_______°</td>
<td>_______mm</td>
<td>Use _______mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lower Arm Mount (Kick-up):</th>
<th>Upper Arm Position:ZX-0041</th>
<th>Lower Arm Spacers:</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______°</td>
<td></td>
<td>_______mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Piston:</th>
<th>Oil:</th>
<th>Spring:</th>
<th>Spacer:</th>
<th>Shock Position:</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______</td>
<td>_______mm</td>
</tr>
</tbody>
</table>

### Caster Angle:

<table>
<thead>
<tr>
<th>Lower Arm Mount: (Toe Angle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______°</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rebound:</th>
<th>Anti-roll Bar:</th>
<th>Anti-Squat:</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______mm</td>
<td>Use _______mm</td>
<td>Use _______mm</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Wheelbase Adjustment:</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______mm</td>
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</tbody>
</table>

### Upper Arm Position:

<table>
<thead>
<tr>
<th>Upper Arm 1:</th>
<th>Upper Arm 2:</th>
</tr>
</thead>
<tbody>
<tr>
<td>_______mm</td>
<td>_______mm</td>
</tr>
</tbody>
</table>

### Front:

- # of O-Rings: _______ pcs.
- # of O-Rings: _______ pcs.

### Rear:

- # of O-Rings: _______ pcs.
- # of O-Rings: _______ pcs.

### Race Time / Laps:

- Position In Race: |
- Best Lap: |

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**CONNECTIONS A WEB SITE FOR THE SERIOUS RACER**