

RADIO CONTROLLED ELECTRIC POWERED SPECIAL RACING BUGGY

4WD OFF-ROAD RACER

**LAZER**

**ZX-SPORT**

- HIGH-PERFORMANCE 4WD RACING BUGGY WITH MOST FEATURES OF THE ALL-OUT ZX-R VERSION EASY UPGRANCE AS SKILL LEVEL IMPROVES.
- EFFICIENT, LIGHT AND RELIABLE FOUR-WHEEL DRIVE BY TOOTHED BELTS. AND DUAL DIFFS.
- LONG-TRAVEL OPTIMUM-GEOMETRY ALL-INDEPENDENT SUSPENSION SYSTEM WITH HIGH-QUALITY OIL-FILLED PRESSURE TYPE SHOCK ABSORBERS.
- HIGH-GRIP LOW-PROFILE PIN-SPIKE TIRES FOR GREAT TRACTION ON ALL SURFACES.
- KIT INCLUDES PEPPY LeMANS STOCK 05 MOTOR AND HIGH-QUALITY ROTARY SPEED CONTROLLER.

**1:10 SCALE**



**KYOSHO**<sup>®</sup>  
THE FINEST RADIO CONTROL MODELS  
KIT NO.3148

BELT DRIVE  
**4WD**

\*\*\*\*\*

# BEFORE YOU BEGIN ASSEMBLY!

\*\*\*\*\*

Thank you for purchasing the Kyosho's R/C "1/10 EP 4WD Car".

In order to keep your Car in top condition to enjoy the most pleasure from the R/C world, you should thoroughly read this instruction manual and the operation instruction of the radio control units to keep the correct way of assembling.

## 《 Kit Features 》

This instruction manual is a common instruction manual of 4WD Buggy Car and 4WD Scale Car to assemble the chassis portion.

Another instruction is the double organization,

{ A matter to except the common instruction on assembly }  
{ and the body explanation to assemble. }

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## BEFORE ASSEMBLY

- Read the instruction carefully.

You can assemble the kit more easily, if you have grasped the general idea of steps and structure beforehand by reading it through to the end.



Instruction

- Check the parts in the kit.

Check to see if all the parts are correctly bagged as they are listed in the "Bagged Parts List" (page 2,3). Your thorough understanding of the assembly will enable you to build the kit without any difficulty.

Check the components in the kit prior to your startings of the assembly.

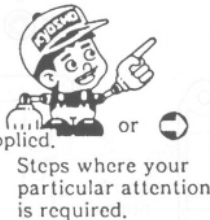


Any claims for replacements or refunds for the model in the process of assembly will not be accepted.

- Learn the marks described in the instruction.

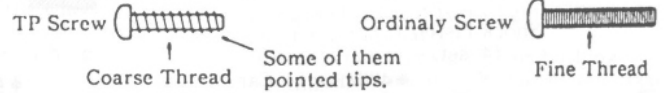
**LOCKTITE** ... Place to put some locktite. (It will prevent the screws and nuts to get loosen by vibration while running)

**GREASE** ..... Point where grease should applied. (It will reduce friction are assure smooth movements.)



- Be well aware of the different types of screws.

- 1) The difference between the TP Screw (short form of self-tapping screw) and the ordinary screw is...



- 2) The kinds of screws which will be used in this instruction.



( There are two kinds of thread, fine and coarse; ones. )

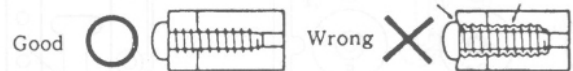
- Pick up the correct parts and screw. Compare the shape and size of small parts, such as screws, nuts, and washers.

- Be sure about the location and direction of parts to install.

Double-check the location and direction of parts with the illustration before installation. When necessary, assemble the parts themselves tentatively before proceeding to the next step.

- Do not tighten the self-tapping screw too tight. Do not use excessive force when tightening the self-tapping screws, or you may strip the thread in the plastic. It is recommended to stop tightening it when the thread part on the screw goes into the plastic part and you feel some resistance from the tightening.

Over tighten may strip the thread in the plastic.



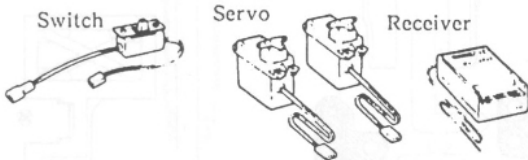
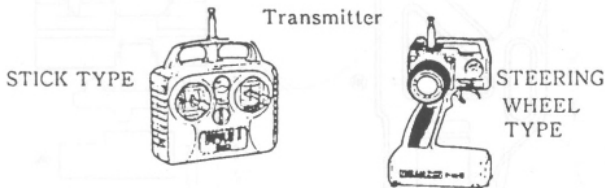
## THINGS NEED BESIDES THE KIT

### < 2 Channel Radio System >



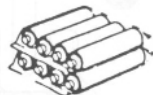
This model is designed to use BEC system radio. A radio contained in a box with this type of logo is a BEC type radio.

Two types of radio control set are on the market, the stick and the steering wheel type. Choose which ever you like.



### < Battery for Radio System >

For Transmitter...8pcs.



### < Ni-Cd Battery >

This model is designed to use below the battery.

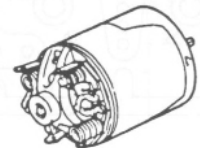


### < Motor >

7.2V-1400

This model is with a motor. A Le Mans series type motor is recommended for top performance.

- Le Mans Pro High Torque
- Le Mans Pro HighSpeed



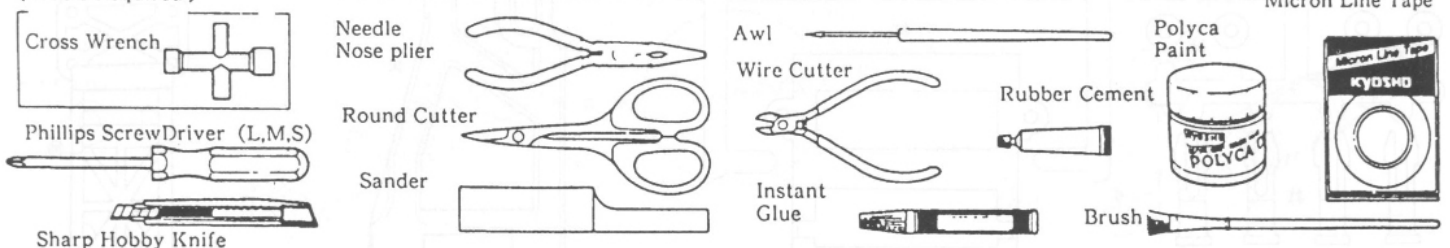
### < Charger for Ni-Cd Battery >

The Kyosho's Ni-Cd Battery is of high performance. If it is charged correctly, it will operate for a considerable period of time.

Use one of the Chargers listed below which suits your need.

No.	Name	Time	Rate	Features
2326	7.2V Power Charger (DC12V)	15 min.	70%	For Beginners Built-in Timer
1849	Multi Charger II (DC12V)	20 min.	100%	Timer, Ammeter built-in
2216	FET Auto-Charger (DC12V)	20-30 min.	100%	Trickle Charging Automatic cut-off at peak of charge

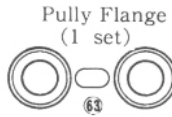
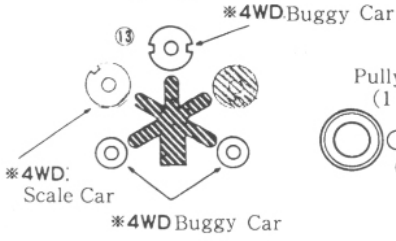
### < Tools Required > Allen Wrench, Cross Wrench, Grease and Screw Locking Compound are in the kit.



# LAYOUT DRAWING OF PLASTIC PARTS ON RUNNERS

 These shaded parts are not used.

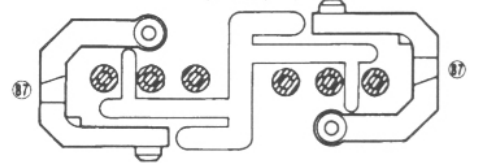
Shock Piston  
(4 set)



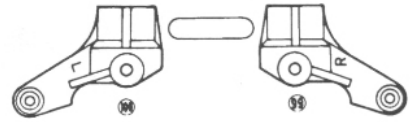
φ5.8 Ball End  
(3 set)



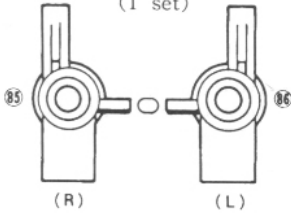
Front Hub  
(1 set)



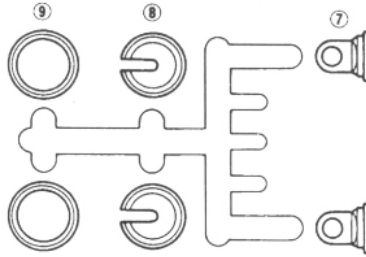
Knuckle Arm  
(1 set)



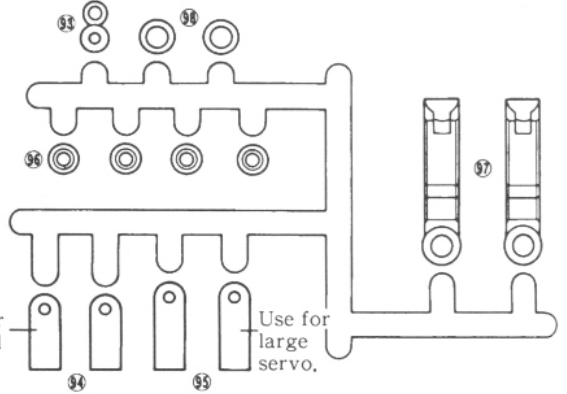
Rear Hub  
(1 set)



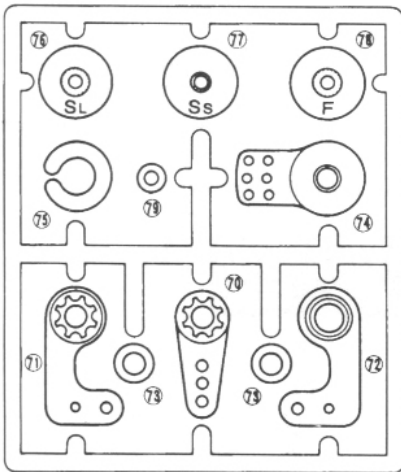
Shock Parts  
(4 set)



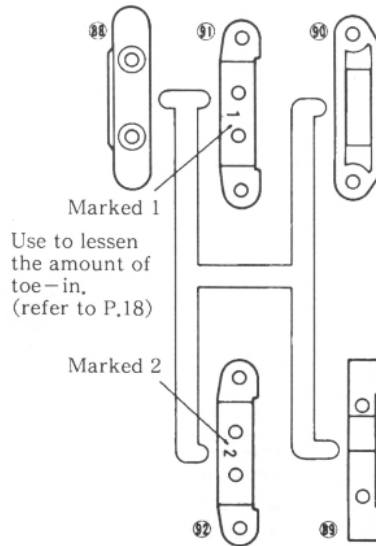
Upper Rod End Parts  
(1 set)



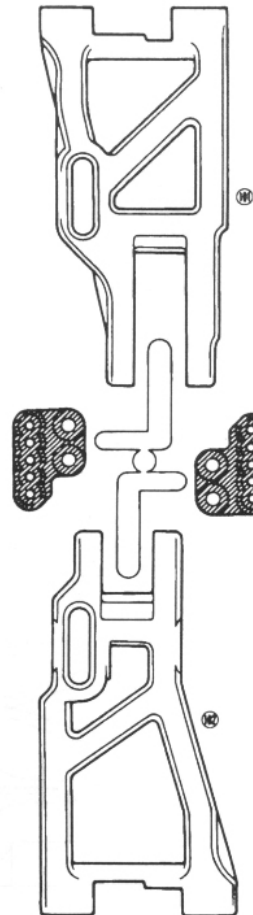
Servo Saver & Uni Crank Parts  
(1 set)



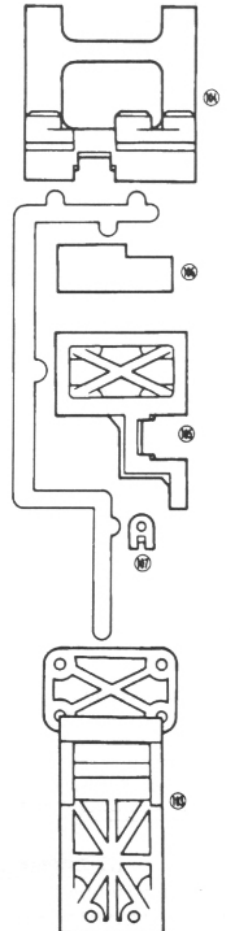
Arm Bracket Parts  
(1 set)



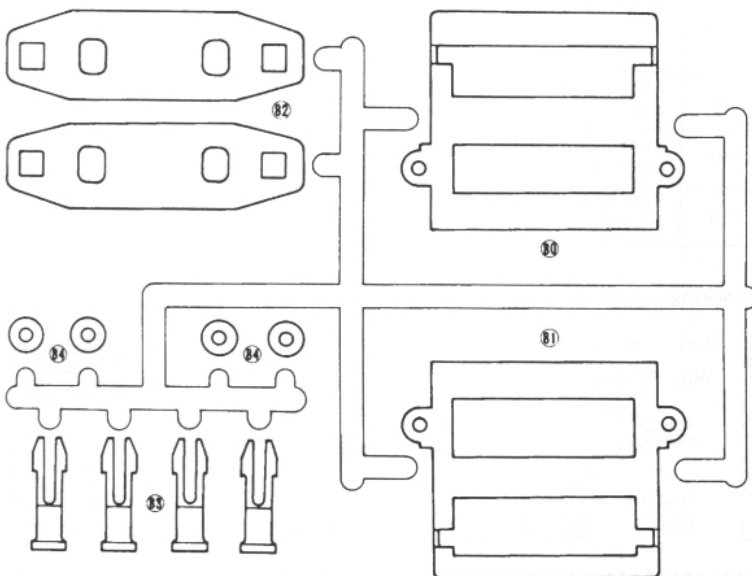
Sus. Arm Parts  
(2 set)



Upper Deck Mount Parts  
(1 set)



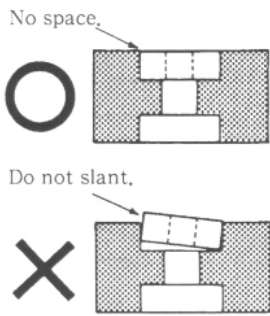
Battery Stopper Parts  
(1 set)



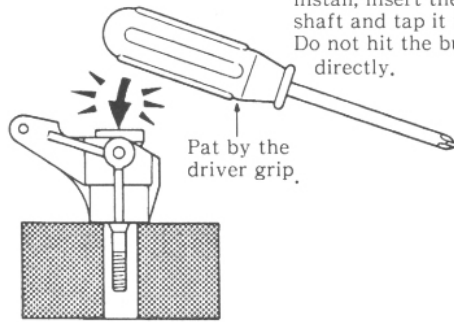


## WHEN INSTALL BUSHING...

(1) Push in till the end.

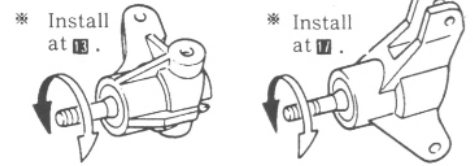


\* If very tight and hard to install, insert the wheel shaft and tap it in. Do not hit the bushing directly.



(2) After install the bushing...

Always check if it turns lightly after inserting the shaft. If it does not turn lightly, the bushing isn't fitted properly. Recheck (1) again.



(3) Don't forget apply the grease!  
\* Apply a proper quantity.

## ● ASSEMBLY OF CHASSIS PORTION

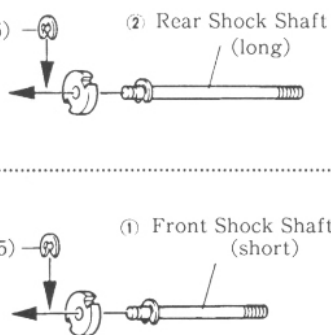
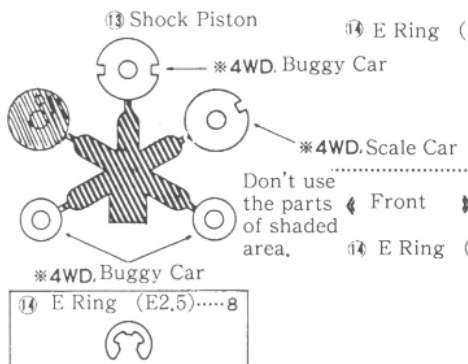
**1 ~ 31**

### 1 ASSEMBLY OF OIL SHOCK

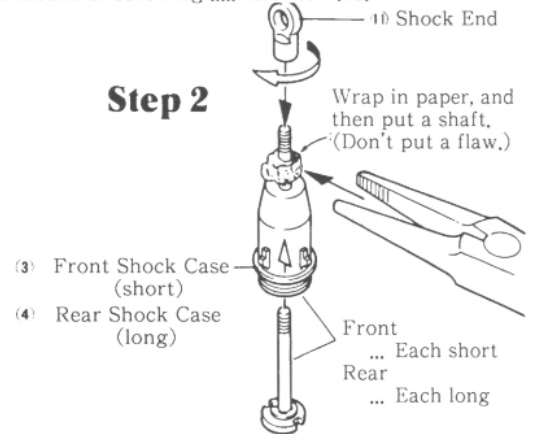
\* These parts are in (bagged1).

A mount of screwing ....Refer to P.18.

**Step 1** Assemble each two pieces. (for front, for rear)



### Step 2

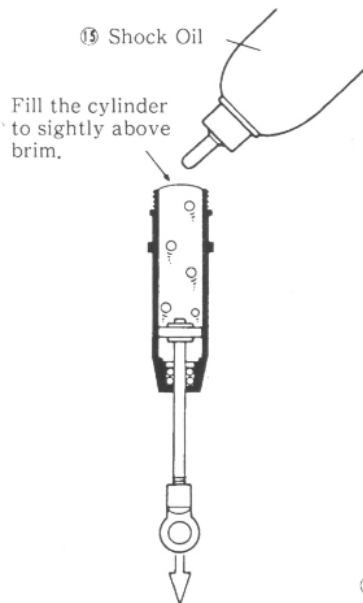


### 2 FILLING SHOCK OIL

\* These parts are in (bagged1) (except  $\phi 5.8$  Ball)

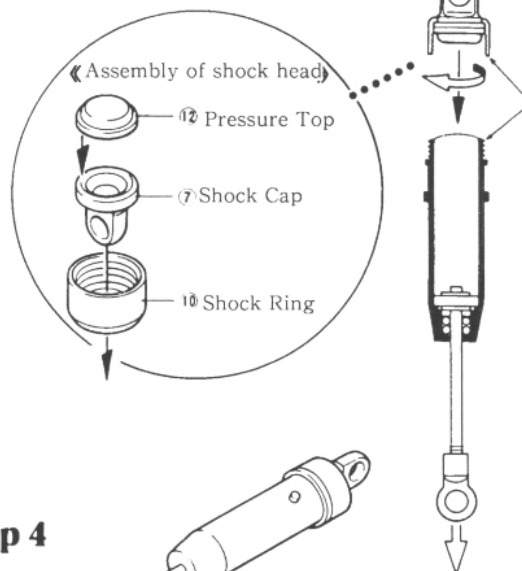
#### Step 1

Pull down the piston to the bottom and pour oil slowly. Then move the piston up and down gently to get rid of air bubbles.



#### Step 2

Keep the piston in the lowest position and tighten the head portion gradually, then excessive oil will run over.



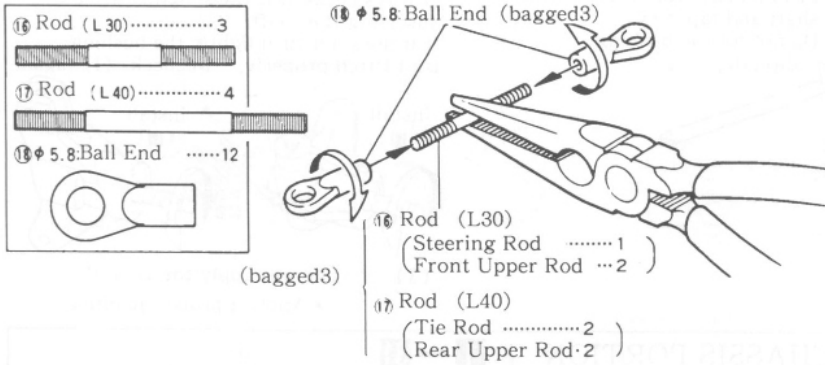
#### Step 3

Confirm that it will work smoothly by moving the piston up and down.

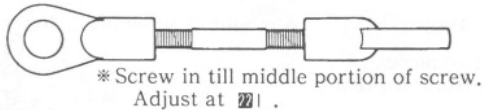


### 3 INSTALLATION OF BALL END

● Screw in the ball ends, put together the length with the actual size drawing.

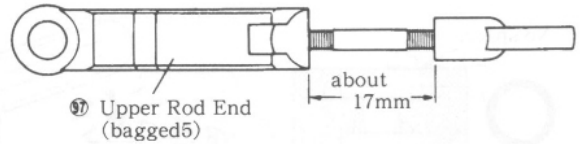


● Steering Rod ... 1  
\* Install at 10 .

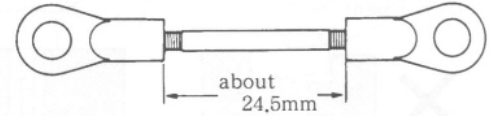


《 ACTUAL SIZE DRAWING 》

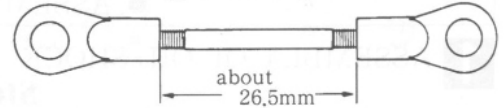
● Front Upper Rod ... 2 \* Install at 12 .



● Tie Rod \* Install at 10 .



● Rear Upper Rod... 2 \* Install at 13 .

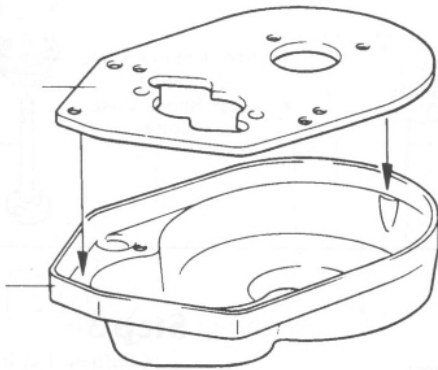


### 4 CUTTING OF GEAR COVER

#### Step 1

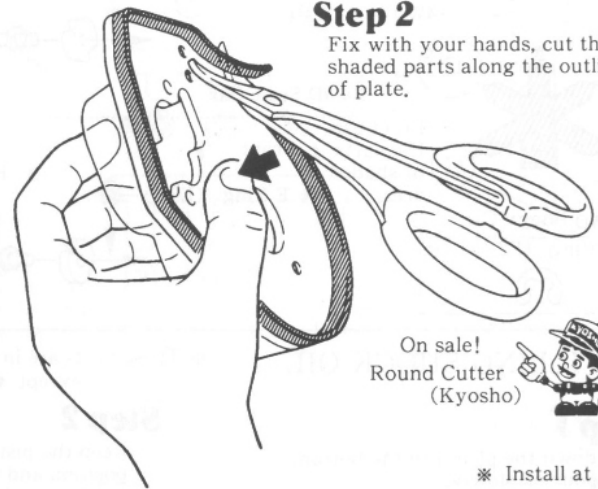
57 Motor Plate (L)  
(bagged 4)

58 Gear Cover  
(bagged 4)



#### Step 2

Fix with your hands, cut the shaded parts along the outline of plate.



On sale!  
Round Cutter  
(Kyosho)

\* Install at 17 .

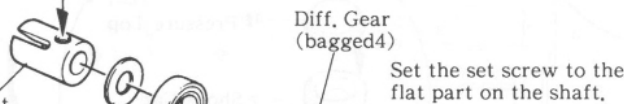
### 5 INSTALLATION OF JOINT

\* IN CASE OF 4WD SCALE CAR.

Allen Wrench (2)  
(bagged 2)

M4 x 4 Set Screw

\* Assemble 2 pcs.  
Install at 14 15 .



\* IN CASE OF 4WD BUGGY CAR.

Allen Wrench (2)  
(bagged 2)

M4 x 4 Set Screw

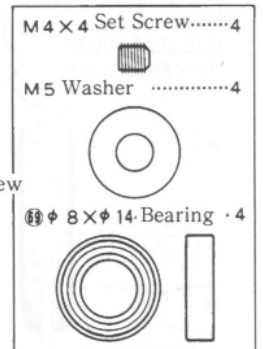
$\phi$  8 x  $\phi$  14 Bearing (bagged 8)

M4 x 4 Set Screw

$\phi$  8 x  $\phi$  14 Bearing

M5 Washer

41 Joint



M4 x 4 Set Screw..... 4

M5 Washer ..... 4

$\phi$  8 Bushing Collar 4

$\phi$  10 x  $\phi$  14 Bushing · 4



Set the set screw to the flat part on the shaft.

\* Assemble 2 pcs.  
Install at 14 15 .

Apply the instant glue on the both side.

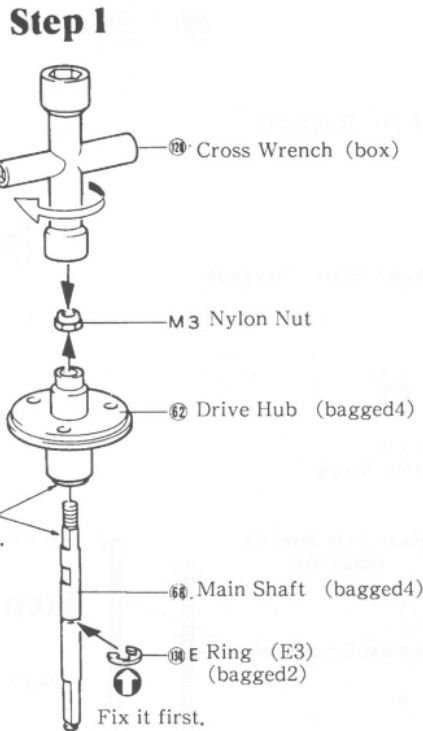
\* In case of using  $\phi$  8 x  $\phi$  14 Bearing (optional parts), don't install the bushing collar.

## 6 ASSEMBLY OF MAIN SHAFT

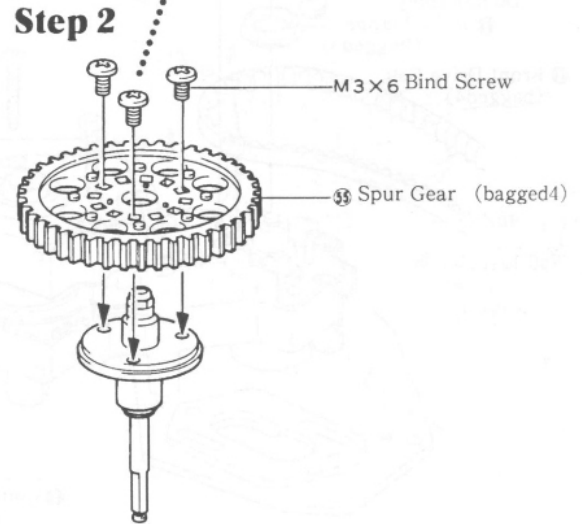
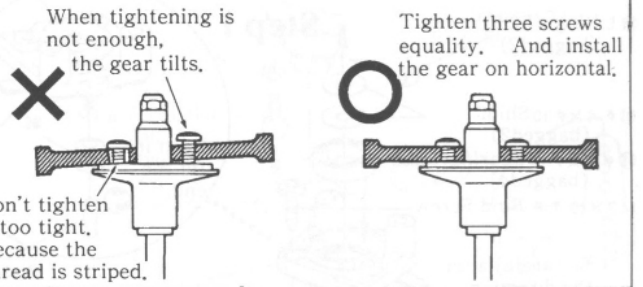
- M3×6 Bind Screw..... 3
- M3 Nylon Nut ..... 1
- E Ring (E3) ..... 1



Fit to the flat part, and install.



Do not use excessive force when tightening the screw, or you may strip the thread. It is recommended to stop tightening it when you feel some resistance from tightening.

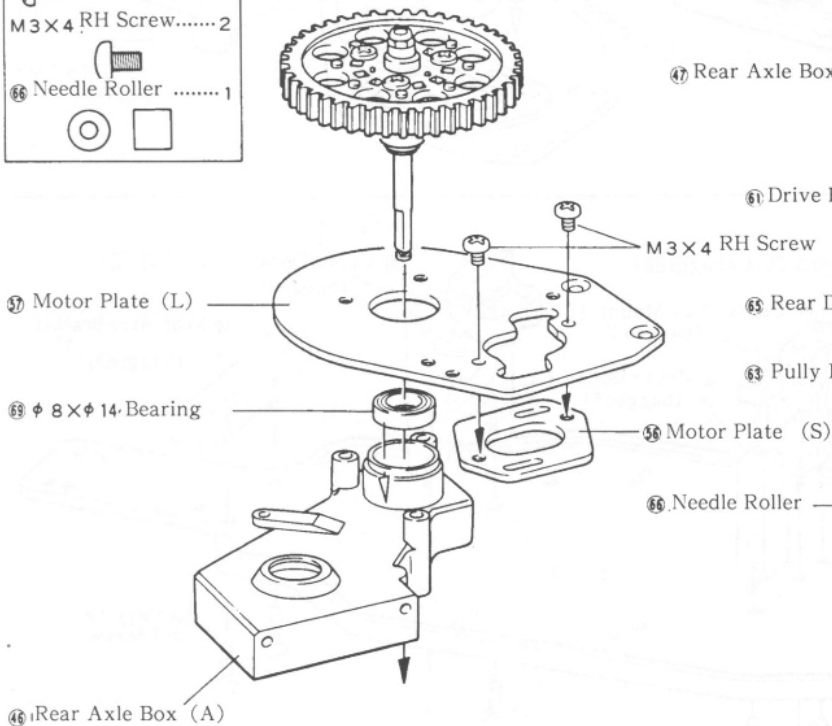


## 7 ASSEMBLY OF REAR AXLE BOX (1)

※ These parts are in (bagged4).

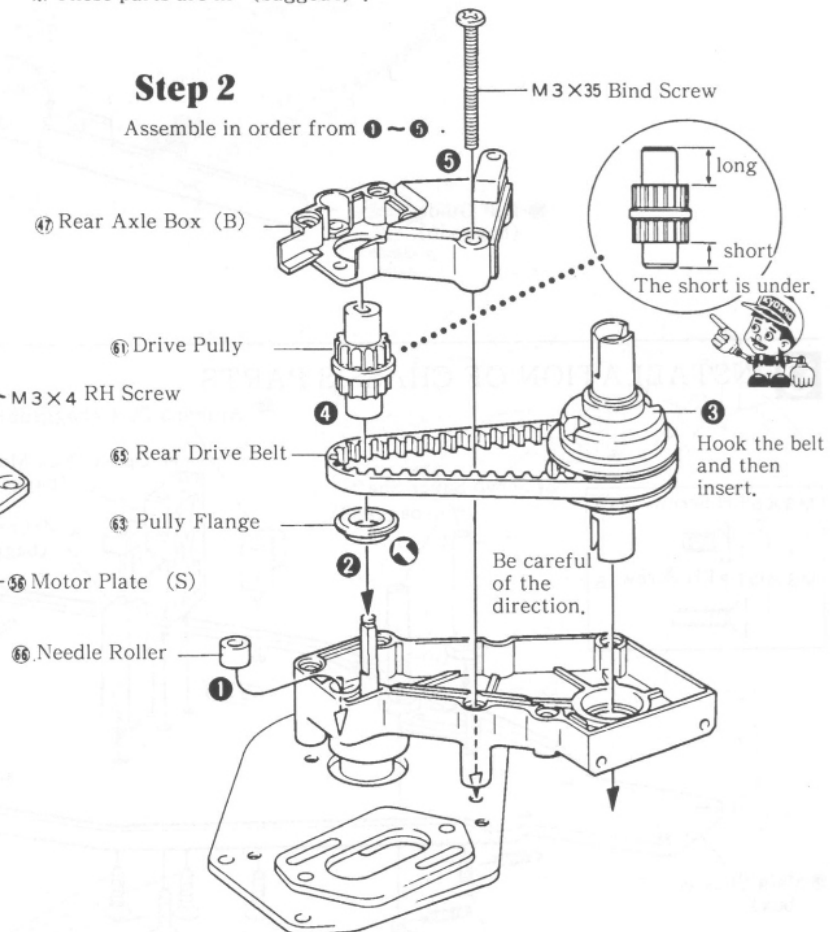
- M3×35 Bind Screw..... 1
- M3×4 RH Screw..... 2
- ⑥ Needle Roller ..... 1

### Step 1

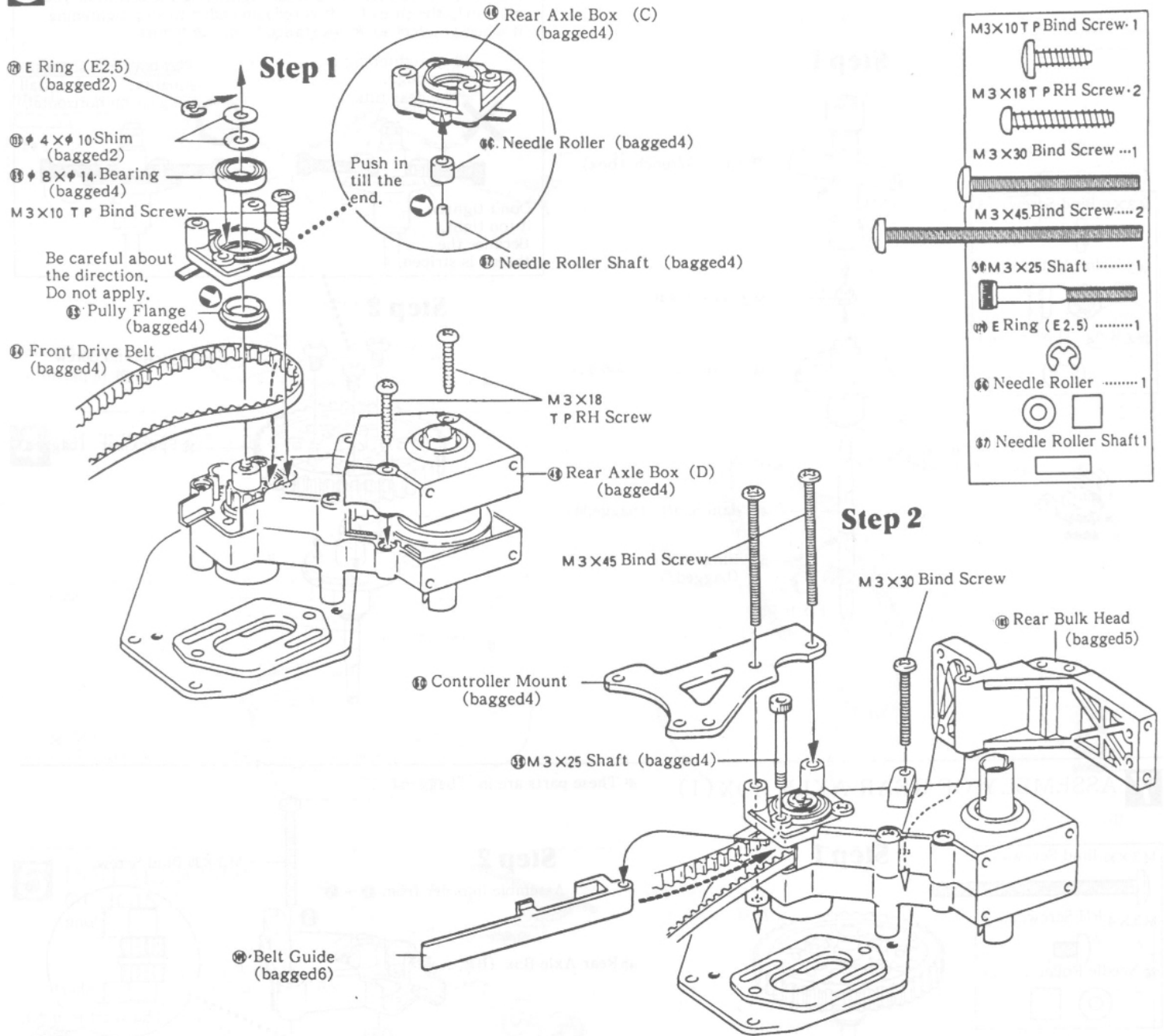


### Step 2

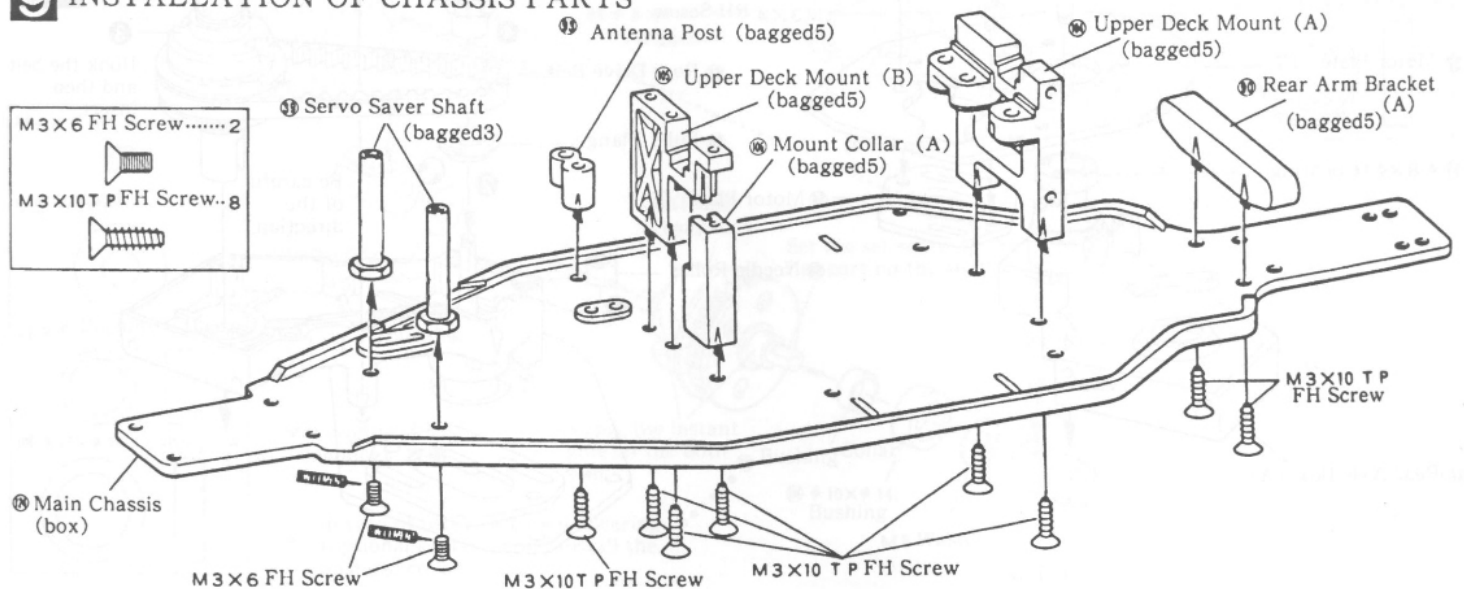
Assemble in order from ① ~ ⑤.



## 8 ASSEMBLY OF REAR AXLE BOX (2)



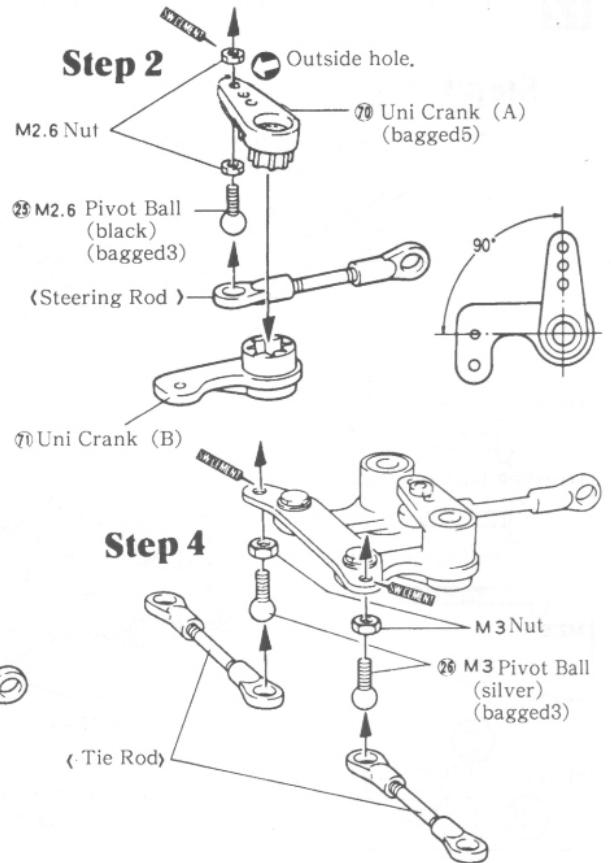
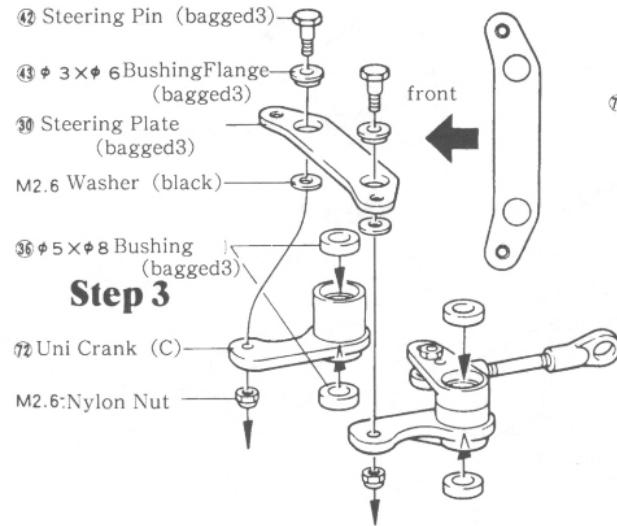
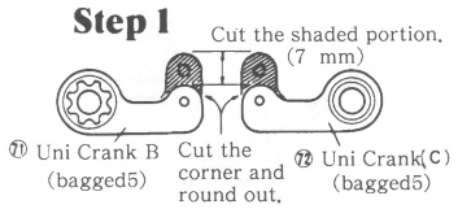
## 9 INSTALLATION OF CHASSIS PARTS





# 10 ASSEMBLY OF UNI CRANK

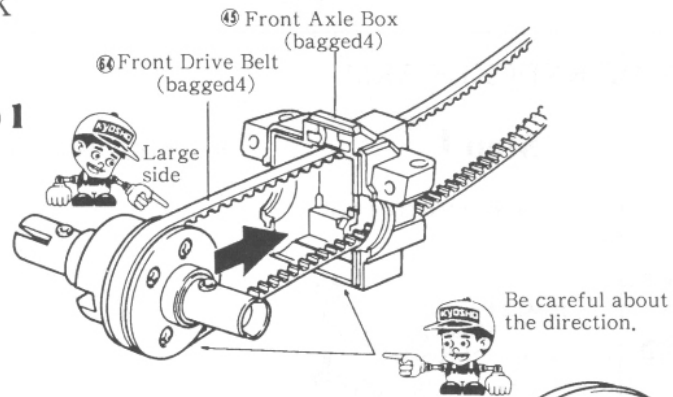
- M2.6 Nut ..... 2
- M3 Nut ..... 2
- M2.6 Nylon Nut ..... 2
- M2.6 Washer (black) · 2
- ②⑨ M2.6 Pivot Ball (black) ... 1
- ②⑩ M3 Pivot Ball silver 2
- ④② Steering Pin ..... 2
- ④③ φ3×φ6 Bushing .. 2 flange
- ④⑥ φ5×φ8 Bushing ... 4



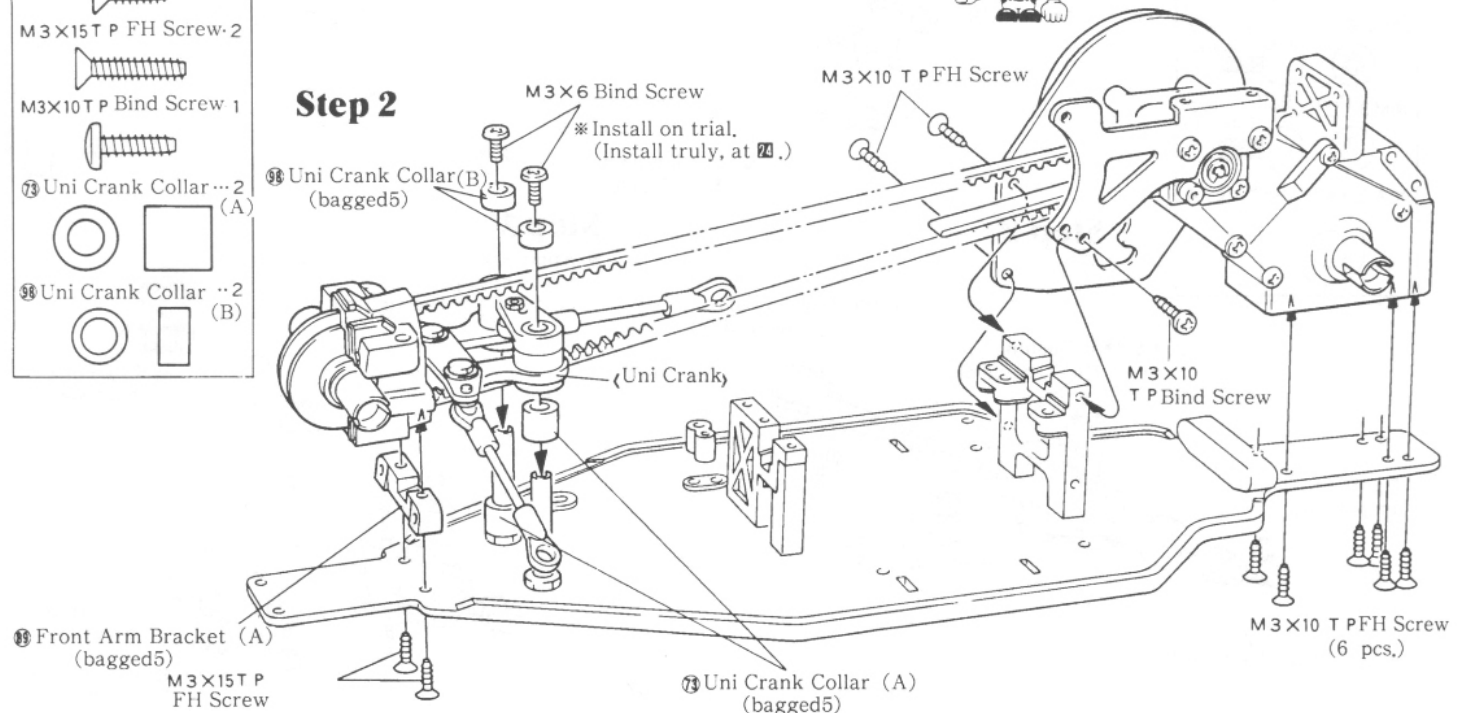
# 11 INSTALLATION OF UNI CRANK & AXLE BOX

- M3×6 Bind Screw ... 2
- M3×10 T PFH Screw · 8
- M3×15 T P FH Screw · 2
- M3×10 T P Bind Screw 1
- ⑦③ Uni Crank Collar ... 2 (A)
- ⑦④ Uni Crank Collar ... 2 (B)

## Step 1

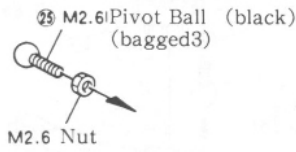


## Step 2



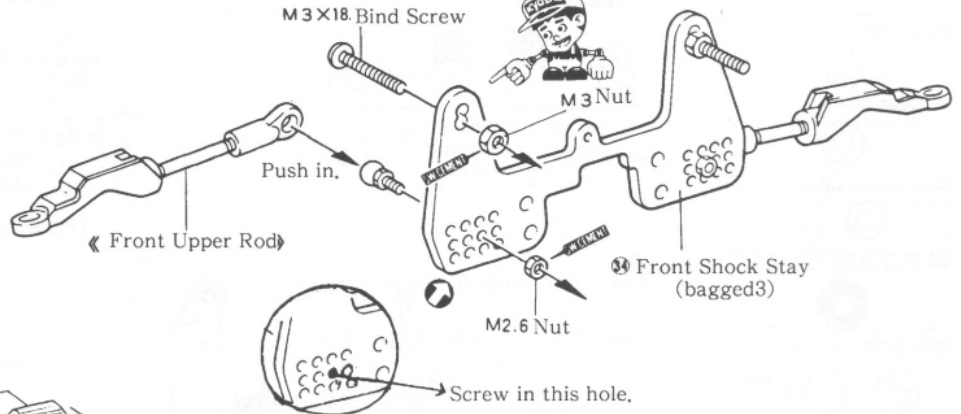
# 12 INSTALLATION OF FRONT SHOCK STAY

## Step 1 \* Assemble 2 pcs.



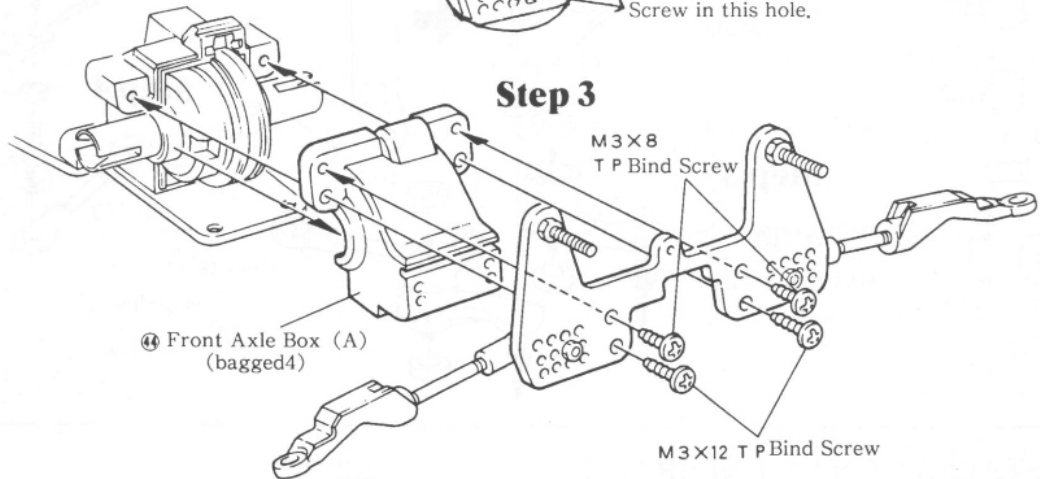
## Step 2

4WD Scale Car ⇒ Upper hole  
4WD Buggy Car ⇒ Under hole



- M3x8 T P Bind Screw...2
- M3x12 T P Bind Screw 2
- M3x18 Bind Screw...2
- M2.6 Nut .....4
- M3 Nut .....2
- 25 M2.6 Pivot Ball ...2 (black)

## Step 3

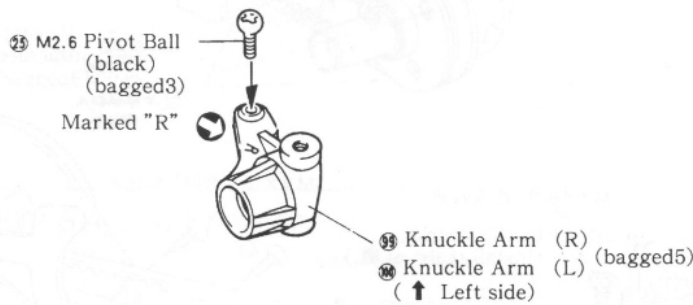


# 13 ASSEMBLY OF KNUCKLE ARM

## Step 1

\* Assemble the left side in the same way.

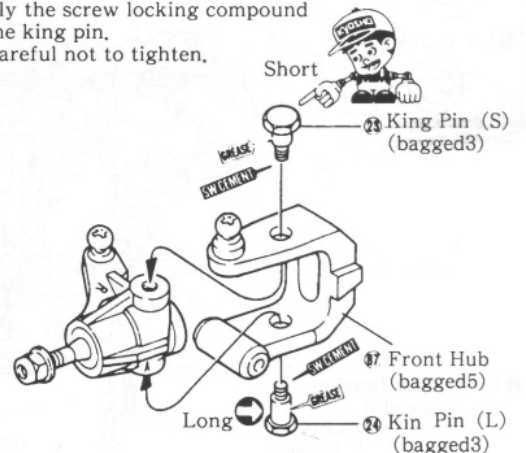
Install the pivot ball.



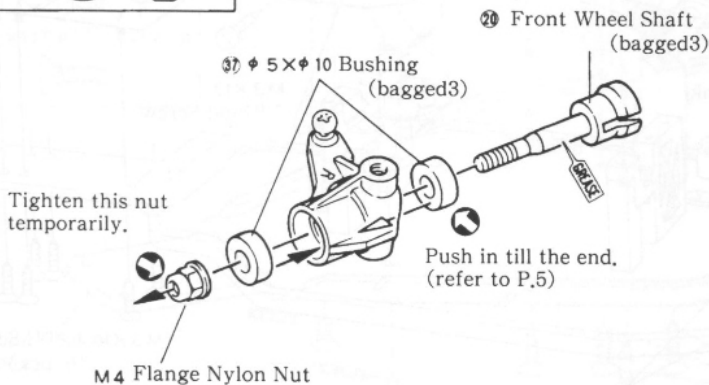
## Step 2

## Step 3

\* Apply the screw locking compound to the king pin. Be careful not to tighten.

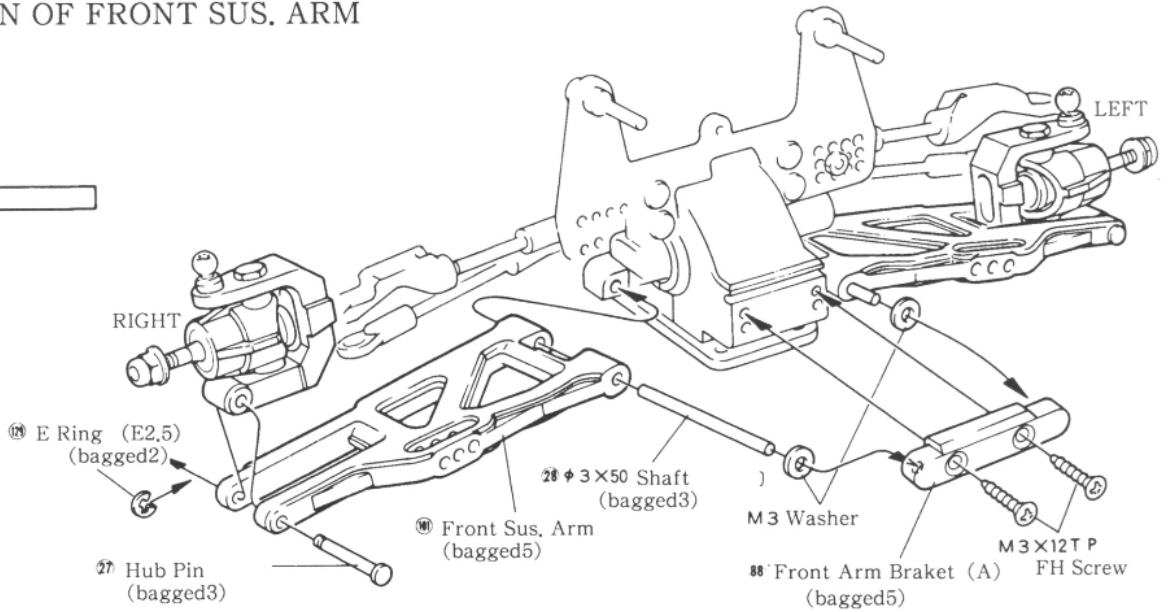


- M4 Flange Nylon.....2 Nut
- 27 King Pin (S)...2
- 27 King Pin (L)...2
- 25 M2.6 Pivot Ball ...2 (black)
- 26 M3 Pivot Ball .....2 (silver)
- 27 φ 5 × φ 10 Bushing...4



# 14 INSTALLATION OF FRONT SUS. ARM

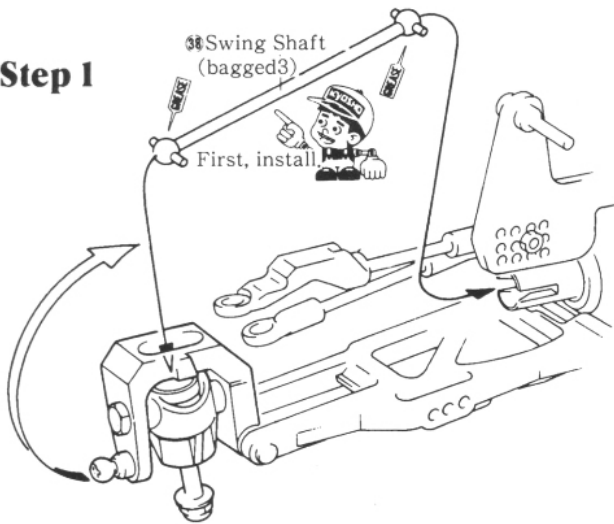
- ⑳  $\phi$  3×50 Shaft ..... 2
- M3×12T P FH Screw · 2
- M3 Washer ..... 2
- ㉗ Hub Pin ..... 2
- ㉘ E Ring (E2.5) ..... 2



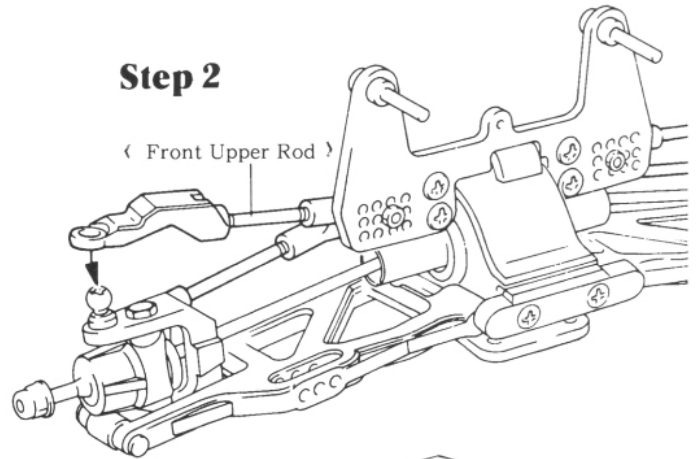
# 15 INSTALLATION OF KNUCKLE ARM

※ These are assembly of the right side.  
In the same way, assemble the left side.

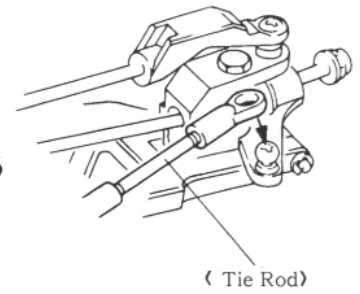
## Step 1



## Step 2

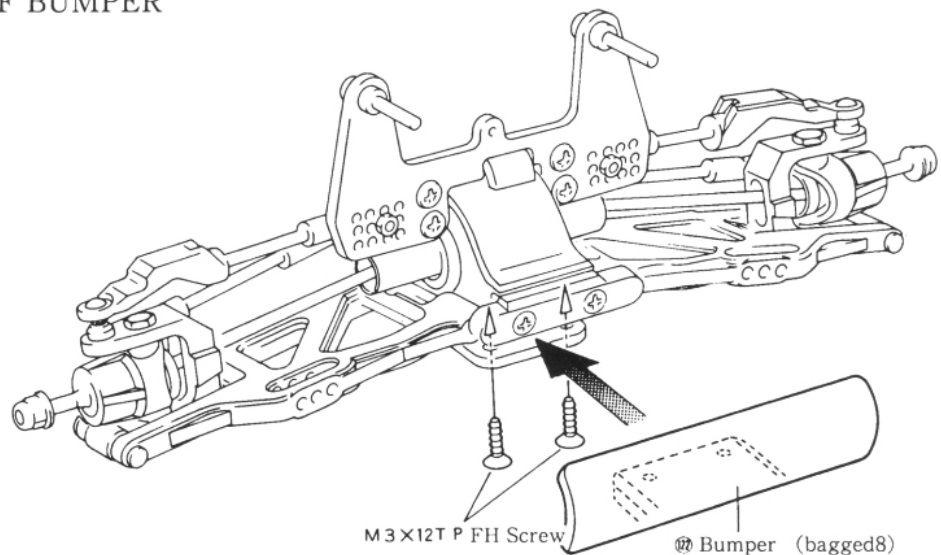


## Step 3



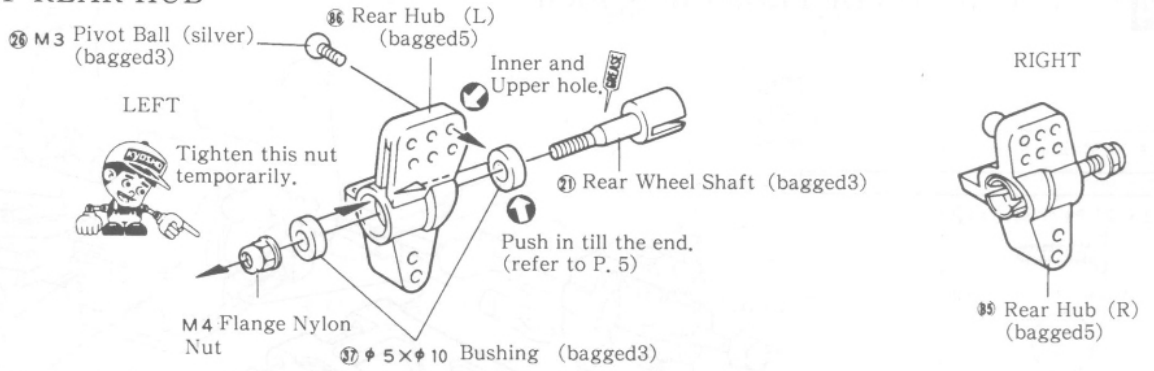
# 16 INSTALLATION OF BUMPER

- M3×12T P FH Screw · 2



# 17 ASSEMBLY OF REAR HUB

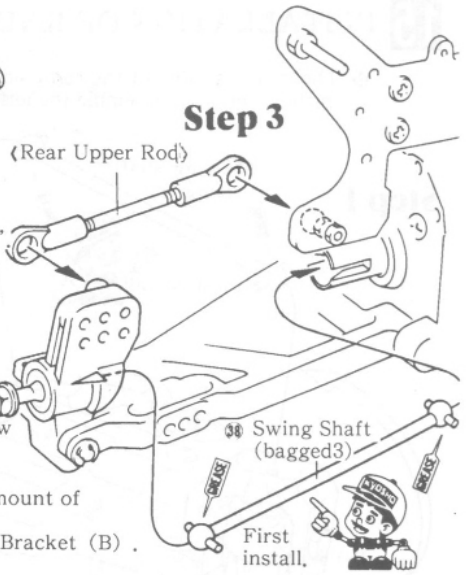
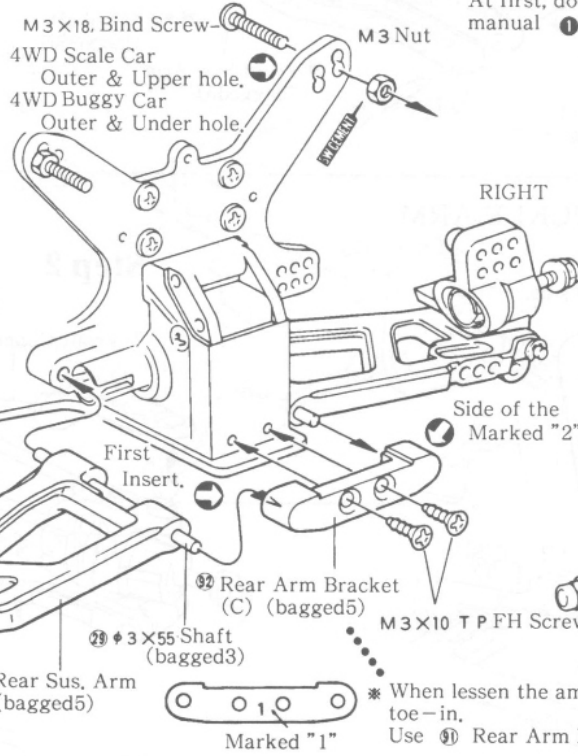
- M4 Flange Nylon Nut ..... 2
- M3 Pivot Ball (silver) ..... 2 (bagged3)
- 5 × 10 Bushing... 2



# 18 INSTALLATION OF REAR SUS. ARM & REAR HUB

※ Before you assemble these parts.....  
At first, do assembly of "Another instruction manual 1 (Page 4)".

- M3×10T P FH Screw ..... 2
- M2.6 Pivot Ball (black) ..... 2
- Hub Pin..... 2
- E Ring (E2.5)·2
- M3×18, Bind Screw ..... 2
- M3 Nut ..... 2
- 3 × 55 Shaft ..... 2

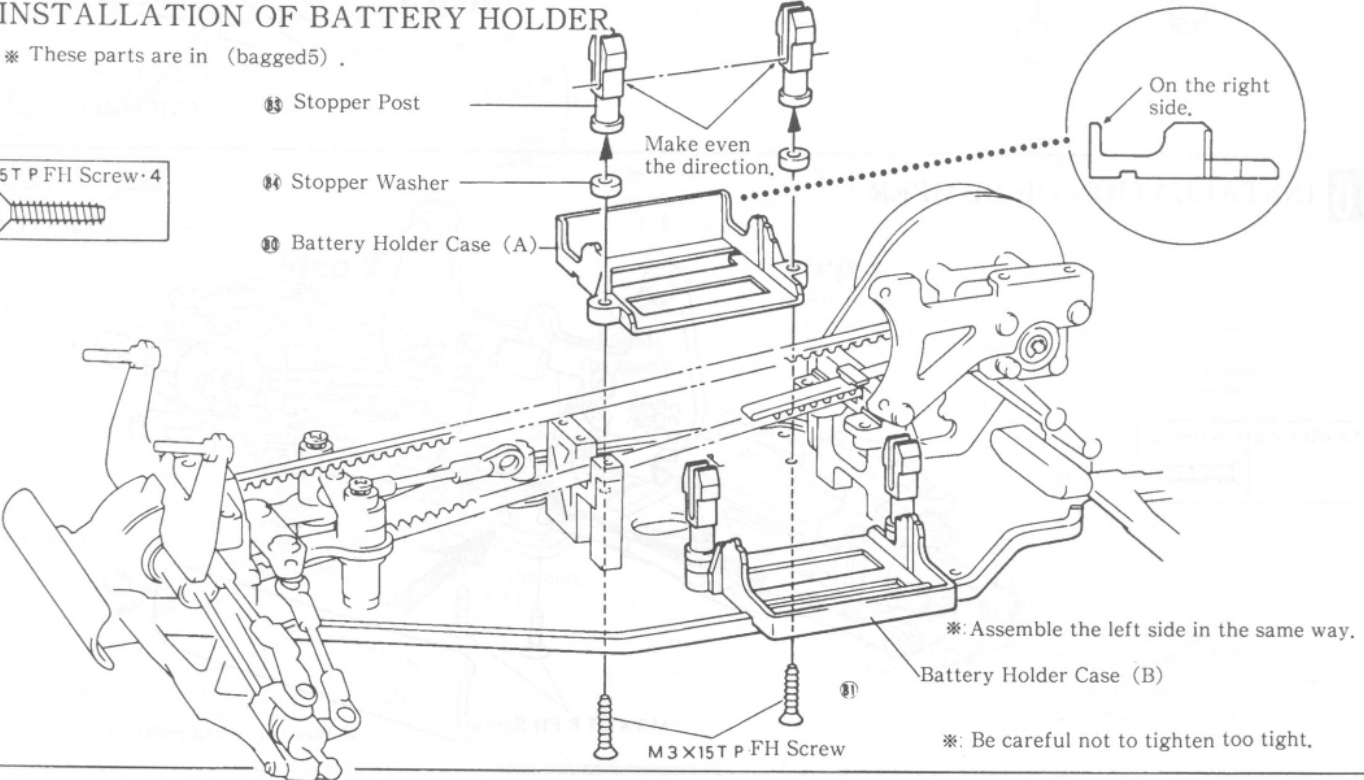


# 19 INSTALLATION OF BATTERY HOLDER

※ These parts are in (bagged5).

- M3×15T P FH Screw·4

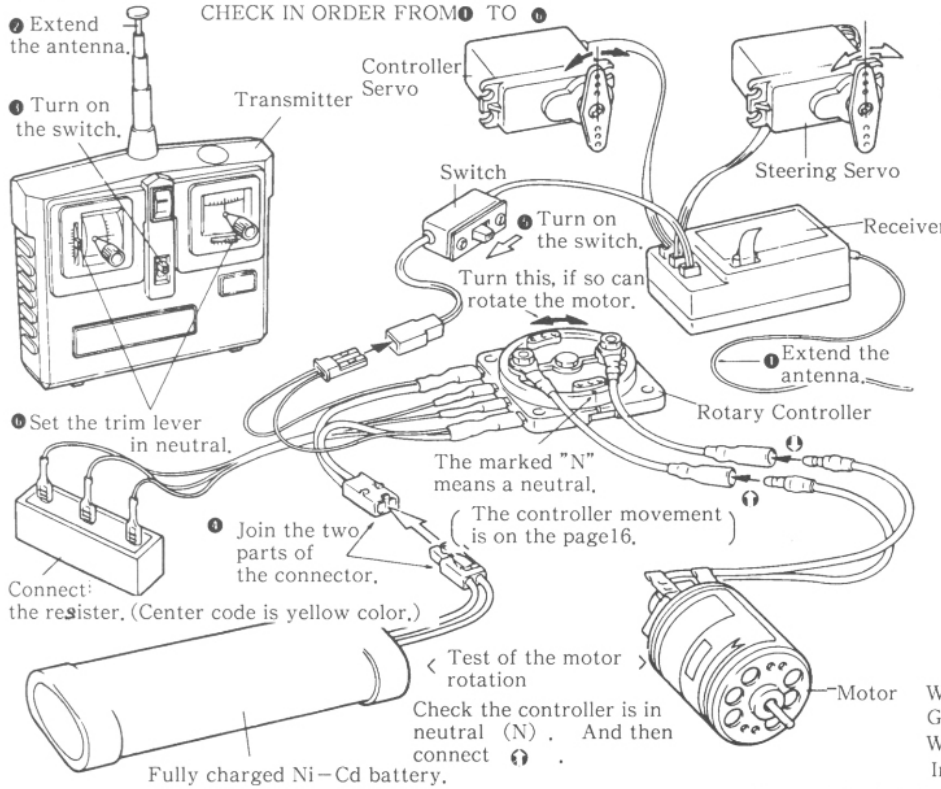
- Stopper Post
- Stopper Washer
- Battery Holder Case (A)



※: Be careful not to tighten too tight.



## 20 HOW TO CHECK RADIO UNIT



A two channel radio is composed of things like a transmitter, receiver and servos.

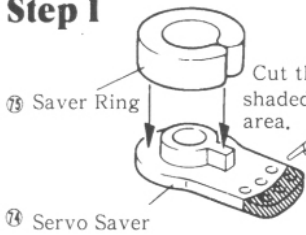
- Transmitter... It is control box which manipulates by stick movements. Signal waves are transmitted through on antenna
- Receiver... Receives the signals from the transmitter and send them to the servos.
- Servo... They move the control mechanism of a model car in accordance with the signals from the receiver.
- Antenna... An antenna on the transmitter sends signals, and one on the receiver accepts them. They should be fully extended.
- Trim Lever... They will adjust the neutral position of servos, thus regulate the steering and advancing controls finely.
- Battery Meter ..... You can tell the amount of electricity in a battery and how the signals are emitted.
- Servo Horn ..... They are intermediate devices on the servos to activate the controls. There are several types in shape, they should be selected depending upon your usage.

When switch on the radio...  
Get the switches in order from transmitter to receiver.  
When switch off the radio...  
In order from receiver to transmitter.

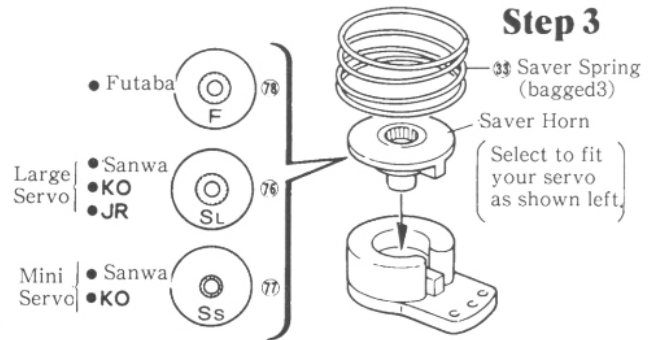
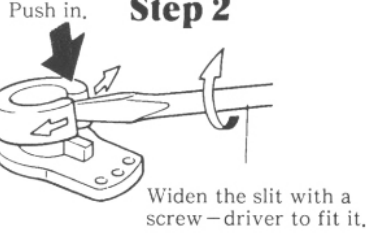
## 21 ASSEMBLY OF SERVO SAVER

\* These parts are in (bagged5) .

### Step 1

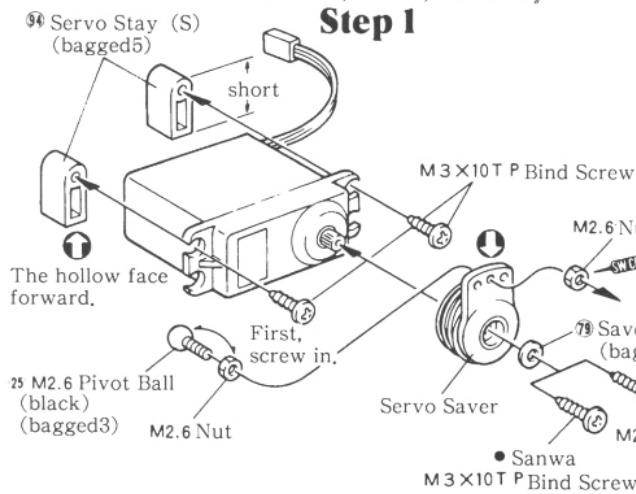
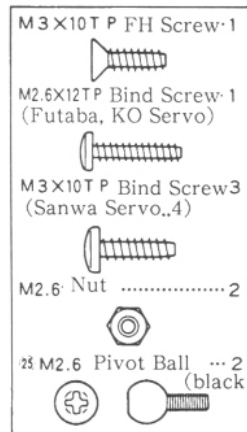


### Step 2

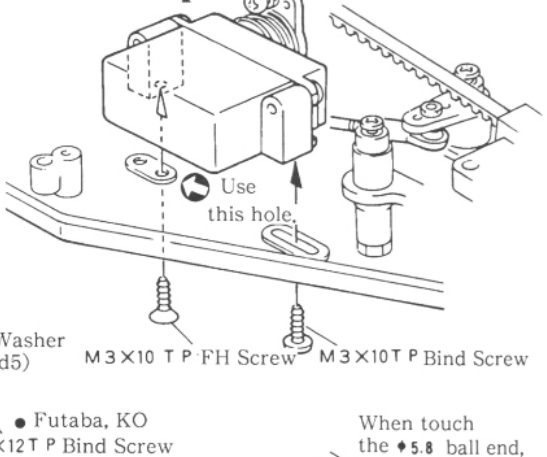


## 22 STEERING LINKAGE

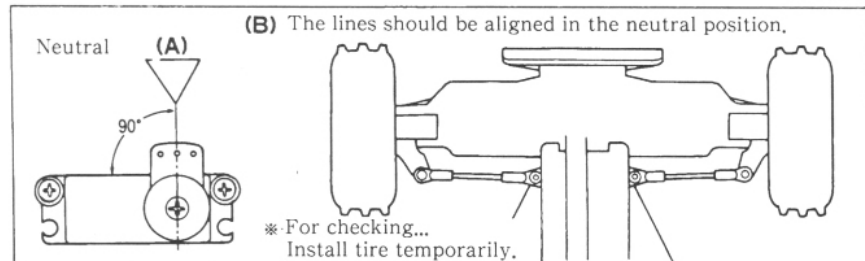
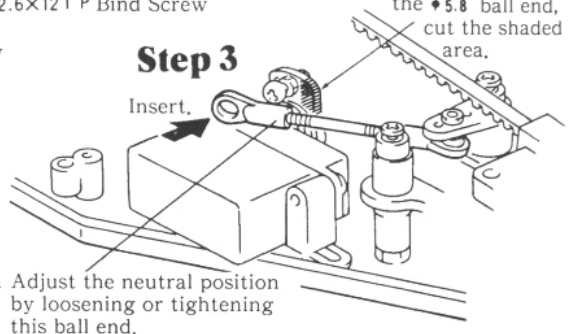
(In case of using the normal servo.)  
《 Sanwa, Futaba, KO Servo 》



### Step 2



### Step 3



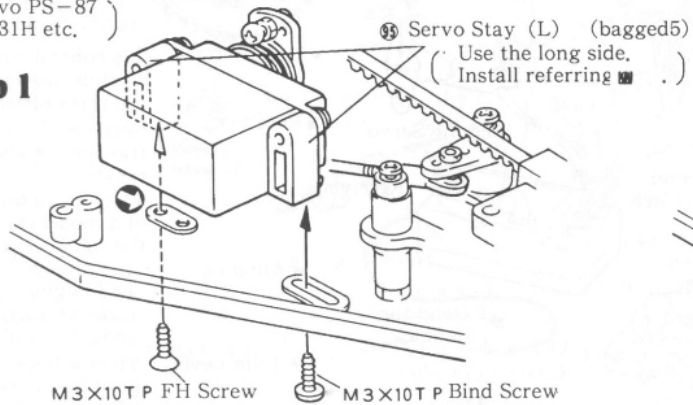
## 23 STEERING SERVO LINKAGE

( In case of using the large servo.)

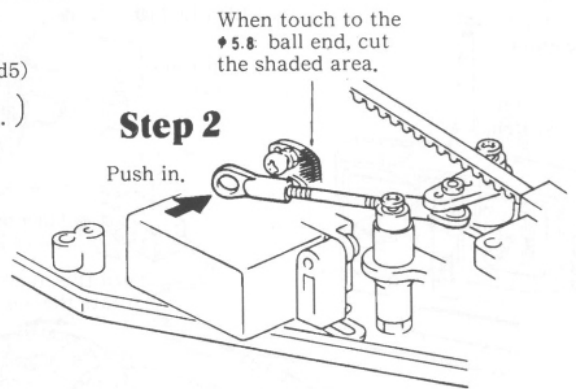
( KO FET Servo PS-87 )  
( Futaba S-131H etc. )

\* Install the servo to the front holes.  
When the servo touch the body install  
the rear holes as shown below.

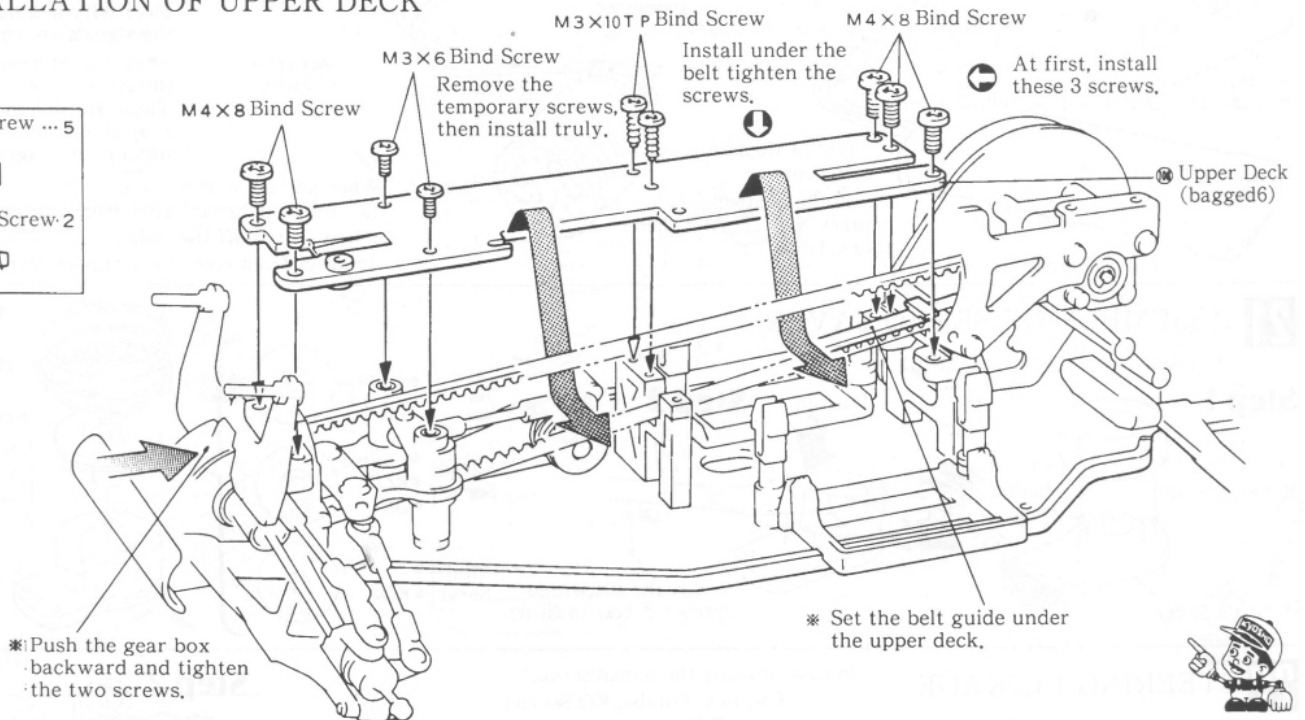
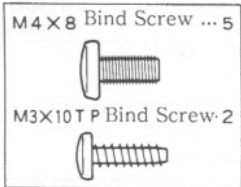
### Step 1



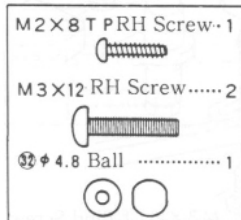
### Step 2



## 24 INSTALLATION OF UPPER DECK

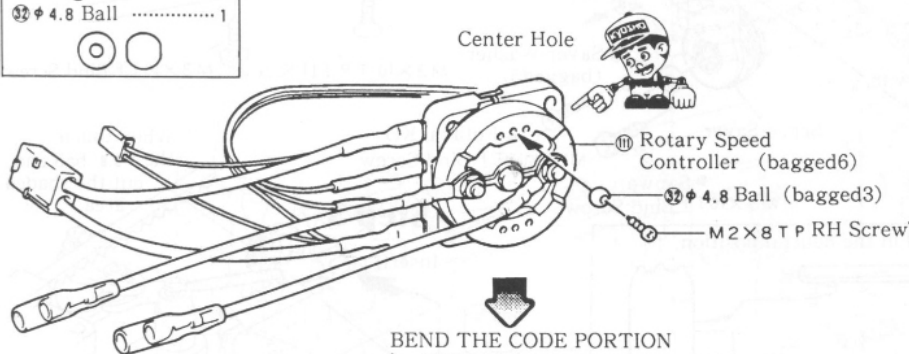


## 25 INSTALLATION OF CONTROLLER



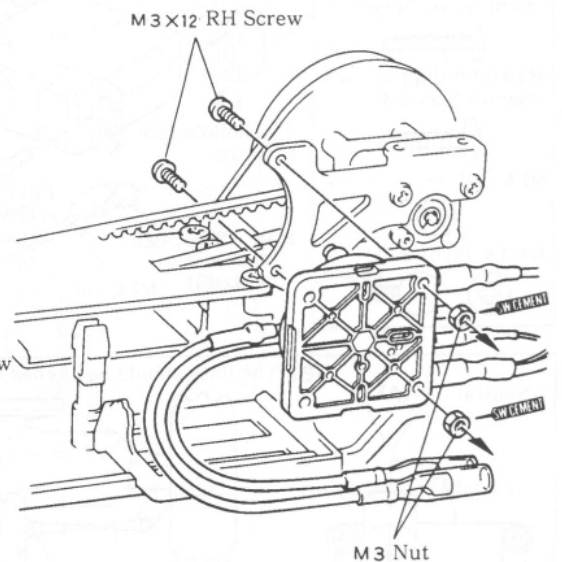
### Step 1

Center Hole



\* Does't it touch the belt,  
Bend a little.

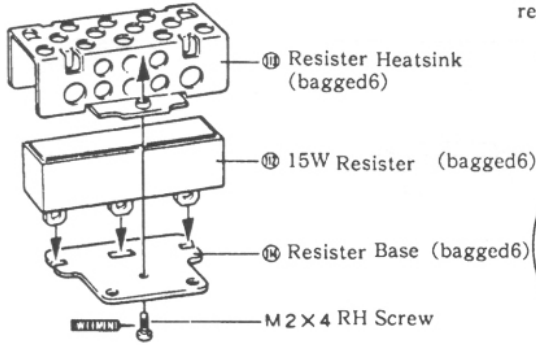
### Step 2



## 26 INSTALLATION OF RESISTER

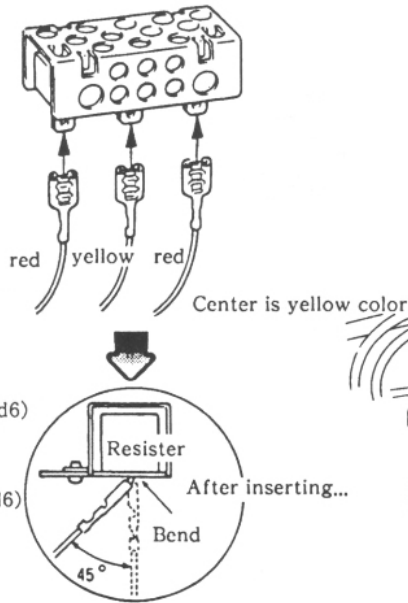
- M2×4 RH Screw..... 1
- M3×6 Bind Screw..... 2

### Step 1



### Step 2

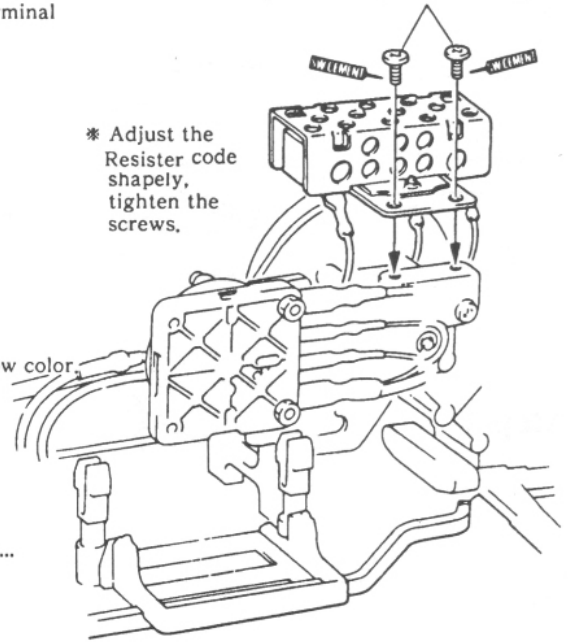
Insert the register code terminal in the controller.



### Step 3

M3×6 Bind Screw

\* Adjust the Resister code shapely, tighten the screws.

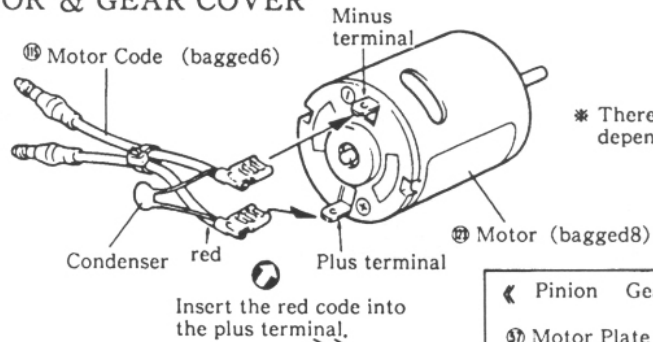


## 27 INSTALLATION OF MOTOR & GEAR COVER

- M3×4 RH Screw..... 2
- M3×6 Bind Screw..... 2
- M3×3 Set Screw..... 1

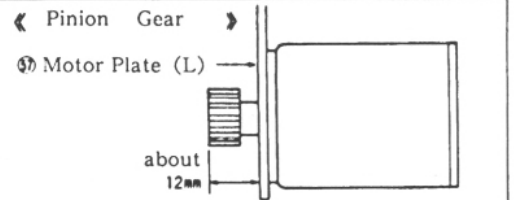
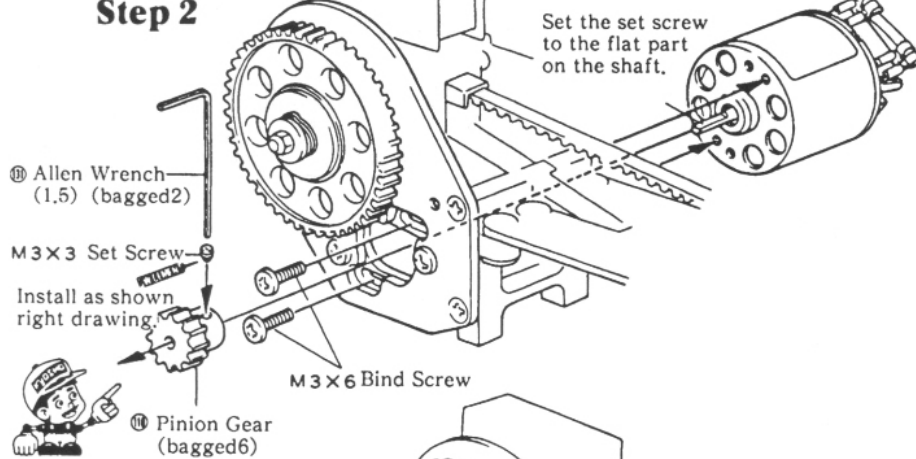
### Step 1

\* Be careful short the condenser!!



\* There are the different motor depend on the kit.

### Step 2

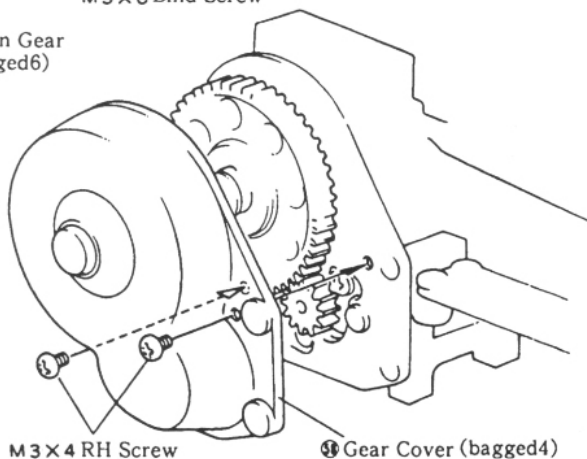


### Step 1

Insert an empty parts bag between the gears and press the pinion gear strongly then tighten the two screws for the motor installation.

Motor installing screws.

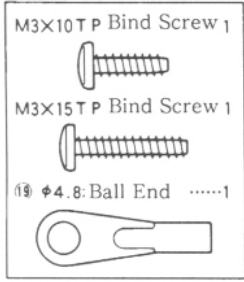
### Step 3



### Step 2

Turn the main gear and take off the parts bag.

## 28 INSTALLATION OF CONTROLLER SERVO & LINKAGE



### Step 1

Cut off the shaded area of servo horn.

Widen the hole with an awl. Because rod is easy to insert.



Use about 13-14mm hole.

### Step 2

Screw in till middle portion of screw.

Check the actual size drawing, bend it.

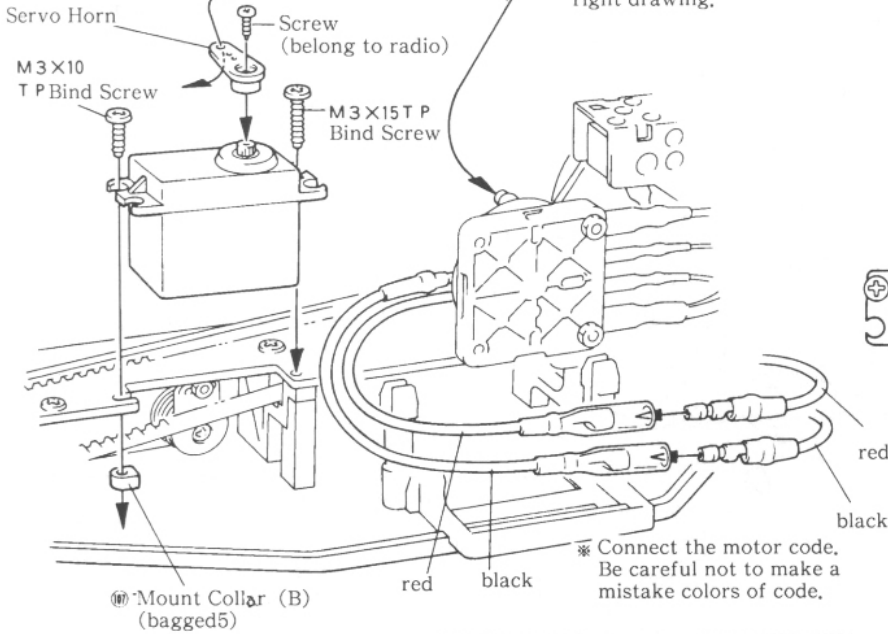


④ Speed Control Rod

Bending the speed control rod  
« ACTUAL SIZE »

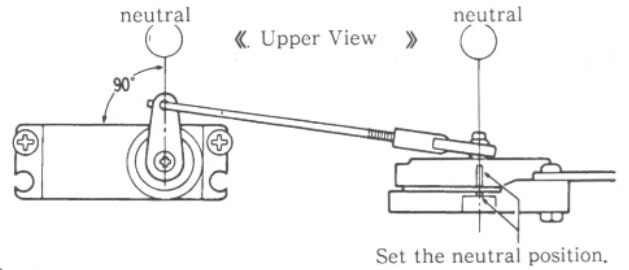
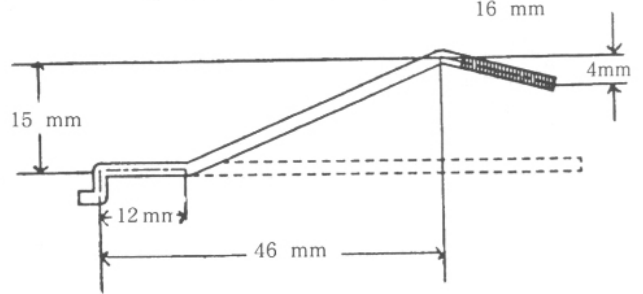
### Step 3

When screw in, it becomes short.  
When loosen, it becomes long.

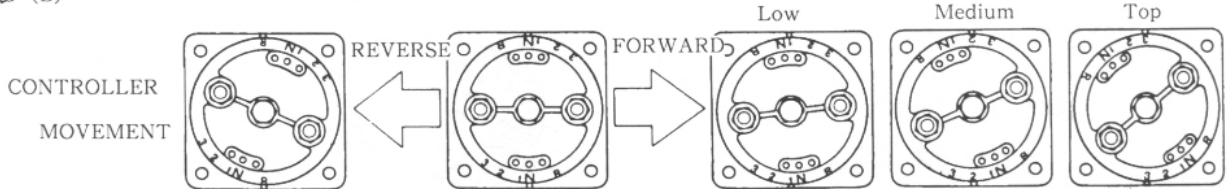


\* Adjust with the length of ball end screwed in or out. Perform as shown the right drawing.

\* Connect the motor code. Be careful not to make a mistake colors of code.



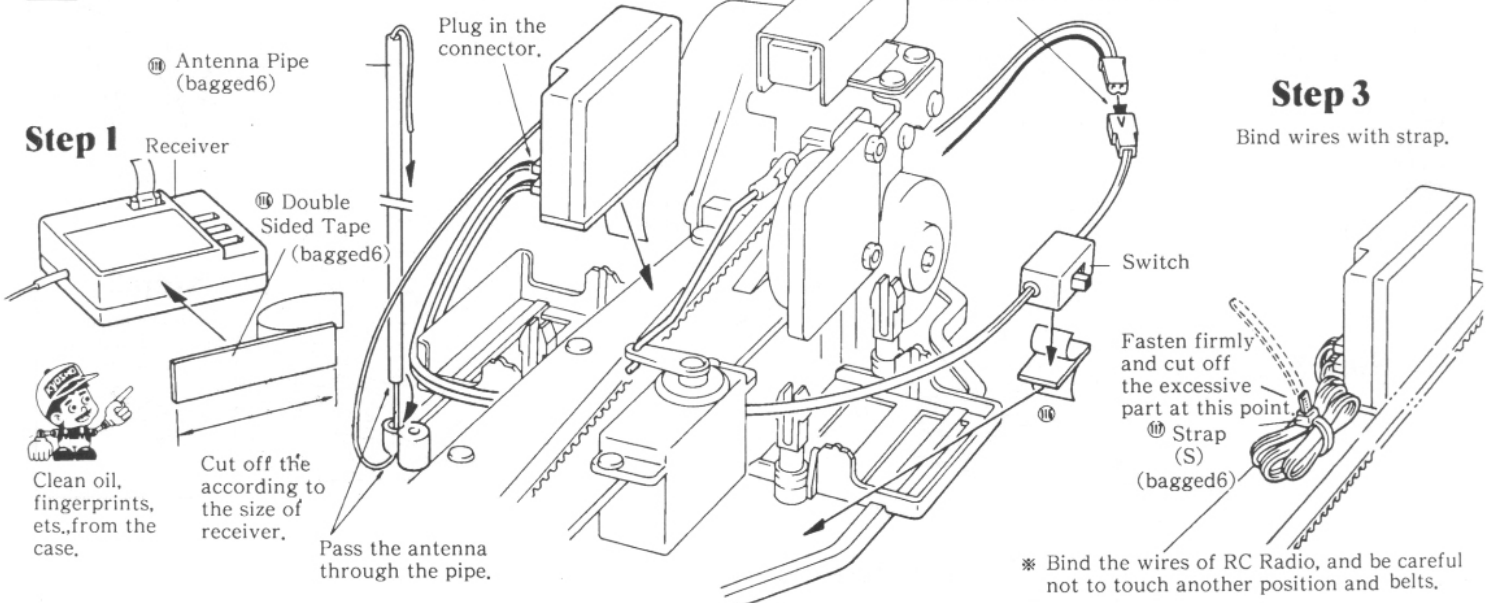
Set the neutral position.



## 29 INSTALLATION OF RECEIVER

### Step 2

Join the BEC connector.



### Step 1

③ Antenna Pipe (bagged6)

④ Double Sided Tape (bagged6)

Clean oil, fingerprints, etc., from the case.

Cut off the according to the size of receiver.

Pass the antenna through the pipe.

### Step 3

Bind wires with strap.

Switch

Fasten firmly and cut off the excessive part at this point.

⑤ Strap (S) (bagged6)

\* Bind the wires of RC Radio, and be careful not to touch another position and belts.



# 30 INSTALLATION OF SHOCK

M3 X12 RH Screw ..... 4

M3 Nylon Nut ..... 4

Shock Collar ..... 4

« Front » RIGHT

\* Install the left side in the same way.

Shock collar (bagged5)

M3 Nylon Nut

( Front Shock ) short

M3 X12

Outer hole

Shock Collar (bagged5)

« Rear » LEFT

\* Install the right side in the same way.

M3 Nylon Nut

( Rear Shock ) long

M3 X12 RH Screw

Outer hole

# 31 INSTALLATION OF BATTERY

Stopper Plate (bagged5)

\* When the remove the battery... Pick this for removing the stopper plate.

**KYOSHO** No. 4400

Kyosho offers the 7.2V - 1400 Power Battery which is prepared for the buggy car specially.



CAUTION!!

REMOVE THE NI-CD BATTERY PACK WHEN CAR IS NOT IN OPERATION OR BEING STORED.

\* Assembly of chassis portion is the end. Next do to "ANOTHER INSTRUCTION MANUAL 7"

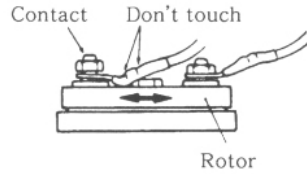
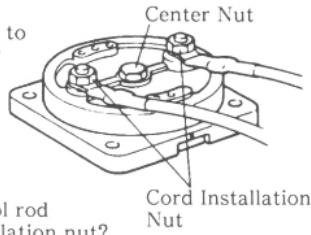
# MEMO

## CHECKING CONTROLLER & MAINTENANCE

● Before running be sure to check below (1) - (4).

### < CHECK POINTS >

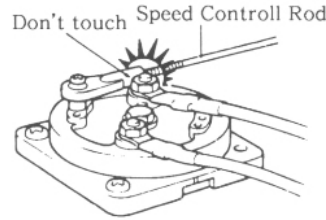
- (1) Are the center nut and cord installation nut tight?
- (2) Is the contact being pushed up due to the cord touching part of the rotor or against the center nut?
- (3) Is the contact being pushed up due to the cord touching part of the body?
- (4) Are you sure that the speed control rod does not hit against the cord installation nut?



### < MAINTENANCE >

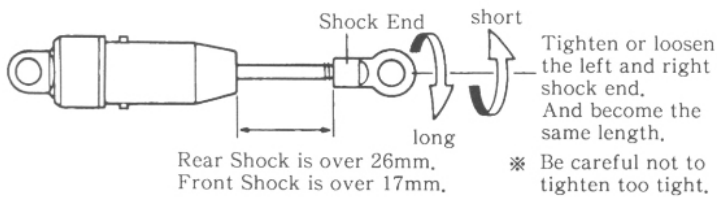
Once in a while remove the center nut and clean the inside.

※ If intermittent irregularity of motor rotation should show up, recheck (1) - (4) of "CHECK POINTS". If nothing is warning it's time for replacement. (At this time, surface of the bushing is worn out considerably.)

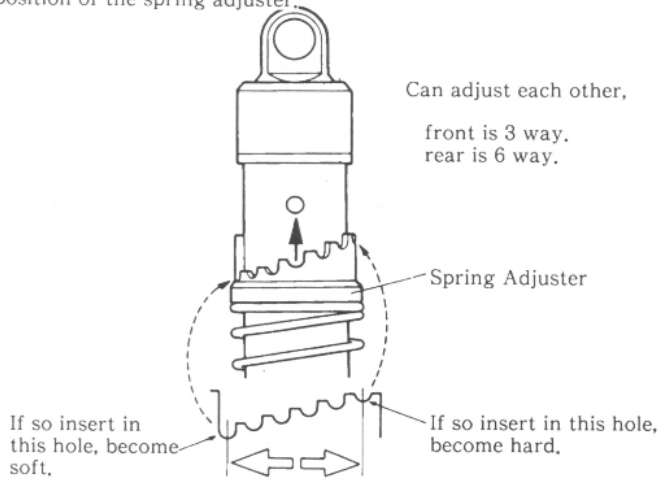


## GUIDE FOR SET UP (1)

### < Setting of Shock >

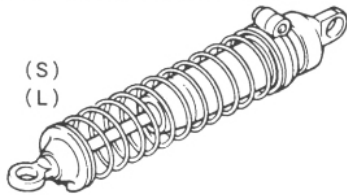


- Spring tension can be adjusted by high simply changing the hole position of the spring adjuster.



- Until use the optional high precision pressure shock (W-5001, W-5002) spring tension can be adjusted without phase.

W-5001 Pressure Shock (S)  
W-5002 Pressure Shock (L)



### < Adjustment of Hardness of Shock Action >

	← harder →		← softer →	
No 1951 Shock Oil (S·M·H)	Yellow	Green	Red	
No 1953 Silicone Oil (S)			200 S C	100 S C
No 1954 Silicone Oil (M)		400 S C	300 S C	
No 1955 Silicone Oil (H)	600 S C	500 S C		

### < MAINTENANCE OF OIL SHOCK >

By changing the oil shock periodically, can maintain fixed effectiveness. When changing oil remove the dirty oil thoroughly from inside the shock and fill with oil.

### < Adjustment of Diff. Gear >

This model's diff. is gear type, and adjustable by the oil amount and hardness of the oil.

To make hard...Use 1956 silicone oil (Super Hard) a little more than usual.

To make softer...Mix 10-20% of the silicone oil (H) with diff. oil.

### < Steering Responce >

	Low Speed Corner	High Speed Corner
Front Diff. (Hard)	Neutral Steer	Under Steer
Rear Diff. (Hard)	Under Steer	Over Steer
Front, Rear (Soft)	Over Steer	Neutral Steer

※ Take this chart just as general indication.

### < Maintenance of Diff. Gear >

Check and clear the diff. gear frequently. See page 21 "Maintenance Guide" that shows the necessary parts to take off and the steps for checking drive belt.

### < Rear Ratio >

Pinion Gear	15	16	17	18	19	20	21	22	23	24	25
Gear Ratio	12.99	12.18	11.46	10.83	10.26	9.74	9.28	8.86	8.47	8.12	7.79
Slow	← Top Speed →										
Good	← Acceleration →										
Long	← Running Time →										
	Fast ← Not Good → Short										

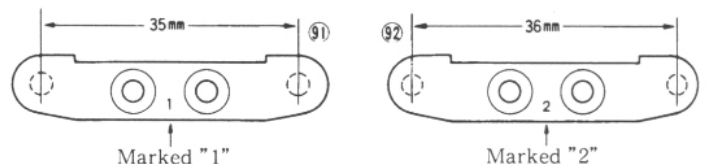
### < Ball Diff. >...Option

Possible to install ball differential for front and rear. Use ball diff. pulley, Ball diff. flange in (bagged4) with option parts WBD-1 Ball diff. shaft plate set and WBD-2 Ball diff. ball set together. Each combination set is required for front and rear installation. When use the grease to the ball diff., it is better to use the 1877 ball diff. grease.

### < Adjustment of Rear Toe In >

Toe in angle is adjustable by changing the part ① (marked "1") and ② (marked "2"). In this manual part ② is used. For more toe in angle use part ①

① ...Grip Running  
② ...Slide Running

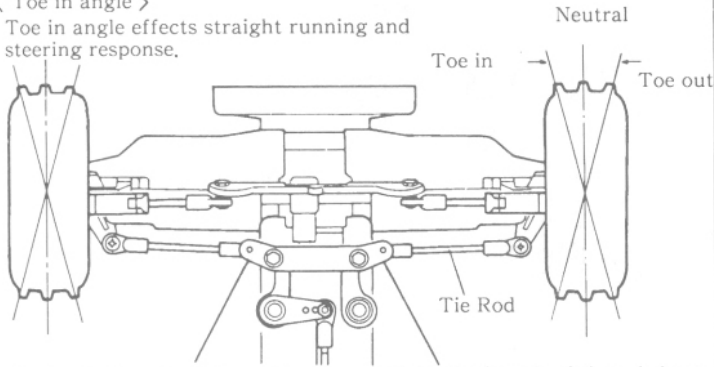




## GUIDE FOR SET UP (2)

### < Toe in angle >

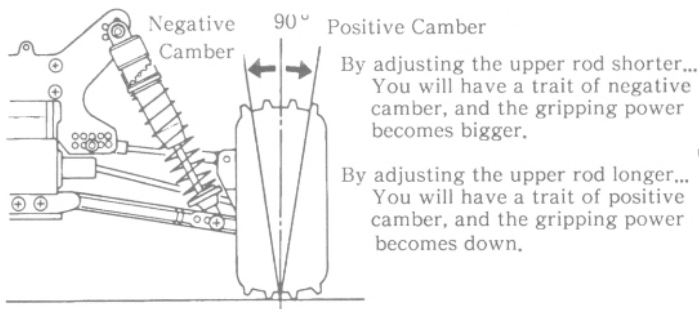
Toe in angle effects straight running and steering response.



- Make the length of tie rod longer ... Become toe in. Slower steering response.
- Make the length of tie rod shorter ... Becomes toe out. Quick steering response.

### < Basic Setting >

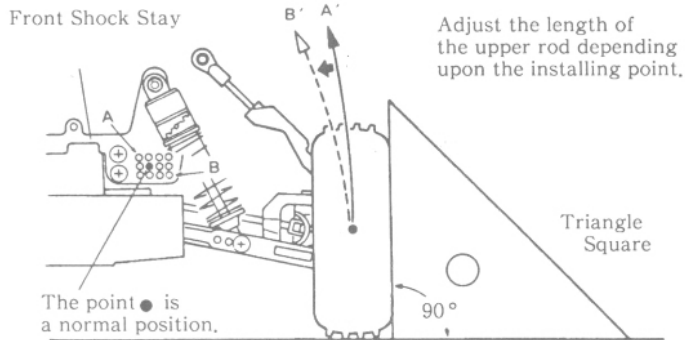
Place the model car on a flat surface, and keep the car with the maximum body, and adjust length of the front and rear upper rods so that the wheels stand at angle of 90° to the ground.



### < Correlation between installing position of the front upper rod and camber angle. >

The installing points A and B on the front shock stay for the upper rod correspond to A' and B' which are the maximum camber angle when the front sus. arms swing down to the lowest position.

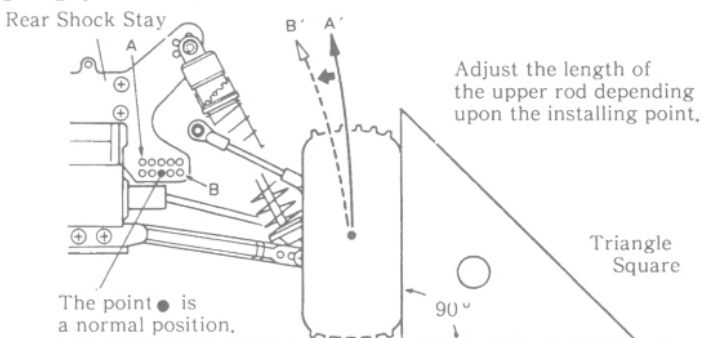
As a standard, on course with bad grips it is set close to "A" and on good grip course, close to "B". When close to "B" setting be careful as there are cases of "Take-in".



### < Correlation between installing position of the rear upper rod and camber angle. >

The installing points A and B on the rear shock stay for the upper rod correspond to A' and B' which are the maximum camber angle when the front sus. arms swing down to the lowest position.

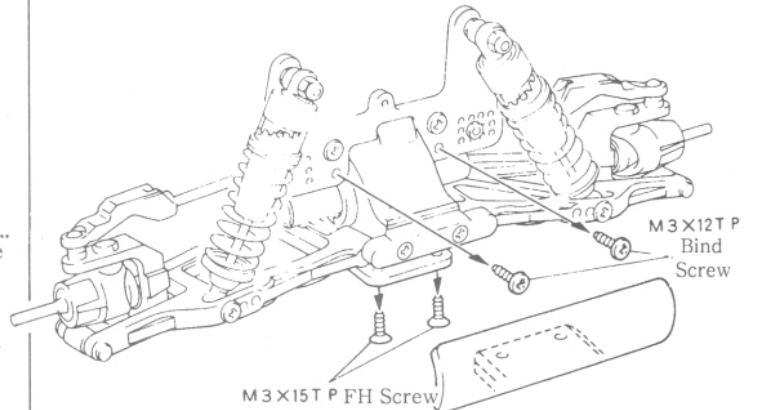
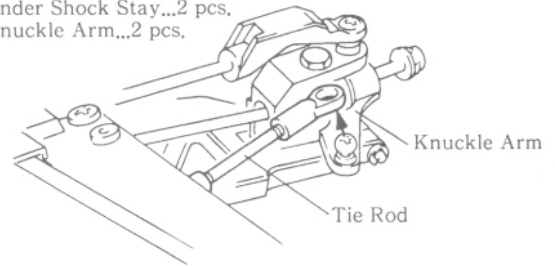
As a standard, on course with bad grips it is set close to "A" and on good grip course, close to "B".



### < Disassembly of front Portion >

Can dismount the front portion by removing 6 pcs. of screws as shown in the drawing below.

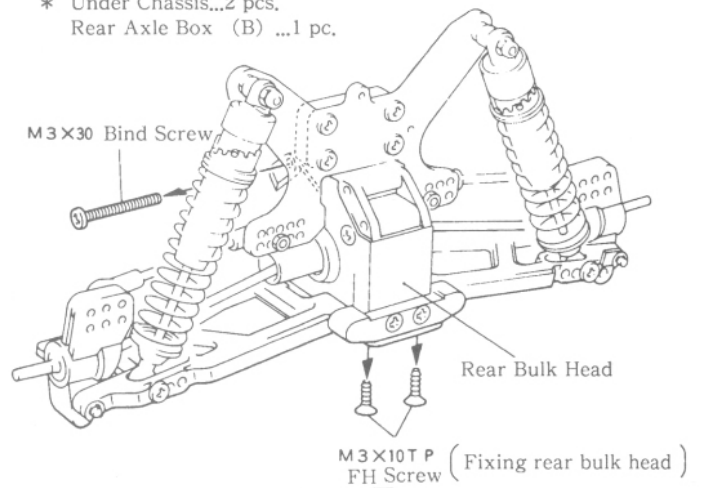
- \* Under Chassis...2 pcs.
- Under Shock Stay...2 pcs.
- Knuckle Arm...2 pcs.



### < Disassembly of Rear Portion >

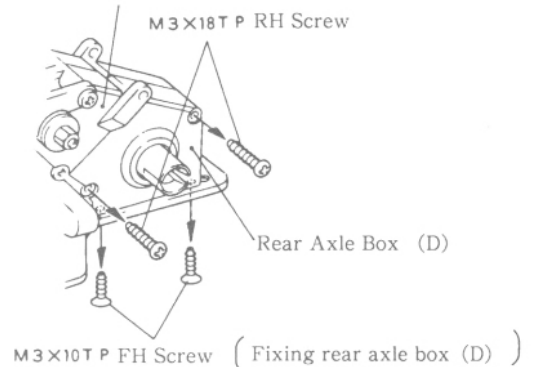
Can dismount the rear portion by removing 3 pcs. of screw as shown in the drawing below.

- \* Under Chassis...2 pcs.
- Rear Axle Box (B) ...1 pc.



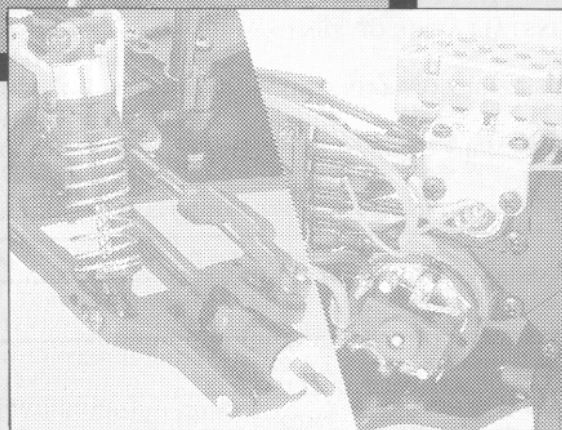
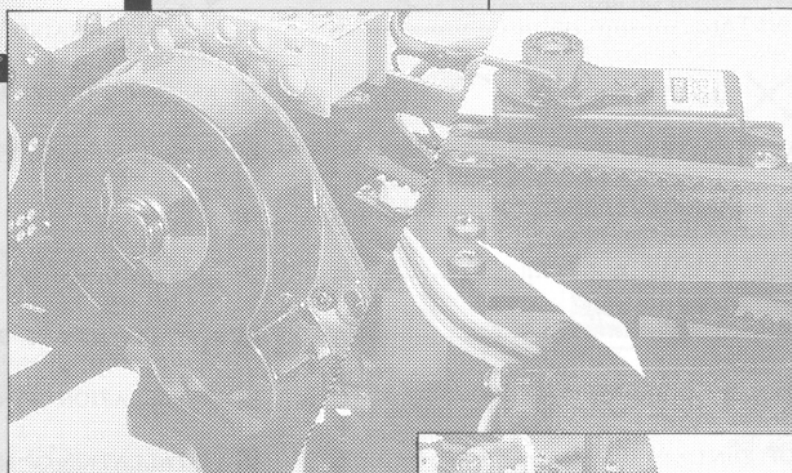
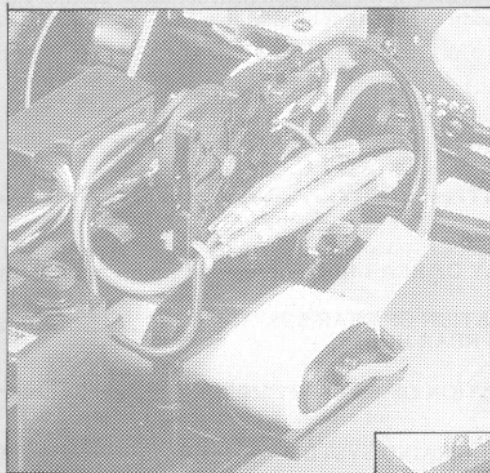
Also can dismount the diff. gear by loosen the four screws.

Rear Axle Box (B)





# RADIO CONTROLLED ELECTRIC POWERED FULL TIME 4WD RACING CARS



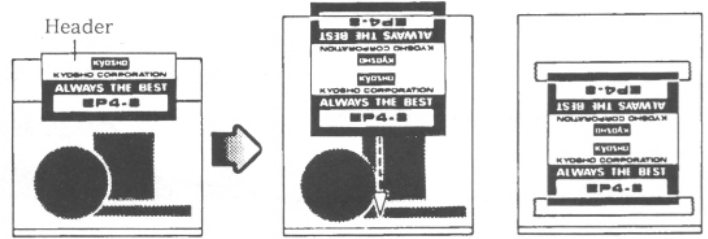
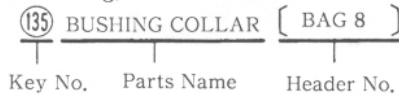
**KYOSHO**  
THE FINEST RADIO CONTROL MODELS

LIST OF BAGGED PARTS (1)

《 DO NOT THROW AWAY A BAG HEADER 》

- The header is the only thing to rely upon when looking for a part.  
Do not discard it until you finish the assembly.

- This instruction manual is the following.



Keep it in the bag.

Affix it on the bag with tape.

Bag No.	Key #	Parts Name	Q'ty	Step
EP4-1	1	Front Shock Shaft	2	1
	2	Rear "	2	1
	3	Front Shock Case	2	1
	4	Rear "	2	1
	5	Front Shock Spring	2	2
	6	Rear "	2	2
	★ 7	Shock Cap	4	2
	★ 8	Spring Holder	4	2
	★ 9	Spring Adjuster	4	2
	10	Shock Ring	4	2
	11	Shock End	4	1
	12	Pressure Top	4	2
	★ 13	Shock Piston	4	1
	14	E Ring (E2.5)	8	1
	15	Shock Oil	1	2
EP4-3	16	Rod (L30)	3	3
	17	" (L40)	4	3
	★ 18	φ 5.8 Ball End	12	3
	19	φ 4.8 Ball End	1	28
	20	Front Wheel Shaft	2	13
	21	Rear "	2	17
	22	Drive Washer	4	3
	23	King Pin (S)	2	13
	24	" (L)	2	13
	25	M2.6 Pivot Ball (Black)	8	10 12 13 18 22
	26	M3 Pivot Ball (Silver)	6	10 13 17
	27	Hub Pin	4	14 18
	28	φ 3×50 Shaft	2	14
	29	φ 3×55 Shaft	2	18
	30	Steering Plate	1	10
	31	φ 5.8 Ball (Silver)	4	2
	32	φ 4.8 Ball	1	25
	33	Saver Spring	1	21
	34	Front Shock Stay	1	12
	35	Rear Shock Stay	1	1
	36	φ 5×φ 8 Bushing	4	10
	37	φ 5×φ 10 Bushing	8	13 17
	38	Swing Shaft	4	15 18
	39	Servo Saver Shaft	2	9
	40	Speed Control Rod	1	28
	41	Joint	4	5
	42	Steering Pin	2	10
	43	φ 3×φ 6 Bushing Metal	2	10 (flange)
EP4-4	44	Front Axle Box (A)	1	12
	45	" (B)	1	11

Bag No.	Key #	Parts Name	Q'ty	Step	
EP4-4	46	Rear Axle Box (A)	1	7	
	47	" (B)	1	7	
	48	" (C)	1	8	
	49	" (D)	1	8	
	◎ 50	Diff. Case	2	◎ Mark Front & Rear Diff. Parts.	
	◎ 51	Sprocket	2		
	◎ 52	Bevel Gear, (A)	4		
	◎ 53	" (B)	4		
	◎ 54	Bevel Shaft	2		
	◎	M 2×12T P RH Screw	8	5	
	55	Spur Gear	1	6	
	56	Motor Plate (S)	1	7	
	57	" (L)	1	4 7	
	58	Gear Cover	1	4 7	
	59	M 3×25 Shaft	1	8	
	60	Controller Mount	1	8	
	61	Drive Pulley	1	7	
	62	Drive Hub	1	6	
	★ 63	Pulley Flange	2	7 8	
	64	Front Drive Belt	1	8	
	65	Rear "	1	7	
	66	Needle Roller	2	7 8	
	67	Needle Roller Shaft	1	8	
	68	Main Shaft	1	6	
	69	φ 8×φ 14 Bearing	2	7 8	
		Ball Diff. Pulley	2	For Ball Diff.	
		Flange	2		
	EP4-5 PLASTIC PARTS	★ 70	Uni Crank (A)	1	10
		★ 71	" (B)	1	10
		★ 72	" (C)	1	10
		★ 73	Uni Crank Collar (A)	2	11
		★ 74	Servo Saver	1	21
★ 75		Saver Ring	1	21	
★ 76		Saver Horn (S L)	1	21	
★ 77		" (S S)	1	21	
★ 78		" (F)	1	21	
★ 79		Saver Washer	1	22	
★ 80		Battery Holder Case (A)	1	19	
★ 81		" (B)	1	19	
★ 82		Stopper Plate	2	31	
★ 83		Stopper Post	4	19	
★ 84		Stopper Washer	4	19	
★ 85	Rear Hub (R)	1	17		
★ 86	" (L)	1	17		
★ 87	Front Hub	2	13		

**LIST OF BAGGED PARTS (2)**

Bag No.	Key #	Parts Name	Q'ty	Step
EP4-5	★ 88	Front Arm Bracket (A)	1	14
	★ 89	• (B)	1	11
	★ 90	Rear Arm Bracket (A)	1	9
	★ 91	• (B)	1	18 Page
	★ 92	• (C)	1	18
	★ 93	Antenna Post	1	9
	★ 94	Servo Stay (S)	2	22
	★ 95	• (L)	2	23
	★ 96	Shock Collar	4	30
	★ 97	Upper Rod End	2	3
	★ 98	Uni Crank Collar (B)	2	11
	★ 99	Knuckle Arm (R)	1	13
	★ 100	• (L)	1	13
	★ 101	Front Sus. Arm	2	14
	★ 102	Rear •	2	18
	★ 103	Rear Bulk Head	1	5
	★ 104	Upper Deck Mount (A)	1	9
★ 105	• (B)	1	9	
★ 106	Mount Collar (A)	1	9	
★ 107	• (B)	1	28	
EP4-6	108	Upper Deck	1	24
	109	Belt Guide	1	8
	110	Pinion Gear (20T)	1	27
	111	Rotary Speed Controller	1	25
	112	15W Register	1	26
	113	Register Heatsink	1	26
	114	Register Base	1	26
	115	Motor Code	1	27
	116	Double Sided Tape	1	29
	117	Strap (S)	2	29
	118	Antenna Pipe	1	29
	119	Screw Locking Compound	1	
120	Hobby Grease	1		
EP4-7	121	Front Wheel (56 Size)	2	7
	134	Rear • ( • )	2	7
EP4-8 (SPORT)	122	Bumper	1	10
	123	Motor	1	27
	135	Bushing Collar	4	5
	136	φ 10×φ 14 Bushing	4	5
	▲137	Wing Stay (A)	2	1
	▲138	• (B)	2	1
	▲139	• (C)	2	1
	▲140	Wing Washer	4	1 spare x2
	141	Double Sided Tape	1	6
	▲142	Body Mount	4	7 spare x2
	143	Body Pin	3	7
	144	Hook Pin	2	7
		T P Bind Screw M2.6X12	4	1
		• M3X8	5	1 spare x1
		T P FH Screw M3X10	3	7 spare x1

Bag No.	Key #	Parts Name	Q'ty	Step	
BOX	124	Main Chassis	1	9	
	125	Front Tire (56 Size)	2	7	
	126	Body	1	1	
	127	Decal	1	6	
	128	Cross Wrench	1		
	145	Rear Tire (56 Size)	2	7	
	146	Wing	1	1	
	147	Side Wing	1	1	
		Instruction	1		
	EP4-2 Screws, Nuts, Washers & Others	129	E Ring (E2,5)	5	11 14 18
		130	• (E3)	1	6
		131	Allen Wrench (1.5)	1	27
		132	• (2)	1	5 8
133		φ 4 X φ 10 Shim	2	8	
		RH Screw M2X4	1		
		• M3X4	4		
		• M3X12	6		
		Bind Screw M3X6	9		
		• M3X18	4		
		• M3X30	1		
		• M3X35	1		
		• M3X45	2		
		• M4X8	5		
		FH Screw M3X6	2		
		T P RH Screw M2X8	1		
		• M3X18	2		
		T P Bind Screw M2.6X12	1		
		• M3X8	6		
		• M3X10	9		
		• M3X12	2		
		• M3X15	1		
		T P FH Screw M3X10	19		
		• M3X12	4		
		• M3X15	6		
		Nut M2.6	12		
		• M3	8		
	Nylon Nut M2.6 (x3)	2			
	• M3	5			
	• M4 Flange	4			
	Set Screw M3X3	1			
	• M4X4	4			
	Washer M2.6	2	(Black)		
	• M3	2			
	• M5	4			
	Allen Wrench (2,5)	1			

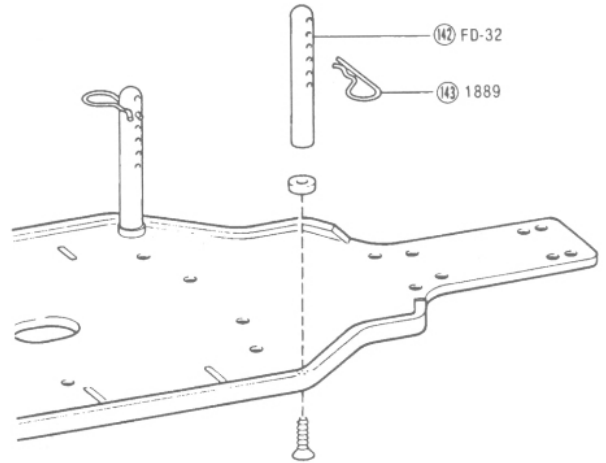
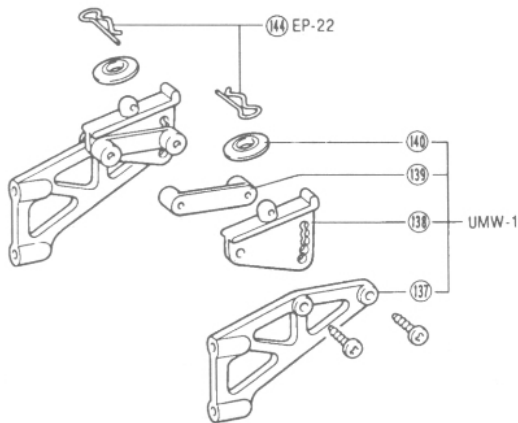
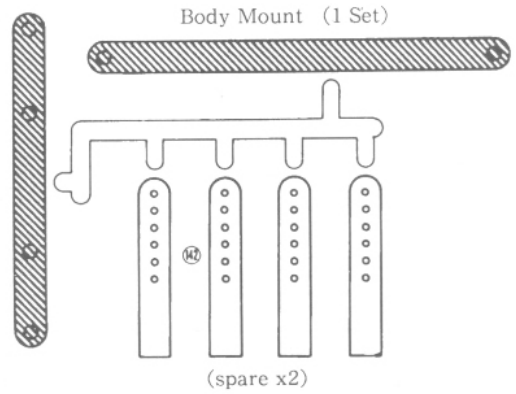
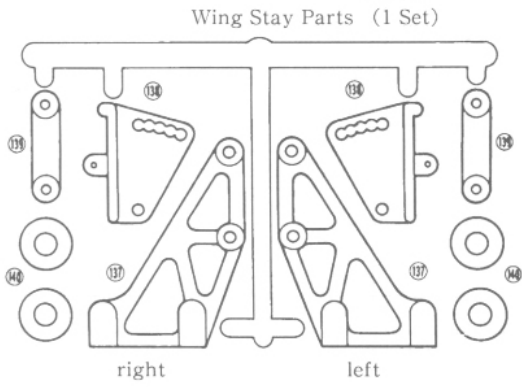
- (1) The key numbers with ★ indicated the plastic parts on a runner.  
 \*\*\* Layout drawing on the runner, \*\*\*  
 ★ mark Chassis assembly/Common instruction (4 Page)  
 ▲ mark Another Sheet instruction (4 Page)
- (2) There are spare Screws to assemble.  
 Use it for spare.



# LAYOUT DRAWING & EXPLODED VIEW OF PLASTIC PARTS ON RUNNERS.

(EXCEPT THE COMMON INSTRUCTION)

 These shaded parts are not used.



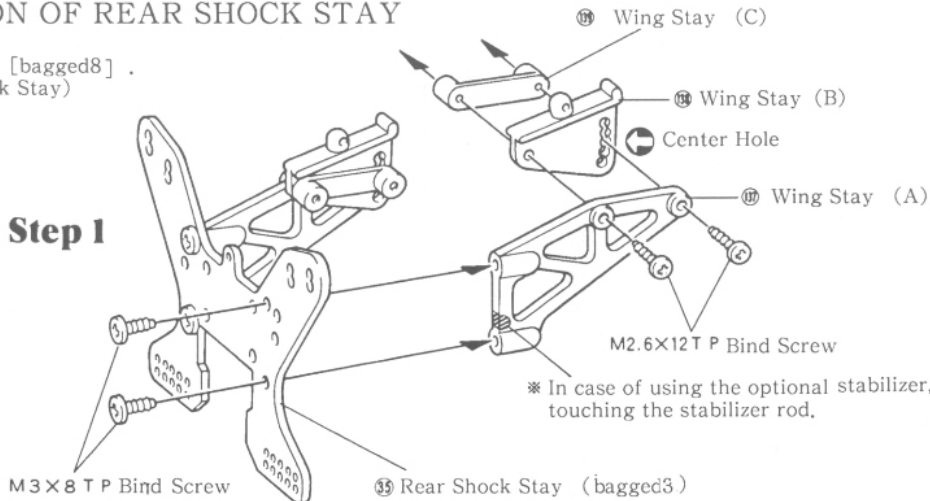
## ASSEMBLY OF CHASSIS PORTION ① ~ ③ . (EXCEPT THE COMMON INSTRUCTION)

### ① INSTALLATION OF REAR SHOCK STAY

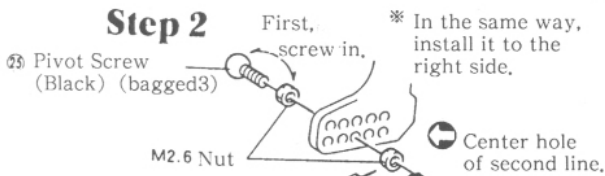
\* These parts are in [bagged8] .  
(Except Rear Shock Stay)

- M2.6X12T P Bind Screw 4
- M3X8 T P Bind Screw 8
- M2.6 Nut
- 4

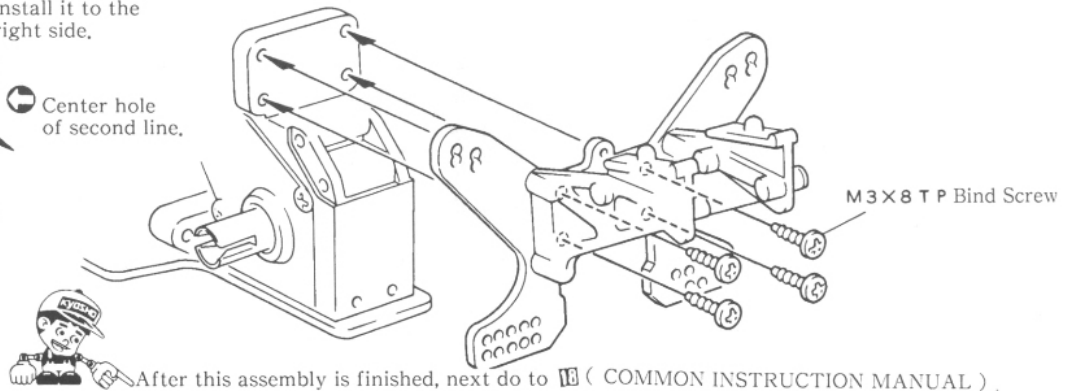
#### Step 1



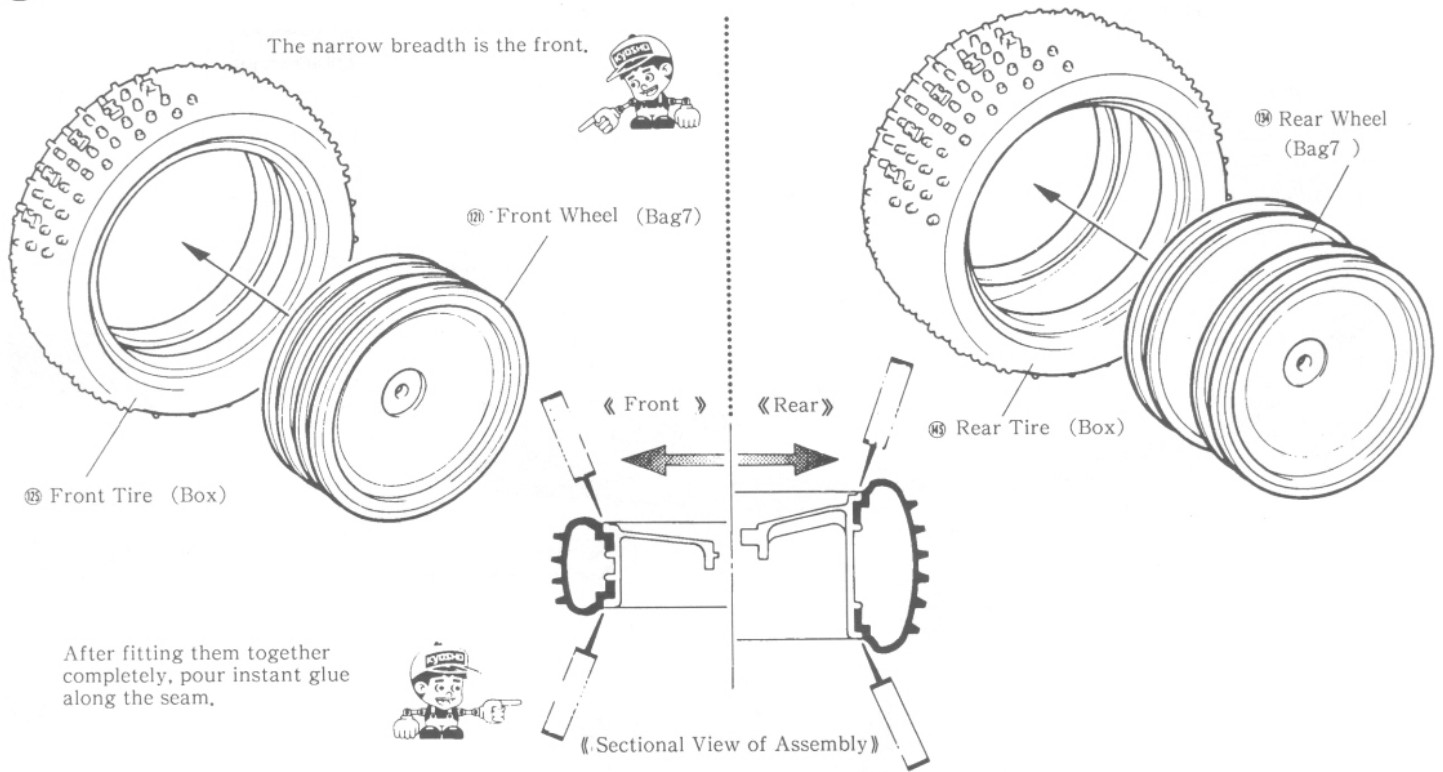
#### Step 2



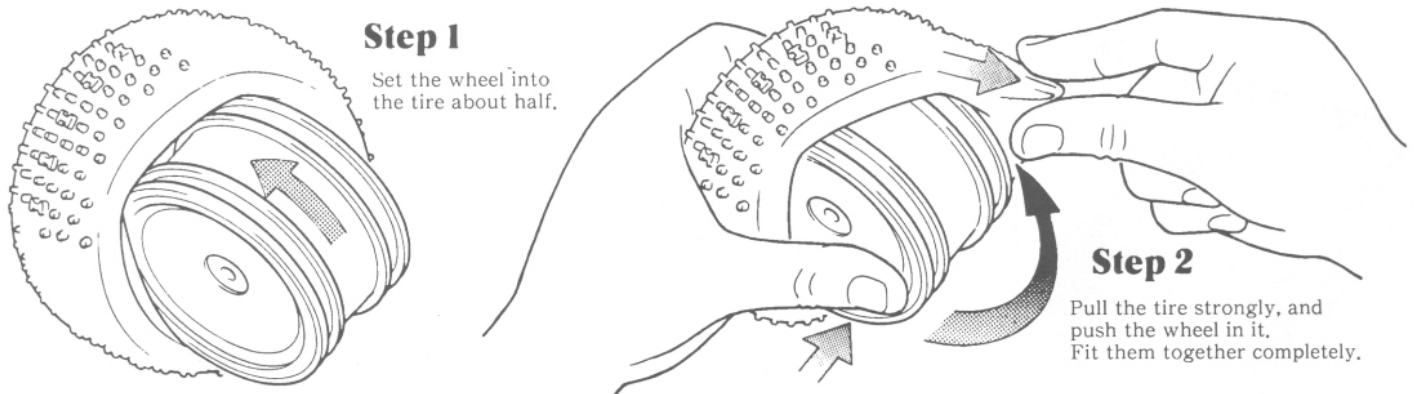
#### Step 3



## 2 ASSEMBLY OF TIRE AND WHEEL \* The shape of tire and wheel are different each kits.

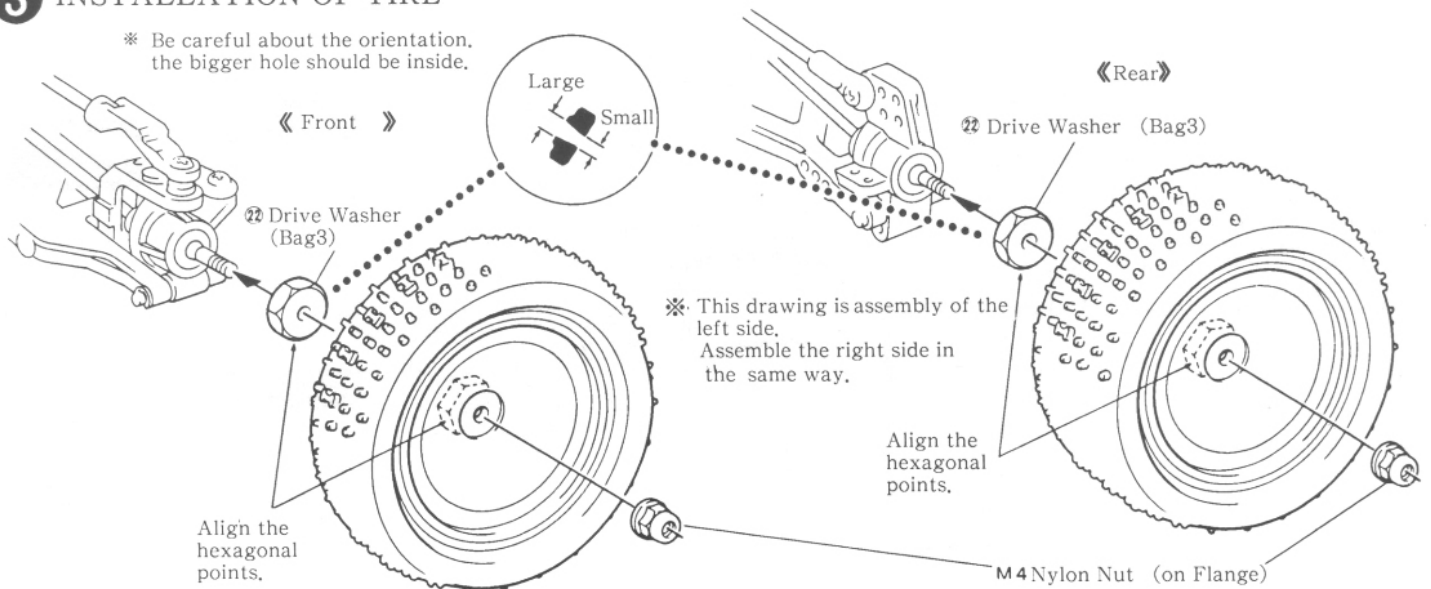


« How to set the wheel »



## 3 INSTALLATION OF TIRE

\* Be careful about the orientation, the bigger hole should be inside.

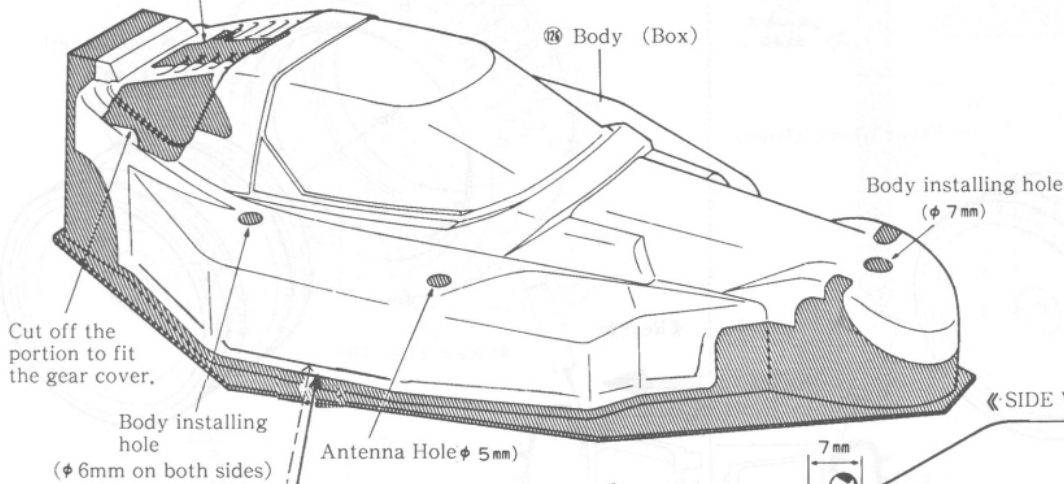




## 4 CUTTING BODY & WING

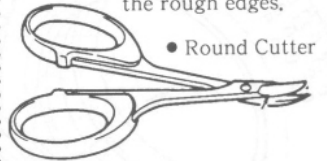
- Cut off the shaded area.
- Finish the cut line with sander.

Cut off this portion to fit the resistor heatsink.



**KYOSHO** No 1829

These special Lexan Scissors make trimming bodies a breeze and the sander comes in handy for finishing the rough edges.

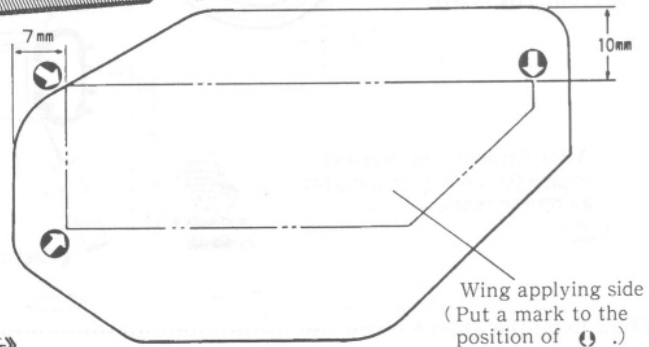


● Round Cutter



● Sander

《 SIDE WING ACTUAL SIZE DRAWING 》

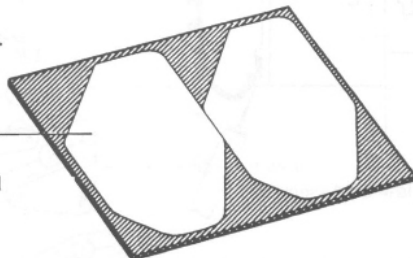


Wing applying side (Put a mark to the position of ●.)

It has two lines. Cut the line of under side.

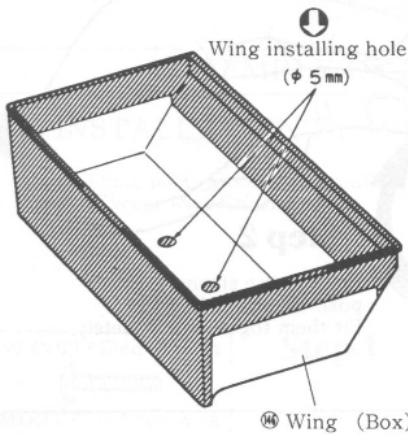
⑩ Side Wing (Box)

Put together the actual size drawing, cut this.



《 WING ACTUAL SIZE DRAWING 》

\* Refer to the actual size drawing.



⑪ Wing (Box)

Make the hole. (Only outside mark.)



Cut off this portion to fit the shock.

29mm

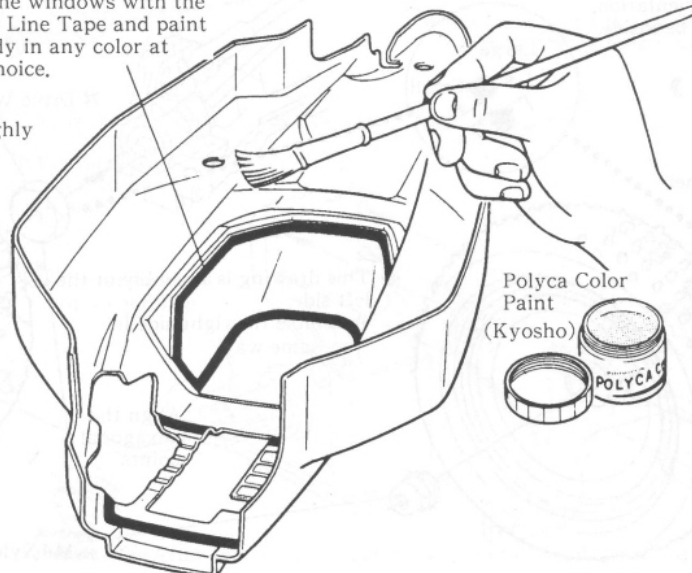
13mm

15mm

## 5 PAINTING

Mask the windows with the Micron Line Tape and paint the body in any color at your choice.

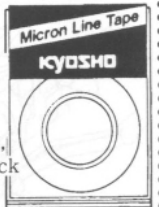
First wash the body to remove any oil or dirt and rinse thoroughly with clean water. Paint the inside of body. You can obtain a color scheme by masking a portion with tape then removing the tape and painting. Apply the lightest color last.



**KYOSHO**

- No. 1841...1mm
- No. 1842...1.5mm
- No. 1843...2.5mm
- Color: White, Red, Yellow, Green, Blue and Black

No 1841~3



**KYOSHO** No 2230

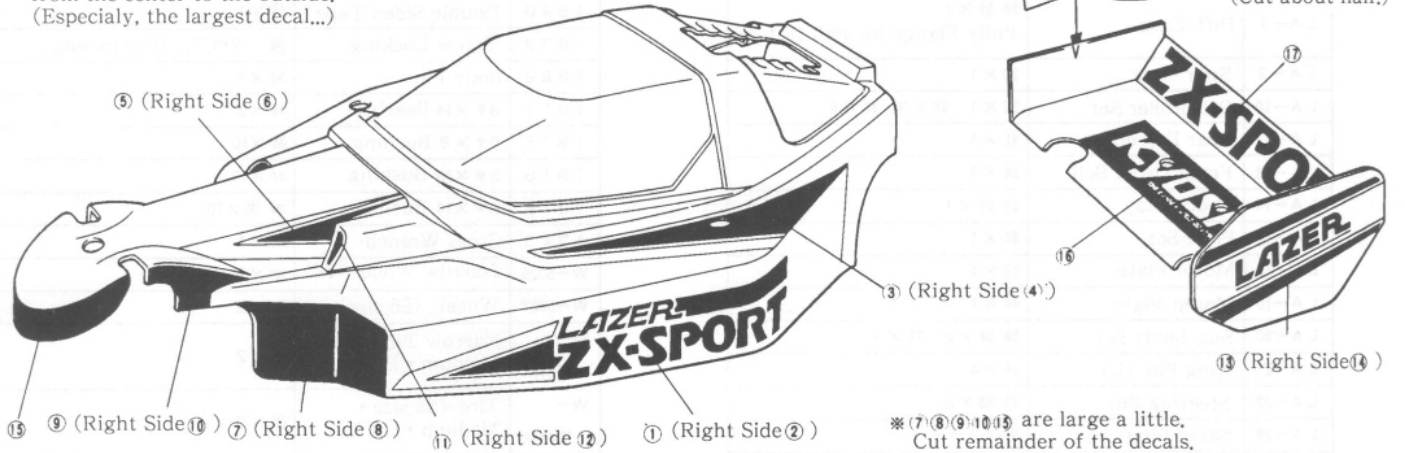
- White, Red, Yellow, Blue, Sky blue, Green, Orange, Black, Violet, F. Orange, F. Pink, Yellow Green, and Calsonic Blue



## 6 ASSEMBLY OF WING AND APPLYING DECAL

« Attention of applying the decal. »

- Cut off the decals along the cutout line with scissors.
- Do not apply suddenly, Convince yourself of the position by trying the decals with the backing paper on.
- Be careful not to have air bubbles left. Apply it by a way of pushing up from the center to the outside. (Especially, the largest decal...)



## 7 INSTALLATION OF BODY & WING

\* These parts are in (bagged 8) . (Except the plastic collar.)

### Step 1 LEFT

\* Install it to the right side in the same way.

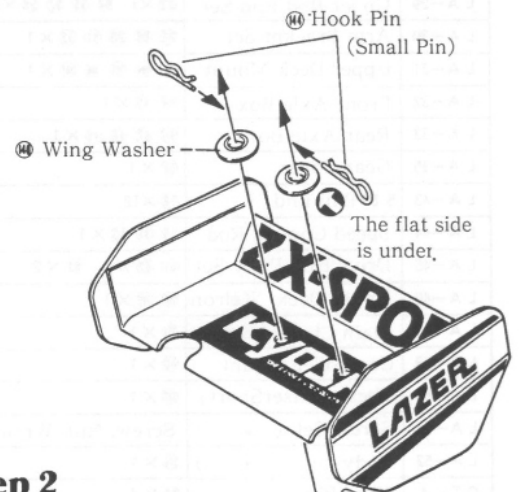
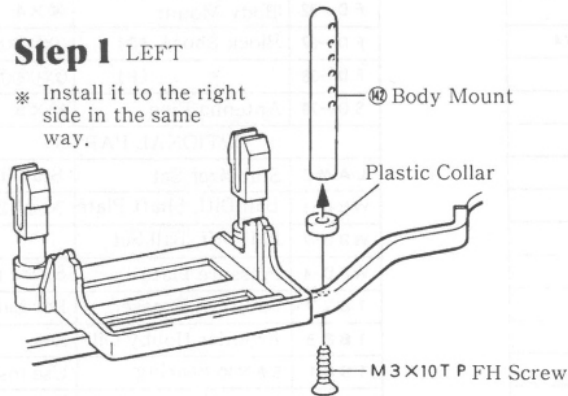
M3 X10T P FH Screw · 2

Plastic Collar ..... 2  
(⑬ On Shock Piston)

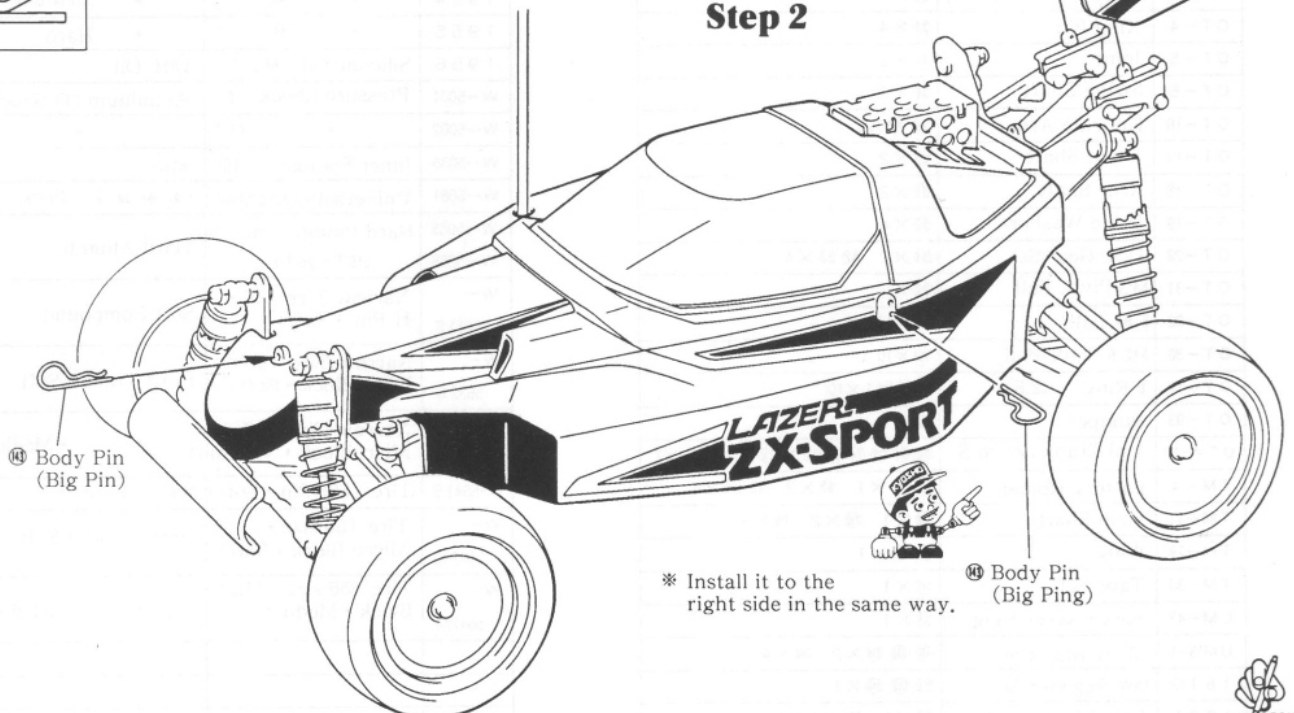
⑭ Body Pin ..... 3

⑭ Hook Pin ..... 2

⑭ Body Pin (Big Pin)



### Step 2



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*The Super Hobby*



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