OFF-ROAD RACER *Featuring Unique All-Wheel Steering!*

PROGRESS 4-wdS

1 : 10 SCALE RADIO CONTROLLED ELECTRIC POWERED
SPECIAL OFF-ROAD RACING BUGGY
4 WHEEL DRIVE & 4 WHEEL STEERING

1:10 SCALE

BATTERY : 7.2V-1200mAh
RADIO : 2ch.
〔NOT INCLUDED〕

TECHNICAL DATA
- Length/395mm (15.6")
- Width/230mm (9.1")
- Ground clearance/27mm (1.1")
- Wheelbase/262mm (10.3")
- Front tire/85mm dia×32mm (3.35×1.25")
- Rear tire/85mm dia×40mm (3.35×1.6")
- Motor/Mabuchi RS-540S
- Total weight/1640g (57.8 oz)

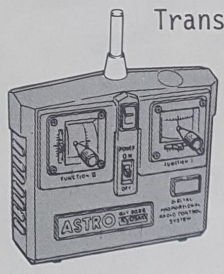
KYOSHO
THE FINEST RADIO CONTROL MODELS

KIT No.3067

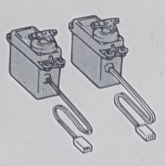
PAT. P.
INSTRUCTION MANUAL

RADIO CONTROL SET

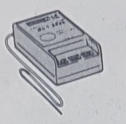
A 2 channel, 2 servo digital proportional radio control unit is required for driving this model car. A unit of such a radio can be used for any models with 2 channel.



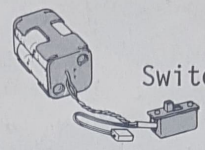
Transmitter



Servo



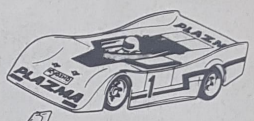
Receiver



Battery Case

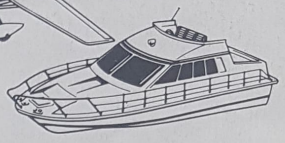
Switch

R/C Car



Boat

Small Airplane



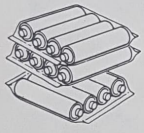
NI-CAD BATTERY

It is formally called a nickel cadminum battery, which is more economical than a dry cell battery, since it can be recharged for reuse over and over again. Also with its retularized voltage it is an ideal power source for driving radio controlled models.

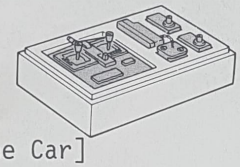
THINGS TO BE PROCURED BESIDES THE KIT

[2 ch. Radio Control System]

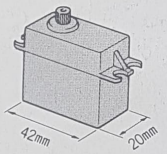
Average size of the receivers and servos can be installed to the "Progress 4WDS".



Battery for Radio Control System



2 ch. Radio Control System



The Maximum Demension to Mount

[Battery for Propelling the Car]

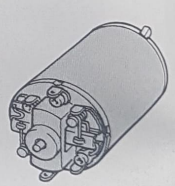
The "Ni-Cad Battery 6N-1200" or "7.2V Racing Battery" are ideal for the purpose.

6N-1200 Battery

7.2V Racing Battery

[Motor]

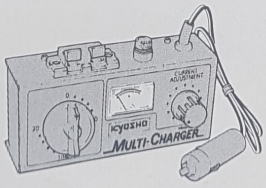
Mabuchi RS-540S motor is installed to the gear box as a standard.
In addition, Racing motor "Le Mans 600E - regular high torque type" and "Le Mans 480T - high torque type for 8 minutes race" are available as an option.



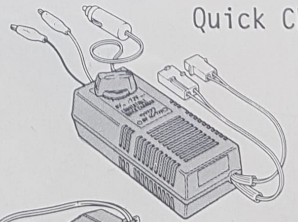
[Charger for Ni-Cad Battery]

The Ni-Cad batteries are capable to be recharge for recurrent use over 300 times. We have 2 types of chargers; one is a 15-hours type powered from a household 100V outlet, and the other is a rapid type taking only 15 minutes to charge a battery powered from a 12V car cigarette lighter.

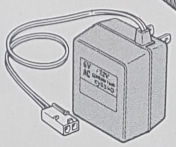
The Multi Charger is a multi purpose rapid type charger to be able to recharge 5N or 6N 1200 Battery and a of a receiver of a radio control set.



Multi Charger (12V General Purpose rapid Charger)



Quick Charger for 12V



100V AC Charger from Household Outlet

TOOLS REQUIRED FOR ASSEMBLED

Following tools and cement included in kit.

1.5mm Allen Wrench

2mm Allen Wrench

Thread Lock Agent

To be applied to the screws and nuts to avoid loosen or lost while running.

Follwong tools have to be ready for assembling.

+ Driver (L, S)

- Driver (L, S)

5.5mm & 7mm Box Driver

Scissors

Radio Pliers

Plier

Awl

Cutter

Instant Cement

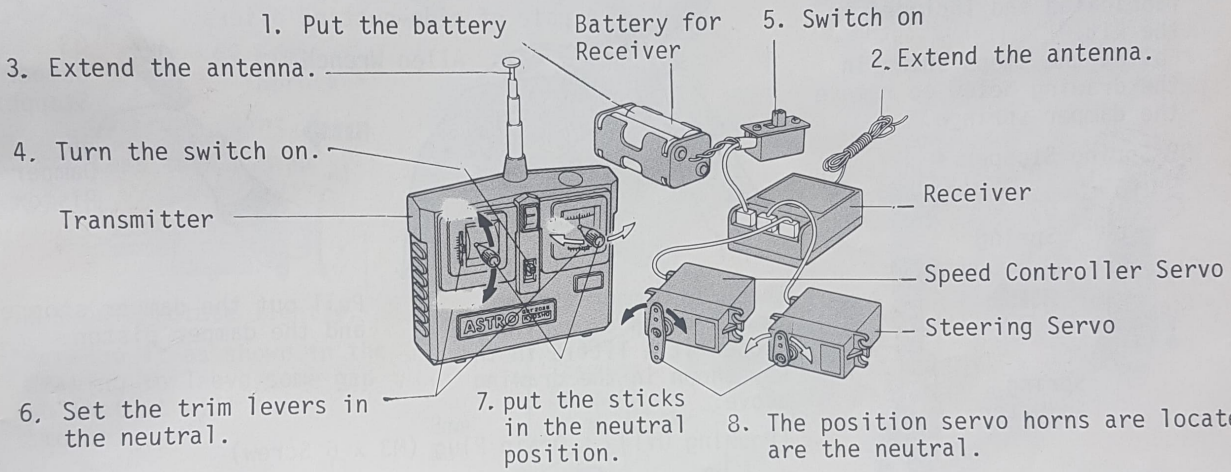
Polyca Color

Masking Tape

Brush

HOW TO CHECK RADIO CONTROL UNIT

Manipulate the radio in order of the number 1 to 8.



*When turning the switch on, get the switch of the transmitter first, then that of the receiver.

A 2 channel radio control set is composed of a transmitter, a receiver, two servos, and a battery box.

*Transmitter ..... This is to control the models. The manipulation of the control sticks is signaled from an antenna in the form of electric waves.

*Receiver ..... Transmits the wave signals received to the servos.

*Servos ..... Operate the controls by means of motor and gears according to signals provided from the receiver.

*Antenna ..... Plays an important role of emitting the wave signals from the transmitter antenna, and the receiver antenna catches them. They must be fully extended when in operation.

*Trim Levers ..... Adjust the neutral position of the servos and fine tuning of steering, and of the speed controlleer to control forward or backward advancement.

*Lever Meter ..... This is to detect the amount of electricity left in the battery, and how distinctly the signal waves are emitted.

*Servo Horn ..... This is to transfer the movements of the servo to a controlled component. There are several types in shape to be selected depending upon the use.

[Before Assembly]

Read this instruciton carefully. Your previous understanding of the model structure will facilitate the assembly. When you have purchased the kit or in prior to the assembly, check the contents of the kit. If you find anything missing, please ask your hobby shop. Any exchange or refund of your kit cannot be accepted after you have started the assembly.

*Small fixtures such as screws, spacers, and washers are illustrated in the actual size.

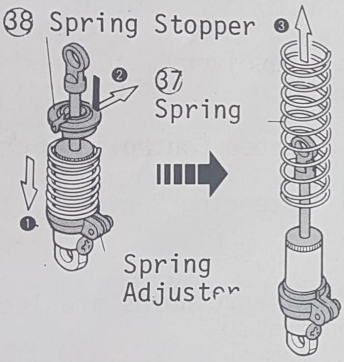
*Apply "Thread Lock Agent" to any point indicated with SW-LOCK mark.

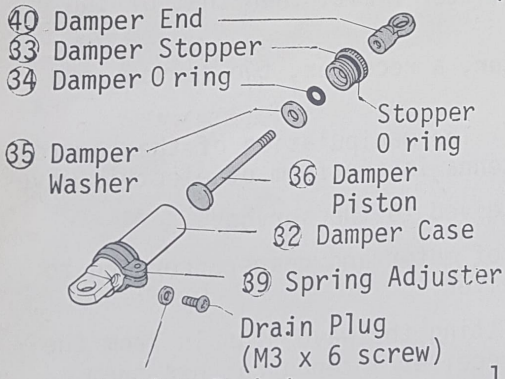
(Note)

1. Try not to apply a thread-lock-agent to other places than indicated so. The agent may dissolve nylon parts.
2. Be careful not to tighten self-tapping-screw too tight. Otherwise you may destroy the thread.
3. Trim off bars of the plastic parts with a knife.

1 FILLING OIL INTO DAMPER

*Dissassemble the three dampers, which have been fabricated and included in the kit.
*Follow the steps shown in the drawing below to remove the damper springs.

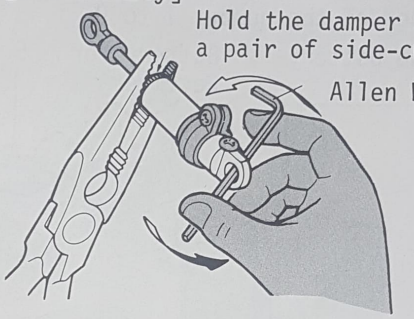




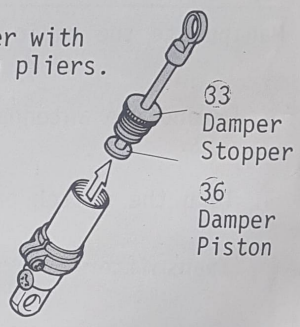
[Exploded View of Damper]

1 FILLING OIL INTO DAMPER

[Disassembly]

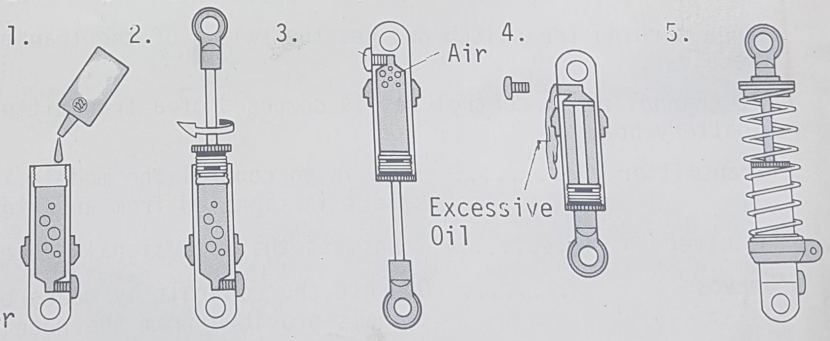


When the damper stopper is thightend excessively, loosen it a little in the way shown in the drawing above.



Pull out the damper stopper and the damper piston.

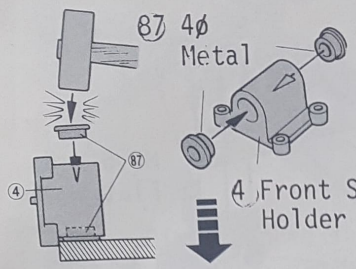
[Pouring Oil] Drain Plug (M3 x 6 Screw)

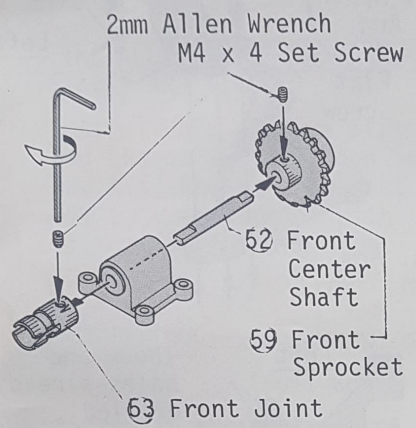


1. Fill up the damper cylinder with oil up to the inner Shoulder.
2. Tighten up the damper stopper by hand to such a degree that the O-ring will not get out of position.
3. Hold the oil damper upside down for 30 seconds until the air rises up to the other end.
4. Remove the drain plug and compress the piston gradually. When you have pushed it up all the way and expelled the excessive oil, screw in the plug.
5. Put the spring as it was at the beginning.

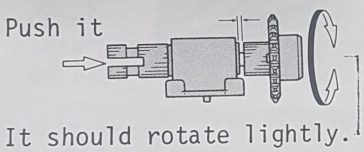
2 ASSEMBLY OF FRONT BLOCK

Drive the front shaft holders in with a hammer.





Less than 0.5 mm

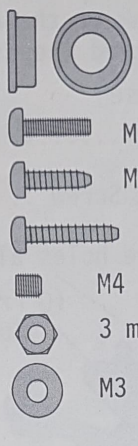


It should rotate lightly.

*Arrange it as shown in the drawing to leave some gap so that it will turn smoothly.

2 ASSEMBLY OF FRONT BLOCK

[Small Parts in Use]

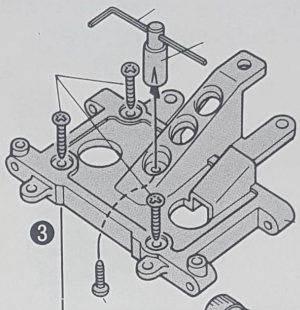


	4ø Metal	2
	M3 x 10 Screw	2
	M3 x 10 Self Tapping Screw.	5
	M3 x 14 Self Tappin Screw	3
	M4 x 4 Set Screw	2
	3 mm Nut	2
	M3 Washer	8

Hold it with a 1.5 mm allen wrench.

(103) Body Support (Install it previously.)

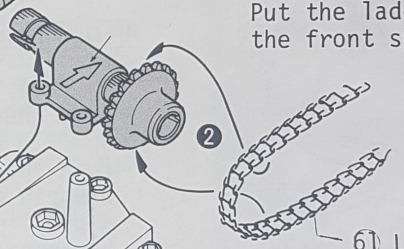
(Note) Assemble it in order from ① to ③ steps.

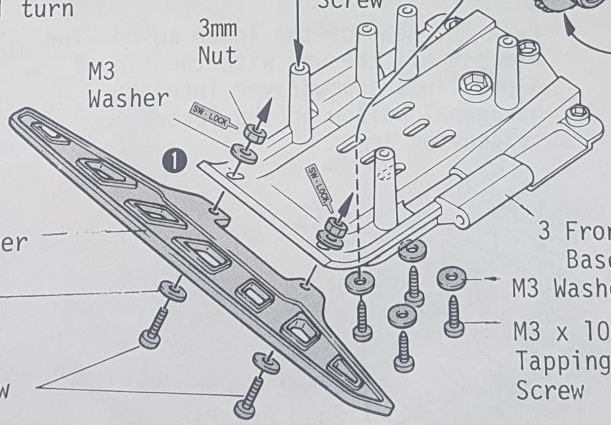


② Front Head

④ The front shaft holder is designed to slide. Keep it in the most backward position when fixing it tentatively.

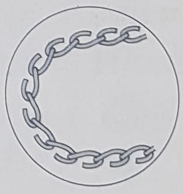
Put the ladder chain on the front sprocket.





61 Ladder Chain

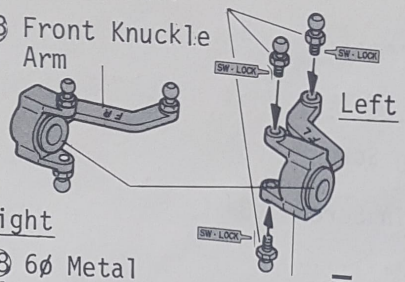
Be carefu about the direction of the chain.



3 ASSEMBLY OF FRONT SUSPENSION ARM

㉘ Pillow Ball

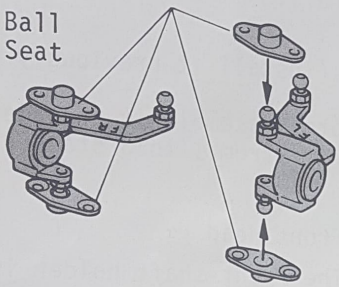
㉓ Front Knuckle Arm



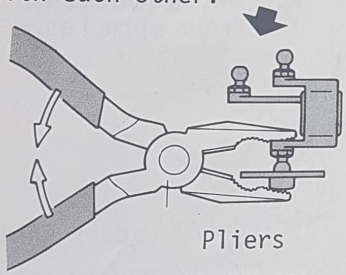
㊽ 6ø Metal (Assembled by Pressing in the Factory)

㉔ Front Knuckle Arm

㉗ Ball Seat



Use a pair of plier to fit the ball seat onto the ball, as they are made to be tight with each other.



Pliers

4 INSTALLATION OF FRONT SUSPENSION ARM

[Small parts in use]

M3 x 15 Screw

3 mm Nut

M3 x 5 Set Screw

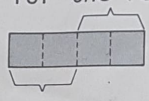
M4 x 4 Set Screw

M3 Washer

Cut the rubber pipe into four pieces, 5mm long each.

Use this portion for the rear damper.

㊷ Damper Rubber Pipe (Actual Size)



Use this portion for the rear damper.

3 ASSEMBLY OF FRONT SUSPENSION ARM

*The work in this step is a little complicated. Look at the drawings carefully to proceed the assembly.

[Small parts in use]

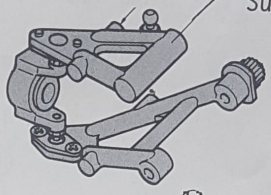
Pillow Ball 6

M2.6x5 Flat Screw .. 8

There are holes already drilled.

⑩ Front Upper Sus. Arm

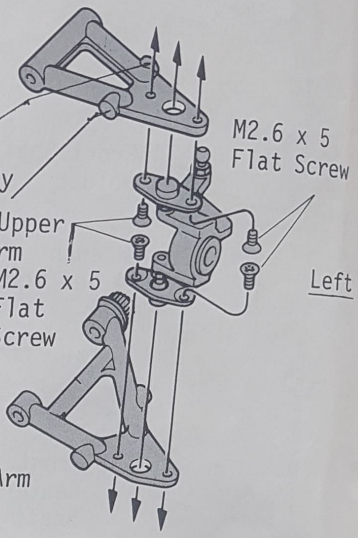
Right



M2.6 x 5 Flat Screw

M2.6 x 5 Flat Screw

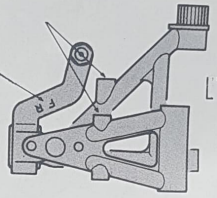
Left



⑪ Front Sus. Arm

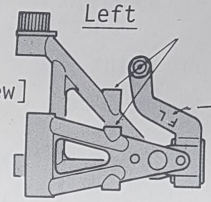
There are holes already drilled.

Right



[Top View]

Left



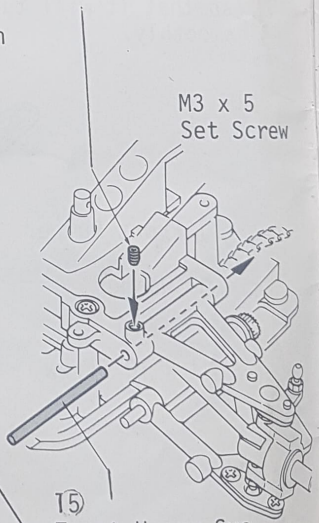
There are holes already drilled.

4 INSTALLATION OF FRONT SUSPENSION ARM

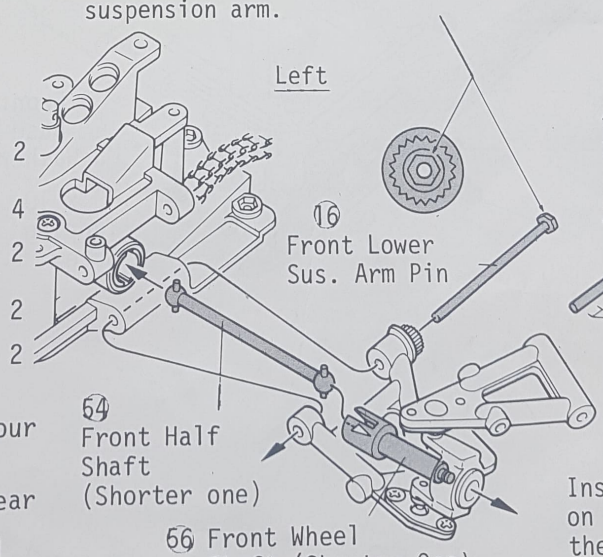
Tighten this setscrew lightly in such a degree that the upper suspension arm will not come off.

Push the head of the lower suspension arm pin all the way with the tip of a phillip's screwdriver into the hexagonal hollow on the lower suspension arm.

M3 x 5 Set Screw



Left



2
4
2
2
2

⑯ Front Lower Sus. Arm Pin

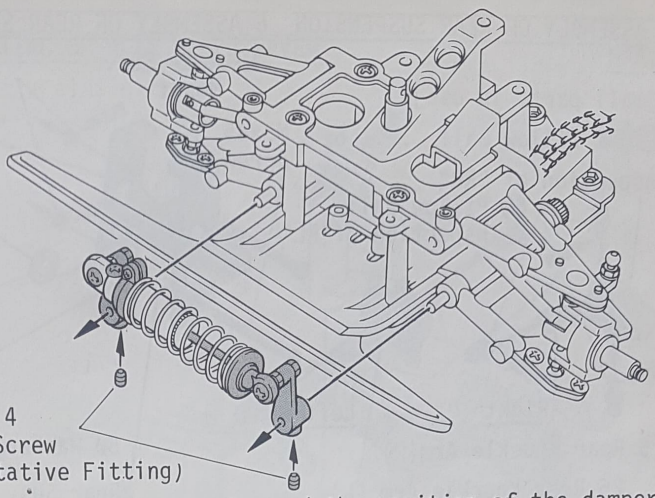
⑮ Front Upper Sus. Arm Pin

⑭ Front Half Shaft (Shorter one)

⑯ Front Wheel Shaft (Shorter One)

Install the same parts on the right side in the same way.

⑰
Front Damper Arm
3 mm Nut
3 mm Nut
M3 Washer
Damper
M3 x 15 Screw
Rubber Pipe chopped in Size



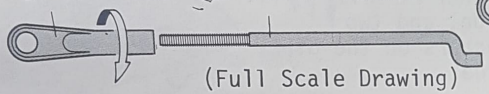
M4 x 4 Set Screw (Tentative Fitting)

Adjustment of the tension and the position of the damper will be done later in the step of "Guide for Chracterizing the Car (1)" on page 22 after the assembly is completed.

5 INSTALLATION OF FRONT SERVO SAVER AND TIE ROD

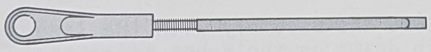
*Control rods of five sizes and shapes are included in the kit. Choose a correct one by comparing it with the drawing when using them.

⑯⑥ Ball End ⑯④ Front Tie Rod



(Full Scale Drawing)

*Screw in the control rod to the point as shown in the drawing. Adjust it finely later in the step described on page 16.



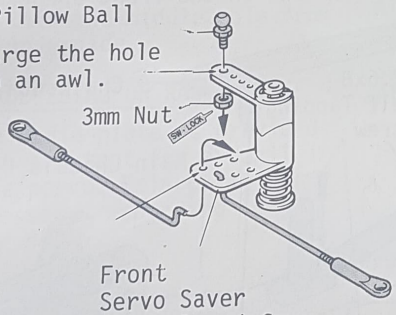
5 INSTALLATION OF FRONT SERVO SAVER AND TIE ROD

	Ball End	2
	Pillow Ball	1
	M3 x 10 Self Tapping Screw ...	4
	3 mm Nut	1
	4 mm Nut	2

Fit the right side tie rod through the two posts, and the left side one by lifting up the part as indicated with an arrow in the drawing.

M4 x 55 Screw
Tighten this screw moderately so that the servo saver will not be binding, instead, screw in the 4mm nut firmly on the underside of the front base.

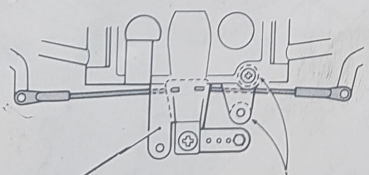
㉘ Pillow Ball
Enlarge the hole with an awl.
3mm Nut



Front Servo Saver

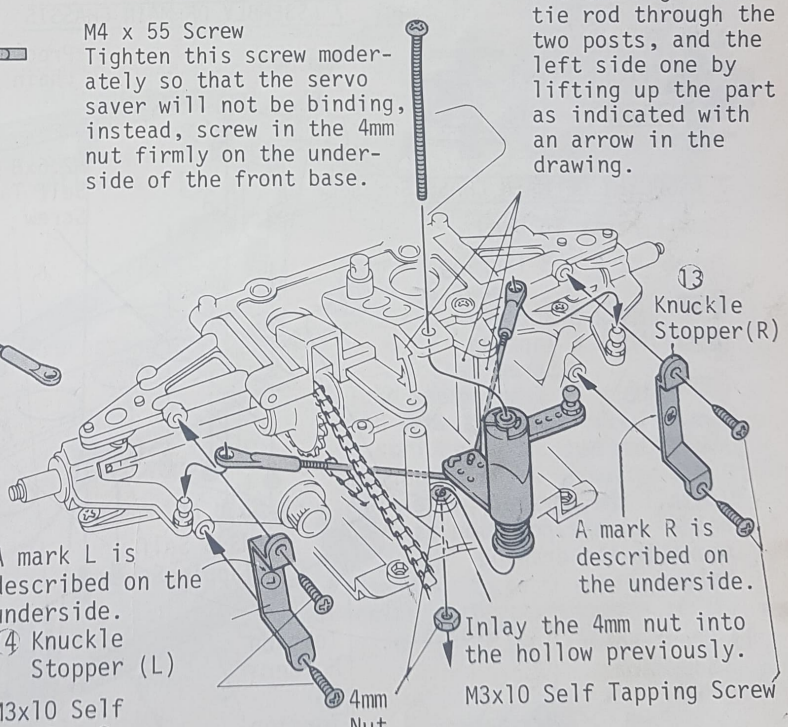
Connect the control rod form the underside into the outer hole.

[Assembled View of Tie Rod]



Raise this part and part and put the tie rod on the left side.

Pass the right side tie rod through the posts.



⑬ Knuckle Stopper(R)

A mark L is described on the underside.

⑭ Knuckle Stopper (L)

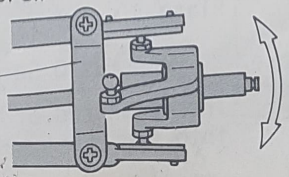
A mark R is described on the underside.

Inlay the 4mm nut into the hollow previously.

M3x10 Self Tapping Screw

M3x10 Self Tapping Screw

4mm Nut



Knuckle Stopper

Tighten the M3 x 10 self tapping screw a little loosely for allowing the suspension arm to move up and down.

6 ASSEMBLY OF REAR SUSPENSION ARM

[Small parts in use]

Pillow Ball 6

Inspection of "RR"

㉘ Pillow Ball Inspection of"RL"

Right

Left

㉕ Rear Knuckle Arm(R)

㉖ Rear Knuckle Arm (L)

㉗ Ball seat

Fit it with a pair of pliers as you have done with the same on the front suspension arm.

[Front View]

Right Left

6 ASSEMBLY OF REAR SUSPENSION ARM

⑲ Rear Sus. Mount

M3x45 Screw

3mm Nut

Rear Sus. Arm (L)

5ø Washer (2 pcs.)

A mark L is described on the underside.

Rear Sus. Arm Collar

5ø Wahser

M2.6x5 Flat Screw

M2.6 x 5 Flat Screw

Rear Knuckle Arm (L)

5ø Washer (2pcs.)

Rear Sus. Arm Collar

5ø Washer

20 Rear Knuckle Arm (R)

Rear Sus. Arm (L)

M2.6x6 Flat Screw..8

3mm Nut.....4

5ø Washer..12

Put one 5mm washer on this side, and two washers on the other side.

M3x45 Screw 4

A mark R is described on the underside.

㉕ Rear Knuckle Arm(R)

7 ASSEMBLY OF MAIN CHASSIS

[Small Parts in Use]

M2.6 x 8 Tapping Screw,,2

M3 x 6 Screw....7

M3 x 6 Tapping Screw ...3

M3 x 10 Tapping Screw ..2

3mm Nut 7

*Install the torsion plate holder to the position as shown in the drawing below.

⑪ Front Lower Sus. Arm

Parallel

3 Front Base

12 Torsion Plate Holder

Lower the front suspension arm.

7 ASSEMBLY OF MAIN CHASSIS

3mm Nut

*Proceed the assembly with the ladder chain drawn on the front sprocket.

M2.6x8 Self Tapping Screw

⑨ Chain Guide (B)

⑤ Main Chassis

M3x6 Screw

M3x6 Self TappingScrew

⑫ Torsion Holder

⑱ Torsion Plate

M3x6 Screw

M3x6 Self Tapping Screw

3mm Nut

Center Post M3x10 Self Tapping Screw

Insert an end of the torsion plate, whichever goes smoothly, into the cross groove on the torsion plate holder.

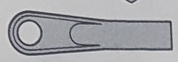
8 MOUNTING OF REAR SERVO SAVER

[Small parts in use]

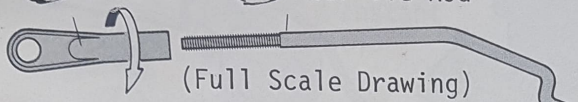

Pillow Ball ...1


3mm Nut 1

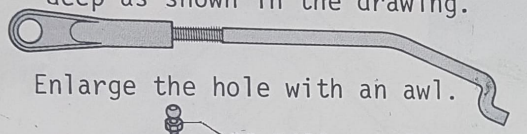

4mm Nut 1

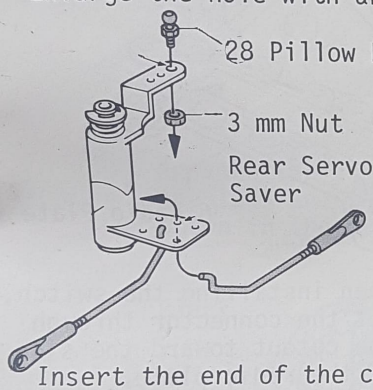

Ball End 2

(106) Ball End (105) Rear Tie Rod


(Full Scale Drawing)

*Screw in the ball end as deep as shown in the drawing.

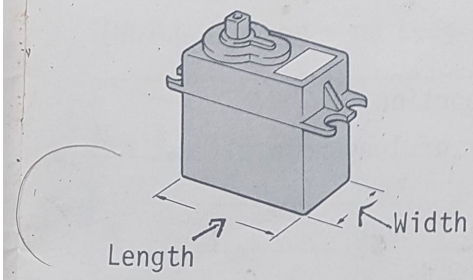

Enlarge the hole with an awl.



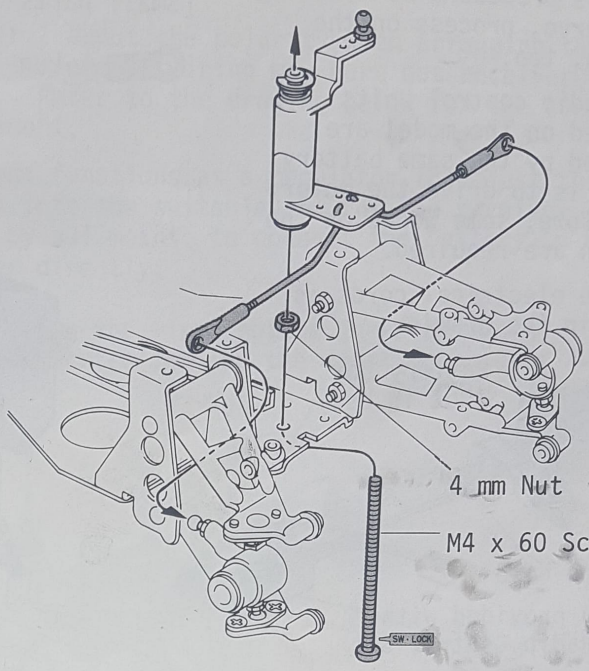
Insert the end of the control rod into the middle hole from the underside.

9 PROCESSING ON RADIO PLATE

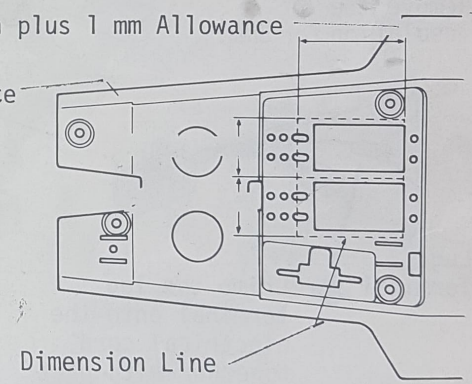
*The radio plate is provided with a cutout for a small size servo. Enlarge it, if necessary, according to your servo.



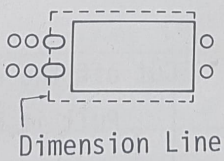
8 MOUNTING OF REAR SERVO SAVER



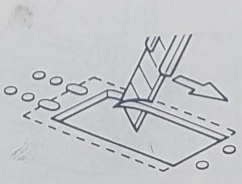
9 PROCESSING ON RADIO PLATE



[Processing Steps]



1 Take measurement of the servo, and draw the lines with an awl or a scriber on the radio plate in the position as shown in the drawing left.



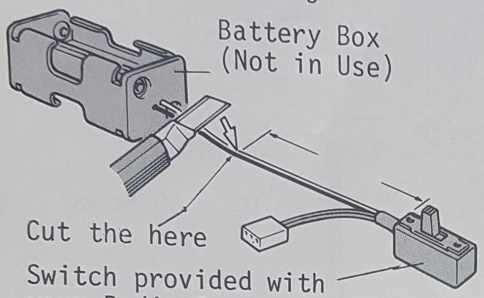
2 Use a knife or a coping saw to enlarge the perforation to the size little by little.

10 MOUNTING OF SERVO

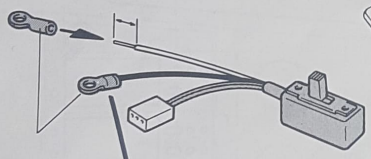
*In this procedure of mounting the servo, process on the switch, too.

*The radio control units mounted on the model are powered by the same battery which is to drive the motor; therefore, some works on the switch are required.

Cut the electrical cords as shown in the drawing.

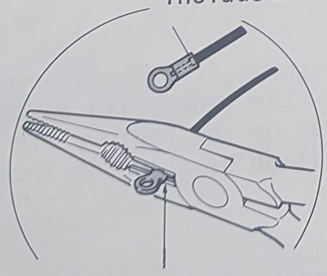


Remove the insulation for 5mm.



Lug Terminal

Crimp the lug terminal onto the electrical cord together with part of the insulation included.



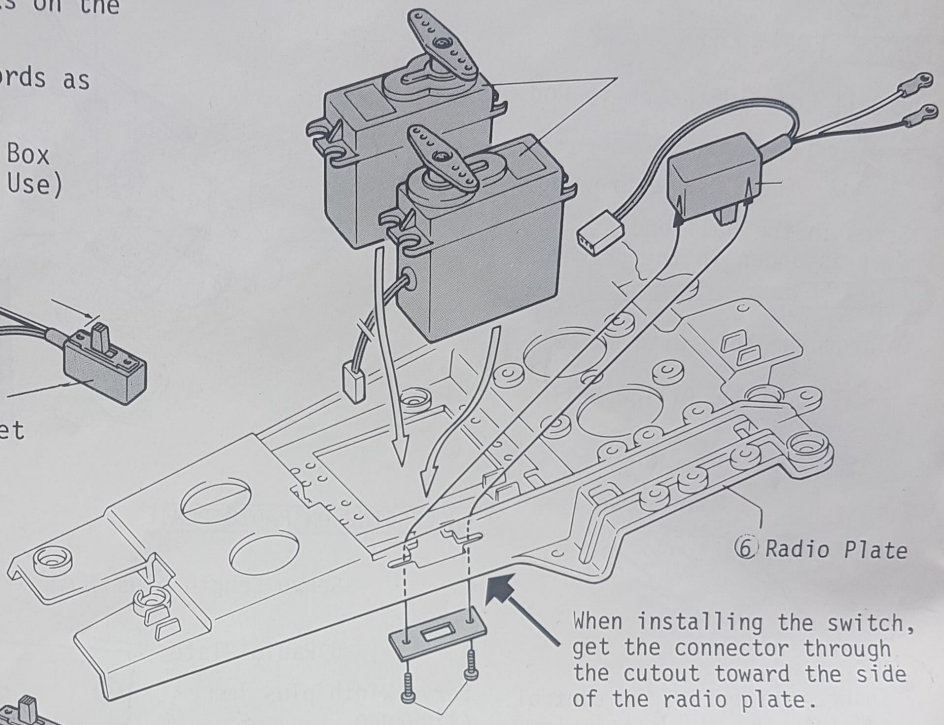
*Since the cords are very fine, handle them with care for not snapping the wires.

10 MOUNTING OF SERVO

[Small parts in use]

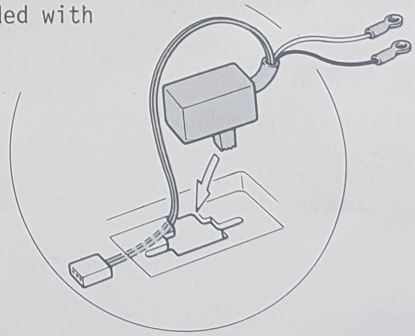
Lug Terminal ... 2

Be careful about the position of the servos.



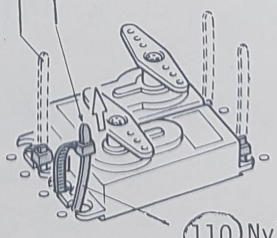
When installing the switch, get the connector through the cutout toward the side of the radio plate.

Screws Provided with the Switch



Cut off the excessive portion.

Pull it with a pair of long nose pliers.

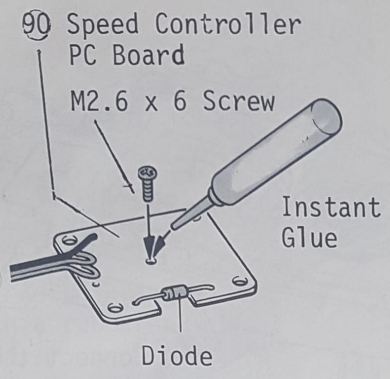


(110) Nylon Strap (S)

Be careful: The nylon strap is so made that it cannot be untied once being bound.

11 MOUNTING OF SPEED CONTROLLER

*Screw in a M2.6 x 6 bolt on the underside of the PC board, and then install the speed controller to the radio plate.



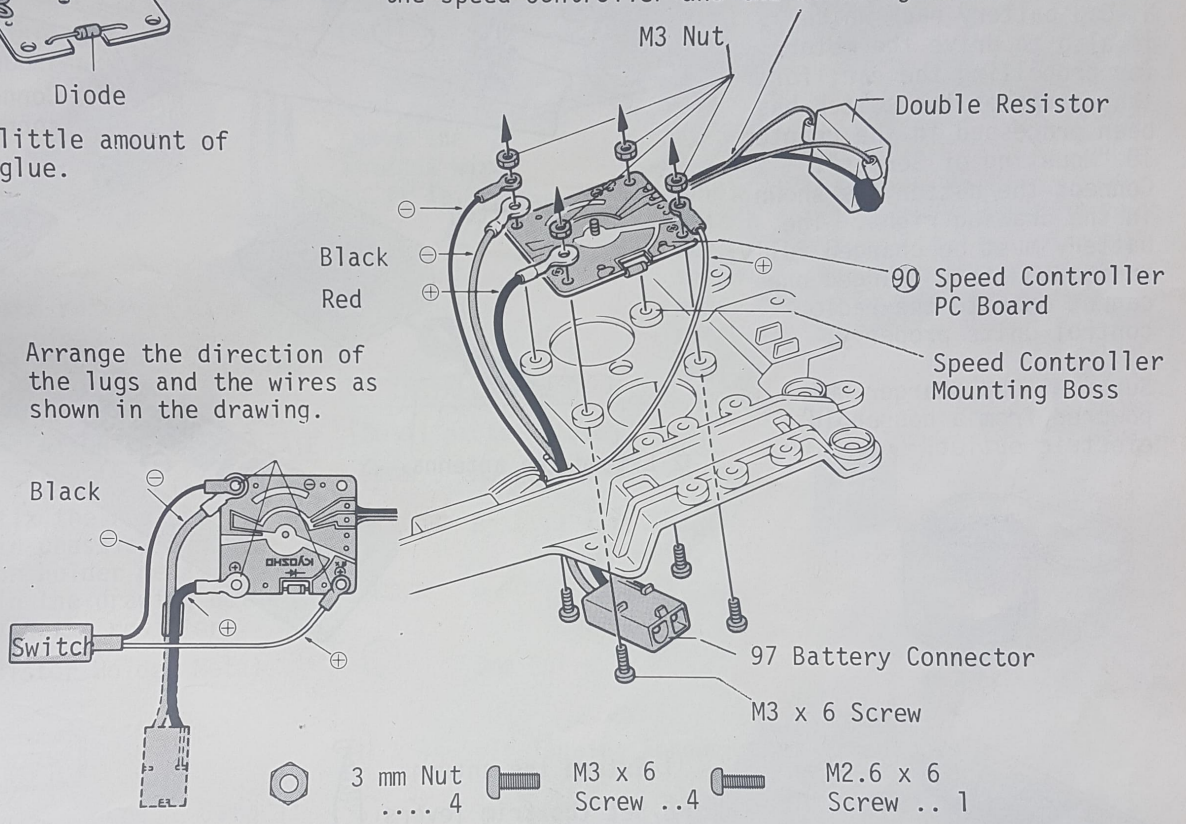
Apply a little amount of instant glue.

11 MOUNTING OF SPEED CONTROLLER

(Note)

1. Be careful about the polarity when arranging the lead wires. Erroneous wiring may burn out receiver in a moment. Refer to the drawing below for the correct arrangement.
2. The diode functions as a regulator to adjust the battery voltage into the suitable one for the receiver. So avoid, by all means, to connect the battery to the receiver directly.

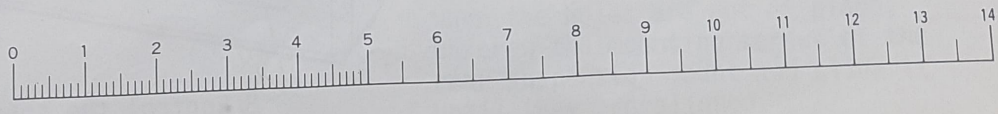
Look out for the wires not be jamed between the speed ocntroller and the mounting bosses.



Arrange the direction of the lugs and the wires as shown in the drawing.

[Which is + or - on Lead Wire]

Polarity / Radio Maker	+ (Plus)	- (Minus)
Futaba	Red	Black
JR	Red	Brown
Sanwa	Black with White Stripe or Red	Black
KO	Red	Black
Kyosho	Red	Black



12 TESTING RADIO OPERATION

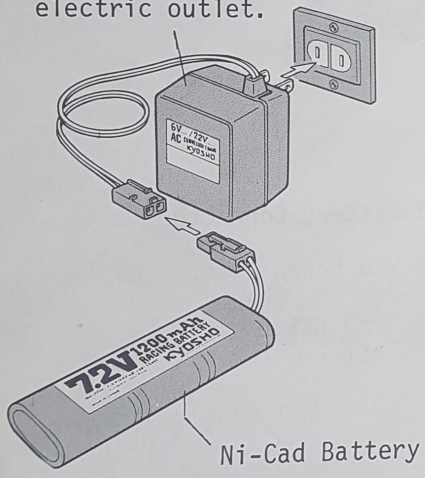
[How to Handle Radio]

Read the instruction which is attached to your radio control set carefully so that you will manipulate it correctly. You are required to be particularly cautions about the polarity of the battery when connecting it.

[Power Source for Receiver]

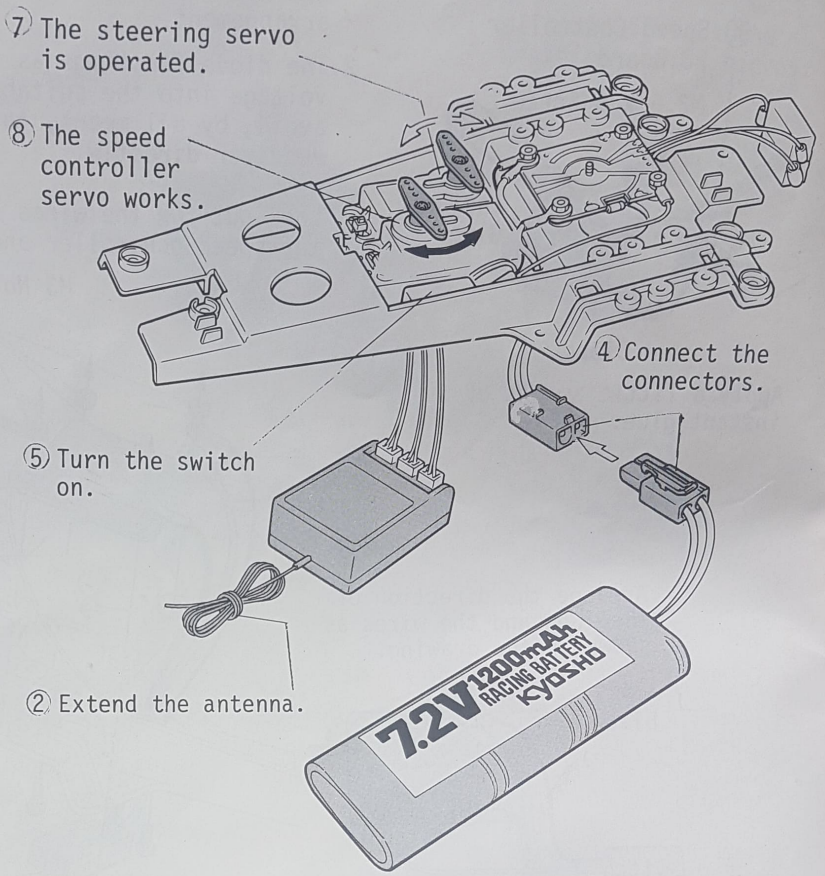
For the receiver, use a Ni-Cad battery pack which is also to drive the motor for propelling the car; for that purposes the switch has been processed in the chapter 10 "Mounting of Servos". Connect the battery as shown in the drawing right. The battery must be charged fully; an inadequately charged one cannot operate the radio control units properly.

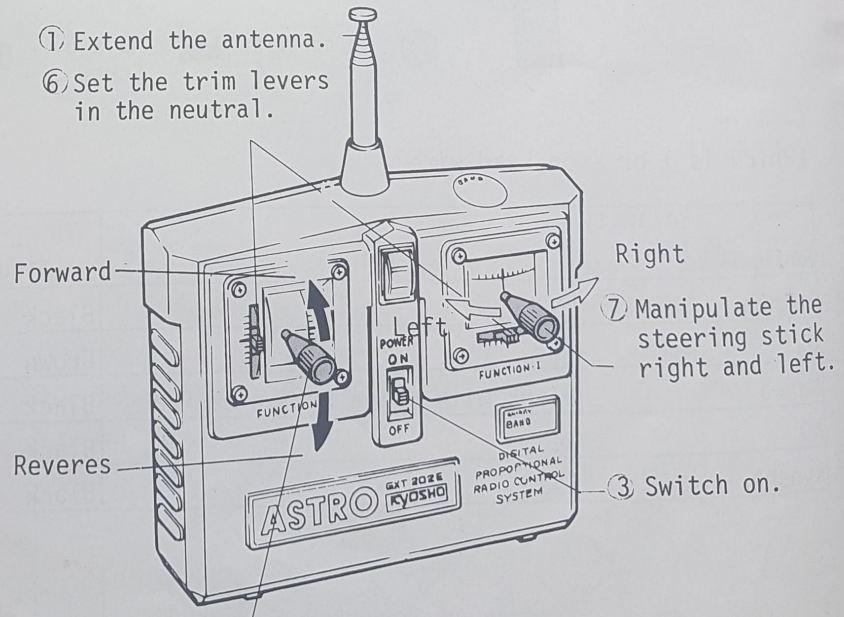
Super Ni-Cad Charger which is powered from a household electric outlet.



12 TESTING RADIO OPERATION

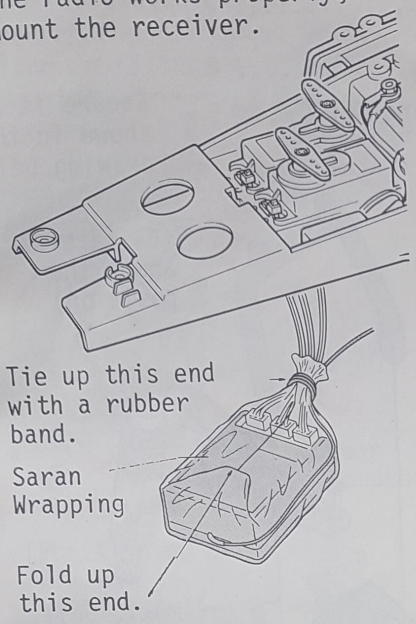
*Activate the radio control units by your radio following the steps indicated in the neumerical order.





13 MOUNTING OF RECEIVER

*After assureing yourself that the radio works properly, mount the receiver.

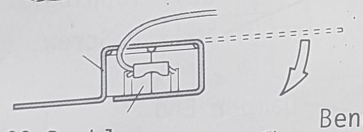


Wrap up the receiver with saran wrappings to prevent dusts and water from entering it.

14 INSTALLATION OF RADIO PLATE

*As the first work in this step, fix the resistor to the main chassis. Bend the resistor holder metal as shown in the drawing below to retain the resistor.

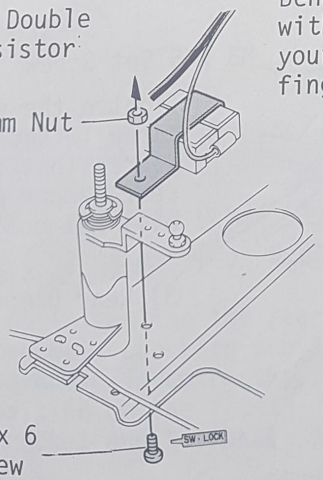
(100) Resistor Holder Metal



99 Double Resistor

Bend it with your finger.

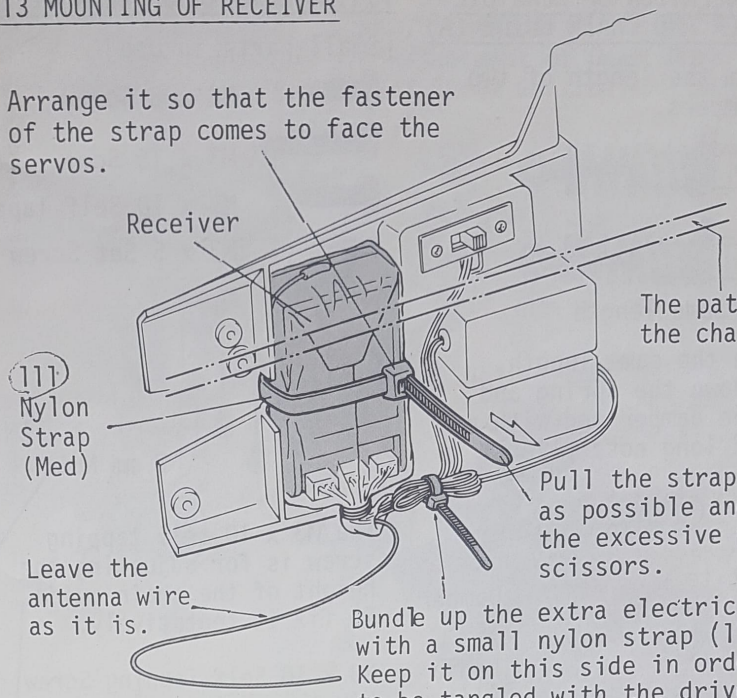
3 mm Nut



M3 x 6 Screw

13 MOUNTING OF RECEIVER

Arrange it so that the fastener of the strap comes to face the servos.

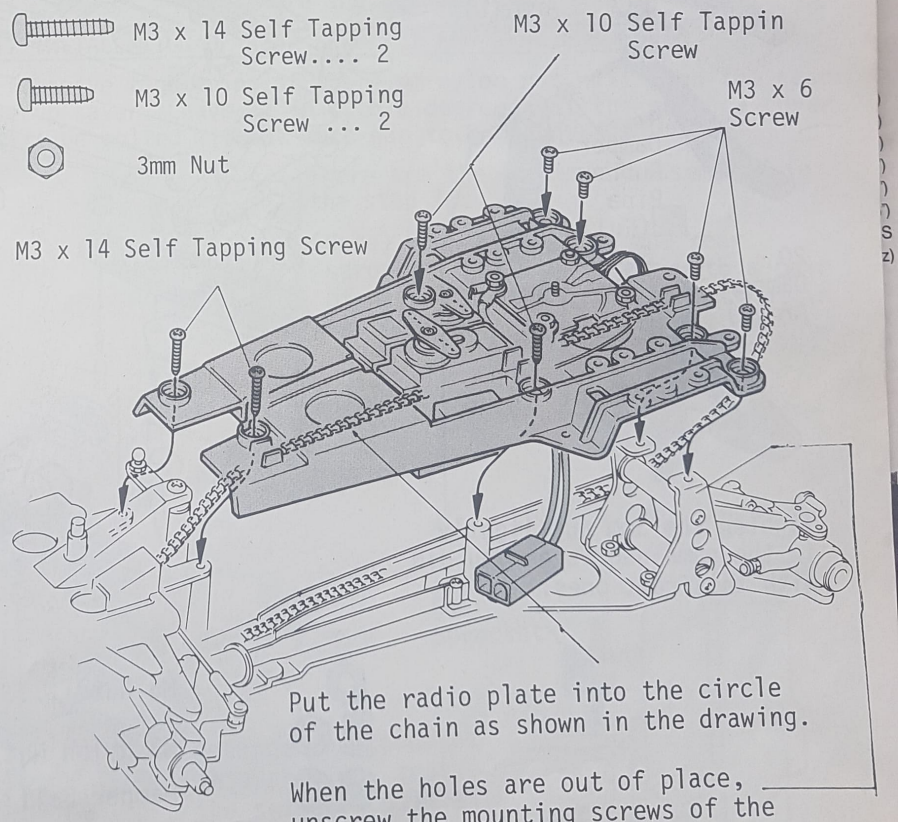


Bundle up the extra electric cords with a small nylon strap (110) and Keep it on this side in order not to be tangled with the drive chain which passes on the other side where the switch is fixed.

14 INSTALLATION OF RADIO PLATE

[Small parts in use]

- M3 x 6 Screw 5
- M3 x 14 Self Tapping Screw.... 2
- M3 x 10 Self Tapping Screw ... 2
- 3mm Nut

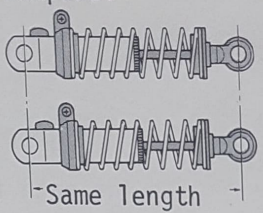


Put the radio plate into the circle of the chain as shown in the drawing.

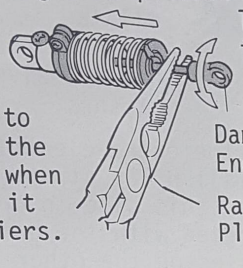
When the holes are out of place, unscrew the mounting screws of the rear suspension mount and slide it until they are aligned.

15 INSTALLATION OF REAR OIL DAMPER AND CHAIN GUIDE (A)

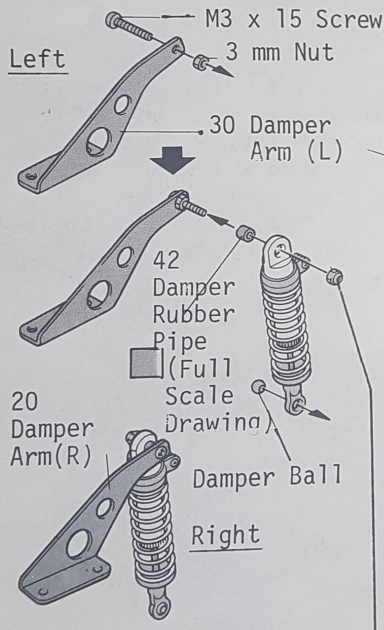
*Uniform the length of two oil dampers.



To make the same length, press down the spring and turn the damper end with a pair of long nose pliers.



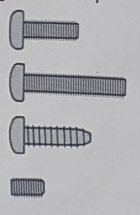
Try not to Scratch the spindle when holding it with pliers.



Tighten the 3mm nut lightly in the same degree as you did with the front ones.

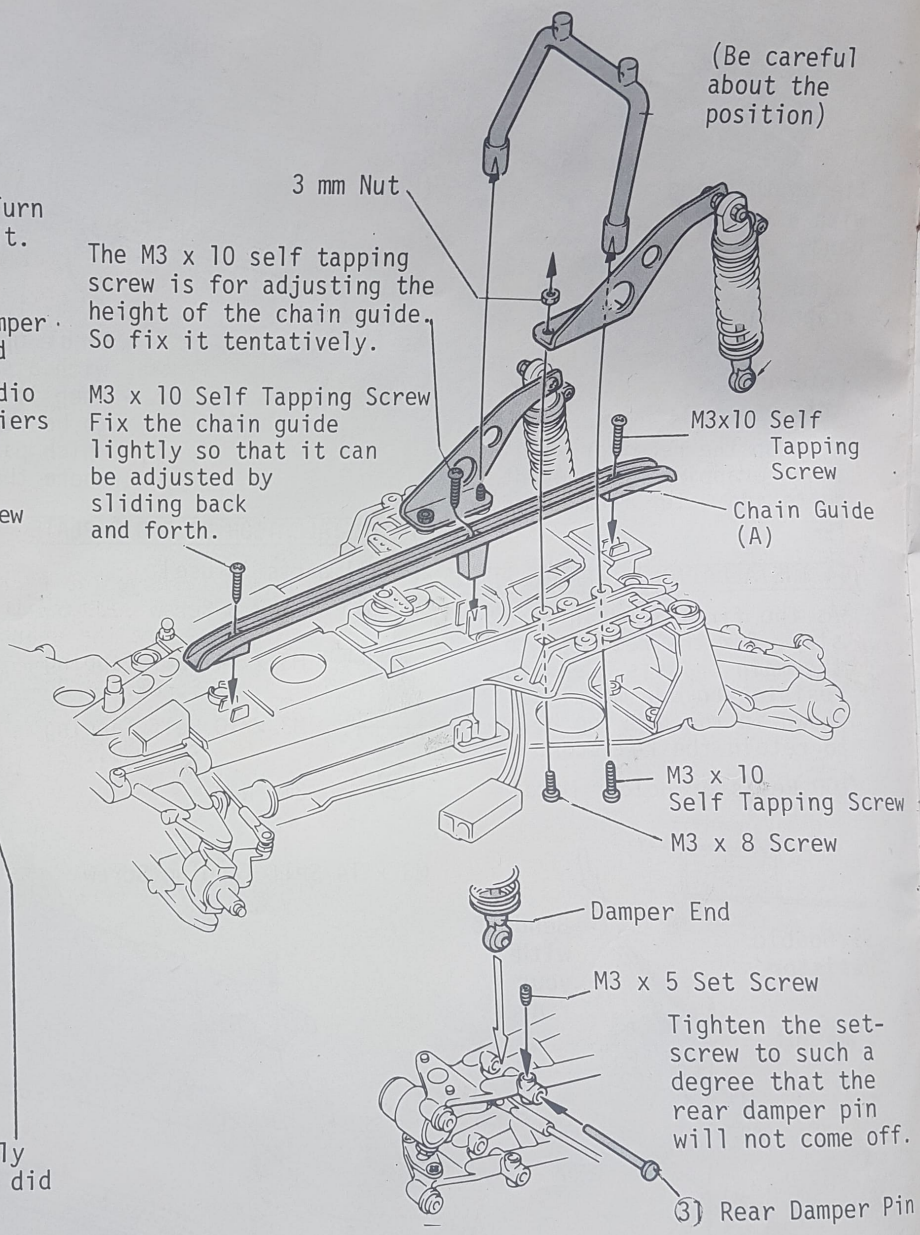
15 INSTALLATION OF REAR OIL DAMPER AND CHAIN GUIDE (A)

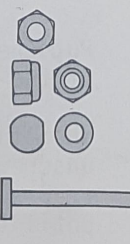
[Small parts in use]



M3 x 8 Screw 2
M3 x 15 Screw 2
M3 x 10 Self Tapping Screw ... 5
M3 x 5 Set Screw 2

Secure it as shown in the drawing below.





M3 Nut 4
M3 Nylon Nut 2
Damper Ball 2

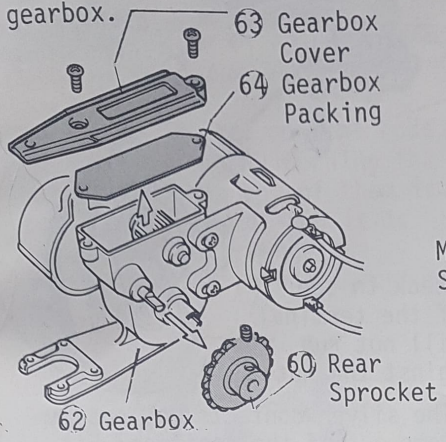
Rear Damper Pin 2

16 ASSEMBLY OF GEAR BOX

[Samll parts in use]

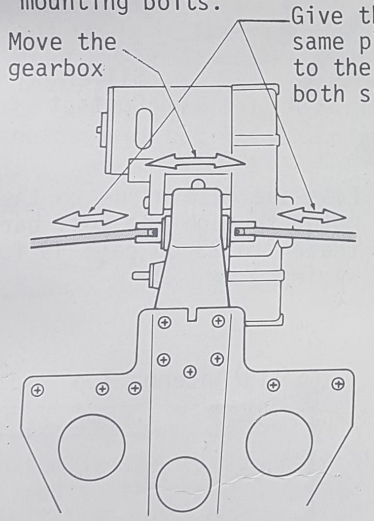
M3 x 6 Screw ... 4

*Detach the following parts from the factory assembled gearbox.



[Positioning of Gearbox]

*Fix the gearbox by moving right and left in order to gain the same backrush on the right and left swing shaft and tighten the four mounting bolts.

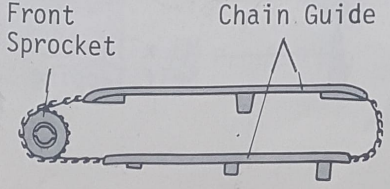


17 INSTALLATION OF REAR SPROCKET AND GEARBOX COVER

[Small parts in use]

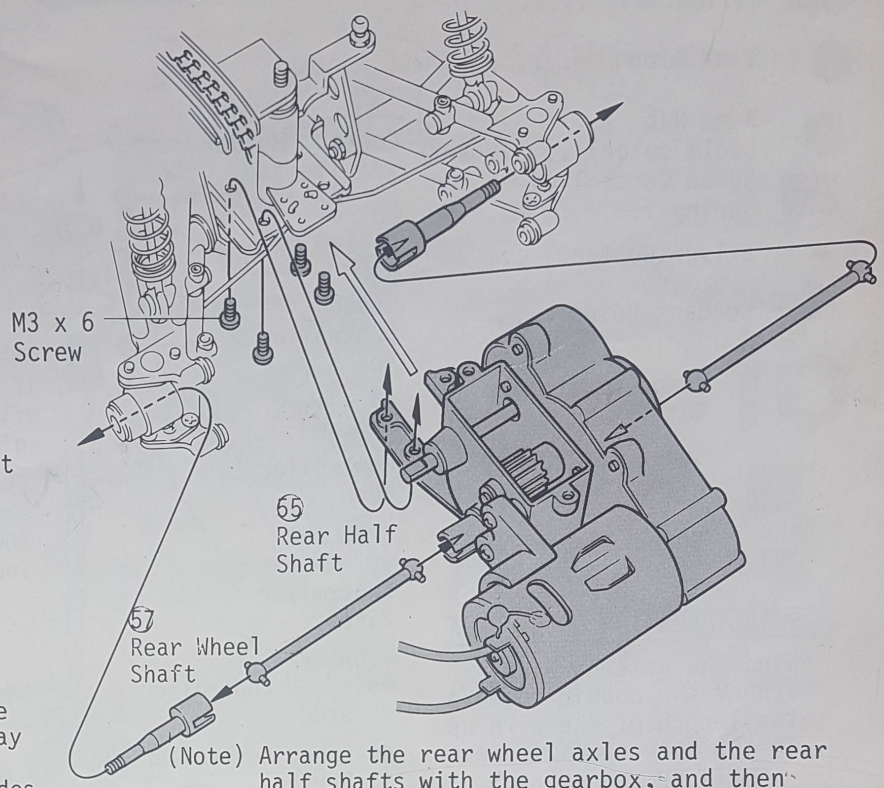
4 mm Nylon Nut .. 1

*When installing the rear sprocket, check to see if the chain is correctly in position on the front sprocket and the chain guide.



16 ASSEMBLY OF GEAR BOX

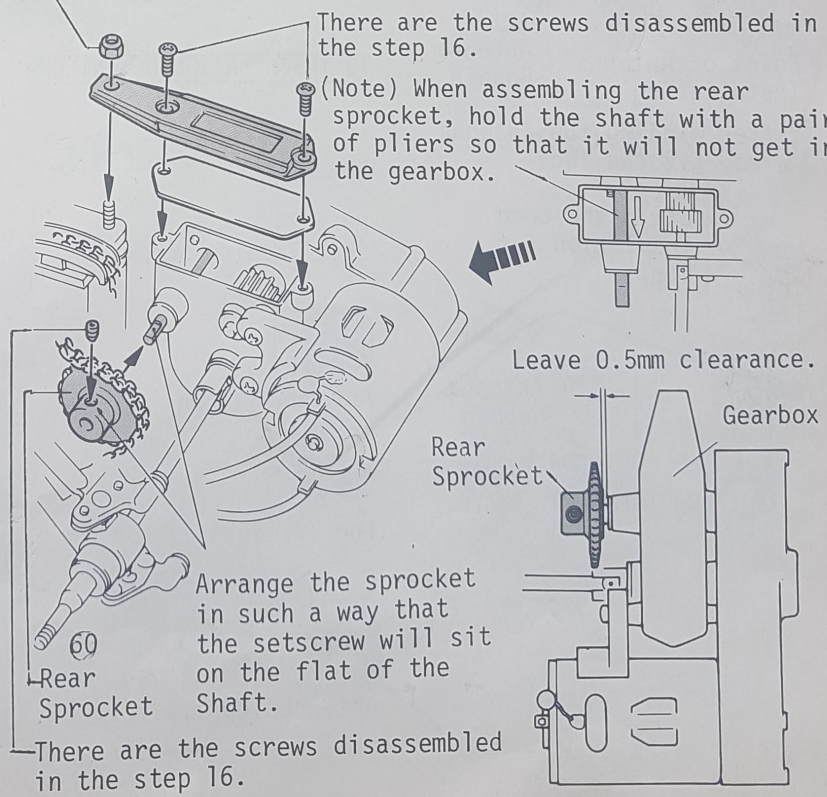
(Note) The pinion gear is not assembled in the gearbox. Fix it in the procedure of "Adjustment of Gear Ratio" after the step of "Setting of Speed Controller" on page 23.



(Note) Arrange the rear wheel axles and the rear half shafts with the gearbox, and then secure the gearbox with M3 x 6 screws.

17 INSTALLATION OF REAR SPROCKET AND GEAR BOX COVER

Excessive tightening of the 4 mm nylon nut will bind the rear servo saver. Leave it in such a degree that the gearbox cover will be bolted without much gap to be seen.



18 MOUNTING OF SPEED CONTROLLER HORN

[Small parts in use]


Pillow Ball 1


3 mm Nut 1


3 mm Nut (Gold color) 2


Speed Controller Spring 1


Silver Contact ... 2


Contact Holder ... 2

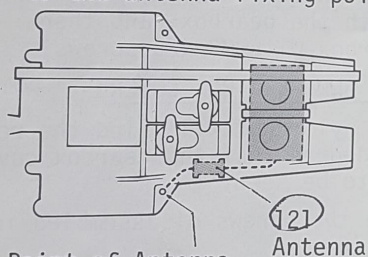

Speed Controller Nut 1


Speed Controller Pivot 1


Speed Controller Stud 1

19 INSTALLATION OF ANTENNA

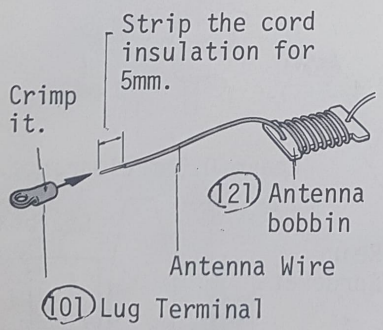
*Wind the antenna wire around the bobbin to make the length of the wire up to the antenna fixing point.



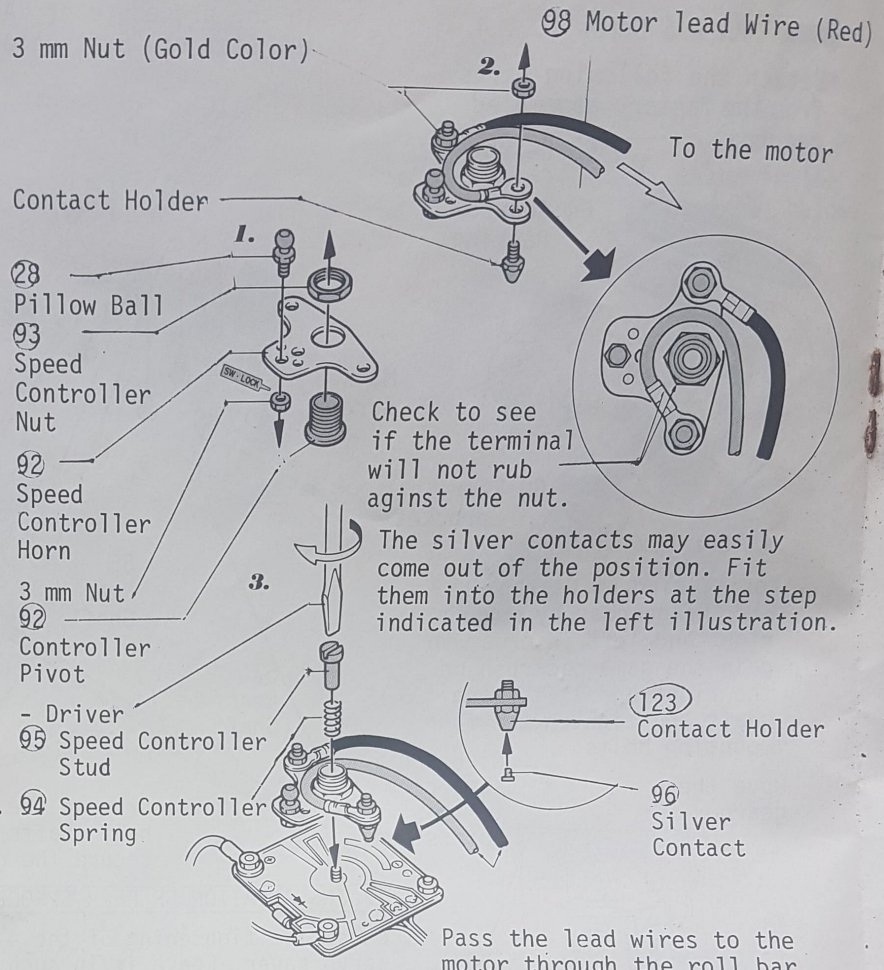
Point of Antenna Installation

121 Antenna Bobbin

*After winding the antenna wire, fix the lug.

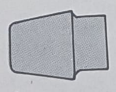


18 MOUNTING OF SPEED CONTROLLER HORN



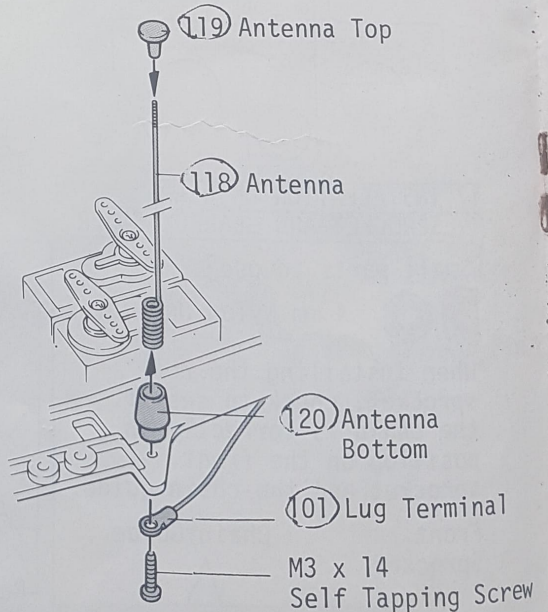
19 INSTALLATION OF ANTENNA


M3 x 14 Self Tapping Screw ..1


Antenna Bottom 1

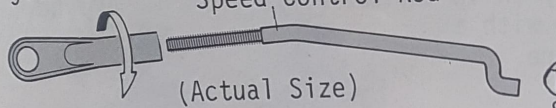

Lug Terminal 1


Antenna Top 1

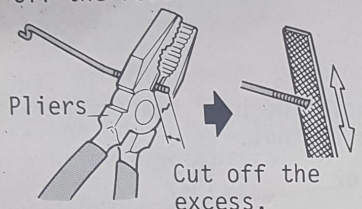


20 LINKAGE OF CONTROL RODS

*The length of the speed control rod should be varied according to the size of your servos.



*The length of the control rods can be modified by turning the ball end. When any of them is too long to adjust and it is impossible to arrange the servo horns in parallel, cut off the rod.



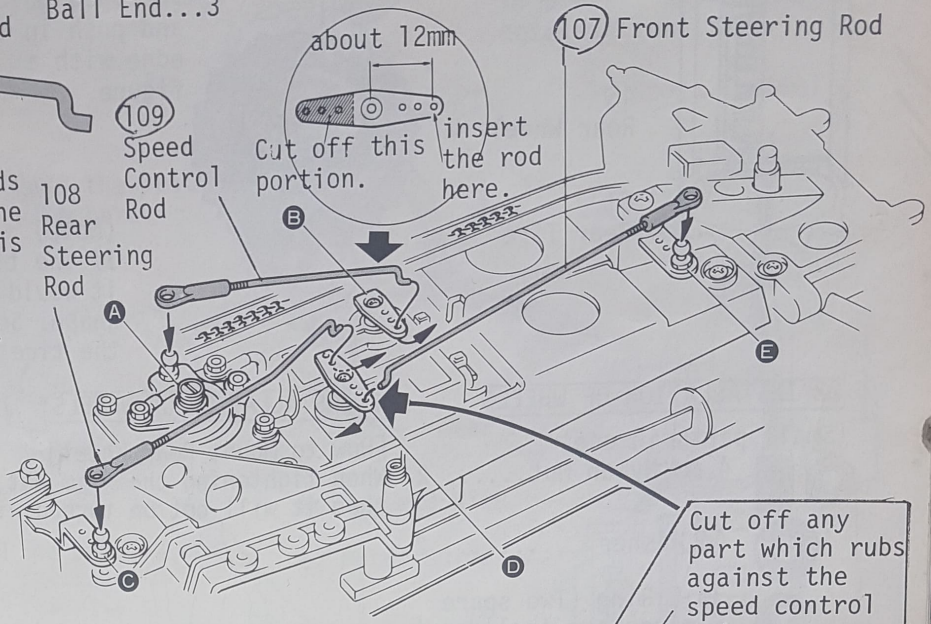
Smooth the cut with a file.

*The front and rear steering control rods should be so adjusted, in the same way as down the speed control rod, that the servo horns should be set in parallel. If necessary, cut the rods.

20 LINKAGE OF CONTROL RODS

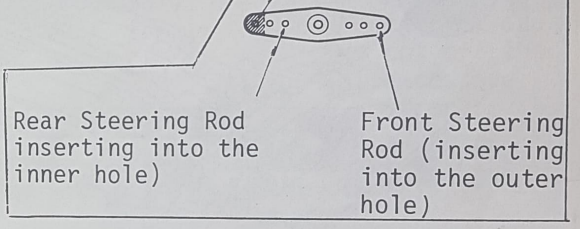
(Small parts in use)

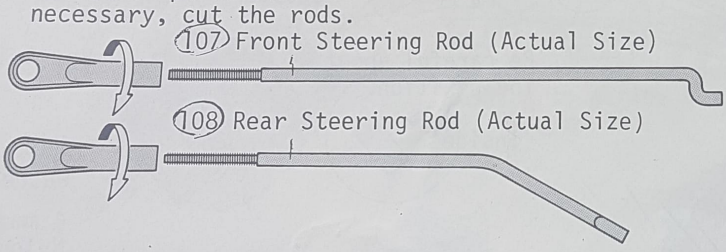
A and B should be parallel.



C, D and E should be parallel.

Cut off any part which rubs against the speed control rod.

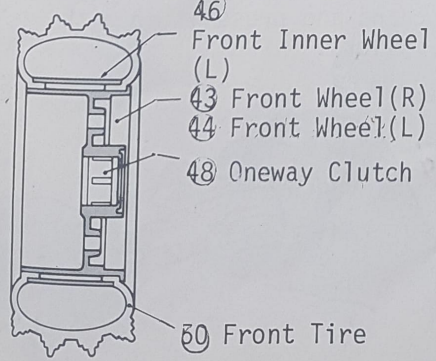




21 ASSEMBLED OF TIRE

*Assemble the fornt and rear tires in the same way which is illustrated on the right.

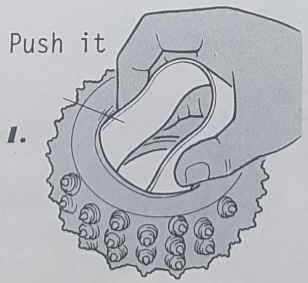
(Cutway View of Front Tire)

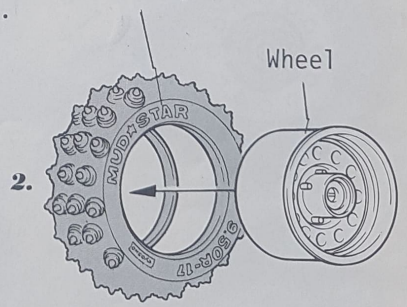


21 ASSEMBLED OF TIRE

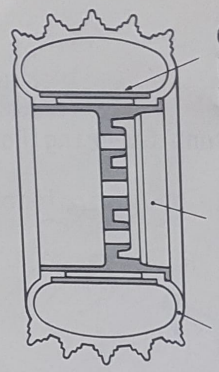
Put the inner tire by squeezing it.

Have the side of the inscription facing outward.





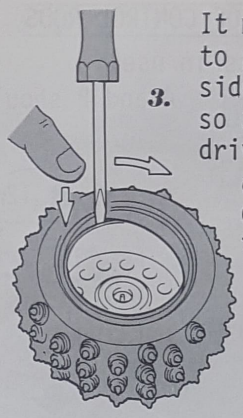
(Cross-Sectional Drawing of Rear Tire)



㊼ Rear Inner Wheel (S)

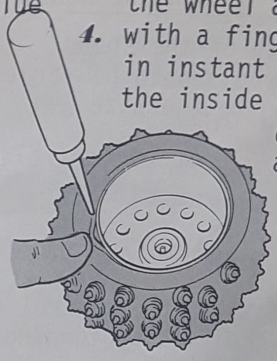
㊺ Rear Wheel

㊶ Rear Tire



3. It may harder to put the inner side of the tire, so use a screw-driver as a guide and push in the edge with a figure.

Instant Glue

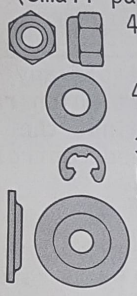


4. Widen the seam between the wheel and the tire with a finger and pour in instant glue into the inside and outside edges all around.

(Note)
If the tire is set in a crushed state, it would be harder to regain the original shape. So try not to apply any force on the tire when gluing one.

22 INSTALLATION OF WHEELS

(Small parts in use)



4 mm Nylon Nut..... 2

4ø Washer 2

3ø E Ring (Two spare E-rings are included in the kit) 2

Wheel Washer .. 2

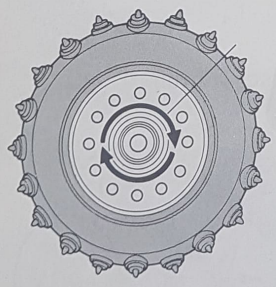
22 INSTALLATION OF WHEELS

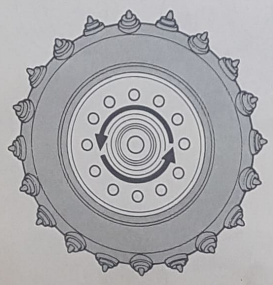
[How to Mount Rear Wheel]

When tightening the 4 mm nut, hold the half shaft firmly so that it will not be turned with the nut.

Distinguish the right side tires from the left ones.

[View from the Inner Side]





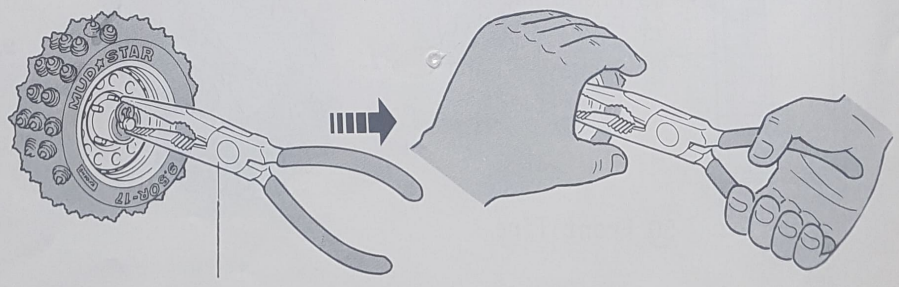
⑲ Wheel Washer

3ø E Ring

[How to Put Front Wheels]

Put the E-ring to the groove on the axle, and squeeze it in with a pair of pliers.

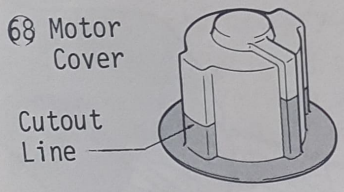
(Note)
It may be likely to fil to put in an E-ring correctly and to flick it. Just in case, cover the working place with your hand and press it in with pliers.



Radio Pliers

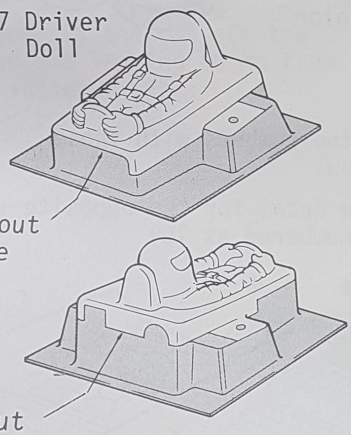
23 ATTACHING OF MOTOR COVER

*Cut off the shaded portion, indicated in the drawing, along the cutout line with a knife or scissors.

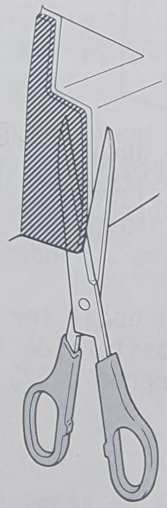


24 CUTTING OUT OF BODY AND DRIVER DOLL

*Cut off the shaded portion, indicated in teh drawing, along the cutout line with a knife or scissors.

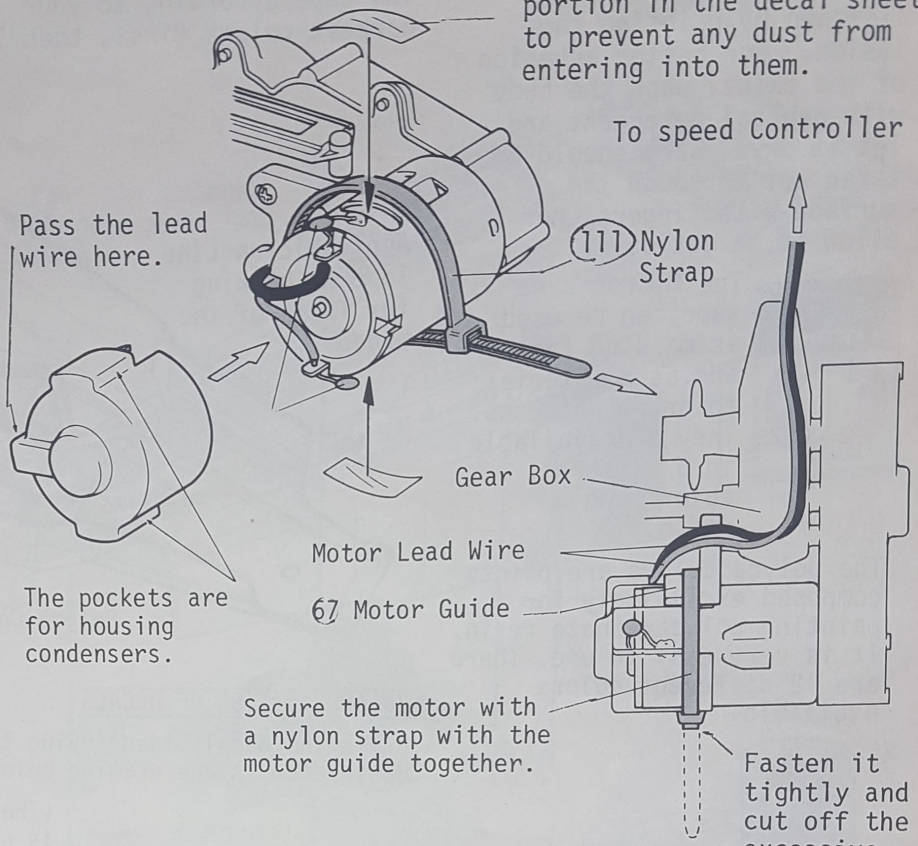


Cut off the diagonally lined portion with scissors.



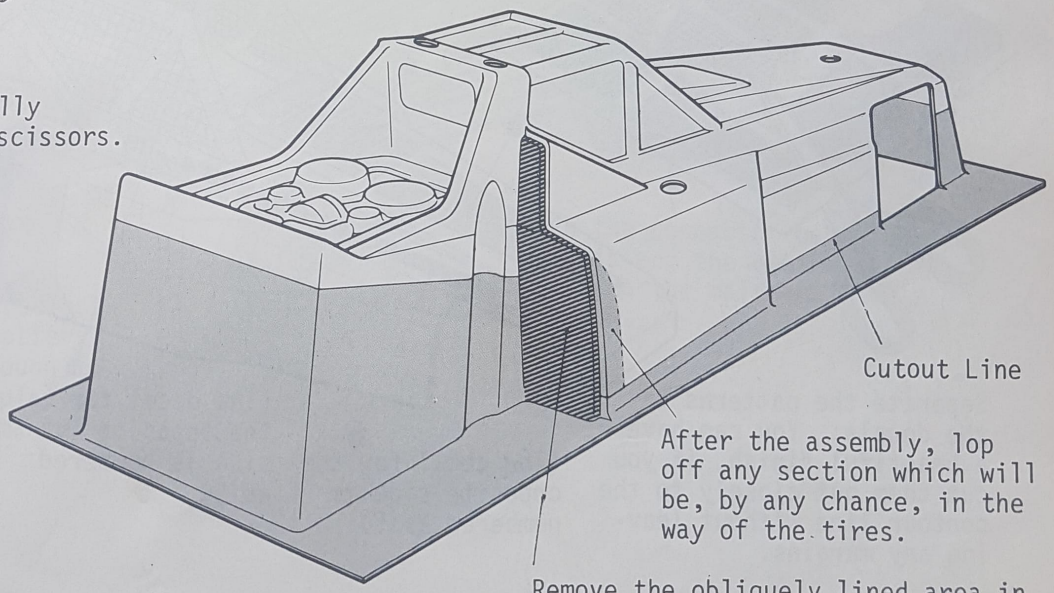
23 ATTACHING OF MOTOR COVER

Cover up the holes on the motor with a tramsparent portion in the decal sheet to prevent any dust from entering into them.



24 CUTTING OUT OF BODY AND DRIVER DOLL

Cut off the shaded portion. It is recommended for an easy cutting to scribe a line with a knife and try to fold it off from an end.



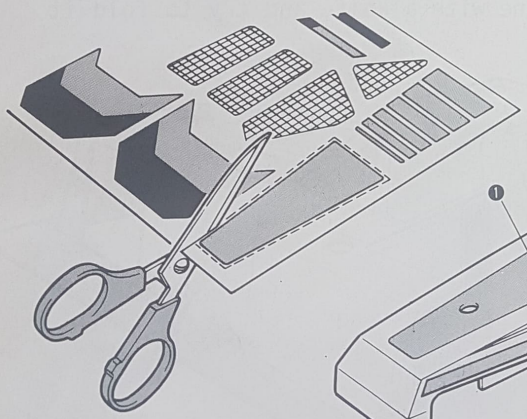
25 PAINTING ON BODY

The Progress's body is made of clear plastic, polycarbonate: Which can be best finished by painting the inside. For better adhesion of the paint, wash the body with neutral detergent and let it dry. Care should be taken not to touch the surface with fingers, nor allow it to get oiley.

The Micron Line tape can be used as masking tape and as a material to drawn patterns. They are available in 6 different colors and 3 width.

The polyca Colors are paints composed exclusively for painting polycarbonate resin. It is very easy to use. There are 12 different colors available.

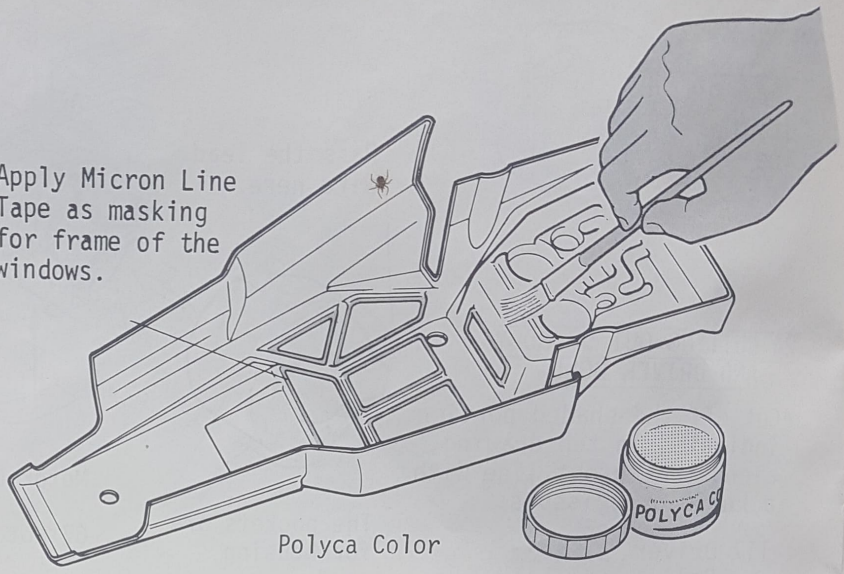
26 APPLICATION OF DECALS



Separate the patterns of the decals. You can have a beautiful finish, if you cut them out closely to the contour line without leaving any margins.

25 PAINTING ON BODY

When painting only one color, two or three coats should be enough. But when finishing it in several colors, use masking tape according to your coloring scheme. Paint the darkest colors first, then lighter colors over all.



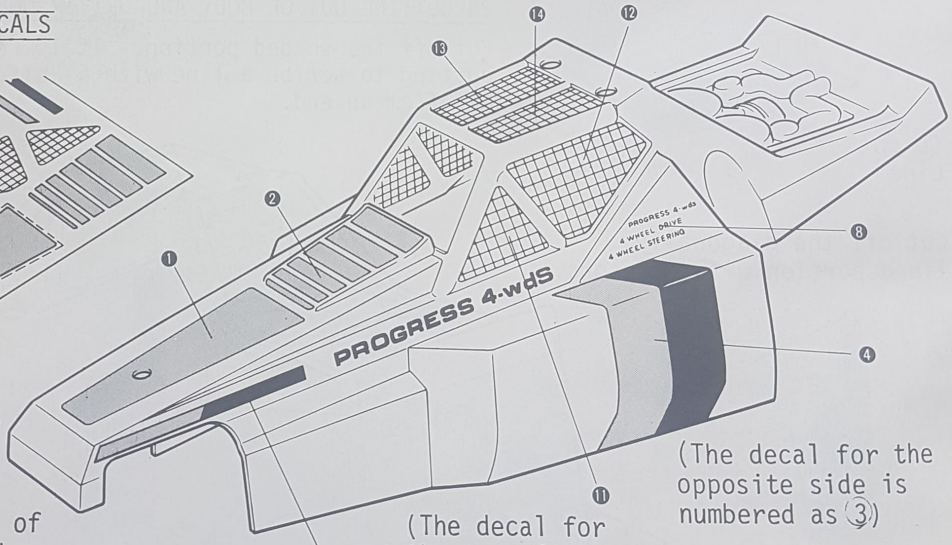
Apply Micron Line Tape as masking for frame of the windows.

Polyca Color

26 APPLICATION OF DECALS

Affix the decals identifying the numbers with those designated in the drawing below.

(The decal for the opposite side is numbered as ⑩)



(The decal for the opposite side is numbered as ⑤)

(The decal for the opposite side is numbered as ⑨)

(The decal for the opposite side is numbered as ③)

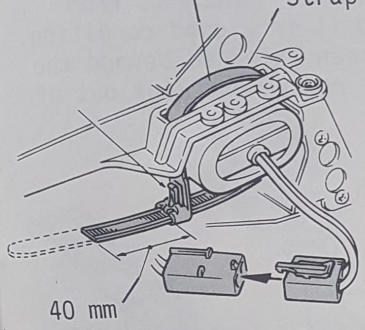
(The decal for the opposite side is numbered as ⑦)

27 MOUNTING OF BODY

*After the procedures of "Guide for Characterizing the Car" on page 23, mount the car body, the driver doll and the Ni-Cad Battery.

This strap is designed to be unfastenable. You can undo it by pushing down the small button.

(112) Ni-Cad Strap



40 mm

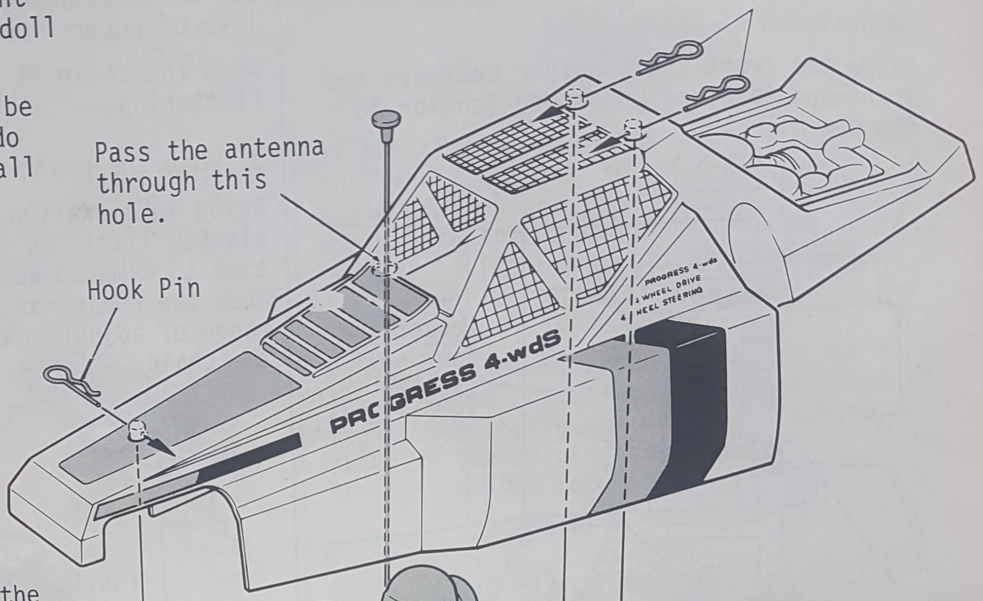
Tighten it and cut off the strap end leaving 40 mm from the faster.

27 MOUNTING OF BODY

Hook Pin

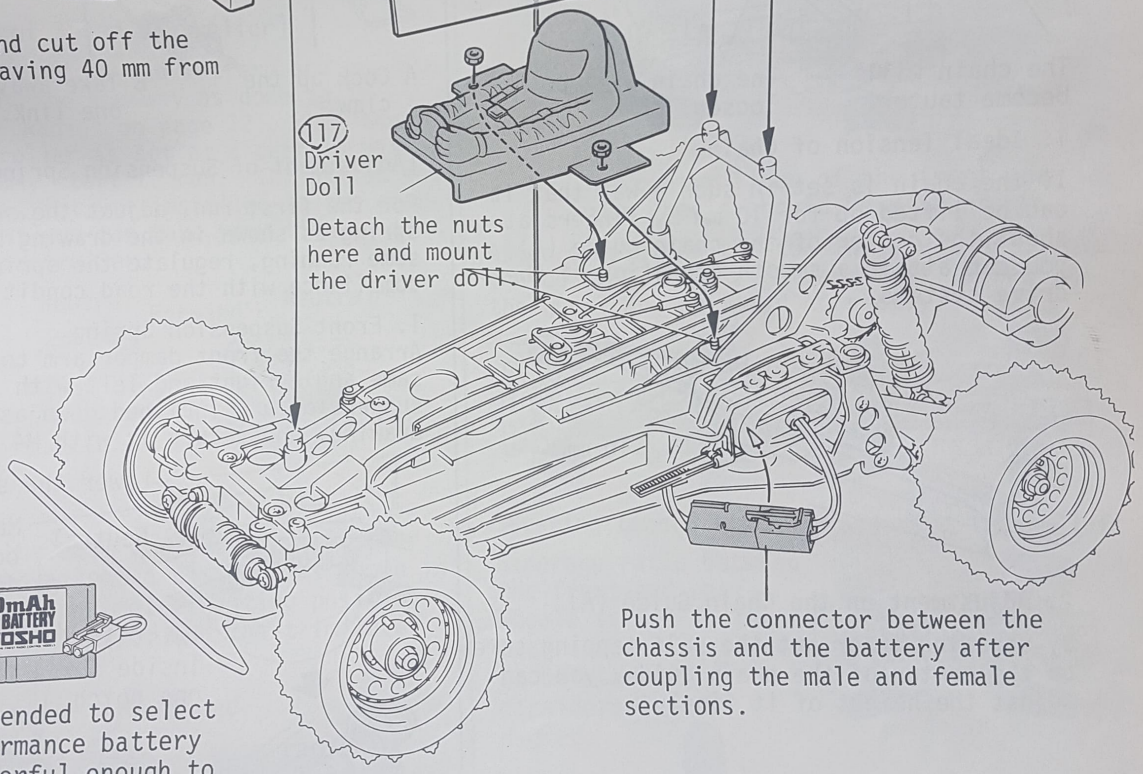
Pass the antenna through this hole.

Hook Pin



(117) Driver Doll

Detach the nuts here and mount the driver doll



It is recommended to select a high performance battery which is powerful enough to let a racing car display its best inherent performance.

Push the connector between the chassis and the battery after coupling the male and female sections.

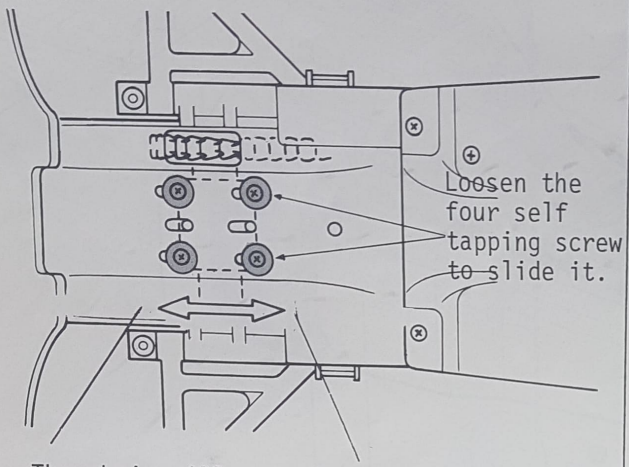
(Small parts in use)

Hook Pin..3

When your assembly is completed, adjust the following points:

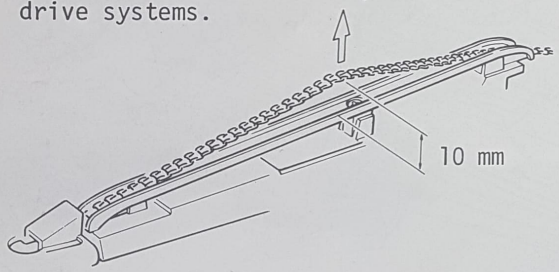
[Adjustment of Chain]

Slide the front shaft holder backward and frontward to give the proper tension to the chain.



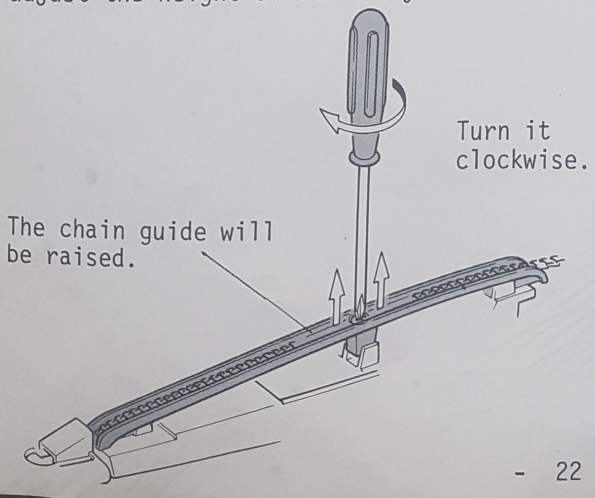
1. Ideal Tension of Chain

If the chain is set in such a way that it can be lifted up for 10 mm by fingers at about the center of the chain guide (A), you can attain a smooth operation of the drive systems.



2. Adjustment on the Chain Guide (A)

By screwing in or out the self tapping screw on the center of the chain guide, you can adjust the height of it finely.

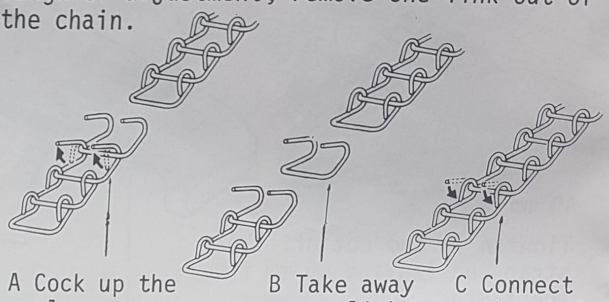


When the chain is too tight, the rotation of the chain becomes awkward with considerable loss of power.

When the chain is too loose, it will rotate fluttering.

3. When the chain is stretched . . .

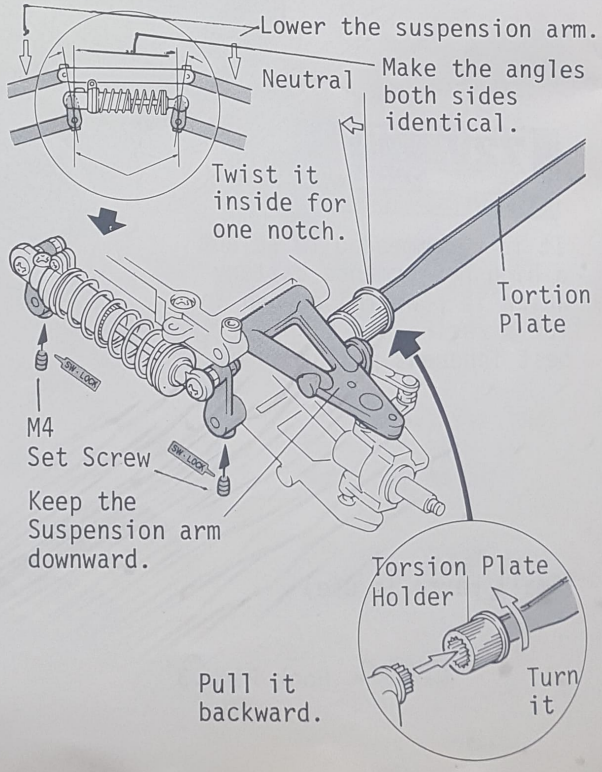
Being in operation, the chain is getting slacken little by little. Check it from time to time to keep it in a good condition. When the chain has been extended beyond the range of adjustment, remove one link out of the chain.



[Adjustment of Suspension Spring]

For the first run, adjust the suspension spring as shown in the drawing below. After some running, regulate the spring tension in compliance with the road condition.

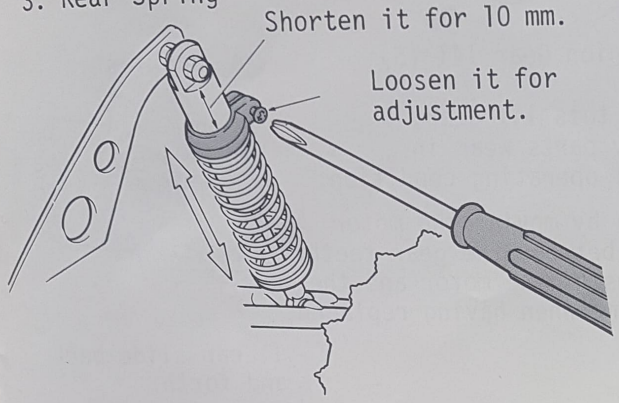
1. Front Suspension Spring
Arrange the front damper arm to be at the same angle right and left with the front suspension arm inclined down as shown in the drawing. And secure it with M4 setscrew.



2 Adjustment of Torsion Plate

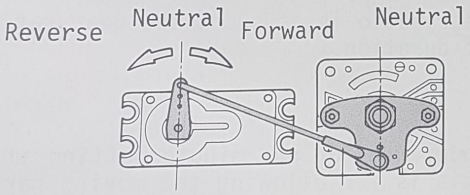
You can adjust the tension of the torsion plate augmented by pulling it out backward and turning it to the inside; by turning it outside, the tension is decreased. Generally speaking it should be kept in neutral as shown in the drawing of 7 of page 6, or 1 spline inside.

3. Rear Spring



[Adjustment of Speed Controller]

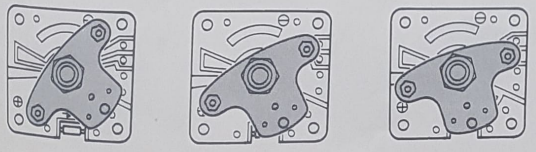
Connect the 7.2V Ni-Cad battery and operate the radio in the someway as done in 12 "Testing of Radio" on page 12. When the speed controller is set at a certain point, the motor may start to run. The pinion gear is, however, not yet installed in the gear-box, so that you can take your time to test the speed controller.



By turning the ball end, adjust the speed controller to assume a position as shown in the drawing above (motor halting position) with the control stick and the trim lever in neutral.

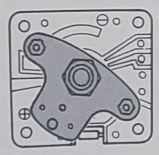
1. Adjustment for High Speed

When the control stick on your radio is pushed forward all the way, the controller should be activated and the motor should run at a high speed. By the motor sound, you can tell a state of the motor running, high, medium, or low speed.

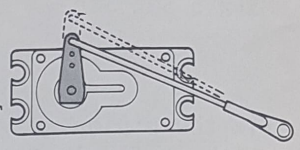


2. Adjustment of Backward Advancement

Pull the control stick and the controller horn is operated as illustrated in the diagram below, then the motor should be driven reverse.

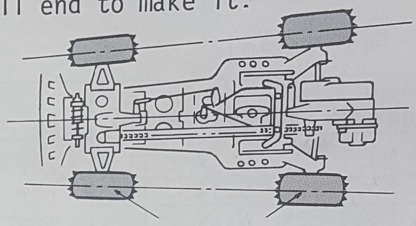


If the states described in 1 and 2 are not achieved, replace the servo horn into a bigger one.



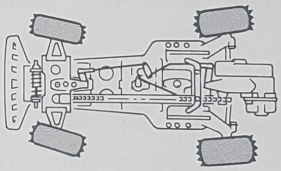
[Adjustment of Toe-In]

Manipulate the steering stick and the trim lever in the neutral position and check to see if the wheels are arranged in line as shown in the drawing below. If not, adjust the ball end to make it.

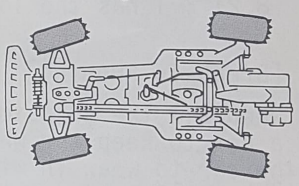


The center lines of the front and rear wheels should be aligned.

After completing the toe-in adjustment, move the control stick right and left to see if the wheel are operated correctly.

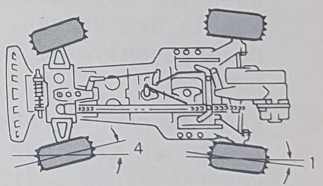


Steering toward right



Steering toward left

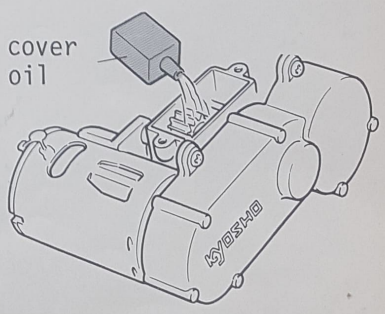
Steerage ratio between the front and rear wheels is 4 : 1. The rear ones are designed to be steered to considerably less degree.



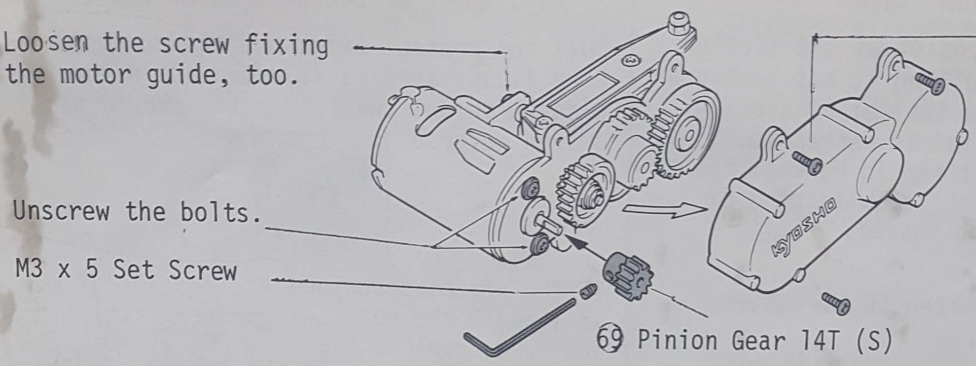
[Supply of Oil]

Remove the gearbox cover and pour 2 or 3 cc oil into it.

The same oil as used with the dampers.

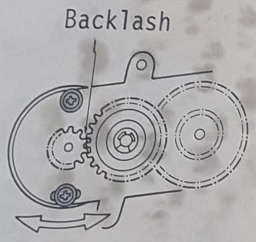


[Adjustment of Gear Ratio]



Fix the pinion gear 14T ⑥9 onto the shaft. Use this 14T gear, which is for low speed running, until all rotary parts wear in with each other and seat themselves under actual operating condition.

Adjust the backlash (play between the gear teeth) by moving the motor back and forth, so that there is some clearance between the gear teeth. Upon determing the adjustment, tighten the screws of the motor and the motor guide. Repeat the same procedures each time when having replaced another pinion gear.



It can slide back and forth.

[List of Gear Ratio]

Pinion Gear x Idle Gear No.	Gear Ratio	Usage
14T x No.1	9.47 : 1	For quicker acceleration. For prolonging running time. For road surface with more resistance (muddy or grassy course, etc.)
14T x No.3	9.14 : 1	
15T x No.1	8.84 : 1	
14T x No.2	8.80 : 1	For faster speed. For road surface with less resistance (hard soil, etc.)
15T x No.3	8.53 : 1	
15T x No.2	8.21 : 1	

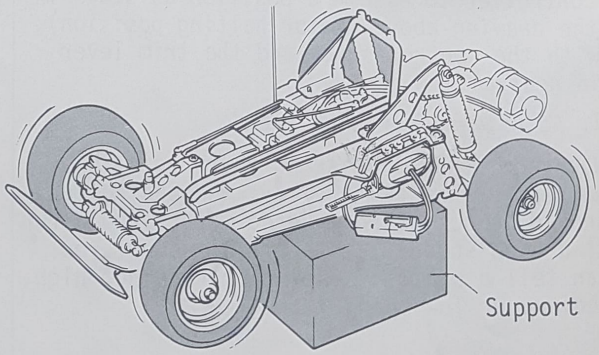
*The relations of the duration of running to the gear ratio is as such; the gear ratio of 8.21 : 1 has the longest and 9.47 : 1 the shortest duration.

[Break-In Running]

When all the adjustments have been done, get the model run for one minute putting it on a box to keep the wheels aloof from the ground. This is for allowing the moving parts of the car to wear in with each other and seat themselve.

*When the car runs forward, all four wheels are driven, when going reverse only the rear wheels are powered.

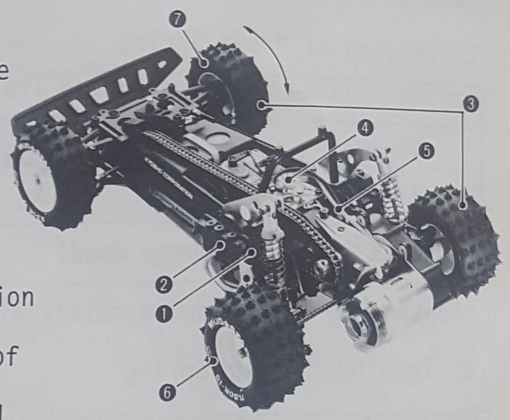
*When turning a rear tire by hand, the other side one rotates in reverse since a differential gear is employed on the rear axle.



** CHECK BEFORE RUNNING **

[Check Before Running]

Before running the car, check the parts in order of the numbers as shown in the picture.



*Drive slowly the first time the car is run. Continue driving slowly until the battery needs recharging. Check all moving parts on the car.

1. Check to see if all bolts and nuts are tightened firmly.
2. Check to see if batteries for radio control units and the motor are charged fully.
3. Check to see if the front wheels steer in proportion to your control of the transmitter.
4. Check to see if the forward and reverse movement of the car responds accurately to your control.
5. Check to see that all wiring is properly insulated with vinyl tape.
6. Check to see that the rear wheels are free and can be turned by hand.
7. Turn the front wheel to see if it is engaged and disengaged properly.

[Steps of Operating]

1. Put batteries into radio control units. Install main Ni-cad running battery.
2. Turn transmitter switch on.
3. Switch on the receiver.
4. Check to see that the sticks of your transmitter operate correctly, right and left for steering, and up and down for throttle.

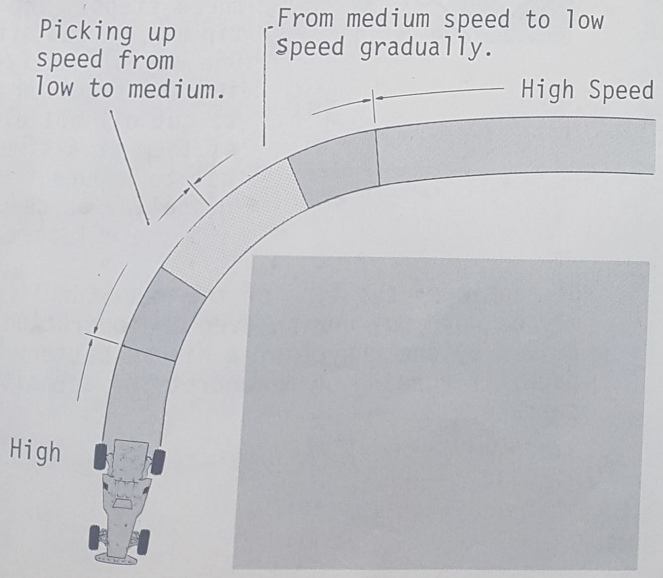
*When turning off the switches, turn off the receiver first then transmitter. Otherwise, the car servos may be left in a position other than neutral.

[Trouble shooting when the car does not start]

1. Poor contact of connectors of receivers, servos, batteries or of electric wiring.
2. Poor contact of the speed controller wiper blade.
3. Radio control units are out order.
4. Signal jamming from other radios.

*The radio control units on the Progress 4-WDS is powered by the same battery which drives the motor. So, during a running, if you notice any drop of speed, retrieve the car at once and turn the switch off. The battery discharged below a certain limit cannot operate the radio control units and the car will be out of control.

** GUIDE FOR CHARACTERIZING THE CAR (2) [FOUNDAMENTAL DRIVING]



(Driving Response)

Though the Progress 4-WDS is equipped with an entirely new device - 4WS, a response you will get when driving it is not very different from one when driving other conventional models. The car will respond to your controls more alrertly at curves with the advantage of the 4WS. The Progress will make a cornering most quickly with the least consumption of electricity by the way illustrated below;

[Adjustment of Damper and Suspension Spring]

Regulate the components based upon a rugged or slippery road. The list below is a general indication for your reference to adjust it in your own way;

1. Tension of Front Spring

Spring Tension	Straight Going Trait	High Speed Corner	Low Speed Corner
Strong	○(Slippery Road)	△(Slight Over Steering)	△(Slight Under Steering)
Medium	○	○	○
Weak	○(Bumpy Road)	△(Slight Under Steering)	△(Slight Over Steering)

*Adjust the front spring mainly with the torsion plate, and finely with the coil spring.

2. Tension of Rear Spring

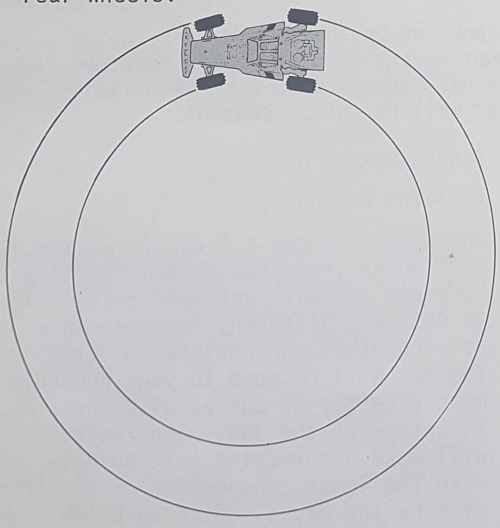
Spring Tension	Straight Going Trait	High Speed Corner	Low Speed Corner
Strong	○ (Slippery Road)	△(Slight Over Steering)	△(Slight Under Steering)
Medium	○	○	○
Weak	○ (Bumpy Road)	△(Slight Under Steering)	○(Slight Over Steering)

3. Adjustment of Oil Damper

Use harder oil, when the spring is set to high tension. No.1880 Damper Oil set is recommended for a hard oil.

[Characterizing 4WD]

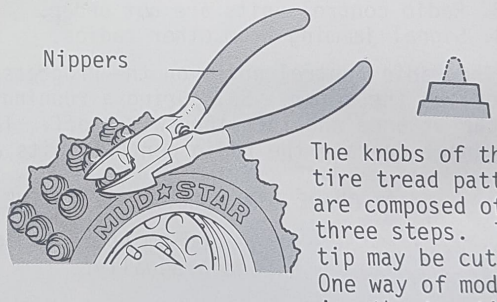
Keep the car running at medium speed and cut the steering wheel all the way right and left. If you see the front and rear wheels tread on the same path, the adjustment is correct. You may tune it finely up to your taste, that is, to change the steerage ration between the front and the rear wheels.



*If you see any trend of spinning when picking up the speed after a cornering, reduce the steerage of the rear wheels.

[Modification of Tires]

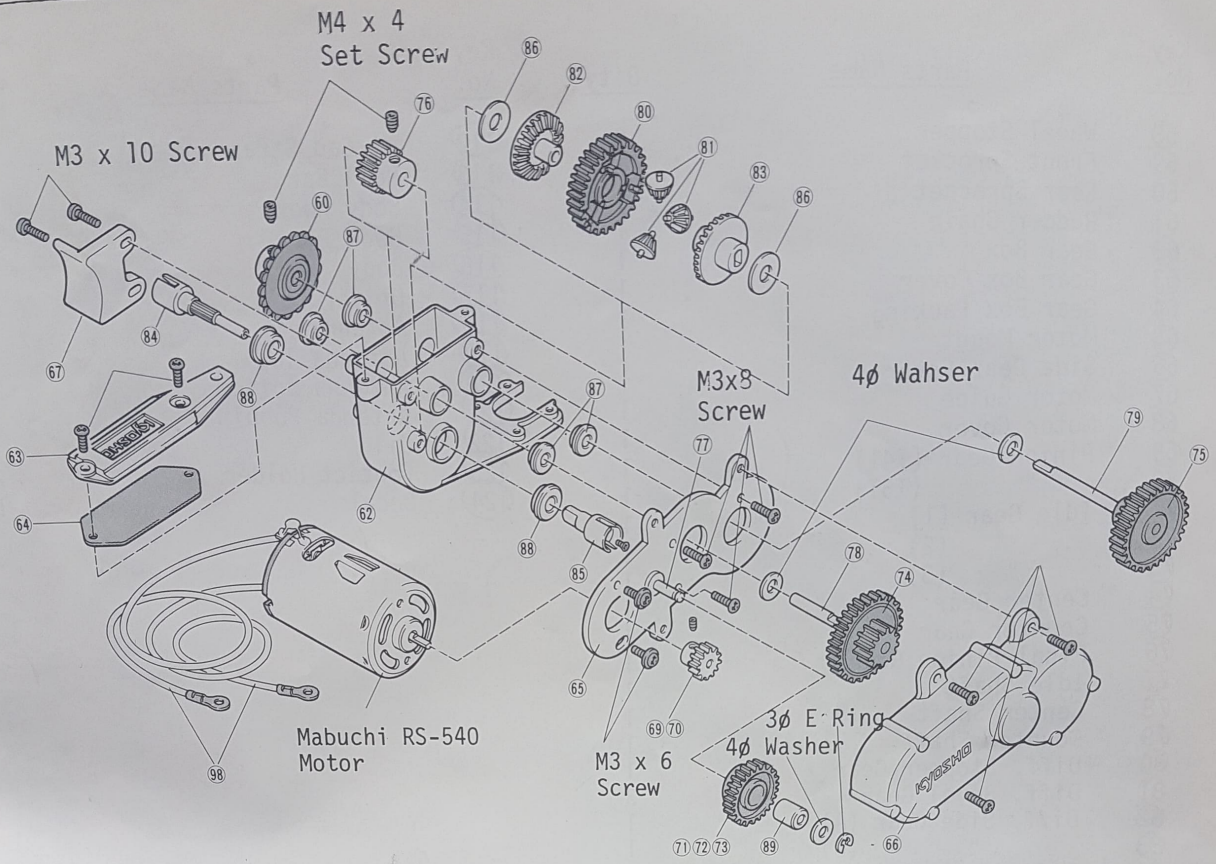
The Mud Star Tire boasts of very strong road holding power, so it requires no additional spikes. On the contrary, it may be sometimes necessary to diminish the gripping power of it. In such a case, you can snip off the tips of the tread patterns of the tire.



The knobs of the tire tread pattern are composed of three steps. The tip may be cut off. One way of modifying the traction is to cut off not all of them at a time, but to reduce them gradullay as checking the effect.

*Be cautious: the tips of the Mud Star Tire may be worn out during even one operation driven by one charge of a Ni-cad battery pack, if running on a concrete or asphalt surface.

EXPLODED VIEW OF GEAR BOX



PARTS LIST

Key No.	Parts Name	Q'ty
1	Front Bumper	1
2	Front Head	1
3	Front Base	1
4	Front Shaft Holder	1
5	Main Chassis	1
6	Deck Plate	1
7	Center Post	2
8	Chain Guide (A)	1
9	" (B)	1
10	Front Upper Suspension Arm	2
11	Front Lower Suspension Arm	2
12	Torsion Holder	2
13	Knuckle Stopper (R)	1
14	" (L)	1
15	Front Upper Sus. Arm Pin	2
16	Front Lower Sus. Arm Pin	2
17	Front Damper Arm	2
18	Torsion Plate	2
19	Rear Suspension Mount	2
20	Rear Suspension Arm (R)	2
21	" (L)	2
22	Rear Suspension Arm Collar	4
23	Front Knuckle Arm (R)	1
24	" (L)	1
25	Rear Knuckle Arm (R)	1
26	" (L)	1
27	Ball Seat	8
28	Pillow Ball	15

Key No.	Parts Name	Q'ty
29	Damper Arm (R)	1
30	" (L)	1
31	Rear Damper Pin	2
32	Damper Case	3
34	Damper O Ring	3
35	Damper Washer	3
36	Damper Piston	3
37	Spring	3
38	Spring Stopper	3
39	Spring Adjuster	3
40	Damper End	3
41	Damper Ball	2
42	Damper Rubber Pipe	1
43	Front Wheel (R)	1
44	" (L)	1
45	Rear Wheel	2
46	Front Inner Wheel	2
47	Rear Inner Wheel	2
48	Oneway Clutch	2
49	Wheel Washer	2
50	Front Tire	2
51	Rear Tire	2
52	Front Center Shaft	1
53	Front Joint	1
54	Front Half Shaft	2
55	Rear Half Shaft	2
56	Front Wheel Shaft	2
57	Rear Wheel Shaft	2

Key No.	Parts Name	Q'ty
58	Wheel Stopper	2
59	Front Sprocket	1
60	Rear Sprocket	1
61	Rudder Chain	1
62	Gear Box	1
63	Gear Box Cover	1
64	Gear Box Packing	1
65	Motor Mount	1
66	Side Gear Cover	1
67	Motor Guide	1
68	Motor Cover	1
69	Pinion Gear (14T)	1
70	" (15T)	1
71	Idle Gear (1)	1
72	" (2)	1
73	" (3)	1
74	Center Gear	1
75	Counter Gear	1
76	Final Pinion Gear	1
77	Idle Shaft	1
78	Center Shaft	1
79	Counter Shaft	1
80	Diff. Stopper Gear	1
81	Diff. Bevel Gear	3
82	Diff. Side Gear (A)	1
83	" (B)	1
84	Diff. Joint (A)	1
85	" (B)	1
86	Diff. Spacer	2
87	4ø Metal	6
88	6ø Metal	10
89	Idle Gear Metal	1
90	Speed Controller PC Plate	1
91	Speed Controller Horn	1
92	Speed Controller Pivot	1
93	Speed Controller Nut	1
94	Speed Controller Nut	1
95	Speed Controller Retainer	1
96	Silver Contact	2
97	Battery Connector	1
98	Motor Lead Wire	2
99	Double Resister	1
100	Resister Holder Metal	1
101	Lug Terminal	3
102	Front Servo Saver	1
103	Rear Servo Saver	1
104	Front Tie Rod	2
105	Rear Tie Rod	2
106	Ball End	7
107	Front Steering Rod	1
108	Rear Steering Rod	1
109	Speed Controller Rod	1
110	Nylon Strap (S)	6
111	" (M)	2

Key No.	Parts Name	Q'ty
112	Ni-Cad Strap	2
113	Roll Bar	1
114	Body Hook	1
115	Hook Pin	3
116	Body	1
117	Driver Doll	1
118	Antenna	1
119	Antenna Top	1
120	Antenna Bottom	1
121	Antenna Bobbin	1
122	Oil	1
123	Contact Holder	2
124	Decal	1

SPARE PARTS LIST

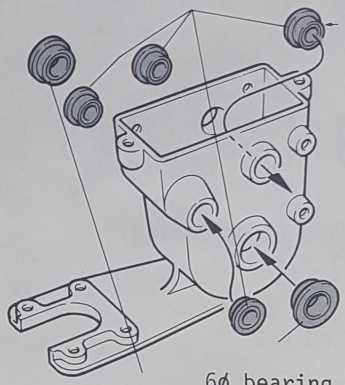
No.	Parts Name	Key No. & Consisting of
PG- 1	Front Bumper	1 x 1
PG- 2	Front Head Base Set	2 3 4 x 1
PG- 3	Main Chassis	5 x 1
PG- 4	Deck Plate	6 x 1
PG- 5	Supension Arm Set	10 11 12 20 21 x 2
PG- 6	Suspension Pin Collar Set	15 16 x 2 22 x 4
PG- 7	Rear Suspension Mount	19 x 2
PG- 8	Ball Seat	27 x 8
PG- 9	Pillow Ball	28 x 10
PG-10	Front Knuckle Arm Set	23 24 x 1 88 x 4 (press-inserted)
PG-11	Rear Knuckle Arm Set	25 26 x 1 88 x 4 (" ")
PG-12	Knuckle Stopper Set	13 14 x 1
PG-13	Torsion Plate & Center Post	7 18 x 2
PG-14	Oil Damper	32 33 34 35 36 x 2 (Assembled)
PG-15	Damper Spring Set	37 38 39 40 41 x 2
PG-16	Front Damper Arm	42 x 1 17 x 2
PG-17	Rear Damper Arm	29 30 42 31 x 2
PG-18	Front Wheel (w/Oneway Clutch)	43 44 x 1 46 48 x 2
PG-19	Rear Wheel	45 47 x 2
PG-20	Wheel Stopper Set	49 58 x 2 w/E Ring
PG-21	MUD STAR Front Tire	50 x 2
PG-22	MUD STAR Rear Tire	51 x 2
PG-23	Front Wheel Shaft	56 x 2
PG-24	Rear Wheel Shaft	57 x 2
PG-25	Front Half Shaft	54 x 2
PG-26	Rear Half Shaft	55 x 2
PG-27	Front Joint & Sprocket	52 53 59 60 x 1
PG-28	Rudder Chain	61 x 1
PG-29	Chain Guide Set	8 9 x 1
PG-30	Gear Box Case	62 63 64 x 1 87 x 4 88 x 2
PG-31	Motor Mount	65 77 x 1
PG-32	Gear Set (A)	69 70 71 72 73 89 x 1
PG-33	Gear Set (B)	74 75 76 78 79 x 1
PG-34	Deff. Gear Set	80 82 83 x 1 81 x 3 86 x 2
PG-35	Diff. Joint Set	84 85 x 1
PG-36	Side Gear Cover	66 67 x 1
PG-37	Motor Cover	68 x 1 (polycarbonate)
PG-38	4ø Metal	87 x 10
PG-39	6ø Metal	88 x 10
PG-40	Speed Controller Set	90 91 92 93 94 x 1 96 101 123 x 2
PG-41	Speed Controller PC Plate (w/Diodo)	90 x 1 101 x 2
PG-42	Contact Set	96 x 4 123 x 2
PG-43	Connecter Lead Wire Set	97 100 x 1 98 x 2
PG-44	Front Servo Saver	102 x 1
PG-45	Rear Servo Saver	103 x 1
PG-46	Tie Rod Set	104 105 x 2 88 106 x 4
PG-47	Linkage Set	107 108 109 x 1 88 106 x 3
PG-48	Body Hook & Roll Bar	113 114 x 1
PG-49	Screw Set	Screw, Nut Allen Wrench Set
PG-50	Decal (Progress 4-WDS)	124 x 1
PG-51	Body & Driver Doll	116 117 x 1
EF-37	Nylon Strap (S)	110 x 6
EF-38	Nylon Strap (M)	111 x 6
EF-39	Ni-Cad Strap	112 x 6
EP-22	Hook Pin	115 x 5
1880	Damper Oil Set	Hard & Soft Type
1885	Antenna Set	118 119 120 121 x 1

OPTION PARTS

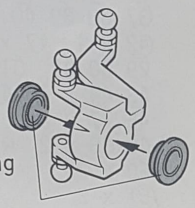
[Replacing of Bearing]

The standard kit is provided with plain bearings in the gearbox and on the wheel axles. For enhancing the performance, it is recommended to change them with ball bearings.

4ø Bearing

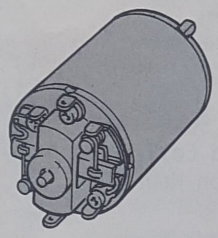


Only this bearing should be inserted from the inside.



6ø bearing
6ø bearing

[Replacing with Le Mans Motor]



The following is the list of the Le Mans motors which would run the Progress best. Especially the Le Mans 480T will run in the same duration as the Mabuchi RS-540S will and with more power.

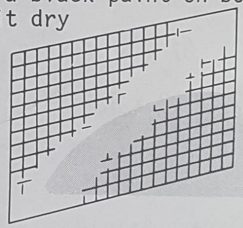
Parts No.	Type of Le Mans Motor	Adaptability
1893	240S	x
1891	480S	0
1892	480T	0
1894	600E	0

[Accessories for Body]

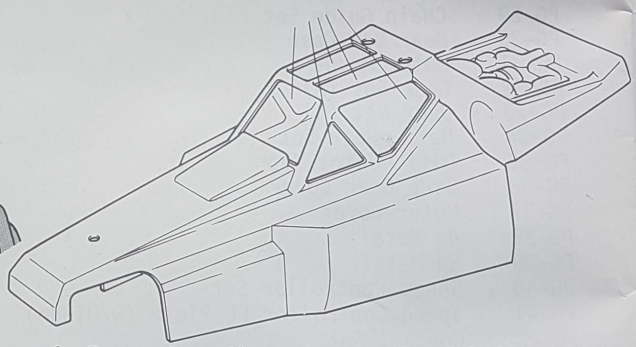
The accessory parts set, Parts No.SC-72, will make the model car more fashionable. The set includes window screens and lights.

How to Fix Window Screen

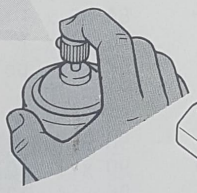
1. Spray a black paint on both sides of the net and let it dry



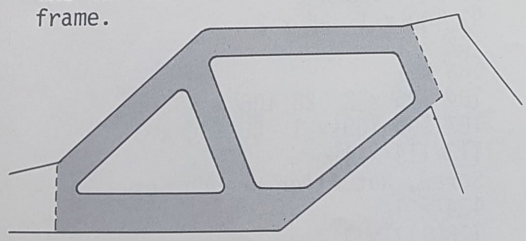
2. Cut out the window on the body.

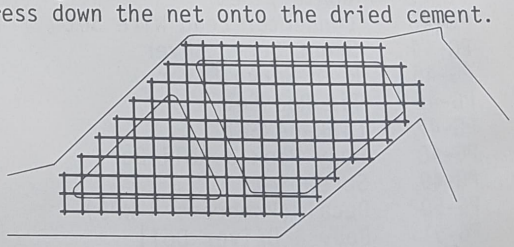


3. Put a thick coat of a contact cement on the inside of window frame.



4. Press down the net onto the dried cement.





*For appling the window screens to the sun roof opening, two sets of the accessory parts are required.

*You can fix the lights, included in the accessory parts, wherever you prefer.

Parts No.	Parts Name	Key No. & Consisting of
CK-63	4ø Bearing (2pcs.)	Replacement for 4mm Plain Bearing (87)
MS-26	6ø Bearing (2 pcs.)	Replacement for 6mm Plain Bearing (88)
SC-80	Resistor for 4th speed	This makes the car w/4 forward speeds, 2 setps of braking, & 1 reserve
SC-72	Accessory Set	Body Accessory Parts
CB-124	Linkage Boot	Protective for Switch against mud
1883	Frontier Hobby Oil	lubricant w/teflon for bearings

OFF-ROAD RACER PROGRESS 4WDS

LIST OF PARTS IN THE BAGS

BAG NO.	KEY NO.	NAME OF PART	QTY	PART USED IN INSTRUCTION
(1)	2	Front Head	1	[2]
	3	Front Base	1	[2]
(2)	1	Front Bumper	1	[2]
	4	Front Shaft Holder	1	[2]
	15	Front Upper Sus. Arm Pin	2	[4]
	16	Front Lower Sus. Arm Pin	2	[4]
	17	Front Damper Arm	2	[4]
	42	Damper Rubber Pipe	1	[4]
	52	Front Center Shaft	1	[2]
	53	Front Joint	1	[2]
	59	Front Sprocket	1	[2]
	61	Ladder Chain	1	[2]
	87	4ø Metal	2	[2]
	114	Body Hook	1	[2]
		1.5mm Hexagonal Wrench	1	
		2.0mm Hexagonal Wrench	1	
(3)	10	Front Upper Sus. Arm	2	[3]
	11	Front Lower Sus. Arm	2	[3]
	12	Torsion Holder	2	[7]
	20	Rear Suspension Arm (R)	2	[6]
	21	Rear Suspension Arm (L)	2	[6]
(4)	27	Ball Seat	8	[3] [6]
	28	Pillow Ball	15	[3] [5] [6] [8] [18]
	106	Ball End	8	[5] [8] [19]
(5)	7	Center Post	2	[7]
	9	Chain Guide (B)	1	[7]
	13	Knuckle Stopper (R)	1	[5]
	14	Knuckle Stopper (L)	1	[5]
	18	Torsion Plate	2	[7]
	19	Rear Susoension Mount	2	[7]
	22	Rear Sus. Arm Collar	4	[6]
	102	Front Servo Saver	1	[5]
	104	Front Tie Rod	2	[5]
(6)	8	Chain Guide (A)	1	[15]
	29	Damper Arm (R)	1	[15]
	30	Damper Arm (L)	1	[15]
	31	Rear Damper Pin	2	[15]
	41	Damper Ball	2	[15]
	90	Controller PC Board	1	[11]
	97	Battery Connector	1	[11]
	99	Double Registor	1	Assembled with (90)
	100	Metal Registor Holder	1	[14]
	101	Lug Terminal	2	[10]
	103	Rear Servo Saver	1	[8]
	105	Rear Tire Rod	2	[8]
	113	Roll Bar	1	[15]

BAG NO.	KEY NO.	NAME OF PART	QTY	PART USED IN INSTRUCTION
(7)	110	Nylon Strap (S)	6	[10] [13]
	111	Nylon Strap (M)	2	[13] [23]
	112	Strap for Ni-Cad Battery	2	[27]
(8)	91	Controller Horn	1	[18]
	92	Controller Pivot	1	[18]
	93	Controller Nut	1	[18]
	94	Controller Spring	1	[18]
	95	Controller Holding Metal	1	[18]
	96	Silver Contact Point	2	[18]
	107	Front Steering Rod	1	[19]
	108	Rear Steering Rod	1	[19]
	109	Speed Control Rod	1	[19]
	123	Contact Point Holder	2	[18]
		3mm Brass Nut	2	[18]
(9)	43	Front Wheel (R)	1	[21]
	44	Front Wheel (L)	1	[21]
	45	Rear Wheel	2	[21]
	46	Front Inner Wheel	2	[21]
	47	Rear Inner Wheel	2	[21]
	48	Oneway Clutch	2	Assembled with (43)(44)
	49	Wheel Washer	2	[22]
	58	Wheel Stopper	2	[22]
(10)	69	Pinion Gear 14T	1	]
	70	Pinion Gear 15T	1	]
	71	Idle Gear No.1	1	]
	72	Idle Gear No.2	1	] To be used for setting.
	122	Oil	1	]
	68	Motor Cover	1	[23]
	117	Driver Doll	1	[24]
	101	Lug Terminal	1	[20]
	118	Antenna	1	[20]
	119	Antenna Top	1	[20]
	120	Antenna Bottom	1	[20]
	121	Antenna Bobbin	1	[20]
		M3 x 14 Tapping Screw (B)	1	[20]
	124	Decal	1	[26]
		Instruction Manual	1	

SCREWS & NUTS ETC.

PART NAME	SIZE	QTY
Screw	M3 x 6	20
Screw	M3 x 8	2
Screw	M3 x 15	4
Set Screw	M3 x 5	5
Screw	M3 x 10	2
Screw	M3 x 45	4
Screw	M4 x 55	1
Screw	M4 x 60	1
Nut	4mm	3
Washer	4ø	2
Set Screw	M4 x 4	4
Tapping Screw	M3 x 10	18

PART NAME	SIZE	QTY
Tapping Screw	M3 x 6	3
Tapping Screw	M3 x 14	5
Flat Screw	M2.6 x 5	16
Nut	3mm	29
Nylon Nut	3mm	2
Nylon Nut	4mm	3
Washer	3ø	10
Washer	5ø	12
Screw	M2.6 x 6	1
Tapping Screw	M2.6 x 8	2
E-Ring	3ø	2
Hook Pin		3
Thread Lock Agent		1

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