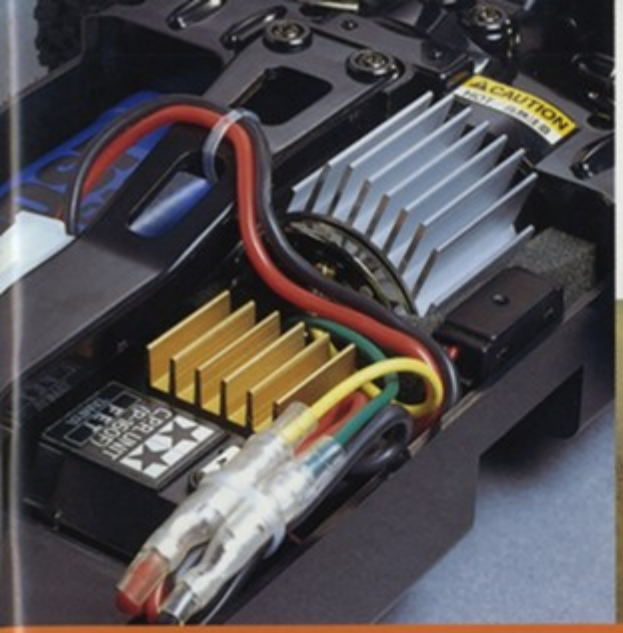
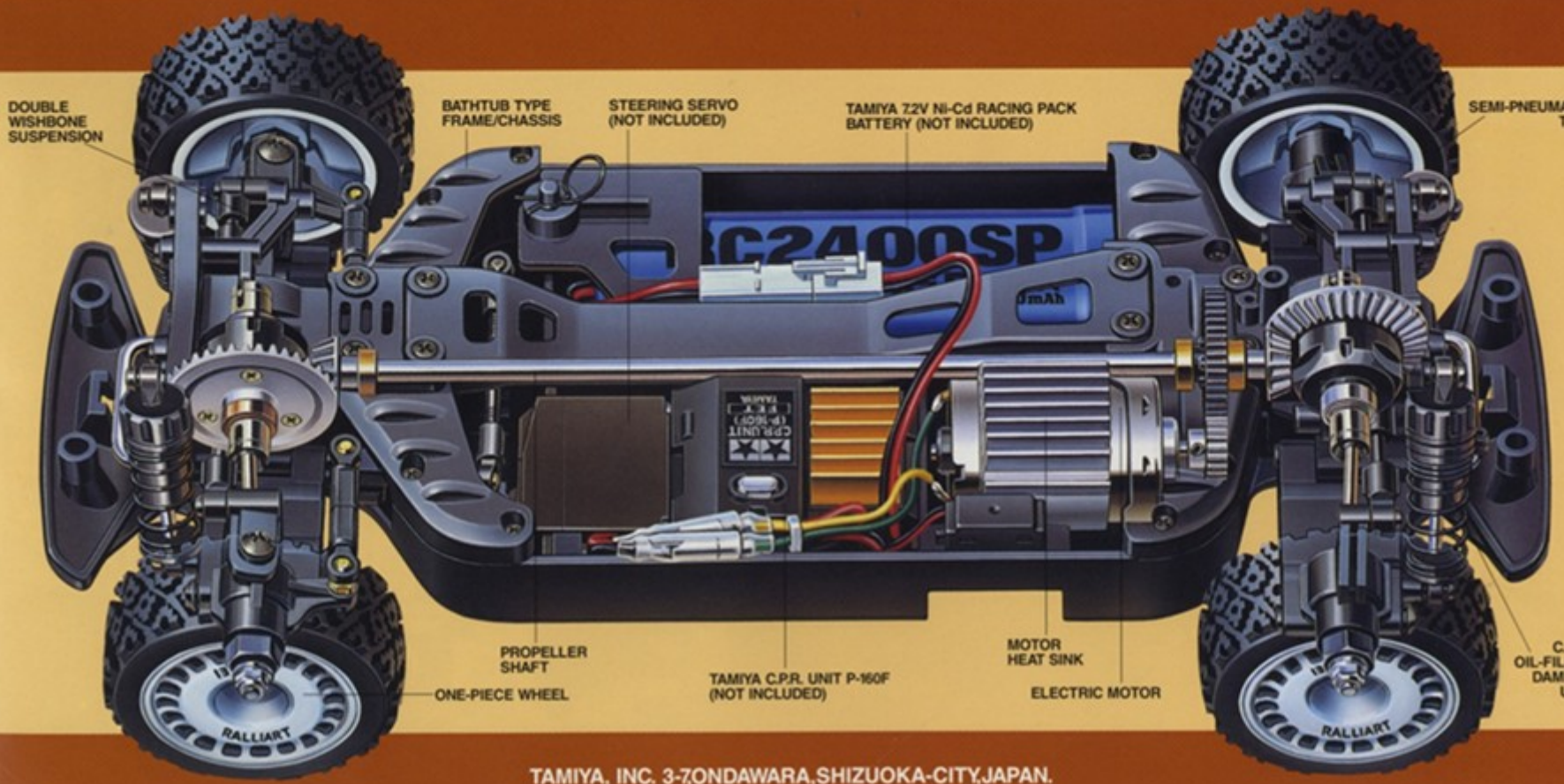


TAMIYA RADIO CONTROL GUIDE BOOK 2000

- 1/10 & 1/12 ELECTRIC RADIO CONTROL CAR SERIES
- 1/10 R/C GLOW ENGINE CAR SERIES
- 1/8 R/C GLOW ENGINE CAR SERIES
- 1/14 R/C TRACTOR TRUCKS SERIES
- R/C SAILING SERIES
- R/C AVIATION SERIES
- R/C BOY'S 4WD RACER SERIES
- TAMIYA R/C SYSTEM
- R/C SPARE PARTS
- HOP-UP OPTIONS



TAMIYA, INC. 3-7,ONDAWARA,SHIZUOKA-CITY,JAPAN.

1/10 ROVER MINI COOPER COMPONENTS

Edited by:
Tamiya News Editing Room
Published by:
Tamiya, Inc.
Shizuoka, Japan

Toys they're not.

TAMIYA RADIO CONTROL GUIDE BOOK

ENJOY RADIO CONTROL

ENJOY RADIO CONTROL

A great number of people from around the world are enjoying this Radio Control sport. Cars, tanks, motorboats and sailing ships, plus many aircraft are available in the R/C format. People find excitement in the precise mechanics and high performance of these models. Assembly and finishing, customizing and tuning up, and organizing and participating in competition are just a few of the possibilities in this limitless hobby of radio control modeling.

This guide book was initially compiled to focus on the fundamentals of electric powered R/C car models; however, additional guidance on glow engine powered cars, sailing ships and motor gliders has been included. We hope it is instructional and informative to provide a better understanding of this fantastic sport.

1. RADIO CONTROLLED MODELS

Radio controlled models are nothing but models remotely controlled by radio signals. So most operating models, if they are big enough to mount radio control units, can be converted for radio control. Radio controlled models are classified under kinds of power units; there are ones with gas powered engines, with electric motors, with steam engines, and ones with no power units like sailboats and gliders. There are airplanes, helicopters, gliders, racing cars, buggies, tanks, boats and some others, each of which has many fans.

However, as for the radio control units, most of them in use today are fundamentally the same; they are the digital proportional type, although their capability varires from unit to unit.

●RADIO CONTROL SYSTEM

When you have bought a model, a radio control system designated for the model should be purchased separately which then is to be installed into the model.

Most predominant radio control systems on the market today are the digital proportional type. In short, they are called a radio. The digital proportional radio control system consists of a transmitter which is to be operated by a modeler, a receiver, and servos which are mounted into the model, plus power supplies for the units.

Transmitter

Your transmitter serves as the control box for R/C models. The standard transmitter uses control sticks, while a wheel and trigger type was developed for car models. When the transmitter is in operation, it emits signals by means of radio waves.

Receiver

The receiver accepts signals from the transmitter and converts them into pulses that operate the model's servo(s).

Servo

The servos get the electrical impulses from the receiver and convert them into mechanical movements. The servo motor then rotates an arm (servo horn) in a programmed direction. This movement then controls a specific model function; such as a car's steering or its speed, a ship's rudder, or the aileron/elevator on aircraft.

★Electric powered R/C models can use amplifier boosted electronic speed control, to eliminate the speed control servo and mechanical speed control unit.

Power source for the R/C system

Normally, twelve UM3 (AA) size batteries are required to operate an R/C system. Eight in the transmitter and four for the receiver.

★The four receiver batteries can be eliminated from electric powered R/C models if a Battery Eliminator Circuitry (BEC) is used. This allows the receiver and servos to draw power from the Ni-Cd running battery of the vehicle.

Tamiya Alkaline battery "Power Champ SP"

Tamiya Ni-Cd N-3U battery

●THE NUMBER OF CHANNELS - THE NUMBER OF CONTROL OPERATIONS

The number of channels of the radio control system indicates the number of operations to be controlled at a time. A four channel digital proportional system will employ four servos to control four different types of action. The radio controlled electric car is basically designed to be controlled in two ways, speed control and steering control; therefore, a two channel radio control system is to be employed. In the present market, radio control systems are available with up to eight channels. The two channel type, though the most fundamental, is enough to control cars, tanks, boats, and gliders, except gas powered model airplane (which usually require over three channels).

Some models require a special R/C equipment; such as a 4-channel radio control system, etc. In such cases, the R/C requirements will be shown on the package or in the instruction manual of the model. Consult with your hobby dealer to choose a suitable R/C unit.

2. ABOUT RADIO FREQUENCIES-STATUTORY BANDS FOR RADIO CONTROL

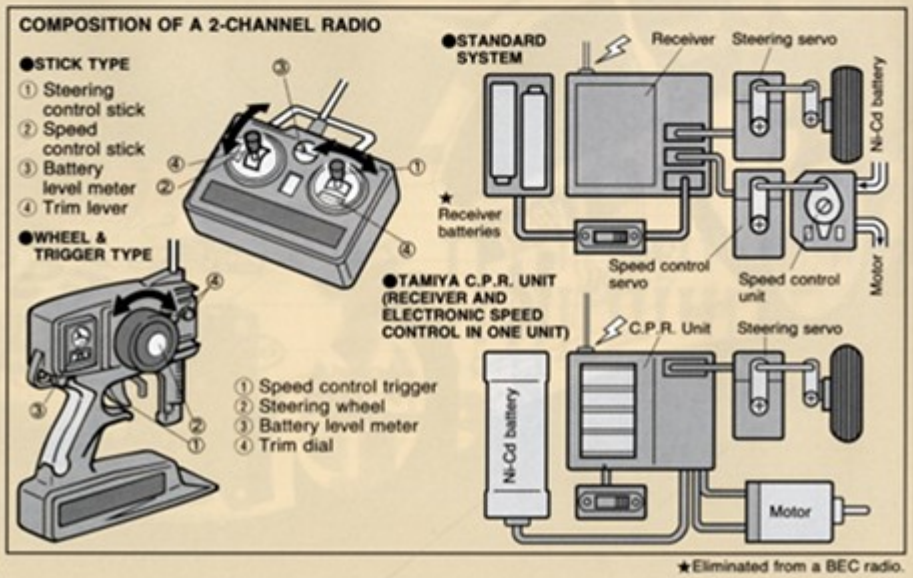
Radio waves are used very widely in the society and are very important for medical emergency, police and military, let alone radio and TV broadcastings. If these radio waves should be interfered with, obvious problems could develop. Therefore, specific frequency radio waves for different purposes are regulated to be handled by qualified personnel for the purpose of avoiding disorder. Thus a number of frequency ranges are designated for model radio control, and any other frequency ranges than the allocated ones should not be used under any circumstances.

●FREQUENCY BANDS

This phrase "frequency band" is used to denote the frequencies of radio waves. A receiver of the radio control system will accept signals emitted even from another transmitter, if the frequency used happens to be the same, the servos will also be put in motion. In other words, radio contol systems on the same frequency will respond to each other, thus causing them to go out of control. However, a number of radio control systems all using different frequency bands can control many models. Hence, it is recommended to employ radio control systems with dispersed frequencies to avoid interfering with each other when organizing racing events in groups.

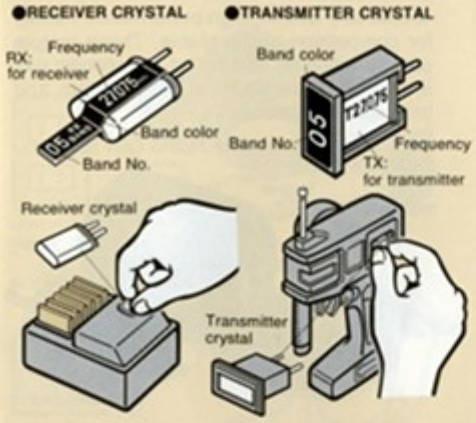
●FREQUENCY CRYSTALS

The frequency of an R/C system is determined by the crystals used in the transmitter and receiver. The frequency band can be al-



★Eliminated from a BEC radio.

tered by changing crystals with ones of a different frequency.



★Limitations on changing frequency

Radio waves used for hobby purposes are classified into several frequency ranges, such as 27MHz, 72MHz, etc. and the interchange of frequency crystals is only possible within the same range. In other words, you could not change a 27MHz frequency crystal to a 72MHz range by using a 72MHz crystal.

★Use the same frequency crystals in both transmitter and receiver

Replacing only the transmitter's or receiver's crystal will result in loss of control of the model. Crystals in the transmitter and receiver must have the same frequency. Even though the frequency is the same, if made by different manufacturers, they could cause control difficulties. Use spare crystals available from your R/C system manufacturer.

★FM and AM crystals are different

There are two types of radio signals: AM (amplitude modulated) and FM (frequency modulated). Each uses its own exclusive frequency crystals, and are therefore not interchangeable between AM and FM.

★Radio interference will occur even between AM and FM radios, if on the same frequency.

●RADIO INTERFERENCE IS DANGEROUS

Signal waves of radio control systems sometimes reach about 2 kilometers in the air and over 300 to 500 meters on the ground. When there is another person operating a radio control unit, compare the frequency of your radio control unit with his. Avoid the possibility of interference; operating radio control units of the same frequency will inevitably result in interference and get your model out of control. In such a case use an alternate frequency if possible.

★In radio controlled models, the fixed frequencies are used commonly among cars, airplanes, boats, and any other kind of model. So radio interference will occur so long as the same frequency is used regardless of the difference of types of models. Radio signals from other types of radio control units will interfere with your radio control model.

★Radio interference will occur even between AM and FM radios, if on the same frequency.

●CHECK ON INTERFERENCE

A device called a "monitor" can be used for detecting radio interference. There is another simple way: move your transmitter away from the model to some distance, and watch the response of your servos. If the servos move strangely, interference can possibly be recognized. While operating your models, if you recognize any sign of interference, stop running and check the cause.

●BE CAREFUL OF BATTERY POWER FOR R/C SYSTEM

Weak or depleted battery power in a transmitter or receiver can cause loss of control. Check the transmitter battery power by means of its power level indicator prior to operation. Since a meter is not on the receiver, it is recommended to replace these batteries with new ones prior to operation. If the receiver gets its power from the model's Ni-Cd battery, control difficulty can occur when the Ni-Cd depletes. It is best to stop operations and recover the model as soon as its running speed slows, to avoid loss of control.

3. NECESSARY TOOLS, PAINTS AND GLUE

Not many tools are required so long as you assemble a kit as is. The necessary tools are illustrated below. Tools especially in need are included in the kit, or at least an explanation about tools is given.

●Tools

Modeling knife, screwdrivers, long nose pliers, side cutters, etc.

●Paints

Use plastic paints for styrene resins, and polycarbonate paints for clear Lexan R/C car bodies. Spray type paints are convenient for finishing larger areas such as bodies. For painting details like figures, bottle paints for brush application are available.

●Cement

The type of cement required will differ according to the model. If a special type is required, it will be indicated on the package or in the instructions. On a standard R/C car model, only the instant CA cement (cyanoacrylate) will be required to secure semi-pneumatic tires to the wheels.

●Oil and grease

It is necessary to lubricate gearboxes, shafts and bearings. Failure to lubricate will hinder rotation movement and result in serious problems, such as excessive wear and parts breakage. Greases and oils of many types and formulas are on the market. Select the type according to its intended use.

4. ADVICE ON SELECTING KITS

When buying your first kit, it is important to select a reliable store. A store that provides good servicing to customers, carries an ample stock of parts, and is willing to help and guide beginners to provide long term enjoyment in the hobby. Before purchasing any kit, be sure to clarify any questions about it, and study the contents and performance of the model, so that you can be satisfied with your purchase of the model kit.

●READINESS OF PARTS AND COMPONENTS

Select model, the parts of which are easy to obtain. Tires and gears can wear out; even a speed control switch is an expendable component in a sense. Bodies and chassis may have to be replaced after some collisions. In such a case, your models can be mended easily and economically if the repair and replacing parts are available. For the Tamiya models, such components as ball bearings and more powerful motors are available for improving model performance according to a modeler's controlling skill. Spare parts and components for tuning up are essential to make fun out of radio control to a further extent, so choose a model whose parts and accessories are easy to buy at model stores.

●POINTS IN PURCHASING

The assembly kit consists of numerous parts and accessories. So it is recommended to check up on the contents of a kit with a store attendant at the purchasing point. Also read through the assembly pamphlet to see how difficult or easy it is and ask questions, if any. Also you might as well inquire about the technical guidance and servicing by the store.

●SAFETY REGULATIONS AND OPERATIONAL BEHAVIOR

Some radio controlled models of airplanes, racing cars and boats powered by gas engines can achieve speeds of over 100 km/h. It can cause serious accident if they should lose control in the midst of operation; it might involve personal injury. Even electric radio controlled cars can attain speeds of 30 km/h. Be sure to abide by the rules stated below and be careful not to endanger or annoy others:

★Do not use the streets for running model cars.
★Do not operate near children or in crowds.
★When operating R/C aircraft, select a safe area where personal and/or property damage will not occur even if the model should crash.
★Glow engined R/C cars emit noise during running and this can be annoying to others. Do not operate your model in an area where noise might disturb others.
★Avoid radio interference.
★Inspect your transmitter, receiver and models prior to operation.

GUIDANCE TO ELECTRIC POWERED R/C CAR MODELS

Of the many types of radio controlled models available, electric powered cars are most popular. Entry level kits are simple to construct and maintain, and ideal for learning the basics of this hobby, while the high performance electric racing cars have the potential of satisfying the most discriminating competition racers.

1. TYPES OF CARS

Electric powered R/C cars are classified by the scale size of the model, such as 1/10, 1/12 or 1/24. 1/10 scale is currently the most popular sized electric powered cars. When categorized by the surface they run on, they are roughly divided into three groups: on-road cars, such as formulas and stock types; off-road vehicles; and the dual purpose types such as rally cars and recreational vehicles.

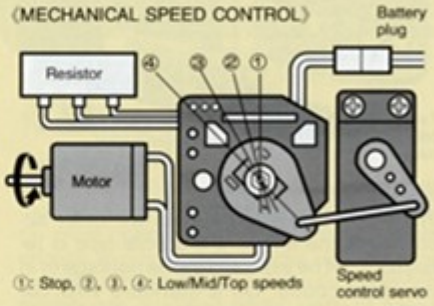
2. RADIO CONTROL SYSTEM

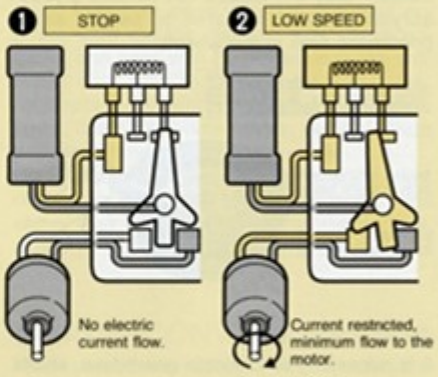
The standard electric R/C car is controlled by a 2-channel, 2-servo radio consisting of a transmitter, receiver and two servos. The servos control the car's direction (steering), and its speed via a mechanical speed control. A mechanical speed control and its servo can be replaced by an amplifier boosted electronic speed control. Normally, the receiver and electronic speed control are two separate units, but Tamiya's C.P.R. Unit combines these into one compact package. Transmitters are available in two types: stick control or wheel and trigger.

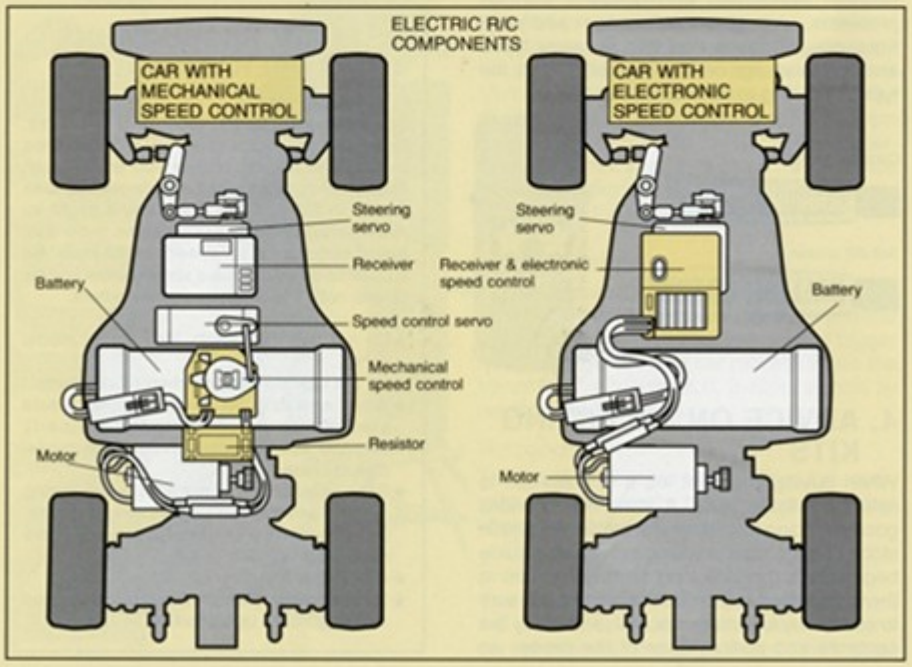
●MECHANICAL SPEED CONTROL

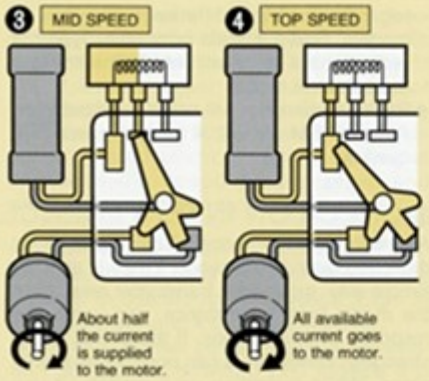
This system uses a resistor to impede the flow of electric current that governs the motors RPM. A 3-step mechanical speed control is used as an example here. At top speed, the resistor is bypassed, and all current goes to the motor. At low speed, the current flow to the motor is impeded by the resistor and bled off as heat. At mid speed, the amount bled off is about half of that at the low speed setting. The speed control servo moves a switch blade on the controller to vary the amount of electric current going to the motor.

〈MECHANICAL SPEED CONTROL〉





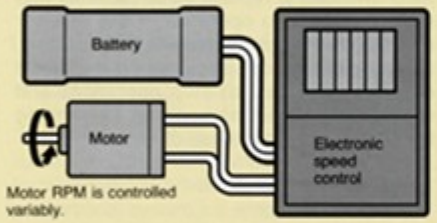


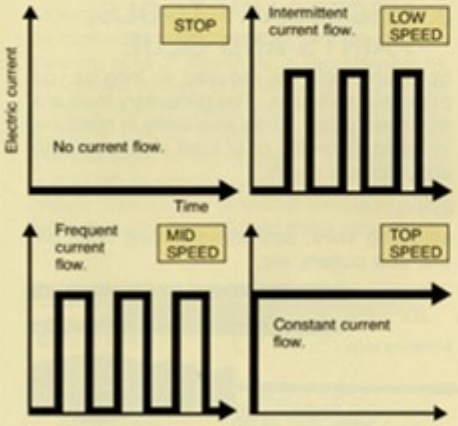


●AMPLIFIER BOOSTED ELECTRONIC SPEED CONTROL

The amplifier transistors in the unit control the current going to the motor, by interrupting the flow. The current, and consequently the motors RPM, is controlled by the frequency of this interruptions. At top speed, no current interruption takes place.

〈ELECTRONIC SPEED CONTROL〉



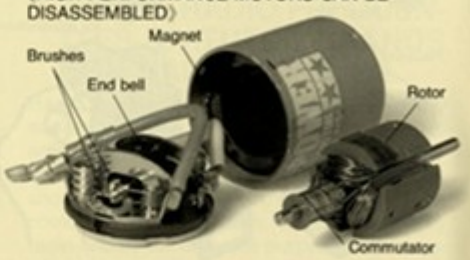


3. MOTORS

Electric motors used in radio controlled vehicles are equipped with noise-suppressing condensers, to prevent radio interference. A 540 sized motor is most often used in 1/10 scale model cars. Other sized motors are used depending on the scale or intended use of the model.

★Specially wound, high performance motors for competition are available. These motors can be adjusted and tuned for specific use and their spare parts, such as rotors and brushes are available.

〈HIGH PERFORMANCE MOTORS CAN BE DISASSEMBLED〉



4. MOTOR POWER SOURCE

Along with motors, the development of nickel-cadmium (Ni-Cd) batteries has brought high performance to electric R/C models. These batteries provide more power than conventional dry cells, and they can be safely recharged for repeated use. A compatible charger is required for recharging.

●Ni-Cd BATTERIES

Ni-Cd batteries are available in two forms. One is the packaged cell type, and the other is the individual cell. A 7.2V stick type battery pack uses six 1.2V Ni-Cd cells connected in series, and is the standard power source used in 1/10 scale R/C cars. Battery capacity is rated in milli-ampere (mAh), and a higher mAh rating will power the model longer. Smaller sized models may require UM3 (AA) sized Ni-Cd cells or specially sized battery packs.

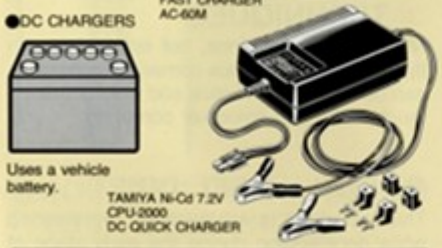
●COMPATIBLE Ni-Cd BATTERY CHARGERS

There are two types of chargers available. An AC (alternating current) type which gets its power from an electric wall outlet; and the DC (direct current) type which uses a vehicle battery as its source of power. Standard chargers take from 4 to 12 hours to charge a Ni-Cd battery. Quick chargers are also available, that shorten the charge time. Always refer to

your Ni-Cd battery specifications when purchasing a compatible charger. Never attempt to charge a different types of battery.

●AC CHARGERS

●DC CHARGERS



●Ni-Cd BATTERY CAUTIONS

Large mAh capacity Ni-Cd batteries provide enormous current, therefore improper use or handling can cause serious accidents. Always follow the instructions included with the battery, charger and the model.

★Disconnect and remove a battery from the model when not in use.

★Do not dismantle or tamper with Ni-Cd batteries or charger. Do not cut a battery cable, as it could short circuit and cause a fire or burns.

★If cable is worn, be sure to insulate bare wires. Use heat shrink tubing or vinyl tape for insulation.

★Use only a compatible charger for recharging.

●CAUTIONS IN OPERATING THE MODEL

★The ceramic resistor of a mechanical speed control becomes very hot during use. If the car is run at low or mid speeds for extended periods, high heat develops, which could damage the resistor or other vehicle components.

★Do not attempt to run the model when its wheel movement is impeded. Avoid putting too much of a load on the motor, such as running in grass, dry sand, etc.

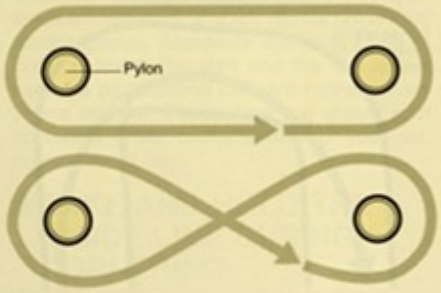
BASIC DRIVING TRAINING

You cannot make yourself a skilled driver just by running a car at will. Make a course using things like empty cans as pylons.

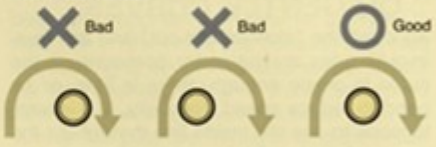
●OVAL COURSE 1

This is the simplest course using two pylons. It looks simple at first sight to drive a car along, but it will require some practice to achieve sharp and rigid turns made with the pylons as vertexes of the curves. Practice both ways, clockwise and counterclockwise, until you can make both rounds in about the same period of time. Figure "8" drill can be also done in the same track.

OVAL COURSE 1



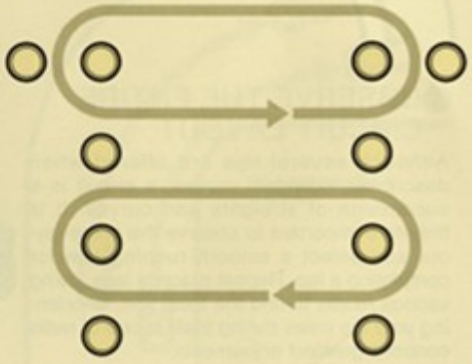
How to take corners



●OVAL COURSE 2

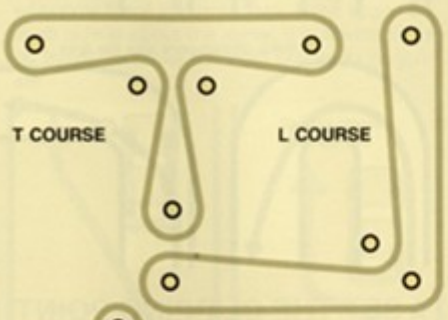
Have two or three pairs of pylons forming gates and run your car through them as accurately as possible. You will find it much harder than the oval course No.1. For the first period of time, arrange the pylons at a wide space, narrow them gradually, then at last put them at a space of one meter. Practice in both rotations, clockwise and counterclockwise.

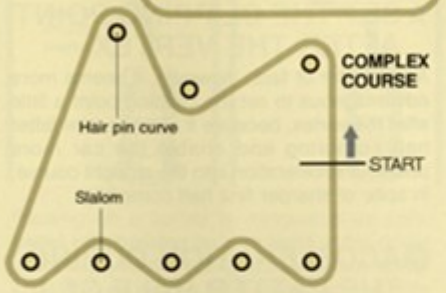
OVAL COURSE 2

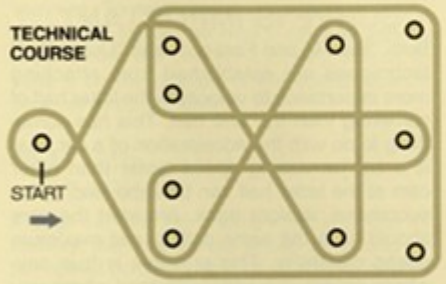


●ROAD COURSE

When finishing course No.1 and No.2 you have mastered the basic driving techniques. Now you should proceed to complex courses. Build a road course with the pylons, from basic figure "T" and "L" courses to more complicated circuits, assortment of figure "L" and hairpin curves, high speed curve and slaloms.

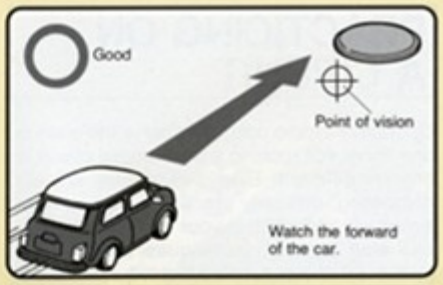


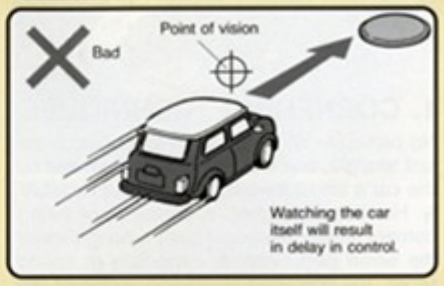




●CAR STEERS OPPOSITELY?

If you are a novice driver and not sufficiently accustomed to R/C car driving, you may feel as if the car steered oppositely to the transmitter movement when the car runs toward you. To solve this problem, try to imagine you were driving in the R/C car. As you repeat the basic exercise, you will get used to this way of thinking and control the model smoothly.

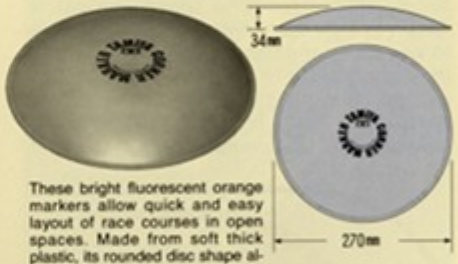




●WHERE TO LOOK WHEN DRIVING

When you drive a car, it is important what you keep your eye on. Suppose the squares described are the field of vision. Put your point of sight on the forward part of the area of vision with a car placed at the rear. The car moves at a rate of 8.3 meters per second when the hourly speed is 30 km/h. With your point of sight on the car itself, you cannot keep clear of obstacles ahead, because it is too late to notice them; nor can you take corners easily.

●53190 CORNER MARKERS (5 PCS.)



These bright fluorescent orange markers allow quick and easy layout of race courses in open spaces. Made from soft thick plastic, its rounded disc shape allow R/C cars to run over them without damage.

PRACTICING ON A CIRCUIT

Operating a radio controlled car in the open is one thing, but running it on a closed circuit is entirely different. Even though you are not competing, and only practicing, driving on a circuit will add much to your driving skills. You can also observe techniques used by experienced drivers running highly tuned cars at the circuit.

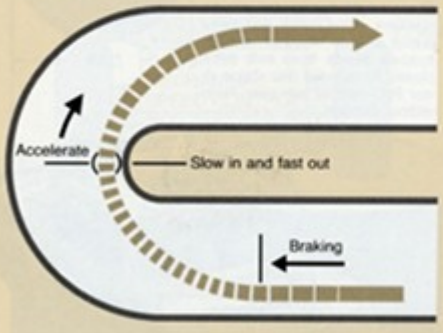
1. CORNERING TECHNIQUES

No particular skill is required for driving a car just straight, and the drag speed is limited by the car's own inherent performance capability. However, at curves, your finesse of taking corners affects the result even among cars of the same performance. Especially in speed races, the cornering technique is one of the decisive factors. After becoming accustomed to the car, try to practice smooth, speedy and stable cornerings.

"Slow-In and Fast-Out" is a golden rule in speed controlling at curves, and "Out-In-Out" instructs how to steer a car. Briefly, you should control speed in "Slow-In and Fast-Out" manner and steer a car in "Out-In-Out" way.

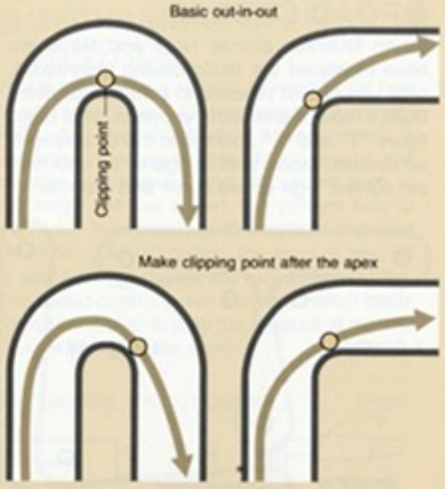
●WHAT'S "SLOW-IN AND FAST-OUT"

Decelerating when entering into a curve and picking up the speed after a vertex of the curve is the technique. In the case of entering bends without reducing speed, the car is forced to slow down before finishing corners to lose speed and stability. In the worst cases, the car might spin or run off the course. It also gets the car moving too late to pick up speed. As a result "Slow-In and Fast-Out" is the fastest way to take corners.



●WHAT'S "OUT-IN-OUT"

It is, as illustrated, a way of turning curves from the outside line of a course into the inside line to which the car will come closest at the vertexes (clipping points) and finishig the cornering approaching back to the outside line, thus making the longest possible turning radius. By utilizing the full width of the course, the car will make an easier turn than the actual curve. So the car may be allowed to run through it faster.



★SET THE CLIPPING POINT AFTER THE VERTEX

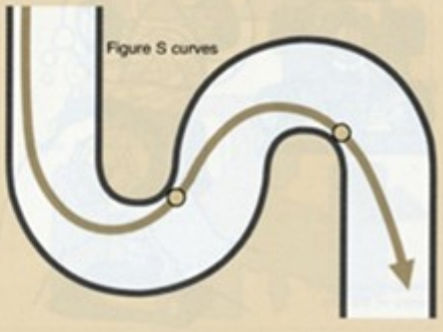
As a matter of fact, however, it seems more advantageous to set the clipping point a little after the vertex, because it allows easier latter half cornering and enable the car more powerful acceleration into the straight course, in spite of sharper first half cornering.

●ACCELERATION DURING THE LATTER HALF OF A CURVE IS IMPORTANT

Both "Slow-In and Fast-out" and "Out-in-Out" techniques are established from attaching more importance to velocity in the latter half of cornering than the first half. This has something to do with the acceleration of a car; that is a car increasing speed faster than other cars at the latter half can take the lead in the successive straight track, provided the cars should have the same pickup and maximum speed capability. This principle is true anywhere except in a very wide road where you are not required to reduce the speed at all.

●THE LAST CURVE IS THE MOST IMPORTANT IN A CHICANE

The last curve is the most important in continuous curves. In successive bends of a road, steer your car so that it will make the easiest turn at the last curve. Then you will be able to speed it up as soon as getting into the straight course.

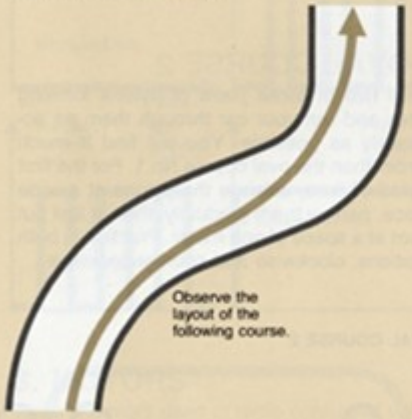


●CONSIDER COMPLEX CURVES AS ONE

Consider complex curves as one integrated compound. In the case of complex curves with different radii, you can manage to get through by considering them as one complex curve and making a cornering passage.

●TAKE THE INSIDE LINE ON GENTLE CURVES

Although the "slow-in, fast-out" and the "out-in-out" rules are basic for cornering, if the curve is gentle enough, there is little, or no need to reduce speed. Naturally, it is advantageous to use the inside line throughout the curve, when possible.



●OBSERVE THE ENTIRE CIRCUIT LAYOUT

Although several tips are offered when describing individual curves, a circuit is a succession of straights and curves. It is therefore important to observe the entire layout and select a smooth running line for completing a lap. Repeat practice laps, trying various routes to find the ideal line. Shortening your lap times during trials is one of radio control's greatest enjoyments.

●WHEN PERFORMANCE GETS BETTER, THE DRIVING LINE SHOULD BE ALTERED

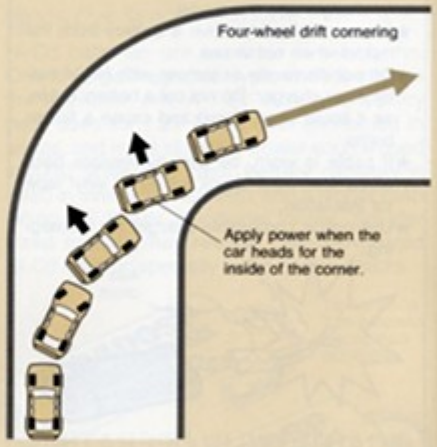
When your car's top speed becomes faster, by using a higher performance motor, etc., more deceleration will be required when entering corners. Not only the speed, but the handling characteristics, tire grip etc. will influence the driving line a car should take.

2. ADVANCED CORNERING TECHNIQUES

Not just steering alone, but combining with throttle control, various cornering techniques can be obtained. Practice and master this for much faster and smoother cornering.

●FOUR WHEEL DRIFT

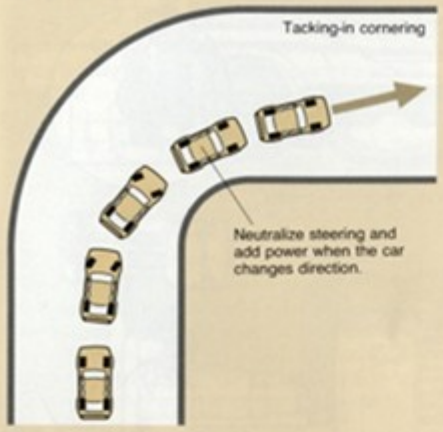
This technique is achieved by oversteering while deceleration during the early stage of cornering. As the rear wheels start to slide outward and the nose heads towards the inside of the corner, neutralize the steering and add power. The car will take the corner with all wheels sliding. This technique is suitable for rear wheel drive and 4WD race cars.



●TACKING-IN

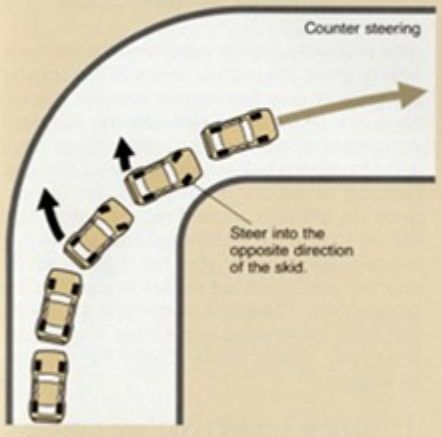
This technique is unique to front wheel drive cars. Enter a curve straight, then cut power and steer around the curve at the same time. The car will change direction quickly.

Straighten out and accelerate going through the corner.



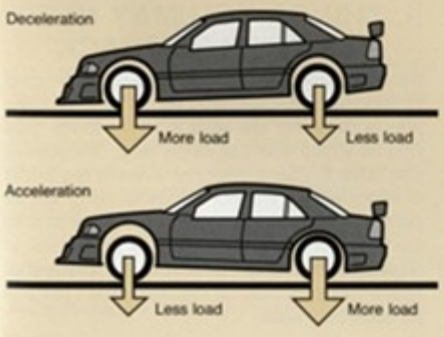
COUNTER OR OPPOSITE LOCK STEERING

The term means to steer the wheels against the turn of a corner. If a car enters the corner too fast, the rear wheels could start to skid, resulting in a spin. To stop this, steer into the direction of the skid. This technique is used to prevent the car from spinning and is not for enhancing cornering speed.



WEIGHT LOAD SHIFT ACCORDING TO POWER APPLIED

When running at a steady speed, the load is divided between the car's front and rear wheels in a fixed ratio. During deceleration, more of a load is put on the front wheels because of inertia, resulting in sharper steering response. Opposite of this is acceleration, where more of a load is put on the rear wheels, producing a slower steering response. Both the four-wheel drift and tack-in use this weight load shift to obtain desired cornering results.



3. PRACTICE AS IF YOU WERE RACING

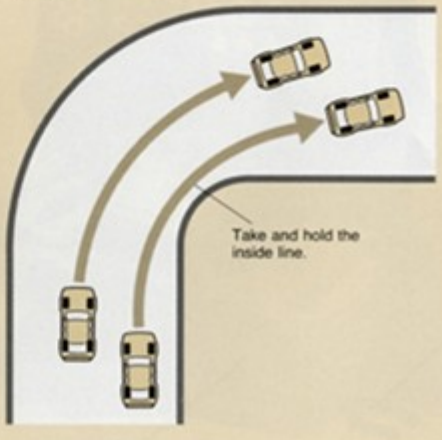
A race is run with many cars at the same time. If you want to become familiar with racing, the best way is to hold practice sessions with your friends as a group. It is important to feel the difference between driving a car by yourself and competition racing. You'll notice that the track seems somewhat narrower with all those cars and it becomes difficult to steer the car on the line you desire. Experience is what counts to get your car ahead of the others.

START

The result of a race sometimes depends upon the start. However, a quick start is not always advantageous. Accidents are most liable to occur between the start and the first corner because participating cars are running close to one another. Decide how you should start according to the characteristics of your car, course layout, etc.

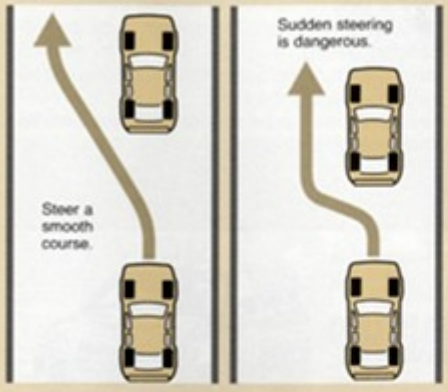
TAKE AND HOLD THE INSIDE LINE DURING CORNERING

When competing with your rivals during cornering, take and keep the inside line for maintaining the lead. It is difficult for you to beat your opponent in the corner by trying to pass him on the inside line because both cars are running at about the same speed. If your car can manage a higher maximum speed than the others, only then, is passing on the outside line possible. Trying to take the inside line too early can lead to over-running the corner resulting in loss of time and running space for your car. While you're at the edge of the track, your rival can easily pass you on the inside. In order to avoid this, stick to the inside, forcing him to delay his acceleration. Taking and holding the inside line in the corner is a golden rule for taking the lead at corners. Confrontation between cars during cornering are the most exciting moments during a race, but be sure to avoid the selfish type of running that can cause collision and damage that will spoil the overall race for everyone.



HOW TO PASS OTHERS

There are various places in which you can try to pass another car. A straight is the safest place to do so. It is dangerous to start passing a car when you are following close behind it. When you judge it is possible to pass, steer your car a little as soon as possible and attempt to pass. You may pass on either side, wherever there is more room. If the space on each side is about the same, it is advisable to go inside to make the next corner to negotiate.



Passing on a corner is dangerous as compared with passing on a straight. If the driver of the car you are going to pass is not skillful in control, your car is liable to be involved in its spinning. To make passing easier, it is advisable to go inside the rival's car and pass it after turning the corner. It is very difficult to pass it on the outside of the corner even if your car is much faster.

IF THE CAR LOST STABILITY

If your car has hit another car and lost its stability, then reduce the speed by turning off the speed control switch. If you try to restore stability by steering, the car must be further disturbed. Start acceleration again only after the car has slowed down and is stable.

Let's go to the R/C circuit!

Race tracks for R/C car models are becoming increasingly popular. Check an R/C magazine to locate a circuit and visit the one in your neighborhood. Confirm beforehand if it's an on or off-road track, and for electric powered or glow engined cars. As many R/C fans use these sites, frequency control is very important. Follow the site instructions, so everyone can enjoy the circuit.

★Follow the site rules and instructions of the staff.
★Make sure that no one else is using your frequency prior to switching on your transmitter.
★Never turn on your transmitter except when running your R/C car.
★Do not drive for long periods, as someone using your frequency may also be waiting. Yield your position to the next person when you finish one battery or a tank of fuel.
★Clean the site when you leave.


1/10 McLaren Mercedes MP4/13


1/10 Honda S2000

1/10 Busting Star

1/10 Mercedes CLK-GTR

GUIDANCE TO PARTICIPATING IN RACE

Today the radio controlled car races are often held in many places promoted by manufacturers and hobby stores. Participate in the official competition when you get used to operating model cars to some extent. If you attain a good score, you will gain confidence. Even with poor grades, you will see better modelers operating a car which is most likely of better performance and helps you to improve your own control technique and your model. You will also find a different kind of delight other than playing with models among just your friends.

1. TYPES OF RACES

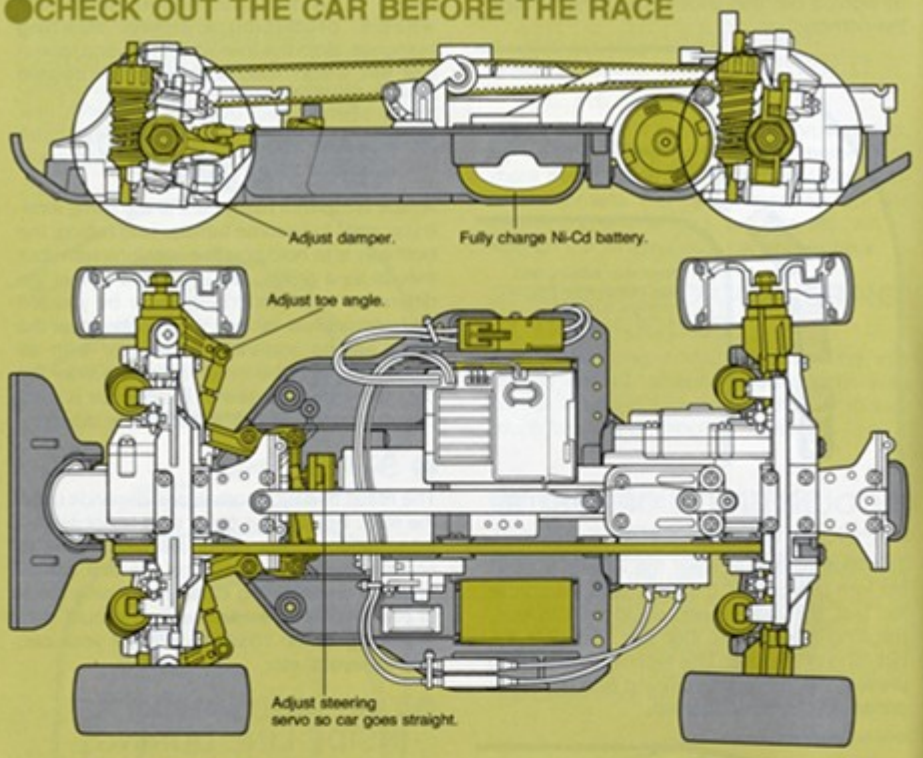
R/C car races can roughly be classified into two types: sprint races and endurance races. In most events, preliminary and final races are held and the winners are determined.

●Sprint race: Competed over a short distance and period. The winner is determined by the time required to run the fixed laps, or by the laps completed in a fixed time.

●Endurance race: Competed over an extended period, from 30 minutes to several hours. Battery replacement or refueling will be required during the race.

★Usually, the finals run longer distance/time than the preliminaries.

●CHECK OUT THE CAR BEFORE THE RACE



TAMIYA GRAND PRIX

TOURING CAR CHAMPIONSHIP

200X Season Xth Round

●Also read the reverse side.

Car	Tamiya 1/10 Electric R/C Cars	Prizes	1st - 8th places for each class, concours prize, and entry souvenir for every participant.		
Classes	Participants	Cars	Motor & battery	Minimum laden weight	Site
Rookie	Novices and women	Tamiya 1/10 4WD & Front Wheel Drive Touring Cars	Stock 540 type Tamiya Ni-Cd 7.2V	FWD: No limit 4WD: 1600g	1st
Touring Car Junior	Elementary & Junior High School Students				1st
Touring Car N1 (A/B)	A: Less than 7 times of participation B: More than 7 times of participation				1st
Touring Car Gr.A	No limit		Acto-Power or Dynatech Tamiya Ni-Cd 7.2V		2nd
FWD Touring Car	No limit	Tamiya 1/10 Front Wheel Drive Touring Cars	Stock 540 type Tamiya Ni-Cd 7.2V		1st
M-Chassis Freshman	Less than 7 times of participation	Tamiya 1/10 M-Chassis Cars	Stock 540 type Tamiya Ni-Cd 7.2V	1200g	2nd
M-Chassis Expert	More than 7 times of participation				1st

X month X day, 200X

Entry Deadline: X month X day

●Registration: AM 8:00 - 9:00

200X Season Tamiya Grand Prix

The 200X Tamiya GP Touring Car Championship competes 3 rounds using Tamiya's 1/10 scale electric powered 4-wheel drive, Front wheel drive and M-Chassis R/C cars. Refer above for detailed classification and limitation.

Notes

★Entry: one car / one class / one driver.
★Rookie Class participants are limited to the first time participants to Tamiya G.P.
★Cars are limited to Tamiya 1/10 electric R/C models. Use of Tamiya Hop-Up Options are permitted in some classes.
★Use of any other manufacturer's parts or hand-made parts are prohibited.
★Completed entry form must be received by Xth, X month.

TAMIYA

TAMIYA GRAND PRIX

with TAMIYA G.P. TOURING CAR CHAMPIONSHIP ENTRY FORM

Name	(M/F)	Age & date of birth	Occupation or school grade	Team name
SAMPLE				
Address				Car
Class: Rookie, Junior, N1/A, N1/B, Gr.A, FWD, M-Freshman, M-Expert			R/C Unit	
Frequency band: 02 04 06 08 10 12 61 63 65 67 69 / 1 2 3 4 5 6				

★Check all frequency crystals you have, and bring them with you on the race day.

2. APPLICATION FOR PARTICIPATION

Schedule of races may be announced at the hobby stores or in the magazines. It is mandatory to enroll yourself in the contest roster; in most cases you cannot apply to an event on the very day. You are required to give the class and kind of your car and frequency you will use, besides your name and age.

3. CONFIRMATION OF RULES AND REGULATIONS

Rules of racing events usually tell you how the race proceeds, how to determine the winners, how to group the models, kinds of motors and batteries to use. Sometimes detailed regulations are provided to regulate the standard equipment of racing cars. Confirm these rules and regulations beforehand with your car, and remodel or modify if necessary for compliance. In official competition, car inspection will be done at the registration area on the day to see whether or not your car is qualified. Of course, a disqualified model is rejected for competition. Therefore, if there is any point you don't understand in the rules and regulations, you should check it with the host organization.

●Check spare parts and tools.

4. PREPARATION BEFORE THE RACE

Prepare your car the day before the race. The most important is the radio control system, because in the race day you will be requested not to turn on the transmitter except when it is your turn to race. In some events, you are requested to place the transmitter in custody of the host organization. Namely, you cannot tune it up on the competition site.

5. THINGS YOU MAY NEED AT THE RACE TRACK

It is needless to say to take a registration card or membership card with you, if anything like that is required. Be sure to bring tools, glue and oil which you use every day. Sometimes you have to mend your car even in the midst of competition. Do not forget to bring fragile parts and accessories which are easy to lose such as screws and bolts. It is advisable, in regards to the length of time of the event, that spare batteries may be recommended to have for caution's sake.

6. REGISTRATION AND CAR CHECK

Leave your home for the race site with ample time for arriving early for registration. Your delay for the registration may upset the whole schedule and annoy others. Very often registration and car check are conducted at the same spot. Undergo the registration desk, you may be given a contest number, perhaps marked on a pennant. During the whole event, you may be referred to with that number when being called or receiving your transmitter; so remember this number. Car check may be done after the registration. Your car will be examined with batteries on board. Even if your car should be disqualified, you might be admitted provided you could repair or modify your car on the spot in accordance with the rules of the organization.

7. BRIEFING FOR DRIVERS

Prior to the races, a briefing is held for letting the contestants know the procedures of the competition. Listen carefully, since how the races proceed, penalties for violating rules and other important affairs are explained.

8. MAKING UP RACING GROUPS

In a radio controlled model race, cars on the same frequency cannot compete at the same time. Therefore, those who use different frequencies will make up a competing group. Before the races the combinations of the groups are announced. You should confirm which race you will be in. When time is getting close to your turn, prepare yourself for the race.

9. TURN ON YOUR TRANSMITTER ONLY WHEN YOU ARE RACING

Using the same frequency at the same time may cause serious accidents. During a race event, never turn on your transmitter unless it is your turn to race. Any radio interference will result in hindering a smooth operation of the race, affecting the schedule of the day and annoying other participants.

10. YOUR TURN TO RACE

Your name or number is called to inform you of your turn. Most racing events hold two or three preliminary races, and then the finals are held. A practice lap may be allowed prior to the actual race in some cases.

★PRELIMINARY HEATS

It is recommended to run the first preliminary heat steadily, giving the priority to complete the race. When this is done, you can challenge the following preliminary for a better result. Keep your coolness during race and always bear in mind that accidents and/or retirement result in nothing!

★FINALS

Following the preliminaries, finalists are qualified. If you succeed in being qualified, do your best at the finals. Finalists are generally regarded to have a high level of driving skills and competing among them is a great honor. Try to fully display your ability to make the race exciting. Even if you fail in remaining in the finals, watching a white hot race competed by highly skilled drivers will surely contribute to improve your own techniques and inspire your R/C enthusiasm.

11. AFTER THE RACE

You have run the complete distance and the race is over. Switch off your receiver and transmitter immediately. Although you may be anxious about the result, do not stand around the finish line, as you may be in the way of the officials. Get back to your seat and check your car, preparing for the next competition.

12. ANNOUNCEMENT OF THE RESULTS AND COMMENDATION CEREMONY

After all the races are complete, the results are posted and the winners are honored. The winners should be praised by applause. Whether or not the competition is successful depends upon the attitude of everybody involved.

●ALTERING THE FREQUENCY

In some cases (particularly at the finals), you may be requested by the organizer to alter your frequency band. It is advisable to bring your spare frequency crystals to the race, so that you can help the organizer to proceed the race smoothly.

●MANNERS IN RACE

Spirit of fair play is essential in any game. It is desirable to make a pleasant race event through the fair play spirit of all the participants.

★Yield the way when you are about to be passed by a faster car.

★When you hit another car, you should apologize. But do not ask for one after being hit. Responsibility should not be claimed by anyone for any collisions during a race.

★After all the races are over, clean the site. No rubbish should be left behind.

EURO-CUP FINAL, ITALY

TAMIYA ON-ROAD CUP, LEBANON

EURO-CUP, HUNGARY

EURO-CUP, GERMAN FINAL

THE CHALLENGE OF LE MANS

The Le Mans 24 hour race is done with racing sport cars, and the famous Spa-Francorchamps 24 hour race is done with touring type cars. A combination of driving ability and team-work of the pit crew are necessary for winning this type of race. Fuel; tire changes and the correction or replacement of broken parts is essential from the pit crew in the minimum time possible to remain competitive.

Participating in an R/C long distance race requires team effort. In addition to driving the car, battery changes/refueling, spot repairs, plus the team management are all vital factors in endurance race competition. Team mate cooperation is the key to victory. By entering an endurance event, you will experience another dimension in radio control enjoyment.

1. CARS FOR LONG DISTANCE RACES

In any long distance race, you cannot say for certain that the fastest vehicle is going to be the winner. We are all familiar with the tale of the "Tortoise and the Hare." The turtle was far slower than the rabbit, but won the race by keeping a steady pace throughout the course. If you have a very high performance car, tuned up to its capacity, and attempt to run a long distance race, you are likely to spin out often if you are initially concerned with leading the pack at the races outset. Long distance vehicles also require a greater degree of precision tuning, better maintenance, and durable parts, and perhaps a different gear ratio. The vehicle that makes the fewest pit stops will most likely be the winner.

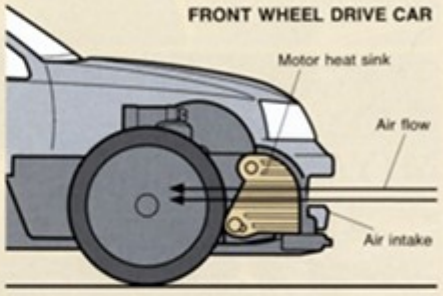
●Credibility & durability are the first requirements

A car made from a kit properly will have this durability and be competitive during the entire race; however, if it is not built and assembled accurately, the chances of it surviving a race are slim.

① Firmly tighten all screws and nuts, applying liquid thread lock where necessary.
② Stripped screws and/or nuts must be replaced with new ones.
③ Screw holes in plastic can become enlarged following repeated tightening/loosening of self-tapping screws. Use larger screws, or replace the worn plastic part.
④ Replace double-sided tape.
⑤ Gather and hold wiring in place using nylon bands, to keep them away from moving parts.
⑥ When chassis modifications are allowed, reinforcement becomes a priority. Weight-saving holes in the chassis, removing bracing, etc. are most often done, and is effective for sprint race cars, but this can result in unnecessary durability loss for endurance racing cars if done excessively.

●COOLING MOTOR OR ENGINE

Overheating is one of the biggest problems encountered during endurance racing. Particularly in the summertime, the track surface will be very hot and operating motors/engines under these conditions for extended times will result in lowering their performance. Pay attention to effective heat dissipation by adding a heat sink, or using a larger, more effective one. It is also recommended to make air intake holes in the body, so the motor/engine can receive a regular flow of cooling air. Try not to ruin the scale looks of the body shell in doing this.



●Pit practice and maintenance for victory

The majority of pit work during the race will be battery changes. By saving time during these stops, you can greatly advance your standing in the race. It is very necessary that your crew practice removing the body, change batteries, replace the body and secure it on the chassis. The more this is practiced, the quicker they will be during the race. One second saved in time is a gain of one second on the leader, and races are won and lost in less time than a second.

●M-CHASSIS QUICK-RELEASE BATTERY HOLDER (53238)
Enables a quick battery replacement on Tamiya M-01, 02 Chassis.

●A powerful motor is not always profitable

A large, powerful motor is a necessity in sprint type races where no battery changes are needed; however, the same does not hold true for long distance racing. Small motors which use little electric current are much better as they require fewer pit stops for battery changes. Another point to consider, is that with the high current flow of the larger motor, the speed controller is more apt to cause trouble, and in any collision, the faster car is normally damaged to a greater extent because of the higher impact forces. A faster car is also more tiring to drive during long races and mistakes in driving are more likely to happen due to the speed at which it is traveling. All of these considerations must be taken into account when selecting a vehicle and motor for long distance racing.

2. LONG DISTANCE RACING ACHIEVEMENT DEPENDS UPON TEAM EFFORT

No matter how fast your car is, you cannot win an endurance race if too much time is spent in the pits. Prolonged driving of fast moving cars is more fatiguing than you realize, so it is advisable that two or more drivers be used. Preparation for a battery change or refueling, quick repairs of broken parts and recovery of the vehicle when an accident occurs, are all required during a race. Team members should understand and practice their individual roles, and reach perfection prior to competition.

●COMPOSITION OF A RACING TEAM

Generally, driver(s), a mechanic, a time keeper and a team manager are the basic members of an R/C endurance racing team.

★Driver

The driver must operate the car in accordance with the team manager's instructions. The driver is most sensitive to the cars performance and therefore likely to be the first to notice any problems. In such cases, he should immediately report it to the team manager and mechanic, so appropriate measures can be taken. He should also keep the relief driver informed about the car and track condition.

★Mechanic

He should prepare the battery/fuel, replacement parts and tools, for both planned and unplanned pit stops. Keep the pit area neat and tidy, and take great care in identifying newly charged and depleted batteries. In addition, the mechanic should be aware of the race situation. If the car stops, upsets or is off the course due to an accident or problem, he should immediately restore it to the track or bring it to the pits.

★Time keeper

The time keeper plays an important role in-as-much as he records all of the fundamental data that the team manager uses to formulate his race strategy and tactics. At a minimum, he should record the number of laps run and the lapsed time from the beginning of the race. If possible, he should calculate the average lap time of the team's vehicle, time the pit stop and record what was done, plus keep track of who was driving and when a change of drivers occured.

★Team manager

The team manager observes the progress of the other teams, and advises his driver as to pacing, pit stops etc. The team manager and time keeper should not be drivers in this race. During the second half of the race, when there is almost no difference between your car and the rivals team, it is the data provided by the time keeper that will give the team manager the necessary information to guide his driver on to victory. It is the manager who is responsible for victory or defeat in long distance races.

●Periodic pit stop maintenance

The number of pit stops made must be reduced to the absolute minimum. If your only stops are for battery changes and/or driver change, then your race is progressing well. Keep in mind though, that it is also necessary to periodically oil bearings, and shafts. Also look for any loosening screws and/or missing parts that may require maintenance during the next stop.

●Trouble pit stops

As soon as a problem is noticed by the driver, he should pit the vehicle the next lap. To keep running the car with a problem will only create a worse problem, and perhaps one that can no longer be repaired during the race. After a bad collision or spin out, observe the vehicle for a lap or so, and if there is a problem pit it as soon as possible. During the latter stages of a race, it is difficult to judge if your vehicle is performing the same as at the beginning. You must compare your performance with your rivals, and if your vehicles running compares favorably with your opponent, keep running it, even though you feel that its performance is not as good as at beginning. If you make a stop and discover that it will take too long to repair the fault, continue running the vehicle, rather than expending the repair time. The manager's judgement on this must be accepted.

●Pit tools and spare parts

Keep the total number of tools in the pit to a minimum; however, make sure that you have all of the required tools to completely assemble the vehicle. A box wrench, for instance, is much better than an adjustable spanner. Needlenose pliers and tweezers are also required. If you take only one glue, the instant cyanoacrylate is recommended. Gummed tape, vinyl tape and soft iron wire are also very useful for making emergency repairs. Take

along enough parts to completely rebuild the vehicle. Extra parts for the front-end and steering, and those parts that require assembly, should be assembled prior to the race, so that they can be installed as a unit, rather than part by part during a pit stop.

●CHANGING TIRES

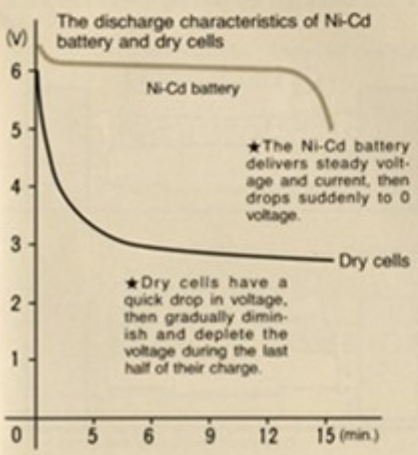
Sponge tires do not normally require replacement in races of two hours or less; however, the sponge may be damaged during an upset or crash. Semi-pneumatic tires will require two or three replacements in a two-hour event. Prepare spare wheels/tires in advance for quick replacement. Secure sponge tires to wheels using double-sided tape, and semi-pneumatic tires using instant cement or cyanoacrylate (CA).

●BATTERY CHANGING OR REFUELING

It is advisable that you know beforehand how long the car will run on one Ni-Cd battery or a full tank of fuel. You can then calculate how many batteries or amount fuel will be required to complete the race. Some extra batteries or fuel should be prepared, because the car will not always run smoothly during the race due to accidents, upsets or obstruction by other cars, thus using extra battery power or fuel.

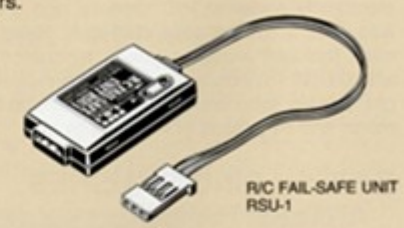
★Ni-Cd BATTERY VOLTAGE DROPS SUDDENLY

Dry cell voltage falls gradually from the start, while Ni-Cd batteries can deliver a constant, even voltage until it is almost depleted. In other words, its voltage drops suddenly at the end of the charge. This is why a Ni-Cd battery powered R/C car runs at a steady speed for a certain period, then suddenly stops. It is advisable not to determine the time for a battery change from the car's running speed, but from its running time or number of laps completed.



★FAIL-SAFE UNIT

This unit is designed for R/C cars, which require receiver battery. It works to prevent out of control running due to receiver battery weakness. Servo position is in neutral automatically when receiver battery weakness occurs.



R/C FAIL-SAFE UNIT RSU-1

●Radio control battery life

Normally, you will not require a fresh receiver or transmitter battery during a race that is not longer than one hour, if you start the race with fresh batteries or recharged Ni-Cds. Note however, that the more servos you use, the more the receiver battery is used. In glow engined cars, replacement of the receiver batteries will be required if the race lasts two hours or longer. Whatever equipment you use, you must be familiar with the nominal life expectancy of the batteries, and if there is a possibility of the race lasting longer than expected, prepare extra batteries beforehand, just in case they are needed at a pit stop.

3. TECHNIQUES FOR WINNING LONG DISTANCE RACES

Endurance or long distance races are very much like human distance racing. To win, you must establish and keep a steady pace throughout the race, avoiding useless dead-heats with other rivals at all times. Keep clear of trouble on the track and run your car at a steady even pace.

●Start

You do not have to "Jack Rabbit" start. Take it easy and run carefully at the beginning, especially at the first corner, where accidents often occur. Enter the corner high, even if you are left behind at this curve. Accidents at the beginning of the race often leave the driver irritated and confused, and the original plan of pacing is lost. For the first two or three laps be very deliberate in your driving. You will start to relax, learn the track and how the others are pacing themselves. If you should spin out, don't become upset and dash to catch up. Keep the pace and drive smoothly.

●How to pass and get ahead of rivals

Success in long distance racing usually comes from not being in the lead for most of the race. When you are the front runner, you are always concerned about those who are behind you trying to pass. If you cannot maintain enough distance in the lead over your rivals, it is better to let one or two pass you, than constantly worrying about them. You can then use the leader as a pace setter for you, and when the time comes for you to pass, do it right after a corner that is followed by a long straightaway. Even if your car seems to be slower than others in the race, you still have a good chance of winning. Remember that the faster a car runs, the more battery it consumes, and the faster cars will have to make more pit stops. This is your chance to catch up and pass them. If you can just manage to keep your own pace, throughout the race, you have a good chance for the winner's trophy.

●Relax when cornering

During the endurance races, take the middle or high corner, rather than at the track inside edge. This is where many accidents occur, and those that are trying to catch up from their last spin out will be fighting for that inside lane, and most likely spin out again. If you are there, you could be knocked out in the accident. Stay high in the corner and relax, except for that time when you need the extra speed and dash for winning the race. Relax and win!

●ESTABLISHING A PACE FOR VICTORY

"Safety first" is a golden rule for long distance competition; however, you cannot be the final winner if you always give way to the rival. Driving at a faster pace is sometimes required to win. This does not mean short spurts of speed or acceleration. You should set a slightly faster pace for several laps, to gradually catch up with, and then outrun your competitor.

4. KEEPING RECORDS

In long distance races, it is advisable to keep a record of the race. Later, you will be able to review it with your team mates and determine where time was lost. This is a very useful and positive approach to improve and strengthen your team for other long races.

★Car settings

The type of motor or engine, gear ratio, type of tires, damper setting, etc.

★Weather condition & temperature

★Conduct of the race

Lap records, pit stops, time in the pit, driver changes, running position, etc.

●PIT RECORD EXAMPLE

TAMIYA LONG DISTANCE SERIES

PIT RECORD SHEET

Team: Tamiya Racing Factory
Drivers: Taki, Kiya, Voss
Pit crew: Arimura, Sano, Fujino Date:

	Laps	Time Pit in / Pit out	Operation	Driver	Position	Recorder
Start	0	/				
1st	43	11'35" / 11'49"	Battery & driver change	Taki → Kiya	2	David
2nd	84	23'25" / 23'31"	"	Kiya → Voss	3	"
3rd	127	35'21" / 35'30"	"	Voss → Taki	2	"
4th	170	47'06" / 47'15"	"	Taki → Kiya	4	"
5th	210	59'37" / 59'45"	" Tire change	Kiya → Voss	5	"
6th	247	68'45" / 69'02"	"	Voss → Taki	3	"
7th	256	71'11" / 71'18"	Tie-rod failure	Taki → Taki	4	"
8th	297	83'07" / 83'15"	Battery & driver change	Taki → Kiya	5	"
9th	321	96'27" / 96'42"	"	Kiya → Voss	3	"
10th	358	109'59" / 105'12"	"	Voss → Taki	3	"
11th	405	123'09" / 123'15"	Tire change	Taki → Taki	2	"
12th	443	139'37" / 140'58"	Battery & driver change	Taki → Kiya	2	"
13th	496	195'15" / 195'48"	"	Kiya → Voss	3	"
14th	545	162'39" / 163'32"	"	Voss → Taki	2	"
15th	593	180'19" /	Finish!	→	1	"

DAILY MAINTENANCE

To keep your car at optimum performance, daily maintenance is important. This will also help discover any hidden problem areas. Without this daily care, your car's performance can deteriorate rapidly. Keep it in the best possible condition at all times.

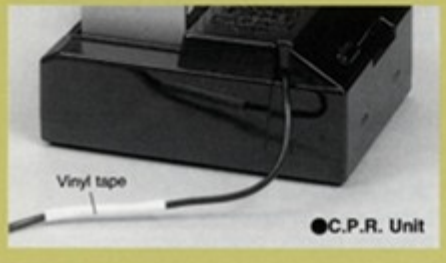
1. MAINTENANCE OF R/C UNITS

Your radio control receiver, transmitter, servos and amplifier boosted speed control are precision electronic instruments. Clean these components after use, especially the connector sockets on the receiver, as they collect dust. Remove plugs and clean the sockets using a soft bristled brush.

★If a malfunction occurs with your radio, do not attempt to dismantle and repair by yourself. No user serviceable parts are inside. Send to the manufacturer or service station for repair.

●IF THE RECEIVER ANTENNA CABLE BREAKS

If the antenna breaks at its base, do not dismantle the receiver. Send it to the manufacturer for repair. If the insulation is worn, cover the bare wire using vinyl tape. If left uncovered, accidental contact with metal parts will cause radio interference and loss of control of the model.



2. MAINTENANCE OF ELECTRIC COMPONENTS

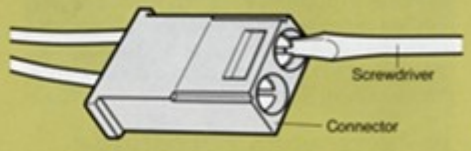
Electrical components play a vital role in R/C models, whether battery powered or glow engined. Make sure to check them prior to and after each use.

●ELECTRIC CABLES

Electrical wire/cables can withstand some degree of stretch; however, if excessively pulled, they can break or become detached from a solder joint. Insulation will wear off if rubbed against the ground or a car's rotating part while running. Special attention should be paid to motor/battery cables on Ni-Cd battery powered models, due to the enormous amount of current that flows in these circuits. Any short circuit can cause a fire or serious burns.

●CONNECTORS

Connectors can become loose and develop bad contact following repeated use. Crimp the tubular contact points using the tip of a screwdriver to maintain firm contact in the plug.



●MECHANICAL SPEED CONTROL

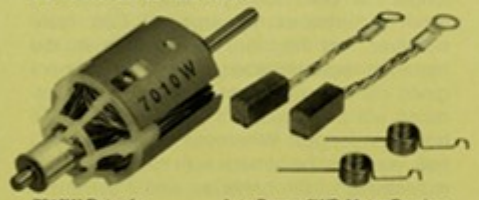
A mechanical speed control passes large currents and its metal contacts repeatedly rub against each other during operation. Metal wears more rapidly than you expect, and this causes poor electrical contact, scorching of points, and sparking. Scorched contact points can be cleaned using fine abrasive paper, but if badly worn, the entire speed control unit should be replaced. Keep dust and sand away from metal contacts, and periodically apply switch lubricant for smooth movement and good contact.

3. MAINTENANCE OF ELECTRIC MOTORS

The electric motor is the vital component in electrically powered R/C models, and it will wear out following extended use. Keep in mind that stiff meshing gears, hindrance of wheel/shaft rotation and running the model in grass or dry sand imposes great stress on the motor and can result in motor burn out.

●REPLACING BRUSHES AND ROTORS

A major reason for reduced motor performance is worn brushes and/or damaged commutator. High performance motors can be disassembled for cleaning, and new brushes and rotors are available for replacement. In these cases, motor performance can be restored to like new.



7010W Rotor for Dynatech 02H Motor

Acto-Power 2WD Motor Brushes

●NOISE SUPPRESSING CONDENSERS

Electric motors generate electromagnetic noise during operation, so R/C electric motors are equipped with noise suppressing condensers to filter out this noise. A standard 540 size motor houses its condenser inside the case so there is little possibility it will come off; however, some high performance motors have their condenser attached outside on the end bell. Check that it is firmly attached and re-solder if necessary.

4. MAINTENANCE OF CHASSIS COMPONENTS

Properly assembled and operating chassis mechanics are the basis for optimum performance of an R/C car. Keep your car in peak condition by constantly inspecting and maintaining it.

1 LOOSENED OR DAMAGED SCREWS & NUTS

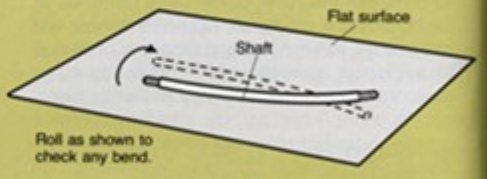
Screws and nuts can become loosened from vibration while running. They can even become bent and distorted from a collision. Tighten screws and nuts and replace those that are bent, cracked or damaged. Stripped screws and nuts must also be replaced.

2 GEARS AND JOINTS

Even durable plastic or metal, gears and joints are subject to wear because they are always in motion during use. Proper lubrication reduces friction, and helps prolong the life of these parts. If gears are exposed, foreign objects such as sand and debris gets between the teeth, damaging the gears. Check and replace any damaged or worn gears and joints immediately.

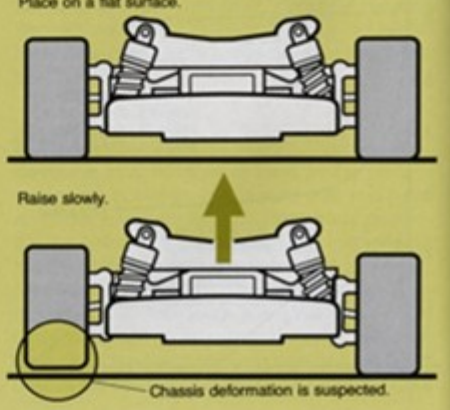
3 BENT SHAFTS

Shafts can become bent following a collision. Even a slight bend in an axle or propeller shaft can cause vibration and unstableness of the car. Periodically remove them from the car to check if they are straight. Bends can be found by rolling the shaft slowly along a flat surface.



4 DAMAGED OR DISTORTED FRAME/CHASSIS

The frame/chassis is the backbone of your car, and made to withstand extreme stresses. However, it can become damaged or distorted following repeated hard collisions. Check for any distortion by placing the model on a



flat surface and gradually raising it from the surface. If a wheel on either side leaves the surface sooner than the other, chassis deformation or an incorrect suspension setting can be suspected. A slight distortion can be corrected by twisting the chassis in the opposite direction, but it is best to replace it with a new one as soon as possible. Check screw holes on the frame/chassis for cracks or damage.

5 SUSPENSION COMPONENTS

Suspension arms and pivots are subject to damage during collisions. Check and replace deformed arms, bent shafts etc. Lubricate all suspension pivot points for smooth operation.

6 OIL DAMPER CHECKS

Oil filled shock absorber units can leak due to improper assembly, rugged use, or the deterioration of the seals and O-rings. Periodically check to see if the damper oil is full, and add oil when required. Check damper piston rods for bends following a collision.

7 STEERING LINKAGE

Because a steering servo saver is constantly receiving external shocks from direct contact with the steering mechanics, it will gradually deteriorate with prolonged use. Plastic ball sockets used at tie-rod ends can become loose after repeated attachment and removal. Periodic replacement of these parts will be required. In due course, replace any damaged components immediately.

8 CHECKING DRIVE BELT

Drive belt tension has to be checked periodically. Drive belt can be easily adjusted by changing pulley position. In addition, change it when damaged and clean it if it becomes dirty.

●BODY REPAIRS

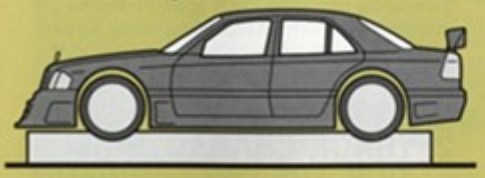
Even a slightly damaged or cracked body shell will worsen beyond repair due to running vibrations. Styrene bodies can be repaired using plastic cement or instant glues (Cyanoacrylates). Apply sheet styrene from the inside for reinforcement. Polycarbonate (Lexan) body shells cannot be repaired with cements, so use cloth tape or fiberglass reinforced tape for repairs. Polycarbonate sheet, cut from a body shell can be used as reinforcement under the cloth tape.

It can avoid body deformation from the heat and it can be used for body reinforcement.

●LONG TERM STORAGE

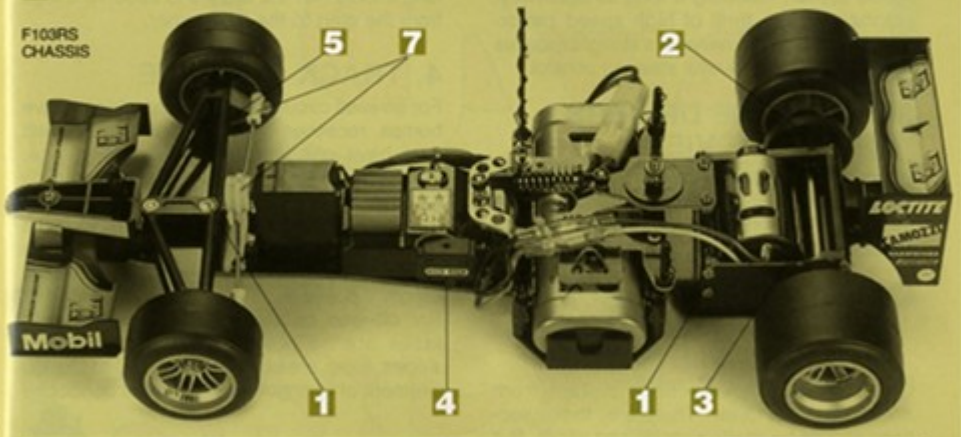
Remove all batteries from model. If the car is to be stored for an extended period, remove the wheels, or put the model on a stand with the wheels clear of the ground. This prevents the tires from deforming.

Put the model on a stand with the wheels clear of the ground.

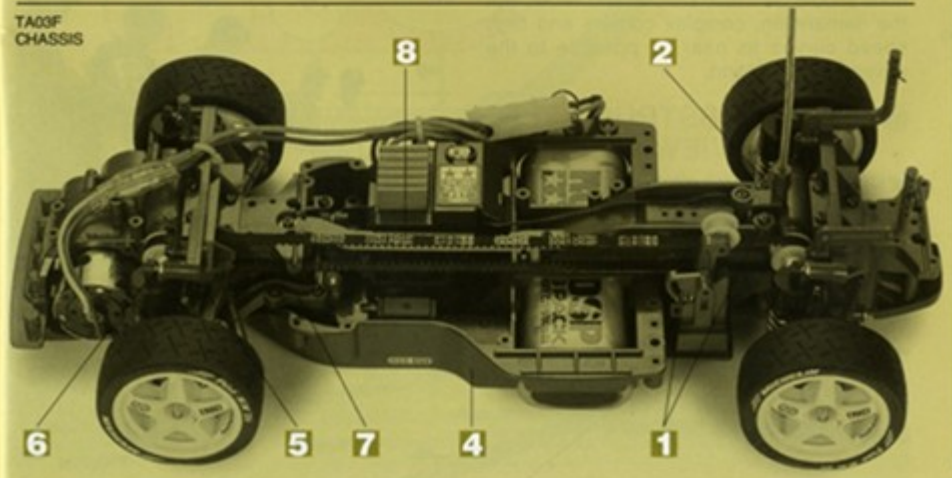


■ MAINTENANCE POINTS

F103RS CHASSIS



TA03F CHASSIS



●CHARGING/DISCHARGING OF Ni-Cd BATTERIES

The performance and life span of Ni-Cd batteries is influenced by its treatment and handling. Note the following points.

Ni-Cd 7.2V-1700mAh Racing Pack RC1700SP

Compatible charger

★NEVER RECHARGE A BATTERY WHEN IT IS WARM.

In most cases, a Ni-Cd battery becomes heated during use. Let the battery cool before recharging, to avoid damaging it.

★COMPLETELY DISCHARGE A BATTERY PRIOR TO RECHARGING.

If you repeatedly recharge a Ni-Cd battery before it is completely discharged, you decrease its capacity for a full charge. Discharge it with a suitable Ni-Cd battery discharger, each use.

Ni-Cd 7.2V Racing Pack Auto-Discharger

●IF NOT USED FOR A LONG TIME, A Ni-Cd BATTERY BECOMES DIFFICULT TO CHARGE.

In such cases, charging and discharging several times will usually bring it back to normal operation.

HOW TO BUILD A CIRCUIT

Building a racing course, even a simple one, lets you enjoy it far better than running a car in a large open space freely. You can make one very easily, i.e., by drawing lines with chalk or using empty bottles for pylons (when using a space of someone's possession, like a parking lot; of course, permission should be acquired beforehand). To make race more fun, some knowledge of courses are required.

1. A TRACK BEFITTING THE CARS

You cannot expect thrills and excitement when running cars on a track that is too wide. Conversely, a too narrow track means you cannot enjoy the fastest racing. Considering R/C car size and performance, suggested track dimensions are shown on the following diagram.

	1/10 Electric car	1/8 Engine car
Course length	100 - 200m	200 - 300m
Course width	3 - 4m	5 - 6m
Longest straight	30m or more	50m or more

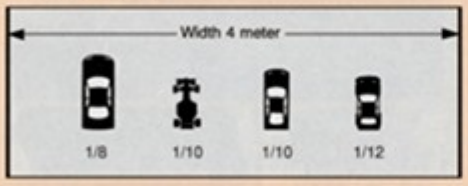
●COURSE LENGTH

With electric powered R/C cars top speeds at around 40km/h, this equates to a little more than 11 meters per second. Taking into account deceleration at corners, a car will lap a 100m circuit in about 15 seconds or less. The top speed of glow engined R/C cars can exceed 60km/h. The faster a car's top speed, the longer and wider the racing circuit should be.

●COURSE WIDTH

Course width should be determined by the models size and the number of cars that will be raced at the same time.

●COMPARISON OF A 4m WIDE COURSE AND MODEL CARS



★Areas distant from drivers should be made broader.

The farther away from drivers, the narrower the course will look, because of parallax. This can cause problems for drivers. To compensate for this, track sections in these areas should be 1 to 2m wider than other areas.

★Wider sections can be used for the pit area.

Make a very wide section near the drivers control stand to be used as the pit area for endurance racing and other events.

★Vertexes of curves should be made wider.

Cars are apt to deviate from the course outward on high speed curves, and inwards on low speed curves. The width of corners should be increased accordingly.

●STRAIGHTAWAY

There should be at least one straight stretch where cars can run at their maximum speed. If a car's top speed is 40km/h, it will travel over 30 meters in less than 3 seconds. Drivers can relax and enjoy top speed driving on these straights. A longer straight may be desired depending upon the car's speed potential. A straight of over 40m will allow drag racing, for cars designed with quick acceleration performance (a 400m full sized track is 40m in 1/10 scale).

2. TRACK CHARACTERISTICS ARE DETERMINED BY CURVES

Circuits are roughly classified in two groups; a high speed course where velocity is important, and a low speed course where control techniques are more important. The features of a track are formed with the number and characteristics of many curves. An ideal circuit conceivable is a mixture of high and low speed courses.

●CURVES AND CORNERS

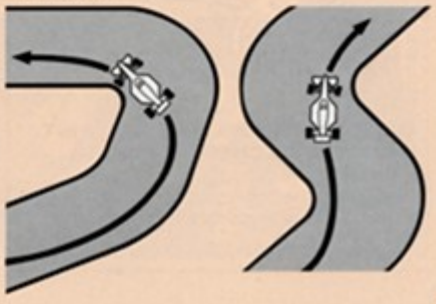
Curves and corners can be divided into three groups in terms of their layout and a car's possible passing speed. It is recommended to use at least one each of the high, medium and low speed curves, plus a complex one consisting of different radii, on the circuit.

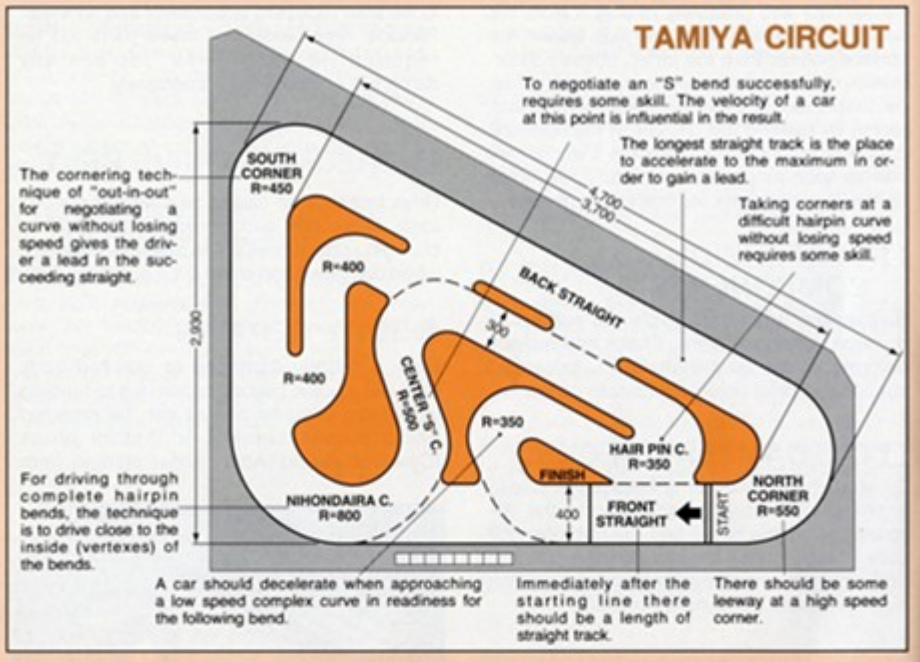
●KIND AND CHARACTERISTICS OF CURVES

High speed curve — Cars can pass through at high speed (challenging running).
Medium speed curve — Some slow down is called for (this is where passing is done. Many car will be spinning and leave the course).
Low speed curve — Hair pin curve (prudent running is required).

●COMPLEX CURVE
SUCCESSION OF MULTIPLE CURVES

Try to anticipate the course ahead. Watch for places to pass skidding opponents.





●COMBINATION OF STRAIGHTS AND CURVES

A circuit's characteristics can be changed by how the straights and curves are combined. A short straight between curves of different radii makes a kind of complex course. A high speed corner, following a long straightaway, emphasizes the thrill of high speed performance. A hairpin corner after a straight requires hard braking and careful steering control.

3. FROM THE DRIVERS POINT OF VIEW

Apart from its size, the biggest difference between real cars and R/C cars is the position of the driver. The following points should be fully considered.

●SECTIONS FAR FROM DRIVERS SHOULD BE MADE SIMPLE

On a circuit, track sections distant from drivers look narrower. Therefore, these sections should be made simpler and wider. Put the demanding, complex corners and high speed curves as near as possible to the drivers' control stand.

●DO NOT OBSTRUCT THE DRIVERS VIEW

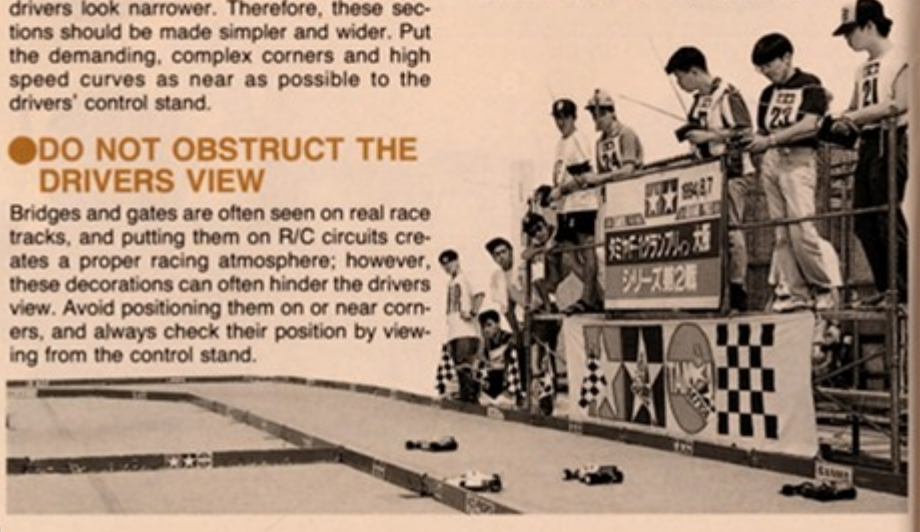
Bridges and gates are often seen on real race tracks, and putting them on R/C circuits creates a proper racing atmosphere; however, these decorations can often hinder the drivers view. Avoid positioning them on or near corners, and always check their position by viewing from the control stand.

●INCORPORATE A STRAIGHTAWAY AFTER THE START

In competition, cars run in a tight group just after the start, and collisions are apt to occur. It is therefore desirable to have a straightaway long enough for the drivers to observe things from the start to the first corner.

4. TRACK SURFACE

For on-road circuits, it is not advisable to have bumps, recessed lines or bulges, as on-road cars have only minimal ground clearance. Some undulations and gentle slopes can be allowed, as long as they do not hinder a car's running. Sand and dust on paved surfaces reduce traction excessively, and should be washed off with water or swept clean with a broom if possible.
For off-road circuits, rough or uneven surfaces are no problem. On the contrary, slopes, jump areas, and banks add to the excitement of racing. Varying surface conditions



require more advanced driving skills and proper car setting, thus providing a greater challenge and more total enjoyment. Pebbles should be picked up and tall grass should be removed from the course surface.

●PLAN COURSE DRAINAGE CAREFULLY

Unless built indoors, drainage is very important for both on-road and off-road circuits. If possible, slightly raise either side or the center of the course, so that water does not remain on the running surface.

5. COURSE EDGES

On permanent circuits it is recommended to have shortly mowed lawn or artificial turf on the edges. The area between the course and its edges spaces should be level or have a gentle slope, with the outside being higher. This will reduce damage to cars if they leave the course and it ensures easy entry back onto the track. When the spacing between course lanes is very short, some fencing should be used to prevent cars from short cutting across the course.
If you build a temporary circuit using logs, boards etc., these should be 10 to 15cm in height so that the drivers view is not obstructed. Painting these in light colors will help the drivers recognize the course, and it also enhance a racing atmosphere.

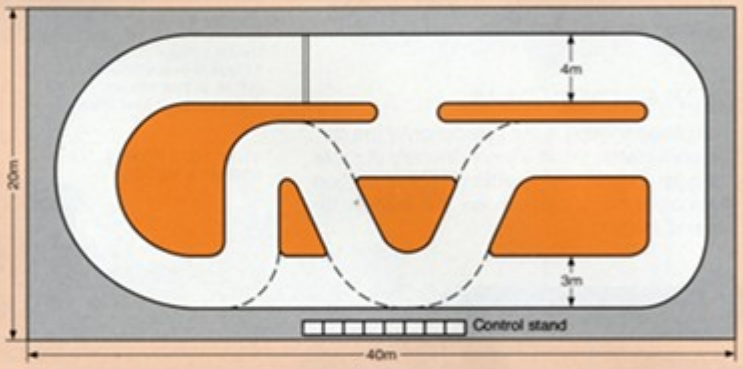
6. DRIVERS CONTROL STAND

In order to provide the best view for drivers, a raised control stand is desirable. You can use large boxes, chairs, or a truck's platform, but be careful of their sturdiness and stability.
The larger a circuit becomes, the higher the control stand should be; however, too tall a stand is inconvenient to get on and off, and ladders may be required. You should also consider hand rails for safety.

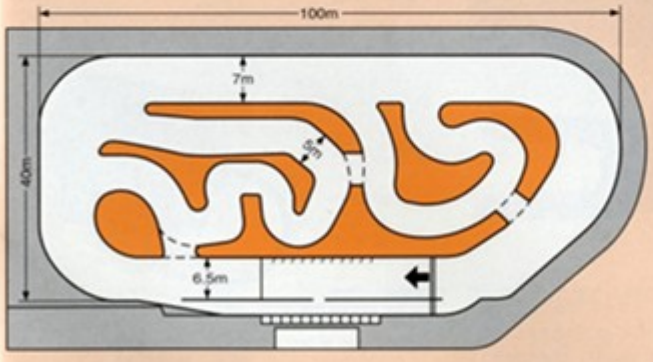
7. SPECTATOR SAFETY

R/C cars travel at very high speeds and can cause serious accidents if they deviate from the course and collide with onlookers. To prevent this, fences of at least 50cm high should be used around the course.
Glow engined R/C cars emit noise during running and this can be annoying to others. When choosing a location to run these cars, be aware of the environment so that you do not disturb people around you.

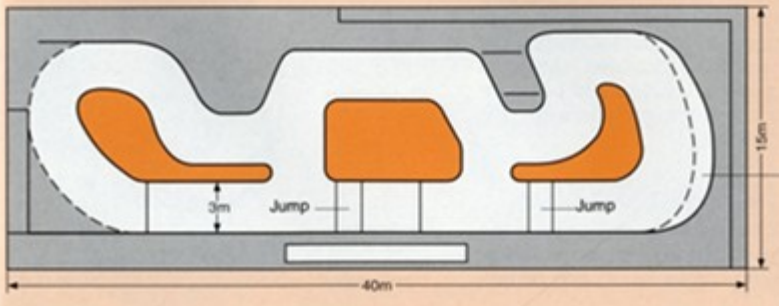
VARIOUS PLANS OF CIRCUIT LAYOUT



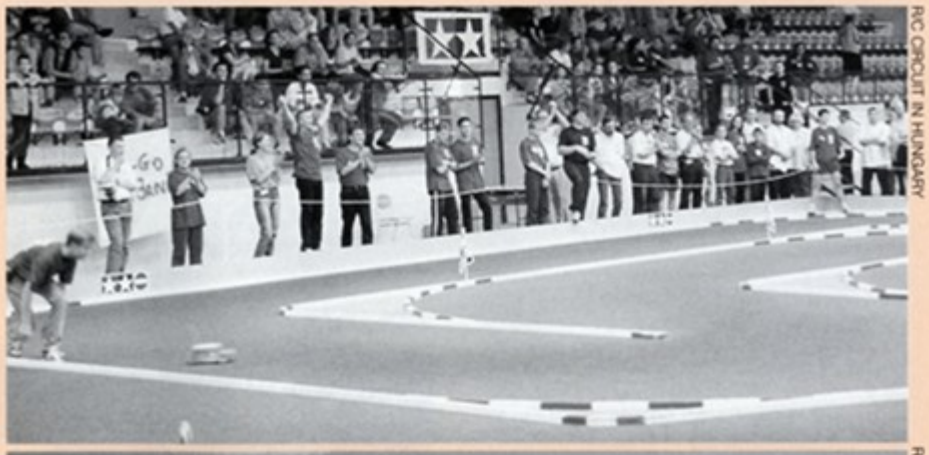
1 LARGE CIRCUIT



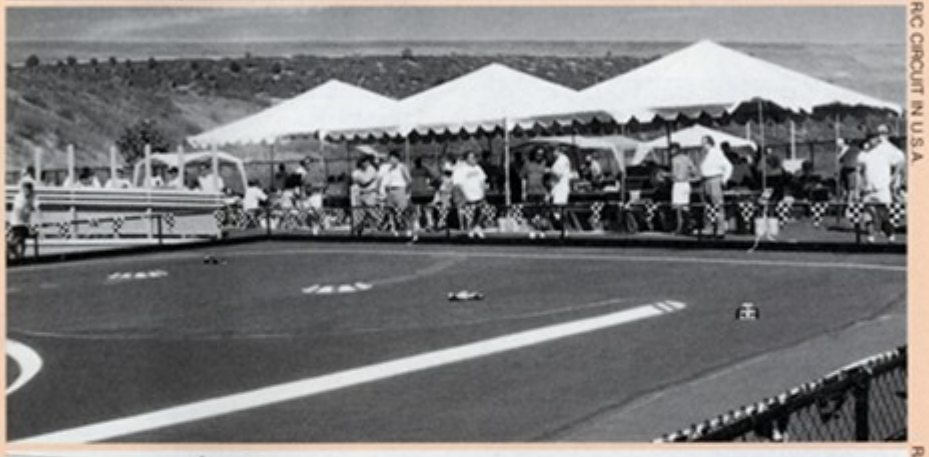
2 TAMIYA KAKEGAWA CIRCUIT



3 TAMIYA OFF ROAD CIRCUIT



R/C CIRCUIT IN HUNGARY



R/C CIRCUIT IN U.S.A.

R/C CIRCUIT IN ENGLAND

TAMIYA KAKEGAWA CIRCUIT IN JAPAN

ENJOYMENT OF IMPROVING PERFORMANCE

As you attain proficiency in controlling cars, you will be tempted to improve your car. This chapter will introduce handy ways of increasing performance. The most important matter you have to keep in mind when you modify your car is to keep everything in balance. By putting a big motor on your car, you can make it run faster. Still it cannot be an improvement of performance if it has lost stability. Most kits on the market are produced by the manufacturer with all factors considered such as speed, maneuverability and durability. So try to enhance the collective performance of your car.

1. MAKE THE BEST USE OF AVAILABLE POWER

Even though you use a high performance motor or engine, friction during transmission can cause considerable power loss and reduced performance. Keep the friction power loss to the minimum and get the most of the available motor/engine power.

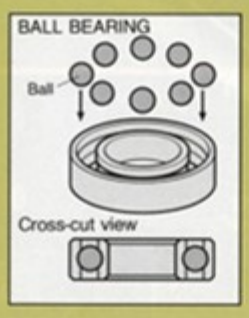
●BALL BEARINGS

Motor and engine power is transmitted to the car's wheels via gears and shafts. Plastic and metal bushings are often used with these shafts, and replacing them with ball bearings is not only simple, but an effective first step for improving your car's performance. Ball bearings consist of an outer and inner race, with steel balls between the races. The balls roll smoothly when the inner or outer race rotates, keeping friction power loss to a minimum. When properly maintained, ball bearings have a much longer life span than plastic or metal bushings. Bushings used in uprights can be replaced with ball bearings after completing the model, while model disassembly is required for replacement if housed inside a sealed gearbox. It is therefore recommended that ball bearings be installed during initial assembly.

850 Ball Bearings

1150 Ball Bearings

1510 Ball Bearings



●WEIGHT SAVINGS

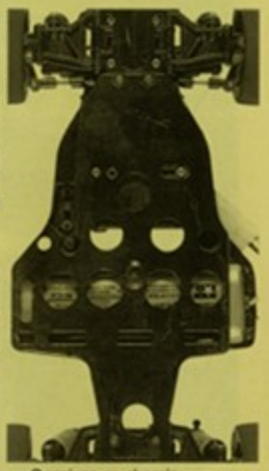
Reducing the weight of a model is another effective way to enhance performance. Even though you have the same power output, a lighter car will accelerate quicker, have a higher top speed and sharper handling response.

★CUTTING AND TRIMMING PARTS

Reducing weight by removing structural ribs or making openings in the chassis/frame are often observed. Reducing the weight of heavy components and/or rotating parts greatly contribute to better performance. When doing this however, keep in mind that you must maintain the car's rigidity. A model car is designed by its manufacturer to withstand normal usage shocks. Careless modifications to the chassis structure can result in breakage of the car, beyond repair.

Making openings
(Note sand and debris)

Removing spokes from wheel

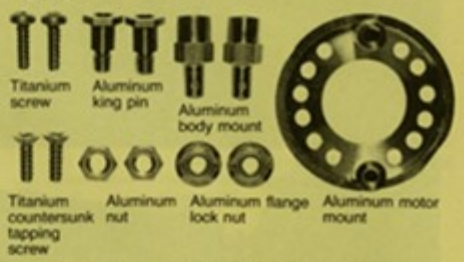


Openings on chassis.
Keep car's rigidity.

★Most contests limit the minimum weight of a car. Check your car's weight and the contest regulations prior to entry.

★REPLACING WITH LIGHTER PARTS

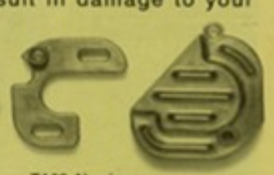
Several components made from lightweight materials, such as aluminum and titanium are available on the market. A considerable number of steel screws and nuts are used in R/C models and replacement with titanium screws and aluminum nuts will significantly reduce the model's total weight. These are also effective in maintaining/increasing the model's rigidity.



●PREVENTING MOTOR/ ENGINE OVERHEATING

The performance of electric motors and glow engines deteriorate with heat buildup. Overheating can result in damage to your motor/engine. To prevent this, aluminum heat sinks are available, which are effective in heat dissipation.

M03 Aluminum heat sink



TA03 Aluminum motor heat sink

2. IMPROVING SUSPENSION PERFORMANCE

Shock absorbers are used on suspension systems to absorb and dissipate road shock energy received while running. Simple coil spring dampers can be replaced with coil over oil-filled shock absorbers for a better damping effect.

3. A QUICKER STEERING RESPONSE

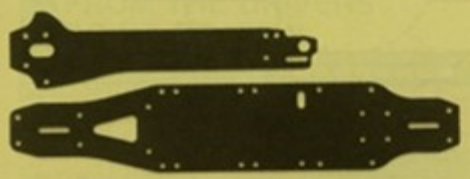
A smooth and quick operating steering system is a must in high performing cars. Spring loaded high-torque servo savers, and special steering servos, with a quicker operating speed, are on the market.

4. ADDING RIGIDITY AND RELIABILITY

Radio controlled cars can run at speeds exceeding 30 40km/h, and are subject to constant vibration and road shock. To fully utilize a car's potential, its entire structure must be built rigid to withstand this. When its performance becomes greater, a more rigid construction will be required.

●CHASSIS/FRAME

The chassis/frame is the foundation of the car. Chassis plates made from extremely durable fiberglass reinforced plastic (FRP) or carbon composite materials, are on the market for several models.



TA03F FRP chassis set

F-1 Hard Type Carbon-Graphite Chassis Plate

●SHAFTS AND PIVOTS

Kit-supplied shafts can be damaged or deformed from excessive shock. By using optional parts made from more durable materials such as tempered or stainless steel, and carbon composites, greater rigidity and smoother movement is obtained. Universal joint drive shafts are less likely to come off during collisions, and are also more efficient in transmitting power.

5. INCREASING POWER

Installing a higher output motor/engine is the final stage in improving your car's performance. Following careful tuning and reinforcement of your chassis components, the car can make the best use of the higher power.

●USING HIGHER OUTPUT MOTOR/ENGINE

Several types of high performance motors and engines are on the market. Select a suitable one for your model. Some motors/engines were developed for specific usage, such as on or off road running, etc. Specially wound rotors are available for some electric motors, and replacing the stock rotor will provide more available power.

★Modifying a motor and/or engine requires a high degree of knowledge, experience and facilities, and is not recommended. Most contests restrict or prohibit the modification of engines/motors.

COMPETITION MOTORS

53068 SPORT-TUNED MOTOR

Usable voltage	6V - 8.4V
Torque at best efficiency	350g-cm (7.2V)
R.P.M. at best efficiency	18,300rpm (7.2V)
Current drain at best efficiency	12.0A (7.2V)

53154 ACTO-POWER FORMULA MOTOR

Usable voltage	7.2V - 8.4V
Torque at best efficiency	400g-cm (7.2V)
R.P.M. at best efficiency	22,500rpm (7.2V)
Current drain at best efficiency	16.7A (7.2V)

53251 ACTO-TUNED M-SPECIAL MOTOR

Usable voltage	7.2V - 8.4V
Torque at best efficiency	200g-cm (7.2V)
R.P.M. at best efficiency	19,000rpm (7.2V)
Current drain at best efficiency	11.6A (7.2V)

53122 ACTO-POWER OFF ROADER 2WD MOTOR

Usable voltage	7.2V - 8.4V
Torque at best efficiency	450g-cm (7.2V)
R.P.M. at best efficiency	25,800rpm (7.2V)
Current drain at best efficiency	30.0A (7.2V)

53263 DYNA-RUN SUPER TOURING MOTOR

Usable voltage	7.2V - 8.4V
Torque at best efficiency	390g-cm (7.2V)
R.P.M. at best efficiency	26,500rpm (7.2V)
Current drain at best efficiency	26.0A (7.2V)

53272 DYNA-RUN RACING STOCK MOTOR

Usable voltage	7.2V - 8.4V
Torque at best efficiency	350g-cm (7.2V)
R.P.M. at best efficiency	18,400rpm (7.2V)
Current drain at best efficiency	15.1A (7.2V)

USING BATTERY OR FUELS WITH HIGHER SPECIFICATIONS

Ni-Cd batteries and glow fuels are power sources for electric and engine powered radio control models. Higher performance Ni-Cd batteries have been developed for competition, which have larger capacity and/or smoother internal current flow, thus providing the motor with a higher output of power. For glow engines, fuels containing a higher percentage of Nitro Methane are available.

Ni-Cd 7.2V Racing Pack RC1700SP

Ni-Cd 7.2V Racing Pack RC2400SP

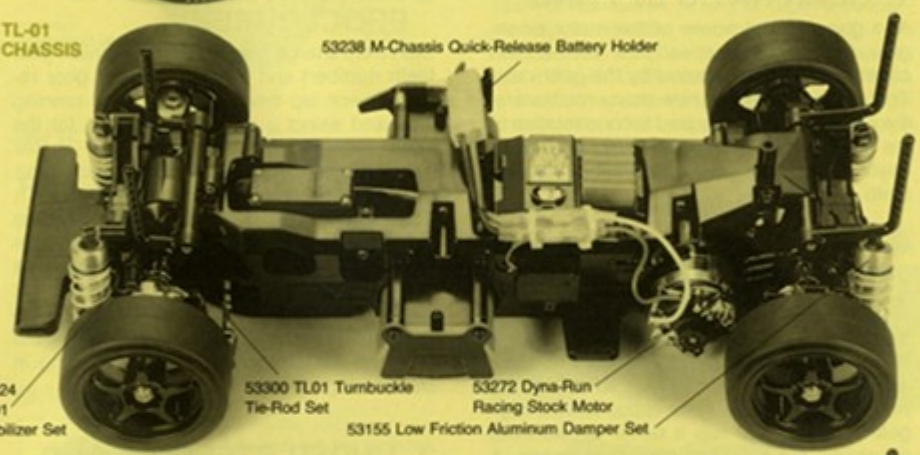
LARGER CAPACITY ELECTRONIC SPEED CONTROL

Large electric currents flow in the circuits of Ni-Cd battery powered R/C cars. When high performance motors are used, an enormous current flows during the start. To safely manage these large currents, the use of a high capacity electronic speed control is recommended.

C.P.R. Unit P-160F

F103 CHASSIS

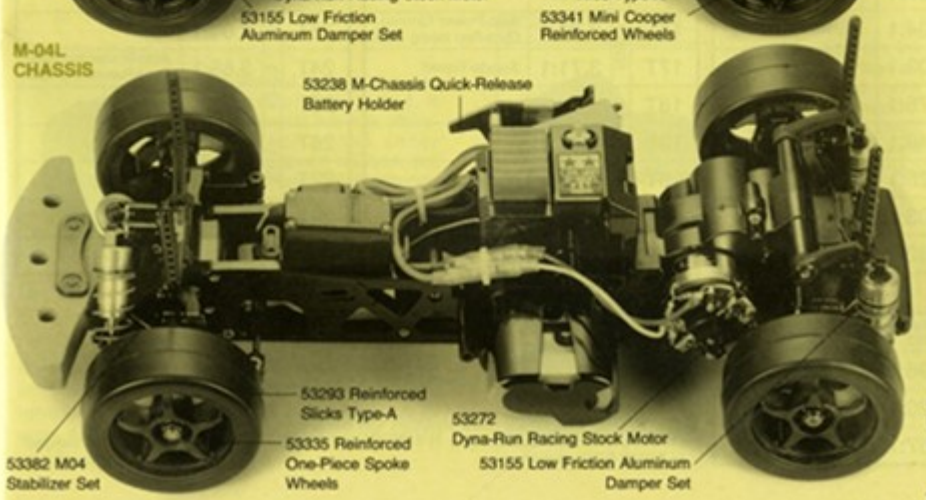
TL-01 CHASSIS



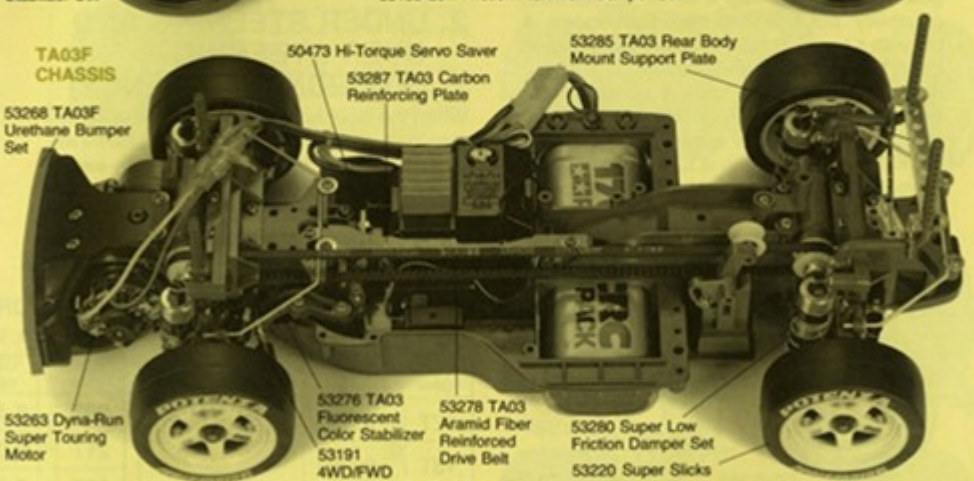
TUNE-UP EXAMPLES

M-03 CHASSIS

M-04L CHASSIS



TA03F CHASSIS



TA03R CHASSIS

CHARACTERIZING A CAR

There are a variety of car characters; fast cars, cars with excellent acceleration, cars with good cornering capability, and so forth. Cars assembled from kits come out diversified in quality because they are built up through the assembler's own techniques. Build your car in your own way. The most apparent characterizations are formed in the gear ratio and the steering characteristics.

1. GEAR RATIO SETTING

At a given output power of the motor or engine, the maximum speed and acceleration capabilities are determined by the gear ratio. The gear ratio means how many rotations of the pinion gear are required for one rotation of the drive wheel. This is generally adjusted by altering the pinion gear to one with a different teeth number.

●RELATION BETWEEN THE GEAR RATIO AND SPEED/ACCELERATION

You will have a higher gear ratio with a smaller pinion gear (smaller number of teeth) and a larger gear on the rear axle. The opposite makes a low gear ratio. With a high gear ratio, the car has a better acceleration capability, but a limited maximum speed. A car with a low gear ratio has poor acceleration but a higher maximum speed.

A car with high gear ratio is suitable for a technical course which is built with hair pin curves demanding low speed driving, while a car with a low gear ratio is for a speed course consisting of longer straightaways and curves of larger radii.

★A too low of a gear ratio will overload the motor/engine, resulting in overheating and eventual burn-out.

High gear ratio (3.71:1) Low gear ratio (3.15:1)

●GEAR RATIO AND RUNNING TIME

In general, the higher the gear ratio is, the longer the running time, and vice-versa. When entering a time race such as a 4-minute or 8-minute competition, a suitable gear ratio to complete the race must be chosen. In endurance competitions, the gear ratio influences times of battery change or refueling.

	Large gear ratio	Small gear ratio
Top speed	Low	High
Acceleration	Good	Poor
Running time	Long	Short
Suitable course	Technical course	High speed course

●GEAR RATIO SUITABLE TO THE MOTOR/ENGINE

A wide range of optional pinion gears are on the market for many variations in the gear ratio settings. You should always bear in mind that motors and engines have their own power output characteristics and effective power range. If the motor or engine is replaced with one with higher performance, replacement of the pinion gear will also be required to obtain a suitable gear ratio. The diagrams below indicates suitable pinion gear for Tamiya electric R/C cars and motors.

●GEAR RATIO SETTING PROCEDURE

Start from a large gear ratio (small pinion gear teeth number) and move to smaller gear ratios. Check lap times on a track or running time and select a suitable gear ratio for the track.

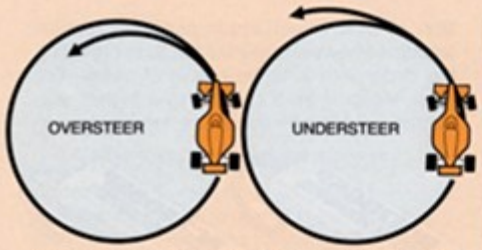
★DRIVE WHEEL DIAMETER

The diameter of the drive wheels are also related to the speed and acceleration characteristics. The larger the diameter of the drive wheels is, the higher the speed of the car will develop within certain limitations.

★Attaching too large a diameter of wheels will overload the motor/engine and resulting in overheating and burn-out.

2. UNDER STEERING AND OVER STEERING (STEERING TENDENCY)

When the steering wheel is turned, the car will also turn in the same direction. However, most cars have the tendency to turn excessively or inadequately. These characteristics are called steering traits. Cars that turn excessively have over steering traits and the others have under steering traits. Cars that



turn in close proportion to the control have neutral steering. This is hardly achieved except with cars that are running at a low speed. A car with slight under steering is easy to drive. A car with over steering will spin when taking corners at a high speed. Even on a straight course, it is unstable. An under steering car has difficulty making sharp turns, and at a high speed it may not be able to take corners and could leave the course. In either case, excessive steering makes a car difficult to control.

●FACTORS TO DETERMINE STEERING CHARACTERISTICS

The steering characteristics are affected by the difference between the traction of the front and rear tires. When the traction of the front tires is greater than that of the rear tires, the result is over steering. The opposite condition causes under steering. Therefore, adjust the traction of the rear tires so that it is a little greater. You will then attain a slight degree of under steering.

The traction of a tire is determined by the following factors. By adjusting these, the steering tendency of a car can be altered.

★Tire's material, tread pattern, and contact area with the ground

★Car's suspension setting and wheel alignment

★Weight distribution between the front and rear wheels

★Aerodynamic effect of wing and spoiler

		Understeer (higher traction at rear)	Oversteer (Higher traction at front)
Tire stiffness	Front	Stiff	Soft
	Rear	Soft	Stiff
Tire width	Front	Narrow	Wide
	Rear	Wide	Narrow
Suspension	Front	Stiff	Soft
	Rear	Soft	Stiff
Weight load	Front	Light	Heavy
	Rear	Heavy	Light
Wing size & angle	Front	Small	Large
	Rear	Large	Small
Wheel alignment	Front toe-angle	Toe-in	Toe-out
	Rear toe-angle	Toe-in	Toe-out
	Front caster angle	Large	Small
	Front camber angle	Positive	negative
	Rear camber angle	Negative	Positive

The diagram above indicates the steering tendency and its relating factors. In addition, the track and wheelbase greatly influence the car's basic running characteristics.

3. CHOOSING TIRES

Motor/engine power is transmitted to the ground via tires, and a car's stability during running is also greatly affected by the tire's traction. Choosing suitable tires is a very important point in the car's setting.

Two types of tires are used on R/C cars; synthetic rubber semi-pneumatic tires and sponge tires. In addition, tires of various materials, widths, tread patterns etc. are available for broad range of settings.

★The diagram above indicates the grip of Tamiya optional tires. The tire grip may differ depending upon the track surface condition, temperature, etc.

〈MOTOR/PINION GEAR DIAGRAM (ACCORDING TO CHASSIS)〉

●FOR TA03, 06 MODULE

Pinion gear		Gear ratio	Motor
12T	53063	9.93:1	
13T		9.16:1	
14T	53064	8.51:1	
15T		7.94:1	TRF-tuned
16T	50354	7.44:1	Dyna-Run touring
17T		7.00:1	
18T	50355	6.62:1	Dyna-Run racing stock
19T		6.27:1	Sports-Tuned
20T	50356	5.96:1	RS-540SH
21T		5.67:1	
22T	50357	5.41:1	
23T		5.18:1	
24T	50477	4.96:1	

●FOR TA03, 04 MODULE

Pinion gear		Gear ratio	Motor
20T	53101	8.44:1	
21T		8.01:1	
22T	53102	7.67:1	TRF-tuned
23T		7.34:1	Dyna-Run touring
24T	53103	7.03:1	
25T		6.75:1	
26T	53107	6.49:1	
27T		6.25:1	Dyna-Run racing stock
28T	53062	6.03:1	Sports-Tuned
29T		5.82:1	RS-540SH

●FOR TL-01

Pinion gear		Gear ratio	Motor
19T	50355	7.96:1	Dyna-Run touring Acto-Touring
21T	50356	7.20:1	Dyna-Stock
23T	50357	6.57:1	Sports-Tuned

●FOR F-1, 06 MODULE (63T, SPUR GEAR IN KIT)

Pinion gear		Gear ratio	Motor
13T	53063	4.85:1	
14T		4.50:1	
15T	53064	4.20:1	
16T		3.94:1	Acto-Power formula Dyna-Run racing stock
17T	50354	3.71:1	Sports-Tuned
18T		3.50:1	
19T	50355	3.32:1	
20T		3.15:1	RS-540SH
21T	50356	3.00:1	
22T		2.86:1	
23T	50357	2.74:1	

●FOR F-1, 04 MODULE (93T, 53104 SPUR GEAR)

Pinion gear		Gear ratio	Motor
20T	53101	4.65:1	
21T		4.43:1	
22T	53102	4.23:1	
23T		4.04:1	
24T	53103	3.88:1	Acto-Power formula Dyna-Run racing stock
25T		3.72:1	Sports-Tuned
26T	53117	3.58:1	
27T		3.44:1	
28T	53062	3.32:1	
29T		3.20:1	RS-540SH

★Rubber tires used for F-1

●Diagram is based on TAMIYA circuit. Refer to P14 for TAMIYA circuit layout.

★All diagrams are based on cars equipped with ball bearings

★06 module is based on black-gear in TA03 chassis (w/body). 04 module is based on white-gear in TA03F-PRO chassis.

●ON-ROAD TIRES

Both sponge and semi-pneumatic tires are used for on-road track running. In case of sponge tires, sponges of different stiffness are used to obtain different traction. Special synthetic rubber caps are sometimes used to cover the surface of sponge tires (these are called "capped tires"). Semi-pneumatic tires for on-road running are roughly divided into the treadless slicks or treaded tires. These are sometimes used in combination with inner sponges.

●SPONGE TIRES

Suitable on paved surfaces like asphalt, etc. Tire's foamed surface grips small undulations on the ground, providing positive traction. Not suitable for wet tracks. Also their merit is weight-savings compared to rubber tires.

●CAPPED TIRES

A soft rubber material covers the surfaces of sponge tire. These tires provide considerable traction even on slippery surfaces such as wet or dusty tracks.

●SEMI-PNEUMATIC SLICKS

Slick tires are often used on the full-sized racing cars. Tires of various compounds are available, providing different traction.

●SEMI-PNEUMATIC TREADED TIRES

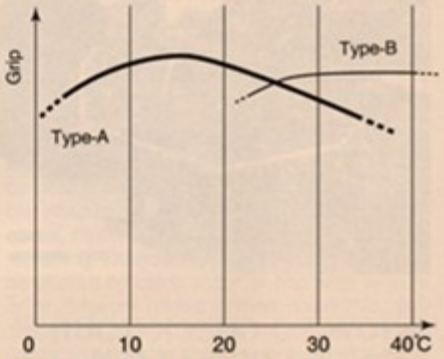
Realistic tread patterns are indented on the tire surface. It has less traction than slicks on dry tracks, but can provide adequate grip on wet surfaces.

●REINFORCED TIRES

Aramid fiber is included inside of tire tread. It prevents not only deformation of tire under high-speed rotation, but also keeps high grip during cornering.

Reinforced tires are used on M-chassis, F-1, GT and TGX cars. Furthermore two-types reinforced tires, A-type and B-type are prepared for F-1 and GT cars according to circuit temperature. A-type is resistant to changing temperature. Special material is used on B-type for high-grip under high-temperature conditions.

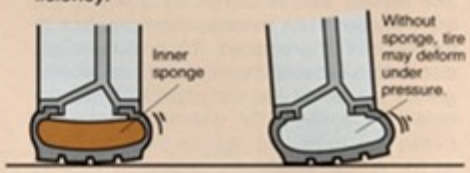
●COMPARISON BETWEEN A-TYPE & B-TYPE



●EFFECT OF INNER

Inner sponge and insert provide even contact between the tire and ground relation, and are effective in increasing overall traction. Insert is ring-shaped synthetic rubber foam to fit the cavity between wheel and tire. Without the inner sponge, the car's weight is carried by side walls of the tires. Therefore tire edges are liable to wear. Inner sponge helps these problems, by providing an even contact of the tire surface to the ground.

Belt-shaped inner sponge, inner foam and ring-shaped insert are prepared. We supply standard and hard types as inner sponge, standard and soft types as ring-shaped insert. We recommend to use inner foam and reinforced slicks type-A together for more efficiency.



●INNER SPONGE

This is popular item to provide an equal contact between the tire and ground relation. Just insert belt-shaped sponge into the inside of tire to increase the lifespan of your tires.

●SHAPED TIRE INSERT

Urethane made tire inserts are harder than inner sponge, and more resistant to deformation. This hard type tire insert fits between tire and wheel for heightened grip.

●INNER FOAM

5mm thick inner foam makes space between tire and wheel, acting as a shock absorber to heighten tire traction.

●SECURING TIRE

It's important to secure semi-pneumatic rubber tires to the wheels. In that case, tire-cementing helper is useful. Just set tire into the inside of helper, then hold it down to make a gap between tire and wheel. Now, apply instant cement between them. We recommend to use TAMIYA CA cement (for rubber tires).

●OFF-ROAD TIRES

Semi-pneumatic tires are mainly used for off-road cars. Tires with various spikes and tread patterns are available. These spikes and patterns provide positive traction while running on rough terrain. Choose tires according to the running surface. Semi-pneumatic off-road tires can be combined with inner sponges when necessary.

●SPIKED TIRES

Provide excellent traction on soft soil surfaces. Spikes of various lengths, shapes and numbers can be seen. Not suitable on hard surface running because spikes wear rapidly.

●LUG PATTERN TIRES

The tread pattern on these tires are molded laterally, as often seen on full-size construction vehicles. These fat tires are suitable for R/C "Big-Tire" cars, and running on soft soil surfaces.

4. SUSPENSION SETTING

On full-sized vehicles, the suspension is important in providing a comfort ride with passengers. On R/C cars, its main objective is to keep the wheels on the ground and maintain constant traction to obtain the maximum maneuverability.

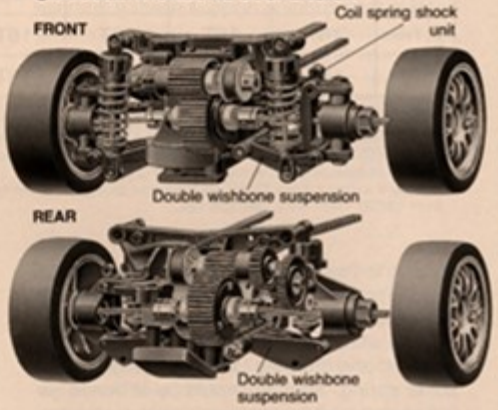
●A GOOD WORKING SUSPENSION PROVIDES TRACK-HUGGING PERFORMANCE

In order to run a radio controlled model smoothly and swiftly over differing road conditions, the suspension system that joins the wheels to the chassis, plays an important roll. Various types of suspension system are used for buggies and on road cars to obtain maximum traction from the tires on the running surface.

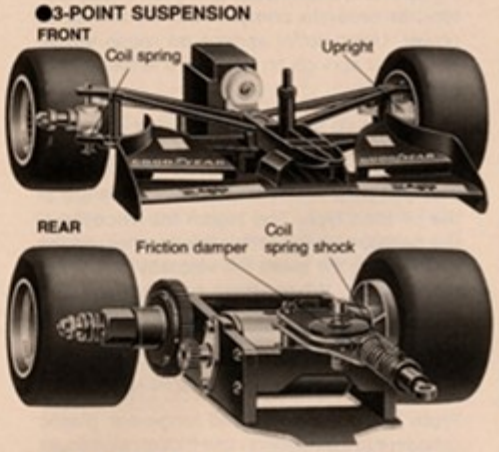
●SPRING AND DAMPER STIFFNESS ARE IMPORTANT

Suspension systems such as double wishbone, and trailing arm type are used on R/C model cars just as on full sized vehicles. These are basically composed of upper and lower arms, coil springs, and damper units that absorb the energy stored in the spring upon compression. A simple 3-point suspension system is often used on the Formula-type on-road R/C cars. In this case, front wheels are independently damped by coil springs, while the rear wheels are damped by a single shock unit. When adjusting suspension systems to track conditions, first adjust the coil spring stiffness, then the damper.

●DOUBLE WISHBONE SUSPENSION



●3-POINT SUSPENSION



●COIL SPRING ADJUSTMENTS

Coil springs fitted to suspension units are there to assist the suspension in following the surface it's running on. It is a mechanical device that stores and dissipates shock energy to keep the car running steadily on the track. A too stiff spring results in an uncontrolled suspension that will cause the car to hop around wildly. If it's too soft, the car will bottom out on the ground at each bump on the track. Springs should be adjusted ac-

■TA03 CHASSIS CARS SETTING SAMPLE

		TA03F		TA03F-S		TA03R		TA03R-S	
Course		Tamiya circuit	Kakegawa circuit	Tamiya circuit	Kakegawa circuit	Tamiya circuit	Kakegawa circuit	Tamiya circuit	Kakegawa circuit
Module		06M	06M	06M	06M	06M	06M	06M	06M
Pinion		24T	25T	24T	25T	24T	25T	24T	25T
Spring	Front	Yellow STD	Yellow STD	Yellow short	Yellow short	Red short	Red short	Red short	Red short
	Rear	Yellow STD	Yellow STD	Yellow STD	Yellow STD	Yellow STD	Yellow STD	Blue STD	Blue STD
Stabilizer	Front	Red	Yellow	Red	Yellow	Red	Yellow	Red	Yellow
	Rear	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Damper oil	Front	#900	#900	#900	#900	#900	#900	#900	#900
	Rear	#900	#900	#900	#900	#900	#900	#900	#900
Spacer (inner)	Front	9mm	9mm	9mm	9mm	3mm	3mm	3mm	3mm
	Rear	6mm	6mm	6mm	6mm	6mm	6mm	6mm	6mm
Spacer (outer)	Front	4mm	4mm	4mm	4mm	6mm	6mm	5mm	5mm
	Rear	4mm	4mm	4mm	4mm	5mm	5mm	5mm	5mm
Pulley	Front	16T	16T	16T	16T	15T	15T	15T	15T
	Rear	16T	16T	16T	16T	15T	15T	15T	15T

●Refer to page 14, 15 for Tamiya circuit and Kakegawa circuit layout.

★Sports-tuned motor, reinforced slicks type-A (winter) and reinforced slicks type-B (summer) are used.
★Damper (CVA Mini), damper oil (#900) and one-hole about piston are used.
★Bathtub chassis is used as standard in this case.
★Standard spring is from 53163; on-road type spring set, short-type is from 53333; touring car short-type spring set. Stabilizer is from 53276; TA03 color stabilizer set.

cording to the overall weight that compresses them. The coil springs included in the kits are designed and matched to the car, and should provide standard performance. If the car is modified and trimmed for lighter weight, use a softer spring. Springs should be stiffened using spacers, after installing higher output motors, in order to compensate for the extra power. Using stiffer springs on rough terrain and softer springs on flat tracks is the normal rule.

●ADJUST DAMPER ACCORDING TO SPRING STIFFNESS

The dampers widely used in R/C cars are of the oil filled type. The higher the viscosity of the damper oil, the stiffer the damper, on the other hand, the lower the viscosity, the softer the damper. When using hard springs use harder damper oil, and for soft springs use softer damper oil.

OIL FILLED SHOCK UNITS

From the economical and long-wear plastic cylinders to competition low-friction aluminum cylinders, Tamiya offers a wide range of high performance oil filled shocks to meet your car's requirement. All shock units are designed to provide the smoothest shock action while providing optimum road hugging ability to the vehicle. Adjustments can be made at the coil springs and pistons to compensate for the different track conditions. Oil viscosity can be altered by using the Tamiya Silicone Damper Oil set, to obtain the best possible performance. ★Shock unit dimensions differ according to the vehicle. Refer to illustration and notes.

TAMIYA SILICONE DAMPER OIL

Tamiya's quality Silicone Damper Oil is developed exclusively for oil filled shock units used on R/C car models. It is formulated to maintain constant viscosity throughout a wide temperature range. 3 sets; Soft, Medium and Hard, are available with each set consisting 2 bottles of different viscosity oil. Select oil according to your track requirements.

Tamiya Silicone Damper Oil Set

★FRICTION DAMPERS

This damping system is used on some on-road R/C racing cars. Several discs and pads are overlaid and damping effect is obtained by their friction. By applying oil or grease to the pads, the damping effect can be adjusted. Oils and greases of different viscosities are on the market for this purpose.

●STABILIZER

During high speed cornering, a car tends to roll or incline outward, resulting in less traction of the inner wheels and causing instability of the car. Stabilizers are used to reduce the roll, and it contributes in improving the car's overall maneuverability.


TA03 color stabilizer

●HOW TO CHECK YOUR CAR'S SUSPENSION SETTING

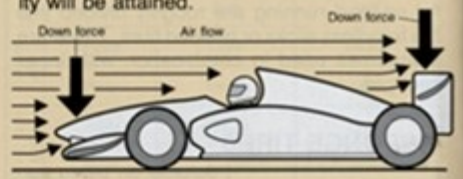
Place your car on a flat surface, and if its damper springs are slightly compressed with the car's weight, spring stiffness is set correctly. Press the car down to the ground and release. If the car rises smoothly (not instantly), an adequate damping is obtained. For off-road cars, drop the car to the ground from a height of about 30cm. If the setting is acceptable, the car will not bump or its bottom does not hit the ground because the dampers absorb shock. Of course, the final adjustment must be done while test running the car.

5. WEIGHT DISTRIBUTION BETWEEN WHEELS

The heavier load is carried by a wheel, the more traction it has because more pressure to the ground is produced. Thus, the weight distribution between the front and rear wheels greatly influences the car's handling characteristics. Generally, the distribution ratio between the front and rear is from 35:65 to 45:55. Adjust weight distribution by moving heavy components such as Ni-Cd battery to the desired direction. Front or rear wheel load can be roughly checked by the method described below.

6. WING & SPOILER

The wing attached on many racing cars is employed to gain stability at high speed running. With your radio controlled cars, the rear wing is used to press down the rear wheels for improving the traction on the road. In this way, the gripping power of the rear wheel becomes greater than that of the front wheels and the steering trait changes toward understeering. The faster the car goes, the more effective the wing becomes, that is, the greater the down thrust on the rear wheels. Depending upon the way you adjust the wing, the car can have an excellent cornering characteristic on a low speed curve, but still keep superb stability on the high speed straights. Such a car, also, will show a good adhesion to the road at high speed running. The effect of the wing is lessened when the wing is flattened. The more it is lifted, the greater the down-force. However, it increases the air drag, too, and the velocity of the car slowed. Therefore, the adjustment of the wing must be made carefully, and with the proper adjustment an ideal maneuverability will be attained.



●A TOO LARGE WING WILL INCREASE AIR DRAG

The larger and the more angled a wing is, the more downward force is produced during running by the air flow. However, a too large or too steep wing will produce a more air drag than desired, resulting in reduced speed of the car. The position of a wing/spoiler also influences its effectiveness. If attached at front, it increases the traction of the front wheels, and vice-versa.

●DOWNFORCE DIFFERS ACCORDING TO RUNNING SPEED

Wings and spoilers produce more downward force during running, as the car's speed becomes faster. If a car has an oversteer tendency, use a large, steep angled rear wing. During high speed running, it will produce more downforce and augment its rear wheel traction, thus understeering characteristics can be obtained. When the speed becomes low, the effect of the wing lessens, and the car recovers its original oversteer characteristics.

★MOUNT THE WING FIRMLY

If a wing is mounted to the chassis with a flexible stay, the downforce produced by the wing cannot be effectively utilized by the car. Some cars' wings are mounted directly onto their polycarbonate body shell. In such cases, the body itself should be firmly secured to the chassis.

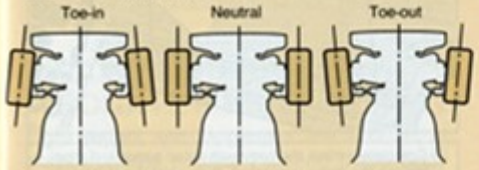
7. WHEEL ALIGNMENT

This is the term for indicating under what condition the wheels are attached to the chassis. Typical factors are toe angles, caster angles and camber angles, which plays important roles in R/C car settings.

●TOE ANGLE

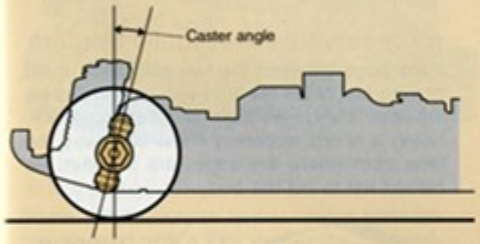
This term indicates the wheels on the both sides are parallel or inclined when viewed from above. If they are inclined forward, it is called "toe-in" and if inclined rearward, they are in a "toe-out" setting. If they are parallel to each other, they are neutral. Toe angles on the front wheels can be adjusted by altering the length of the steering tie-rods. In addition to the standard adjustable tie-rods, turnbuckle tie-rods are available which allow quick and easy adjustment of the length without removal

of the rod. Rear wheel toe-angle is adjustable on some cars, but in most cases, replacement of suspension arms etc. will be required. Take care not to set an excessive toe-in or toe-out, otherwise the resulting drag will hinder the handling of the car. Begin with a little toe-in and work from there.



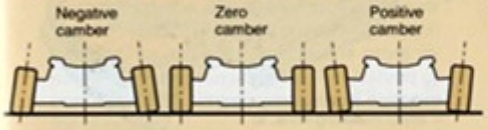
●CASTER ANGLE

This angle indicates how much the king pin on the front upright is inclined rearward from the vertical. Generally, a larger caster angle improves the car's straight running stability. However, with a large caster angle, the front wheels become slanted when steered. This may result in reduced traction during cornering and an uneven wear to the tire tread.

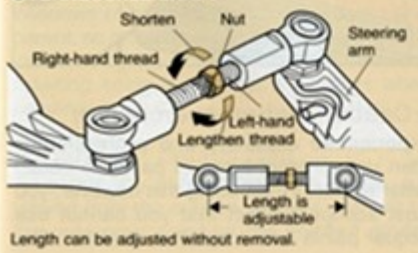


●CAMBER ANGLE

This is the angle of the right and left wheels when viewed from the front or rear. If the wheels incline inward to the top, it is in negative camber. If inclined outward to the top, they have a positive camber. The camber angle determines the area of contact on each tire during cornering, and therefore the traction of the tires can be made greater or lesser through its adjustments. To increase traction during cornering, adjust to negative, and for reducing traction, adjust to positive. The steering characteristics can be changed by altering the traction of the front and rear tires. The car can be made to oversteer with the front adjusted to negative camber and the rear to positive. To cause the car to understeer, adjust front to positive camber and rear to negative. Camber angle adjustment is done by altering the length of the suspension upper arms. Use of turnbuckle shafts on upper arms allows quick camber angle adjustments.



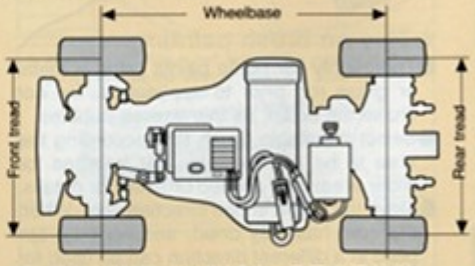
●TURNBUCKLE SHAFT



Length can be adjusted without removal.

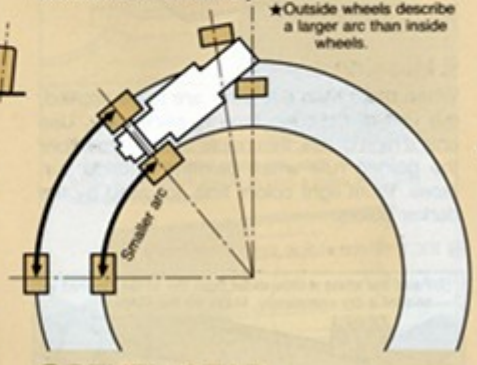
8. WHEELBASE AND TREAD (TRACK)

Wheelbase is the distance between the car's front and rear axles. Tread or track means the distance between the left and right wheels. If the tread is the same, a car with longer wheelbase has better straight running stability and reduced cornering performance. If the wheelbase is the same, a wider tread provides quicker cornering. Cars which have adjustable wheelbase are not common, but in some cases, this can be done by adding spacers or replacing chassis members, etc. Tread can be altered by using wider or narrower wheels or of different offsets. When doing this, you should be careful so that the wheels do not contact the body shell, and also within the limits of race regulations in which you are participating.



9. DIFFERENTIAL GEARING

When the car is turning, the distance travelled by the inside wheels is less than that of the outside wheels. The differential gearing provides a smoother cornering performance by absorbing these differences by altering the rotating speed of each wheel. Without the differential, a car is apt to make big turns or take corners awkwardly.



●BEVEL GEAR DIFFERENTIAL

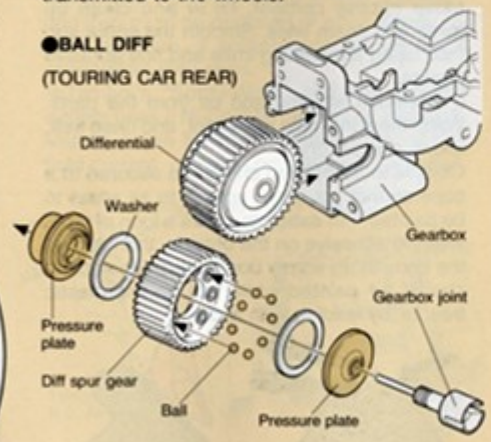
This differential system is used on both the full-sized vehicles and R/C cars. During straight running and if both the left and right wheels contact with the ground, the differential does not work and the motor/engine power is transmitted to both wheels evenly. When cornering, the bevel gears in the differential unit rotate according to the travel of the left or right wheels, thus absorbing the difference of their rotation. One shortcoming of this system is that when the wheel of either side loses contact with the ground, the power is transmitted only to this wheel to rotate it, and the wheel keeping contact with the ground will not rotate, thus the car's driving force will be totally lost.

●BEVEL GEAR DIFF (TOURING CAR FRONT)

●BALL DIFFERENTIAL

This is a unique differential system used on R/C cars. A ball differential consists of metal balls sandwitched between two pressure plates. The balls work like the small bevel gears in a gear differential, absorbing rotation differential between the right and left wheels during cornering. Even when a wheel leaves the ground, because of the friction caused by the pressure to the balls, power is transmitted to some extent to the wheel that is in contact with the ground, thus a total loss of the driving force is avoided. The pressure can be adjusted by tightening a screw, and adding spacers or washers etc. A too little pressure results in slipping of the balls, so the power is not transmitted to the wheels.

●BALL DIFF (TOURING CAR REAR)



●TORQUE SPLITTERS AND ONE-WAY DIFF UNITS

There is a slight difference of travel between the front and rear wheels. The rear wheels turns more inward than the front wheels, so the front wheels rotate more than the rear. In a shaft-driven four wheel drive cars, the front and rear wheels are connected with a propeller shaft, and the rotation difference causes stress to the propeller shaft. Torque splitter and one-way diff units are developed to solve this problem. Both systems use a one-way bearing which rotates freely only in one direction, allowing the front wheels to rotate faster than the propeller shaft rotation during cornering.

10. FINE-TUNING AN R/C CAR'S PERFORMANCE

A car's performance characteristics is influenced by many factors. Unthought alteration of various components results in mere confusion. Observe and follow the points described below.

●TRACTION OF THE DRIVING WHEELS IS IMPORTANT

The motor/engine power is transmitted to the car's driving wheels and propels the car. To make the best use of the power, concentrate on obtaining the utmost traction at the driving wheels.

●REAR WHEELS' TRACTION MAKES A CAR STABLE

When a car turns its direction, the front wheels steer while the rear wheels acts like a fulcrum. If these support points do not grip the ground properly, the car's stability will be reduced. In rear wheel drive and four wheel drive cars, the rear wheel traction should be most valued. In front wheel drive cars, balance between the front driving wheels and rear wheels traction should also be carefully considered.

●ALTER STEP BY STEP

Attempting to modify-it-all in one try should be avoided, because if any effect is obtained, you cannot figure out exactly which alteration led to the obtained result. Alter/adjust one point at a time and perform a test run each time. By repeating this procedure, you will know the individual effect of each adjustment, which greatly helps you in attaining a balanced setting on your car.

●BALANCED ADJUSTMENT BETWEEN THE RIGHT AND LEFT

If a suspension setting is different between the left and right side of your car, it will have different tendencies when taking corners and turns. Settings must be equal on the right and left.

★In oval track competitions as seen on the full-sized Indy Car events, cars have a different weight distribution on the right and left side, because these cars take corners only in one direction.

●CONSIDER THE WEATHER AND TEMPERATURE

High temperatures cause oil and grease becoming softer and thus their viscosities are lowered. Conversely, they become stiffer under low temperatures. Therefore, different greases and oils will be required to obtain the same setting condition during summer and winter. The setting should be also done according to the track surface conditions. When running on a wet or slippery surfaces, higher traction tires and/or larger spoilers to produce stronger down force, should be employed.

PAINTING & DECORATION OF R/C CAR BODIES

A large part of R/C car enjoyment is in their construction and running; however, final finishing and decoration can also provide great pleasure. Decorating and finishing is not only self satisfying, but an essential part of the R/C hobby. A beautifully finished car even seems to go faster, and if it has been modified or customized, it will stand apart from the others.

1. PAINTING BODIES

Painting the body shell is the most important single step in finishing the R/C car model. Two types of bodies are used on R/C vehicles. Injection molded styrene plastic resin or vacuum formed transparent polycarbonate (Lexan) body shells. The usable paints and working procedures are very different between these two types of bodies.

●SOME PRACTICAL ADVICE ON PAINTING

Plastic paints use organic solvents, and can be harmful if improperly handled. Observe and follow the manufacturers rules for safe use and a good finish on the model.

★Ventilate while painting

Allow adequate ventilation in the painting area while working.

★Avoid open flames

Some paints and thinners are inflammable. Never use them near open flame.

★Paint on a clear day with low humidity

High humidity can cause a cloudy finish (blushing) on the painted surface. If possible, paint on a clear day to avoid this problem.

★Spray paint outdoors in a windless area

A spray can delivers a fine mist of paint that coats wide areas evenly. Spray paint outdoors in a shady, windless area. Use a cardboard box, newspapers, etc. to keep paint off the surrounding areas.

●PAINTS AND RELATED ITEMS REQUIRED

★Paints for injection molded bodies

Standard plastic model paints, like enamels, acrylics, and lacquers, can be used in painting injection molded R/C car bodies.

★Paints for polycarbonate bodies

Specially formulated polycarbonate paints are required for painting these transparent body shells. Conventional plastic paints easily peel or chip off, even with the slightest shock to the car body.
Some kits include separately molded plastic parts such as the driver's helmet, spoiler, door mirrors, etc., which are added to the polycarbonate body. These plastic parts must be painted with regular plastic paints and not polycarbonate paint.

★Brushes and other implements

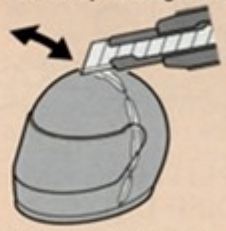
Paint brushes come in several shapes and sizes, such as flat or pointed brushes. In addition, you will need the following when painting: Paint thinner compatible with your paint, empty paint jars or trays, masking tape, scissors, a modeling knife, clips or clothespins, rags and newspapers, etc.

●PAINTING INJECTED MOLDED BODIES

The highly detailed and lifelike bodies are injection molded from styrene plastic resin. They are heavier and are more easily damaged in collisions at the track. Standard plastic paints are used in painting these bodies.

★Preparation

① A subassembly to be painted in one color should be assembled prior to painting. Remove excess cement, fill in and clean up joints and seam lines. Smooth the entire surface using a modeling knife and fine abrasive papers.
② Remove all dust and oil from the parts. Wash them in a mild detergent, and rinse well, allowing to air dry.
Objects to be painted should be secured to a base so that you have access to all areas to be painted. For example, make a loop of tape, with the adhesive on the outside, then secure the body to an empty box or can. Small parts should be painted while still on the plastic tree, or by holding with a clip.



Smooth off joints and seams.

Hold small parts with clip.

★Painting procedures

First paint the body overall. Add small details after the first coat has completely cured. Spray paint the large areas and brush paint the details.

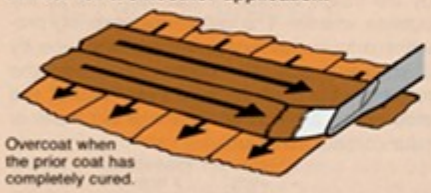
★Tips on spray painting

- ●Shake the spray can well prior to use. Test spray to see if it is properly mixed.
- ●Spray in one direction only, from a distance about 30cm from the model.
- ●Always use a light coat over the entire surface, and allow to dry. Repeat this procedure two or three times for a perfect finish.
- ●When the distance between the can and model is too close, or too thick of a coat is applied, the paint will run or contain small air bubbles. In these cases, let the paint dry for two or three days, then sand off using abrasive paper. Clean and smooth the surface and respray.

★Tips on brush painting

- ●Thoroughly stir bottle paints using a metal or grass rod prior to application. Do not shake the bottle, as this causes bubbles.
- ●Select a suitable brush size according the area to be painted. Use flat brushes for wider areas and pointed brushes for details.
- ●Move the brush in one direction only. When the coat has fully dried, another coat applied in a different direction can be used for an even finish.

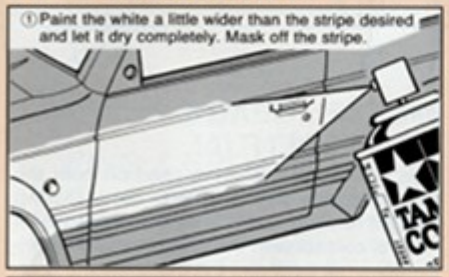
★If a paint is too thick, add the exclusive thinner for a smoother application.



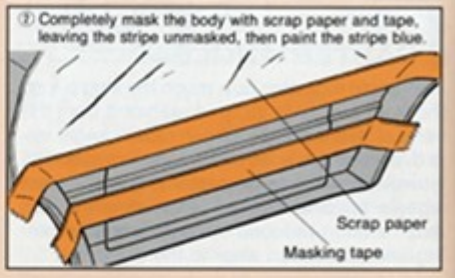
★Masking

When more than one color are to be applied, the use of masking tape is necessary. Use only a high grade, thin paper tape. Remember the golden rule when painting outside surfaces. Paint light colors first, followed by the darker colors.

■ EX.1 White stripe on a blue body

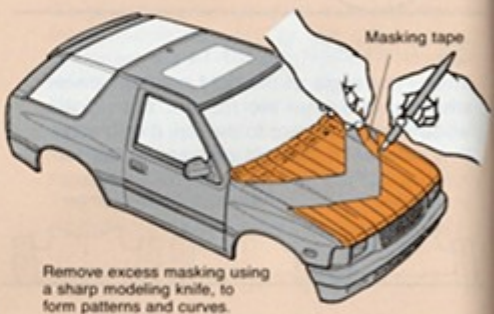


■ EX.2 Blue stripe on a white body



★For curved and irregular borders

If the edge between the two colors is curved or irregular, cover the area with tape and draw the edge line on the tape with a sharp pencil. Using a sharp modeling knife, cut away the tape from where the edges are to meet. Be careful not to cut the body.



★Some tips on masking

When masking tape is not properly applied, paint will run under the tape and mar the surface. Press the masking tape down firmly with a finger nail for good tape adhesion. Special attention must be paid to recessed body panel lines, projections and undulating surfaces, plus edges and corners of a body, if these areas are masked.

★Cautions when overcoating

Experienced modelers and professionals often use different types of paints to obtain better results. When doing this however, you must accept the fact that you cannot use lacquer paints over acrylics or enamels. The

solvents in lacquer will melt and damage coatings of other paints. Painting acrylic and enamel over lacquer paint is not a problem. When overcoating, use several light coats, and only when the previous coat has completely cured. Do not attempt to finish the job with one thick coat. Even if it is the same type of paint, it will probably melt and ruin the under coating.

●PAINTING POLYCARBONATE (LEXAN) BODIES

Light weight and toughness are features of polycarbonate bodies. Painting these body shells requires special polycarbonate paints, and the painting is done from the inside of the body. Therefore, different procedures are required than those for plastic resin bodies.

★Preparation

Some polycarbonate bodies' outer surfaces are covered with a thin vinyl protective coating. Do not remove this coating until just prior to applying the decorative stickers.

① Cut away excess areas using a sharp modeling knife. Scribe one or two strokes along the outline of the body. Bend along the scribed line and the area will snap or tear off. Use only a very sharp knife when scribing, as a blunt knife causes more injuries than you can imagine. For curved or complicated outlines, use curved scissors for plastics.

② Wash the body thoroughly with detergent to remove the oils, then rinse well and allow to air dry. As paints are applied to the inside of the body, concentrate washing mainly on the inside surface.

★Mask off the outside when spray painting

When spray painting a polycarbonate body, overspray will mar the outside surface. To prevent this, the outside body shell must be completely covered. Use scrap newspaper etc. to cover the wide areas, holding in place with masking tape. If the body is already protected with a vinyl coating, outside masking is not necessary.

★Mask off the window areas

Windows of car bodies should remain transparent, so masking is required. Mask from the inside using paper tape. Some kits include masking seals for the car's windows when painting.

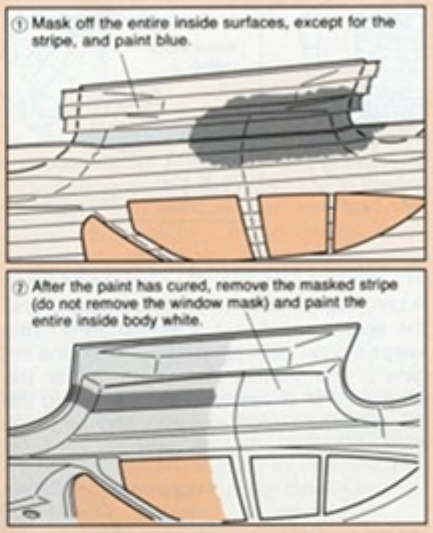
★Paint the details first

As paints are applied from the inside, but viewed from the outside, the first coat will be the outermost color on the finished model. You must be careful when considering the order of painting colors. Color application should start with the details, just the opposite from painting styrene bodies.

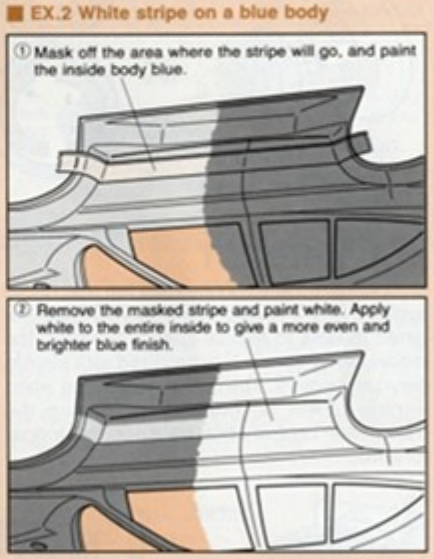
★Paint darker colors first

When more than one color is to be used, apply the darker color first. The masking procedure is also done in reverse.

■ EX.1 Blue stripe on a white body

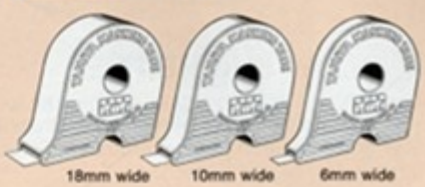


■ EX.2 White stripe on a blue body



★If a lighter color is applied first, followed by a darker color, the overcoated area of the first color will be darkened when viewed from the outside.

TAMIYA MASKING TAPES



●AIRBRUSH PAINTING

Airbrushing combines the advantages of both brush and spray cans. By utilizing its features, a variety of painting effects can be achieved.

★Paints can be mixed to make custom shades

Airbrushing uses bottle paints, so blending and matching colors to your desires is easy.

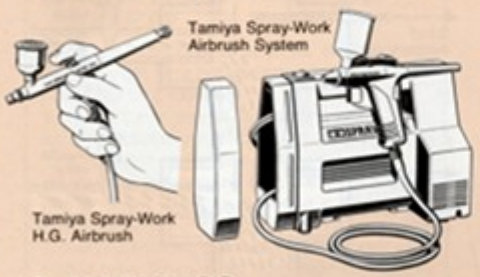
★Fine lines can be done

Airbrush painting is done by spraying misted paint onto the surface, just like spray cans. However, airbrushes can spray lines of about 1-3cm and even down to 1mm in some cases. By using this characteristics, professional effects, such as subtle gradations, camouflage painting, or using it just like a paint brush, is possible.

●NECESSARY ITEMS

An airbrush system consists of the handpiece, compressor, and the connecting hose. Propellant cans can be used instead of a compressor, but their duration time is limited, and they must be disposed of when empty. In the long term, a compressor will be more economical than cans.

★Tamiya's "Spray-Work" portable airbrush system uses a Ni-Cd 7.2V battery as its power source. It can also be operated from household current, using a compatible AC adapter.

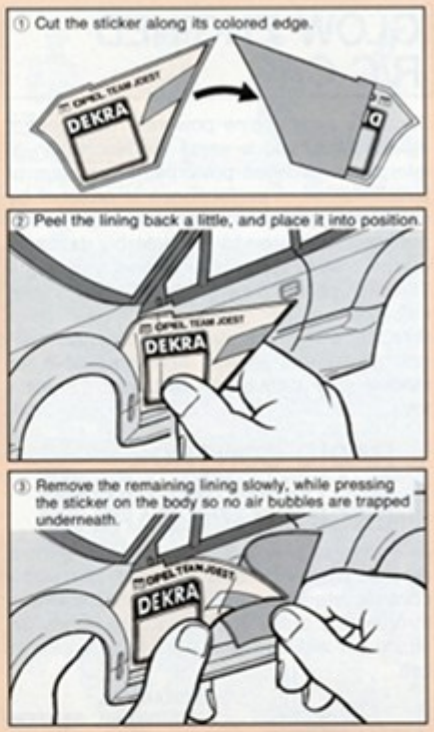


2. MARKINGS

Decal and stickers are another important aspect in finishing car bodies. In addition to kit-supplied stickers, a wide selection of optional stickers is available on the market. One of a kind markings can also be made using self-adhesive sticker sheets.

●TIPS FOR APPLYING STICKERS

Although the application seems easy, wrinkled or out-of-position stickers mar a model's final finish. Completely removing the backing from the sticker prior to application will result in wrinkles or bubbles. Follow these procedures:



3. MORE DETAIL AND CUSTOMIZING

Add details and customize your R/C car, to build the one-off model. It is limited only by your imagination. Add a visor to your drivers helmet using thin transparent sheet styrene. Cut out a photo of your favorite driver from a magazine and glue it in the helmet. Make openings in the front grille, air intakes, etc. and apply plastic mesh from the inside. You can operate your R/C car's headlights and tail lamps by using optional light bulbs and brake lamp units available on the market. However, make sure they have compatible voltage ratings with your battery.

●FUEL-PROTECTIVE TOP COAT

Some polycarbonate paints are damaged with glow engine fuels and exhaust residue. To prevent this, a Fuel-Protective Top-Coat (PC-26) is available from Tamiya. Simply apply over the entire dry painted surface, and it will protect the finish from glow fuels.

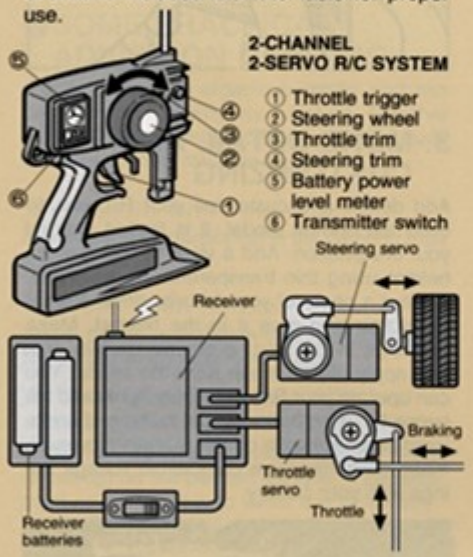
GLOW ENGINED R/C CAR

Tamiya's glow engine powered radio control models allow you to enjoy the fascination of internal combustion powerplant operation at work. Maximum performance is ensured by using high quality, reliable glow engine components. Add these to the superbly designed chassis and suspension, and you have Tamiya's new dimension in R/C glow engine enjoyment.

★NOTE: This is a scale model using an internal combustion engine, and is suitable for modelers 14 years of age and older. It is not a toy.

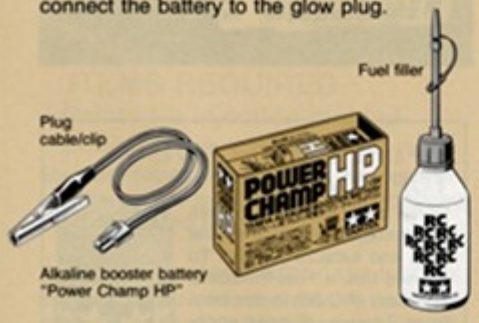
1. RADIO CONTROL SYSTEMS FOR GLOW ENGINED R/C CARS

A 2-channel 2-servo radio system with a receiver battery case, is standard. One servo controls steering, while the other controls throttle and braking. Refer to the safety instructions included with the radio for proper use.



●ITEMS REQUIRED FOR STARTING ENGINE

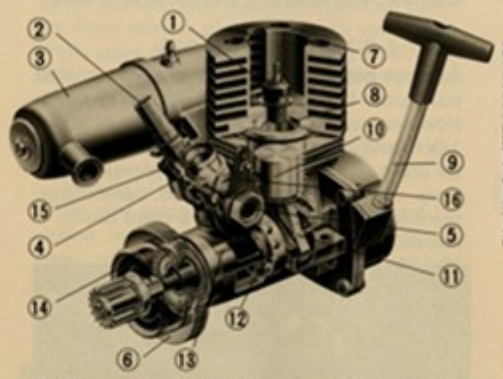
In addition to glow fuel, several other items are required for starting a glow engine. A fuel filler, battery for glow plug and a cable/clip to connect the battery to the glow plug.



2. ABOUT GLOW ENGINES

Two-stroke glow engines are known for their simple and reliable mechanics. Fuel and air is mixed in carburetor drawn into the cylinder, compressed and ignited by the glow plug. The explosion (combustion) translated into workable power via the crankshaft. The correct ratio of fuel/air mixture is essential to keep the engine running properly.

●GLOW ENGINE COMPONENTS

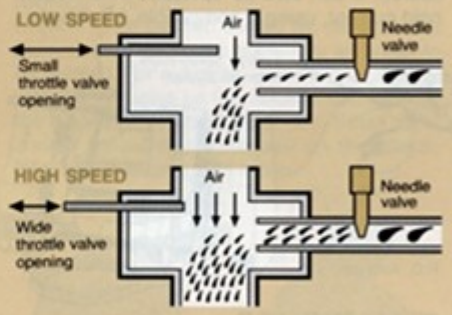


① Glow plug ② Needle valve ③ Muffler ④ Carburetor ⑤ Slow running speed adjuster ⑥ Flywheel ⑦ Cylinder head ⑧ Cylinder sleeve ⑨ Recoil starter ⑩ Piston ⑪ Connecting rod ⑫ Ball bearing ⑬ Crank shaft ⑭ Centrifugal clutch ⑮ Idle screw ⑯ Throttle

●ABOUT ENGINE COMPONENTS

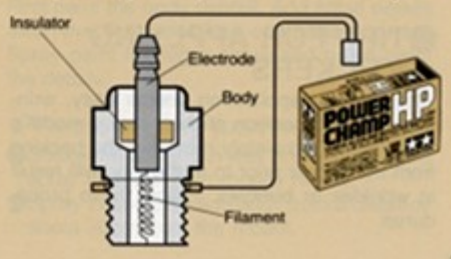
★ CARBURETOR

The carburetor is the engine component that mixes the fuel and air to the proper ratio and atomizes it. The throttle adjusts the amount fuel/air mixture available to the cylinder. An open throttle allows more intake of the mixture, resulting in increased engine RPM and a higher running speed.



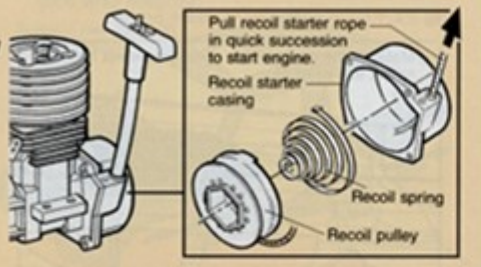
★ GLOW PLUG

The heated glow plug filament ignites the compressed air/fuel mixture in the cylinder, producing combustion, which forces down the piston. This rotates the crankshaft, and the cycle is repeated. The glow plug, once heated, is kept hot by the repeated combustion cycle.



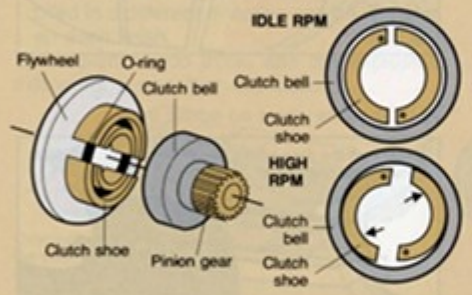
★ RECOIL STARTER

The recoil zip starter is a manual method of starting a glow engine by pulling the rope handle in quick succession, forcing the crankshaft to rapidly rotate. The rope automatically rewinds by the recoil spring in the casing. An electric starter is also offered with some models that use an electric motor for engine start.



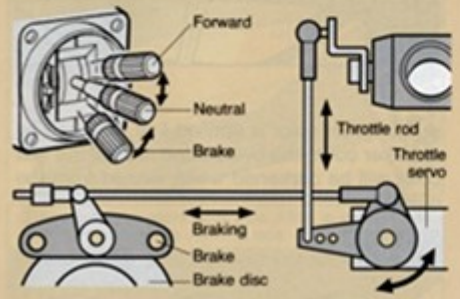
★ CENTRIFUGAL CLUTCH

A centrifugal clutch remains disengaged until the engine reaches a specified RPM. This keeps the car from jumping out when the engine is first started, and at idle. When the proper RPM is reached (by advancing the throttle), the clutch engages and power is transmitted to the transmission.



3. BRAKE UNIT

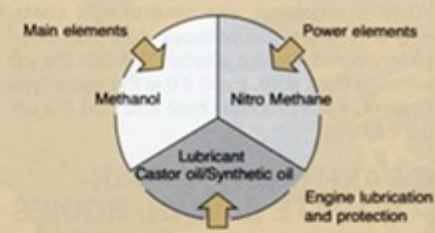
Most full sized automobiles use the disc brake system, and it is also used on R/C glow engined models to reduce speed; however, the model car system is synchronized with throttle servo movement. The brake is activated when engine power is reduced by moving the transmitter control stick back, or the trigger forward.



4. GLOW ENGINE FUEL

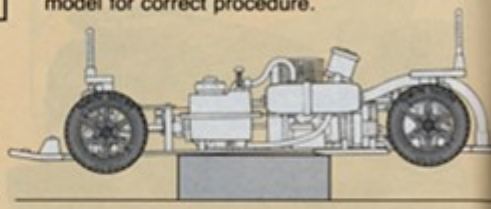
Use only the specified glow engine fuel for your R/C model. Glow fuels contain Methanol and Nitro Methane for combustion, plus lubricant for engine protection.

★A higher ratio of Nitro Methane can produce higher power output, but will result in engine starting difficulties.



5. ENGINE STARTING PROCEDURE

The standard procedure for starting glow engines is described below. Always refer to the instructions included with your engine and/or model for correct procedure.



① Set the car on a box or support so that all wheels are free to rotate.
② Install batteries in transmitter and receiver. Switch on and check servo functions. Make sure the throttle is at idle when the throttle servo is at neutral.
③ Fill fuel tank with glow fuel.
④ Press choke button until fuel reaches the carburetor.
⑤ Connect battery to glow plug using cable/clip.
⑥ Start engine using recoil or electric starter.
★If difficult to start, increase throttle trim on the transmitter 2 or 3 clicks.
⑦ When engine starts, increase RPM to about half throttle with transmitter throttle control, to warm up engine. Go from idle to half throttle two or three times.
⑧ When idle has stabilized, remove glow plug cable/clip and return throttle trim to its original position.

6. STOPPING ENGINE

Engine can be stopped by removing the air cleaner and closing off air intake or blocking exhaust; however, fuel remaining in engine and tank could damage internal components. It is therefore recommended that the engine be run at idle until it runs out of fuel.

7. TUNING TIPS FOR GLOW ENGINED R/C CARS

Adjustment of chassis components, such as suspension etc. are common with electric and glow engine powered R/C cars. Several points unique to glow engined R/C cars are discussed below.

●MAKE THE BEST USE OF ENGINE POWER

A simple, but effective first step in tuning your car is to replace the metal/plastic bushings with precision ball bearings. This reduces loss

of engine power from friction, and provides the most power from the engine.

●IMPROVING RELIABILITY AND ENDURANCE

Overheating is often a problem with glow engines. To reduce this, cut air intake openings in the body shell to help cool the engine. Replace the engine's heat sink with a larger or more efficient one. Sand and/or debris in the fuel can damage internal engine parts. Install a fuel filter to prevent this.

●FOR QUICKER ENGINE RESPONSE

Glow engines produce usable torque after sufficient RPM is reached (ie. low torque at low RPM). By using a lighter weight flywheel, the time required to reach high RPM is shortened. This provides quicker throttle response, improving acceleration. Make sure to adjust the engine's needle valve and idle setting after replacing a flywheel.

●BETTER BRAKING

Just like full sized vehicles, a glow engine R/C car is equipped with a braking system. Brakes are used often during running and wear following prolonged use. Replace worn parts when required. Larger diameter brake disks, or ones of composite material are available for some cars, which provide better braking.

●OBTAINING A HIGHER ENGINE OUTPUT

It is not recommended to modify the engine's cylinder or piston, as this requires a high degree of knowledge, experience and facilities. An easier way to obtain more power is to use a glow fuel of higher specifications. Race oriented fuels include a higher Nitro Methane content and are on the market. However, always refer to your engine's instructions and use its recommended fuel.

●TO AVOID RUNNING OUT OF FUEL

Even though refueling is not difficult, sudden stops due to fuel starvation should be avoided. To aid in this, a fuel level indicator is available from Tamiya for their glow engined R/C cars. A sensor monitors fuel level in the tank, and when low, a light emitting diode glows alerting time to refuel.

8. MAINTENANCE

Glow engined R/C cars get soiled from oil residue after running, due to the lubricants used in the fuel. Daily clean-up and maintenance is essential for optimum performance.

●CLEANING CHASSIS

To remove the oily residue from chassis components, an alcoholic cleaning spray is recommended. Several types are available from hobby shops; however, use only the cleaner developed for model use as other types could attack the plastic and rubber components.

●ENGINE MAINTENANCE

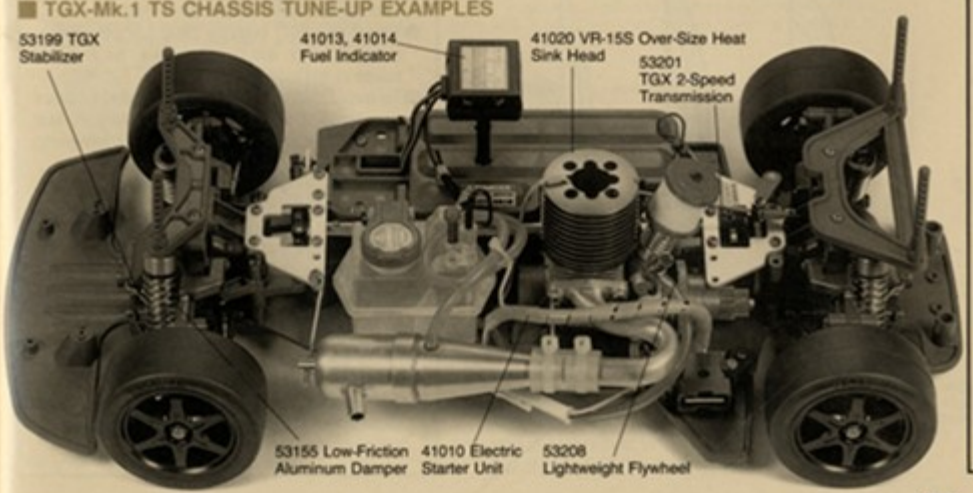
The engine's internal components are exposed to high heat, pressure and exhaust gases during operation. If left uncleaned, the oily grime can cause rust and corrosion inside the engine. Use an oil spray for cleaning. Remove the glow plug and spray directly into the cylinder and carburetor after running.

★Vehicle components such as engine, muffler, exhaust pipe etc. get very hot during use and can cause burns if touched. Allow to cool before cleaning and maintenance.

●CHECKING GLOW PLUG

The glow plug is also subject to high temperatures and pressure. Periodically check and replace when necessary. To check the plug, remove it from the engine and connect it to the battery with the cable/clip. The filament should glow a bright red if good.

■ TGX-Mk.1 TS CHASSIS TUNE-UP EXAMPLES



●AIR FILTER

A clogged air filter hinders the supply of air to the engine, resulting in lowered performance. Periodically check and replace the air filter element when necessary.

●SAFETY PRECAUTIONS

To avoid serious personal injury and/or property damage, operate all remotely controlled models in a responsible manner as out-lined below. Be aware of your surroundings when operating any R/C model.

●Never run R/C models near people or animals, nor use people or animals as obstacles when operating R/C vehicles.

●Never run R/C models on the street or highway, as it could cause or contribute to serious traffic accidents.

●To avoid injury to persons or animals, and damage to property, never run R/C models in a confined or crowded area.

●Be aware of your surroundings. Avoid running R/C models in environment where noise can cause displeasure.

●Never run R/C models near heat and open flame as it can cause serious accidents.

●Running R/C models into furniture or other inanimate objects will cause damage to the objects and the R/C model.

●Make sure that no one else is using the same frequency as yours in your operating area. Using the same frequency at the same time, whether it is driving, flying, or sailing, can cause loss of control of the R/C models, resulting in serious accidents.

★Use only glow fuel. Never use gasoline or other fuel as it can explode and burn, causing serious personal injury and/or accidents. Read the warning on product prior to use. Improper use of glow fuel could result in serious injury and/or property damage. You are solely responsible for the safe use of the product.

●HEAT, FIRE AND FUEL SAFETY

★Vehicle components such as engine, muffler, etc., get very hot during running and can cause burns if touched.

★Do not touch any of the moving parts, such as drive shafts, wheels, gears, etc. as these rotating parts can cause serious injury.

★Use only glow engine fuel. Never use gasoline or other fuels as they can explode and burn, causing serious personal injury and/or property damage. Use fuel only in a well ventilated area. Keep away from heat and flame. Never fuel or prime with battery connected to engine. Glow fuels are poisonous. Avoid contact with eyes and skin. Keep away from children.

●AVOIDING LOSS OF CONTROL

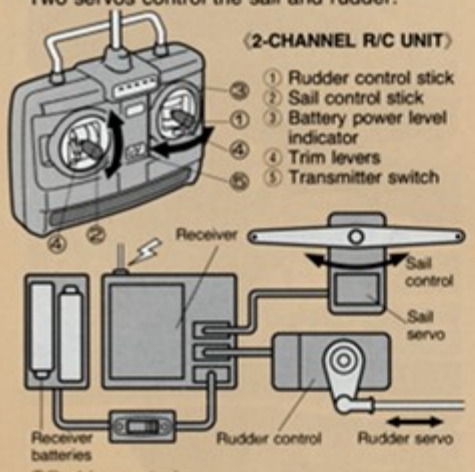
Top speeds of glow engined R/C cars exceed 50km/h and can be very dangerous if control is lost. Tamiya's R/C Fail-Safe Unit (Item No.45017) can help prevent control loss. The central processing unit of this system is programmed to continuously monitor pulse signals from the receiver. When radio interference or noise is detected, or the receiver battery voltage becomes insufficient, the unit automatically returns the servos to their neutral position, preventing loss of control.

R/C SAILING GUIDE

Radio controlled yacht models can provide the same enjoyment in "conversing with the wind" as their full sized counterparts can do. Using the natural energy of the wind, the model glides over the water, precisely controlled by its rudder and sails. Following are fundamental tips for operating in this elegant R/C sport.

1. RADIO CONTROL REQUIREMENTS

A 2-channel radio, with a stick controlled transmitter is required for R/C yacht models. Two servos control the sail and rudder.



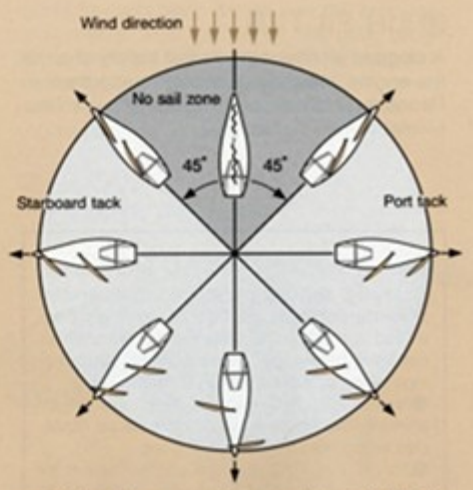
●Rudder control servo:
Steers the vessel in the desired direction.

●Sail control servo:
Controls the travel of the sails, so they effectively catch the wind.

A small yacht model can be controlled by standard sized servos, but a special high torque servo may be required to control the sails on a larger sized model. Consult your hobby dealer to select a suitable R/C system.

2. WIND DIRECTION AND SAIL ZONE

The procedures for R/C sailing are the same as experienced on full-sized yachts. A yacht is



capable of maneuvering as shown in the illustrations. Bear in mind that a yacht cannot sail directly into the wind and there is an approximately 45 degree no-sail zone.

3. CONTROLLING A YACHT MODEL

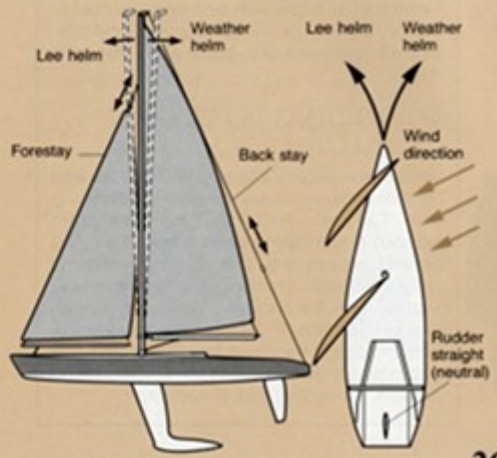
The sailing performance of a yacht is largely influenced by the wind direction in relation to its sailing direction. The wind direction varies each moment. Control of the sail and rudder obtains smooth sailing, always keeping the direction of the prevailing wind in mind.

4. ADJUSTING MAST AND SAIL

The sailing characteristics of a yacht can be altered by adjusting mast angle and sail tensions.

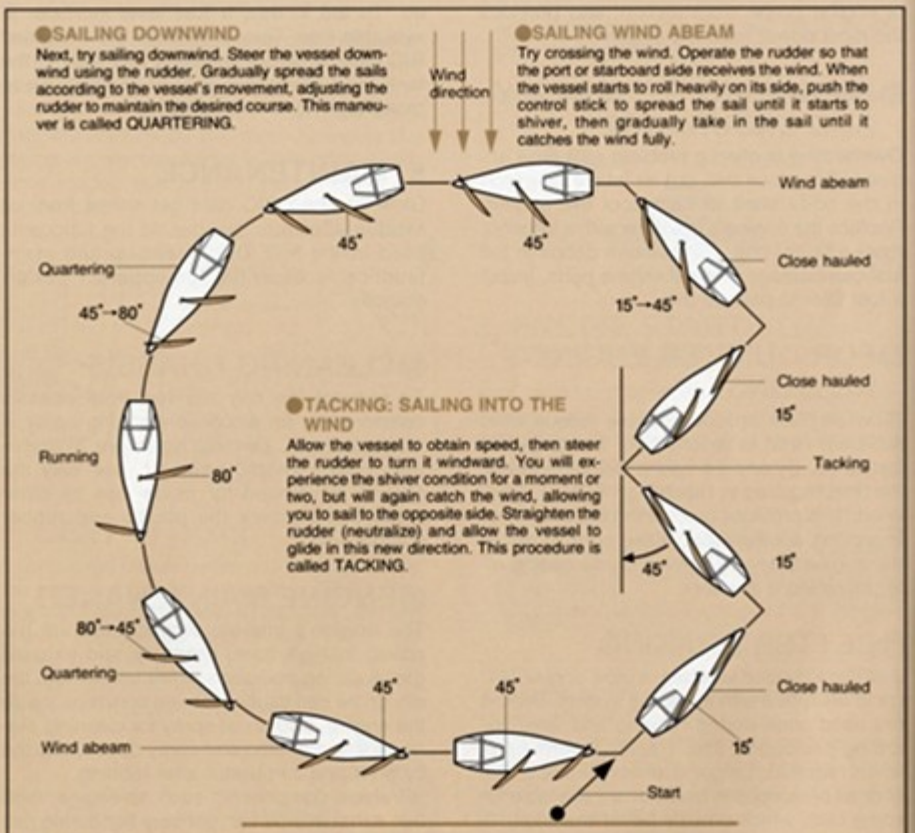
●WEATHER HELM AND LEE HELM

Three basic sailing tendencies are present when the rudder is straight (neutral). When the vessel tends to sail windwards (weather) with the rudder straight, the condition is called a WEATHER HELM. Opposite to this, when the vessel sails downwind (leeward), it is called a LEE HELM. A vessel that sails straight ahead is JUST HELM. Helm conditions can be adjusted by mast inclination. Inclining the mast forward (forestay) provides a lee helm, while inclining it aft (backstay), provides a weather helm.



●SAILING DOWNWIND
Next, try sailing downwind. Steer the vessel downwind using the rudder. Gradually spread the sails according to the vessel's movement, adjusting the rudder to maintain the desired course. This maneuver is called QUARTERING.

●SAILING WIND ABEAM
Try crossing the wind. Operate the rudder so that the port or starboard side receives the wind. When the vessel starts to roll heavily on its side, push the control stick to spread the sail until it starts to shiver, then gradually take in the sail until it catches the wind fully.

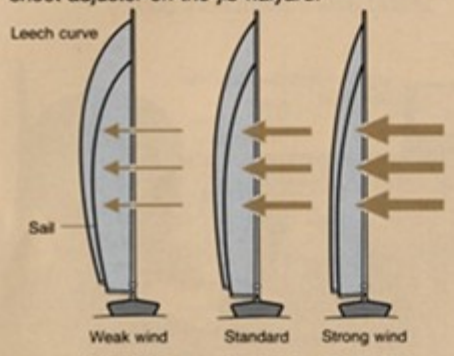


●RUNNING
Steer the vessel so that it sails straight off the wind. Open the sail to catch a fair wind. The jib sail will open opposite the main sail. This is called Running.

●START & CLOSE HAULED
To begin sailing, fully spread the sail and steer the vessel to about 45 degrees to the wind. At first, a sail flutter (called Shiver) is experienced. Gradually take in (close) the sail until it catches the wind, and the vessel starts to glide off. This is a Close Hauled condition.

●ADJUSTING LEECH CURVE (SAIL TENSION)

Proper adjustment of your sails is essential in order to utilize wind power efficiently. During strong winds, the sails should be given extra tension, and less tension during mild winds. Adjust the mainsail by the boom vang, using the adjuster. Extend boom vang rod for weak tension and shorten for more tension. Jib sail curve is adjusted by inclining or declining the sheet adjuster on the jib halyard.



★Moisture can cause troubles with R/C systems and batteries. In particular, contact with salt water can cause almost immediate corroding of precision electronic circuits. Avoid contact with water as much as possible; however, in case the R/C unit and/or batteries accidentally get wet, immediately remove from the model. Drain and wipe off any water. Allow it to air dry in the shade. If salt water gets inside the R/C unit, remove the case and rinse with fresh water. Test the dried unit prior to reinstalling in the model. Send to the dealer/manufacturer for repairs if any malfunction is observed.

SAILING SAFETY PRECAUTIONS

To avoid serious personal injury and/or property damage, operate all remotely controlled models in a responsible manner.

- ●Never sail R/C vessels near people (swimming, fishing, etc.) or animals, as it could cause a serious accident.
- ●To avoid damage to the vessel and prevent accidents, do not sail R/C vessels in fast moving currents or restricted maneuvering areas.
- ●Never sail R/C vessels near full-sized boats as it could cause accidents.
- ●Never sail R/C vessels in harbors, ports or traffic routes used by full-sized ships/boats, as it could contribute to accidents.
- ●Sailing in weak or no wind conditions could result in loss of control of the R/C yacht model.
- ●Avoid sailing in shallow waters, among water plants or in areas which could have underwater obstacles. The keel and rudder of the yacht model may become entangled or caught.

R/C MOTOR GLIDERS

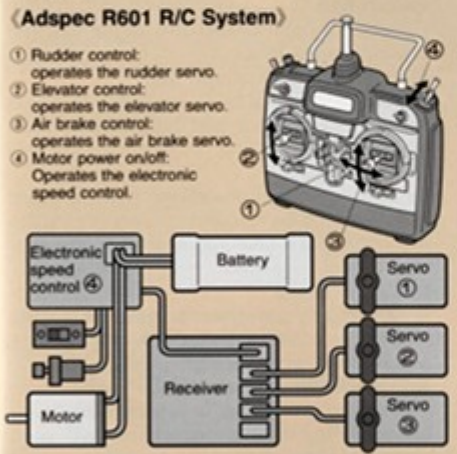
As its name implies, gliders use thermals and air currents for flight, and once airborne can remain aloft for extended periods of time. Experienced glider pilots can perform spectacular aerobatics, loops, rolls etc. by using energy conservation as pertains to flight (ie: converting speed into altitude). Conventional gliders require a launching device (bungee cord or winch tow) or a special location such as a hillside to take off. Electric motor gliders however, can climb to altitude using its own motor.

1. R/C EQUIPMENT

A conventional non-powered R/C glider can be controlled by a 2-channel 2-servo radio and stick type transmitter. For a motor glider, the motor requires on/off switching, therefore 3-channels or more are required. Some models require special R/C equipment to obtain optimum function and performance. The manufacturer's suggested equipment list will be shown on the package or in the instruction manual. Consult your hobby dealer for choices of suitable R/C equipment.

★For Tamiya's Peak Spirit glider, a five channel (or more) radio with three micro servos and an electronic speed control is suggested.

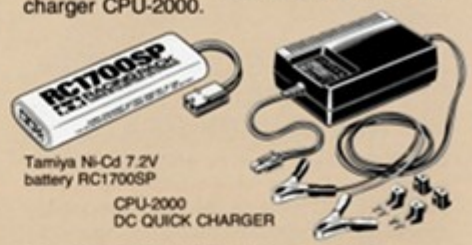
〈Adspec R601 R/C System〉



2. MOTOR POWER SOURCE

A Ni-Cd battery pack is most often used for power in electric motor gliders. Battery specifications (capacity, dimensions, weight etc.) greatly effect the performance of a glider. Use only the glider's specified battery for operating the model.

★Tamiya's Peak Spirit requires a Tamiya Ni-Cd 7.2V battery RC1700SP and a DC quick charger CPU-2000.



3. OPERATION OF THE MOTOR GLIDER

Once you reach the desired altitude, cut the power and the propellers will fold back. The motor glider operation is exactly the same as any conventional glider. Basic soaring techniques are discussed below. One thing you should always avoid is a steep climb without sufficient airspeed. This can stall the glider and could result in a spin and possible crash of the aircraft.

4. THERMAL HUNTING AND SLOPE SOARING

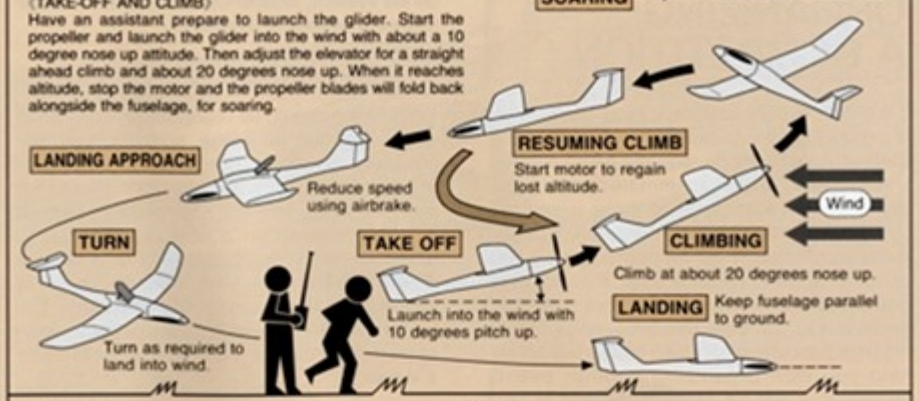
These terms concern ascending air currents. If a glider enters these updraft it can gain altitude without use of motor power, thereby increasing the flight time.

●THERMAL HUNTING

The word "thermal" means a rising current of heated air, caused by the uneven heating of the ground by the sun. Thermals occur over uncovered ground, such as sand and soil. Air over grasslands and water tend to be cooler and generally have descending air patterns. When circling inside a thermal, a glider will gain altitude, so "Thermal Hunting" is the process of finding and making use of these invisible currents by observing a glider's flying attitude.

〈BASIC OPERATION OF A MOTOR GLIDER〉

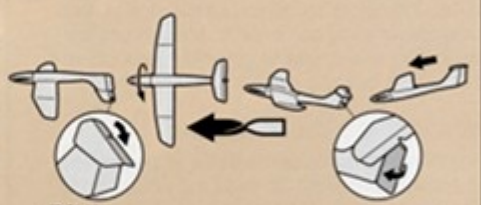
〈TAKE-OFF AND CLIMB〉
Have an assistant prepare to launch the glider. Start the propeller and launch the glider into the wind with about a 10 degree nose up attitude. Then adjust the elevator for a straight ahead climb and about 20 degrees nose up. When it reaches altitude, stop the motor and the propeller blades will fold back alongside the fuselage, for soaring.



〈TURNS〉
Move the transmitter rudder stick to the desired turn direction. Once a wing has lowered into a turn, slightly add a little up elevator to keep the nose from dropping. To stop the turn, move the rudder in the opposite direction stopping the bank, releasing the elevator control stick to neutral when a wings level attitude is reached.

〈LANDING〉
Make your landing approach downwind, then turn 180 degrees to land directly into the wind, adjusting airspeed using the airbrake. Fully deploy the brake after completing the turn and with the glider in about a 10 degree nose down attitude. Flair (raise the nose) using elevator just prior to touchdown with the fuselage in a level attitude.

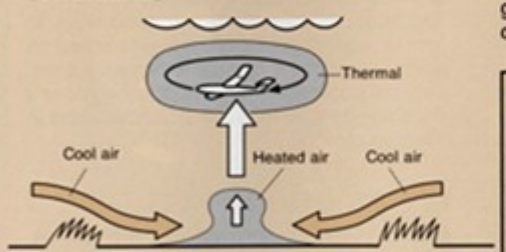
〈LOOP〉
Apply a little down elevator to lower nose attitude and increase airspeed. When sufficient speed is obtained, apply up elevator. The gliders nose will rise and continue up and over into a loop. Keep the elevator back during the loop, releasing it to neutral when loop is completed, returning to straight and level flight.



〈ROLL〉
Apply down elevator to gain airspeed. Bring the nose up and move the rudder fully in the desired roll direction. When the glider is inverted, add down elevator to keep the nose from falling out of the roll. When the roll is almost complete, add opposite rudder, for an instance, to bring the fuselage back to horizontal.

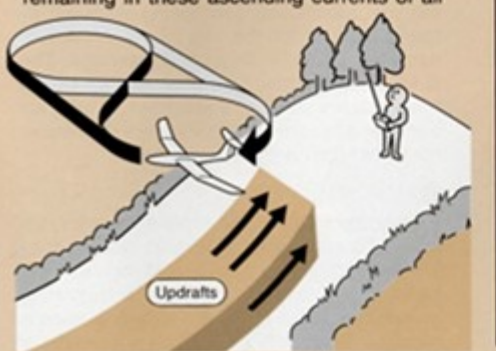
★Aerobatics down or crossing the wind are very demanding. Practice them into the wind.

〈THERMAL〉



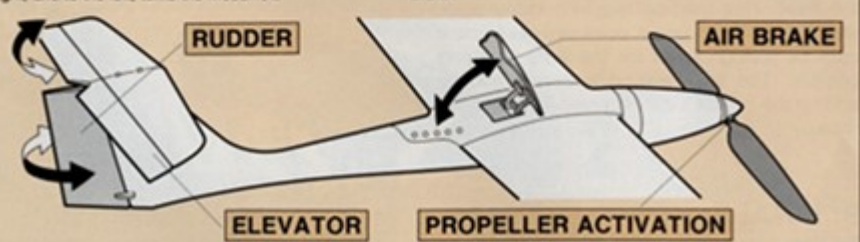
●SLOPE SOARING

Winds moving towards an upslope or hillside become natural updrafts. Finding and remaining in these ascending currents of air by doing a figure 8 maneuver, will keep the glider parallel to the hills ridge line, allowing continuous flight.



Turns the model right or left. Moving the transmitter stick to the right turns the model right, and to the left, turns the model left.

Used to reduce the glider's speed during landing etc. Pulling the stick back closes the brake and pushing it deploys the brake.



Controls climb/descent and turning radius of the model. Like a full-sized aircraft, pulling the transmitter elevator stick raises the elevator, increasing the gliders angle of attack. Pushing the stick forward, decreases the angle of attack and lowers the nose.

Propeller thrust is required for take off, and climb. Cut the motor power when soaring altitude is reached.

★RUDDER OR AILERON CONTROL

An aircraft changes its direction by movement of its rudder or aileron, or both. Rudder controlled, or aileron controlled model gliders are named accordingly. A rudder control glider is very suitable for long, stable soaring flights.

SAFETY PRECAUTIONS

Radio controlled aircraft models are subject to radio failure, malfunctions of the R/C system and mechanical problems. Always operate your model in a safe area where personal and/or property damage will not occur even if the model should crash. Follow these rules when flying:

- ●Do not fly near people, buildings or public facilities, or near roads and vehicular traffic.
- ●Do not fly near electric power lines, power stations, antennas or broadcast transmission towers. They are not only obstructive, but can also cause radio interference.
- ●Do not fly in strong winds or rainy weather.
- ●Do not fly alone. Always have an assistant with you.
- ●Double check your R/C equipment prior to any flight.
- ●Use only those frequencies authorized for R/C aircraft.

★Warnings about the propeller

Take great care during assembly and operating the propeller. It rotates at a very high RPM and the blades have sharp edges. When turning on the motor, make sure no one is alongside or in front of the propeller.

GUIDANCE FOR ORGANIZING A COMPETITION

It is a thrill to participate in a race; however, it is a more significant experience to organize a contest. A competition requires many people; timekeepers, course committee members, etc. In small races, such as those organized by hobby stores, players often serve concurrently as officials. It will be appreciated if you can offer a hand as an official. It is not only welcomed by an organization, but it is also rewarding to yourself. The experience of taking part in a race meet as an official will surely help you with organizing another event. Moreover, it will be of much benefit to you when you participate in a contest as racer.

1. TYPES OF RACES

There are many types of races; series, single ones, and others. It is a common purpose to compete with fellow racers and to develop skills. The more races you participate in, the better results you can expect. Many races are organized in a series to compete throughout the year in order to single out a champion.

●POINT SYSTEM SERIES

Points are given to contestants in proportion to records achieved at each individual race. The winner, 2nd, 3rd places and so forth are determined respectively by the total points accumulated in the series.

●REPECHAGE SERIES (PRELIMINARY)

A big drawback of the point system series is that it is unfavorable to participants who join late. The repechage series has been organized for eliminating this drawback. For example, minor races are held every month to choose a champion of the month. The annual event is conducted to determine a champion of the year. Anyone who has become a champion of the month is eliminated from the following monthly events. In this way, a new champion (competent person to the annual final race) is chosen every month, and contestants from the middle will not be put at a disadvantage. At the same time, this system will give an opportunity to low scores to win a monthly race.

2. QUALIFICATION FOR PARTICIPATION

These are two typical systems. It is usually common that employees or members of the host organization are not eligible, but they may be admitted under the condition that they are eliminated from obtaining awards and ranking.

3. ANNOUNCEMENT OF A RACE

It can be announced through posters. Handouts are also good media to publicize the competition. Essential factors such as when, where, qualification, way of grouping, kinds of cars, type of race and method of determining ranking should be described. If the race is the series system, announcement of dates of the following events is desirable.

4. ENTRY

Entry forms should be ready at the registration desk. Columns for name, address, age, occupation, entry class, frequency of radio control system, and contest number should be provided along with entrance requirements. It is recommended for a host organization to make an entry register book, as it will be useful for reference. With a series race, it is important to keep records of contestants. Entry forms are made in duplicate; one for participant, the other for the organization to make a ledger.

STORE GRAND PRIX ENTRY CARD

Name Address	
Age (Grade)	Occupation
Class	
Car Number (check one)	
Frequency Band	01 02 03 04 05 06 07 08 09 10 11 12 61 63 65 67 69

Store Grand Prix Entry Card

1st		2nd		3rd		4th	
5th		6th		7th		8th	

5. GROUPING OF CONTESTANTS

●Group by age

●Group by skill and experience

The above two methods are good ways to form groups. There can be a beginner and an advanced class, if sorting is carefully done. Top ranking contestants in the beginner's class can be placed in the advanced class in the next race.

6. CAR GROUPINGS

Basically cars are divided into two groups; Stock and Modified.

●STOCK CLASS

Cars in this class must use a standard (stock) 540 type electric motor, and be built right from the box. Modifications or tuning up is not allowed, except for the use of the most fundamental items, such as ball bearings. The stock class is highly recommended for beginning drivers as it allows them to quickly become acquainted with the racing environment and gain needed experience.

●MODIFIED CLASS

As modelers gain more experience from racing and learn more about radio control, they are encouraged to modify and increase the cars performance. This can be a frustrating proposition as the costs and technical finesse required, allow only a few to be successful at it. It is more practical however, to organize a modified class, by setting some limits on the degree of modifications allowed.

7. REGISTRATION ON THE DAY

Ascertain who the participants are with the entry form. Check if the car is qualified under the requirements of the particular racing class.

8. GROUPING OF PARTICIPANTS FOR PRELIMINARY HEATS

During most racing events, entrants run in two or more heat races while working up to final event. As R/C cars on the same frequency cannot run at the same time, grouping should be made so they are separated into different heats. List the number of entrants using the same frequency and sort them out. The number of cars racing in one heat can be from six to eight, depending on track width and length.

●GROUPING EXAMPLE

Number of participants: 01 band: six drivers, 02: three, 03: five, 04: three, 05: five, 06: three, 61: one, 63: one, 65: two, 67: one, 69: one.

Band / Group	1	2	3	4	5	6
1	01	03	05	02	06	63
2	01	03	05	04	65	
3	01	03	05	04	65	
4	01	03	05	04	67	
5	01	03	02	06	69	
6	01	05	02	06	61	

In this example, six drivers use the 01 band. Therefore at least six preliminary heats are required.

●TIMES OR POINTS DECIDE RANKING

Several cars running at high speed race together during a heat, and it may be difficult to confirm their finishing order. Ideally, each car should have its own time keeper, with the ranking determined by the elapsed time for the heat. This method requires many stopwatches. you can use a point system to rank cars by giving points for the cars finishing position. The final ranking is determined by adding the points a car received in each heat race.

9. FINALS

Finalists are decided from the results of the preliminary heats. Only one final is held in each class, however, if the schedule will allow, several final groups, such as A-final, B-final etc. can be had so that as many participants as possible can be in a final event. In such cases, racing distances or elapsed times are normally longer as the rankings are higher.

●CHANGING FREQUENCIES FOR FINALS

As the final grouping is determined by the results of the heat races, it is possible that two or more cars for the final will have the same frequency. In these cases, it is necessary to change some frequencies. The race organizer can have spare crystals available, but it is better if the race participants themselves have their own spare crystals with them.

10. PENALTY POINTS

A participant should be penalized when he conducts himself against the spirit of fair play or against the smooth progress of a contest. The punishment is disqualification and then imposition of a cut in marks or additional penalty time.

★It is usual that interference to other cars and remodeling exceeding the limit should be liable to disqualification.

★A breakaway is subject to demerit mark. The penalty system should be constituted from the standard of annoyance to other participants or injustice among the entrants.

11. ACCOMMODATION

Ample consideration is desired to be given to conveniences and accommodations in the place of the meeting in order to produce an exciting atmosphere to the race.

●Start flag

Generally a national flag or a flag of the host organization is in use.

●Finish flag (checkered flag)

A checkered flag of black and white is waved to the winner's car just before and when crossing the finish line.

●Score board

To help the race proceedings, a score board is desirable to be installed for announcing the records of each heat and ranking to the public.

●Control stand

A stand is very convenient to install so that the drivers can control in better view of the course and the cars while racing.

●Props in the course layout

A bridge made of a tire or advertisement sign boards of companies which can be seen along a real racing track, and miniature guard rails used as pylons in the course will enliven the race.


ROVER MINI COOPER RACING (58211)
MINI SPORTS
32


McLaren Mercedes MP4/13 (58235)
Mobil 1
LOCTITE
Mobil
COMPUTER ASSOCIATES


PEUGEOT 206 WRC (58250)
206
14
Ultron
Clarion


AUDI R8R (58247)
8
Audi Sport Team Joest
Shell
MICHELIN


MITSUBISHI LANCER EVOLUTION VI WRC (58257)
TOMMI
MITSUBISHI
Makinen
RALLY ART
1

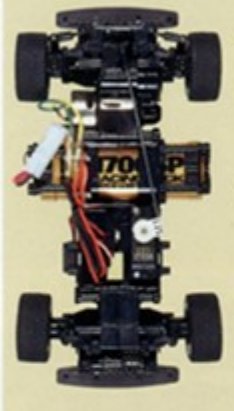

SUBARU IMPREZA WRC '99 (44024)
SUBARU
5


STADIUM RAIDER (58246)
2
SUPER DRIPPER
STADIUM RAIDER
EXACT


JUGGERNAUT 2 (FORD F-350) (58256)

TAMIYA R/C TOURING CAR CHASSIS (Refer to the pages for each chassis specifications)

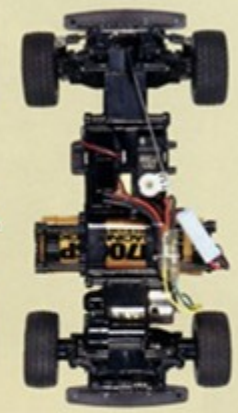
M-01 P.31



M-01M P.31

M-02 P.31

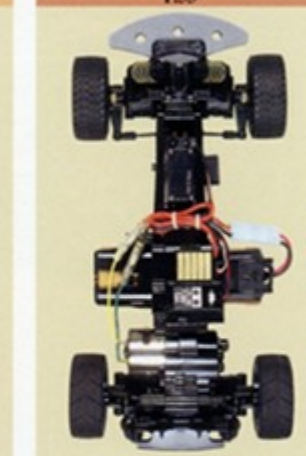
M-02M P.32



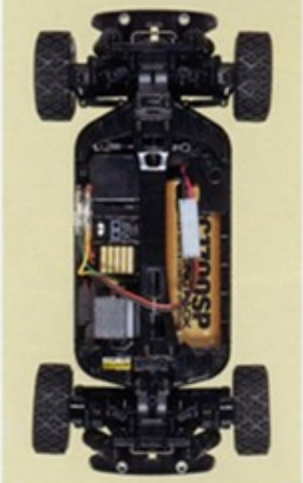
M-02L P.32

M-03 P.33

M-04L P.33



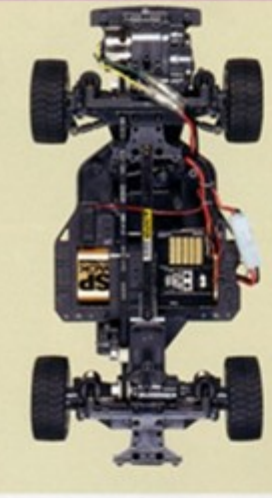
TB-01 P.39



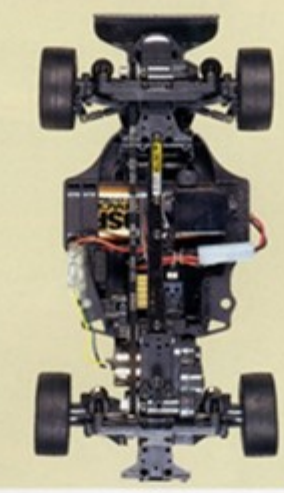
TA02 P.39

TA03F P.40-41

TA03F-S P.41

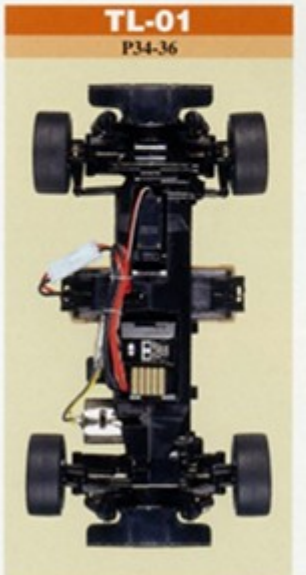


TA03R P.42-43

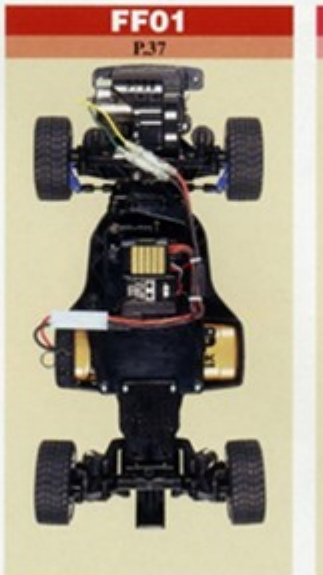


TA03R-S P.43

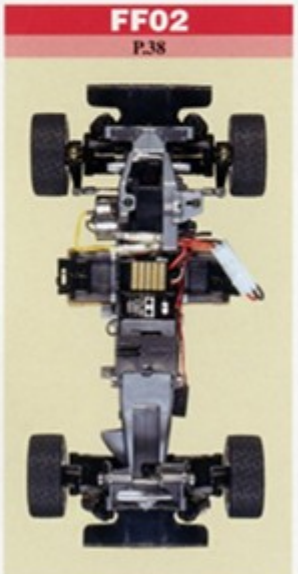
TL-01 P.34-36



FF01 P.37



FF02 P.38



● ENGINE R/C CAR CHASSIS

TG-10Mk.1 P.54-55

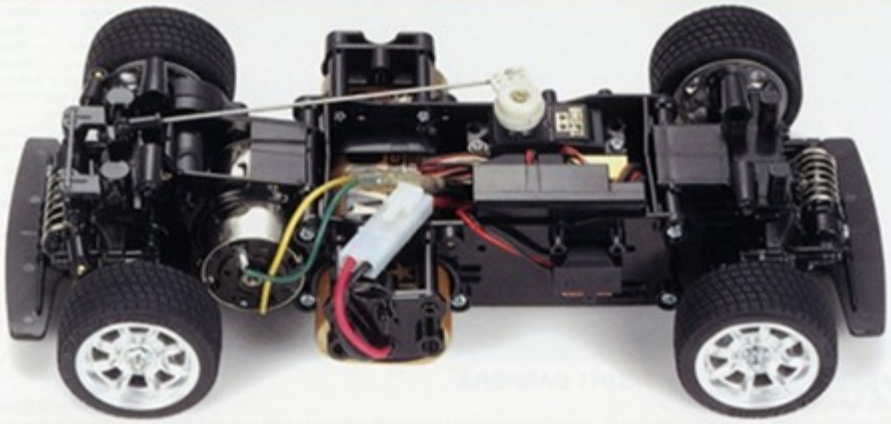
TG-10Mk.1 P.56

For 1/8 Mini Cooper Racing

TGX-Mk.1 P.52-54

M-01

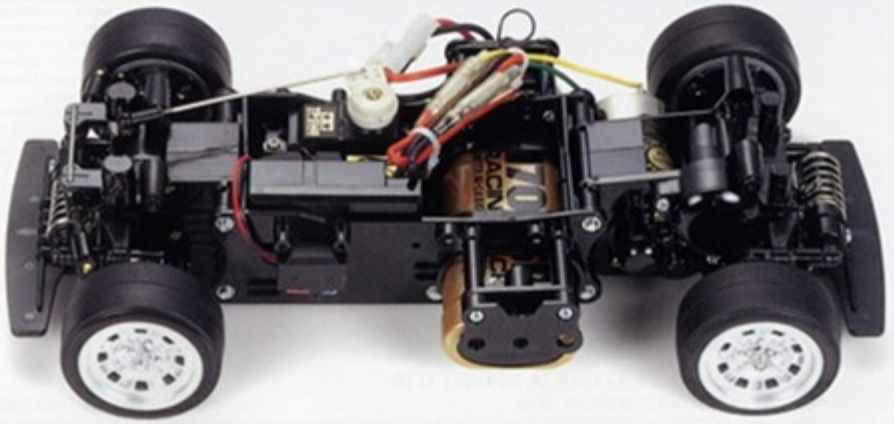
M-01 CHASSIS
Front motor, front drive



Powerful 540 motor is mounted at the front and drives the front wheels. Monocoque type frame/chassis is light in weight and very study. Four wheel independent double wishbone suspension system is equipped with a horizontal mounted coil spring damper at each end.

M-02

M-02 CHASSIS
Midship motor, rear drive



The chassis utilizes midship mounted motor and rear wheel drive configuration. Four wheel independent double wishbone suspension system is equipped with a horizontal mounted mono-shock coil spring damper unit at each end.

M-01

(58163)
- Overall length: 322mm
- Overall width: 160mm
- Chassis weight: 837g
- Wheelbase: 210mm
- Tread-front and rear: 134mm
- Tire width/diameter: front and rear 25/55mm
- Gear ratio: 1:5.48
- ★Body: polycarbonate
- ★Frame: ABS monocoque type
- ★Suspension: four wheel independent double wishbone system
- ★540 type motor included
- ★Radio control unit: Tamiya R/C system or 2-channel radio system (available separately)

163 58163 ROVER MINI COOPER '94 MONTE-CARLO
ミニクーパー'94モンテカルロ

1/10 Scale

30 years after its first victory in the Monte Carlo Rally, a Mini Cooper once again ran the event in 1994. The comeback of the "Mini of Monte" pleased every motor sports fan in the world.

M-02

(58175)
- Overall length: 360mm
- Overall width: 168mm
- Chassis weight: 825g
- Wheelbase: 210mm
- Tread-front and rear: 134mm
- Tire width/diameter: front and rear 25/59mm
- Gear ratio: 1:5.48
- ★Body: polycarbonate
- ★Frame: ABS monocoque type
- ★Suspension: wheel independent double wishbone system
- ★540 type motor included
- ★Radio control unit: Tamiya R/C system or 2-channel radio system (available separately)

175 58175 HONDA S800 RACING
ホンダS800レーシング

1/10 Scale

Unveiled to the public in 1965, Honda's S800 was one of the earliest examples of the lightweight 2-seater sports cars in the Japanese automotive history. This compact motor car was very active in the Japanese racing events.

M-01M

(58196)
- Overall length: 355mm
- Overall width: 165mm
- Chassis weight: 860g
- Wheelbase: 225mm
- Tread-front and rear: 134mm
- Tire width/diameter: front and rear 25/59mm
- Gear ratio: 1:5.48
- ★Body: polycarbonate
- ★Frame: ABS monocoque type
- ★Suspension: four wheel independent double wishbone system
- ★540 type motor included
- ★Radio control unit: Tamiya R/C system or 2-channel radio system (available separately)

196 58196 HONDA S-MX LOWDOWN
ホンダS-MX ローダウン

1/10 Scale

Debuted in November 1996, Honda's "S-MX" multi-utility vehicle has set a new trend in the Japanese car market. Its body shape provides plenty of room for passengers. The large headlight and narrow grille give the S-MX a distinctive look.

M-02

(58168)
- Overall length: 395mm
- Overall width: 168mm
- Chassis weight: 855g
- Wheelbase: 210mm
- Tread-front and rear: 134mm
- Tire width/diameter: front and rear 25/59mm
- Gear ratio: 1:5.48
- ★Body: polycarbonate
- ★Frame: ABS monocoque type
- ★Suspension: four wheel independent double wishbone system
- ★540 type motor included
- ★Radio control unit: Tamiya R/C system or 2-channel radio system (available separately)

168 58168 ALPINE A110
アルピーヌA110

⊕1/10 Scale

The Alpine A110 swept over the European rally scene during the early 1970's. This famous French rally car is reproduced by Tamiya as a highly realistic electric powered R/C model. The model represents the Alpine A110 that won the 1971 Monte-Carlo Rally.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

⊕No further production. ★Specifications are subject to change without notice.

M-02M

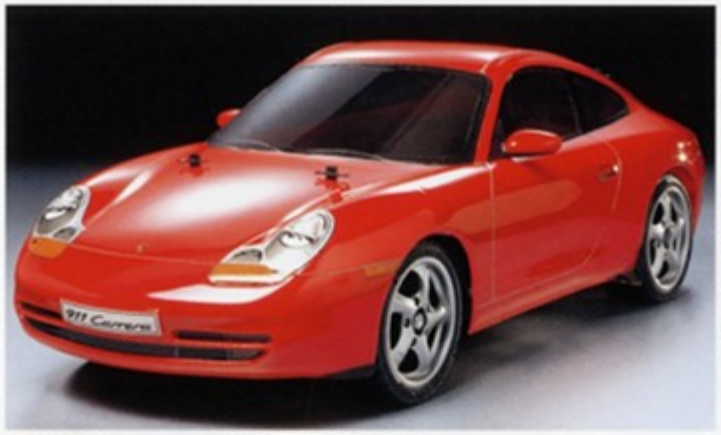
(58187)
Overall length——385mm
Overall width——168mm
Chassis weight——847g
Wheelbase——225mm
Tread-front and rear 134mm
Tire width/diameter——
front and rear 25/59mm
Gear ratio——1:5.48
★Body——polycarbonate
★Frame——
ABS monocoque type
★Suspension——
four wheel independent double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-channel radio system (available separately)

187 58187 ALFA ROMEO GIULIA SPRINT GTA

アルファロメオ ジュリア スプリント GTA

1/10 Scale

It was back in 1965 when Alfa Romeo of Italy released their Giulia Sprint GTA. They developed this car as a base car to vie the European Touring Car Championships. It showed outstanding performance on the track and became a regular on the winners' podium.



M-02L

(58208)
Overall length——440mm
Overall width——178mm
Chassis weight——855g
Wheelbase——239mm
Tread——front 138mm
& rear 146mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:6.86
★Body——polycarbonate
★Frame——
ABS monocoque type
★Suspension——
four wheel independent double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-channel radio system (available separately)

208 58208 PORSCHE 911 CARRERA

ポルシェ911カレラ

※1/10 Scale

Porsche's latest model of their ever-popular 911 series is joining Tamiya's radio control car lineup. Tamiya's high performing R/C replica uses the popular "M-Chassis" mechanics. A 540 type electric motor is mounted at the rear-mid section of the frame.

M-02M

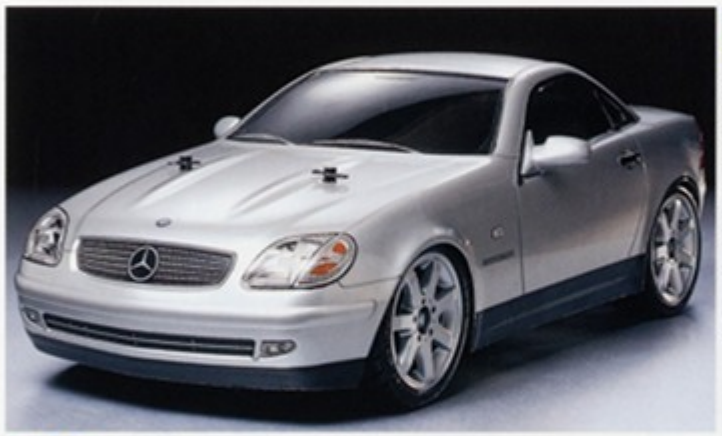
(58180)
Overall length——390mm
Overall width——168mm
Chassis weight——840g
Wheelbase——225mm
Tread-front and rear 134mm
Tire width/diameter——
front and rear 25/59mm
Gear ratio——1:5.48
★Body——polycarbonate
★Frame——
ABS monocoque type
★Suspension——
four wheel independent double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-channel radio system (available separately)

180 58180 EUNOS ROADSTER

ユーノスロードスター

※1/10 Scale

Since its debut in 1989, Mazda's Eunos Roadster has been leading the market of light-weight roadsters all over the world. With its superb maneuverability, the Eunos Roadster is enjoying excellent reputation among public.



M-02L

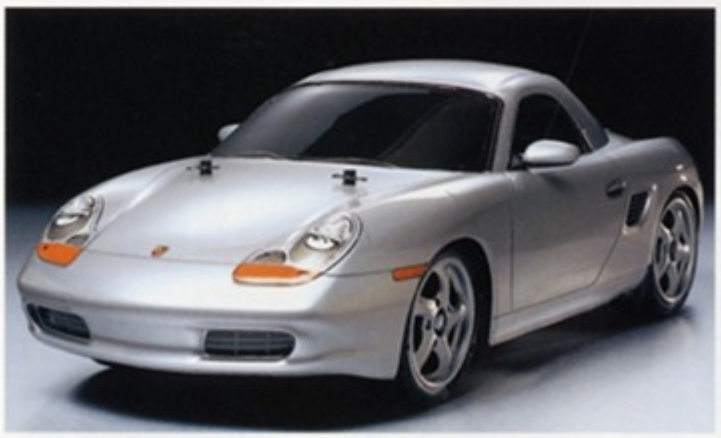
(58202)
Overall length——394mm
Overall width——170mm
Chassis weight——850g
Wheelbase——239mm
Tread-front and rear 142mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:6.86
★Body——polycarbonate
★Frame——
ABS monocoque type
★Suspension——
four wheel independent double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-channel radio system (available separately)

202 58202 Mercedes-Benz SLK

メルセデスベンツ SLK

※1/10 Scale

Sporty, light and compact was the concept of Mercedes while developing their latest SLK roadster, and Tamiya's radio control counterpart also features these characteristics. Monocoque type frame and 540 type electric motor provide an agile performance.



M-02L

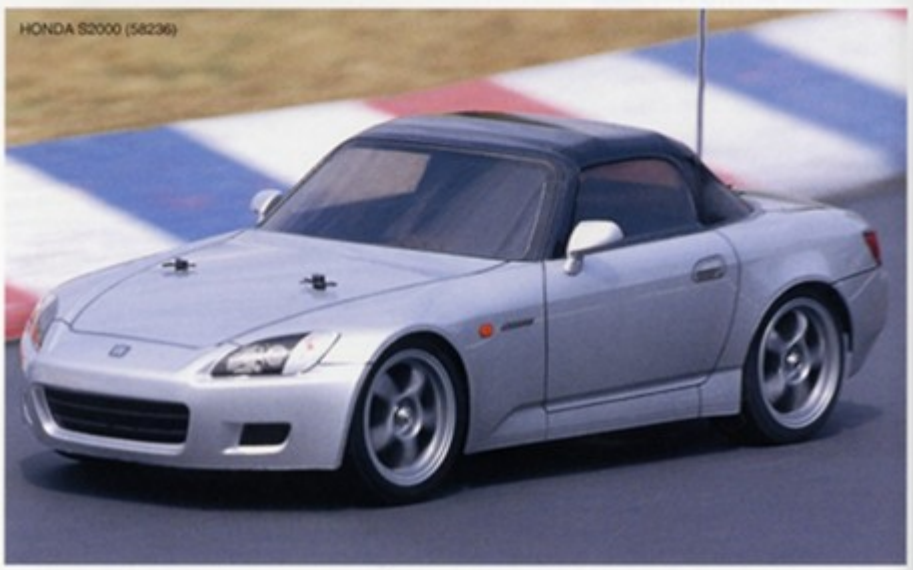
(58197)
Overall length——426mm
Overall width——177mm
Chassis weight——850g
Wheelbase——239mm
Tread——front 138mm
& rear 146mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:6.86
★Body——polycarbonate
★Frame——
ABS monocoque type
★Suspension——
four wheel independent double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-channel radio system (available separately)

197 58197 PORSCHE Boxster

ポルシェ ボクスター

※1/10 Scale

In 1997, Porsche has revived the "roadster" configuration in their stable. The "Boxster" is regarded as a new generation Porsche with its numerous advanced features such as their state of the art "Tiptronic" 5-speed automatic transmission etc.

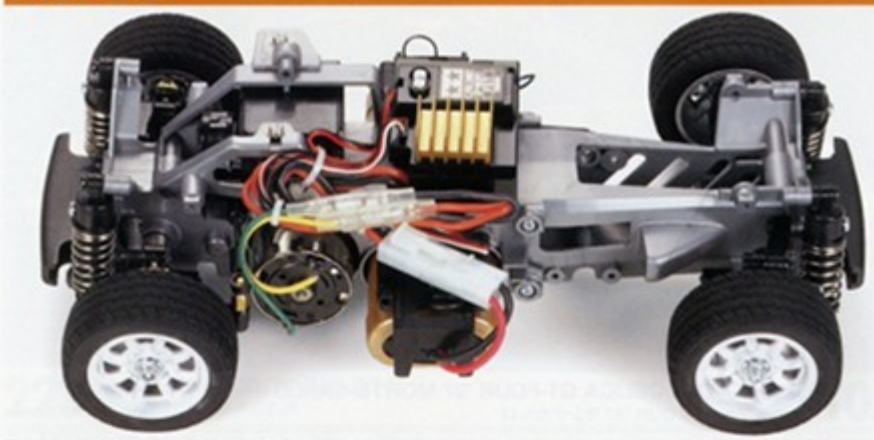


★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

※No further production. ★Specifications are subject to change without notice.

M-03

M-03 CHASSIS
Front motor, front drive



The 540 motor is mounted at the front and drives front wheels. Monocoque type frame/chassis is light in weight and very sturdy. Four wheel independent suspension is damped with coil spring shock units all around.

M-03

(58211)
Overall length——315mm
Overall width——167mm
Chassis weight——855g
Wheelbase——210mm
Tread-front and rear 138mm
Tire width/diameter——front and rear 25/59mm
Gear ratio——1:5.8
★Body——polycarbonate
★Frame——polycarbonate monocoque type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

211 58211 ROVER MINI COOPER RACING
ローバーミニクーパーレーシング
1/10 Scale

Originally created by Sir Alec Isigonis in 1959, and tuned by John Cooper, the "Mini" has established worldwide fame on both the commercial and racing scene. Tamiya has reproduced racing version in a 1/10 scale R/C car format.

M-03

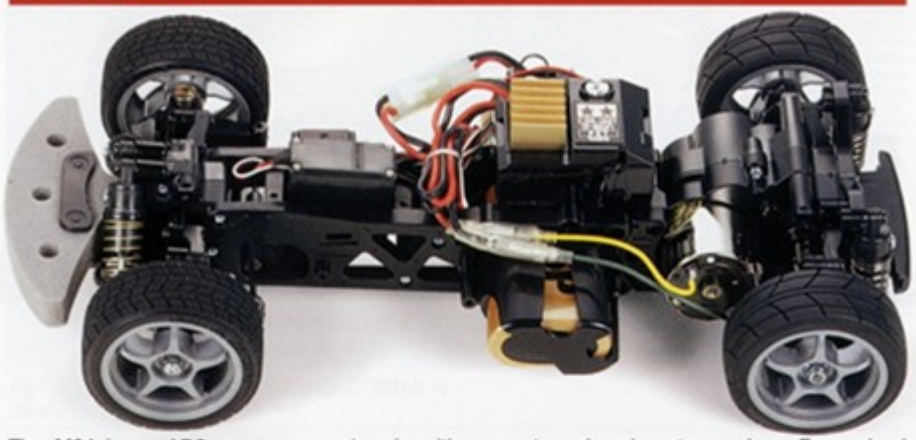
(58234)
Overall length——333mm
Overall width——167mm
Chassis weight——855g
Wheelbase——210mm
Tread-front and rear 138mm
Tire width/diameter——front and rear 25/59mm
Gear ratio——1:5.8
★Body——polycarbonate
★Frame——polycarbonate monocoque type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

234 58234 SUZUKI wagon R RR
スズキワゴンR RR
1/10 Scale

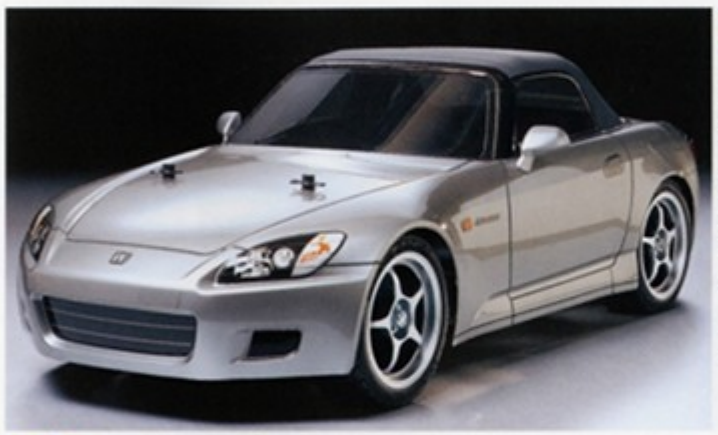
In the middle 90's, Suzuki developed a mini-van light car called the Wagon R, this car was a commercial success and can be seen on the streets everywhere. Suzuki took this popular narrow tread light design and developed it into a normal tread version.

M-04L

M-04L CHASSIS
Midship motor, rear drive (long wheelbase type)



The M04 is an ABS monocoque chassis with separate polycarbonate gearbox. Four wheel independent double wishbone suspension system is damped by four coil spring shock units. Large urethane bumper protects suspension from damage.



M-04L

(58236)
Overall length——409mm
Overall width——177mm
Chassis weight——914g
Wheelbase——239mm
Tread——front 140mm & rear 148mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:6.82
★Body——polycarbonate
★Frame——polycarbonate monocoque type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——R/C system or 2-channel radio system (available separately)

236 58236 HONDA S2000
ホンダS2000
1/10 Scale

Honda built this rear drive roadster to commemorate the company's 50th anniversary. The 2.0 liter DOHC 16V in-line 4-cylinder engine of the S2000 generates and estimated 240 bhp of power. Tamiya captures the grace and energy of this new roadster.

M-04L

(58240)
Overall length——390mm
Overall width——179mm
Chassis weight——890g
Wheelbase——239mm
Tread——front 140mm & rear 148mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:6.82
★Body——polycarbonate
★Frame——polycarbonate monocoque type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

240 58240 BMW M roadster
BMW M ロードスター
1/10 Scale

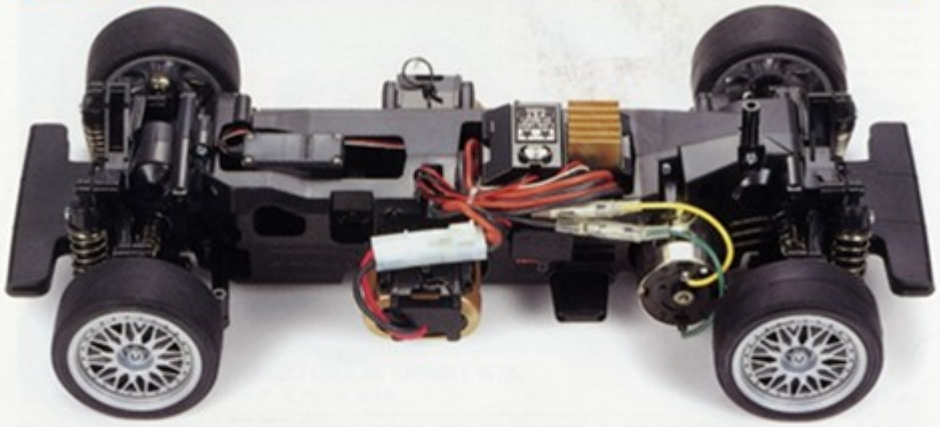
One of BMW's latest creations, the M roadster turns heads and enthralls drivers. Equipped with a 3.2 liter DOHC 24-valve in-line 6-cylinder engine and many other features, this powerful car is sure to make automotive history.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

TL-01

TL-01 CHASSIS
Midship motor, shaft driven 4WD



A shaft driven full time 4WD system is incorporated in the light and sturdy monocoque type frame. Front and rear sealed gearboxes house precision bevel gear type differential units. Four wheel independent suspension is assisted by coil spring shock units, assuring excellent maneuverability.

TL-01

(58201)
- Overall length: 451mm
- Overall width: 186mm
- Chassis weight: 1130g
- Wheelbase: 257mm
- Tread-front and rear 157mm
- Tire width/diameter: front and rear 27/65mm
- Gear ratio: 1:7.96
- ★Body: polycarbonate
- ★Frame: polycarbonate monocoque type
- ★Suspension: four wheel independent double wishbone system
- ★540 type motor included
- ★Radio control unit: Tamiya R/C system or 2-channel radio system (available separately)

201 58201 TOYOTA CELICA GT-FOUR '97 MONTE-CARLO
トヨタ セリカ GT-FOUR '97 モンテカルロ

1/10 Scale

The name "Celica" is one of the established names in the rally sports. The 1997 season saw the entry of Celica in the hand of non-works teams. Its sleek styling and distinctive, irregularly shaped four headlights made it stand out from other rally cars.

TL-01

(58195)
- Overall length: 462mm
- Overall width: 185mm
- Chassis weight: 1070g
- Wheelbase: 257mm
- Tread-front and rear 157mm
- Tire width/diameter: front and rear 27/65mm
- Gear ratio: 1:7.96
- ★Body: polycarbonate
- ★Frame: polycarbonate monocoque type
- ★Suspension: four wheel independent double wishbone system
- ★540 type motor included
- ★Radio control unit: Tamiya R/C system or 2-channel radio system (available separately)

195 58195 ALFA ROMEO 155 V6 TI BOSCH
アルファロメオ155 V6 TI ボッシュ

1/10 Scale

The Bosch sponsored Alfa Romeo 155 V6 TI racing machine showed its high potential during the 1996 International Touring Car Championships (ITC). Tamiya has replicated this impressive racing machine in a ready to assemble electric R/C format.

TL-01

(58212)
- Overall length: 463mm
- Overall width: 186mm
- Chassis weight: 1125g
- Wheelbase: 257mm
- Tread-front and rear 157mm
- Tire width/diameter: front and rear 27/65mm
- Gear ratio: 1:7.96
- ★Body: polycarbonate
- ★Frame: polycarbonate monocoque type
- ★Suspension: four wheel independent double wishbone system
- ★540 type motor included
- ★Radio control unit: Tamiya R/C system or 2-channel radio system (available separately)

212 58212 PEUGEOT 406 ST
プジョー406 ST

1/10 Scale

The famous French car manufacturer Peugeot entered their 406 ST racing machine in the German STW (Super Touring Wagen) Cup, and achieved an outstanding success by winning the title. Tamiya has added this attractive racer to 1/10 R/C car stable.

TL-01

(58191)
- Overall length: 463mm
- Overall width: 189mm
- Chassis weight: 1080g
- Wheelbase: 257mm
- Tread-front and rear 161mm
- Tire width/diameter: front and rear 27/65mm
- Gear ratio: 1:7.96
- ★Body: polycarbonate
- ★Frame: polycarbonate monocoque type
- ★Suspension: four wheel independent double wishbone system
- ★540 type motor included
- ★Radio control unit: Tamiya R/C system or 2-channel radio system (available separately)

191 58191 CALSONIC SKYLINE GT-R
カルソニック・スカイラインGT-R

1/10 Scale

Nissan's Skyline GT-R has been one of the dominant forces at the Japanese GT Car Championships (JGTC). For the 1996 season, Nissan further souped up this competitive machine using their latest racing expertise.

TL-01

(58216)
- Overall length: 425mm
- Overall width: 193mm
- Chassis weight: 1130g
- Wheelbase: 257mm
- Tread-front and rear 157mm
- Tire width/diameter: front and rear 27/65mm
- Gear ratio: 1:7.96
- ★Body: polycarbonate
- ★Frame: polycarbonate monocoque type
- ★Suspension: four wheel independent double wishbone system
- ★540 type motor included
- ★Radio control unit: Tamiya R/C system or 2-channel radio system (available separately)

216 58216 FORD ESCORT WRC
フォードエスコートWRC

1/10 Scale

In 1998, the Ford Works team entered their Escort machine in the World Rally Championships (WRC). Tamiya has reproduced this rally car in a 1/10 R/C format. Kit contains stickers for driver Kankkunen and the 1998 Monte Carlo Rally.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

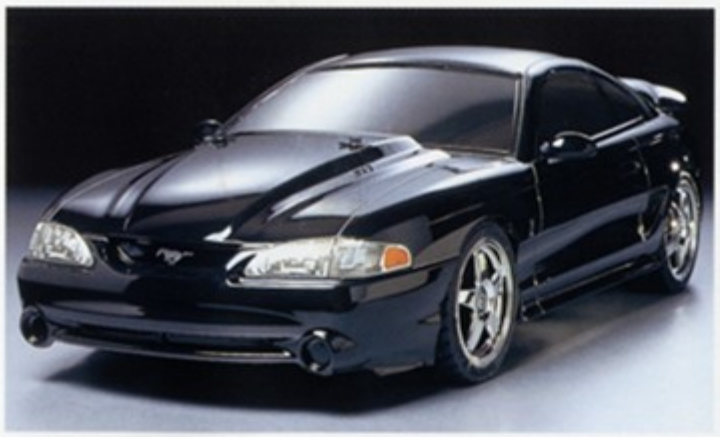
TL-01

(58223)
Overall length——463mm
Overall width——189mm
Chassis weight——1087g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

223 58223 PENNZOIL NISMO GT-R
ペンズオイル・ニスモGT-R

※1/10 Scale

The NISMO GT-R is based on the Nissan Skyline, a very popular car among Japanese motorsport enthusiasts. The body of the '98 NISMO GT-R includes louvers added to the hood, and a large wing added to the rear.



TL-01

(58228)
Overall length——456mm
Overall width——184mm
Chassis weight——1048g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

228 58228 FORD MUSTANG COBRA R
フォードマスタングコブラR

1/10 Scale

The Ford Mustang is a definitive vehicle in American automotive history, and continues to be popular car. The Ford Mustang Cobra R is equipped with a 5.8 liter engine that generates 300hp, and racing car style rear wing.

TL-01

(58226)
Overall length——442mm
Overall width——186mm
Chassis weight——1070g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

226 58226 SUBARU IMPREZA WRC
スバル インプレッサWRC（TL-01シャーシ）

★Limited release 1/10 Scale

Subaru sent new compact machine, Impreza instead of Legacy into 1000 Lakes Rally from 1993. The driver of Subaru, Colin Mcrae won the victory on 4th race in Portugal and 6th race in Tour-de-Corse. Impreza showed its high potential on stage WRC.

TL-01

(58233)
Overall length——435mm
Overall width——194mm
Chassis weight——1120g
Wheelbase——257mm
Tread——front 157mm
& rear 165mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

233 58233 CASTROL MUGEN NSX
カストロール無限NSX

1/10 Scale

The Castrol MUGEN team is another team that used the competitive Honda NSX in the 1998 Japan Grand Touring Car Championship (JGTC). The Castrol MUGEN NSX is flamboyantly painted in green, white, red and black.

TL-01

(58219)
Overall length——448mm
Overall width——186mm
Chassis weight——1067g
Wheelbase——257mm
Tread-ront and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

219 58219 MITSUBISHI LANCER EVOLUTION Ⅳ MONTE-CARLO
三菱ランサーエボリューションⅣ モンテカルロ仕様

1/10 Scale

The Mitsubishi Lancer Evolution Ⅳ Monte Carlo is a participant in the World Rally Championship (WRC). Piloted by T. Makinen, the Mitsubishi Lancer Evolution Ⅳ won the Portuguese, Catalonian and Argentine rallies.

TL-01

(58222)
Overall length——463mm
Overall width——187mm
Chassis weight——1038g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

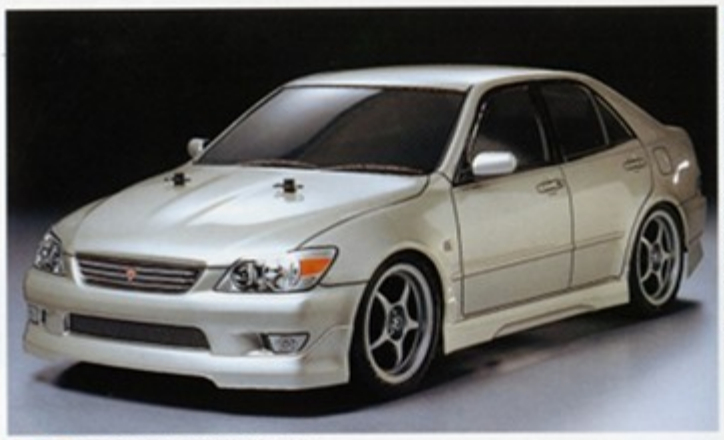
222 58222 FORD SVT F-150 Lightning
フォードSVT F-150 ライトニング

1/10 Scale

Based on the Ford 150 series, a popular vehicle in America's heartland. The SVT (Special Vehicle Team) appeared at this year's Chicago Auto show. The original F-150 base was enhanced with the SVT tuning: a 5.4 liter Triton V8 engine equipped with a supercharger and intercooler.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

※No further production. ★Specifications are subject to change without notice.



TL-01

(58237)
Overall length——440mm
Overall width——187mm
Chassis weight——1045g
Wheelbase——257mm
Tread–front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

237 58237 LEXUS IS 200
トヨタ アルテッツァ

1/10 Scale

Known in Japan as the Altezza, this sedan is the 1998 Japanese Car of the Year. The Altezza is equipped with a 2 liter, 4-cylinder engine that generates 210hp, and sports car style 17 inch wheels.

TL-01

(58251)
Overall length——460mm
Overall width——187mm
Chassis weight——1065g
Wheelbase——257mm
Tread–front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

251 58251 LEXUS GS400
トヨタ アリスト

1/10 Scale

The Lexus name has earned its reputation for high quality cars abroad. Known in Japan as the Toyota Aristo, the Lexus GS400 continues the tradition of high quality luxury cars, rivaling the best luxury cars from around the world.

TL-01

(58241)
Overall length——418mm
Overall width——185mm
Chassis weight——1060g
Wheelbase——257mm
Tread–front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

241 58241 FORD FOCUS WRC
フォードフォーカスWRC

1/10 Scale

The Ford Focus WRC took first place in the Portugal and Safari rallies and continues to be an exciting performer in the World Rally Championships. Armed with a 4-cylinder, 2.0 liter engine and a host of high performance features, this car has performed well in the 1999 season.

TL-01

(58255)
Overall length——442mm
Overall width——185mm
Chassis weight——1076g
Wheelbase——257mm
Tread–front & rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:7.92
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

255 58255 CALSONIC SKYLINE GT-R (R34)
カルソニック スカイラインGT-R(R34)

1/10 Scale

For the 1999 All Japan GT Championships, Nissan brought out a new machine, the R34. The body was completely remade in carbon fiber and equipped with a large, curved wing on the rear. Tamiya has transformed this renowned car into an R/C assembly model kit.

TL-01

(58246)
Overall length——423mm
Overall width——204mm
Chassis weight——1143g
Wheelbase——257mm
Tread–front and rear 174mm
Tire width/diameter——
front and rear 32/86mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate
monocoque type
★Suspension——four wheel
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

246 58246 STADIUM RAIDER
スタジアムレイダー

1/10 Scale

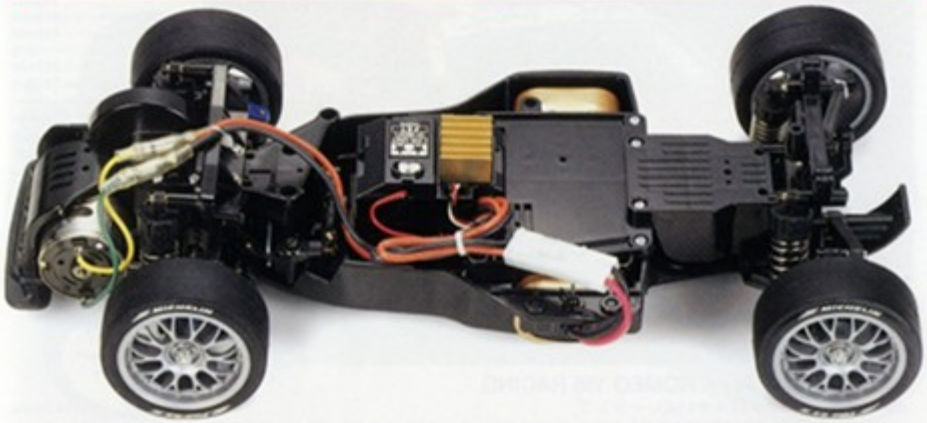
Based on the tough vehicles that participate in stadium races, this truck is designed for the off-road loving R/C enthusiasts. New silver wheels complement the exterior of this off-road vehicle. The large tires have pin spikes for running stability.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

FF01

FF01 CHASSIS
Front motor, front drive



The front mounted 540 type electric motor drives the front wheels, giving a crisp handling response. Precision ball type differential is housed at the sealed front gearbox. Bathtub type frame/chassis is injection molded of tough ABS resin.

FF01

	(58183)
Overall length	456mm
Overall width	184mm
Chassis weight	997g
Wheelbase	258mm
Tread-front and rear	157mm
Tire width/diameter front and rear	27/65mm
Gear ratio	1:7.21
★Body	polycarbonate
★Frame	ABS bathtub type
★Suspension	four wheel independent double wishbone system
★540 type motor included	
★Radio control unit	Tamiya R/C system or 2-channel radio system (available separately)

183 58183 VOLVO 850 BTCC
ボルボ 850 BTCC

※1/10 Scale

In 1996 this Volvo 850 saloon showed its outstanding performance after further development, and made their drivers, R. Rydell and T. Harvey, regular visitors to the victory podium throughout the season.

FF01

	(58206)
Overall length	425mm
Overall width	185mm
Chassis weight	975g
Wheelbase	258mm
Tread-front and rear	157mm
Tire width/diameter front and rear	27/65mm
Gear ratio	1:7.21
★Body	polycarbonate
★Frame	ABS bathtub type
★Suspension	four wheel independent double wishbone system
★540 type motor included	
★Radio control unit	Tamiya R/C system or 2-channel radio system (available separately)

206 58206 VOLKSWAGEN GOLF V5
フォルクスワーゲンゴルフ V5

1/10 Scale

Volkswagen Golf is one of the best-selling cars in the world. This popular vehicle underwent a complete model change and made its debut at the 1997 Frankfurt Motor Show. The V5 is the top-of-the-line model of the 4th generation Golf stable.

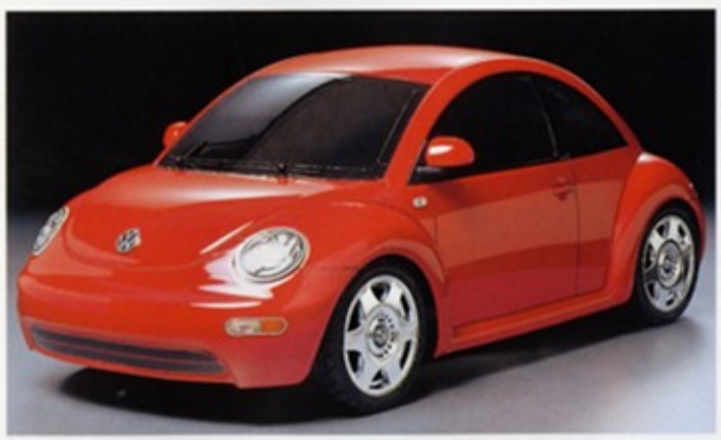
FF01

	(58186)
Overall length	451mm
Overall width	185mm
Chassis weight	985g
Wheelbase	258mm
Tread-front and rear	157mm
Tire width/diameter front and rear	27/65mm
Gear ratio	1:7.21
★Body	polycarbonate
★Frame	ABS bathtub type
★Suspension	four wheel independent double wishbone system
★540 type motor included	
★Radio control unit	Tamiya R/C system or 2-channel radio system (available separately)

186 58186 PIAA ACCORD VTEC
ピア アコード VTEC

1/10 Scale

The Accords were entered from three different racing teams for the 1996 season, and among them, the PIAA Accord in a two-toned black & white color scheme showed impressive racing performance at the track.



FF01

	(58217)
Overall length	416mm
Overall width	183mm
Chassis weight	973g
Wheelbase	258mm
Tread-front and rear	157mm
Tire width/diameter front and rear	27/65mm
Gear ratio	1:7.21
★Body	polycarbonate
★Frame	ABS bathtub type
★Suspension	four wheel independent double wishbone system
★540 type motor included	
★Radio control unit	Tamiya R/C system or 2-channel radio system (available separately)

217 58217 VOLKSWAGEN NEW BEETLE
フォルクスワーゲンニュービートル

1/10 Scale

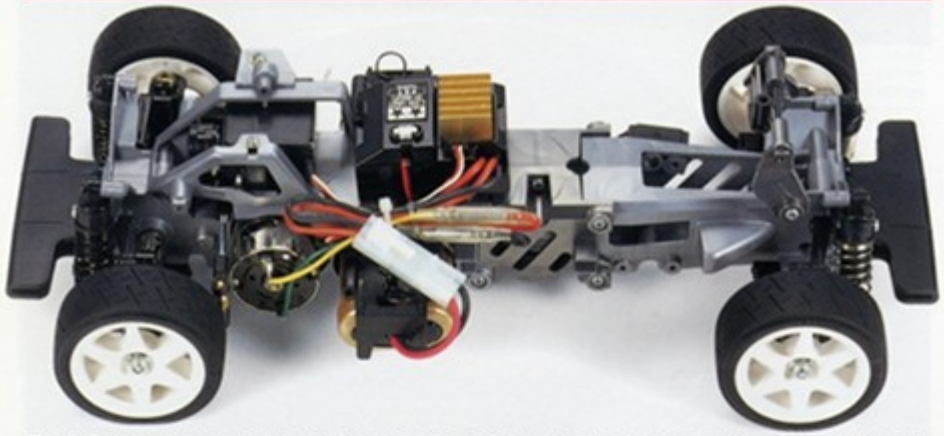
The redesigned Volkswagen New Beetle was revealed at the 1998 Detroit Auto Show. The New Beetle was different from its predecessor, but the familiar shape remains. A gasoline engine or diesel turbo engine mounted in the front.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

※No further production. ★Specifications are subject to change without notice.

FF02

FF02 CHASSIS
Front motor, front drive



The 540 motor is mounted at the front and drives front wheels. Monocoque type frame/chassis is light in weight and very sturdy. Four wheel independent suspension is damped with coil spring shock units all around.

FF02

(58245)
Overall length——445mm
Overall width——188mm
Chassis weight——960g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:7.25
★Body——polycarbonate
★Frame——polycarbonate monocoque type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

245 58245 ALFA ROMEO 156 RACING
アルファロメオ156レーシング

1/10 Scale

The potential of the Alfa Romeo 156 was realized in this year's Italian Super Tourismo Championship. The Selenia team race car, driven by Giovanardi, won this year's championship. This elegant car is now available as a Tamiya R/C car.

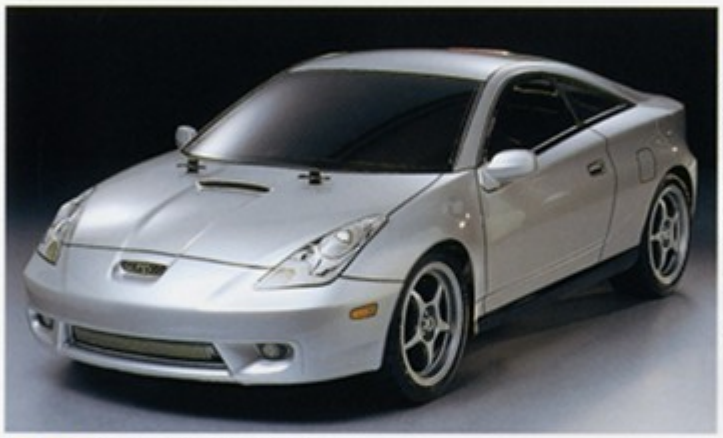
FF02

(58224)
Overall length——402mm
Overall width——184mm
Chassis weight——935g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:7.25
★Body——polycarbonate
★Frame——polycarbonate monocoque type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

224 58224 PEUGEOT 306 MAXI WRC
プジョー306 マキシWRC

1/10 Scale

Peugeot enters the rally car arena with its 306 Maxi WRC. Armed with a 4-cylinder, 2.0 liter engine and a host of high performance features, this car has performed well in the 1998 season.



FF02

(58248)
Overall length——434.5mm
Overall width——188mm
Chassis weight——950g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:7.25
★Body——polycarbonate
★Frame——polycarbonate monocoque type
★Suspension——four wheel double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

248 58248 TOYOTA CELICA
トヨタセリカ

1/10 Scale

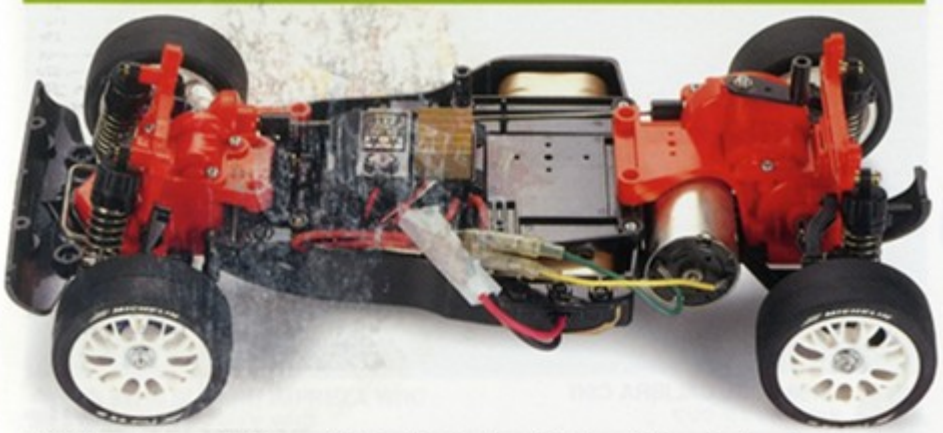
At the Detroit Auto Show in January 1999, the Celica, introduced under the name "XYR", captivated onlookers with its innovative styling. The GT-S engine features a 1.8 liter 4 cylinder DOHC capable of pumping out 180hp.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

TA02

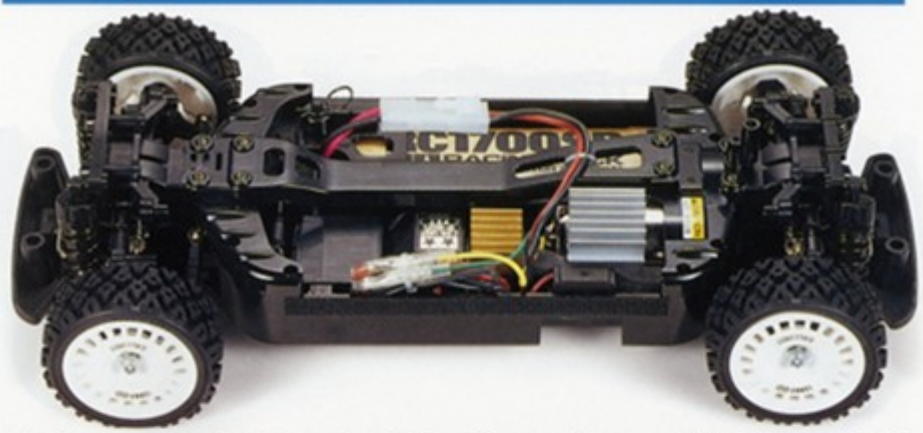
TA02 CHASSIS
Midship motor, shaft driven 4WD



TA02 chassis uses a highly sophisticated shaft driven full-time 4WD mechanics. Front and rear sealed gearboxes incorporate precision differential gearing. The four wheel independent, double wishbone suspension system is damped by oil-filled shock units all around.

TB-01

TB-01 CHASSIS
Midship motor, shaft driven 4WD



This chassis consists of main/upper frame for low balance and maneuverability. Shaft driven 4WD system transmits the power from 540 motor, which is parallel to the chassis. The upper cover keeps out sand and debris.

TA02

(58171)
Overall length——447mm
Overall width——186mm
Chassis weight——1050g
Wheelbase——260mm
Tread–front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.59
★Body——polycarbonate
★Frame–ABS bathtub type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

171 58171 BMW 318i STW
BMW 318i STW

1/10 Scale

The BMW 318i four-door sedan was turned into a highly competitive racing machine, and entered in the 1995 German Super Touring Car Championships. The car monopolized the constructors and drivers titles for the season.

TB-01

(58257)
Overall length——442mm
Overall width——185mm
Chassis weight——1275g
Wheelbase——257mm
Tread–front and rear 157mm
Tire width/diameter——
front and rear 27/69mm
Gear ratio——1:9.91
★Body——Polycarbonate
★Frame–ABS bathtub type
★Suspension——
Four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

257 58257 MITSUBISHI LANCER EVOLUTION VI WRC
三菱ランサーエボリューションVI WRC

1/10 Scale

The Lancer Evolution VI, as its name implies, evolved from the proven technology of its predecessor, the Lancer V. This latest inception of the Evolution features two main cosmetic changes, a modified spoiler on the front and the rear.

TA02W

(58170)
Overall length——458mm
Overall width——200mm
Chassis weight——1080g
Wheelbase——256mm
Tread——front 173mm
& rear 169mm
Tire width/diameter——
front 27/65mm
& rear 33/65mm
Gear ratio——1:8.59
★Body——polycarbonate
★Frame–ABS bathtub type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

170 58170 CASTROL TOYOTA TOM'S SUPRA GT
カストロール・トヨタ・トムススープラGT

1/10 Scale

The race-tuned Supra that competed in the 1995 Japanese GT car championships is now available as a highly realistic and high performing R/C model kit. Tamiya's model of Supra GT uses sophisticated shaft-driven full time 4WD mechanics.

TB-01

(58259)
Overall length——442mm
Overall width——186mm
Chassis weight——1277g
Wheelbase——257mm
Tread——front & rear 157mm
Tire width/diameter——
front and rear 27/69mm
Gear ratio——1:9.91
★Body——polycarbonate
★Frame–ABS bathtub type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

259 58259 SUBARU IMPREZA GERMAN RALLY CHAMPION '99
スバル インプレッサ(99年ドイツ国内ラリー選手権優勝車)

1/10 Scale

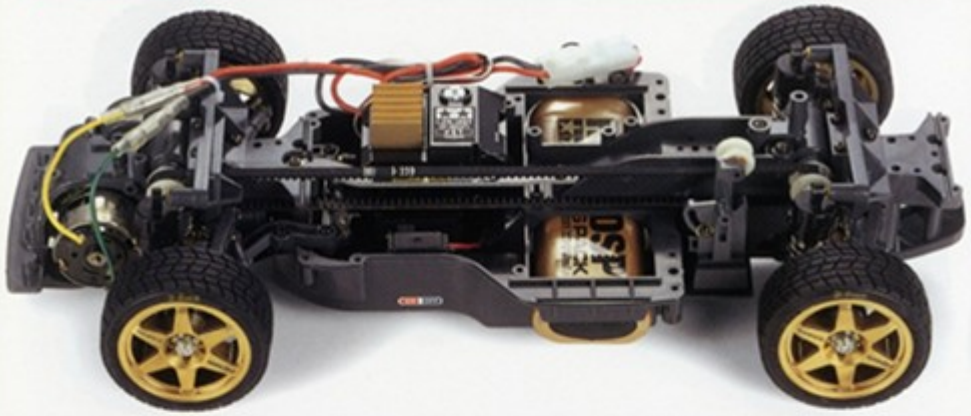
The team Holzer Subaru Impreza WRC challenged Lancer, Corolla and Escort for the German Rally Championships. Impreza won 7 victories out of 8 races and earned the title for the 1999 season. The model features full-time shaft driven TB01 chassis.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

TA03F

TA03F CHASSIS
Front motor, belt driven 4WD



Powerful 540 type electric motor is mounted at the front for the optimized weight distribution, and the power is efficiently transmitted to the front and rear wheels via a drive belt. Suspension is four wheel independent double wishbone type, damped by four oil-filled shock units.

TA03F

(58188)
Overall length——448mm
Overall width——185mm
Chassis weight——1130g
Wheelbase——257mm
Tread-front and rear 153mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

188 58188 OPEL CALIBRA Cliff
オペル カリブラ クリフ

※1/10 Scale

The Opel firm of Germany entered six Calibra's into the 1995 International Touring Car Championships (ITC), to compete against the dominant Mercedes and Alfa Romeo. The Calibra used a Cosworth tuned, 2.5 liter V-6 cylinder DOHC engine.

TA03F

(58182)
Overall length——454mm
Overall width——186mm
Chassis weight——1117g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

182 58182 AUDI A4 STW
アウディ A4 STW

1/10 Scale

The famous German automobile manufacturer Audi's A4 showed impressive performance at touring car races all around the world during the 1996 season. Four-wheel drive system brought outstanding results especially at races in rain.

TA03F

(58189)
Overall length——462mm
Overall width——185mm
Chassis weight——1110g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

189 58189 MARTINI ALFA ROMEO 155 V6 TI
マルティニ アルファロメオ 155 V6 TI

1/10 Scale

For the 1996 International Touring Car Championships (ITC), the Alfa Romeo constructed a number of Alfa Romeo 155 V6 TI cars. With its eye-catching color scheme and aggressive performance, the Martini Alfa Romeo 155 V6 TI pleased the racing fans.

TA03F

(58185)
Overall length——463mm
Overall width——189mm
Chassis weight——1160g
Wheelbase——257mm
Tread——front 157mm & rear 162mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

185 58185 KURE NISMO GT-R
KURE ニスモ GT-R

※1/10 Scale

The NISMO GT-R has been one of the principal contenders in the JGTC. During the 1996 season, painted in a distinctive, overall black color scheme, the KURE NISMO GT-R fully displayed its outstanding performance to the Japanese motorsports fans throughout the season.

TA03F PRO

(58177)
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:7.34
★Frame——FRP double-deck type
★Suspension——four wheel independent double wishbone w/stabilizer system
★Fully equipped with ball bearings
★Front and rear gearbox with ball differential
★Motor (separately available)
★Body (separately available)
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

177 58177 TA03F PRO CHASSIS KIT
TA03F・PRO シャーシキット

1/10 Scale

Tamiya's radio control expertise has been fully packaged in this state of the art racing weapon. Its low center gravity, front mounted motor configuration and full time 4WD system give it very stable running characteristics.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

※No further production. ★Specifications are subject to change without notice.

TA03F

(58210)
Overall length——442mm
Overall width——186mm
Chassis weight——1105g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

210 58210 SUBARU IMPREZA WRC

スバル インプレッサ WRC

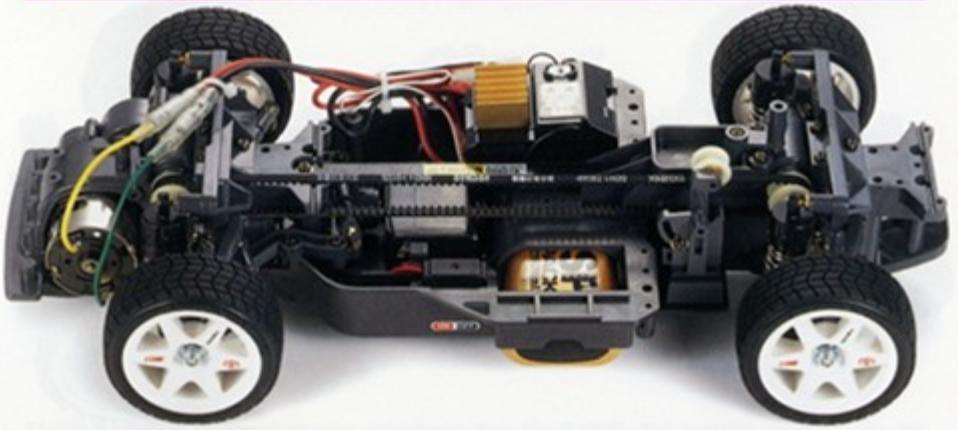
1/10 Scale

Subaru is one of the potent forces in the current rally racing scene. Their Impreza earned the WRC constructor's title in three consecutive years from '95 to '97. Now the fun of driving a rally machine can be had with Tamiya's R/C counterpart of Impreza.

TA03F-S

TA03F-S CHASSIS

Front motor, belt driven 4WD (short wheelbase type)



TA03F-S chassis is 20mm shorter wheelbase than the TA03F. This specification combines the TA03F's fine stability with light, nimble handling. Front and rear sealed gearboxes incorporate precision differential gearing.

TA03F

(58225)
Overall length——445mm
Overall width——185mm
Chassis weight——1130g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

225 58225 MITSUBISHI LANCER EVOLUTION V WRC

三菱ランサー エボリューションV WRC

1/10 Scale

The Catalonian Rally in 1998 April witnessed the impressive debut of the Mitsubishi Lancer Evolution V, which finished in third place. T. Makinen and the Lancer Evolution V are going to challenge Subaru and Toyota for the World Rally Championship.

TA03F-S

(58218)
Overall length——415mm
Overall width——185mm
Chassis weight——1090g
Wheelbase——237mm
Tread-front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

218 58218 TOYOTA COROLLA WRC

トヨタカローラWRC

1/10 Scale

This car has already had a successful season to date, winning the Monte Carlo heat in the 1998 season. The World Rally Championships have concluded, and Toyota has proved itself by remaining in the top three with Mitsubishi and Subaru.

TA03F

(58239)
Overall length——442mm
Overall width——185mm
Chassis weight——1095g
Wheelbase——257mm
Tread-front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——
four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

239 58239 PENNZOIL NISMO GT-R (R34)

ペンズオイル・ニスモGT-R (R34)

1/10 Scale

Developed from Nissan Skyline, the NISMO GT-R is another contender in the GT championships. The NISMO GT-R is sponsored by Pennzoil, the top market share holder for motor oil products in America. The Pennzoil NISMO GT-R carries the distinct yellow and black Pennzoil colors.

TA03F-S

(58250)
Overall length——402mm
Overall width——185mm
Chassis weight——1080g
Wheelbase——237mm
Tread-front and rear 157mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.51
★Body——Polycarbonate
★Frame-ABS bathtub type
★Suspension——
Four wheel independent
double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-
channel radio system
(available separately)

250 58250 PEUGEOT 206 WRC

プジョー206WRC

1/10 Scale

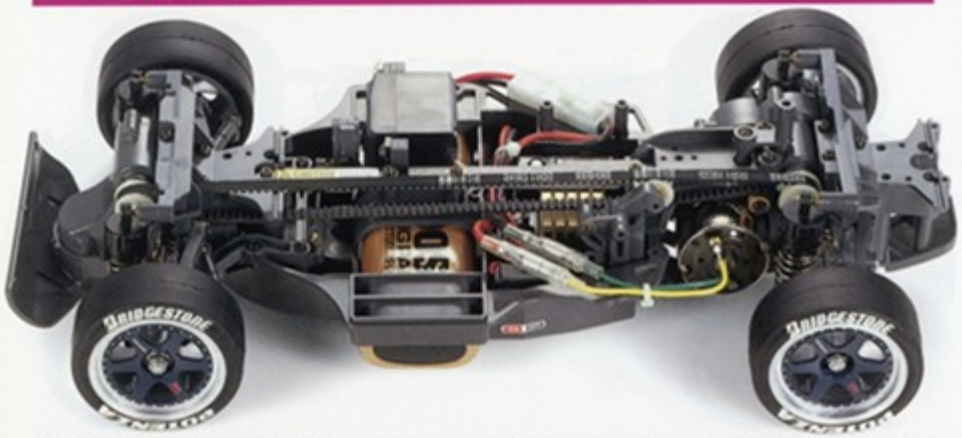
Peugeot 206 WRC is powered by a 4 cylinder 2-liter engine that generates 300 horsepower. The power is transmitted to the front and rear wheels through a six-speed sequential shift gearbox. The steel chassis is the shortest of the WRCs, measuring 4.01m in length.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

TA03R

TA03R CHASSIS
Midship motor, belt driven 4WD



The motor is positioned rear amidships, and the power is transmitted to all four wheels via drive belt. Position of running battery (not included) is slightly moved forward, to obtain the ideal 50:50 weight distribution between the front and rear wheels.

TA03R

(58214)
Overall length——470mm
Overall width——194mm
Chassis weight——1125g
Wheelbase——257mm
Tread——front 157mm & rear 165mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame–ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

214 58214 Mercedes CLK-GTR
メルセデス CLK-GTR

1/10 Scale

In 1997, Mercedes had a spectacular racing season with their state of the art CLK-GTR racing machine. Although the car was developed in a very short and limited period, it brought both the driver's and constructor's titles to the team.

TA03R

(58203)
Overall length——428mm
Overall width——194mm
Chassis weight——1115g
Wheelbase——257mm
Tread——front 157mm & rear 165mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame–ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

203 58203 NISSAN R390 GT1
ニッサン R390 GT1

1/10 Scale

Nissan's R390 was their state-of-the-art endurance racing machine entered in the 1997 Le Mans 24 Hour event. This sophisticated racer has been realistically replicated in a 1/10 scale electric powered R/C format by Tamiya.

TA03R-TRF

(58227)
Wheelbase——257mm
Tread——front 157mm & rear 165mm
Gear ratio——1:7.34
★Frame——carbon double-deck type
★Suspension——four wheel independent double wishbone w/low-friction damper system
★Fully equipped with ball bearings
★Equipped with front one-way unit
★27 option parts included
★Motor (separately available)
★Body (separately available)
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

227 58227 TA03R-TRF SPECIAL CHASSIS KIT
TA03R-TRF スペシャルシャーシキット

★Limited release 1/10 Scale

The TA03R-TRF Special Chassis kit is a hopped up version of the TA03R, featuring 27 different hop-up parts. The new carbon double deck chassis features two new parts, the motor support plate and carbon steering connector bar.

TA03R

(58207)
Overall length——435mm
Overall width——194mm
Chassis weight——1115g
Wheelbase——257mm
Tread——front 157mm & rear 165mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame–ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

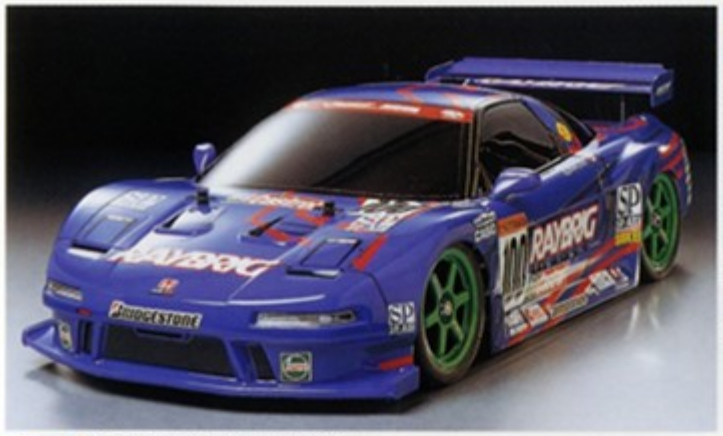
207 58207 avex DOME MUGEN NSX
avex 童夢 無限 NSX

◈1/10 Scale

The two famous Japanese racing factories, Mugen and Dome, combined force to convert Honda's stylish NSX sports car into a highly competitive GT racing machine. This NSX racer is quite active in the Japanese GT car championships.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

◈No further production. ★Specifications are subject to change without notice.



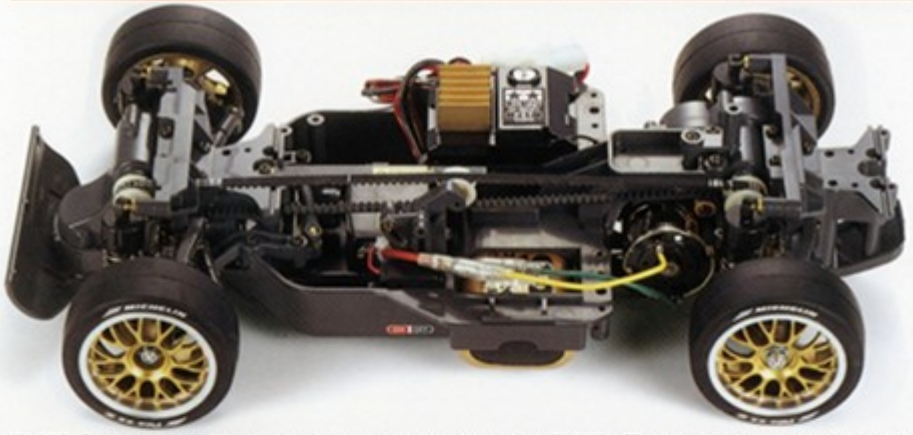
TA03R

(58254)
Overall length——435mm
Overall width——194mm
Chassis weight——1102g
Wheelbase——257mm
Tread——front 157mm & rear 165mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

TA03R-S

TA03R-S CHASSIS

Midship motor, belt driven 4WD (short wheelbase type)



254 58254 RAYBRIG NSX '99
レイブリックNSX '99

1/10 Scale

Team Kunimitsu and their car, the RAYBRIG NSX, have a loyal following in Japan. The RAYBRIG NSX uses the TA03R chassis and several option parts to create a race worthy machine straight out of the box. The body is faithfully replicated in polycarbonate.

TA03R-S chassis is 20mm shorter wheelbase than the TA03R. The midship mounted electric motor and short wheelbase contribute to have a responsive handling and excellent maneuverability. Equipped with four coil over oil-filled damper units.

avex DOME MUGEN NSX (58207)

TA03R-S

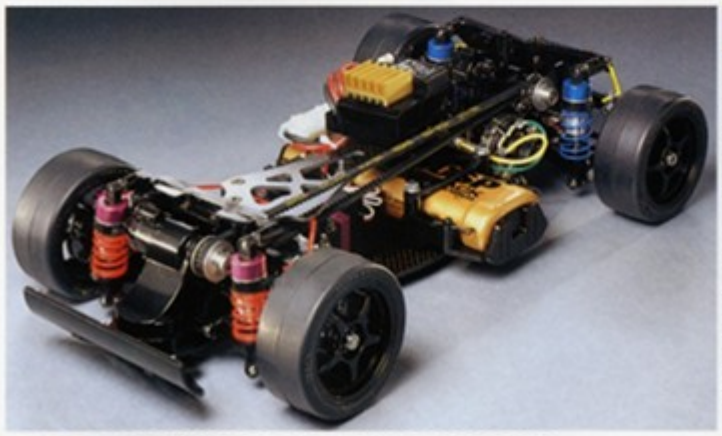
(58193)
Overall length——444mm
Overall width——194mm
Chassis weight——1113g
Wheelbase——237mm
Tread——front 157mm & rear 165mm
Tire width/diameter——front and rear 27/65mm
Gear ratio——1:8.51
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

193 58193 PORSCHE 911 GT1
ポルシェ911GT1

1/10 Scale

The Porsche 911 GT1 is a race ready version developed for the famous Le Mans 24 hours endurance race. For the 1996 Le Mans 24 hours race, two GT1's made its debut and earned considerable 2nd and 3rd places.

RAYBRIG NSX '99 (58254)



TA03R-S TRF

(58243)
Wheelbase——237mm
Tread——front 157mm & rear 165mm
Gear ratio——1:7.34
★Frame——carbon double-deck type
★Suspension——four wheel independent double wishbone w/low-friction damper system
★Fully equipped with ball bearings
★Equipped with front one-way unit
★28 option parts included
★Tire-reinforced slick type A
★Motor (separately available)
★Body (separately available)
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

243 58243 TA03R-S TRF SPECIAL CHASSIS KIT
TA03R-S・TRFスペシャルシャーシキット

★Limited release 1/10 Scale

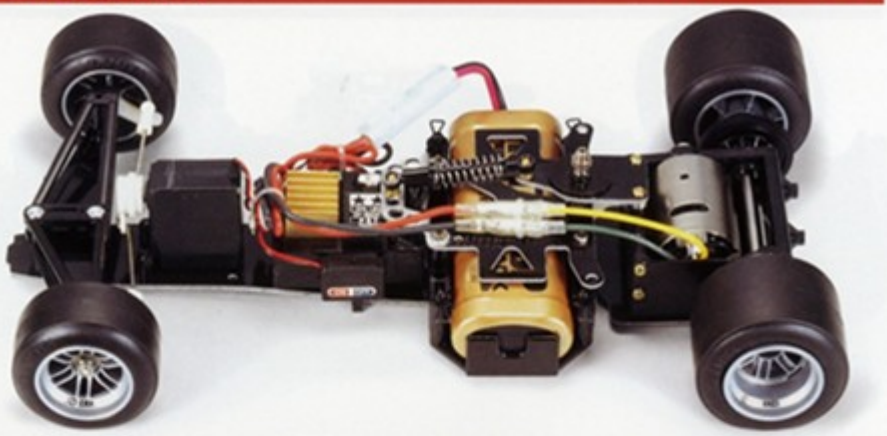
The TA03R-S TRF Special Chassis kit is a hopped up version of the TA03R-S, featuring 28 hop-up parts. The new carbon double deck chassis, precision ball type differential gears, the motor support plate and carbon steering connector bar.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

F103RS

F103RS CHASSIS
Midship motor, rear drive



The chassis uses light and sturdy FRP semi-double deck frame/chassis and a suspension system of independent coil springs at the front and a triple pad friction damper at the rear. Precision ball type differential provides excellent cornering performance.

F103RS

(58179)
Overall length——410mm
Overall width——200mm
Chassis weight——660g
Wheelbase——260mm
Tread——front 170mm & rear 160mm
Tire width/diameter——front 30/60mm & rear 40/64mm
Gear ratio——1:3.7
★Body——polycarbonate
★Frame——FRP half double-deck type
★Suspension——front independent coil spring & rear rigid T-bar system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

179 58179 WILLIAMS RENAULT FW18
ウイリアムズ ルノー FW18

1/10 Scale

In the 1996 Formula 1 Championships, the famous Williams racing team entered their FW18. Driven by talented pilots, the FW18 won the dominant 12 victories out of 16 racers during the season, bringing the constructor's championship to the team.

F103

(58198)
Overall length——405mm
Overall width——200mm
Chassis weight——660g
Wheelbase——260mm
Tread——front 170mm & rear 160mm
Tire width/diameter——front 30/60mm & rear 40/64mm
Gear ratio——1:3.7
★Body——polycarbonate
★Frame——FRP half double-deck type
★Suspension——front independent coil spring & rear rigid T-bar system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

198 58198 PIAA NAKAJIMA REYNARD 97D
ピア ナカジマ レイナード 97D

1/10 Scale

The Team Nakajima's Reynard 97D was entered into the Formula Nippon '97. It was one of the top contenders in the 1997 Formula Nippon racing category. This sleek and stylish racer has been reproduced in 1/10 scale radio control format by Tamiya.

F103RS

(58235)
Overall length——397mm
Overall width——201mm
Chassis weight——660g
Wheelbase——260mm
Tread——front 170mm & rear 155mm
Tire width/diameter——front 30/56mm & rear 45/58mm
Gear ratio——1:3.7
★Body——polycarbonate
★Frame——FRP half double-deck type
★Suspension——front independent coil spring & rear rigid T-bar system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

235 58235 McLaren Mercedes MP4/13
マクラーレンメルセデスMP4/13

1/10 Scale

Racing giants McLaren and Mercedes teamed up to deliver the McLaren Mercedes MP4/13. Equipped with a McLaren developed carbon fiber/aluminum honeycomb composite chassis and a 2998cc Mercedes Benz FO110G V10 engine, this car has proven itself at the races.

F103RX

(58194)
Wheelbase——256.5mm
Tread——front 170mm & rear 160mm
Tire width/diameter——front 30/60mm & rear 40/64mm
Gear ratio——1:3.7
★Frame——FRP half double-deck type
★Suspension——front 3-point system of independent coil spring damped & rear adjustable friction pad damper with a coil spring shock unit
★Body shell is not included in kit
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

194 58194 FORMULA-1 RACING CAR "F103RX" CHASSIS KIT
フォーミュラ1レーシングカーF103RXシャーシキット

1/10 Scale

The circuit-proven F103 formula car chassis has been further enhanced by incorporating Tamiya's genuine Hop-up Optional parts in kit. Use with Tamiya's 1/10 scale polycarbonate F-1 body shells (available separately).

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

F103RS

(58253)
Overall length——423mm
Overall width——208mm
Chassis weight——765g
Wheelbase——260mm
Tread——front 170mm & rear 155mm
Tire width/diameter——front 30/56mm & rear 45/58mm
Gear ratio——1:3.7
★Body——polycarbonate
★Frame——FRP half double-deck type
★Suspension——front independent coil spring & rear rigid T-bar system
★Sport-tuned motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

253 58253 TOYOTA GT-One TS020 '99
トヨタGT-One TS 020 '99

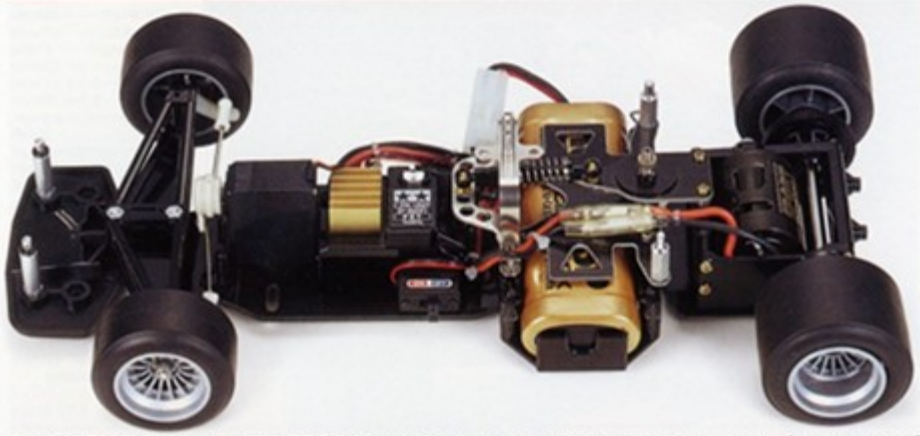
1/10 Scale

Toyota claimed 2nd place at the 1999 Le Mans race held on June 13. The all-Japanese crew of car No.3 (Katayama, Tsuchiya, Suzuki) performed remarkably well. Tamiya celebrates this epic Le Mans race with new Le Mans Stickers.

F103LM

F103LM CHASSIS

Midship motor, rear drive



Tamiya F103LM includes an FRP half-double deck frame/chassis and a suspension system of independent coil springs at the front and a low friction pad damper at the rear. Wide lower deck heightens chassis rigidity and reduces twisting and bending.

F103RS

(58230)
Overall length——455mm
Overall width——204mm
Chassis weight——760g
Wheelbase——260mm
Tread——front 170mm & rear 155mm
Tire width/diameter——front 30/56mm & rear 45/58mm
Gear ratio——1:3.7
★Body——polycarbonate
★Frame——FRP half double-deck type
★Suspension——front independent coil spring & rear rigid T-bar system
★Sport-tuned motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

230 58230 PORSCHE 911 GT1 '98 LM WINNER
ポルシェ911GT1'98ル・マン優勝車

1/10 Scale

Porsche's 911 is an automotive icon, this radically different Le Mans version is a sure entry into the annals of racing history. This third generation GT1 employed a carbon fiber chassis and bodywork that is quite different from the '97 GT1.

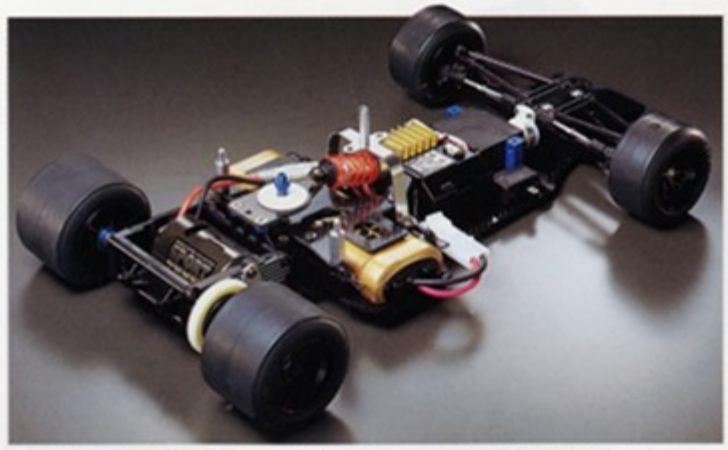
F103LM

(58247)
Overall length——436mm
Overall width——202mm
Chassis weight——765g
Wheelbase——260mm
Tread——front 170mm & rear 155mm
Tire width/diameter——front 30/56mm & rear 45/58mm
Gear ratio——1:3.7
★Body——polycarbonate
★Frame——FRP half double-deck type
★Suspension——front coil spring & rear rigid T-bar system
★Sport-tuned motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

247 58247 AUDI R8R
アウディR8R

1/10 Scale

This open topped car features a carbon fiber monocoque chassis and 4.0 liter turbocharged V8 engine. Tamiya has replicated this Le Mans car in a ready to assemble electric R/C format. The body is faithfully replicated in polycarbonate, a driver figure with helmet is included.



F103LM-TRF

(58258)
Wheelbase——256.5mm
Tread——front 174mm & rear 155mm
Tire width/diameter——front 30/56mm & rear 45/58mm
Gear ratio——1:2.52
★Frame——carbon half double-deck type
★Suspension——front 3-point system of independent coil spring damped & rear adjustable low friction pad damper with a coil spring shock unit
★Body shell is not included in kit
★Sport-tuned motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

258 58258 F103LM-TRF SPECIAL CHASSIS KIT (FOR GT)
F103LM-TRFスペシャルシャーシキット

★Limited release 1/10 Scale

Recent successes at the Le Mans races have sparked a rise in popularity of the GT cars such as the Toyota GT-One and the Porsche 911 GT1 '98. Tamiya releases a new F103-TRF special chassis kit for this new breed of car. GT polycarbonate body is not included.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

TL-01B 4WD BUGGY

(58221)
Overall length——398mm
Overall width——249mm
Chassis weight——1105g
Wheelbase——258mm
Tread——front 217mm & rear 208mm
Minimum ground clearance——30mm
Tire width/diameter——front 32/90mm & rear 41/99mm
Gear ratio——1:7.96
★Body——polycarbonate
★Frame——polycarbonate monocoque type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

221 58221 BAJA CHAMP
バハチャンプ

1/10 Scale

This is a high performing 4WD off-road model. The suspension arms and drive shafts were elongated, and new friction dampers were incorporated into chassis. A large bumper and a newly designed wing stay were added to the monocoque frame.

4WD BUGGY

(58087)
Overall length——390mm
Overall width——250mm
Chassis weight——1170g
Wheelbase——269mm
Tread-front and rear 207mm
Minimum ground clearance——25mm
Tire width/diameter——front and rear 40/84mm
Gear ratio——1:8.59
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

87 58087 MANTA RAY
マンタレイ

1/10 Scale

With its simple construction and superb potential, the Manta Ray is created to meet the requirements of R/C enthusiasts at all levels and ages. The sleek and dynamic body styling takes after manta ray devilfish that propels itself through the ocean deep.

4WD BUGGY

(58160)
Overall length——392mm
Overall width——250mm
Chassis weight——1170g
Wheelbase——270mm
Tread-front and rear 207mm
Minimum ground clearance——25mm
Tire width/diameter——front and rear 40/84mm
Gear ratio——1:8.59
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

160 58160 DIRT THRASHER
ダートスラッシャー

1/10 Scale

This is an economically priced and high performing, R/C 4WD off-road buggy model. Four wheel independent double wishbone suspension is damped by four large capacity oil filled shock units, providing road hugging performance.

4WD BUGGY

(58204)
Overall length——392mm
Overall width——246mm
Chassis weight——1130g
Wheelbase——270mm
Tread-front and rear 207mm
Minimum ground clearance——25mm
Tire width/diameter——front and rear 33/88mm
Gear ratio——1:8.59
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

204 58204 BLAZING STAR
ブレイジングスター

1/10 Scale

This is a tough, dual-purpose radio control car which is suitable for both on- and off-road running. The heavy duty double wishbone suspension is damped by four large capacity oil filled shock absorber units, providing excellent maneuverability on rough terrain.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

2WD BUGGY

(58184)
Overall length——390mm
Overall width——236mm
Chassis weight——960g
Wheelbase——284mm
Tread——front 205mm & rear 196mm
Minimum ground clearance——15mm
Tire width/diameter——front 23/81mm & rear 40/78mm
Gear ratio——1:9.33
★Body-ABS injection molded
★Frame-ABS monocoque type
★Suspension——front swing arm & rear rolling rigid suspension
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

184 58184 FIGHTER BUGGY RX

ファイターバギーRX

1/10 Scale

This is an ideal machine for those who are just getting into the exciting radio control buggy world. Economical price, ease of assembly and sturdy construction are important features in a beginner's machine. The Fighter Buggy RX fulfills this need.

2WD BUGGY

(58082)
Overall length——409mm
Overall width——250mm
Chassis weight——1070g
Wheelbase——275mm
Tread——front 205mm & rear 212mm
Minimum ground clearance——25mm
Tire width/diameter——front 20/78mm & rear 40/87mm
Gear ratio——1:8.33
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

82 58082 MADCAP

マッドキャップ

※1/10 Scale

Controlling a lightweight 2WD off road racer at will, gliding over rough terrain, and showing off its agile performance...If you are looking for car with this kind of performance, Tamiya's R/C Madcap is the one. Try the Madcap, and experience the true excitement of R/C.

4WD CROSS COUNTRY

(58132)
Overall length——445mm
Overall width——195mm
Chassis weight——1650g
Wheelbase——242mm
Tread-front and rear 160mm
Minimum ground clearance——27mm
Tire width/diameter——front and rear 33/88mm
Gear ratio——1:14.67
★Body-ABS injection molded
★Frame-ABS bathtub type
★Suspension——front double wishbone & rear 4-link rigid axle suspension
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

132 58132 MITSUBISHI PAJERO METALTOP WIDE

三菱パジェロ・メタルトップワイド

1/10 Scale

The Mitsubishi Pajero is famous for many achievements accomplished by its prototype racers in internationally famous rallies. In the commercial stable of Pajero, the Metaltop Wide is very popular among out-doorsmen with its performance, comfort and styling.

2WD BUGGY

(58205)
Overall length——400mm
Overall width——315mm
Chassis weight——1300g
Wheelbase——284mm
Tread-front and rear 245mm
Minimum ground clearance——30mm
Tire width/diameter——front and rear 68/115mm
Gear ratio——1:9.33
★Body-PS injection molded
★Frame——ABS monocoque type
★Suspension——front swing arm & rear rolling rigid suspension
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

205 58205 MAD BULL

マッドブル

1/10 Scale

Chunky lug pattern tires are mated to simple but reliable chassis components, taking form of "Mad Bull" off-road racing buggy. Long throw coil spring shock units are factory assembled, and 115mm diameter tires are factory fitted to the wheels.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

※No further production. ★Specifications are subject to change without notice.

4WD

(58231)
Overall length——426mm
Overall width——310mm
Chassis weight——1660g
Wheelbase——281mm
Tread-front and rear 250mm
Minimum ground clearance-47mm
Tire width/diameter——front and rear 60/130mm
Gear ratio——1:18.3
★Body——polycarbonate
★Frame—monocoque type
★Suspension——four wheel independent double wishbone system
★540 type motor x2 included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

231 58231 WILD DAGGER
ワイルドダガー

1/10 Scale

This sporty metallic blue truck is designed for high-speed off-road use. Equipped with a chassis based on the TL01 and TL01B, this chassis uses an efficient twin motor configuration and new gearboxes and gears for maximum power.

4WD

(58256)
Overall length——480mm
Overall width——372mm
Chassis weight——4580g
Wheelbase——280mm
Tread—front & rear 272mm
Tire width/diameter——front and rear 60/130mm
Gear ratio——1:34.0
★Body——styrene
★Frame——aluminum
★Suspension——double shock coil spring dampers and metal leaf springs
★540 type motor x 2 included
★Radio control unit——Tamiya R/C system or 2-channel 2-servos radio system (available separately)

256 58256 JUGGERNAUT 2 (FORD F-350)
ジャガノート2（フォードF-350）

1/10 Scale

The Juggernaut 2 is ready to make its monstrous worldwide debut. It uses four-wheel steering and four-wheel drive, and powered by two RS540 motors. The suspension is damped by leaf springs and friction dampers. 175mm diameter tires are finished with plated hubcaps.

4WD

(58065)
Overall length——480mm
Overall width——380mm
Chassis weight——3900g
Wheelbase——270mm
Tread-front and rear 270mm
Minimum ground clearance-55mm
Tire width/diameter——front and rear 110/165mm
Gear ratio——1:30.1
★Body-PS injection molded
★Frame-ABS bathtub type
★Suspension——front and rear trailing arm
★540 type x2 motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

65 58065 CLOD BUSTER
クラッドバスター

1/10 Scale

The ultimate in an all-terrain crusher, using mammoth size tires and a custom paint job will attract admires both young and old. They can't resist the action and excitement these customized pick-up trucks offer.

4WD

(58089)
Overall length——436mm
Overall width——380mm
Chassis weight——4000g
Wheelbase——270mm
Tread-front and rear 270mm
Minimum ground clearance-55mm
Tire width/diameter——front and rear 110/165mm
Gear ratio——1:30.1
★Body-PS injection molded
★Frame-ABS bathtub type
★Suspension——front and rear trailing arm
★540 type motor x2 included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

89 58089 BULLHEAD
ブルヘッド

1/10 Scale

Riding high on 165mm diameter earth-kicking tires, the Bullhead extends the "state-of-art" in radio controlled monster vehicles. The Bullhead is damped by eight long stroke coil shocks, and is powered by two powerful electric motors.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

2WD

(58192)
Overall length——434mm
Overall width——300mm
Chassis weight——1875g
Wheelbase——250mm
Tread-front and rear 240mm
Minimum ground clearance-57mm
Tire width/diameter——front and rear 60/130mm
Gear ratio——1:14.5
★Body-PS injection molded
★Frame-ABS space frame
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

192 58192 KING BLACKFOOT
キングブラックフット

1/10 Scale

A stylish pick-up truck body has been coupled with chunky oversized wheels, providing fun and excitement of customized trucks. Tamiya's radio controlled monster truck "King Blackfoot" features simple and tough components to take the off-road running abuse.

2WD

(58070)
Overall length——385mm
Overall width——290mm
Chassis weight——1600g
Wheelbase——207mm
Tread——front 212mm & rear 216mm
Minimum ground clearance-38mm
Tire width/diameter——front and rear 71/115mm
Gear ratio——1:14.7
★Body-PS injection molded
★Frame——ABS box type
★Suspension——front swing axle & rear rolling rigid
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

70 58070 MIDNIGHT PUMPKIN
ミッドナイトパンプキン

1/12 Scale

The kit contains that all-time-favorite '53 Ford F-100 pick-up truck fitted out with giant oversized tires for stomping performance at the track. Front suspension is an independent swing axle type while the rear uses a rolling, rigid axle type suspension.

2WD

(58106)
Overall length——410mm
Overall width——295mm
Chassis weight——1310g
Wheelbase——260mm
Tread——front 248mm & rear 242mm
Minimum ground clearance-33mm
Tire width/diameter——front 45/98mm & rear 52/99mm
Gear ratio——1:10.00
★Body——polycarbonate
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone suspension
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

106 58106 STADIUM BLITZER
スタジアム・ブリッツァー

1/10 Scale

The excitement seen in full size Stadium-Truck racing can now be enjoyed with Tamiya's Stadium Blitzer. The suspension is damped by heavy duty oil-filled shocks at all corners, for the smoothest ride obtainable.

2WD

(58252)
Overall length——394mm
Overall width——295mm
Chassis weight——1400g
Wheelbase——260mm
Tread——front 218mm & rear 224mm
Tire width/diameter——front 45/84mm & rear 50/84mm
Gear ratio——1:10.00
★Body——ABS
★Frame-ABS bathtub type
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

252 58252 BLITZER BEETLE CHROME METALLIC SPECIAL
ブリッツァービートル クロームメッキスペシャル

★Limited release 1/10 Scale

This variation of the Blitzer Beetle features a chrome metallic body and the original bathtub chassis. Four wheel independent double wishbone suspension system is equipped with large capacity oil-filled dampers at all corners.

2WD

(58122)
Overall length——394mm
Overall width——295mm
Chassis weight——1400g
Wheelbase——260mm
Tread——front 248mm & rear 242mm
Minimum ground clearance-33mm
Tire width/diameter——front 45/98mm & rear 52/99mm
Gear ratio——1:10.00
★Body-PS injection molded
★Frame-ABS injection molded
★Suspension——four wheel independent double wishbone system
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

122 58122 BLITZER BEETLE
ブリッツァービートル

1/10 Scale

The ever popular Volkswagen Beetle is customized and rides on oversized tires....Tamiya's "Blitzer Beetle" is an eye catcher at any R/C meeting, with both its looks and performance. Colorful and eye-catching stickers enhance its overall looks.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

BIG TRUCK

(56301)
Overall length——600mm
Overall width——183mm
Chassis weight——2800g
Wheelbase——447mm
Tread——front 156mm & rear 138mm
Tire width/diameter——front and rear 22/83mm
Gear ratio——1:10.66, 1:17.76, 1:32.49
★Body–PS injection molded
★Frame–aluminum ladder type
★Suspension——front and rear rigid axle with metal leaf springs
★540 type motor included
★Radio control unit——Tamiya R/C system or 4-channel radio system (available separately)

1 56301 TRACTOR TRUCK KING HAULER
トレーラーヘッド キングハウラー

1/14 Scale

The King Hauler demonstrates state of the art model construction and exciting R/C action. It features a rear double-axle drive using propeller shafts and a servo-shifted 3-speed transmission. Powerful 540 type electric motor is mounted above the front axle.

BIG TRUCK

(56304)
Overall length——500mm
Overall width——183mm
Chassis weight——2640g
Wheelbase——350mm
Tread——front 156mm & rear 138mm
Tire width/diameter——front and rear 22/83mm
Gear ratio——1:10.66, 1:17.76, 1:32.49
★Body–PS injection molded
★Frame–aluminum ladder type
★Suspension——front and rear rigid axle with metal leaf springs
★540 type motor included
★Radio control unit——Tamiya R/C system or 4-channel radio system (available separately)

4 56304 TRACTOR TRUCK GLOBE LINER
トレーラーヘッド グロープライナー

1/14 Scale

Tamiya has captured the attractive appearance and exciting action of trucks in its 1/14th scale electric powered "Globe Liner" R/C truck model. The rear double axle drive uses rigid propeller shafts for smooth performance.

BIG TRUCK

(56305)
Overall length——443mm
Overall width——189mm
Chassis weight——2270g
Wheelbase——272mm
Tread——front 156mm & rear 138mm
Tire width/diameter——front and rear 22/83mm
Gear ratio——1:10.66, 1:17.76, 1:32.49
★Body–PS injection molded
★Frame–aluminum ladder type
★Suspension——front and rear rigid axle with metal leaf springs
★540 type motor included
★Radio control unit——Tamiya R/C system or 4-channel radio system (available separately)

5 56305 MERCEDES-BENZ 1838LS
トレーラーヘッド メルセデス ベンツ1838LS

1/14 Scale

The 1838LS tractor truck combines a massive aerodynamic silhouette with a powerful 380 horsepower, 12,763cc V8 cylinder turbo diesel engine. Tamiya's R/C model of the 1838LS truck realistically captures the looks of the full sized truck.

BIG TRUCK

(56307)
Overall length——568mm
Overall width——202mm
Chassis weight——4010g
Wheelbase——360mm
Tread——front 156mm & rear 138mm
Tire width/diameter——front and rear 22/83mm
Gear ratio——1:10.66, 1:17.76, 1:32.49
★Body–PS injection molded
★Frame–aluminum ladder type
★Suspension——front and rear rigid axle with metal leaf springs
★540 type motor included
★Radio control unit——Tamiya R/C system or 4-channel radio system (available separately)

7 56307 MERCEDES-BENZ 1850L
メルセデスベンツ1850Lパネルバントラック

1/14 Scale

Mercedes-Benz 1850L delivery truck is regarded as a new trend setter with its aerodynamically sophisticated appearance and extremely reliable mechanics. Tamiya's model of the Mercedes-Benz 1850L realistically captures the looks of the full-sized truck.

BIG TRUCK

(56309)
Overall length——614mm
Overall width——190mm
Chassis weight——2900g
Wheelbase——447mm
Tread——front 156mm & rear 138mm
Tire width/diameter——front and rear 22/83mm
Gear ratio——1:10.66, 1:17.76, 1:32.49
★Body–PS injection molded
★Frame–aluminum ladder type
★Suspension——front and rear rigid axle with metal leaf springs
★540 type motor included
★Radio control unit——Tamiya R/C system or 4-channel radio system (available separately)

9 56309 FORD AEROMAX
トレーラーヘッド フォード エアロマックス

1/14 Scale

The massive American Rig is joining Tamiya's 1/14 scale R/C tractor truck stable. Tamiya's model of the Ford Aeromax tractor truck boasts both large scale realism and authentic functions. Servo-shifted 3-speed transmission is mounted at the front of the aluminum ladder frame.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

SEMI TRAILER

(56302)
Overall length——886mm
Overall width——186mm
Chassis weight——5360g
Tread——rear 138mm
Tire width/diameter——22/83mm
★Aluminum panels
★Aluminum frame
★Suspension——rigid axle suspension with metal leaf springs
★Retractable support legs
★Wheel chock included
★Can be connected to the separately sold tractor truck

2 56302 SEMI-TRAILER FOR TAMIYA R/C TRACTOR TRUCK

トレーラートラック用パネルバン・セミトレーラー

1/14 Scale

Tamiya offers a Semi-Trailer model that can be hitched-up to the 1/14 scale R/C tractor truck. The box type trailer uses hard-anodized aluminum panels for the utmost durability and realism. Rear gate doors are openable as seen on full-sized trailers.

SEMI TRAILER

(56303)
Overall length——814mm
Overall width——186mm
Chassis weight——4400g
Tread——rear 138mm
Tire width/diameter——22/83mm
★Stainless steel tank
★Aluminum frame
★Suspension——rigid axle suspension with metal leaf springs
★Retractable support legs
★Wheel chock included
★Can be connected to the separately sold tractor truck

3 56303 TANK-TRAILER FOR TAMIYA R/C TRACTOR TRUCK

トレーラートラック用タンク・セミトレーラー

1/14 Scale

Tamiya offers a Tank Semi-Trailer model kit that can be hooked up to their 1/14 scale R/C tractor truck. The tank is made from polished stainless steel, for a brilliant finish. Colorful and authentic sponsor stickers add to the total realism of the model.

SEMI TRAILER

(56306)
Overall length——711mm
Overall width——193mm
Chassis weight——2480g
Tread——rear 138mm
Tire width/diameter——22/83mm
★Wood-floored platform
★Aluminum frame
★Suspension——rigid axle suspension with metal leaf springs
★Retractable support legs
★Metal chains included
★Wheel chock included
★Can be connected to the separately sold tractor truck

6 56306 FLATBED SEMI-TRAILER FOR TAMIYA R/C TRACTOR TRUCK

トレーラートラック用フラットベッド・セミトレーラー

1/14 Scale

This highly realistic 1/14 scale flatbed semi-trailer model is for use in combination with Tamiya's 1/14 R/C tractor truck. A high degree of fidelity is achieved by using authentic components such as aluminum chassis/frame, wood-floored platform etc.

SEMI TRAILER

(56310)
Overall length——709mm
Overall width——186mm
Chassis weight——2550g
Tread——rear 138mm
Tire width/diameter——22/83mm
★Aluminum frame
★3-types adjustable aluminum pole
★Wood-floored table
★Suspension——rigid axle suspension with metal leaf springs
★Metal chains included
★Can be connected to the separately sold tractor truck
★5 plastic pipes of 55mm indiameter and 750mm in length are included.

10 56310 POLE-TRAILER FOR TAMIYA R/C TRACTOR TRUCK

トレーラートラック用ポールトレーラー

1/14 Scale

The trailer is named a Pole Trailer for its collapsible pole, which allows the rig to carry pipes of various lengths. Trailer also features an aluminum chassis and 4 highly detailed wheels. 5 plastic pipes of 55mm in diameter and 75cm in length are included.

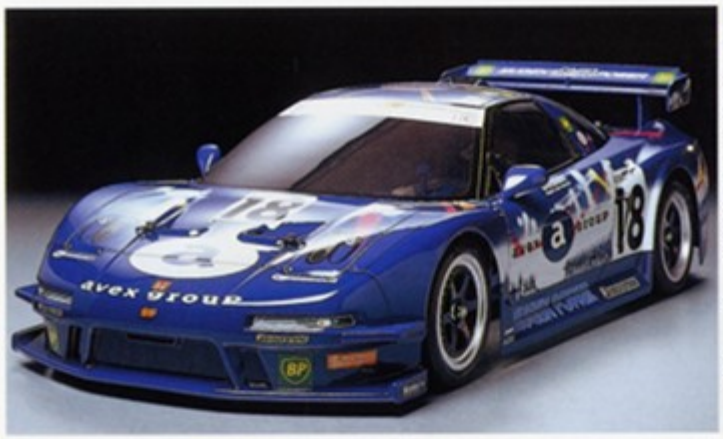
★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

TGX-Mk.1

TGX-Mk.1 CHASSIS
Shaft driven 4WD engine car

The chassis uses a 2.5mm thick duralumin plate for the main frame/chassis. A 2.5cc displacement FS-15LT glow engine is mounted amidships, and front and rear gearboxes are connected via center drive shaft. Four double wishbone suspension is equipped with four coil over oil-filled shock units.



TGX-Mk.1

(44008)
Overall length——525mm
Overall width——234mm
Chassis weight——2020g
Wheelbase——300mm
Tread——front 190mm & rear 200mm
Tire width/diameter——front and rear 36/74m
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/half double-deck
★Suspension——four wheel independent double wishbone system
★FS-15LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

8 44008 avex DOME MUGEN NSX
avex 童夢 無限 NSX
1/8 Scale

The two famous Japanese racing factories, Mugen and Dome, combined force to convert Honda's stylish NSX sports car into a highly competitive GT racing machine. This NSX racer is quite active in the Japanese GT car championships.

TGX-Mk.1

(44006)
Overall length——552mm
Overall width——240mm
Chassis weight——2060g
Wheelbase——300mm
Tread——front 190mm & rear 200mm
Tire width/diameter——front and rear 36/74mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/half double-deck
★Suspension——four wheel independent double wishbone system
★FS-15LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

6 44006 PORSCHE 911 GT1
ポルシェ 911 GT1
1/8 Scale

The Porsche 911 GT1 is a race ready version developed for the famous Le Mans 24 hours endurance race. For the 1996 Le Mans 24 hours race, two GT1's made its debut and earned considerable 2nd and 3rd places.

TGX-Mk.1

(44009)
Overall length——570mm
Overall width——234mm
Chassis weight——2050g
Wheelbase——300mm
Tread——front 190mm & rear 200mm
Tire width/diameter——front and rear 36/74mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/half double-deck
★Suspension——four wheel independent double wishbone system
★FS-15LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

9 44009 Mercedes CLK-GTR
メルセデス CLK-GTR
1/8 Scale

In 1997, Mercedes had a spectacular racing season with their state of the art CLK-GTR racing machine. Although the car was developed in a very short and limited period, it brought both the driver's and constructor's titles to the team.

TGX-Mk.1

(44007)
Overall length——519mm
Overall width——240mm
Chassis weight——2015g
Wheelbase——300mm
Tread——front 190mm & rear 200mm
Tire width/diameter——front and rear 36/74mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/half double-deck
★Suspension——four wheel independent double wishbone system
★FS-15LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

7 44007 NISSAN R390 GT1
ニッサン R390 GT1
1/8 Scale

Nissan's R390 was their state-of-the-art endurance racing machine entered in the 1997 Le Mans 24 Hour event. The car features Tamiya FS15-LT glow engine. Polycarbonate body shell reproduces the aerodynamic silhouette of the full size counterpart in 1/8 scale.

TGX-Mk.1

(44011)
Overall length——542mm
Overall width——228mm
Chassis weight——2045g
Wheelbase——300mm
Tread-front and rear 190mm
Tire width/diameter——front and rear 36/74mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/half double-deck
★Suspension——four wheel independent double wishbone system
★FS-15LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

11 44011 PENNZOIL NISMO GT-R
ペンズオイル・ニスモGT-R
1/8 Scale

Developed from Nissan Skyline, the NISMO GT-R is another contender in the GT championships, The NISMO GT-R is sponsored by Pennzoil, the top market share holder for motor oil products in America. The Pennzoil NISMO GT-R carries the distinct yellow and black Pennzoil colors.

★R/C unit, batteries & fuel are not included. ★Weight: without R/C unit, batteries & fuel

★Specifications are subject to change without notice.

TGX-Mk.1

(44018)
Overall length——525mm
Overall width——234mm
Chassis weight——2020g
Wheelbase——300mm
Tread——front 190mm & rear 200mm
Tire width/diameter——front and rear 36/74m
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★FS-15LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

18 44018 RAYBRIG NSX
レイブリック NSX

1/8 Scale

Team Kunimitsu and their car, the Raybrig NSX, have a loyal following in Japan. The Kunimitsu team features drivers Takahashi Kunimitsu and Akira Iida. The Raybrig NSX features the NSX body with purple base and red stripes of the Kunimitsu team.

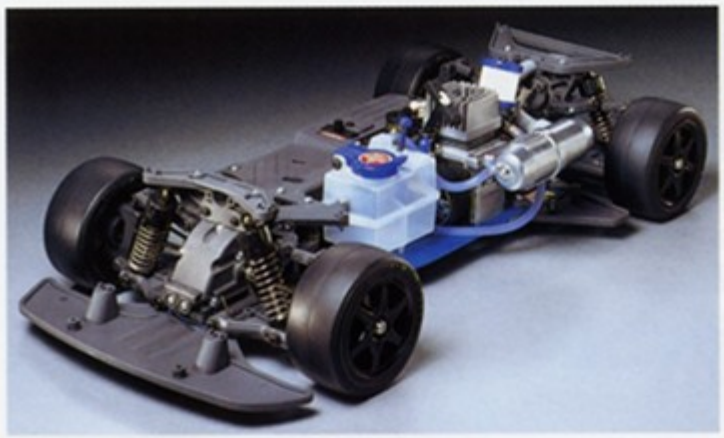
TGX-Mk.1

(44019)
Overall length——515mm
Overall width——227mm
Chassis weight——2045g
Wheelbase——300mm
Tread-front and rear 190mm
Tire width/diameter——front and rear 35/82mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/half double-deck
★Suspension——four wheel independent double wishbone system
★FS-15LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

19 44019 SUBARU IMPREZA WRC '99
スバル インプレッサ WRC '99

1/8 Scale

Subaru is one of the potent forces in the current rally racing scene. The driver of Subaru, Kankkunen won the victory on 7th race in Argentine. Impreza WRC '99 showed its high potential on stage WRC.



TGX-Mk.1

(44010)
Wheelbase——300mm
Tread-front and rear 190mm
Tire width/diameter——front and rear 36/74mm
Gear ratio——1:8.1
★Requires FS-15LT, FS-15RS engine (available separately)
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

10 44010 TGX-Mk.1 TS DOUBLE DECK TYPE
TGX-Mk.1・TSダブルデッキ仕様

1/8 Scale

Tamiya's TGX Mk.1 TS provides glow engine radio excitement in a simple way. Each component is designed and engineered using Tamiya's latest modeling expertise. The kit uses 2.5mm thick duralumin lower deck and glass fiber polyester upper deck.

TGX-Mk.1 TRF

(44015)
Wheelbase——300mm
Tread-front and rear 190mm
Tire width/diameter——front and rear 36/74mm
Gear ratio——1:8.1
★Body-(available separately)
★14 optional parts are included
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system w/ super low friction dampers
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

15 44015 TGX-Mk.1 TRF SPECIAL CHASSIS KIT
TGX-Mk.1・TRF スペシャルシャーシキット

◎1/8 Scale

Tamiya Racing Factory has produced a fiercely competitive racing machine at equally competitive prices. 14 optional parts are included to enhance the race worthiness of the TGX chassis. The chassis lower deck is made of anodized silver colored aluminum.

TGX-Mk.1

(44017)
Wheelbase——300mm
Tread-front and rear 190mm
Tire width/diameter——front and rear 36/74mm
Gear ratio——1:8.1
★Body-(available separately)
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★O.S.MAX 15CV-X engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

17 44017 TGX-Mk.1 TS DOUBLE DECK TYPE w/O.S. MAX 15CV-X
TGX-Mk.1 TS ダブルデッキ仕様 O.S.MAX-15CV-X付き

★Limited release 1/8 Scale

Tamiya's TGX Mk.1 TS provides glow engine radio excitement in a simple way. Each component is designed and engineered using Tamiya's latest modeling expertise. The MAX-15CV-X engine was developed by O.S.

★R/C unit, batteries & fuel are not included. ★Weight: without R/C unit, batteries & fuel

◎No further production. ★Specifications are subject to change without notice.

TGX-Mk.1

(44022)
Overall length——503mm
Overall width——227mm
Chassis weight——2060g
Wheelbase——300mm
Tread-front and rear 190mm
Tire width/diameter——
front and rear 35/82mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★FS-15LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

22 44022 TOYOTA COROLLA WRC
トヨタカローラ WRC

1/8 Scale

The Toyota Corolla WRC won the 1999 WRC Manufacturer's Title. Tamiya has faithfully reproduced the looks of the full-sized vehicle. The Corolla offers several standard rally car features, including a gear case cover, undercowl and a wet-type air cleaner.

TG10-Mk.1

TG10-Mk.1 CHASSIS
Shaft driven 4WD engine car

The double deck TG10 chassis features a shaft driven 4WD mechanics and the FS-12LT glow engine. The four wheel independent double wishbone suspension is damped by four oil-filled shock units at all corners.

TGX-Mk.1

(44027)
Wheelbase——300mm
Tread-front and rear 190mm
Tire width/diameter——
front and rear 36/74mm
Gear ratio——1:8.1
★Body-(available separately)
★TM-4 muffler, special air-cleaner and reinforced propeller shaft included
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★TAMIYA NOVAROSSI CX-12 engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

27 44027 TGX Mk.1 TS DOUBLE DECK TYPE w/TAMIYA NOVAROSSI CX-12
TGX-Mk.1 TSダブルデッキ仕様(タミヤ ノバロッシCX-12エンジン付き)

1/8 Scale

Tamiya releases a TGX Mk.I chassis kit with a Tamiya Novarossi engine. Italian glow engine manufacturer, Novarossi, developed this engine. The chassis kit includes all of the features of the TGX chassis kit, plus ball bearings and a hard propeller shaft.

TG10-Mk.1

(44012)
Overall length——470mm
Overall width——194mm
Chassis weight——1650g
Wheelbase——257mm
Tread——front 155mm
& rear 164mm
Tire width/diameter——
front and rear 27/65m
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★FS-12LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

12 44012 Mercedes CLK-GTR TEAM CLK SPORTSWEAR
メルセデスCLK-GTRチームCLKスポーツウェアー

1/10 Scale

The Mercedes CLK-GTR dominated the '97 FIA-GT championships with this sleek, impressive machine. The Team CLK Sportswear enters the competition with their uniquely decorated car, which is adorned with a distinctive picture of a woman on the hood and a man on the side.

TG10-Mk.1

(44013)
Overall length——435mm
Overall width——194mm
Chassis weight——1640g
Wheelbase——257mm
Tread——front 155mm
& rear 164mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★FS-12LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

13 44013 RAYBRIG NSX
レイブリック NSX

1/10 Scale

Team Kunimitsu and their car, the Raybrig NSX, have a loyal following in Japan. The Kunimitsu team features drivers Takahashi Kunimitsu and Akira Iida. The Raybrig NSX features the NSX body with purple base and red stripes of the Kunimitsu team.

★R/C unit, batteries & fuel are not included. ★Weight: without R/C unit, batteries & fuel

★Specifications are subject to change without notice.

TG10-Mk.1

(44016)
Overall length——460mm
Overall width——187mm
Chassis weight——1630g
Wheelbase——257mm
Tread-front and rear 155mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★FS-12LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

16 44016 LEXUS GS 400

トヨタアリスト

1/10 Scale

The Lexus name has earned its reputation for high quality cars abroad. Known in Japan as the Toyota Aristo, the Lexus GS 400 continues the tradition of high quality luxury cars, rivaling the best luxury cars from around the world.

TG10-Mk.1

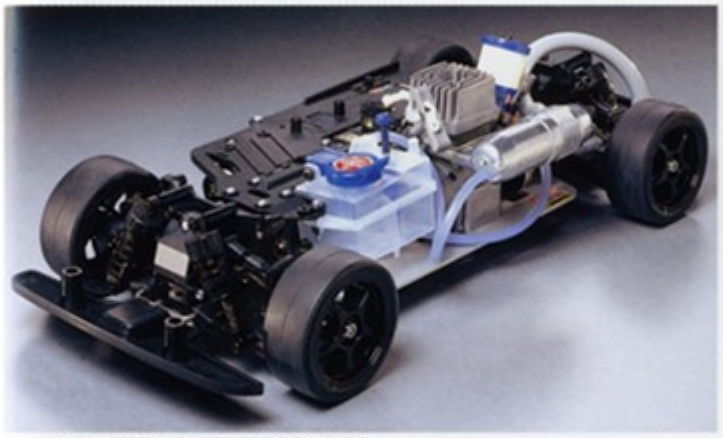
(44023)
Overall length——442mm
Overall width——185mm
Chassis weight——1600g
Wheelbase——257mm
Tread-front and rear 155mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★FS-12LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

23 44023 CALSONIC SKYLINE GT-R (R34)

カルソニック スカイライン GT-R (R34)

1/10 Scale

The R34 version of the Nissan Skyline has caused a stir among Japanese automotive circles with its superb performance and sporty styling. The latest version of this sporty vehicle has teamed up with the Calsonic racing team for the latest round of the JGTC championships.



TG10-Mk.1

(44014)
Wheelbase——257mm
Tread——front 155mm & rear 164mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.1
★Body-(available separately)
★Requires FS-12LT or O.S. MAX-12CV-X engine (available separately)
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

14 44014 TG10-Mk.1 CHASSIS KIT

TG10-Mk.1シャーシキット

1/10 Scale

Tamiya's experience with the successful TGX chassis assisted in the development of the new TG10-Mk.1 chassis. The high speed and frenetic sound of glow engine racing can be found in this easy to use 1/10 scale chassis.

TG10-Mk.1

(44024)
Overall length——442mm
Overall width——186mm
Chassis weight——1670g
Wheelbase——257mm
Tread-front and rear 155mm
Tire width/diameter——
front and rear 27/71mm
Gear ratio——1:8.1
★Body——polycarbonate
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★FS-12LT engine included
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

24 44024 SUBARU IMPREZA WRC '99

スバルインプレッサWRC '99

1/10 Scale

That machine featured a unique, all aluminum horizontal four cylinder turbo engine paired with a vertically mounted gearbox. Kankkunen and Burns finished in 1st and 2nd place respectively at both the 7th Argentina Rally and the 10th Finland Rally.

TG10-Mk.1

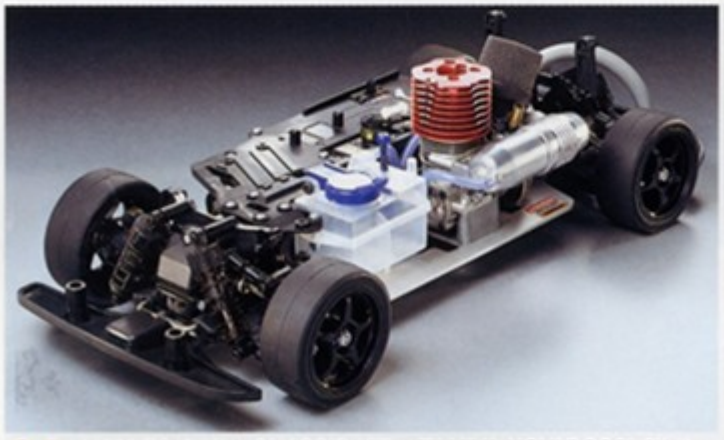
(44020)
Wheelbase——257mm
Tread——front 155mm & rear 164mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.1
★Body-(available separately)
★Requires glow engine (available separately)
★12 optional parts are included
★Frame——3mm thick duralumin chassis plate w/carbon double-deck
★Suspension——four wheel independent double wishbone system w/super low friction dampers
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

20 44020 TG10-Mk.1 PRO RACING CHASSIS KIT

TG10-Mk.1・PRO レーシングシャーシキット

1/10 Scale

This value packed kit is ideally suited for serious racers. The kit uses the TG10 chassis as base, and adds ball bearings, super low friction dampers, a lightweight flywheel, a carbon upper deck, a special lower deck and several other competitive features.



TG10-Mk.1

(44026)
Wheelbase——257mm
Tread——front 155mm & rear 164mm
Tire width/diameter——
front and rear 27/65mm
Gear ratio——1:8.1
★Body-(available separately)
★Frame——2.5mm thick duralumin chassis plate w/double-deck
★Suspension——four wheel independent double wishbone system
★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)
★TAMIYA NOVAROSSI CX-12 engine included
★TM-4 muffler, special air-cleaner and reinforced propeller shaft included

26 44026 TG10-Mk.1 CHASSIS KIT w/TAMIYA NOVAROSSI CX-12

TG10-Mk.1シャーシキット(タミヤノバロッシCX-12エンジン付き)

1/10 Scale

Tamiya releases a TG10 Mk.1 chassis kit with a Tamiya Novarossi engine. This .12 engine is a joint effort between Tamiya and Italian glow engine manufacturer Novarossi, and features a heatsink. The recoil starter is not included, the Tamiya Glow Engine Starter Box is required.

★R/C unit, batteries & fuel are not included. ★Weight: without R/C unit, batteries & fuel

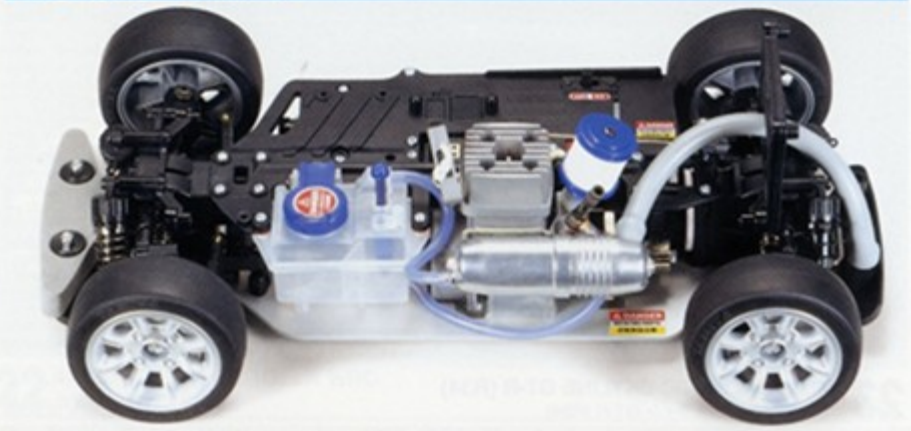
★Specifications are subject to change without notice.

TG10-Mk.1

For 1/8 Mini Cooper Racing

TG10-Mk.1 CHASSIS

Shaft driven 4WD engine car



The Mini Cooper features the proven TG10-Mk.I chassis with several modifications. Large eight spoke silver wheels and slick tires are used, as well as the TG10 Mini-Bumper. The chassis features FS-12LT glow engine.

TG10-Mk.1

(44021)

- Overall length——390mm
- Overall width——202mm
- Chassis weight——1630g
- Wheelbase——257mm
- Tread-front and rear 170mm
- Tire width/diameter——front and rear 29/75mm
- Gear ratio——1:8.1
- ★Body——polycarbonate
- ★Frame——2.5mm thick duralumin chassis plate w/double-deck
- ★Suspension——four wheel independent double wishbone system
- ★FS-12LT engine included
- ★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

21 44021 ROVER MINI COOPER RACING

ローバー ミニクーパー レーシング

1/8 Scale

Originally created by Sir Alec Isigonis in 1959, and tuned by john Cooper, the "Mini" has established worldwide fame on both the commercial and racing scene. Tamiya has reproduced racing version in a 1/8 scale engine car format.

TGM-01

TGM-01 CHASSIS

Shaft driven 4WD engine car

The FS-15LT engine is connected to a fuel tank and Wet Type Air Cleaner. The chassis is protected from dirt and debris by a new polypropylene undercowl. The suspension is damped by oil filled shock absorbers at the all corners.

TGM-01

(44025)

- Overall length——423mm
- Overall width——313mm
- Chassis weight——2010g
- Wheelbase——262mm
- Tread——front 251mm & rear 253mm
- Tire width/diameter——front and rear 60/130mm
- Gear ratio——1:16.25
- ★Body——polycarbonate
- ★Frame——2.5mm thick duralumin chassis plate w/double-deck
- ★Suspension——four wheel independent double wishbone system
- ★FS-15LT engine included
- ★Radio control unit——Tamiya R/C system or 2-channel 2-servo radio system (available separately)

25 44025 MAD BISON

マッドバイソン

1/10 Scale

Tamiya returns to the realm of glow engine trucks with the new TGM-01 Mad Bison. The Tamiya FS-15LT engine is mounted, along with a newly designed spur gear, counter gear and muffler. The chassis is protected from dirt by a new polypropylene undercowl.

★R/C unit, batteries & fuel are not included. ★Weight: without R/C unit, batteries & fuel

★Specifications are subject to change without notice.

WR-02 2WD

(58242)
Overall length——325mm
Overall width——272mm
Chassis weight——1710g
Wheelbase——172mm
Tread-front and rear 200mm
Tire width/diameter——
front and rear 68/115mm
Gear ratio——1:18.3
★Body——
ABS injection molded
★Frame——
ABS monocoque type
★Suspension——four wheel double wishbone system
★540 type motor included
★Radio control unit——
Tamiya R/C system or 2-channel radio system (available separately)

242 58242 WILD WILLY 2
ワイルドウイリー2

1/10 Scale

The legendary Wild Willy returns, leaping into action. Quick full throttle enables wheelies with both front wheels off the ground. For ease of construction, the gearbox is factory pre-assembled. Solid large bumper protects suspension from damage.

RC BOY'S 4WD RACER

This is an ideal chassis for those first entering the popular radio control world. Its simple construction allows even an inexperienced modeler to finish the model without difficulty. Sturdy bathtub type frame/chassis protects the vital R/C components.

●45020 ADSPEC SPORTS R/C DRIVE SET

4WD

(57602)
Overall length——383mm
Overall width——225mm
Chassis weight——1240g
Wheelbase——238mm
Tread——front 177mm & rear 182mm
Tire width/diameter——
front 29/75mm & rear 42/75mm
Gear ratio——1:13.65
★Body-ABS injection molded
★Frame——bathtub type molded of polycarbonate
★Tires are factory attached to the wheels
★Front and rear gearboxes house precision differential gearing
★380 type motor included
★Radio control unit——
Tamiya R/C system or 2-channel radio system (available separately)

2 57602 VOLTEC FIGHTER
ボルテックファイター

1/10 Scale

4WD

(57604)
Overall length——383mm
Overall width——225mm
Chassis weight——1220g
Wheelbase——238mm
Tread——front 177mm & rear 182mm
Gear ratio——1:13.65
Tire width/diameter——
front 29/75mm & rear 42/75mm
★Body-ABS injection molded
★Frame——bathtub type molded of polycarbonate
★Tires are factory attached to the wheels
★Front and rear gearboxes house precision differential gearing
★380 type motor included
★Radio control unit——
Tamiya R/C system or 2-channel radio system (available separately)

4 57604 THUNDER BLITZ
サンダーブリッツ

1/10 Scale

4WD

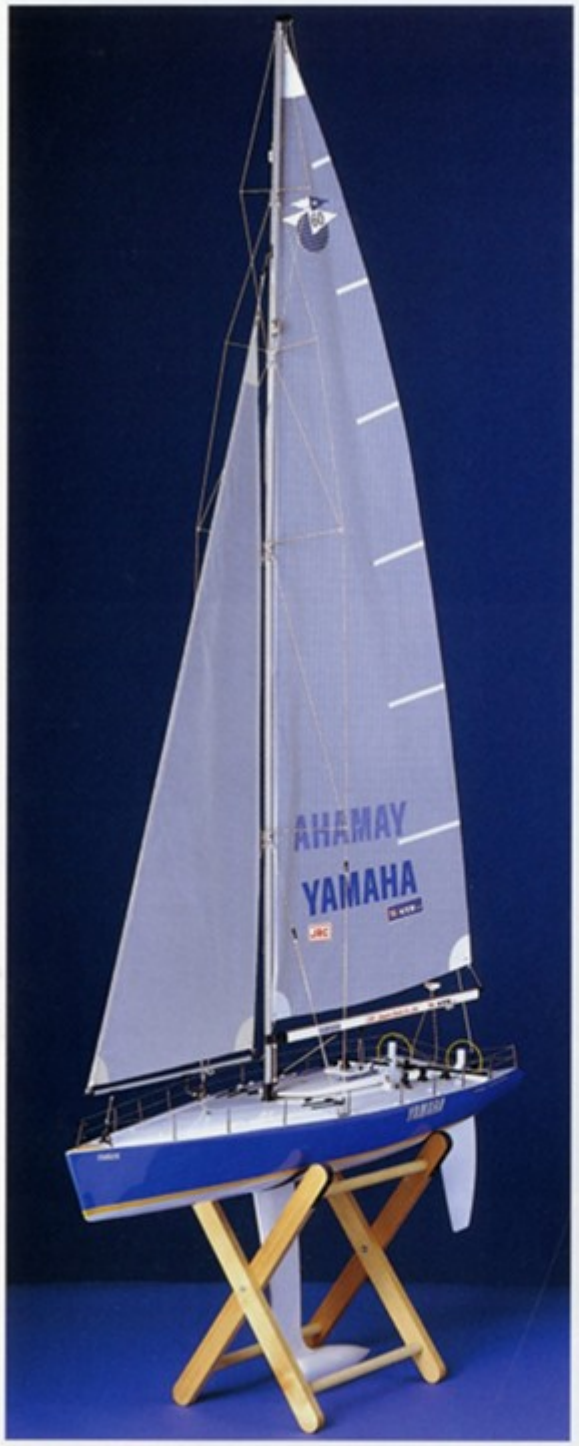
(57606)
Overall length——396mm
Overall width——224mm
Chassis weight——1250g
Wheelbase——238mm
Tread——front 181mm & rear 190mm
Tire width/diameter——
front and rear 34/83mm
Gear ratio——1:15.17
★Body-ABS injection molded
★Frame——bathtub type molded of polycarbonate
★Tires are factory attached to the wheels
★Front and rear gearboxes house precision differential gearing
★380 type motor included
★Radio control unit——
Tamiya R/C system or 2-channel radio system (available separately)

6 57606 WILD CEPTOR
ワイルドセプター

1/10 Scale

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.



1·2 56201/56202 YAMAHA ROUND THE WORLD
ヤマハ・ラウンド・ザ・ワールド 1/20 Scale

Grueling, is what defined the Whitbread "Round the World" yacht race. Yamaha, using their state of the art racing yacht, participated in the 1993-94 event. Now the excitement of sailing can be enjoyed with Tamiya's R/C model of the Yamaha Round the World yacht.

Overall length	985mm	Overall width	264mm
Overall height	1814mm	Mast height	1420mm
Keel weight	approx. 2kg	Sail area	40dm²

★One-piece blow molded ABS plastic hull. ★Spincloth sails
★Aluminum mast and booms
★Radio control unit — Adspec sports sailing
★56201 is not available in some countries.

4 56204 YAMAHA 40EX
ヤマハ 40EX 1/20 Scale

Yamaha provides a wide range of sailboats, and their top-of-the-line 40EX cruiser yacht is highly acclaimed by many experts sailors. Tamiya's model of the Yamaha 40EX reproduces its elegant styling and performance in a 1/20 scale R/C replica.

Overall length	600mm	Overall width	194mm
Overall height	1110mm	Mast height	810mm
Keel weight	approx. 750g	Sail area	16.8dm²

★One-piece blow molded ABS plastic hull.
★Spincloth sails
★Aluminum mast and booms
★Radio control unit — 2-channel 2-servo radio system

5 56205 36CLASS R/C RACING YACHT INNOVATOR
36クラス RCレーシングヨット・イノベーター

The Innovator is a full brown racing yacht aimed at enthusiasts who want maximum performance out of their sport. The Innovator is easily assembled/disassembled for easy storage. The hull is blow molded in one piece.

Overall length	925mm	Overall width	145mm
Overall height	2074mm	Mast height	1520mm
Keel weight	approx. 1.6kg	Sail area	40.71dm²

★One-piece blow molded ABS plastic hull.
★Spincloth sails
★Aluminum 2-pieces mast and booms
★Radio control unit — Adspec sports sailing

56203 YACHT CREW SET (ASSEMBLED & PAINTED)
ヨットクルーセット(完成塗装ずみ) 1/20 Scale

★R/C unit & batteries are not included. ★Specifications are subject to change without notice.

1·2 56401/56402 PEAK SPIRIT RU
ピークスピリット RU

The Peak Spirit R/C motor glider will excite your passions for flight, with its sophisticated construction and performance. The light and tough ABS resin fuselage is blow molded in one piece, for ease of construction and utmost durability. Cable controlled rudder and elevator ensure nimble maneuverability. A servo controlled air brake is extremely effective during spot landings. A powerful Dynatech 02H electric motor is included.

Fuselage length	1030mm	Wing area	35.63dm²
Wingspan	1990mm	Stabilizer area	5.2dm²
Weight fully equipped			1350~1500g

★Cable controlled rudder and elevator ★Factory assembled, detachable wings ★Folding propeller uses carbon blades ★Reduction gear unit is fully equipped bearings ★Radio control unit——Adspec R601FM or 4-channel 3-servo radio system plus electronic speed control (available separately) ★56402 is not available in some countries.

3 56403 ALT STREAM
アルトストリーム

Tamiya's "Alt Stream" R/C glider incorporates highly sophisticated design and construction, to make your flight dream come true. In order to obtain excellent maneuverability during thermal soaring and slope soaring, the Alt Stream is controlled by its rudder, elevator and ailerons. These vital components are connected to the servos via cables, enabling crisp response to the transmitter inputs without play or delay.

Fuselage length	1030mm	Wing area	35.6dm²
Wingspan	2000mm	Stabilizer area	5.2dm²
Weight fully equipped			1110~1200g

★Cable controlled ailerons, rudder and elevator ★Factory assembled, detachable wing ★Radio control unit——Tamiya Adspec R601 FM with an additional servo, extension cable and receiver battery box, or other 4-channel 4-servo radio system (available separately)

★R/C unit & batteries are not included.

★Specifications are subject to change without notice.

2WD

(58124)
Overall length——410mm
Overall width——295mm
Overall height——185mm
★Body——Injection molded
★Suspension——front:swing axle & rear:rolling rigid axle
★Sealed gearbox with diff.
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

124 58124 SUPER HORNET

1/10 Scale

This is an economically priced and high performing R/C 2WD off-road buggy model. Front suspension system is a swing axle type while the rear uses a rolling rigid type, both damped by four oil filled shock units. Colorful and eye-catching wheels enhance its overall looks.

4WD

(58161)
Overall length——410mm
Overall width——190mm
Overall height——165mm
★Body——polycarbonate
★Frame——bathtub type
★Suspension——four wheel independent double wishbone suspension
★Sealed gearbox with diff.
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

161 58161 FORD F-150

1/10 Scale

The "Outlaw" class pickup truck is extremely popular in the United States. Now you can enjoy this same excitement using Tamiya's R/C model of Ford's F-150 racing pickup. Colorful racing stickers enhance its overall good looks.

4WD

(58146)
Overall length——410mm
Overall width——190mm
Overall height——174mm
★Body——polycarbonate
★Frame——bathtub type
★Suspension——four wheel independent double wishbone suspension
★Sealed gearbox with diff.
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

146 58146 CHEVY S-10

1/10 Scale

The Chevy S-10 has brought new standards to the R/C stadium racing world. Its sophisticated shaft driven 4WD system efficiently transmits the power from the 540 type electric motor to all four wheels. Includes colorful self-adhesive stickers.

2WD

(58181)
Overall length——420mm
Overall width——295mm
Overall height——170mm
★Body——polycarbonate
★Frame——bathtub type
★Suspension——four wheel independent double wishbone suspension
★540 type motor included
★Radio control unit——Tamiya R/C system or 2-channel radio system (available separately)

181 58181 STADIUM THUNDER

1/10 Scale

The excitement seen in full-size stadium truck racing can now be had with Tamiya's Stadium Thunder. The lightweight, but sturdy ABS resin bathtub type frame/chassis allows easy access to mechanics for maintenance chores. The suspension is damped by oil-filled shocks at all corners.

★R/C unit & batteries are not included. ★Weight: without R/C unit & batteries

★Specifications are subject to change without notice.

OFF ROAD DRIVING CARE

Even though you own an off-road vehicle, you must select your driving areas with care to keep your vehicle in good condition. Inconsiderate driving will cause trouble and possible damage to your car.

1. UNSUITABLE AND DIFFICULT DRIVING SURFACES

●DRY RIVER BED

A dry river bed where many large rocks are found is perhaps the worst place for driving an off roader. In 1/10 scale, even a stone with a 10cm dia is the same as a 1 meter dia boulder in real life. Driving against these objects is like intentionally destroying your vehicle.

●WATER AND PONDS

You may sometimes run into a puddle or two when running off-road. Radio control unit, motor, speed controller, and batteries are very sensitive to moisture. Avoid running into standing water and heavy rain. A splash of water from the car is enough to damage the mechanics.

●GRASSLAND

Grasslands with tall grass and stems are bad for buggies because the grass can become entangled in the shafts and universal joints, which cause an unnecessary load on the motor which can cause overheating.

●GRAVEL AND DRY SAND

These surfaces offer considerable resistance to your vehicle. There is a burden on the motor and it will use much more current. The vehicle will not move as fast on this type of terrain, and on loose dry sand the tire can become buried and spin, without moving the car.

●ASPHALT AND LAWNS

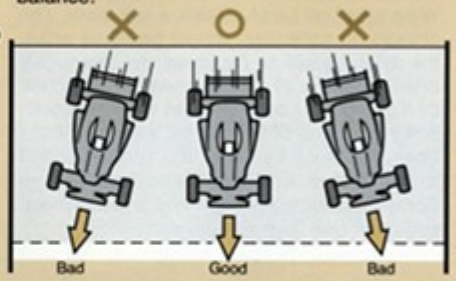
Highspeed cornering on concrete, asphalt or smooth lawns will cause the vehicle to roll. Slow down a little when cornering on these surfaces.

2. JUMPS

Dynamic jumps are a part of off road driving; however, you can damage your car if it is done recklessly. For 1/10 scale cars, a jump height of only 20cm has a scale height of 2 meters. Special attention must be paid to jumping correctly.

●ENTER THE JUMP RAMP STRAIGHT

To obtain a stable attitude when jumping, you must leave the ramp squarely and not at an angle. If this is not done, the car will tend to tumble while in the air and will land off balance.



●TO OBTAIN A GOOD LANDING ATTITUDE

A jump must be done so that the car's rear wheels hit the ground first, in a level or slightly nose high attitude. To do this it is important to apply only enough power to the car when leaving the ramp. Applying too much power tends to raise the nose too much and not enough power allows the nose to drop and land on the front wheels. If power is slightly reduced when entering the ramp, the jump attitude should be OK.

★CONTROLLING THE CAR'S ATTITUDE WHEN IN THE AIR

While in the air, a car's attitude can be altered by adding or reducing power. Adding power will raise the nose, due to the torque reaction of the motor and wheels, while reducing power will lower the nose.

●ACCELERATE WHEN ALL WHEELS ARE ON THE GROUND

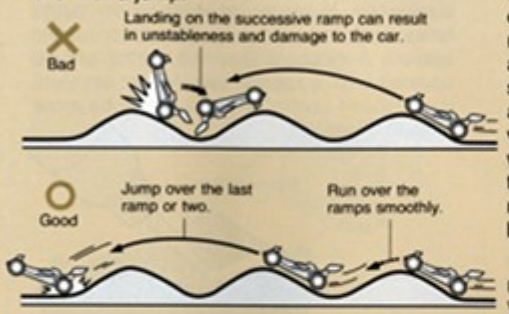
Applying power before the car lands, or when only the rear wheels have touched, will make the car "Wheelie" and be very unstable. Accelerate only when all four wheels are down.

●KEEP JUMPS AS LOW AS POSSIBLE

Although they look great, high jumps are not advantageous during competition because the car cannot accelerate while in the air. It is recommended to keep the jump low and land quickly so time is not lost during the jump.

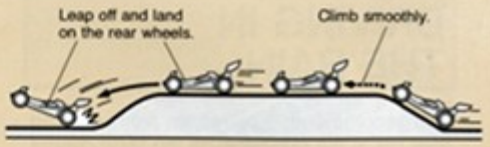
●SUCCESSIVE JUMP RAMPS

Special planning and technique is required when going through successive ramp jumps. If the car jumps from the first ramp normally and lands on the following ramp, the landing will be very unstable. Do not jump the initial ramps, but reduce power and run over the ramps smoothly. Clear only the last ramp or two with a jump.



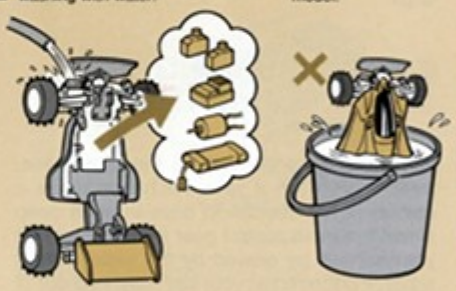
●PASSING ON A PLATEAU OR TABLELAND

Plateaus and tablelands are raised level surfaces between slopes. If the level surface is short enough to jump over, you can use it the same as a ramp jump. If the top surface is fairly long, slightly reduce power and climb smoothly up to the level surface. Add power just before the down slope, leaping off to land on the rear wheels. This prevents the car from "Nose-diving" and becoming unstable.



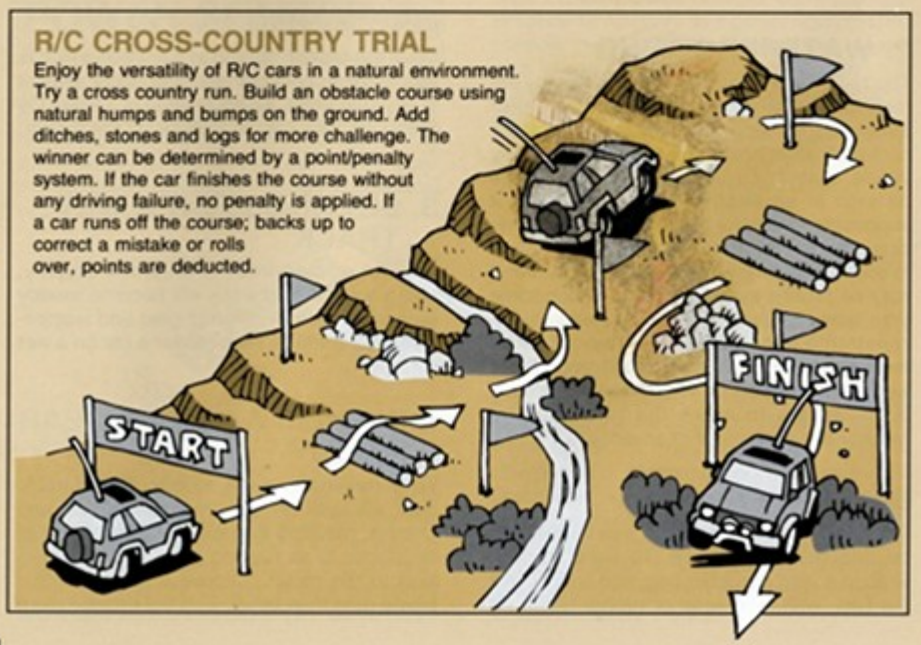
3. MAINTAINING OFF ROAD CARS

Since off road cars and buggies are designed to run mostly on dirt, and often are run on these surfaces, dust is a major problem compared to on-road-going cars. Always completely clean your car after running it. Dust can be easily removed using brushes with stiff bristles. If the car was driven through loose ground or puddle, ending up with mud all over the car, wipe off mud from easy-to-reach areas using tissue papers or rag and let the rest of the dirt dry off. When completely dried, mud will come off easily by brushing and chipping off using screwdrivers. For nasty mud clogs remove wheel, suspension, etc. for a thorough clean up. Remove all mechanics such as servos, receiver, speed controller, and motor when washing with water to prevent water getting into the mechanics. After washing, completely wipe off moisture and thoroughly dry to prevent any rust, and reapply oil and grease in gearbox, shafts, bearings, and all moving parts.



R/C CROSS-COUNTRY TRIAL

Enjoy the versatility of R/C cars in a natural environment. Try a cross country run. Build an obstacle course using natural humps and bumps on the ground. Add ditches, stones and logs for more challenge. The winner can be determined by a point/penalty system. If the car finishes the course without any driving failure, no penalty is applied. If a car runs off the course; backs up to correct a mistake or rolls over, points are deducted.



DRIVING IN THE RAIN

It is recommended to refrain from running your car in the rain because the radio control mechanism is liable to be affected by water. However, races may be held in drizzle. It is necessary to have some basic knowledge of driving in the rain.

1. DRIVING TECHNIQUE IN THE RAIN

Although a light drizzle may seem to augment grip slightly on a dried off-road track, any track will become more slippery when it gets wet. If an on-road circuit becomes wet, its surface grip will be extremely low. The same thing can happen in off road racing during or following a heavy rain.

●AVOID QUICK ACCELERATION/DECELERATION OR SUDDEN STEERING CHANGES

Any wet race track is very slippery, so cars may spin even when they accelerate at the start. Quick acceleration, quick deceleration and sudden steering are taboo. In cornering, keep the steering angle of the front wheels as little as possible so that the turning radius is large.

●AVOID RUNNING THROUGH WATER/MUD PUDDLES

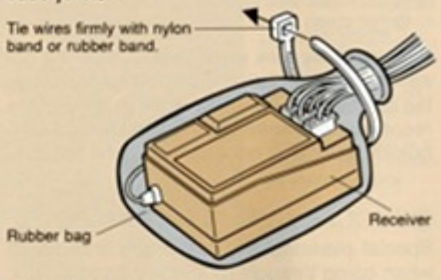
When there are puddles on the racecourse, avoid them even if your car has to make a detour. If you attempt to drive through deep water, the radio control gear may get wet and your car will be slowed by the resistance of water. Furthermore, your car may skid out of control.

2. WATERPROOFING

The radio control mechanism, particularly the receiver and servos, contains precision electric circuits carrying weak electric currents for control. If water enters the mechanism, it may cause a short circuit which often causes damage to an electric circuit and makes it impossible to control the car. If a wet electric circuit is kept electrified, its fine wiring begins to corrode gradually by chemical reaction and may be broken even by a slight shock some time later. Such a circuit may become unrepairable. Therefore, the radio control mechanism must be made waterproof. If the weather forecasts rain on the day of racing, it is necessary to make the radio control mechanism waterproof in advance.

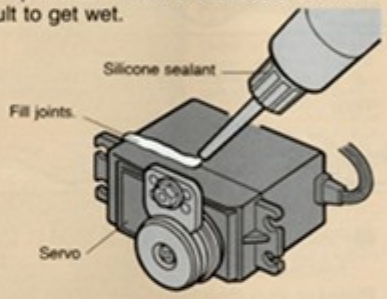
●RECEIVER

The radio control receiver is most subject to be affected by moisture. To waterproof it, wrap in a vinyl or rubber bag, and firmly close the bag with a tie wrap or rubber band. Air inside the bag may be damp, so do not leave the receiver in the bag for long periods, and remove after use. It is advisable to apply silicone sealant or rubber cement to the receiver case joints.



●SERVOS AND SPEED CONTROL

It is difficult to put servos into vinyl bags because they have moving parts. An electronic speed control in a vinyl bag may hinder heat dissipation. However, at least fill the cable holes and case joints with silicone or rubber cement. A mechanical speed control can be covered with a rubber bag. Mount an electronic speed control where it would be more difficult to get wet.



●Ni-Cd BATTERY AND RECEIVER BATTERIES

Batteries are liable to become affected by water. Seal the cable hole on the Ni-Cd battery pack. Wrap the receiver battery case in a vinyl or rubber bag.

●SWITCHES

Move the receiver switch to a position which is less liable to become wet, and apply sealant to its cable joints. An application of Tamiya Oil Spray will also help to waterproof the switch.

3. SETTINGS FOR A WET TRACK

Any wet on-road track is extremely slippery, and a wet off-road track will become muddy during the race. A different gear and suspension setting will be required for a car on a wet surface.

●CHOOSE A HIGHER GEAR RATIO

While running on a wet, muddy off-road track, mud will stick on the tires, suspension and chassis, resulting in additional weight, higher resistance to all rotating parts and a heavier load to the motor. Choose a smaller motor pinion gear than usual. This will provide more power to cope with the additional loads. A higher gear ratio is also preferable for on-road cars by reducing the car's top speed, as it will be more controllable on slippery surfaces.

●PUT PRIORITY ON OBTAINING GRIP

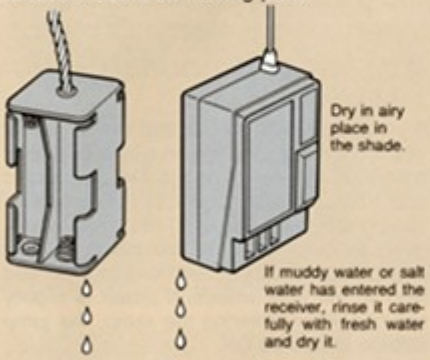
Using high grip tires is the first step in setting up a car for wet surface running. Suspension should be set softer and the wing or spoiler should be adjusted to obtain as much downforce and traction as possible.

●MAINTENANCE AFTER RUNNING

On a rainy day, the car gets very wet and dirty, and it is almost impossible to prevent water from entering the car. If it is left as it is, the chassis, etc., may rust and the radio control mechanism may develop unexpected trouble. After using the car in rain, be sure to carry out maintenance as soon as possible.

●MAINTENANCE OF CAR BODY AND CHASSIS

Wipe water off carefully with a soft cloth. The chassis, in particular, should be taken apart, the axles should be removed and thoroughly dried. Oil anew all moving parts because their oil has probably been washed away by water. Adhesive fixing of the servos, etc., may have been weakened by water. It is recommended to refix them with new adhesive. Tamiya Spray Oil gets under water and protects metal surfaces. Use it on moving parts.



●MAINTENANCE OF RADIO CONTROL MECHANISM, ETC.

Remove all the connectors and wipe off water from the whole mechanism. Then, remove it from the car and dry it in an airy place in the shade. If the receiver is wet inside, remove the casing, wipe off water, and dry in the shade. (The receiver must be handled with care.) If the receiver is wet inside with muddy water or salt water, carefully rinse it with clean water. After it has dried completely carry out a performance test. If it does not work, have it serviced by the manufacturer or his agent. As for the electric motor and speed control switch, it is recommended to apply Oil Spray or similar after carefully wiping off all water. Also dry the battery thoroughly.

★The RC mechanism contains precision electric circuits. Do not attempt to take it apart.

ADSPEC R/C SYSTEM

ADSPEC GT-I RADIO CONTROL SYSTEM (45023)

A 2-channel radio control system for use with a wide range of 1/10 scale R/C vehicles. Wheel type transmitter is ideal for control of R/C cars. Servo reverse switch, trim adjuster function, and the independent left/right adjustable trim are attractive functions. P-160F CPR unit included. Uses a 27MHz narrow band frequency.

ADSPEC GT-II RADIO CONTROL SYSTEM (45024)

This two channel, two servo transmitter can be used with 1/10 scale R/C cars as well as 1/10 & 1/8 class glow engine cars. The thin body is attached to an easy to hold grip. Designed for stability, a battery is stored in the base of the grip. Functions are the same as the ADSPEC GT-I.

ADSPEC SPORT R/C DRIVE SET (45021)

This set of radio equipment is ideal for a novice to start the exciting electric powered R/C car sport for the first time. The set includes an "Adspec Sport" stick type 2-channel digital proportional R/C trans- mitter, a C.P.R. unit P-80F a steering servo. The C.P.R. Unit integrates the functions of a receiver and electronic speed control in one compact unit, and accepts the use of 380, stock 540 type and Tamiya Sport-Tuned electric motors. Requires eight UM3 (AA) size batteries for transmitter power source (available separately).

ADSPEC SPORT SAILING R/C SYSTEM (45022)

This is an ideal radio control unit for Tamiya's Round the World (56202) and Innovator (56205) yacht models. Set includes a stick type 2-channel transmitter, high-torque sail servo, rudder servo, receiver and receiver battery case. Left stick of the transmitter is of ratchet type, to suit sail control. Available in 27MHz frequencies. Requires 12 UM3 (AA) size batteries for transmitter and receiver power source.
★Not available in some countries.

ADSPEC R601 FM RADIO CONTROL SYSTEM (45018)

This is an ideal radio control system for use with Tamiya's R/C aviation models. Using a noise resistant FM radio, the system can control up to six channels. The stick type transmitter is equipped with dual rate adjusters and mixing functions. The system operates on the 72MHz frequency band.
★Set contains a stick type transmitter, three micro servos, a receiver and an electronic speed control. ★Requires a total of 12 UM3 (AA) size batteries for transmitter and receiver power source (not included).

C.P.R. UNIT P-160F (45015)

This Control Processing Receiver (C.P.R.) unit was developed for 1/10 and 1/12 R/C cars, but can be used with boats and aircraft without modification. The compact unit contains a high capacity, amplifier boosted electronic speed control, receiver, switch and

separate servo. Maximum current capacity: 160A constant, 640A momentary. Size is 60 x 45 x 33mm.

R/C FAIL-SAFE UNIT (45017)

The central processing unit of this system is programmed to continuously monitor pulse signals from the receiver. When radio interference or noise is detected, or the receiver battery voltage becomes insufficient, the unit automatically returns the servos to their neutral position.

MOTOR GLIDER PROPELLER BRAKING UNIT (FOR ADSPEC R601-FM) (45019)

This unit is to prevent the propeller of Tamiya's electric powered glider from rotating while gliding. Installed in the motor cowling, connection to speed controller and motor is easy and secure. It brakes propeller rotation automatically as soon as the motor power is cut. This item is a must-have for improved flight performance.

POWER SOURCE

Tamiya Ni-Cd batteries are ideal for use with radio controlled model cars. The rechargeable Ni-Cd batteries are safely packed. They offer powerful pickup for operating your model. The Ni-Cd battery is very economical since it can be recharged over 500 times.

TAMIYA Ni-Cd BATTERY 7.2V 1400mAh RACING PACK RC1400SP (55071)

The Racing Pack RC1400SP has high capacity at a reasonable price. It puts out the same electrical discharge level as the Racing Pack RC1700SP and gives powerful acceleration suitable for racing. It can be safely recharged over 500 times under normal handling and operating conditions, and is extremely economical.

Ni-Cd 7.2V-1700mAh RACING PACK RC1700SP (55065)

Developed by Sanyo, one of world's leading manufacturers in the Ni-Cd battery field, this Ni-Cd battery pack was designed exclusively for electric powered R/C cars use. Its smooth internal current flow provides outstanding acceleration, plus its large capacity ensures prolonged running time for your R/C car.

Ni-Cd 7.2V 2400mAh RACING PACK RC2400SP (55074)

Developed by Sanyo, one of the world's leading manufacturers in the Ni-Cd battery field, this Ni-Cd pack was designed exclusively for electric powered R/C cars use. Its large capacity ensures prolonged running time for your R/C car.

TAMIYA Ni-Cd 7.2V CPU-2000 DC QUICK CHARGER (55070)

High capacity quick charger uses your automobile 12V battery as a power source. CPU controls the Ni-Cd battery voltage so regardless of remaining power, 100% charge is possible. After a full charge, a "trickle effect" automatically maintains optimal power. 1700mAh battery can be fully charged in 35 minutes and 1400mAh battery in 30 minutes. LED bar graph displays battery voltage.

7.2V AUTO DISCHARGER (55058)

To prolong the life of your 7.2V Ni-Cd Racing Pack Batteries, they should be fully discharged prior to recharging. Tamiya's Auto Discharger will safely accomplish this. Just connect a depleted Ni-Cd battery to start discharging. The indicator lamp will automatically turn-off when it is sufficiently discharged. Average discharge time for a depleted battery is approximately 1 hour.

MAINTENANCE MATERIALS

TAMIYA SPRAY OIL

87005

Tamiya Spray Oil is an oil which utilizes a molecular chemical formulated compound, in the U.S.A. which has proved effective as a long lasting lubricant. As it has strong permeability, spraying on bearings, within gear boxes, moving shafts and suspension parts, providing a smoother and less friction operation of all moving parts. It will also displace moisture and ensure longer rust free operation than normal penetrating lubricants. After your cars have been running in the rain or through puddles, spray Tamiya Spray Oil onto the chassis or other metal surfaces. This will penetrate between the water and the metal surface to form a layer which helps to dry up the surface and also protects the metal from rusting.

TAMIYA ENGINE TREATMENT SPRAY

87040

This spray is extremely effective when using on glow engined R/C models. Directly spray into carburetor or plug hole. The specially formulated oil has an excellent lubricating effect and protects engine components from rust and corrosion. It does not attack plastic, so it can also be used for lubricating plastic parts, too.

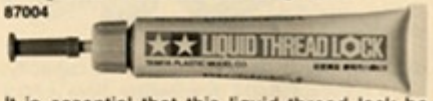
TAMIYA RC CLEANER SPRAY

87039

This is a handy cleaner spray for use with radio controlled models. Dirt and oily grime can be spray flushed, making maintenance chores easier. Spray comes with extension tubing to allow spraying in tight spots. Wipe clean using cloth or brush for better results.

LIQUID THREAD LOCK

87004



It is essential that this liquid thread lock be applied to all nuts and screws when the model is assembled. This liquid is not a glue, but a securing agent. It will prevent screws from working loose, which will happen if it is not used. It is very effective and easy to use. At any time, screws can be loosened or removed for maintenance or repairs by using about twice the force required when they were originally tightened.

SWITCH LUBRICANT

87023

Your speed controller, in order for it to do the job properly, must work smoothly and respond to the slightest movement of the transmitter control. This switch lubricant will provide you with a speed controller that responds correctly each and every time. The lubricant also helps to suppress the arcing that is always present, in any high current flowing switch, and will prolong its life far longer than expected. This switch lubricant is also safe with plastics and the 10g tube is easy to use. Remember, your speed controller is next in importance to your steering, so use the lubricant periodically to ensure proper performance of your R/C car and to prolong its life.

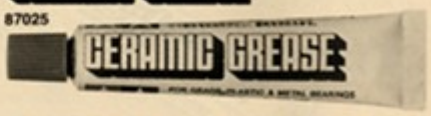
BALL DIFF GREASE

53042

This is the most effective grease available to R/C enthusiasts for their ball type differential gear units. It is specially formulated to prolong component life while maintaining the proper transmission torque. The long nozzle on the tube allows easy application. NOTE: Use only on ball type differential gear units.

CERAMIC GREASE

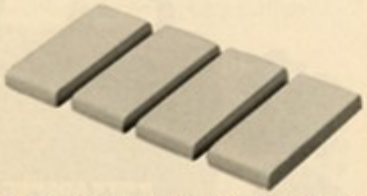
87025



This grease is formulated using Boron Nitride particles, and is ideal for use on electric powered R/C vehicles. It should be applied to all bearings, shafts and gears. It maintains its viscosity throughout a wide temperature range. Ceramic grease will substantially prolong the life of your R/C vehicle and keep it performing at its best. Each tube contains 10g of lubricant, and the long nozzle makes it easy to apply the proper amount in those hard-to-reach areas.

TAMIYA CLEANING PUTTY

87041



Knead an appropriate amount of this putty until it becomes soft, and firmly press it against the dirty areas on your R/C model. All the dirt, such as oil and dust, will be transferred to the surface of the putty. Can be used repeatedly. Contains four blocks of 28 x 57 x 9mm dimensions.

★Keep out of reach of children. Children must not ingest the putty.

★Keep in the plastic container after use. Avoid storage in direct sunlight or near a heat source.

TAMIYA TIRE MARKER

87043

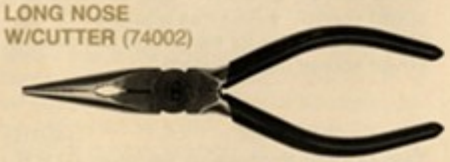
This is a ball-point pen type marker which comes in handy for radio control car enthusiasts. Used to write letters, signs or codes on the surface of your R/C car tires, such as front or rear, right or left, rotation direction, etc. Silver color ink stands out on tire surface for easy eye-catching. Its push-button mechanism provides handy usage and retracts the ball point when not in use. Can be used on rubber and sponge tires. Ink can easily removed with Tamiya's R/C Cleaner Spray.

CRAFT TOOLS

SIDE CUTTER
FOR PLASTIC (74001)

This is a precision side cutter for removing parts from a plastic sprue without damaging the parts. Developed exclusively for plastic modeling, the impact resistant chrome vanadic alloy material was chosen for long life. High quality vinyl covering assures good grip.

LONG NOSE
W/CUTTER (74002)

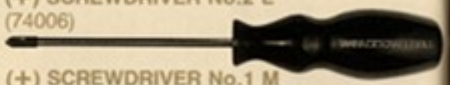


These quality long nose radio type pliers, with cutter, will come in handy during radio control kit construction. They are of high strength steel with a quality finish for long life. The cutter is capable of cutting 2.6mm brass wire or 2.3mm steel wire. High quality vinyl covering assures a positive grip.

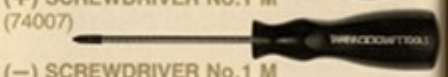
CURVED SCISSORS
FOR PLASTIC (74005)

These are quality scissors that will come in handy when trimming polycarbonate bodies of R/C car models. The curved blades enable easy access to polycarbonate body curves, and are made of high quality stainless steel for strength and long life. They can also cut plasticsheet up to 2mm in thickness.

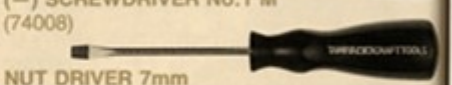
(+) SCREWDRIVER No.2 L
(74006)



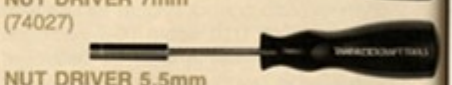
(+) SCREWDRIVER No.1 M
(74007)



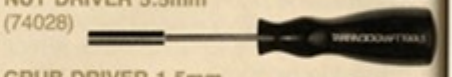
(−) SCREWDRIVER No.1 M
(74008)



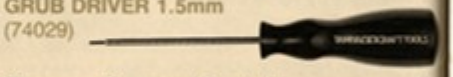
NUT DRIVER 7mm
(74027)



NUT DRIVER 5.5mm
(74028)

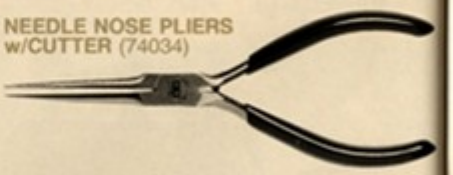


GRUB DRIVER 1.5mm
(74029)



These quality screw & nut drivers are a must during radio control car model construction. The impact resistant chrome vanadic alloy material was chosen for long life. The originally designed pentagonal grip molding is of acetylcellulose that has excellent durability and assures a firm grip when wanted.

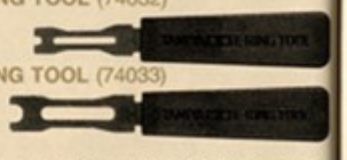
NEEDLE NOSE PLIERS
w/CUTTER (74034)



These quality pliers with their long slender tips come in handy during R/C model construction and other fine craft applications. The pinching surfaces of the tips are finished flat, to avoid marring the object during holding. The cutter is capable of cutting 1.4mm steel wire.

2mm E-RING TOOL (74032)

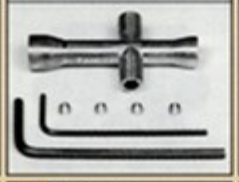
4mm E-RING TOOL (74033)



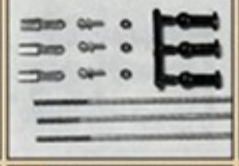
These tools are extremely useful during construction and maintenance of R/C models. The unique shape of the specially designed tip makes it easy to connect and remove the tiny E-rings. The tip is tempered for long life, and the handle is covered with plastic for a firm grip.

50025 DOUBLE SIDED SERVO TAPE SET

50038 TOOL SET



50068 BALL LINK & ADJUSTER ROD SET



50106 7.2V CONNECTOR SET

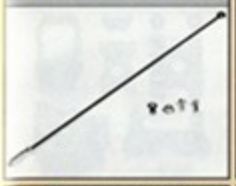
50170 NYLON BAND SET

50171 HEAT RESISTANT DOUBLE SIDED TAPE

50186 SILICONE INSULATED WIRE

50194 RUBBER BAG SET

50195 STEEL ANTENNA



50197 SNAP PIN SET

50204 DIRECTLY CONNECTED SERVO SAVER

50245 SNAP CONNECTOR SET

50253 HORNET SPEED CONTROLLER SET (BEC)

50320 R/C LIGHT BULB SET

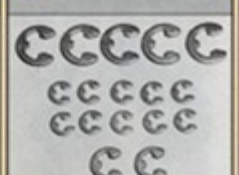
50354 16T, 17T AV PINION GEAR SET

50355 18T, 19T AV PINION GEAR SET

50356 20T, 21T AV PINION GEAR SET

50357 22T, 23T AV PINION GEAR SET

50380 E-RING SET



50388 RACING DEVELOPED DIFFERENTIAL BALL & PLATE SET

50395 RACING DEVELOPED FRONT UPRIGHT SET (1 PAIR)

50409 RACING DEVELOPED DIFF JOINT SET

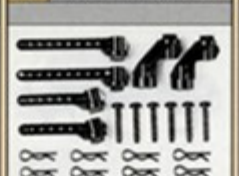
50411 FLEX STICKER SHEET (FLUORESCENT RED)

50473 HS-TORQUE SERVO SAVER

50477 24T, 25T AV PINION GEAR SET

50478 SKYLINE SPARE REAR GEAR CASE

50482 SKYLINE BODY MOUNT SET



50487 WINDOW MASKING SEAL SET A

50488 WINDOW MASKING SEAL SET B

50493 FWD TOURING CAR SPARE GEAR SET

50503 F-1 FRONT SUSPENSION ARM SET (F103 CHASSIS)

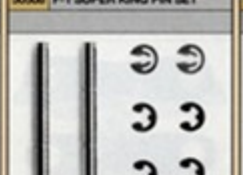
50504 F-1 SPARE GEAR CASE (F103 CHASSIS)

50505 F-1 T-BAR (F103 CHASSIS)

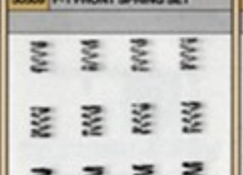
50506 F-1 SPARE GEAR SET

50507 F-1 DIFF JOINT SET (F103 CHASSIS)

50508 F-1 SUPER KING PIN SET

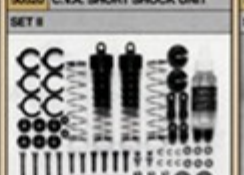


50509 F-1 FRONT SPRING SET



50519 C.V.A. MINI SHOCK UNIT SET II

50520 C.V.A. SHORT SHOCK UNIT SET II



50524 SAUBER C12 BUMPER WING SET

50525 SAUBER C12 REAR WING SET

50529 4WD TOURING & RALLY CAR PLASTIC GEAR SET

50541 4WD TOURING & RALLY CAR FRONT GEAR CASE (TA01 & 02 CHASSIS)

50554 4WD & FWD TOURING & RALLY CAR REAR UPRIGHTS (C SPRUE)

50555 4WD-TA02 & FWD TOURING & RALLY CAR FRONT UPRIGHTS (1 PAIR)

50556 4WD-TA02 TOURING & RALLY CAR REAR SUSPENSION ARMS (K SPRUE)

50573 2x8mm TAPPING SCREW (10 PCS.)

50574 2x8mm COUNTERSUNK TAPPING SCREW (10 PCS.)

50575 2.6x10mm TAPPING SCREW (5 PCS.)

50576 3mm GRUB SCREW (10 PCS.)

50577 3x10mm TAPPING SCREW (10 PCS.)

50578 3x10mm COUNTERSUNK TAPPING SCREW (10 PCS.)

50579 3x10mm STEP SCREW (5 PCS.)

50580 3x10mm HEX BOLT (10 PCS.)

50581 3x12mm COUNTERSUNK TAPPING SCREW (10 PCS.)

50582 3x14mm STEP TAPPING SCREW (5 PCS.)

50583 3x15mm TAPPING SCREW (10 PCS.)

50584 3x30mm CAP SCREW (2 PCS.)

50585 4x10mm STEP SCREW (5 PCS.)

50586 3mm WASHER (15 PCS.)

50587 3mm SPRING WASHER (15 PCS.)

50588 2mm E-RING (15 PCS.)

50589 5mm E-RING (5 PCS.)

50590 4mm BALL CONNECTOR (5 PCS.)

50591 5mm BALL COLLAR (5 PCS.)

50592 5mm BALL CONNECTOR (10 PCS.)

50593 4x8mm FLANGED TUBE (5 PCS.)

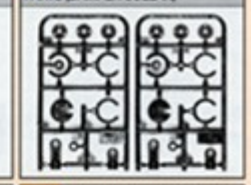
50594 2x10mm SHAFT (10 PCS.)

50595 NYLON BAND w/METAL HOOK (10 PCS.)

50596 5mm ADJUSTER (6 PCS.)

50597 DAMPER O-RING (RED, 10 PCS.)

50598 CVA MINI SHOCK UNIT II V PARTS (DAMPER COLLAR)



50599 CVA MINI SHOCK UNIT II W PARTS (DAMPER CYLINDER)

50600 CVA MINI SHOCK UNIT II OIL SEAL (6 PCS.)

50601 CVA MINI SHOCK UNIT II PISTON ROD (2 PCS.)

50602 DIFFERENTIAL BEVEL GEAR SET

50603 TGX PROPELLER SHAFT

50604 TGX WHEEL AXLE (2 PCS.)

50605 SCREW PIN SET (50mm, 30mm, 22mm)

50606 TGX A PARTS (GEAR CASE)

50607 TGX B PARTS (F & R SUSPENSION ARMS)

50609 TGX D PARTS (BODY MOUNT)

50610 TGX E PARTS (BUMPER & SIDE GUARD)

50611 TGX MECHANISM BOX

50612 TGX G PARTS (50T SPUR GEAR & DIFF CASE)

50613 TGX R PARTS (REAR UPRIGHT & FRONT KNUCKLE ARM)

50614 10mm DIA. SILICONE EXHAUST PIPE

50615 TGX UPPER PLATE

50616 TGX-Mk.1 CHASSIS PLATE

50617 TGX ENGINE MOUNT (2 PCS.)

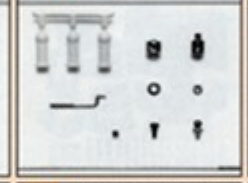
50618 TGX JOINT CUP (LONG & SHORT)

50619 TGX CLUTCH SHOE SET

50620 16T CLUTCH BELL

50621 TGX SUSPENSION ARM STAY

50622 TGX THROTTLE LINKAGE



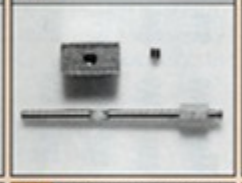
50623 TGX DAMPER SPRING (2 PCS.)

50624 TGX CENTER BEAM

50625 TGX DRIVE SHAFT (2 PCS.)

50626 TGX PILOT SHAFT (FOR TAMIYA)

50627 TGX BRAKE CAM & SHAFT SET



50628 TGX BRAKE PAD (2 PCS.)

50629 TGX PROPELLER JOINT (F OR R)

50630 TGX BEVEL PINION & RING GEAR SET

50631 M-CHASSIS SPARE GEAR SET

50632 M-CHASSIS DRIVE SHAFT & CUP SET

50633 4mm ADJUSTER (6 PCS.)

50637 TA02 & FWD TOURING CAR CHASSIS/FRAME

50638 FWD TOURING CAR A PARTS (GEAR CASE)

50640 FWD TOURING CAR D PARTS (F & R SUSPENSION ARMS)

50641 FWD TOURING CAR E PARTS (MECHANISM DECK)

50642 1/10 TOURING CAR U-SHAPED SHAFT

50643 TA02 & FWD TOURING CAR DRIVE SHAFT SET

50644 1/10 TOURING CAR D PARTS (BODY MOUNT)

50645 1/10 TOURING CAR 17mm THRUST WASHER (4 PCS.)

50648 TA01 TOURING CAR FRONT UPRIGHT (RED)

50649 TA02/TA02W TOURING CAR F PARTS (FRONT SUSPENSION ARM)

50650 4WD TOURING CAR DRIVE SHAFT SET

50651 M-CHASSIS A PARTS (CHASSIS)

50652 M-CHASSIS B PARTS (GEAR CASE)

50653 M-CHASSIS C PARTS (UPRIGHT)

50654 M-CHASSIS D PARTS (SUSPENSION ARM)

50655 F103 CHASSIS D PARTS (BATTERY HOLDER)

50657 TYRRELL YAMAHA 023 BUMPER WING SET

50658 TYRRELL YAMAHA 023 REAR WING SET

50660 BENETTON RENAULT B195 BUMPER WING SET

50661 BENETTON RENAULT B195 REAR WING SET

50680 LIGIER MUGEN HONDA JS41 BUMPER WING SET

50681 LIGIER MUGEN HONDA JS41 REAR WING SET

50689 ALPINE A110 E PARTS (REAR BODY MOUNT & FRONT BUMPER)

50697 M-LONG CHASSIS A PARTS (CHASSIS/FRAME)

50698 TA03 A PARTS (GEAR CASE)

50699 TA03F B PARTS (REAR GEAR CASE)

50700 TA03 C PARTS (UPRIGHT)

50701 TA03 D PARTS (SUSPENSION PARTS)

50702 TA03 F PARTS (PULLEY)

50703 TA03 PRO J PARTS (BATTERY HOLDER)

50704 TA03 PRO L PARTS (GEAR)

50705 TA03 KNUCKLE ARM

50706 TA03 DRIVE BELT

50716 M-MEDIUM CHASSIS A PARTS (CHASSIS/FRAME)

50717 TA03 E PARTS (BUMPER)

50718 TA03 G PARTS (GEAR)

50719 TA03 BUTHTUB CHASSIS

50735 TL01 A PARTS (CHASSIS)

50736 TL01 B PARTS (UPRIGHT)

50737 TL01 C PARTS (SUSPENSION ARM)

50738 TL01 G PARTS (GEAR)

50743 TA03-R B PARTS (FRONT GEAR CASE)

50744 TA03 L PARTS (BODY MOUNT)

50745 TA03 SHORT BATHTUB CHASSIS

50746 C.V.A. SUPER MINI SHOCK UNIT SET

50760 R/C BOY'S 4WD SPARE GEAR SET

50767 KING BLACKFOOT PLATED ROLL BAR

50768 TA03R BATHTUB CHASSIS

50788 TGX UPPER DECK SET

50792 M03 A PARTS (CHASSIS)

50793 M03 C PARTS (SUSPENSION ARM)

50794 M03 G PARTS (GEAR)

50797 5mm SHORT ADJUSTER (8 PCS.)

50799 FF02 D PARTS (CENTER FRAME)

50800 1/10 SCALE GLOW-ENGINE R/C TG10 GEAR CASE

50801 1/10 SCALE GLOW-ENGINE R/C TG10 FRONT WHEEL HUB

50802 TG10 FRONT UPRIGHT

50803 TG10 BUMPER

50804 TG10 U-SHAPED SHAFT

50805 TG10-Mk.1CHASSIS

50806 TG10 DRIVE SHAFT (2 PCS.)

50807 TG10 FRONT PROPELLER JOINT

50808 1/10 SCALE GLOW-ENGINE R/C TG10 LONG WHEEL AXLE (2 PCS.)

50814 TG10 FRONT SUSPENSION ARM

50815 TG10 REAR SUSPENSION ARM

50816 TG10 STEERING ARM

50817 TG10 FRONT HUB CARRIER

50818 TG10-Mk.1 UPPER DECK

50819 TG10-Mk.1 BATTERY CASE COVER

50822 3x10mm HEX HEAD TAPPING SCREW (10 PCS.)

50823 TG10 WHEEL AXLE (2 PCS.)

50828 F103 GT CAR SPARE BUMPER

50829 F103 GT CAR ANTENNA HOLDER SET

50838 TGX & TG10 GEAR COVER SET

50840 TG10 MINI BUMPER

50842 TGX UNDERCOWL SET

50849 M-04 A PARTS (GEAR SET)

50850 M-04 E PARTS (BODY MOUNT)

50851 M-04 F PARTS (CHASSIS)

50852 TG-10 BODY MOUNT (B3-B12, B16)

50855 TL01 E PARTS (BODY MOUNT)

50860 TB-01 G PARTS (GEAR)

50374 MONSTER PIN SPIKE TIRES (1 PAIR)

50386 RACING DEVELOPED DISH WHEEL SET (4430F/3645R)

50389 RACING DEVELOPED 4430 FRONT SPONGE TIRE (1 PAIR)

50390 RACING DEVELOPED 3645 REAR SPONGE TIRE (1 PAIR)

50397 RACING DEVELOPED 4428 FRONT SPONGE TIRE SET (1 PAIR)

50398 RACING DEVELOPED 4445 REAR SPONGE TIRE SET (1 PAIR)

50415 RACING DEVELOPED 4432 FRONT SPONGE TIRE SET (1 PAIR)

50419 TOYOTA CELICA GT-FOUR RACING RADIAL TIRE SET

50420 TOYOTA CELICA GT-FOUR WHEEL SET

50432 SKYLINE GT-R WHEEL SET

50441 RACING DEVELOPED 3630 FRONT SPONGE TIRE (1 PAIR)

50442 RACING DEVELOPED F-1 SPOKE WHEEL SET (3630F/3645R)

50449 STADIUM BLITZER FRONT TIRES (1 PAIR)

50450 STADIUM BLITZER REAR TIRES (1 PAIR)

50451 STADIUM BLITZER FRONT WHEELS (1 PAIR)

50452 STADIUM BLITZER REAR WHEELS (1 PAIR)

50454 RACING SLICK TIRE SET (1 PAIR)

50456 MERCEDES-BENZ 190E AMG WHEEL SET (1 PAIR)

50468 BMW M3 MESH WHEEL SET (1 PAIR)

50476 RALLY BLOCK TIRES (1 PAIR)

50491 MUGEN CIVIC WHEELS (1 PAIR)

50496 DYNA BLASTER FRONT WHEELS (1 PAIR)

50497 DYNA BLASTER REAR WHEELS (1 PAIR)

50512 ALFA ROMEO 155 WHEELS (1 PAIR) ★

50522 CASTROL CELICA WHEELS (1 PAIR)

50532 LOLA T93/00 WHEELS (1 PAIR, 4430F/4445R)

50545 FORMULA MESH WHEEL SET (3630F/3645R)

50547 WIDE RACING SLICK TIRES w/INNER SPONGE (1 PAIR)

50548 2-PIECE MESH WHEELS (1 PAIR, 4WD/FWD TOURING & RALLY CAR)

50549 2-PIECE WIDE MESH WHEELS (1 PAIR, 4WD TOURING CAR)

50557 CASTROL PRIMERA WHEELS (1 PAIR)

50563 TGX RACING RADIAL TIRES w/INNER SPONGE (1 PAIR)

50564 1/8 SCALE AMG MERCEDES C-CLASS DTM DISH WHEELS (1 PAIR)

50565 1/8 SCALE ALFA ROMEO 155 WHEELS (1 PAIR)

50566 1/8 SCALE OPEL CALIBRA V6 DTM WHEELS (1 PAIR)

50568 M-CHASSIS RADIAL TIRES (1 PAIR)

50569 MINI COOPER WHEELS (1 PAIR)

50634 1/10 OPEL CALIBRA WHEELS (1 PAIR)

50636 5-SPOKE ONE-PIECE WHEELS

50663 1/10 FIAT ABARTH CORSA WHEELS (1 PAIR)

50664 1/8 NISMO CLARION GT-R LM WHEELS (1 PAIR)

50669 FORMULA MESH WHEEL SET, WHITE (3630F/3645R)

50672 1/10 5-SPOKE TWO-PIECE WHEELS (1 PAIR)

50673 1/10 5-SPOKE TWO-PIECE WHEELS, WIDE (1 PAIR)

50675 1/10 CELICA SPOKE WHEELS (1 PAIR)

50676 1/10 ROVER MINI COOPER '94 MONTE-CARLO PLATED WHEELS (1 PAIR)

50678 TOYOTA TOM'S EXIV JTCC WHEELS (1 PAIR)

50683 M-CHASSIS 60D RADIAL TIRES (1 PAIR)

50684 M-CHASSIS 60D M-GRIP RADIAL TIRES (1 PAIR)

50685 ALPINE A110 WHEELS (1 PAIR)

50686 M-CHASSIS 60D INNER SPONGE SET

50708 HONDA S800 RACING WHEELS (1 PAIR)

50710 TGX RACING SLICKS w/INNER SPONGE (1 PAIR)

50711 REPSOL FORD ESCORT RS COSWORTH WHEELS (1 PAIR)

50714 EUNOS ROADSTER WHEELS (1 PAIR)

50724 1/10 SCALE HAA ACCORD VTEC WHEELS (1 PAIR)

★No further production.

50726 1/10 SCALE ALFA ROMEO GIULIA SPRINT GTA WHEELS (1 PAIR)

50728 1/8 PORSCHE 911 GT1 REAR WHEELS (1 PAIR)

50732 TOURING CAR 10-SPOKE ONE-PIECE WHEELS (1 PAIR)

50739 CALSONIC SKYLINE GT-R WHEELS (1 PAIR)

50741 PORSCHE 911 GT1 FRONT WHEELS (1 PAIR)

50742 PORSCHE 911 GT1 REAR WHEELS (1 PAIR)

50745 HONDA S-MX LOWDOWN WHEELS (1 PAIR)

50749 PORSCHE BOXSTER FRONT WHEELS (1 PAIR)

50750 PORSCHE BOXSTER REAR WHEELS (1 PAIR)

50755 MERCEDES-BENZ SLK WHEELS (1 PAIR)

50761 R/C BOY'S 4WD FRONT SLICKS (1 PAIR)

50762 R/C BOY'S 4WD REAR SLICKS (1 PAIR)

50763 VOLTEC FIGHTER FRONT WHEELS (1 PAIR)

50764 VOLTEC FIGHTER REAR WHEELS (1 PAIR)

50766 KING BLACKFOOT PLATED WHEELS (1 PAIR)

50770 CELICA GT-FOUR '97 MONTE-CARLO WHEELS (1 PAIR)

50772 BV01X DOME MUGEN NSX FRONT WHEELS (1 PAIR)

50773 BV01X DOME MUGEN NSX REAR WHEELS (1 PAIR)

50777 THUNDER BLITZ FRONT WHEELS (1 PAIR)

50778 THUNDER BLITZ REAR WHEELS (1 PAIR)

50781 FORMULA MESH WHEEL SET, GOLD (3630F/3645R)

50783 1/10 SCALE VOLKSWAGEN GOLF V5 WHEELS (1 PAIR)

50789 1/10 SCALE VOLKSWAGEN NEW BEETLE WHEELS (1 PAIR)

50810 RACING SEMI-SLICK TIRES (1 PAIR)

50825 1/10 SCALE R/C SUZUKI WAGONR RR WHEELS (1 PAIR)

50835 1/8 SCALE R/C SUBARU IMPREZA WRC '99 WHEELS (1 PAIR)

50839 TGX RALLY BLOCK TIRES (1 PAIR)

50843 ROVER MINI COOPER RACING WHEELS (1 PAIR)

50844 1/10 SCALE BMW M ROADSTER WHEELS (1 PAIR)

50861 1/10 SCALE MITSUBISHI LANCER EVOLUTION VI WRC WHEELS (1 PAIR)

50430 CALSONIC SKYLINE GT-R GR.A BODY PARTS SET

50485 TOYOTA CELICA GT-FOUR RC BODY PARTS SET

50500 LOTUS 107B FORD BODY PARTS SET

50523 SAUBER C12 BODY PARTS SET

50536 BLITZ TOYOTA SUPRA GR. N BODY PARTS SET

50540 AMG MERCEDES-BENZ C-CLASS DTM D2 BODY PARTS SET

50551 FORD MONDEO BTCC TOURING CAR BODY PARTS SET

50560 1/8 TABAC-ORIGINAL SONAX AMG MERCEDES C-CLASS DTM BODY PARTS SET

50561 ALFA ROMEO 155 V6 TI BODY PARTS SET

50562 OPEL CALIBRA V6 DTM BODY PARTS SET

50656 1/10 R/C F-1 BODY PARTS SET "TYRRELL YAMAHA 023"

50665 NISMO CLARION GT-R LM BODY PARTS SET

50666 CASTROL TOYOTA TOM'S SUPRA GT BODY PARTS SET

50667 FIAT ABARTH 1000 TCR BERLINA CORSA BODY PARTS SET

50668 HKS OPEL VECTRA JTCC BODY PARTS SET

50671 ROVER MINI COOPER '94 MONTE-CARLO BODY PARTS SET

50674 VOLKSWAGEN GOLF VR6 BODY PARTS SET

50679 BODY PARTS SET LIGIER MUGEN HONDA JS41

50688 ALPINE A110 BODY PARTS SET ★

50690 FORD SVT MUSTANG COBRA R BODY PARTS SET

50691 CASTROL TOYOTA TOMS SUPRA GT BODY PARTS SET

★No further production.

50695 TAISAN STARCARD PORSCHE 911 GT2 BODY PARTS SET

50696 VOLKSWAGEN BEETLE BODY PARTS SET

50707 KURE NISMO GT-R BODY PARTS SET

50713 1/8 CALSONIC SKYLINE GT-R BODY PARTS SET

50723 1/10 SCALE R/C WILLIAMS-RENAULT FW18 BODY PARTS SET

50725 1/8 SCALE GLOW-ENGINE R/C BODY PARTS SET KURE NISMO GT-R

50727 PIAA ACCORD VTEC BODY PARTS SET

50729 1/8 PORSCHE 911 GT1 BODY PARTS SET

50730 ALFA ROMEO GIULIA SPRINT GTA BODY PARTS SET

50733 JACCS ACCORD BODY PARTS SET

50734 MARTINI ALFA ROMEO 155V6TI BODY PARTS SET

50740 CALSONIC SKYLINE GT-R BODY PARTS SET

50747 PORSCHE 911 GT1 BODY PARTS SET

50751 1/8 OPEL CALIBRA CLIFF BODY PARTS SET

50752 ALFA ROMEO 155V6TI BOSCH BODY PARTS SET

50753 HONDA S-MX LOWDOWN BODY PARTS SET

50754 PORSCHE BOXSTER BODY PARTS SET

50756 MERCEDES-BENZ SLK BODY PARTS SET

50757 MITSUBISHI LANCER EVO.IV BODY PARTS SET

50758 1/8 NISSAN R390 GT1 BODY PARTS SET

50759 VOLTEC FIGHTER BODY PARTS SET

50765 PIAA NAKAJIMA REYNARD 97D BODY PARTS SET

50769 NISSAN R390 GT1 BODY PARTS SET

50771 CELICA GT-FOUR '97 MONTE-CARLO BODY PARTS SET

50774 PORSCHE 911 CARRERA BODY PARTS SET

50775 1/8 ØVEX DOME MUGEN NSX BODY PARTS SET

50776 ØVEX DOME MUGEN NSX BODY PARTS SET

50779 THUNDER BLITZ BODY PARTS SET

50780 PEUGEOT 406 ST BODY PARTS SET

50782 SUBARU IMPREZA WRC BODY PARTS SET

50794 1/8 MERCEDES CLK-GTR BODY PARTS SET

50796 MERCEDES CLK-GTR BODY PARTS SET

50787 VOLKSWAGEN GOLF V5 BODY PARTS SET

50790 VOLKSWAGEN NEW BEETLE BODY PARTS SET

50791 TOYOTA COROLLA WRC BODY PARTS SET

50795 ROVER MINI COOPER RACING BODY PARTS SET

50796 FORD ESCORT WRC BODY PARTS SET

50798 Mobil 1 NSX BODY PARTS SET

50809 PEUGEOT 306 MAXI WRC BODY PARTS SET

50811 MERCEDES CLK-GTR TEAM SPORTSWEAR BODY PARTS SET

50812 RAYBRIG NSX BODY PARTS SET

50820 PENNZOIL NISMO GT-R BODY PARTS SET ★

50821 MITSUBISHI LANCER EVOLUTION V WRC BODY PARTS SET

50824 TOYOTA GT-One TS020 BODY PARTS SET ★

50826 1/10 SCALE R/C PORSCHE 911 GT1 '98 LM WINNER BODY PARTS SET

50827 CASTROL MUGEN NSX BODY PARTS SET

50830 LEXUS GS 400 BODY PARTS SET

50831 SUZUKI WagonR RR BODY PARTS SET

50832 RAYBRIG NSX BODY PARTS SET

50833 1/10 SCALE R/C MCLAREN MERCEDES MP4/13 BODY PARTS SET

50834 SUBARU IMPREZA WRC '99 BODY PARTS SET

50836 HONDA S2000 BODY PARTS SET

50837 LEXUS IS200 BODY PARTS SET

50841 1/8 ROVER MINI COOPER RACING BODY PARTS SET

50845 PENNZOIL NISMO GT-R (R34) BODY PARTS SET

50846 CALSONIC SKYLINE GT-R (R34) BODY PARTS SET

★No further production.

50647 FORD FOCUS WRC BODY PARTS SET

50648 BMW M ROADSTER BODY PARTS SET

50653 ALFA ROMEO 156 RACING BODY PARTS SET

50654 SUBARU IMPREZA WRC '99 BODY PARTS SET

50656 PEUGEOT 206 WRC BODY PARTS SET

50657 TOYOTA CELICA BODY PARTS SET

50658 1/10 SCALE R/C TOYOTA GT-One TS020 '99 BODY PARTS SET

50659 AUDI R8R BODY PARTS SET

50662 MITSUBISHI LANCER EVOLUTION VI WRC BODY PARTS SET

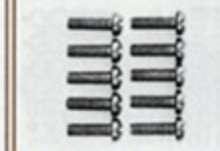
HOP-UP OPTIONS

For those seeking more performance at the track, Tamiya's Hop-Up Options provide the serious radio control competitor with race designed components for souped-up power, weight savings, and added durability. Enhance the overall performance and potential of your Tamiya racer using these optional Hop-Up parts to meet your competition requirements.

53006 1150 SEALED BALL BEARING SET (4 PCS.)

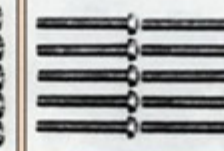
53011 3x6mm TITANIUM ROUND HEAD SCREW (10 PCS.)

53012 3x10mm TITANIUM ROUND HEAD SCREW (10 PCS.)



53013 3x15mm TITANIUM ROUND HEAD SCREW (10 PCS.)

53014 3x20mm TITANIUM ROUND HEAD SCREW (10 PCS.)



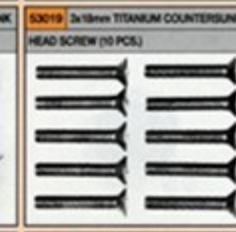
53015 3x8mm TITANIUM TAPPING SCREW (10 PCS.)

53016 3x12mm TITANIUM TAPPING SCREW (10 PCS.)

53017 3x15mm TITANIUM TAPPING SCREW (10 PCS.)

53018 3x10mm TITANIUM COUNTERSUNK TAPPING SCREW (10 PCS.)

53019 3x18mm TITANIUM COUNTERSUNK HEAD SCREW (10 PCS.)



53020 3x8mm TITANIUM COUNTERSUNK HEAD SCREW (10 PCS.)

53021 3mm ALUMINUM NUT (20 PCS.)

53022 3mm ALUMINUM LOCK NUT (10 PCS.)

53023 4mm ALUMINUM NUT (20 PCS.)

53024 4mm ALUMINUM FLANGE LOCK NUT (10 PCS.)

53025 SILICONE DAMPER OIL SOFT SET (#200, #300)

53026 SILICONE DAMPER OIL MEDIUM SET (#400, #500)

53027 SILICONE DAMPER OIL HARD SET (#600, #700)

53029 1150 SEALED BALL BEARING SET (2 PCS.)

53030 500 SEALED BALL BEARING SET (4 PCS.)

53037 HI-CAP DAMPER (SHORT)

53042 BALL DIFF. GREASE

53047 730 SEALED BALL BEARING SET (4 PCS.)

53053 MINI HI-CAP DAMPER SPRING SET

53054 SHORT HI-CAP DAMPER SPRING SET

53056 PIN TYPE WHEEL ADAPTER

53062 7010W ROTOR FOR DYNATECH 02H MOTOR

53063 12T, 13T H.P. STEEL PINION GEAR SET

53064 14T, 15T H.P. STEEL PINION GEAR SET

53065 1260 SEALED BALL BEARING SET (2 PCS.)

53066 1280 SEALED BALL BEARING SET (2 PCS.)

53068 RS-540 SPORT-TUNED MOTOR

53070 MANTA RAY BALL DIFF. SET

53071 MANTA RAY TORQUE SPLITTER SET

53072 MANTA RAY DIFFERENTIAL BALL & PLATE SET

53075 HI-CAP DAMPER (MINI) PLASTIC PARTS SET

53076 HI-CAP DAMPER (SHORT) PLASTIC PARTS SET

53079 MANTA RAY STAINLESS STEEL PROPELLER SHAFT SET

53085 6014 2WD FRONT STAR-DISH WHEELS (1 PAIR)

53086 6029 REAR STAR-DISH WHEELS (1 PAIR)

53089 6024 4WD FRONT STAR-DISH WHEELS (1 PAIR)

53090 RACING DEVELOPED TIRE CAP

53092 6024 4WD SPIRE SPIKE FRONT TIRES (1 PAIR)

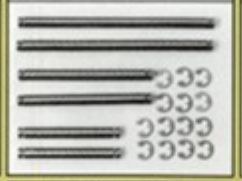
53093 6029 SPIRE SPIKE REAR TIRES (1 PAIR)

53095 3x10mm TITANIUM TAPPING SCREW (10 PCS.)

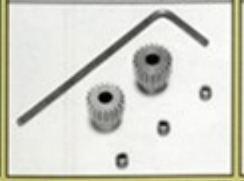
53096 3x32mm TITANIUM COUNTERSUNK HEAD SCREW (4 PCS.)

53097 4x42mm TITANIUM COUNTERSUNK HEAD SCREW (4 PCS.)

53098 4WD STAINLESS STEEL SUSPENSION SHAFT SET

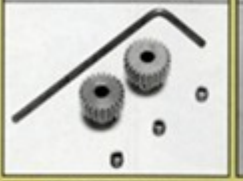


53101 RACING DEVELOPED 0.4 STEEL PINION GEAR SET (20T, 21T)



53102 RACING DEVELOPED 0.4 STEEL PINION GEAR SET (22T, 23T)

53103 RACING DEVELOPED 0.4 STEEL PINION GEAR SET (24T, 25T)

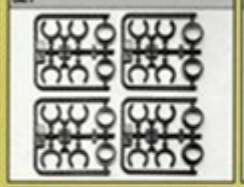


53104 RACING DEVELOPED 0.4 SPUR GEAR SET (93T, 104T)

53109 TURNBUCKLE SHAFT SET

53110 6mm BALL ADJUSTER SET

53111 DAMPER SPRING SPACER SET



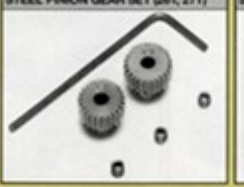
53113 RACING RADIAL/SLICK INNER SPONGE SET

53114 R/C BRAKE LIGHT SET

53115 SKYLINE GT-R UNIVERSAL SHAFT SET

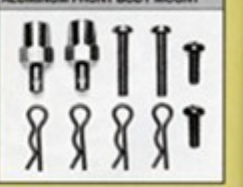
53116 RACING DEVELOPED 6mm CARBON REAR SHAFT

53117 RACING DEVELOPED 0.4 STEEL PINION GEAR SET (26T, 27T)



53119 RACING DEVELOPED SPECIAL KING PIN SET

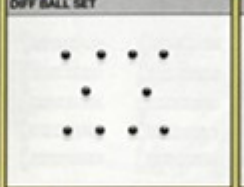
53120 RACING DEVELOPED F-1 ALUMINUM FRONT BODY MOUNT



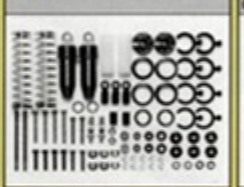
53121 SKYLINE LONG FRONT ARM SET

53122 ACTO-POWER OFF-ROADER 2WD MOTOR

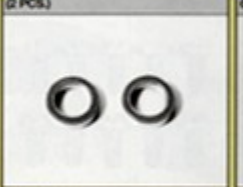
53124 3mm TUNGSTEN-CARBIDE DIFF BALL SET



53125 SLEEVED DAMPER (SHORT)



53126 1510 BALL BEARING SET (2 PCS.)



53127 SKYLINE SPEED-TUNED GEAR SET

53128 F-1 FRONT 3630 HBR MEDIUM SPONGE TIRES (1 PAIR)

53129 F-1 REAR 3645 HBR SOFT SPONGE TIRES (1 PAIR)

53130 NYLON PARTS COLORING SET

53132 R/C FLUORESCENT COLOR ANTENNA PIPES (4 PCS.)

53134 F-1 FRONT 3630 HBR SOFT SPONGE TIRES (1 PAIR)

53135 F-1 REAR 3645 HBR MEDIUM SPONGE TIRES (1 PAIR)

53136 ONE-PIECE BALL THRUST BEARING

53137 FWD TOURING CAR BALL BEARING SET

53141 4WD TOURING & RALLY CAR LIGHTWEIGHT KING PINS

53142 4WD TOURING & RALLY CAR ALUMINUM MOTOR MOUNT

53143 4WD RALLY CAR SKID GUARD SET ★

53144 4WD/FWD TOURING & RALLY CAR BUSHING & BALL CONNECTOR SET

53145 4WD TOURING & RALLY CAR URETHANE BUMPER SET

53147 F-1 CARBON GRAPHITE UPPER DECK PLATE (F103 CHASSIS)

53148 F-1 CARBON GRAPHITE FRICTION PLATES (F103 CHASSIS)

53149 F-1 LOW-FRICTION PADS (F103 CHASSIS)

53150 F-1 TURNBUCKLE TIE-RODS (F103 CHASSIS)

53151 F-1 DIFFUSER SET

53152 4WD TOURING & RALLY CAR SHORT TYPE HARD PROPELLER SHAFT

53154 ACTO-POWER FORMULA MOTOR

53155 LOW FRICTION ALUMINUM DAMPER SET (1 PAIR, 4WD & FWD TOURING & RALLY CAR)

53156 HARD INNER SPONGE SET (4WD/FWD TOURING & RALLY CAR)

53157 ALUMINUM KING PINS (4WD-TA02/FWD CHASSIS)

53158 FORMULA CAR BALL BEARING SET

53159 4mm ANODIZED ALUMINUM FLANGE LOCK NUTS (BLUE 5 PCS.)

53160 4mm ANODIZED ALUMINUM FLANGE LOCK NUTS (RED 5 PCS.)

53161 4mm ANODIZED ALUMINUM FLANGE LOCK NUTS (GOLD 5 PCS.)

53162 4mm ANODIZED ALUMINUM FLANGE LOCK NUTS (BLACK 5 PCS.)

53163 ON-ROAD TUNED SPRING SET (4WD/FWD TOURING & RALLY CAR)

53164 4WD TOURING & RALLY CAR HOLLOW CARBON GEAR SHAFT SET

53166 4WD TA02 & FWD CAR FRP CHASSIS SET

53167 4WD TOURING & RALLY CAR BALL BEARING SET (TA02 CHASSIS CARS)

53168 F-1 HARD-TYPE CARBON-GRAPHITE CHASSIS PLATE (F103 CHASSIS)

53169 F-1 FLEX T-BAR SET (F103 CHASSIS)

★No further production.

53170 GLASS TAPE (15mm X 25m)

53171 TR-15T UP-GRADED BRAKE DISC

53172 4WD TA02 & FWD CAR UNIVERSAL SHAFT SET (1 PAIR)

53173 FORMULA CAR LOW FRICTION ALUMINUM DAMPER

53174 FRICTION DAMPER GREASE (SOFT)

53175 FRICTION DAMPER GREASE (MEDIUM)

53176 FRICTION DAMPER GREASE (HARD)

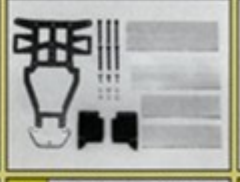
53177 FWD ALUMINUM MOTOR HEAT SINK

53181 TURNBUCKLE SHAFT SET (50, 60, 65mm)

53184 RD TIRE CAP (SOFT)

53185 TAMIYA R/C PARTS BOX

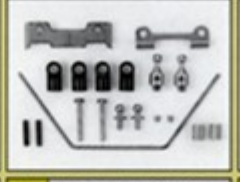
53186 F-1 FRP UPPER CHASSIS SET (F103 CHASSIS)



53187 CROSS COUNTRY 4WD LOW-RIDE CONVERSION KIT

53188 CROSS-COUNTRY 4WD TORQUE SPLITTER UNIT

53189 4WD TOURING & RALLY CAR REAR STABILIZER SET (TA02 CHASSIS)



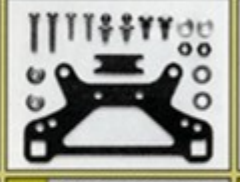
53190 CORNER MARKERS (5 PCS.)

53191 4WD/FWD TOURING & RALLY CAR TURNBUCKLE TIE-ROD SET

53192 4WD/FWD TOURING & RALLY CAR TURNBUCKLE UPPER ARM

53193 4WD TOURING & RALLY CAR FRP FRONT DAMPER STAY

53194 4WD TOURING & RALLY CAR FRP REAR DAMPER STAY

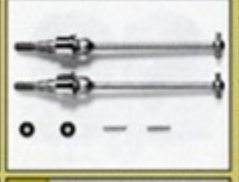


53195 4WD-TA02 & FWD CAR CARBON CHASSIS PLATES

53196 TGX WHEEL AXLE BALL BEARING SET

53197 TGX TURNBUCKLE SHAFT SET

53198 TGX UNIVERSAL SHAFT SET



53199 TGX STABILIZER SET

53200 4WD FRONT ONE-WAY DIFF. UNIT

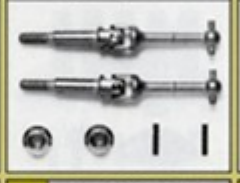
53201 TGX 2-SPEED TRANSMISSION

53202 TGX M-GRIP SUPER SLICKS (1 PAIR)

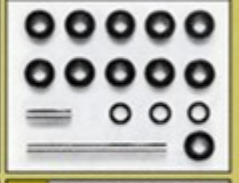
53203 TGX SHAPED TIRE INSERTS (1 PAIR)

53204 M-CHASSIS INNER SPONGE

53205 M-CHASSIS UNIVERSAL SHAFT SET (1 PAIR)



53206 M-CHASSIS BALL BEARING SET



53207 TGX STAINLESS STEEL SUSPENSION SHAFT SET

53208 LIGHTWEIGHT FLYWHEEL

53209 1/10 TOURING & RALLY CAR SHAPED TIRE INSERT (1 PAIR)

53210 TGX 2-SPEED TRANSMISSION PINION GEAR (15/19T)

53211 TGX 2-SPEED TRANSMISSION SPUR GEAR SET

53212 TGX 2-SPEED TRANSMISSION CLUTCH SHOE SET

53213 1/10 MINI COOPER RACING STICKER SET

53214 SUPER GRIP RADIAL TIRES (1/10 TOURING CARS)

53215 M-CHASSIS SLICKS (1 PAIR)

53216 1/10 TOURING CAR SHAPED TIRE INSERT, WIDE (1 PAIR)

53217 1/10 TOURING CAR HARD JOINT CUP SET (FOR BALL DIFF)

53218 1/10 TOURING CAR HARD JOINT CUP SET (FOR GEAR DIFF)

53219 4WD/FWD TOURING CAR ALUMINUM PRESSURE PLATE SET

53220 1/10 4WD/FWD TOURING CAR SUPER SLICKS (1 PAIR)

53222 M-CHASSIS SUPER SLICKS (1 PAIR)

53223 M-CHASSIS SHAPED TIRE INSERTS (1 PAIR)

53224 1/10 TOURING CAR M2 SLICKS (1 PAIR)

53225 TA02W TOURING CAR FRONT UNIVERSAL SHAFT SET

53226 1/10 TOURING CAR ALUMINUM FRONT HUB CARRIER (1 PAIR)

53227 1/10 TOURING CAR M2 RADIAL TIRES (1 PAIR)

53228 1/10 4WD TOURING CAR SUPER SLICKS, WIDE (1 PAIR)

53229 1/10 ONE-PIECE WIDE MESH WHEELS (1 PAIR)

53230 WIDE INNER SPONGE SET (HARD)

53231 1/10 SUPER GRIP RADIAL TIRES, WIDE (1 PAIR)

53232 1/10 ONE-PIECE RACING SPOKE WHEELS (1 PAIR)

53233 1/10 ONE-PIECE WIDE RACING SPOKE WHEELS (1 PAIR)

53234 M-CHASSIS 4x65mm ALUMINUM SCREW (5 PCS.)

53235 M-CHASSIS STAINLESS STEEL SUSPENSION SHAFT SET

53236 M-CHASSIS BUSHING SET

53237 M-CHASSIS HOLLOW CARBON GEAR SHAFT SET

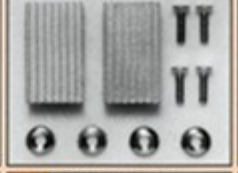
53238 M-CHASSIS QUICK-RELEASE BATTERY HOLDER

53239 M-CHASSIS FRONT & REAR STABILIZER SET

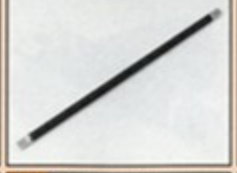
53240 3x20mm TITANIUM TAPPING SCREW (5 PCS.)

53241 M-CHASSIS ALUMINUM MOTOR HEAT SINK

53242 TGX ALUMINUM ENGINE MOUNT

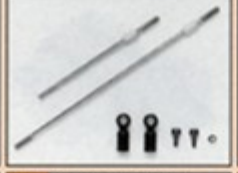


53244 TGX CARBON PROPELLER SHAFT



53245 TGX BALL DIFFERENTIAL

53246 M-CHASSIS TURNBUCKLE STEERING ROD SET



53247 FORMULA ADJUSTABLE FRICTION DAMPER POST SET

53248 FORMULA LIGHTWEIGHT DIFF JOINT SET

53250 TOURING CAR SHAPED TIRE INSERT, SOFT (1 PAIR)

53251 ACTO-TUNED M-SPECIAL MOTOR

53252 TGX REAR ALUMINUM UPRIGHT SET

53253 M-CHASSIS ALUMINUM RACING STEERING SET

53254 M-CHASSIS 60D SUPER GRIP RADIAL TIRES (1 PAIR)

53255 M-CHASSIS 60D INNER SPONGE,HARD (4 PCS.)

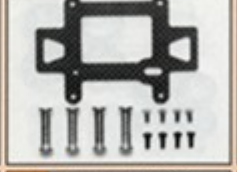
53257 FORMULA HEIGHT ADJUSTABLE GEAR CASE

53258 FORMULA LINK-TYPE FRONT SUSPENSION

53259 FORMULA 3.5mm OFFSET UPRIGHT

53260 TA03 HOLLOW CARBON GEAR SHAFT

53261 TA03F PRO CARBON BATTERY PLATE SET



53262 0.4 STEEL PINION GEARS (28T/29T)

53263 DYNA-RUN SUPER TOURING MOTOR

53264 TGX REINFORCED SUPER SLICKS (1 PAIR)

53265 TA03F BALL BEARING SET

53266 TA03 STAINLESS STEEL SUSPENSION SHAFT SET

53267 TA03 BALL DIFFERENTIAL

53268 TA03F URETHANE BUMPER SET

53269 TA03 ALUMINUM MOTOR MOUNT PLATE

53270 1060 BALL BEARINGS (2 PCS.)

53271 HIGH RUBBER CONTENT SPONGE TIRES, MEDIUM (F-1 FRONT, 1 PAIR) ★

53272 DYNA-RUN RACING STOCK MOTOR

53273 FORMULA CAR REAR SUSPENSION BALL MOUNT SET

53274 TA03 ALUMINUM COUNTER SHAFT

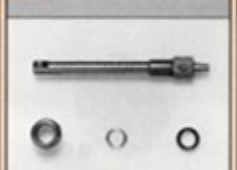
53275 TA03 ALUMINUM MOTOR HEAT SINK

53276 TA03 FLUORESCENT COLOR STABILIZER SET

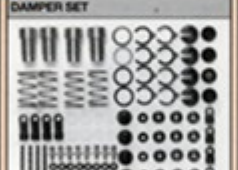
53277 FORMULA CAR HEIGHT-ADJUSTABLE ALUMINUM HEAT SINK MOTOR MOUNT

53278 TA03 ARAMID FIBER REINFORCED DRIVE BELT

53279 TA03 TORQUE SPLITTER UNIT



53280 TA03 SUPER LOW FRICTION DAMPER SET



53281 TGX PROGRESSIVE FORCE SPRING SET

53282 TGX 2-SPEED TRANSMISSION STEEL PINION GEAR (15/19T)

53283 TGX 2-SPEED TRANSMISSION STEEL PINION GEAR (16/20T)

53284 5mm ALUMINUM BALL CONNECTOR (10 PCS.)

53285 TA03 REAR BODY MOUNT SUPPORT PLATE

53286 TA03 ALUMINUM PULLEY (16T)

53287 TA03 CARBON REINFORCING PLATE

53288 TA03 ALUMINUM REAR UPRIGHT

53289 TGX HARD ALUMINUM FRONT SUSPENSION ARM SET

53290 TGX HARD ALUMINUM REAR SUSPENSION ARM SET

53291 TA03 ALUMINUM PULLEY (15T)

53292 TL01 BALL BEARING SET

53293 REINFORCED SLICKS TYPE-A (1 PAIR)

53294 REINFORCED SLICKS TYPE-B (1 PAIR)

53295 TIRE INNER FOAM

53296 TA03R BALL BEARING SET

53297 TA03R-S ARAMID FIBER REINFORCED DRIVE BELT (SHORT)

53298 TA03F TORQUE CONTROL UNIT (15/17T)

53299 TA03R TORQUE CONTROL UNIT (14/16T)

53300 TL01 TURNBUCKLE TIE-ROD SET

53301 TL01 STAINLESS STEEL SUSPENSION SHAFT SET

53302 TA03F PRO CARBON CHASSIS PLATE

53303 TL01 ADJUSTABLE UPPER ARM SET

53304 TA03R URETHANE BUMPER SET

53305 TA03 LIGHTWEIGHT DRIVE SHAFT

53306 TA03F FRP CHASSIS SET

★No further production.

53307 TAMIYA RACING MOTOR BRUSH SET

53308 ALUMINUM SERVO STAY

53309 TA03 TITANIUM SUSPENSION SHAFT SET

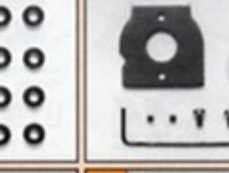
53310 TA03 UNIVERSAL DRIVE SHAFT (1 PAIR)

53311 TA03R CARBON REINFORCING PLATE

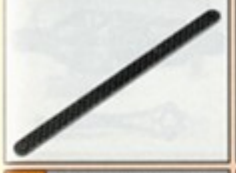
53312 TA03 CARBON STABILIZER SUPPORT

53313 RC BOY'S 4WD BALL BEARING SET

53314 RC BOY'S 4WD MOTOR PLATE SET FOR 540 TYPE MOTOR



53315 TA03R-S CARBON REINFORCED PLATE



53316 TA03 ALUMINUM FRONT HUB CARRIER (1 PAIR)

53317 RC BOY'S 4WD 540 MOTOR SET

53318 RC BOY'S 4WD INNER SPONGE SET (FRONT)

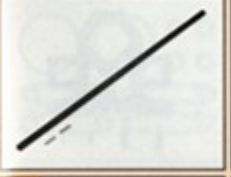
53319 RC BOY'S 4WD INNER SPONGE SET (REAR)

53320 RC BOY'S 4WD LIGHTWEIGHT GEAR SHAFT SET

53321 RC BOY'S 4WD LIGHTWEIGHT PROPELLER SHAFT

53322 TL01 HOLLOW CARBON GEAR SHAFT

53323 TL01 CARBON PROPELLER SHAFT



53324 TL01 STABILIZER SET

53325 TA03 ALUMINUM KNUCKLE ARM (1 PAIR)

53326 TA03 ALUMINUM RACING STEERING SET

53327 VOLTEC FIGHTER FRONT WHEELS (FLUORESCENT YELLOW)

53328 VOLTEC FIGHTER REAR WHEELS (FLUORESCENT YELLOW)

53329 VOLTEC FIGHTER REAR WING

53330 RC BOY'S 4WD PATTERN TIRE & WHEEL SET

53331 TL01 LIGHTWEIGHT CHASSIS/FRAME

53332 TA03R REAR LONG WHEEL AXLE SET

53333 TOURING CAR TUNED SPRING SET (SHORT TYPE)

53334 LOW FRICTION DAMPER V PARTS (DAMPER COLLAR)

53335 REINFORCED ONE-PIECE SPOKE WHEELS (1 PAIR)

53336 REINFORCED ONE-PIECE MESH WHEELS (1 PAIR)

53337 TA03 REINFORCED DAMPER STAY (LOW MOUNT TYPE)

53338 RC TIRE CEMENTING HELPER

53339 TAMIYA CA CEMENT (FOR RUBBER TIRES)

53340 M-CHASSIS 60D REINFORCED TIRES TYPE-A (1 PAIR)

53341 MINI COOPER REINFORCED WHEELS (1 PAIR)

53342 TL01 SPEED-TUNED GEAR SET

53343 M03 FRONT & REAR STABILIZER SET

53344 M03 ALUMINUM HEAT SINK

53345 (TL01, M03) TOE-IN REAR UPRIGHT

53346 (TL01, M03) QUICK RELEASE BATTERY HOLDER

53347 3mm SPRING SET SCREW (10 PCS.)

53348 M03 BALL BEARING SET

53349 F-1 FRONT REINFORCED SLICKS TYPE A (1 PAIR)

53350 F-1 REAR REINFORCED SLICKS TYPE A (1 PAIR)

53351 ALUMINUM REINFORCED TAPE

53352 TG10 BALL BEARING SET

53353 TG10 URETHANE BUMPER

53354 TG10 STABILIZER SET

53355 TGX URETHANE BUMPER

53356 TG10 CARBON UPPER DECK

53357 TA03 ALUMINUM MOTOR PLATE

53358 TA03R FRP CHASSIS CONVERSION

53359 TG10 2-SPEED TRANSMISSION

53360 TG10 BALL DIFFERENTIAL

53361 TG10 2-SPEED PINION (15, 19T)

53362 TG10 2-SPEED PINION (16, 20T)

53363 TA03R CARBON CHASSIS SET

53364 TA03 CARBON STEERING BAR

53365 TG10 ALUMINUM RACING STEERING SET

53366 TG10 ALUMINUM GEARBOX MOUNT

53367 TG10 RACING CHASSIS

53368 (TGX, TG10) ALUMINUM BRAKE ARM SET

53369 MONSTER TRUCK ALUMINUM DAMPER SET

53370 R/C LIGHT BULB SET (FOR MONSTER TRUCK)

53371 TOURING CAR RACING REAR WING SET

53372 TG10 HARD ALUMINUM FRONT SUSPENSION ARM

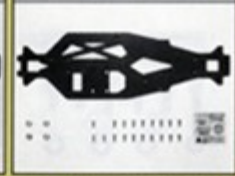
53373 TG10 HARD ALUMINUM REAR SUSPENSION ARM

53374 F-1 FRONT REINFORCED SLICKS TYPE B (1 PAIR)

53375 F-1 REAR REINFORCED SLICKS TYPE B (1 PAIR)

53376 TGX CARBON UPPER DECK

53377 TGX RACING CHASSIS



53378 TG10 ALUMINUM FRONT HUB CARRIER (1 PAIR)

53379 3mm LIGHTWEIGHT DIFFERENTIAL BALL SET

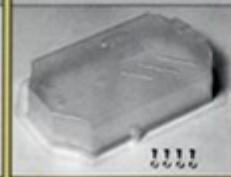
53380 TG10 ALUMINUM REAR UPRIGHT SET

53381 TG10 REINFORCED PROPELLER SHAFT

53382 M04 STABILIZER SET

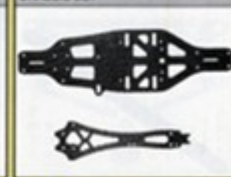
53383 MONSTER TRUCK ALUMINUM SUSPENSION ARM SET

53384 TG10 UNDERCOWL SET



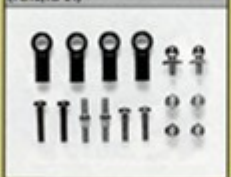
53385 MONSTER TRUCK ALUMINUM STEERING ROD SET

53386 TA03R-S/F-S CARBON CHASSIS SET



53387 TA03R-S/F-S FRP CHASSIS CONVERSION SET

53388 TURNBUCKLE TIE-ROD SET (TG10,TB-01)



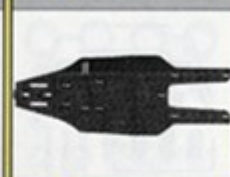
53389 M04 ALUMINUM MOTOR HEAT SINK

53390 (M03, M04) HOLLOW CARBON GEAR SHAFT

53391 FORMULA SUPER LOW FRICTION DAMPER SET

53392 TURNBUCKLE UPPER ARM SET (TG10,TB-01)

53393 F103LM CARBON CHASSIS

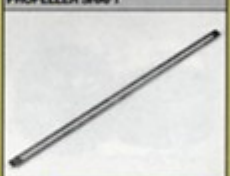


53394 F103LM CARBON UPPER DECK

53395 F103 CARBON FRICTION PLATE

53396 RD 6mm TITANIUM REAR SHAFT

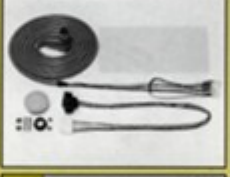
53397 TGX REINFORCED PROPELLER SHAFT



R/C TRACTOR TRUCKS OPTIONAL & SPARE PARTS

56501 TRACTOR TRUCK ELECTRICAL UNIT SET

56502 SEMI-TRAILER LIGHT SET



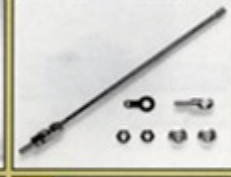
56503 TRACTOR TRUCK OIL SHOCKS

56504 ROOF SPOILER

56505 MOTORIZED SUPPORT LEGS

56506 ANIMAL GUARD

56507 TELESCOPIC ANTENNA



56508 TRUCK ALUMINUM FRONT WHEELS (1 PAIR)

56509 TRUCK ALUMINUM REAR WHEELS (1 PAIR)

GLOW ENGINE PARTS & ACCESSORIES

To keep your glow engined R/C model in the optimum condition, Tamiya provides the line of genuine Glow Engine Parts & Accessories. The fundamental replacement parts, plus optional electric starter unit etc. are available. Periodically check and maintain your model, and always replace any worn parts immediately.
★Tamiya glow engine fuels are not available in some countries.

41001 ENGINE STARTING EQUIPMENT

41003 SPARE GLOW PLUG (MEDIUM)

41004 ALKALINE BOOSTER BATTERY "POWER CHAMP HP" 1.5V

41005 FUEL FILTER

41006 SILICONE FUEL PIPE SET

41007 TM-1 MUFFLER GASKET SET

41008 24mm AIR CLEANER FILTER (2 PCS.)

41009 FS-15 OVER-SIZE HEAT SINK HEAD

41010 ELECTRIC STARTER UNIT

41013 FUEL INDICATOR (FOR TAMIYA, FUTABA, KO)

41014 FUEL INDICATOR (FOR SANWA)

41015 24mm AIR CLEANER

41016 TM-1 MUFFLER

41017 80cc FUEL TANK

★No further production.

41018 THROTTLE SERVO HORN

41019 VR-15S AIR CLEANER ALUMINUM MOUNT

41020 VR-15S OVER-SIZE HEAT SINK HEAD

41021 STARTER ROPE HOLDER

41022 TM-2 RACE TUNED MUFFLER

41023 TM-2 EXHAUST MANIFOLD

41024 Ø13x30mm SILICONE JOINT TUBE

41025 VR-15S SLIDE-VALVE CARBURETOR

41026 TM-3 MUFFLER

41027 TM-3 MUFFLER GASKET

41028 TGX VERTICAL U-SHAPED MANIFOLD

41029 FS-15 AIR CLEANER ALUMINUM MOUNT

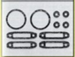
41030 R/C CAR GLOW ENGINE FS-15LT

41031 R/C CAR GLOW ENGINE FS-15RS

41032 TG10 65cc FUEL TANK

41033 TG10 TM-4 MUFFLER SET (FS-12)

41035 TG10 TM-4 MUFFLER GASKET SET



41036 R/C CAR GLOW ENGINE FS-12LT

41037 FS-12LT OVER-SIZE HEAT SINK

41038 WET TYPE AIR CLEANER SET

41039 AIR FILTER OIL

41040 TGX/TG10 GLOW ENGINE STARTER BOX

R/C SPARE PARTS

Chassis Type		Big Tire							2WD Buggy		4WD Buggy		Refer to the bottom of page 87																									Engined			
ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster Bullhead	Stadium Blitzer Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggernaut	Fighter Buggy	Madcap	Manta Ray Dirt Thrasher Blazing Star	Baja Champ	GrC & SPORTS CAR	F102	F103 F103RS F103RX	F103GT	F103L	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-S	TA03R	TA03R-S	FF01	FF02	TL-01	TB-01	M01·M02	M01M·M02M	M02L	M03	M04L	RC BOY'S 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-Mk.1	TG10-Mk.1	Mini Cooper
50025 Double Sided Servo Tape Set	●																																								
50038 Tool Set	●																																								
50068 Ball Link & Adjuster Rod Set		●	●		●		●	●	●	●			●	●	●	●	●													●	●	●						●	●	●	●
50106 7.2V Connector Set		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
50170 Nylon Band Set	●																																								
50171 Heat Resistant Double Sided Tape	●																																								
50186 Silicone Insulated Wire		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
50194 Rubber Bag Set	●																																								
50195 Steel Antenna														●	●		●																								
50197 Snap Pin Set		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●
50204 Directly Connected Servo Saver		●								●			●	●	●	●	●												●	●	●	●						●		●	●
50245 Snap Connector Set		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
50253 Hornet Speed Controller Set (BEC)		●																																							
50320 R/C Light Bulb Set		●	●					●																												●	●				
50354 16T, 17T AV Pinion Gear Set										●	●		16T	●	●	●	●	●	●	●	●	*1	●	●	●		16T		●	16T	16T	16T	16T	17T		16T					
50355 18T, 19T AV Pinion Gear Set						18T	18T			●	●	19T		●	●	●	●	●	●	●	●	*1	●	●	●		18T	19T	●	18T	18T	18T	18T	19T							
50356 20T, 21T AV Pinion Gear Set						20T	20T			●	●	21T		●	●	●	●	●	●	●	●	*1	●	●	●	●	20T	21T	●	20T	20T	20T	20T	21T		20T					
50357 22T, 23T AV Pinion Gear Set										●		23T		●	●	●	●	22T	22T	22T	22T	*1	●	●	●	●		23T	●												
50374 Monster Pin Spike Tires (1 pair)							●																															●			
50380 E-Ring Set				●				●			●		●	●				●	●	●	●	●	●	●	●	●										●	●	●	●	●	●
50386 Racing Developed Dish Wheel Set (4430F/3645R)														50389	50389		50389																								
50388 Racing Developed Differential Ball & Plate Set													●	●	●	●	●																								
50389 Racing Developed 4430 Front Sponge Tire (1 pair)													●	50386	50386		●																								
50390 Racing Developed 3645 Rear Sponge Tire (1 pair)													●	●	●		●																								
50395 Racing Developed Front Upright Set (1 pair)										●			●	●	●	●	●																								
50397 Racing Developed 4428 Front Sponge Tire Set (1 pair)													●	50386	50386		●																								
50398 Racing Developed 4445 Rear Sponge Tire Set (1 pair)													●	50532	50532		●																								
50409 Racing Developed Diff Joint Set													●	●	●																										
50411 Flex Sticker Sheet (Fluorescent Red)	●																																								
50415 Racing Developed 4432 Front Sponge Tire Set (1 pair)													●	50386	50386		●																								
50419 Toyota Celica GT-FOUR Racing Radial Tire Set																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
50420 Toyota Celica GT-FOUR Wheel Set																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
50430 1/10 R/C Body Parts Set Calsonic Skyline GT-R Gr.A																		●	●	●	●	●	●	●	●			●	●					●						●	
50432 Skyline GT-R Wheel Set																		●	●			●	●	●	●	●	●	●	●					●						●	
50441 Racing Developed 3630 Front Sponge Tire (1 pair)														●	●																										
50442 Racing Developed F-1 Spoke Wheel Set (3630F/3645R)														●	●																										
50449 Stadium Blitzer Front Tires (1 pair)				●																																					

50389......Use together with 50389 parts. 16T......Pinion gear indicated can be used. *1......Can not be used on TA03F-PRO chassis.
All-purpose parts......use as spare-parts and maintenance. ✱Please use same size nut and screw as indicated in the instructions.

R/C SPARE PARTS

Chassis Type		Big Tire							2WD Buggy		4WD Buggy		Refer to the bottom of page 87																								Engined		
ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster Bullhead	Stadium Blitzer Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggermaut	Fighter Buggy	Madcap	Monster Ray Dark Thrasher Blazing Star	Baja Champ	Gr.C & SPORTS CAR	F-102	FF111000 Super SX	F-103GT	F-103F	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-S	TA03R	TA03R-S	FF01	FF02	TL-01	TB-01	M01-M02	M01-M02M	M02L	M03	M04L	RC BOYS 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-MK1	TG10-MK1	Mini Cooper
50450 Stadium Blitzer Rear Tires (1 pair)				●																																			
50451 Stadium Blitzer Front Wheels (1 pair)				●																																			
50452 Stadium Blitzer Rear Wheels (1 pair)				●																																			
50454 Racing Slick Tire Set (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●					●	
50456 Mercedes-Benz 190E AMG Wheel Set (1 pair)																		●	●			●	●	●	●	●	●	●	●					●					●	
50468 BMW M3 Mesh Wheel Set (1 pair)																		●	●			●	●	●	●	●	●	●	●					●					●	
50473 Hi-Torque Servo Saver											●		●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●		●		●	●	●	●
50476 Rally Block Tires (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●										●	
50477 24T, 25T AV Pinion Gear Set																		53127	53127	53127	53127	*1	●	●	●	●			●											
50478 Skyline Spare Rear Gear Case																		●	●	●	●																			
50482 Skyline Body Mount Set																		●	●	●	●					●														
50485 Toyota Celica GT-FOUR RC Body Parts Set																		●	●			●		●				●	●										●	
50487 Window Masking Seal Set A																		●																						
50488 Window Masking Seal Set B																		●	●																					
50491 Mugen Civic Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●					●	
50493 FWD Touring Car Spare Gear Set																										●														
50496 Dyna Blaster Front Wheels (1 pair)																																							
50497 Dyna Blaster Rear Wheels (1 pair)				●																																			
50500 Lotus 107B Ford Body Parts Set															●																								
50503 F-1 Front Suspension Arm Set (F103 Chassis)															●	●	●																							
50504 F-1 Spare Gear Case (F103 Chassis)															●	●	●																							
50505 F-1 T-Bar (F103 Chassis)															●	●	●																							
50506 F-1 Spare Gear Set														●	●	●	●																							
50507 F-1 Diff Joint Set (F103 Chassis)															●	●	●																							
50508 F-1 Super King Pin Set															●	●	●																							
50509 F-1 Front Spring Set													●	●	●	●	●																							
50512 Alfa Romeo 155 Wheels (1 Pair)																		●	●			●	●	●	●	●	●	●	●					●					●	
50519 C.V.A. Mini Shock Unit Set II				●	●	●	●		●	●		●	●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●	●
50520 C.V.A. Short Shock Unit Set II		●		●	●				●	●	●																								●					
50522 Castrol Celica Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●					●	
50523 Sauber C12 Body Parts Set															●																								
50524 Sauber C12 Bumper Wing Set														●	●																								
50525 Sauber C12 Rear Wing Set														●	●																								
50529 4WD Touring & Rally Car Plastic Gear Set																		●	●	●	●																		
50532 Lola T93/00 Wheels (1 Pair, 4430F/4445R)																	●																						
50536 Blitz Toyota Supra Gr. N Body Parts Set																		●	●			●		●				●	●										●	
50540 AMG Mercedes-Benz C-Class DTM D2 Body Parts Set																		●	●			●		●				●	●										●	
50541 4WD Touring & Rally Car Front Gear Case (TA01 & 02 Chassis)																		●	●	●	●																		
50545 Formula Mesh Wheel Set (3630F/3645R)														●	●																								
50547 Wide Racing Slick Tires w/Inner Sponge (1 pair)																		●	●	●	●	●	●	●	●	●														
50548 2-Piece Mesh Wheels (1 Pair, 4WD/FWD Touring & Rally Car)																		●	●	●	●	●	●	●	●	●	●	●	●					●					●	
50549 2-Piece Wide Mesh Wheels (1 Pair, 4WD Touring Car)																		●	●	●	●	●	●	●	●	●														
50551 Ford Mondeo BTCC Touring Car Body Parts Set																		●	●			●		●		●	●	●												
50554 4WD & FWD Touring & Rally Car Rear Uprights (C Sprue)											●							●	●	●	●					●														
50555 4WD-TA02 & FWD Touring & Rally Car Front Uprights (1 pair)																			●			●	●	●	●	●										●				
50556 4WD-TA02 Touring & Rally Car Rear Suspension Arms (K Sprue)																			●	●																				
50557 Castrol Primera Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●					●	
50560 1/8 Body Parts Set "Tabac-Original Sonax AMG Mercedes C-Class DTM"																																					●		
50561 1/8 Body Parts Set "Alfa Romeo 155 V6 TI"																																					●		
50562 1/8 Body Parts Set "Opel Calibra V6 DTM"																																					●		
50563 TGX Racing Radial Tires w/Inner Sponge (1 pair)																																					●		
50564 1/8 Scale AMG Mercedes C-Class DTM Dish Wheels (1 pair)																																					●		
50565 1/8 Scale Alfa Romeo 155 Wheels (1 pair)																																					●		
50566 1/8 Scale Opel Calibra V6 DTM Wheels (1 pair)																																					●		
50568 M-Chassis Radial Tires (1 pair)																														●									
50569 Mini Cooper Wheels (1 pair)																														●	●	●	●						
50573 2x8mm Tapping Screw (10 pcs.)										●	●	●		●	●	●	●	●	●	●	●	*1	●	●	●		●	●		●	●	●	●		●		●	●	●	●
50574 2x8mm Countersunk Tapping Screw (10 pcs.)																													●								●	●	●	●
50575 2.6x10mm Tapping Screw (5 pcs.)		●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
50576 3mm Grub Screw (10 pcs.)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
50577 3x10mm Tapping Screw (10 pcs.)				●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●	●
50578 3x10mm Countersunk Tapping Screw (10 pcs.)										●			●	●	●	●	●					*2																	●		
50579 3x10mm Step Screw (5 pcs.)																													●								●	●	●	●
50580 3x10mm Hex Bolt (10 pcs.)																																					●	●	●	●
50581 3x12mm Countersunk Tapping Screw (10 pcs.)																													●								●	●	●	●
50582 3x14mm Step Tapping Screw (5 pcs.)				●	●	●	●			●	●	●						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●	●
50583 3x15mm Tapping Screw (10 pcs.)				●		●		●						●				●	●	●	●	●	●	●	●	●							●				●		●	●	●	●
50584 3x30mm Cap Screw (2 pcs.)																																						●	●	●	●
50585 4x10mm Step Screw (5 pcs.)						●													●		●	●	●	●	●	●										●	●		●	●	●	●
50586 3mm Washer (15 pcs.)		●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●

53127.....Use together with 53127 parts. *1.....Can not be used on TA03F-PRO chassis. *2.....Can be used on TA03F-PRO chassis.
All-purpose parts.....use as spare parts and maintenance. ★Please use same size nut and screw as indicated in the instructions.

Chassis Type		Big Tire							2WD Buggy		4WD Buggy		Refer to the bottom of page 87																									Engined			
R/C SPARE PARTS ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster / Bullhead	Stadium Blitzer / Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggernaut	Fighter Buggy	Madcap	Manta Ray / Dirt Thrasher / Blazing Star	Baja Champ	Q.C.& SPORTS CAR	F102	F103 / F103RS / F103RX	F103GT	F103L	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-S	TA03R	TA03R-S	FF01	FF02	TL01	TB01	M01·M02	M01M·M02M	M02L	M03	M04L	RC BOY'S 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-Mk.1	TG10-Mk.1	Mini Cooper
50587 3mm Spring Washer (15 pcs.)										●												*2																●	●	●	●
50588 2mm E-Ring (15 pcs.)				●									●	●				●	●	●	●	●	●	●	●	●												●	●	●	●
50589 5mm E-Ring (5 pcs.)								●																														●	●	●	●
50590 4mm Ball Connector (5 pcs.)		●	●				●			●			●	●	●	●	●													●	●	●						●	●	●	●
50591 5mm Ball Collar (5 pcs.)																																							●		
50592 5mm Ball Connector (10 pcs.)			●	●		●	●	●			●							●	●	●	●	●	●	●	●	●	●		●	●	●	●		●		●		●	●	●	●
50593 4x6mm Flanged Tube (5 pcs.)				●				●				●						●	●	●	●	●	●	●	●	●													●		
50594 2x10mm Shaft (10 pcs.)		●		●		●	●				●	●						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●		●	●	●	●
50595 Nylon Band w/Metal Hook (10 pcs.)	●																																								
50596 5mm Adjuster (6 pcs.)				●		●	●																				●		●					●				●	●	●	●
50597 Damper O-Ring (Red, 10 pcs.)				●							●		●	●				●	●	●	●	●	●	●	●	●			●							●		●	●	●	●
50598 CVA Mini Shock Unit II V Parts (Damper Collar)				●															●	●	●	●	●	●	●	●			●									●	●	●	●
50599 CVA Mini Shock Unit II W Parts (Damper Cylinder)				●															●	●	●	●	●	●	●	●			●							●		●	●	●	●
50600 CVA Mini Shock Unit II Oil Seal (6 pcs.)				●															●	●	●	●	●	●	●	●			●							●		●	●	●	●
50601 CVA Mini Shock Unit II Piston Rod (2 pcs.)				●														●	●	●	●	●	●	●	●	●												●	●		
50602 Differential Bevel Gear Set				●	●	●	●		●		●	●						●	●	●	●	*1	●	●	●		●	●	●	●	●	●	●	●		●	●	●	●	●	●
50603 TGX Propeller Shaft																																							●		
50604 TGX Wheel Axle (2 pcs.)																			●		●	●	●	●	●	●										●			●		
50605 Screw Pin Set (55mm, 32mm, 22mm)																																							●		
50606 TGX A Parts (Gear Case)																																							●		
50607 TGX B Parts (F & R Suspension Arms)																																							●		
50609 TGX D Parts (Body Mount)																																							●		
50610 TGX E Parts (Bumper & Side Guard)																																							●		
50611 TGX Mechanism Box																																							●		
50612 TGX G Parts (50T Spur Gear & Diff Case)																																							●	●	●
50613 TGX R Parts (Rear Upright & Front Knuckle Arm)																																							●		
50614 10mm Dia. Silicone Exhaust Pipe																																						●	●	●	●
50615 TGX Upper Plate																																							●		
50616 TGX-Mk.1 Chassis Plate																																							●		
50617 TGX Engine Mount (2 pcs.)																																						●	●	●	●
50618 TGX Joint Cup (Long & Short)																																							●		
50619 TGX Clutch Shoe Set																																						●	●	●	●
50620 16T Clutch Bell																																						●	●	●	●
50621 TGX Suspension Arm Stay																																							●		
50622 TGX Throttle Linkage																																							●	●	●
50623 TGX Damper Spring (2 pcs.)							●																																●		
50624 TGX Center Beam																																							●		
50625 TGX Drive Shaft (2 pcs.)																																							●		
50626 TGX Pilot Shaft (For Tamiya)																																						●	●	●	●
50627 TGX Brake Cam & Shaft Set																																						●	●	●	●
50628 TGX Brake Pad (2 pcs.)																																						●	●	●	●
50629 TGX Propeller Joint (F or R)																																						●	●	●	●
50630 TGX Bevel Pinion & Ring Gear Set																													●									●	●	●	●
50631 M-Chassis Spare Gear Set																														●	●	●									
50632 M-Chassis Drive Shaft & Cup Set																														●	●	●	●	●							
50633 4mm Adjuster (6 pcs.)		●	●				●			●			●	●	●	●	●																					●	●	●	●
50634 1/10 Opel Calibra Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●						●	
50636 5-Spoke One-Piece Wheels																		●	●			●	●	●	●	●	●	●	●					●						●	
50637 TA02 & FWD Touring Car Chassis/Frame																			●	●	●					●															
50638 FWD Touring Car A Parts (Gear Case)																										●															
50640 FWD Touring Car D Parts (F & R Suspension Arms)																										●															
50641 FWD Touring Car E Parts (Mechanism Deck)																										●															
50642 1/10 Touring Car U-Shaped Shaft											●							●	●	●	●					●															
50643 TA02 & FWD Touring Car Drive Shaft Set																			●	●	●	●	●	●	●	●										●					
50644 1/10 Touring Car D Parts (Body Mount)																			●	●	●																				
50645 1/10 Touring Car 17mm Thrust Washer (4 pcs.)																		●	●	●	●	53267	53267	53267	53267	●	53267	53267		53267	53267	53267	53267	53267							
50648 TA01 Touring Car Front Upright (Red)											●							●		●	●																				
50649 TA02/TA02W Touring Car F Parts (Front Suspension Arm)																			●	●	●																				
50650 4WD Touring Car Drive Shaft Set																		●	●	●	●						●	●	●												
50651 M-Chassis A Parts (Chassis)																														●											
50652 M-Chassis B Parts (Gear Case)																														●	●	●									
50653 M-Chassis C parts (Upright)																														●	●	●									
50654 M-Chassis D Parts (Suspension Arm)																														●	●	●									
50655 F103 Chassis D Parts (Battery Holder)															●	●	●																								
50656 1/10 R/C F-1 Body Parts Set "Tyrrell Yamaha 023"															●																										
50657 Tyrrell Yamaha 023 Bumper Wing Set															●																										
50658 Tyrrell Yamaha 023 Rear Wing Set														●	●																										
50660 Benetton Renault B195 Bumper Wing Set															●																										
50661 Benetton Renault B195 Rear Wing Set														●	●																										
50663 1/10 Fiat Abarth Corsa Wheels (1 pair)																														●	●	●	●								

53127......Use together with 53127 parts. *1......Can not be used on TA03F-PRO chassis. *2......Can be used on TA03F-PRO chassis.
All-purpose parts......use as spare-parts and maintenance. ★Please use same size nut and screw as indicated in the instructions.

R/C SPARE PARTS

Chassis Type		Big Tire								2WD Buggy		4WD Buggy		Refer to the bottom of page 87																								Engined			
ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster Bullhead	Stadium Blitzer Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggernaut	Fighter Buggy	Madcap	Manta Ray Dark Thrasher Blazing Star	Baja Champ	Gr.C & SPORTS CAR	F103	FF103/3RS/SX	F103GT	F103L	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-S	TA03R	TA03R-S	FF01	FF02	TL-01	TB-01	M01-M02	M01-M02M	M02L	M03	M04L	RC BOY'S 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-Mk-1	TG10-Mk-1	Mini Cooper
50664 1/8 Nismo Clarion GT-R LM Wheels (1 pair)																													50654									●		
50665 1/8 R/C Body Parts Set "Nismo Clarion GT-R LM"																																						●		
50666 1/8 R/C Body Parts Set "Castrol Toyota TOM's Supra GT"																																						●		
50667 1/10 Fiat Abarth 1000 TCR Berlina Corsa Body Parts Set																													50654											
50668 1/10 HKS Opel Vectra JTCC Body Parts Set																		●	●			●		●		●	●	●												
50669 Formula Mesh Wheel Set, White (3630F/3645R)														●	●																									
50671 1/10 Rover Mini Cooper '94 Monte-Carlo Body Parts Set																													50654											
50672 1/10 5-Spoke Two-Piece Wheels (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
50673 1/10 5-Spoke Two-Piece Wheels, Wide (1 pair)																		●	●	●	●	●	●	●	●	●														●	
50674 1/10 Volkswagen Golf VR6 Body Parts Set																										●															
50675 1/10 Celica Spoke Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●						●	
50676 1/10 Rover Mini Cooper '94 Monte-Carlo Plated Wheels (1 pair)																														●	●	●	●								
50678 Toyota Tom's Exiv JTCC Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●						●	
50679 Body Parts Set Ligier Mugen Honda JS41														●	●																									
50680 Ligier Mugen Honda JS41 Bumper Wing Set														●	●																									
50681 Ligier Mugen Honda JS41 Rear Wing Set														●	●																									
50683 M-Chassis 60D Radial Tires (1 pair)																														●	●	●	●								
50684 M-Chassis 60D M-Grip Radial Tires (1 pair)																														●	●	●	●								
50685 Alpine A110 Wheels (1 pair)																														●	●	●	●								
50686 M-Chassis 60D Inner Sponge Set																														●	●	●	●								
50688 Alpine A110 Body Parts Set																														●											
50689 Alpine A110 E Parts (Rear Body Mount & Front Bumper)																														●		●									
50690 Ford SVT Mustang Cobra R Body Parts Set																		●	●			●		●		●		●	●											●	
50691 Castrol Toyota Tom's Supra GT body Parts Set																				●																					
50695 TAISAN Starcard Porsche 911 GT2 Body Parts Set																					●		●		●															
50696 Volkswagen Beetle Body Parts Set																																●									
50697 M-Long Chassis A Parts (Chassis/Frame)																																●									
50698 TA03 A Parts (Gear Case)																						●	●	●	●															
50699 TA03F B Parts (Rear Gear Case)																						●	●																	
50700 TA03 C Parts (Upright)																						●	●	●	●															
50701 TA03 D Parts (Suspension Parts)																						●	●	●	●															
50702 TA03 F Parts (Pulley)																						●	●	●	●															
50703 TA03 PRO J Parts (Battery Holder)																						*2																		
50704 TA03 PRO L Parts (Gear)												53267										*1	53267	53267	53267		53267	53267		53267	53267	53267	53267	53267						
50705 TA03 Knuckle Arm																						●	●	●	●															
50706 TA03 Drive Belt																						●		●																
50707 KURE NISMO GT-R Body Parts Set																		●	●			●		●				●	●											●	
50708 Honda S800 Racing Wheels (1 pair)																														●	●	●	●								
50710 TGX Racing Slicks w/Inner Sponge (1 pair)																																						●		
50711 Repsol Ford Escort RS Cosworth Wheels (1 Pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
50713 1/8 Calsonic Skyline GT-R Body Parts Set																																						●		
50714 Eunos Roadster Wheels (1 pair)																														●	●	●	●								
50716 M-Medium Chassis A Parts (Chassis/Frame)																															●									
50717 TA03 E Parts (Bumper)																						*1	●	●	●															
50718 TA03 G Parts (Gear)																						*1	●	●	●															
50719 TA03 Buthtub Chassis																						*1																		
50723 1/10 Scale R/C Williams-Renault FW18 Body Parts Set															●																									
50724 1/10 Scale PIAA Accord VTEC Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●						●	
50725 1/8 Scale Glow-Engine R/C Body Parts Set Kure Nismo GT-R																																						●		
50726 1/10 Scale Alfa Romeo Giulia Sprint GTA Wheels (1 pair)																														●	●	●	●								
50727 PIAA Accord VTEC Body Parts Set																		●	●			●		●		●	●	●	●											●	
50728 1/8 Porsche 911 GT1 Rear Wheels (1 pair)																																						●		
50729 1/8 Porsche 911 GT1 Body Parts Set																																						●		
50730 Alfa Romeo Giulia Sprint GTA Body Parts Set																															●									
50732 Touring Car 10-Spoke One-Piece Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●						●	
50733 Jaccs Accord Body Parts Set																		●	●			●		●		●	●	●	●											●	
50734 Martini Alfa Romeo 155V6Ti Body Parts Set																		●	●			●		●				●	●											●	
50735 TL01 A Parts (Chassis)												●																●													
50736 TL01 B Parts (Upright)						●	●					●															●	●						●	●						
50737 TL01 C Parts (Suspension Arm)						●																					●	●												
50738 TL01 G Parts (Gear)												●																●													
50739 Calsonic Skyline GT-R Wheels (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
50740 Calsonic Skyline GT-R Body Parts Set																		●	●			●		●			●	●	●											●	
50741 Porsche 911 GT1 Front Wheels (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
50742 Porsche 911 GT1 Rear Wheels (1 pair)																				●	●				●															
50743 TA03-R B Parts (Front Gear Case)																								●	●															
50744 TA03 L Parts (Body Mount)																						●	●	●	●															
50745 TA03 Short Bathtub Chassis																							●		●															
50746 C.V.A. Super Mini Shock Unit Set																						●		●	●	●		●			●	●	●	●						
50747 Porsche 911 GT1 Body Parts Set																									●															

50389.....Use together with 50389 parts. ●1.....Can not be used on TA03F-PRO chassis. ●2.....Can be used on TA03F-PRO chassis.
All-purpose parts.....use as spare parts and maintenance. ★Please use same size nut and screw as indicated in the instructions.

R/C SPARE PARTS

ITEM.	All-purpose parts	Big Tire: Midnight Pumpkin	Big Tire: Clod Buster Bullhead Stadium Blitzer Blitzer Beetle	Big Tire: Madbull	Big Tire: Wild Willy 2	Big Tire: Wild Dagger	Big Tire: Juggernaut	2WD Buggy: Fighter Buggy	2WD Buggy: Madcap	4WD Buggy: Manta Ray Dark Thrasher Blazing Star	4WD Buggy: Baja Champ	Refer to the bottom of page 87: GC1 SPORTS CAR	F102	FF111000 3302 SX	F103GT	F103FL	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-S	TA03R	TA03R-S	FF01	FF02	TL-01	TB-01	M01-M02	M01-M02M	M02L	M03	M04L	RC BOY'S 4WD	Cross-Country	Tractor Trucks	Engined: TGM-01	TGX-Mk.1	TG10-Mk.1	Mini Cooper
50748 Honda S-MX Lowdown Wheels (1 pair)																													●	●	●	●	●							
50749 Porsche Boxster Front Wheels (1 pair)																	●	●	●	●	●	●	●	●	●	●	●	●			*4		●						●	
50750 Porsche Boxster Rear Wheels (1 pair)																			●	●				●							*4									
50751 1/8 Opel Calibra Cliff Body Parts Set																																					●		
50752 Alfa Romeo 155V6Ti Bosch Body Parts Set																	●	●			●		●				●	●											●	
50753 Honda S-MX Lowdown Body Parts Set																														●										
50754 Porsche Boxster Body Parts Set																															●		●							
50755 Mercedes-Benz SLK Wheels (1 pair)																			●	●				●				●			*4		●						●	
50756 Mercedes-Benz SLK Body Parts Set																															●		50823							
50757 Mitsubishi Lancer Evo.IV Body Parts Set																	●	●			●		●				●	●											●	
50758 1/8 Nissan R390 GT1 Body Parts Set																																					●		
50759 Voltec Fighter Body Parts Set																																		●						
50760 R/C Boy's 4WD Spare Gear Set																																		●						
50761 R/C Boy's 4WD Front Slicks (1 pair)																																		●						●
50762 R/C Boy's 4WD Rear Slicks (1 pair)																																		●						
50763 Voltec Fighter Front Wheels (1 pair)																																		●						
50764 Voltec Fighter Rear Wheels (1 pair)																																		●						
50765 PIAA Nakajima Reynard 97D Body Parts Set														●																										
50766 King Blackfoot Plated Wheels (1 pair)																																								
50767 King Blackfoot Plated Roll Bar																																								
50768 TA03R Bathtub Chassis																								●																
50769 Nissan R390 GT1 Body Parts Set																								●															●	
50770 Celica GT-FOUR '97 Monte-Carlo Wheels (1 pair)																	●	●			●	●	●	●	●	●	●	●					●						●	
50771 Celica GT-FOUR '97 Monte-Carlo Body Parts Set																	●	●			●		●			●	●	●											●	
50772 @VEX Dome Mugen NSX Front Wheels (1 pair)																	●	●			●	●	●	●	●	●	●	●					●						●	
50773 @VEX Dome Mugen NSX Rear Wheels (1 pair)																			●	●			●	●																
50774 Porsche 911 Carrera Body Parts Set																															●		●							
50775 1/8 @VEX Dome Mugen NSX Body Parts Set																																					●			
50776 @VEX Dome Mugen NSX Body Parts Set																								●															●	
50777 Thunder Blitz Front Wheels (1 pair)																																		●						
50778 Thunder Blitz Rear Wheels (1 pair)																																		●						
50779 Thunder Blitz Body Parts Set																																		●						
50780 1/10 Scale R/C Peugeot 406 ST Body Parts Set																	●	●			●		●				●	●											●	
50781 Formula Mesh Wheel Set, Gold (3630F/3645R)													●	●																										
50782 1/10 Scale R/C Subaru Impreza WRC Body Parts Set																	●	●			●		●				●	●											●	
50783 1/10 Scale Volkswagen Golf V5 Wheels (1 pair)																	●	●	●	●	●	●	●	●	●	●	●	●					●						●	
50784 1/8 Scale Glow Engine R/C Body Parts Set Mercedes CLK-GTR																																					●			
50786 1/10 Scale R/C Mercedes CLK-GTR Body Parts Set																								●															●	
50787 1/10 Scale R/C Volkswagen Golf V5 Body Parts Set																										●	●													
50788 TGX Upper Deck Set																																					●			
50789 1/10 Scale Volkswagen New Beetle Wheels (1 pair)																	●	●	●	●	●	●	●	●	●	●	●	●					●						●	
50790 1/10 Scale R/C Volkswagen New Beetle Body Parts Set																										●	●	●												
50791 1/10 Scale R/C Toyota Corolla WRC Body Parts Set																							●		●															
50792 M03 A Parts (Chassis)																										●						●								
50793 M03 C Parts (Suspension Arm)																																●	●							
50794 M03 G Parts (Gear)																										●						●	●							
50795 1/10 Scale R/C Rover Mini Cooper Racing Body Parts Set																													●			●								●
50796 1/10 Scale Ford Escort WRC Body Parts Set																	●	●			●		●				●													
50797 5mm Short Adjuster (8 pcs.)													●				●	●	●	●						●			●	●	●						●		●	●
50798 1/10 Scale R/C Mobil 1 NSX Body Parts Set																								●															●	
50799 FF02 D Parts (Center Frame)																										●														
50800 1/10 Scale Glow-Engine R/C TG10 Gear Case																												●									●		●	●
50801 1/10 Scale Glow-Engine R/C TG10 Front Wheel Hub																												●									●		●	●
50802 1/10 Scale Glow-Engine R/C TG10 Front Upright																												●											●	●
50803 1/10 Scale Glow-Engine R/C TG10 Bumper																												●											●	
50804 1/10 Scale Glow-Engine R/C TG10 U-Shaped Shaft																												●									●		●	●
50805 1/10 Scale Glow-Engine R/C TG10-Mk.1Chassis																																							●	●
50806 1/10 Scale Glow-Engine R/C TG10 Drive Shaft (2 pcs.)						●											●	●	●	●						●	●	●											●	●
50807 1/10 Scale Glow-Engine R/C TG10 Front Propeller Joint																												●									●		●	●
50808 1/10 Scale Glow-Engine R/C TG10 Long Wheel Axle (2 pcs.)						●																					53345	●					●						●	
50809 1/10 Scale R/C Peugeot 306 Maxi WRC Body Parts Set																										●														
50810 Racing Semi-Slick Tires (1 pair)																	●	●	●	●	●	●	●	●	●	●	●	●					●						●	
50811 1/10 Scale Glow Engine R/C Mercedes CLK-GTR TEAM SPORTSWEAR Body Parts Set																								●															●	
50812 1/10 Scale Glow Engine R/C RAYBRIG NSX Body Parts Set																								●															●	
50814 1/10 Scale Glow-Engine R/C TG10 Front Suspension Arm																												●											●	●
50815 1/10 Scale Glow-Engine R/C TG10 Rear Suspension Arm																												●											●	●
50816 1/10 Scale Glow-Engine R/C TG10 Steering Arm																												●									●		●	●
50817 1/10 Scale Glow-Engine R/C TG10 Front Hub Carrier																												●											●	●
50818 1/10 Scale Glow-Engine R/C TG10-Mk.1 Upper Deck																																					●		●	●
50819 1/10 Scale Glow-Engine R/C TG10-Mk.1 Battery Case Cover																																					●		●	●

50389.....Use together with 50389 parts. *4.....Can be used on Porsche Boxster, Mercedes-Benz SLK and Porsche 911 Carrera.
All-purpose parts.....use as spare parts and maintenance. ★Please use same size nut and screw as indicated in the instructions.

R/C SPARE PARTS

Chassis Type		Big Tire							2WD Buggy		4WD Buggy		Refer to the bottom of page 87																									Engined			
ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster Bullhead	Stadium Blitzer Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggernaut	Fighter Buggy	Madcap	Manta Ray Dirt Thrasher Blazing Star	Baja Champ	Gr.C & SPORTS CAR	F102	F103 F103RS F103RX	F103GT	F103L	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-S	TA03R	TA03R-S	FF01	FF02	TL-01	TB-01	M01-M02	M01M-M02M	M02L	M03	M04L	RC BOY'S 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-Mk.1	TG10-Mk.1	Mini Cooper
50820 Pennzoil Nismo GT-R Body Parts Set																		●	●			●		●				●	●											●	
50821 1/10 Scale R/C Mitsubishi Lancer Evolution V WRC Body Parts Set																		●	●			●		●		●		●	●											●	
50822 3x10mm Hex Head Tapping Screw (10 pcs.)																																			●			●		●	●
50823 TG10 Wheel Axle (2 pcs.)							●				●	●						●	●	●	●						●	●	●	●	●	●	●	●				●		●	●
50824 Toyota GT-One TS020 Body Parts Set																●																									
50825 1/10 Scale R/C SUZUKI wagonR RR Wheels (1 pair)																														●	●	●	●								
50826 1/10 Scale R/C Porsche 911 GT1 '98 LM Winner Body Parts Set																●																									
50827 1/10 Scale R/C Castrol Mugen NSX Body Parts Set																								●				●												●	
50828 F103 GT Car Spare Bumper																●																									
50829 F103 GT Car Antenna Holder Set																●																									
50830 1/10 Scale R/C LEXUS GS 400 Body Parts Set																						●		●		●	●	●	●											●	
50831 1/10 Scale R/C SUZUKI wagonR RR Body Parts Set																														●			●								
50832 1/8 Scale R/C RAYBRIG NSX Body Parts Set																																							●		
50833 1/10 Scale R/C McLaren Mercedes MP4/13 Body Parts Set															●																										
50834 1/8 Scale R/C Subaru Impreza WRC '99 Body Parts Set																																							●		
50835 1/8 Scale R/C Subaru Impreza WRC '99 Wheels (1 pair)																																							●		
50836 1/10 Scale R/C HONDA S2000 Body Parts Set																																●		●							
50837 1/10 Scale R/C LEXUS IS200 Body Parts Set																		●	●			●		●			●	●	●											●	
50838 TGX & TG10 Gear Cover Set																																							●	●	●
50839 TGX Rally Block Tires (1 pair)																																							●		
50840 TG10 Mini Bumper																													●									●		●	●
50841 1/8 Scale R/C Rover Mini Cooper Racing Body Parts Set																																									●
50842 TGX Undercowl Set																																							●		
50843 Rover Mini Cooper Racing Wheels (1 pair)																																									●
50844 1/10 Scale BMW M roadster Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●						●	
50845 1/10 Scale R/C Pennzoil Nismo GT-R (R34) Body Parts Set																						●		●				●	●											●	
50846 1/10 Scale R/C Calsonic Skyline GT-R (R34) Body Parts Set																						●		●				●	●											●	
50847 1/10 Scale R/C Ford Focus WRC Body Parts Set																						●		●				●													
50848 1/10 Scale R/C BMW M roadster Body Parts Set																																●		●							
50849 M-04 A Parts (Gear Set)																																		●							
50850 M-04 E Parts (Body Mount)																																		●							
50851 M-04 F Parts (Chassis)																																		●							
50852 TG-10 Body Mount (B3-B12, B16)																													●											●	●
50853 1/10 Scale R/C Alfa Romeo 156 Racing Body Parts Set																						●		●		●	●	●	●											●	
50854 1/10 Scale R/C Subaru Impreza WRC '99 Body Parts Set																						●		●				●	●											●	
50855 TL01 E Parts (Body Mount)						●																					●	●													
50856 1/10 Scale R/C Peugeot 206 WRC Body Parts Set																							●		●																
50857 1/10 Scale R/C TOYOTA Celica Body Parts Set																						●		●		●	●	●	●											●	
50858 1/10 Scale R/C Toyota GT-One TS020 '99 Body Parts Set																●																									
50859 1/10 Scale R/C Audi R8R Body Parts Set																●																									
50860 TB-01 G Parts (Gear)																													●												
50861 1/10 Scale Mitsubishi Lancer Evolution VI WRC Wheels (1 pair)																		●	●			●	●	●	●	●	●	●	●					●						●	
50862 1/10 Scale R/C Mitsubishi Lancer Evolution VI WRC Body parts set																						●		●				●	●											●	

All-purpose parts......use as spare-parts and maintenance. ★Please use same size nut and screw as indicated in the instructions.

HOP-UP OPTIONS

Chassis Type		Big Tire							2WD Buggy		4WD Buggy		Refer to the bottom of page 87																									Engined			
ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster Bullhead	Stadium Blitzer Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggernaut	Fighter Buggy	Madcap	Manta Ray Dirt Thrasher Blazing Star	Baja Champ	GrC & SPORTS CAR	F102	F103 F103RR SX	F103GT	F103L	TA01	TA02	TA02W	TA02SW	TA03F	TA03FS	TA03R	TA03RS	FF01	FF02	TL01	TB01	M01 M02	M01M M02M	M02L	M03	M04L	RC BOY'S 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-Mk.1	TG10-Mk.1	Mini Cooper
53008 1150 Sealed Ball Bearing Set (4 pcs.)		●		●	●	●	●	●	●	●	●	●	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
53011 3x6mm Titanium Round Head Screw (10 pcs.)		●	●					●		●	●			●			●	●	●	●	●								●							●					
53012 3x10mm Titanium Round Head Screw (10 pcs.)		●	●	●				●		●				●	●		●					*2								●	●	●							●		
53013 3x15mm Titanium Round Head Screw (10 pcs.)		●	●					●						●				●	●	●	●																				
53014 3x20mm Titanium Round Head Screw (10 pcs.)			●	●				●																		●										●					
53015 3x8mm Titanium Tapping Screw (10 pcs.)		●	●			●		●		●				●	●		●																								
53016 3x12mm Titanium Tapping Screw (10 pcs.)		●	●	●				●		●				●	●	●	●					●	●	●	●																
53017 3x15mm Titanium Tapping Screw (10 pcs.)				●		●		●									●	●	●	●	●	●	●	●	●	●							●			●		●	●	●	●
53018 3x10mm Titanium Countersunk Tapping Screw (10 pcs.)										●				●	●		●					*2																	●		
53019 3x18mm Titanium Countersunk Head Screw (10 pcs.)																																									
53020 3x8mm Titanium Countersunk Head Screw (10 pcs.)								●							●		●																								
53021 3mm Aluminum Nut (20 pcs.)		●	●	●				●						●	●		●																						●		
53022 3mm Aluminum Lock Nut (10 pcs.)			●					●						●																								●			
53023 4mm Aluminum Nut (20 pcs.)													●	●	●	●	●													●	●	●									
53024 4mm Aluminum Flange Lock Nut (10 pcs.)	●																																								
53025 Silicone Damper Oil Soft Set (#200, #300)				●							●		●	●				●	●	●	●	●	●	●	●	●			●							●		●	●	●	●
53026 Silicone Damper Oil Medium Set (#400, #500)				●							●		●	●				●	●	●	●	●	●	●	●	●			●							●		●	●	●	●
53027 Silicone Damper Oil Hard Set (#600, #700)				●							●		●	●				●	●	●	●	●	●	●	●	●			●							●		●	●	●	●
53029 1150 Sealed Ball Bearing Set (2 pcs.)		●		●	●	●	●	●	●	●	●	●	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
53030 850 Sealed Ball Bearing Set (4 pcs.)		●	●	●	●			●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●		●	●	●	●
53037 Hi-Cap Damper (Short)		●		●	●				●	●	●																														
53042 Ball Diff. Grease										●			●	●	●	●	●	●	●	●	●	●	●	●	●	●															
53047 730 Sealed Ball Bearing Set (4 pcs.)											53071							53071	53071	53071	53071	●	●	●	●														●		
53053 Mini Hi-Cap Damper Spring Set				53036	53036				53036	53036				53036																											
53054 Short Hi-Cap Damper Spring Set		53037		53037	53037				53037	53037	53037																														
53056 Pin Type Wheel Adapter				●			●				●	●						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●	●	●	●
53062 7010W Rotor for Dynatech 02H Motor										53044	53044	53044	53044	53044	53044	53044	53044	53044	53044	53044	53044	53044	53044	53044	53044	53044	53044	53044		53044	53044	53044	53044	53044							
53063 12T, 13T H.P. Steel Pinion Gear Set													●	●	●	●	●																								
53064 14T, 15T H.P. Steel Pinion Gear Set													●	●	●	●	●																								
53065 1260 Sealed Ball Bearing Set (2 pcs.)			●					●					●	●	●	●	●	53121	●			●	●	●	●	●			●								●	●	●	●	●
53066 1280 Sealed Ball Bearing Set (3 pcs.)													●	●	●	●	●												●									●	●	●	●
53068 RS-540 Sport-Tuned Motor				●						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●	●	53314						
53070 Manta Ray Ball Diff. Set											●	●						●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●							
53071 Manta Ray Torque Splitter Set											●							●	●	●	●																				
53072 Manta Ray Differential Ball & Plate Set											53070							●	●	●	●	53070	53070	53070	53070	●	53070	53070		53070	53070	53070	53070	53070							
53075 Hi-Cap Damper (Mini) Plastic Parts Set				53036	53036				53036	53036				53036																											
53076 Hi-Cap Damper (Short) Plastic Parts Set		53037		53037	53037				53037	53037	53037																														
53079 Manta Ray Stainless Steel Propeller Shaft Set											●							●																							
53085 6014 2WD Front Star-Dish Wheels (1 pair)									●	53083																															
53086 6029 Rear Star-Dish Wheels (1 pair)									●	53093	●	●																													
53089 6024 4WD Front Star-Dish Wheels (1 pair)											●	●																													
53090 Racing Developed Tire Cap													●	●	●		●																								
53092 6024 4WD Spire Spike Front Tires (1 pair)											●	●																													
53093 6029 Spire Spike Rear Tires (1 pair)									●	53086	●	●																													
53095 3x10mm Titanium Tapping Screw (10 pcs.)				●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●
53096 3x32mm Titanium Countersunk Head Screw (4 pcs.)														●	●	●	●																								
53097 4x42mm Titanium Countersunk Head Screw (4 pcs.)													●																												
53098 4WD Stainless Steel Suspension Shaft Set											●							●	●	●	●					●															
53101 Racing Developed 0.4 Steel Pinion Gear Set (20T, 21T)													53104	53104	53104	53104	53104					*2																			
53102 Racing Developed 0.4 Steel Pinion Gear Set (22T, 23T)													53104	53104	53104	53104	53104					*2																			
53103 Racing Developed 0.4 Steel Pinion Gear Set (24T, 25T)													53104	53104	53104	53104	53104					*2																			
53104 Racing Developed 0.4 Spur Gear Set (93T, 104T)													*6	*6	*6	*6	*6																								
53109 Turnbuckle Shaft Set																																									
53110 6mm Ball Adjuster Set																																									
53111 Damper Spring Spacer Set		53036 53037		53036 53037	53036 53037				53036 53037	53036 53037	53036 53037			53036 53037																											
53113 Racing Radial/Slick Inner Sponge Set																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
53114 R/C Brake Light Set													●					●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●							
53115 Skyline GT-R Universal Shaft Set																		●	●	●	●						●	●	●											●	●
53116 Racing Developed 6mm Carbon Rear Shaft													●	●	●	●	●																								
53117 Racing Developed 0.4 Steel Pinion Gear Set (26T, 27T)													53104	53104	53104	53104	53104					*2																			
53119 Racing Developed Special King Pin Set													●	●	●	●	●																								
53120 Racing Developed F-1 Aluminum Front Body Mount														●	●		●																								
53121 Skyline Long Front Arm Set																		●	●		●																				
53122 Acto-Power Off-Roader 2WD Motor										*5																															
53124 3mm Tungsten-Carbide Diff Ball Set										●		53070 53267	●	●	●	●	●	●	●	●	●	*2	53070 53267	53070 53267	53070 53267	●	53070 53267	53070 53267	53360	53070 53267	53070 53267	53070 53267	53070 53267	53070 53267					53245	53360	53360
53125 Sleeved Damper (Short)		●		●	●				●	●	●																														
53126 1510 Ball Bearing Set (2 pcs.)																		53121	●			●	●	●	●	●									●	●			●		
53127 Skyline Speed-Tuned Gear Set																		●	●	●	●																				
53128 F-1 Front 3630 HBR Medium Sponge Tires (1 pair)														●	●		●																								
53129 F-1 Rear 3645 HBR Soft Sponge Tires (1 pair)														●	●		●																								

53127 ...... Use together with 53127 parts. *2 ...... Can be used on TA03F-PRO chassis. *5 ...... Use after fully equipped with ball bearings. *6 ...... Use together with 53101, 53102, 53103, 53117 and 53262.
All-purpose parts ...... use as spare-parts and maintenance. ★Please use same size nut and screw as indicated in the instructions.

HOP-UP OPTIONS

Chassis Type		Big Tire							2WD Buggy		4WD Buggy		Refer to the bottom of page 87																								Engined			
ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster / Bullhead	Stadium Blitzer / Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggernaut	Fighter Buggy	Madcap	Manta Ray / Dirt Thrasher / Blazing Star	Baja Champ	Gr.C & SPORTS CAR	F102	F103 / F103RS / F103RX	F103GT	F103L	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-S	TA03R	TA03R-S	FF01	FF02	TL-01	TB-01	M01·M02	M01·M02M	M02L	M03	M04L	RC BOY'S 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-Mk.1	TG10-Mk.1	Mini Cooper
53130 Nylon Parts Coloring Set	●																																								
53132 R/C Fluorescent Color Antenna Pipes (4 pcs.)	●																																								
53134 F-1 Front 3630 HBR Soft Sponge Tires (1 pair)														●	●		●																								
53135 F-1 Rear 3645 HBR Medium Sponge Tires (1 pair)														●	●		●																								
53136 One-Piece Ball Thrust Bearing														●	●		●					*2																			
53137 FWD Touring Car Ball Bearing Set																										●															
53141 4WD Touring & Rally Car Lightweight King Pins							●				●	●						●		●	●						●	●					●	●				●			
53142 4WD Touring & Rally Car Aluminum Motor Mount											●							●	●	●	●																				
53143 4WD Rally Car Skid Guard Set																		●	●																						
53144 4WD/FWD Touring & Rally Car Bushing & Ball Connector Set						●	●					●						●	●	●	●	●	●	●	●	●	●	●													
53145 4WD Touring & Rally Car Urethane Bumper Set																		●	●	●	●																				
53147 F-1 Carbon Graphite Upper Deck Plate (F103 Chassis)															●	●																									
53148 F-1 Carbon Graphite Friction Plates (F103 Chassis)															●	●	●																								
53149 F-1 Low-Friction Pads (F103 Chassis)															●	●	●																								
53150 F-1 Turnbuckle Tie-Rods (F103 Chassis)															●	●	●																								
53151 F-1 Diffuser Set													●	●	●	●	●																								
53152 4WD Touring & Rally Car Short Type Hard Propeller Shaft																			●	●	●																			●	●
53154 Acto-Power Formula Motor													*5	*5	*5	*5	*5																								
53155 Low Friction Aluminum Damper Set (1 Pair, 4WD & FWD Touring & Rally Car)						●	●					●						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●	●	●	●
53156 Hard Inner Sponge Set (4WD/FWD Touring & Rally Car)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
53157 Aluminum King Pins (4WD-TA02/FWD Chassis)						●												53121	●			●	●	●	●	●			●	●	●	●			●				●	●	●
53158 Formula Car Ball Bearing Set														●	●	●	●																								
53159 4mm Anodized Aluminum Flange Lock Nuts (Blue 5 pcs.)	●																																								
53160 4mm Anodized Aluminum Flange Lock Nuts (Red 5 pcs.)	●																																								
53161 4mm Anodized Aluminum Flange Lock Nuts (Gold 5 pcs.)	●																																								
53162 4mm Anodized Aluminum Flange Lock Nuts (Black 5 pcs.)	●																																								
53163 On-Road Tuned Spring Set (4WD/FWD Touring & Rally Car)						●						●						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						●	●
53164 4WD Touring & Rally Car Hollow Carbon Gear Shaft Set											●							●	●	●	●																				
53166 4WD TA02 & FWD Car FRP Chassis Set																			●	●	●					●															
53167 4WD Touring & Rally Car Ball Bearing Set (TA02 Chassis Cars)																			●																						
53168 F-1 Hard-Type Carbon-Graphite Chassis Plate (F103 Chassis)															●	●																									
53169 F-1 Flex T-Bar Set (F103 Chassis)															●	●	●																								
53170 Glass Tape (15mm x 25m)	●																																								
53171 TR-15T Up-Graded Brake Disc																																						●	●	●	●
53172 4WD TA02 & FWD Car Universal Shaft Set (1 pair)																		53121	●			●	●	●	●	●															
53173 Formula Car Low Friction Aluminum Damper													●	●	●	●	●																								
53174 Friction Damper Grease (Soft)															●	●	●																								
53175 Friction Damper Grease (Medium)															●	●	●																								
53176 Friction Damper Grease (Hard)															●	●	●																								
53177 FWD Aluminum Motor Heat Sink																										●															
53181 Turnbuckle Shaft Set (50, 60, 65mm)																																									
53184 RD Tire Cap (Soft)													●	●	●		●																								
53185 Tamiya R/C Parts Box	●																																								
53186 F-1 FRP Upper Chassis Set (F103 Chassis)															●	●																									
53187 Cross Country 4WD Low-Ride Conversion Kit																																				●					
53188 Cross-Country 4WD Torque Splitter Unit																																				●					
53189 4WD Touring & Rally Car Rear Stabilizer Set (TA02 Chassis)																			●	●	●																				
53190 Corner Markers (5 pcs.)	●																																								
53191 4WD/FWD Touring & Rally Car Turnbuckle Tie-Rod Set																		●	●	●	●	●	●	●	●	●															
53192 4WD/FWD Touring & Rally Car Turnbuckle Upper Arm Set																		53121	●	●	●	●	●	●	●	●															
53193 4WD Touring & Rally Car FRP Front Damper Stay																		●	●	●	●																				
53194 4WD Touring & Rally Car FRP Rear Damper Stay																		●	●	●	●																				
53195 4WD-TA02 & FWD Car Carbon Chassis Plates																			53166	53166	53166					53166															
53196 TGX Wheel Axle Ball Bearing Set																						●	●	●	●														●		
53197 TGX Turnbuckle Shaft Set																																							●		
53198 TGX Universal Shaft Set																																							●		
53199 TGX Stabilizer Set																																							●		
53200 4WD Front One-Way Diff. Unit											●	●						●	●	●	●	*1	●	●	●			●	50806										●	●	●
53201 TGX 2-Speed Transmission																																							●		
53202 TGX M-Grip Super Slicks (1 pair)																																							●		
53203 TGX Shaped Tire Inserts (1 pair)																																							●		
53204 M-Chassis Inner Sponge																														●											
53205 M-Chassis Universal Shaft Set (1 pair)																														●	●	●	●								
53206 M-Chassis Ball Bearing Set																														●	●	●									
53207 TGX Stainless Steel Suspension Shaft Set																																							●		
53208 Lightweight Flywheel																																						●	●	●	●
53209 1/10 Touring & Rally Car Shaped Tire Insert (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
53210 TGX 2-Speed Transmission Pinion Gear (15/19T)																																							53201		
53211 TGX 2-Speed Transmission Spur Gear Set																																							53201	53359	53359
53212 TGX 2-Speed Transmission Clutch Shoe Set																																							53201	53359	53359

53127......Use together with 53127 parts. *1......Can not be used on TA03F-PRO chassis. *2......Can be used on TA03F-PRO chassis. *5......Use after fully equipped with ball bearings.
All-purpose parts......use as spare-parts and maintenance. ✱Please use same size nut and screw as indicated in the instructions.

Chassis Type		Big Tire							2WD Buggy		4WD Buggy		Refer to the bottom of page 87																									Engined			
HOP-UP OPTIONS ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster Bullhead	Stadium Blitzer Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggernaut	Fighter Buggy	Madcap	Manta Ray Dirt Thrasher Blazing Star	Baja Champ	Gr.C & SPORTS CAR	F102	FFF 111 000 333 RR SX	F103GT	F103L	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-S	TA03R	TA03R-S	FF01	FF02	TL01	TB01	M01-M02	M01-M02M	M02L	M03	M04L	RC BOYS 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-Mk.1	TG10-Mk.1	Mini Cooper
53213 1/10 Mini Cooper Racing Sticker Set																														●	●	●	●								
53214 Super Grip Radial Tires (1/10 Touring Cars)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
53215 M-Chassis Slicks (1 pair)																														●											
53216 1/10 Touring Car Shaped Tire Insert, Wide (1 pair)																				●	●																				
53217 1/10 Touring Car Hard Joint Cup Set (for Ball Diff)																		●	●	●	●	*2				●															
53218 1/10 Touring Car Hard Joint Cup Set (for Gear Diff)				●		●	●				●	●						●	●	●	●	*1	●	●	●		●	●	●	●	●	●	●	●		●		●		●	●
53219 4WD/FWD Touring Car Aluminum Pressure Plate Set																		●	●	●	●	*2				●															
53220 1/10 4WD/FWD Touring Car Super Slicks (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
53222 M-Chassis Super Slicks (1 pair)																														●											
53223 M-Chassis Shaped Tire Inserts (1 pair)																														●											
53224 1/10 Touring Car M2 Slicks (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
53225 TA02W Touring Car Front Universal Shaft Set																				●	●																				
53226 1/10 Touring Car Aluminum Front Hub Carrier (1 pair)											●							●	●	●	●					●															
53227 1/10 Touring Car M2 Radial Tires (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
53228 1/10 4WD Touring Car Super Slicks, Wide (1 pair)																		●	●	●	●	●	●	●	●	●															
53229 1/10 One-Piece Wide Mesh Wheels (1 pair)																		●	●	●	●	●	●	●	●	●															
53230 Wide Inner Sponge Set (Hard)																				●	●																				
53231 1/10 Super Grip Radial Tires, Wide (1 pair)																		●	●	●	●	●	●	●	●	●															
53232 1/10 One-Piece Racing Spoke Wheels (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
53233 1/10 One-Piece Wide Racing Spoke Wheels (1 pair)																		●	●	●	●	●	●	●	●	●															
53234 M-Chassis 4x65mm Aluminum Screw (5 pcs.)																														●	●	●									
53235 M-Chassis Stainless Steel Suspension Shaft Set																														●	●	●									
53236 M-Chassis Bushing Set																														●	●	●									
53237 M-Chassis Hollow Carbon Gear Shaft Set																														●	●	●									
53238 M-Chassis Quick-Release Battery Holder																						*2								●	●	●									
53239 M-Chassis Front & Rear Stabilizer Set																														●	●	●									
53240 3x20mm Titanium Tapping Screw (5 pcs.)											●																			●	●	●									
53241 M-Chassis Aluminum Motor Heat Sink																														●	●	●									
53242 TGX Aluminum Engine Mount																																						●	●	●	●
53244 TGX Carbon Propeller Shaft																																							●		
53245 TGX Ball Differential																																							●		
53246 M-Chassis Turnbuckle Steering Rod Set																														●											
53247 Formula Adjustable Friction Damper Post Set															●	●	●																								
53248 Formula Lightweight Diff Joint Set															●	●	●																								
53250 Touring Car Shaped Tire Insert, Soft (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●						●	
53251 Acto-Tuned M-Special Motor																														●	●	●									
53252 TGX Rear Aluminum Upright Set																																							●		
53253 M-Chassis Aluminum Racing Steering Set																														●	●	●									
53254 M-Chassis 60D Super Grip Radial Tires (1 pair)																														*3	●	●	●								
53255 M-Chassis 60D Inner Sponge,Hard (4 pcs.)																														●	●	●	●								
53257 Formula Height Adjustable Gear Case															●	●	●																								
53258 Formula Link-Type Front Suspension															●	●																									
53259 Formula 3.5mm Offset Upright															53258	53258																									
53260 TA03 Hollow Carbon Gear Shaft																						●	●	●	●																
53261 TA03F PRO Carbon Battery Plate Set																						*2																			
53262 0.4 Steel Pinion Gears (28T/29T)													53104	53104	53104	53104	53104					*2																			
53263 Dyna-Run Super Touring Motor												*5						*5	*5	*5	*5	*5	*5	*5	*5	*5	*5	*5		*5	*5	*5	*5	*5							
53264 TGX Reinforced Super Slicks (1 pair)																																							●		
53265 TA03F Ball Bearing Set																						●	●																		
53266 TA03 Stainless Steel Suspension Shaft Set																						●	●	●	●																
53267 TA03 Ball Differential												●										●	●	●	●	●	●	●		●	●	●	●	●							
53268 TA03F Urethane Bumper Set																						●	●																		
53269 TA03 Aluminum Motor Mount Plate																						●	●	●	●																
53270 1060 Ball Bearings (2 pcs.)															53257	53257	53257																								
53271 High Rubber Content Sponge Tires, Medium (F-1 Front, 1 Pair)														●	●		●																								
53272 Dyna-Run Racing Stock Motor												●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●	●							
53273 Formula Car Rear Suspension Ball Mount Set															●	●	●																								
53274 TA03 Aluminum Counter Shaft																						●	●	●	●																
53275 TA03 Aluminum Motor Heat Sink																						●	●	●	●																
53276 TA03 Fluorescent Color Stabilizer Set																						●	●	●	●																
53277 Formula Car Height-Adjustable Aluminum Heat Sink Motor Mount															53257 53270	53257 53270	53257 53270																								
53278 TA03 Aramid Fiber Reinforced Drive Belt																						●		●																	
53279 TA03 Torque Splitter Unit																						●	●	●	●																
53280 TA03 Super Low Friction Damper Set						●	●					●										●	●	●	●		●	●	●											●	●
53281 TGX Progressive Force Spring Set							●																															●	●	●	●
53282 TGX 2-Speed Transmission Steel Pinion Gear (15/19T)																																							53201		
53283 TGX 2-Speed Transmission Steel Pinion Gear (16/20T)																																							53201		
53284 5mm Aluminum Ball Connector (10 pcs.)				●		●	●				●							●	●	●	●	●	●	●	●	●	●		●	●	●	●		●		●		●	●	●	●
53285 TA03 Rear Body Mount Support Plate																						●	●																		
53286 TA03 Aluminum Pulley (16T)																						●	●																		

53127......Use together with 53127 parts. *1......Can not be used on TA03F-PRO chassis. *2......Can be used on TA03F-PRO chassis. *3......Can be used on chassis cars w/60D tire. *5......Use after fully equipped with ball bearings.
All-purpose parts......use as spare-parts and maintenance. ✱Please use same size nut and screw as indicated in the instructions.

HOP-UP OPTIONS

Chassis Type		Big Tire							2WD Buggy		4WD Buggy		Refer to the bottom of page 87																										Engined			
ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster Bullhead	Stadium Blitzer Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggernaut	Fighter Buggy	Madcap	Monster Beetle Dark Thunder Blazing Star	Baja Champ	Grand Sports CAR	F102	FF111000 3RR SX	F103GT	F103L	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-FS	TA03R	TA03R-S	FF01	FF02	TL-01	TB-01	M01-M02	M01-M02M	M02L	M03	M04L	RC BOY'S 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-Mk.1	TG10-Mk.1	Mini Cooper
53287 TA03 Carbon Reinforcing Plate																						*1																			
53288 TA03 Aluminum Rear Upright																						●	●	●	●																
53289 TGX Hard Aluminum Front Suspension Arm Set																																							●		
53290 TGX Hard Aluminum Rear Suspension Arm Set																																							●		
53291 TA03 Aluminum Pulley (15T)																								●	●																
53292 TL01 Ball Bearing Set												●																●													
53293 Reinforced Slicks Type-A (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●				●						●	
53294 Reinforced Slicks Type-B (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●				●						●	
53295 Tire Inner Foam																		●	●	●	●	●	●	●	●	●	●	●	●				●						●	
53296 TA03R Ball Bearing Set																								●	●																
53297 TA03R-S Aramid Fiber Reinforced Drive Belt (Short)																							●		●															
53298 TA03F Torque Control Unit (15/17T)																						●	●																	
53299 TA03R Torque Control Unit (14/16T)																								●	●															
53300 TL01 Turnbuckle Tie-Rod Set																												●												
53301 TL01 Stainless Steel Suspension Shaft Set						●	●					●															●	●	●				●	●			●		●	●
53302 TA03F PRO Carbon Chassis Plate																						●					●	●												
53303 TL01 Adjustable Upper Arm Set						●																					●	●												
53304 TA03R Urethane Bumper Set																								●	●															
53305 TA03 Lightweight Drive Shaft																			●	●	●	●	●	●	●															
53306 TA03F FRP Chassis Set																						●																		
53307 Tamiya Racing Motor Brush Set												*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7	*7		*7	*7	*7	*7	*7							
53308 Aluminum Servo Stay		●		●		●	●			●	●							●	●	●	●	●	●	●	●	●				●	●	●		●		●			●	●	●
53309 TA03 Titanium Suspension Shaft Set																						●	●	●	●															
53310 TA03 Universal Drive Shaft (1 pair)																			●		●	●	●	●	●	●														
53311 TA03R Carbon Reinforcing Plate																								●																
53312 TA03 Carbon Stabilizer Support																						●	●	●	●															
53313 RC Boy's 4WD Ball Bearing Set																																		●						
53314 RC Boy's 4WD Motor Plate Set for 540 Type Motor																																		●						
53315 TA03R-S Carbon Reinforced Plate																							●		●															
53316 TA03 Aluminum Front Hub Carrier (1 pair)																						●	●	●	●															
53317 RC Boy's 4WD 540 Motor Set																																		●						
53318 RC Boy's 4WD Inner Sponge Set (Front)																																		●						●
53319 RC Boy's 4WD Inner Sponge Set (Rear)																																		●						
53320 RC Boy's 4WD Lightweight Gear Shaft Set																																		●						
53321 RC Boy's 4WD Lightweight Propeller Shaft																																		●						
53322 TL01 Hollow Carbon Gear Shaft												●																●												
53323 TL01 Carbon Propeller Shaft												●																●												
53324 TL01 Stabilizer Set																											●	●												
53325 TA03 Aluminum knuckle Arm (1 pair)																						●	●	●	●															
53326 TA03 Aluminum Racing Steering Set																						●	●	●	●															
53327 Voltec Fighter Front Wheels (Fluorescent Yellow)																																		●						
53328 Voltec Fighter Rear Wheels (Fluorescent Yellow)																																		●						
53329 Voltec Fighter Rear Wing																																		50759						
53330 RC Boy's 4WD Pattern Tire & Wheel Set																																		●						
53331 TL01 Lightweight Chassis/Frame																												●												
53332 TA03R Rear Long Wheel Axle Set																								●	●															
53333 Touring Car Tuned Spring Set (Short Type)																		●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●						
53334 Low Friction Damper V Parts (Damper Collar)							●					●	53173	53173	53173	53173	53173	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●	●	●	●
53335 Reinforced One-Piece Spoke Wheels (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●					●	●	
53336 Reinforced One-Piece Mesh Wheels (1 pair)																		●	●	●	●	●	●	●	●	●	●	●	●					●					●		
53337 TA03 Reinforced Damper Stay (Low Mount Type)																						●	●	●	●															
53338 RC Tire Cementing Helper																		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●	
53339 TAMIYA CA Cement (for Rubber Tires)		●	●	●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●
53340 M-Chassis 60D Reinforced Tires Type-A (1 pair)																														*3	●	●	●							
53341 Mini Cooper Reinforced Wheels (1 pair)																														●	●	●	●							
53342 TL01 Speed-Tuned Gear Set																												●												
53343 M03 Front & Rear Stabilizer Set																																	●							
53344 M03 Aluminum Heat Sink																											●						●							
53345 (TL01, M03) Toe-In Rear Upright						●	●					●															●	●	●				●	●					●	●
53346 (TL01, M03) Quick Release Battery Holder							●					●															●	●					●	●						
53347 3mm Spring Set Screw (10 pcs.)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
53348 M03 Ball Bearing Set																											●						●	●						
53349 F-1 Front Reinforced Slicks Type A (1 pair)														●	●	●	●																								
53350 F-1 Rear Reinforced Slicks Type A (1 pair)														●	●	●	●																								
53351 Aluminum Reinforced Tape	●																																								
53352 1/10 Glow-Engine R/C TG10 Ball Bearing Set																																					●		●	●
53353 1/10 Glow-Engine R/C TG10 Urethane Bumper																																							●	
53354 1/10 Glow-Engine R/C TG10 Stabilizer Set																																							●	●
53355 1/10 Glow-Engine R/C TGX Urethane Bumper																																						●		
53356 TG10 Carbon Upper Deck																																							●	●

53127 ..... Use together with 53127 parts. *1 ..... Can not be used on TA03F-PRO chassis. *3 ..... Can be used on chassis cars w/60D tire. *7 ..... Use as spare parts when using Acto-Power, Acto-Tuned and Dyna-Run motors. All-purpose parts ..... use as spare parts and maintenance. ★Please use same size nut and screw as indicated in the instructions. 50389 ..... Use together with 50389 parts.

HOP-UP OPTIONS

Chassis Type		Big Tire							2WD Buggy		4WD Buggy		Refer to the bottom of page 87																									Engined			
ITEM.	All-purpose parts	Midnight Pumpkin	Clod Buster / Bullhead	Stadium Blitzer / Blitzer Beetle	Madbull	Wild Willy 2	Wild Dagger	Juggernaut	Fighter Buggy	Madcap	Manta Ray / Dirt Thrasher / Blazing Star	Baja Champ	Gr.C & SPORTS CAR	F102	F103 / F103RS / F103RX	F103GT	F103L	TA01	TA02	TA02W	TA02SW	TA03F	TA03F-S	TA03R	TA03R-S	FF01	FF02	TL-01	TB-01	M01·M02	M01M·M02M	M02L	M03	M04L	RC BOY'S 4WD	Cross-Country	Tractor Trucks	TGM-01	TGX-Mk.1	TG10-Mk.1	Mini Cooper
53357 TA03 Aluminum Motor Plate																						●	●	●	●																
53358 TA03R FRP Chassis Conversion																								●																	
53359 TG10 2-Speed Transmission																																								●	●
53360 TG10 Ball Differential																													●											●	●
53361 TG10 2-Speed Pinion (15, 19T)																																								53359	53359
53362 TG10 2-Speed Pinion (16, 20T)																																								53359	53359
53363 TA03R Carbon Chassis Set																								●																	
53364 TA03 Carbon Steering Bar																						●	●	●	●																
53365 TG10 Aluminum Racing Steering Set																													●									●		●	●
53366 TG10 Aluminum Gearbox Mount																													●									●		●	●
53367 TG10 Racing Chassis																																								●	●
53368 (TGX, TG10) Aluminum Brake Arm Set																																						●	●	●	●
53369 Monster Truck Aluminum Damper Set								●																																	
53370 R/C Light Bulb Set (for Monster Truck)								●																																	
53371 Touring Car Racing Rear Wing Set																																								●	
53372 TG10 Hard Aluminum Front Suspension Arm																													●											●	●
53373 TG10 Hard Aluminum Rear Suspension Arm																													●											●	●
53374 F-1 Front Reinforced Slicks Type B (1 pair)														●	●	●	●																								
53375 F-1 Rear Reinforced Slicks Type B (1 pair)														●	●	●	●																								
53376 TGX Carbon Upper Deck																																							●		
53377 TGX Racing Chassis																																							●		
53378 TG10 Aluminum Front Hub Carrier (1 pair)																													●											●	●
53379 3mm Lightweight Differential Ball Set										●		53070/53267	●	●	●	●	●	●	●	●	●	*2	53070/53267	53070/53267	53070/53267	●	53070/53267	53070/53267	53360	53070/53267	53070/53267	53070/53267	53070/53267	53070/53267					53245	53360	53360
53380 TG10 Aluminum Rear Upright Set						●	●					●															●	●	●				●	●				●		●	●
53381 TG10 Reinforced Propeller Shaft																																								●	●
53382 M04 Stabilizer Set																																		●							
53383 Monster Truck Aluminum Suspension Arm Set								●																																	
53384 TG10 Undercowl Set																																								●	
53385 Monster Truck Aluminum Steering Rod Set								●																																	
53386 TA03R-S/F-S Carbon Chassis Set																							53387		53387																
53387 TA03R-S/F-S FRP Chassis Conversion Set																							●		●																
53388 Turnbuckle Tie-rod Set (TG10,TB-01)																													●											●	●
53389 M04 Aluminum Motor Heat Sink																																		●							
53390 (M03, M04) Hollow Carbon Gear Shaft																											●						●	●							
53391 Formula Super Low Friction Damper Set															●	●	●																								
53392 Turnbuckle Upper Arm Set (TG10,TB-01)																													●											●	●
53393 F103LM Carbon Chassis																●																									
53394 F103LM Carbon Upper Deck																●																									
53395 F103 Carbon Friction Plate															●	●	●																								
53396 RD 6mm Titanium Rear Shaft														●	●	●	●																								
53397 TGX Reinforced Propeller Shaft																																							●		

53127 ...... Use together with 53127 parts. *2 ...... Can be used on TA03F-PRO chassis.
All-purpose parts ...... use as spare-parts and maintenance. ★Please use same size nut and screw as indicated in the instructions.

Gr. C & Sports Car
★58094 Honda NSX
★58098 Ferrari F40
★58109 Nissan R91CP
★58153 Daytona Thunder

F102
★58105 Williams FW14
★58114 Footwork FA13
★58118 Benetton B192

F103
★58126 Lotus 107B
★58130 Sauber C12
★58142 Ferrari 412T1
58198 PIAA Nakajima Reynard 97D

F103RS
★58156 F103RS Chassis Kit
58179 Williams-Renault FW18
★58213 Ferrari F310B
58235 McLaren Mercedes MP4/13

F103GT (F103LM)
★58229 Toyota GT-One TS020
58230 Porsche 911 GT1 '98 LM Winner
58247 Audi R8R
58253 Toyota GT-One TS020 '99
58258 F103LM-TRF Special Chassis Kit

F103RX
58194 "F103RX" Chassis Kit

F103L
★58134 Newman Haas Lola
★58148 Rahal Hogan Lola

TA01
★58099 Skyline GT-R
★58108 Mercedes 190E
★58112 Ford Escort
★58113 BMW M3
★58117 Lancia Delta
★58119 Celica GT-Four RC
★58125 Michelin Pilot Ford Escort

TA02
★58128 Alfa Romeo 155
★58129 Castrol Celica
★58137 Blitz Supra
★58139 Mercedes C-Class D2
★58145 ProMarkt Mercedes C-Class
★58150 Opel Calibra V6 DTM
★58155 Loctite Nissan Skyline GT-R N1
★58164 Celica GT-Four
★58169 Ford Mustang Cobra R
58171 BMW 318i STW
★58176 Repsol Ford Escort

TA02W
★58144 Nissan 300ZX IMSA GTS
★58165 NISMO Clarion GT-R LM
58170 Castrol Supra GT

TA02SW
★58172 Taisan Porsche 911 GT2

TA03F
58177 TA03F PRO Chassis kit
58182 Audi A4 STW
58185 KURE NISMO GT-R
58188 Opel Calibra Cliff
58189 Martini Alfa Romeo 155 V6 TI
★58199 Mitsubishi Lancer Evolution IV
58210 Subaru Impreza WRC
58225 Mitsubishi Lancer Evolution V WRC
58239 Pennzoil Nismo GT-R (R34)

TA03F-S
58218 Toyota Corolla WRC
58250 Peugeot 206 WRC

TA03R
58203 Nissan R390 GT1
58207 avex Dome Mugen NSX
58214 Mercedes CLK-GTR
58227 TA03R-TRF Special Chassis Kit
58254 Raybrig NSX '99

TA03R-S
58193 Porsche 911 GT1
58243 TA03R-S TRF Special Chassis kit

FF01
★58121 Idemitsu Civic
★58127 Castrol Civic
★58131 Tom's Levin
★58133 JACCS Civic
★58138 Renault Clio
★58143 Ford Mondeo
★58147 Castrol Primera
★58159 HKS Opel Vectra JTCC
★58162 Volkswagen Golf VR6
★58167 TOM'S Exiv JTCC
★58183 Volvo 850 BTCC
58186 PIAA Accord VTEC
58206 Volkswagen Golf V5
58217 Volkswagen New Beetle

FF02
58224 Peugeot 306 Maxi WRC
58245 Alfa Romeo 156 RACING
58248 Toyota Celica

TB-01
58257 Mitsubishi Lancer Evolution VI WRC

TL-01
58191 Calsonic Skyline GT-R
58195 Alfa Romeo 155 V6 TI Bosch
58201 Toyota Celica GT-Four '97 Monte-Carlo
58212 Peugeot 406 ST
58216 Ford Escort WRC
58219 Mitsubishi Lancer Evolution IV Monte-Carlo
58222 Ford SVT F-150 Lightning
★58223 Pennzoil Nismo GT-R
58226 Subaru Impreza WRC
58228 Ford Mustang Cobra R
58233 Castrol MUGEN NSX
58237 Lexus IS 200
58241 Ford Focus WRC
58244 Mercedes CLK-GTR Original-Teile
58246 Studium Raider
58251 Lexus GS 400
58255 Calsonic Skyline GT-R (R34)

M01
★58149 Rover Mini Cooper
58163 Mini Cooper Monte-Carlo

M01M
58196 Honda S-MX Lowdown

M02
★58158 Fiat Abarth 1000 TCR
★58168 Alpine A110
58175 Honda S800 Racing

M02M
★58180 Eunos Roadster
58187 Alfa Romeo Giulia Sprint GTA

M02L
★58173 Volkswagen Beetle
★58197 Porsche Boxster
★58202 Mercedes-Benz SLK
★58208 Porsche 911 Carrera

M03
58211 Rover Mini Cooper Racing
58234 Suzuki wagonR RR

M04L
58236 Honda S2000
58240 BMW M roadster

RC Boy's 4WD Racer
57602 Voltec Fighter
57604 Thunder Blitz
57606 Wild Ceptor

Cross Country
58132 Mitsubishi Pajero
★58141 Jeep Wrangler
★58166 Isuzu mu Type X
★58178 Honda CR-V
(Low Ride):
★58152 Isuzu mu

Tractor Truck
56301 King Hauler
56304 Globe Liner
56305 Mercedes-Benz 1838LS
56307 Mercedes-Benz 1850L
56309 Ford Aeromax

★No further production.

TAMIYA COLOR ACRYLIC PAINT

Tamiya Acrylic Paints are made from water-soluble acrylic resins and are excellent for either brush or spray painting. These paints can be used on styrol resins, styrofoam, wood, glass, and metal, plus all of the common model plastics. The paint covers well, flows smoothly with no blushing or fading, and can be blended easily. Each bottle contains 23ml, and come in glossy colors, matt colors, transparent colors plus the exclusive thinner and flat base.

BECAUSE THEY ARE WATER-SOLUBLE, BUT PERMANENT WHEN DRY, CLEANUP IS BOTH QUICK AND EASY WITH PLAIN WATER.

Being water-soluble, the paints can be completely removed from brushes and other implements with plain water if done prior to drying. After the paints have cured, they are permanent and water will have no effect on the finished surface. The large, heavy glass bottles are stable and difficult to upset, and the large caps are easy to open and close. With the caps molded in the same color of the paint, it is easy to select the shade or color desired quickly. These colors are ideal for beginners and young children just getting into the hobby, as they are safe and provide an excellent finish.

THINNER IS USEFUL FOR SPRAY PAINTING AND THE FLAT BASE WILL TONE DOWN THE GLOSS.

The thinner is used for removing dried paint from brushes and spraying implements, plus adjusting the viscosity of the paints for effective spray painting. When the paint is too thick, it is difficult to brush it on evenly, so thin it down a little with the thinner. When spray painting mix ten parts of paint with 2 parts of thinner for best results. The flat base is almost indispensable in modeling as a true gloss is not always desired. For a semi-gloss color, mix 10 parts paint with 1 part of flat base, and to achieve a flat color, mix 3 parts of base to 10 parts of paint.

EXCELLENT WHEN TWO OR MORE COLORS ARE REQUIRED FOR SPECIAL EFFECTS.

Overpainting in two or more colors, such as camouflage, is quite easy as the prepainted base color, when dried, is permanent and not effected by the overcoat. Acrylics can be painted over any other type of paint with no problems; however, never overpaint acrylics with lacquers. Prior to masking off the model for painting, be sure that the paint is completely cured before the tape is applied. When spray painting, remember that several light coats are preferable to one heavy coat, and the drying time will be considerably lessened.

★Never use lacquer paints over acrylics.
★Surface to be painted must be dry and dust free.
★Mix paint by gently stirring. Shaking bottle will cause bubbles.

TAMIYA PAINT MARKER

Easy and professional results can be yours with Tamiya's Paint Markers. Use it as you would a marking pen. Enamel paint formulated for the painting of plastics. Even the unskilled painter can now achieve beautiful results on their models. For expert modelers, it is indispensable for detail painting and time saving. Excellent for wood, metal, glass as well as on plastics. Contents: 8 grams.

EXCELLENT FOR FINISHING MODELS OF PLASTIC AND OTHER MEDIUMS.

Shake paint marker well first, then push tip against a firm surface to break seal and start paint flow. Tamiya's Paint Marker ensures you of safe, easy painting without brushes and messy cleanup.

UNIQUE FLAT CUT PEN TIP FOR PAINTING OF BOTH NARROW AND WIDE AREAS

Model painting and detailing with a brush requires a fine technique, learned with years of practice. Tamiya's Paint Marker, with its tough felt tip frees you from the worry of lack of experience and allows you to detail your subject like never before. The flat cut tip is 4mm wide and 1mm thick. Use the narrow edge to paint small areas, stripes or markings. By using the marker like a flat brush you can paint wide areas and expect a beautiful smooth flowing finish because of the enamel paint characteristics. With its unique tip, it is easy to paint projecting parts with no overflow; badges and emblems of cars; motorcycles and figures. Raised surfaces on moulded parts can be highlighted with a light touch of the marker for added realism. Accessories on military models, lights and landing gear detail are now easy to finish realistically. When necessary, the marker tip can be cut to a desired thickness by a knife, for those special applications.

USE IN COMBINATION WITH TAMIYA ACRYLIC PAINTS.

Enamel paints can be applied over acrylics and lacquers, so the Tamiya Paint Marker can be used to detail stripe, lettering and markings without fear of damaging the undersurface. Tamiya Acrylic Paints can also be applied over Tamiya Paint Marker finishes, so using the two in combination will enhance your model finishing techniques and achieve results that will amaze you.

SAME COLOR NAMES, SHADES AND NUMBER AS TAMIYA ACRYLIC PAINTS.

Color names and numbers of the Tamiya Paint Marker match those of Tamiya Acrylic paints, and the color toning between the two is almost perfect. Excellent gloss and matt.

TAMIYA COLOR FOR POLYCARBONATE

These paints have been formulated for use on Polycarbonate (Lexan) R/C car bodies. For brush and spray painting. Each bottle contains 23ml. There are bright colors to beautify transparent polycarbonate body shells of your cars, plus an anti-fuel protective top-coat for use with gas-powered R/C models.

EASY TO USE, SAFE AND WATER-SOLUBLE. THE PAINT IS SHOCK RESISTANT, PERMANENT AND FLEXIBLE.

Tamiya polycarbonate paints are water-soluble and completely safe. They can be removed from brushes and other implements using plain water, if done prior to drying, making clean-up quick and easy. After the paint has cured, it is resistant to oils as well as water. It is extremely durable and long lasting. As these paints were spacially formulated for car bodies, the paint film has good elasticity after curing and is not likely to peel or chip off when the body flexes during collisions. For use with gas-engined R/C models, a fuel-protective top-coat (PC-26) is also available. Simply apply over dry painted surface, and it will protect your paint work from the engine fuel.

EXCELLENT COVERAGE MAKES FOR LIGHT WEIGHT.

It is important when painting polycarbonate bodies to wash them first with a detergent solution to remove all dust and oils. Paint details such as window frames, panel lines etc., first, then the overall body. Since the Tamiya polycarbonate paints are opaque, they have good covering qualities with thin coats, making for a lightweight R/C car body, which is extremely important for competition vehicles.

MIXING OF COLORS AND OVERPAINTING IS EASY.

Painting in two or more colors and complicated patterns is not difficult, and the colors mix easily to match any hue you desire. As the paint is applied from the inside, but viewed from the outside, paint the dark colors first, followed by the lighter shades. When using masking tape, remove the tape prior to the paint completely drying, due to its flexibility and tendency for the paint to peel from the body after being cured. If the paint should want to peel away when removing the tape, run a sharp hobby knife along the tape edge. The tape will then come off cleanly without removing the paint from the surface. When spray painting, thin by adding 4 parts of acrylic thinner to 10 parts of paint. The thinner is also useful for removing cured paint from brushes and unwanted areas.

★The painted surface will remain vulnerable to scratches and marring until cured, even though tack free, for about 24 hours.

1/10 & 1/12 SCALE RADIO CONTROL CARS

	58065	Clod Buster
	58070	Midnight Pumpkin
★	58082	Madcap
	58087	Manta Ray
	58089	Bullhead
	58106	Stadium Blitzer
	58122	Blitzer Beetle
	58124	Super Hornet
	58132	Mitsubishi Pajero Metaltop Wide
	58146	Chevy S-10
	58160	Dirt Thrasher
	58161	Ford F-150
	58163	Rover Mini Cooper '94 Monte-Carlo
★	58168	Alpine A110
	58170	Castrol Toyota Tom's Supra GT
	58171	BMW 318i STW
	58175	Honda S800
	58177	TA03F PRO Chassis Kit
	58179	Williams-Renault FW18
★	58180	Eunos Roadster
	58181	Stadium Thunder
	58182	Audi A4 STW
★	58183	Volvo 850 BTCC
	58184	Fighter Buggy RX
★	58185	KURE NISMO GT-R
	58186	PIAA Accord VTEC
	58187	Alfa Romeo Giulia Sprint GTA
★	58188	Opel Calibra Cliff
	58189	Martini Alfa Romeo 155 V6 TI
	58191	Calsonic Skyline GT-R
	58192	King Blackfoot
	58193	Porsche 911 GT1
	58194	F103RX Chassis Kit
	58195	Alfa Romeo 155 V6 TI Bosch
	58196	Honda S-MX Lowdown
★	58197	Porsche Boxster
	58198	PIAA Nakajima Reynard 97D
	58201	Toyota Celica GT-Four '97 Monte Carlo
★	58202	Mercedes-Benz SLK
	58203	Nissan R390 GT1
	58204	Blazing Star
	58205	Mad Bull
	58206	Volkswagen Golf V5
★	58207	avex Dome Mugen NSX
★	58208	Porsche 911 Carrera
	58210	Subaru Impreza WRC
	58211	Rover Mini Cooper Racing
	58212	Peugeot 406 ST
	58214	Mercedes CLK-GTR
	58216	Ford Escort WRC
	58217	Volkswagen New Beetle
	58218	Toyota Corolla WRC
	58219	Mitsubishi Lancer Evolution Ⅳ Monte-Carlo
	58221	BAJA Champ
	58222	Pick-Up Truck Ford SVT F-150 Lightning
★	58223	Pennzoil Nismo GT-R
	58224	Peugeot 306 Maxi WRC
	58225	Mitsubishi Lancer Evolution Ⅴ WRC
▲	58226	Subaru Impreza WRC
▲	58227	TA03R-TRF Special Chassis Kit
	58228	Ford Mustang Cobra R
	58230	Porsche 911 GT1 '98 LM Winner
	58231	Wild Dagger
	58233	Castrol MUGEN NSX
	58234	Suzuki wagonR RR
	58235	McLaren Mercedes MP4/13
	58236	Honda S2000
	58237	Lexus IS 200
	58239	Pennzoil Nismo GT-R (R-34)
	58240	BMW M roadster
	58241	Ford Focus WRC
	58242	Wild Willy 2
▲	58243	TA03R-S TRF Special Chassis Kit
	58245	Alfa Romeo 156 RACING
	58246	Stadium Raider
	58247	Audi R8R
	58248	Toyota Celica
	58250	Peugeot 206 WRC
	58251	Lexus GS 400
▲	58252	Blitzer Beetle Chrome Metallic Special
	58253	Toyota GT-One TS020 '99
	58254	Raybrig NSX '99
	58255	Calsonic Skyline GT-R (R34)
	58256	Juggernaut2 (Ford F-350)
	58257	Mitsubishi Lancer Evolution Ⅵ WRC
▲	58258	F103LM-TRF Special Chassis Kit
	58259	Subaru Impreza German Rally Champion '99

1/8 & 1/10 SCALE R/C GLOW ENGINE CARS

	44006	Porsche 911 GT1
	44007	Nissan R390 GT1
	44008	avex Dome Mugen NSX
	44009	Mercedes CLK-GTR
	44010	TGX-Mk.1 TS Double Deck Type
	44011	Pennzoil Nismo GT-R
	44012	Mercedes CLK-GTR Team SPORTSWEAR
	44013	Raybrig NSX
	44014	TG10-Mk.1 Chassis kit
★	44015	TGX-Mk.1 Special Chassis Kit
	44016	Lexus GS 400
▲	44017	Chassis kit "TGX-Mk.1 TS" Double Deck Type w/O.S. MAX-15CV-X
	44018	1/8 Raybrig NSX
	44019	1/8 Subaru Impreza WRC '99
	44020	TG10-Mk.1 PRO Racing Chassis Kit
	44021	1/8 Rover Mini Cooper Racing
	44022	1/8 Toyota Corolla WRC
	44023	1/10 Calsonic Skyline GT-R (R34)
	44024	1/10 Subaru Impreza WRC '99
	44025	1/10 Mad Bison
	44026	TG10-Mk.1 Chassis Kit w/TAMIYA NOVAROSSI CX-12
	44027	TGX-Mk.1 TS Double Deck Type w/TAMIYA NOVAROSSI CX-12

1/14 SCALE R/C TRACTOR TRUCKS

	56301	King Hauler
	56302	Semi-Trailer
	56303	Tank-Trailer
	56304	Globe Liner
	56305	Mercedes-Benz 1838LS
	56306	Flatbed Semi-Trailer for Tamiya Truck
	56307	Mercedes-Benz 1850L
	56309	Ford Aeromax
	56310	Pole-Trailer

1/10 SCALE R/C BOY'S 4WD RACER SERIES

	57602	Voltec Fighter
	57604	Thunder Blitz
	57606	Wild Ceptor

R/C SAILING SERIES

	56201	Yamaha Round The World (with R/C Unit)
	56202	Yamaha Round The World
	56203	Yacht Crew Set (Assembled & Painted)
	56204	Cruiser Yacht Yamaha 40EX
	56205	36 Class Racing Yacht Innovator

R/C AVIATION SERIES

	56401	Peak Spirit RU
	56403	Alt Stream

TAMIYA R/C SYSTEMS

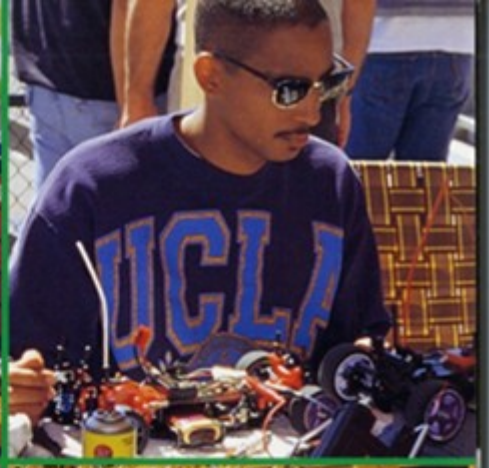
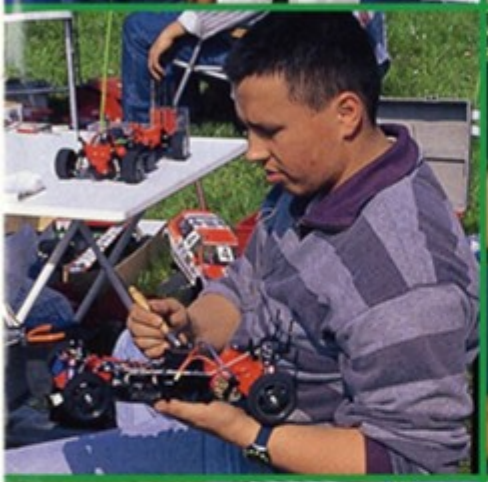
	45015	C.P.R. Unit P-160F
	45017	Tamiya R/C Fail-Safe Unit
	45018	Adspec R601 FM 6-chan. R/C System
	45019	Motor Glider Propeller Braking Unit
	45021	Adspec Sport R/C Drive Set
	45022	Adspec Sport Sailing
	45023	Adspec GT-Ⅰ
	45024	Adspec GT-Ⅱ

BATTERIES AND QUICK CHARGERS

	55058	7.2V Auto Discharger
	55065	Ni-Cd 7.2V-1700mAh Racing Pack RC1700SP
	55070	Ni-Cd 7.2V DC Quick Charger CPU-2000
	55071	Ni-Cd 7.2V -1400mAh Racing Pack RC1400SP
	55074	Ni-Cd 7.2V -2400mAh Racing Pack RC2400SP

★No further production. ▲Limited release

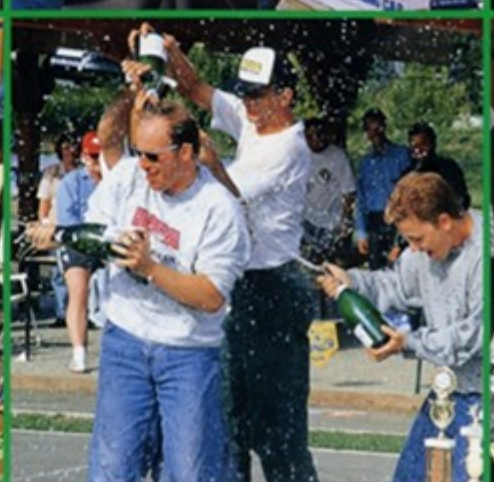
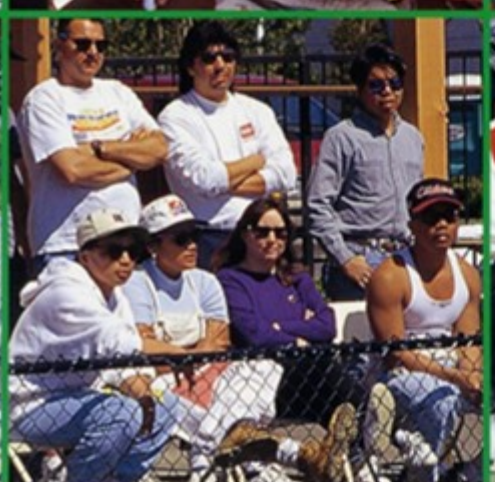



TAMIYA TAMIYA
team
RC CARS

UCLA




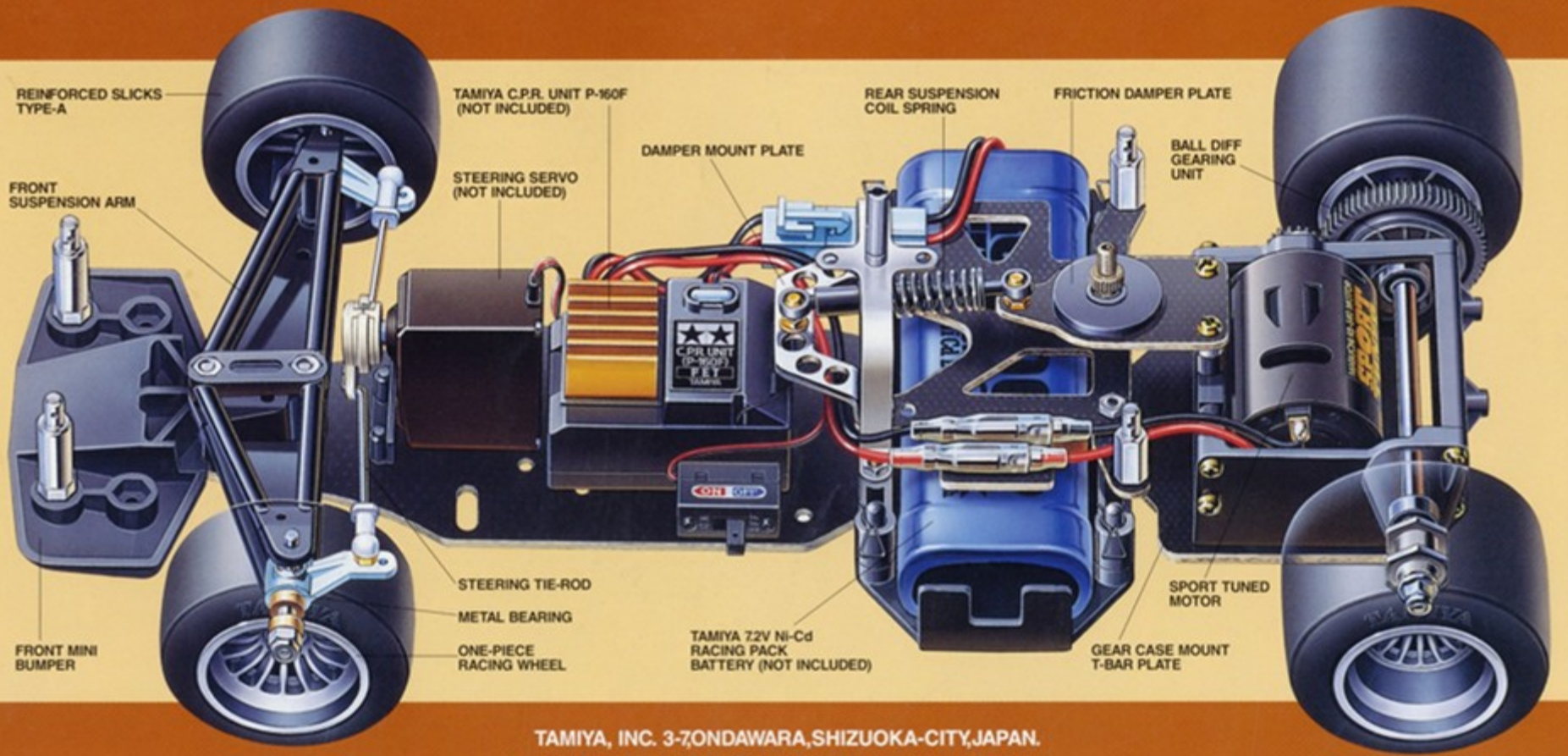





4 950344 642793

TAMIYA RADIO CONTROL GUIDE BOOK 2000



TAMIYA, INC. 3-7,ONDAWARA,SHIZUOKA-CITY,JAPAN.