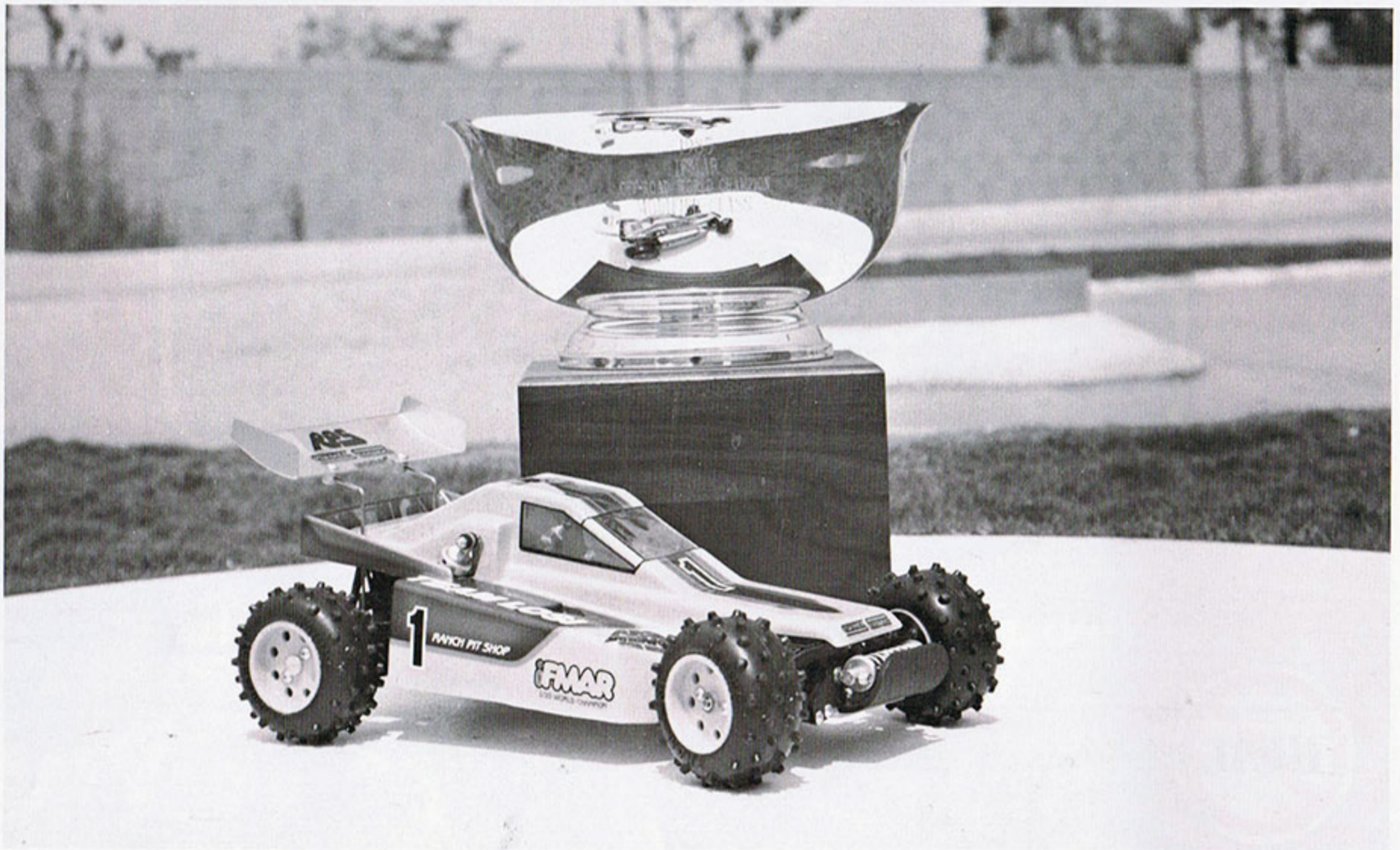


RPS/Yokomo SE

A High-Performance 4WD Offroad Racer



BY GARY KYES

The name "Yokomo" is second only to that of Tamiya in the history of the development of 1/10 scale R/C offroad racing. In the beginning, a bunch of Southern California crazies took a Tamiya R/C model kit and transformed it into a quasi-R/C offroad racer. The next big step in the evo-

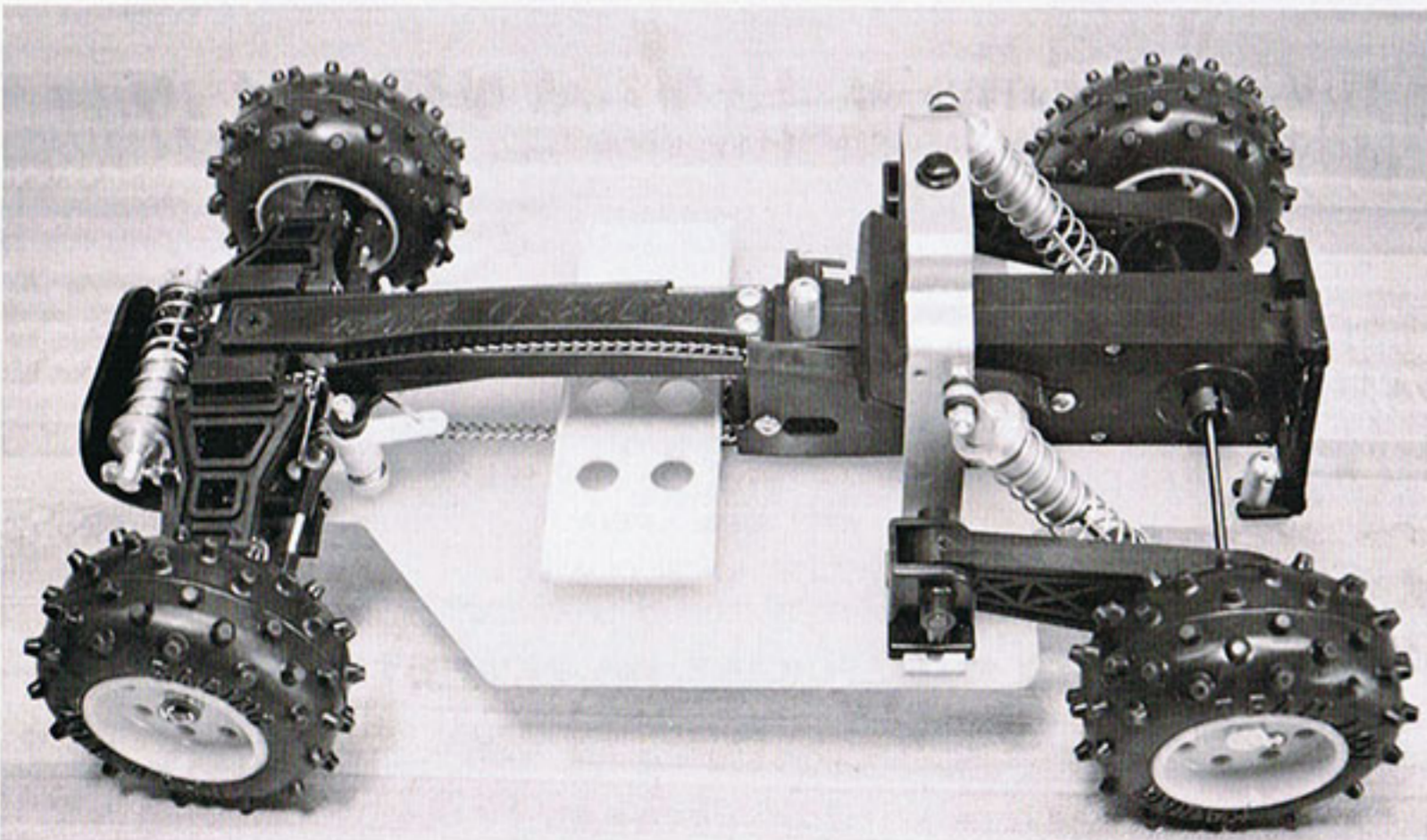
lution of offroad racing as we know it today occurred with the release of the Yokomo "Dog Fighter" which subsequently dominated offroad racing. The subject of this review article, the RPS/Yokomo "SE," most successful of the current generation of high performance four-wheel drive, offroad race

cars.

This newest Yokomo offroad car is really not a true Yokomo kit as was the "Dog Fighter." Instead, it is the product of on going development at RPS/Team Losi and the Yokomo factory in Japan. In days past, the racer had to buy a Japanese kit, then go out and purchase several hundred dollars worth of aftermarket accessories to modify this kit car into a real racer that wouldn't break every time you ran it. This was true of virtually all cars available and surprisingly is still the case in most cars today.

Among the pioneers of this sport and its development is the father/son team of Gil Losi and Gil Losi Jr. Gil Losi Jr. is now world-renowned as the 1/10 scale World Champion and this new RPS/Yokomo "Special Edition" (SE) is the result of his development and refinement of the "SE" 4-wheel drive offroad racer.

If you are into buying "trick-looking" boxes I think you will be very disappointed with the SE. When questioned about the simple-looking box compared to the flashy highly illustrated Japanese models, Gil Jr. advised that they were selling race cars, not boxes and that they would rather put



The SE's Yokomo-made chassis, showing chain drive to front wheels. Yokomo chassis components and U.S.-made accessories add up to a winning combination in the SE.

money into the product than fancy packaging. Wise words for a rather young man.

After you get by the box you cannot help but be impressed by its contents. This box is just full of parts and pieces—no air here! Upon further examination you find that this kit is almost like the result of a shopping spree. All the aftermarket parts that you would have had to locate and buy separately after buying the kit are all in this one box. This combination of basic Yokomo chassis components and U.S.-made parts and accessories makes for one exciting kit.

The super detailed and complete instruction manual includes many photographs that are referenced throughout the construction process. The assembly itself is quite simple; for the most part, the SE is modular in design with a gear box, chassis, and front end/drive as major components. Assembly as per the instructions starts with the transmission. As with any R/C car the transmission is probably the single most important part/assembly of the model. Be prepared to spend a fair amount of time on this or any transmission as it will pay big dividends later.

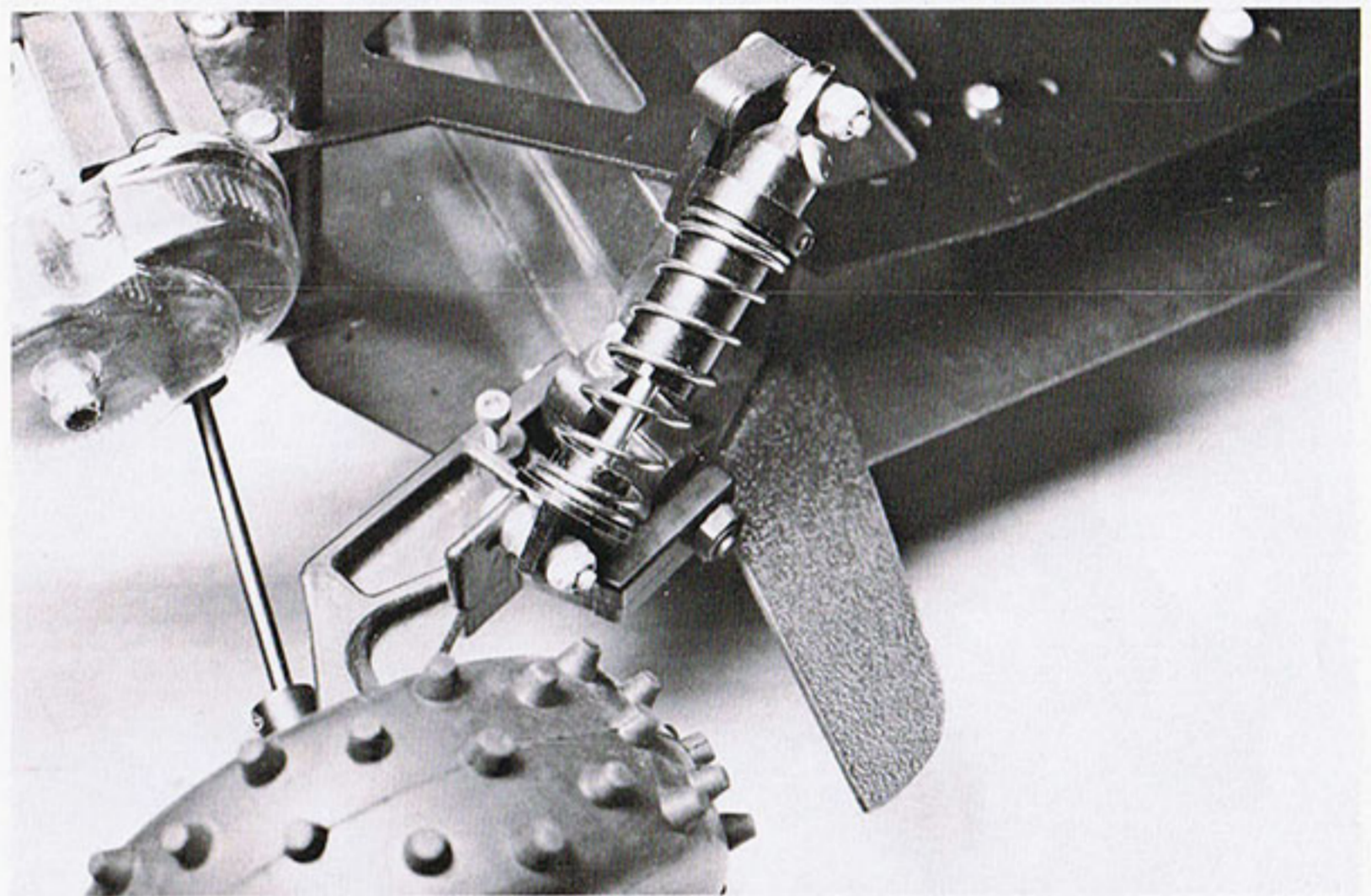
The RPS/Yokomo comes standard with a racing-type (what else!) ball differential. Before installation it is suggested that you disassemble the diff and grease the thrust bearing as well as the diff balls. Make sure you notch the adjusting screw as per the instructions. The photos show the exact assembly sequence which makes this very easy. When setting up the gear box I suggest you use some 5mm (Delta or CRP) shims to eliminate most of the side play from the gears. The best method of doing this is to insert the diff and assemble the remainder of the gear box. There should be a very slight bit of side to side movement. Spin the diff and notice how free it is. Now install the idler gear that runs in front of the diff. Start with a single shim on either side. Assemble the gear box, and spin the diff again. If it is still free and smooth, disassemble and add a shim to one side, then reassemble. Recheck until you sense the gears begin binding. At this point you should remove a shim, and while the box is apart start with the next gear. I realize that this is time-consuming, but your perseverance will guarantee great results. By the way, since you now have several minutes invested in shimming your gear box, take just a minute more and make a note of how many shims you used where to get the best results so you will know where they belong when you take your gear box apart to clean the bearings.

After completing the final assembly of the gear box with its neat and simple slipper device, the rest of the assembly goes very quickly. After the gear box is attached to the chassis the single trailing arms can be installed along with the rear axles and drive shafts.

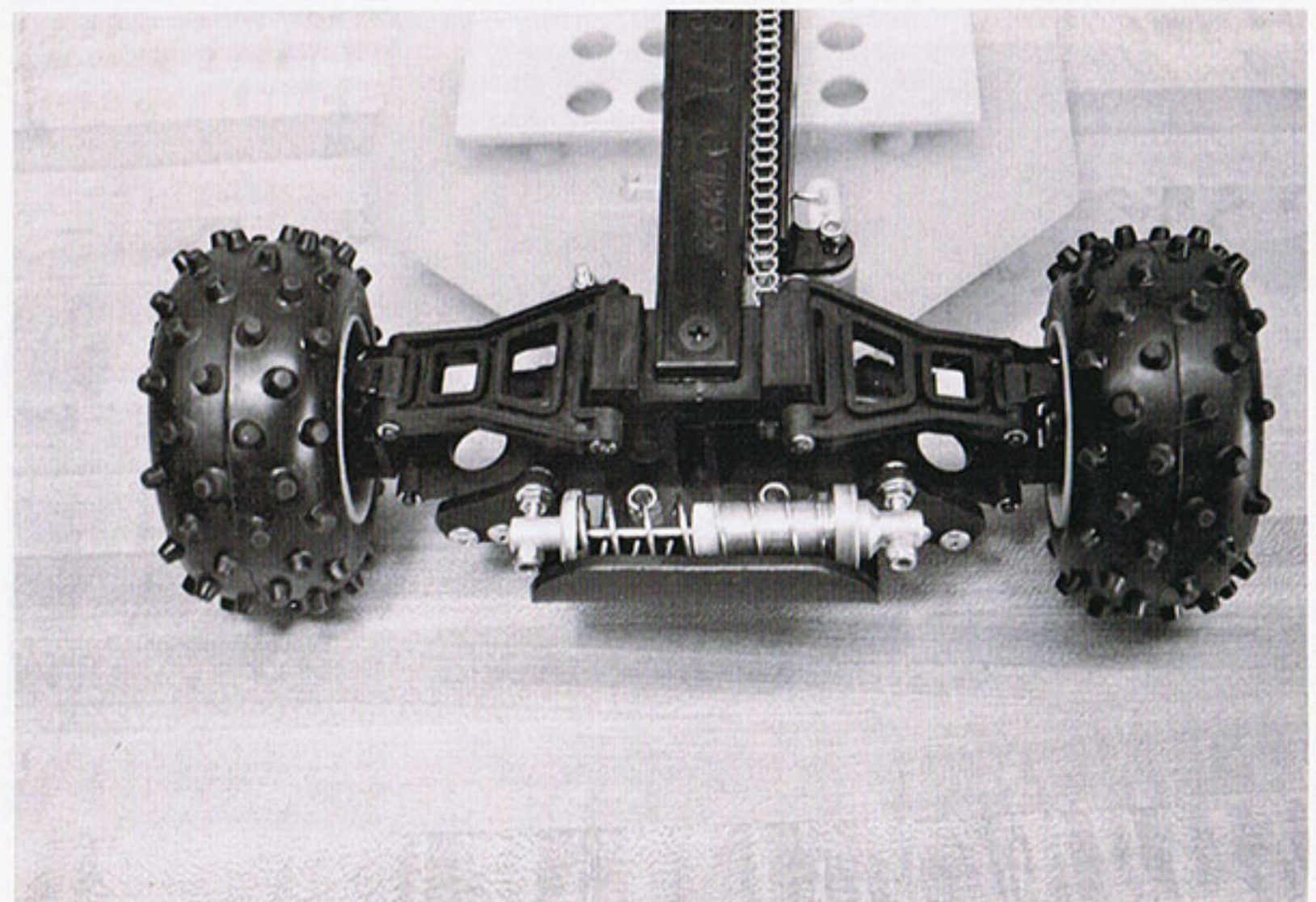
The new gold anodized rear shocks are really quite nice—a giant improvement over the old "Dog Fighter" units. I suggest you start with 10-weight oil in the shocks as this



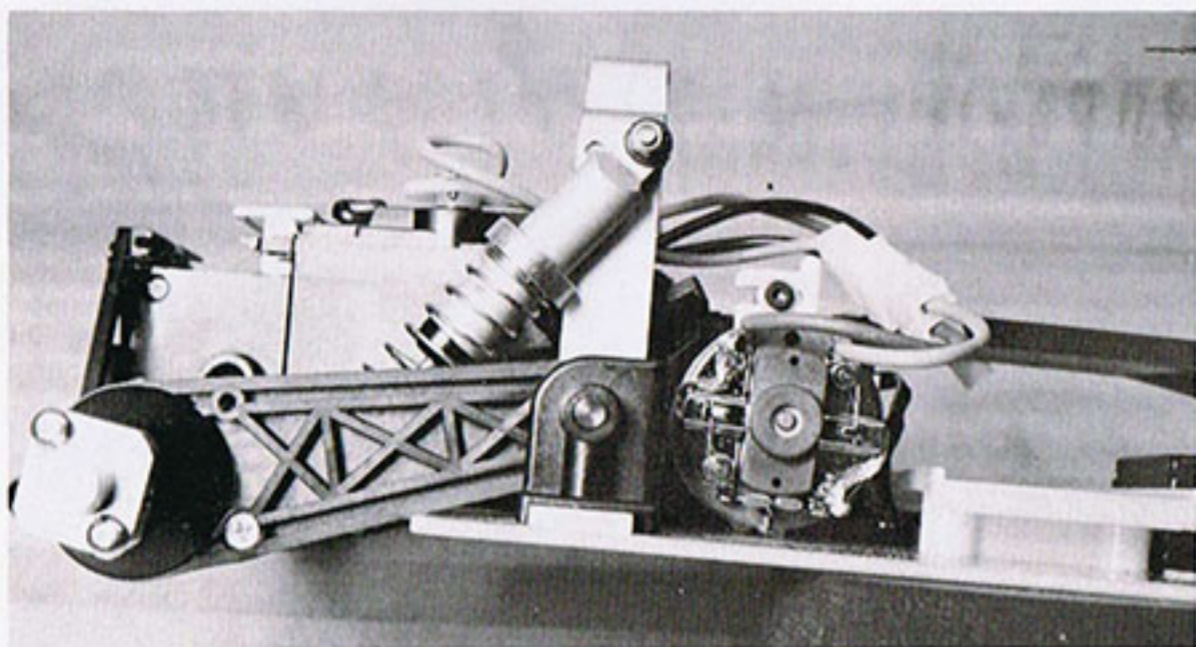
An array of 'aftermarket' products that come with the RPS/Yokomo kit. Bearings, Team Losi racing knobies, Yokomo motor add up to a complete, professionally designed kit.



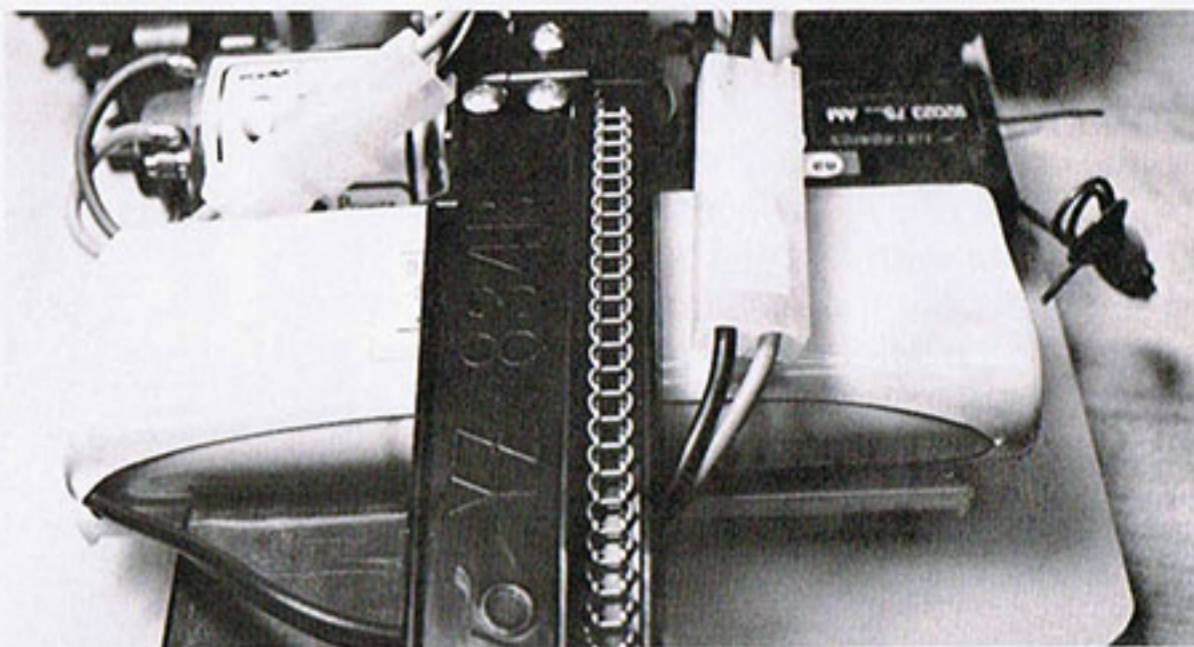
Gold anodized rear shocks are filled with 10- or 20-weight oil; author advises starting with the 10-weight, switching to 20 if more dampening is necessary to limit bounce.



Front end set up is simple and efficient. Author recommends a drop of CA glue to secure the bearings to the front bulkhead and front axle carriers.



Rear assembly of the SE showing enclosed diff and gear box. Author explains how to use shims to eliminate gear sideplay.



Author calls installation of the chain drive the second most important step; links must be running in the right direction, or it will stretch.

is a "middle-of-the-road" setting. If you find more dampening necessary due to excessive bouncing change to 20-weight oil.

Perhaps the second most important item in the construction process is the proper installation of the chain. The pictures show the correct direction to run the links. If you

install it backwards the chain will still work, but you will find that the sprockets will wear very fast, and the links will stretch very quickly, necessitating chain replacement.

The front end is very simple and efficient in construction. I suggest you use a drop of "Zap" or similar CA glue to secure the

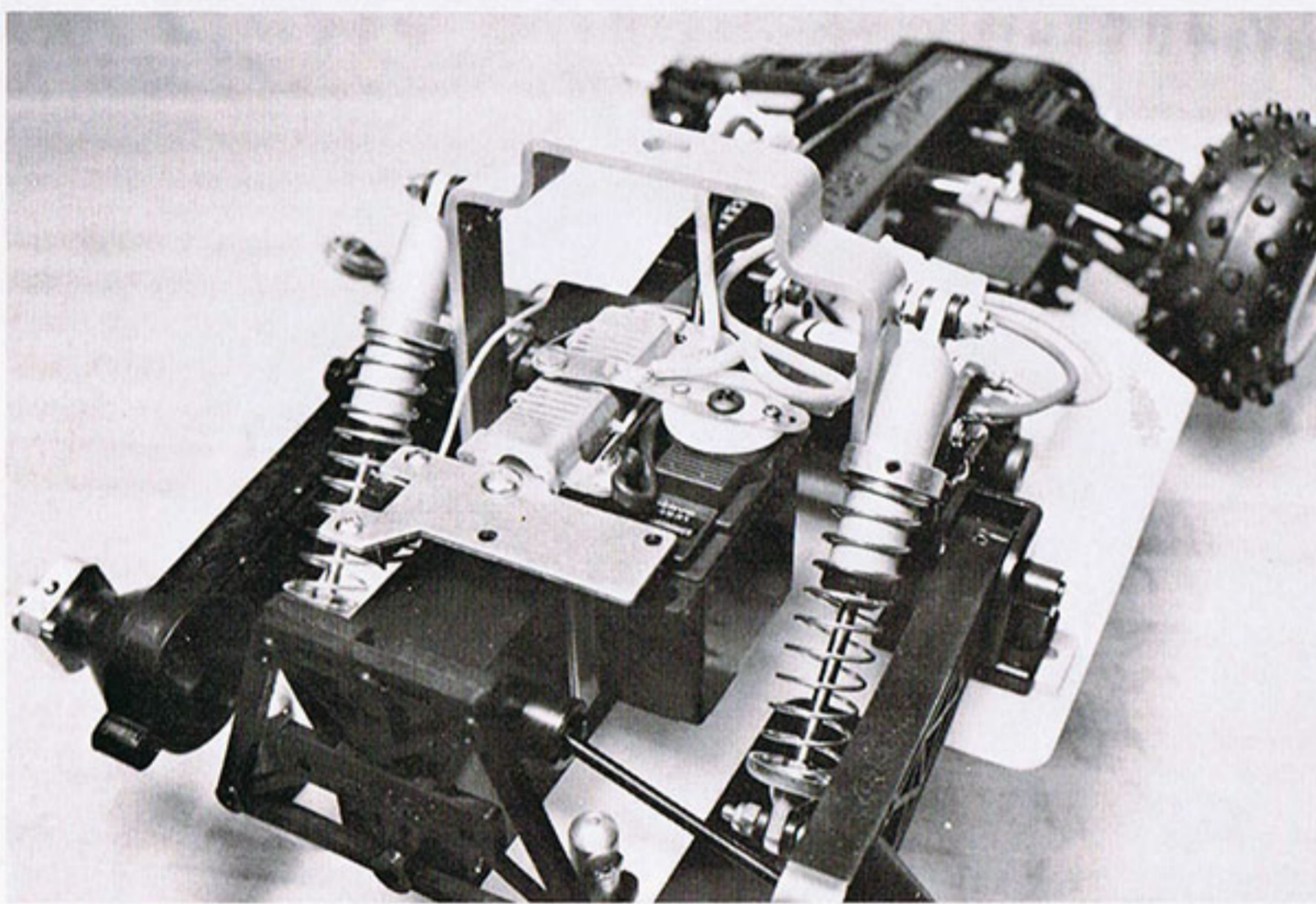
bearings to the front bulkhead and front axle carriers. About the only other tip I can give you here is make sure you do not overtighten the set screws in the plastic hub carriers. If you do, use a drop of Pic "Vibra-jam" in the stripped hole. You will be pleased to note that all of the suspension arms move freely through their suspension travel without binds or hang-ups.

The SE uses one-way bearings in the front hubs instead of a differential. This system of allowing the front wheels to run free while not under power fosters better handling and maximizes run time. When installed correctly the front wheels should spin forward freely but lock up when rotated backwards. If you find that the wheels work backward just switch the wheel hubs from one side to the other. Do not oil or grease the one-way bearings as this will only accelerate the wear of both the axle and the "one-way." While on the subject of the front axles I must say that these new axles are absolutely the best I have ever seen. After many hours of use they show no wear whatsoever.

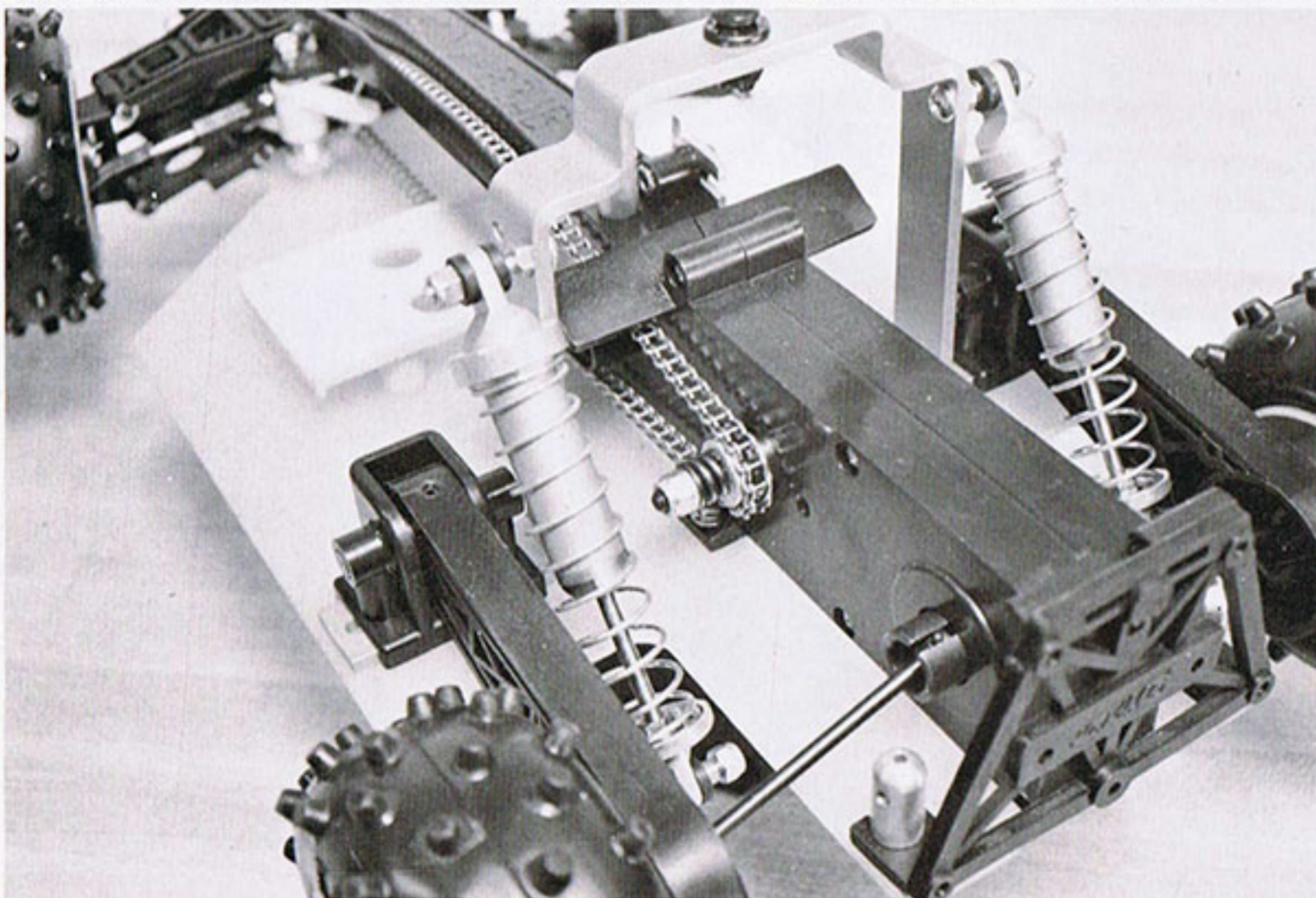
The balance of the assembly takes all of 10 minutes and is very simple and straightforward. The only other tip I can lend in final assembly is to tape closed the openings on the aluminum motor mount so as to eliminate an inlet for dust and dirt.

The radio installation is extremely easy as it only takes double-sided sticky tape (included) to do the job. I was especially impressed with the speed control. The one included is very sturdy with an extremely heavy-duty resistor and wiper arm assembly. Another nice point is that it requires no soldering. The receiver runs off the speed control which has a built-in mini-switch. This means that no extra radio receiver battery pack has to be carried on the car. Extra weight like that of the receiver pack only impairs the performance of R/C cars, as it taxes the suspension and must be accelerated and decelerated constantly which robs battery power.

The tires supplied in this kit were a real surprise. I don't know of any other kit where the tires provided are used on other cars as aftermarket racing accessories. The Team Losi racing knobbies in the SE kit are on the soft side and feature strong sidewall construction. These same tires are very popular with those racing the RC10 and



Supplied speed control on the SE is sturdy, with a heavy-duty resistor and wiper arm assembly that require no soldering. Receiver runs off speed control, eliminating receiver battery pack.



Rear view of the SE's setup showing drive shaft and shock assemblies. Chain drive required only minimal adjustment (removal of one link) after prolonged running.

Optima.

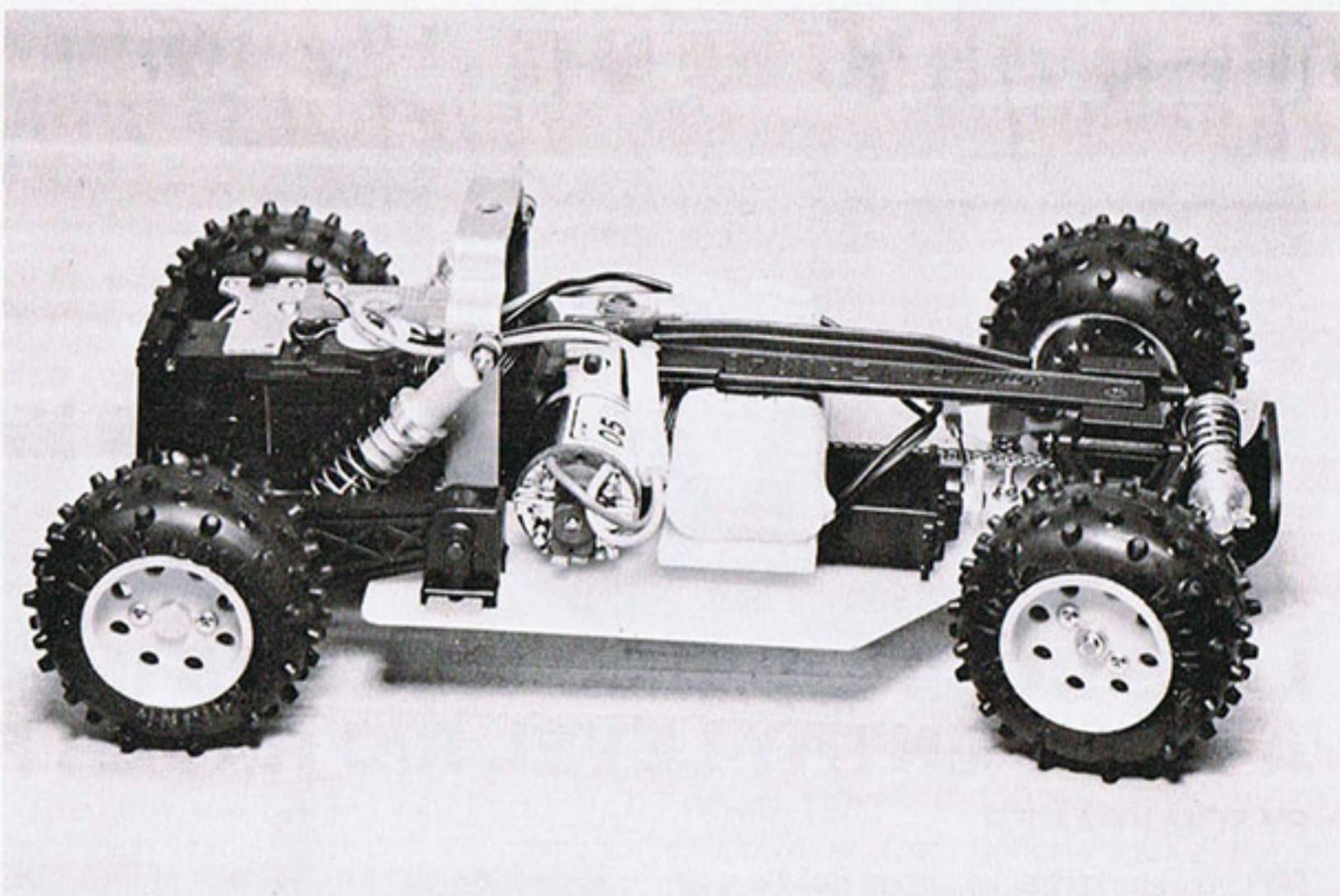
The body shell is made of clear Lexan and does require trimming. Another little trick that I found most amazing is the neat, self-contained body mount.

Although Velcro is used at the front, a simple push-pull unit fixes the back of the body to the aluminum roll bar. To mount the body you merely push the button down which expands the jaws under the roll bar. By popping it up you release the jaws and allow the unit to come free through the roll bar and off the chassis. I used Pactra's new Lexan spray paint to finish the body. This stuff really works well, and the wide range of colors is fantastic.

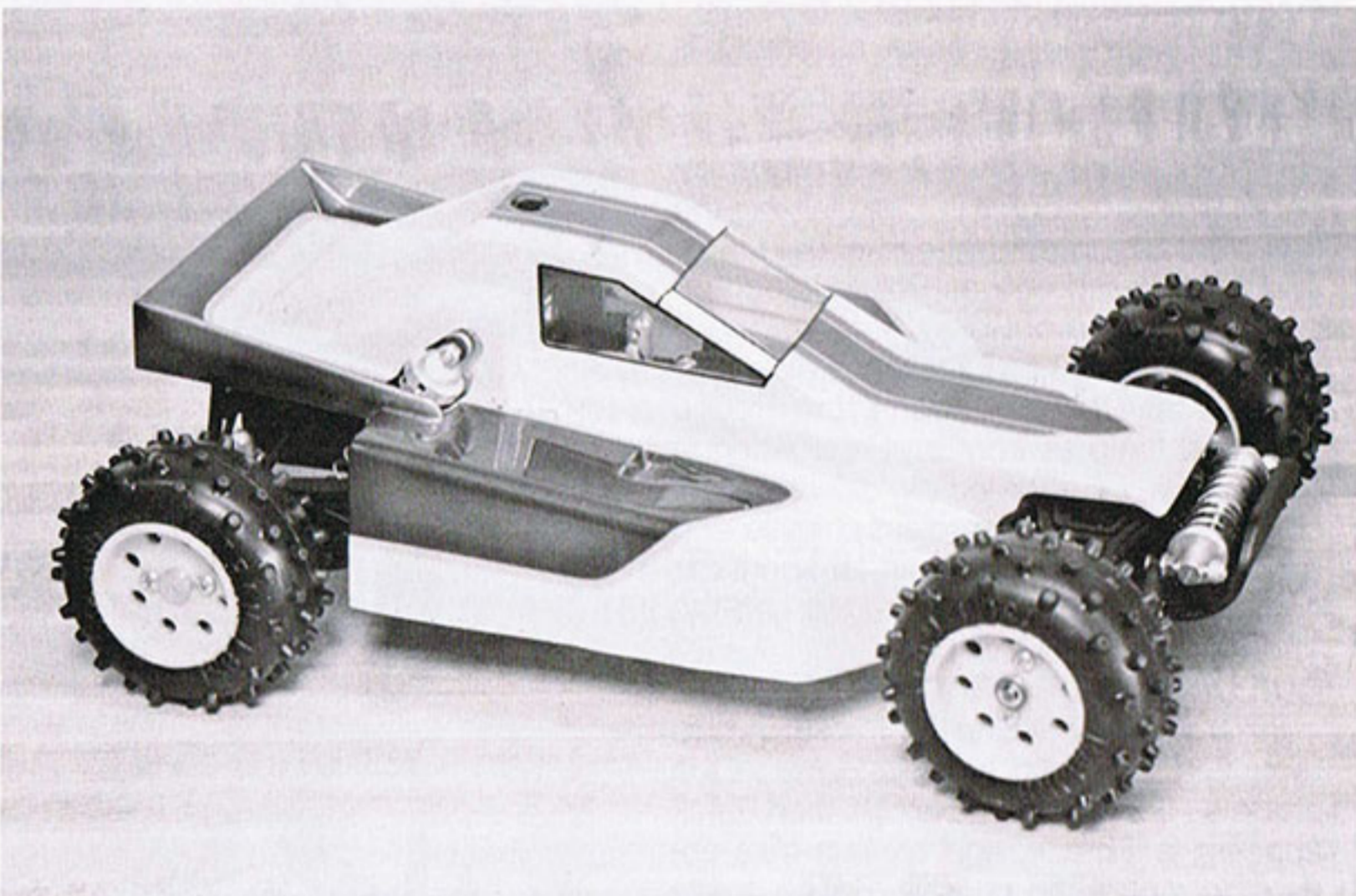
Racing the SE was a real pleasure. It is quite obvious that this model is designed to be a highly competitive racer. Perhaps the toughest thing to do with this car is back off the throttle. Due to the advanced design of the unique four-wheel drive system, the SE was able to maneuver effectively on the dry, slick track. I first tested it at almost constant full-throttle. When the car started to get loose, I just punched the trigger and let the four-wheel drive do its stuff. The Yokomo stock motor which is the standard by which all racing motors are compared, provided more than sufficient horsepower for all my running and racing. The soft compound tires worked extremely well, especially on the hard and slick unprepared track surfaces. One little tip that I might pass along is that when running on an oval course, I found that at times the addition of a rear sway bar (part #ZB45) to be very helpful. After several hours of very hard racing I found that it was necessary to adjust my slipper twice, once after three or four runs and again after several hours. I also found it necessary to remove one link from the chain as it had stretched. But after this initial stretch no further stretching has occurred.

After running the SE I can only say that the crew at RPS/Team Losi really know their stuff. This car comes out of the box a winner. No need for a ton of modifications and expensive aftermarket parts here. Just as the old Yokomo "Dog Fighter" was the example used to compare its challengers (which have all seemed to fall short) the Special Edition is the current standard by which entries into the four-wheel drive market must be judged. It's interesting to note that just as the old "Dog Fighter" had to bear the burden of the addition of costly aftermarket parts to make it reliable and competitive, so now must the SE's competitors. It appears that the World Champion RPS/Yokomo is a generation ahead of the competition. Needless to say, I liked this car. It's a good product at an almost unbelievable price. If you need a second opinion just ask Ron Rossetti from Riverside, California; he won the (ROAR) United States National Championships this year with his SE.

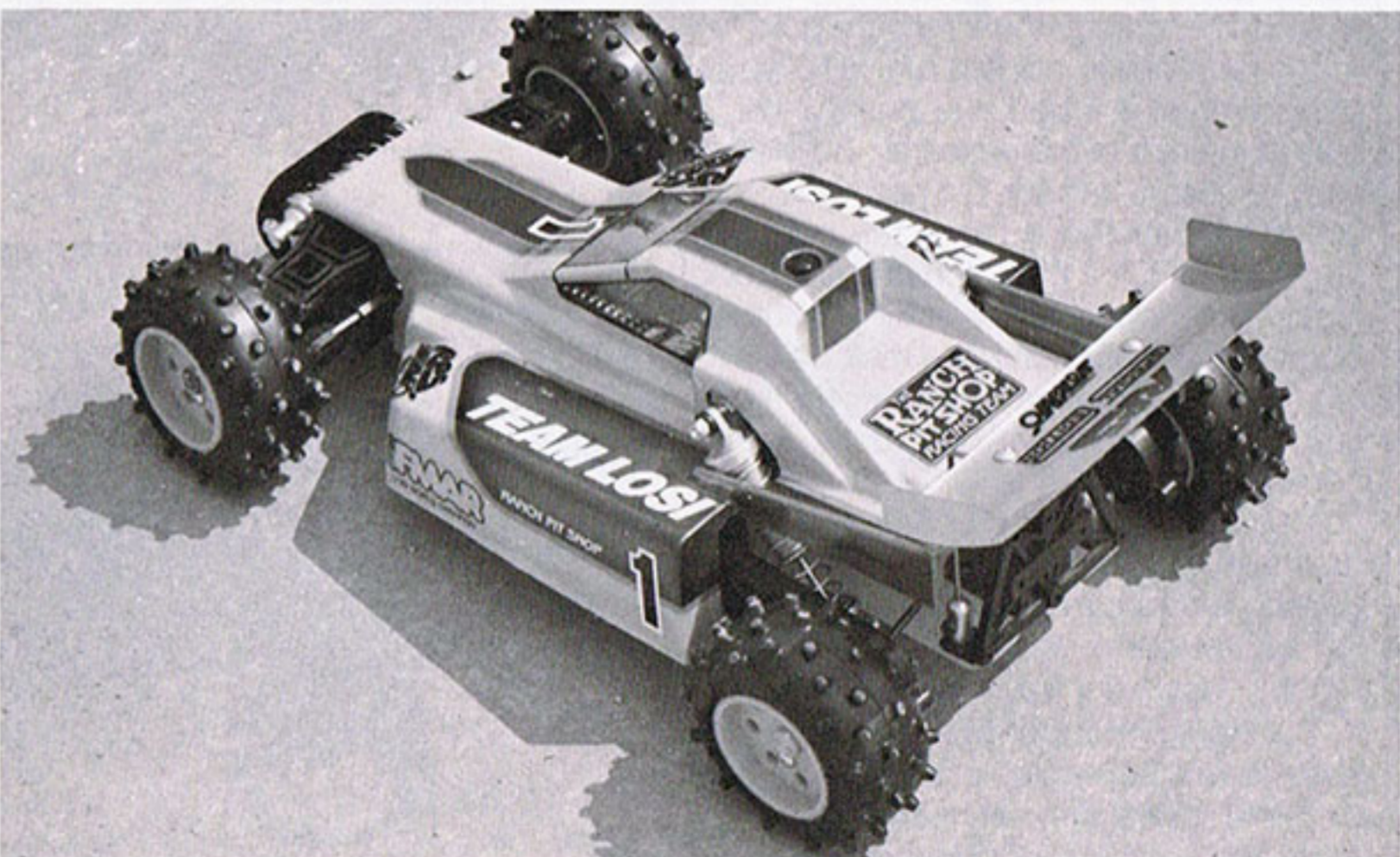
For more information on the RPS/Yokomo SE contact: RPS/Yokomo 1655 E. Mission Blvd., Pomona, California 91766. ●



The Yokomo, all assembled and ready for the body to be attached. The 'stock' tires, Team Losi knobbies, are aftermarket choices for many other racers.



The painted body sans stickers. The time invested in taping and painting your body will return dividends in self-pride and the comments of fellow racers. Take your time and do a good job!



The stubby, wide-stance Yokomo profile is unmistakable; the Special Edition with its stickers on is ready to take on all comers. It holds the world record for 4WD racers at present.