

Kevin Crozier,
Daniel & James Crozier

cadet

racers

The Tamiya Mad Bull and Fighter Buggy

Mad Bull

by Daniel Crozier, 9

I started building the Mad Bull stage by stage with my Dad. I helped by tightening the screws for him. Then I went in my first race and I crashed quite a lot. When I went into my second race I was in second position.

Fighter Buggy

by James Crozier, 7

The Fighter Buggy is a good car for learning. I built the Fighter Buggy with my Dad. It was good fun making it, especially the stickers, but sometimes the steering locks on

one side. If you want to know how to make it stop, ask my dad for help. If you drive into a bush beware - don't do anything. Once I lost a wheel! It is easy to drive and remember practice makes perfect. In my first race I was last because I was nervous and I got pushed by one of the real remote control cars. In my second race I was in third position because I pushed over a man's car. In my third and fourth races I was in first position.

Dad's Pad

Hmm, a bit short of words for a review, so I suppose that I ought to add a few words to pad things out!

Ed' PeterE kindly arranged for my two boys to review this pair of off-road buggies after I called him for advice on how to get them started in R/C cars. My own hobby is building and flying R/C planes, but both Daniel and James are a little bit too young to start flying. I'm a firm believer in building up their interest from basic principles, so aeromodelling for them at the moment means a lot of fun in learning to trim and fly some simple rubber powered models. But I still wanted to get them used to operating an R/C transmitter, and learning to control a model, especially when it's coming towards you and the controls are reversed! Far



Mad Bull in 'out of the box' trim. Monster tyres were forsaken for Cadet racing by young Daniel, but our 'Ed' now reports that those 'big boots' work well in race conditions too!



Inside the diff - make sure to grease those cogs!



Differential gear assembly. Requires a bearing washer at each end - see text.

better, I reasoned, to learn these basic skills using a simple model car, rather than an expensive and easy to break model aeroplane.

After reading several letters on the Tamiya Cadet classes in Radio Race Car, these easy to build vehicles seemed ideally suited for 'Team Croziers' needs! A call to Peter to find out more information brought forward the unexpected bonus of both the Tamiya Mad Bull and Fighter Buggy to review and to ultimately race in the RRC/Tamiya Cadet 2WD series. Sorted!

Since the Fighter Buggy has been reviewed previously, I'll stick to describing the Mad Bull for the majority of this article.

Where's Postman Pat?

A week to go before the first Cadet race at Kidderminster and still no sign of the cars. A panic stricken call to Peter worked wonders and on the Monday a large box arrived from Traplet Towers. This treasure trove included both kits in smart colour boxes, two sets of Acoms radio, a Riko 12V/mains charger and two 1400 mAh battery packs. Everything, in fact, that we needed to assemble two race ready Tamiya Cadets!

After thoroughly reading both instruction manuals, it was obvious that both models were to all intents the same, except for a few minor details. In standard form, the Mad Bull differs by having monster tyres and a different body shell. However, the Cadet rules allow the Mad Bull to be built using Fighter Buggy tyres, so all the pictures show the car in its race trim. I hope that PeterE can reproduce the box art-work as this shows the Mad Bull in 'out of the box' trim.

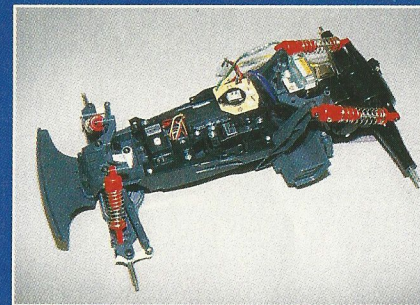
Since time was of the essence, I decided to tackle both together on a table top production line.

Into the tub

The chassis tub, that is! Section one to five of the instructions detail the assembly of the front steering and suspension units to the moulded plastic chassis. I immediately got stuck by failing to find the steering arm, the attachment of which is the main job in Section 1! I finally found it in a parts bag full of bits which had nothing to do with the front suspension - all the other front end parts were bagged conveniently together, so this is one for the X Files! (I was as sick as the proverbial parrot after finishing both cars and finding a full pictorial parts list at the BACK of the manuals. This would have helped no end in solving this problem. I guess that I couldn't have read the instruction books so well after all!)

To be fair, this was the only big hold-up that I encountered and finding all the other parts was a doddle. Most parts for a particular section are bagged up together, including individual bags of screws, nuts and washers. The manual is really superb and is very easy to follow. It's mainly pictorial, with Japanese, English, German and French notes, but the pictures are so good that these are largely superfluous. The margins of each page include full size drawings of each different size screw, washer and fixing used in the assembly of each part, so there's really no excuse for not cracking along at a blistering pace. Tamiya kindly include a few extra screws etc., which is good news if you drop any on the workshop floor!

'you have to be a Malteser short of a full bag to muck things up!'



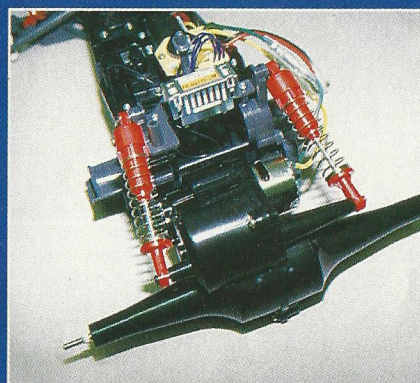
Chassis assembled and radio installed. Simple 'n' strong



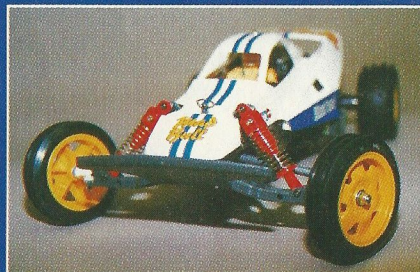
Mad Bull monster boots, compared with replacement Fighter Buggy tyres used for Cadet racing.



Mad Bull running gear. A couple of relaxed evenings will get you to this stage.



Rear end view showing diff unit supported by pre-assembled shocks.



Mad Bull in Cadet race trim, complete with Fighter Buggy wheels.

Although the kids helped by 'screwing' a few parts together, in reality the force needed to drive the self tapping screws into the plastic chassis was quite large. Adult supervision and muscle is definitely required!

Unlike the Fighter Buggy, the dampers for the Mad Bull are pre-assembled and just require greasing before fitting to the suspension arms.

Gearing up

Next up is the assembly of the gearbox and driveshafts. Again, no problems here, all the parts drooping into position without a hitch. The only point to watch is when assembling the differential gear assembly. The upper and lower gears should have a washer inserted over the drive spigots to provide a bearing surface when they are pushed into the nylon diff covers. I fully assembled one complete diff assembly before realising that there needs to be a washer at both ends, and not two washers on one end, as I had interpreted the note: 'Make 2' to mean!

It's obvious that the Mad Bull is a later development as there are a couple of nice touches which are missing from the Fighter Buggy kit. One of these is a little plastic gauge which helps you to fix the pinion gear on the motor shaft at exactly the correct distance. Neat!

Bearing up

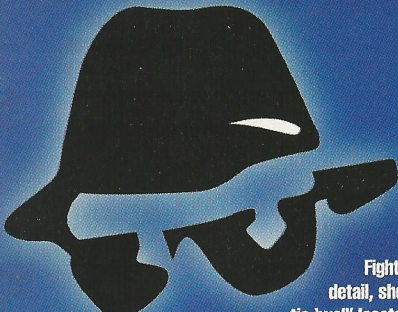
The kits include nylon bushes as standard, but the Cadet class rules allow for the fitting of bearings on the wheels and in the differential assembly. PeterE advised that bearings were a 'must have' for racing, so the correct bearings were duly fitted. They are packaged as 'Hop-Up' parts and the part numbers are fully detailed in the instructions.

In with the radio

With the chassis, diff and suspension units fitted, now's the time to start installing the radio. Much reference is made to Tamiya's own Adspec Plus R/C set, especially the fitting of a CPR unit (combined speed controller and receiver). But UK spec kits forego this fancy bit of kit in favour of a humble mechanical speed controller. If you decide to use this unit, combined with a basic BEC (Battery Eliminator Circuit) receiver, then now's the time to swap over to the instructions that come with the speed controller. Again, if followed to the letter, you have to be a Malteser short of a full bag to muck things up!

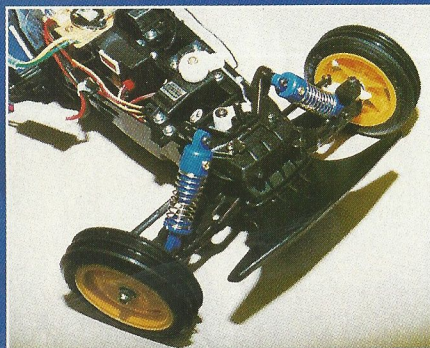
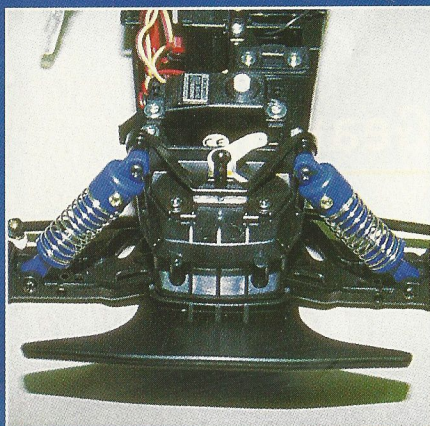
Servo wise, the parts are fully adjustable and will take most standard servos from all the popular R/C manufacturers. Coming from an aeromodelling background, where the use of all four mounting screws and rubber anti-vibration bushes are the norm, I found it a real struggle to just use two screws and NO bushes! But that's what the instructions said and guess what? It works!

summertime blues



Front end steering and suspension parts are common to both cars.

Fighter Buggy front detail, showing the plastic 'wall' located between the servo and steering arm. This wall needs to be cut away to allow the pushrod to pass freely.



Tamiya's Fighter Buggy is the other choice for budding Cadet 2WD drivers - mainly 'bleu' colour scheme on the Fighter Buggy but no Summertime Blues with these nimble motors!

Body work

After bolting on the wheels, my thoughts turned to finishing the neatly moulded white plastic bodies supplied with both kits. Originally, PeterE had asked me to forego the boxtop colour schemes and to spray the bodies blue, to match the Summertime Blues theme for this issue. However, with just three days to go until the big race day, I thought that this was leaving things a little too late. I resolved to use simple 'stick on' blue based trims for both cars; for the Fighter Buggy this was very easy as the kit decals are predominately blue,



Underside of the tough FB chassis.

but those supplied with the Mad Bull are every colour but blue. Out came a sheet of blue trim film from my aeromodelling supplies, from which I cut a couple of sporty stripes and some side panel flashes. A selection of white stickers and Tamiya logos from the Mad Bull sticker sheet added some neat graphic touches.

As this was a kit review, I was a bit worried about not using the intended stickers, but PeterE reassured me that all was OK. Apart from the time issue, our main defence is that all the other Cadet cars would probably be using the kit box schemes, so the use of something a little different probably was quite a good idea to allow Daniel and James to easily pick out their cars from the melee.

Practice makes perfect

As James rightfully points out in his introduction, practice is a vital part of pre-race preparation - especially for two boys with absolutely no race experience! So with one day left before our planned visit to Kidderminster for the first Cadet round, we dashed over to the local industrial estate for some much needed driving lessons.

After marking out a basic course using small toy 'traffic cones', the boys were off! In a recent issue of this mag, I noted with interest a truck review in which the test drive ended after just a few seconds when the suspension broke after the car hit a kerb. Well, no such problems with either the Mad Bull or Fighter Buggy as they were regularly rammed into the kerbs surrounding the car park! Despite all this abuse, the only thing that happened was that the Mad Bull's steering locked hard over a couple of times. I put this down to the servo saver doing rather too good a job and merely reset the linkages without examining things further... More anon!

The speed of both cars was quite impressive and more than enough to provide some exciting moments for my two 'learners'.

Although the boys' driving skills improved dramatically during this test session, I was really concerned that they were still not up to a good enough standard to compete sensibly in a proper race, so with a heavy heart we went home and I phoned up Tony Meridith, the race organiser at Kidderminster, to withdraw from the race. But all was not lost, as I had a contact number for the local model car club. A quick call to the club secretary resulted in details of how to reach their track and an invite for the boys to come over and to race at their next meeting. As luck would have it, this was the very next day, so the boys were going to get their race after all!

Friendly folk

Within just a few minutes of arrival at the Herts RC Car Club, I was bowled over by the friendly atmosphere. Several members came over for a chat and to offer the boys advice. Pretty soon, we felt as if we had belonged to the club for weeks instead of minutes - if all car clubs are this friendly, then the future of the hobby is in safe hands.

I couldn't help but notice that our Tamiya cars were conspicuous by virtue of being the only models in operation from this manufacturer. The Herts track is in a woodland location and, by the club's own admission, is very

bumpy and quite demanding on cars. Only the tough survive, so I braced myself for a sizeable repair bill! But despite the track conditions and some pretty rough handling by the boys, both cars survived intact - I was very impressed.

Lessons learnt

A couple of points did arise. The main problem being that both cars kept suffering from the 'steering lock' problem described earlier. This bugged us throughout the meeting, but one of the younger racers had obviously seen this problem before and with a knife in hand, proceeded to perform minor surgery on the chassis tub to alleviate the problem. A plastic wall is moulded into the tub just behind the front steering and suspension mounts, no doubt offering increased strength in this area. The steering pushrod runs from the servo arm to the steering arm right over the top of this wall. At full deflection, the end of the pushrod can foul behind this wall, effectively 'locking' the steering. The remedy is very simple - just cut a notch in the top of the wall to allow the pushrod to pass without catching.

The only other race drama was provided when James lost a rear wheel. I had previously noticed that the rear wheels were prone to loosening, despite being secured with lock-nuts. Tamiya thoughtfully provide a nut wrench with each kit, so keep this in the tool box and check your nuts before the start of each race. Ouch!

Other than these two minor hiccups, both the Mad Bull and Fighter Buggy have proved excellent steeds for a couple of tyro R/C racers. They're more than fast enough for learning race craft and have proved pretty tough in use. Overall, they're just what Daniel and James needed.

Our thanks go to PeterE for arranging this review, and also to Richard Kohnstam Ltd for supplying the cars and all the support kit. Now that we've had some practice, we're raring to take on other Cadets at the next RRC meeting. See you there! **RCR**

Quick Spec

1:10th scale electric off road racer. Supplied with 540 sport motor and mechanical speed controller. Requires 2 channel radio, 2 servos (or 1 servo and an ESC), battery and charger to operate. Includes monster truck tyres - Fighter Buggy tyres optional for Cadet races.

Tester Kit

Acoms Techniplus radio
Tamiya 1400 battery
Riko 12V/Mains Charger

Likes

Quick and easy assembly
Idiot proof manual (well almost!)
Easy to finish - no paint required.
Surprisingly tough

Dislikes

Steering pushrod catches on chassis
Rear wheel nuts slacken off too easily

summertime blues