Scale Saloon Shoot Out

The Conclusion!

bodies are A) beautiful B) aerodynamic C) illegal for any BRCA sanctioned racing ??'? It's not hard is it ! ! Maybe one day we will have a G.T. series for these cars and the wee beasties will come alive as will the racing, but for now if you intend to race at all seriously, as HPI have obviously designed the RS4 to do, you had better resist the temptation and plump for the Merc.

Open This Bag First

Reading through the instructions as I flicked the dense packages out of the box it became very obvious that the familiar phrase "narrow" or "scale" saloon has been ditched in favour of "standard" which obviously reflects the state of racing in the rest of the world where "wide" saloon is considered far too stable to be interesting, although it should be noted the American "wide" is still some 20mm narrower than our own "wide' tourers .

There is a fluorescent label inside the chassis bag which reads "OPEN THIS BAG FIRST", relax, it is trying to be helpful rather than stating the obvious for it draws your attention to the fact that each step of construction is individually bagged and sequentially labelled from A to F so there is no "Which is bag 235z-bq when its at home" and assembly should pass off stress free regardless of what sort of day you've just had.

The only ball bearings are the loose balls for the limited slip diffs otherwise the whole car is bushed as standard but the 26 ballraces are available separately but for now we will concentrate on the basic kit. To keep things going nicely until we decide to upgrade the rolling stock, we'd best lightly lubricate all bushings with light machine oil, don't be tempted to grease

Some of the best shocks the author has ever built.

Opening bag "A" you find all you need to put together some of the smoothest shocks I have had the pleasure to build for a long time. Using the kit supplied oil of unknown viscosity and number one pistons all round, they feel very soft but only track time will tell. The Teflon pistons all look alike, they are all two hole but the outside diameter leaves varying clearance to the hard anodised body to control oil passage and hence damping characteristics. To this end each piston has its number moulded into both faces to make selection unmistakable. I must confess to opening the diff bag and pinching a dab of silicon grease and coating the "O" rings that seal the shock shafts for a really smooth result. Leaving the shocks to bleed themselves of bubbles.

Can you spot the none BRCA bodyshell??.

BY DEZ CHAND

The RS4 comes with a choice of body shells ranging from thc exotica of the McLaren F1 through Porsche 911, Ferrari F355 and Honda NSX to the more familiar Mercedes DTM. Here's a Question for you. Which of these them as the drag accumulates and will slow the car down some.

Turn the TV off, the stereo on and get stuck in.

With everything laid out in labelled bags each step through the assembly method is uncluttered by excess pieces scattered around the worktop.

Bag B

I moved onto bag "B" and assembled the front and rear ball diffs. The method of tension adjustment is against a short spring rather than a couple of opposing spring washers which gives a much finer rate of slip adjustment, even if it does weigh a little more. But being at the centre of the diffs it will only add a little weight and negligible rotating mass, which is a small price to pay for a set up that is guaranteed not to back off thanks to a nyloc nut in the opposite half. Two different greases are supplied in order to give a top notch result. The clear silicone grease is destined for the main 2.4mm balls that are designed to slip, whereas the graphite grease is for the 2.0mm thrust balls that should grip their beds.

Bag "C"

This holds your rear gearbox, slipper clutch and layshaft components. Moulded into the gearbox housings is the option to drop the overall ratio but for this model the 2.1:1 position is used. The lower 2.6:1 option is presumably for a future version that would use larger diameter wheels and drag around a much larger shell. The gears sit in their respective bearings, fully encased by the gearbox housing, in turn sandwiched by aluminium plates that later mount the assembly to the chassis. The left plate also holds the bearing carrier for the belt pulley to take power from the other end of the layshaft forwards via the single drive belt.

Bag "D"

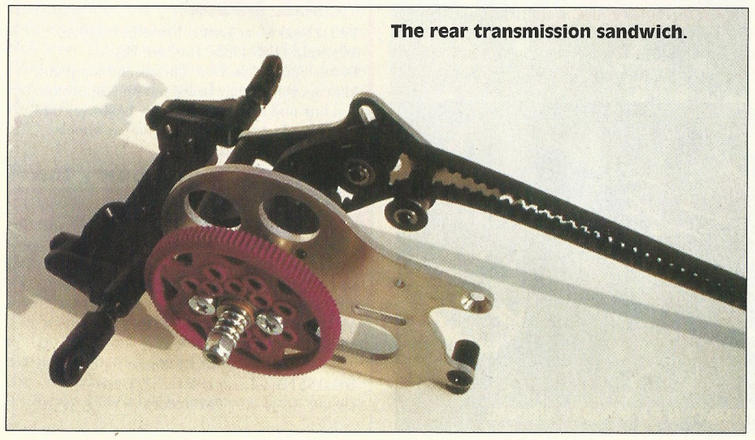
Holds the individual components to construct either long or short drive shafts and the suspension arms that will cater for either width choice. The U.J.'s are supplied in nut and bolt formation because they can be built long or short, so take your time and refer to the instructions following the narrow assembly closely, to make

Open this bag first.

sure you don't end up with a front stub axle attached to a rear drive shaft and vice versa. These are held together with roll pins through the ball, that is the centre piece of any U.J., and you won't want to try and disassemble these I promise, so get it right first time. The instructions are concise with full size photos of each step so if you get it wrong you will have no one to blame but the cat, should they end up mixed up.

All the suspension arms are in wide format and have moulded in cut lines for you to follow. Get a good, sharp, wide blade and a chopping board because I assure you it will not be easy. The lower arms are very hard, glass filled, nylon while mercifully the upper arms are tougher, easier to cut, pure nylon. This is interesting because the choice of materials here denotes the components design intentions. The hard torsionally stiff lower arms will be taking all the loads and transferring them to the shock absorbers, while the upper arms are mearly tie rods and should "give" rather than break if called upon in an unpredicted roll reversal (literally !). Each front upper arm has a ball joint on the end fixed via a turn-buckle, the assembled length of which as given in the instructions equates to an initial 1.5 degrees camber set up.

Japanese Exotica



The rear transmission sandwich.

Bag "E"

Contains chassis mounting blocks for all your little arm, gearbox and transmission assemblies. the front diff mount, front bumper and battery (stick) pack retainers. Also in here are your belt guides and tensioners that complete the rear gearbox just before the top rear arm sub assembly goes on to form its final chassis mounting point.

Bag "F"

Is full of steering arms with integral servo saver and tie rods so with all these mounted to the chassis it's time to drop the front diff, with the belt drooped over it, into the front casing and screw down the lid. On top of this go the top deck and upper front arms sub-assembly, the balls that fit into the large rose joints on the end of these are a very tight fit, be warned. When they go in its like a gun reporting, but then they rotate superbly smoothly yet slop free. An excellent

tolerancing achievement. These balls are hollow to allow the screw, that passes through and into the front uprights, to totally submerge and allow the rose joint to pivot un-hindered by its cap head.

With the shock towers on and the top deck screwed down to the rear gearbox; its time to put the tops on those shocks and pop them onto their mounting ball joints. The two piece lids make fitting the diaphragm a pleasure as the hole in the side of the cap allows the excess oil to carry away the surface bubbles before it traps air behind the diaphragm, for an excellent end result first time.

With the belt tensioned you have a completed rolling chassis and are ready to plonk in your radio gear and motor. The standard pinion supplied with the kit is 29 tooth against the 106 spur which combined with the internal 2.1:1 ratio puts you on 26.2mm/rev using the 64 mm diameter, treaded wet look, kit tyres. This sounds spot on for the usual insane winds used these days in scale saloon racing. The only room for your receiver and speedo is on the top deck but one advantage of having your ESC on the left side of the top deck is the very short wiring distance from cell to motor, which keeps electrical losses to a minimum. Unfortunately, running all this and the layshaft above the slick pack configuration will raise the centre of gravity and increase chassis roll, but this is counteracted by the geometry of the suspension arms which use this induced roll to generate camber change and hence mid corner grip, so it all works out beautifully!! Fully bushed as standard. the rolling resistance is high at the expense of keeping the price of the kit low.

What have you got to play with

Sat on the worktop, fully loaded up, the 5mm front suspension travel and 8mm droop, balance nicely against the 8mm travel and 11mm droop of the rear end. To tune the handling characteristics at the front you can adjust static camber, toe-in, trailing castor and make full use of the six steering linkage positions to make sure you reach full lock without over stressing the servo, when it gets there. The front shocks have only one usable position, top and bottom, so it's just as well that it looks about right where it is.

The rear end has no adjustment for toe-in, it is set at 3mm inside the front tyre, when measured with a straight edge against the rear wheel. There are three positions of the upper arm and two on the lower to make a total of six camber "rate of change" selections. Static camber is adjusted by a turnbuckle and the shock has two upper and two lower options to alter ride height and shock angle. On top of all this the battery compartment can be moved by13mm which doesn't sound a lot but it changes the weight distribution from 1.2:1 (rearwards) then in the forward holes to 1.3:1 in the aft position. A total weight transfer of:- 680g:820g to 650g:850g some 30g to play with that should not be sniffed at for it will undoubtedly affect the "steering".

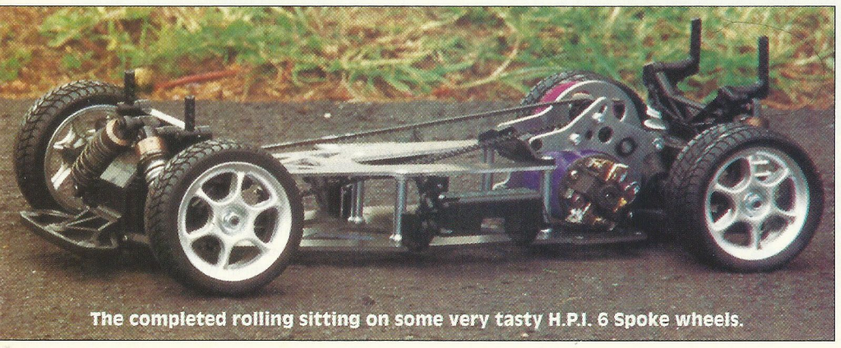
These should be more than enough options for you to tune the chassis into just about any track. just make sure you change one thing at a time so as not to overdo it ! The addition of a slipper clutch is a definite advantage on damp or dusty surfaces, so much an advantage that it must be removed to comply with BRCA rules, but you should find it a useful gadget at club circuit where they are not so tight on rules and regulations.

The Mercedes Saloon shell is beautifully detailed and all body edge and wheel arches lines are moulded in to take the guess work out of trimming but strangely they choose not to point out where the body mounting holes should appear to guarantee the wheels arriving central to the predetermined arches. Mark these out before you spray the body or it could all go horribly wrong. To make it stand out from the crowd whilst remaining as realistic as possible I added a little metal flake to the silver paint for that extra sparkle, then after spraying the body shell I used the drying time to cut out the comprehensive sticker sheet. It will take you about 3/4 of an hour because everything is here leaving nothing but the windows to mask. Windscreen wipers, lights and fuel cap are all beautifully elaborate, but to include tailored window edging in black is a little excessive, if slightly tidier than marker pen outlines. Try and organise the aerial wire around a flat card type rather than up the usual tube for a much more authentic result. These scale cars really are petite and the sight of a fluorescent yellow aerial tube can nullify the hours of hard work indulged.

In your hands you now have a fully equipped racing car, to use and abuse as you desire with plenty of set-up options (a plethora of after market up grades are listed as well) and if you check out the set up sheet included you will soon learn the value and effect of each of the adjustments available. The car looks built for the rough and tumble that comes with this class yet retains a well thought out, tidy construction especially in the narrow format, when all the M4 turn buckles are at their shortest, hence strongest configuration.

You should feel proud of your assembly and respect the vehicle accordingly by using it to full effect.

Go wipe the smiles off the established front runners in your neighbourhood. The RS4 is up for it. are you ?



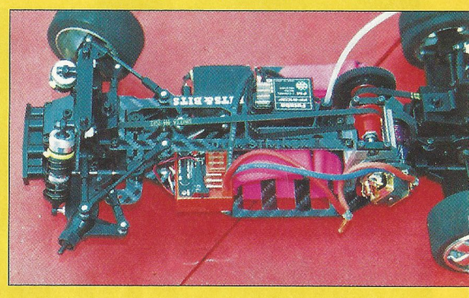
The completed rolling sitting on some very tasty H.P.I. 6 Spoke wheels.

QUICK SPEC

4WD. Rear Gear Drive, Front Belt Drive. Adjustable Ball Diffs. Bushed. U/J Driveshafts. Glass-fibre chassis and top plate. Alloy motor mount. Independent suspension. Top link and bottom wishbone. Coil-over oil filled shock absorbers. Multi-spoke wheels. Pattered Radial tyres.

THE TESTERS KIT

SERVO:-	Futaba 148 (standard)
RECEIVER:-	Futaba Attack
SPEED CONT:-	Nosram PDQ
CELLS:-	Unknow 1700 SCRC
MOTOR:-	ARS 12D
TYRES:-	Kit Radial H.P.I. Super Soft Radials
BODYSHELL:-	H.P.I. "C" Class Mercedes



The revised chassis lay-out showing the new front wishbones.

DTM Striker "Evo 2"

BY RUSS GILES

It only seems like yesterday that I was sat at this computer writing the review for the original Ml Racing DTM Striker. Whilst however Schumacher are just releasing their new SST, such is the pace of progress with the fast growing Scale Saloon Class that M1 Racing have been hard at work to develop their new "Evo" of their car incorporating many improvements to an already good design of car, the old car already having had many successes in the RRC On road series .

For those of you that are unfamiliar with the car I will give a quick recap of the cars impressive standard specification. It has a high efficiency adjustable Kevlar belt drive with full time 4WD and ball differentials front and rear, power is transmitted to the wheels through driveshafts with outboard universal joints, the car is fully ballraced. This all sits on a rigid twin deck carbon fibre reinforced chassis with double wishbone suspension all round, operating oil filled dampers with coil springs .

What's new then ?

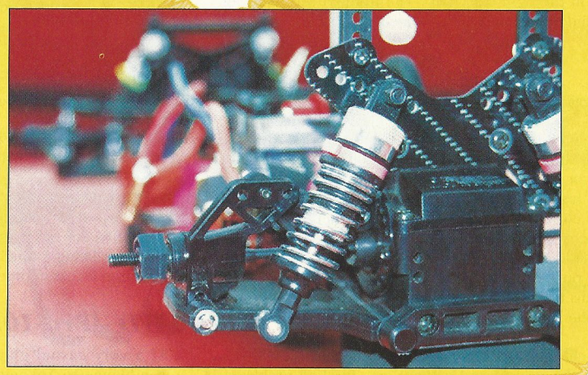
The main changes that have been made to the car centre around the suspension, this car has always been fast in a straight line, so Ml decided that the best place to improve the performance was to make it go round corners quicker, there is a completely new front suspension layout with new wishbones top and bottom and a new front upright, the front end is now fully adjustable for camber, caster and toe in, with a simple tweak of the correct tie rod . The wishbones are also beefed up quite a bit, to improve rigidity and also stop the breakage's that some people experienced with the old car in cold weather . The geometry has been looked at, and now includes active caster to improve the steering characteristics .

There have also been changes to the rear suspension, with new stronger wishbones and revised uprights that give a little toe in to add to the cars stability on the power .

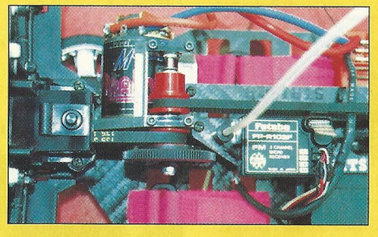
The biggest improvement in my eyes is the changed driveshafts and stub axles that allow the fitting of the standard hex fitting type of wheel .This now means that all the major manufacturers of scale saloons all use the same wheel fitting . Hooray ! standardisation at last !

The rest of the car is pretty much unchanged . (If it a'int Broke, don't fix it !) for the owners of the older type of car there is to be an update kit to bring the car up to the very latest spec. which knowing M1 will be at a very competitive cost .

When the DTM Striker was first released the rules for the class were still in their infancy and some confusion existed as to the cars legality, this has been completely laid to rest with the new car which now conforms to EFRA and BRCA rules .

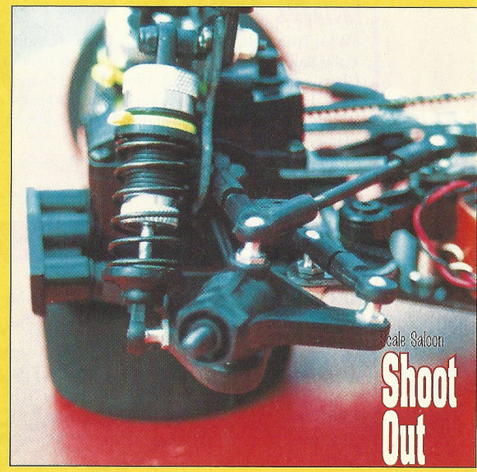


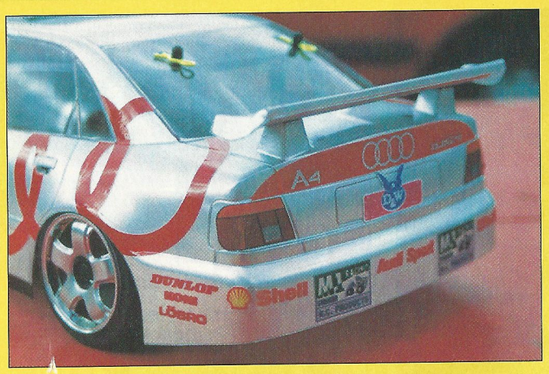
The latest rear uprights. The rear geometry is fully adjustable.



Corally motor and the "One-way" layshaft.

Close-up of the new "bits", wishbone, wheel adapter, and steering block.





Yokomo YR-F2

BY CHRIS DEAKIN

Front suspension detail. The push-rod from the lower wishbone can be clearly seen.

Having seen the photographs of the F2 in Race Cars Nurnberg 96 report, I was really looking forward to reviewing the car. The F2 breaks new ground in Scale Saloon design and layout, the suspension being a totally new concept not just in Scale Saloons but in any class of model car in production at present.

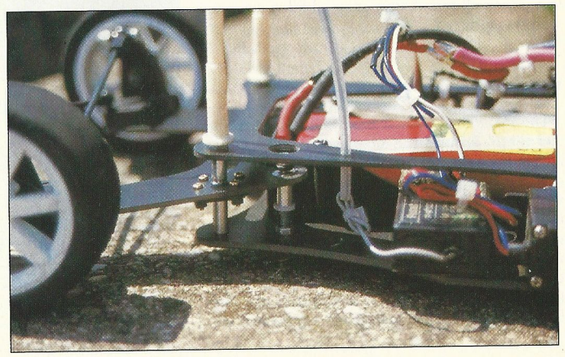
FWD - Pro-10?

At a very casual glance the F2 seems to carry more than passing resemblance to Yokomo's World Championship winning Pro-10 car the YRX, this is definitely not the case. The F2 carries over no parts from the YRX and in fact a part from a few of the YR4 transmission and suspension parts the F2 is a completely new car.

Let's Take a Look

The heart of the F2 is a three-quarter length black fibreglass chassis, as per normal Yok practice all screw holes being countersunk. Alone the

Rear suspension "sliding pillar".



There's Not much to do !

The car I have to review here is the first in the country and was hurriedly delivered to 'Kits and Bits' in Coventry for me to join in the fun at the RRC Touring Car Shoot-out at the Ashby circuit . Like the production cars, mine came fully assembled and only required the installation of electric's to make it a runner . As with all scale saloons space for a decent servo, speed controller and receiver is at a premium and careful installation is required to ensure the drive belt is well clear of all the bits . I fitted the car with a Novak MIC speed-controller, Futaba 9401 steering servo, Futaba 103F Receiver a Corally 12 double motor and some old SCRC batteries of unknown origin .

As I would with any car that has been factory assembled, I gave the Striker a quick once over to check that everything was tight and that all the wheels are pointing in the right direction ! The front wheels were set with 2 degrees camber and no toe in, the rear wheels were again set with 2 degrees camber .

Is it fast mister ?

As soon as I had completed the first flying laps with the new car I knew that M1 had not been wasting their time, it was a definite improvement, the handling seemed to be there straight out of the box with a stable feel to it but without lots of understeer, the overall balance being better than that I remember of the old car . The only time that it could be made to misbehave was on the entry into corners where, if given some provocation, It could get a little unstable and start to loose the back end . This may be in some part due to the presence of a one way bearing in the drive to the front wheels which means the rear wheels are doing all the braking, some drivers seem to prefer the handling of their scale saloons without the one way operating .

One thing that hasn't changed is the straight line performance, it is still fantastically quick down the straight and without any duration problems, even with old batteries !

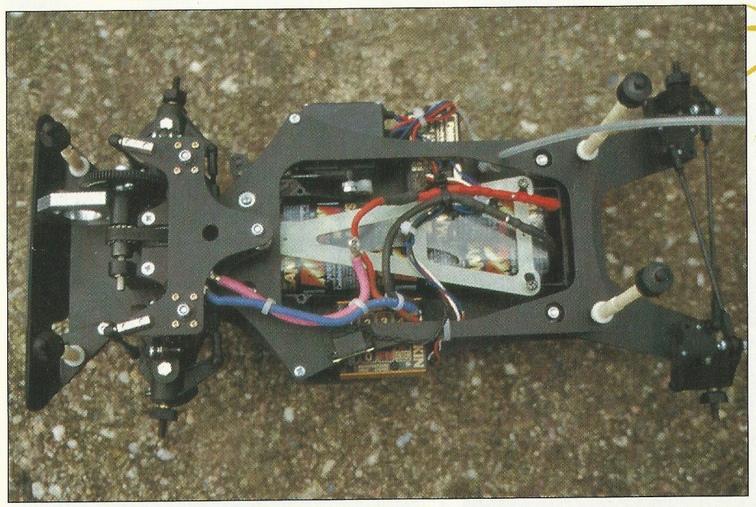
The latest Evo 2 and all the M1 Racing range can be found at Kits & Bits Brandon, Coventry. r.r.p. £199.99

QUICK SPEC

4WD. Twin Belt Drive. One-way Layshaft. Adjustable Ball Diffs. Fully Ballraced. U/J Drive-shafts. Carbon Reinforced Glass Fibre Chassis and Top Plate. Cast Alloy Motor Mount. Transverse Stick Pack. Independent Suspension. Front Unequal Length Double Wishbone. Rear Top Link and Bottom Wishbone. Oil Filled Dampers.
Multi-spoke Wheels. Foam Tyres (Blues)

THE TESTERS KIT

SERVO:-	Futaba 9401
RECEIVER:-	Futaba 103F 40 Meg Micro
SPEEDO:-	Novak M1C
CELLS:-	Unknown (old)
MOTOR:-	Corally 12D
BODYSHELLS:-	Parma Audi A4 Quattro, Frewer BMW 318
TYRES:-	Tamiya Super Softs (Rubber) M1 Blues. Kit (Foams)



The completed rolling chassis.

Right: The rear uprights and transverse links.

chassis is quite flexible, but once the upper deck is fitted it almost gives a monocoque like chassis (box) which is very stiff.

The front suspension/transmission centres around a very simply belt driven two shaft drive unit, this is about as simple as it gets, no lay shaft, idler gears etc. The main diff coming from the YR4. This is suspended between two side mounting plates, which is braced by the thick alloy motor mount and a glass fibre top plate.

The actual front corners are all YR4 parts: ie the bottom wishbones, hub carrier, steering blocks and U/J driveshafts. They all mount to the main chassis plate via a small mounting block/pivot point which is doweled to the chassis, no slop and perfect alignment. Now this is where things get very clever, with most "standard" FWD/4WD layouts, you have springs, shocks and probably some form of anti-roll bar. Not the F2, from a ball joint on the bottom wishbone a Formula One style pushrod goes up to a flat plate mounted above the diff housing, this glass fibre plate also traps a single coil at its rear. Where the plate mounts to the diff housing, 1/12 type pivot balls locate on the two fixing studs. This allows the plate to rock fore-aft.

So the plate acts as three separate components.

1 A flat "leaf" spring - compressing the single coil spring.

2 A friction damper - by flexing between the pivots.

3 An anti-roll bar - by connecting both front wheels.

This makes for a very uncomplicated and very uncluttered layout, which is also very light. By adjusting the pushrod lengths and thus the loads on the spring plate, the handling of the car can be changed very simply.

Wacky Racer

An Even Simpler Rear

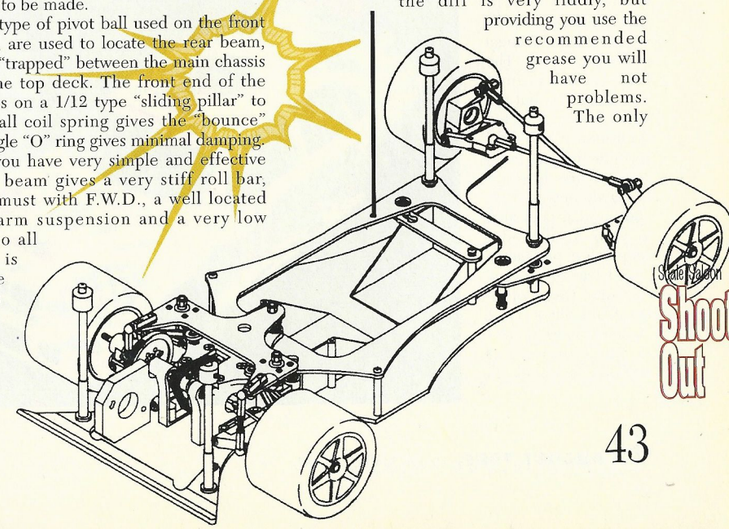
The rear suspension again is also very new and inventive, and very simple. A single glass fibre rear beam/anti-roll bar connects the two rear hub carriers., these are from the YR4. Two transverse control rods act as top arms, which again are adjustable, which allows camber adjustments to be made.

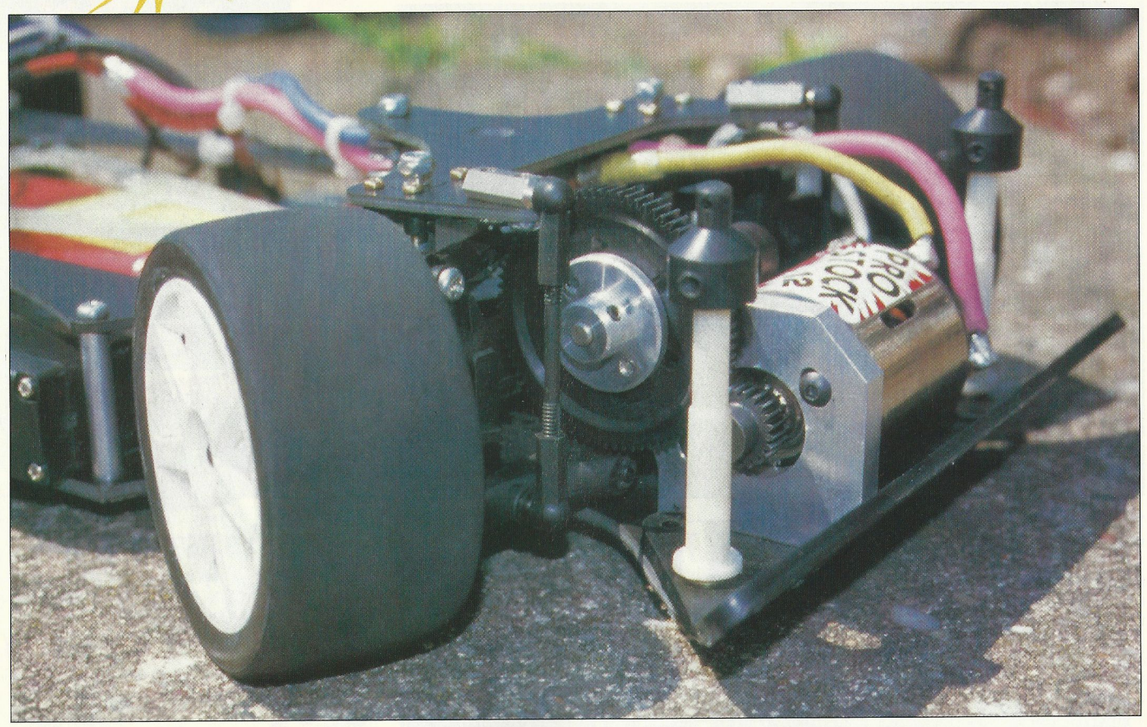
The same type of pivot ball used on the front spring plate, are used to locate the rear beam, these being "trapped" between the main chassis plate and the top deck. The front end of the beam locates on a 1/12 type "sliding pillar" to which a small coil spring gives the "bounce" factor. A single "O" ring gives minimal damping.

So again you have very simple and effective layout, the beam gives a very stiff roll bar, which is a must with F.W.D., a well located "trailing" arm suspension and a very low weight. Also all the weight is low in the chassis which will give a bonus in handling.

Construction

Although at first when looking at the instructions, the build looks quite complicated. This is not the case. The normal Yokomo "Japlish" instructions and the quality of manufacture and fit, makes this car very quick to build. Just follow the pictures. No filing or fettling being required. As per its 4WD brothers, the thrust bearing for the diff is very fiddly, but providing you use the recommended grease you will have not problems. The only





Alloy motor, some very grippy slick tyres and "that" motor.

other "tip" I can pass on is to lube the metal bushing with light machine oil, rather than grease, as this gives a lot less drag.

Radio and Racing

As the F2 is very light, heavy weight radio gear was the order of the day, a metal geared KO1002 Fet servo taking the steering load, 40 meg Futaba receiver and my trusty Tekin 410 K2 speedo. As C.M.L.s own race series is about to happen, I fitted the F2 with a Yokomo Touring Car Pro Stock 12 motor (legal for the C.M.L. series). Also as Yokomo sell the car without a bodyshell a Racecraft "C" class Merc was acquired. A few words on shells, the F2 has a slightly longer wheelbase than most of the current Scale Saloons, so shells with pre-formed wheel arches may not fit. The front bumper to front arch seems ok, but the rear arches may be too far forward. I would recommend you build your car first, leave off the body post and try your chosen bodyshell at your local model shop before purchase.

As I had the review car some time before the Ashby Shoot-out, I decided to race the car at RRCs round 2 at Stafford. As the car in kit form comes with rubber tyres on 1" and 1.2" Ifmar legal rims and the Race Car series runs on foams, I fitted a set of Fastrack wheel adaptors so I could fit Tamiya pattern 1" wide wheels and foam tyres.

Other than the foams the car ran kit standard, and boy was it fun. On untreated Jaco Greens the car was so easy to drive. As you would expect with FWD, under power the car understeered , but a slight lift off would bring the tail round, then it was back on the power. Although not having the ultimate traction of the 4WD cars it was still very nimble on the tighter parts of Stafford's track. The Pro Stock motor was also very quick, using the kit gearing (all I had got) and quite old 1700 SCRs, I was passing many cars on the straight, cars that had fully blown £50 modifieds (Pro Stocks cost £19.95). At the end of the day I qualified 17th overall, 13 4WDs behind me, and 4th in the "B" final, after a very bad start which left me dead last, was a very good result.

Conclusion

If you fancy something completely different, almost "wacky racer". Which builds well, handles well and costs very little then this is the car for you. Maybe not having the ultimate grip of the 4WD cars, but with the lower weight and higher top speed this could be an overall winner in the right hands.

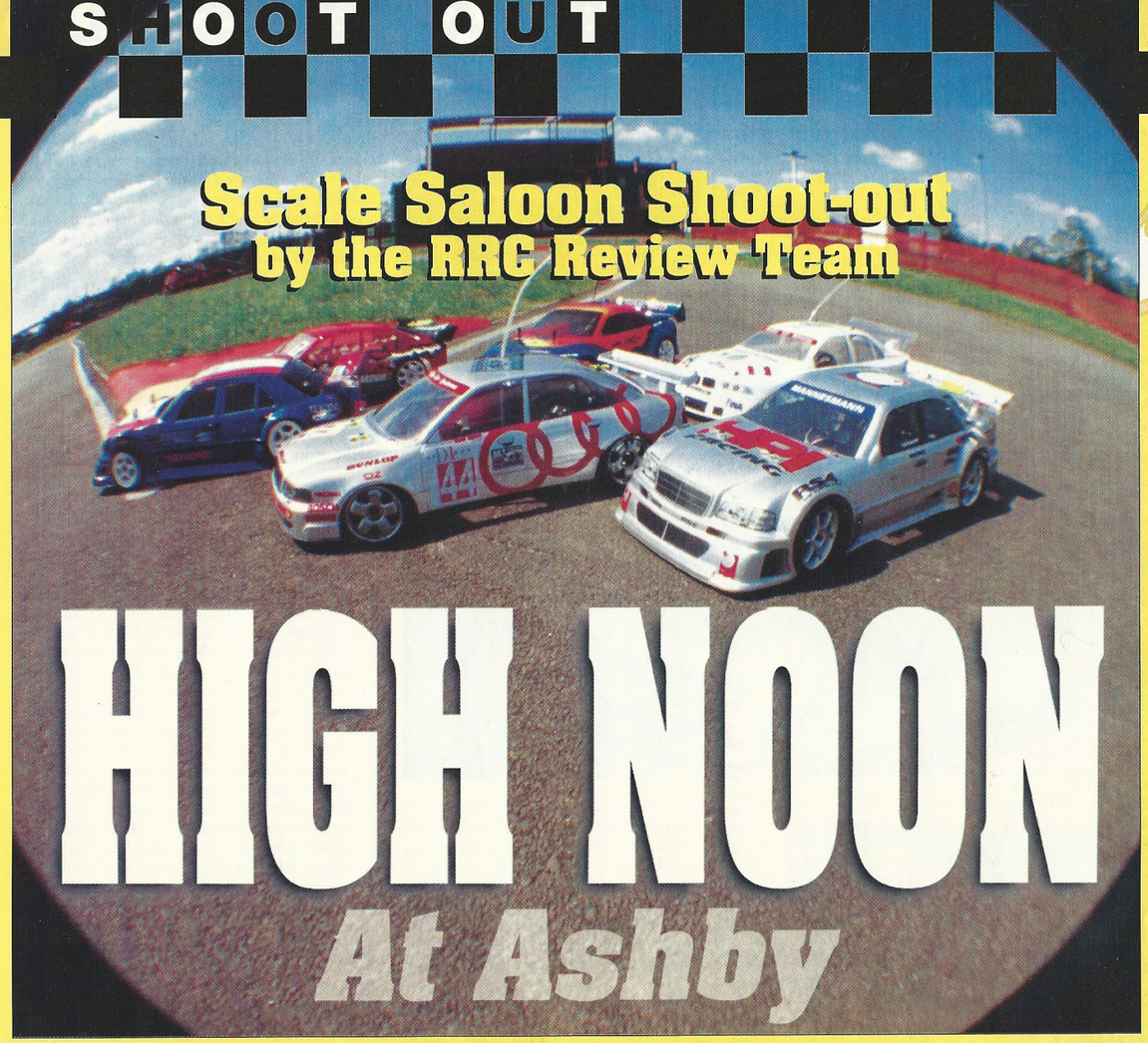
Available from most forward thing model shops. rrp £115 .00

QUICK SPEC

2WD. Belt drive. Adjustable ball diff. Metal bushings. U/J driveshafts.
Double deck fibreglass chassis. Alloy motor mount. In-line stick pack.
Independent suspension. Pushrod operated "flat" plate spring. Rear trailing arms/integral anti roll bar. Coil springs. Multi-spoke wheels. Radial slick tyres. Foam inserts.

THE TESTERS KIT

Servo:-	KO1002 Fet
Receiver:-	Futaba 40 meg
Speed Cont:-	Tekin 410 K2
Cells:-	Yokomo Pro Stock 12
Bodyshells:-	Racecraft "C" Class. BMW 318 iLS.
Tyres:-	Kit Hot laps (Rubber) Jaco Greens/ Blues (Foams)



Scale Saloon Shoot-out
by the RRC Review Team

HIGH NOON
At Ashby

Having spent many long nights wrestling with their respective review kits, the RRC display, sorry review team dragged their drawn frames to the Ashby Woulds circuit. High noon was approaching. Ashby was chosen for the Shoot-out for many reasons, mainly because it has such a range of different corners and good grip. Cars that "work" at Ashby normally handle well at other tracks. This can be confirmed by the amount of manufacturer testing done at Ashby. Anyway, back to the plan, as the Team had now woke up. The plan was for them each to track test their own review cars, then swap with their fellow testers. So everybody could get an opinion on each car. It nearly worked as well, the plans of "mice and men"etc. Due to various unforeseen problems, mostly immovable objects appearing as if by magic, not all of the cars performed as they should, anyway I shall leave the Testers to tell their tales. Over to you Mike.

MIKE HASWELL
(Review kit - Predator DTM)

All of the cars have their plus and minus points and at the end of the day price and personal preference will always win out. On price Yokomo wins with their YR4 Sport and the front-wheel drive

YRF-2, although neither of them are ball-raced At the top end of the

price range you have the two graphite YR-4's the SP and MC-against the Tenth Technology DTM which is now available in a tear-down version (fully ball-raced but no body or wheels). The HPI, M1 and the Schumacher fall between the others, the HPI having a slipper clutch but no bearings (the slipper is not allowed for competition use and bearings would have been more preferable) and the Schumacher

does have bearings on the layshaft, with the bearing kit being relatively inexpensive. The Schumacher, Yokomo and

Tenth Tech cars also have better support from the shops and the SST and DTM get additional points for being British.

Having reviewed and raced the Tenth Tech DTM over the winter it didn't take much to get it going at Ashby. First run out on foams was fine, although the track was a bit dusty. At the Ed's behest we all then agreed to run on slicks (moulded rubber tyres) to get a better comparison between the cars. For me this meant changing the front springs back to the kit black ones. Next time out saw the car gripping alright but understeering. This was cured by moving the front push-rods to the forward position and I was left with a faint amount of understeer, which given a bit more time could have been dialed-out. I felt it was quicker than the other cars, Dez was able to hussle the HPI through the corners better, but part of that was down to the wider rear tyres (the HPI radials work very well)

He was suffering on duration due to the car not being fully ball-raced. The YR4 went well but I think that the old shocks were better as they had greater volume than the newer, narrower versions, a number of drivers have changed their shocks on the new car. The Schumacher is still pretty new and needs a little run time on it and considering it is the latest car out, it isn't any better than the rest at present. The Yokomo YRF2, front-wheel drive, was kitted out on blue foams a Yokomo 12 turn Pro-stock motor went really well. Alright it didn't have the traction of the 4wd cars out of the slower corners and the backend tends to flap around a bit (some damping wouldn't go amiss), but it was easy to drive and great fun.

So if you are looking at serious competition racing then I would have to say go for either the Yokomo with a change of shocks or the Tenth Tech DTM which is very adjustable. If you not an experienced racer or aren't confident in your set-up abilities then the Yokomo

would be slightly better as there is less to get wrong. A fully kitted H.P.I would also be worth considering as Chris Wilkinson has had some good results in the BTCC with his.

On the other hand if you are just starting out and on a budget then the YRF2 is a good bet on the

cost front and it won't be hard on cells for duration. If you want 4wd then go for the Yokomo Sport as it can always be upgrade to full spec at a later date. Over to you Steve.

STEVE ROUSE
(Review kit - Schumacher SST 2000)

As my time was a little tight before RRC's Shoot-out, In the first part of the Schumacher review I didn't quite finish the car off, so before I could carry out a track test, the electrical equipment had to be fitted, due to the large amount of space in the modern scale saloon, no problems were encountered. Thoughtfully, Schumacher supplies an extra radio plate which can be bolted to the chassis behind the cells, upon which any large receivers may be mounted. In order that novices may be tempted into buying a Schney, the chassis accepts standard stick pack cells which is lucky for me as all of my packs are in stick form for my F-1, and my M-chassis...

Right, with everything firmly bolted down it was time to carry out a systems check; in the local park, after a little rain. 'Fast, isn't it?,' said one of my house-mates as the car took off down the path, minus bodyshell. After a quick spin the car was given a full throttle pass: the combination of wet tarmac, a few stones, a twelve triple, and kit rubber tyres meant that there was a big sideways moment followed by a large CRACK as the car hit the wall. Hard. Result, a broken inner top-link mount, which was pretty lucky really. The biggest dent was to my pride. Pillock. A quick 'phone call to Tim Walden resulted in further humiliation as apparently the test team never broke this particular component during many thousands of laps testing, but a new one arrived by return of post.

This delay affected an already tight time scale and meant that I arrived at the RRC shoot-out in a somewhat ill prepared state; and it showed. On the morning of the test I received a set-up sheet from the Schumacher team for the Aldershot track which gave me a few ideas, but the car was still a handful and I left with a slightly puzzled brain. Hmmm. Time for a little serious thought and a lot of serious testing. One major encouragement though: a serious amount of acceleration and top speed.

There appears to be a slightly different technique with regard to the setting up of the dampers on a scale saloon, when compared to a wide saloon: something to do with the leverage of the shorter wishbones. This means that the dampers should be set-up fairly soft. This is, however, just my personal approach, so don't treat it as gospel. The chassis was then lowered by adjusting the bump-stops to a much more appropriate height: this had the effect of lowering the roll centre to increase the available grip, though obviously if the car runs too low the grip level will reduce. It worried me that the springs were subject to pre-load even at full droop, so this effect was reduced to an acceptable level by removing a portion of the shock absorber ball joint to allow the spring to e seated lower. Right, time to hit the track.

Bedworth Track Test

I decided to run the car to the new British Touring Car rules, and as such I had a few sets of the rubber control tyres, equipped with different compound inserts. The first run saw a huge amount of oversteer as the car slid from corner to corner, slow but fun. As the afternoon wore on, the car was dragged up by its boot laces until I was suitably impressed by the cornering performance: the combined talents of three Auto Engineering students obviously paying dividends. The car was equipped with the ballrace kit and the front anti-roll bar from the Speed Secrets range, but other than that it was completely standard. The first real test was provided by the appearance of another belt driven 4WD scale saloon from a different manufacturer. Even on foam tyres against the rubber of the Schuey, I was able to lap consistently quicker; quite impressive. As it stood, the only aspect of the car that still puzzled me was the small amount of high speed oversteer, but this can be explained. The rubber tyres quite obviously are not in possession of the grip exhibited by a set of additive equipped foams, and allied to this the wing on the standard Parma bodyshell does not appear to offer sufficient down force, (or should that be drag?), at high speed. Schumacher/BRCA rules do allow the driver to construct a wing of his own design, albeit to a set of given dimensions, and I for one will be building a proper negative lift wing to generate some real down force.

One item that cannot be recommended too highly is a motor heat sink. The motor became very hot during testing and, at the least, the Schumacher 'bolt-on' heat sink should be fitted, to improve the running efficiency. Though even with this hiccough a good seven minutes was observed on my final run of the day, which looked good to.

Eurther to the new Schumacher/BRCA British Touring Car Championship, I understand that many people are rather sceptical about rejecting foams for these rather slippy rubber tyres. Having tried them once, some people have thrown their hands up in horror and vowed 'never again'. Well personally I am all in favour of any thing that reduces the costs of competing, and these tyres undeniably do that. Not only are the tyres cheap, £10 per set for championship competitors, but the inability to go at full attack around all corners means that battery life is also increased, reducing the need for top draw cells. And if you think that the handling is not so good, remember that these tyres have different characteristics to foams, and the set-up of the car must change accordingly.

In conclusion, the car will undeniably become a proven winner over the approaching summer. After all, Schumacher will not let it be anything less: and it is this level of commitment that in stills me with great confidence. It has, after all, tempted me to race in something other than the Eurocup this year, so I must be enjoying it...over to you Russ.

RUSS GILES
(Review kit - MI Striker Evo 2)

The car was given its first run with moulded rubber tyres at the request of the Ed. I was pleasantly surprised at the level of grip available and the handling balance achieved with these tyres, as they have a reputation in some circles as being a very poor second to foam tyres . Whilst the ultimate grip is not there I believe that the Europeans may be right in making the scale saloons a moulded tyre only formula . I then tried it with the kit foam tyres and this just made things even better, with excellent steering response and even more confidence inspiring grip . The best thing however was the difference in handling between foam and rubber tyres was relatively small this seems to indicate to me that the chassis is pretty much well sorted. Overall I was very impressed with the new car, the effort that MI have put in has not been wasted, they seem to have the commitment to keep themselves at the forefront of this exciting new class and hope they have every success . As for the other cars I tried, I found the Yokomo F2 to be the most fun, although being FWD, and maybe lacking the ultimate grip of 4WD, it handled really well, if a little bouncy. The Predator, H.P.I. and Yokomo YR4 all seemed very evenly matched performance wise, all being very quick. Cost and back-up, I think would have to be the final decider. Your turn Dez.

DEZ CHAND
(Review kit - HPI RS4)

First time out this car handled very well, no oversteer, no understeer either, and with the ARS12 Double , using the kit gearing of 27mm/rev it was not the slowest car out there by a long way.

Being a basic kit, the bushings took their toll on overall duration, but didn't appear to hamper speed at all. When you consider that everything was assembled as per the instructions and had no tweeks or attention lavished upon it at all, I would say this was going to be a very dangerous car, for the opposition. The weight is smack on the limit, nothing to add, nothing to lose and the kit supplied moulded grooved tyres suited the abrasive Ashby excellently. If anything, it could use a little more damping than standard to cope with the ripples after the "alpine drop" but it never got out of shape once. This would indicate that it is set up too moderately but without lap times to compare it is hard say. Being easy to drive means anybody can go well straight out of the box by making less mistakes thanks to its forgiving nature. By tuning the suspension, particularly the front, to increase grip to the point of oversteer then backing off slightly should improve the pace a bit but only track time and race experience will help you there.

Predator

As set up for the immortal hands of the likes of Richmond Rogers, the Predator looks most ungainly with the bodyshell removed. With geometry to scare the most experienced of campaigners, yet it all works out beautifully on the track. With the toe-out on the front and buckets of toe-in on the rear it points into a corner like a woman at a chocolate shop, yet the rear end follows around albeit slightly sideways and the straight line stability is only matched by its outright speed. Being shaft drive it has no inherent drag in the drive line, no belt tensioners or guides so that with the motor out of mesh it would happily roll down Ashby straight towards race control were most belt drives would stop at the bottom of the banked corner used to launch it. Efficiency equates to duration and top end speed and as driven round Ashby it still had some of its big brothers unfair advantage but as no one was counting the laps we all concentrated instead on emulating the rear thing and maxed out on door handling, grip rolling and 'T' boning.

M1

The M1 did look controllably quick but then so does every car I have seen "Referee" Giles drive.

It was definitely the lightest car of the bunch by a long way and the difference was obvious in the corner exit punch available. I didn't get to drive it but from the poke and prod session I'd say it was definite improvement over last years car, with more tuneable options and a better thought out chassis.

Yokomo 4WD

The Yokomo YR4 I had seen running previously at Stafford and it did a mighty job of demolishing the competition in Jason Varley's capable hands. The shock absorbers in the top deck is a puzzling addition, I thought that a stiff chassis and suspension did all the work, but what do I know! It seemed to work so I guess "you learn something new every day" still stands.

Yokomo FWD

The Yokomo front wheel drive did look twitchy. It had to be, every other FWD I have driven has suffered mind numbing understeer on or off the throttle. Not so Yoko! With its quite unique "suspension" and chassis (where does one end and the other begin?), it turned in and came out on fire yet handled the long sweeper equally well. Most peculiar. I could not run one of this at the same meeting as my Formula One or Saloon because the driving style is so far removed it would fry my brain (yes it's limited I'm only human). Definitely a bargain buy. It's so fast it must be illegal. It's all yours Chris.

CHRIS DEAKIN
(Review kits - Yokomo YR4 MC & YR F2)

Having two cars to run did give me quite a headache and somewhat reduced track time, but with a little help from the "team", both track tests were completed:- YR4 MC

My first run was on the some what strange kit rubber tyres. To my great surprise the combination of P3 fronts and slick rears worked really well, I'd got grip. The narrower fronts giving a good level of steering, but not oversteer. Straight from the box the balance was brilliant. With the Merc shell fitted I did feel I had a little to much high speed steering. By changing to a flatter fronted Frewer BMW shell this was cured. Bodyshells do make a difference, a useful tuning aid.

Changing to foam tyres for my second run, did unbalance the car very slightly, slow speed turn-in oversteer had set in, a very common scale saloon trait. By softening the rear dampers and stiffening the "roll control" damper the balance returned very quickly. Although the Reedy motor was some what undergeared, I fell the MC was just as quick as the other cars, having sharp steering and good grip. Setting-up the car proving to be very simple. My reservations about the low volume shocks being unfounded.

YR-F2

As I had run and raced the F2 before the Ashby test and as the F2 has so few set-up adjustments, it was a simple case of charge nicads and run.....

The more I drive the F2 the more I love it, the car is just simply fun, with a capital F. Running completely as kit, tyres etc, it performed like it had just won a World Championship. The traction was not as good as the 4wd'ers, but this car has hidden depths. A real budget racer.

Due to the time taken running the two Yoko's I only got a short run with the other cars. The Pred undoubtedly has a mechanical advantage with it's transmission, the low speed acceleration was very impressive, also the car is very adjustable, maybe to adjustable for a beginner?. The H.P.I. was smooth and easy to drive, giving the driver a lot of confidence to attack the bends. I only had a few laps with the M1, first impression suggested the Evo2 is an improvement over the old car, know to be fast in a straight line, the cars also now goes round corners.

The Editors View

Having built, tested and tuned all the review cars. Several points must be made. Firstly, rubber tyres, like all of the team I was some what sceptical about their performance, or their lack of. We were all wrong, Rubber Tyres are here and here to stay. Like all forms of tyres some work better than others, but already a "data" base of compounds is already appearing, so racers will not need a great stock of tyres . Although the initial cost of the tyres maybe higher, several factors are in their favour, wear compared to foams is minimal, grip levels stay more consistent and because of the two afore mentioned points they will last longer, so the costs will be lower in a racing season. Secondly, the cars, all though different, some more than others all performed very well and very closely, the message here I think is clear, it not so much the car as the set-up that is important. With all the cars being so evenly matched, the only way to get an edge is to "tweek" your car better than the opposition. All the cars carry the facility to be adjusted. Either as standard or in the option list. Ultimately the choice of car will be purely a personal thing. All the cars we have featured are winners, now and in the future.

Radio Race Car International

CAR OF THE DAY

By a unanimous decision the Team award goes to the Yokomo YR-F2. Everybody who drove the car was amazed by it's performance. Maybe not the fastest or best handling on the day. The value for money and performance is outstanding, and one lucky reader will find out for his/herself. In next months RRC, with thanks to CML, the Yokomo distributors, the review F2 will be the prize in our readers competition, complete with a Frewer Alfa 155 bodyshell, superbly painted by Dave Designs. All in the September edition.