



by MIKE LEE

CONSIDERING ALL THE great cars that are available to R/C drivers, you might think that it wouldn't be necessary to modify

cars. After all, there has never been a shortage of new cars! Usually, the latest cars are the best ever made, and there lies the reason for competition: the top car earns the top sales.

Well, the struggle for a competitive edge is what drives a person to invent something new and better. That person starts to analyze the car and how it works. He studies the movement of the car and understands the reasoning behind its design. And then, he leaps off the far end of a pier, and modifies a perfectly good design with the hope of making it better. That's what I did with the subject of this review: the Cheetah Racing* Telesis I oval-car conversion for the Associated* RC10L SS.

faster feline



Cheetah
Telesis
OVAL CONVERSION KIT



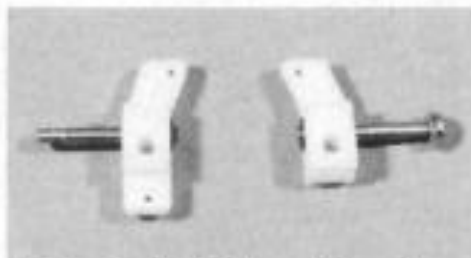
The Telesis kit contains an Ultimate Front End, a Pro Flex rear end and the chassis and its components.

IMPROVING AN OLD FRIEND

The Telesis conversion kit is almost a complete car in itself; it requires only a few parts of the original RC10L SS chassis. The conversion parts are the main chassis pan, an entirely new front end, the rear motor pod and an upper chassis brace. The kit dramatically changes the way the original car works; the result is enhanced adjustability, increased chassis rigidity and all-new rear-suspension geometry. Let's jump right on in, feet first, and go through this conversion.

TELESIS UNDERWAY

The Telesis' main chassis is a graphite composite unit that has been fully routed to accept seven cells on the left of the chassis and three cells on the right. This is a sensible layout that allows the driver to set up the car with all six cells on the left, or to use a split saddle pack with three cells on each side of the chassis. I prefer the saddle-pack arrangement for racing on flat oval tracks and all six on one side for banked-oval tracks. The Telesis is already leaning (pan) toward my liking.



The front-end axle block was trimmed to remove unused material.

CHEETAH RACING TELESIS I



Scale 1/18
Price \$224.54

DIMENSIONS:

Overall length 14.5 inches
Width 6 inches
Wheelbase 10.5 inches
Front track 7.25 inches
Rear track 7.875 inches

WEIGHT:

Gross (with battery) 43 ounces*

CHASSIS:

Type Pan with upper brace
Material Graphite

DRIVE TRAIN:

Type Pinion/spur
Transmission Direct
Differential Ball
Bearings/bushings Only if included
..... on original car

SUSPENSION:

Front:
Type Floating kingpins

Damping Coil spring

Rear:

Type Suspended pod
Damping Oil-filled, coil-over
shock with dampers
(from original kit)

WHEELS:

Front/rear Not included

TIRES:

Front/rear Not included

ELECTRICS:

Motor/battery/speed controller Not
included

OPTIONS AS TESTED:

Precision Motorworks "Rage" stock motor; Reedy* Ultra 1400 batteries; Airtronics Caliber radio; Novak 410-HPc ESC and FM receiver; Futaba 9401 servo; TRC Pro-Cuts nylon one-piece black wheels and green foams; Protoform '93 Olds Cutlass body; custom paint by Bich'n Bodies.

HITS

- High-quality material
- Versatile chassis layout
- Very good handling

MISSES

- Instructions lack details
- Kit could use some tuning hints

*Please note that the weight of the Telesis is dependent on the equipment and parts you use for the conversion. The use of the TRC tires and rims, large steering servo and other parts brought the weight up to 43 ounces. Lightweight rims and tires, such as those from Associated, and a lightweight mini-servo will drop an instant 1.5 ounces. With any care at all, the advertised weight of 40.5 ounces can easily be achieved.

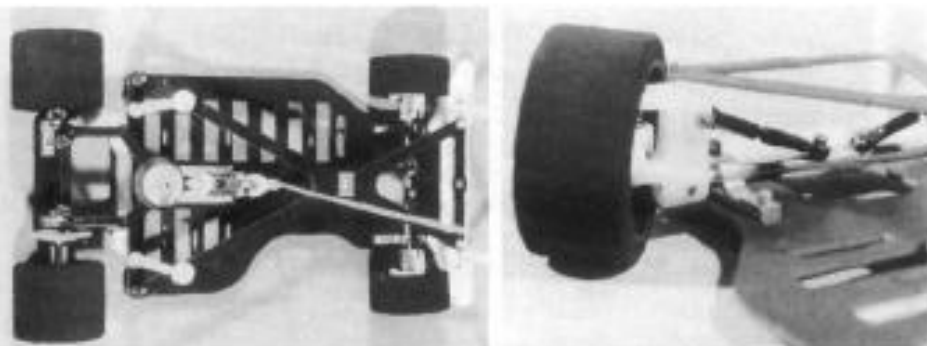
The instructions aren't as nice as the original Associated instructions. In fact, there aren't any photos—only a few illustrations—to assist in the assembly. Therefore, you should have some car-assembly experience if you want to get through the conversion quickly. Make sure that you pre-fit all of the pieces before final assembly.

To begin this conversion project, I took my ever-trusty RC10L SS down from the shelf

and set it next to the Telesis kit on my workbench.

TELESSEMBLY

To construct the Telesis, you'll need the following parts from the 10L SS: the motor-pod bulkheads, the entire axle with the diff, the shock, the shock/antenna mount, the ball joint for the shock, the ball pivots from the T-bar, the damper disks and the damper springs. The



Left: the top view of the chassis shows the serious look of an oval vehicle. Note the choice of battery-mounting slots. Right: the Ultimate Front End mounted on the Telesis chassis plate. Note the camber-adjustment rod that's angled down from the kingpin carrier to almost the middle of the beam.

Telesis kit includes the upper and lower motor pod plates, a new T-bar, two ball pivots, a new threaded damper post, a new chassis cross-brace and all the necessary hardware.

You'll assemble the front end first (see sidebar). The rear end is assembled in the same manner as the original 10L rear pod, with the exception of the ball pivots, the damping post and the T-bar. The first thing you'll notice is that the rear end looks narrow. This is only a figment of the imagination. The rear end is the same width as the 10L SS, but the pod makes it look narrow.

BRACE YOURSELF

The rear chassis brace is different from the original RC10L SS brace in that it supports the anti-roll springs and supports the main chassis brace—a pair of V-shaped graphite pieces that join at their points to form an "X." The brace makes the chassis very rigid. Its only drawback is that you can't use a low-profile body, e.g., a GTP or a Can-Am type, with it. Of course, we're using a NASCAR-type body anyway, so who cares?

From here, add the front bumper from the original car, the wheels, the bearings and all

CHEETAH'S ULTIMATE FRONT END

This single-beam front end may look like other single-beam axles, but that's where the similarities end. The Ultimate Front End has large, extraordinarily strong kingpin carriers that allow camber adjustment. At the top of the kingpin carrier is



an adjustable turnbuckle that is attached to the main beam. Each side is adjustable for camber, and the 4-40 rod is heavy enough to prevent flexing in the linkage. If you rotate the mounting blocks 180 degrees (cinch the screws toward the rear of the car), the wheelbase will be shortened by 3/8 inch. The front-wheel suspension is basically the same as that of the original car.

The front end is split in the center, and this allows individual caster adjustment. As you know, the tires of almost any oval race car wear unevenly. Independent camber and caster adjustments allow not only maximum traction, but also more even tire wear. To prevent the two sides of the beam from rotating accidentally, the axle mounts are cinched down separately with a large 6-32 hex screw. All the front-end hardware is made of high-quality, tempered aircraft-grade material.

PRO FLEX REAR SUSPENSION



The Cheetah Pro Flex rear end and the RC10L SS have different suspensions. The RC10L SS uses a T-bar for side-to-side and front-to-rear suspension movement. A friction-damper plate with two disks provides damping, with the assistance of an oil-filled, coil-over shock. On the Pro Flex rear end, the front-to-rear

motion is provided by twin tempered-aluminum ball pivots. By using the ball pivots, the stress against the T-bar is decreased, and this forces the coil-over shock to do the work. Overall front-to-back movement is greatly enhanced, and you no longer have to worry about excess stress on the T-bar.

The side-to-side movement of the Pro Flex rear end is still provided by the T-bar, and damping is provided by the same type of friction disk used on the original car. One improvement is the Pro Flex's threaded damper post. It allows a range of movement that's more accurate than the normal setscrew/wheel-collar adjustment found on the stock car.

The second thing you'll notice is that the rear end is really loose and floppy before you attach the shock. This is good, because this is what makes the shock do all the work for you.

The last thing you'll notice is that this rear-end kit has two spring-a-ma-bob things at the rear of the T-bar. These springs assist the T-bar in roll resistance during a turn, much as a sway bar does. The springs used here are the same as those used in the front suspension. You can change the side-to-side damping by changing the springs.

the radio gear. This completes the Cheetah Telesis conversion.

UP AND RUNNING

For radio gear, I used an Airtronics® CS-3P Caliber radio, a Novak® 410-HPc speed controller, a Novak FM receiver and a Futaba® 9401 servo. I also used a Precision Motor Works® "Rage" Series stock motor.

I chose TRC® Pro-Cuts mounted foam tires. The black TRC rims look great on the car.

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CHEETAH TELESIS

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BODY BEAUTIFUL

I used the latest body from the guys at Protoform®—the 1993 Olds Cutlass NASCAR. This narrow body has great scale looks and some very obvious aerodynamic lines that spell speed. It's a perfect fit for the Telesis. The body was custom painted by one of the best paint guys in the business—Scott Bich of Bich'n Bodies®.

The final weight of the car, ready to run, was a trim 43 ounces, including the stock RC10L SS hubs. It doesn't look like a lightweight, but it is. Let's put it to the test!

CUTTIN' SOME HOT LAPS

I tested the Telesis on the indoor oval at Hobby City Raceway in San Diego, CA. This short, challenging asphalt oval with banked turns demands a car that's well-tuned and able to turn quickly. It's a driver's track!

The first time on the track, the Telesis didn't turn well, but a change to .020-inch front-suspension springs solved this problem. The Telesis was smooth on the track, ironing out the three "bumps" on the main straight that other cars had trouble with. The rear end trails tightly behind the front end, as long as you don't dump everything you've got from

the throttle in the apex of the turn. The narrow rear end will hold on, but if given the chance to break away, it will do so very quickly.

With my static suspension settings of 4 degrees of caster to the right front, 2 degrees to the left front and about 3 degrees of negative camber on the right front tire, I had the car running on pace with the fastest of the stock cars.

Is the Telesis worth the conversion? This is a valid question when you consider the cost of putting it together with a car that you already bought. It certainly handles very well, and it's easier to adjust than the original car.

The Telesis conversion kit provides you with a smooth-handling car that's a versatile performer. You'll need the parts of an original RC10L SS to complete the conversion, and even if you don't have an original, it's worth purchasing the required parts separately to make the conversion. The chassis, with its unique cross brace, is stiff where it should be and provides excellent handling. If oval is your game, this car is a prime candidate. If you do a lot of oval racing on different types of track, this car is *definitely* for you. Check out the latest ideas from Cheetah, and you'll find yourself driving the Telesis.

