



The rear pod arrangement has been steadily refined over the years

Introduction

Earlier in the year, Great Britain hosted one of the greatest events in the world of Model car racing. The IFMAR World championships and World Cup had three competitive disciplines in 16 days. This provided quite a task for the

organisers and a lot of pressure on the drivers competing in the event. As always at these events manufacturers and distributors took the opportunity to launch their new products across the world, giving them great PR coverage. Top drivers are usually given new equipment to give them the advantage over their competitors in order for them to achieve results, and the manufacturers hopefully improve their sales. As ever in Motorsport, everybody wants a little bit more power than the next person, everybody is looking for that extra edge. At the world championships we saw the launch, or at least the prototype of, the new Associated 1/12th L3. Associated only managed to get 10 cars ready to hand out to the team drivers and obviously they went to the talented drivers such as Craig Drescher, Oscar Jansen, Phil Davis, Nigel Hale and Masami Hirosaka. It was very interesting to see these drivers taking a packet containing carbon fiber components, axles and front-end assemblies and turning them into a competitive racer in only in a matter of hours. I spoke to Mike Reedy and asked him when the finished product would be hitting the streets and he said that all they were waiting for was the new box design to come through from the printers, and then the car would be ready for production. True to his word, as always, within a few weeks the

car was available in this country from the importer CML, who kindly supplied this review sample.

First Impressions

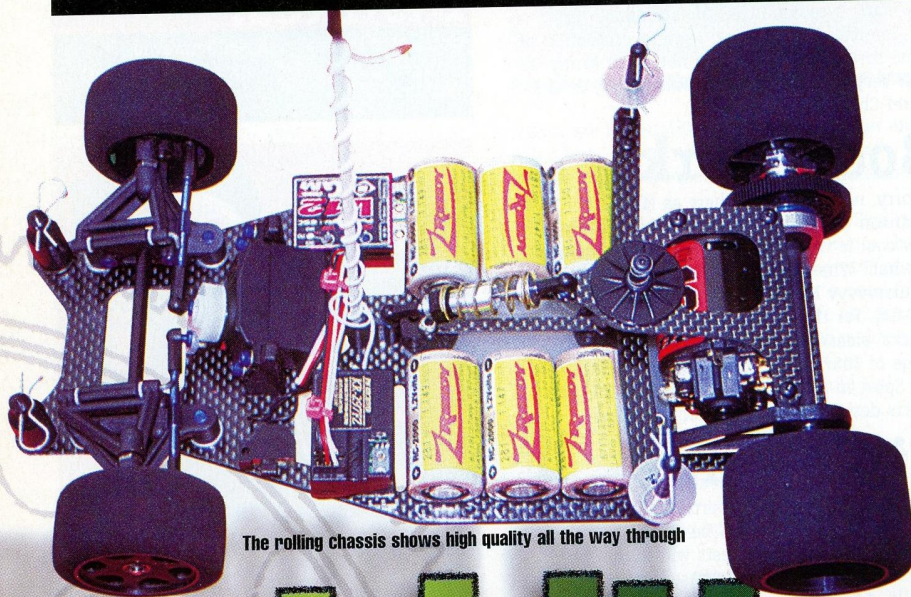
The packaging is good and it is attractive, showing you what the car is like on the box top art. On opening the box you can see a bag full of goodies and brief instructions. Associated seemed to have slimmed down on the instructions but then a 1/12th car is not as complex as other classes of cars and therefore do not take to long to assemble. All components are neatly packed so they are easy to identify in order of assembly. As ever, Associated supply plenty of 'PR bumf' telling us about all the products they deal with such as motors, T-shirts, other kits etc.

Kit Improvement

One of the first things I noticed with the new L3 is how well the components are finished. They seem to have taken their time and upgraded the quality and the finishing of the compo-

World class

The new Associated 12 L3



The rolling chassis shows high quality all the way through

nents as well as providing some refinements such as lighter components on the car. The chassis has a new shape to it but the actual dimensions of the car remain the same. The Motor plate and left hand axle carrier are both made in lighter material. The T-bar arrangement is the same as the LC, but there has been a modification to the rear axle. Tools such as Allen keys, a spanner and diff nut spanner are included in the kit. The actual main spanner for using on the turnbuckles is a great improvement as it actually fits better than the one before.

Assembly

One of the off-putting chores with Pro10 and 1/12th cars is obviously when using a carbon fiber chassis you have to file cutouts for the cells to make them fit more snugly. Some people have a little moan but it's all part and parcel of racing in this class. This is after all a Model Car and some of the enjoyment is assembling the model and then taking it out to the track. Never rush when filing the chassis it's the main part of the car. If you treat the chassis right and protect it

get kitted out

properly, then you should not have any problems with it unless you hit something that does not move such as a brick wall. Once you filed the battery slots and you are happy with them, it might pay you to file all sharp, square edges round to the needle file and then seal them with Superglue. Should you have a shunt, the car is better protected and stronger and this prevents delamination. This is applicable to any car that has a carbon fiber chassis.

Over the years in model car racing I have learned that after using patience and putting some effort into building the car, the results and the response you get from the car when its build correctly makes it all worthwhile. Of course, these models will work okay, if you just slap them together while watching the TV! However, you take that little bit of tender loving care

'a bag full of goodies and brief instructions'

while building it, checking it, making sure you don't strip threads and simple things like that, and you will get more satisfaction out of driving the car, knowing that you have built it correctly and according to the instruction manual.

Since the World Championships and the launch of the L3 there have been a few teething problems with the chassis, mainly to do with breakage at the front of the chassis. I contacted Associated and spoke to Cliff Lett the head of R&D. When I brought this problem to his attention, he apologised and could not see any reason in the design of the chassis and why it should break. Cliff is contacting the manufacturer of the carbon fibre to follow it up. Cliff believes it might be a material fault, rather than a design fault. By the time this review goes into print, this should have been corrected. Cliff also asked me to pass on his utmost apologies to all his drivers of the new L3. For those of you who wish for extra protection on the front of the car, it may be an idea if you go to your local hardware store and purchase two half inch tap washers. These make excellent bumpers when place under the body posts, replacing the aluminium spacers.

For this review we are going to assemble the car as 'kit'. In a later issue we will look at how to modify components to allow more room for radio and show some fine tuning to make the car more competitive.

Front End

Associated have stuck with their ever successful dynamic strut front end. Associated are now using a slightly different material, more refined and easier to assemble. Simply following the instructions, the front end goes together very smoothly. The pivot balls seem to go in a lot easier and are quite free on assembly which means you do not have to run the car in as much before a major event. Axles and King pins are the same as before with a little anodised blue screw and pivot balls. Anodised titanium turn-buckles finish off the front end very nicely, making it an even more attractive car.

Always take care when assembling the front end, never rush to tighten up the screws too much. Remember to line up all the part first, making sure everything is square and that no threads or screws are stripped. Make sure all holes are deburred and everything is a smooth fit before final assembly.

Rear End

The same revised rear end as the LC has been used just using lighter components with a new magnesium Motor mount and the left hand side bearing carrier made out of lighter material. The plus sides of Associated are that all the lighter components are just as strong as before. So the advantage is in having a lighter car just as strong as any other previous model. The top and bottom rear plates are the same as before and it is an advantage to round the edges to give it a nice smooth finish. With the top rear plate it may be an advantage to use some 1200 wet and dry. Do not forget to smooth off the rear end on both sides as it gives a better action on the back end, especially in low traction conditions.

The right height adjusters fitted to the rear end of the car seem to be a lot better fit. The machining looks a much higher standard. Do make sure that you don't have any bearings binding and make sure the axle is free at all times. Once again the rear end is finished off with very nice blue anodised screws to contrast with the rest of the car.

T-Bar Assembly

The revised T-bar as used in the 1/12th LC car has been used again for this car. The traditional Associated ball and club cup features, using 2 screws at the front for adjustment. Take time to install the ball and cups on the T-Bar, making sure the ball is not binding in the cup, giving a free action on the T-Bar.

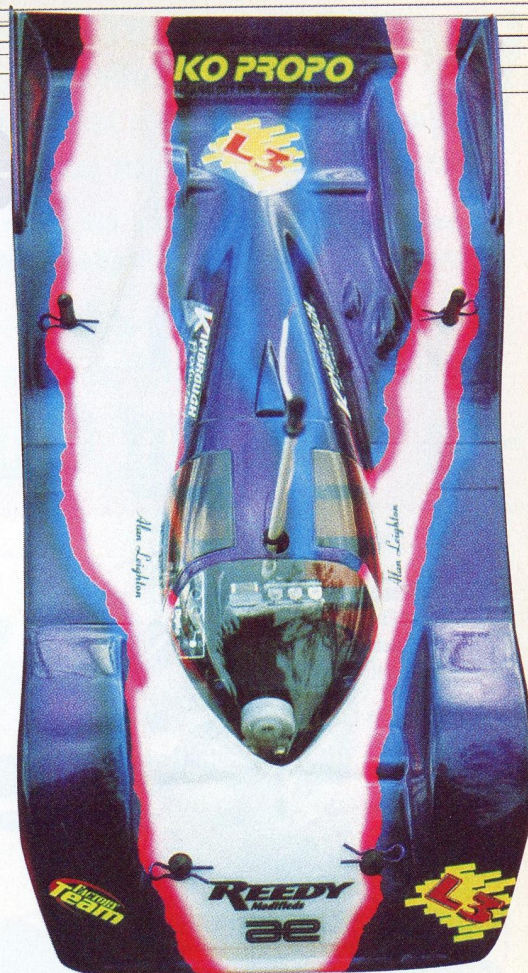
The T-Bar brace fitted on the LC car has been used again as it has been a success. One the T-Bar has been fitted to the rear pod, and it has been secured onto the chassis, then you can move on to the rear brace and damper assembly.

Tip

The one thing that we racers change is take the middle screw out of the T-Bar, allowing the T-Bar to flex slightly more, giving more traction at the rear end. Once the T-Bar has been assembled and the twig screws have been installed, take a needle file and file down the outer ears around the twig screws to avoid catching the batteries when installing them in the car as the T-Bar moves. It is always best not to over tighten the screws that hold the T-Bar in place. Always make sure they are tight but not too tight.

Rear Suspension

The two round things with the springs above and below are the squeegee damper springy things connected to the chassis and this is what we call the rear suspension setup. This part of



The completed car ready to race

this car is quite unique and very important to the handling characteristics of the car. Very minor adjustments to this system can transform the car into steering very aggressively or very tamely. This depends on personal preference. First off the damper post should be secured on the rear brace and then the rear brace secured to the chassis by three fixing points. Sadly however, these have not been anodised in blue and haven't even been polished therefore require some work to make them look attractive. Once the brace is in place, you can install the spring then the circle damper washer, the top plate, another damper washer, another spring and yet another washer, followed by a nut securing the whole assembly in place. Don't forget to secure the top plate onto the rear pod. At this point leave the top plate and the damper washers dry. Once you are happy with the installation of the rear pod, top plate and the rear brace it should begin to look like a model car. Now you can begin with fitting the shock mounting, antenna mount and the body posts. For the time being we are going to leave the servo posts in the standard pre-drilled position, ready for easy installation of the electric's and the Radio gear.

Next month we will finish the assembly, fit the electric's and start shaking down the chassis for competition. **RACI**

Quick Spec

1:12th scale On-track racing chassis kit. Carbon chassis. Requires Motor and speed controller, 2 channel Radio, Bodyshell and paint, cells and charger to complete.

New Year, New Gear!

OK, Christmas is now a fading memory but your favourite Aunt gave a few sheets of folding to buy yourself 'something nice'. Great, take a look at these - they are very nice! How about the 1:12th Associated Rug Rat for some serious speed and

competition - Alan Leighton started the build last month and this month he looks at the set-up of the beast and then takes it racing. No - not for you? OK then, what about the worlds smallest remote controlled model? You will have a short wait before you can buy one as Keyence need to appoint a European distributor. As an executive toy or as a superb looking model it is a technical 'tour de force'. Something bigger? The Wedico Mercedes is true 'Heavy Metal'. Just about everybody appeared to have liked the previous truck in Race Car, or at least find it interesting. Trucks are unlikely to appear every month but they do add variety on the occasions they do appear. Now the decision to feature any more in the future is yours, not ours. If you like them or you hate them tell us, and then we can decide if any more should feature in future issues. The Mercedes not big enough? Then try a Laro 1:5th car. The Laro 1:5th scale car is built by Mike Myers, one of our American contributors. Mike races 1:8th and 1:10th Gas cars in the States so he probably finds the Laro a bit tame but I reckon Big scale = Big fun!

Our 'Alternative American' offers a new route into the ever popular Touring Cars. Distinctly American in flavour this is a well thought out, tough budget contender. The handling and performance with the standard shocks and motor are better than you might expect but a decent stock motor and some better shocks would make it a very useful tool indeed.

The ever prolific Tamiya company provides the final reviews. The cover cars are the Nissan GT-Rs in 1:10th Electric and 1:8th Nitro form. Pick one to suit your preference and pocket. The Ford F150 Pickup is given the unique Neil Kerridge treatment, looks good. These models really show our continued commitment to cover all sections of the hobby. With scales of 1:87th, 1:16th, 1:12th, 1:10th, 1:8th and 1:5th and Trucks, Carpet Racer and Touring cars it certainly means a good variety in the review 'Mega Mix' this month. We hope you enjoy them.

World class

The new Associated 12L - Part 2

If you followed last month's article you should by now have the 12L 50% completed. Now let's finish the assembly and take to the tracks.



Who stole my wheels?

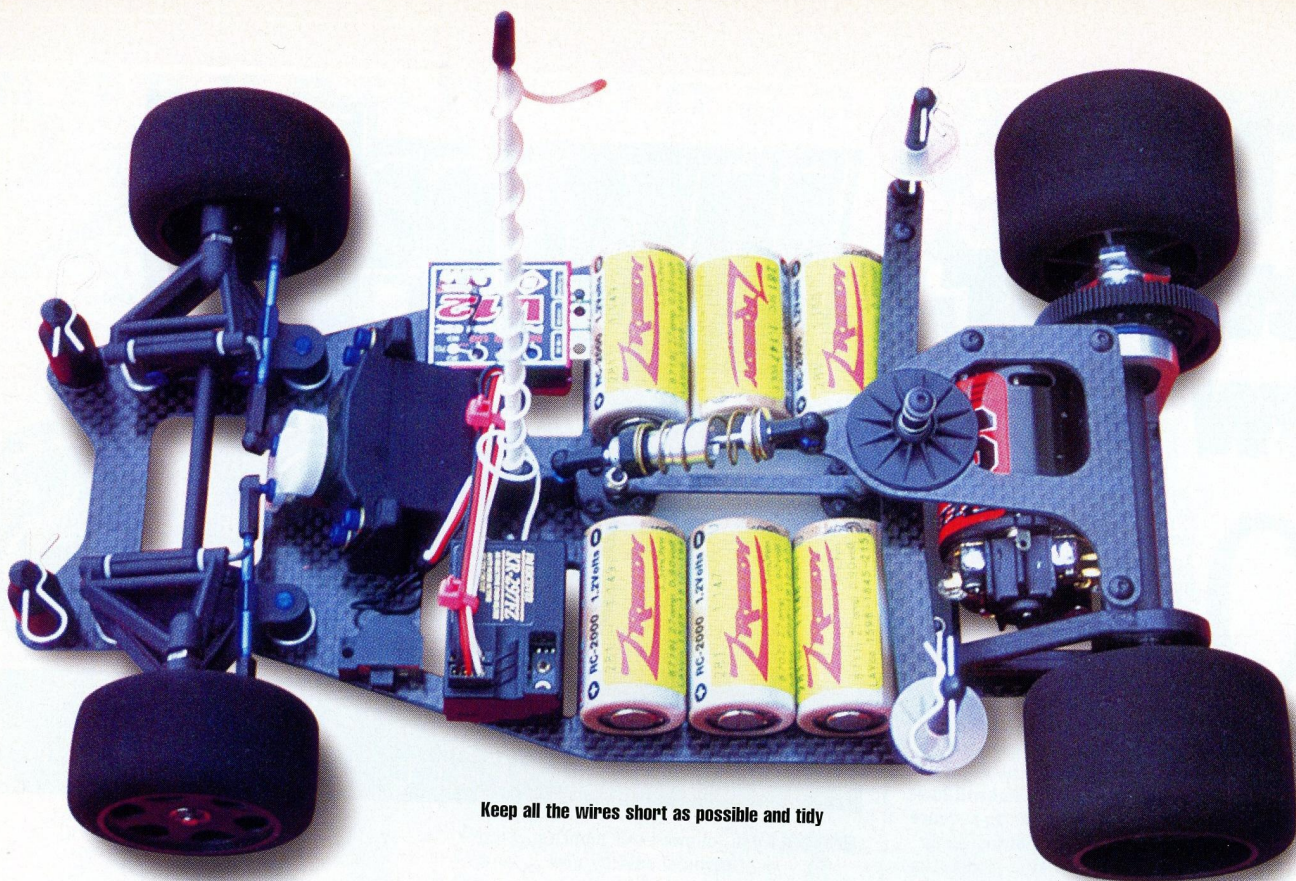
Shock Absorber

This little interesting component is I believe, one of the main features of the new L3, a revised suspension unit. Instead of the traditional piston and 'O' ring system, what they are

using is almost a sponge, with a plastic backing absorbing the oil before assembly. This is acting as a true damper system. With the actual shock absorber being larger than before, it is obviously more reliable and is more likely to be consistent between runs. This means less maintenance on the car, i.e. re-filling, re-springing and more durability in racing conditions. In the package are two springs, optional springs are available. Simply follow the instruction for assembly, it is straightforward. You do need to check the suspension and the shock absorber itself that it is clean and free of any swarf. Also make sure all

'The L3 generally felt smoother and was more predictable'

New Year New Gear



Keep all the wires short as possible and tidy

the threads are clean and smooth. Take your time to fill the suspension unit up with oil and assemble carefully. Never rush to fit the ball joints onto the actual suspension unit, avoid bending the plastic or damage to the unit itself. Never use heavy duty pliers, it will go on by hand, just be patient with it. The recommended suspension oil is included in the kit. You may want to change the weight of the oil to driver preference, once you have tested it on the circuit. Check to see if you have the suspension at the correct lengths. When the car is complete and all electrics, motor and batteries are installed, you can adjust the pre-load by tensioning the spring. Oh, don't forget that little piece of wire in the bottom of the pack, don't throw it away, as it is your de-assembly kit so don't scrap it!

Rear Axle

Associated came up with a new design of the axle, light, very attractive with new titanium lightweight three bolt hooks. With weight saving in mind, and keeping the cost of the kit the same, clearly some possible refinements were not made. Not machining the alloy on the axle to fit a bearing for a spur gear was one of them, and leaving out one bearing from the outside hub was the other. However, apart from these two little items, this is a very well designed and manufactured differential system. Using the threading system on the left-hand side, and using a couple of shims out of the packet, you can have the axle spot on every time. It is just what you want in that last minute 'quick, change the bearing or axle' moment. Securing the wheel with the nut on the left-hand side is also an added bonus. The other thing I noticed, on the right hand side,

on the diff side of the axle, Associated decided only to use one bearing. On the outside of the diff, not sure that I entirely agree with this design due to the fact there is no bearing on the inside of the hub to keep the diff running true. As always, Associated would not have put it in the box if it had not been tested and tried out before hand. The Diff rings are the same as before as in the Stealth 2 but Associated have returned to using the small cone that fits on the inside of the bearing and then using bewail washers with a locknut. The diff action feels fine and I have not heard of any complaints by any of the team drivers. I think, at the end it comes down to personal preference.

The rear wheels are of a new design, using three bolts, securing the wheels onto the hubs. This gives you a slightly stronger wheel, with less flex. Therefore you establish more grip on the circuit. The down side for 1/12th drivers, as we always seem to acquire loads of wheels. Drivers will be reluctant to buy new wheels due to the garden shed already being full of them!

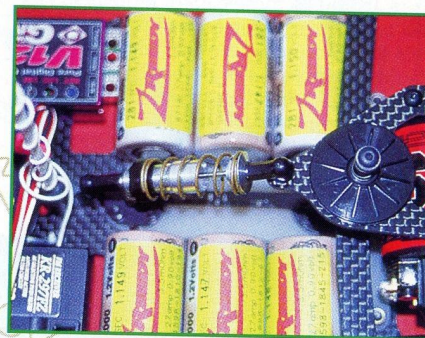
The front wheel is also of a new design with a spline effect in the middle preventing the bearings sinking into the inside of the wheel. This means another new fitting for my tyre truer! I still cannot understand why we get supplied with green tyres, we never use them. Mind you, a lot of the 12th racing in America is taking place outside, on tarmac, so they maybe using green tyres out there. If they would supply us with rims, we could put our own tyres on. I am not saying that they don't work, it is just that we don't use them here in the UK.

One new Associated L3 rolling chassis, ready for your radio equipment, battery and motor installation.

Electrics

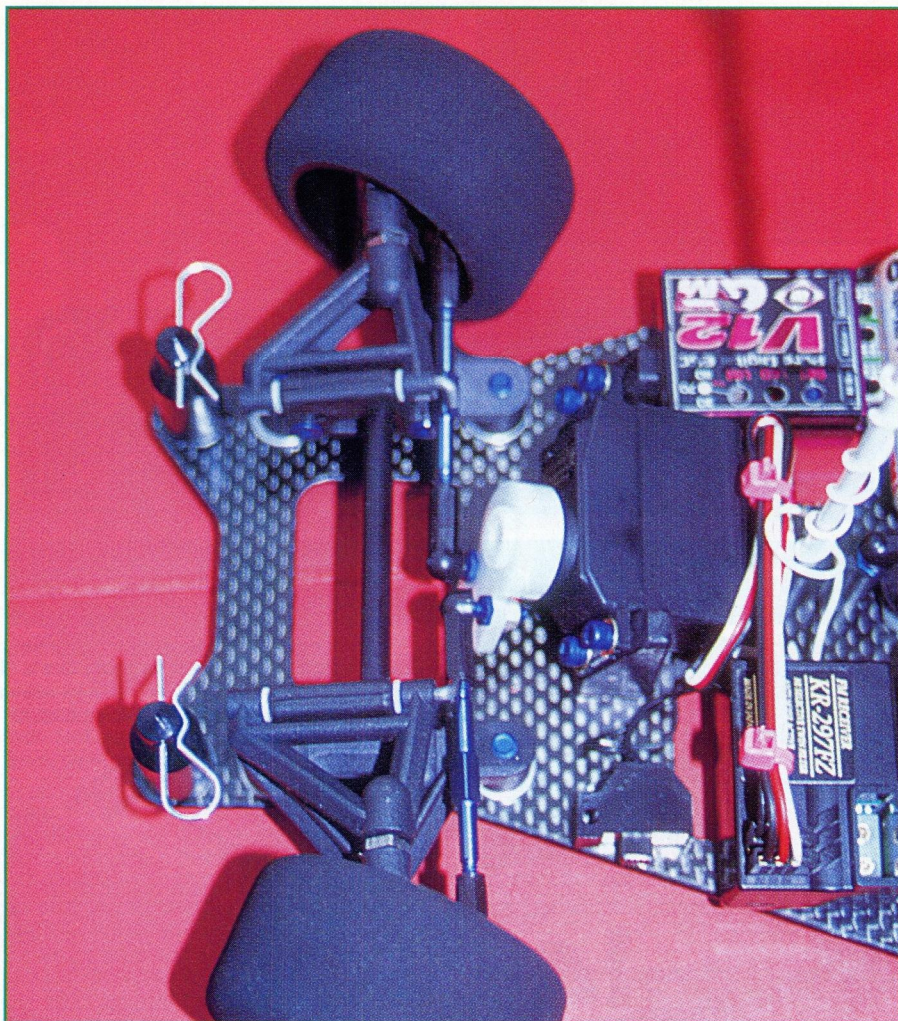
Please choose your electrics carefully. Make sure you can fit in your speed controller and your receiver as far into the chassis as possible to prevent damage in a collision later on. This does not mean that 1/12th drivers drive dangerously but we drive very fast and close together. Make sure that all your wires are nice and neat, as well as secure. In later issues, we will be given you tips on installation, speed controllers, wiring etc., so stay with us.

One of the simple things to keep the weight down in the car, bearing in mind that we are running for 8 minutes, is to avoid excessive wiring, excessive solder on connections and so on. Make sure that relevant equipment is laid out neatly before installing it into the chassis. Check that the wires are the right length so they are not catching or snagging any other components in the car and ensure that the back end is free for movement. Basically make sure there is enough room for everything without contact.



The new shock absorber is larger than before

'The Hobby-Tech Touring Car sports a number of 'must have' attributes'



We built this part last month

One of the main problems with the radio such as interference or glitching, is actually caused by the motor. To avoid this, the tip is to take a small piece of aerial wire, secure it on to one of the bolts at the rear chassis brace and to the motor pod. This will earth the car and prevent any glitching due to static, which could be caused by the carpet. Also make sure the switch is secure on the chassis, where you can get to it. Try to keep the receiver wire way from any other wiring, going straight from the receiver straight to aerial and straight up.

1/12th racing is quite friendly when it comes to batteries or motor, so there not much requirement for a heat sink on the speed controller. Make sure the T-bar is free to move, the batteries are not too close and any wires are tidy. One handy place to install some of the radio wires - if you don't want to cut them down, is to secure them underneath the servo. If you take them through the servo post block and the servo itself, there is just enough room for a couple of wires. Loop them through and then back through again, making sure they are not trapped in any way.

Always make sure that Motor wires from the Speed controller to the Motor are not too tight. Do not restrict the rear pod from moving freely. You must make sure at all times that battery terminal connectors are not touching the chassis when in the car.

Track Test

Now the car is complete and built for the racetrack, everything has been checked and

is in place and the transmitter has been calibrated to the electrics in the car. The maiden run for the car is going to be Clay Cross, Chesterfield. I sorted my equipment out and put some cells on charge, I selected some Jaco rubber to fit on to the L3. I am going to run Jaco grey rears about 53.5 mm with Jaco purple fronts at 45.0 mm. The one thing to remember with 1/12th racing is with most of the cars, particularly the Associated, the smaller the tyres the better the car handles. I myself in the past have used a smaller 47.5 mm rears and found the car to be excellent, maintaining grip throughout the run.

The additive we are going to use is Paragon, which has just been given the go ahead by the 1/12th committee for this coming season. You need to apply the additive to the rear tyres about 45 minutes before you run and 20 minutes before to the front tyres. This will give you the required drying off time before your run.

The moment of truth, the L3 on the track for the first time. As always in Chesterfield, it is never expected that your car will perform 100% in the first run due to the lack of grip. My first few laps consist of nursing the car around the track, getting used to the racing line, as well as getting the car bedded in. The car seemed to be smooth, straight and fairly accurate. The one characteristic I have found in the past with an Associated car is that it instantly tells you what it is doing. The feedback comes straightway, and the L3 is no exception. I did feel that the L3 was carrying more corner speed even though we

faced poor track conditions. The car generally felt smoother and was slightly more predictable.

The Tri-Sonic 15 triple planted in to the back of the car, may have been a bit on the hot side for the track conditions but I persevered throughout the night.

The second run, the track had not improved a great deal but with some minor changes and adjustments to suit the car to the circuit the L3 performed well. The aim for the rest of the evening was to see how much grip I could find by adjusting the car. By round three there was an improvement on the car. Easier to drive and having slightly more grip at the rear end made the car even more predictable, making it possible to carry more corner speed. For the last run of the night I had chosen a 16 turn motor, a little bit milder to avoid losing grip later on in the race.

Conclusion

The L3 is very good, very refined and very smooth to drive. Even better to build than the previous LC, it gives consistent feedback to the driver. The differential axle system is a lot easier to use, and the rear suspension systems is a lot more refined and much more reliable. The option of the extra springs, giving the driver the extra little twig to suit his style when driving is a good one. The L3 has the added bonus of the car being even lighter, being even more competitive with minimal work to the car. More on the L3 and improving its performance in the future. **RRCI**

Quick Spec

1:12th scale On-track racing chassis kit. Carbon chassis. Requires Motor and speed controller, 2 channel Radio, Bodyshell and paint, cells and charger to complete.

Testers Kit

KO Propo Vantage Radio system
Futaba 9602 steering servo
GM V12 Speed controller
Reedy Zappers 2000 batteries
Reedy Trisonic 15 triple
Kimbrough Spurgears and Pinions
KO Propo battery charging system
Jaco tyres
Protoform Nissan bodyshell
Ground effects additive by Paragon
Battery tape by girlfriend
Technical advice - Associated Manual

Likes:

New shock
Better finished components

Dislikes:

Missing rear bearing
New wheel design cause spares problem

