RADIO CONTROLLED ELECTRIC POWERED RACING BUGGY

OFF-ROAD RACER

# ULTIMA II

- · SUPER LIGHTWEIGHT FOR QUICK ACCELERATION.
- LONG SUSPENSION TRAVEL FOR TOP HANDLING ON EVEN THE WORST TRACKS.
- NEW KELRON-TYPE CHASSIS FOR HIGH STRENGTH AND LIGHT WEIGHT.
- PERFECT COMBINATION OF SUSPENSION DESIGN AND WEIGHT DISTRIBUTION FOR TOP HANDLING.
- INDEPENDENT SUSPENSION ON ALL FOUR WHEELS WITH NEW RACE-TESTED GEOMETRY.
- OIL-FILLED SHOCK ABSORBERS ON ALL FOUR WHEELS.
- TRUE GEAR-TYPE DIFFERENTIAL.
- A QUALITY DESIGN FOR SIMPLE MAINTENANCE.
- MANY HIGH PERFORMANCE OPTIONAL PARTS ARE AVAILABLE.



## WARRANTY INFORMATION 90 Day Limited Warranty

It is expressly understood that the standard replacement warranty of the seller, a copy of which is annexed to and made part of this agreement, shall be in lieu of any and all other warranties, including the warranties of merchantability and fitness for use. The sole responsibility of the seller shall be in its replacement obligations contained in this standard warranty.

Kyosho's "Ultima II" is warranted to the original owner to be free of defects in parts or workmanship for a period of 90 days from the date of purchase. During this time Kyosho's authorized U.S. repair facility, Hobby Services, will repair or replace at their option any defective parts without charge.

Limit of our Liability: Our liability under this warranty is limited to the repair or replacement of defect or defective parts by Hobby Services and does not include shipping expense.

Exclusion and/or Voidance of Warranty: This warranty does not apply to damage or defects resulting from misuse, abnormal service, damage in shipment, or damage resulting from a crash. The warranty is voided if the model is modified, altered, or repaired by anyone other than Hobby Services. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state within the U.S.

## PROOF OF DATE OF PURCHASE

It is the responsibility of the pruchaser to show proof of the date of purchase if a model's warranty is to be honored. Your original purchase invoice or receipt will suffice for this. Your Kyosho "Ultima II" should be returned directly to Hobby Services for warranty work. The address is:

Hobby Services 1610 Interstate Drive Champaign, Illinois 61821 Attn: Warranty Department Phone: 217-398-0007

#### SHIPPING INFORMATION

Please follow steps 1 through 4 in "Repair Service" when returning a model to Hobby Services. (See Below).

We are sorry, but we cannot be responsible for crash damage and/or loss of kits, engines, accessories, etc.

#### REPAIR SERVICE

Should your model be past the 90 day warranty period, or should your kit be voided or excluded from warranty coverage, repairs are available for a nominal cost through Kyosho's authorized U.S. repair facility, Hobby Services. Since we want you to be happy with your purchase for a long time, Hobby Services employes a full time in-house service staff. They have the professional knowledge and the sophisticated equipment and parts available to service your model for years to come. When returning your model, whether for warranty or repair service, please be sure to follow the instructions below. This will help the technician troubleshoot the system, repair it, and return it to you as quickly as possible.

- 1. Under all circumstances, return the ENTIRE system.
- Disconnect the receiver battery switch harness, and make sure the transmitter is turned off.
- 3. Send written instructions which include: proof of purchase date (your store receipt or purchase invoice), a list of all items returned, a THOROUGH explanation of the problem and the service needed, and your phone number where you can be reached during the day.
- 4. Also include your full return address.

Repair charges and postage may be prepaid or billed C.O.D. Additional postage charges will be applied for non-warranty returns. All repairs shipped outside the United States must be prepaid in U.S. funds only.

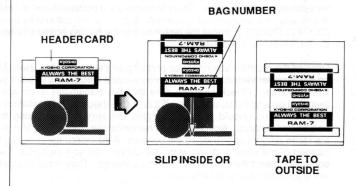
## **ULTIMA II**

#### IMPORTANT! BEFORE YOU BEGIN

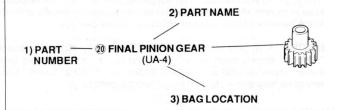
This is a sophisticated model with a large number of moving parts. Before you begin assembly, take a look through the box and these instructions carefully to decide whether or not you are ready for this challenge! If you do not think that this type of model is for you, it may be returned to the dealer as long as it is NEW and UNUSED. UNDER NO CIRCUMSTANCES CAN YOUR DEALER ACCEPT A KIT FOR RETURN IF ASSEMBLY HAS ALREADY BEGUN! If this is not what you bargained for, then go no further and return this kit to the dealer immediately. BUT, if a little maintenance doesn't bother you, and the thrill of high performance driving is for you, then don't hesitate another minute! IT IS VERY IMPORTANT TO read through this entire manual thoroughly to familiarize yourself with the parts and methods of construction used BEFORE actually starting to build.

#### **HOW TO USE THIS MANUAL**

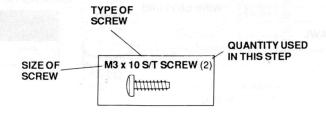
This Kyosho instruction manual uses a unique cross reference system to help you locate all of the bagged parts. DO NOT open each bag and dump out the parts. Carefully remove the header card from the bag and discard the staple. Slip the header card into the bag or tape it to the outside of the bag so that the bag number shows. These bag numbers will be used throughout the assembly process and will prove invaluable when locating parts.



In each step of assembly each part will be labeled with 1) The part number, 2) Part name, 3) Bag location.



On each page you find a directory of small parts that will be used in each step. For ease of identification, these parts are shown actual size enabling you to place a screw directly on the picture to ensure you have selected the appropriate size.

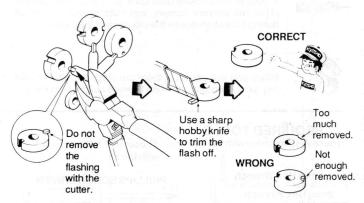


On page 26 you will find a complete list of parts used in this kit including the part number and total quantity supplied in the kit. On pages 5 and 6 you will find an inventory of how each part is bagged in this kit and in which step it is used. When ordering replacement or optional parts, see page 25 for a complete listing of parts and stock numbers.

#### **HELPFUL TIPS AND PRECAUTIONS**

Some precautions need to be observed when building your model to avoid problems.

- Use a muffin tin or egg carton to separate screws, nuts, washers, etc.
   This will make it easier to locate the correct part.
- Place a mat or towel on the work surface where you will be building the kit. This will prevent parts from rolling off and will protect the work surface at the same time.
- Try to avoid working over a shag carpet. In the event that a small part of screw should fall onto the carpet, it will be difficult to find.
- Avoid getting products like engine cleaner or screw lock on the plastic parts. They can have a serious effect on your model.
- Avoid running the "Ultima II" in very cold temperatures. Both
  plastic and metal parts become brittle at low temperatures. In addition,
  grease and oil become very thick causing premature wear and
  deficent performance.
- Remove all flashing from parts before assembly as shown in the example below.



- 7. Trial fit all parts to ensure proper fit before attaching them permanently.
- 8. Do not use excessive force when tightening self-tapping type screws into plastic. Overtightening will cause the threaded portion of the plastic to strip. It is recommended to stop tightening when some resistance is felt after the threaded portion enters the plastic.



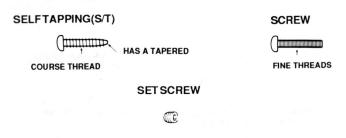
- 9. Ensure that all parts are well lubricated where the instructions indicate the use of grease.
- 10. Avoid using power screwdrivers when assembling your kit. They tend to overtighten screws.
- 11. Take your time and read the directions thoroughly. It's not how fast you can assemble the kit but how fast it goes once it is assembled.

#### METRIC NUTS AND BOLTS

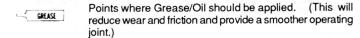
All nuts and bolts used throughout this kit are metric size. Therefore, some of the notations may not be familiar to you. An M3 nut is a 3 millimeter (3mm) nut. An M3 x 15 screw is 3mm diameter and 15mm long. Some round parts may be labled as a "M4 Washer" (a washer with a 4mm inside diameter) or a "3mm Bushing" (a bushing with a 3mm inside diameter). At various points throughout the manual these parts are labled and pictured in their actual size on the left hand side of the page. For your reference, 1 millimeter equals approximately .039 inches.



A few different types of screws are used in the construction of your model. Here are some examples and how they will be indicated in the instructions. For example, Self-Tapping will simply be S/T screw.



Certain symbols are used throughout the instructions. Pay attention to their location.



SW CEMENT

Places where Locktite (Zap Lock, etc.) should be applied. (This will prevent screws and nuts from loosening up during operation due to the vibration of the model.)

When you see this face, there are steps that you should pay extra particular attention to when building this model.

#### RADIO OPERATIONAL CHECK

Thoroughly read and follow the instructions supplied with your radio system. The following instructions are a general procedure for testing the operation of your radio system.

An operational check of your complete radio system proir to installation is a must. This check will locate possible defective components BEFORE they are installed in your model.

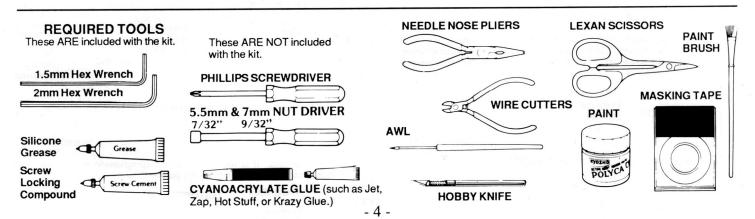


Gently plug the switch harness and servo connectors into the proper receptacles on the receiver. The connectors are polarized and will only fit one way. If they do not plug in easily, turn them around and try again (DO NOT FORCE.). Install the batteries into the battery holders for both the transmitter and receiver.

Unravel the receiver antenna wire and turn on the transmitter, then turn on the receiver switch. The servos may move a little bit at this point but this is normal. Check to make sure that the transmitter is on when switched on and if it is, continue. If it is not, recheck your installation of batteries. You should be able to move the servos' arms using the transmitter controls. Notice how the servos move. They should move the same amount as you move the controls. Also, notice the direction of rotation of the servos, then switch the servo reversing switches, if so equipped. See if the rotation of the servos change. They should operate in the opposite direction as before.

Decide whether your radio is in proper working order. If you decide that it is defective, check the warranty procedures described in the radio instruction manual. When turning off the system, always turn the receiver off first, then the transmitter. This will prevent the receiver from responding to stray signals which can cause the servos to react erratically and move to the extreme of their rotation which can cause damage.

**NOTICE:** Use only radio frequencies specifically allowed to operate "surface" models such as R/C cars and boats. In the United States those frequencies fall with in the "75 MHz" or "27 MHz" bands. Use of any other frequencies is both illegal and dangerous.



#### LIST OF BAGGED PARTS (1)

Before assembly, open each bag one at a time and compare the parts in each bag to the parts listed below. Check the bag for the part and correct quantity. If you are not familiar with the names of some parts, turn to the step where that part is used, and refer to the labeled diagrams. Return all parts to the correct bag after checking the list. **NOTE:** The parts with a  $\star$  by them are contained on a molded parts tree.

Bag #	Key#	Description	Qty	Stepused
	1	Rear Shaft (B)	2	11)
	2	Motor Plate	1	5
	3	5.8mm Ball	2	2
UA-2	4	Front Shock Stay	1	14
UA-Z	5	Rear Shock Stay	1	9
	6	4 x 8mm Bushing	4	35
	7	5 x 10mm Bushing	6	5 7 11
	8	10 10 x 14mm Bushing	2	4
UA-3	9	Front Rim	2	34
UA-3	10	Rear Rim	2	34
10 15 87	11	Joint	2	4
	12	Rear Wheel Shaft	2	100
	13	Drive Washer	2	100
	14	Bevel Gear (A)	2	8
	15	Bevel Gear (B)	2	8
	16	Bevel Gear Shaft	1	8
	17	Pinion Gear	1	28
	18	Swing Shafts	2	12
	19	Center Gear Shaft	1	
	20	Final Pinion Gear	1	27 6
	21	Counter Gear	1	
UA-4	22	Main Gear	1	5
	23	Diff. Case		3
	24		1	3
	25	Center Gear	1	27
	26	Front Wheel Shaft Counter Gear Shaft	2	13
	27		1	5
	-	2 x 11mm Pin	3	56
	28	Servo Saver Guides	2	18
	29	Plate Post	2	25
	30	Bushing Collar	2	8
	31	4 x 8mm Bushing (L)	1	27
	32	O-Ring	1	27
	33	Shock Shaft (S)	2	0
	34	Shock Shaft (L)	2	0
	<b>★</b> 35	Shock Piston Tree	4	0
	36	Diaphram	4	2
UA-5	37	Shock Spring (F)	2	2
ONO	38	Shock Spring (R)	2	2
	39	Shock Case (F)	2	0
	40	Shock Case (R)	2	0
	<b>★</b> 41	Shock Cap	4	2
	★ 42	Spring Retainer	4	2
	<b>★</b> 43	Spring Spacer	4	2
	44	Cap Retainer	4	2
	45	Shock End	4	0
UA-6	46	E-Ring (E-2.5)	10	10
	<b>★</b> 47	Front Hub	2	113
	<b>★</b> 48	Rear Hub	2	00
	<b>★</b> 49	Knuckle Arm (R)	1	IB
	★ 50	Knuckle Arm (L)	1	18
	51	Front Bulk Head	1	14

Bag #	Key#	Description	Qty	Step used in
	52	Rear Axle Stopper	1	12
	53	Rear Bulk Head	1	9
	54	Gear Cover	1	29
	55	Front Sus. Arms	2	15
	56	Rear Sus. Arms	2	100
	<b>★</b> 57	Servo Saver (A)	1	177
	★ 58	Servo Saver (B)	1	17
	★ 59	Servo Saver (C)	1	17
	★ 60	Servo Saver (D)	1	17
UA-6	<b>★</b> 61	Servo Saver Collar	2	18
	<b>★</b> 62	Gear Box Hatch	1	10
	<b>★</b> 63	Servo Mounts	4	21
	<b>★</b> 64	Shock Bushing	4	30 32
	<b>★</b> 65	Antenna Mount	1	25
	<b>★</b> 66	Front Body Mount	1	28
	<b>★</b> 67	Wing Mount	2	31
	± 68	Wing Adjuster	2	31
	± 69	Adjuster Retainer	2	81)
	<b>★</b> 70	Wing Washer	4	40
	<b>★</b> 71	Battery Holder	2	36
	<b>★</b> 72	Battery Mount	4	36
	± 73	Battery Mount Spacer (A)	4	36
	<b>★</b> 74	Battery Mount Spacer (B)	4	36
1	121	Bumper	1	800
	75	Ball End (LG)	12	8
	76	Ball End (SM)	2	21
UA-7	77	Ball Nut	1	17
	78	2.6mm Pivot Ball	6	9 13 17
	79	3mm Pivot Ball	8	11 13 14 32
	80	Rear Shaft (A)	2	
	81	Front Shaft (A)	2	10
	82	Front Shaft (B)	2	15 15
	83	King Pin	2	
	84	Center Rod	1	18
	85	Speed Control Rod	1	-
	86	Steering Control Rod	1	21
	87	Upper Rod	4	<u>21</u> 8
	88	Tie Rod	2	and the same of
	89			8
1	90	4.8mm Ball	1	28
	90	Gear Box (R)	Martin Company	5
	and the second second	Gear Box (L)	1	7
	92	Radio Plate Double Sided Tape	1	28
			1	33
	94	Tie Strap	2	28 33
UA-8	95	Battery Strap	2	36
	96	Antenna Tube	1	88
	97	Shock Oil	1	2
	98	Screw Cement	1	
	99	Silicone Grease	1	
	100	4-Way Wrench	1	
	101	Gear Cover Seal	1	29

#### **LIST OF BAGGED PARTS (2)**

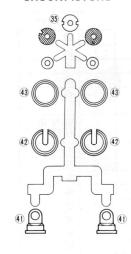
Bag #	Key#	Qty	Step used i	
	102	Speed Control	1	
114.0	103	Resistor	1	Mig Dhil
	104	Resistor Heatsink	1	
UA-8	105	Resistor Base	1	
	106	Resistor Bracket	1	
	107	Motor	1	
	108	Motor Leads	1	
Lastra	109	Front Tire	2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	110	Rear Tire	2	
	111	Body	1	
	112	Chassis	1	
	113	Wing	1	
	114	Decal Sheet	1	
	25.		1	1 1
	46	E-Ring (E-2.5)	9	
	115	E-Ring (E-3)	3	
	116	E-Ring (E-4)	2	
	117	Body Pin (small)	7	
	118	Body Pin (large)	2	
	119	Hex Wrench (1.5)	1	
	120	Hex Wrench (2)	1	
	1.20	M2 x 4 Screw	1	
		M3 x 16 Screw	4	
		M3 x 33 Screw	3	
	2 7 1	M2.6 x 6 Screw	1	
	100	M3 x 6 F/H Screw	10	
		M3 x 1 F/H Screw8	4	-
		M3 x 35 F/H Screw	1	
		M4 x 8 S/T Screw	4	
114.4	227	M3 x 6 S/T Screw	4	
UA-1		M4 x 8 S/T Screw	8	
		M4 x 12 S/T Screw	4	
		M2 x 8 S/T Screw	1	
		M2 x 10 S/T Screw	4	
		M3 x 18 S/T Screw	1	-
		M2.6 x 12 S/T Screw	4	
		M3 x 8 S/T Screw	18	
		M3 x 10 F/H, S/T Screw	3	
		M3 x 10 F/H, S/T Screw	2	
		M3 x 15 S/T Screw	5	
	1 1	M3 x 3 Set Screw	1	
	18	M4 x 4 Set Screw	2	-
	-8	M2.6 Nut	8	
	182	M3 Nut	10	19
	138	M3 Nylon Nut	4	-
			4	<u> </u>
	700	M4 Washer		
	31.1	M3 Washer	1	
		M4 Washer M5 Washer	2	

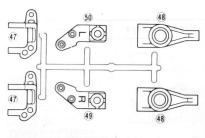
#### PLASTIC PARTS TREE LAYOUTS

The plastic parts trees are shown below to help identify the location of parts on the trees.

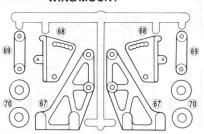
#### KNUCKLEARMS

#### SHOCK PISTONS

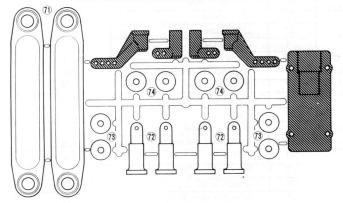




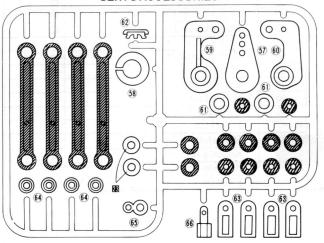
#### WING MOUNT

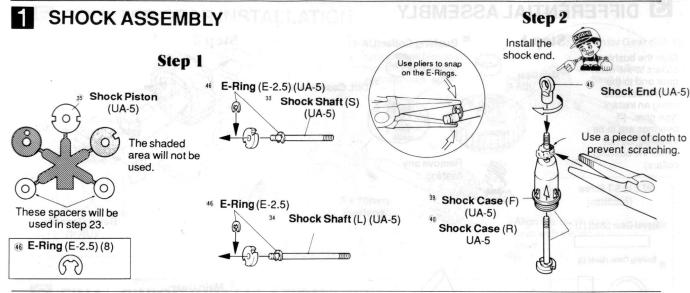


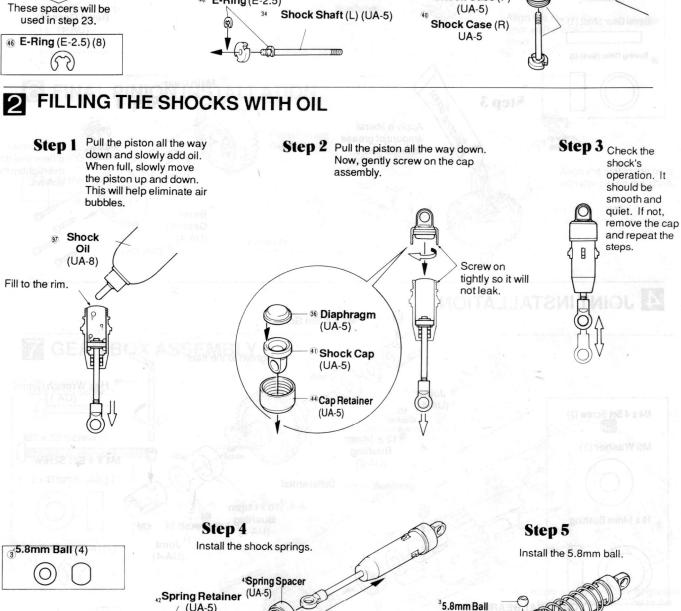
#### **BATTERY MOUNTING ACCESSORIES**

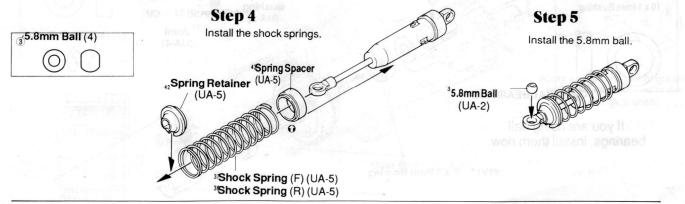


#### **SERVO ACCESSORIES**

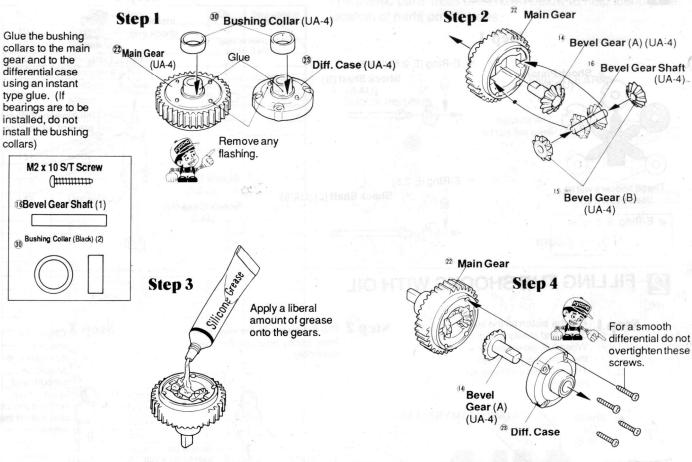


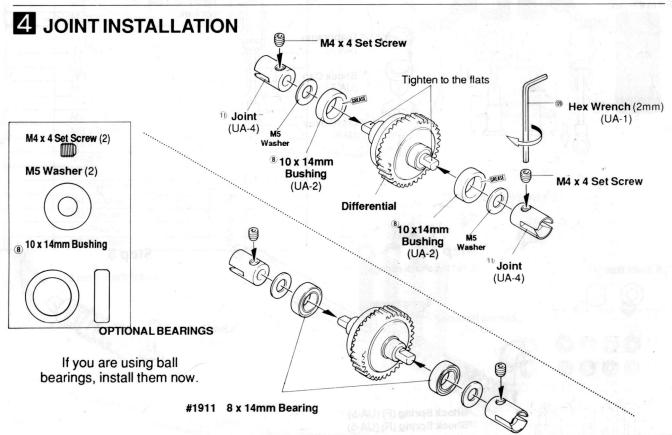


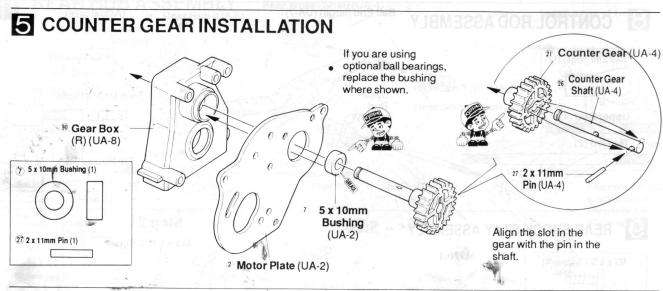




## 3 DIFFERENTIAL ASSEMBLY

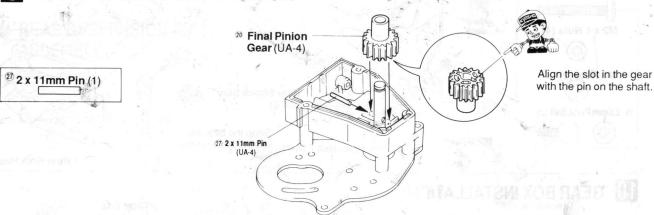




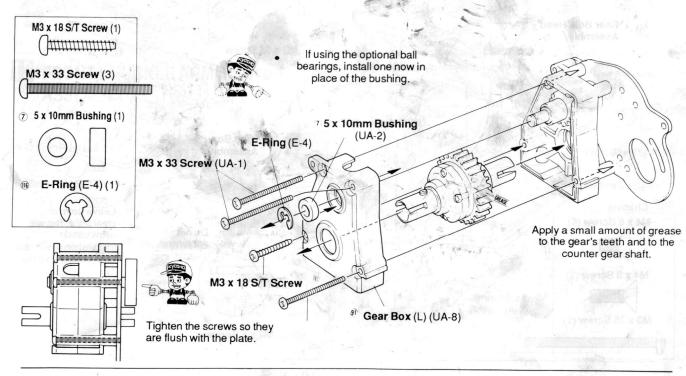


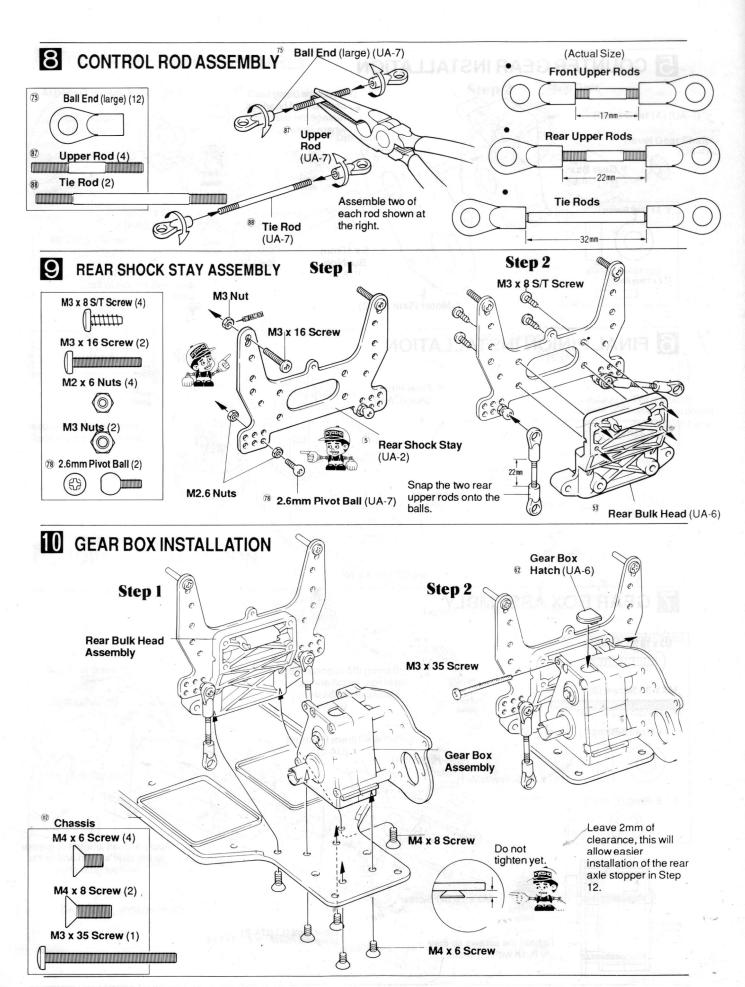
## **6** FINAL PINION INSTALLATION

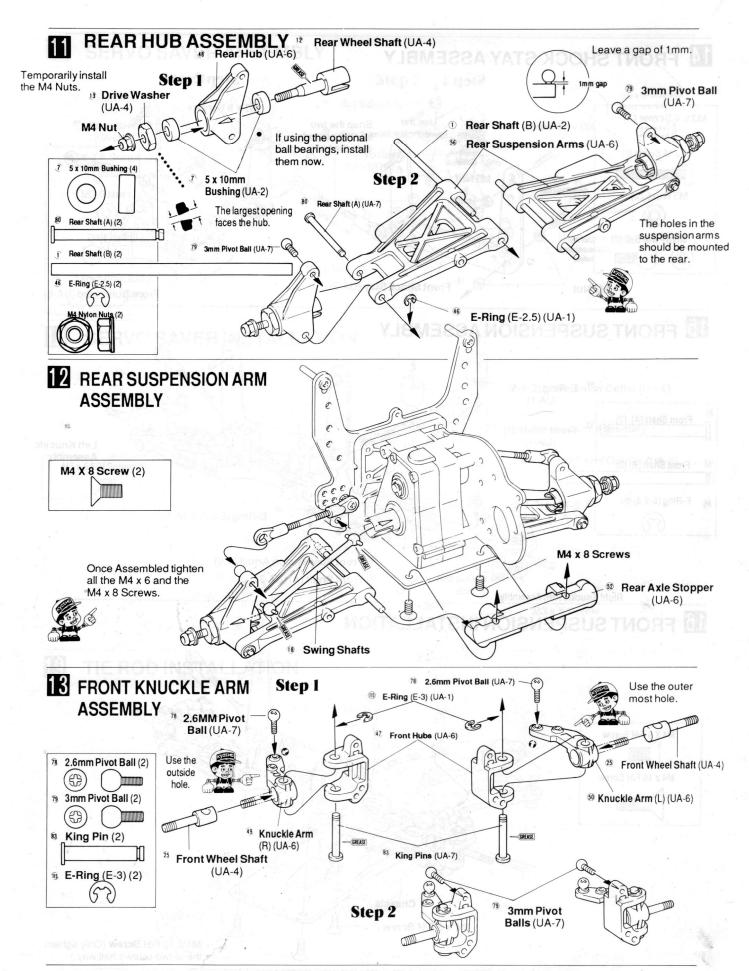
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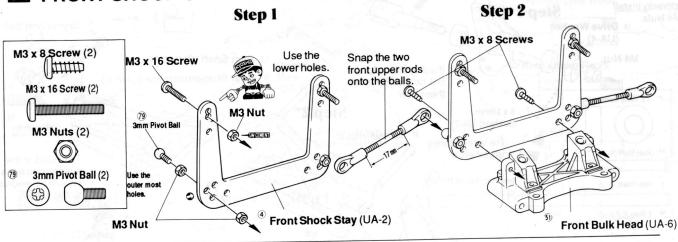
## **7** GEAR BOX ASSEMBLY

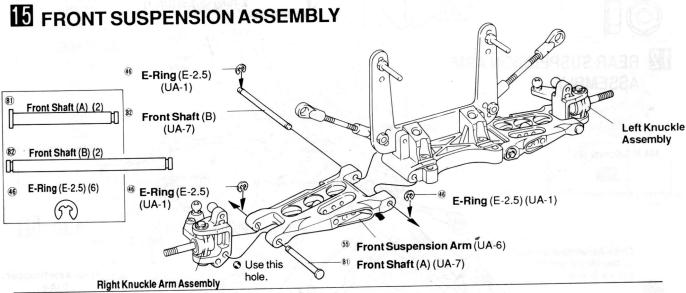




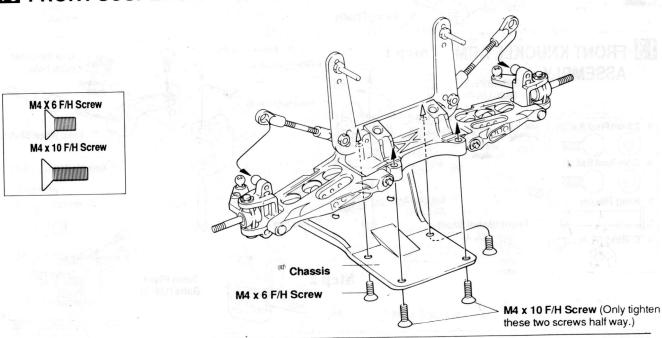


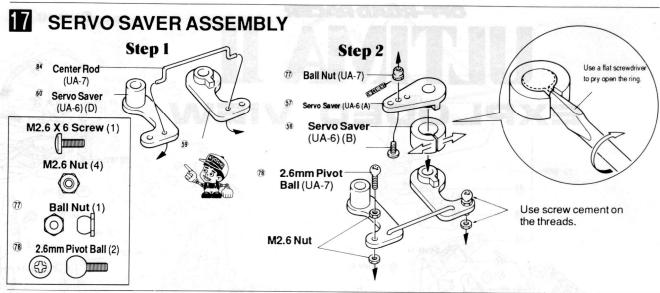
## 14 FRONT SHOCK STAY ASSEMBLY Step 1 M3 x 8 Screw (2) Use the

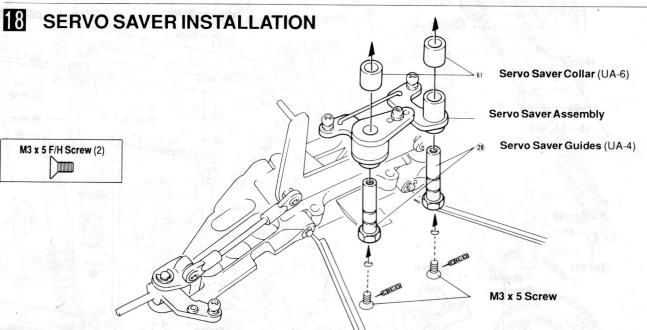




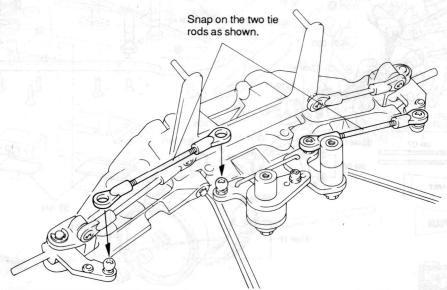
## **16** FRONT SUSPENSION INSTALLATION



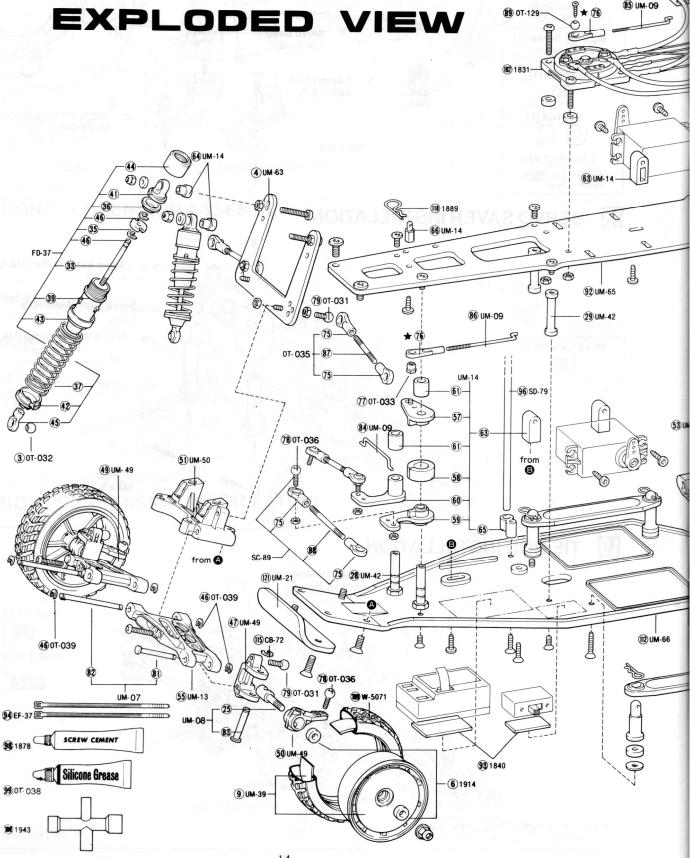


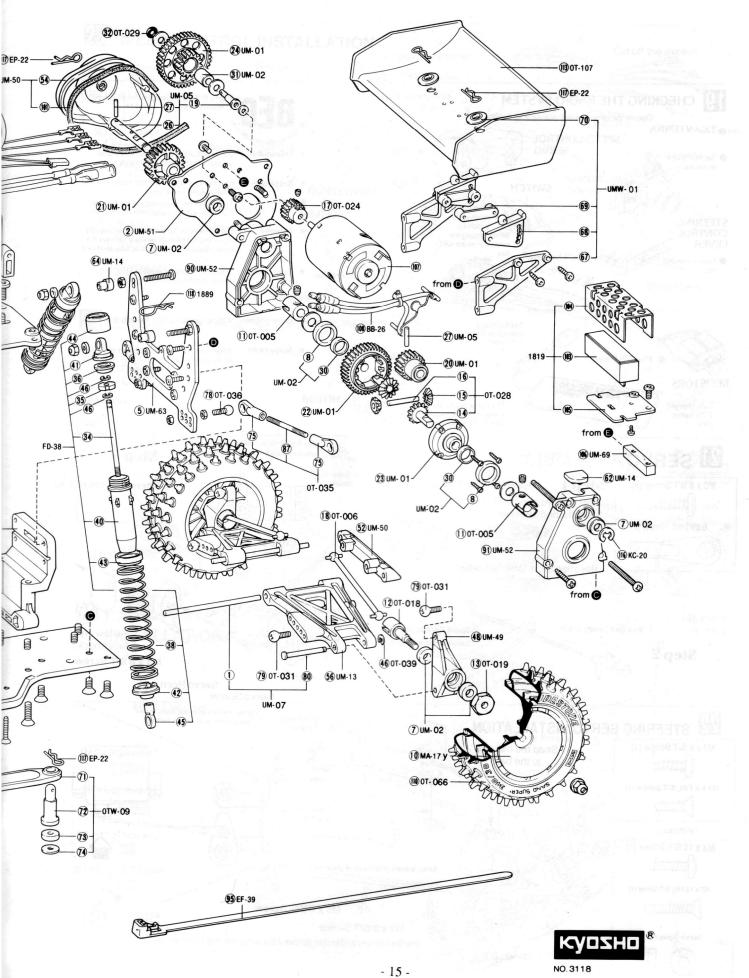


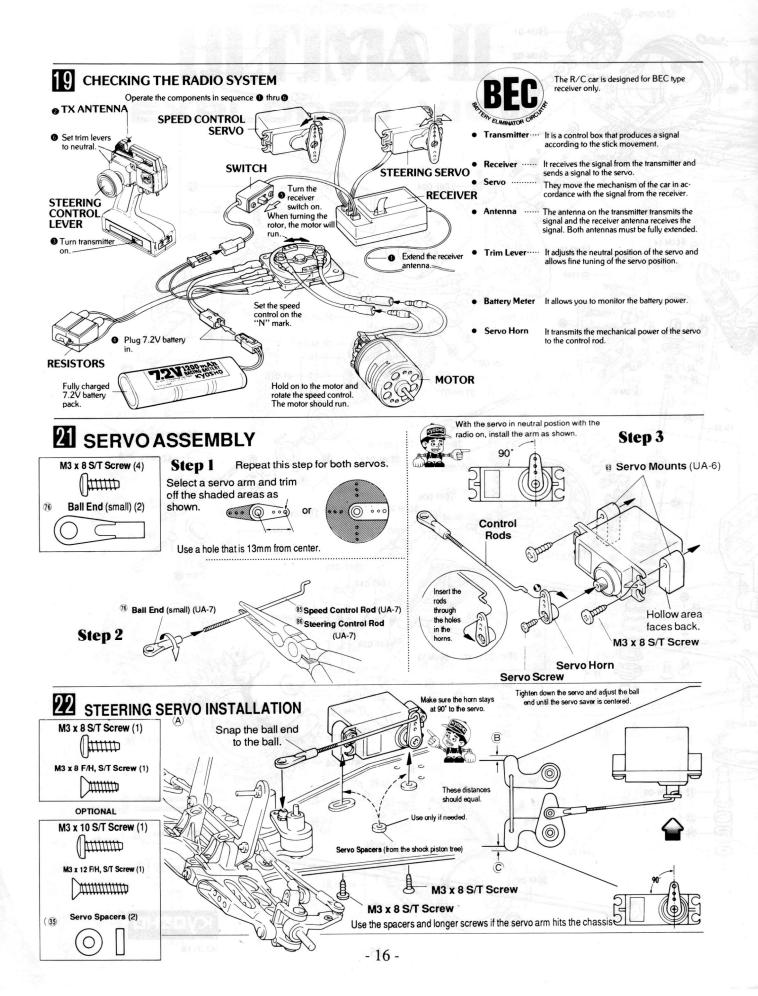
## 19 TIE ROD INSTALLATION

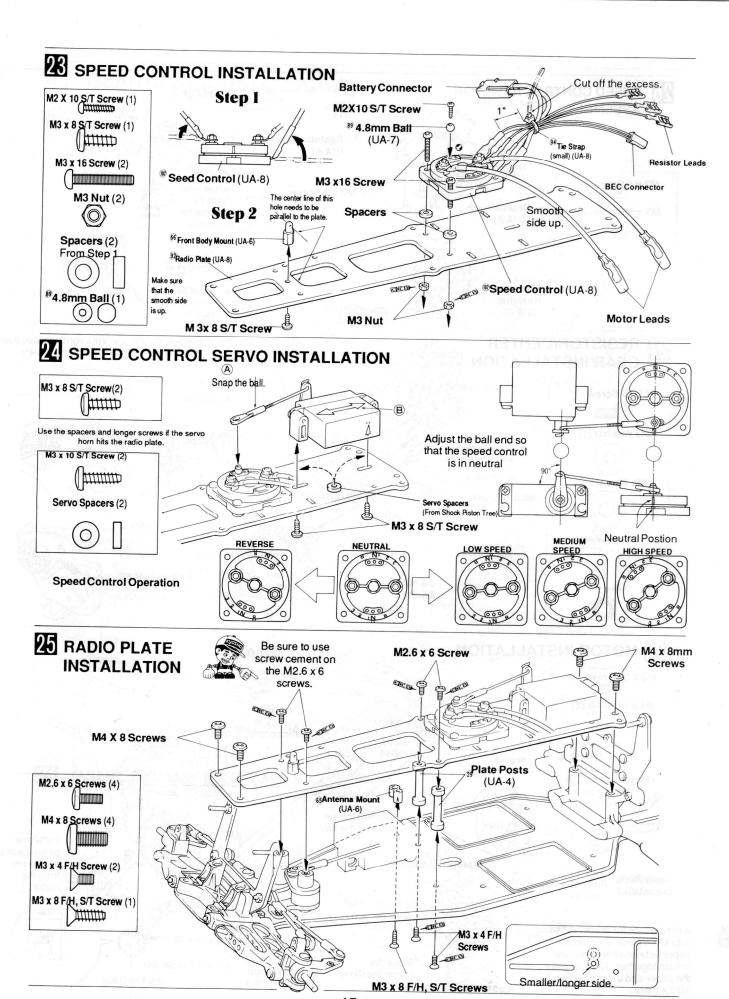


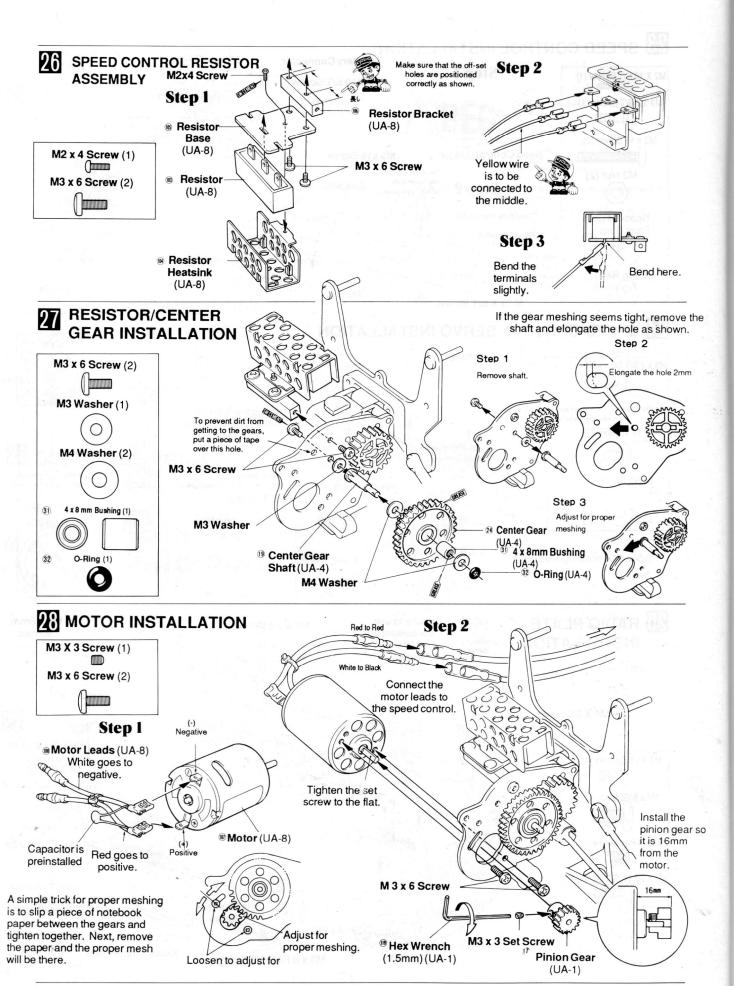
## ULTIMA II

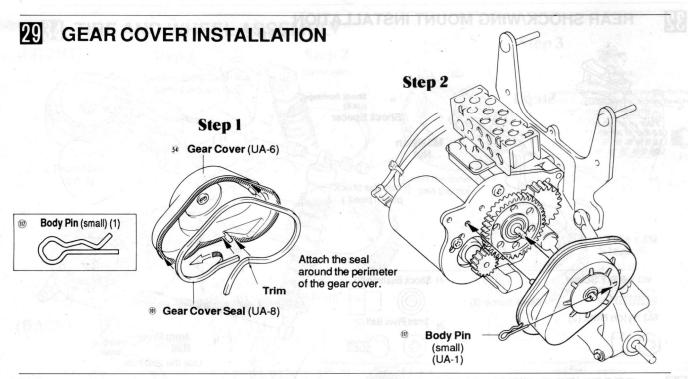




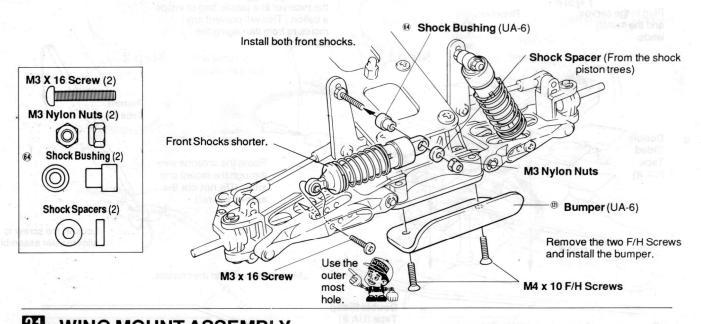


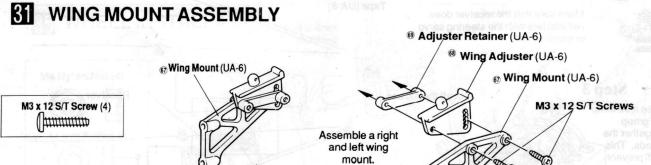


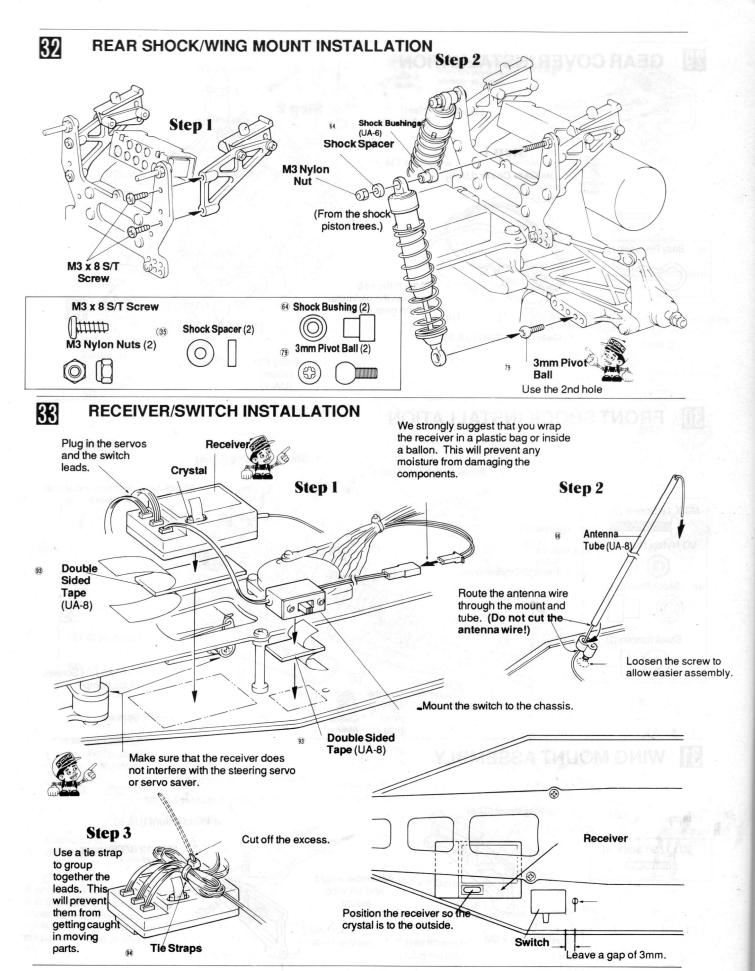


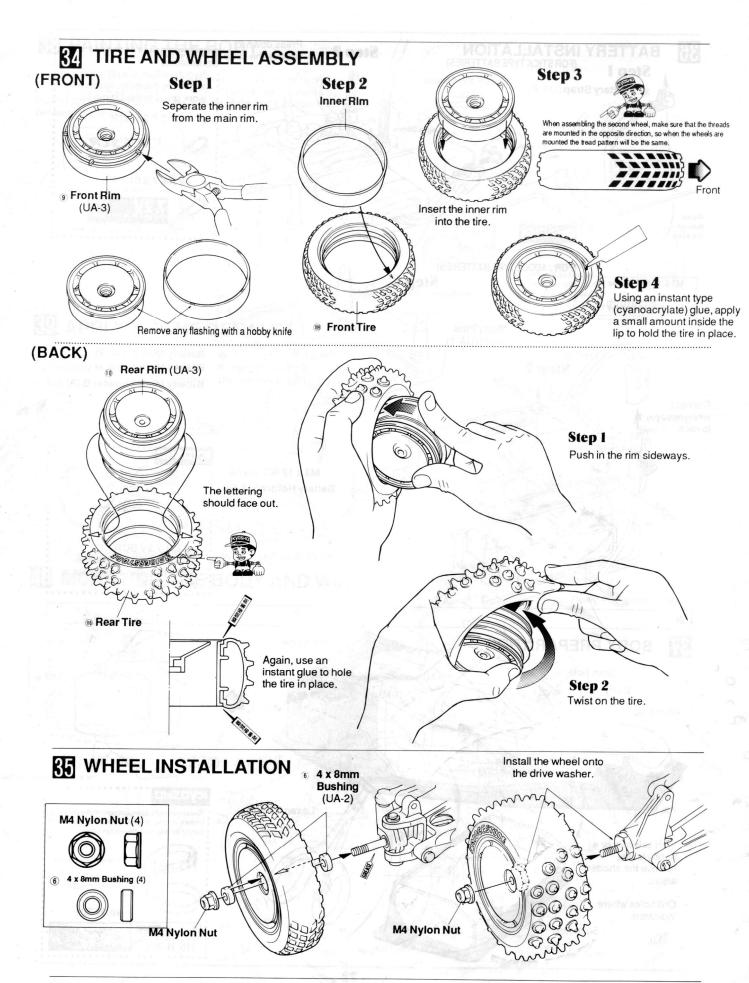


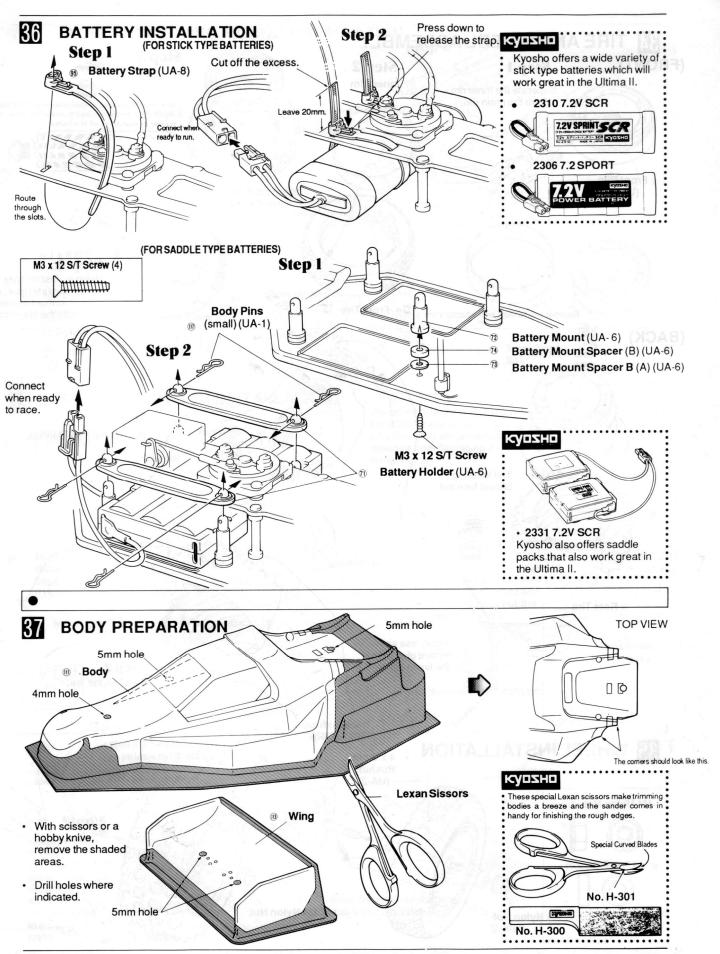
### **FRONT SHOCK INSTALLATION**

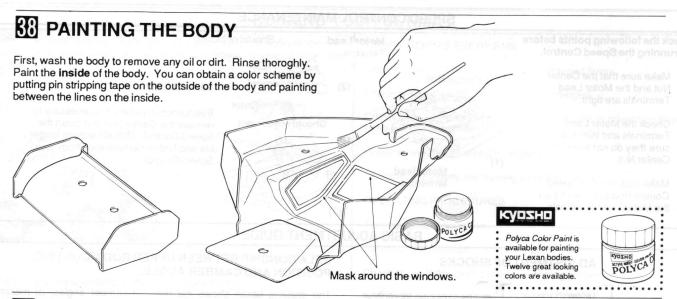




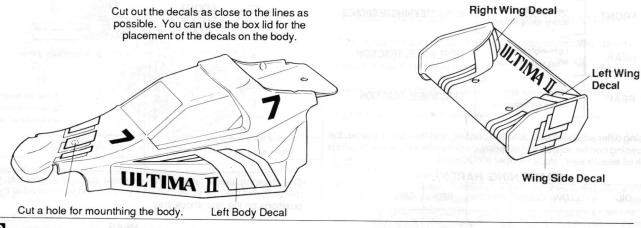


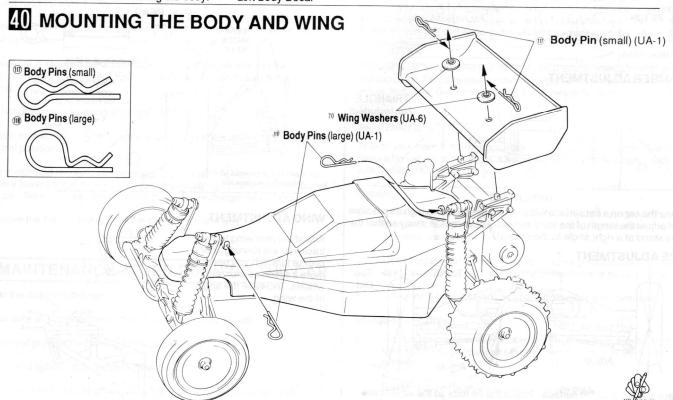






## **39** APPLYING THE DECALS

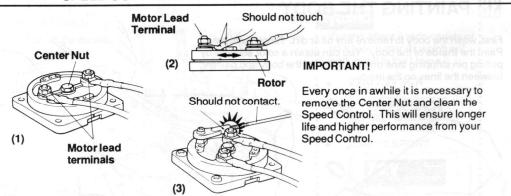




#### SPEED CONTROL MAINTENANCE

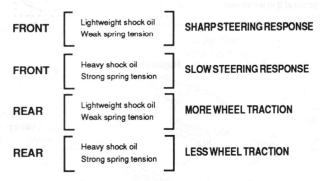
#### Check the following points before running the Speed Control.

- Make sure that the Center Nut and the Motor Lead Terminals are tight.
- Check the Motor Lead Terminals and Wires to make sure they do not hit on the Center Nut.
- Make sure that the Speed Control Rod does not hit on the Motor Lead Terminals



#### **BASIC ADJUSTMENT GUIDE**

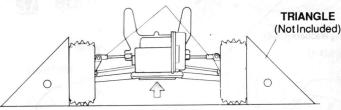
#### **ADJUSTMENT OF SHOCKS**



By using different shock oils, different pistons, and the spring spacer, the dampening can be adjusted to different track conditions. Kyosho sells a shock oil assortment: stock number KYOC5681.

# DAMPENING HARDNESS OIL YELLOW GREEN YELLOW RED GREEN RED PISTON SOFTER

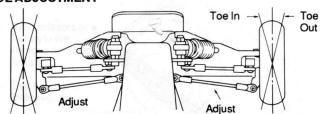
#### **CAMBER ADJUSTMENT**



#### **UPPER ROD**

Place the car on a flat surface with the chassis raised as high as possible and adjust the length of the front and rear upper rods in a way so that the tires stand at a right angle to the ground.

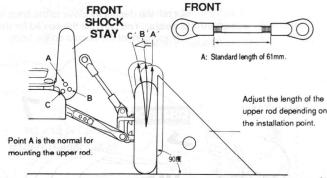
#### **TOE ADJUSTMENT**



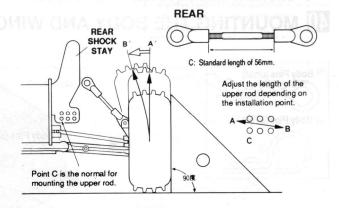
Place the car on a flat surface. Adjust the tie rods so the wheels are slightly (1° or 2°) toed in. This will allow great straight away handling.

## RELATIONSHIP BETWEEN UPPER ROD MOUNTING POSITION AND CAMBER ANGLE.

The drawing below shows the different camber angles, at maximum deflection of the front wheel, when the upper rod is mounted at the different positions on the front shock stay.

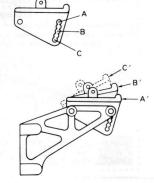


The drawing below shows the different camber angles, at maximum delflection of the rear wheel, when the upper rod is mounted at the different positions on the rear shock stay.



#### WING ADJUSTMENT

Adjust the rear wing to the track you are running. For a course in which you need more traction at your rear wheels. Increase the angle of the wing.

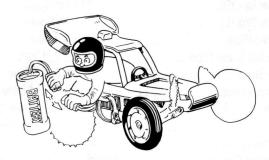


#### **RUNNING YOUR ULTIMA II**

Note: The same battery powers the radio **and** motor. As soon as the car starts to slow down, recharge the battery. Otherwise, you will quickly lose control.



After running, always remove the battery from the car.



#### **OPERATIONAL SAFETY**

Radio controlled model cars are powered by quick discharge NiCd batteries which allow the cars to obtain high speeds. **Caution** is required when operating R/C cars.

Do not run R/C cars on the street.

Check to make sure no one else is on your frequency. If so do not turn your radio on.

If your car is stopped by an obstacle do not continue running the car. Remove the car manually. Failing to do so may ruin the motor and wiring.

Do not grab the tires while they are rotating.

Before connecting the NiCd battery, check that the speed control is in the neutral position.

The motor and receiver are powered by the same NiCd battery. As the battery lowers the receiver looses power resulting in the loss of control of the car. When the car slows down, stop, and recharge the battery.

Remove the NiCd battery from the car when not in use..

#### MAINTENANCE AFTER RUNNING THE CAR

Wipe the dirt off of the car.

Make sure all the switches of the radio control unit are off.

Clean and grease the moving parts periodically.

Check and tighten all nuts and screws.

Wipe the speed control off with a rag or a brush and check regularly.

#### **CHECK BEFORE EVERY RUN**

Check to see if all bolts and nuts are tightened firmly.

Check to see if the NiCd battery is fully charged.

Check to see if the steering and speed control is in proportion to your control of the transmitter.

Check to see that all wiring is properly insulated.

Check to see if parts are moving smoothly.

#### **OPERATING PROCEDURES**

Turn transmitter switch on.

Switch on the receiver.

Check to see if the radio system is working properly.

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

#### TROUBLE SHOOTHING IF THE CAR DOES NOT START

Poor contact of connectors of batteries, connector, and speed control.

Check to see if the NiCd battery is fully charged.

Check to see shortage of battery power for the transmitter.

Signal interference from other radios.

#### MOTOR CARE

#### **BREAK-IN RUNNING**

Breaking in your new motor is necessary to allow the brushes, commutator, and bushings to seat themselves into position. Break-in running should be done with no load placed on the motor; don't break it in while installed in your model. Since higher voltages tend to cause some vibration before break-in, the ideal break-in procedure is to run the motor at around 3-4 volts for a total period of 10 hours. If a source of 3 or 4 volts is unavailable, run the motor at a higher voltage for less time. Just remember, the lower the voltage, the better. Never exceed 7.2 volts for break-in.

After a particularly rough run in your model, the brushes and commutator may become dirty and start to bind. If this is the case, run the motor with a 7.2 voltbattery for about 15-20 minutes with no load(Pinion Gear removed). This should restore the motor to its proper operating condition.

#### MAINTENANCE

To keep your motor in top condition, keep it clean and inspect it often. The motor was designed for use with battery packs. It is a good idea to avoid battery packs greater than 8.4 volts (7-cells). Using more voltage will shorten motor life.

#### Cleaning

- To clean the inside working parts, we suggest one of the new spray motor cleaners such as "BLAST OFF" (follow the instructions suppled with the cleaner. Never spray lubricants such as WD-40 on your motor!
- Oil the front and rear bushings with a light machine oil such as 3-IN-1 Oil. Don't allow any oil to get into the inside of the motor and contaminate the commutator.
- Occasionally check the terminals for oxidation and other contaminates.

#### Changing the Brushes

- The motor brushes eventually will wear out. To replace them, slide the brush springs forward at the spring holder tabs and pull them back so that the brushes can be removed.
- 2. Carefully remove the brushes and install the new ones.
- You will now have to break-in the motor again to allow the brushes to seat.

- 25 3.

## PARTS LIST

(I)	Poor Shoft (P)	20	Ob a Company of the C	1160	cadio and motor: As soon as the	anti e	Note: The same battery power	527
(2)	Rear Shaft (B)2 Motor Plate	(39)	01100K 0436 (1 )		Ball End (SM)2		Wing	
3			Shock Case (R)2		Ball Nut1		Decal Sheet	
4	5.8mm Ball2	<b>(1)</b>	0110011 Oup		2.6mm Pivot Ball6		© E-Ring (E-3)	
(5)	Front Shock Stay1	42	Spring Retainer4		3mm Pivot Ball8		© E-Ring (E-4)	
_	Rear Shock Stay1	43	Spring Spacer4		Rear Shaft (A)2	Œ		
6	4 x 8mm Bushing4	44	Cap Retainer4		Front Shaft (A)2		Body Pin (large)	
7	5 x 10mm Bushing6	45)	Shock End4		2 Front Shaft (B)2		Mex Wrench (1.5)	
8	10 x 14mm Bushing2	46	E-Ring (E-2.5)10		King Pin2	(12	Hex Wrench (2)	1
9	Front Rim2	47	Front Hub2	84	Center Rod1	(12	Bumper1	1
10	Rear Rim2	48	11001 1100	8	Speed Control Rod1		M2 x 4 Screw1	1
11)	Joint2	49	Knuckle Arm (R)1	8	Steering Control Rod1		M3 x 16 Screw	1
12	Rear Wheel Shaft2	50	Knuckle Arm (L)1	87	Upper Rod4		M3 x 33 Screw	3
13	Drive Washer2	(51)	Front Bulk Head1	88	Tie Rod2		M2.6 x 6 Screw1	
14	Bevel Gear (A)2	52	Rear Axle Stopper1		4.8mm Ball1		M3 x 6 Screw 10	)
15	Bevel Gear (B)2	53	Rear Bulk Head1	90	Gear Box (R)1		M3 x 18 Screw4	
16	Bevel Gear Shaft1	54	Gear Cover1		Gear Box (L)1		M3 x 35 Screw 1	
17	Pinion Gear1	55)	Front Sus. Arms2		Radio Plate1		M4 x 8 Screw4	
18	Swing Shafts2	56			Double Sided Tape1		M3 x 6 F/H Screw 4	
19	Center Gear Shaft1	57)	Servo Saver (A)1		Tie Strap2		M4 x 8 F/H Screw8	
20	Final Pinion Gear1	58	Servo Saver (B)1		Battery Strap2		M4 x 12 F/H Screw4	
21	Counter Gear1	59	Servo Saver (C)1		Antenna Tube1		M2 x 8 S/T Screw1	
22	Main Gear1	60	Servo Saver (D)1	_	Shock Oil1		M2 x 10 S/T Screw4	
23	Diff. Case1	61	Servo Saver Collar2		Screw Cement1		M3 x 18 S/T Screw1	
24	Center Gear1	62	Gear Box Hatch1		Silicone Grease1		M2.6 x 12 S/T Screw4	
25	Front Wheel Shaft2		Servo Mounts4		4-Way Wrench1		M3 x 8 S/T Screw18	
26	Counter Gear Shaft1				Gear Cover Seal1		M3 x 10 F/H, S/T Screw3	
27	2 x 11mm Pin3	65	Antenna Mount1	-	Speed Control1		M3 x 10 F/H, S/T Screw 2	
28	Servo Saver Guides2	66	Front Body Mount1		Resistor1		M3 x 15 S/T Screw5	
29	Plate Post2	6?	Wing Mount2		Resistor Heatsink		M3 x 3 Set Screw1	
30	Bushing Collar2	68	Wing Adjuster2		Resistor Base1		M4 x 4 Set Screw2	
31	4 x 8mm Bushing (L)1	69	Adjuster Retainer2		Resistor Bracket		M2.6 Nut8	
32	O-Ring1	70	Wing Washer4		Motor1		M3 Nut	
33	Shock Shaft (S)2	71)	Battery Holder2		Motor Leads		M3 Nylon Nut4	
34	Shock Shaft (L)2	72	Battery Mount4		Front Tire2		M4 Nylon Nut4	
35	Shock Piston Tree4	73	Battery Mount Spacer (A)4		Rear Tire2		M3 Washer1	
36	Diaphram4		Battery Mount Spacer (B)4		Body1		M4 Washer2	
37	Shock Spring (F)2		Ball End (LG)12		Chassis1		M5 Washer	
38	Shock Spring (R)2	(75)	Daii Liiu (LG)12	(112)	UIIa3313		IVID TVASIICI	
39,	Shock Spring (n)2							

MEMO

#### **PARTS LIST**

You can purchase replacement and optional parts for your kit. All of the parts identified by key numbers (see page 26 for complete list) are usually not available singularly, but we offer these parts in convenient parts "packs" which can be purchased sparately. To figure out which parts pack you need, find the

key number for that part within the manual. Then consult our parts pack guide below. When referring to the parts you need, always use the Parts Pack Number. For instance, if you need a Center Gear Shaft (Key#19) ask your dealer for Kyosho Parts Pack UM-05 (Gear Shaft Set).

07001/#	D-+#	DECODIDATION	CONTAING
STOCK#	Part#	DESCRIPTION	CONTAINS  20 20 23 29 × 1
KYOC4182	UM-01	Gear Set	(3) × 1 (8) (30) × 2 (7) × 6
KYOC2747	UM-02	Bushing Set	
KYOC4184	UM-05	Gear Shaft Set	0 0 0 0
KYOC6078	UM-07	Susp. Shaft Set	① 80 80 82 × 2
KYOC3737	UM-08	Shaft Set-Frt.	25 83 × 2
KYOC5387	UM-09	Rod Set	84 85 86 × 1 76 × 2
KYOC6069	UM-13	Susp. Arm Set	§ § × 2
KYOC5653	UM-14	Servo Saver	57 58 59 60 62 65 66 × 1
			6) × 2 63 64 × 4
KYOC2677	UM-21	Bumper	(2) × 1
KYOC2486	UM-34	Body	(II) × 1
KYOC6319	UM-39	Wheels-Frt.	9 × 2
KYOC5639	UM-42	Servo Saver Set	28 29 × 2
KYOC6301	UM-49	Upright Set	49 59 × 1 47 48 × 2
KYOC2626	UM-50	Bulk Head Set	5) 52 53 54 (0) × 1
KYOC4622	UM-51	Motor Plate	②×1
KYOC4034	UM-52	Gear Box	90 91 × 1
KYOC5769	UM-63	Shock Stay Set	4 5 × 1
KYOC6297	UM-65	Upper Plate Set	92 × 1
KYOC4523	UM-66	Kelron Chassis	.@×1
KYOC3259	UM-67	Decal	(N) × 1
KYOC5472	UM-68	Screw Set	
KYOC5372	UM-69	Resistor Stay	®×1
K YOC2258	UMW-01	Wing Stay Set	67 68 69 × 2 70 × 4
KYOC4322	OT-005	Joints	① × 2
KYOC6122	OT-006	Swing Shafts	<b>18</b> × 2
KYOC5658	OT-018	Shafts-Rear	12×2
KYOC3332	OT-019	Drive Washer	①3×4
KYOC4782	OT-024	Pinion Gear (15T)	① × 1
KYOC3297	OT-028	Diff. Gear Set .	16×2 19 15×4
KYOC4707	OT-029	O-Ring	<b>32</b> ×10
KYOC4823	OT-031	Pivot Ball-3mm	⑦ ×10
KYOC2167	OT-032	Balls-5.8mm	③ ×10
KYOC2242	OT-033	Ball Rcptl2.6mm	⑦ ×10
KYOC6292	OT-035	Upper Rod Set	16 87 × 4 15 × 8
KYOC4822	OT-036	Pivot Ball 2.6mm	⑦ ×10
KYOC5732	OT-038	Silicone Grease	99 × 1
KYOC3392	OT-039	E-Ring (E-2.5)	<b>€</b> ×10
KYOC6246	OT-066	Tires-Low Pro	™×2
KYOC6363	OT-107	Wing	(B) × 1
KYOC4485	OT-129	Linkage Set	16 × 2 ⋅ 89 × 1
KYOC4827	OTW-09	Plastic Parts	①×2 ② ③ 3 14×4
KYOC5721	FD-37	Shocks-Front	33 35 36 37 39 41 42 43 44 45 × 2
			€6 × 4
KYOC5722	FD-38	Shocks-Rear	39 35 36 38 40 41 42 43 49 45 × 2,46 × 4
KYOC6253	W-5071	Tires Front	100 × 2
KYOC5823	1819	Resistor-15W	(6) (8) (16) × 1
KYOC5785	1831	Speed Control	® × 1
KYOC6141	1840	Double Sided Tape	93 × 1
KYOC5451	1878	Screw Cement	98
KYOC2517	1889	Body Pins (Large)	(II) × 5
KYOC2701	1914	4 x 8mm Bushing	⑥×10
KYOC6395	1943	Wrench	® × 1
KYOC6222	SC-089	Tie Rod Set	88 × 2 75 78 × 4

STOCK#	Part#	DESCRIPTION	CONTAINS
KYOC2520	EP-22	Body Pins (small)	⑪ × 5
KYOC6347	MA-17	Wheel Set	①×4
KYOC6025	EF-037	Straps (small)	<b>9</b> × 6
KYOC6020	EF-039	Battery Straps	® ×6
KYOC2055	SD-79	Antenna Tube	96 × 5
KYOC3395	CB-072	E-Ring (E-3)	® × 4
KYOC3400	KC-20	E-Ring (E-4)	® × 4
KYOC4586	BB-26	Motor Cord	<b>®</b> 1
		Stock 05 Motor	

OPTIONAL PARTS					
KYOC4767	OT-050	Pinion Gear (13T)	Ratio 9.5 : 1		
KYOC4777	OT-051	Pinion Gear (14T)	Ratio 8.8 : 1		
KYOC4787	OT-052	Pinion Gear (16T)	Ratio 7.7 : 1		
KYOC4792	OT-053	Pinion Gear (17T)	Ratio 7.3 : 1		
KYOC4797	UM-23	Pinion Gear (18T)	Ratio 6.9 : 1		
KYOC4802	UM-24	Pinion Gear (19T)	Ratio 6.5 : 1		
KYOC4807	UM-25	Pinion Gear (20T)	Ratio 6.2 : 1		
KYOC5694	UM-26	ShockStay-spl			
KYOC4604	UM-28	Motor Guard			
KYOC5944	UM-29	Stabilizer Set			
KYOC3830	SC-026	Front Tires	-		
KYOC3882	SC-090	Front Tires			
KYOC4708	1883	Oil-Frontier			
KYOC2197	1901	5 x 10mm			
		Bearings (2)			
KYOC2207	1903	4 x 8mm			
-		Bearings (2)			
KYOC2217	1911	8 x 14mm			
		Bearings (2)			
KYOC5681	1951	Oil Set (S, M, H)	Shock Oil		
KYOC5736	1953	Shock Oil (S)			
KYOC5737	1954	Shock Oil (M)	*		
KYOC5738	1955	Shock Oil (H)	*		
KYOC2176	W-0109	Ball Differential			
KYOC5897	W-0110	Spur Gear			
KYOC3089	W-0111	Counter Gear			
KYOC5692	W-5001	Gold Shocks (S)			
KYOC5693	W-5002	Gold Shocks (L)	,		
KYOC5703	W-5003	Platinum Shocks (S)			
KYOC5704	W-5004	Platinum Shocks (L)	*		
KYOC5388	W-5005	Rod Set-Adjustable			
KYOC6236	W-5031	Tires-Hard	Low-Pro Rears		
KYOC6237	W-5032	Tires-Soft	Low-Pro Rears		
KYOC6127	W-5061	Swing Shafts	Universal (2)		
KYOC6254	W-5072	Tires Block	Front-Hard		
KYOC6223	W-5073	Tires-Pin Spike	Front-Soft		
KYOC6224	W-5074	Tires-Pin Spike	Front-Hard		
KYOC6227	W-5077	Tires-Pin Spike	LowProfile		
KYOC6228	W-5078	Tires-Block	Low Profile		
See Your	W-5085	(15T - 23T)	Hardened Performance		
Local Hobby	thru	Pinion Gears	Gears		
Dealer For Listing	W-5093				



## Ball Bearings KYOC2194 1974

Complete Bearing Set

The addition of ball bearings to your kit will reduce friction and wear resulting in faster speeds and longer running times.

#### Gold Shocks and Shock Oils



KYOC5692 W-5001 W-5002 Gold Shocks-Short (2) KYOC5693 Gold Shocks-Long (2) Shock Oil Set (L-M-H) KYOC5681 1951

Kyosho Gold Shocks will easily install on your Ultima II and will greatly increase your handling characteristics. The Shock Oil Set will make the "Golds" even more versatile by allowing you to "tune" the car for any track.

## -The Super Hobby-



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