

THE TAMIYA CONTRIBUTION to 1/10th scale Off-Road racing can only be adequately described as immense. Apart from starting the whole thing off, this Japanese company have produced, to date, 16 different variations on the Off Road theme. Never let it be said that with Tamiya you are left without a choice.

As featured last month, the sixteenth addition to the range is the 'Grasshopper' or 'Glasshopper' as it has been affectionately dubbed. This particular buggy can be termed 'new' in the proper sense, incorporating as it does a completely different chassis, gearbox design, bodyshell and suspension system.

The 'Grasshopper' kit obviously follows in the same mould as the 'Holiday Buggy' and 'Sand Rover' buggies, offering sprightly performance at a reasonable cost. Scope for uprating the 'Grasshopper' exists in abundance and undoubtedly 'Readers' Mods' will be flooding in within a short space of time.

#### Kitting up

Lovely box:  
Brilliant instructions:  
Great packaging:

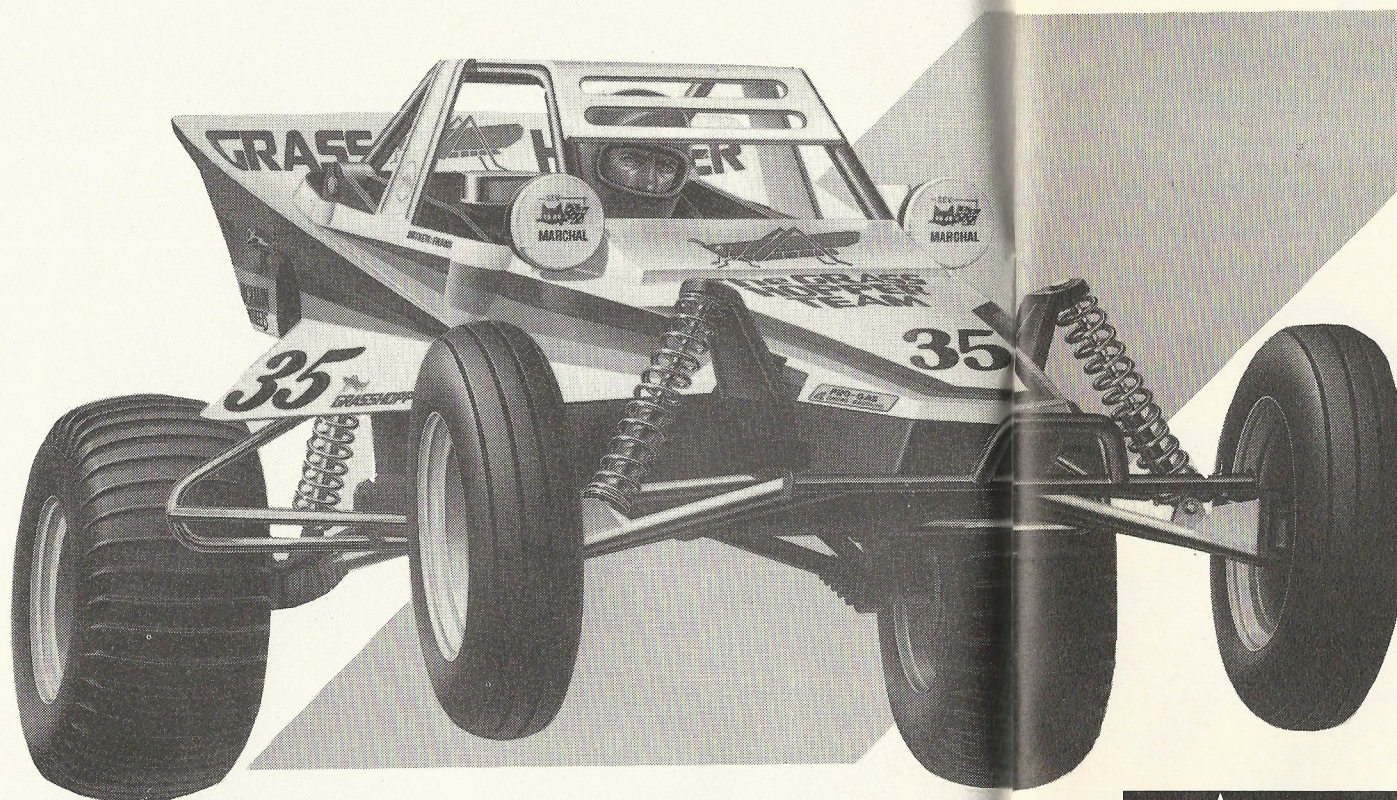
# Grasshopper

*Lewis Eckett gets hopping mad with this latest 1/10th scale Off-Roader*

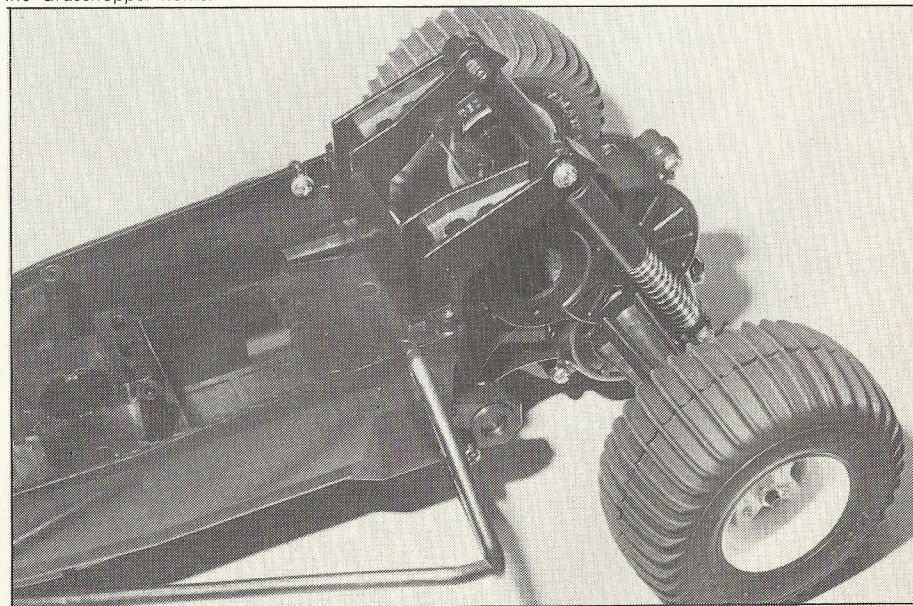
With the formalities over we can actually get down to building. At this point I am often tempted to put a clock on how long it takes to build a Tamiya kit. However, since this was a review item I felt it prudent to 'relax' a little so as not to miss anything.

A hefty, plastic geared differential is included, similar to the 'Audi Quattro' item. Plastic bushes are included for the bearings, but I chose to fit proper ballraces. The completed assembly produces a solid axle drive system which makes independent suspension a bit difficult. Tamiya have got around this problem by allowing the gearbox and axle to pivot up and down at the front.

The kit includes a refined version of the '380' type motor usually found in the Tamiya electric flight kits. This motor is fitted to an adaptor which in turn fits to the gearbox. This means that the larger '540' size, motor can be fitted without need for modification. The pinion supplied with the 'Subaru Brat' will give the correct ratio for the 'Grasshopper.'



*Below: the assembled rear suspension system and gearbox. The dampers are simple coil-spring units which can be replaced with proper oil-filled units from the 'Frog' kit. If using these replace the springs with the 'Grasshopper' items.*



#### Chassis

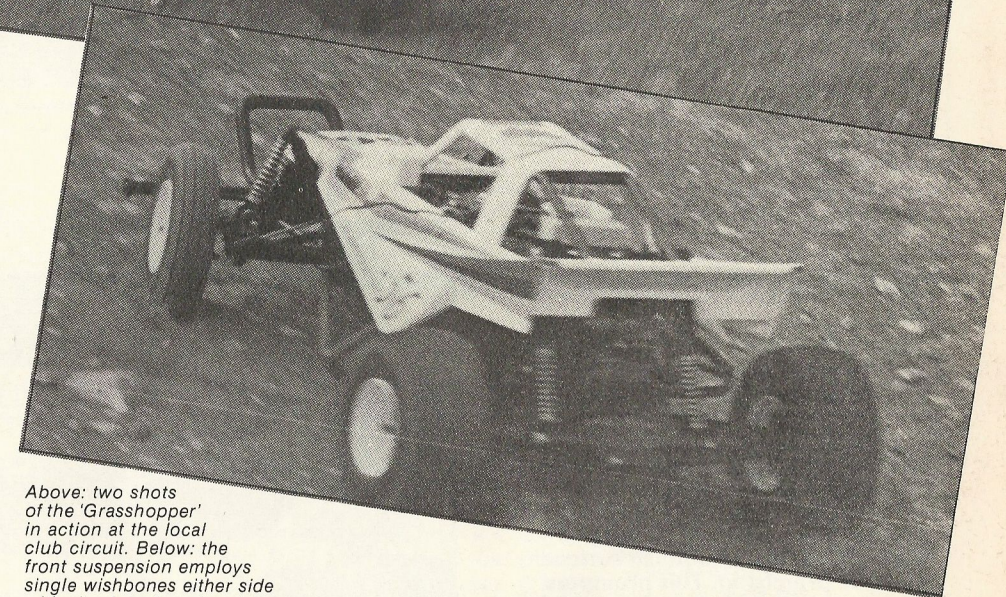
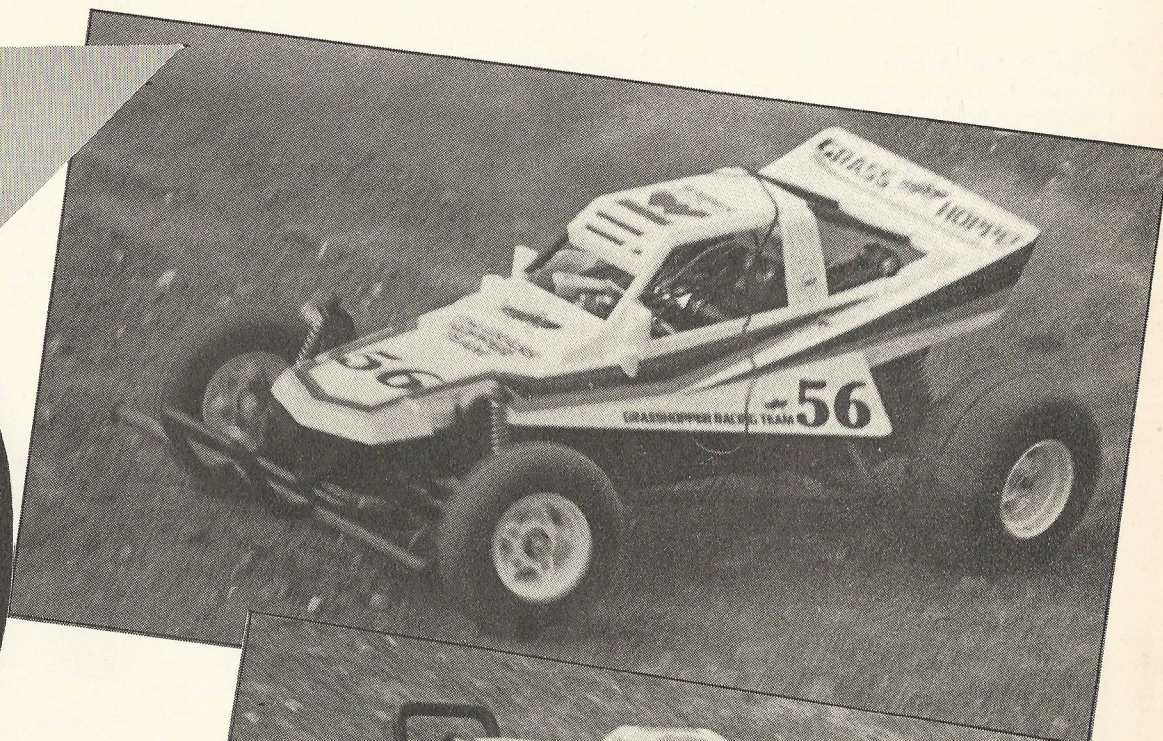
This takes the form of a single injection moulding which doubles as the radio crate and battery box. The chassis also incorporates the damper and suspension mounting pivots and is able to accommodate five or six-cell battery packs in either 'stick' or side-by-side configuration.

#### Dampers

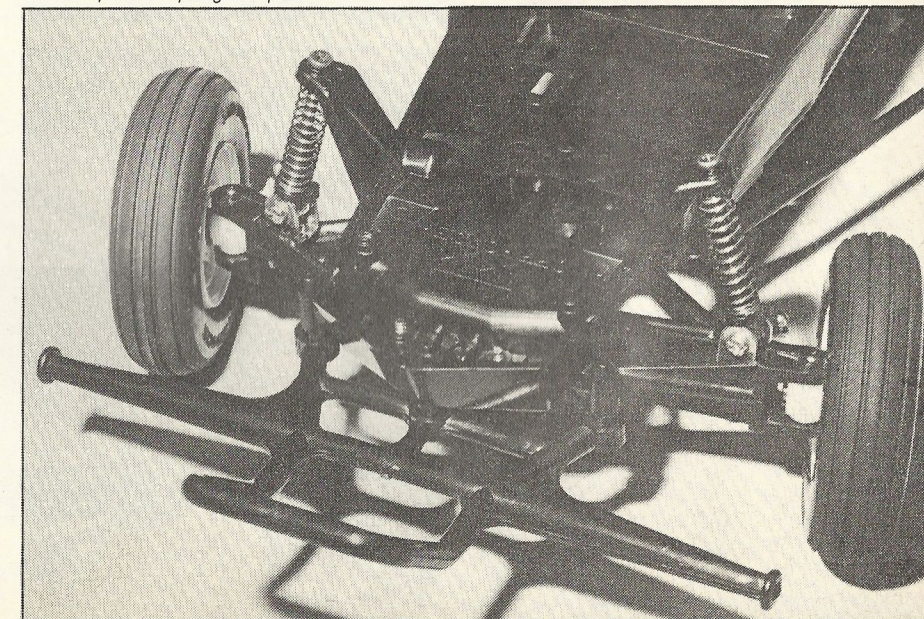
The 'Grasshopper' kit contains simple, friction dampers, fitted with coil springs. However, the 'Frog' oil filled versions can be fitted to the rear suspension. The front dampers are simple coil spring units which gives the front suspension its ride height and springing.

#### Front suspension

In contrast to the rear end the front wheels are individually sprung on nylon injection moulded wishbones which incorporates the steering stub axle blocks. Steering linkages are carried between the chassis and wishbones.



*Above: two shots of the 'Grasshopper' in action at the local club circuit. Below: the front suspension employs single wishbones either side with simple coil spring dampers.*





# Track Test

## R/C installation

As mentioned earlier the main chassis also doubles as the radio crate. The instructions show how and where the servo's and such should be positioned whilst the kit includes servo mounting posts, servo saver, (steering) and linkages. The speed controller is the usual three step resistor board type which has proven to be fairly reliable under Off-Road conditions.

**Important!** If using a 540 size motor the fuse must be changed from the eight amp type supplied to a 15 amp.

The Ni-Cad battery pack fits into a compartment located underneath the chassis, a slide-fit cover keeps the pack in place.

## Bodyshell

The 'Grasshopper' bodyshell is, as we have come to expect of *Tamiya* a superb, injection moulding which fits very neatly onto the chassis. Instead of the usual clip style mounting the 'Grasshopper' bodyshell is actually bolted onto the chassis becoming, in a sense, integral with it. A full decal sheet is supplied to decorate the 'Grasshopper' accordingly.

## Hop it!

I must confess to being less than enthusiastic about '380' powered cars, they simply don't move fast enough for me. However, I was fairly surprised at the 'Grasshopper's' performance with the motor supplied in the kit. This must be attributable to the low race-weight (3lb).

Nevertheless, when fitted with a '540' size motor the performance really perked up, the general handling of the 'Grasshopper' on smoothish surfaces was quite promising. This prompted me to try it out at the Chingford BRCA National meeting.

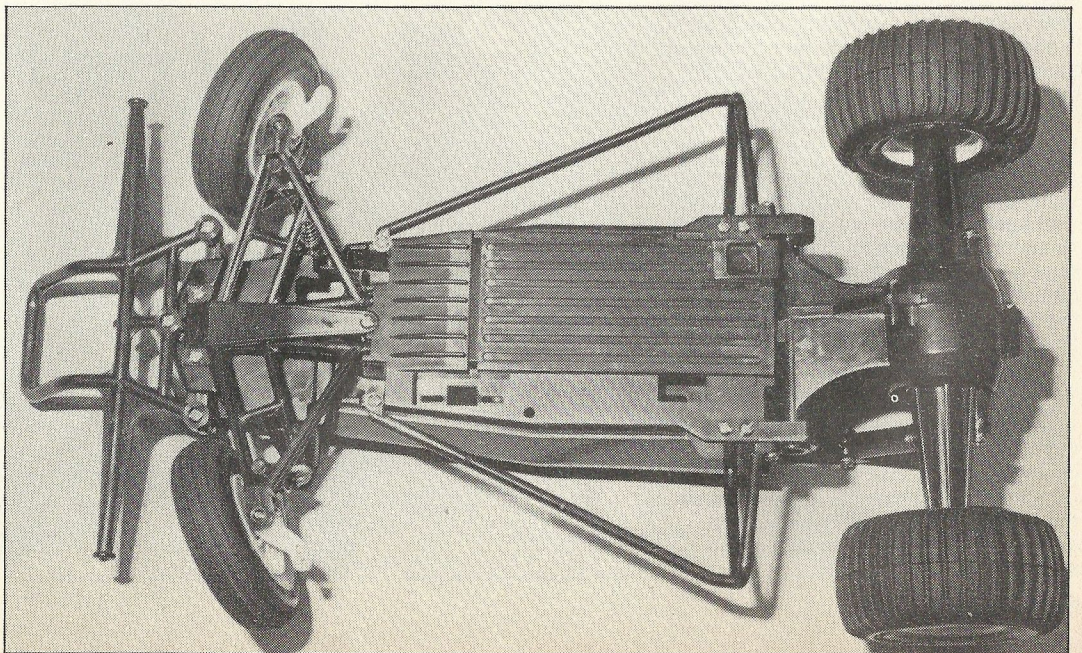
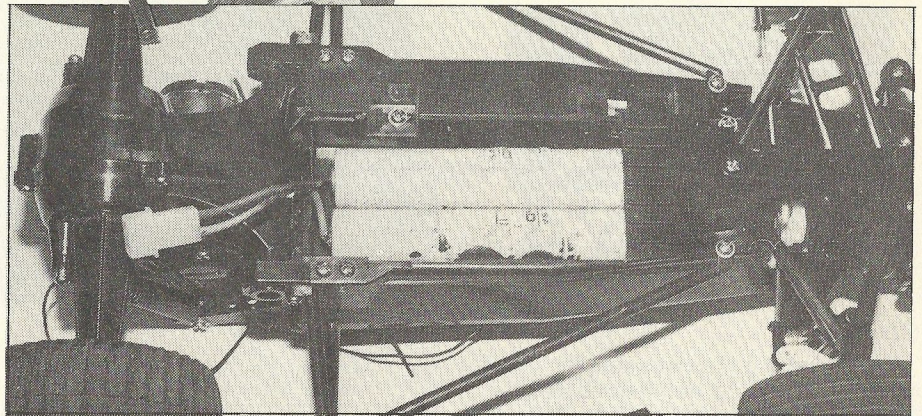
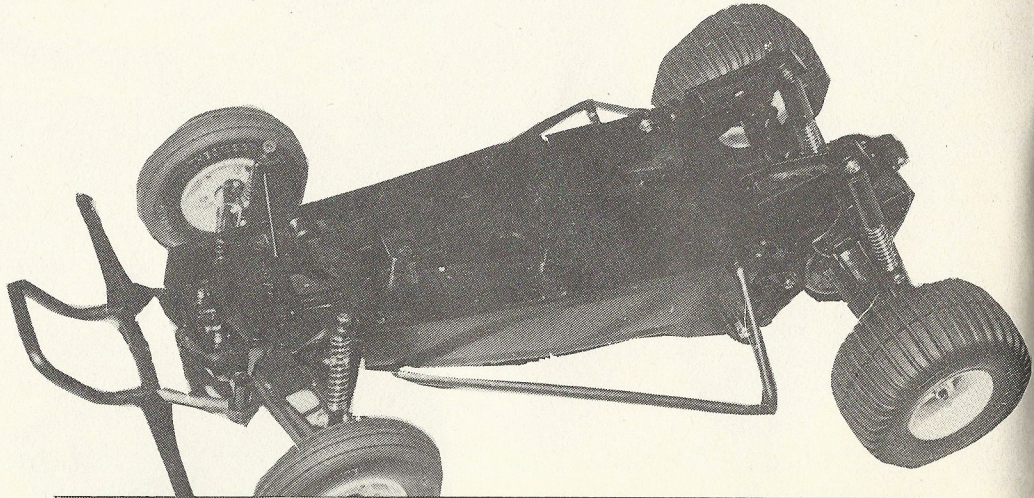
The 'Grasshopper' certainly lived up its name and 'hopped' all over the place. Unfortunately, the rudimentary rear suspension wasn't able to put the power down on the track, all of the time. Even the substitution of some proper, oil-filled dampers did little to keep the wheels on the ground. Nevertheless it was fairly fast and should go even better with some modifications to the rear-end.

Incidentally, the ready-to-race weight with 540 motor standard R/C gear and no receiver battery pack was dead on 3lb which is the BRCA legal minimum.

Overall an excellent budget priced racer which will serve as the ideal introduction to R/C buggy racing.

UK Distributor: Richard Kohnstam Ltd., 13-15a High Street, Hemel Hempstead, Herts.

Price: £40.00 (approx.).



*Top right: the completed rolling chassis ready for the R/C installation. The side nerf-bars protect the rear axle in event of a crash. 'Paddle' type tyres are supplied in the kit but other Tamiya styles are available. Centre: the Ni-Cad racing pack slides into a compartment along the bottom of the chassis. Tamiya six-cell packs can be fitted also. Right: the chassis underside with Ni-Cad compartment cover in position.*