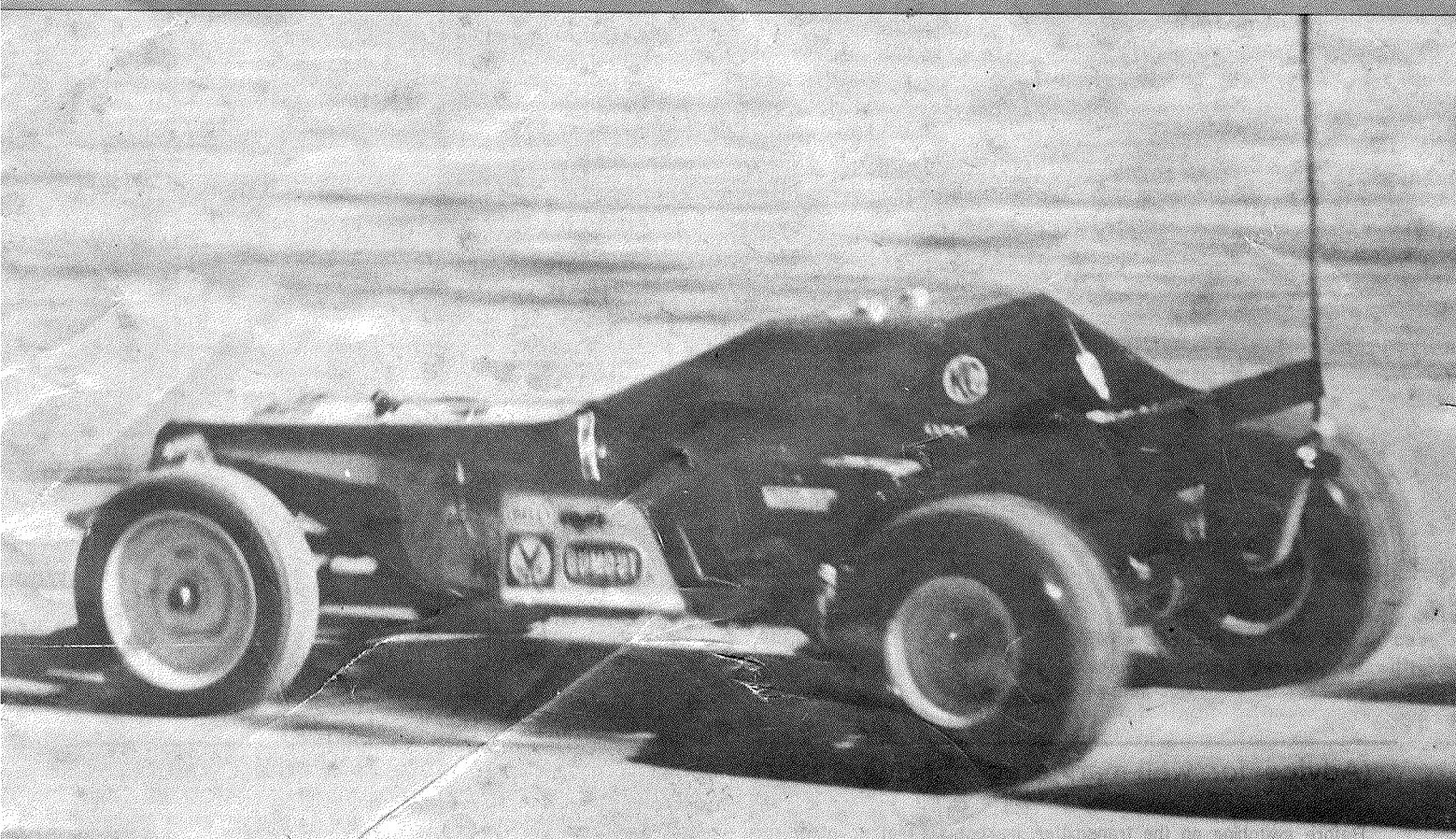


SEWINDER

The Super Off Road Racing Specialty



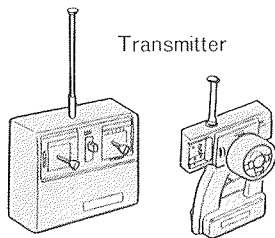
INSTRUCTION AND ASSEMBLY MANUAL

(Radio Control Mechanism)

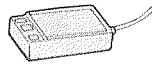
Radio Control mechanism in 2-channel digital proportional method is applied to operate RC car. Any standard 2-channel mechanism can be used, however, 3-8 channel one may not be applicable depending on the receiver size. Highly efficient ni-cad battery can be operated more than 300 times. Regarding charger, following two types are available: 15-hour charger plugging into domestic outlet; or 15-minute quick charger using 12V battery.

AYK's quick battery charger TX-200, by which 15 to 20 minutes charging is possible from 12V battery, is recommended. This charger is equipped with safe automatic cut-off system bringing out ni-cad battery performance.

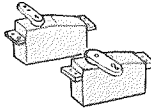
(The Necessary Items for Assembly)-not included in the kit



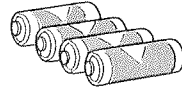
Transmitter



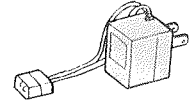
Receiver



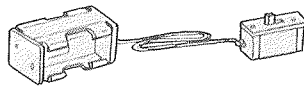
Servo



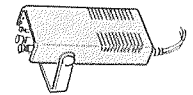
Battery for prop



charger



7.2V/1,200Ah
ni-cad battery pack



Quick charger (TX-200)

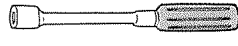
2-channel proportional radio control system required.

*Please read the instruction of each radio control unit carefully and use prop correctly.

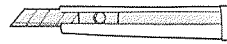
(Tools required for Assembly)



Phillips screw driver



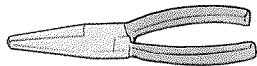
Box driver



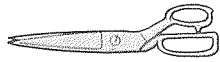
Hobby knife



Brush



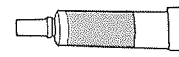
Needle nose pliers



Scissors



Gimlet

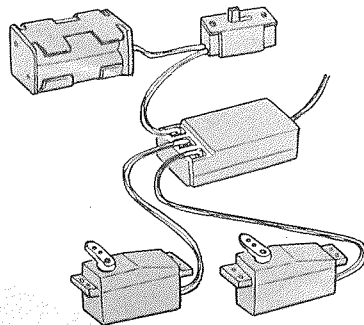
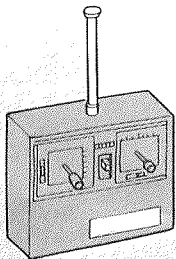


Liquid thread lock



Acrylic paint

(Prop checking)



How to set neutral

1. Connect receiver, two servos and power source.
2. Remove the servo horn (note: cut out unnecessary parts of the servo horn)
3. Switch on the transmitter.
4. Set the trim lever of steering controller at the middle position.
5. Turn on the receiver and set up the the servo horn at the proper direction.
6. First turn on the receiver and then transmitter.

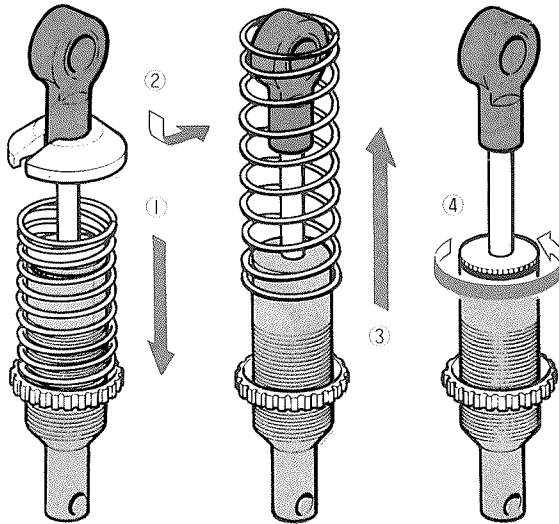
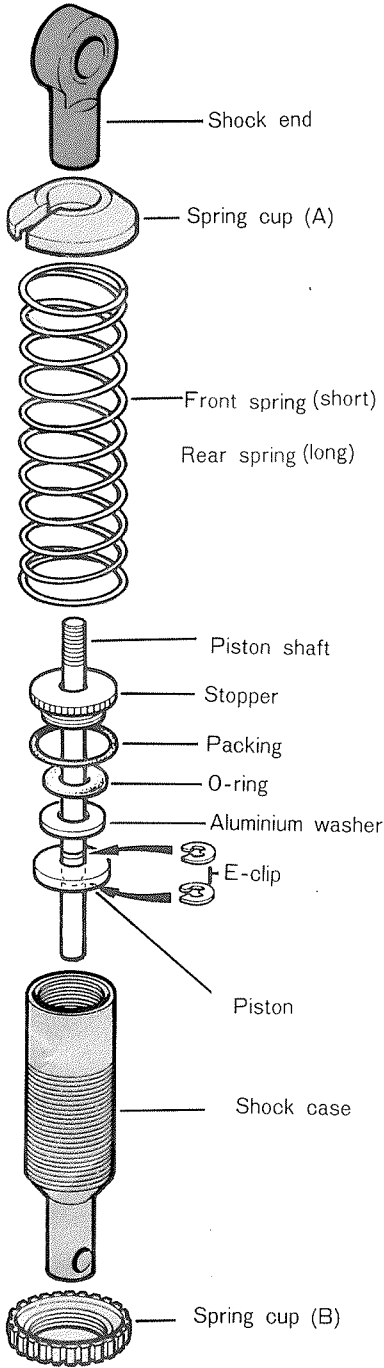
(Advice for well-mannered operation of radio-control car)

Before switching on the transmitter, make sure that no other radio-controlled vehicles such as airplane, boat and car are being operated around you. Avoid the same frequency in use if any radio-controlled vehicles are nearby. (See the band ribbon attached to the antenna to check its frequency)

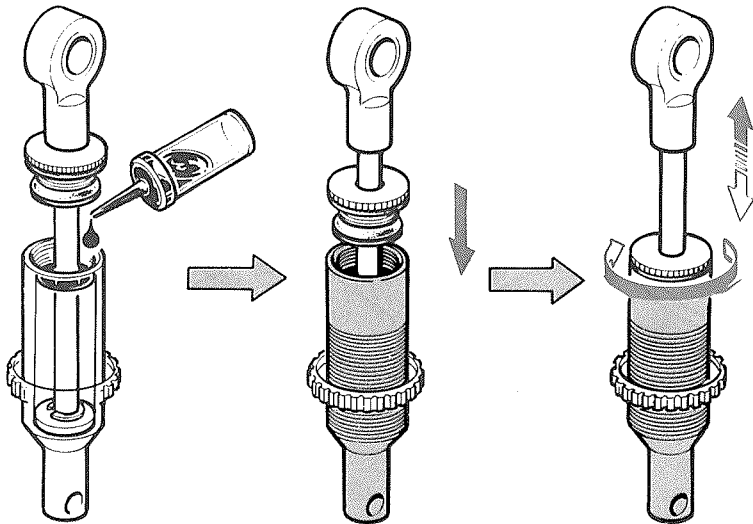
Replace the crystal in order to change the frequency. Do not turn on the transmitter while the same frequency is used by others as it may cause reckless running due to entanglement of transmission.

1 Assembly and Adjustment of Shock Absorber

Shock absorber has been already assembled, but disassemble it in order to apply oil. To prevent mixing-up parts, disassemble one by one.



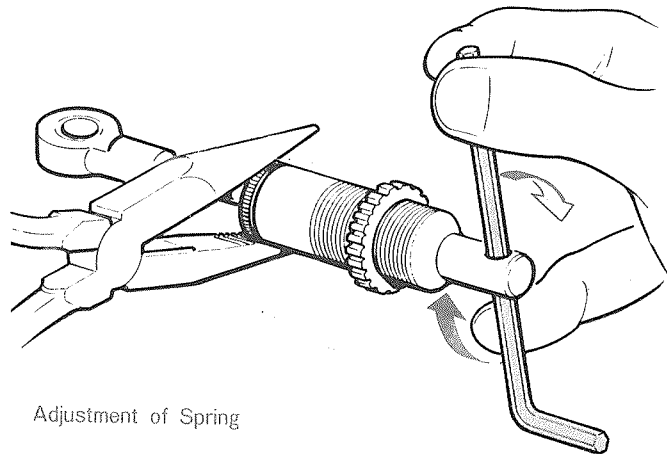
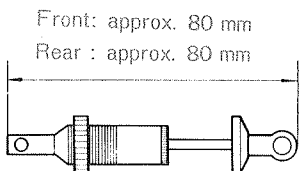
- 1) push down the spring as shown in the drawing.
- 2) slide out the spring cup A to remove.
- 3) take out the spring.
- 4) spin the stopper to remove.



1. Push the piston all way down and pour oil up to the line shown in the drawing in order not to have air bubble inside.
2. Assemble parts as shown in the picture.
3. Move the piston up and down to see if it moves smoothly.

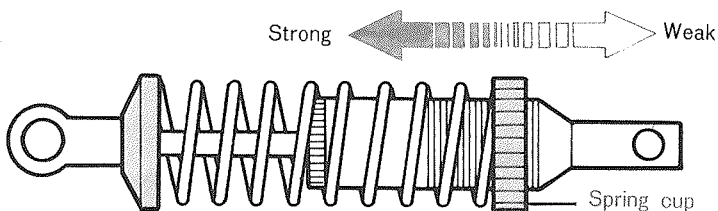
Apply oil in the shock and fasten the stopper firmly as indicated in the drawing.

Note: Apply oil in the shock and assemble parts back as before. Adjust the shock end in order to have the same length of the shock in front and rear as indicated below. (adjust in an extended state)



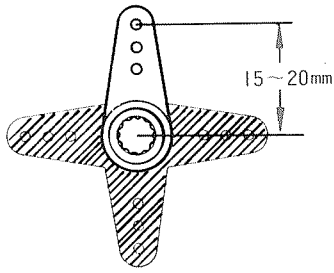
Note: Do not flaw the shock case when fastening the stopper with needle nose pliers.

Adjustment of Spring

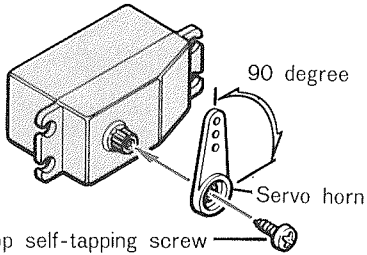


Tighten the spring cup B to increase strength and loosen it to decrease the same. Adjust it according to the racing condition.

2 Mounting and Adjusting of Steering Servo

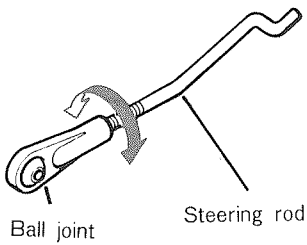


Modify servo arm as shown, removing parts covered by slash mark.



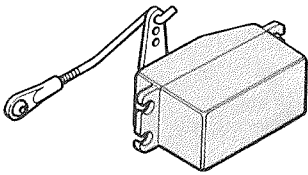
Prop self-tapping screw

Wire the steering servo and put servo center at neutral position.



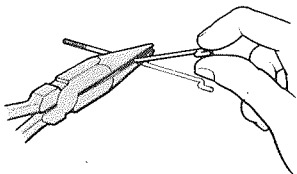
Ball joint

Steering rod

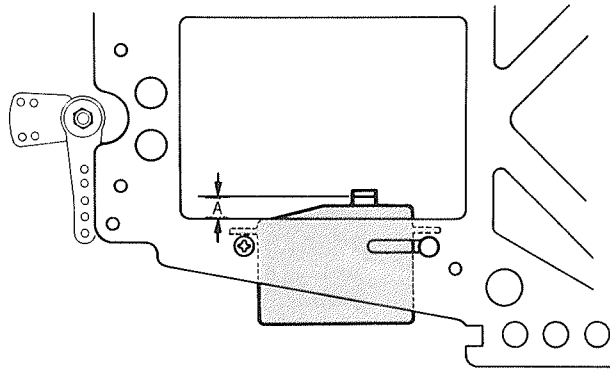


Set the steering rod in the servo horn.

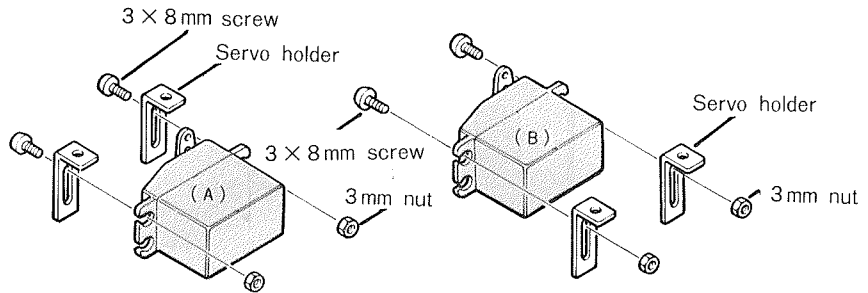
Bring the steering rod into line with the same angle as shown in the picture.



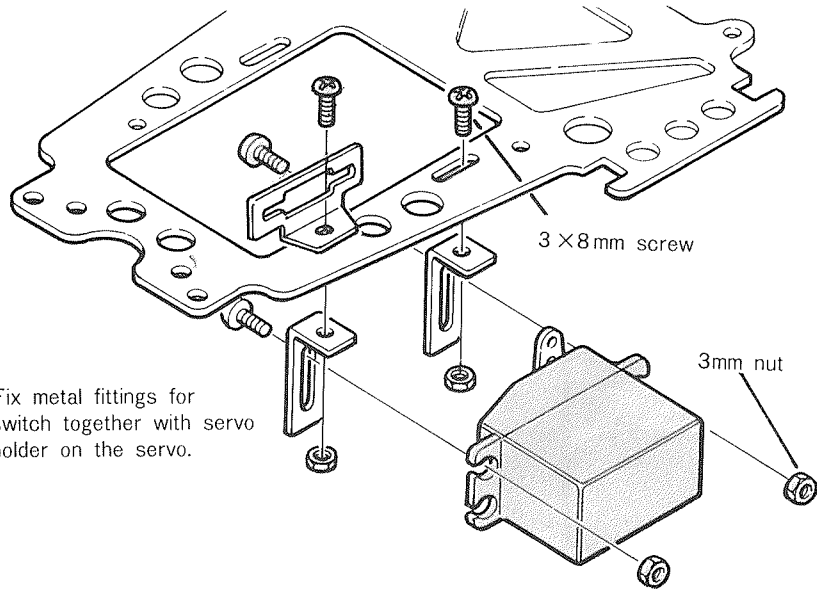
Bend it to match servo by needle nose pliers.



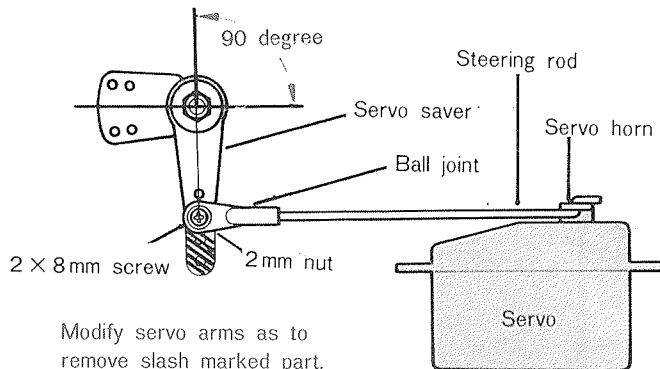
Adjust the width of A in order not to have servo horn contact the mechanical plate



Some servo may contact the mechanical plate. Adjust A width by either above A or B means and/or use washer (attached).



Fix metal fittings for switch together with servo holder on the servo.

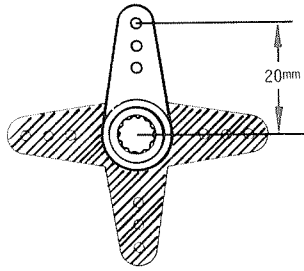


Modify servo arms as to remove slash marked part.

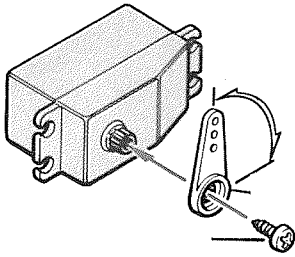
Use adjustable ball joint to place both servo horn and servo saver at the same angle of 90 degree.

After installing the steering servo, see if the steering works correctly.

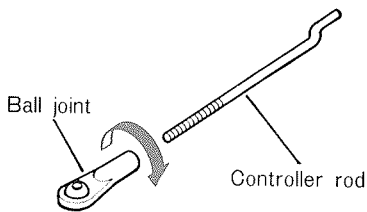
3 Mounting and Adjusting of Controller Servo



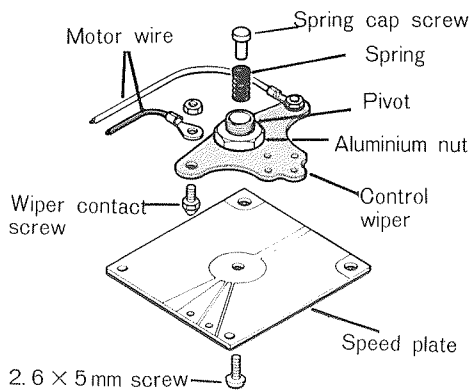
Modify servo horn as to remove the slash marked part in the picture.



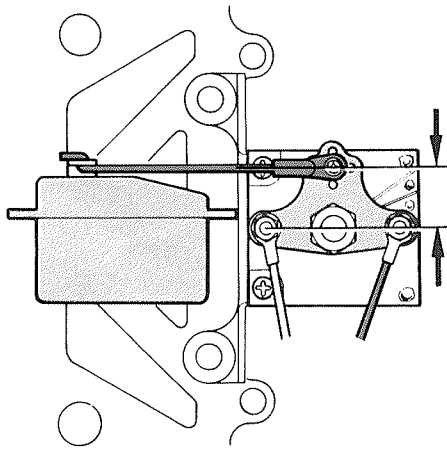
Wire the controller servo and put servo's center at neutral position.



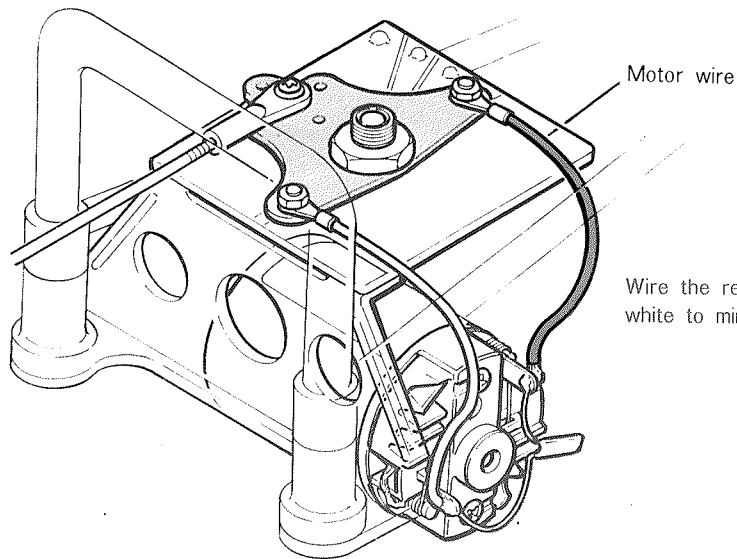
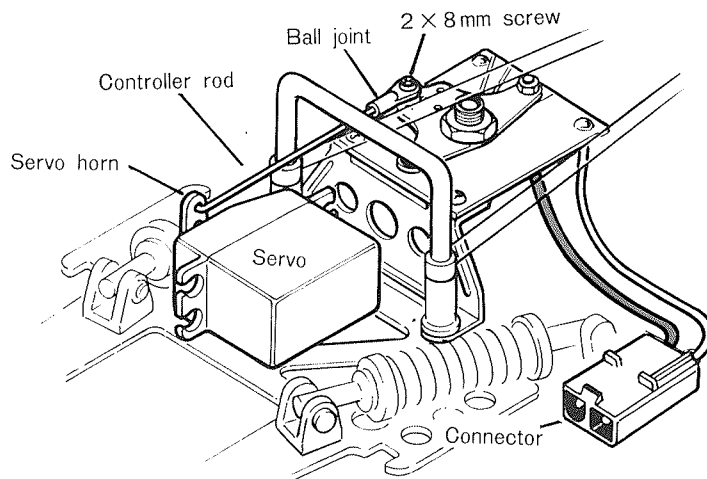
Controller Disassembly Drawing



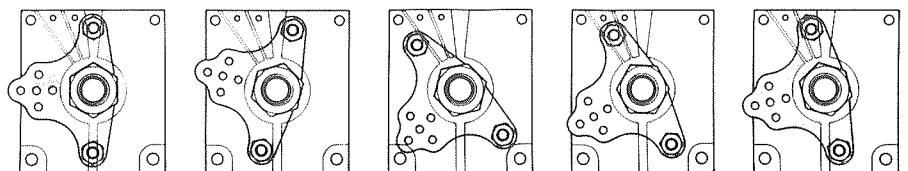
Note: Always keep the contacting point clean. AYK's Hi-speed 1200 cleaner is recommended to dust off the specks after each running.



Mount the servo on the mechanical plate with both-sided adhesive tape. Make sure controller rod parallels to control wiper.



Wire the red cord to plus (+) and white to minus (-).



neutral

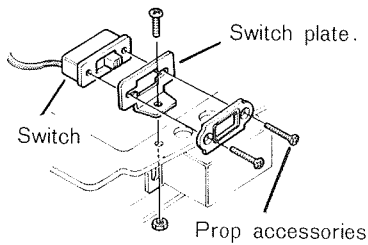
full-speed/reverse

full-speed/forward

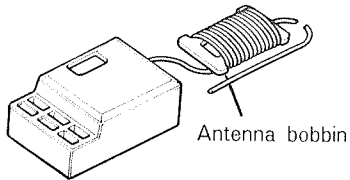
second/forward

low/forward

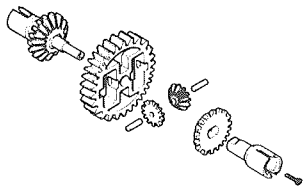
4 Installation of Receiver, Switch, Battery case, 7.2V/1200m AH Ni-cad Battery Pack



Wind up extra antenna round the bobbin.



5 Removing Motor and Adjusting Gear Case

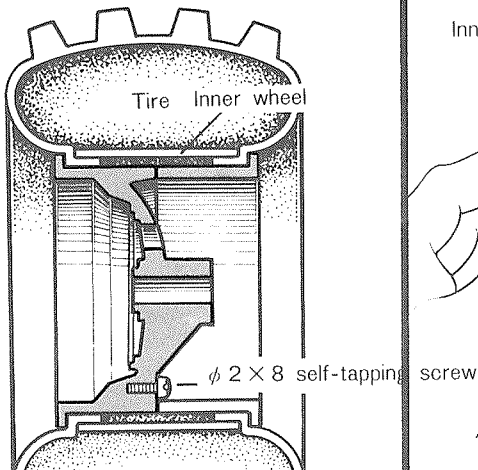


This kit includes 12T. motor pinion gear. Use 13T. or 14T. gear, which is available as optional accessories, in accordance with race type.

| Pinion Gear | Gear Ratio |
|-------------|------------|
| 12T. | 10 : 1 |
| 13T. | 9 : 1 |
| 14T. | 8 : 1 |

6 Tire Assembly

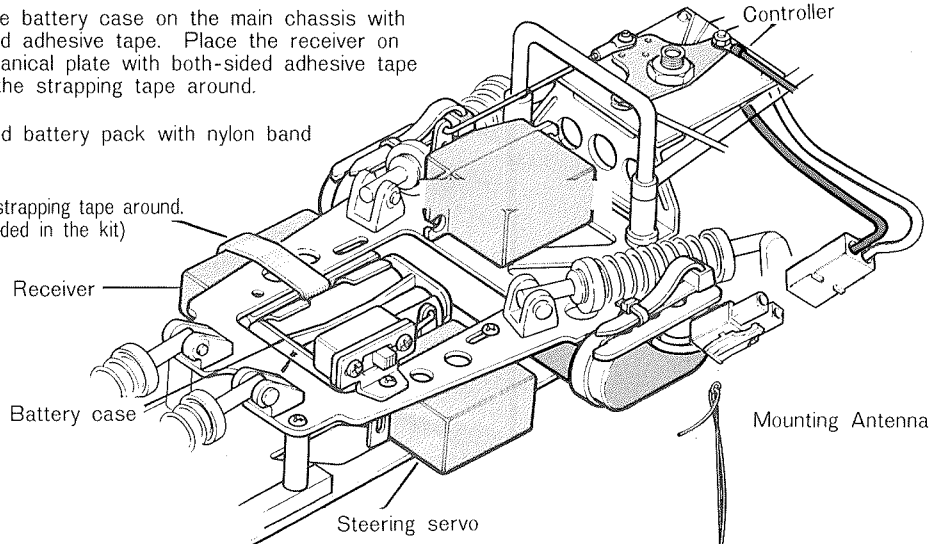
Cross-sectional view of the tire



Mount the battery case on the main chassis with both-sided adhesive tape. Place the receiver on the mechanical plate with both-sided adhesive tape and roll the strapping tape around.

Fix ni-cad battery pack with nylon band (large).

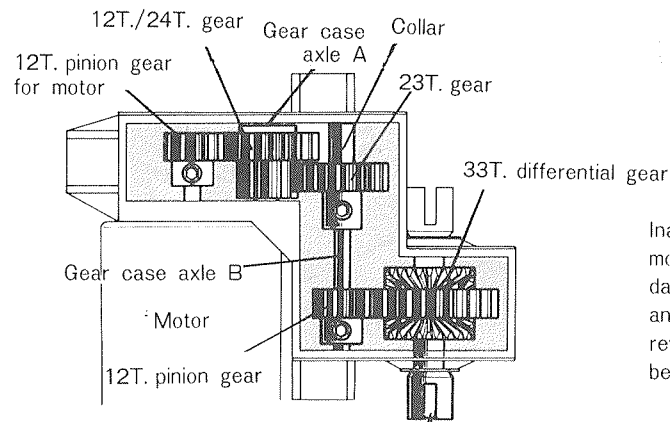
Wind the strapping tape around. (tape included in the kit)



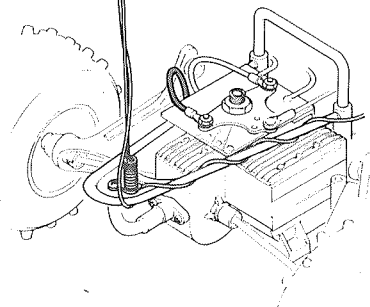
(Note): Make sure rear tire and/or drive joint do not get caught in the antenna.

Fill oil in the gear case.

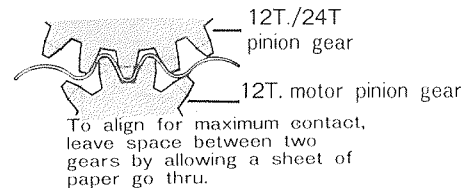
Mount oilete bearing or other optional bearings on the body with instantaneous bonding agent.



Put in 2mm screw from this side.

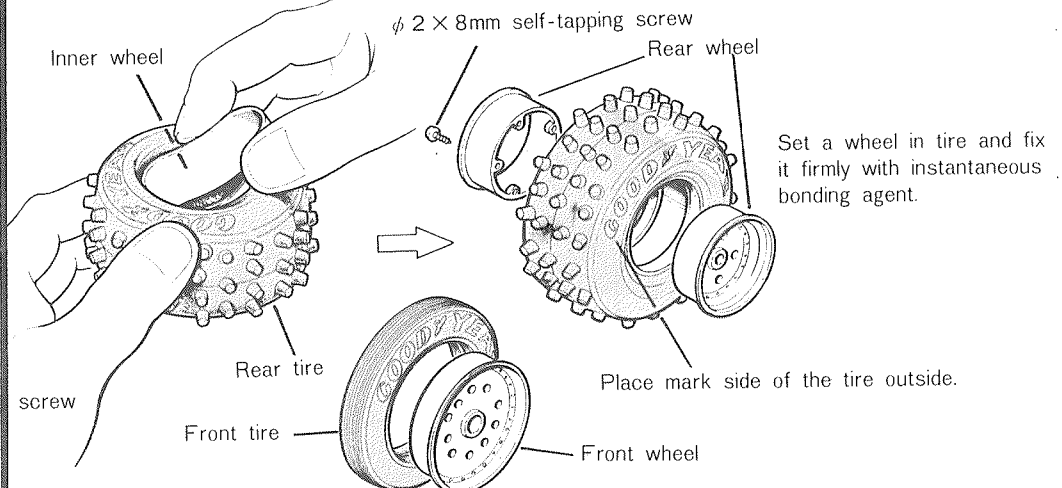


Inadequate adjustment of motor pinion gear may cause damage in motor, controller and gear due to interrupted revolving. Adjust as shown below.



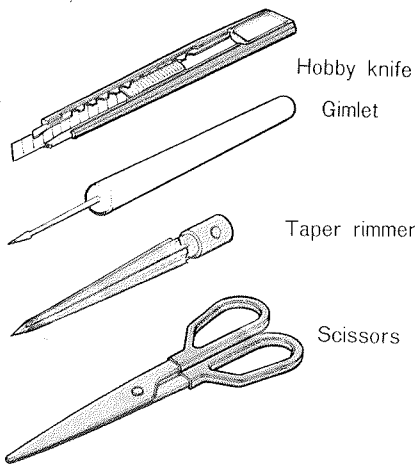
Note 1 : Motor should be mounted with 3 × 8mm cap screws.

Note 2 : After mounted a motor, please cover the adjustable hole of gear case with the attached rubber cap.



7 Trimming the Body and Its Mounting

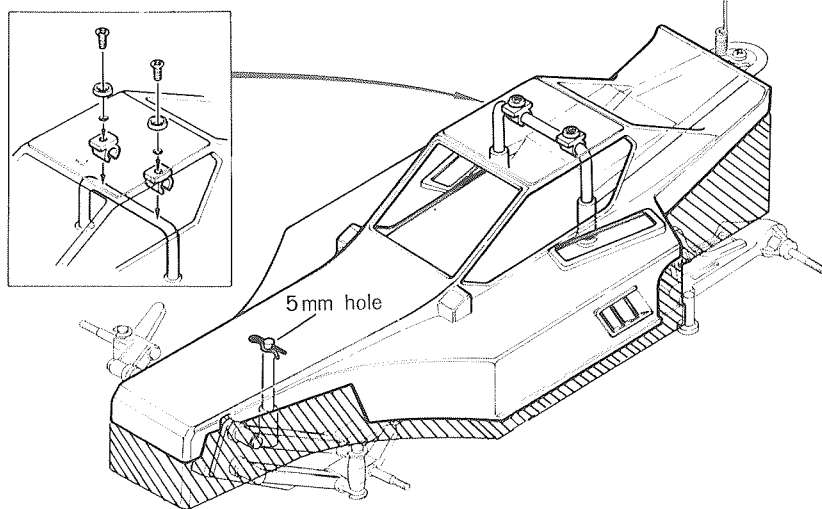
Scissors, hobby knife, gimlet and taper rimmer are required.



Trimming the body and cutting out opening

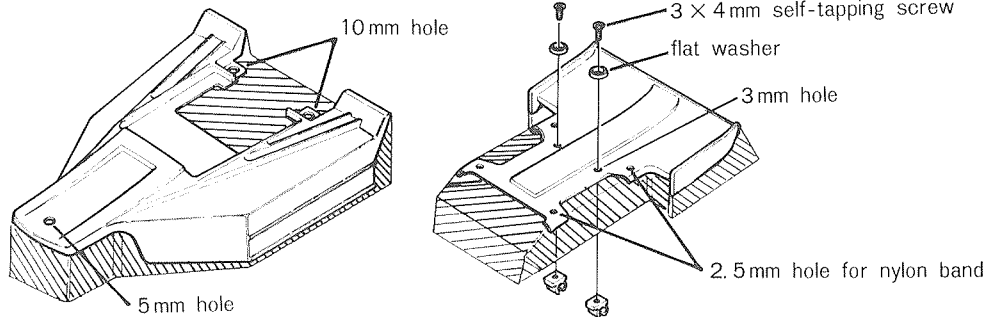
<Body-shell type>

Mount rear body post on the reverse side.



<Pipe framed type>

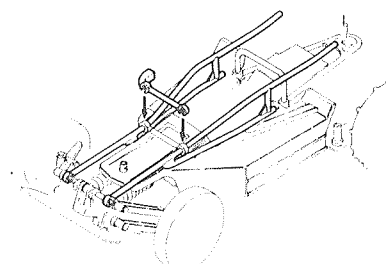
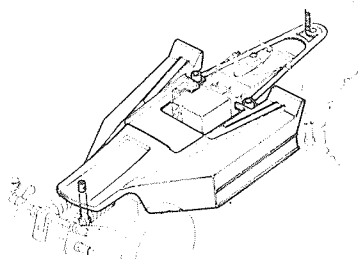
Mount rear body post on the reverse side.



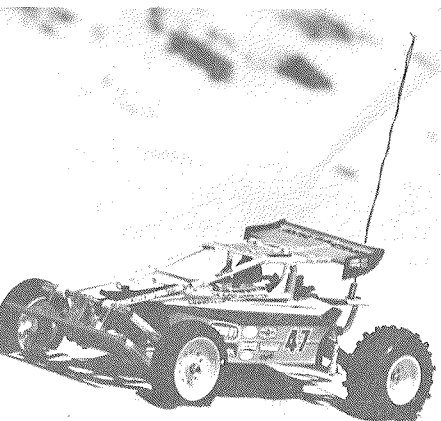
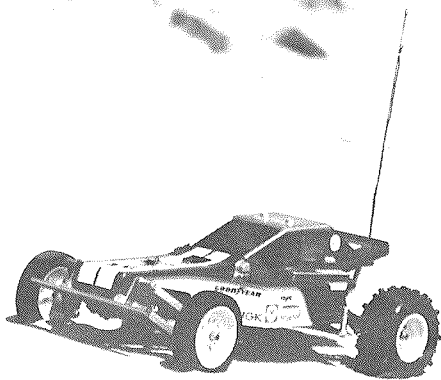
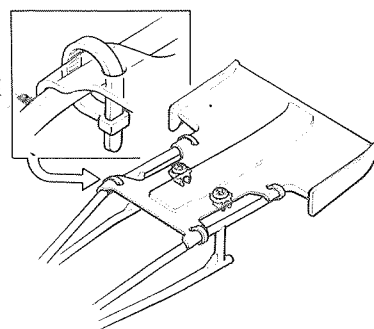
- (1) Bodies can be trimmed with scissors or by scoring along trim lines with a hobby knife.
 - (2) Drill holes as marked in a body with a gimlet or rimmer.
 - (3) Mount the rear body post on the body with 3 × 4 mm tapping screws as shown in the drawing.
- (Pipe framed type-Body Mounting)

- (1) Attach semi cowl using roll bar holder and front body post.

- (2) Fix the edge on the front upper axle.

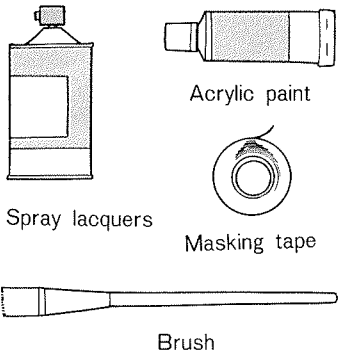


- (3) Fix the roof wing on the roll bar and use nylon band (small) to fix pipe frame as shown in the picture.



8 Painting the Body

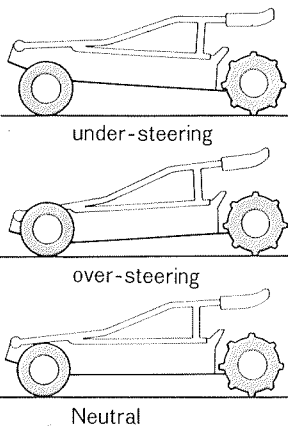
The body is made of durable polycarbonate. Paint the inside first for the best finishing. Brush on acrylic paint as designed. Use masking tape for stripping windows and apply spray lacquers (for polycarbonate) to entire body.



9 Adjustment Body Heights and Steering

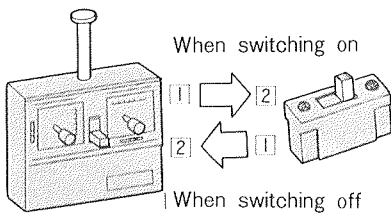
<Adjusting front body height>

Unfasten the set screw of shock mount to adjust the body height. In principle, set the chassis parallel to road surface.



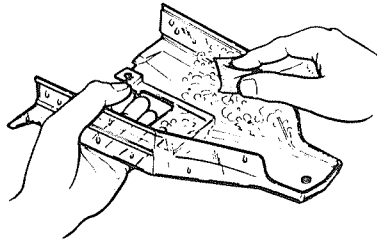
10 Checking Points before Running a Trial

Make sure to switch on both transmitter and receiver in order.

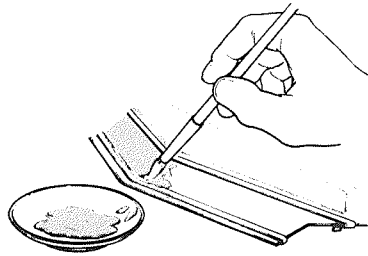


Be sure to follow the right order. In case receiver is turned on prior to the transmitter, mixing up with other radio wave may occur and cause reckless running of the car.

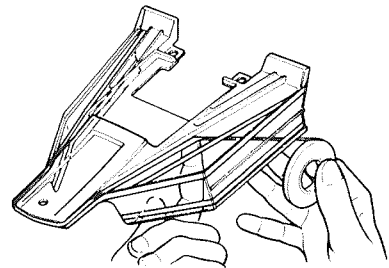
- ① Wash the inside of the body thoroughly in a neutral detergent water.



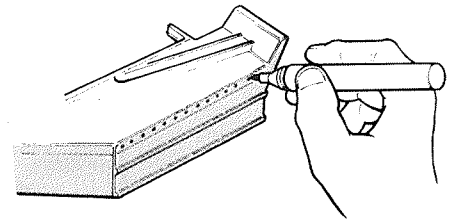
- ③ Coat the reverse side first. Use masking tape to prevent overflowing of the paint.



- ② Design your coloring pattern.

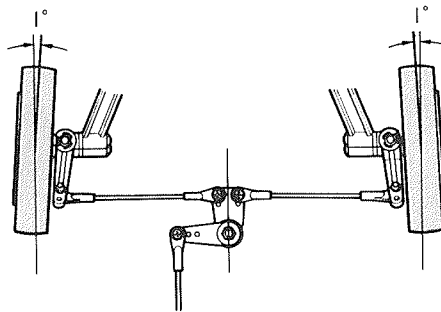


- ④ After coating gets dry, you may use an oil marker pen to draw design for the sake of accentuation.

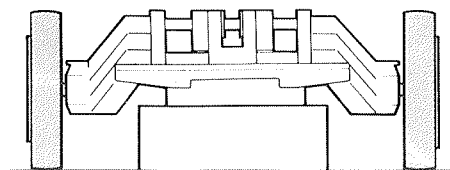


Steering Adjustment

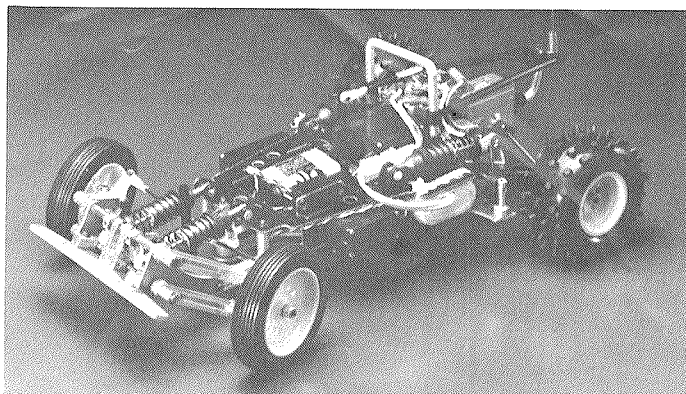
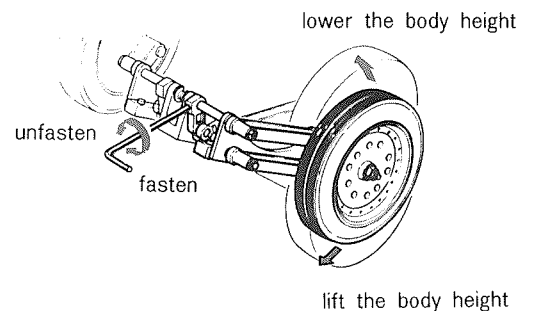
This is an important point to improve straight-driven efficiency and steering quality in cornering.



Body height adjustment in front end



As shown in left, set 1 degree to 2 degree toe-in for both sides. Adjustable ball joint must be used while holding the servo saver at neutral position.



Check following points before racing:

- ① Check all screws and nuts to be secure.
- ② See if battery capacity for transmitter and receiver is enough.
- ③ Make sure ni-cad battery has been charged sufficiently.
- ④ Check steering servo and controller servo for correct response.

RO SIDEWINDER TUNING

1 Motor

AYK presents following motors and parts from which you can choose right ones according to the road surface and type of race.

GZ-480 Motor:

It features economic consumption of current, so that it is most appropriate for many hours run and long race.

GZ-480 Magnum Rotar:

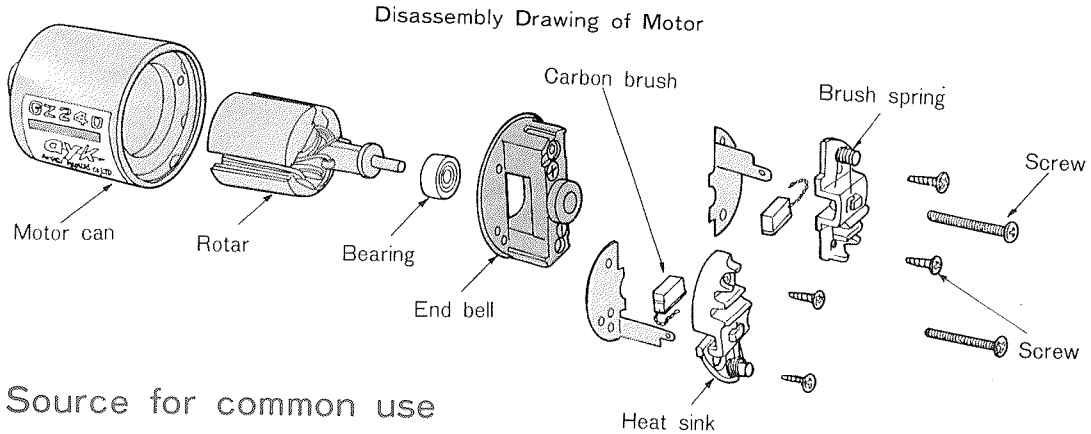
It is especially made for racing with highly efficient performance on the small current consumption.

GZ-240 Motor:

This high-powered motor promises you dynamic performance. Most appropriate for sprint race for short distance.

GZ-240 Magnum Rotar:

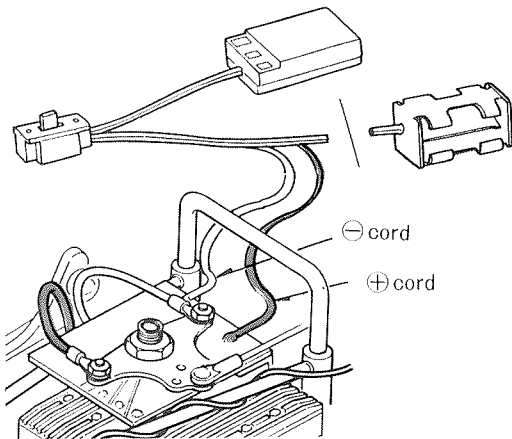
Developed for sprint race use with the best torque and rotational frequency.



2 Power Source for common use

Using one power source for both receiver and battery serves the purpose of lightening a car weight since battery case is not required.

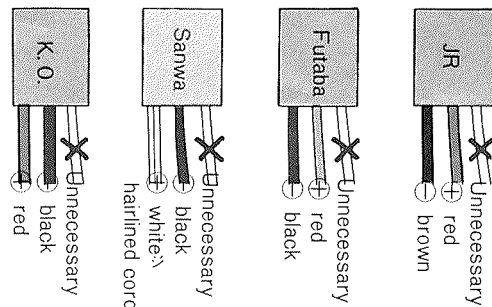
① Cut off battery case as shown.



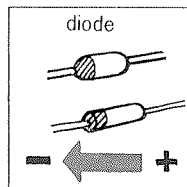
Wire the connector cords and solder them according to the wiring diagram above:

Note: Be sure put ⊕ code thru diode

② Confirm plus and minus cord of each maker:



Note 1: Direct wiring of ⊕ cord without diode would damage servo and receiver. Also confirm the direction of current as diode lets current flow only in one direction.



While sharing power source, voltage drop of battery may lead out of control state. Stop the car immediately when it starts slowing down.

3 Light weight Advantage

Light weight is an important element for improving the speed, traveling time and performance. Described below are three ways of lightening weight:

① Aluminium screw

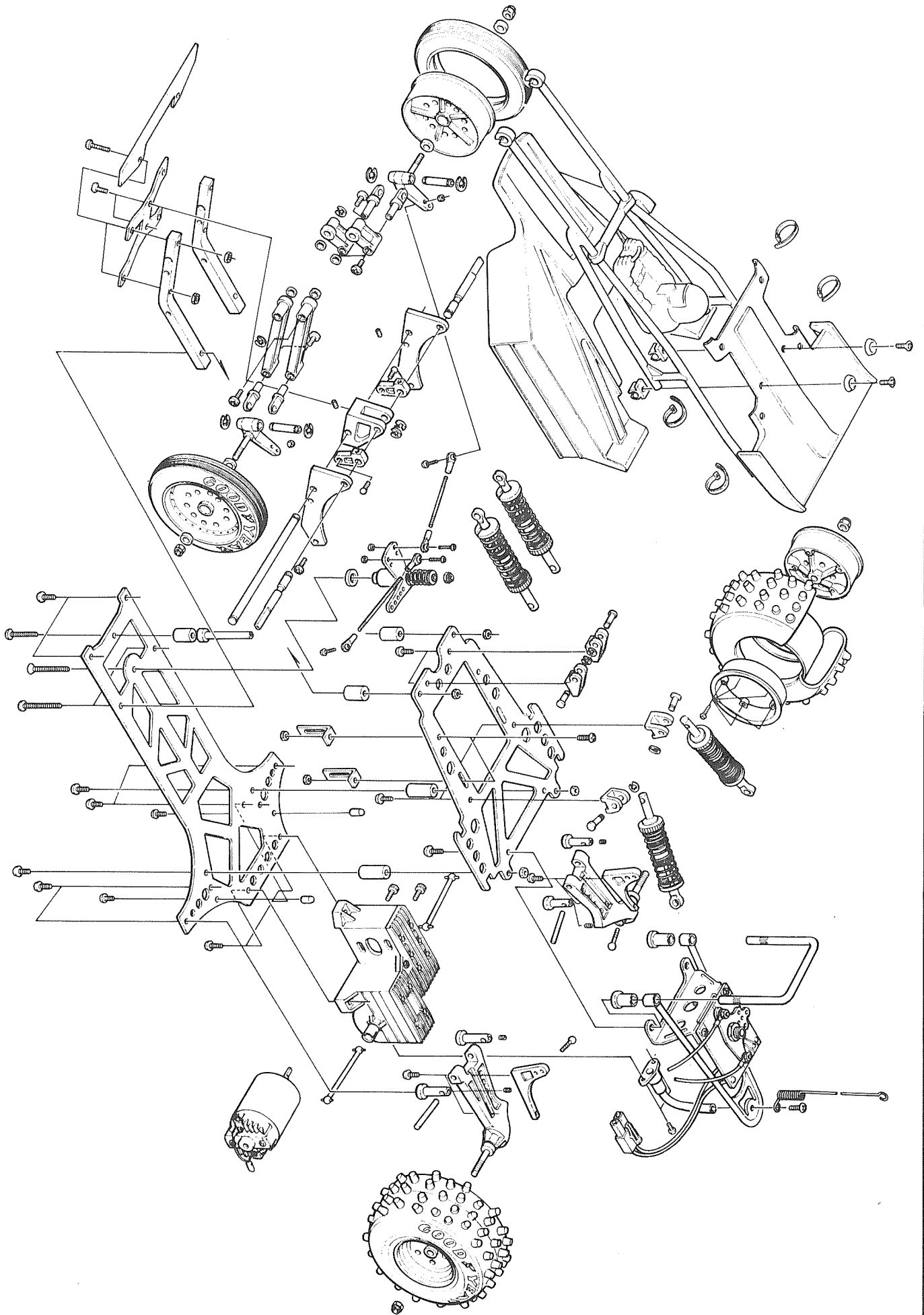
Using aluminium screws has decreased the total weight which would gain you a victory over a race.

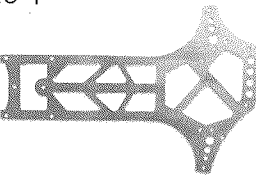
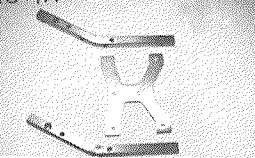
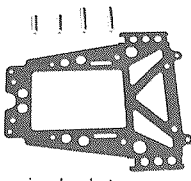
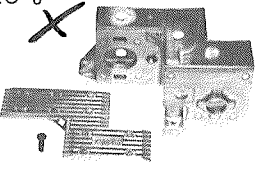

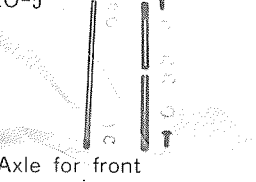
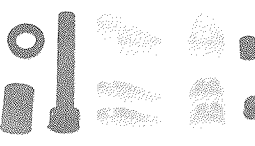
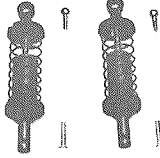
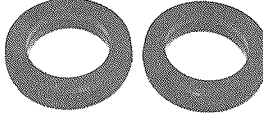
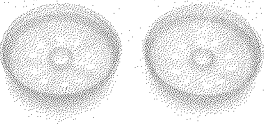
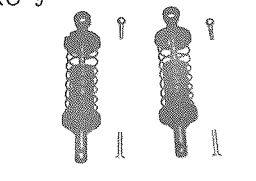
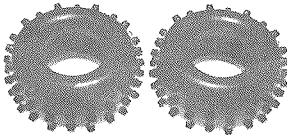
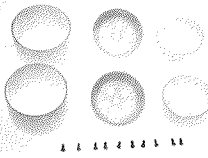


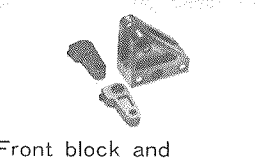
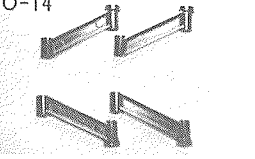
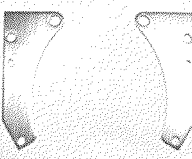
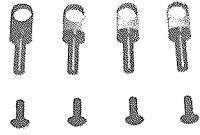
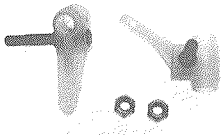
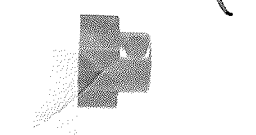
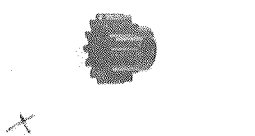
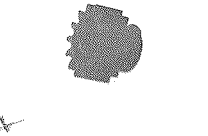
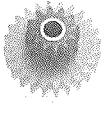

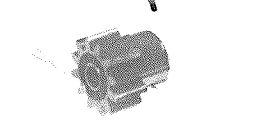
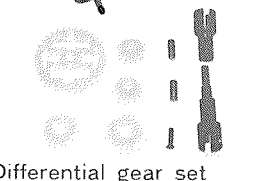
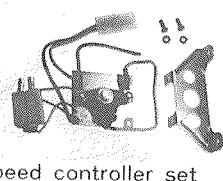
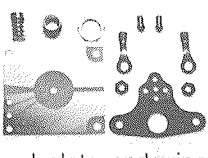
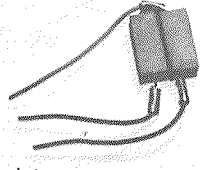
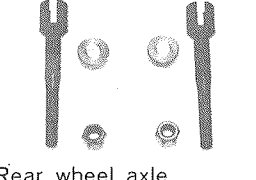
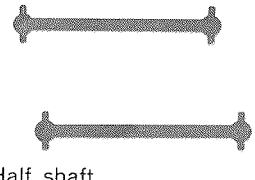
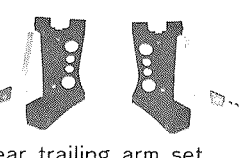
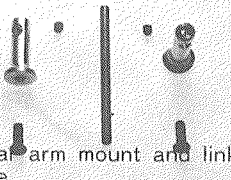
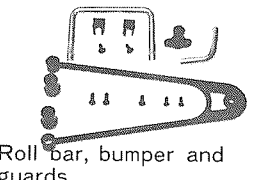
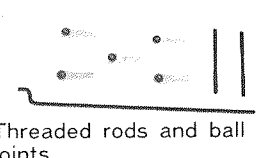

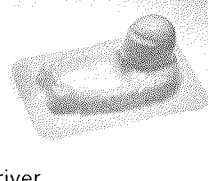
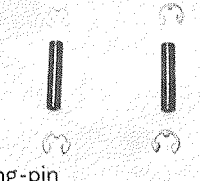
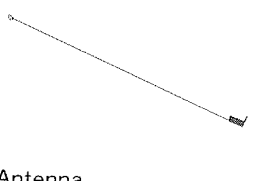
② Electric amplifier

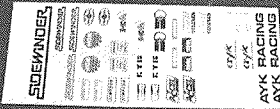


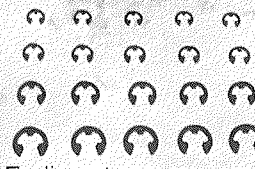
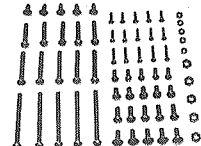
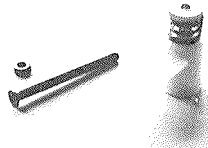

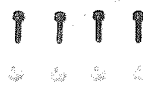

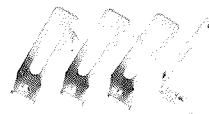
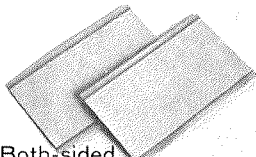

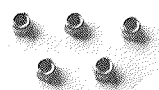


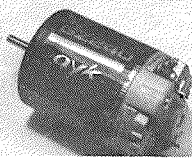

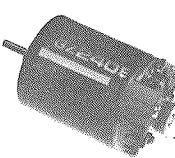
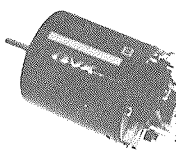
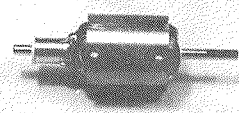
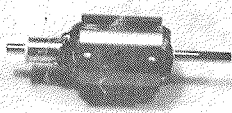

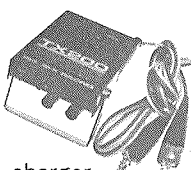
Many of highly efficient electric amplifiers are available on sale. Use of electric amplifier eliminates troublesome linkage work. When an amplifier is applied, battery case for the receiver, controller and controller servo are not required.

③ Mini servo

Any mini servo on the market can be used. Since mini servo weighs only half of general servo, that it enables to decrease car weight further.



| | | | | |
|--|--|---|---|--|
|  <p>RO-1 Main chassis</p> |  <p>RO-1A Front guard and frame rails</p> |  <p>RO-2 Mechanical plate</p> |  <p>RO-3 Gear case</p> |  <p>RO-4 Front bumper</p> |
|  <p>RO-5 Axle for front suspension arms</p> |  <p>RO-6 Plastic parts set</p> |  <p>RO-7 Front shock set</p> |  <p>RO-8 Front tire</p> |  <p>RO-8A Front wheel</p> |
|  <p>RO-9 Rear shock set</p> |  <p>RO-10 Rear tire</p> |  <p>RO-10A Rear wheel</p> |  <p>RO-11 5mm ball bearings</p> |  <p>RO-12 6mm ball bearings</p> |
|  <p>RO-13 Front block and shock mount set</p> |  <p>RO-14 Front suspension arms</p> |  <p>RO-15 Front side plate</p> |  <p>RO-16 Supporter for steering arm</p> |  <p>RO-17 Steering arm set</p> |
|  <p>RO-18 12T. motor pinion gear</p> |  <p>RO-19 13T. motor pinion gear</p> |  <p>RO-20 14T. motor pinion gear</p> |  <p>RO-21 12T. x 24T. gear</p> |  <p>RO-22 23T. gear</p> |
|  <p>RO-23 12T. pinion gear</p> |  <p>RO-24 Differential gear set</p> |  <p>RO-25 Speed controller set</p> |  <p>RO-26 Speed plate and wiper</p> |  <p>RO-26A Resistor</p> |
|  <p>RO-27 Rear wheel axle</p> |  <p>RO-27A Half shaft</p> |  <p>RO-28 Rear trailing arm set</p> |  <p>RO-29 Rear arm mount and link</p> |  <p>RO-30 Roll bar, bumper and guards</p> |
|  <p>RO-31 Threaded rods and ball joints</p> |  <p>RO-32 Shock end set</p> |  <p>RO-33 Driver</p> |  <p>RO-34 King-pin</p> |  <p>RO-35 Antenna</p> |

| | | | | |
|---|---|--|---|---|
| <p>RO-36</p>  <p>Decals</p> | <p>RO-37</p>  <p>SIDEWINDER body shell</p> | <p>RO-38</p>  <p>Pipe framed body</p> | <p>RO-39</p>  <p>E-clip set</p> | <p>RO-40</p>  <p>Screw set</p> |
| <p>RX-18EX</p>  <p>Servo saver</p> | <p>RX-28</p>  <p>Hexagon wrench set</p> | <p>RX-36</p>  <p>2mm lock nut and 2x8mm cap screw</p> | <p>RX-38</p>  <p>4x4mm set screw</p> | <p>61AL</p>  <p>Servo holder</p> |
| <p>RB-26</p>  <p>Both-sided adhesive tape</p> | <p>RB-44</p>  <p>3mm lock nuts</p> | <p>RB-46</p>  <p>4mm lock nuts</p> | <p>RS-39</p>  <p>Set screw 3x3mm 3x5mm</p> | <p>RS-73</p>  <p>Shock oil</p> |
| <p>GZ-240</p>  <p>Motor for short race</p> | <p>GZ-480</p>  <p>Motor for long race</p> | <p>GZ-240E</p>  <p>Economical motor</p> | <p>GZ-480B</p>  <p>Basic motor</p> | <p>Magnum rotar GZ-240</p>  |
| <p>Magnum rotar GZ-480</p>  | <p>GS-1200</p>  <p>7.2V/1200mAh NiCad pack</p> | <p>TX-200</p>  <p>Quick charger</p> | | |