

## About radio-controlled cars, tanks, planes, helicopters and boats

**Nitro RC Cars** Nitro RC car or Gas powered RC car is a radio-controlled model car that runs on a special fuel - a mix of oil, nitro-methane and methyl alcohol. The ESP of a Nitro RC car is that it is far more powerful and runs longer compared to Electric RC cars. They are a little more expensive than their electric counterparts - both to own and maintain. While electric RC cars are ideal for beginners, Nitro RC cars are ideal for serious hobbyists and racers. Basically, a Nitro RC car has an internal combustion engine of 2-stroke or 4-stroke type. Fuel is supplied from a little tank that contains its special fuel. Normal gasoline will not work in these engines. It starts either with pull start cord or starter box. As with real cars, these engines have a carburetor, air filter and such other subsystems of the internal combustion engine. They also have the universal subsystems like, electronic radio control, servo speed control, transmission / gear system, drive train, differentials, steering system, shock absorbers, and batteries for head lights. OK, then what makes an RC car so special and expensive First, the complex internal combustion engine and its subsystems are costly, compared to the simple motor in the electric RC car. In addition, the battery is a simple one time investment compared to recurring fuel cost of Nitro RCs. Also, Nitro RC cars gather more dirt and grease. More the running components in any system mean there will be more wear and tear. Both these add to the maintenance cost. But for the sheer power and racing range, the Nitro RC cars are the leaders in RC toys. For your choice, they are available in 1/8, 1/10, 1/12, 1/20 scales as well as mini nitro RC cars. The 1/8 and 1/10 scale Nitro RC cars are popular with racers and serious hobbyists. One can buy them in any hobby stores or in internet commerce sites for between \$200 to \$400. This is a hefty price, indeed! But it does not cost you a fortune like the real racing cars, yet helps fulfil your racing dreams. At 60 to 100 kmph speeds, they are very fun and exciting!

**Nitro RC Car Kits** Want to buy a Nitro RC car You can either buy a ready to run (RTR) car or build one on your own using the Nitro RC car kits. Why take those pains Well, ready to run may be a few bucks more and hassle free to run, but you would be saved of many tuning steps involved in an assembled RC car. Though a little of tuning is inevitable with assembled Nitro RC cars. However, it pays to assemble one because it's fun and economical too. Besides it gives you useful insight into your RC car. The Nitro RC car kits usually contain the following. Engine: Depending on your choice, it is either a simple two stroke engine or a four stroke one. Its essential parts are cylinder, piston, piston sleeves, piston rings, cranks, valves etc. It also has the following auxiliary parts: 1. Air filter: To prevent entry of dirt and dust into the engine causing damage. 2. Carburettor: This helps control flow of oil into the engine. It has a 'Low End Adjustment Screw' to make the engine fuel leaner or richer, thereby controlling the speed and an 'Idle Adjustment Screw' to increases or decreases the idling speed. 3. Gears: A clutch operated gear system to transfer power from the engine to the transmission of nitro RC car. 4. Heat Sink: The fins on the engine cylinder are air cooled by a cooling fan. 5. Flywheel: Like a real car, a Nitro RC car needs a Fly wheel to conserve momentum. 6. Pull-start cord: To start the engine. A starter box is optional. 7. Glow Plug: Similar in function to a spark plug, it has a little coil whose heat ignites the fuel in a Nitro RC car Engine. Drive traction and transmission: Transmits power from gear box to differentials. It differs slightly as whether the car is 2 wheel driven or 4 wheel driven. Servos: These are tiny motors for control the acceleration, speed and steering of car. Batteries: Even a Nitro RC car need a battery pack to power its servo, electronics and head lights etc. Other systems like Chassis, body, wheels and axles, etc. are similar to Electric RC cars. So, before choosing a Nitro RC car kit, decide on what kind of car and engine you want. Also, check what additional accessories the pack contains, in addition to necessary parts. Finally, seek advice to save on money, time and trouble of assembling.

**Electric RC Cars** An Electric RC car is a radio-controlled car operated on batteries. In comparison to the Nitro (gas-driven) RC cars, which are powered by a small engine that runs on a mixture of nitro methane, methanol and oil, the Electric RC cars are economical, and easy to operate and maintain. Due to their low cost, and ease of operability and maintenance these are very suitable for beginners. Electric RC cars are, therefore, very popular with both beginners and serious hobbyists. In late 1970s, Japanese firm, 'Tamiya' was the first to pioneer the art of radio controllable model cars. Modern electric radio controlled cars appeared on the scene in America in the early 1980s. Today, like others varieties, Electric RC cars are also available in on-road and off-road versions. An Electric RC car essentially consists of a battery pack, motor, servo, radio electronics, etc., in addition to basic transmission and steering mechanisms. To the uninitiated in other countries, these modern miniature model cars were bafflingly similar to real cars. With aircraft grade aluminium alloys for the body, high impact resistant polymers for wheels (which even take little tires), fully functional shock absorbers, transmissions, drive systems and multi-channel radio controlled electronics, these little machines were both toys and hobby gadgets for the people in developed nations. To cap it all, these are available in ready-to-use cars for novices and as do-it-yourself kits for the mechanical enthusiasts. Electric RC cars are supported by good after sales service and wide availability of spares. You can purchase anywhere from a \$20 toy Electric RC car to a few thousands of dollars worthy monster cars depending on your taste, budget and purpose, either in shops or online. The toy-grade cheap Electric RC cars offer less-scope for disassembling, repair, renovation / upgrading etc., compared to the hobby grade expensive electric RC cars. Hence, the toy grade makes sense for children and beginners for practice. As with the thriving industry, there are thriving RC car races, racecourses, trainers, forums, RC car enthusiasts' clubs and communities. One would completely be immersed, once entered this world. As usual, the Internet is replete with guidance and resources. Just Google in it!

**RC Monster Trucks** The RC monster truck racing is a rapidly growing hobby that can be enjoyed by both young and old. RC monster trucks have become a favorite remote controlled vehicle, because they can maneuver around and over almost anything providing hours of fun. In addition to racing many RC monster truck enthusiasts enjoy building and upgrading their own trucks. There are many hobby stores that carry the materials to build an exceptional RC monster truck. Hobby stores may also provide information for where races are being held. There are many clubs and organizations dedicated to the RC monster truck enthusiast. Attending a race is an excellent place to find out about clubs and meet other people who are interested in RC monster trucks too. Another enjoyable part of driving RC monster trucks is building obstacle courses and tracks. Many hobbyist build tracks in their own backyards using any materials they have laying around including boards, RC cars and dirt. However, there are many store bought obstacles that can be purchase as well. RC monster trucks can be purchased ready to run or can be

purchased as a kit that needs to be built. Additional parts are available to make your monster truck unique. The starting price for beginning a hobby with a RC monster truck starts at around \$300 and can go up depending on the type of truck desired. There is a large variety of RC monster trucks available for beginners and advanced racers. RC monster trucks come as 2-wheel drive or 4-wheel drive. The power source can be electric, which requires recharging, or it can be gas, nitro being one of the favorite fuels. The bodies can be painted and some can be interchanged. Almost any part on a RC monster truck can be upgraded to give it more power or better aerodynamics for the race. RC monster trucks can provide fun for an individual or a family. The intricateness of building a RC monster truck can provide a science or engineering project for a student. Or driving the monster truck can provide a relaxing time in the backyard while barbequing. Whichever direction you are interested RC monster trucks has a little something for everyone.

**RC Boats** The hobby of rc boats has four main categories: nitro, gas, sail, and electric. The advantage of electric is the ease of maintenance, the relatively cheap price, and the quite electric motor which allows you to play without disturbing other people. The basic entry level, ready to run boat kits can go 15 - 25 mph. Gas, Nitro Boats Speed, noise, and maintenance are important factors to consider. Before buying, make sure you have enough wide open space, as these boats reach 30 miles per hour. Nitro rc boats are generally faster but the run time is shorter. The nitro fuel is also more expensive than the regular gasoline / oil mixture used by gas boats. Gas rc boats have much longer run times, but are usually slower and more expensive. However it is cheaper to operate in the long run because gasoline is much cheaper than nitro fuel. Speed of nitro boats achieves 65mph. Models that sell for less than \$400 are usually nitro powered. Models that sell for over \$1000 are usually gasoline powered. I would recommend starting out with the cheaper nitro boats.

**RC Planes** RC Airplanes have acquired an international status mainly owing to the availability of smaller, comparatively inexpensive parts and fast-paced development in technologies. The broad range of models and styles available on the market suit the tastes and budget of just about any customer. Also, a significant number of hobbyists are flying electric powered craft instead of fuel-powered ones, mainly because they are easier to construct and they don't require fuel consumption. There are many different types of radio-controlled planes such as park flyers and trainers for beginners, glow plug engines, electric powered and sailplane aircraft for advanced pilots and jets, pylon racers, 3D aircraft, and other high end competition aircraft intended for expert flyers. There are also numerous ways to construct and assemble RC Airplanes. Today, lots of construction kits are available in the market requiring varying degrees of assembling, cost, skill, and experience.

**RC Helicopters** RC Helicopters are usually constructed using carbon fiber, aluminum, balsa wood, foam, or fiberglass, and are available in a variety of designs. Models that are more maneuverable, such as helicopters with collective pitch, possess greater aerobatic capabilities, but are mostly more difficult to fly. Gas turbine and electric helicopters are rapidly evolving, but the nitro types are currently the most common. Learning to fly by radio-controlled helicopter isn't as difficult as it is sometimes made out to be. With the latest advances in technology, flight simulator software can teach amateur hobbyists to handle their toy. Starting out on a personal computer, this flight simulator software can guide amateurs to learn all sorts of aviation and manipulation tricks. Read further about radio-controlled cars, planes, helicopters, tanks, boats, sailing boats, hovercrafts, submarines at the site below. About 100 interesting articles, that you could choose what you need, and also selection of the best models of various companies.

## About the Author

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