

'93-'94 CATALOG AND HANDBOOK

THE FINEST RADIO CONTROLLED MODELS



KYOUSHO®
THE FINEST RADIO CONTROL MODELS

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MODEL



ENGINE-POWERED
MODEL



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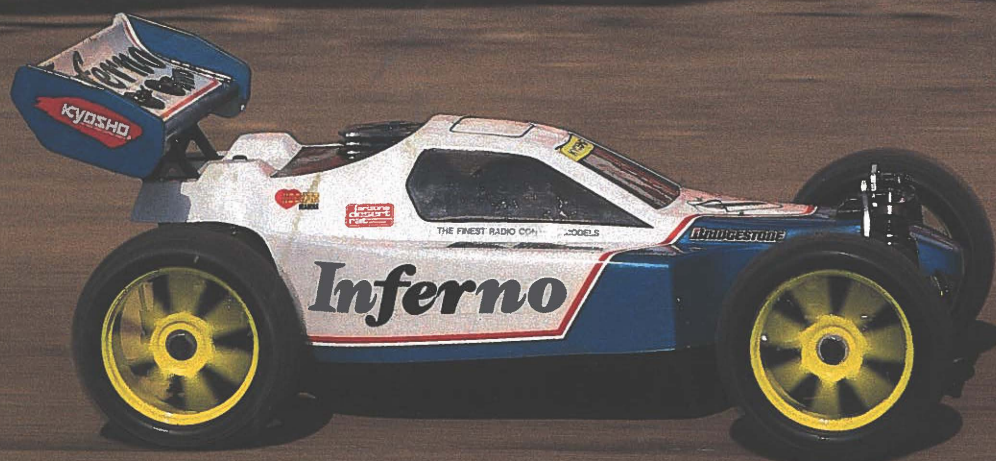
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-  **RADIO CONTROL SET**
(NUMBERS SHOW CHANNELS)
-  **MOTOR** (NUMBER SHOWS SIZE-CLASS)
-  **NiCd BATTERY** (NUMBERS SHOW VOLTAGE/CAPACITY)
-  **BATTERY CHARGER**
-  **ENGINE**
(NUMBER SHOWS SIZE)
-  **FUEL REQUIRED**
-  **2-STROKE OIL REQUIRED**
-  **STARTER, GLOW-PLUG BATTERY REQUIRED**



R/C GENERAL INFORMATION

RADIO CONTROL MODELS

Radio control offers you one of the most interesting and challenging of all hobbies. From a distance, you can direct every move of an airplane, helicopter, car, or boat. You have control as far as you can see the model, but for safety you should keep it close enough to see exactly what it is doing.

R/C models may be miniatures of actual machines, but you have the freedom to create your own. What all models have in common is that they must be carefully designed and built if they are to function properly. A well made model is the work of a true craftsman. Other than being small, they have nothing in common with toys, which require no skill to make or operate. R/C modellers are proud of their hobby.

Modellers with the time and the skill may do everything, from drawing the plans to decorating the model. But most do not have the time, may not have enough equipment or skills, and many do not live near a hobby shop where they can easily buy the bits of hardware needed to complete a model. For all these modellers, the answer is a kit.

Kits are designed by experts to perform properly when built. Also, a kit can be built much faster than a scratch-built model. Many modellers do not even have the

time to build, so companies around the world are producing models that are almost completely built and require only a few hours of work, like joining two wing-halves, and installing the radio equipment.

Kyosho is one of the world's major producers of kits for model cars, airplanes, helicopters, and boats. Some airplane kits are the traditional balsa type, and are popular with modellers who like to build. Others are designed for faster, simpler, construction, and have factory-made built-up balsa wings and tails with fuselages made of modern materials, while others use such materials for all parts of the model. Some car and helicopter kits are assembled by the builder, who then learns how it is constructed, while others have the major mechanical parts assembled at the factory so the model can be ready to use in the quickest time. The boats have pre-molded hulls, and require relatively little preparation.

Operating a radio control model is a big responsibility. Many models are large and move fast enough to be able to damage property and injure people. If you are just starting, ask an experienced modeller to help you, and you should have public liability insurance. Most national modelling associations have insurance programs.

CARS AND BIKES

With radio control, you have the opportunity to drive exotic and interesting cars, motorcycles, and specialized vehicles, in 1/8, 1/10, and 1/12 size, that few people can afford in real life. The high-quality products from Kyosho shown in this catalog have the same design features as the full-size originals, and drive much like the originals.

There are two main types of R/C vehicle, "On-road" and "Off-road". On-rodgers are intended to run on smooth tracks, like pavement and gym floors, and include model super-performance road cars, competition cars, and sports cars.

Off-rodgers are designed to cope with rough ground, and have large tires, high ground clearance, and long-travel



suspensions with high-performance shock absorbers.

In-between these extremes are rally cars that can travel at high speed on good surfaces, yet can run on rough ground too.

In all these groups there are rear-wheel drive, front-wheel drive, and four-wheel drive (4WD) models, like full-size vehicles.

These models are powered by either an electric motor and battery, or a miniature piston engine. Each type has its advantages. Electric models are clean, quiet, and require very little adjustment, while the engine-powered models have the sound of a real engine and somewhat higher performance (but effective mufflers keep them quiet!). Kyosho has made engine-powered modelling almost as simple as electric, with pull starters and easy-priming systems.

AIRCRAFT



Whether you like exciting aerobatics, realistic scale models, graceful gliders, or challenging helicopters, you can fly them with radio control. Kyosho makes a large variety of kits for gliders and for both engine- and electric-powered model airplanes and helicopters. Airplane kits include the traditional built-up balsa type, with precision-cut parts that slot together, and a large variety of models with factory-made wings and fuselages ready for quick and easy assembly. Concept helicopters are popular around the world for their good performance. Kyosho makes a model for you, whatever type you like!

BOATS

Whether you prefer the sight of a graceful model sailboat crossing a body of water under wind power, an elegant motor cruiser under way, or an exciting high-performance speedboat with either electric or engine power, Kyosho offers what you are looking for, with radio control. Hulls are finely molded and need no further finishing, and many of the power boats have the mechanical parts mounted at the factory. All are simple to assemble and operate.



ALL R/C MODELS

INTRODUCTION TO RADIO CONTROL EQUIPMENT

Radio-controlled models are aircraft, cars, boats, and other models that you can control by radio signals sent from a transmitter to a receiver system in the model. A transmitter is like a box with two pivoted vertical "sticks" that you hold in your hands. When you move a stick, the model responds, so a car might turn or an airplane might climb or roll. The movement of the model is proportional to the amount you move the stick.

One stick may move in just one direction (right-left or back-forth) and control just one function, or it may be free to move in all directions and control two functions. Up to four functions can be controlled by the two sticks. Additional functions can be controlled by switches or slide controls.

Although the transmitter sends out a signal on a single frequency, the signal can be "encoded" to control more than one function. Each function uses one "channel" of the signal. The simplest systems have only two channels, but commercial equipment is available with nine or more channels.

Most cars, boats, and gliders need only two channels, one for the right-left direction and one for speed (or forward-reverse) or up-down direction. Powered airplanes usually use four channels, one each for rudder, ailerons, elevator, and engine/motor speed. More elaborate models may have retracting landing gear, flaps, and other functions, and require more channels. Helicopters require at least five channels. The main items of the system in a model are the receiver and servos, which are described separately, plus a battery.



TRANSMITTER



There are two common ways to use the sticks to control an airplane, called Mode I and Mode II. These are shown on page 100. The two main controls (right-left, up-down) of a Mode I set are operated by both hands. It is the easiest for learners and for sports flying. One hand must operate both main controls of a Mode II set, so the stick has to be moved with greater precision. It is regarded as best for precision aerobatics ("pattern"). Mode II is the most common in North America, while Mode I is the most popular in other markets. Manufacturers of radio control equipment usually make both types, and can supply the less popular model on request.

There are two modes of transmission, AM (Amplitude Modulation) and FM (Frequency Modulation). Low-priced sets are usually AM, and will be more susceptible to interference than FM sets. However, an AM system can be designed to perform as well as an FM system, although its cost will be like that of the FM system. A third way of sending control data is by PCM (Pulse Code Modulation). Transmission is by FM, but the signal includes a code that must be present before the control data are decoded by the receiver. PCM can give better control with some types of interference.

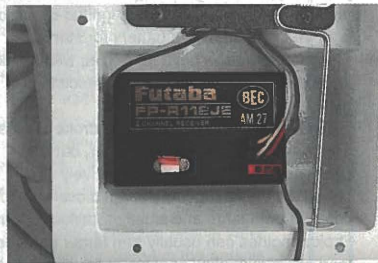
Each transmitter puts out a signal of a fixed frequency. Because several models may be

operating at the same time, it is necessary to control the frequency very accurately so the signals do not interfere. The transmitter and the receiver are kept on the one frequency by crystals, and the frequency can usually be changed within the same band by changing crystals, but it may be necessary to retune the transmitter and receiver to operate correctly. In some countries such a change may be illegal.

In most countries the government assigns a certain range (band) of frequencies for modellers, and only those frequencies may be used. In many countries, regulations also specify that frequencies for aircraft must not be used for surface models (cars and boats), and vice versa. The purpose is safety. If a car modeller were using an aircraft frequency, he would cause any nearby aircraft flying on that frequency to crash. At the very least this could cause the loss of a valuable model airplane. More seriously, the falling model could injure a person or cause property damage.

ALWAYS THINK SAFETY!

RECEIVER



The signal from the transmitter is picked up by the antenna of the receiver, which decodes the signal and extracts the information for each servo. It then sends a signal to each servo to move to the position indicated by the sticks.

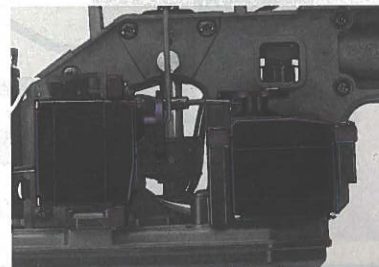
The receiver, transmitter, and crystals must be of the same type (AM or FM), and FM and PCM receivers and the crystals usually must be from the same manufacturer as the transmitter to function properly.

Simpler receivers are of single conversion type. The double conversion type is more expensive, but it rejects signals of other frequencies much better.

SERVOS

A servo moves the part of the model being controlled, one servo per function. Inside the servo is an electric motor and a train of gears to drive the output shaft. An arm or wheel on the shaft is attached by a rod or cable to the part of the model that is to be moved, like the rudder of an airplane or the steering gear of a car.

The signal from the receiver is decoded by a control circuit inside the servo, and the circuit supplies current to the motor as required. A variable resistor linked to the output shaft sends a feedback signal to the control circuit to indicate the position of the shaft.



ELECTRONIC SPEED CONTROLLER



The simplest way to control the speed of the electric motor of a model is a resistor in series with it to limit the current. Kyosho's Rotary speed controller operates this way. An electronic speed controller regulates power by switching the current ON and OFF thousands of times a second with a low-resistance FET semiconductor switch. If the controller is ON almost all the time, the motor receives full power, and if it is ON for a shorter fraction of the time, the power will be lower in proportion. This is called Pulse Width Modulation. Efficiency is very high, for no power is lost in a resistor, and it requires no servo to operate it.

R/C GENERAL INFORMATION

ELECTRIC MOTORS

Model cars, boats, and even airplanes and helicopters, are powered by motors.

Motors depend on the fact that current flowing through a wire wrapped around a piece of iron makes the metal a magnet, with N and S poles, as long as the current is flowing. Opposite poles, N (north) and S (south), attract each other, and like poles, N and N or S and S, repel. Magnetic effects make the rotor of a motor turn. Motors used for models have two pairs of curved magnets mounted solidly inside the housing, so two sets of N and S poles face each other. These field poles are strong permanent magnets made of materials like ferrite, and fit closely around the rotor. The magnetic poles of the rotor alternate between N and S as it turns, so they are always being attracted to an opposite field pole or repelled by a like one. The rotor has an armature made of many thin lobe-shaped pieces of steel (three lobes in Kyosho motors) laminated together and mounted on a shaft. Copper wire is wound around each lobe. When current flows through the windings, the lobe becomes one pole of a magnet. Two lobes are magnetized at any one time to make N and S poles. A magnetized pole is attracted to the nearest field pole of



opposite polarity, causing the rotor to turn. When the rotor pole reaches the field pole, the current is cut off by the commutator, and current flows through the windings of the next pair of lobes, so they are attracted next. The commutator acts like a rotating switch. The commutator of a three-pole rotor is made of three separate curved segments of copper wrapped around a sleeve that supports them and insulates them from the shaft and from each other. Two brushes on opposite sides of the commutator contact two segments at a time, and current flows in from one brush, through the windings connected to both segments, and out through the other brush.

The brushes are made mainly of carbon. They are held in place on the endbell of the motor in insulated holders, and are pressed against the commutator by springs.

Motor power is affected by the bearings (bushing or ball), windings (resistance and number of turns), contact of brushes on the commutator (for carrying current), strength of the field magnets, and timing (position of brushes relative to field poles). All Kyosho motors have stainless steel shafts and diamond-trued commutators for maximum current carrying ability.

NICKEL-CADMIUM BATTERIES

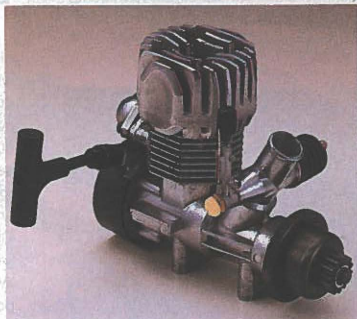
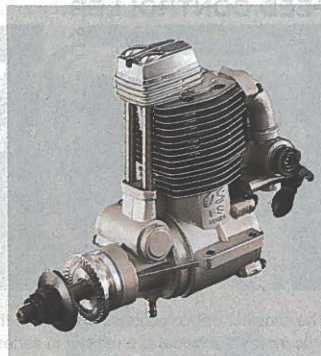


Nickel cadmium, or Ni-Cd, batteries can deliver high current, so they are very suitable for delivering the high power required by electric model cars, airplanes, and helicopters.

NiCd batteries can be recharged and used repeatedly, up to 300 or more times if the batteries are not abused. The worst abuse for a nickel cadmium battery is recharging it when it is still hot from use or overcharging (current too high or charging too long).

All NiCds can be slow-charged for 14 to 16 hours, but the types used for models can be fast-

ENGINES

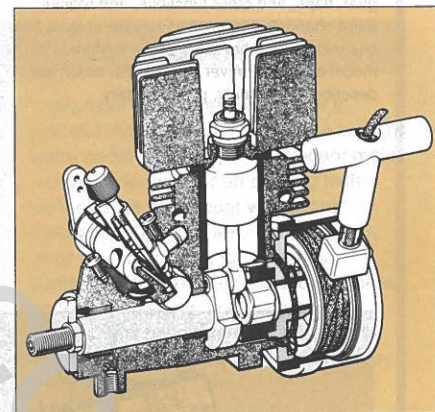


Most radio control model aircraft and many vehicles are powered by engines. The most popular type is the glow engine, which uses an alcohol-based fuel. The fuel is ignited by a glow plug that is heated by a battery for starting. Many large models have an engine with spark ignition and use fuels based on gasoline or alcohol.

There are both two- and four-stroke engines. The former are simpler and lighter, but are usually best used for turning relatively small propellers at high speed (except diesels, which can turn both large and small propellers). Four-stroke engines can usually turn larger propellers than two-stroke glow engines of the same size, and are usually quieter and sound more pleasing, but they are heavier and more complex mechanically, with cams and valves.

Model aircraft engines usually operate in the speed range between about 8000 and 15,000rpm, although engines for special purposes can turn much faster.

Engines range in size (displacement) from a tiny .010 cubic inches (.16cc) to multi-horsepower giants of more than 5 cubic inches (80cc). Engines for most Kyosho models are in the .049 to .60 cubic inch range.

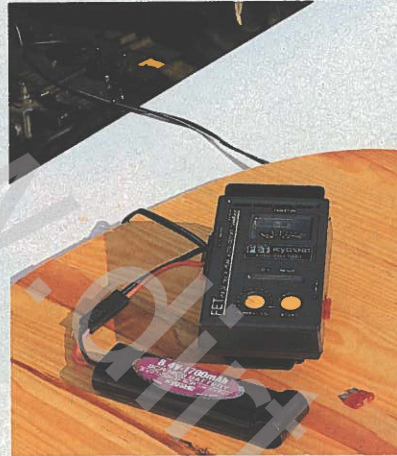


ALL R/C MODELS

BATTERY CHARGERS

charged in about 20 minutes using an appropriate charger, like those sold by Kyosho. Such chargers are powered by an ordinary 12V car battery. Each NiCd cell produces about 1.2 volts. For powering models, cells are connected in series to produce higher voltages. Kyosho models operate on 7.2V, 8.4V and 9.6V.

Each cell has a capacity, measured in milliampere-hours (mAh). The number is an indication of the length of time a cell can deliver a specific current. Capacities of 1200 to 1700mAh are the most common for powering models. This is the range of the "sub-C" cell chosen for its combination of compact size and good capacity. The types of cell used in most Kyosho batteries are SCR and SCE. The SCR is somewhat more robust, can deliver a higher current, and is slightly more tolerant of excess charging current. The SCE has a higher capacity but the internal resistance is slightly higher, so the maximum current is slightly lower. An SCR battery is the best for maximum performance, while an SCE type gives longer duration at slightly lower power.



A NiCd battery must be recharged after it has been discharged before it is ready to use again. The NiCd cells used for powering models are of a type that can be quick charged, in about 15 minutes, instead of the 14-16 hours recommended for ordinary cells used for flashlights and radios. In quick-charging, the charging current is high, 3 amps or more. As long as the cell is not fully charged, it can accept this high current without damage, but if charging at a high rate continues past the fully-charged point, the battery will overheat and may be damaged permanently. If a cell becomes hot enough to boil the liquid inside, a pressure-release plug will blow and that cell will be useless.

To prevent overcharging, chargers either have a timer to cut the current after a fixed time, or else have a sensor circuit to detect the tiny voltage drop occurs when a cell becomes fully charged and then cut off the current. If you are using a charger with a timer, remember that the full timed period is for use only with a fully discharged battery. If the battery is only partly discharged, a full time period will overcharge the battery. In this case, either estimate the amount of charge left and charge for a proportionally shorter time, or

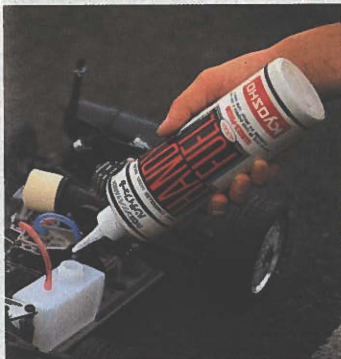
else discharge the battery completely through a discharger, motor, or a resistor, let it cool, then charge for the full time period. Many types of charger are available, some intended for only one type of battery (voltage and capacity), and others that can be adjusted to charge a wide variety of batteries.

Discharger

NiCd cells are not identical, and some will recharge more quickly than others in the same pack. Quick charging does not recharge any cell to 100% of its capacity, and the less efficient cells will be charged to a lower level than the best cells. To correct this problem it is useful to discharge a battery completely from time to time through a discharger, motor, or resistor, then to recharge the battery at a low "C/10" charging current for 14-16 hours. "C" is the battery capacity in mAh, and "10" is 10 hours, so the C/10 current for a 1200mAh battery is 120mA.

There are specialized dischargers on the market, and some chargers are also able to act as dischargers. A resistor can also be used to discharge a battery.

FUEL

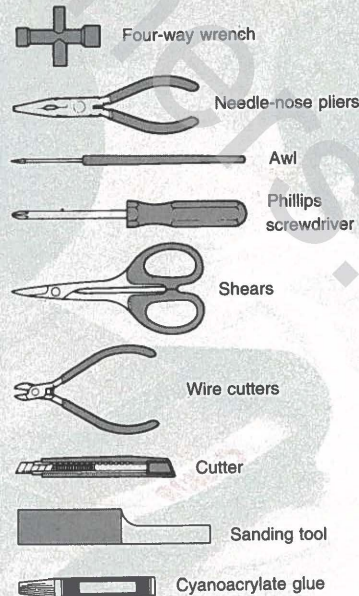


Fuel for glow engines is based on methyl alcohol, with a lubricant to prevent friction. The best lubricant is castor oil, but it may become gummy if the engine is left unused for a long time, and it also passes unburned through the engine and deposits on the model. Many fuels contain synthetic lubricants that burn in the engine and do not deposit on the model. However,

because they burn, synthetics give poor protection if the engine is set too lean and runs hot, whereas castor oil maintains an oil film even at very high temperatures and gives some protection from damage. It is advisable to use fuel with at least 5% castor oil (plus other lubricant) in any glow engine.

Fuel for glow engines usually contains some nitromethane, often called "nitro", which supplies oxygen and helps the alcohol burn faster. For sports modellers, the greatest benefits of nitro are to make the needle valve less critical to adjust and to make the engine idle more reliably. For this purpose, 5% nitromethane is enough. Adding more will increase power at higher maximum speed, but in many engines there is no advantage in using more than 5-15% nitro for sports operation. High-nitro fuel is more expensive and makes an engine run hotter. Each modeller has to make tests and find the best fuel for his purposes.

MODELLING TOOLS



To make building or assembling models as enjoyable and simple as possible, the tools shown are very useful.

Absolutely essential when working with Kyosho kits is a medium-size Phillips screwdriver, since all screws in a kit are Phillips type (cross head).

One or more needle-nose pliers are invaluable for reaching into narrow spaces to grip screws and other parts. They also have cutter blades for cutting copper wire. Note: Do not use these cutters for cutting hardened steel wire, for this will ruin the blades.

A very useful tool, especially in countries where metric fasteners are not common, is a 4-way metric wrench (Kyosho No.1943), for it fits almost all nuts used in Kyosho kits: 2mm, 2.6mm, 3mm, and 4mm (marked 4, 5, 5.5, and 7mm).

Kyosho car bodies are molded of sheet polycarbonate, and must be trimmed to the final shape by cutting and sanding. Ordinary scissors will cut the sheet, but for cutting inside curves, like wheel arches, shears with curved blades are invaluable. Kyosho Hobby Shears (Kyosho No.1829) were designed for this work, and are excellent for the purpose. Included with the shears is a sanding block that can be used to smooth the shear cuts.



www.dirt-burners.com

Labatt's

Canon

Canon

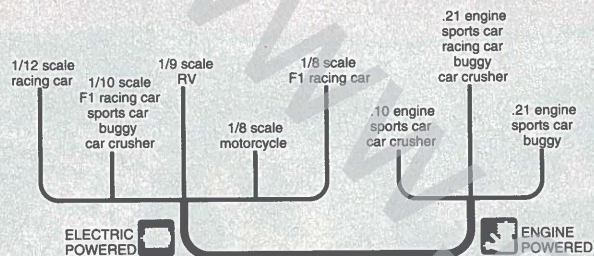
Bull

FONDOMETAL

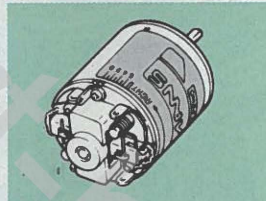
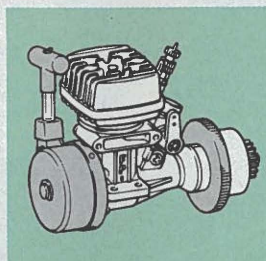


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R/C GENERAL INFORMATION

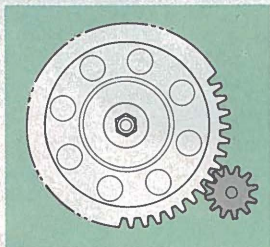


TYPES OF KYOSHO R/C CARS



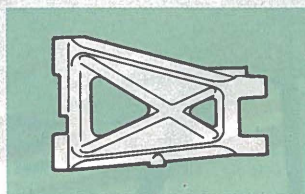
POWER UNIT

A vehicle can be driven by either an electric motor powered by a rechargeable nickel-cadmium (NiCd) battery, or by an engine burning an alcohol-based fuel and ignited by a glow plug.



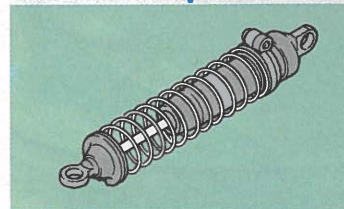
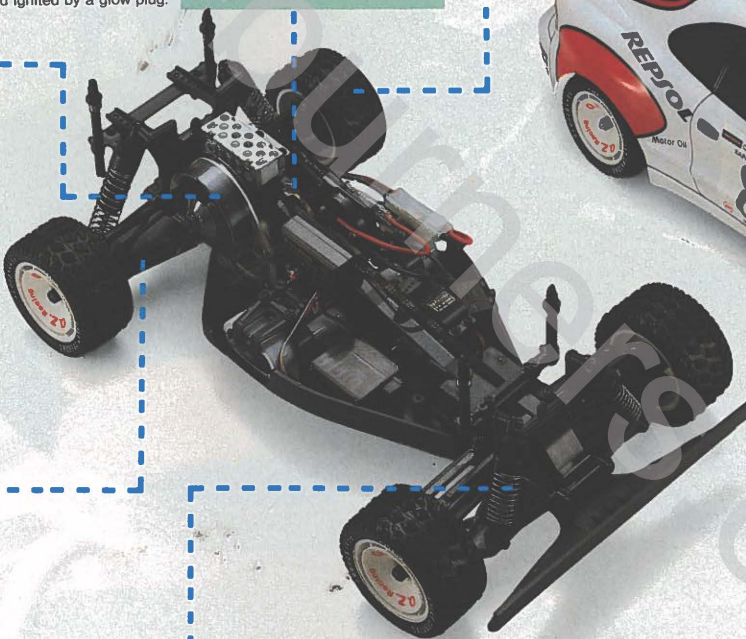
GEARING AND POWER TRANSFER

The torque of motors and engines is increased by a gearbox. Wheels at the same end as the motor or engine are driven directly by the gearbox. Nearly all 4WD vehicles have shafts or belts to drive the wheels at the other end of the vehicle.



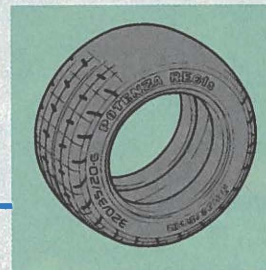
SUSPENSION

Except for a couple of specialized vehicles, all Kyosho models have a sophisticated four-wheel independent suspension that allows each wheel to move separately in response to a bump and keeps the vehicle under control, even on rough surfaces.



SHOCK ABSORBERS

Models have shock absorbers (dampers) to keep the suspension springs under control, and thus the vehicle, even on rough ground. In the oil-filled type a piston moves up and down in a cylinder full of oil, and the viscosity of the oil damps the wheel movement. In the friction type, mechanical friction in the shock body acts in the same way as oil in the oil-filled type.



TIRES

There are two basic types of tire. The sponge type is made of a closed-cell material like a sponge. The semi-pneumatic type is hollow, and the design traps air inside the tire, although there is no inner tube. The shock-absorbing function is a combination of the air inside the tire and the stiffness of the sidewalls of the tires. There are many types of tread pattern, each suited to a particular type of road surface.



PAINTING

Car bodies in kits are made of clear polycarbonate plastic, a very strong, impact-resistant material. It should be painted with acrylic paints, like Polycolor, which are water-based. Paints using an organic solvent will damage the body. The paint is usually applied to the inside of the body. This gives a glossy finish and protects the paint from scratch damage.

RADIO-CONTROLLED CARS

R/C cars appeal to almost everyone because they make it possible to drive many interesting kinds of vehicle, in 1/8, 1/10 and 1/12 scale. High-quality products like those from Kyosho have the same design features as their full-size equivalents. The following gives a brief outline of the types of model vehicles available and the function of the major components.

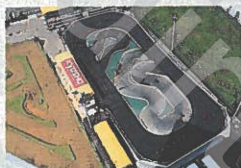
There are two main types of R/C vehicle, "On-road" and "Off-road". The former are intended to run on smooth tracks like pavement, gym floors, etc., and include model Formula 1 cars, super-performance road cars, and competition cars, while the latter are designed to cope with rough ground, and have large tires, high ground clearance, and long-travel suspensions. In-between them are rally cars that, like the full-size cars, can travel at high speed on good surfaces, yet can cope with rough conditions too. In all these groups there are, also like full-size vehicles, rear-wheel drive, front-wheel drive, and four-wheel (4WD) models. Kyosho makes cars of all these types.

The powerplant of these R/C models is either an electric motor or a miniature piston engine. Each type has its advantages. Electric models are clean, quiet, and require very little adjustment, while the engine-powered models have the sound of a real engine and somewhat higher performance.



COMPETITION

Owning a fast model car often leads to the desire to race it against other models. It's a lot of fun, and many competitors spend much time practising and improving their cars. Many clubs and hobby shops organize races, so it is a good idea to ask them to find out what activities are available in your area.



ROAD RACING

This is racing on a track with many corners, like a real road. Cars must be able to turn equally well in both directions, and this requires the ability to tune the chassis in the same way as real cars do.

Tracks may be laid out on flat areas, like parking lots, or may be permanent setups with hills as well.



OVAL-TRACK RACES

It looks simple to drive around an oval course, but certain skills are required, as in American stock car races. To improve the performance of model cars on oval tracks, the batteries can be mounted toward the inside of the course to improve cornering. There are many other tricks.



OFF-ROAD RACING

Off-road tracks are rough. For some drivers, the rougher the better! These courses require the best handling, which requires a long-travel all-independent suspension, good shock absorbers, a powerful motor, and the right choice of tire. It's a real test of skill.

TECHNICAL INFORMATION



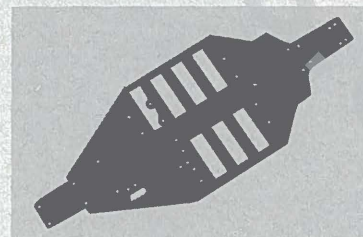
MOTORS

There is a motor for every application. Some of the differences are the type of vehicle (2WD/4WD), duration of race, capacity of battery used (1200/1700mAh), size of vehicle, motor winding (single/double, wire diameter, number of turns), bushings/ball bearings, soldered/crimped commutator, etc. Expensive motors have advantages, but less-expensive ones also give good performance.



SHOCKS

The handling of any vehicle will be affected by the relationship of the springs and shock absorbers. The springs can be made shorter and stiffer by changing the clamp position on the shock body, and more or less viscous oil can be used in the shocks to increase or decrease their effect. Finding the winning set-up requires much experimentation.



CHASSIS

The standard chassis (glass-reinforced nylon or polyester) is quite adequate for all normal operation, but for maximum speed there can be an advantage in converting to an ultra-stiff carbon fiber reinforced chassis.



GEARING AND DIFFERENTIAL

A low-geared model (high numerically) will accelerate quickly, but the top speed will be limited. Conversely, a higher-geared model will accelerate slower, but the top speed will probably be higher (if the power is available). If there is a choice of gearing for your model, it may be worth experimenting to find the best gearing. Also, if the differential is adjustable, there may be an advantage in trying various settings.



TIRES

For On-road racing, the choice would be among tires of various diameters and hardnesses, soft for better cornering, harder for longer life. For Off-road vehicles, the type of tread (pin, spike, block, etc.) on the front and rear wheels would be selected for the best handling.



NiCd BATTERY

If the rules permit their use, batteries with the highest capacity will give the longest duration with high power (1700mAh vs 1200mAh).

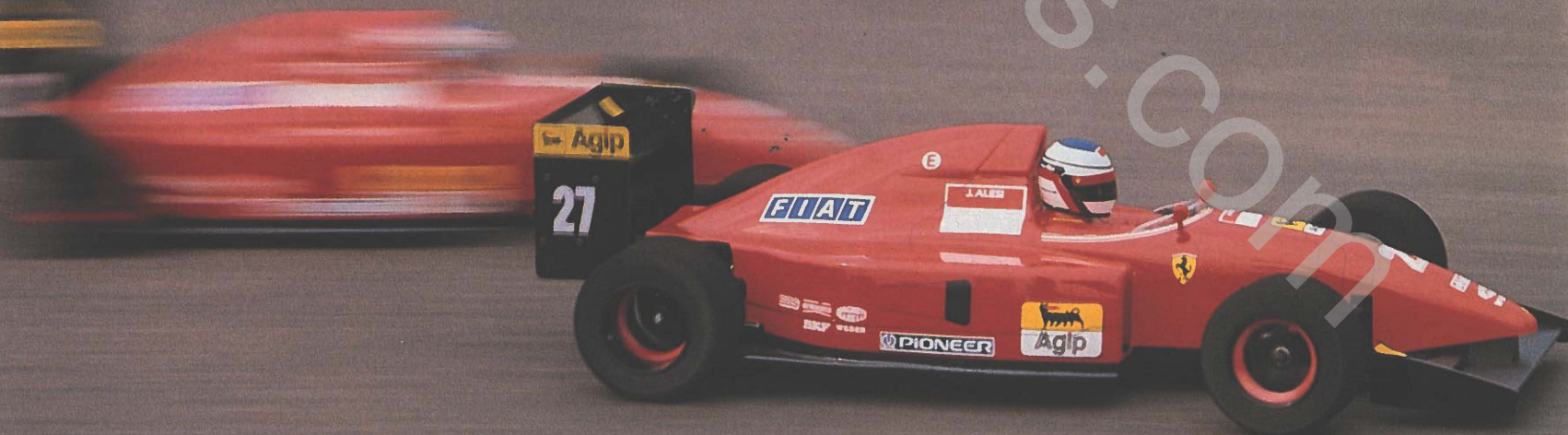
ELECTRIC 1 / 10 SCALE F1 CARS





1/10 SCALE FORMULA RACING SERIES

ELECTRIC POWERED SCALE F1 RACING CARS

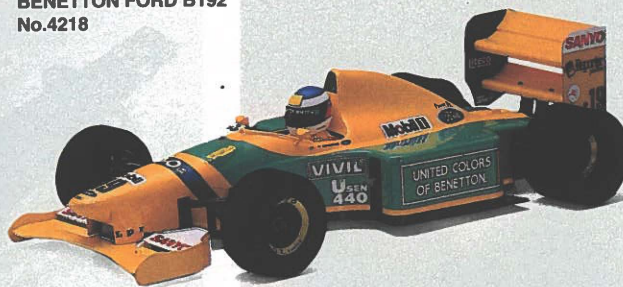




1:10 SCALE



BENETTON FORD B192
No.4218



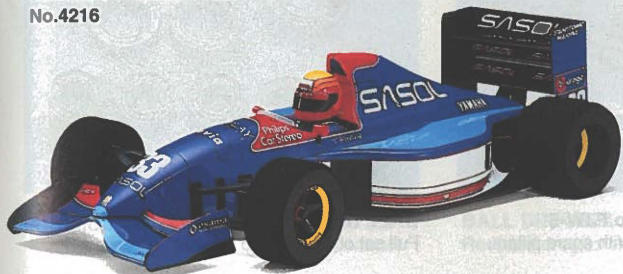
FERRARI F92A
No.4217



WILLIAMS RENAULT FW14
No.4215



JORDAN-YAMAHA 192
No.4216



SUPER PERFORMANCE! SUPER REALISM!

SET UP YOUR OWN GRAND PRIX CIRCUIT AND ENJOY THE THRILLS OF RACING IN 1/10-SCALE! THESE MODEL GRAND PRIX CARS LOOK AND HANDLE LIKE THE FULL-SIZE ORIGINALS AND ARE DESIGNED TO OUTRUN AND OUTCORNER ANY OTHER 1/10-SCALE GRAND PRIX MODEL ON THE MARKET. ALL HAVE THE SAME SLIDING PILLAR FRONT SUSPENSION WITH STREAMLINED ARMS AND FLEX-CHASSIS REAR SUSPENSION WITH FRICTION DAMPING, SIMPLE, LIGHT, AND IDEAL FOR SMOOTH ROAD-TYPE COURSES. POWERFUL LeMANS STOCK 05 MOTOR (INCLUDED) AND BATTERY ARE MID-MOUNTED FOR IDEAL BALANCE AND TOP HANDLING. STRONG REINFORCED CHASSIS. CHOICE OF FOUR OF THE TOP COMPETITORS IN THE GRAND PRIX SCENE. BODIES AND FRONT/REAR WINGS ARE ACCURATELY MOLDED IN STRONG, LIGHT POLYCARBONATE, READY FOR YOUR PAINT SCHEME. MANY SPONSOR INSIGNIAS. SLICK TIRES INCLUDED. OPTIONAL CARBON CHASSIS AND DRIVE SHAFT, ALUMINUM MOTOR MOUNT.

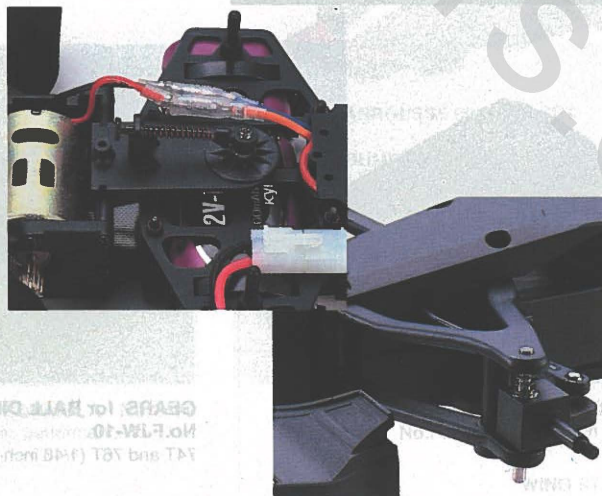
Required for operation (not included)



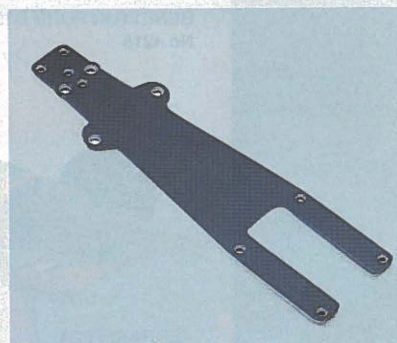
7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel
w/electronic speed controller

Technical data (typ)

Length/397mm (15.2") Width/200mm (7.9")
Height/95mm (3.7") Wheelbase/250mm (9.8")
Ground clearance/8mm (0.3")
Track/F: 170mm (6.7"); R: 155mm (6.1")
Tires/F: Ø60x30mm; R: Ø60x45mm
Weight/1090g (38 oz) Gear ratio/4.1:1
Motor (included)/LeMans Stock 05
Speed controller (not included)/electronic



OPTION PARTS for FORMULA RACING SERIES



CARBON CHASSIS No.FJW-1
Increased stiffness. Hybrid CFRP material.



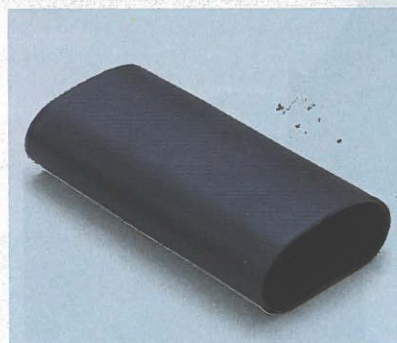
CARBON SHAFT No.FJW-2
Ultra light with higher strength and durability.



FRONT SPRING SET No.FJW-5
Set of 3 spring stiffnesses. With spare pillars.



BALL BEARING SET No.FJW-6
Full set of 9 bearings.



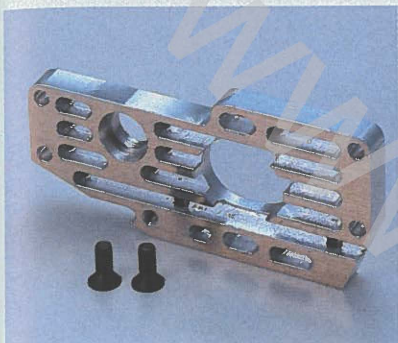
TIRE CAPED RUBBER No.FJW-9
For rear tires.



GEARS for BALL DIFF. (74T/76T) No.FJW-10
74T and 76T (1/48 inch-pitch)



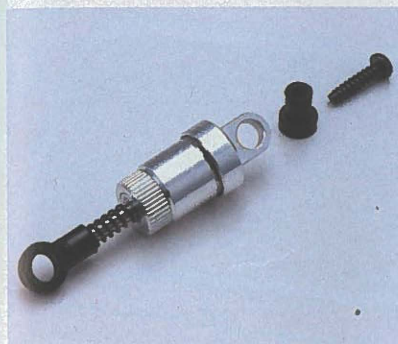
HARD PINION (17T-23T) No.W-0117 - W-0123
Alumite finish aluminum. 7 sizes, 17T-23T.



SPECIAL AXLE MOUNT No.FJW-3
17S alloy aluminum. Also acts as heat sink.



SPECIAL POST SET No.FJW-4
Strengthens rear suspension mount.
17S aluminum alloy.



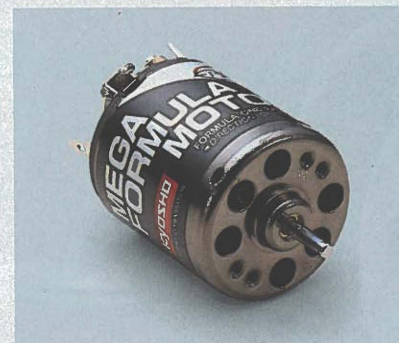
FORMULA OIL SHOCK No.FJW-7
Improves shock damping by rear suspension.



BALL DIFF. SET No.FJW-8
Reduced drag for higher performance.



SPARK GENERATOR No.1857
Makes sparks on Bumps! Attach to bottom of chassis.



MEGA MOTOR 22x2 FORMULA No.2470
Specially designed for top performance in F1 cars.



BENETTON FORD B192 BODY SET No.FJ-33



FERRARI F92A BODY SET No.FJ-27



JORDAN-YAMAHA 192 BODY SET No.FJ-23



WILLIAMS RENAULT FW14 BODY SET No.FJ-19



BRAUN TYRRELL HONDA 020 BODY SET No.FI-76



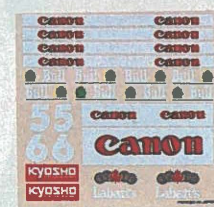
BRABHAM-YAMAHA BT60Y BODY SET No.FI-75



ESPO LARROUSSE 90 BODY SET No.FI-54
FRONT BUMPER No.FI-77



FERRARI F189 BODY SET No.FI-53
FRONT BUMPER No.FI-77



WING STICKERS (WILLIAMS) No.FJ-28



WING STICKERS (JORDAN) No.FJ-34



WING STICKERS (BENETTON) No.FJ-29

ELECTRIC

MINI COOPER

& VW BEETLE







MINI COOPER
ELECTRIC POWERED SCALE MODEL CAR
1:10 SCALE

VW BEETLE
ELECTRIC POWERED SCALE MODEL CAR
1:12 SCALE



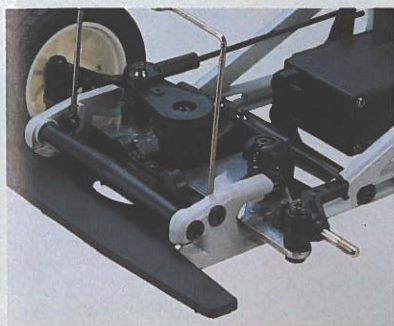
FACTORY ASSEMBLED (ARR) No.3056•No.3058
KIT No.3055•No.3057



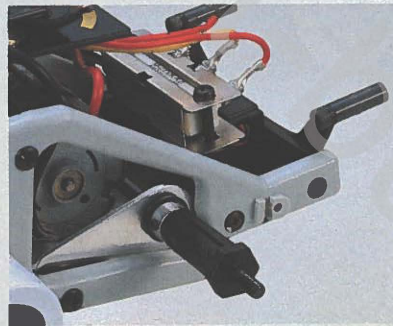
MINI COOPER
No.3055•No.3056(ARR)



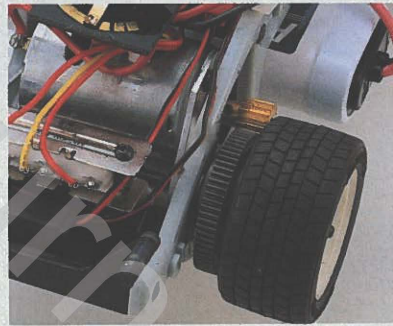
VW BEETLE
No.3057•No.3058(ARR)



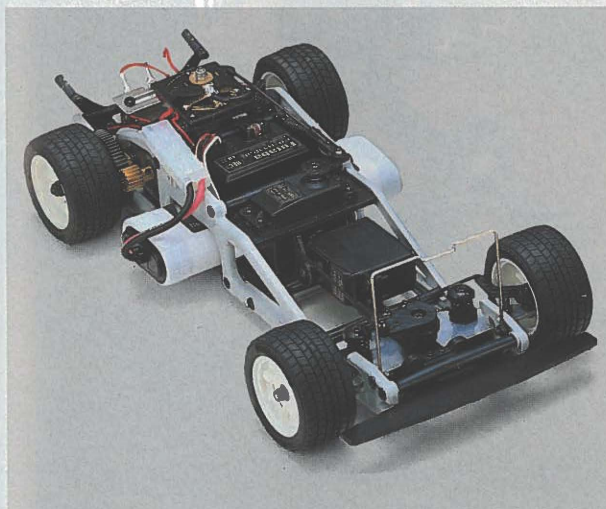
LIGHT, RELIABLE SWING ARM FRONT SUSPENSION GIVES FLAT CORNERING WITH SUFFICIENT WHEEL TRAVEL.



LIVE REAR AXLE IS SPRUNG BY CHASSIS PLATE FLEX. SIMPLE, LIGHT, AND EFFECTIVE.



DIRECTLY DRIVING MOTOR AND DIFFERENTIAL MEAN ZIPPY POWER, RELIABILITY, AND GOOD CORNERING.



Technical data (VW BEETLE)

●Length/339mm (13.3") ●Width/164mm (6.5") ●Height/121mm (4.8") ●Wheelbase/210mm (8.3")
●Ground clearance/12mm (0.5") ●Track (F/R)/130mm (5.1 in) ●Weight/1000g (2.2 lb) ●Tires (F/R)/φ55×27mm
●Gear ratio/4.07 : 1 ●Motor (included)/Mabuchi RS-540SH ●Speed controller (included)/3 fwd+rev

TWO CARS THAT DEFINED AN AGE

THE MINI COOPER AND THE VW BEETLE WERE CARS THAT DEFINED THE 60's, THE COOPER HAD A BIG ENGINE IN A TINY PACKAGE AND GAVE GREAT PERFORMANCE, THE VW CHEAP AND RELIABLE TRANSPORTATION FOR MILLIONS OF YOUNG PEOPLE WHO MADE IT INTO A CULT CAR WITH PAINT SCHEMES TO MATCH. THESE KYOSHO 1/10-SCALE MINIATURES ARE SMALL IN EVERYTHING BUT PERFORMANCE. BOTH HAVE A STRONG NYLON CHASSIS AND AN INDEPENDENT SWING-ARM FRONT SUSPENSION AND THREE-POINT MOUNTED LIVE REAR AXLE WITH DIFFERENTIAL FOR GOOD HANDLING AND GREAT CORNERING ON SMOOTH TRACKS. THE BODIES ARE ACCURATELY MOLDED OF IMPACT-RESISTANT POLYCARBONATE, READY FOR YOUR WILDEST PAINT SCHEME, AND THERE ARE MANY CHROME-FINISH DETAIL PARTS. THE CHASSIS AND MECHANICAL PARTS ARE FACTORY ASSEMBLED, SO THE BUILDER JUST INSTALLS THE RADIO CONTROL EQUIPMENT. A POWERFUL MABUCHI RS-540SH MOTOR AND STEPLESS SPEED CONTROLLER ARE INCLUDED. QUICK-RELEASE BODY MOUNTS PERMIT EASY BATTERY CHANGES.



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos

ELECTRIC 1/10 SCALE RALLY CARS





www.dirt-burners.com

CITROËN ZX RALLYE RAID

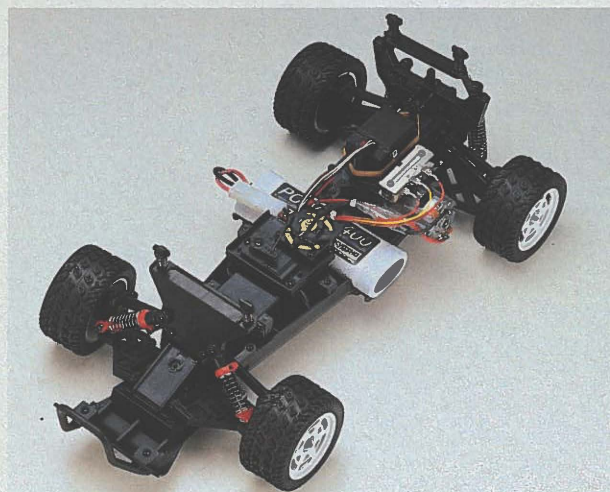
ELECTRIC POWERED RALLY CAR

1:10 SCALE
No.3163



GOOD LOOKS AND PEPPY PERFORMANCE

IN ITS FIRST YEAR OF COMPETITION THE CITROËN ZX WON THE GRUELLING 1991 PARIS TO DAKAR RALLY. THIS LARGE, EXCITING 1/10-SCALE KYOSHO MODEL HAS ALL THE CONTOURS OF THE ORIGINAL BODY IN PRECISION MOLDED POLY-CARBONATE. IT HAS SCALE TIRES AND METAL FINISH WHEELS, PLUS MANY DETAIL PARTS LIKE MIRRORS, WIPERS, AND REAR SPOILER, AND THE KIT HAS PLENTY OF SPONSOR DECALS TO ADD THE FINAL TOUCH OF REALISM TO YOUR PAINT SCHEME. THE ALL-INDEPENDENT WISHBONE/ARM SUSPENSION WITH LIGHTWEIGHT FRICTION-TYPE SHOCKS GIVES GOOD HANDLING ON SCALE ROUGH SURFACES, AND THE POWERFUL MID-MOUNTED MABUCHI RS-540SH MOTOR (INCLUDED), DRIVING THROUGH A PRECISION GEAR-TYPE DIFF, PUTS PLENTY OF POWER AT THE REAR WHEELS. THE SPEED CONTROLLER (INCLUDED) GIVES THREE FORWARD SPEEDS PLUS REVERSE. CONCEALED BODY MOUNTS MAINTAIN THE SMOOTH LINES BUT ALLOW QUICK ACCESS FOR BATTERY CHANGES.



Technical data

- Length/486mm (19.1") ● Width/235mm (9.3") ● Height/188mm (7.4") ● Wheelbase/273mm (10.7")
- Track/F: 192mm (7.6"); R: 195mm (7.7") ● Ground clearance/20mm (0.8") ● Weight/1670g (3.6 lb)
- Tires (F/R)/φ74×36mm
- Gear ratio/10.8 : 1 ● Motor (included)/Mabuchi RS-540SH ● Speed controller (included)/3 fwd+rev



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)

Battery charger (No.2358/1849/2246)

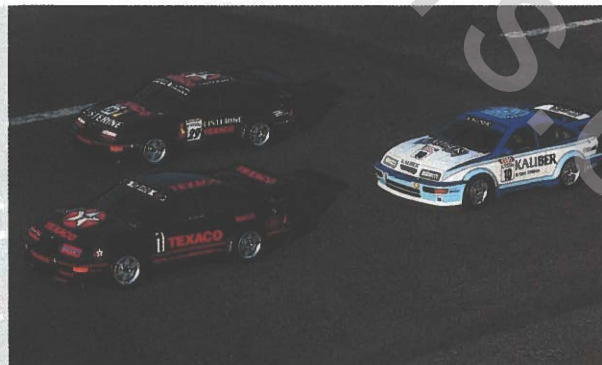
Radio control set: Two-channel w/two servos

FORD RS500 COSWORTH
ELECTRIC POWERED SCALE MODEL CAR

1:10 SCALE
No.3178



FAST GROUP A CAR EXCITEMENT!
LARGE, ACCURATELY-MOLDED FULL-DETAIL 1/10-SCALE MODEL OF EXCITING FORD COSWORTH Gr. A COMPETITION CAR. GOOD HANDLING ON SMOOTH AND ROUGH TRACKS. WISHBONE/ARM ALL-INDEPENDENT SUSPENSION WITH RELIABLE FRICTION SHOCK ABSORBERS. POWERFUL MABUCHI RS-540SH MOTOR AND SPEED CONTROLLER INCLUDED. STRONG, DURABLE PARTS. GEAR-TYPE DIFF AND SEALED GEARBOX FOR DUST PROTECTION. COLORFUL DECORATIVE SELF-ADHESIVE DECALS. EASY ASSEMBLY. A GREAT INTRODUCTION TO THE FUN OF RADIO CONTROLLED CARS!



OPTION DECAL SHEETS ARE SHOWN ON PAGE 69.

Technical data

- Length/521mm (20.5") ●Width/255mm (10.0") ●Height/166mm (6.5") ●Wheelbase/273mm (10.7")
- Ground clearance/20mm (0.8") ●Track/F: 192mm (7.6"); R: 206mm (8.1") ●Tires (F/R)/φ77×36mm ●Weight/1750g (3.9 lb)
- Gear ratio/10.8 : 1 ●Motor (included)/Mabuchi RS-540SH ●Speed controller (included)/3 fwd+rev



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel
w/two servos



LANCIA DELTA INTEGRALE 16V

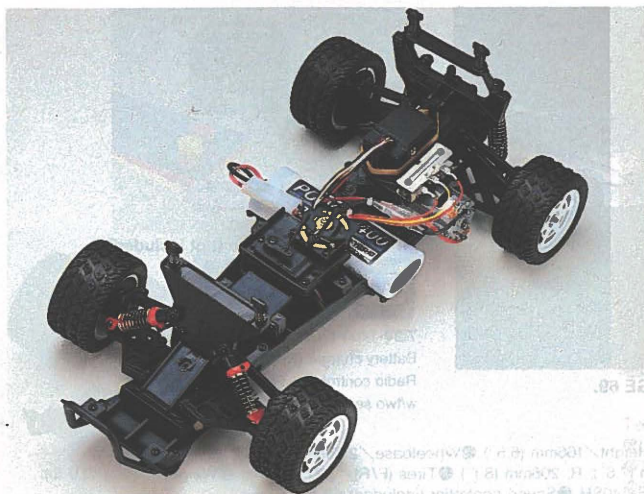
ELECTRIC POWERED 2WD RALLY CAR

1:10 SCALE
No.3169



WORLD CHAMPION RALLY COMPETITION CAR

THE LANCIA DELTA INTEGRALE RALLY COMPETITION CAR IS WORLD FAMOUS FOR HIGH POWER, RUGGED CONSTRUCTION, AND GOOD HANDLING. THIS 1/10-SCALE KYOSHO MODEL HAS THE SAME FEATURES, BUT CAN BE RUN IN ANY OPEN SPACE, ROUGH OR SMOOTH. THE BODY IS VERY ACCURATELY MOLDED FOR REALISM, AND MANY DETAIL PARTS ARE INCLUDED, SUCH AS MIRRORS, WIPERS, PLUS MANY SPONSOR INSIGNIAS. WHEELS AND TIRES ARE COMPLETELY SCALE. THE ALL-INDEPENDENT SUSPENSION WITH WISHBONE/ARM LINKAGE AND LIGHTWEIGHT FRICTION SHOCK ABSORBERS KEEPS IT UNDER CONTROL ON SCALE TRACKS. POWERFUL MABUCHI RS-540SH AND SPEED CONTROLLER ARE INCLUDED. DIFFERENTIAL IS STRONG GEAR TYPE. ASSEMBLY IS SIMPLE, MAKING IT AN EXCELLENT FIRST R/C CAR. ONLY BATTERY, CHARGER, RADIO CONTROL SET, AND PAINTS OF YOUR CHOICE ARE REQUIRED TO HAVE THIS GREAT LOOKING CAR READY. IT LOOKS GOOD ON DISPLAY, TOO.



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos

Technical data

Length/450mm (17.7") Width/240mm (9.4")
Height/170mm (6.7") Wheelbase/273mm (10.7")
Ground clearance/ 20mm (0.8")
Track/F: 192mm (7.6"); R: 195mm (7.7")
Tires (F/R)/ Ø74x36mm Weight/1670g (3.7 lb)
Gear ratio/ 10.8:1 Motor (included)/ Mabuchi RS-540SH
Speed controller (included)/ 3 fwd + rev



CALSONIC SKYLINE GT-R

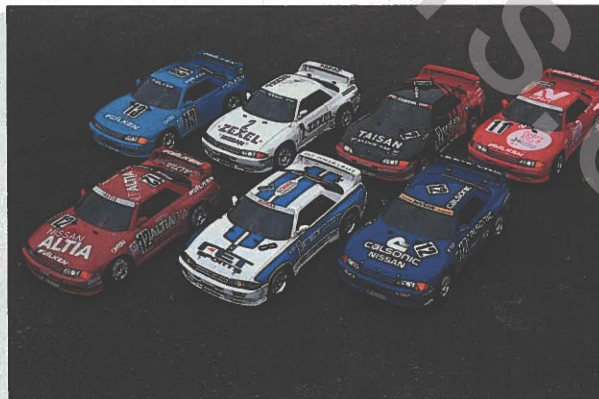
ELECTRIC POWERED 4WD GROUP A CAR

1:10 SCALE
No.3039



GT-R HIGH-PERFORMANCE 4WD TOURING CAR TRACK RACER

THE CALSONIC SKYLINE GT-R IS A VERY SUCCESSFUL COMPETITOR IN THE JAPANESE MANUFACTURERS' TOURING CAR CHAMPIONSHIP SERIES. THIS 1/10-SCALE MODEL FEATURES KYOSHO'S HIGH-PRECISION MOLDING SKILLS TO PRODUCE A VERY ACCURATELY SHAPED BODY OF THIS FAMOUS CAR, WITH EVERY DETAIL REPRODUCED. MANY DETAIL PARTS, LIKE MIRRORS AND WINDSHIELD WIPERS, ARE PART OF THE KIT. THE RUNNING GEAR IS TAKEN FROM THE VERY SUCCESSFUL LAZER ALPHA FOUR-WHEEL DRIVE OFF-ROADER, WITH CHANGED GROUND CLEARANCE AND SCALE ROAD TIRES AND WHEELS, SO IT IS EASY TO ASSEMBLE AND REQUIRES MINIMAL ADJUSTMENT. THE KIT IS COMPLETE WITH A POWERFUL LeMANS STOCK 05 MOTOR AND A RELIABLE KYOSHO ROTARY SPEED CONTROLLER.



OPTION DECAL SHEETS ARE SHOWN ON PAGE 69.

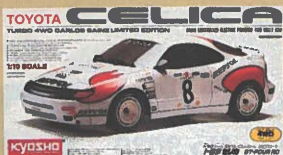
Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos

Technical data

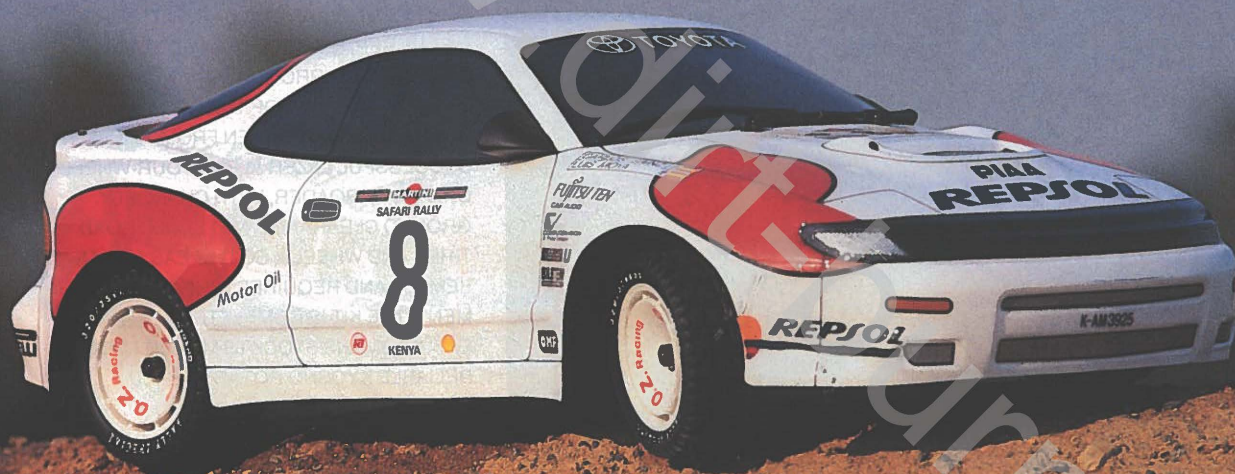
Length/492mm (19.4") Width/242mm (9.5")
Height/150mm (5.9") Wheelbase/273mm (10.7")
Ground clearance/26mm (1.0")
Track/F: 202mm (8.0"); R: 207mm (8.1")
Weight/1770g (3.9 lb) Tires/F/R: Ø77x36
Gear ratio/11.6:1 Motor (included)/LeMans Stock 05
Speed controller/ Kyosho Rotary (3 fwd + rev)



TOYOTA CELICA TURBO 4WD

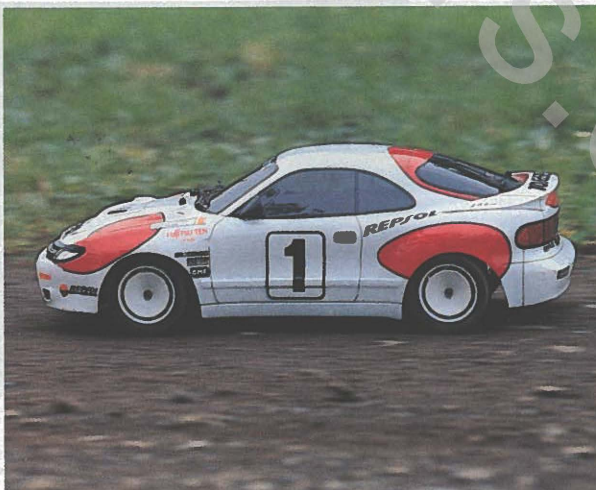
ELECTRIC POWERED 4WD RALLY CAR

1:10 SCALE
No.3037



HIGH-PERFORMANCE 4WD COMPETITION RALLY CAR

THE CARLOS SAINZ LIMITED EDITION VERSION OF THE TOYOTA CELICA TURBO 4WD IS A WELL-KNOWN CONTENDER FOR THE WORLD RALLY CHAMPIONSHIP. KYOSHO HAS PRODUCED THIS 1/10-SCALE MODEL WITH A VERY ACCURATELY SHAPED BODY. MANY DETAIL PARTS, LIKE MIRRORS AND WINDSHIELD WIPERS, ADD TO THE REALISM. THE CHASSIS IS THE SAME AS THAT OF THE VERY SUCCESSFUL LAZER ALPHA FOUR-WHEEL DRIVE OFF-ROADER, AND IT HAS THE SAME EFFICIENT FOUR-WHEEL DRIVE SYSTEM BY TOOTHED BELTS. IT IS EASY TO ASSEMBLE AND REQUIRES MINIMAL ADJUSTMENT. A POWERFUL LeMANS STOCK 05 MOTOR AND A RELIABLE KYOSHO ROTARY SPEED CONTROLLER ARE INCLUDED IN THE KIT. THE MODEL CAN BE UPGRADED AS DESIRED WITH ALL PARTS FROM THE LAZER ALPHA AND MOST FROM THE ZX-R, KYOSHO'S HOTTEST RACING OFF-ROADER, SUCH AS A FULL SET OF BALL BEARINGS.



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos

Technical data

Length/495mm (19.5") Width/260mm (10.2")
Height/160mm (6.3") Wheelbase/276mm (10.8")
Ground clearance/26mm (1.0")
Track/F: 202mm (8.0"); R: 207mm (8.1")
Weight/1770g (3.9 lb) Tires/F/R: Ø77x36
Gear ratio/11.6:1 Motor (included)/LeMans Stock 05
Speed controller/ Kyosho Rotary (3 fwd + rev)



MITSUBISHI NIKON PAJERO

ELECTRIC POWERED 4WD RALLY CAR

1:10 SCALE
No.3038



SCALE MODEL OF THE 1992 PARIS-CAPETOWN RALLY WINNER

THE MITSUBISHI NIKON PAJERO OUTLASTED ALL OTHER COMPETITORS IN THE GRUELLING 1992 PARIS-LE CAP RALLY FROM PARIS TO CAPETOWN, 12,427km THROUGH THE FULL LENGTH OF AFRICA. THIS RALLY, IN REALITY A TIMED ROAD RACE, IS THE SUCCESSOR TO THE PARIS-DAKAR RALLY, AND THE NIKON PAJERO REACHED SPEEDS UP TO 230km/h (145mph). THE KYOSHO MODEL OF THE WINNING CAR REPRODUCES THE BODY WITH GREAT DETAIL, AND A FULL SET OF SPONSOR DECALS IS INCLUDED SO YOU CAN FINISH YOUR MODEL AS A SCALE REPLICA, AS GOOD FOR DISPLAY AS FOR RUNNING OVER SMOOTH SURFACES OR ROUGH. THE CHASSIS IS A MODIFIED VERSION OF THE LAZER ALPHA, AND WAS DESIGNED FOR EASY ASSEMBLY AND ADJUSTMENT. IT FEATURES AN ALL-INDEPENDENT LONG-TRAVEL SUSPENSION WITH OIL-FILLED SHOCKS, AND RELIABLE FOUR-WHEEL DRIVE BY TOOTHED BELT AND TWO GEAR-TYPE DIFFERENTIALS. THE KIT INCLUDES A POWERFUL LeMANS STOCK 05 MOTOR AND A RELIABLE KYOSHO ROTARY SPEED CONTROLLER.



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set:Two-channel w/two servos

Technical data

Length/470mm (18.5") Width/245mm (9.6")
Height/210mm (8.3") Wheelbase/276mm (10.9")
Ground clearance/26mm (1.0")
Track/F: 202mm (8.0"); R: 207mm (8.2")
Weight/1850g (4.0 lb) Tires (F/R)/ Ø76x36mm
Gear ratio/11.6:1 Motor (included)/LeMans Stock 05
Speed controller (included)/Kyosho Rotary (3 fwd + rev)

ELECTRIC RACING TRUCKS





OUTLAW ULTIMA TRUCK

ELECTRIC POWERED OFF-ROAD RACER

1:10 SCALE
No.3166



ACTION IS THE NAME OF THE GAME!

COMBINE THE HIGH PERFORMANCE OF AN *ULTIMA* CHASSIS WITH A STYLISH TRUCK BODY, AND YOU'VE GOT HIGH-SPEED FUN ON THE ROUGHEST TRACKS WITH "TRUCK CULTURE" STYLING! THE LONG-TRAVEL ALL-INDEPENDENT SUSPENSION WITH OIL-FILLED SHOCKS SOAKS UP THE JOLTS AND BUMPS, AND THE STRONG *KELRON* CHASSIS KEEPS IT ALL ALIGNED. THE GEARS ARE SEALED TO KEEP OUT HARMFUL DUST, AND THE WHEELS ARE DESIGNED TO PREVENT DIRT FROM BUILDING UP AND AFFECTING THE HANDLING. THE POWERFUL *SUPER STOCK 34* MOTOR (INCLUDED) GIVES PEPPY PERFORMANCE, AND THE HIGH-QUALITY *ROTARY* SPEED CONTROLLER (INCLUDED) KEEPS THE POWER UNDER CONTROL. MOST *ULTIMA* OPTIONS FIT PERFECTLY FOR EVEN HIGHER PERFORMANCE.



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2356/1849/2246)
Radio control set: Two-channel w/two servos

Technical data

●Length/423mm (16.7") ●Width/286mm (11.3") ●Height/186mm (7.3") ●Wheelbase/280mm (11.0")
●Ground clearance/46mm (1.8") ●Track/F: 222mm (8.7"); R: 235mm (9.3") ●Tires (F/R)/φ104×56mm ●Weight/1850g (4.1 lb)
●Gear ratio/10.3 : 1 ●Motor (included)/*Super Stock 34* ●Speed controller (included)/*Rotary* (3 fwd + rev)

OUTLAW RAIDER

ELECTRIC POWERED
OFF-ROAD RACING TRUCK / No.3161

OUTLAW RAIDER ARR

PRE-ASSEMBLED ELECTRIC POWERED
OFF-ROAD RACING TRUCK / No.3162

1:10 SCALE



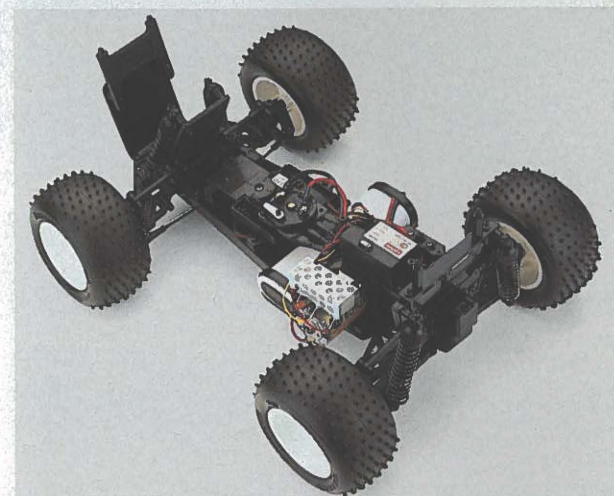
STADIUM TRUCK PERFORMANCE WITH ENTRY-LEVEL EASE OF OPERATION

THE OUTLAW RAIDER STADIUM TRUCK IS DESIGNED TO GET FIRST-TIME DRIVERS INTO THE EXCITEMENT OF RACING. BOTH VERSIONS ARE OF HIGH QUALITY AND BASED ON THE WILDLY SUCCESSFUL RAIDER OFF-ROAD BUGGIES THAT COMBINED HIGH PERFORMANCE WITH EASY ASSEMBLY AND MAINTENANCE. BOTH VERSIONS ARE IDENTICAL WHEN FINISHED, BUT THE ARR IS 90% FACTORY ASSEMBLED FOR FAST BUILDING AND ASSURED ALIGNMENT. THE SPECS INCLUDE HIGH GROUND CLEARANCE AND A LONG-TRAVEL ALL-INDEPENDENT WISHBON/ARM SUSPENSION WITH LIGHT, RELIABLE FRICTION SHOCKS TO SOAK UP THE BUMPS, A STRONG, LIGHT, RESIN CHASSIS, PROTECTIVE FRONT BUMPER, A POWERFUL MABUCHI RS-540SH MOTOR AND HEAVY-DUTY SPEED CONTROLLER, HIGH-GRIP TIRES, AND DISHED NYLON WHEELS THAT RESIST WEIGHT BUILD-UP. THE HIGH-QUALITY GEAR-TYPE DIFF ASSURES GOOD TRACTION THROUGH CORNERS. MIDPOSITIONED MOTOR AND BATTERY OPTIMIZE THE BALANCE, AND THE BATTERY MOUNT ALLOWS QUICK CHANGES.

OUTLAW RAIDER
No.3161



OUTLAW RAIDER ARR
No.3162



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)

Battery charger (No.2358/1849/2246)

Radio control set: Two-channel w/two servos

Technical data

Length/440mm (17.3") Width/292mm (11.5")

Height/224mm (8.8") Wheelbase/260mm (10.2")

Ground clearance/29mm (1.1")

Track/F:200mm (7.9"); R: 210mm (8.3")

Weight/1700g (60 oz) Tires/F: Ø77x23mm; R: Ø82x40mm

Gear ratio/10.8:1 Body/ polycarbonate (clear)

Motor (included)/ Mabuchi RS-540SH

Speed controller (included)/3 fwd+rev

ELECTRIC RACING BUGGIES





RAIDER PRO

ELECTRIC POWERED 2WD RACING BUGGY
No.3197

RAIDER PRO ARR

PRE-ASSEMBLED ELECTRIC POWERED
2WD RACING BUGGY / No.3198

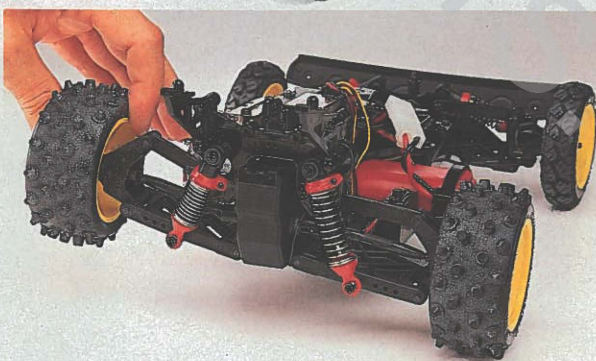
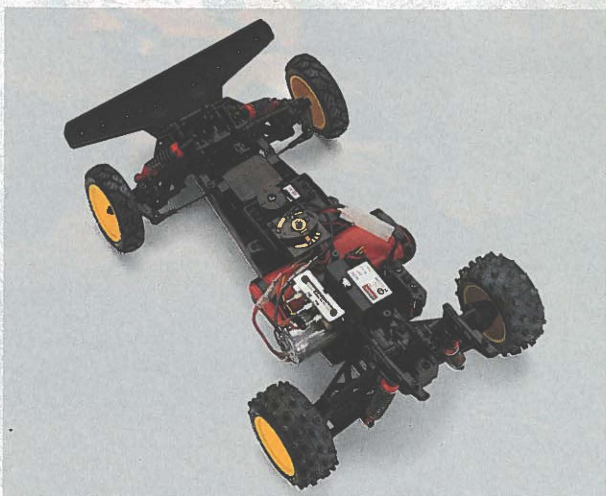
1:10 SCALE



RAIDER PRO
No.3197



RAIDER PRO ARR
No.3198



THE IDEAL FIRST BUGGY

RAIDER BUGGIES JUST GET BETTER EVERY YEAR! DESIGNED AS THE IDEAL FIRST BUGGY FOR OFF-ROAD FUN, COMBINING HIGH PERFORMANCE WITH EASY ASSEMBLY AND MAINTENANCE, THE RAIDERS HAVE SUCCEEDED FABULOUSLY! BOTH THE PRO AND THE PRO ARR VERSIONS HAVE THE SAME SPECIFICATIONS, BUT THE ARR IS 90% FACTORY ASSEMBLED FOR FAST BUILDING AND ASSURED ALIGNMENT. THE SPECS INCLUDE A LONG-TRAVEL ALL-INDEPENDENT WISHBONE/ARM SUSPENSION WITH LIGHT, RELIABLE FRICTION SHOCKS TO SOAK UP THE BUMPS, A STRONG, LIGHT RESIN CHASSIS, STRONG AND PROTECTIVE FRONT BUMPER, A POWERFUL MABUCHI RS-540SH MOTOR AND HEAVY-DUTY SPEED CONTROLLER, HIGH-GRIP TIRES, AND STYLISH DISH-TYPE NYLON WHEELS. THE HIGH-QUALITY GEAR-TYPE DIFFERENTIAL ASSURES GOOD TRACTION THROUGH CORNERS, AND IS SEALED AGAINST DUST. THE MID POSITION OF THE MOTOR OPTIMIZES THE BALANCE, AND THE BATTERY MOUNT ALLOWS QUICK CHANGES. YOU CAN'T GO WRONG WITH A RAIDER!

Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos

Technical data

Length/390mm (15.4") Width/250mm (9.8")
Height/152mm (6.0") Wheelbase/260mm (10.2")
Ground clearance/29mm (1.1")
Track/F: 200mm (7.9"); R: 210mm (8.3")
Weight/1450g (51oz) Tires/F: $\varnothing 77 \times 23$ mm; R: $\varnothing 82 \times 40$ mm
Gear ratio/10.8:1 Motor (included)/Mabuchi RS-540SH
Speed controller (included)/3 fwd+rev



TURBO RAIDER PRO

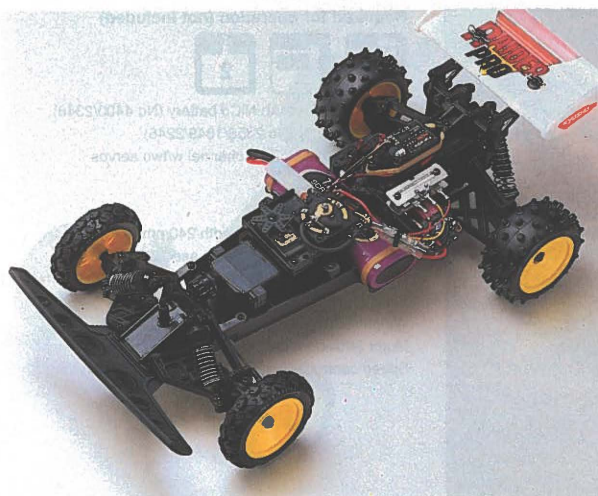
ELECTRIC POWERED 2WD RACING BUGGY

1:10 SCALE
No.3164



THE RAIDER THAT'S HOPPED-UP RIGHT OUT OF THE BOX!

IF YOU LIKE THE RAIDER, BUT WANT A LITTLE MORE PERFORMANCE RIGHT AWAY, THE TURBO KIT SHOULD BE YOUR CHOICE! STANDARD EQUIPMENT INCLUDES A HIGH-PERFORMANCE MEGA OUTLAW STOCK MOTOR FOR MORE POWER, LARGE-VOLUME OIL-FILLED SHOCKS FOR BETTER CONTROL ON BUMPY TRACKS, AND TWO PRECISION BALL BEARINGS IN THE TRANSMISSION FOR REDUCED FRICTION AND POWER LOSS. ASSEMBLY IS AS SIMPLE AS FOR THE OTHER RAIDER MODELS, AND THE TURBO SHARES THE STRONG, CRASH-RESISTANT BUMPER AND FRAME. LIKE THE OTHER RAIDERS, IT HAS A STRONG GEAR-TYPE DIFFERENTIAL AND LONG-TRAVEL SUSPENSION WITH WISHBONE/ARM LINKAGES.



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)

Battery charger (No.2358/1849/2246)

Radio control set: Two-channel w/two servos

Technical data

Length/390mm (15.5") Width/250mm (9.8")

Height/152mm (6.0") Wheelbase/260mm (10.2")

Ground clearance/29mm (1.1")

Track/F: 200mm (7.9") R: 210mm (8.3")

Weight/1450g (51 oz) Tires/F: Ø77x23mm; R: Ø82x40mm

Gear ratio/10.8:1 Motor (included)/Mega Outlaw Stock

Speed controller (included)/3 fwd + rev



ULTIMA II

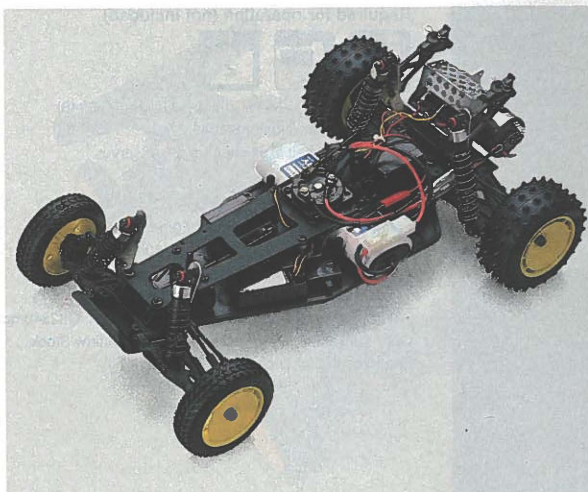
ELECTRIC POWERED 2WD RACING BUGGY

1:10 SCALE
No.3118



FOR BEGINNING 2WD RACERS

THE FIRST CHOICE FOR THE BEGINNER IN 2WD COMPETITION! BASED ON A CHAMPIONSHIP-WINNING DESIGN. EXCELLENT PERFORMANCE GUARANTEED! EXTENDED-LENGTH WISHBONE/ARM SUSPENSION WITH TOP QUALITY METAL-BODIED OIL-FILLED PRESSURE-TYPE SHOCKS TO SOAK UP THE BUMPS ON ANY TRACK. FINE-PITCH GEARS FOR SMOOTH POWER DELIVERY. EASY TOE-IN AND CAMBER ADJUSTMENTS. SEALED GEARBOX. FIVE-POSITION WING. STRONG, RIGID FRP CHASSIS. HIGH-GRIP PIN-SPIKE TIRES. POWERFUL LeMANS STOCK 05 MOTOR INCLUDED. CAN BE UPGRADED WITH MANY OPTION PARTS FOR EVEN BETTER PERFORMANCE.



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos

Technical data

Length/360mm (14.2") Width/240mm (9.4")
Height/130mm (5.1") Wheelbase/280mm (11.0")
Ground clearance/40mm (1.6") Track (F/R)/200mm (7.9")
Tires/F: Ø75x20mm; R: Ø85x37mm
Weight/1500g (3.3 lb) Gear ratio/8.2:1
Motor (included)/LeMans Stock 05
Speed controller (included)/Rotary (3 fwd+rev)

TRIUMPH

ELECTRIC POWERED 2WD RACING BUGGY

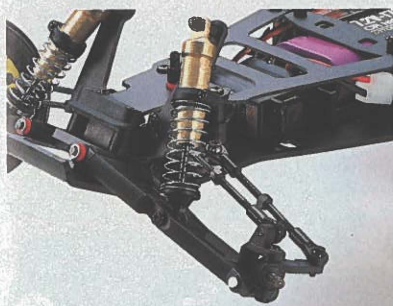
1:10 SCALE

No.4301



DESIGNED FOR ANOTHER KYOSHO 2WD CHAMPION SHIP

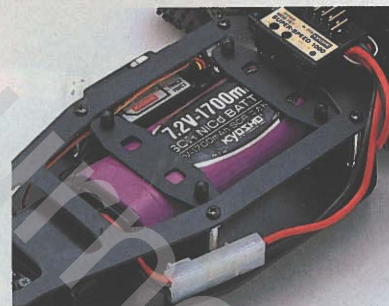
DESIGNED FOR ANOTHER KYOSHO 2WD WORLD CHAMPIONSHIP! THE *TRIUMPH* INCORPORATES ALL OF KYOSHO DESIGNERS' KNOWLEDGE OF SUSPENSION GEOMETRY, SHOCK ABSORBERS, AND DRIVE TRAINS. AMONG ITS MANY FEATURES ARE EXTRA-LONG WISHBONE/ARM SUSPENSION FOR MAXIMUM WHEEL TRAVEL AND BUMP ABSORPTION VITAL FOR TOP HANDLING ON ALL TRACK CONDITIONS; NEW-DESIGN "M" SIZE OIL-FILLED PRESSURE-TYPE SHOCKS; RIGID, LIGHT FRP DOUBLE-DECKER CHASSIS; EASY SUSPENSION ADJUSTMENT AND TUNING, INCLUDING CASTER AND FRONT AND REAR TOE-IN BY QUICK-ADJUST THE RODS; LIGHT, RELIABLE DRIVE SYSTEM BY TOOTHED BELT AND TORQUE-LIMITING CLUTCH; FINE-PITCH GEARS FOR SMOOTHER POWER DELIVERY; NEW WHEELS AND HIGH-GRIP "H" PATTERN TIRES; FULL SET OF 12 BALL BEARINGS. EVERY IMPORTANT SUSPENSION PARAMETER CAN BE FINE-TUNED SO THAT IT TRACKS STRAIGHT AND TRUE REGARDLESS OF THE SURFACE. THE *TRIUMPH* WILL MAKE BEST USE OF THE MOST POWERFUL MOTORS!



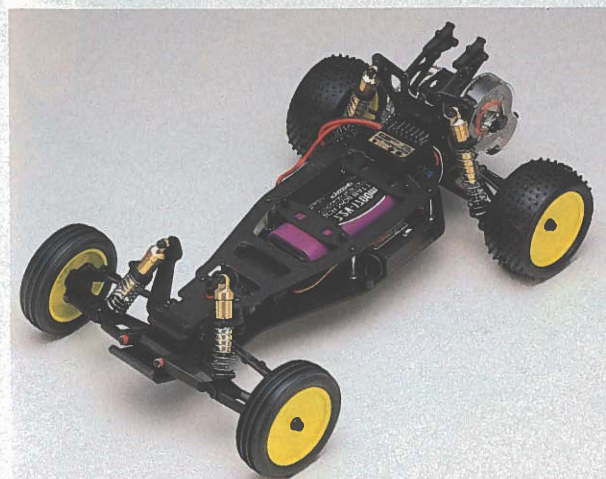
EXTRA-LONG SUSPENSION ARMS GIVE LONG TRAVEL TO ABSORB BUMPS AND KEEP THE *TRIUMPH* ON COURSE.



TORQUE-LIMITING CLUTCH INCLUDED AS STANDARD. PROTECTS MOTOR FROM BURN OUT AND CAN BE ADJUSTED TO LIMIT WHEELSPIN.



STRONG, LIGHT DOUBLE DECKER FRP CHASSIS. QUICK-CHANGE BATTERY HOLDER.



Technical data

Length/385mm (15.2") Width/245mm (9.6") Height/130mm (5.1")
Wheelbase/274mm (10.8") Ground clearance/40mm (1.6")
Track/ F: 216mm (8.5"); R: 201mm (7.9") Weight/1550g (3.4 lb)
Tires/F: Ø81x23mm R: Ø88x40mm Gear ratio/ 10.1:1



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)

Battery charger (No.2358/1849/2246)

Motor (LeMans Pro type)

Radio control set: Two-channel
w/electronic speed controller

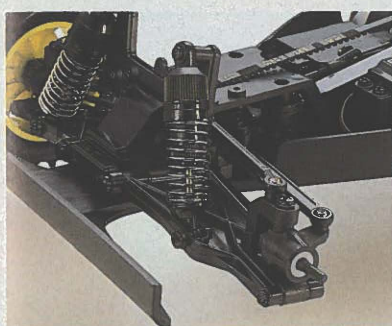


LAZER ALPHA

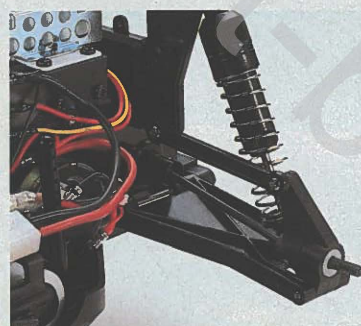
ELECTRIC POWERED 4WD RACING BUGGY



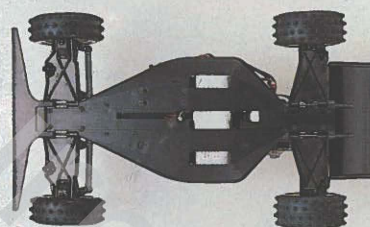
1:10 SCALE
No.3036



LONG WISHBONE/ARM FRONT SUSPENSION AND OIL-FILLED SHOCK FOR LONG TRAVEL AND BUMP ABSORPTION.



LONG TRAVEL REAR SUSPENSION WITH OIL-FILLED SHOCK. GEAR-TYPE DIFF FOR SMOOTH POWER IN CURVES.



STRONG, LIGHT, GLASS-REINFORCED CHASSIS IS RIGID AND CRASH RESISTANT.



TOP PERFORMANCE IN A MODEL CUSTOM MADE FOR THE NEWCOMER

THE "BIG BROTHER" OF THE LAZER ALPHA IS THE LAZER ZX-R, KYOSHO'S ULTIMATE FOUR-WHEEL DRIVE OFF-ROADER. THE ALPHA VERSION HAS BEEN SIMPLIFIED FOR EASY ASSEMBLY AND TO KEEP THE PRICE AT THE ENTRY LEVEL, BUT IT HAS MOST OF THE PERFORMANCE OF THE ZX-R. ABOUT TWO-THIRDS OF THE ZX-R AND OPTION PARTS FIT THE ALPHA, SO YOU CAN UPGRADE THE PERFORMANCE AS YOUR SKILLS DEVELOP. THE KIT IS COMPLETE (EXCEPT FOR BATTERY, CHARGER, AND RADIO SYSTEM), INCLUDING A POWERFUL LEMANS STOCK 05 MOTOR AND A HIGH-QUALITY KYOSHO ROTARY SPEED CONTROLLER. THE ALPHA HAS THE SAME LIGHTWEIGHT AND EFFICIENT FOUR-WHEEL DRIVE SYSTEM BY TOOTHED BELT AND TWIN GEAR-TYPE DIFFS, AND THE VERY-LONG-TRAVEL SUSPENSION SYSTEM INCLUDES OIL-FILLED SHOCK ABSORBERS. ELECTRICAL COMPONENTS ARE DESIGNED FOR BOTH 7.2V AND 8.4V BATTERIES. GET INTO RACE-WINNING FORM WITH THE ALPHA!

Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)

Battery charger (No.2358/1849/2246)

Radio control set: Two-channel w/two servos

Technical data

Length/420mm (16.5") Width/240mm (9.5")

Height/155mm (6.1") Wheelbase/276mm (10.8")

Ground clearance/26mm (1.0")

Track/F: 202mm (8.0"); R: 207mm (8.1")

Weight/1550g (3.4 lb)

Tires/F: Ø85x30mm; R: Ø85x37mm Gear ratio/ 13.8:1

Motor (included)/LeMans Stock 05

Speed controller (included)/Kyosho Rotary (3 fwd +rev)



LAZER ZX-R

ELECTRIC POWERED 4WD RACING BUGGY

No.3147

LAZER ZX SPORT

ELECTRIC POWERED 4WD RACING BUGGY

No.3148



www.dirtburners.com



DESIGNED FOR THE CHAMPIONSHIP!

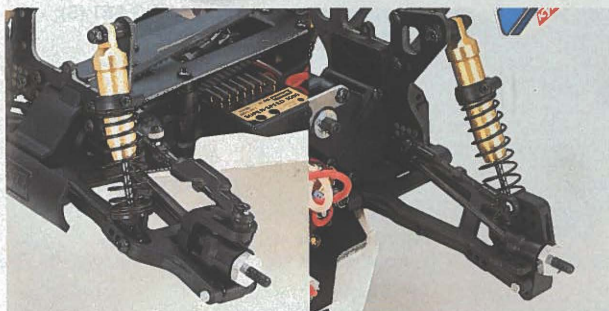
KYOSHO'S HIGHEST PERFORMANCE FOUR-WHEEL DRIVE OFF-ROADER, DESIGNED TO WORLD CHAMPIONSHIP ROADHOLDING STANDARDS. THE ZX-R VERSION WILL GIVE ALL-OUT PERFORMANCE IN THE HANDS OF THE TYPE OF TOP DRIVER WHO WILL WANT TO CHOOSE HIS OWN MOTOR AND ELECTRONIC SPEED CONTROLLER. IT HAS A FULL SET OF 14 QUALITY BALL BEARINGS, UNIVERSAL-JOINTED SWING SHAFTS AT THE FRONT, METAL-BODIED SHOCK ABSORBERS, ADJUSTABLE BALL-TYPE DIFFERENTIALS FRONT AND REAR, TORQUE-LIMITING COUPLING, FRP CHASSIS, AND QUICK-ADJUST LINKAGES. THE ZX SPORT HAS THE SAME EXTRA-LONG-TRAVEL WISHBONE/ARM SUSPENSION WITH LOW-MASS PARTS FOR REDUCED UNSPRUNG WEIGHT AND TOP HANDLING, PLUS THE SAME FOUR-WHEEL DRIVE BY DUAL TOOTHED BELTS, BUT THE KIT INCLUDES A SPIRITED LeMANS STOCK 05 MOTOR, ROTARY SPEED CONTROLLER, KELRON CHASSIS, HIGH-QUALITY OIL-FILLED FRP-BODIED SHOCKS, GEAR-TYPE DIFFS, AND THERE ARE TWO BALL BEARINGS. THE KIT CAN BE UPGRADED STEP BY STEP TO ZX-R SPECS WITH OPTIONAL BEARINGS AND OTHER PARTS.



LAZER ZX-R
No.3147



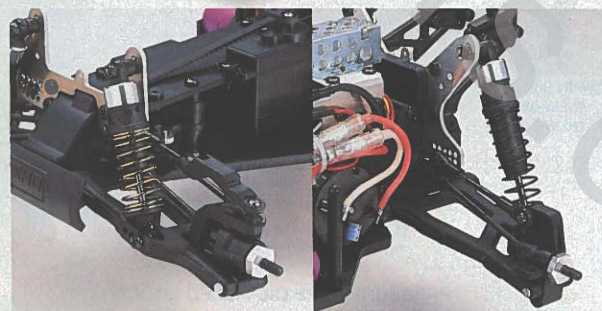
LAZER ZX SPORT
No.3148



ZX-R: METAL-BODIED SHOCKS AND LIGHTWEIGHT FRP SHOCK TOWERS. HIGH-GRIP PIN-SPIKE TIRES FOR TOP TRACTION. LIGHT NYLON WHEELS. 14 BALL BEARINGS.

Technical data

●Length/360mm (14.2") ●Width/240mm (9.5") ●Height/130mm (5.1") ●Wheelbase/276mm (10.9")
●Ground clearance/30mm (1.2") ●Track/F: 202mm (8.0"); R: 201mm (7.9") ●Weight/1600g (3.5 lb)
●Tires/F: ϕ 88x30mm; R: ϕ 88x41mm ●Gear ratio/10.1 : 1



ZX SPORT: EFFECTIVE FRP-BODIED OIL-FILLED SHOCKS AND ALUMINUM SHOCK TOWERS. HIGH-GRIP PIN-SPIKE TIRES AND LIGHT NYLON WHEELS.



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)

Battery charger (No.2958/1849/2246)

Radio control set: Two-channel

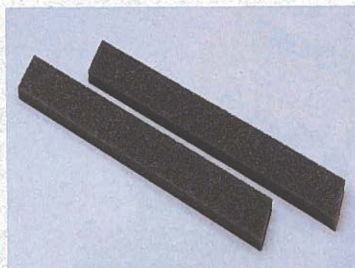
w/servo and electronic speed controller (ZX-R)

w/two servos (SPORT)

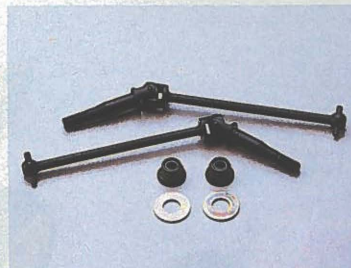
Motor: LeMans Pro type (ZX-R)

LeMans Stock 05 (SPORT: included)

OPTION PARTS for ELECTRIC BUGGIES



INNER SPONGE STRIPS No.W-5036



UNIVERSAL SWING SHAFT No.W-5061



UNIVERSAL SWING SHAFT 3L (ZX-R FRONT) No.W-5063



54 SIZE YELLOW (x2)
No.W-5025



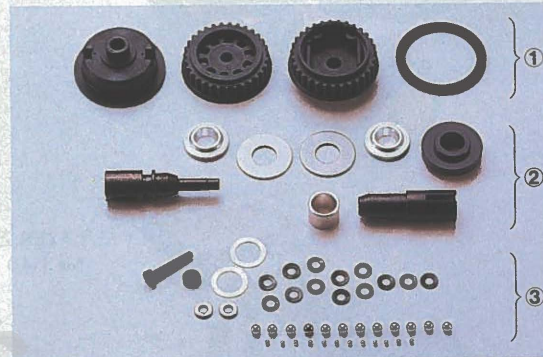
56 SIZE NARROW
YELLOW (x2)
No.W-5026



56 SIZE YELLOW (x2)
No.W-5027



HARD PINION (17T-25T)
No.W-0117 - W-0125



① DIFF. CASE
No.LA-1
② SHAFT PLATE SET
No.WBD-1
③ DIFF.BALL SET
No.WBD-2



54 SIZE MICRO BLOCK
NARROW (x2)
SOFT No.W-5632S
MEDIUM No.W-5632M



56 SIZE MICRO BLOCK (x2)
SOFT No.W-5642S
MEDIUM No.W-5642M



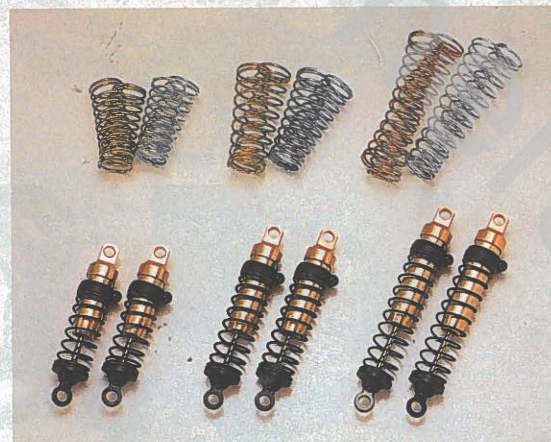
56 SIZE MICRO BLOCK (x2)
SOFT No.W-5642S
MEDIUM No.W-5642M



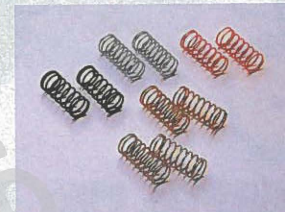
56 SIZE MICRO BLOCK
NARROW (x2)
SOFT No.W-5632S
MEDIUM No.W-5632M



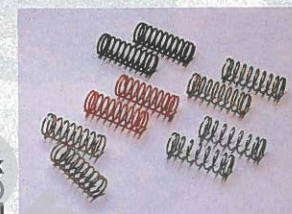
56 SIZE MICRO BLOCK (x2)
SOFT No.W-5642S
MEDIUM No.W-5642M



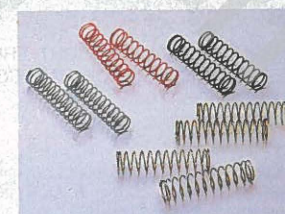
PRESSURE-TYPE OIL-FILLED SHOCK
No.W-5001 (S)
No.W-5000 (M)
No.W-5002 (L)



GOLD SHOCK
SPRING SET (S)
No.W-5013S



GOLD SHOCK
SPRING SET (M)
No.W-5013M

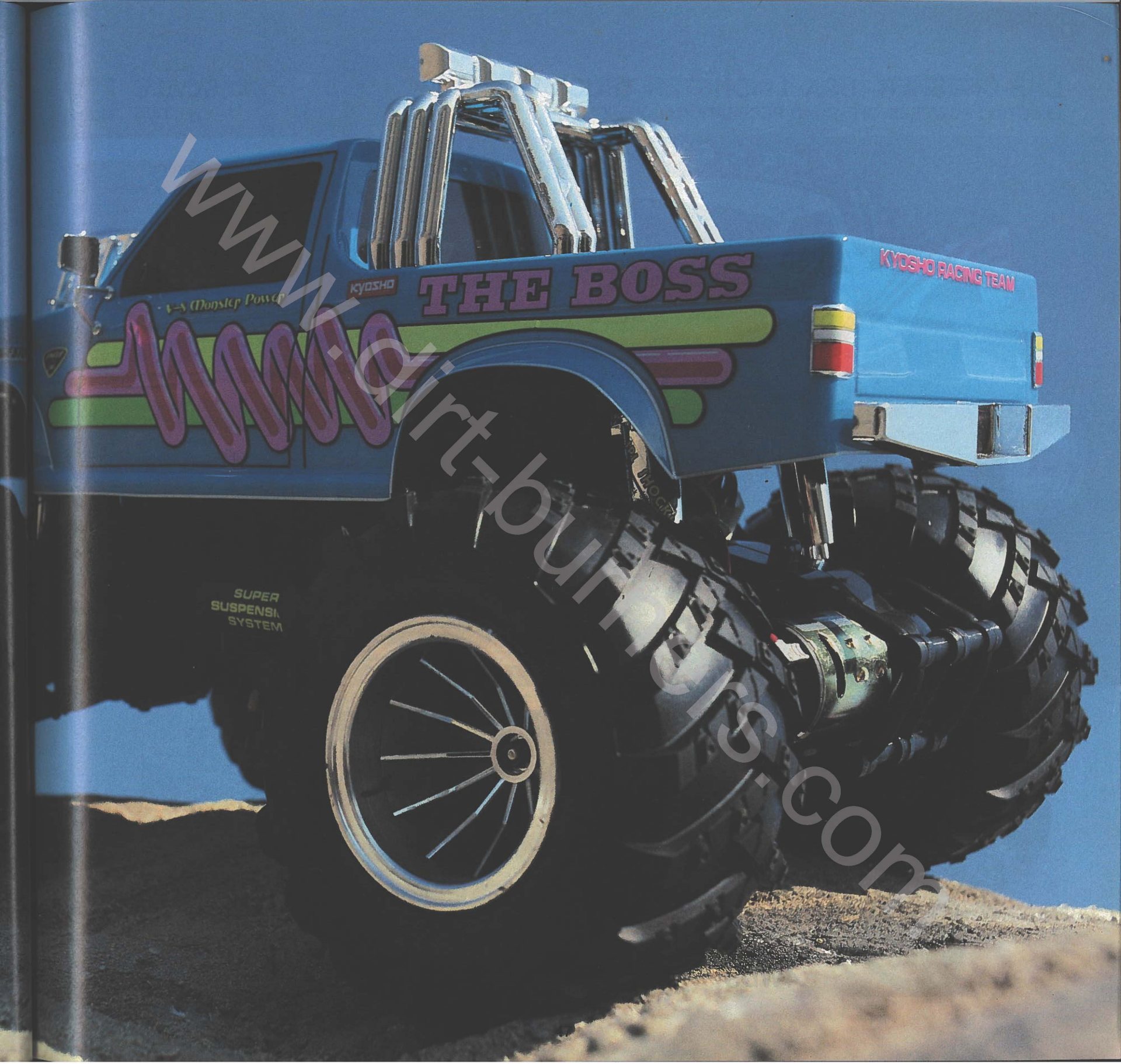


GOLD SHOCK
SPRING SET (L)
No.W-5013L



ELECTRIC MONSTER TRUCKS





www.dirt-busters.com

SUPER
SUSPENSION
SYSTEM

THE BOSS

KYOSHO RACING TEAM

KYOSHO

1-8 Monster Power

CAR CRUSHER USA-1 MONSTER TRUCK

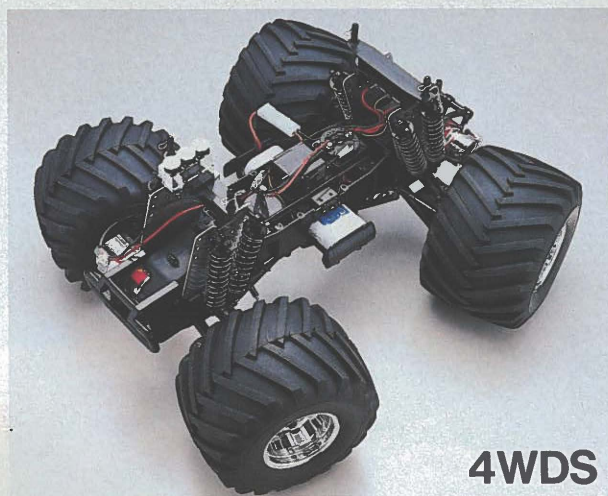
ELECTRIC POWERED OFF-ROAD RECREATIONAL VEHICLE

1:10 SCALE
No.3165



USA-1 MONSTER TRUCK TRUE-SCALE CAR CRUSHER

"USA-1" IS ONE OF THE MOST FAMOUS OF ALL CAR CRUSHER GIANT TRUCKS. THIS ACCURATE SCALE MODEL HAS THE SAME GREAT PERFORMANCE IN MINIATURE. TWIN HIGH-TORQUE MEGA MONSTER TRUCK MOTORS PROVIDE GREAT TRACTION THROUGH FOUR-WHEEL DRIVE AND GIANT 165mm (6.5") TIRES. ALL FOUR WHEELS STEER FOR GREAT MANEUVERABILITY. THE ALL-INDEPENDENT SUSPENSION, WITH EIGHT FRICTION SHOCKS, KEEPS IT UNDER CONTROL AT ALL TIMES. THE BODY IS A FULLY DETAILED SCALE CHEVROLET SILVERADO WITH DECALS THAT DUPLICATE THE COLOR SCHEME OF THE ORIGINAL. CHROME-FINISH CARBS, GRILL, MIRRORS AND OTHER ACCESSORIES ADD TO THE REALISM. HIGH-QUALITY ROTARY SPEED CONTROLLER INCLUDED. THE STRONG CHASSIS PROTECTS THE RADIO EQUIPMENT.



4WDS



HEADLIGHT KIT (NB-13) ADDS TO THE REALISM.

Technical data

- Length / 465mm (18.3") ● Width / 400mm (15.7") ● Height / 300mm (11.8") ● Wheelbase / 265mm (10.4")
- Ground clearance / 70mm (2.8") ● Track (F/R) / 290mm (11.4") ● Tires (F/R) / φ165×110mm (6.5×4.3") ● Weight / 3950g (8.7 lb)
- Gear ratio / 20 : 1 ● Motors (included) / Mega Monster Truck (×2) ● Speed controller (included) / Rotary (3 fwd + rev)



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)

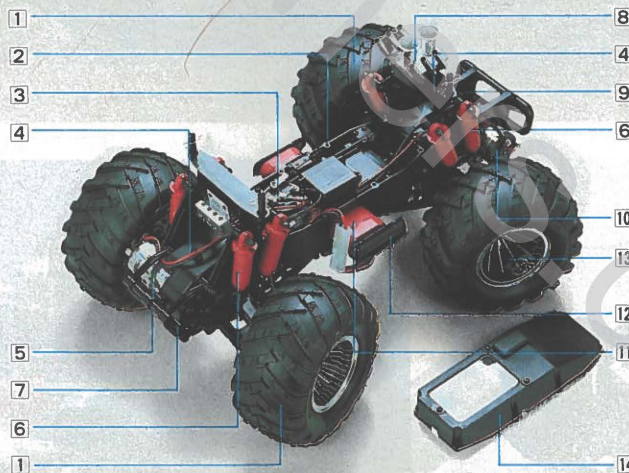
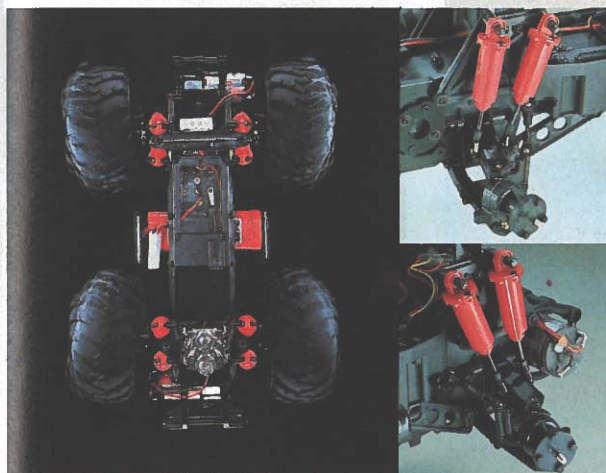
Battery charger (No.2358/1849/2246)

Radio control set: Two-channel w/two servos

CAR CRUSHER DOUBLE DARE 4WDS

ELECTRIC POWERED OFF-ROAD RECREATIONAL VEHICLE

1:10 SCALE
No.3106



DOUBLE DARE DOUBLES YOUR CAR CRUSHING FUN!

IT'S NEARLY UNSTOPPABLE! DOUBLE DARE'S TWO POWERFUL MOTORS AND HUGE 146mm (5.75") TIRES TAKE IT OVER OBSTACLES CAR-CRUSHER STYLE! EACH MOTOR HAS ITS OWN GEARBOX AND DIFFERENTIAL WHICH MEANS NO CHAINS OR BELTS ARE REQUIRED. FOUR WHEEL STEERING FOR MAXIMUM MANEUVERABILITY AND SHARP TURNING. EXTRA LONG, FULLY INDEPENDENT DOUBLE WISH-BONE SUSPENSION MAKES FOR INCREDIBLE HANDLING. DOUBLE SHOCK ABSORBERS ON EACH WHEEL SOAK UP THE BUMPS. HIGH-QUALITY HEAVY DUTY ROTARY SPEED CONTROLLER IS SHIELDED TO PREVENT CONTAMINATION FROM DIRT, FEATURES PURE SILVER CONTACTS, AND GIVES THREE FORWARD SPEEDS, NEUTRAL, AND ONE IN REVERSE. UNDERNEATH THE SCALE-LIKE NISSAN PICKUP TRUCK BODY IS A STRONG TUB TYPE CHASSIS.

- 1 GIANT, SPECIAL PATTERN TIRE.
- 2 STRONG, DUST-SHIELDED TUB CHASSIS. LIGHT ABS RESIN.
- 3 HIGH-QUALITY HEAVY DUTY ROTARY SPEED CONTROLLER (INCLUDED).
- 4 GEARBOX AND DIFFERENTIAL (FRONT/REAR).
- 5 POWERFUL LeMANS STOCK 05 MOTOR (INCLUDED).
- 6 SHOCK ABSORBER (WITH INTERNAL SPRING).
- 7 REAR MOTOR GUARD.
- 8 REALISTIC CHROME-FINISH ENGINE REPLICA.
- 9 PROTECTIVE NYLON FRONT BUMPER.
- 10 POWERFUL LeMANS STOCK 05R MOTOR (INCLUDED).
- 11 7.2V "STICK" TYPE NiCd BATTERY (1200mAh OR LARGER; NOT INCLUDED).
- 12 QUICK CHANGE BATTERY HOLDER.
- 13 STRONG, LIGHT CHROME-FINISH NYLON WHEELS.
- 14 COVERED CHASSIS PROTECTS RADIO EQUIPMENT.

4WDS

Required for operation (not included)

NiCd battery: 7.2V-1400/1700mAh (No.4400/2348) Battery charger (No.1849/2358) Radio control set: Two-channel w/two servos

Technical data

Length/440mm (17.3") Width/310mm (12.2") Height/295mm (11.6") Wheelbase/265mm (10.4") Ground clearance/70mm (2.75") Front track/237mm (9.3")

Rear track/237mm (9.3") Weight (track-ready)/2800g (6 lb 3oz) Tires (F/R)/Ø146x73mm Motors (included)/LeMans Stock 05 (x2)

Speed controller (included/Kyosho Rotary (3 fwd+rev)



CAR CRUSHER THE BOSS

ELECTRIC POWERED OFF-ROAD RECREATIONAL VEHICLE

1:10 SCALE
No.3108B



AMERICAN-STYLE CAR CRUSHER FUN MACHINE

DRIVE YOUR OWN CAR CRUSHER FUN MACHINE IN 1/10-SCALE! DRIVE IT OVER SCALE CAR-SIZE OBJECTS AND THROUGH RUGGED TERRAIN. *THE BOSS* TAKES IT ALL IN STRIDE! THE HUGE TIRES ROLL OVER ALMOST ANYTHING, THE LONG-TRAVEL ALL INDEPENDENT SUSPENSION SOAKS UP ROUGH GROUND, AND THE HIGH-QUALITY ROTARY SPEED CONTROLLER (INCLUDED) KEEPS THE POWER OF THE HIGH-TORQUE LeMANS STOCK 05 MOTOR (INCLUDED) UNDER PRECISE CONTROL. THE RUGGED TUB-TYPE ABS CHASSIS IS DESIGNED FOR THE ROUGHEST CONDITIONS, AND PROTECTS THE RADIO GEAR AND SPEED CONTROLLER FROM DUST AND ABUSE. *THE BOSS* IS STYLED LIKE REAL FULL-SIZE MACHINES AND HAS MANY REALISTIC TOUCHES, LIKE THE CHROME-FINISH ENGINE AND GRILL.



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos

Technical data

Length/465mm (18.3") Width/300mm (11.8")
Height/295mm (10.4") Ground clearance/70mm (2.8")
Track (F/R)/237mm (9.3") Tires (F/R)/ Ø146x73mm
Weight/2650g (5.8 lb) Gear ratio/17:1
Motor (included)/LeMans Stock 05
Speed controller (included)/Rotary (3 fwd+rev)

CAR CRUSHER HI-RIDER CORVETTE

ELECTRIC POWERED OFF-ROAD RECREATIONAL VEHICLE

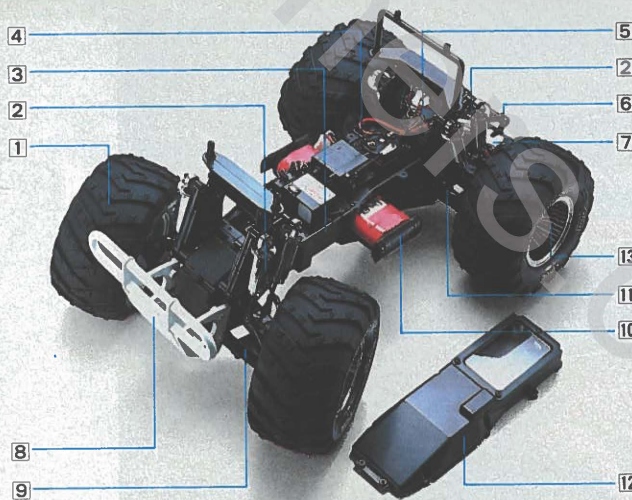
1:10 SCALE
No.3107



DO YOUR CAR CRUSHING IN STYLE!

COMBINE A RAKISH CORVETTE BODY WITH A BRUTAL CAR CRUSHER CHASSIS AND YOU HAVE AN INCREDIBLE ACTION MACHINE! UNDER THE STYLISH AND SOPHISTICATED BODY IS A SUPER RIGID TUB STYLE CHASSIS THAT HOUSES AND PROTECTS THE RADIO EQUIPMENT AND THE INCLUDED HEAVY DUTY *ROTARY* SPEED CONTROLLER. THE HUGE (146mm, 5.7") TIRES AND WHEELS ARE LINKED TO THE CHASSIS BY A FULLY INDEPENDENT WISHBONE/ARM SUSPENSION WITH TWO SHOCK ABSORBERS PER WHEEL AND FEATURING ADJUSTABLE SPRING ACTION. THE POWER TO DRIVE THIS VETTE OVER HIGH OBSTACLES COMES FROM A HIGH TORQUE *LeMANS STOCK 05* MOTOR DRIVING A SEALED TRANSMISSION/DIFFERENTIAL WITH STRONG ACETYL RESIN GEARS.

- 1 HUGЕ (146×73mm 5.75×2.87") HIGH TRACTION RUBBER TIRES.
- 2 DEPENDABLE AND EFFECTIVE SHOCK ABSORBER (2 PER WHEEL) WITH ADJUSTABLE SPRINGING.
- 3 STRONG, RUGGED ABS TUB TYPE CHASSIS.
- 4 HEAVY DUTY *ROTARY* SPEED CONTROLLER WITH 3 FORWARD SPEEDS, NEUTRAL, AND 1 REVERSE SPEED.
- 5 SEALED GEARBOX/DIFFERENTIAL.
- 6 PROTECTIVE REAR GUARD.
- 7 POWERFUL *LeMANS STOCK 05* MOTOR (INCLUDED).
- 8 STRONG, PROTECTIVE FRONT BUMPER.
- 9 WISHBONE/ARM FRONT SUSPENSION WITH LONG TRAVEL.
- 10 QUICK-CHANGE BATTERY COMPARTMENT.
- 11 WISHBONE/ARM REAR SUSPENSION WITH LONG TRAVEL. STRONG ABS PARTS.
- 12 FULLY ENCLOSED, PROTECTIVE COMPARTMENT FOR RADIO EQUIPMENT AND SPEED CONTROLLER.
- 13 STRONG, CHROME-FINISH NYLON WHEELS.



Required for operation (not included)

NiCd battery: 7.2V-1400/1700mAh (No.4400/2348) Battery charger (No.1849/2358) Radio control set: Two-channel w/two servos

Technical data

Length/465mm/ (18.3") Width/300mm (11.8") Height/285mm (10.4") Wheelbase/283mm (11.1") Ground clearance/70mm (2.8") Front track/237mm (9.3") Rear track/237mm (9.6") Weight (track-ready)/2650g (5 lb 13oz) Tires (F/R) Ø146x73mm Motor (included) *LeMans Stock 05*

ELECTRIC 4WD 1/9 SCALE VEHICLES



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Toyota is a registered trademark of Toyota Motor Corporation.



TOYOTA 4RUNNER

ELECTRIC POWERED 4WD RECREATIONAL VEHICLE

No.4271

MITSUBISHI PAJERO

ELECTRIC POWERED 4WD RECREATIONAL VEHICLE

No.4272





1:9 SCALE



TOYOTA 4RUNNER No.4271



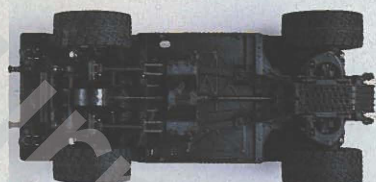
MITSUBISHI PAJERO No.4272



SCALE-LIKE INDEPENDENT FRONT SUSPENSION. FRONT WHEELS DRIVEN VIA GEAR-TYPE DIFFERENTIAL.



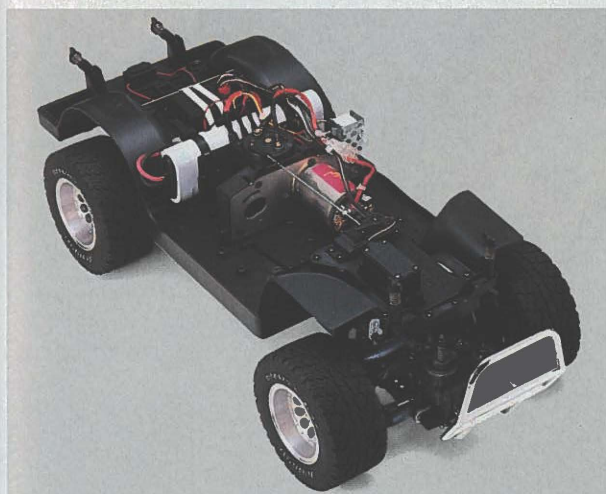
REALISTIC FOUR-LINK LIVE-AXLE REAR SUSPENSION. GEAR-TYPE DIFF INSIDE BANJO HOUSING.



BOTTOM OF CHASSIS IS FULLY DETAILED AND LOOKS LIKE A MINIATURE OF REAL VEHICLE.

TWO OF THE MOST POPULAR 4X4 OFF-ROADERS IN 1/9 SCALE

THE PAJERO AND 4RUNNER ARE TWO OF THE MOST POPULAR FOUR-WHEEL DRIVE VEHICLES IN THE WORLD. THESE TWO KYOSHO MODELS CAPTURE THE SPIRIT OF THE ORIGINALS WITH A SUPER-SCALE BODY AND A FOUR-WHEEL DRIVE SYSTEM BY TRANSFER CASE, FRONT AND REAR DRIVE SHAFTS, AND TWIN GEAR-TYPE DIFFERENTIALS. THE BOTTOM OF THE CHASSIS LOOKS EXACTLY LIKE THAT OF A FULL-SIZE VEHICLE, WITH SIMULATED FRAME MEMBERS, SCALE FRONT SUSPENSION, AND SOLID REAR AXLE. KIT INCLUDES A POWERFUL MEGA MONSTER TRUCK MOTOR (OPTION: FIT A SECOND FOR MORE POWER) AND A RELIABLE KYOSHO ROTARY SPEED CONTROLLER. SCALE DETAIL PARTS INCLUDE MIRRORS, WIPERS, CHROME-FINISH CRASH BAR, AND SCALE WHEELS AND TIRES. STOCK SHOCK ABSORBERS ARE FRICTION TYPE. OPTIONAL OIL-FILLED SHOCKS MAY FITTED. EVEN IF YOU CAN'T AFFORD A REAL OFF-ROADER, YOU CAN STILL HAVE THE FUN OF DRIVING ONE OVER SCALE TERRAIN WITH ONE OF THESE MODELS! (NOTE: THE 4RUNNER IS SOLD AS A HILUX SURF IN JAPAN.)



Required for operation (not included)



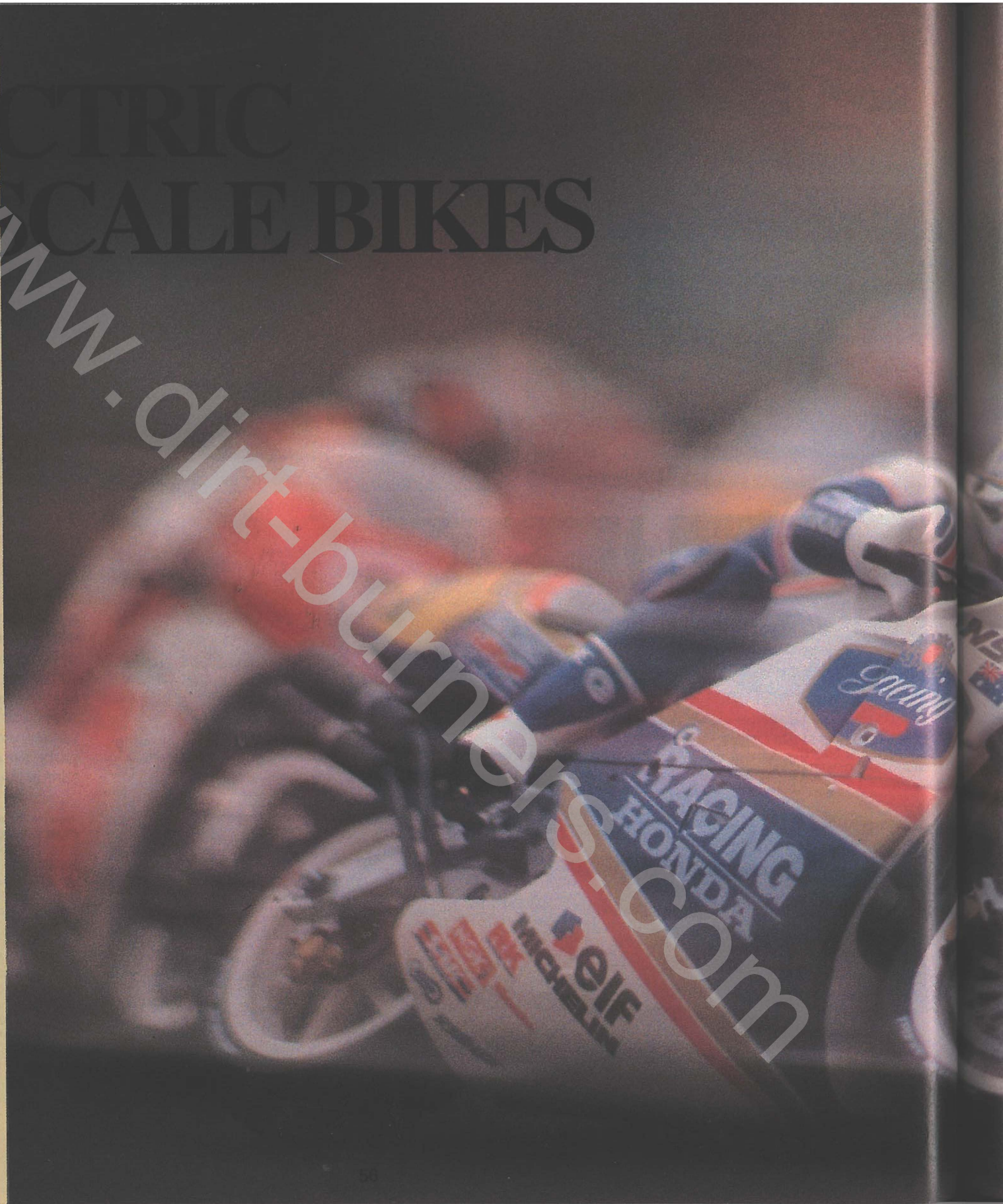
7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos

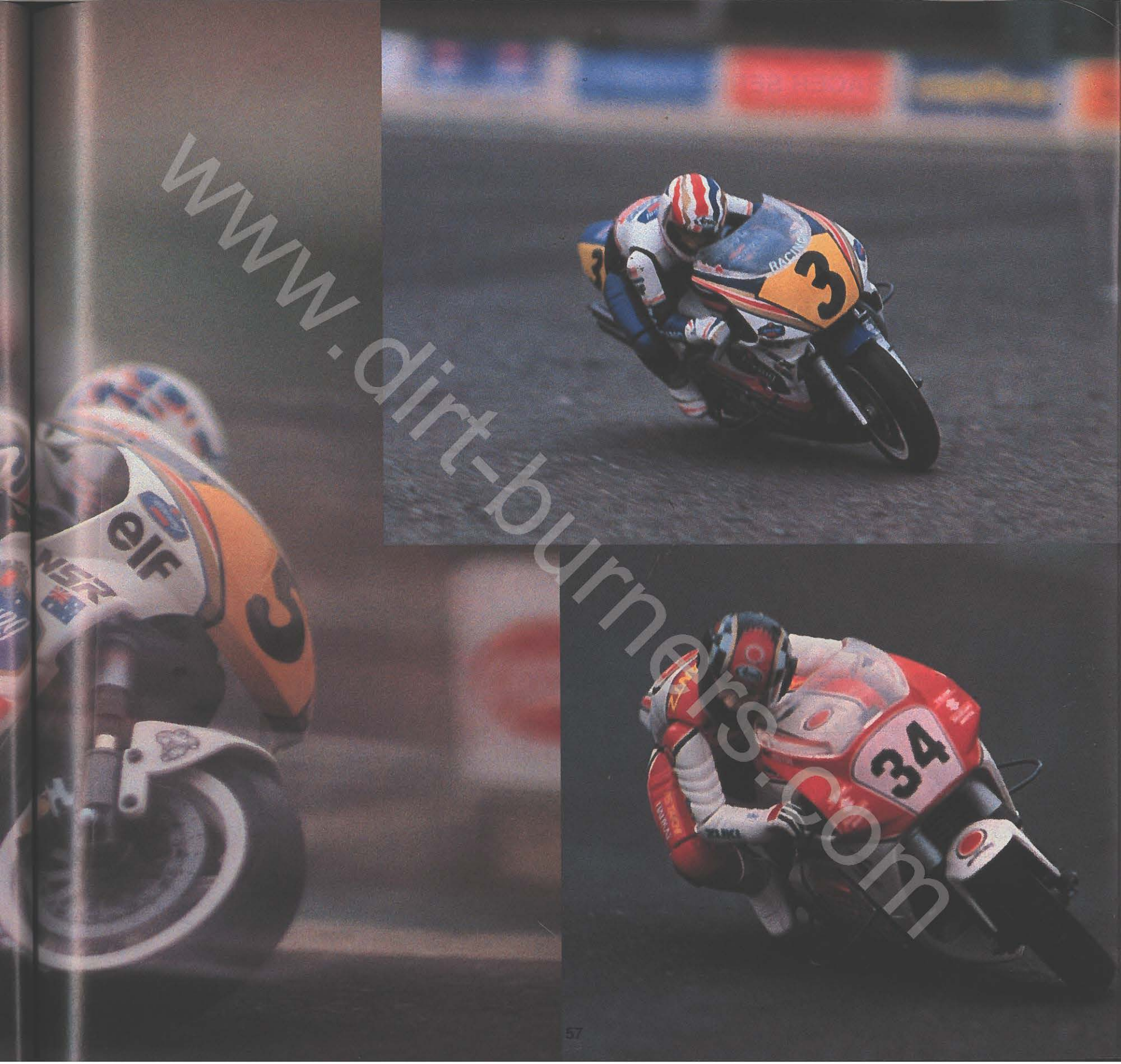
Technical data (typ)

Length/518mm (20.4") Width/219mm (8.6")
Height/227mm (8.9") Wheelbase/295mm (11.6")
Ground clearance/23mm (0.9")
Track (F/R)/171mm (6.7") Weight/2300g (5.1 lb)
Tires (F/R)/Ø100x40mm Gear ratio/10.5:1
Motor (included)/Mega Monster Truck
(optional second motor may be installed)
Speed controller (included)/Kyosho Rotary (3 fwd + rev)

ELECTRIC 1/8 SCALE BIKES

www.dirt-burners.com





www.dirt-burners.com

HANGING ON RACER SERIES

ELECTRIC POWERED MOTORCYCLES





1:8 SCALE



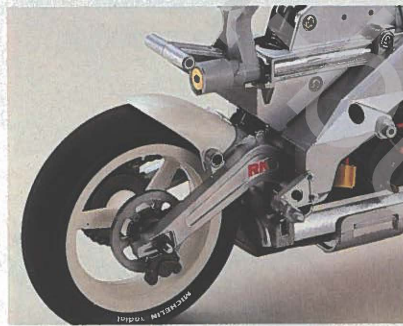
HONDA NSR500 No.3021



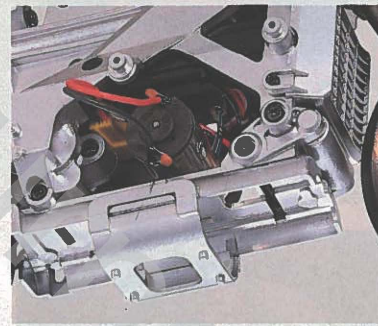
SUZUKI RGV-7 No.3022



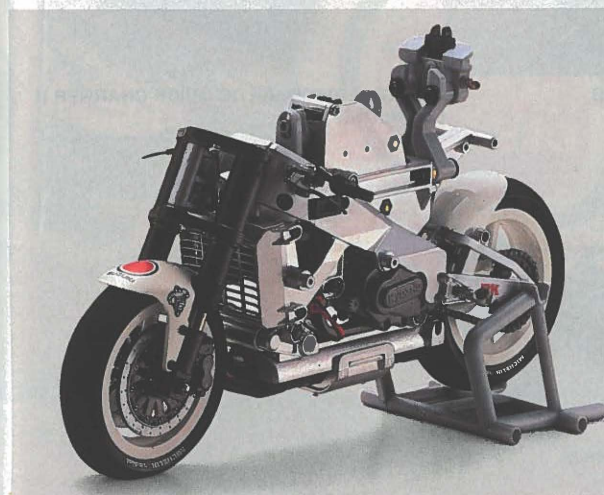
INGENIOUS LINKAGE MOVES THE RIDER FROM SIDE TO SIDE AS THE BIKE BANKS THROUGH CORNERS.



OPERATING SWING-ARM REAR SUSPENSION ABSORBS BUMPS. STRONG, REINFORCED PARTS FOR LONG SERVICE.



STRONG, REINFORCED FRAME. OPEN DESIGN FOR QUICK BATTERY CHANGES AND EASY ACCESS TO EQUIPMENT.



THE MOST REALISTIC SCALE MOTORCYCLES ON THE TRACK!

THE ULTIMATE! THESE TWO BIKES NOT ONLY LEAN REALISTICALLY THROUGH THE CURVES, BUT THE RIDER MOVES FROM SIDE TO SIDE AT THE SAME TIME! THESE ARE ALL-NEW MODELS MADE FROM NEW MOLDS FOR GREATER SCALE ACCURACY AND EASIER ACCESS TO RADIO EQUIPMENT AND MECHANICAL PARTS. (DRIVER IS MADE OF 10 SEPARATE PARTS FOR NATURAL MOVEMENT.) FULLY FUNCTIONAL SUSPENSION BY FORKS IN FRONT AND A MONOSHOCK SWING-ARM AT THE REAR, BOTH WITH FRICTION-TYPE SHOCKS. (OIL-FILLED FORKS AND REAR SHOCK ARE OPTIONS FOR EVEN BETTER HANDLING ON ROUGH TRACKS.) THE POWERFUL LeMANS DM20 MOTOR (INCLUDED) DRIVES THE REAR WHEEL VIA A REAL ROLLER CHAIN. (DMC20BB OPTION MOTOR CAN BE FITTED FOR EVEN MORE PERFORMANCE.) BATTERY CLIP HOLDS BOTH 270 AND 600mAh BATTERIES. KIT INCLUDES THREE GEAR SETS TO MATCH THE POWER TO THE TRACK. AND IT'S EASY TO DRIVE!

Required for operation (not included)



7.2V-270/600mAh NiCd battery (No.2312/2313)
Battery charger (No.2359/1849/2246)
Radio control set: Two-channel w/micro servo and elec. speed controller (No.2567)

Technical data

Length/270mm (10.6") Width/98mm (3.9")
Height/190mm (7.5") Wheelbase/185mm (7.3")
Tires/F: 278x18mm; R: 286x23mm
Weight/750g (26 oz) Gear ratios: 13.8:1, - 19.3:1
Motor (included) LeMans DM20

OPTION PARTS for HANGING ON RACERS



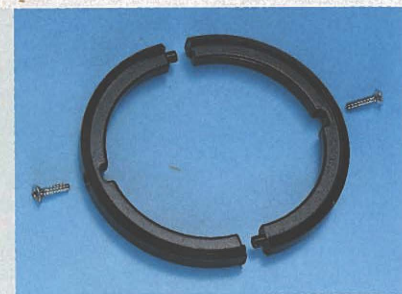
OIL-FILLED FRONT FORKS
No.GPW-1



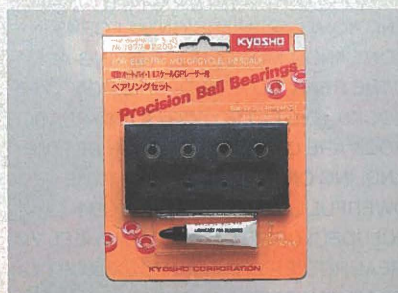
OIL-FILLED SHOCK ABSORBER
No.GPW-2



BRASS PINIONS (10T / 12T / 14T)
No.GPW-3



LIGHT FRONT WHEEL WEIGHT
No.GPW-7



BALL BEARING SET
No.1977



7.2V-270mAh NiCd BATTERY
No.2312



GP 7.2V-600mAh AE NiCd BATTERY
No.2313



LeMANS DM20 MOTOR
No.1934



LeMANS DMC20BB MOTOR
No.1935



7.2V-270/600mAh DC QUICK CHARGER II
No.2359



RECEIVER / SERVO UNIT RS-M
No.2567

10 F
CAR

www.dirtbikes.com



.10 ENGINE-POWERED CARS





www.dirt-burners.com

ZR-1 CORVETTE

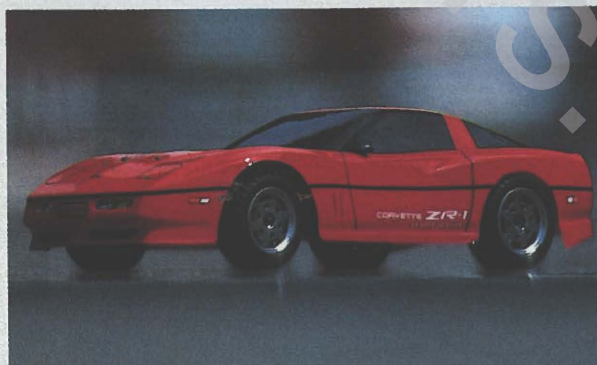
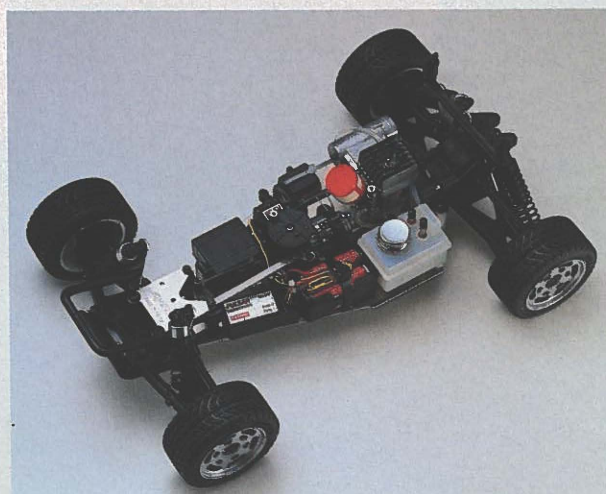
.10 ENGINE POWERED SPORT CAR

1:10 SCALE
No.3071G



EXCITING GOOD LOOKS, TOP PERFORMANCE AND EASY STARTING!

COMBINE A REALISTIC SCALE CORVETTE BODY WITH A SUPERB-HANDLING CHASSIS AND A SUPER-EASY STARTING, POWERFUL .10 SIZE GLOW ENGINE, AND THE RESULT IS FUN AND EXCITEMENT! EVEN THE BEGINNING MODEL DRIVER CAN BE CONFIDENT OF EASY OPERATION. ALL MECHANICAL PARTS, LIKE THE SUSPENSION AND DRIVE TRAIN, ARE FACTORY ASSEMBLED, SO YOU JUST INSTALL THE RADIO CONTROL EQUIPMENT AND DECORATE THE BODY TO YOUR TASTE. AND THE ZR-1 IS READY TO ROLL! STARTING THE ENGINE IS NO PROBLEM. JUST FILL THE FUEL TANK, PRIME THE ENGINE USING THE BUILT-IN PUMPS. CONNECT THE BATTERY TO THE GLOW PLUG (BATTERY HOLDER, LEADS AND CONNECTOR SUPPLIED); USES ORDINARY D-SIZE CELLS, AND PULL THE RECOIL STARTER ONCE OR TWICE. THAT'S ALL IT TAKES!



Required for operation (not included)



Radio control set: Two channel w/two servos
Fuel

Technical data

- Length/495mm (19.4") ●Width/235mm (9.3") ●Height/140mm (5.5") ●Wheelbase/272mm (10.7") ●Ground clearance/35mm (1.4")
- Track (F/R)/205mm (8.1") ●Tires (F/R)/φ77×36mm ●Weight/1360g (3.0 lb) ●Gear ratio/9.6 : 1
- Engine (included)/.10 glow w/recoil pull starter ●Fuel filler bottle and box for glow plug battery included.



CALSONIC SKYLINE GT-R GP-10

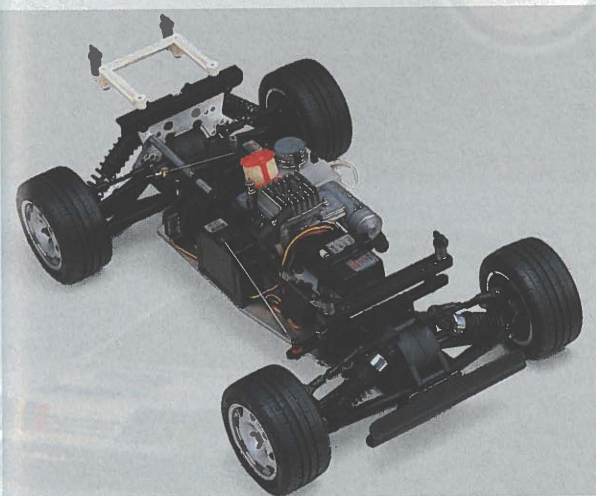
.10 ENGINE POWERED 4WD GROUP A CAR

1:10 SCALE
No.3077G



A COMPETITION WINNER WITH EXCITING ENGINE POWER

THE CALSONIC GT-R NISSAN SKYLINE IS THE FASTEST PRODUCTION CLASS (GROUP A) RACING CAR IN JAPAN. THIS 1/10-SCALE KYOSHO MODEL HAS A TRUE-SCALE BODY ACCURATELY MOLDED IN IMPACT-RESISTANT POLYCARBONATE READY FOR PAINTING. CHOOSE THE SCALE COLOR OR LET YOUR IMAGINATION RUN WILD! DETAIL TOUCHES INCLUDE SPONSOR TRANSFERS, MIRRORS, WIPERS, WHEELS, AND SCALE PATTERN TIRES. PERFORMANCE IS PEPPY WITH THE .10 GLOW ENGINE DRIVING FRONT AND REAR WHEELS THROUGH A RELIABLE SYSTEM OF TOOTHED BELTS, DRIVE SHAFTS, AND TRIPLE DIFFS. THE POWER IS KEPT UNDER CONTROL ON ROUGH AND SMOOTH TRACKS BY THE ALL-INDEPENDENT LONG-TRAVEL WISH-BONE/ARM SUSPENSION WITH QUALITY OIL-FILLED SHOCKS. RUNNING AN ENGINE-POWERED MODEL CAR HAS NEVER BEEN EASIER. THE BUILT-IN RECOIL-TYPE PULL STARTER HAS THE ENGINE RUNNING WITH JUST A COUPLE OF TUGS ON THE CORD. THE ENGINE MAKES JUST A PURR, SO IT WON'T DISTURB ANYONE! QUICK-RELEASE BODY MOUNTS ALLOW EASY REFUELLING, AND THERE IS A STRONG ALLOY ALUMINUM FRAME UNDERNEATH.



OPTION DECAL SHEETS ARE SHOWN ON PAGE 69.



Required for operation (not included)



Radio control set: Two channel w/two servos
Fuel

Technical data

- Length/495mm (19.5") ● Width/240mm (9.4") ● Height/150mm (5.9") ● Wheelbase/270mm (10.6")
- Ground clearance/25mm (1.0") ● Track (F/R)/205mm (8.1 in) ● Weight/1750g (3.9 lb) ● Tires (F/R)/φ77×36mm
- Gear ratio/12 : 1 ● Engine (included)/.10 glow w/recoil starter
- Kit includes fuel filler bottle, glow plug wrench, and battery holder/connector clip for heating glow plug

GP RALLY CAR SERIES

.10 ENGINE POWERED 4WD RALLY CARS





1:10 SCALE



FORD RS-200
No.3013G



PEUGEOT 405
No.3014G

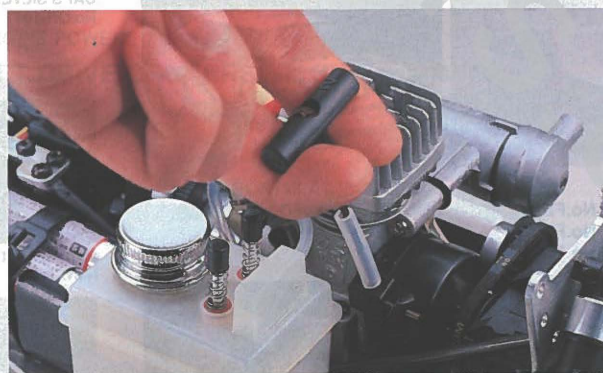


LANCIA DELTA INTEGRALE 16V
No.3044G



FAMOUS RALLY CARS WITH EXCITING ENGINE POWER

IF YOU LIKE THE EXCITEMENT OF INTERNATIONAL CAR RALLIES AND THE HIGH-PERFORMANCE OF THE CARS THAT RUN IN THEM, YOU'LL LOVE THIS STABLE OF KYOSHO 1/10-SCALE MODELS OF THE MOST FAMOUS COMPETITORS. THE ORIGINALS NEED TO HAVE HIGH POWER, RUGGED CONSTRUCTION AND DURABILITY, AND GOOD HANDLING, FEATURES THAT ARE CARRIED OVER INTO THESE MODELS. EACH HAS AN ALL-INDEPENDENT LONG-TRAVEL WISHBONE/ARM SUSPENSION WITH QUALITY OIL-FILLED SHOCKS TO KEEP IT UNDER CONTROL ON ALL TYPES OF SCALE ROADS, BUT THE EXCITEMENT COMES FROM THE PEPPY PERFORMANCE FROM THE .10-SIZE ENGINE. RUNNING AN ENGINE-POWERED MODEL CAR HAS NEVER BEEN EASIER, FOR THE BUILT-IN RECOIL-TYPE PULL STARTER ENSURES THAT THE ENGINE IS READY TO GO WITH JUST A COUPLE OF TUGS ON THE CORD. THE POWER IS DELIVERED TO THE WHEELS BY A SOPHISTICATED FOUR-WHEEL DRIVE SYSTEM FEATURING TOOTHED BELTS, DRIVE SHAFTS, AND TRIPLE DIFFERENTIALS. MANY SPONSOR DECALS AND DETAIL PARTS LIKE MIRRORS AND WIPERS. THE WHEELS AND TIRES ARE SCALE, TOO.



Required for operation (not included)

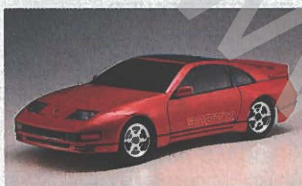


Radio control set: Two channel w/two servos
Fuel

Technical data (Ford/Peugeot/Lancia)

●Length/450/440/440mm (17.7/17.2/17.2") ●Width/240/235/235mm (9.4/9.2/9.2") ●Height/170/138/138mm (6.7/5.4/5.4")
●Wheelbase/270mm (10.6") ●Ground clearance/25mm (1.0") ●Track F/R/201mm (8.1 in) ●Weight/1750/1660/1660g (3.9/3.7/3.7 lb)
●Tires (F/R)/φ77×36mm ●Gear ratio/10:1/12:1/12:1 ●Engine (included)/.10 glow w/recoil starter

OPTION PARTS for 1/10 SCALE CARS



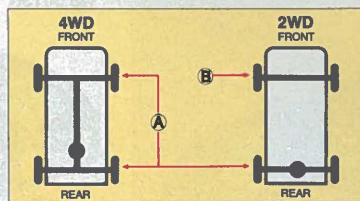
NISSAN 300ZX BODY SET
No.OR-39



PORSCHE 911 TURBO BODY SET
No.OR-34



FERRARI F40 BODY SET
No.OR-47



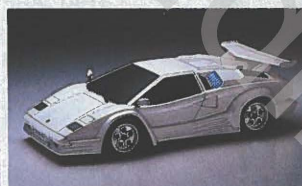
TYPE B WHITE (x2)
No.OR-38
TYPE A WHITE (x2)
No.OR-58



TYPE B SILVER (x2)
No.OR-67
TYPE A SILVER (x2)
No.OR-51



FERRARI TESTAROSSA BODY SET No.OR-65



LAMBORGHINI COUNTACH BODY SET No.OR-70



LAMBORGHINI DIABLO BODY SET No.OR-102



TYPE B SILVER (x2)
No.RM-14
TYPE B SILVER (x2)
No.SI-9
TYPE A WHITE (x2)
No.RM-15
TYPE A WHITE (x2)
No.SI-10



TYPE B SILVER (x2)
No.OR-72
TYPE A SILVER (x2)
No.OR-73



TYPE A GUNMETAL (x2)
No.OR-56
TYPE A SILVER (x2)
No.OR-109
TYPE A WHITE (x4)
No.OT-90



TYPE A SILVER (x2)
No.OR-84
CAPS SILVER (x4)
No.OR-101



XJ220 PROTOTYPE BODY SET No.OR-106



CALSONIC SKYLINE BODY SET No.OR-52



FORD RS500 COSWORTH BODY SET No.SI-5



WIDE TYPE SILVER (x2)
No.OR-85
CAPS SILVER (x4)
No.OR-101



TYPE A SILVER (x2)
No.OR-84
CAPS SILVER (x4)
No.OR-105



WIDE TYPE SILVER (x2)
No.OR-85
CAPS SILVER (x4)
No.OR-105



TYPE A WHITE (x4)
No.FD-2
TYPE A YELLOW (x4)
No.MA-17



ZR-1 CORVETTE BODY No.RM-17
BODY PARTS No.RM-16
DECAL SHEET No.RM-18



PEUGEOT 405 BODY No.FD-39
BODY PARTS No.FD-41
REAR WING No.FD-42



LANCIA DELTA INTEGRALE BODY SET No.FD-53



RADIAL PATTERN A (x2)
No.W-5053



RADIAL PATTERN B (x2)
No.W-5054



RADIAL PATTERN C WIDE (x2)
No.W-5057



RADIAL PATTERN C (x2)
No.W-5056



CITROEN ZX BODY SET
No.SI-11



TOYOTA CELICA TURBO 4WD BODY SET No.LZ-13



MITSUBISHI NIKON PAJERO BODY SET No.LZ-15



SLICKS (x2)
No.W-5055



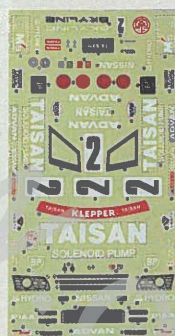
RALLY PATTERN (x2)
No.W-5058



CALSONIC SKYLINE
GT-R DECAL SHEET
No.OR-110



ZEXEL SKYLINE
GT-R DECAL
SHEET No.1761



TAISAN KLEPPER
GT-R DECAL
SHEET No.1762



NICHIREI ACEROLA
GT-R DECAL SHEET
No.1763



FALKEN GT-R
DECAL SHEET
No.1764



NISSAN ALTIA
FALKEN GT-R
DECAL SHEET
No.1765



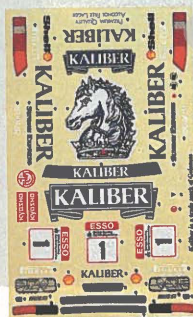
FET GT-R DECALSHEET No.1766



TEXACO (FORD
RS500) DECAL
SHEET No.SI-7



LISTERINE TEXACO
(FORD RS500)
DECAL SHEET
No.SI-W-1



KALIBER (FORD
RS500) DECAL
SHEET No.SI-W-2



PEUGEOT 405 DECAL
SHEET No.FD-40



LANCIA DELTA INTEGRALE
DECAL SHEET No.FD-55



CITROËN ZX DECAL SHEET
No.SI-13

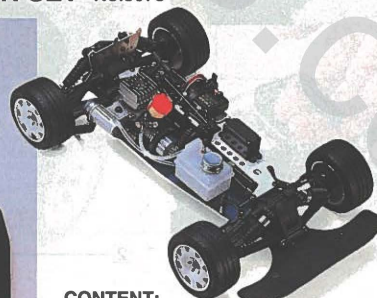
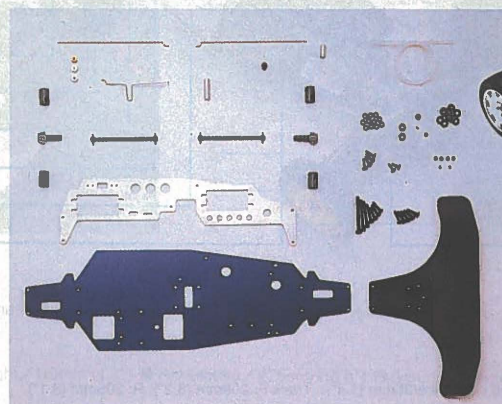


TOYOTA CELICA
TURBO 4WD
DECAL SHEET
No.LZ-14



MITSUBISHI NIKON
PAJERO DECAL
SHEET
No.LZ-16

CHASSIS for .10 ENGINE POWERED 4WD SCALE CARS CENTER SHAFT DRIVE CONVERSION SET No.3078



CONTENT:
MAIN CHASSIS RADIO PLATE
LINKAGE SET DRIVE SHAFTS
BUMPER (FOR SCALE CARS)
JOINTS FINAL PINION
SILICONE TUBE SPACERS
SCREWS,NUTS,WASHERS

CONVERSION SET FOR .10 ENGINE POWERED
4WD SCALE CARS.

IMPROVED POWER TRANSFER DUE TO USE OF
DRIVE SHAFTS INSTEAD OF BELTS FOR CON-
NECTING CENTER DIFF WITH FRONT AND
REAR DIFFS.

CHANGED POSITIONS OF FUEL TANK AND THE
ENGINE ALLOW MUCH BETTER DISTRIBUTION
OF WEIGHT.

IMPROVED RIGIDITY DUE TO BLUE ALUMITE-
FINISH ALLOY ALUMINUM CHASSIS AND LONG
RADIO PLATE.

RAMPAGE GP-10

10 ENGINE POWERED 2WD RACING BUGGY

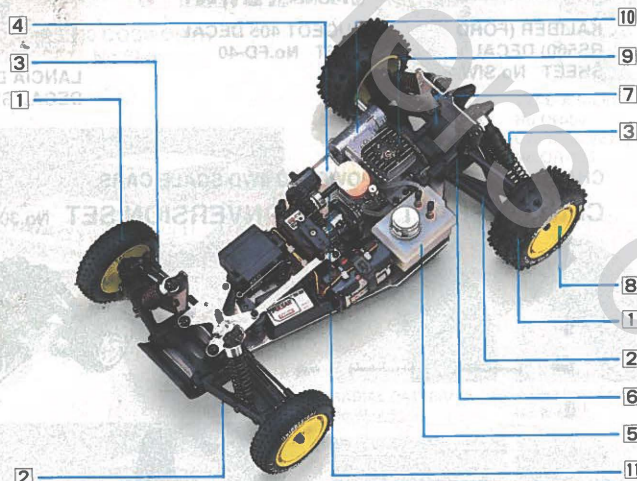
1:10 SCALE
No.3072G



SUPER PERFORMANCE! SUPER-EASY STARTING!

THE EXCITEMENT OF RUNNING AN ENGINE-POWERED R/C BUGGY HAS NEVER BEEN SO EASY! JUST FILL THE TANK WITH FUEL, CONNECT THE GLOW-PLUG BATTERY, PRIME THE ENGINE USING THE PUMPS BUILT INTO THE FUEL TANK, AND PULL THE HANDLE OF THE RECOIL STARTER OF THE POWERFUL 10 ENGINE.

THAT'S ALL IT TAKES TO START THE RAMPAGE! NO ELECTRIC STARTER AND HEAVY BATTERY NEEDED! THE STANDARD MUFFLER PASSES JUST ENOUGH ENGINE SOUND TO BE EXCITING WITHOUT BOTHERING THE NEIGHBORS. ON THE TRACK, THE RAMPAGE IS PURE FUN TO DRIVE. ITS LONG-TRAVEL SUSPENSION WITH LARGE-CAPACITY OIL-FILLED PRESSURE SHOCK ABSORBERS SOAKS UP THE BUMPS, WHATEVER THE SURFACE, AND THE ENGINE DELIVERS THE SPEED! THE STYLISH BODY LOOKS GREAT, TOO!



- ① PIN-SPIKE SOFT-COMPOUND TIRES (ALL-TERRAIN).
- ② LONG-TRAVEL WISHBONE/ARM SUSPENSION (F/R).
- ③ LARGE-CAPACITY PRESSURE TYPE OIL-FILLED SHOCK ABSORBER.
- ④ STRONG, LIGHT 17S ALLOY ALUMINUM CHASSIS.
- ⑤ FUEL TANK W/PRIMING PUMPS.
- ⑥ RECOIL-STARTER HANDLE.
- ⑦ GEARBOX/DIFFERENTIAL.
- ⑧ STRONG, LIGHT NYLON WHEELS.
- ⑨ 10 ENGINE (INCLUDED).
- ⑩ SUPER-SILENT MUFFLER (INCLUDED).
- ⑪ DRIVE MECHANISM: GEAR/SHAFT/BELT.

Required for operation (included)

Radio control set: Two-channel w/two servos Fuel

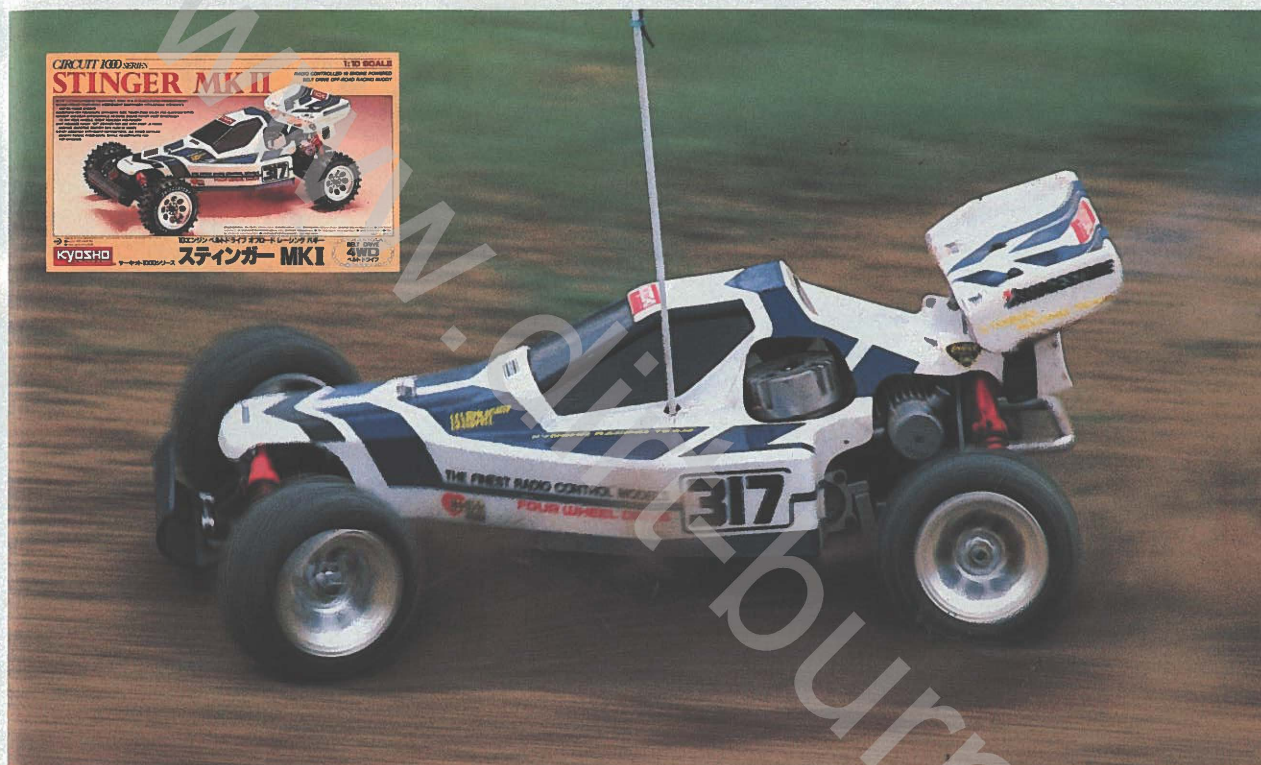
Technical data

Length/350mm (13.8") Width/240mm (9.4") Height/130mm (5.1") Wheelbase/272mm (10.7") Ground clearance/36mm (1.4") Track/F: 208mm (8.2"); R: 205mm (8.1")
Tires/F: Ø70x20mm; R: Ø85x37mm Weight/1360g (3.0 lb) Gear ratio/9.6:1 Engine (included) / .10 glow w/recoil pull starter Fuel filler bottle and box for glow plug battery included.

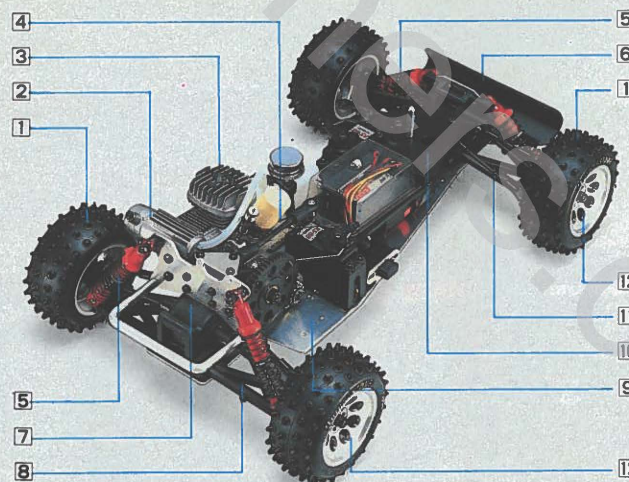
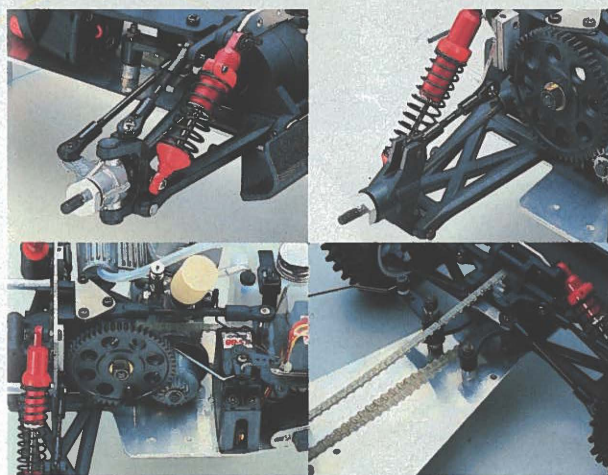
CIRCUIT 1000 SERIES STINGER MK-II

10 ENGINE POWERED OFF-ROAD RACING BUGGY

1:10 SCALE
No.3042



WITH A STRENGTHENED VERSION OF THE ADVANCED DRIVE AND SUSPENSION SYSTEMS OF THE FAMOUS OPTIMA, THE STINGER IS GOING TO MOVE ON ANY TERRAIN! HIGH-TRACTION FOUR-WHEEL DRIVE BY LIGHT, EFFICIENT AND RELIABLE GEAR/BELT SYSTEM. EXTRA-LONG-TRAVEL (35mm) WISHBONE/ARM SUSPENSION WITH EFFECTIVE OIL-FILLED SHOCKS. STRONG, LIGHT, ALLOY ALUMINUM CHASSIS. USES ALMOST ANY .09 - .11 ENGINE, SIDEWINDER MOUNTED WITH DIRECT DRIVE TO GEARBOX. FUEL TANK AND MUFFLER INCLUDED.



- 1 ULTRA-LOW PROFILE PIN-SPIKE TIRES FOR DEPENDABLE TRACTION ON ANY SURFACE.
- 2 MUFFLER (INCLUDED) GIVES PLEASANT SOUND WITH LOW POWER LOSS.
- 3 USES ALMOST ANY .09 - .11 ENGINE.
- 4 LIGHT, RELIABLE, EFFICIENT REINFORCED DRIVE BELT.
- 5 EFFECTIVE OIL-FILLED SHOCK ABSORBER.
- 6 PROTECTIVE NYLON BUMPER.
- 7 REAR GEARBOX AND DIFFERENTIAL WITH 5 BALL BEARINGS FOR LOW POWER LOSS.
- 8 LONG-TRAVEL WISHBONE/ARM REAR SUSPENSION. STRONG EX66 NYLON PARTS.
- 9 STRONG, LIGHT 17S ALLOY ALUMINUM CHASSIS.
- 10 EX66 NYLON UPPER CHASSIS PLATE.
- 11 GLASS-REINFORCED EX66 NYLON LONG-TRAVEL WISHBONE/ARM FRONT SUSPENSION.
- 12 STYLIZED STRONG, LIGHT, METALLIZED NYLON WHEELS.

Required for operation (not included)

● Radio control set: Two-channel w/two servos ● Engine (.09~.11 size buggy type) ● Fuel and glow-plug battery ● Starter (No.1791 or equiv.) and battery

Technical data

● Length/370mm (14.6") ● Width/240mm (9.9") ● Height/110mm (4.3") ● Wheelbase/275mm (10.8") ● Ground clearance/30mm (1.2") ● Track/F: 200mm (7.9"); R: 205mm (8.1") ● Tires (F/R)/φ85×37mm ● Weight/1450g (3.2 lb)

1/8 SCALE F1 RACERS & ENGINE-POWERED 4WD 1/9 SCALE VEHICLES





1/8 SCALE F1 RACER SERIES

ELECTRIC / .10 ENGINE POWERED SCALE F1 RACING CARS

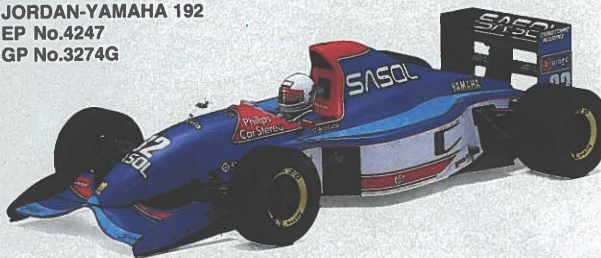




1:8 SCALE



JORDAN-YAMAHA 192
EP No.4247
GP No.3274G



WILLIAMS RENAULT FW14
EP No.4246
GP No.3273G

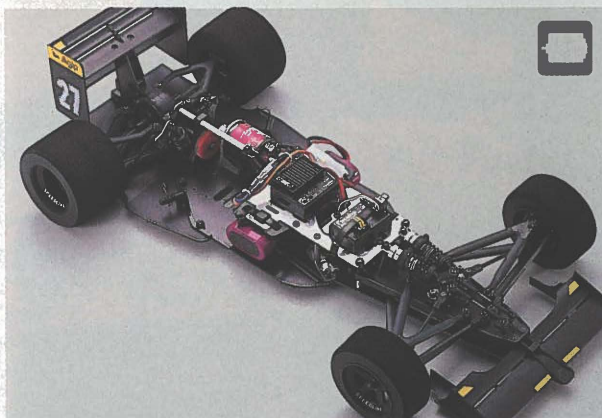


FERRARI 643
EP No.4245
GP No.3272G

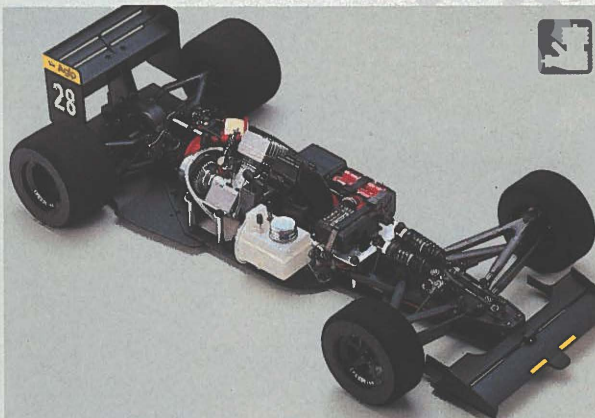


EXCITING REALISM! IMPRES- SIVELY LARGE 1/8-SCALE FORMULA 1 CARS!

SET UP YOUR OWN GRAND PRIX RACES WITH YOUR FRIENDS! THE ELECTRIC VERSION IS QUICK AND SILENT, AND CAN BE RUN ANYWHERE. THE ENGINE VERSION IS EVEN QUICKER AND IS WELL MUFFLED, SO IT CAN BE RUN ALMOST ANYWHERE. YOUR CHOICE! BOTH VERSIONS ARE ALIKE EXCEPT FOR CHANGES REQUIRED FOR THE DRIVE SYSTEMS. ALL HAVE A RIGID FIBERGLASS AND ALLOY ALUMINUM CHASSIS. SUSPENSION IS FULLY OPERATIONAL WITH STREAMLINED ARMS AND INBOARD OIL-FILLED SHOCKS (LONGITUDINAL AT FRONT) LIKE THAT OF REAL CARS. BODIES, WINGS, AND SPOILERS ARE VERY ACCURATELY MOLDED AND READY FOR YOUR PAINTING SKILLS. FULL SET OF SPONSOR INSIGNIAS FOR REALISM. TIRES ARE HIGH-GRIP SPONGE TYPE.



[EP] KIT INCLUDES A POWERFUL MEGA OUTLAW STOCK MOTOR AND CONNECTOR FOR 8.4V BATTERIES. SECOND MOTOR CAN BE FITTED.



[GP] KIT INCLUDES PEPPY KYOSHO GS11-CR CUSTOM CAR ENGINE W/PULL STARTER, FAN, MUFFLER, AND PREASSEMBLED GEARBOX, ALL FACTORY MOUNTED.

Required for operation (not included)



EP
Radio control set : Two channel w/electronic speed controller
8.4V-1700mAh NiCd battery (No.2338)
Battery charger (No.2358/1849/2246)
GP
Radio control set: Two-channel w/two servos
Fuel

Technical data (typ)

Length/550mm (21.7") Width/275mm (10.8")
Height/135mm (5.3") Wheelbase/365mm (14.4")
Ground clearance/12mm (0.5")
Track/F: 233mm (9.2"); R: 155mm (6.1")
Motor (EP; included)/ Mega Outlaw Stock
Engine (GP; included)/ Kyosho GS11-CR w/muffler, recoil pull starter
Speed controller (EP; not included)/electronic

NISSAN PATHFINDER

.10 ENGINE POWERED 4WD RECREATIONAL VEHICLE
NO.3200G

MITSUBISHI PAJERO

.10 ENGINE POWERED 4WD RECREATIONAL VEHICLE
No.3202G





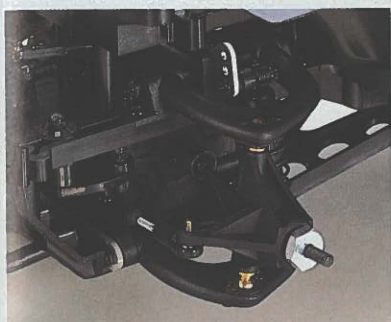
1:9 SCALE



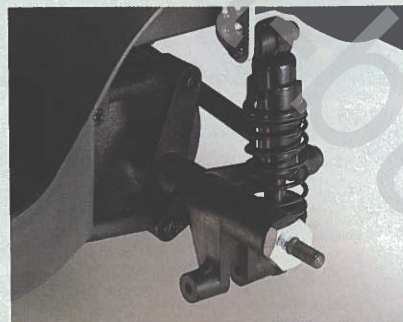
NISSAN PATHFINDER No.3200G



MITSUBISHI PAJERO No.3202G



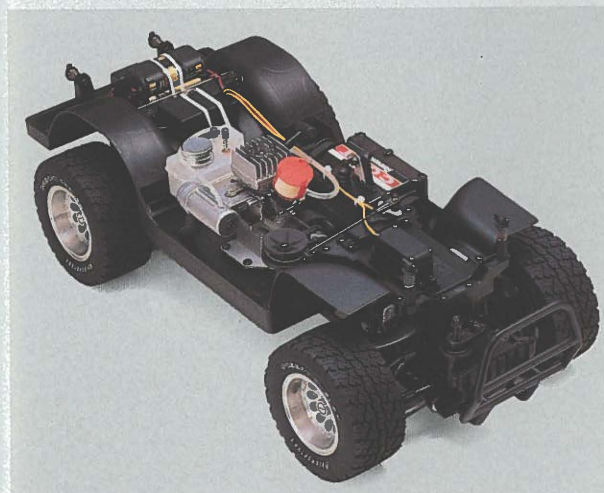
COMPLETELY SCALE DOUBLE-WISHBONE INDEPENDENT FRONT SUSPENSION WITH QUALITY FRICTION SHOCKS.



COMPLETELY SCALE FIVE-LINK LIVE-AXLE REAR SUSPENSION WITH FRICTION SHOCK ABSORBERS.



RECOIL-TYPE PULL STARTER AND CCVT AUTOMATIC TRANSMISSION MAKE OPERATION SIMPLE.



SCALE REALISM, WITH AUTOMATIC TRANSMISSION DRIVING EASE!

THESE TWO OFF-ROAD RECREATIONAL VEHICLES ARE FAVORITES AROUND THE WORLD. KYOSHO'S ENGINE-POWERED MODELS LET YOU ENJOY OFF-ROADING AT A FRACTION OF THE COST OF THE REAL THING! AND IT COULDN'T BE SIMPLER! THE CUSTOM DESIGNED KYOSHO GS11-CR ENGINE STARTS EASILY WITH THE BUILT-IN PULL STARTER, THEN RUNS AT STEADY SPEED AND THE GEAR RATIO OF THE GEARBOX CHANGES STEPLESSLY FROM STANDSTILL TO TOP SPEED. (IT HAS REVERSE TOO.) ADD A THIRD SERVO AND YOU CAN VARY THE ENGINE SPEED TOO. (FOR MORE DETAILS OF CHASSIS, RUNNING GEAR, AND 4WD SYSTEM, PLEASE SEE DESCRIPTION OF ELECTRIC VERSION ON PAGE 54.) AN EFFECTIVE MUFFLER KEEPS ENGINE SOUND TO A PURR. BODIES ARE MOLDED VERY ACCURATELY, AND THERE ARE MANY DETAIL PARTS, LIKE WINDSHIELD WIPERS, MIRRORS, SPARE TIRE CARRIER, PLUS SCALE WHEELS AND TIRES. THEY ALSO MAKE GOOD DISPLAY MODELS. (NOTE: THE PATHFINDER IS SOLD AS A TERRANO IN JAPAN.)

Required for operation (not included)

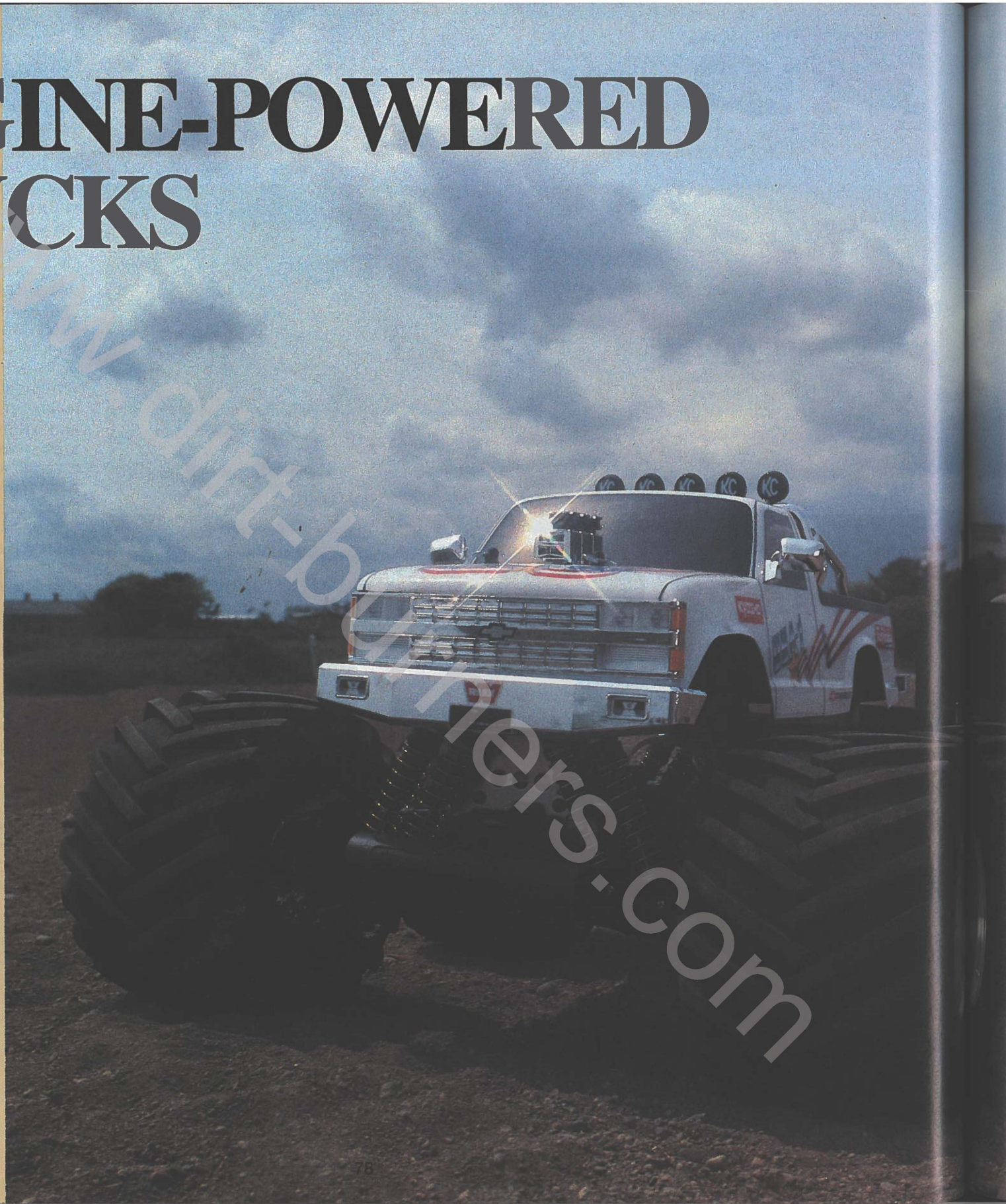


Radio control set: Two (three) channel w/two (three) servos
Fuel

Technical data (typ)

Length/518mm (20.4") Width/219mm (8.6")
Height/227mm (8.9") Wheelbase/295mm (11.6")
Ground clearance/23mm (0.9")
Track (F/R)/171mm (6.7")
Tires (F/R)/Ø100x40mm Weight/2700g (6.0 lb)
Engine (included)/Kyosho GS11 w/built-in starter, muffler, cooling fan

ENGINE-POWERED TRUCKS







OUTLAW RAMPAGE TRUCK

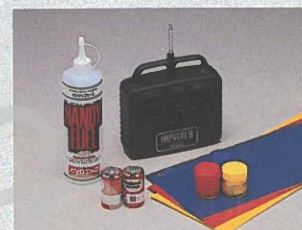
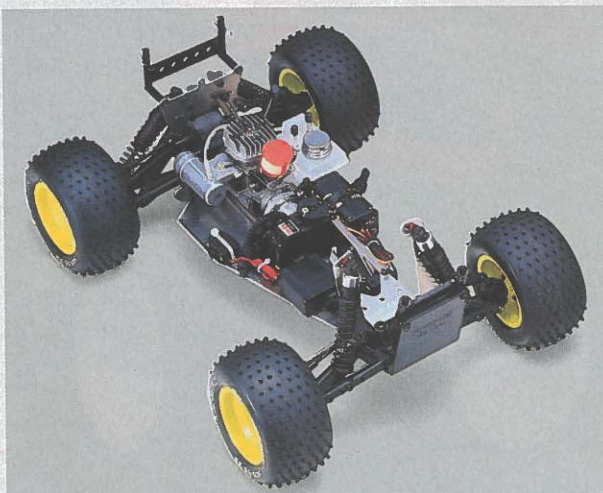
.10 ENGINE POWERED OFF-ROAD RACER

1:10 SCALE
No.3073G



ENGINE-POWERED OFF-ROAD TRUCK EXCITEMENT

REAL STADIUM RACING TRUCKS HAVE ENGINE POWER, AND LOTS OF IT! SO DOES THIS FUN-FILLED PERFORMER FROM KYOSHO. RUN IT ACROSS ROUGH GROUND OR YOUR OWN MINI-STADIUM AND IT JUST COMES BACK FOR MORE! THE URGE COMES FROM A GUTSY .10-SIZE GLOW ENGINE THAT MAKES REAL ENGINE SOUNDS, BUT IS QUIET AND WON'T DISTURB THE NEIGHBORS. ITS BUILT-IN RECOIL-TYPE PULL STARTER MAKES THE ENGINE SUPER EASY TO START. THE BUMP-GOBBLING WISHBONE/ARM SUSPENSION WITH LARGE-CAPACITY OIL-FILLED SHOCK ABSORBERS IS DERIVED FROM A CHAMPIONSHIP-WINNING OFF-ROADER, SO IT IS GOING TO KEEP THE RAMPAGE TRACKING TRUE WHATEVER THE TERRAIN! GEARBOX AND DIFF ARE SEALED FOR PROTECTION, AND THE HIGH-TRACTION PIN-SPIKE TIRES ARE DRIVEN BY A RELIABLE SHAFT AND BELT SYSTEM. PICK YOUR OWN WILD COLOR SCHEME FOR THE FORD PICKUP BODY. MANY SELF-ADHESIVE TRANSFERS ADD TO THE REALISM. UNDERNEATH IS A STRONG, LIGHT, ALLOY ALUMINUM CHASSIS.



Required for operation (not included)



Radio control set: Two channel w/two servos
Fuel

Technical data

- Length/423mm (16.7") ●Width/292mm (11.5") ●Height/202mm (8.0") ●Wheelbase/272mm (10.7")
- Ground clearance/49mm (1.9") ●Track/F: 240mm (9.4"); R: 235mm (9.3") ●Weight/1650g (3.6 lb)
- Tires (F/R)/φ104×56mm (φ4.1×2.2") ●Gear ratio/11.5 : 1 ●Engine (included)/.10 glow w/built recoil-type starter



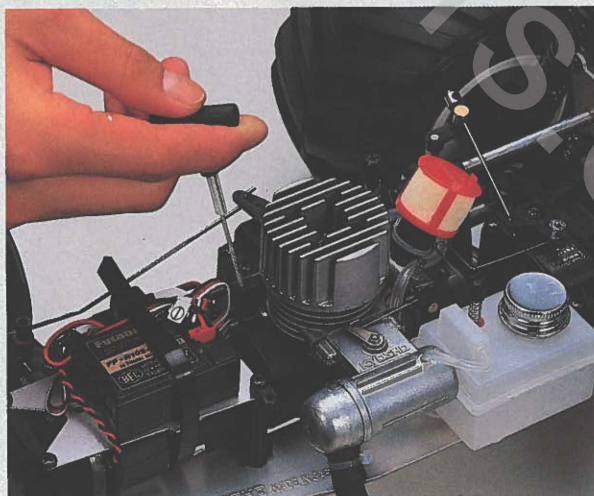
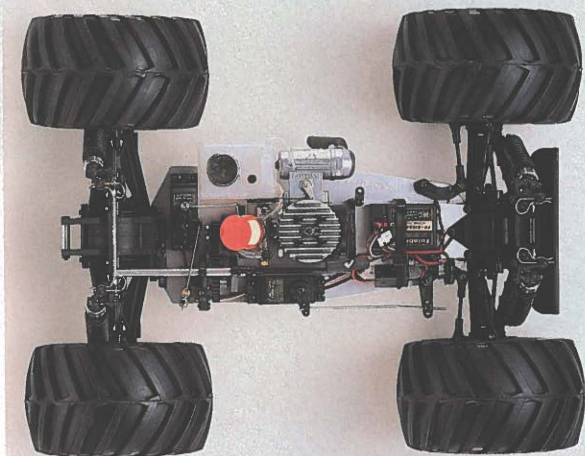
CAR CRUSHER "NITRO THRASHER" .10 ENGINE POWERED OFF-ROAD 4WD RECREATIONAL VEHICLE

1:10 SCALE
No.3111G



CAR-CRUSHING ACTION WITH EASY-STARTING ENGINE POWER!

FOR MAXIMUM CAR-CRUSHING CRAWL-OVER-ANYTHING PERFORMANCE, MATCH A POWERFUL KYOSHO GS11-CR CUSTOM-DESIGNED CAR ENGINE WITH STUMP-PULLING GEARING, A STRONG ALLOY ALUMINUM CHASSIS, RUGGED ALL-INDEPENDENT SUSPENSION WITH HIGH-PERFORMANCE OIL-FILLED SHOCKS, FOUR-WHEEL DRIVE, AND HUGE HIGH-GRIP TIRES. THE ENGINE IS EASY TO BRING TO LIFE WITH ITS BUILT-IN PULL STARTER AND DEVELOPS PLENTY OF POWER, BUT THE MUFFLER KEEPS THE SOUND TO A PLEASANT GROWL. THE POWER OF THE GS11 IS TRANSMITTED THROUGH A CENTRAL TRANSFER CASE, TWO DRIVE SHAFTS, AND TWIN GEAR-TYPE DIFFERENTIALS. SITTING HIGH ATOP THE CHASSIS IS A STYLISH FORD F-250 PICKUP BODY WITH PLENTY OF DETAIL PARTS, LIKE CHROME-FINISH MIRRORS, ROLL BARS, BUMPERS AND GRILL PLUS COLOR-PANEL AND SPONSOR TRANSFERS. KIT INCLUDES FUEL FILLER BOTTLE AND PLUG WRENCH. GET INTO THE CAR-CRUSHING GAME WITH THE THRASHER.



Required for operation (not included)



Radio control set: Two channel w/two servos
Fuel

Technical data

Length/438mm (17.2") Width/320mm (12.6")
Height/302mm (11.9") Wheelbase/270mm (10.6")
Ground clearance/54mm (2.1")
Track (F/R)/238mm (9.4")
Tires (F/R)/Ø136x80mm Weight/2680g (5.9 lb)
Gear ratio/27.5:1
Engine (included)/Kyosho GS11 w/built-in starter, muffler.

www.airbrushburners.com





USA-1 NITRO CRUSHER

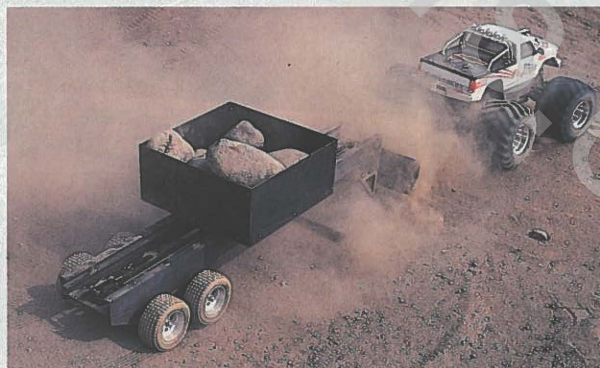
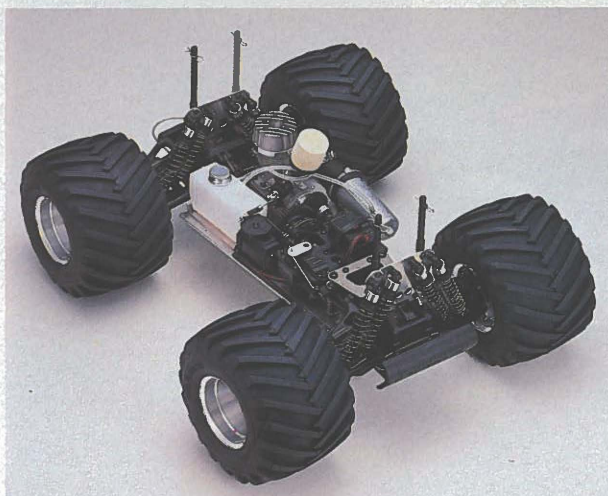
.21 ENGINE POWERED 4WD RECREATIONAL VEHICLE

1:8 SCALE 
No.3241



CAR CRUSHER WITH BIG-ENGINE POWER

POWER! POWER! POWER! LIKE THE FAMOUS FULL-SIZE USA-1 SUPER TRUCK, *NITRO CRUSHER* HAS POWER TO SPARE. WITH THE POWERFUL .21 ENGINE OF YOUR CHOICE, IT WILL ALMOST CLIMB WALLS! WHETHER CLAMBERING OVER OBSTACLES OR CHALLENGING FOR THE TRAILER-PULLING HONORS, *NITRO CRUSHER* HAS WHAT IT TAKES. FOUR-WHEEL DRIVE BY SHAFTS AND THREE METAL-GEAR DIFFS (BASED ON THE *BURNS* CHASSIS) AND GIANT 165mm (6.5") HIGH-GRIP TIRES GIVE UNBEATABLE TRACTION ON ANY SURFACE, AND ALL FOUR WHEELS STEER FOR GREAT MANEUVERABILITY. ALL-INDEPENDENT SUSPENSION, WITH EIGHT FRICTION SHOCKS, KEEPS IT UNDER CONTROL ON THE MOVE. THE SCALE CHEVROLET SILVERADO BODY IS FULLY DETAILED, AND SPONSOR TRANSFERS ARE INCLUDED SO YOU CAN DUPLICATE THE COLOR SCHEME OF THE ORIGINAL USA-1. CHROME-FINISH CARBS, GRILL, MIRRORS, AND OTHER ACCESSORIES ADD TO THE REALISM. UNDERNEATH IS A STRONG ALUMINUM PLATE CHASSIS.



Required for operation (not included)



Radio control set. Two-channel w/two servos

.21 size engine

Fuel, starter, plug-heater battery

Technical data

- Length/492mm (19.4") ●Width/420mm (16.5") ●Height/375mm (14.8") ●Wheelbase/320mm (12.6")
- Ground clearance/62mm (2.4") ●Track (F/R)/310mm (12.2") ●Weight/4150g (9.1 lb)
- Tires (F/R)/ ϕ 165×110mm (6.5×4.3") ●Gear ratio/23.8 : 1 ●Engine (not included)/.21 glow or diesel

ENGINE-POWERED 1/8 SCALE TOURING CARS





1/8 SCALE TOURING CARS

.21 ENGINE POWERED 4WD CARS





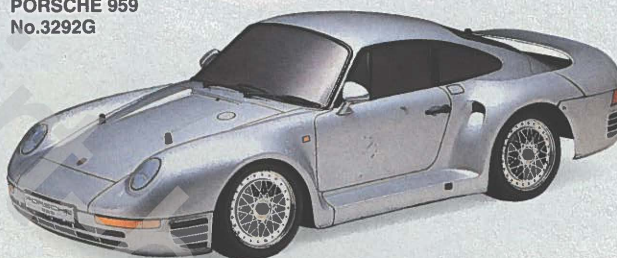
1:8 SCALE



AUDI V8 QUATTRO
No.3291G



PORSCHE 959
No.3292G

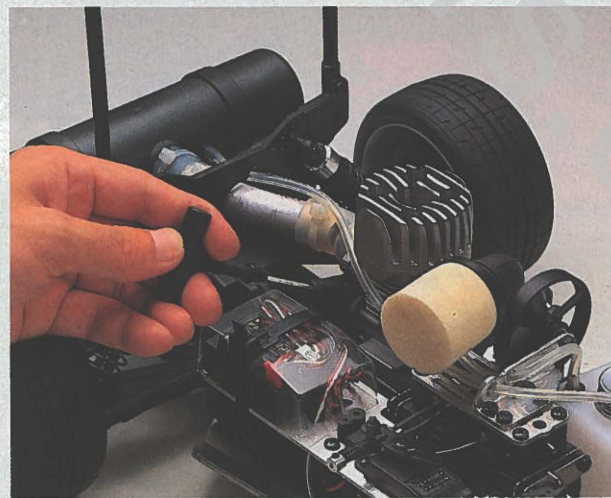
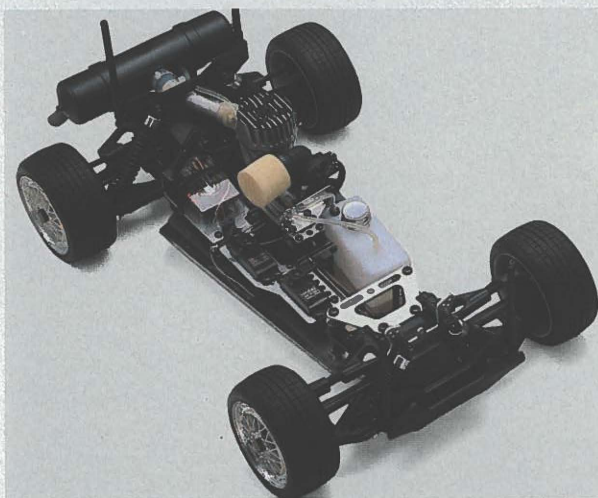


CALSONIC SKYLINE GT-R
No.3293G



**POWER! PERFORMANCE! FUN!
AND GREAT LOOKS!**

THESE THREE CARS ARE KNOWN FOR THEIR HIGH PERFORMANCE AND GOOD LOOKS. KYOSHO OFFERS THE SAME IN THESE IMPRESSIVELY LARGE 1/8-SCALE FOUR-WHEEL DRIVE MODELS. ALL ARE BASED ON THE INFERNO DX CHASSIS WITH LOWERED SUSPENSION, SCALE-SIZE WHEELS/TIRES, AND HIGHER GEARING. MAIN MECHANICAL PARTS ARE FACTORY INSTALLED FOR EASIER ASSEMBLY. THE POWER COMES FROM A CUSTOM-DESIGNED KYOSHO GS21-CR ENGINE WITH BUILT-IN PULL STARTER TO GET IT RUNNING IN A HURRY, WHILE THE MUFFLER KEEPS THE SOUND TO A PLEASANT GROWL. (FOR OTHER TECHNICAL DATA, PLEASE REFER TO THE DESCRIPTION OF THE INFERNO DX.) THE BODIES ARE ACCURATELY MOLDED SCALE REPRODUCTIONS AND ARE OF DISPLAY QUALITY. MANY DETAIL PARTS ARE INCLUDED, LIKE WIPERS, MIRRORS, METAL-FINISH GRILL, AND SPONSOR INSIGNIAS. ALL INFERNO PARTS FIT FOR UPGRADING THE PERFORMANCE.



Required for operation (not included)



Radio control set: Two channel w/two servos
Fuel

Technical data (typ)

Length/658mm (25.9") Width/300mm (11.8")
Height/209mm (8.2") Wheelbase/328mm (12.9")
Ground clearance/24mm (1.0")
Track (F/R)/255mm (10.0")
Tires (F/R)/298x44mm Weight/3300g (7.3 lb)
Gear ratio/9.7:1
Engine (included)/Kyosho GS21-CR w/built-in starter, muffler

ENGINE-POWERED RACING BUGGIES





INFERNO DX 4WD

.21 ENGINE POWERED 4WD RACING BUGGY

No.3290G

INFERNO 4WD

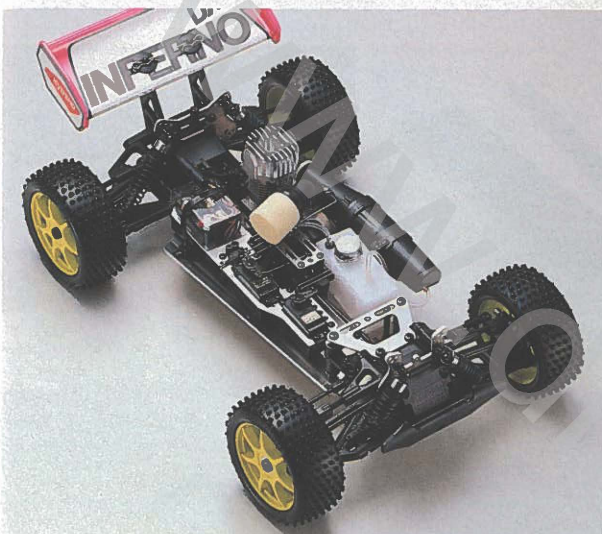
.21 ENGINE POWERED 4WD RACING BUGGY

No.3281





1:8 SCALE



INFERNO DX 4WD
No.3290G



INFERNO 4WD
No.3281

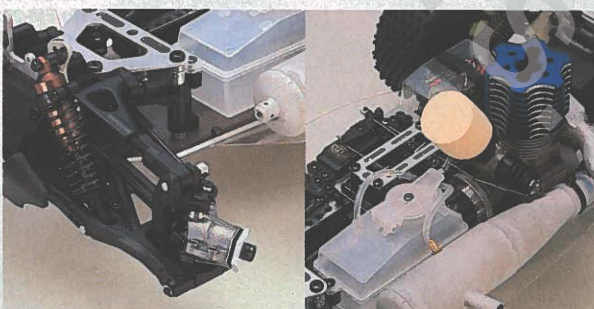


TWO GREAT ALL-OUT 4WD OFF-ROADERS WITH .21 ENGINE POWER!

BOTH *INFERNO* MODELS ARE DESIGNED FOR ALL-OUT PERFORMANCE, WITH EXTRA-LONG TRAVEL SUSPENSION AND OIL-FILLED SHOCKS, RIGID ALLOY-ALUMINUM CHASSIS, ADVANCED FOUR-WHEEL DRIVE SYSTEM BY CENTRAL TRANSFER CASE, TWIN DRIVE SHAFTS, TWIN DIFFERENTIALS WITH FOUR METAL BEVEL GEARS FOR RELIABLE POWER TRANSFER, AND INDEPENDENTLY-ADJUSTABLE FRONT/REAR DISC BRAKES. THE "4WD" MODEL IS DESIGNED FOR YOUR CHOICE OF .21 COMPETITION ENGINE, AND HAS TOP-QUALITY METAL-BODY SHOCKS, FULL SET OF BALL BEARINGS, AND CUSTOM FRONT HALF-SHAFTS, WHILE THE "DX 4WD" USES HIGH-QUALITY PLASTIC SHOCKS AND BUSHINGS TO KEEP THE COST DOWN. THE MAJOR MECHANICAL PARTS OF THE "DX 4WD" AND ITS CUSTOM-DESIGNED KYOSHO GS21-CR ENGINE ARE FACTORY INSTALLED FOR SIMPLE ASSEMBLY. BUILT-IN PULL STARTER MAKES STARTING THE ENGINE QUICK AND EASY. THE "DX 4WD" CAN BE UPGRADED WITH THE "4WD" PARTS.



"DX 4WD" VERSION HAS POWERFUL GS21-CR ENGINE WITH BUILT-IN STARTER. BASIC SUSPENSION IS SAME AS ON "4WD" MODEL.



MAXIMUM PERFORMANCE "4WD" VERSION HAS FULL SET OF BALL BEARINGS AND TOP QUALITY PARTS. YOUR CHOICE OF ENGINE.

Required for operation (not included)

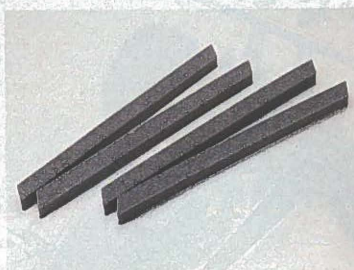
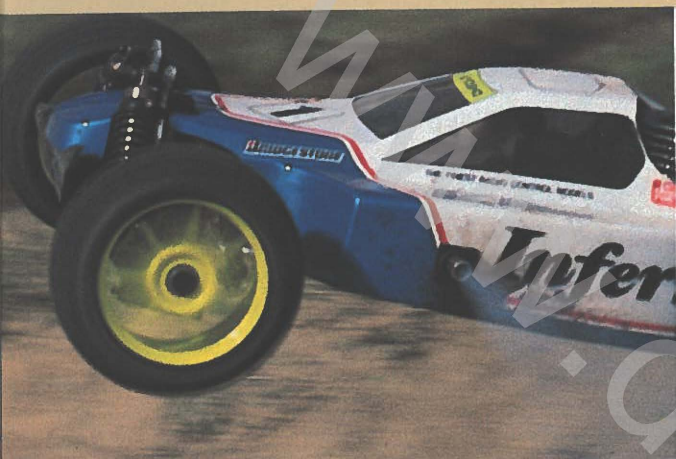


"DX 4WD", "4WD"
Radio control set: Two channel w/two servos
Fuel
"4WD"
.21 size engine
Starter

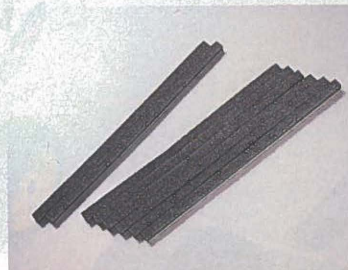
Technical data

Length/480mm (18.9") Width/305mm (12.0")
Height/180mm (7.9") Wheelbase/328mm (12.9")
Ground clearance/35mm (1.4")
Track (F/R)/255mm (10.0")
Tires (F/R)/ Ø115x43mm Weight/3400g (7.5 lb)
Gear ratio/12:1
Engine (DX 4WD model)/Kyosho GS21-CR w/built-in starter, muffler

OPTION PARTS for 1/8 SCALE BUGGIES



INNER SPONGE STRIPS
No.BSW-17



SUB INNER SPONGE STRIPS
No.BSW-39



CUSTOM SILENCER
No.BSW-48



L SIZE WHITE (x2)
No.BS-58



S SIZE WHITE (x2)
No.BS-59



M SIZE YELLOW (x2)
No.BS-105



MESH TYPE
SILVER (x2)
No.GT-9



SPOKE TYPE
SILVER (x2)
No.GT-13



M SIZE MULTI PIN (x2)
SOFT No.BSW-40S
MEDIUM No.BSW-40



M SIZE
MICRO BLOCK (x2)
No.BSW-47
HARD No.BSW-47H



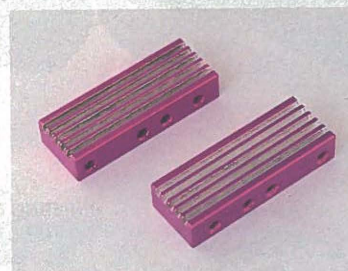
M SIZE
CROSS BLOCK (x2)
SOFT No.BSW-62S
HARD No.BSW-62H



RADIAL PATTERN (x2)
No.GT-8



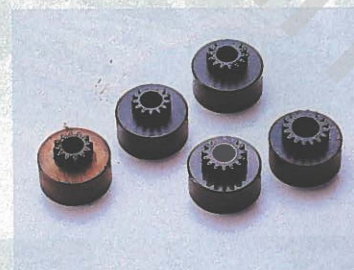
FUEL FILTER
No.1876



SPECIAL ENGINE MOUNT
No.BSW-51



SPECIAL DISK PLATE
No.BSW-52



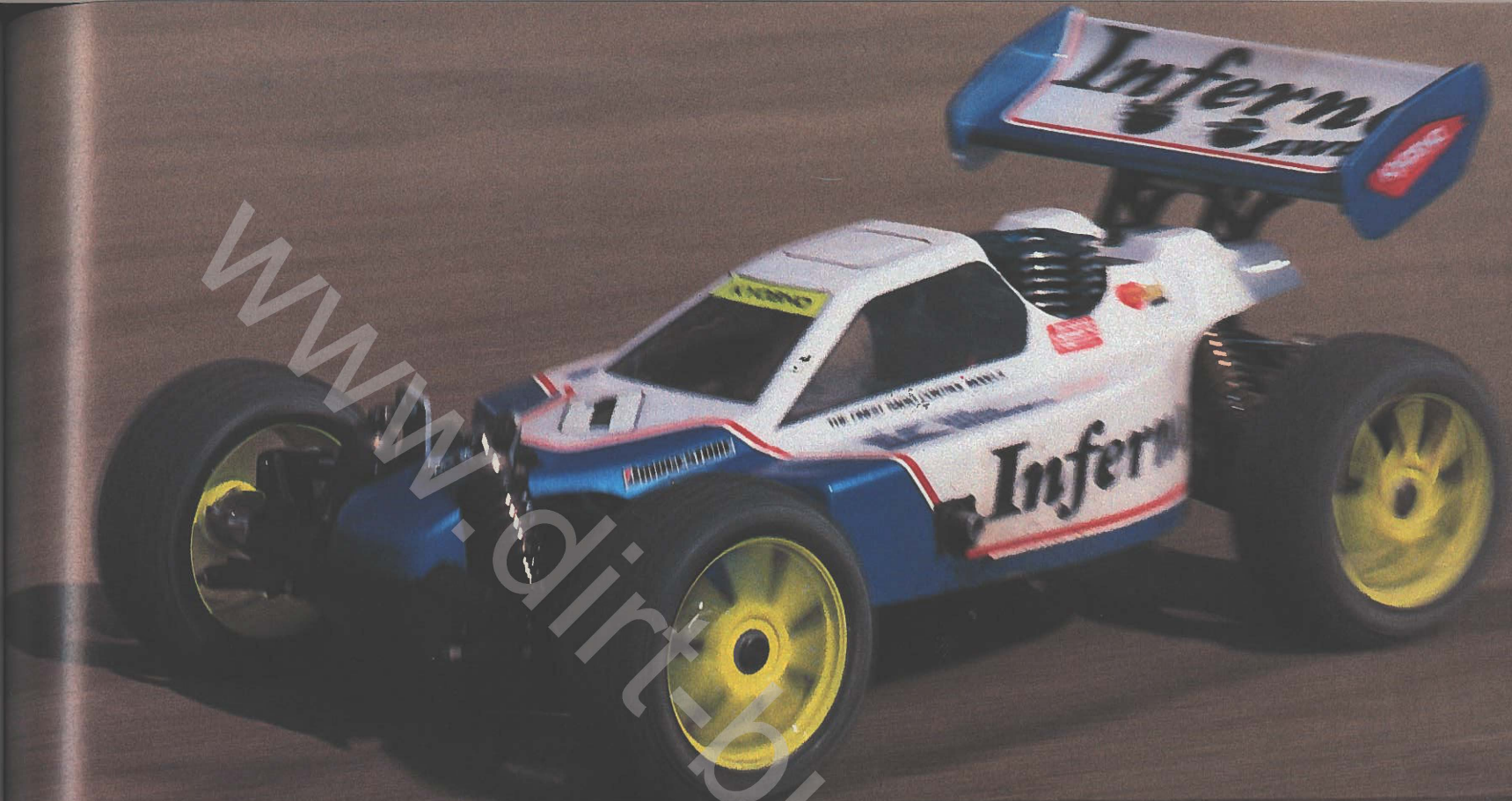
CLUTCH BELL
No.SD-53 (12T)
No.SD-54 (13T)
No.SD-55 (14T)
No.FM-222 (15T)
No.BSW-62 (16T)



BIG PRESSURE SHOCK
No.BSW-27 (S)
No.BSW-28 (L)



SPECIAL MAIN CHASSIS (INFERNO)
No.BSW-60



GAS-ENGINE POWERED 1/5 & 1/6 SCALE CARS





www.dirtbarriers.com

LANCIA DELTA INTEGRALE 16V

ENGINE POWERED RALLY CAR

No.3252

TOYOTA CELICA TURBO 4WD

ENGINE POWERED RALLY CAR

No.3254





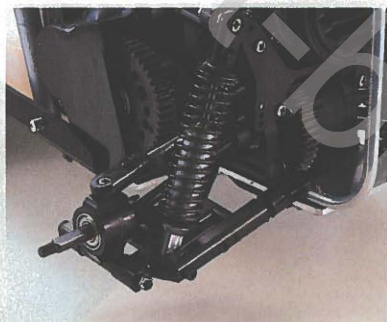
1:5 SCALE



LANCIA DELTA INTEGRALE 16V
No.3252

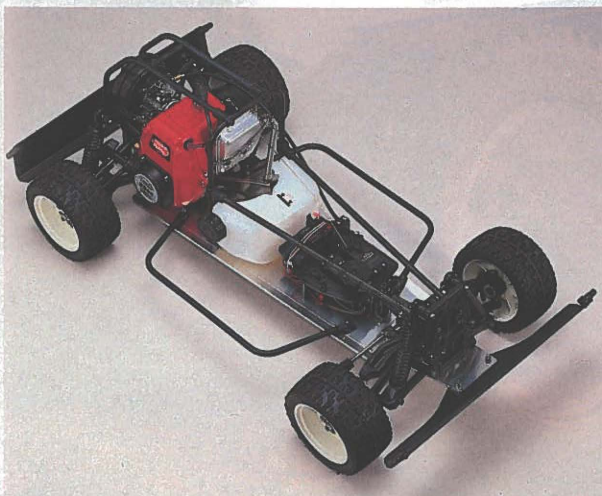


TOYOTA CELICA TURBO 4WD
No.3254



FRONT AND REAR SUSPENSION ARE INDEPENDENT, WITH WISHBONE/ARM LINKAGE AND HIGH-QUALITY OIL-FILLED SHOCK ABSORBERS. STRONG GLASS-REINFORCED PARTS.

THE PEPPY 22cc 2-STROKE ENGINE RUNS ON A LOW-COST GASOLINE-OIL MIXTURE. RECOIL PULL STARTER.



GIANT-SIZE RALLY CAR FUN!^{MOST}

A 1/5-SCALE RADIO-CONTROLLED LANCIA DELTA OR TOYOTA CELICA RALLY CAR IS IMPRESSIVE TO LOOK AT, AND EVEN MORE FUN TO DRIVE! A POWERFUL AND EASY-STARTING 22cc 2-STROKE GASOLINE ENGINE WITH AN EFFECTIVE MUFFLER PROPELS IT EFFORTLESSLY ON BOTH SMOOTH SURFACES AND SCALE RALLY TRACKS. KYOSHO'S EXPERIENCE IN DESIGNING MODEL OFF-ROADERS HAS GONE INTO THE ALL-INDEPENDENT WISHBONE-ARM SUSPENSION AND THE RIGID 4mm-THICK ALLOY ALUMINUM CHASSIS. THE RESULT IS GOOD HANDLING WHATEVER THE TRACK CONDITIONS, AND THE GEAR-TYPE DIFFERENTIAL ENSURES SMOOTH CORNERING. THE ACCURATELY-SCALED PRECISION MOLDED BODY IS MADE OF STRONG, THICK POLYCARBONATE. INCLUDED ARE MANY DETAIL PARTS, LIKE WINDSHIELD WIPERS, MIRRORS, AND SPONSOR INSIGNIA SELF-ADHESIVE TRANSFERS. A SUGGESTION FOR DECORATION: COLOR DECAL SHEETS (PART No. 1754).

Required for operation (not included)



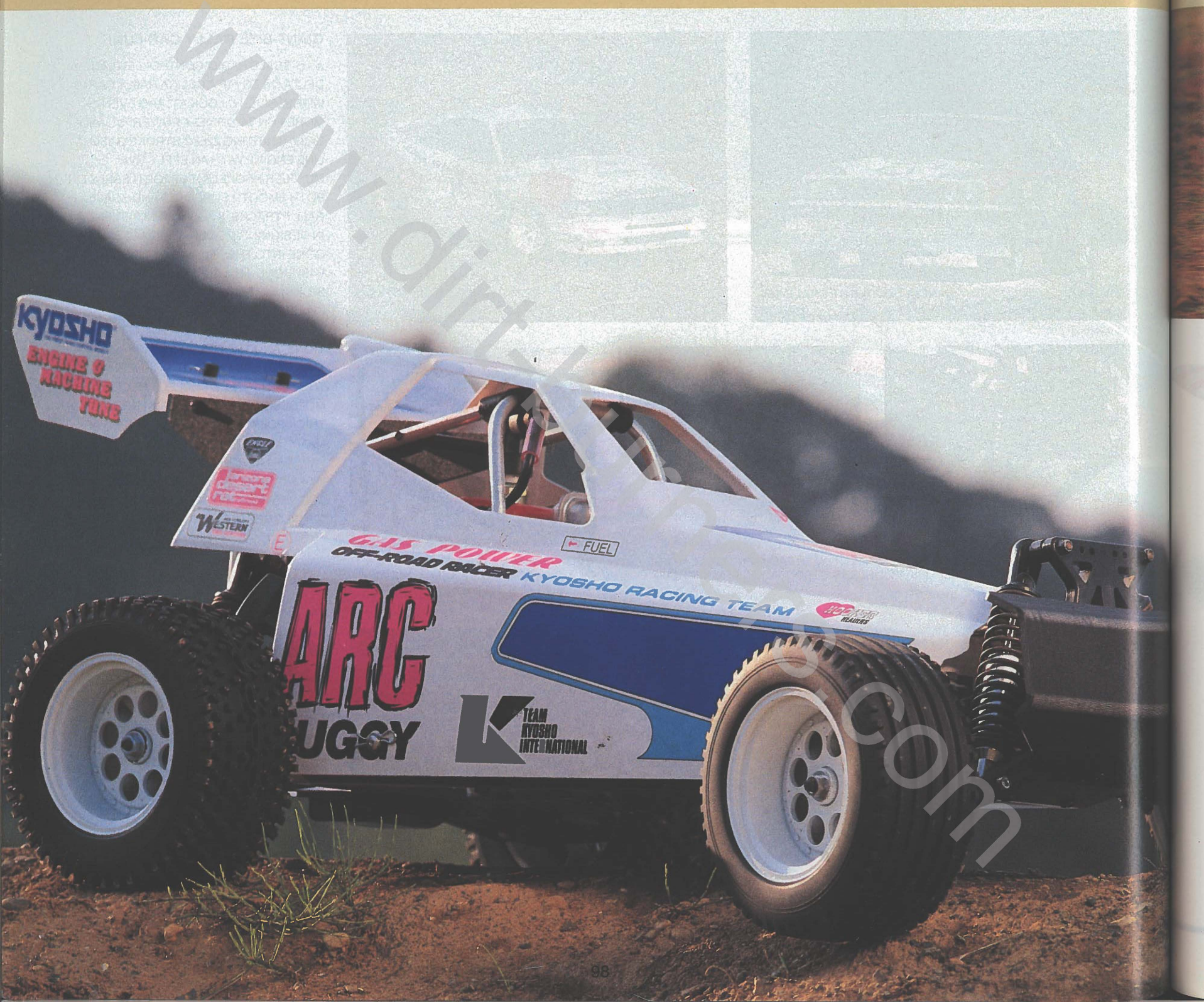
Radio control set: Two-channel w/two servos (steering servo: 4kg. cm of torque min.)
Gasoline (petrol)
Two-stroke oil

Technical data (typ)

Length/820mm (32.2") Width/430mm (16.9")
Height/290mm (11.4") Wheelbase/520mm (20.5")
Ground clearance/30mm (1.2")
Track (F/R)/340mm (13.4")
Tires (F/R)/ Ø140x68mm Weight/9.7kg (21.3 lb)
Gear ratio/9.8:1
Engine (included)/EC 02EHR 22cc 2-stroke w/recoil type pull starter (for 25:1 gasoline/ oil mixture)

ARC BUGGY

ENGINE POWERED BUGGY

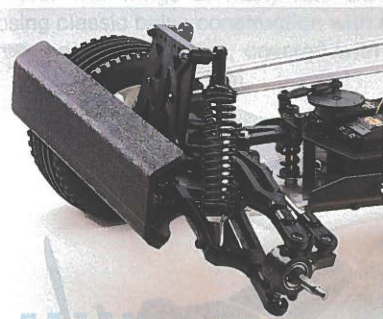


1:6 SCALE
No.3251

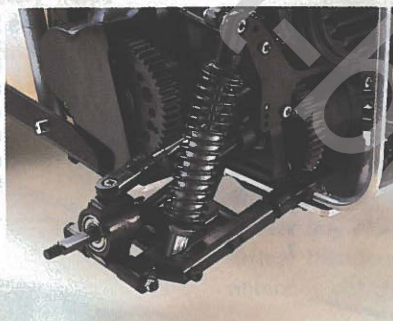


OFF-ROAD GIANT! RUN IT ALMOST ANYWHERE!

THE WHEELS OF THE ARC BUGGY ARE BIG ENOUGH TO LET YOU RUN IT ON REALLY ROUGH GROUND THAT WOULD STOP A 1/8 OR 1/10 SIZE BUGGY. IT'S LOTS OF FUN TO DRIVE, YET THE SOUND LEVEL IS LOW, SO YOUR NEIGHBORS WON'T MIND. THE POWERFUL AND EASY-STARTING 22cc 2-STROKE GASOLINE ENGINE PROPELS IT EFFORTLESSLY, AND ITS ALL-INDEPENDENT WISHBONE-ARM SUSPENSION AND THE RIGID 4mm-THICK ALLOY ALUMINUM CHASSIS KEEP IT UNDER CONTROL WHATEVER THE TRACK CONDITIONS, AND THE GEAR-TYPE DIFFERENTIAL KEEPS THE DRIVE WHEELS TURNING SMOOTHLY NO MATTER HOW SHARP THE TURN. THE BODY IS SMOOTHLY MOLDED OF STRONG, HEAVY-GAUGE POLYCARBONATE, PRECOLORED WHITE SO YOU DON'T HAVE TO PAINT IT. MANY SELF-ADHESIVE DECORATIVE TRANSFERS ARE INCLUDED. A SUGGESTION FOR DECORATING THE MODEL: COLOR DECAL SHEETS (PART No. 1754).



FRONT AND REAR SUSPENSION ARE INDEPENDENT, WITH WISHBONE/ARM LINKAGE AND HIGH-QUALITY OIL-FILLED SHOCK ABSORBERS. STRONG GLASS-REINFORCED PARTS.



THE PEPPY 22cc 2-STROKE ENGINE RUNS ON A LOW-COST GASOLINE-OIL MIXTURE. RECOIL PULL STARTER.



Required for operation (not included)

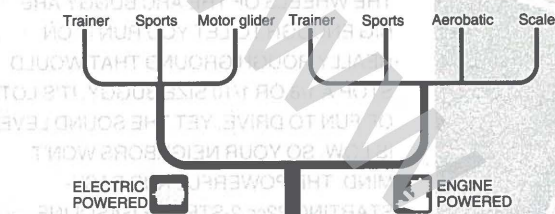


Radio control set: Two-channel w/two servos (steering servo: 4kg. cm of torque min.)
Gasoline (petrol)
Two-Stroke oil

Technical data

Length/790mm (31.1") Width/425mm (16.7")
Height/340mm (13.4") Wheelbase/482mm (19.0")
Ground clearance/60mm (2.4")
Track (F/R)/340mm (13.4")
Tires/F: \varnothing 152x70mm: R: \varnothing 160x70mm
Weight/9.4kg (20.7 lb)
Gear ratio/7.7:1
Engine (included)/EC 02EHR 22cc 2-stroke w/recoil type pull starter (for 25:1 gasoline/ oil mixture)

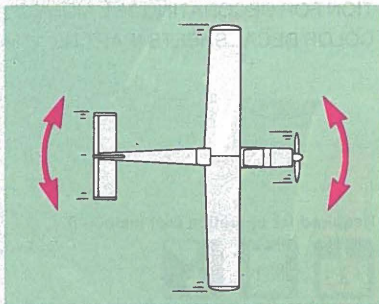
R/C GENERAL INFORMATION



TYPES OF KYOSHO R/C AIRPLANES

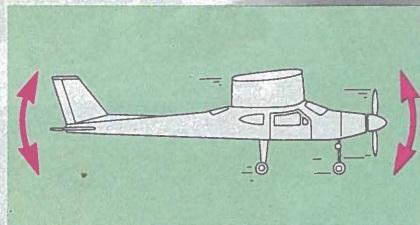
RUDDER

The rudder is the movable part attached to the fin (also called the vertical stabilizer, the part that keeps the plane flying straight). When it moves, it causes the tail of the model to swing right or left, an effect called yaw. The effect of the yaw depends on the design of the model. A low-wing model may simply continue flying in a crabbed attitude (slightly sideways), while an airplane with a high wing, particularly one with several degrees of dihedral, will lean in the direction in which the rudder initially turned it, and it will make a smooth turn. Many gliders have only rudder and elevator controls, and can turn very well.



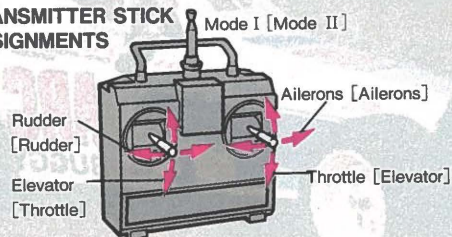
ELEVATOR

The elevator is the movable part attached to the (horizontal) stabilizer (the part that keeps the plane from changing attitude). It controls the pitch or angle of attack of the model. If it moves down, the model will pitch down and dive and gain speed, while moving it up will cause the nose to rise. The action then depends on the amount of power; it may climb, or it may slow down. A very important function is to prevent the nose of the model from dropping during a turn; some up-elevator must be given, otherwise the plane will spiral into a dive.



RADIO CONTROL FUNDAMENTALS

TRANSMITTER STICK ASSIGNMENTS



ANTENNA

The antenna is the wire extending from the receiver. The antenna should be strung straight and as far as possible from long metal parts, like pushrods. The antenna wire should never be cut short nor tied in a knot.

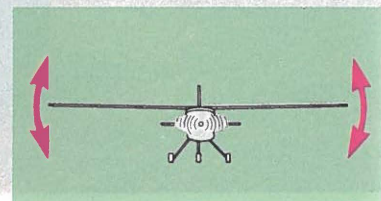
FUNDAMENTALS OF MODEL AIRCRAFT CONTROL

A model airplane is controlled by the same forces and laws of physics as a full-size airplane. It is just smaller. It can be moved right-left, up-down, and at various speeds by the actions of the rudder, elevator, ailerons and power unit. The controls of an airplane interact with each other, and the descriptions on this page are simpler than in actuality.

Transmitters with stick assignment shown for Mode II are very widely used in the USA and Canada. Mode I is most common in other countries.

AILERONS

Ailerons are movable surfaces in the right and left trailing edges of the wing. They always move in opposite directions, one up and one down. The wing with the down aileron will rise, causing the model to bank (lean) and turn away from the down aileron. As with a turn started with the rudder, it is usually necessary to apply some up elevator to prevent the model from diving.



POWER UNIT

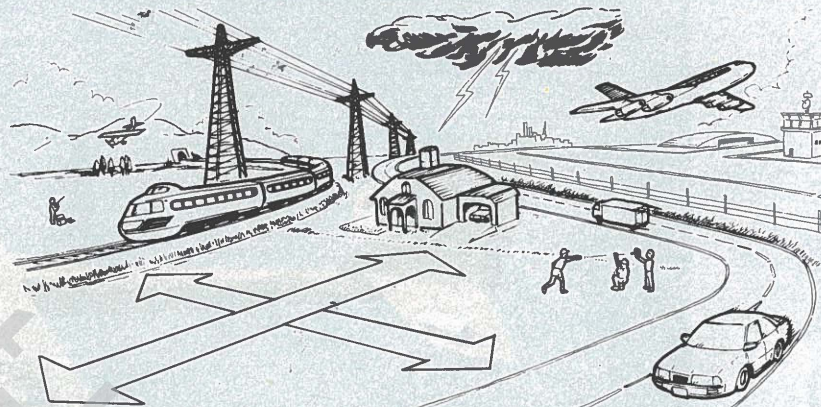
The engine of simple engine-powered models has only one speed, but the engines of most R/C models have a servo-operated carburetor that can vary the speed. The motor of an electric airplane may be connected directly to the battery and run only at full speed, or a speed controller may be used. This is controlled directly by the receiver, and no servo is required.

TYPES OF KYOSHO RADIO CONTROL AIRPLANES

If there is time, every modeller would gain valuable knowledge by building the model that he or she flies. However, many people do not have the time, and are happy to be able to buy kits in which the main parts have been factory made.

Koyscho makes a number of Almost-Ready-to Fly (ARF) kits, using various types of construction. OHS material has a core of polystyrene foam covered with a glossy outer OPS film that can be printed with any desired pattern. It is used for wings, fuselages and tail surfaces. LSS is a polypropylene material that can be molded into strong and crash-resistant fuselages. The wings of many kits are factory made using classic balsa construction with ribs, spars, and leading edge sheeting, covered with a thin, strong Excelcote polyester film.

DANGER! DO NOT FLY RADIO-CONTROLLED AIRCRAFT IN ANY OF THE LOCATIONS OR CONDITIONS SHOWN.



- Near high-tension power lines
- Near train lines
- Near highways
- Near airports or aircraft flight paths
- Near houses or buildings
- Near any areas open to the public
- Near thunderstorms (transmitter antennas act as lightning rods)

BE SURE THAT THE AREA AROUND THE FLYING FIELD IS CLEAR FOR AT LEAST A KILOMETER (OVER HALF A MILE).

WIND

When you are first learning to fly, do not try to fly when the wind is strong, for you will have much difficulty keeping your plane from crashing. Always take off (or hand-launch) into the wind. Also, always try to land into the wind.

STARTING A GLOW ENGINE

Engines used with Kyosho models can be started safely by hand, although it is safer to start larger engines with an electric starter.

The following instructions will be sufficient to start virtually any glow engine in good condition.



PRIMING THE ENGINE

Fill the fuel tank. Switch the radio set on. Close the needle valve completely, then open it about 4 turns. Open the throttle fully, block the intake with a finger and turn the propeller slowly until fuel is drawn up to the carburetor inlet. Either turn the engine more to draw in fuel, or use a dropper to put a couple of drops of fuel into the intake. Do not put in too much fuel!



DRAWING IN FUEL

Flip the propeller a couple of times to draw the fuel into the crankcase.



HEATING THE GLOW PLUG

Connect the glow plug battery to the plug. A one-piece connector is shown. If using separate leads, connect one lead to the center terminal of the glow plug and the other to any metal part of the engine. Make sure that the battery is behind the wing and that the wires cannot be caught by the propeller.



FLIPPING

Set the carburetor opening just above idle. Flip the propeller as quickly as possible. The engine should start within a couple of flips. If it does not start after a few flips, put another couple of drops into the inlet and flip again. (Do not put more fuel than this into the engine. A flooded engine is very difficult to start.)



ENGINE ADJUSTMENT (1)

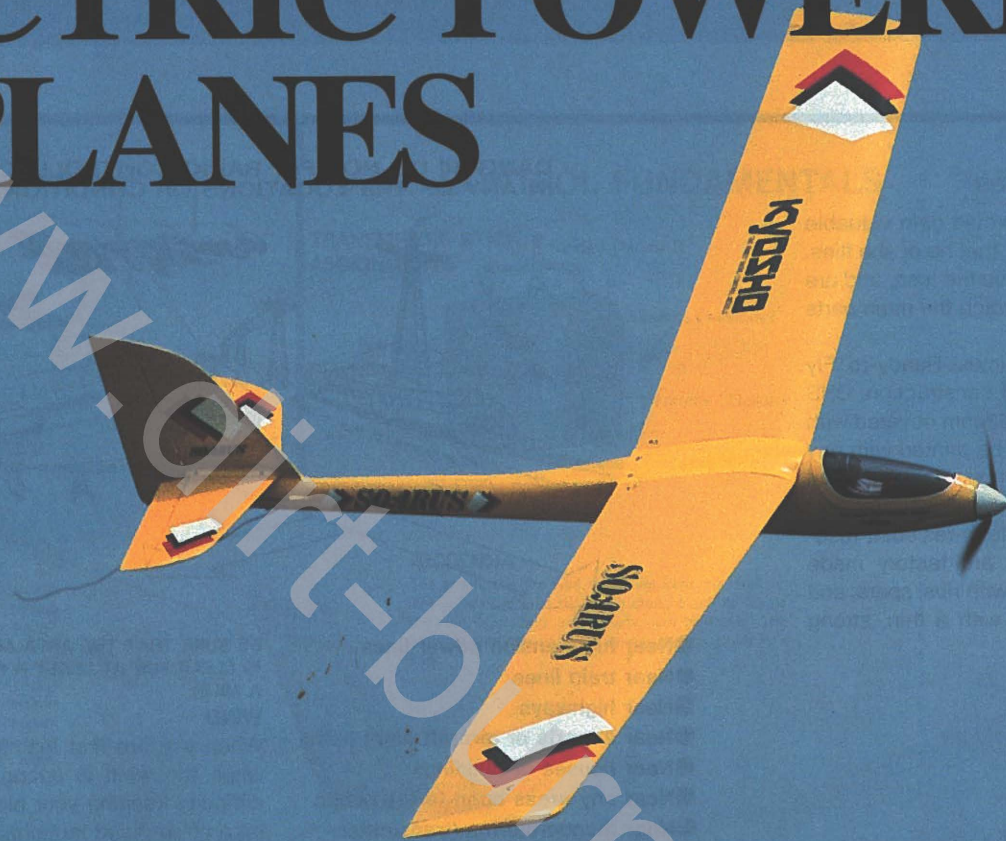
When the engine is running, its speed will be low. Slowly open the carburetor fully, then turn in the needle valve slowly, a little at a time, waiting for speed to stabilize before turning it again. When the speed is quite fast and even, the battery leads may be disconnected. (Always be careful of the turning propeller!)



ENGINE ADJUSTMENT (2)

Hold the model as shown. Turn in the needle valve a little. Wait 10 seconds. Repeat. The speed should increase. When this causes the speed to drop, the engine is too lean. Quickly screw the needle valve out to full speed plus a further 4 clicks or so. (This compensates for higher engine speed in flight.) If idle adjustment is required, refer to engine instructions.

ELECTRIC POWERED AIRPLANES





CESSNA 177 CARDINAL M36

ALMOST READY-TO-FLY ELECTRIC POWERED AIRPLANE

WINGSPAN: 1190mm
No.4073



QUIET ENJOYMENT FOR THE BEGINNER AND EXPERT

THE *CARDINAL 177* HAS IT ALL! IT LOOKS GREAT, IT IS STABLE AND EASY TO FLY, IT IS ALMOST SILENT IN THE AIR, AND IT IS EASY TO PUT TOGETHER. THE 177 IS AN ACCURATE 1/9 SCALE MODEL, AND FLIES REALISTICALLY. IT MAKES A GOOD TRAINER FOR THE BEGINNER, AND IS FUN AS WELL FOR THE EXPERT. ALL PARTS ARE FACTORY MADE, AND ASSEMBLY IS QUICK. THE WING IS BUILT-UP Balsa FOR STRENGTH AND LIGHTNESS, FACTORY-MADE IN JIGS FOR ACCURACY, AND COVERED WITH *EXCELCOTE* FILM. THE FUSELAGE IS STRONG, LIGHT MOLDED RESIN. THE POWERFUL ELECTRIC MOTOR UNIT (AP36 MOTOR, GEARBOX, AND PROP) IS INCLUDED IN THE KIT. ONLY A FEW HOURS BETWEEN BUYING AND FLYING! AND BECAUSE IT'S SO QUIET, YOU CAN FLY IT ALMOST ANYWHERE.



Required for operation (not included)

Radio control set: three-channel with electronic speed controller NiCd battery: 7.2V-1700mAh (No.2348) Battery charger (No.2358, 1849, 2246)

Technical data

Wingspan/1190mm (46.9") Length/865mm (34") Wing area/23.5dm² (365 sq in) Total weight/1100-1200g (39-42 oz)

Motor unit (included)/ AP36 motor w/matched gearbox and prop



ACROSKY M36

ELECTRIC POWERED BIPLANE

WINGSPAN: 980mm
No.4074



LSS
Light Strong & Smooth

GOLDEN-ERA BIPLANE LOOKS AND PERFORMANCE.

RELIVE THE GOLDEN AGE OF AVIATION, WHEN AIRPLANES HAD TWO WINGS AND OPEN COCKPITS! THE ACROSKY M36 IS A SMOOTH FLYING, GOOD PERFORMING BIPLANE WITH MODERN AND QUIET ELECTRIC POWER. THE TWO WINGS PACK PLENTY OF LIFTING SURFACE INTO A SMALL SPAN, SO IT IS COMPACT AND CAN BE CARRIED EASILY EVEN IN A SMALL CAR. ASSEMBLY AT THE FIELD IS QUICK AND EASY. AND BECAUSE IT DOESN'T USE FUEL, IT IS ALWAYS CLEAN, SO THERE IS NO RISK OF MESS. BUILDING TIME IS QUICK. THE FUSELAGE IS FACTORY MADE, AND THE BUILT-UP Balsa wings and tail parts are ready for covering with the white super monokote film included in the kit. (OR USE OTHER FILM OF ANOTHER COLOR.) THE LeMANS AP36 MOTOR WAS SPECIFICALLY DESIGNED FOR HIGH-POWER AIRCRAFT APPLICATIONS, AND HAS A MATCHED GEARBOX THAT DRIVES THE EFFICIENT 9x8 PROP (INCLUDED) AT OPTIMUM SPEED.



Required for operation (not included)



8.4V-1700mAh NiCd battery (No.2338)
Battery charger (No.2358/1849/2246)
Radio control set : Three (four) channel
w/electronic speed controller

Technical data

Wingspan/980mm (38.6") Length/790mm (31.1")
Wing area/30.4dm² (460 sq in) Dihedral/4°
Controls/Elevator, rudder Weight/1400g (49.4 oz)
Motor unit (included)/ LeMans AP36 motor
w/integral 2.81: 1 reduction unit

SOARUS II WINGSPAN: 1910mm
ALMOST READY-TO-FLY ELECTRIC POWERED THERMAL GLIDER
No.4018

STRATUS 2000 WINGSPAN: 1920mm
ALMOST READY-TO-FLY ELECTRIC POWERED THERMAL GLIDER
No.4017



LSS
Light Strong & Stable



SOARUS II No.4018

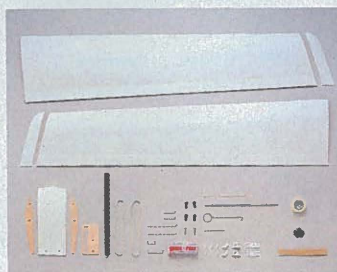


STRATUS 2000 No.4017



BEAUTIFUL IN THE AIR! A DREAM TO FLY!

BOTH STRATUS and SOARUS II ARE BEAUTIFUL FINE-FLYING GLIDERS WITH THE THRUST OF A POWERFUL LeMANS AP36L DIRECT-DRIVE MOTOR TO LIFT THEM HIGH INTO THE SKY. SOARUS II WAS DESIGNED FOR HIGH-SPEED HIGH-PERFORMANCE SOARING, WITH THE LIFT FOR SLOW FLYING IN RISING AIR, THE HIGH SPEED FOR GETTING TO THE NEXT THERMAL, AND AILERONS FOR FAST TURNS. STRATUS IS A DUAL-PURPOSE MODEL. WITH THE STANDARD WING IT IS A STABLE AND GRACEFUL THERMAL SOARER. WITH THE OPTIONAL AILERON WING IT CONVERTS INTO A HIGH-SPEED FLIER LIKE THE SOARUS. THE WINGS DISMANTLE INTO TWO OR THREE PARTS FOR TRANSPORTATION. BOTH FEATURE FACTORY-MADE MOLDED FUSELAGES AND BUILT-UP Balsa WINGS/TAILS. NO BUILDING REQUIRED, EASY ASSEMBLY. LOW-DRAG FOLDING PROPELLER FITS FLUSH AGAINST SIDES OF FUSELAGE TO REDUCE DRAG WHEN MOTOR IS NOT OPERATING (INCLUDED). EFFICIENT S-3021 AIRFOIL. EASY BATTERY ACCESS. PILOT DUMMY INCLUDED.



No.1721
FOLDING PROPELLER UNIT

No.4044
AILERON WING CONVERSION KIT
1890mm (74.4")/33.7dm² (522 in²)/2'
dihedral

Technical data

STRATUS 2000 Wingspan/1920mm (75.6") Length/1015mm (40") Wing area/
36.0dm² (560 sq in) Total weight/1250g (44 oz) Motor (included)/LeMans AP36L
w/7-3 folding prop Airfoil/Selig S-3021 Dihedral/10"

SOARUS II Wingspan/1830mm (72.0") Length/1015mm (40")

Wing area/32.1dm² (500 sq in) Total weight/1150g (42 oz)

Motor (included)/LeMans AP36L w/7-3 folding prop Airfoil/Selig S-3021 Dihedral/5"



Required for operation (not included)



8.4V-1700mAh NiCd battery (No.2338)
Battery charger (No.2358/1849/2246)
Radio control set: Three (four) channel
w/electronic speed controller

ENGINE-POWERED AIRPLANES





CESSNA 177 CARDINAL 10

ALMOST READY-TO-FLY RADIO CONTROLLED ENGINE-POWERED MODEL AIRPLANE

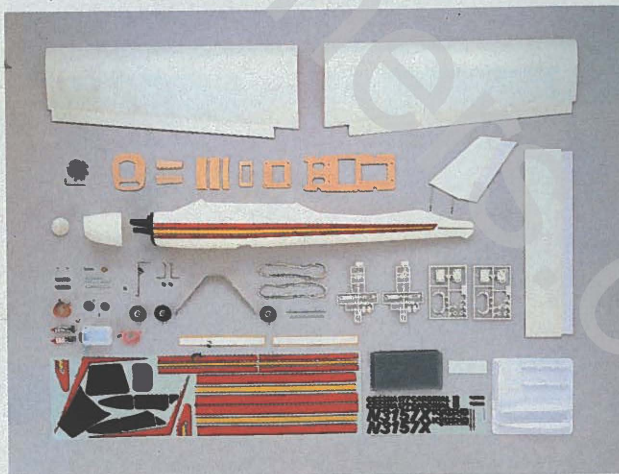
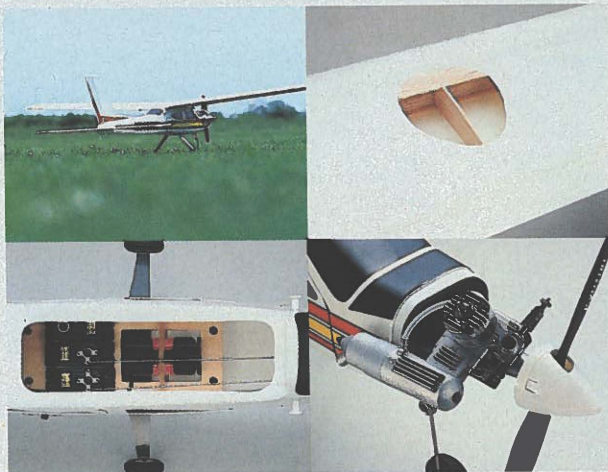
WINGSPAN: 1190mm

No.4079



REALISTIC SCALE FLYING WITH ENGINE PERFORMANCE!

THE *CARDINAL 10* FLIES SUPERBLY WITH ANY .09-.15 GLOW OR DIESEL SPORTS ENGINE. THE LARGE WING AREA GIVES SHORT TAKE-OFFS AND GENTLE LANDINGS, AND AILERON CONTROL ALLOWS MANY SMOOTH MANEUVERS. THE 177 IS STABLE ENOUGH TO BE USED AS A FIRST TRAINER, BUT IS ENOUGH FUN TO SATISFY THE EXPERIENCED MODELER AS WELL. BECAUSE ALL STRUCTURAL PARTS ARE FACTORY MADE AND COVERED, THE 177 GOES TOGETHER QUICKLY, AND CAN BE FLYING IN A FEW SHORT HOURS. THE TANK AND ALL LINKAGES ARE INCLUDED, AS IS A UNIVERSAL ENGINE MOUNT. THE Balsa-STRUCTURE WING IS BUILT IN JIGS FOR ACCURACY AND FACTORY COVERED WITH STRONG *EXCELCOTE* POLYESTER FILM. THE FUSELAGE IS LIGHT AND CRASH-RESISTANT *LSS* MOLDED RESIN. GET INTO THE AIR WITH A GREAT FLYING AND GREAT LOOKING PLANE!



Required for operation (not included)

● Engine: .09-.15 glow or diesel 2-stroke ● Fuel, battery, etc ● Radio control set: 4-channel

Technical data

● Wingspan/1190mm (46.9") ● Length/865mm (34") ● Wing area/23.4dm² (365 in²) ● Total weight/900-1000g (35-39 oz)



ACROSKY 10

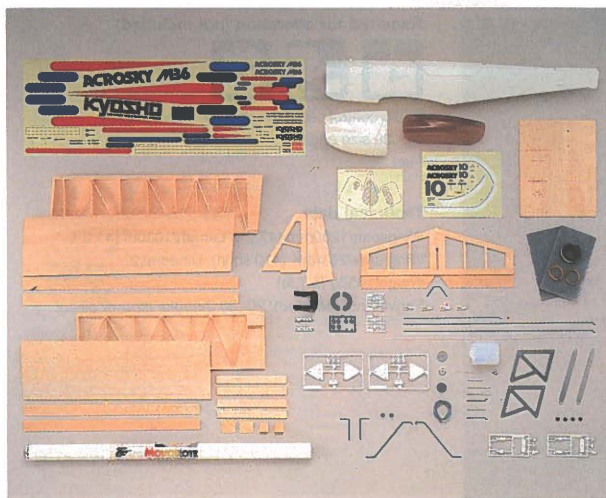
.10 ENGINE-POWERED BIPLANE

WINGSPAN: 980mm
No.4080



THE TAKE-ANYWHERE AERO-BATIC BIPLANE!

GET READY FOR LOTS OF FLYING FUN WITH THE ACROSKY 10! WITH ANY .10 TO .15 GLOW OR DIESEL ENGINE IT IS READY TO PERFORM ALMOST EVERY AEROBATIC MANEUVER YOU CAN COMMAND. STANDARD CONTROLS ARE RUDDER, ELEVATOR, AND ENGINE, BUT AILERONS CAN BE INSTALLED AS WELL FOR EVEN GREATER CAPABILITIES. THE ACROSKY IS SMALL ENOUGH TO CARRY AROUND IN YOUR CAR AND HAVE AVAILABLE AT ALL TIMES. ASSEMBLY AT THE FIELD TAKES ONLY A FEW MINUTES. THE FUSELAGE IS MOLDED OF CRASH-RESISTANT LSS POLYOLEFIN RESIN, AND THE WINGS, STABILIZER, AND FIN ARE FACTORY-MADE BUILT-UP Balsa STRUCTURES AND READY COVERING WITH THE WHITE SUPER MONOKOTE FILM INCLUDED IN THE KIT. CONSTRUCTION AND ASSEMBLY TAKE ONLY A FEW HOURS. KIT INCLUDES A SPECIAL VIBRATION-DAMPING RADIAL MOUNT SYSTEM THAT PROLONGS MODEL LIFE PLUS A 100cc (4 oz) FUEL TANK IDEALLY SHAPED TO FIT INSIDE THE MOLDED COWLING (INCLUDED).



Required for operation (not included)



Radio control set : Three (four) channel
w/three (four) servos
.10-.15 size engine
Fuel

Technical data

Wingspan/980mm (38.6") Length/790mm (31.1")
Wing area/30.4dm² (460 sq in) Dihedral/4°
Airfoil/Clark Y Weight/1150g (42oz)
Engine/.10-.15 glow or diesel

ETUDE 20

ALMOST READY-TO-FLY .20 ENGINE-POWERED AIRPLANE

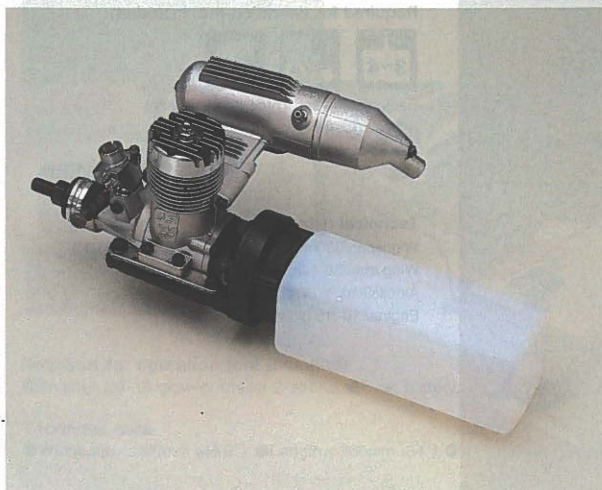
WINGSPAN: 1200mm

No.4070



THE IDEAL MODEL FOR BEGINNING AND INTERMEDIATE-LEVEL PILOTS!

THE ETUDE 20 GIVES YOU EVERYTHING YOU WANT IN A SPORTS MODEL: GOOD STABILITY FOR THE LEARNER, WITH THE ABILITY TO DO MOST AEROBATIC MANEUVERS FOR THE MORE ADVANCED FLIER. PERHAPS BEST OF ALL, THE ETUDE 20 IS EASY TO PUT TOGETHER, SO YOU CAN GET OUT TO THE FLYING FIELD WITH A MINIMUM OF BUILDING TIME. POWER IT WITH YOUR CHOICE OF .20 TO .30 GLOW OR DIESEL TWO-STROKE OR .40 FOUR-STROKE ENGINE, A SMALLER ONE FOR RELAXED FLYING, OR A MORE POWERFUL ONE FOR THE HOT STUFF! THE FUSELAGE IS MOLDED OF CRASH-RESISTANT LSS POLYOLEFIN RESIN, AND THE WING, STABILIZER, AND FIN ARE FACTORY-MADE BUILT-UP Balsa STRUCTURES ALREADY COVERED WITH STRONG FILM, SO CONSTRUCTION AND ASSEMBLY TAKE ONLY A FEW HOURS. KIT INCLUDES A SPECIAL VIBRATION-DAMPING RADIAL MOUNT SYSTEM THAT PROLONGS MODEL LIFE, 200cc (8 oz) FUEL TANK SHAPED TO FIT INSIDE THE COWLING (INCLUDED), WHEELS, SPINNER, AND LINKAGES.



Required for operation (not included)



Radio control set: Four-channel w/four servos
.20-.30 size engine
Fuel

Technical data

Wingspan/1200mm (47.2") Length/1050mm (41.3")
Wing area/26.4dm² (410 sq in) Dihedral/2°
Weight/1650g (5.7 lb)
Engine (not included)/.20-.30 2-stroke glow or diesel



ACROSKY 40-4C

ALL-BALSA .40-4C ENGINE-POWERED
AEROBATIC BIPLANE KIT

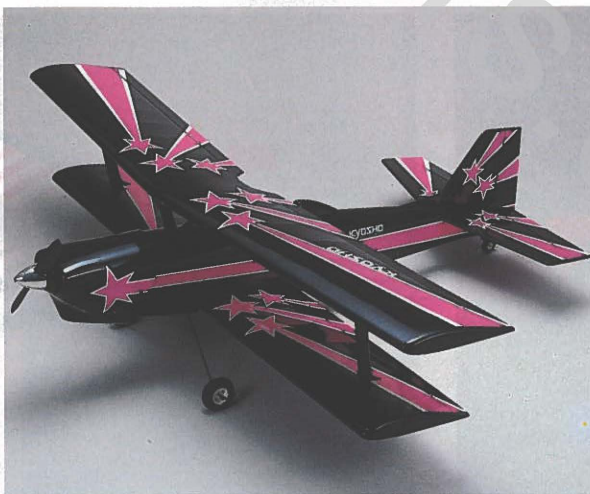
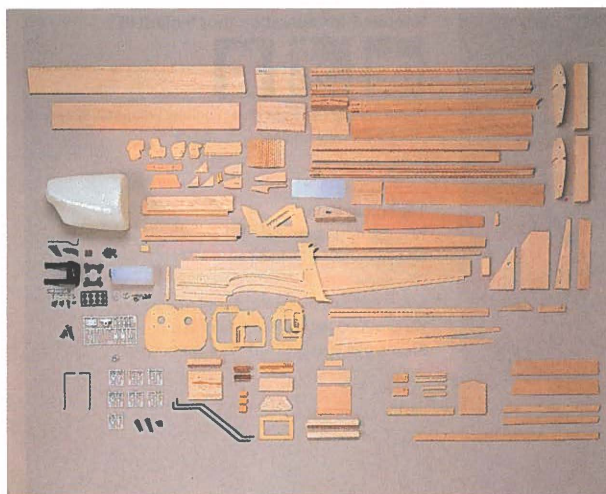
WINGSPAN: 1180mm

No.4501



ALL THE AEROBATIC ABILITY THE INTERMEDIATE/EXPERT FLIER WANTS!

THE ACROSKY 40 IS DESIGNED FOR AEROBATICS. THE ADVANTAGE OF A BIPLANE IS THE LARGE WING AREA IN A SHORT SPAN, SO THE PLANE CAN REACT MORE QUICKLY THAN A MONOPLANE OF THE SAME WING AREA. WHETHER IT'S LOOPS OR SPINS OR MORE, THE ACROSKY 40 IS UP TO THE JOB. THE MODEL IS OF ALL BUILT-UP BALSA STRUCTURE, SO IS LIGHT AND STRONG, AND READY TO REACT TO YOUR INPUTS. PARTS ARE MACHINE CUT TO CLOSE TOLERANCES AND SLOTTED FOR PERFECT ALIGNMENT DURING CONSTRUCTION AND TO SPEED UP BUILDING. POWER IT WITH YOUR CHOICE OF .40-.53 FOUR-STROKE ENGINE. KIT INCLUDES A SPECIAL UNIVERSAL RADIAL MOUNT THAT ACCEPTS NEARLY ALL ENGINES AND DAMPS VIBRATION TO PROLONG MODEL LIFE, A MOLDED LSS COWLING (NO CARVING OF BALSA BLOCKS REQUIRED), AND A FUEL TANK SHAPED TO FIT INSIDE THE COWLING, PLUS LANDING GEAR, WHEEL PANTS, AND WINDSHIELD.



Required for operation (not included)



Radio control set :Four-channel w/four servos
.40-.53 4 stroke engine
Fuel

Technical data

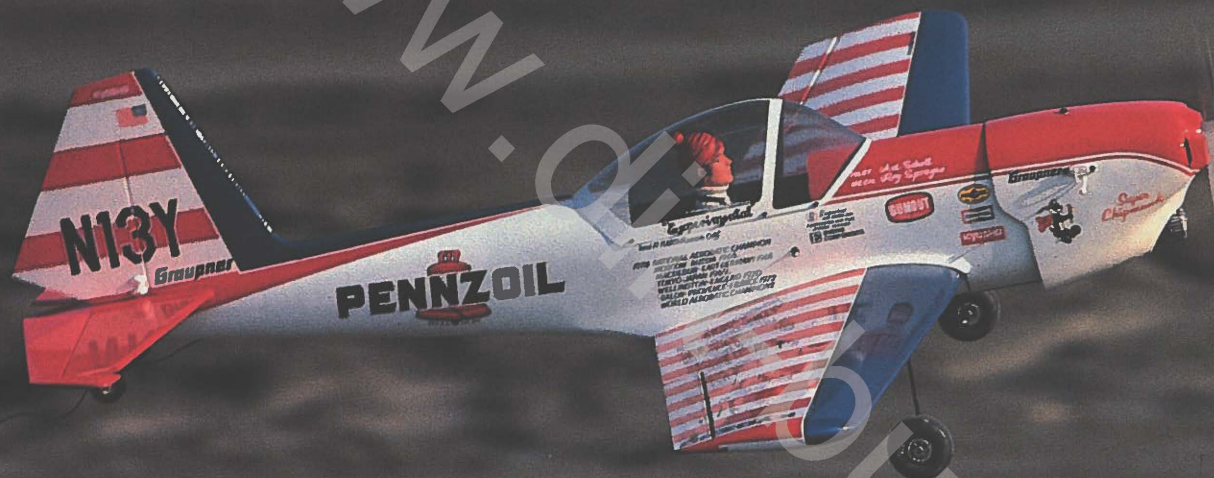
Wingspan/1180mm (46.5") Length/970m (38.2")
Wing area (total)/44dm² (680 sq in)
Dihedral/Upper: 0° ; Lower: 2°
Airfoil/NACA 2415 Weight/2100-2200g (4.6-4.8 lb)
Engine (not included)/.40-.53 4-stroke glow



SUPER CHIPMUNK 40-4C

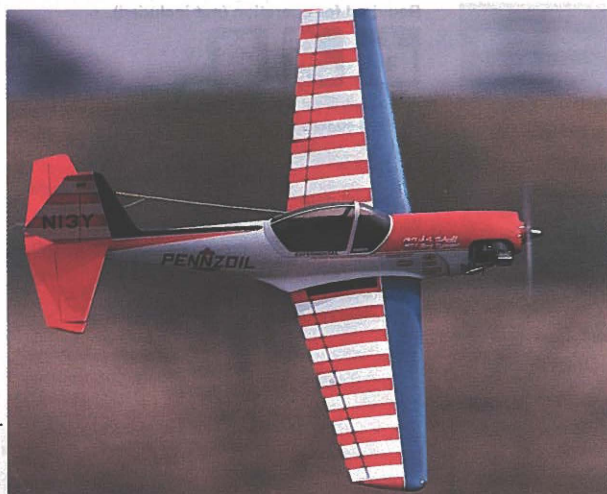
ALL-BALSA .40-4C ENGINE-POWERED
AEROBATIC SCALE AIRCRAFT KIT

1:7 SCALE
No.4502



SCALE APPEARANCE AND AEROBATIC PERFORMANCE OF THE ORIGINAL!

FOR MANY YEARS, ART SHOLL'S SUPER CHIPMUNK WAS A FAVORITE AT AMERICAN AEROBATIC CONTESTS. THIS KYOSHO MODEL REPRODUCES BOTH THE APPEARANCE AND THE PERFORMANCE OF THIS FAMOUS AIRPLANE, AND WILL REWARD THE EXPERIENCED FLIER. THE STRONG, LIGHT, BUILT-UP Balsa STRUCTURE OF THE MODEL IS EASY TO BUILD AND TO BUILD STRAIGHT THANKS TO THE PRECISION-CUT PARTS WITH ALIGNMENT SLOTS THAT HOLD THEM IN PLACE DURING CONSTRUCTION. YOUR CHOICE OF POWERPLANT: FOUR-STROKE (.40-.53 GLOW). KIT INCLUDES A SPECIAL UNIVERSAL RADIAL MOUNT THAT ACCEPTS NEARLY ALL ENGINES AND DAMPS VIBRATION TO PROLONG MODEL LIFE AND PROTECT THE RADIO EQUIPMENT, A MOLDED LSS COWLING (NO CARVING OF Balsa BLOCKS REQUIRED), AND A FUEL TANK SHAPED TO FIT INSIDE THE COWLING, PLUS LANDING GEAR, WHEEL PANTS, AND WINDSHIELD.



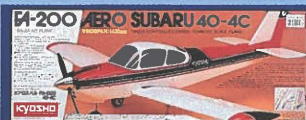
Required for operation (not included)



Radio control set: Four (five) channel w/four (five) servos
.40-.53 4 stroke engine
Fuel

Technical data

Wingspan/1440mm (56.7") Length/1030mm (40.5")
Wing area/33dm² (510 sq in)
Dihedral/4°
Airfoil/Semisymmetrical, 15% thickness
Weight/2000-2200g (4.4-4.8 lb)
Engine (not included)/.40-.53 4-stroke glow

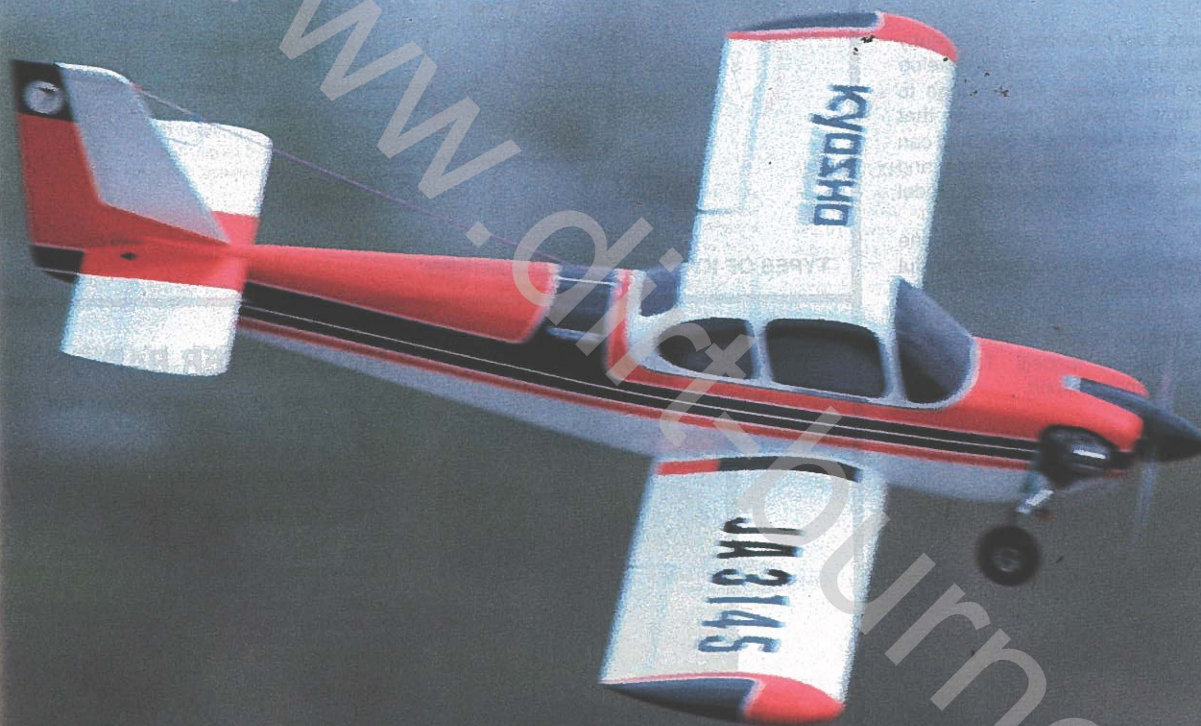


FA-200 AERO SUBARU 40-4C

ALL-BALSA .40-4C ENGINE-POWERED
AEROBATIC SCALE AIRCRAFT KIT

1:7 SCALE

No.4503



SCALE APPEARANCE AND SMOOTH FLYING CHARACTERISTICS!

THE AERO SUBARU IS JAPAN'S BEST-KNOWN LIGHTPLANE. ITS GOOD FLYING CHARACTERISTICS MADE IT POPULAR OVERSEAS AS WELL. THIS KYOSHO MODEL HAS THE SAME FLYING CHARACTERISTICS THAT GAVE THE ORIGINAL ITS GOOD REPUTATION, AND IT LOOKS REALISTIC AS WELL. THE STRUCTURE IS STRONG AND LIGHT, BUILT UP OF ACCURATELY-SHAPED BALSA PARTS. PARTS ARE SLOTTED FOR ACCURATE ALIGNMENT DURING CONSTRUCTION, MAKING IT EASY TO BUILD A STRAIGHT MODEL. YOU HAVE A WIDE CHOICE OF ENGINES TO POWER THE SUBARU: FOUR-STROKE (.40-.53 GLOW). THE KIT INCLUDES A SPECIAL UNIVERSAL RADIAL MOUNT THAT ACCEPTS NEARLY ALL ENGINES AND DAMPS VIBRATION TO PROLONG MODEL LIFE AND PROTECT THE RADIO EQUIPMENT, A MOLDED LSS COWLING (NO CARVING OF BALSA BLOCKS REQUIRED), AND A FUEL TANK SHAPED TO FIT INSIDE THE COWLING, PLUS CANOPY AND LANDING GEAR.

Required for operation (not included)



Radio control set : Four (five) channel
w/four (five) servos
.40-.53 4 stroke 2 stroke engine
Fuel

Technical data

Wingspan/1400mm (55.1") Length/1170mm (46.0")
Wing area/30.8dm² (465 sq in)
Dihedral/7°
Airfoil/Semisymmetrical, 16% thickness
Weight/2000-2200g (4.4-4.8 lb)
Engine (not included)/.40-.53 4-stroke glow



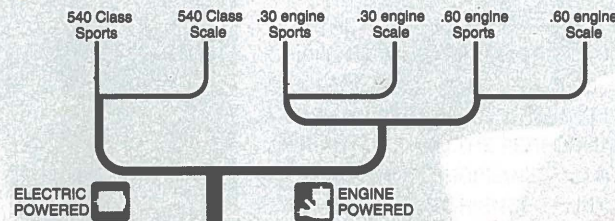
R/C GENERAL INFORMATION

HELICOPTER FLYING

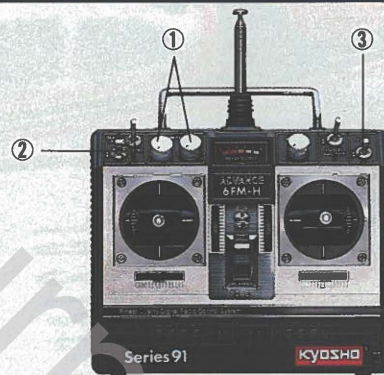
The model helicopter dates back only about 15 years. Any helicopter is inherently unstable and continually trying to go out of control, and it took years to develop the control systems required to master it and the mechanisms light enough to allow helicopters to fly. Model helicopters can now do every maneuver that full-size machines are capable of, such as hovering, flying backward, etc., and can also do aerobatics that would be too risky for a real one. For these reasons, and because helicopters can be flown in spaces too small for airplanes, model helicopters have become more popular year by year.

There are international competitions (category F3C of the FIA), and the first one was won by Mr. Shigetada Taya, who later designed the fabulously successful Concept 30 and Concept 60 series of helicopters for Kyosho.

Almost anyone can learn to fly a model helicopter. It does require time and good instruction, and a good model. Kyosho is probably the best source in the world for the machine, for it manufactures a full range of high-quality models. There are models for all skill levels, from beginner to the most advanced expert.



TYPES OF KYOSHO R/C HELICOPTERS



HELICOPTER RADIOS

A radio set for helicopter flying has the same type of control sticks, etc., as for airplanes, but there are some special controls.

① TAIL ROTOR MIXING

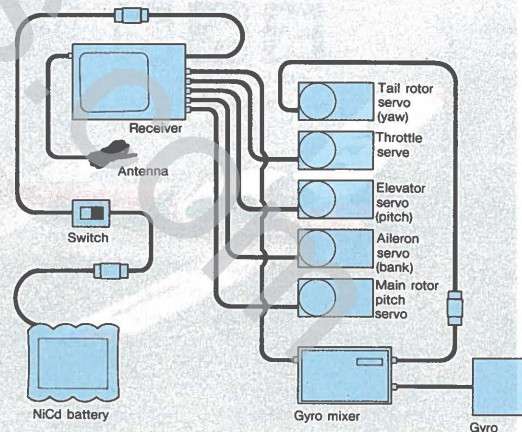
When the main rotor is being driven, the driving torque would cause the body to swing in the opposite direction. This swing is counteracted by the tail rotor, which generates thrust against the torque. If the torque driving the main rotor is to be increased (or decreased), the effect of the tail rotor must be changed to match. The Tail Rotor Mixing function of the transmitter makes this change automatically by operating the servos that control the pitch of both the main and tail rotors together.

③ THROTTLE HOLD SWITCH

A helicopter can be landed safely without engine power if the rotor is spinning at a sufficiently high speed. This is called "autorotation". To practice autorotation with the engine running, it is desirable to keep the engine idling and control the flight by varying the rotor pitch. The Throttle Hold Switch will keep the engine at idle regardless of the movements of the pitch control stick.

② IDLE UP SWITCH

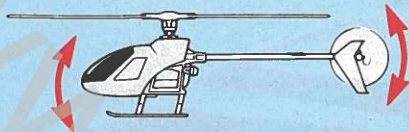
The throttle and main rotor pitch change together. During aerobatics like loops and rolls the pitch must sometimes be reduced, but it is not desirable for the engine speed to drop to idle at such times. The Idle Up switch increases the idle speed when engaged.



HELICOPTERS

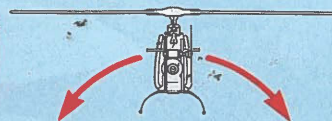
SWASH PLATE

The pitch of each blade of the main rotor can be varied independently at any point around the circle described by a blade as it rotates. The swash plate is the device that controls the pitch of each blade, thus it has major influence on the path taken by the helicopter (bank right/left, pitch down/up).



PITCH AXIS

As with an airplane, the pitch axis is an imaginary line through the side of the body about which the body rotates nose down or nose up. When a helicopter is pitched forward, it will tend to move forward. When it is pitched up, it will tend to stop or move backward. Pitch is controlled by the elevator stick.



ROLL AXIS

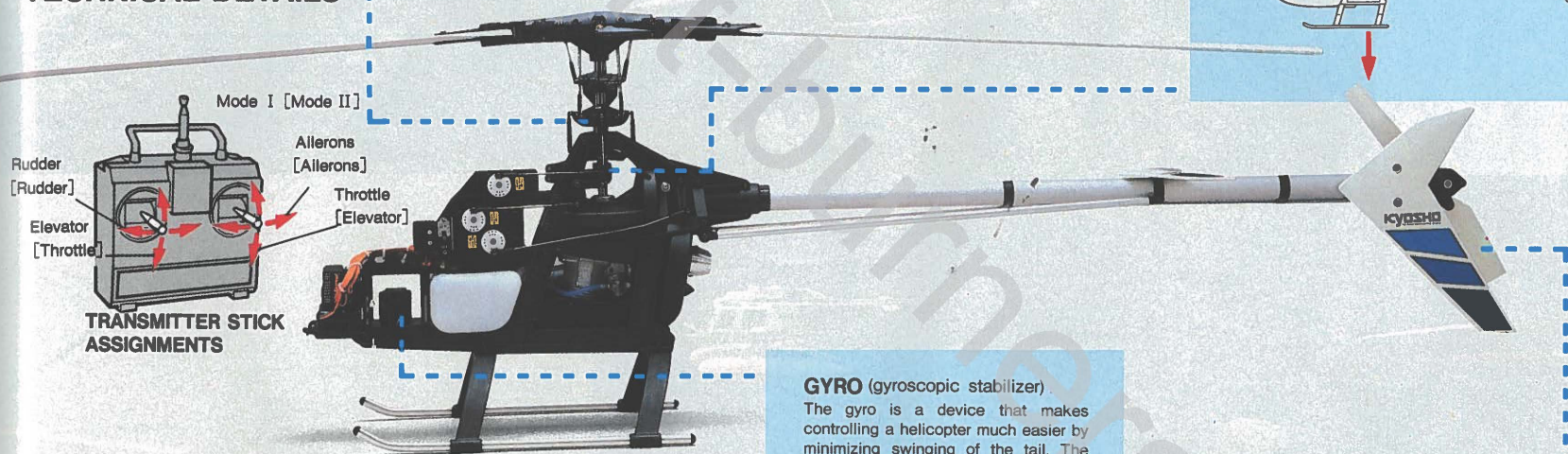
As with an airplane, the roll axis is an imaginary line from nose to tail through the body about which the body rotates (banks). When a helicopter is banked to the right, it will tend to turn and move to the right, and likewise to the left. Roll is controlled by the aileron stick.

MAIN ROTOR

The main rotor provides the vertical thrust that lifts and supports the helicopter. (As described under "swash plate", it also controls the direction that the helicopter flies.) The lift increases with increased rotor speed or pitch (provided that the engine power increases in proportion). The pitch is controlled by the collective pitch mechanism; this is linked with the throttle, so a change in throttle by the throttle stick will also bring about a matching change in blade pitch.

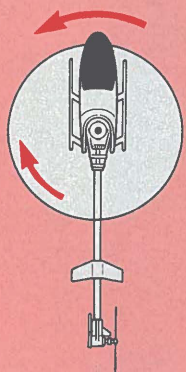


TECHNICAL DETAILS



TAIL ROTOR: COUNTERACTING MAIN ROTOR TORQUE

The main rotor is driven by the torque of the engine. By the law of physics regarding action and reaction, the same torque tries to turn the body of the helicopter in the opposite direction. This is counteracted by thrust generated by the tail rotor. A modern model helicopter system is designed to match the thrust of the tail rotor (by varying the blade pitch) to the torque driving the main rotor so that the body does not turn unless this is desired.

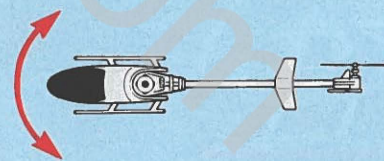


GYRO (gyroscopic stabilizer)

The gyro is a device that makes controlling a helicopter much easier by minimizing swinging of the tail. The gyroscope of a gyro unit is a motor-driven flywheel that resists any effort to rotate it. Sensors detect any such rotation. The unit is positioned to detect swing of the tail. If there is any swing not commanded from the transmitter, the sensor sends a signal to the gyro mixer. This unit combines the signals from the gyro and the receiver, and causes the tail rotor servo to adjust the pitch of the rotor to counteract the swing.

TAIL ROTOR: YAW CONTROL

The yaw axis is an imaginary line through the center of the main rotor about which the helicopter swings. This swinging rotation is yaw, and is counteracted by the tail rotor, which acts like a rudder under control of the rudder stick.



HELICOPTERS





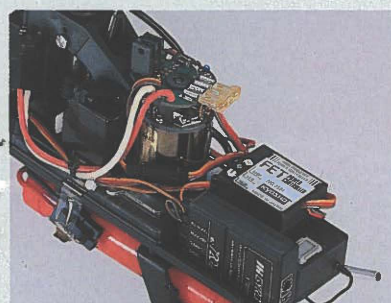
EP CONCEPT
ELECTRIC POWERED HELICOPTER
No.3546

EP CONCEPT HUGHES 500
ELECTRIC POWERED SCALE HELICOPTER
No.3548



EP CONCEPT HUGHES 500 No.3548





KYOSHO ELECTRONIC SPEED CONTROLLER (No.2594) IS CUSTOM DESIGNED TO GIVE SMOOTH CONTROL AT HIGH AND LOW SPEEDS.



RECOMMENDED NiCd BATTERY (No.2355) WAS CUSTOM DESIGNED FOR TOP PERFORMANCE AND MAXIMUM FLIGHT TIME WITH MINIMUM WEIGHT.



TRAINING STAND (No.2162) MAKES LEARNING TO FLY A HELICOPTER FUN AND CRASH-FREE!

HIGH-PERFORMANCE ELECTRIC R/C HELICOPTER

EP CONCEPT TAKES THE ELECTRIC MODEL HELICOPTER INTO PERFORMANCE AND OUTDOORS FLYING, WITH A DESIGN TAKEN DIRECTLY FROM THE HIGHLY-REGARDED CONCEPT 30. A POWERFUL AP36 (HUGHES 500: AP36BB) CUSTOM AIRCRAFT MOTOR (INCLUDED) AND AN 8.4V OR 9.6V NiCd BATTERY (NOT INCLUDED) GIVE IT HIGH SPEED AND AEROBATIC PERFORMANCE. OVER-RUN CLUTCH FOR AUTOROTATION. STRONG GLASS-REINFORCED) FRAME. AIRCRAFT-ALLOY ALUMINUM MAST. METAL BALLS ON SWASH PLATE, NO-SLOP LINKAGES, AND BELL-HILLER PITCH CONTROL SYSTEM WITH SAME-PLANE FLYBAR FOR PRECISION FLYING. BELT TAIL ROTOR DRIVE. OHS COMPOSITE MATERIAL ROTOR BLADES FOR TOP PERFORMANCE. STRONG MOLDED LSS BODY. SET OF 20 BALL BEARINGS FOR MINIMUM FRICTION. PARTIALLY FACTORY ASSEMBLED.



SET ILLUSTRATED IS FOR JAPANESE MARKET ONLY.



SET ILLUSTRATED IS FOR JAPANESE MARKET ONLY.

Technical data (Hughes 500 in parentheses)

- Fuselage length / 830 (800)mm (32.7/31.5")
- Fuselage width / 90mm (3.5")
- Overall height / 210mm (8.3")
- Main rotor diameter / 912mm (35.9")
- Tail rotor / 175mm (6.9")
- Weight / 1330-1420g (2.9-3.1 lb)
- Gear ratio (motor: main: tail)
- Motor (included) / LeMans AP36 (AP36BB)
- Belt drive to tail rotor
- Bell-Hiller pitch control



Required for operation (not included)



Radio control set: Five-channel helicopter type w/four mini servos, elec. speed controller (No.2594) and mini gyro stabilizer
8.4/9.6V-1000/1200/1700mAh NiCd battery (No.2355/2318/2338/2352)
Battery charger (No.2358/1849/2246)

CONCEPT 30 SR

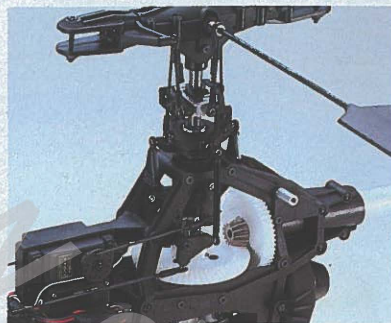
.32 ENGINE POWERED HELICOPTER



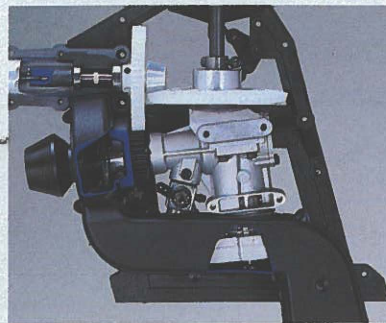
**FACTORY ASSEMBLED W/O.S. .32 ENGINE/No.3566
KIT W/O ENGINE/No.3565**



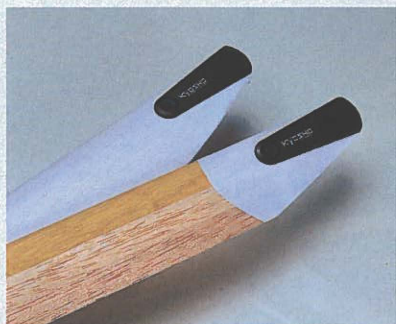
FLYBAR IS IN SAME PLANE AS MAIN ROTOR AND ACTS DIRECTLY, NOT THROUGH A LONG LINKAGE.



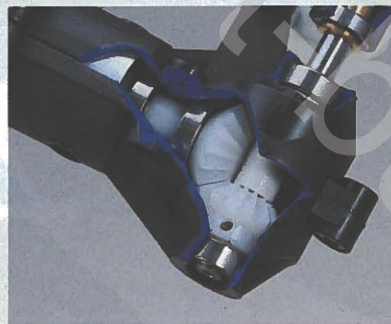
ALL-METAL MIXING BASE FOR WEAR RESISTANCE. SEPARATE CONTROL OF CYCLIC AND COLLECTIVE PITCH.



REGULAR STARTER FITS ANGLED CONE. PINION IS CLOSE TO ENGINE FOR MINIMUM STRESS ON CRANKSHAFT.



STRONG WOODEN MAIN ROTOR BLADES. COMBINED DENSE AND LIGHT WOODS FOR OPTIMUM CHORDWISE C.G.



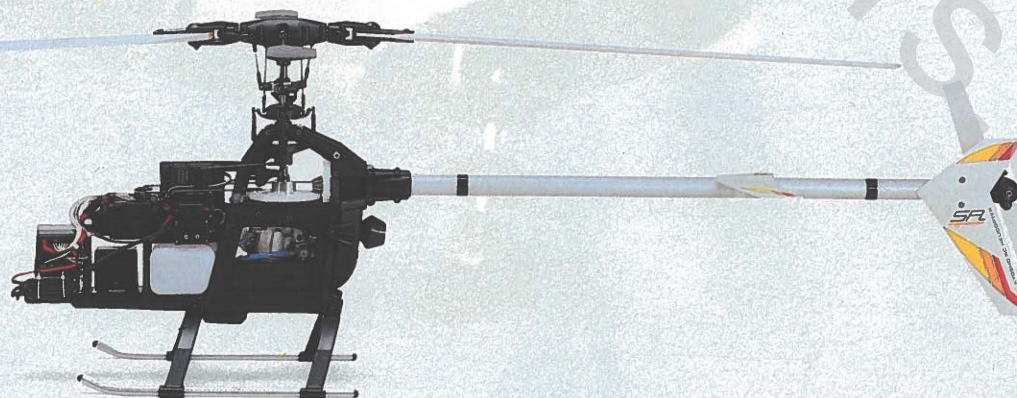
SHAFT AND PRECISION GEAR TAIL-ROTOR DRIVE SYSTEM. BALL BEARINGS AT ALL FRICTION POINTS.



TAIL ROTOR SHAFT SUPPORTED IN BALL BEARINGS FOR SMOOTH ROTATION. PRECISE PITCH-CONTROL SYSTEM.

THE WORLD'S MOST POPULAR HELICOPTER BECOMES EVEN BETTER!

THE CONCEPT 30 HAS ESTABLISHED ITSELF AS THE BEST-SELLING MODEL HELICOPTER IN THE WORLD. AND FOR GOOD REASON. IT FLIES VERY WELL, IT IS RELIABLE, AND THE .30-SIZE ENGINE IS ECONOMICAL TO OPERATE. THE 30 SR MODEL TAKES THE DESIGN A STEP FURTHER IN REFINEMENT WITH AN ALL-METAL MIXING BASE AND STAINLESS STEEL BALLS IN ALL LINKAGES FOR INCREASED RESISTANCE TO WEAR, PLUS LONGER TAIL, LARGER MAIN ROTOR, TALLER MAST, AND REDESIGNED HEAD AND ROTOR GRIPS FOR EVEN BETTER FLYING CHARACTERISTICS. THE RESULT IS EVEN MORE PRECISE CONTROL IN BOTH ORDINARY FLYING AND IN AEROBATICS. KIT No.3566 IS FACTORY ASSEMBLED AND HAS A POWERFUL O.S. 32F-H HELICOPTER ENGINE ALREADY MOUNTED. LITTLE OTHER ASSEMBLY IS REQUIRED. KIT No.3565 IS UNASSEMBLED AND IS SUPPLIED WITHOUT ENGINE SO YOU CAN MOUNT THE ENGINE OF YOUR CHOICE.



Required for operation (not included)



Radio control set : Five-channel helicopter type w/five servos and gyro (No.Z-8001)
.32-.35 helicopter type engine (Kit No.3565 only)
Fuel
Starter

Technical data

Fuselage length/1031mm (40.6") Fuselage width/140mm (5.5") Overall height/370mm (14.5") Main rotor diameter/1200mm (47.2") Tail rotor diameter/210mm (8.3")
Weight/2500g (5.5 lb) Gear ratios (engine:main:tail)/9.76:1:4.6 Engine/Kit No.3566: O.S. 32F-H (included); Kit. No.3565: .32-.35 heli engine (not included)
Tail rotor drive: Shaft Pitch control: Bell-Hiller

CONCEPT 60
.60 ENGINE POWERED HELICOPTER





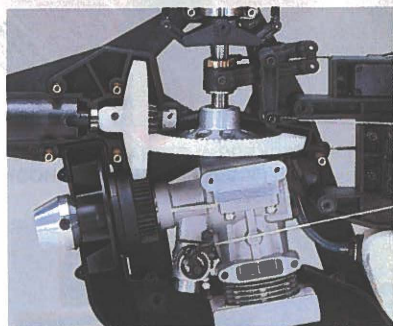
HEAD HAS BALL BEARINGS FOR NEARLY ALL FUNCTIONS TO GIVE LOW FRICTION AND HIGH PRECISION IN NORMAL FLIGHT AND IN AEROBATICS.



OPTIONAL PARTS CONVERT THE HEAD TO FULL BALL BEARINGS WHEN YOUR SKILLS ARE READY FOR THE UPGRADE.



PITCH CONTROL LINKAGE IS VERY PRECISE FOR EXCELLENT CONTROL IN ALL PHASES OF AEROBATIC FLIGHT.



ENGINE IS ANGLED DOWN 10 DEGREES TO MAKE STARTING EASY. ALSO SIMPLIFIES STARTING WHEN SCALE BODY IS FITTED.



FRAME IS GLASS-REINFORCED ENGINEERING RESIN FOR HIGH STRENGTH WITH LOW WEIGHT. SUPERIOR TO METAL!



SHAFT-DRIVEN TAIL FOR RELIABILITY. INTERNAL PITCH CONTROL LINKAGE. EXCELLENT FOR COMPETITION.

THE POWER OF A .61 ENGINE FOR FULLY AEROBATIC PERFORMANCE! FOR HELICOPTER AEROBATICS NOTHING BEATS PURE POWER IN A WELL-DESIGNED MACHINE! THE *CONCEPT 60* HARNESSSES A POWERFUL .61 ENGINE TO A DESIGN BY S. TAYA, WINNER OF THE FIRST R/C HELICOPTER WORLD CHAMPIONSHIP AND DESIGNER OF THE FABULOUSLY SUCCESSFUL "30" SERIES *CONCEPTS*. EVERY FEATURE HAS BEEN SPECIFIED FOR SUPERB FLYING QUALITIES. THESE INCLUDE INDEPENDENT FEATHERING HINGE AND FLAPPING HINGES; FULL RANGE OF PITCH ADJUSTMENTS FOR ALL MANEUVERS, UPRIGHT OR INVERTED; MAINSHAFT THRUST BEARING FOR PROBLEM-FREE INVERTED FLIGHT; LIGHT, STRONG FRAME MADE OF GLASS-REINFORCED NYLON; RELIABLE SHAFT DRIVE TO THE REAR ROTOR; FULL SET OF 34 BALL BEARINGS FOR MINIMUM POWER LOSS; PRECISION STAINLESS STEEL BALL-TYPE CONTROL LINKAGES FOR CRISP RESPONSE; EASY ACCESS TO THE MECHANICAL PARTS FOR MAINTENANCE; DUST-SEALED GEARS FOR LONGER LIFE; AND MANY OTHER FEATURES TO MAKE THIS ONE FINE FLYING MACHINE.



Required for operation (not included)



Radio control set: Five-channel helicopter type w/five servos and gyro (No.Z-8001)

.61 helicopter type engine

Fuel
Starter

Technical data

- Length/1400mm (55.1") ●Body width/170mm (6.7") ●Overall height/440mm (17.3") ●Main rotor diameter/1500mm (59.1")
- Tail rotor diameter/260mm (10.2") ●Weight/4400g (9.7 lb) ●Gear ratio (engin : main : tail)/9.8 : 1 : 5.4
- Engine/.61 class helicopter type ●Tail rotor drive/Shaft ●Pitch control system/Bell-Hiller ●Blade material/wood

OPTION PARTS for HELICOPTERS



HUGHES 300 BODY (CONVERT) No.FH-43
TAIL WING SET (CONVERT) No.FH-44



HUGHES 500 BODY SET (EP CONCEPT) No.EH-81
BODY MOUNT (EP CONCEPT) No.EH-82



HUGHES 300 BODY SET (CONCEPT 30) No.H-3208



HUGHES 500 BODY SET (CONCEPT 30) No.H-3214



JET RANGER BODY SET (CONCEPT 30) No.H-3213



BELL 222 BODY SET (CONCEPT 30) No.H-3251



JET RANGER BODY SET (CONCEPT 60) No.H-6218

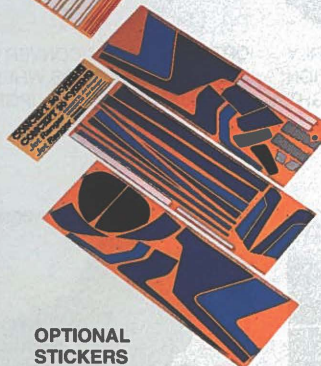


INTERCEPTOR BODY SET (CONCEPT 60) No.H-6219

**OPTIONAL STICKERS
 RED
 (30 HUGHES 500)
 No.H-3094R**



**OPTIONAL STICKERS
 GREEN
 (30 HUGHES 500)
 No.H-3094G**



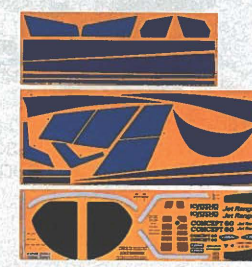
**OPTIONAL
 STICKERS
 BLUE (30 JET RANGER)
 No.H-3223**



**OPTIONAL
 STICKERS
 RED (30 JET RANGER)
 No.H-3223M**



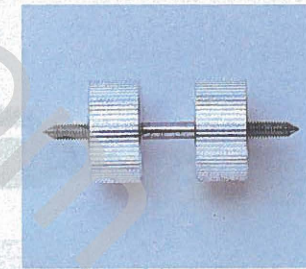
**OPTIONAL STICKERS GREEN
 (30 JET RANGER)
 No.H-3223G**



**OPTIONAL STICKERS BLUE
 (60 JET RANGER)
 No.H-6226B**



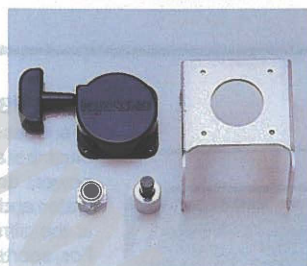
**ROTOR BLADE BALANCER
 (FOR ALL HELIS.) No.2161**



**ROTOR BLADE BALANCER
 (FOR EP HELIS.) No.EH-72**



**TRAINING STAND
(FOR EP HELIS.) No.2162**



**RECOIL STARTER SET
(CONCEPT 30) No.1786**



**HP HOLLOW MAST
(CONCEPT 30 SR) No.Z-3002**



**HP DRIVE GEAR (CONCEPT 30)
No.Z-3003**



**ONE WAY STARTER CONE
(CONCEPT 30) No.H-3232**



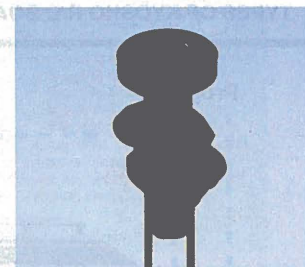
**ONE WAY STARTER CONE
(CONCEPT 60) No.H-6228**



**HP SWASH PLATE (CONCEPT 30)
No.Z-3004**



**HP FLAPPING HEAD Z-31
(CONCEPT 30) No.Z-3006**



**HEX MIXING BASE (CONCEPT 30)
No.Z-3007**



**STARTER EXTENSION SHAFT
No.H-3263**



**BLADE TRACKING TAPE
No.H-3220**



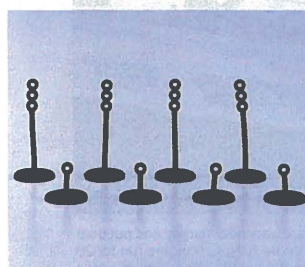
**HP BLACK TAIL BOOM
(CONCEPT 60) No.Z-6001**



**HP METAL ROTOR HEAD Z-61
(CONCEPT 60) No.Z-6002**



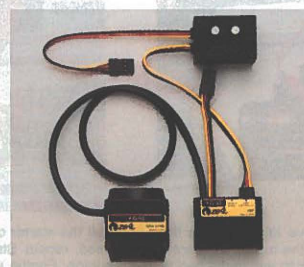
**HP METAL MAIN FRAME SET
(CONCEPT 60) No.Z-6003**



**ANTENNA HOLDERS
No.1844**



**VIDEO TAPE IS FOR JAPANESE
MARKET ONLY.**



**KG-92 GYRO
No.Z-8001**

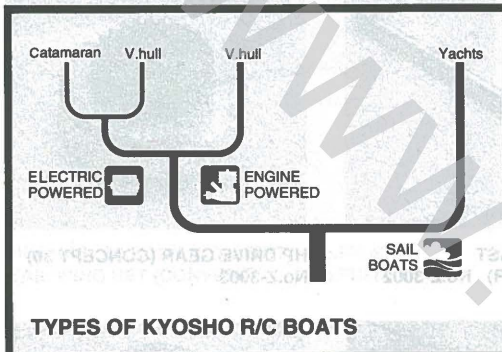


**TITANIUM BALL END
M2 RH (STD) SCREWS No.Z-8002
M2 LH (REV) SCREWS No.Z-8003
M2.3 RH (STD) SCREWS No.Z-8004
M2.3 LH (REV) SCREWS No.Z-8005**

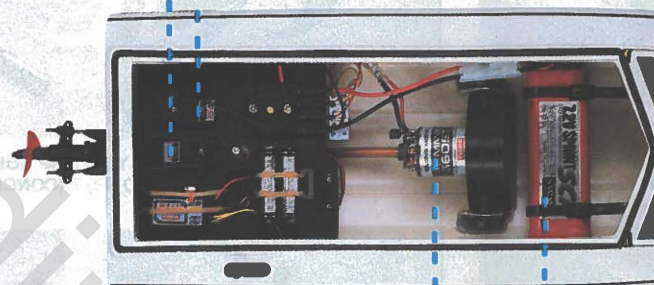


**VIBRATION ABSORPTION SHEET
No.Z-8006 (5x45x145mm)**

R/C GENERAL INFORMATION



Rudder servo — Speed controller



POWERBOATS

A successful powerboat, full-size or model, must be able to go fast with the available power, and must be stable both in rough water and when turning. Achieving all three is the aim of all boat designers.

For sports and much high-speed boating, the V hull is preferred. It cuts through high waves and is stable in turns, resisting side-slip. The shape of the hull normally changes to a flat bottom at the rear, and at high speed the boat planes on this small area for minimum drag.

Boats intended purely for competition are designed for minimum surface in contact with the water, and will typically have two sponsons or partial hulls that lift the nose of the boat out of the water. At the rear, the boat is supported out of the water by the propeller. Because of the small surface in contact with the water, this type is more prone to skidding in turns, and has to be designed carefully.

Kyosho offers both types of boat. Viper and Jetstream are of the V hull type, while the Hurricane is a Catamaran twin-hull type. Both the Jetstreams and the Hurricane have a very efficient inboard-outdrive unit that angles the propeller for maximum thrust and which permits the prop to pivot and redirect the thrust for full-power, stable turns.

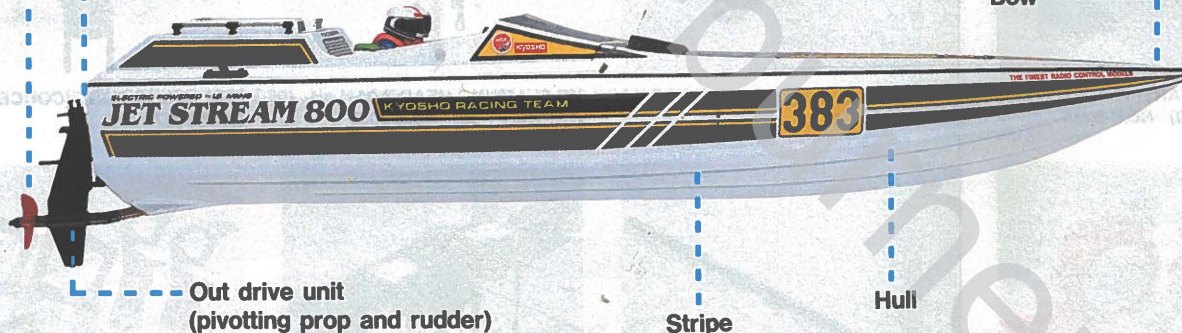
Propeller

Transom

Motor

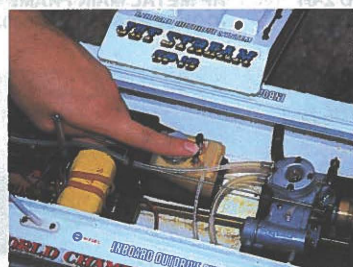
NiCd battery
(for motor)

Bow

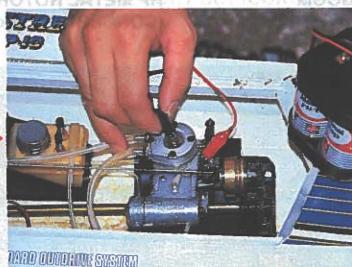


STARTING THE ENGINE

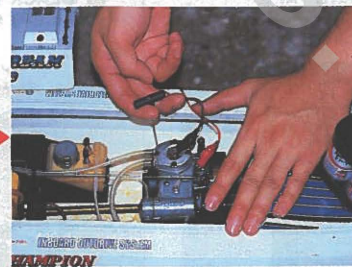
Starting the engine in a Kyosho inboard motorboat



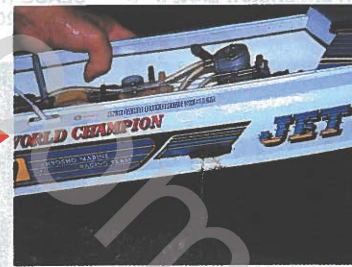
Fill the fuel tank. Close the engine needle valve completely (don't force it), then open it 4 turns. Push the priming pump on the fuel tank until fuel can be seen reaching the carburetor inlet and press once again. Switch the radio set ON and set the throttle to LOW. Pull the starter 2-3 times.



Set the throttle to a little above idle. Connect the glow plug battery, one clip to the top of the center post of the glow plug, the other to any metal part of the engine. Be careful not to short circuit the clips.



Pull the starter quickly. If several pulls do not succeed, repeat Step 1). Check that fuel is reaching engine. Engine will also be difficult to start if it is flooded (too much fuel). In this case, close the needle valve, pull the starter repeatedly, then re-open the needle valve and repeat Step 1.

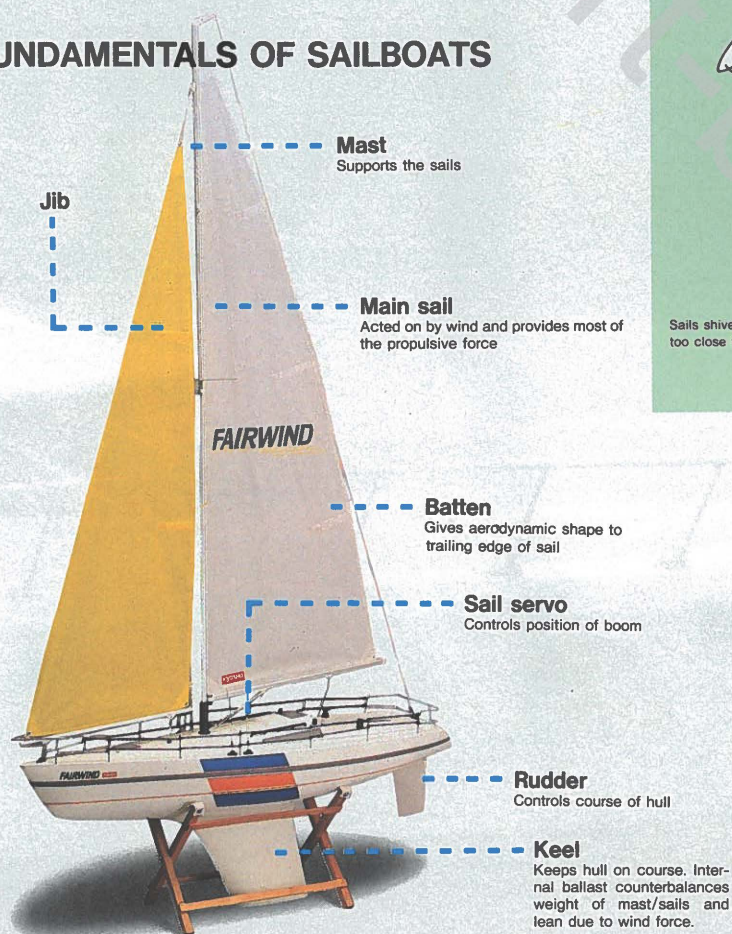


When engine starts, disconnect battery and put boat into water. Open throttle fully. Let engine run for 20 seconds, then close the needle valve in small steps (pause each time) until speed is maximum, then open it again 4-5 clicks. (Running at peak setting would damage engine.) Check that cooling water is exiting port.

SAILBOATS

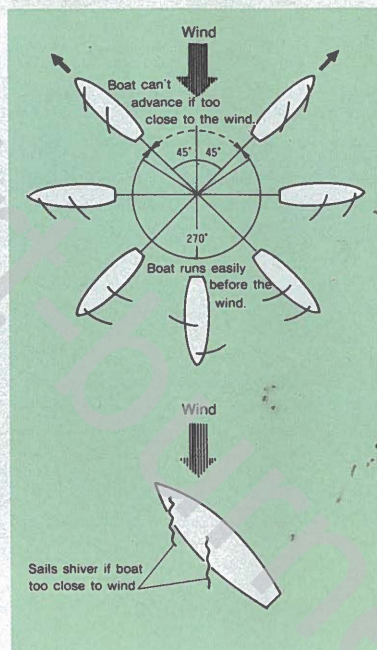
Sailboats are graceful to watch and can be operated almost anywhere because they make no noise. A well-designed sail does not operate just by the wind pushing against it, but actually has an airfoil shape like an airplane wing that can pull the boat along, allowing the boat to sail at quite a sharp angle toward the wind. Kyosho's Fairwind and Beneteau are both graceful sailboats that can be assembled and operated easily, and both look beautiful on the water. They look equally good as a home decoration, too.

FUNDAMENTALS OF SAILBOATS



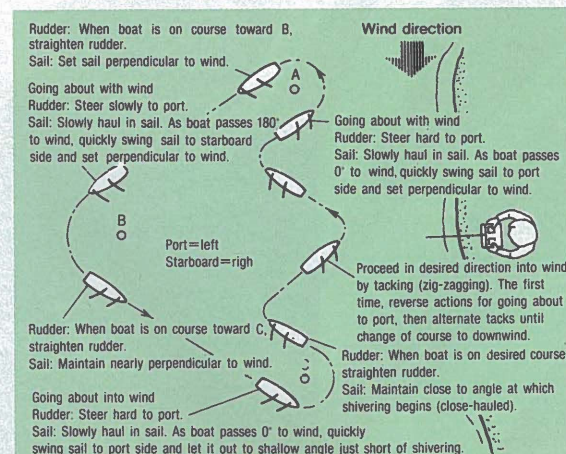
RELATIONSHIP OF WIND AND OF HULL

The drawing shows the required mainsail settings for various headings relative to the wind. The closest heading is about 45° to either side of the wind. Any closer and the sails will shiver (flap uselessly). Sailing with the wind is "running", close to perpendicular, "reaching", and against, "luffing".



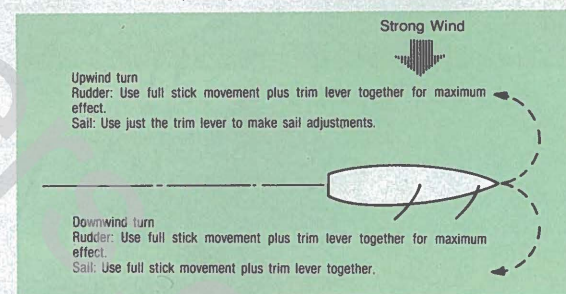
SAILING SKILLS

The figure below shows the position of the sails for various headings around a marked course. If the boat has no sail control, use only the rudder.



- To change direction, the boat must be moving forward so that the rudder is effective. First swing the rudder so that the hull turns onto the desired heading, then quickly readjust the mainsail to the appropriate angle relative to the wind.
- Learn to sail with gentle winds. Strong winds make control difficult.
- Try to sail on water with no current, otherwise the boat may be put out of control or carried away.

Strong wind If the wind becomes strong, use these special instructions to help bring the boat back to shore.



BOATS





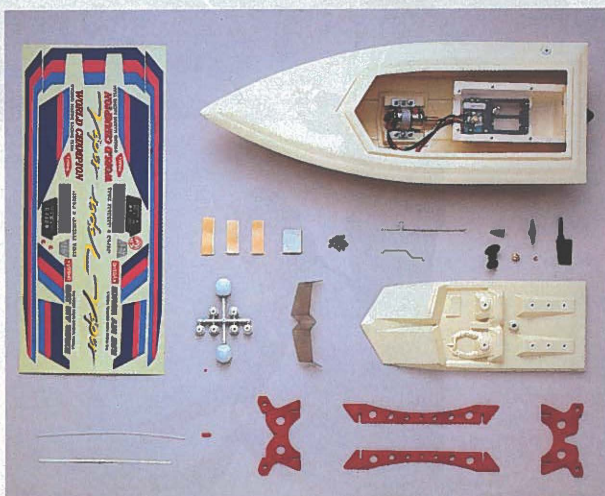


VIPER
ELECTRIC POWERED SPORT BOAT

LENGTH: 640mm
No.2281



HIGH-SPEED WATER EXCITEMENT!
MAKE ANY LAKE OR RIVER INTO A MINI POWERBOAT RACE COURSE WITH THE VIPER! RACING POWERBOATS GREW FROM MODEST SPEEDS IN 1904 TO 3500 hp POWERHOUSES CAPABLE OF MORE THAN 250 km/h (150 mph). THE LINES OF THE VIPER CAPTURE THE SPIRIT OF THESE MACHINES. BEST OF ALL, IT CAN BE READY TO HIT THE WATER IN A SHORT TIME, SINCE THE SLEEK MOLDED-ABS HULL IS FINISHED AND MOST OF THE MECHANICAL PARTS ARE ALREADY ASSEMBLED. THE HIGH-TORQUE LeMANS 350ST MOTOR (INCLUDED) IS AN IDEAL POWERPLANT AND GIVES EXCELLENT PERFORMANCE WITH A STANDARD 7.2V NiCd BATTERY (1200-1700mAh) AS USED FOR MODEL CARS. THE MANY DECORATIVE STICKERS IN THE KIT ADD TO THE GREAT APPEARANCE, AND THE DRIVER FIGURES BRING IT TO LIFE. AND WHEN THE WEATHER IS UNSUITABLE, THE VIPER MAKES AN ATTRACTIVE DISPLAY MODEL.



Technical data

Length/640mm (25.2") Beam/220mm (8.7) Weight/1250g (2.8 lb)
Speed controller (included)/2 fwd+2 rev
Drive system/Inboard motor w/shaft drive (35Dx42P (mm) prop)
Motor (included)/LeMans 360ST



Required for operation (not included)



7.2V-1400/1700mAh NiCd battery (No.4400/2348)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos



NITRO VIPER GP-10

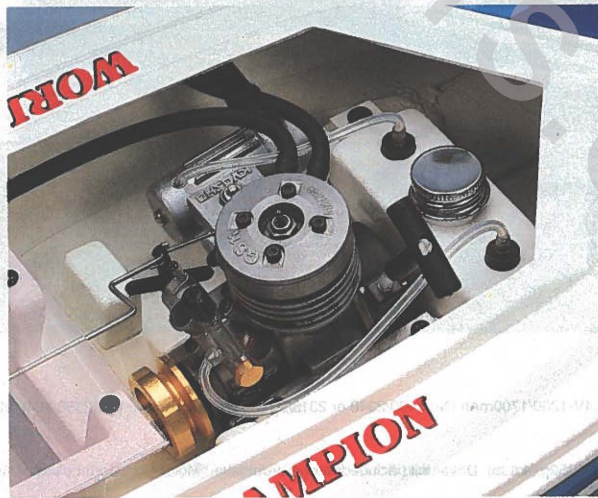
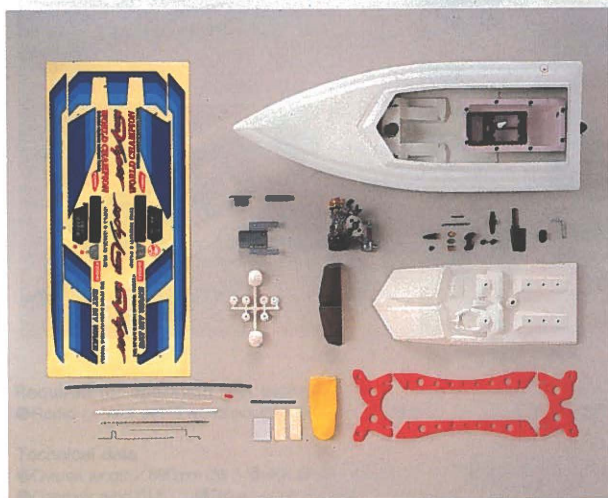
.10 ENGINE POWERED SPORT BOAT

LENGTH: 640mm
No.2287G



ENGINE POWER AND HIGH-SPEED HULL FOR EXCITEMENT ON THE WATER!

OFF-SHORE RACING BOATS ARE THE EQUIVALENT OF GRAND PRIX RACING CARS, AND REACH ASTONISHING SPEEDS. THE NITRO VIPER GIVES SCALE HIGH PERFORMANCE BY PUTTING A POWERFUL ENGINE INTO A HULL THAT BLENDS HIGH-SPEED CAPABILITY WITH GOOD CONTROL IN THE TURNS. THE HULL IS FACTORY MOLDED IN IMPACT-RESISTANT ABS RESIN. THE HULL IS PRECOLORED WHITE, SO THERE IS NO NEED TO PAINT IT. THE MAJOR EQUIPMENT, INCLUDING THE ENGINE, UNIVERSAL JOINT, STAINLESS STEEL DRIVE SHAFT, AND PROPELLER, IS MOUNTED AT THE FACTORY, SO THE MOST DIFFICULT PART OF ASSEMBLY IS DECIDING HOW TO DECORATE IT. (COLORFUL SELF-ADHESIVE TRANSFERS ARE SUPPLIED.) THE ENGINE IS A CUSTOM-DESIGNED KYOSHO GS11-MR WITH BUILT-IN RECOIL-TYPE PULL STARTER, WATER-COOLING HEAD, AND EFFECTIVE MUFFLER THAT KEEPS THE SOUND TO A PLEASANT GROWL. OPERATING A MODEL BOAT HAS NEVER BEEN EASIER OR MORE ECONOMICAL.



Required for operation (not included)



Radio control set: Two channel w/two servos
Fuel

Technical data

Length/640mm (25.1") Beam/220mm (8.7")
Weight/1200g (2.6 lb)
Engine (included)/Kyosho GS11-MR w/built-in pull starter, muffler
Drive system/Shaft (direct) Propeller/35x42mm (DxP)
Running time/15 minutes (typical)

JET STREAM 800

ELECTRIC POWERED INBOARD/OUTDRIVE OFFSHORE RACING BOAT

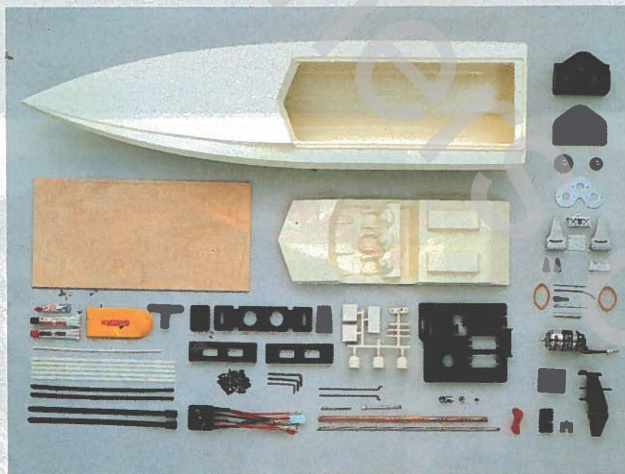
LENGTH: 880mm

No.2270



ALL THE EXCITEMENT OF OFFSHORE POWERBOAT RACING

THIS SCALE REPRODUCTION GIVES JUST AS MANY THRILLS AS THE FULL-SIZE OFFSHORE RACING ORIGINALS! THE SLEEK, LONG VEE HULL CUTS THROUGH THE WATER, DRIVEN BY A POWERFUL *LeMANS 360ST* MOTOR (INCLUDED) AND EFFICIENT INBOARD-OUTBOARD STERN-DRIVE UNIT. THE MOTOR AND REDUCTION UNIT ARE INSIDE THE HULL FOR GOOD BALANCE, AND DRIVE THE PROP VIA A SHAFT AND UNIVERSAL JOINT. THE PROP IS ANGLED PERPENDICULAR TO THE SURFACE FOR MAXIMUM THRUST, AND THE PROP SHAFT UNIT PIVOTS TO STEER THE BOAT. THE HULL IS A STRONG, LIGHT ABS MOLDING THAT CAN BE PAINTED OR LEFT ITS NATURAL COLOR. A HIGH-QUALITY *ROTARY* SPEED CONTROLLER IS INCLUDED (3 SPEEDS FORWARD/1 REVERSE). USE A 7.2V BATTERY FOR GOOD PERFORMANCE, 8.4V FOR SUPERCHARGED SPEED. (BATTERY NOT INCLUDED.) QUICK, EASY ASSEMBLY IN A FEW HOURS. MANY DETAILS, LIKE CREW, INTERIOR, ETC.



Required for operation (not included)

Radio control set: Two-channel w/two servos NiCd battery: 7.2V/8.4V-1200/1700mAh (No.4400/2348 or 2318/2338) Battery charger (No.2358/1849/2246)

Technical data

Length/880mm (34.6") Beam/205mm (8.1") Weight (ready to run)/1850g (4.1 lb) Drive unit (included)/Inboard-outdrive Motor (included)/LeMans 360ST Propeller (included)/42x60mm (DxP) Reduction gear ratio/1.5:1

JET STREAM GP-10

10 ENGINE POWERED INBOARD/OUTDRIVE RACING BOAT

LENGTH: 890mm

No.2286G



ENGINE-POWERED EXCITEMENT WITH EASY OPERATION

JETSTREAM GP-10 GIVES THE EXCITEMENT OF A HIGH-SPEED OFFSHORE POWERBOAT IN LAKE-SIZE PROPORTIONS, WITH THE FUN AND SPEED THAT ONLY AN ENGINE CAN DELIVER! STARTING IS SIMPLE. JUST FILL THE TANK (FUEL NOT INCLUDED), CONNECT THE GLOW-PLUG BATTERY (NOT INCLUDED), PRESS THE PRIMING PUMPS OF THE FUEL TANK, AND TUG THE HANDLE OF THE BUILT-IN RECOIL STARTER ONCE OR TWICE TO BRING THE POWERFUL 10 GLOW ENGINE (INCLUDED) INTO LIFE. POWER IS TRANSMITTED EFFICIENTLY VIA THE SPEED-MATCHING GEARBOX TO THE SHAFT OF THE INBOARD/OUTDRIVE UNIT. THE PROPELLER OF THE OUTBOARD UNIT ACTUALLY SWIVELS TO DIRECT THE THRUST FOR RAPID TURNS AND MINIMUM POWER LOSS. ENGINE HAS A WATER JACKET FOR COOLING, SO FULL POWER CAN BE USED WITHOUT RISK TO THE ENGINE. AND THE MUFFLER PRODUCES A PURR OF POWER, LOTS OF FUN BUT NOT BOTHERSOME TO OTHERS NEARBY.



Required for operation (not included)

- Radio control set: Two-channel w/two servos
- Fuel and glow-plug batteries (D-size x 4; alkaline type recommended)

Technical data

- Overall length/890mm (35")
- Hull length/800mm (31.5")
- Beam/205mm (8.1")
- Weight/1700g (3.75 lb)
- Engine (included) w/recoil pull starter, water-cooling head, muffler, and fuel tank w/priming pumps
- Gearbox ratio/1.5 : 1
- Drive unit (included)/Inboard/outdrive
- Propeller/42x60mm (DxP)

HURRICANE

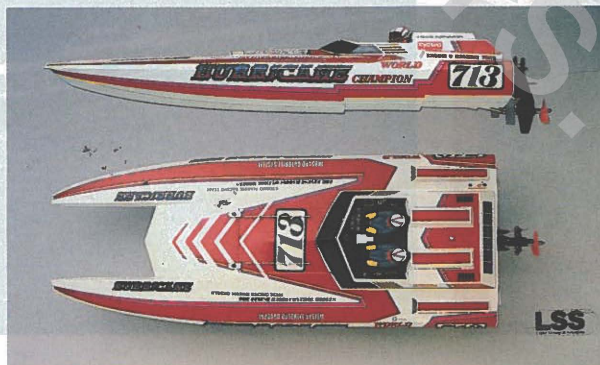
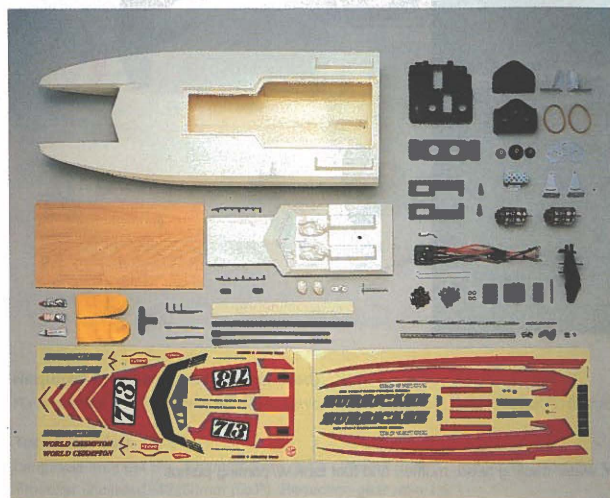
ELECTRIC POWERED CATAMARAN RACING BOAT

LENGTH: 790mm
No.2271



HIGH-SPEED TWIN-MOTOR PERFORMANCE!

POWERFUL TWIN LeMANS 360ST MOTORS. HIGH-EFFICIENCY INBOARD/OUTDRIVE SYSTEM MAXIMIZES POWER TO THE PROP. PROP RUNS AT THE MOST EFFICIENT ANGLE OF 90° TO THE WATER SURFACE TO MAXIMIZE THRUST ON THE STRAIGHTS, AND SWIVELS TO DIRECT THE THRUST FOR FULL-POWER TURNS. GEARBOX MATCHES MOTOR AND PROP CHARACTERISTICS. STYLING IS THAT OF A TYPICAL OFFSHORE CATAMARAN RACING BOAT, AND SCALE SPEEDS REACH OVER 200 km/hr (125 mph). THE TWIN HULLS GIVE MAXIMUM STABILITY AT HIGH SPEED AND CONTROLLABLE, SMOOTH TURNS, AIDED BY TWIN TRIM FINS. STRONG, LIGHT FACTORY-MOLDED LSS RESIN HULL WITH DRIVERS AND COLORFUL DECALS.



Required for operation (not included)



8.4V-1700mAh NiCd battery (No.2338)

Battery charger (No.2358/1849/2246)

Radio control set: Two-channel w/two servos

Technical data

- Overall length/790mm (31.1") ● Hull length/700mm (27.6") ● Width/270mm (10.6") ● Weight/2100g (4.6 lb)
- Motors (included)/LeMans 360ST x 2 ● Drive system/Integrated inboard-outdrive ● Gear ratio/2:1
- Propeller/42 x 60mm (D/P) ● Speed controller (included)/Rotary (3 fwd + rev)



MAJESTY 800

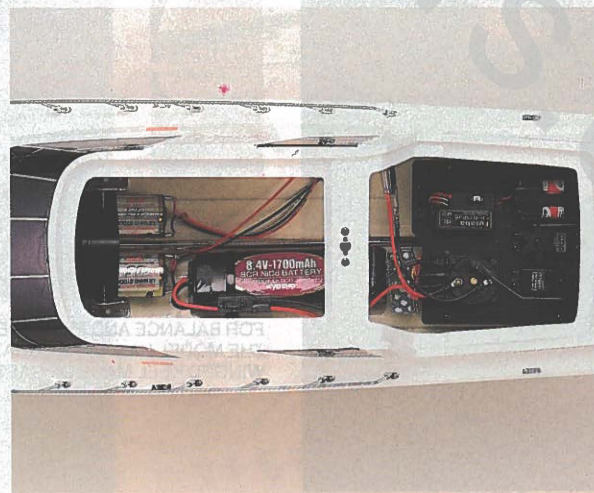
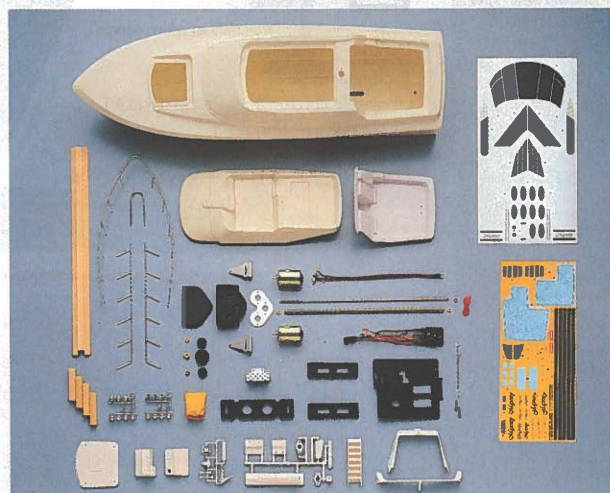
ELECTRIC POWERED CRUISER

LENGTH: 840mm
No.2283



REALISTIC SCALE MODEL OF A FAMOUS LUXURY MOTOR CRUISER

THE MAJESTY IS TWENTY METERS OF OCEAN-GOING LUXURY CRUISER WITH ALL THE COMFORTS OF A VERY EXPENSIVE HOME. KYOSHO'S MAJESTY 800 MODEL HAS THE SAME APPEARANCE IN SMALLER SCALE, WITH ALL THE DETAILS THAT YOU CAN EXPECT IN A KYOSHO MODEL, LIKE METAL RAILING AND POSTS, HORNS, AND CLEATS. THE POWERPLANT IS A PAIR OF *LeMANS STOCK 05* MOTORS DRIVING THE STAINLESS STEEL SHAFT AND SCREW VIA A REDUCTION GEARBOX THAT MATCHES THE MOTOR AND PROPELLER SPEEDS. THE HULL IS MADE OF STRONG, IMPACT-RESISTANT ABS RESIN, PRECOLORED WHITE SO THERE IS NO NEED TO PAINT IT. MANY SELF-ADHESIVE DECORATIVE TRANSFERS ARE INCLUDED IN THE KIT. THE MOTORS AND KYOSHO *ROTARY* SPEED CONTROLLER (ALSO INCLUDED) ARE DESIGNED FOR BOTH 8.4V OPERATION, SO YOU CAN HEAT UP THE ACTION WITH AN 8.4V BATTERY IF YOU WANT! THE MAJESTY 800 MAKES AN EXCELLENT DISPLAY MODEL, TOO, SO A STAND IS ALSO INCLUDED IN THE KIT.



Required for operation (not included)



8.4V-1700mAh NiCd battery (No.2338)
Battery charger (No.2358/1849/2246)
Radio control set: Two-channel w/two servos

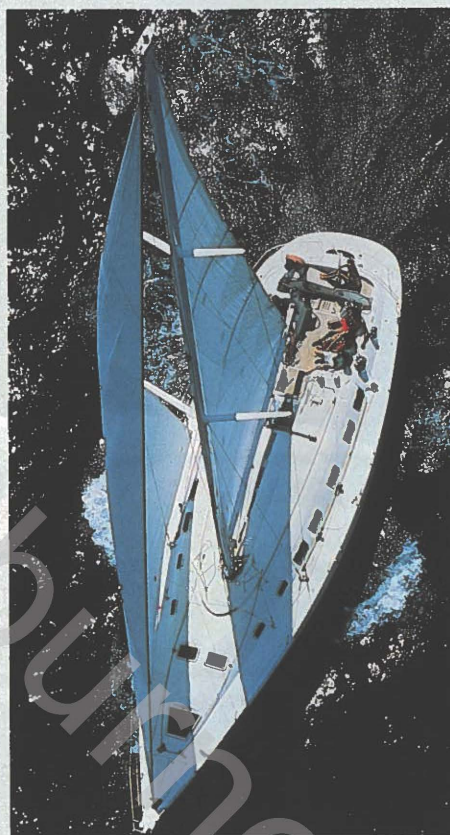
Technical data

Length/840mm (33.0") Beam/225mm (8.8")
Weight/2530g (5.6 lb)
Motors (included)/LeMans Stock 05 (x2)
Drive system/Reduction gearbox, stainless steel shaft, propeller (direct)
Reduction gear ratio/1.5:1

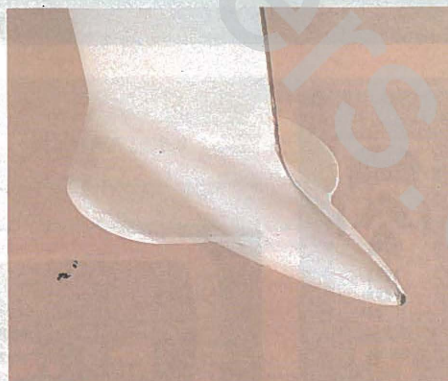
BENETEAU FIRST 53F5

RADIO CONTROLLED SAILING YACHT

LENGTH: 640mm
No.40351



Copyright: CHANTIERS BENETEAU Photographer: G.MARTIN RAGET



FOR BALANCE AND ENHANCED PERFORMANCE, THE MODEL HAS AN ACCURATELY-SHAPED WINGED KEEL MADE OF CAST LEAD.

A FAMOUS LUXURY SAILING YACHT IN 1/25 SCALE

THE SKILLS OF NAVAL ARCHITECT BRUCE FARR AND DESIGN STUDIO PININFARINA WERE COMBINED TO PRODUCE THE MAGNIFICENT BENETEAU "FIRST 53F5" SAILING YACHT. THIS MODEL IS AN ACCURATE REPRODUCTION IN 1/25 SCALE AND HAS ALL THE ATTENTION TO DETAIL THAT YOU EXPECT FROM KYOSHO, LIKE THE HULL AND CABIN ACCURATELY MOLDED IN STRONG, WHITE, ABS RESIN. BENEATH THE HULL IS A FACTORY-INSTALLED CAST-LEAD KEEL FOR BALANCE, AND RISING HIGH ABOVE THE DECK IS A RIGID ALUMINUM MAST WITH ALUMITE FINISH. THERE IS A METAL RAILING, AND THE JIB AND MAIN SALES ARE PRINTED WITH SIMULATED STITCHING FOR ADDED REALISM. OTHER DETAIL FITTINGS INCLUDE FRONT AND REAR PULPITS. THE MODEL CAN BE SAILED WITH AN ORDINARY TWO-CHANNEL RADIO CONTROL SET AND TWO STANDARD SERVOs. WHEN IT IS NOT IN ACTION, IT CAN BE USED AS AN ATTRACTIVE DISPLAY MODEL, AND A DISPLAY STAND IS INCLUDED IN THE KIT.

Required for operation (not included)



Radio control set: Two-channel w/two servos

Technical data

Length/640mm (25.1") Beam/176mm (6.9")

Weight/1800g (4.0 lb)

Sail area/16.6dm² (260 sq in)

[main: 10.0dm² (155 sq in)/jib: 6.7dm² (105 sq in)]



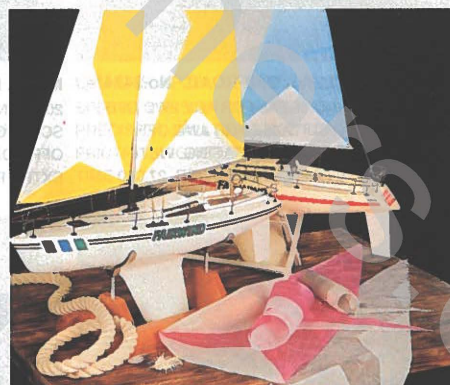
FAIRWIND RADIO CONTROLLED SAILING YACHT

LENGTH: 900mm
No.3421



THE MOST BEAUTIFUL SAILING YACHT TO HIT THE WAVES!

THE GRACEFUL AND ELEGANT LINES OF A CLASSIC RACING YACHT IN AN ARS (ALMOST READY TO SAIL) MODEL. FAIRWIND IS SILENT, SO SHE CAN BE SAILED WHERE POWER MODELS AREN'T WELCOME. EASY TO ASSEMBLE AND EASY TO SAIL. CONTROL WITH A SINGLE STANDARD SERVO (RUDDER ONLY) OR ADD A WINCH SERVO FOR THE SAIL. SMOOTH. GLOSSY ONE-PIECE MOLDED ABS HULL TO CUT THROUGH THE WATER. EASILY MOUNTED DECORATIVE FITTINGS, HATCHES, ETC. STRONG ALUMINUM MAST. DACRON SAILS WITH BATTENS FOR SHAPE. MANY DECORATIVE PRESSURE-ADHESIVE DECAL STICKERS. EQUALLY PRETTY ON THE WATER OR AS A DISPLAY MODEL.



Required for operation (not included)



Radio control set: Two-channel w/one servo
(option: sail winch servo)
Ballast (No.Y-08)

Technical data

Length/900mm (35.4") Beam/225mm (8.9")
Height/1560mm (61.4")
Total weight/3600-4200g (7.9-9.3 lb)
Sail area/38.1dm² (597 sq in)

OPTIONAL COLOR SAIL

No.3425 (YELLOW) No.3426 (BLUE)
No.3427 (PINK) No.3428 (GRAY)



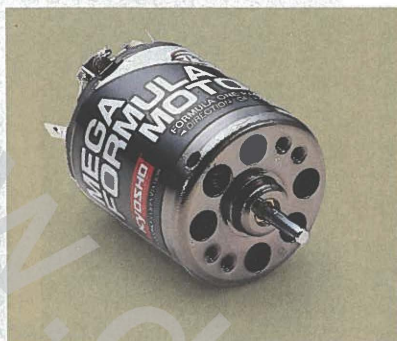
OPTIONAL
ACCESSORY
SET
No.3429

CUSTOM MODEL MOTORS

HIGH-PERFORMANCE MOTORS FOR ELECTRIC MODELS

A MOTOR FOR EVERY MODEL AND BUDGET!

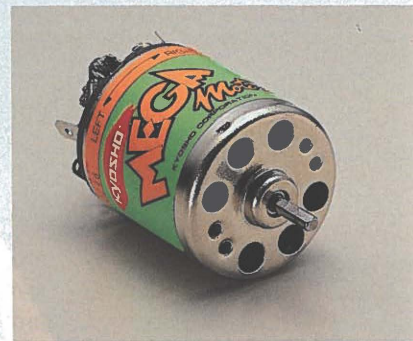
ALL KYOSHO MOTORS HAVE BEEN CUSTOM DESIGNED SPECIFICALLY FOR USE IN MODELS, NOT GENERAL-PURPOSE MOTORS WITH DESIGN COMPROMISES. THEY ARE HIGH-QUALITY PRODUCTS, AND ARE DESIGNED FOR HIGH POWER OUTPUT AND LONG SERVICE LIFE REGARDLESS OF THE PRICE RANGE. FOUR KYOSHO STAFF MEMBERS WORK FULL-TIME DEVELOPING AND IMPROVING KYOSHO'S MOTORS. ALL KYOSHO MOTORS HAVE STIFF STAINLESS STEEL SHAFTS, DIAMOND TRUED COMMUTATORS, AND ADJUSTABLE TIMING (EXCEPT SOME MOTORS).



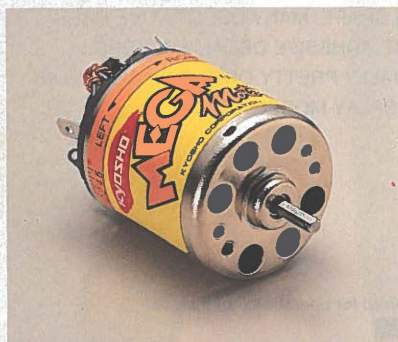
MEGA MOTOR 22x2 FORMULA No.2470
22 TURN DOUBLE WIND. IDEAL UPGRADE MOTOR FOR 1/10-SCALE GRAND PRIX CARS. FIXED OPTIMUM 20° ADVANCE TIMING. COBALT-PLATED CASE FOR INCREASED MAGNETIC STRENGTH. DRY-PROCESS MAGNETS.



MEGA MOTOR 12x2 PAVED OVAL No.2471
12 TURN DOUBLE WIND. IDEAL FOR ANY ON-ROAD OVAL RACING. ALSO SUITABLE FOR HIGH-SPEED DIRT OVAL RACING. WET-PROCESS MAGNETS FOR EXTRA POWER. 37,000 PRM MAX.



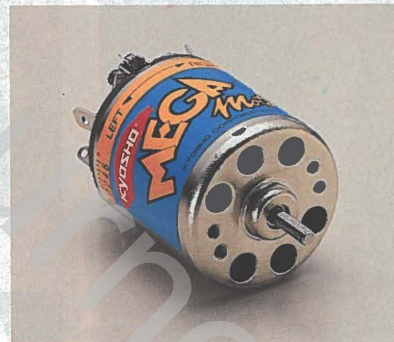
MEGA MOTOR 14x2 DIRT OVAL No.2472
14 TURN DOUBLE WIND. IDEAL FOR ANY DIRT OVAL RACING. ALSO SUITABLE FOR 4WD OFF-ROAD AND 1/10 ON-ROAD RACING. WET-PROCESS MAGNETS FOR EXTRA POWER. 33,000 PRM MAX.



MEGA MOTOR 16x2 4WD OFF-ROAD No.2473
16 TURN DOUBLE WIND. IDEAL FOR ANY 4WD OFF-ROAD RACING. ALSO SUITABLE FOR 2WD OFF-ROAD AND 1/10 SCALE ON-ROAD RACING. WET-PROCESS MAGNETS FOR EXTRA POWER. 29,000 RPM MAX.



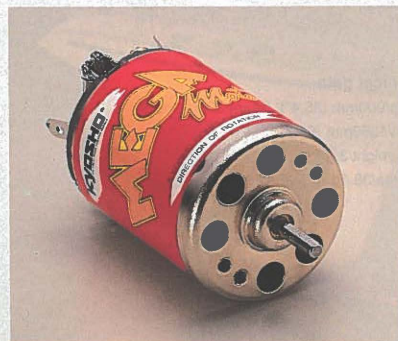
MEGA MOTOR 18x2 2WD OFF-ROAD No.2474
18 TURN DOUBLE WIND. IDEAL FOR ANY 2WD OFF-ROAD RACING. ALSO SUITABLE FOR 4WD OFF-ROAD RACING. AND 1/12 SCALE RACING. WET-PROCESS MAGNETS FOR EXTRA POWER. 27,000 RPM MAX.



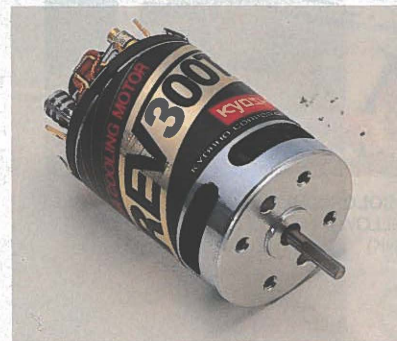
MEGA MOTOR 20x2 ON-ROAD No.2475
20 TURN DOUBLE WIND. IDEAL FOR ANY 1/10 OR 1/12 SCALE ON-ROAD RACING. ALSO SUITABLE FOR 2WD OFF-ROAD RACING. WET-PROCESS MAGNETS FOR EXTRA POWER. 24,000 RPM MAX.



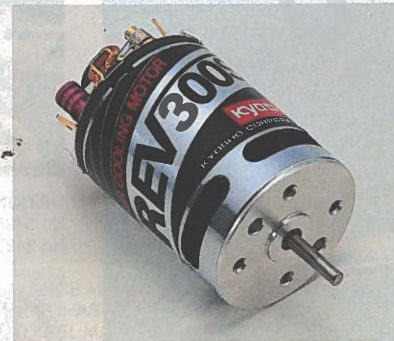
MEGA MOTOR 22x1 OUTLAW STOCK No.2476
22 TURN SINGLE WIND. FOR ANY OFF-ROAD OR ON-ROAD OUTLAW STOCK VEHICLE. ROAR APPROVED MODIFIED MOTOR. WET-PROCESS MAGNETS FOR EXTRA POWER. 22,000 RPM MAX.



MEGA MOTOR 360 MONSTER TRUCK No.2477
IDEAL FOR USE IN MONSTER TRUCKS. ALSO SUITABLE FOR ELECTRIC BOATS AND OFF-ROAD RACING. 550 SIZE CAN FOR MORE TORQUE 21,000 RPM MAX.



REV 300T No.1905
RECOMMENDED FOR CONSTANT HIGH LOADS, LIKE BOATS AND GLIDERS, ESPECIALLY IN HOT WEATHER. BUILT-IN FAN COOLS MAGNETS AND ROTOR WINDINGS FOR FULL POWER THROUGH ENTIRE RUN. FOR 7.2V TO 9.6V.



REV 300S No.1906
RECOMMENDED FOR EP CONCEPT ELECTRIC HELICOPTERS, ESPECIALLY IN HOT WEATHER. BUILT-IN FAN COOLS MAGNETS AND ROTOR WINDINGS FOR FULL POWER THROUGH THE FLIGHT. FOR 7.2V TO 9.6V OPERATION.



LeMANS PRO HIGH SPEED No.2481
FOR HIGH-SPEED OFF-ROAD SPRINT RACES. HIGH-EFFICIENCY, HIGH-POWER MOTOR FOR HIGH-LEVEL COMPETITION. OPTIMIZED FOR FULL POWER WITH 1700mAh BATTERIES.



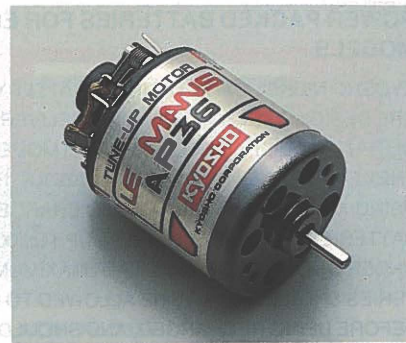
LeMANS PRO HIGH TORQUE No.2483
FOR TWISTY OFF-ROAD RACES. HIGH-EFFICIENCY, HIGH-POWER MOTOR FOR HIGH-LEVEL COMPETITION. OPTIMIZED FOR FULL POWER WITH 1700mAh BATTERIES.



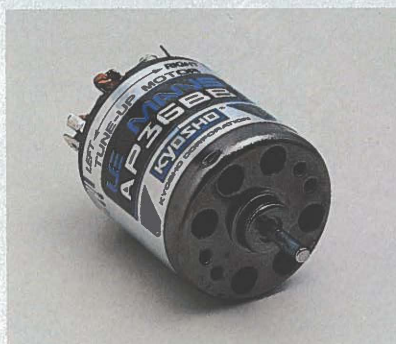
LeMANS PRO ON-ROAD No.2485
FOR HIGH-SPEED ON-ROAD 8-MINUTE RACES. HIGH-EFFICIENCY, HIGH-POWER MOTOR FOR HIGH-LEVEL COMPETITION. OPTIMIZED FOR FULL POWER WITH 1700mAh BATTERIES.



LeMANS PRO SUPER HELI No.1984
SPECIALLY DESIGNED TO MEET THE NEEDS OF ELECTRIC HELICOPTERS. TWIN BALL BEARINGS.



LeMANS AP36 No.1962
CUSTOM DESIGNED FOR ELECTRIC MODEL HELICOPTERS OF EP CONCEPT TYPE AND FOR AIRPLANES USING GEARED PROP-DRIVE UNITS. HIGH POWER-TO-WEIGHT RATIO. 7.2/8.4V.



LeMANS AP36BB No.1966
SPECIAL HIGH-PERFORMANCE VERSION OF No.1962 WITH TWO PRECISION BALL BEARINGS FOR REDUCED FRICTION, HIGHER POWER, AND LONGER FLIGHT TIME.



LeMANS AP36L No.ES-15
HIGH-TORQUE 550-TYPE MODEL AIRPLANE MOTOR CUSTOM DESIGNED FOR DIRECT DRIVE. ADJUSTABLE TIMING FOR OPTIMUM POWER/CURRENT CHARACTERISTICS. 7.2/8.4V.



LeMANS AP36L SPECIAL No.2461
SPECIAL VERSION OF No.ES-15 WITH TWO PRECISION, BALL BEARINGS FOR REDUCED FRICTION, HIGHER POWER, AND LONGER FLIGHT TIME.



LeMANS AP29 No.1929
HIGH TORQUE MOTOR SPECIALLY DESIGNED FOR MODEL AIRPLANES AND BOATS.



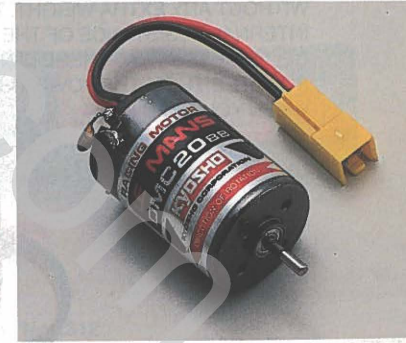
LeMANS AP29R No.1961
REVERSE-ROTATION VERSION OF AP29 FOR AIRPLANES AND BOATS. MAXIMUM POWER WITH GEAR-REDUCTION UNIT.



LeMANS AP29BB No.1930
SPECIAL VERSION OF AP29 MOTOR, WITH TWO PRECISION BALL BEARINGS FOR REDUCED FRICTION AND EVEN HIGHER POWER.



LeMANS DM20 No.1934
POWERFUL MINI MOTOR FOR 1/8-SCALE MOTORCYCLES.



LeMANS DMC20BB No.1935
SPECIAL VERSION OF No.1934 WITH TWO PRECISION BALL BEARINGS FOR REDUCED FRICTION AND EVEN HIGHER POWER.

SUPER NiCd FAST-CHARGE BATTERIES

POWER PACKED BATTERIES FOR ELECTRIC MODELS

KYOSHO NICKEL-CADMIUM (NiCd) BATTERY PACKS ARE DESIGNED SPECIFICALLY TO DELIVER THE HIGH OUTPUT CURRENTS REQUIRED FOR MODEL MOTORS. THEY CAN ALL BE RECHARGED IN ABOUT 15 MINUTES USING AN APPROPRIATE KYOSHO CHARGER. NiCd BATTERIES CAN BE RECHARGED UP TO 500 TIMES UNDER GOOD CONDITIONS. (FOR MAXIMUM LIFE, BATTERIES SHOULD ALWAYS BE ALLOWED TO COOL BEFORE BEING RECHARGED, AND SHOULD NEVER BE OVERCHARGED AT HIGH CHARGE RATES.)

HIGH POWER IN A STANDARD PACKAGE!

THESE TWO NICKEL CADMIUM BATTERIES ARE THE IDEAL POWER SOURCE FOR MODEL VEHICLES, BOATS, AND AIRPLANES. THEIR 1700mAh CAPACITY GIVES 40% LONGER RUNNING TIME THAN THE USUAL 1200mAh BATTERY PACKS WITHOUT ANY EXTRA WEIGHT. THE LOW INTERNAL RESISTANCE OF THE SCR CELLS MEANS THAT THERE IS NO LOSS OF POWER, EITHER. THE POWER IS THERE WHEN YOU NEED IT!



9.6V-1700mAh SCR HELI SPECIAL No.2352
SPECIAL 9.6V BATTERY FOR EP CONCEPT HELICOPTERS. CAUTION: USE ONLY IN 9.6V EQUIPMENT!



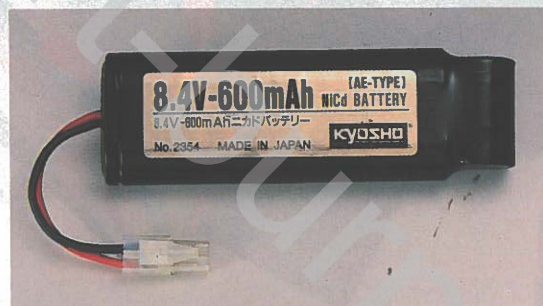
8.4V-1700mAh SCR No.2338
SPECIAL MAXIMUM CAPACITY 8.4V BATTERY WITH REMARKABLY LOW WEIGHT. FOR SUPERCHARGED PERFORMANCE WITH LONG DURATION IN AIRPLANES, CARS AND BOATS.



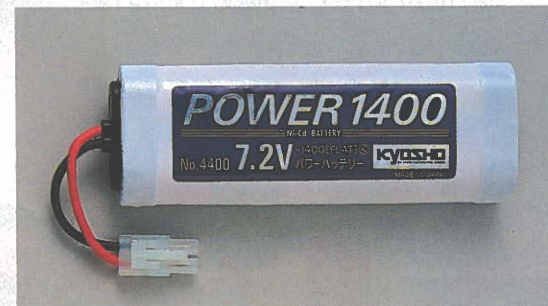
8.4V-1200mAh FLIGHT POWER SCR No.2318
FOR SUPERCHARGED PERFORMANCE IN AIRCRAFT,
CARS AND BOATS.



8.4V-1000mAh SCR No.2355
FOR EP CONCEPT ELECTRIC HELICOPTERS AND OTHER
APPLICATIONS WHERE VERY HIGH POWER WITH EXCEP-
TIONALLY LOW WEIGHT ARE REQUIRED.



8.4V-600mAh AE No.2354



7.2V-1400 POWER BATTERY No.4400
HIGHER CAPACITY THAN STANDARD 1200mAh BATTERIES
WITH LOWER WEIGHT AND ECONOMICAL PRICE.



GP7.2V-600mAh AE No.2313
HIGH-CAPACITY BATTERY FOR EXTENDED RUNNING WITH
GRAND PRIX MOTORCYCLES (TYPICALLY 15 MINUTES), ETC.



7.2V-270mAh No.2312
SPARE BATTERY FOR GRAND PRIX MOTORCYCLES, ETC.



7.2V-1700mAh SCR No.2348
SPECIAL MAXIMUM CAPACITY 7.2V
BATTERY WITH REMARKABLY LOW
WEIGHT. FOR HIGH PERFORMANCE
WITH LONG DURATION IN AIRCRAFT,
CARS AND BOATS.

BATTERY CHARGERS



DC CHARGERS

THESE CHARGERS ARE ALL DESIGNED TO RECHARGE QUICK-CHARGEABLE NiCd BATTERY PACKS IN 15-20 MINUTES. (THIS TIME FOR FULLY DISCHARGED PACKS; PARTIALLY DISCHARGED PACKS REQUIRE PROPORTIONALLY LESS.) POWER SOURCE IS A STANDARD 12V CAR BATTERY. CHARGING CURRENT STOPS AUTOMATICALLY. CONNECTORS ARE SUPPLIED FOR KYOSHO BATTERIES. OTHER MAKERS' BATTERIES CAN BE CHARGED IF CONNECTORS ARE CHANGED.



FET DELTA PEAK AUTO-CUTOFF CHARGER No. 2246

AUTOMATICALLY CHARGES ANY 4.8-8.4V 270-1700mAh FAST-CHARGEABLE NiCd PACK. SET CHARGING CURRENT WITH METER AND PRESS START BUTTON. WHEN PACK IS CHARGED (20 MINUTES OR LESS), DELTA PEAK DETECTION CIRCUIT STOPS FAST CHARGING AND TRICKLE CHARGING STARTS.



MULTI-CHARGER II No. 1849

CHARGES ANY 4.8/8.4V-270/1700mAh NiCd AT CURRENT SET USING AMMETER. SELECT 3, 10, 15, OR 20 MINUTES BY PRESSING BUTTON. ELECTRONIC TIMER. ALSO CAN DISCHARGE BATTERIES. HAS COMPARTMENT FOR LEADS.



DC QUICK CHARGER II No. 2358

ONE CHARGER FAST-CHARGES ALL 7.2 AND 8.4V NiCd BATTERY PACKS OF 1000 TO 1800mAh CAPACITY. ELECTRONIC TIMER. SELECT 5, 10, 15, OR 20 MINUTES BY PRESSING BUTTON. LEADS AND CONNECTORS INCLUDED.



DC QUICK CHARGER II No. 2359

FOR CHARGING 7.2V NiCd BATTERY PACKS OF 270mAh AND 600mAh CAPACITY, AS USED IN 1/8-SCALE MOTORCYCLES. ELECTRONIC TIMER. LEADS AND CONNECTORS INCLUDED.

COLOR DECAL MICRON LINE TAPE POLYCA COLOR MASKING SHEET

No.1754

No.1841/42/43/59/60

No.2230

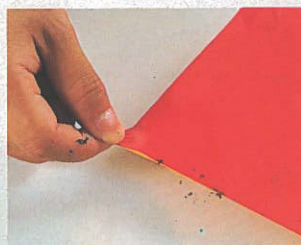
No.1947



FOR WRINKLE-FREE TRIMMING AND CUSTOMIZING YOUR MODEL!

KYOSHO'S COLOR DECAL SHEETS ARE PRESSURE SENSITIVE, SOLID-COLOR TRIM SHEETS. CUT OUT THE PATTERN AND STICK IT DOWN. WRINKLE-FREE! SHEET STRETCHES OVER CURVES.

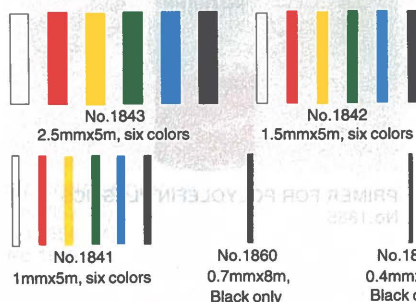
No.1754W WHITE
 No.1754BK BLACK
 No.1754R RED
 No.1754Y YELLOW
 No.1754O ORANGE
 No.1754RB ROYAL BLUE
 No.1754LB LIGHT BLUE
 No.1754GR GREEN
 No.1754MG GOLD
 No.1754MS SILVER
 No.1754KY FLUORESCENT YELLOW
 No.1754KG FLUORESCENT GREEN
 No.1754KO FLUORESCENT ORANGE
 No.1754KP FLUORESCENT PINK
 No.1754SG SMOKE GRAY
 No.1754CF CARBON FIBER PATTERN
 No.1754CK ARAMID FIBER PATTERN
 SIZE: 155x400mm (6.1x15.7in)



COLOR DECAL



MICRON LINE TAPE



FOR THE FINISHING TOUCH

MICRON LINE TAPE GIVES THE LOOK THAT MARKS THE WORK OF A CRAFTSMAN, NEAT STRIPES OF EVEN WIDTH FROM ONE END TO THE OTHER. MICRON LINE CAN FOLLOW ALMOST ANY CURVE AND IS SELF-ADHESIVE, STICKING WITH JUST A TOUCH TO ANY SMOOTH SURFACE SUCH AS PLASTIC CAR BODIES, EXCEL-COTE AND OTHER COVERING MATERIALS, DOPED SURFACES, ETC.

MASKING SHEET No.1947



MASKING SHEET

AN AID FOR NEATLY MASKED PAINT JOBS. A FLEXIBLE POLYETHYLENE SHEET 55cmx35m (1.8x114.8ft) WITH ONE SELF-ADHESIVE EDGE. JUST STICK IT DOWN ALONG THE PAINT LINE.



POLYCA COLOR No.2230

POLYCA COLOR PAINTS THE BEAUTIFUL FINISH

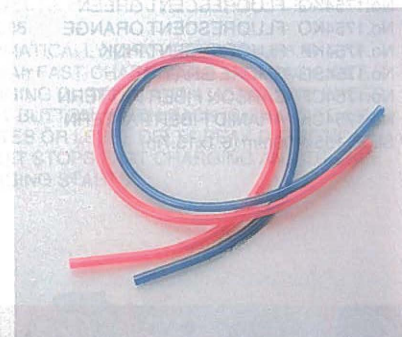
POLYCA ACRYLIC COLOR PAINT IS FORMULATED FOR USE ON NEARLY ALL PLASTIC MATERIALS USED FOR MODELS, SUCH AS POLYCARBONATE, ABS, BUTYRATE, ETC. POLYCA IS THINNED AND CLEANED FROM BRUSHES WITH WATER, IS FLEXIBLE, AND DOES NOT CRACK. 16 BRILLIANT COLORS.

No.2230W WHITE	No.2230YG YELLOW GREEN
No.2230R RED	No.2230V VIOLET
No.2230Y YELLOW	No.2230KO FLUORESCENT ORANGE
No.2230O ORANGE	No.2230KP FLUORESCENT PINK
No.2230BK BLACK	No.2230CB CALSONIC BLUE
No.2230BL BLUE	No.2230RR RACING RED
No.2230G GREEN	No.2230BG BRITISH GREEN
No.2230SB SKY BLUE	No.2230RY RACING YELLOW

ACCESSORIES for ALL MODELS



FLUORESCENT TIE STRAPS (YELLOW)
No.1700KY (2.5x102mmx18)
No.1701KY (3.5x150mmx18)
No.1702KY (4x200mmx12)



SILICONE FUEL TUBING (500mmx2)
No.1790

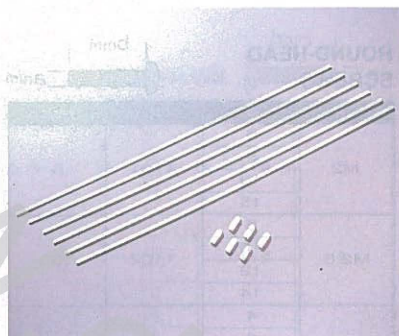


PRIMER FOR POLYOLEFIN PLASTICS
No.1865

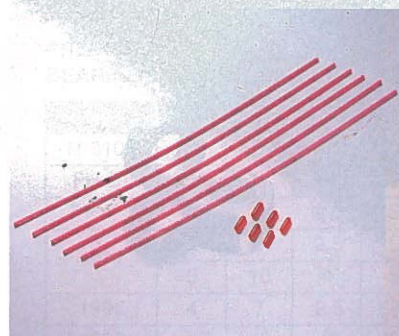




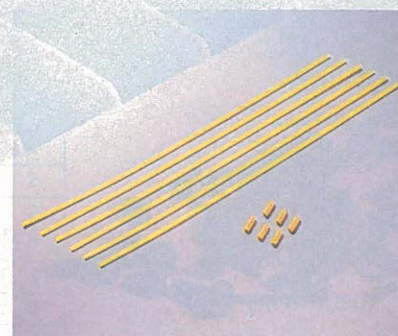
FLUORESCENT TIE STRAPS (PINK)
No.1700KP (2.5x102mmx18)
No.1701KP (3.5x150mmx18)
No.1702KP (4x200mmx12)



ANTENNA TUBE (WHITE)
No.1705 (Ø3x450mmx5)



ANTENNA TUBE (PINK)
No.1706 (Ø3x450mmx5)



ANTENNA TUBE (YELLOW)
No.1707 (Ø3x450mmx5)



HOBBY SHEARS AND SANDER
No.1829



THREAD LOCKING COMPOUND (2 TUBES)
No.1878



SILICONE GREASE (2 TUBES)
No.OT-38



BALL DIFF. GREASE
No.1877



SILICONE SHOCK OIL
No.1953 (S)
No.1954 (M)
No.1955 (H)



SILICONE SHOCK OIL SET
No.1957



SILICONE SHOCK OIL (SUPER HARD)
No.1956



AIR CLEANER OIL
No.1948

ACCESSORIES for ALL MODELS



NUTS



a	No.	pkts
M2	1171	10
M2.6		
M3		
M4	1172	10

FLANGED NUTS



a	No.	pkts
M3	1174	10
M4	1175	10

LOCK NUTS



a	No.	pkts
M2.6	1177	5
M3	1178	5
M4	1179	5

FLANGED LOCK NUTS



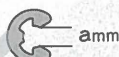
a	No.	pkts
M4	1180	5

WASHERS



a	No.	pkts
M2	1185	10
M2.6		
M3		
M4	1186	10
M5		

E-CLIPS



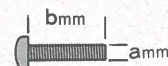
a	No.	pkts
E1.5	1380	10
E2.0	1381	10
E2.5	1382	10
E3.0	1383	10
E4.0	1384	10
E5.0	1385	10
E6.0	1386	10
E7.0	1387	6
E10.0	1390	6

SETSCREWS



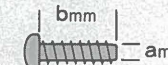
a	b	No.	pkts
M3	3	1161	3
	4		
	5		
	10		
M3	4	1162	3
	5		
	8		
	12		
M3	6	1160	3
	12		
	14		
	16		
M5	4	1163	3
	5		
	6		
M5	30	1164	3
	40		

ROUND-HEAD SCREWS



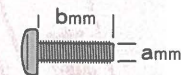
a	b	No.	pkts
M2	6	1101	5
	8		
	10		
	15		
M2.6	8	1102	5
	10		
	12		
	14		
M3	4	1103	5
	6		
	8		
	10		
M3	12	1104	5
	14		
	16		
	18		
M3	20	1106	5
	22		
	24		
	26		
M4	28	1105	5
	6		
	8		
	10		
	12		

ROUND-HEAD SELF-TAPPING SCREWS



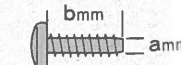
a	b	No.	pkts
M2	4	1132	5
	6		
	8		
	10		
M2.6	6	1133	5
	8		
	10		
	12		
M2.6	14	1137	5
	15		
	16		
	18		
M3	6	1134	5
	8		
	10		
	12		
M3	14	1135	5
	15		
	16		
	18		
M3	20	1136	5
	25		
	30		
	35		

BINDING-HEAD SCREWS



a	b	No.	pkts
M2.6	4	1110	5
	6		
	8		
	12		
M3	4	1111	5
	6		
	8		
	10		
M3	12	1112	5
	14		
	16		
	18		
M3	20	1114	5
	22		
	24		
	26		
M4	28	1113	5
	6		
	8		
	10		
M4	12	1115	5
	15		
	18		
	20		
	22		

BINDING-HEAD SELF-TAPPING SCREWS



a	b	No.	pkts
M2.6	6	1140	5
	8		
	10		
	12		
M3	6	1141	5
	8		
	10		
	12		
M3	14	1142	5
	15		
	16		
	18		
M4	10	1143	5
	15		
	18		

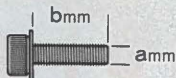


CAP SCREWS



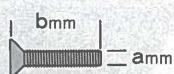
a	b	No.	pkgs
M2	8	1124	2
	10		
	12		
M2.6	8	1125	2
	10		
	12		
M3	8	1126	2
	10		
	12		
M3	14	1127	2
	16		
	18		
M3	20	1128	2
	25		
	30		
M4	10	1129	2
	15		
	20		
M4	25	1130	2
	28		
	30		
M4	35	1131	2
	40		
	45		

FLANGED CAP SCREWS



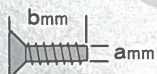
a	b	No.	pkgs
M3	6	1153	2
	8		
	10		
M4	8	1154	2
	10		
	12		

FLAT-HEAD SCREWS



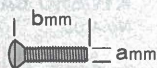
a	b	No.	pkgs
M2.6	8	1118	5
	10		
	12		
M3	6	1119	5
	8		
	10		
M3	12	1120	5
	14		
	16		
M3	18	1122	5
	20		
	22		
M3	24	1123	5
	26		
	28		
M3	30	1121	5
	32		
	34		
M4	35	1121	5
	8		
	10		
M4	15	1121	5
	20		
	20		

FLAT-HEAD SELF-TAPPING SCREWS



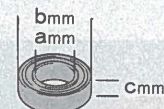
a	b	No.	pkgs
M2.6	6	1147	5
	8		
	10		
M3	6	1148	5
	8		
	10		
M3	12	1149	5
	14		
	15		
M3	16	1149	5
	18		
	20		
M4	15	1150	5
	20		
	25		

OVAL-HEAD SCREWS



a	b	No.	pkgs
M2	8	1157	10
	10		

PRECISION BEARINGS



No.	a	b	c	TYPE	pkgs
H-3103	3	6	2	O	4
FH-21	3	6	2	S	2
PFW-1	3	6	2.5	S	2
1977	3	6	2.5	S	4
	5	10	4	S	4
1995	4	7	2.5	F-S	2
1903	4	8	3	S	2
FH-22	4	8	2	F-O	2
EH-9	4	10	4	S	2
1902	5	8	2.5	S	2
1901	5	10	4	S	2
H-3006	5	13	4	S	2
H-3034	5	13	4	S	1
	5	16	5	S	1
H-3048	6	10	3	S	2
H-3101	6	12	3	O	2
PS-7	6	13	5	S	2
EH-37	7	14	3.5	O	1
EH-16	7	14	5	S	1
PS-5	7	19	6	S	2
PI-15	8	12	3.5	S	2
H-3040	8	14	3.5	O	2
1911	8	14	4	S	2
BS-16	8	16	5	S	2
H-3106	10	15	3	O	2
H-6015	10	19	5	S	1
	15	28	7	S	1
H-3222	12	18	4	S	2
H-3051	3	8	3.5	T	2
H-3241	5	10	4	T	2
H-6007	8	16	5	T	2
H-3201	3	6.5	6	N	4
H-6211	4	9	9	N	4



TYPE F (FLANGED)



TYPE O (OPEN)



TYPE S (SHIELDED)



TYPE T (THRUST BEARINGS)





PIT BOX
No.1776 (420 × 240 × 330mm)



TOOL BOX
No.4139 (330 × 230 × 65mm)



PARTS BOX
(S) No.4137 (120 × 83 × 25mm)
(M) No.4138 (180 × 98 × 50mm)



LOGO-TYPE STICKERS

- (S) No.4100 (106 × 35mm)
- (M) No.4101 (290 × 72mm)
- (L) No.4102 (363 × 90mm)
- (LL) No.4103 (900 × 220mm)

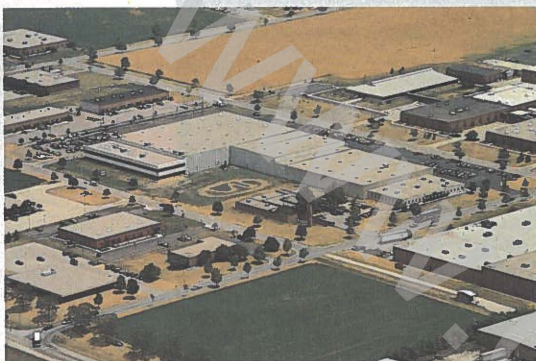
BANNERS (20) ON ROPE
No.4106



KYOSHO BANNER
No.4105

THE KYOSHO WORLD FAMILY

Hobbico KYOSHO USA



Hobbico has grown steadily through the years, and the company now occupies this large office and warehouse complex in Champaign, Illinois. Their location in central USA is ideal for quick delivery to all parts of the country.

The full-size Big Boss and Heavy Metal car crusher monster vehicles are on display in front of the main office of Hobbico. They show vividly how Kyosho brings the reality of radio control to full scale.



The Kyosho-sponsored contest exclusively for helicopters with .30-class engines, held by Hobbico at Champaign, always draws a large crowd. It is especially popular with beginner pilots because of its fun nature.



Super Tigre KYOSHO ITALY



Super Tigre is the sole agent in Italy for Kyosho products, and they can now be found in 400 shops all over Italy. Kyosho models are very popular, and shops are happy to display them in a front window or in a prominent inside space.



Spare parts are essential to customer satisfaction. Supertigre carries over 2000 types of part, and can make up to 50 shipments a day for delivery all over Italy within 48 hours of receipt of order.

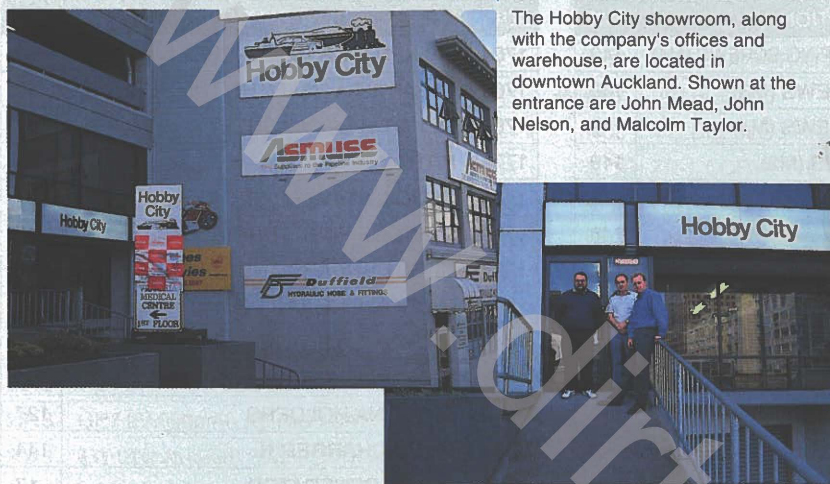


This display of Kyosho products appeared in a shop window in one of the most popular shopping areas of the historic city of Florence. It shows the range of Kyosho products and their popularity with the public.

For the past three years, Supertigre has organized an Italian Championship for one specific Kyosho item. To ensure the greatest possible interest, it has the highest prize value of any kind of R/C model competition in Italy.



Hobby City KYOSHO NEW ZEALAND



The Hobby City showroom, along with the company's offices and warehouse, are located in downtown Auckland. Shown at the entrance are John Mead, John Nelson, and Malcolm Taylor.



The Hobby City retail store displays Kyosho products for its customers. Dealers come from all over New Zealand to inspect and evaluate the latest kits and products.

Kyosho products are a popular choice among competitors in New Zealand. This array of trophies was won by John Mead, a KYOSHO NZ staff member, driving Kyosho products. KYOSHO NZ drivers hold seven national titles.



ERTL CANADA

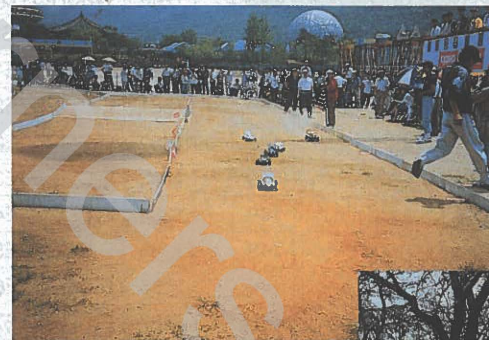


ERTL Canada is promoting the hobby and Kyosho products in Canada. This photo was taken at Toronto's International Centre at the annual hobby show, and shows Kyosho's "USA-1 Monster Truck" in front of the huge original.

The ERTL Canada display at the annual hobby show at Toronto International Centre showed the wide range of Kyosho products.



KOREA R/C DISTRIBUTION CO.



Radio control racing is popular in Korea. The photo shows a race in progress at a competition in Seoul. Kyosho cars are regular winners, and are very popular in Korea.

The R/C hobby is popular with people of a variety of ages, as can be seen from this photo of competitors at a contest



Korea R/C Distribution's delivery truck advertises the hobby as it drives around Seoul. The publicity is useful in promoting the hobby in this now-prosperous country.

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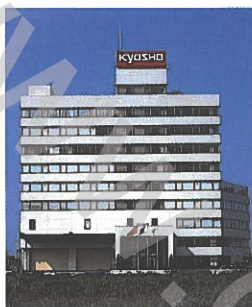
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