

The release of the Mardave Cobra has been one of the most eagerly awaited events to take place in the last few months. The phone has hardly stopped ringing in the BBC offices, as keen prospective 2wd racers have kept up a steady stream of enquiries such as "when is it coming out?", "and how much will it cost?" In other words, the interest shown was pretty good! For the last three years, Mardave have had prototypes in use around the country, using different transmission designs etc. with the majority of them using different shocks and springs from different manufacturers. The thing that Mardave had to finalise was the design for their own shocks, the box art and instructions but, contrary to popular opinion, the last two items probably take as long to produce, and if



Mardave's long awaited 2WD Off-Roader - full review.



track, with some of those costing literally twice as much as the Cobra to buy in the first place. How have Mardave managed to produce such a competitive car for the money? The answer would appear to be that Mardave have gone for the 'simple' approach. What exactly do I mean by that? Well firstly, all the wishbone and upright pivots are quite small diameter, pressed in pits, whereas its rivals would most probably utilise a larger diameter pin with an E clip at either end, thus giving rise to not only the cost of the extra material, but the cost of machining the pins to accept the clips. The Mardave method is certainly very light in weight, but did give rise to doubts about the longevity of the partnership between the pins and the components. The

another, after as much complication as designing the car in the first place? Well, the car eventually arrived at the office having been officially on the market for about a month, and was eagerly put into use to see what the production kit was like, compared to the prototypes seen over the last few months.

The stout, colourful box was full of sealed plastic bags containing the plastic mouldings, bushings, bearings,

chassis, wheels, trim etc, etc, and the sticker sheet and instructions, with everything free to roam around the box. It would be nice to see the method of packing employed by our Oriental friends put to good use, as this would result in a much more first impression upon opening the box, but essentially the end product is what we're interested in and as most guys find out when buying perfume, for their wives/girlfriends, it's the packaging that costs the money?



wishbone pivots are rather reminiscent of a small nail, with the head stopping the pin moving right through, and my first impression was that the whole thing would fall apart, given a hard knock, or by coming to a stop as only model cars can do when confronted by an immovable object. How wrong can you be, as was suitably proven when the track test was undertaken on the local BMX track, which just goes to show how misleading first impressions can be!

The Cobra

From the ground up.

The kit came with a blue-painted aluminium chassis, although I gather that Mardave are to market chassis in various colours, this has the edges looked upwards slightly to give longitudinal strength, but doesn't provide much in the way of protection for the radio gear in the event of wet weather. To this end, Mardave are marketing a resin undertray, available as an option part. This tray is unusual in that it fits on top of the chassis, rather than underneath it (is it still an undertray?) The chassis is neatly countersunk, and is pretty rigid considering the shallow angle of the knees.

The suspension, both front and rear, is of totally conventional design, apart from the aluminium cast parts, the wishbones being fairly substantial while the front upright look rather spindly but are well up to the job in hand. The front shock tower is made from GFR, while the rear bracket is moulded in the same material as the suspension components; this has 4 different mounting positions on the rear bulkhead. While not offering the facility to alter the angle of the rear shocks at the top, this at least gives the option of adjusting the ride height for different tracks, conditions etc.

The aerial tube is mounted to the rear bulkhead, well out of harm's way, by a small clamp

How have Mardave done it?

The Cobra is definitely at the bottom end of the competitive 2wd car price range, but, as evidenced by drivers such as Lee Romang and young Chris Doughty last year, the car has exhibited it has no qualms about knocking the spots off its' competitors in competition at the



Strikes!

which can be easily released, but should do a good job. I've

never liked tubes merely pushed into a holder, as they've never seemed too secure to me.

The gearbox mouldings also serve as the mountings for the rear wishbones. This means that the anti-squat angle is unadjustable, as are indeed the majority of cars, but after the amount of development put in by Mardave, the purchaser can be assured that the manufacturer has got it right. The car's results to date seem to bear this

out. The transmission housing is a plain looking 'box', but this houses a fully ballraced drive train that even comes with the differential ready assembled! The Cobra is supplied with the most essential piece of equipment for a fast 2wd car these days, a slipper clutch, and when the prices of spare parts are seen (at the end of this review), then it becomes apparent that the whole machine really is a bargain, not only to buy, but to maintain.

How did it go together?

The Chassis.

The quality of the mouldings is good and, once separated from their sprues, were easy to clean up nicely with a modelling knife. The instructions were followed to the letter, which resulted in not a single problem being experienced throughout the whole build. The pivot pins were installed in the suspension components by pushing them into position with a pair of pliers until they were nearly in their final position, then knocking them home gently with the underside of the relevant moulding resting on a scrap block of wood. This allowed the pins to project through the moulding without damaging either the pins, the mouldings, or the surface used for the support. Don't do this on the dining room table without a wooden block, or small holes in the table top aren't to be recommended! The servo saver is of the usual 'v' type and is an integral part of one of the steering bellcranks. This assembly isn't





ballraced, but is perfectly adequate for the job. I always prefer to have a Kimbro saver on the servo as well, as will be seen in the photos. The ball joints gave me no trouble, and altogether the chassis build went according to plan.

The Transmission.

The transmission went together with no problems being evident, the ready assembled diff unit was a nice touch, which could be a real plus point for Mardave when it comes to selling the car to inexperienced racers, as if the low price wasn't enough! The primary gear is integral with the steel layshaft, and could be said to be the reason for the noise that emanates from the gearbox when the initial runs are undertaken. This soon disappears after a few packs of cells have been run through the car, when the gears have bedded in nicely. The slipper clutch unit is the essence of simplicity, and allied with the nice quality spur gear, the whole transmission has already built a reputation for being free running, therefore giving good run times and acceleration. I very much liked the cover for the gears and slipper as it was a very close fit, and it didn't distort when the attachment screws were tightened up. This made a change from the flimsy items supplied in some of the more expensive competition. This in itself is a minor point and certainly won't win races, but showed that a bit of care had been taken in the manufacture, which was nice to see.

The Shocks.

The shock absorbers supplied in the kit are of Mardave's own design, and differ from those by other firms, in that they are supplied with the top cap already in place on the shock barrel, with the internals (the 'o' rings, piston rod etc) installed from the bottom, all contained in the lower screw in plug, this is sealed by an 'o' ring at the shoulder of the plug. These units are very simple in design, and don't have volume compensating diaphragms etc, but they seem to work quite adequately. For

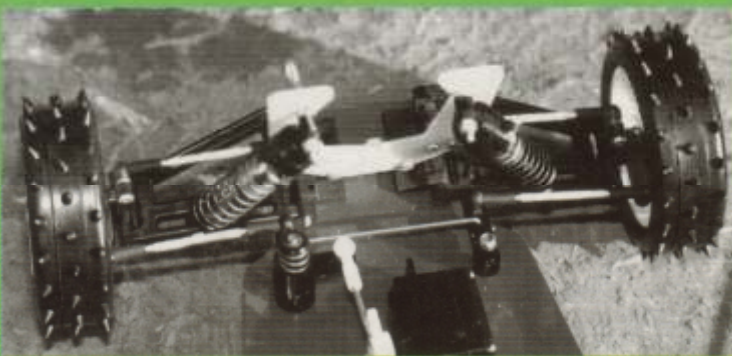
the review kit, I used Losi Silatech oil in 20wt, as this was all I had to hand at 1.30 in the morning! The instructions recommend the use of S.A.E. 30 oil but, as it happened, the damping seemed just enough for the terrain on which the Cobra was asked to strut its stuff!

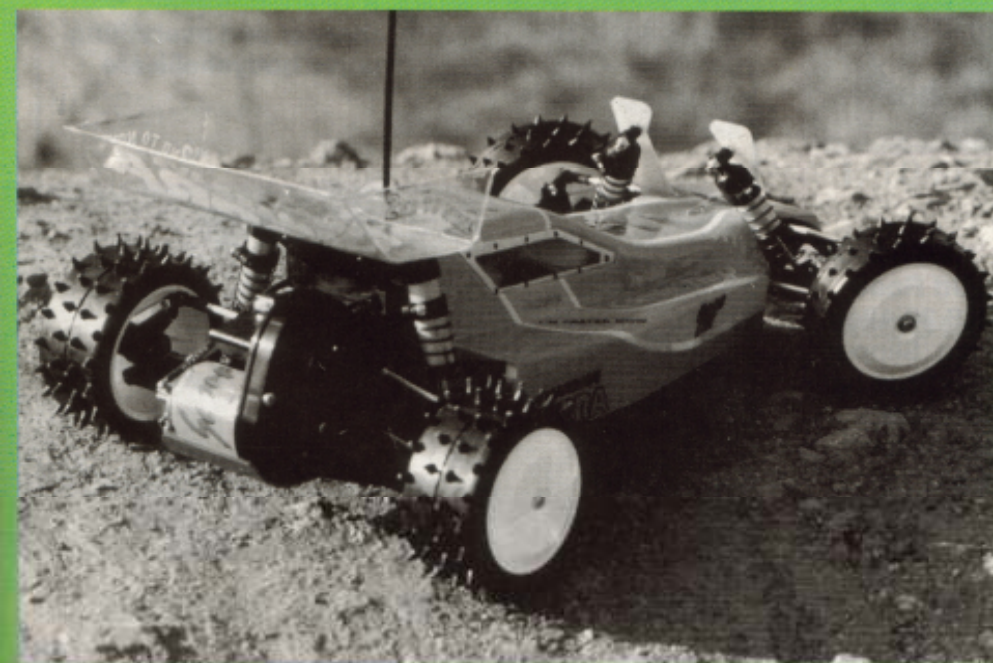
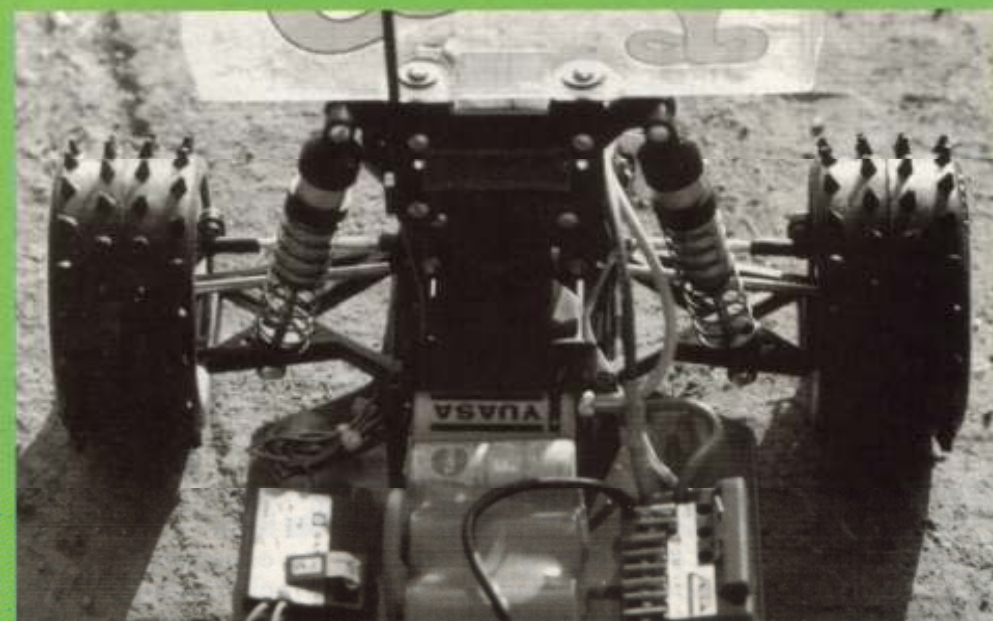
The Finishing Touches.

The radio installation was easy, as there is room enough for just about any speedo and receiver combination on the market. As can be seen in the photos, I used a Futaba 40 mhz receiver and 132H servo, with a Nosram Dominator speed control as illustrated in the Mardave instructions. I didn't really go for the idea of mounting the servo with double sided tape, much preferring to use mounting pillars, but as none are supplied I went along with the instructions, and didn't experience any trouble during the track tests, even though the car went through a fair hammering over some very large jumps! For motive power, a Twister Signature Series 27 turn, short stack standard motor was used. The instructions

recommend that for a 'standard' standard motor, that a 28 tooth pinion be used, but as the Twister is a short stack I tried a 27 tooth pinion, to get the motor to rev nicely and achieve better duration.

The body shell is made from some of the





thickest lexan that I have ever had to trim to shape, and should certainly last a long time. The shell follows the norm for a 2wd car, and is quite pleasing to the eye. The method suggested (and used) for mounting the shell is that of a clip through a mounting peg at the front, and a strip of velcro at the rear of the shell behind the cockpit. My thanks go to Bruce from Trackside Models, Hinkley, for the nicely painted shell used on the review car (actually a MK 1 version, the MK 11 shells have slightly different radii on the curves). The wing is again formed from the same thick lexan, and is mounted to the top of the rear bulkhead by two 3mm self tapping screws and washers. This method of mounting could result in a ripped wing after a hefty cartwheel, but is the method suggested, so that's what I went along with.

To the Track.

Malvern BMX track was the venue for the Cobra's test runs, and a better day for trying out a new car couldn't have been asked for! The surface was hard packed earth, with a smattering of gravel here and there, as well as all the jumps that could be wished for! The kit tyres were used throughout the runs I had, and were well up to the surface we were driving on. The suspension was set up with approximately 1 degree of negative camber front and rear as suggested, the driveshafts horizontal, and the rear of the car slightly lower than the front. I did feel that the instructions could have been more specific regarding the setting up of the suspension and how to make the car handle in different ways. Mardave do say in the instructions that it is intended for relatively experienced racers, but, as the price is on a par with the average beginners model, I think that outright novices might well go for the Cobra as their first car. Right from the first minute I felt really at home with the car, and soon realised that it was very stable over the jumps and ruts whilst giving good response to the steering. The turn in was very positive, but while the car was actually in the corners it held the chosen line well. It was particularly good around a fast hairpin, the approach was flat out having landed off a 3ft jump (!), and with a quick dab at the brakes it would flick nicely into the corner then, with a quick application of opposite lock, could be powered round the corner in a similar fashion to a 4wd car. The stability was amazing! The Cobra coped well with the large jumps at the BMX track, and flew very well indeed with the usual blip of the throttle as it left the ground! The damping was fine for the ruts and bumps, but perhaps a higher rated oil, and more ride height would have been more suitable, considering the abuse the Cobra was receiving when landing off the yumps. Not a single component failed

while it was being thrashed to within an inch of its young life, dispelling what fears I had regarding the dimensions of some of the components in the suspension.

The impression I gained from my first few drives with the car, was that it is really very good on the track in the handling department and, despite the lack of sophisticated titanium parts etc, is a good, strong little beast that warrants a close look if competing in 2wd is the aim. It literally can't be beaten on price at the present, and with the spares being so reasonably priced (front tyres £4.00 pair, wheels 90p each, spur gear £1.05 and complete slipper clutch for £3.45), the Cobra is a very attractive proposition indeed, and gets a 'recommended' from yours truly!

Manufactured and distributed by Mardave R/C Racing, 7, Heanor St, Sanvey Gate, Leicester. Tel:- 0533 - 624701