



Model Cars graphic designer Michelle Bardsley brings a touch of colour to this month's buggy review.



Pete Winton revisits the long awaited revised Schumacher 'CAT'

# CAT *revisited*

TRACK TEST

## CAT 'O Nine Tails

In olden times, when men was men and scurvy rules the high seas along with 'Blackbeard the Pirate,' recalcitrant sailors and other vagabonds received punishment by lashes with the rather gruesome 'Cat 'o Nine Tails'. This whip had nine leather thongs, each knotted at the end, and inflicted serious wounds on the poor recipient. Thankfully those days of overt flogging are gone, but Cecil Schumacher felt they had returned covertly when Geoff Driver's review of the Schumacher 1/10th 'CAT'

appeared earlier this year — it received a bit of a flogging! Geoff called it as he saw it, his analysis has not proved too wide of the mark, judging from the words and deeds of the recalcitrant sailors and other vagabonds received punishment by lashes with the rather gruesome 'Cat 'o Nine Tails'. This whip had nine leather thongs, each knotted at the end, and inflicted serious wounds on the poor recipient. Thankfully those days of overt flogging are gone, but Cecil Schumacher felt they had returned covertly when Geoff Driver's review of the Schumacher 1/10th 'CAT'

image. The car is easier to set up and drive, and the revised suspension geometry appears to have removed most of the car's wayward behaviour at speed, witness the third place at the recent BRCA Bolton National by Glyn Pegler, beating Andy Dobson on this occasion.

However, we shall see what has been done to improve the building of the car!!

### Suspension Modifications

There are some major modifications to the suspension. The geometry has

been changed to rid the car of its excessive camber change during roll. The front wishbones are strengthened and feature new revised shock locations. At the rear there are new top wishbones again with revised pick-up points. The rear wishbones have been canted over on the inner pick-up to induce a degree of anti-squat to the rear end. Broadly, anti-squat is a term used to describe the suspensions ability to resist deflection when the car accelerates, and is fitted to many road cars, notably the new Jaguar 'XJ40'. This keeps the car more level aiding control of the body by the suspension.

Schumacher have added a number of tune-up items for the 'CAT', which are to be standard in some cases. A long wheelbase kit consisting of main drive belt, top and bottom chassis plate, undertray, body, and belt covers are available to lengthen the wheelbase by the 25mm. Cars with a longer wheelbase are normally more stable, and ride undulations better. (I hesitate to use the word bumps since UK buggy track designers seem to think that unless a bump is half the height of the Empire State Building, it is not worth including. It may one day dawn on these people that nice tracks with raceable features

attract more drivers, see Chesham Buggy Club for details!) To go with your longer wheelbase, Schumacher can now offer a differential for the front axle. Based on the tried and tested 'ball and thrust race' design, this item is a direct replacement for the existing pulley and one way clutches.

The excellent 'CAT XL' driveshfts (how long will it be before this idea is available as an add-on to other kits?) can now be fitted to the front axle with one-way roller clutches, giving a freewheel effect to the front wheels should their effort not be required. This increases straight line speed, and

removes braking effect from the front wheels. RCMC's kit was built to long wheelbase format with front differential and roller clutch driveshfts. The reasoning was twofold. Firstly it more closely matches the specification of the highly successful PB 'Mini-Mustang', and secondly it was a known quantity which had been used to good effect in the recent Bolton National.

Leaving aside the 'box is wonderful, look at all those bags' bit which Geoff Driver adequately covered in the first review, the first item of previous criticism was the instructions. There are new

ones which do improve on the original. One can now build the car from the book, but it still helps if one is already a buggy racer, or if one is technically minded. The transmission gives a problem, being unlike anything else on the market one has no inkling of the required result, and some details have to be worked out from the photo's and bits.

### Transmission Improvements

Improvements in the transmission too, the integrator now has a proper thrust





washer instead of relying on the small ball-bearing to take all the side loads. When bearings are this small, it might appear the taking side loads is OK, but the rigours of off-road racing have taken many people by surprise. No doubt that the thrust washer will do the job. Changes to the rear bearing eccentrics allow a fully assembled Integrator to be fitted in one piece, a great improvement.

Once everything is in position, setting the whole gearbox to give free movement is not a problem. The rest is straightforward if a trifle fiddly, patience and a few dummy runs with the front end and each wheel assembly pay off. Technically the car is good. Massive double-sealed hub bearings, internal wheel stone guards, adjustable ball joints, bulletproof drive-shafts, strong plastic parts, and that unique all enveloping bodyshell/undertray. The steering assembly has been modified to use proper pivots, this is now much freer and removes any play in the linkages caused by use of 3mm bolts in the early kits.

The quality of the mouldings is really quite good. There is little flash, such as there is being confined to small holes, and easily removed. The parts are slightly better in most respects than other UK kits (which one pray!!). I do prefer PB's Posidrive screws, easier

to use, and safer on the hands.

Thank goodness the front and rear anti-roll bars are now bent for you, no more guesswork or failure here. Before we wipe the 'CAT's' back with the whip again, let's say that this is a competition car, it pretends nothing else. No-one in their right mind would expect to have such a car fall together like a Tamiya kit and get such reliability and performance. I think Schumacher have aimed this car at the serious competitor, in this mode it must be built by the serious minded. But on the track it outscored the others on reliability and performance. One should buy something that fits one's needs.

Having built the car, it was fitted with 'BELRAY' oil in the dampers, standard springs, no rear anti-roll bar. This latter was a crib from the cars seen running locally to good effect. Motor: a Twister '25 turn double', cells: Laser 'SRM' matched 'SCR's', and my normal electronic bits (JR Beat 2 Pro, 131SH servo, Laser 'Comfet' controller). Dammit this 1/10th racing is fun, and the car proves the equal of the best driving talent. It is responsive where the PB is stable, as fast as a PB or Optima. All the filing, fitting, cutting, building and time is forgotten when the cars hit the track. A full test will follow next month, regrettably time is short at the moment.

### Keep the Dirt Out

The enveloping bodyshell keeps everything clean, and the suspension components seem to shrug off the dirt. No fear of losing a driveshaft, no problem in changing shock oil or springs. Now that the car has been tidied up and improved in the suspension department, the track results are beginning to come. The long wheelbase version will be made available as a kit. Roller clutch drive-shafts are a matter of personal choice and will remain as an option, as will the front differential.

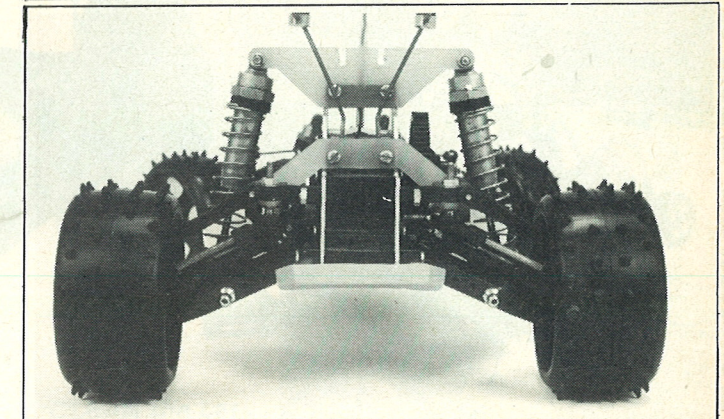
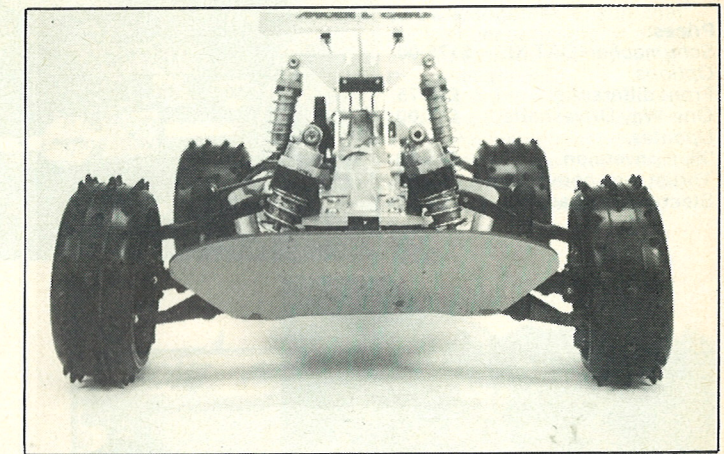
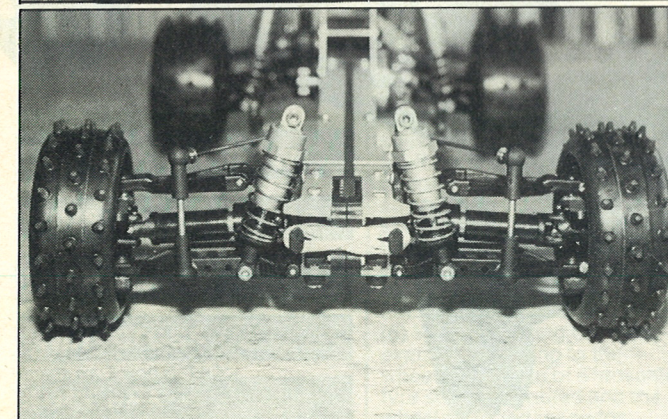
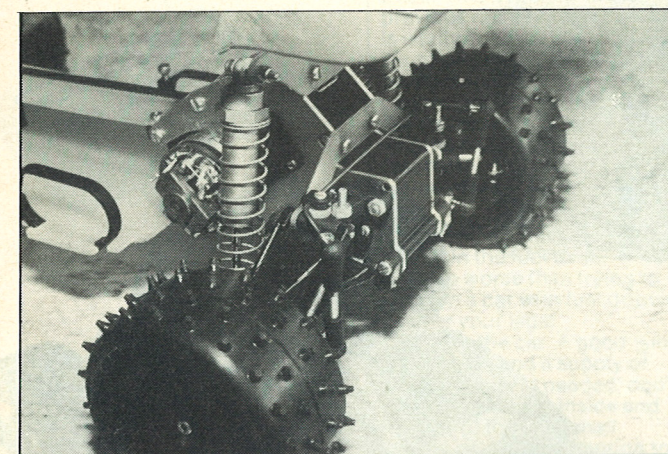
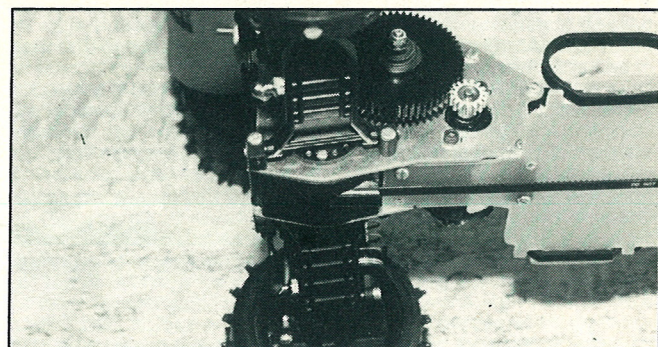
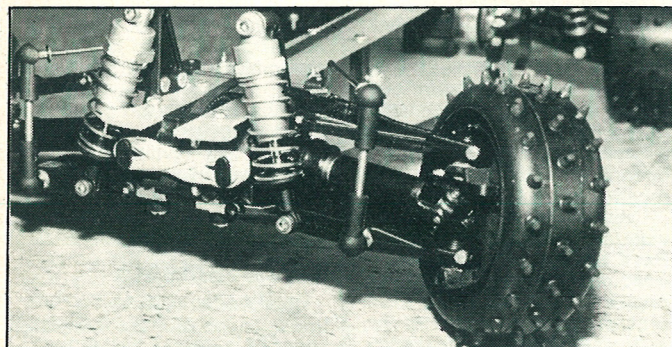
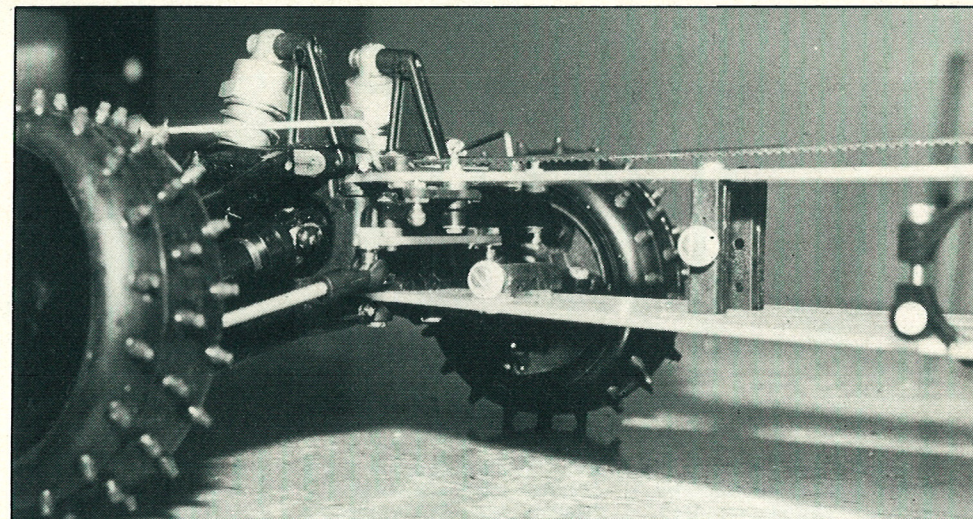
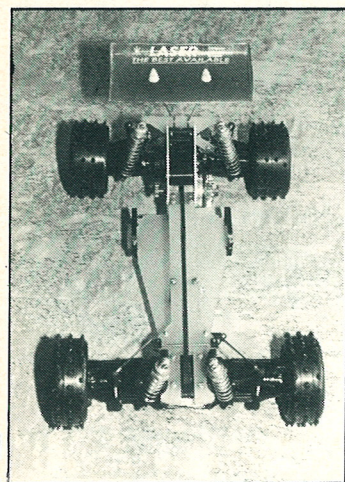
Every once in a while one gets a difficult job, this is mine. In reviewing products I have panned some, praised some, but always tried to be fair. In 1/12th the problem is not difficult. The quality of the product is decided on the circuit in racing conditions. 1/12th racers race their cars, they do not have the opportunity to drive them anywhere else just for fun. 1/10th drivers can buy a car and drive it almost anywhere just for fun. Yet the fun cars appear to be unable to withstand the punishment they get on a serious race track if the many advertisements for tune-up replacement parts are to be believed. In the days of Tamiya domination there were a dozen companies offering strengthened this or that. PB's 'Mini-Mustang' changed all that.

The Schumacher 'CAT' is a competition car, make no mistake of that. It has become highly competitive in the hands of Pete Stevens, Jamie Booth, Glyn Pegler and Phil Davies. Notably the likes of Kevin Blears, Tim Walden and Mike Stevenson are also appearing in the results where recently they had not. In long wheelbase guise it is very driveable for the club competitor (me!). Competition cars must be strong, reliable, and with adjustments available to suit different tracks. The 'CAT' now stakes its claim to number one in this respect.

Frankly my opinion is this: the 'CAT' takes longer to build than the 'Mustang', and like anything else must be built correctly. One can build a 'Mini-Mustang' right first time as it follows known standards for 1/10th. One gets hesitant about the 'CAT' because it is different from anything else. Schumacher have put a lot of work into the 'Cat' to get it close to the 'Mustang's' ease of build. Broadly they have succeeded, but that does not mean that it is perfect. It does not fall together, it must be built. Screws are easier to insert, many more parts require little or no manufacture (e.g. roll bars and wing wires).

A pool of knowledge will develop as more and more cars find their way into UK racing, and this will serve to lessen the perceived difficulty

Far page clockwise: overall view of the car less undertray and electrics. The new angled rear suspension. The front end showing the one-way driveshafts. Below clockwise: the stance of the 'CAT' showing ground clearance. The rear certainly can sit very high! The front still uses the elastic band to allow for accidents. The rear anti-roll bar remains as before.





in putting the car together. Maybe the time will come when we will all wonder what the fuss was about, but not yet. I have built 'CAT' and 'Mini-Mustang', the 'CAT' took more time, effort, and understanding. If *Schumacher* want to sell the car in vast numbers then some form of pre-assembly for the transmission would clearly help. Alternatively, they can sit and wait, for given time the car will sell itself, just as their 1/12th 'C Car' did.

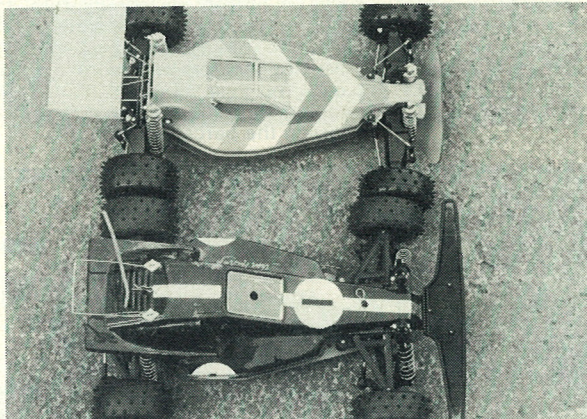
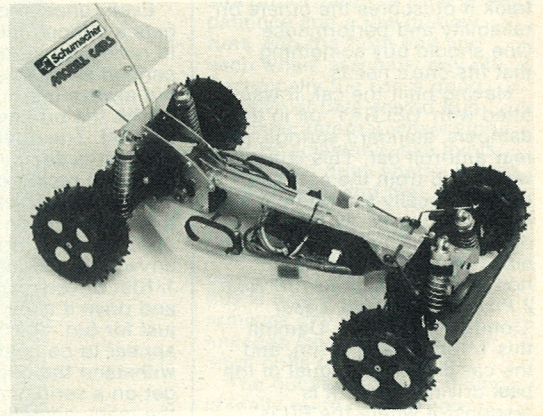
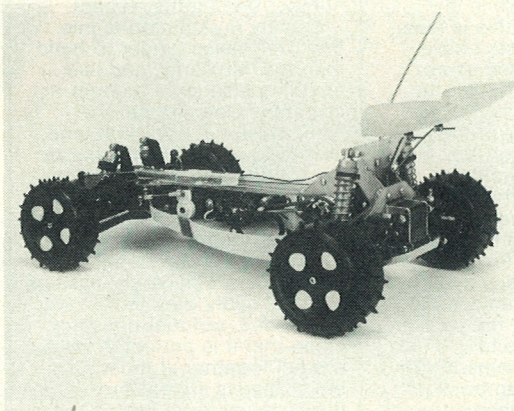
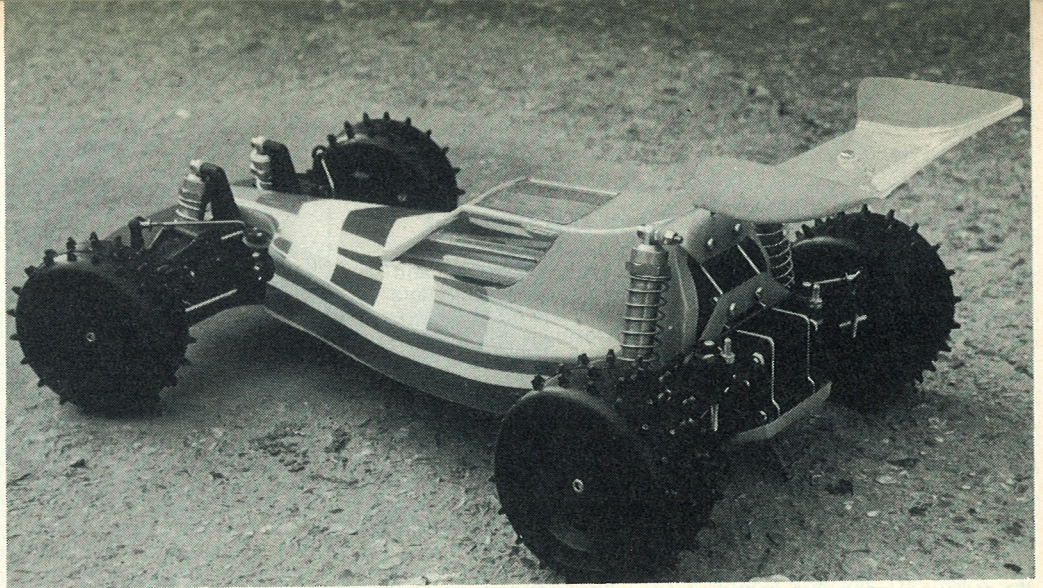
If you value a highly competitive car and can invest the time and money it takes to build, own and set-up a 'CAT', you will not be disappointed. But don't expect *PB* to take the situation lying down! As an enthusiast I liked the 'CAT', and *PB* appear to have quite a task on their hands if they believe that results sell cars.

### Ear Bending

When *Cecil Schumacher* bent my ear about our original review I reminded him that the 'C Car' (1/12th) took fully a year to become generally accepted. It was difficult to build and set up, but once these problems were resolved, it became very popular with serious competitors. It sold, and won, all over the world.

I admire *Schumacher* for sticking to the task of developing the original concept of the 'CAT' and not being swayed by numerous red herrings. On the track this 'CAT' can hold all nine of its tails in the air! Many may find they owe it to themselves to learn how to build one.

**Prices:**  
*Schumacher* 'CAT XL' £175.00  
**Options:**  
 Front differential £16.75  
 One-Way Driveshafts £17.00  
**Updates:**  
 'XL Conversion' £25.00  
 Thrust race conversion £3.99  
 Steering pivot assy. £2.50



Top: the new body certainly hasn't lost any of its good looks during the 25mm stretch. Above: the chassis less cells, the radio control is a bit of a tight fit! Below: next to a 'Mustang' the 'CAT' is now the longest contender.



Above: ready for the track, as the 'CAT' is now Euro champ prospects seem excellent for the coming World Champs.

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