

# A S S O C I A T E D RC10L S P E E D F F E E E D

by WALLY DAVID

**T**HE ASSOCIATED\* RC10L had a reputation long before it became available to the public. The prototype's accomplishments were quite impressive: it took the TQ honors at the ROAR Nationals, after which nine more prototypes were built for the rest of Team Associated. The 10L then cleaned up at the ROAR Region 6 Championships, taking TQ in Stock and Modified and winning both classes. Eight 10Ls placed in the Stock Class and seven in the Modified Class. In the car's third race, Kent Clausen set a national speed record of 56.5mph at the RC Thunderdrome (Encino Velodrome, CA).

After a wait that seemed interminable to many, the RC10L was finally released in kit form.

**THE KIT:** For this review, I received the RC10L Graphite Kit, which has a graphite chassis. The Fiberglass Kit comes with a fiberglass chassis, and both chassis have five battery slots on

each side for saddle-pack configuration.

The front end consists of two nylon suspension arms with a graphite plate between them to increase rigidity. Coil springs on the kingpin absorb bumps in the track, and E-clips hold the wheels on the front axles. Nylon shims are included to add caster, if needed.

The rear suspension uses an offset T-bar that's mounted to the chassis with twin rocker balls. Dampening is provided by an oil-filled, coil-over shock, which many will recognize as an RC10 front shock. The shock is attached to the chassis by a

# Great Expectations



combination antenna mount/shock pivot, and is then connected to the top of the graphite rear pod with a ball joint.

The rear pod pivots on the T-bar system, its side-to-side movement controlled by two damper plates, one on each side of the motor pod's upper bracket. The pod is offset so that the motor can be located toward the center of the chassis. The 10L is topped by a graphite axle with aluminum hubs. Two ball

manual, I wasn't disappointed. In the photos, the parts were clearly numbered and arrowed, so I was in no danger of going blind trying to find the right ones!

Assembly starts with chassis preparation. To avoid slicing through the shrink wrap of the cells, use a small file or a Dremel® Moto-Tool to round off the rough edges of the battery slots. As an additional precaution, wrap a small amount of electrical tape around the

graphite between each slot. Any tear in the shrink wrap could cause a short because graphite can conduct electricity. Also, to prevent the strapping tape from being cut, file the edges of the chassis where the tape will go.



bearings and three thrust bearings provide smooth differential operation.

**ASSEMBLY:** I've owned an RC10 for two years, and I've built many Associated kits for other people, so I've come to expect a well-organized assembly process spearheaded by a clear, concise manual with well-executed photographs. When I opened this kit's

I made a modification to the chassis that you may want to consider if you go oval racing. While there's much debate about the need to offset the batteries on the inside of the car, I had a more practical reason for running my batteries along my car's left side: all my packs were in stick configuration! There's no way to run the packs across

## ASSOCIATED

### RC10L

Type ..... On-road  
Scale ..... 1/10  
Sug. Retail Price ..... \$235

#### DIMENSIONS:

Overall Length ..... 20 inches  
Width ..... 9.25 inches  
Height ..... 5 inches  
Wheelbase ..... 10.25 inches  
Front Track ..... 7 inches  
Rear Track ..... 7.25 inches

#### WEIGHT:

Gross (w/bat.) ..... 44 ounces

#### BODY:

Type ..... Not included

#### CHASSIS:

Type ..... Pan  
Material ..... Graphite

#### DRIVE TRAIN:

Primary ..... Pinion/spur  
Transmission ..... Direct drive  
Differential ..... Ball  
Bearings ..... Ball bearings

#### SUSPENSION:

Front: Type ..... Suspension arms  
Dampening ..... Coil spring  
Rear: Type ..... T-bar  
Dampening ..... Oil-filled, coil-over  
shock w/dampener plates

#### WHEELS:

Front: Type ..... One-piece nylon  
Dimensions (DxW) ..... 1.8x1.125  
inches  
Rear: Type ..... One-piece nylon  
Dimensions (DxW) ..... 1.8x2 inches

#### TIRES:

Front/Rear ..... Foam

#### ELECTRICS:

Motor ..... 05/540\*  
Battery ..... 6- or 7-cell\*  
Speed Controller ..... Electronic\*

#### OPTIONS AS TESTED:

Futaba Magnum JR radio; Novak T1X electronic speed controller; Reedy Modified Yellow Dot motor and 6-cell SCE Team pack; Associated Chevy Lumina; Scale Racing Products center-point steering; JG Mfg. foam tires, body posts, and graphite lower pod brace; CKW cap tires.

#### COMMENTS:

The RC10L worked right off the work table. It can be placed anywhere on the track, and it almost broke the track record on its first time out. The car stays very consistent from track to track, without needing adjustment. I hope the broken T-bars and axle were due to a tough track. Overall, a good value/performance ratio.

\* not included



The RC10L was topped off with some goodies from JG Mfg. Tough, extra-long, Delrin body posts were needed to mount the stock-car body. Trick-looking wheels and tires were used on each corner.

the chassis, so I enlarged the small slot for the strapping tape (toward the front of the chassis) to the size of a battery cell. This allowed me to have all six cells on one side of the chassis. I cut a new slot to allow me to tape the batteries into place.

The front end is installed next. You have a choice of two bumpers: the large one is for the wide GTP or Can-Am bodies, and the smaller one is for stock cars.

I was extremely disappointed to find that the 10L uses E-clips to hold the wheels onto the front axles. I've seen E-clips fail too many times to trust a race to them. I substituted Bolink\* front ax-

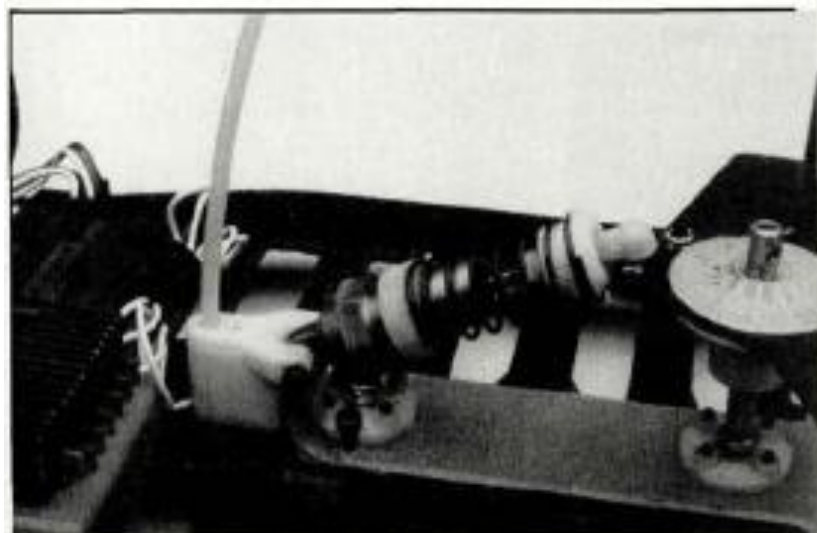
les, which are threaded on the end and use locknuts to keep the wheels on. It's been said that I can "drive the wheels of a car," but I don't want to take this literally.

The front end is finished with tough-looking suspension arms that offer support to the top and bottom of the kingpin. No snapped kingpins on this car! The kingpins didn't need polishing to get a smooth up-and-down movement in conjunction with the small coil springs.

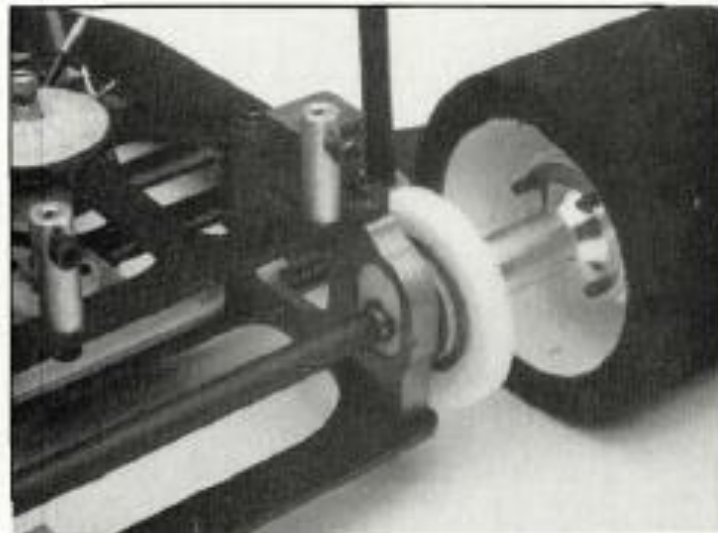
Each suspension arm is mounted to the chassis with three, long, aluminum screws. A nylon spacer goes between the chassis and the arm, along with a 2-degree caster wedge if needed. (Associ



Befry, center-point steering replaced the stock linkages. To clear the linkages, the bolts had to be cut. You won't have to do this if the front ride height isn't changed.



The fiberglass T-bar pivots on two rocker balls. Tweak screws, located next to the front rocker ball, are easily accessible.



The Litespeed Litesink, a bolt-on accessory, replaces the stock motor mount. The ride-height adjusters are set to give maximum ground clearance for bumpy tracks.

ated recommends that you start without any caster.)

Construction continues with the rear of the car—the assembly of the T-bar and rocker balls, and their installation on the chassis. There are a couple of things to watch for in these sections:

- Don't overtighten the screws on the rocker balls, or you'll inhibit the T-bar's movement.
- The instructions' "Racers' Tips" recommends that you CA two pieces of brass shim stock where the tweak screws make contact with the chassis. Otherwise, the screws may bore into the chassis, changing the critical tweak setting.
- The aluminum tube that's the pivot point for the T-bar and dampener plates must be securely tightened on the screw that comes up through the chassis and T-bar. Although I used thread-locking

compound, there was no way to tighten the tube without crushing it. I drilled a small hole through the top of the tube and inserted a small Allen wrench. This allowed me to *really* tighten the tube onto the screw and prevent it from vibrating loose.

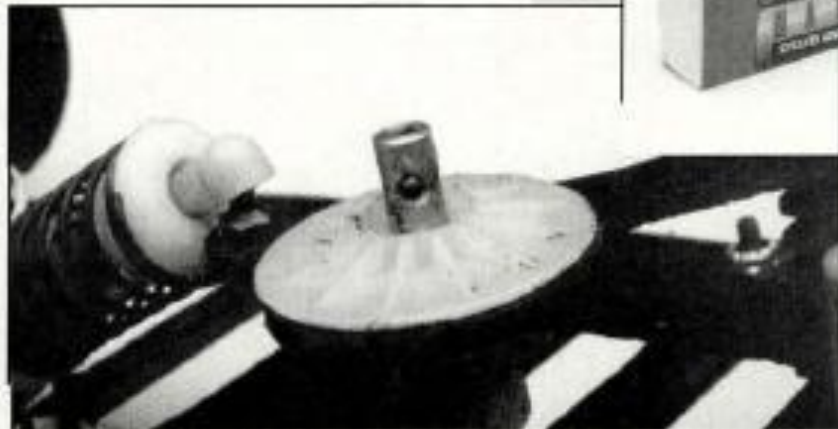
The rear pod goes together quite easily. Although the right-hand motor bulk-

head is aluminum, I wanted to get more cooling for the motor, so I used a Litespeed\* Litesink, which is a bolt-on part. The Litesink's big fins become warm during use, helping to dissipate heat more effectively.

Some have reported a problem with the aluminum lower brace, which can bend on bumpy tracks, throw the



A Yellow-Dot modified motor and a 6-cell SCE Team Pack, both from Reedy, powered the RC10L. A Sassy Chassis motor spacer kept the proper distance between the motor pinion and the spur gear.



A hole was drilled so that the post can be tightened more securely. The post had a tendency to vibrate loose before this modification was made.

"tweak" way off and cause alignment problems for the rear axle. To eliminate this, JG Manufacturing\* has introduced a graphite lower brace, which definitely won't bend.

Assembly continues with the graphite axle and diff; building and mounting the oil-filled, coil-over shock; and mounting the radio gear. These steps go according to the instructions.

(Continued on page 139)

## ASSOCIATED RC10L

(Continued from page 131)

For smooth differential operation, I used diff balls and silicone lube from Bud's Racing Products\*, and Hyperring diff rings from Hyperdrive\*. To lube the diff, I dump the balls into a 35mm film container, squirt in a little silicone lube, close the top and shake the container to coat the balls properly. I then pluck out the slipper diff balls and insert them into the spur.

I use Robinson Racing Products\* white, machined, 64-pitch spur gears along with the new machined-steel pinion gears. They're available in a large range of teeth to give an almost infinite number of ratios.

The Hyperrings have a shiny side (for contact with the diff balls) and a rough side, and this precludes the need to glue the rings to the hubs. A Cheetah Racing\* diff-centering kit, which has a small plastic spacer with a ridge to fit into the Belleville washer, combines with these products to make a silky-smooth diff, even when it's adjusted tightly!

I wasn't thrilled with the kit's steering links; each side is to use two thin pieces

of piano wire with a locking collar to adjust toe-in and Z-bends at each end. They looked entirely too flimsy. Perhaps the team drivers don't touch the walls, but for the average racer, this setup is inadequate. I chose the center-point steering system from Scale Racing Products\*. It has easy-to-adjust turnbuckles with eyelets on the servo ends that join at the center hole of the servo-saver.

Associated does include an awesome, spring-loaded Kimbrough\* servo-saver that's the same size as those used on 1/4-scale cars. There's no way this thing will damage the servo, which is held to the chassis with double-sided servo tape.

To round out the RC10L, Associated sent along a painted Chevy Lumina body that's detailed to look just like Darrell Waltrip's Tide machine. I replaced the stock body posts (which are too short for stock-car bodies) with the new, machined Delrin body posts from JG Manufacturing. They're long enough for the high-roofed stock cars and are rock solid, yet flexible, to avoid breaking.

For power, Associated included a 6-cell SCE Team Pack and a Reedy\* Yellow Dot modified motor. I used a Sassy Chas-

sis\* aluminum motor spacer to space the pinion on the motor shaft correctly. A Futaba\* Magnum Jr. radio system and a Novak\* NESC T1X electronic speed controller are used to guide the RC10L.

**PERFORMANCE:** The track test for the RC10L consisted of three phases. The initial phase took place at RC Speedworld, which is the unofficial "official" test track for the *Car Action* staff. Located just along Route 7 in Danbury, CT, RC Speedworld is a large, slightly banked, concrete tri-oval, with tight turns offering different degrees of banking and radii.

Right off my kitchen table, the 10L was spot-on. The soft-compound stock tires gave plenty of bite but were worn away after only a few runs. The track's surface was just too abrasive for these gummy tires. I switched to a set of JG Mfg. firm foam tires, which provided ample traction and lasted longer.

Because of some surface bumps, the chassis dragged on the ground in a few spots. To combat this, I removed the spacers under the front-suspension arms, and I installed the axle-height adapter with the bearing toward the chassis. These two changes raised the ride height enough to prevent any further chassis problems. I had to cut the front-suspension screws to allow the front steering rods to have proper movement.

During its first competitions, the 10L was only one section of the track away from beating the track record for most laps.

The second phase of the test took place at *Car Action's* East-West Shootout at the RC Thunderdrome. Without changing the setup, I ran the car there. Following advice from Team Associated's Kent Clausen, to avoid "hopping," I used some Bud's\* silicone lube on the dampener plates of the rear suspension. I noticed that although many cars were occasionally thrown off by bumps, my slightly higher setup was very stable. CKW\* rubber-cap tires did the trick for traction, and they lasted.

The third, and most frustrating phase, of the test took place at Megatrack in Browns Mills, NJ. I was absolutely "ballistic" on this high-banked concrete tri-oval. Unfortunately, I broke two T-bars in my qualifiers. I think that I may have overtightened the screws that hold the T-bar to the rear pod; this could have caused the failures. Still, I was able to make and

lead the C-Main at the New Jersey Concrete Oval Championships.

My two-lap lead vanished in one, sickening moment, however, as the graphite axle sheared off at the wheel. I've been told that other 10L owners have also suffered broken axles.

The RC10L is a great car. It handled perfectly, right off the work table. I was able to put it anywhere on the track and still hold a good line. It held up during many weeks of racing at my home track and also to the high speeds of the Thunderdrome. I hope that the car's problems were the result of a tough track, but only time will tell. A titanium axle may be the answer.

I know that this car will get you to the winners' circle, so give it a try.

*\*Here are the address of the companies mentioned in this article:*

*Associated Electric, Inc., 3585 Cadillac Ave., Costa Mesa, CA 92626.*

*Dremel, 4915 21st St., Racine, WI 53406.*

*Bolink RC Cars, Inc., 420 Hosea Rd., Lawrenceville, GA 30245.*

*Litespeed, P.O. Box 4765, Spokane, WA 99202.*

*JG Manufacturing, P.O. Box 6014, Whittier, CA 90609.*