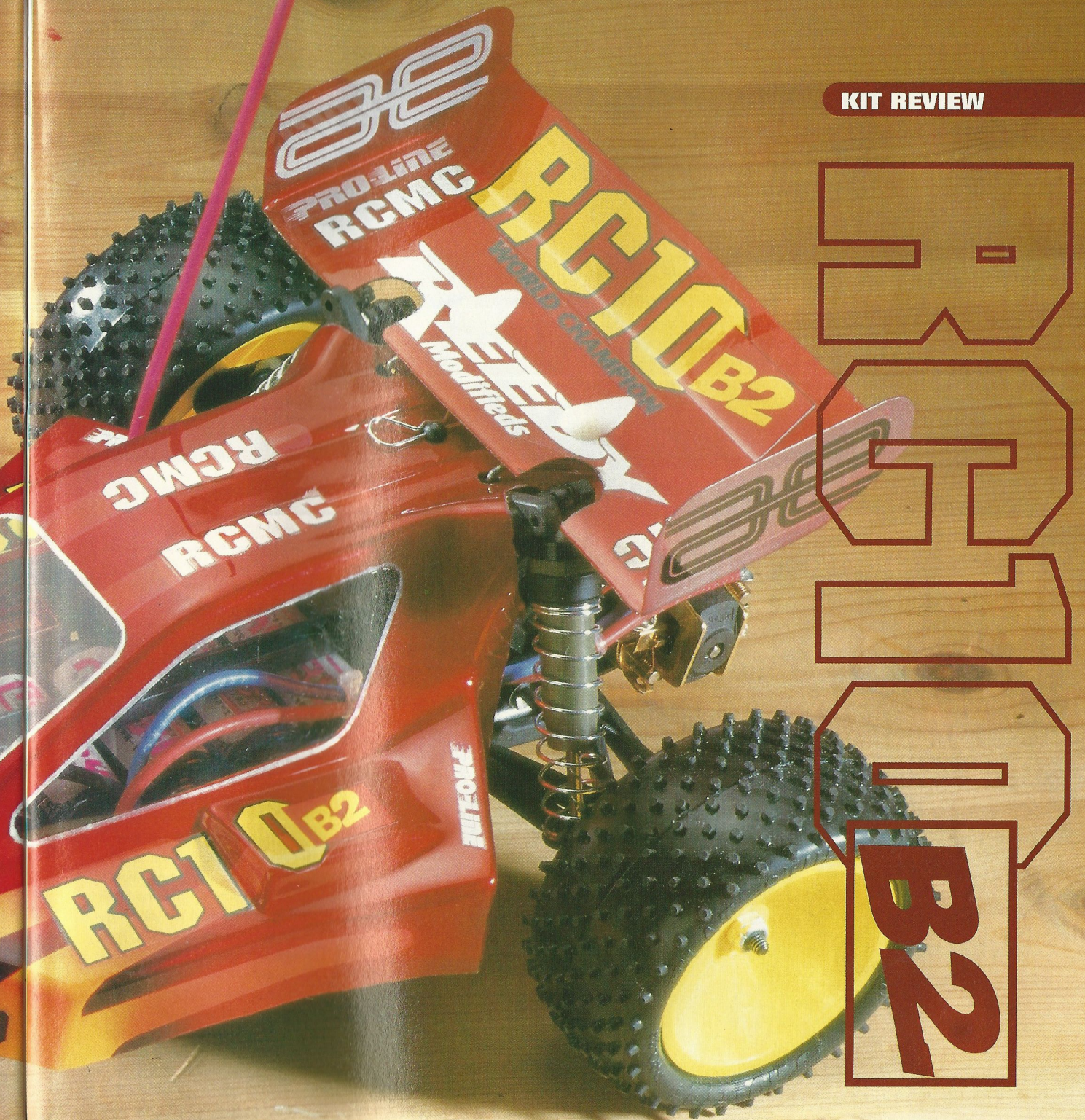


# WINNING IS ALL



# RC10B2

The new Associated RC10B2 is the most eagerly awaited kit for years in the off road market. Its debut at the 1995 World Champs was dominant taking the World title first time out...

### How It Began

**T**his may be the newest model car on the racing market but already it has proven itself in the hands of their team. The racing fraternity have been eagerly awaiting the release of Team Associated's all new buggy, the RC10 B2.

Up till now, there had only been the one RC10 model, although small modifications had kept it running at the top of the pile. Since 1984 when the original was released, it has dominated the American racing scene and scored an impressive four out of five World Championships.



# RC10 B2

It took something big to start Team Associated thinking about a new car and this came when Joel Johnson debuted the all new Team Losi XX at the 1993 World Championships in Basildon, England taking the precious TQ

spot. To further enhance the RC10 domination, they still held seven of the top ten qualifying spots in the final.

The RC10 B2 was officially launched at the 1995 World Championships in Japan where

another Associated Campaign would begin. Matt Francis took TQ and stormed the first two legs of the A Final with his B2 taking it to an unbelievable maiden victory; an impressive start for a completely new buggy.

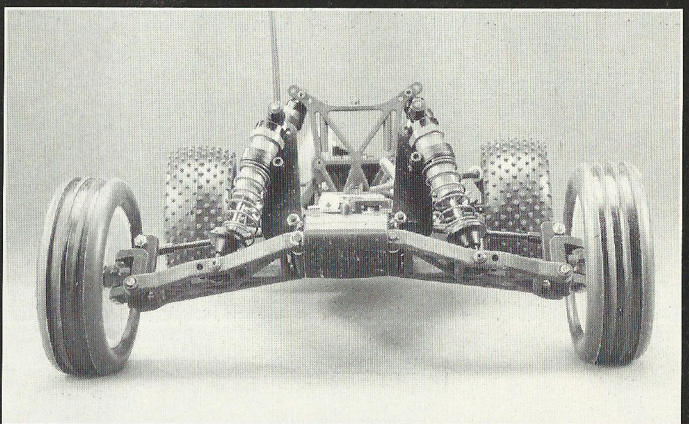
It has taken some 3 or four months since that win to release the kit to the public across the world. Fortunately, we at RCMC were lucky enough to receive one of the earliest kits sent directly from the factory in California. Our particular

package came specially supplied with an extra box containing some of the parts similar to that of the ones used by Matt Francis at the Worlds. A Reedy Sonic 12x2 motor, Reedy Ultra SCRC's and a pre-painted bodyshell and wing, cut out and smartly airbrushed in a similar design to that of Matt's. Some additional wheels were also sent so a full evaluation could take place.

## Inside the Box

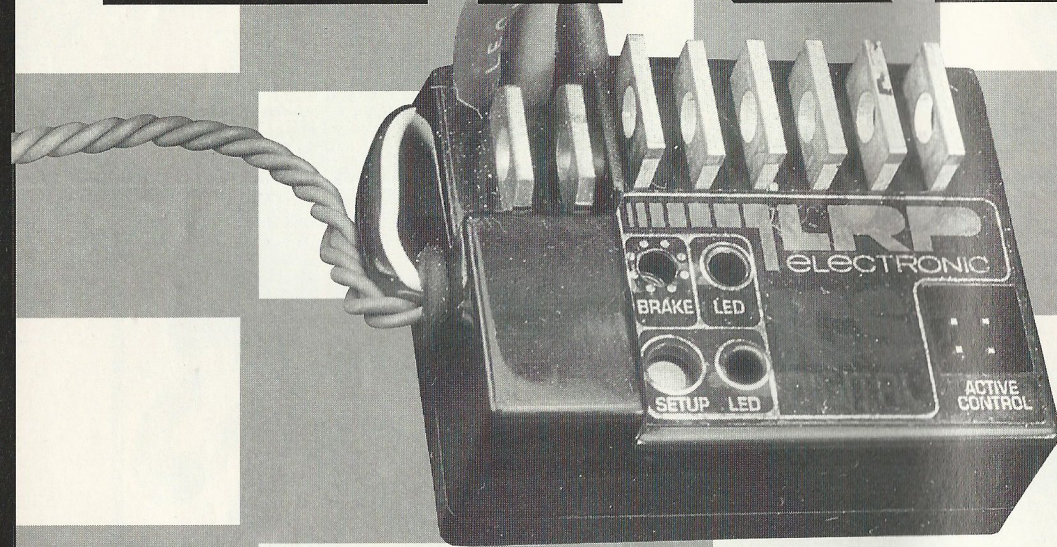
Previous revisions to the RC10 have been very small, but the RC10 B2 is totally different with just a few parts carried over like the teflon coated shocks and the Associated Torque Control transmission clutch.

Like the new breed of modern 2wd model cars, the B2 is



## WINNING IS ALL

# LRP



## ICS Digital

The LRP ICS speed controller also made an amazing start to its career being installed in the cars of Matt Francis and Mark Pavidis taking two world titles...

LRP Electronic has been on the model racing scene for many years now, selling a wide range of electrical parts including motors, batteries and commutator lathes. They have recently released a new speed controller, the ICS Digital, which has been

based around a microprocessor, acting as the controllers brain. The complete speed controller is very smart, and can be regarded as one of the neatest and smallest units on the market. Popularity has soared, and with it has come many respected results.

At the recent Reedy Race in California, seven out of the top ten Invitational drivers were using the LRP ICS speed controller in their off road cars.

Team Associated (US) have strengthened both the reputation and sales of the LRP ICS by becoming the North American

distributor. Unsurprisingly, all of the Factory drivers install the ICS in their cars and trucks. This combination excelled at the 1995 World Championships when Team Associated driver Matt Francis took his RC10 B2 to the TQ and win with an ICS controller aboard. TQ and the win in 4wd was also

taken by an LRP speed controller.

It seemed only natural then, when RCMC were reviewing the B2, to fit an ICS as per Matt Francis and find out what makes the speed controller so good.

The unit was servo taped down in the car, and all the wires neatly laid out as per the photographs of Matt's car. The wires length were kept to a minimum, although a little extra was left to allow the batteries to move fore and aft in the tray. LRP/Reedy Power Pin connectors were fitted to both the controller and the battery pack.

With the unit installed, it's time to program it to the transmitters and our personal requirements. To enter the set-up mode, the button must be held down until the LED begins to flash. Quite simply, hold the stick where you require the neutral point to be and push the button. The same for both the high speed point and full brakes and the controller is ready to be used. Its as simple as that.

Once set-up, some of the innovative features of the unit can be explored. As like other controllers, there is an adjustable torque control, although this one can be removed to allow unlimited power. The torque limiter comes in the form of plug in chips in values ranging from 30 through to 120. There is a temporary by-pass feature though, which allows for fast starts. Once full power has been reached, the current limit is made active again.

The torque limiting feature has one more little trick, hidden up its sleeve. There

are four positions that the chips can be inserted, which affects the time period, that the limit stays active for. Position 1 holds the limit on for the longest period, while in the 4th position, the time is kept very short. This feature allows the current limiting to be taken one stage further.

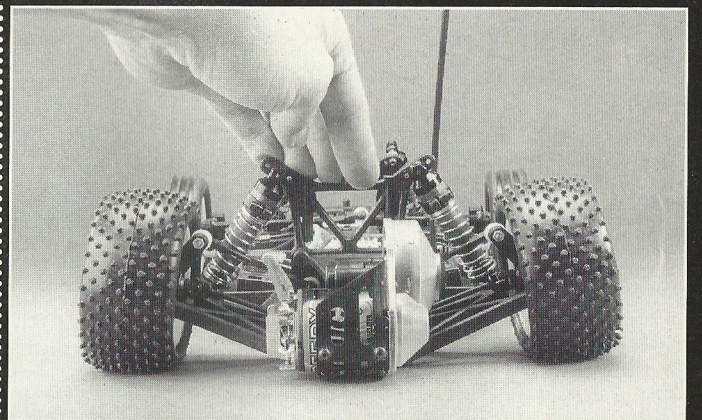
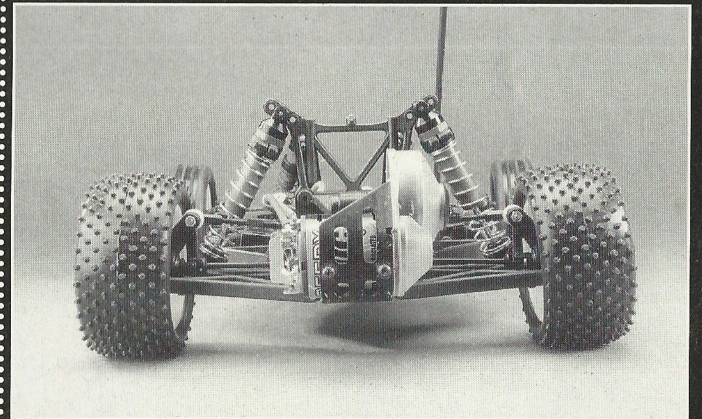
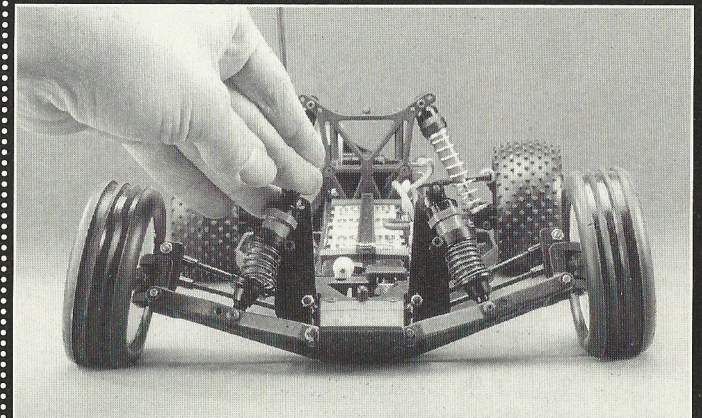
The final function that sets the ICS apart from the rest of the crowd, is the ability to adjust the level of initial braking. Full brakes are always reached, but the adjustable pot can increase or decrease the amount of brakes at the start. This can make it easier to control the car on slippery surfaces.

## In Use

There are over 200 forward steps on the ICS, so smoothness is definately an area where the unit scores strongly, even though the operating frequency is 2690Hz. Other manufacturers have decided to raise their frequencies in order to improve efficiency and smoothness, yet as a result, they have interference to contend with.

After running a battery pack flat from fully charged in a five minute spell, the FETs were hardly warm and a credit to the design and performance of the controller.

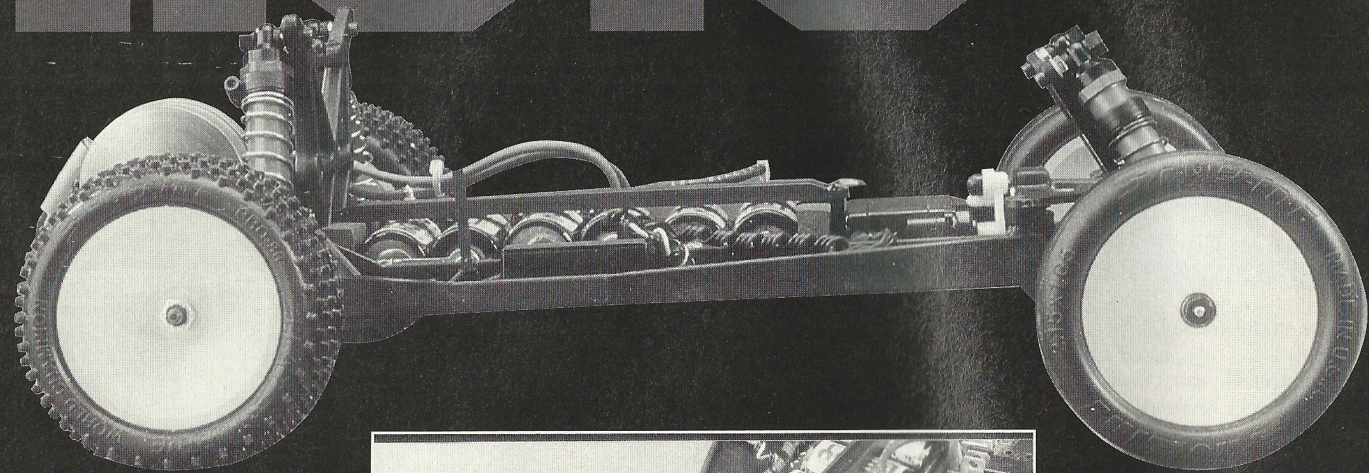
In simple terms, the quality of the unit speaks for itself and the list of impressive results certainly backs this up. But ask anyone who has just bought an ICS and get their view; I don't think they will have much to complain about.



New RC10B2 is radically different from the old RC10 - long wishbones, new transmission and plastic chassis show that this is no re-packaged old car. Seen here are damper angles and simple lack of suspension changes.



# RC10 B2

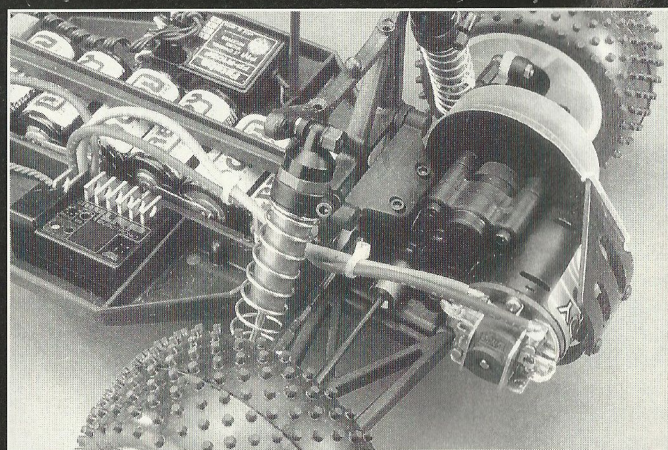
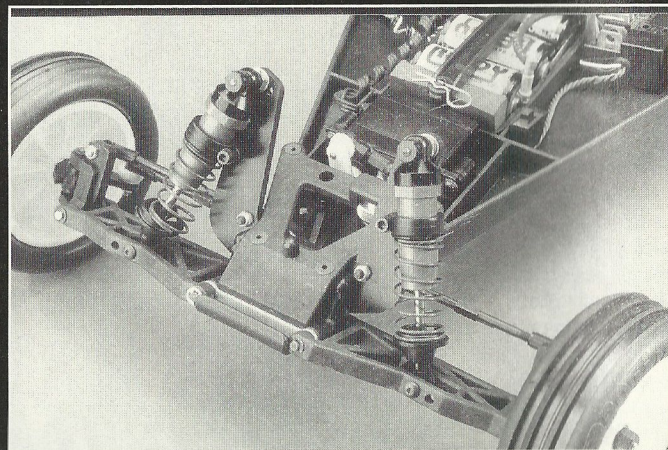


designed to use the minimum number of screws and adopt a modular format in order to make quick and easy adjustments while keeping the maintenance to a minimal level.

The build begins with the front end, securing the caster blocks to the steering arms. Lightweight alloy stub axles are adopted to reduce unsprung weight and are locked in place with a grub screw against the king pin. Unlike the previous kit, Associated have decided to make all their plastic parts black instead of white like before. Ball joints and caster blocks are now black so as well as looking very smart and purposeful, also hides the dirt to some extent.

Associated's design brief for the B2 required it to have the excellent reputation of its predecessor the RC10, but to retain its competitive advantage over the competition. And it's at this point that you realize the result of that briefing. At the front end, where locknuts are not necessary, plain nuts are used, and if alloy can be used to create a weight saving and is still strong enough, then it will be used over steel.

Continuing at the front are the wishbones which being very grey, gives them that carbon impregnated look. Unfortunately, the standard arms are not carbon based, although they can be bought as an after market product. With the wishbones attached to the outboard steering parts, the bulkhead can be fitted to make a near complete front end assembly. An alloy brace is positioned next to



*RC10B2 has an amazing lack of screws to hold the car together - the design brief was obviously plain and simple but with purpose. Below; New transmission was a surprise but weight distribution played a key role in the design.*

the bulkhead to help support the inner hinge pins and reduce flex and twisting. This will also prevent any damage in an accident. The brace is neatly machined with weight being kept very low.

The shock tower is fixed to the rear of the bulkhead with just two

screws; anymore would be considered unnecessary and simply add to the overall weight of the car. Surprisingly, there is only one set of holes for the front camber link. It would seem that the Team have spent a lot of time researching and developing the B2

so you don't have to. The same can be said of shock positions with just two sets of holes at the top and two on the wishbone.

The front of the car can now be fixed to the alloy nose plate, of similar design to that of the old car. With the alloy plate in position, the complete unit can be screwed to the new moulded chassis and the car begins to take shape.

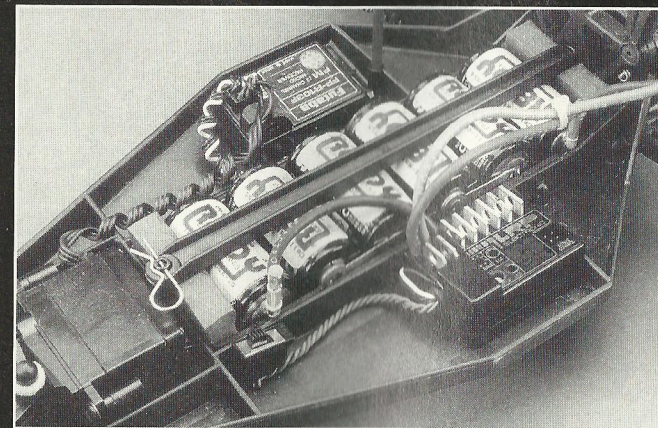
## Steering Bellcranks

Those of you who are familiar with the Losi XX, will realize that the plastic steering parts on the B2 bare a close resemblance to the standard kit and optional parts on the XX.

With a built in adjustable servo saver and optional holes to reduce the amount of Ackerman, the kit comes with all modifications included and adds up to a very comprehensive package. There is only one small steering upgrade which consists of a pair or ballraces for one side of the assembly to replace the standard plastic bushes. A rigid brace completes the front end, securing everything into place.

## Stealth

Attentions are now turned from the front to the rear and with it is the well known and respected Stealth transmission. Equipped with the "tried and trusted" Associated Torque Control slipper clutch and the indestructible



*New detail inside the car shows battery holder and servo mounting. Right; Plenty of room for the largest receivers. Below; Is the wing the only part of the old car left?*



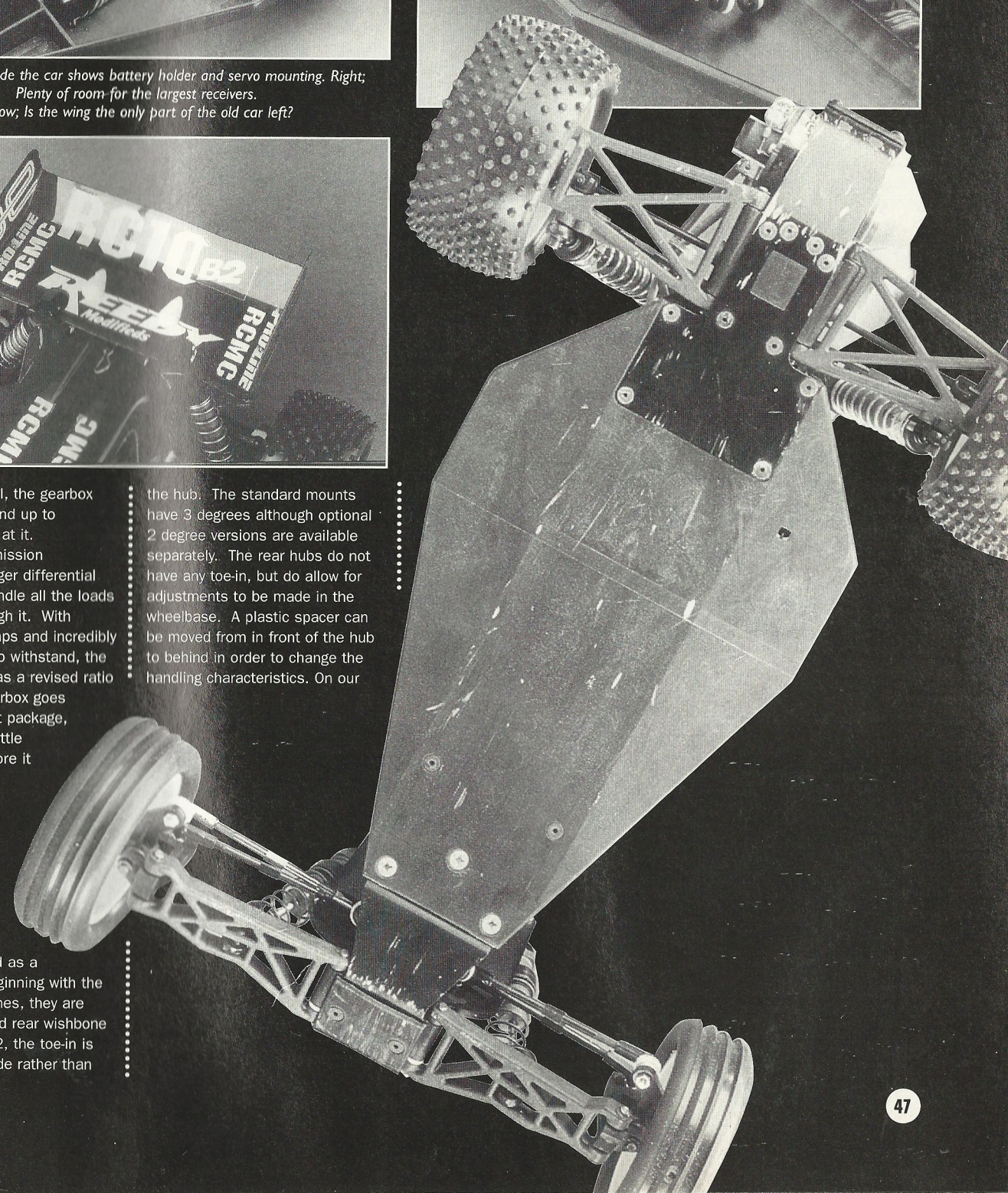
Stealth differential, the gearbox will be able to stand up to everything thrown at it.

The new transmission incorporates a larger differential which helps to handle all the loads that are put through it. With immeasurable jumps and incredibly powerful motors to withstand, the new differential has a revised ratio of 2.4:1. The gearbox goes together as a neat package, although it felt a little tight in action before it was run in.

## Rear Suspension

Following the same principle at the front, the rear is constructed as a modular item. Beginning with the sided rear wishbones, they are fixed to the inboard rear wishbone mounts. On the B2, the toe-in is placed on the inside rather than

the hub. The standard mounts have 3 degrees although optional 2 degree versions are available separately. The rear hubs do not have any toe-in, but do allow for adjustments to be made in the wheelbase. A plastic spacer can be moved from in front of the hub to behind in order to change the handling characteristics. On our





# RC10 B2

kit, we adopted the setting as shown in the instructions - short wheelbase.

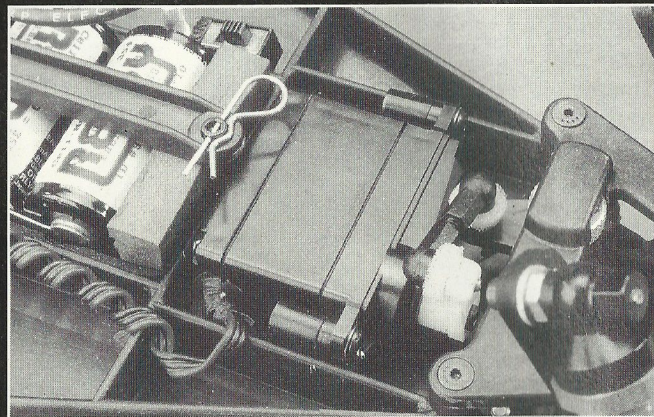
With the driveshafts installed in the hub, and the wishbone mounts fitted to the rear alloy plate, the gearbox can now be bolted to the plate. The plate fixes itself to the chassis, and provides a strong and rigid platform for the rear wishbones to work from.

The rear shock tower is of similar design to the XX one and is fixed with four screws. The bottom two are quite fiddly to get to and a little patience is required. Once this and a few other items are fitted, the car is nearly finished, bar the shocks and radio.

## Shock Absorbers

Associated's current shock design has been around for many years and they have received much acclaim for producing one of the best shock absorbers on the market. They have not made any recent changes to the design for this kit so they will be just as people remember them.

At the rear, 1.32" stroke bodies are combined with 1.02" shock shafts and a Number 1 piston. At the front 0.89" stroke shock



Tiny steering arms are used that require a short steering link. We fitted an Airtronics servo but all popular types will install easily.

bodies are fitted with 0.71" stroke shock shafts and a Number 2 piston. There are three pistons in the Associated range from 1 through to 3. Number 1 pistons have the least pack while Number 3 has the most.

Green springs are fitted to the front shocks and silver versions at the rear. There are four springs in the Associated range, with black being the softest followed by green, silver and gold. The springs are held in place with a redesigned spring clamp, collar and cup.

## Installation of Electrics

Just like Matt Francis' B2, we intended to copy his choice of

steering was controlled by an Airtronics 94151 servo, similar to that used by Matt, while for personal reasons, a combination of KO Esprit radio and Futaba receiver would transmit and receive the instructions.

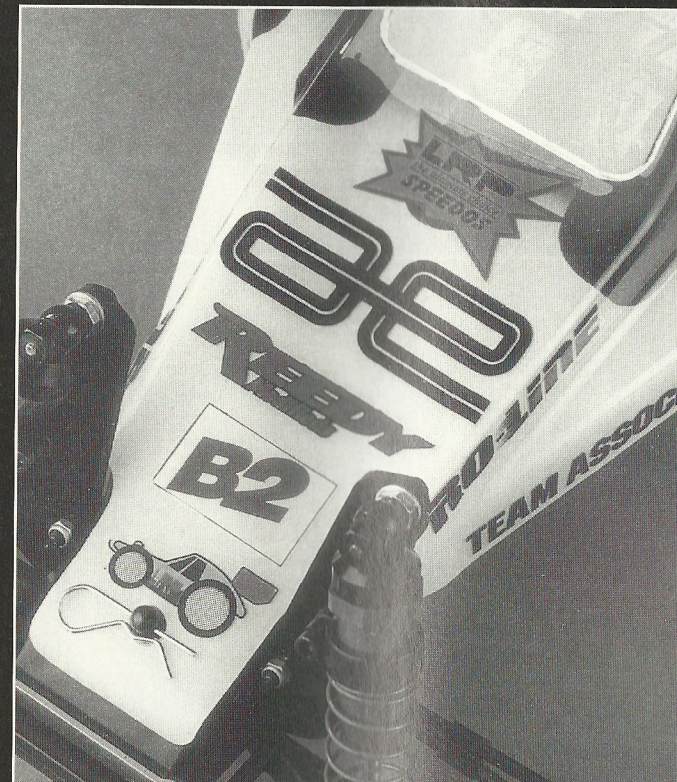
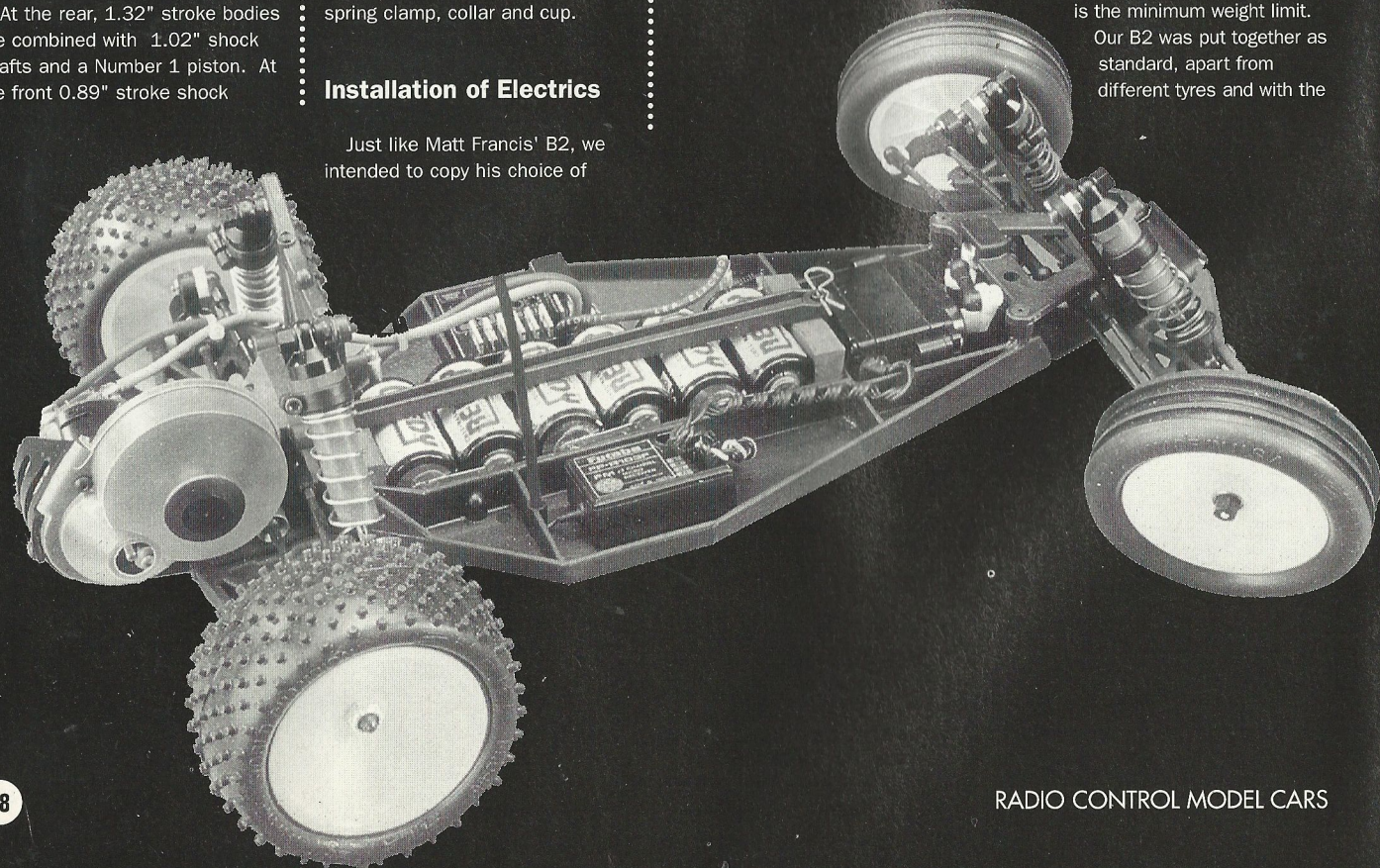
In the wiring of the speed controller, the wires were left a little long in order to allow the batteries to be moved backwards and forwards. This can be controlled by moving the supplied foam pads from the front to the back of the battery tray. Moving the battery forward improves steering while shifting it towards the rear increases traction.

## Conclusion

Minimalist is the key word that sums up the B2. Every screw, nut and washer has an important job to do as is not there just for looks or insurance against failure. This kit has a reputation to live up to as has been manufactured to do that job. It certainly looks and feels the part on the pit table and especially when you put it on the scales. 1474g is the minimum weight limit.

Our B2 was put together as standard, apart from different tyres and with the

electrics as far as possible. Motor and battery were as supplied by Associated. The 12 turn motor received its energy from the Reedy Ultra battery pack fitted with Reedy Ultra Pin/LRP connectors. The same connectors were fitted to the LRP ICS Digital speed controller supplied by LRP UK. This is the same unit that dominated both classes at the 1995 World Championships in Japan. The



equipment outlined weighed in at 1466g - very impressive. From here it was put on the track and put through its paces.

## Track Test

To start with, the front shocks were re-positioned in the outer hole at the bottom to suit our type of high grip tracks. We have found before that running with a lot of drop on a high grip surface can cause the car to hook around in the corner so this was changed to suit. The initial run took place in difficult conditions and when combined with an unfamiliar car resulted in an interesting first few minutes.

After this first run, a few changes were made to try to improve the car. We fitted 25 degree caster blocks to the front to help the car to turn-in and fitted a green spring to the rear. The low grip surface was making the car feel vague to drive, so by changing the rear spring to something softer, we would hope to improve the grip situation.

A few more runs and a few more changes and the car was getting better and more suited to the tricky conditions. The front shocks were moved at the top and the same for the rear. The green

spring was replaced by a black one at the front, again looking for an improvement in grip. Long wheelbase was tried but found that the car lost all stability which was really what was expected.

The key word for the race day had to be "balance". It was important to retain a balance between the front and the rear in terms of grip especially as the surface was so slippery. We felt that if we were to move the battery to the front, it would have definitely improved the steering and vice versa for moving the weight back to improve rear grip. If these adjustments had been made, then the other end of the car would suffered as a result.

To complicate matters, the motor was very strong out of the corners which made it quite difficult to drive; definitely not the right motor for the conditions.

The changes that we made and finished up with included:

- Associated Green rear springs
- Associated Black front springs
- Inner hole on top of front shock mount
- Inner hole on top of rear shock mount
- 25 degree caster blocks
- 10g weight in front bumper
- Limited rear travel to stop driveshafts rubbing

## A winner first time out

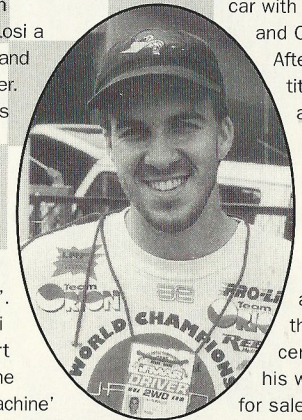
Associated's new two wheel drive has been long in coming. For many years 'Special' prototype cars have been used by the team to win the world titles; but the standard kit was the version on sale.

Now the policy has changed, with sales stolen from Associated by Team Losi a new car was needed and the B2 was the answer.

Although he car has been secretly tested the new car's debut was at the world champs in Japan and Associated had the hopes of the new car winning 'first time out'.

Although Team Losi made a massive effort at the worlds it was the Associated wining 'machine' that took top honours in both qualifying and the finals. The new car (with old transmission) has given Associated the perfect start to sales by taking the title and most places in the final.

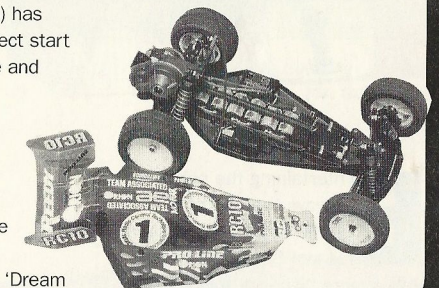
Driver" - the all American boy Matt Francis is a marketing dream for Associated and although they state no preference, it is well known that the top brass at the company have always wanted an American to take the title. Matt used the new LRP speedo in his car with Reedy motor and Orion batteries.



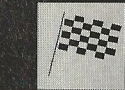
After taking the title two years ago with Brian Kinwald who ditched the RC10 for a Losi soon after, Matt Francis announced at the trophy ceremony that his win was 'Not for sale' - only time will tell if Matt stays loyal to Associated.

## Matt Francis

The perfect start for the RC10B2 was topped by Associated winning with a 'Dream



Even though we struggled a little first time out, a week later a B2 went to an unfamiliar track and took TQ against a number of F1 drivers - nuff said!



## Thanks must go to:

- **Associated Electrics:**  
Kit and additional items
- **Reedy Modifieds:**  
Motor and battery pack
- **LRP Electronic:**  
Speed controller

