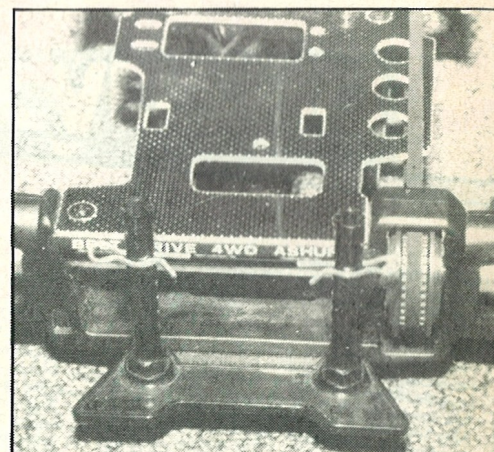


TRACK TALK



Hirobo Ashura Review. Front end, the 42T pulley which houses the geared differential sits inside the front suspension beam.

It must have been at least twelve months ago now since I received the Ashura, courtesy of Tony Stephenson after a visit to the Toledo Model Fair. Most of you will remember the same kit no doubt being reviewed some three years ago in Model Cars by Pete Winton, however many things have changed in three years, ie. the cars are getting faster via better selection of nicads and now the new wet magnet type 'ultra' motors and not forgetting the SCE cell which is still being worked on.

For the three major chassis makes on the market at present, the Schumacher, Associated and Corally, all of which are rear wheel driven, we are getting to the point where more power is going to be harder to utilise efficiently, maybe not at National level where grip levels are high but at club level where the first couple of runs are always a bit poor since the carpet is dry. I'm sure most of you have experienced what I mean when you've turned up at the local club with your National spec gear and modifieds and have found your car more than a handful, especially on a small twisty track, not forgetting any bumps.

Factors like the extra power available led to the 1/8 scale circuit cars to move to four wheel drive, followed by the 1/10 scale buggies. With all this in mind I was determined

Hirobo Ashura Review. The completed kit, finished and ready to go.

to review the kit with a totally open mind.

The kit was received in just a normal cardboard box, so I can't make any judgement on the presentation and packaging. Digging away at a pile of shredded paper I came across a virtually completely built rolling chassis, clear body shell and a few extra bags containing body posts, nicad straps and speed control. I don't know why but the first thing I always do with a new kit is compare the wheelbase to another kit.

The wheelbase is 198 mm which is the same as the RC12L. The rear tracking is also identical but the front is a couple of millimetres narrower.

Basically the car utilises a one piece chassis on to which are mounted a single beam type front suspension block and a pivoting rear end. A shaker plate or mechanical deck is then attached which runs from the top of the front suspension beam to a support at the rear of the chassis where a twin ball link arrangement attaches it to the motor pod.

Unlike our normal cars, the motor drives to the left hand side of the car and not the right, no doubt designed for the old Mabuchi motor. Drive is transferred to the rear of the car by a toothed belt, extremely similar to those used on the Schumacher CAT, so instead of pinions we have motor pulley's, four being supplied with the kit 13, 14, 15 and 16 tooth. This belt links to a 54 tooth pulley on the rear axle.

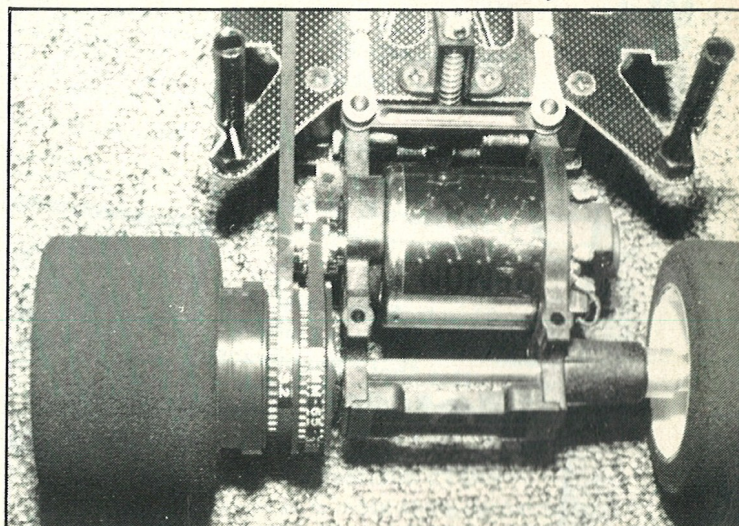
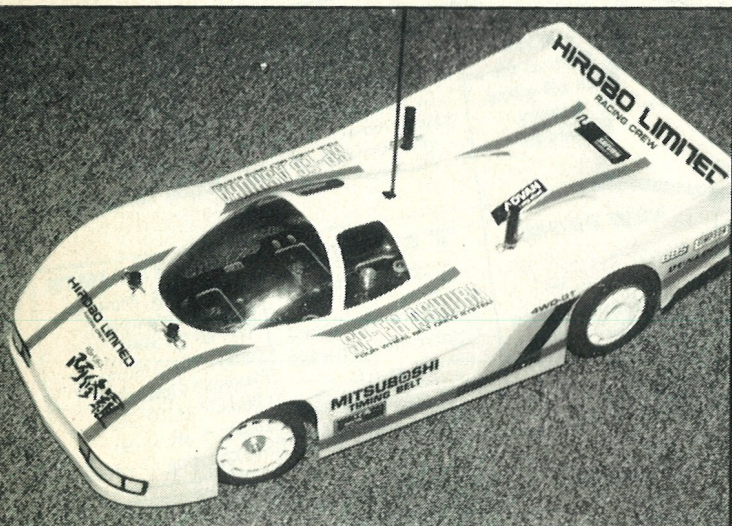
The rear axle and drive uses a geared type differential with a one way roller clutch so that on heavy cornering any braking effect will be done by the front wheels.

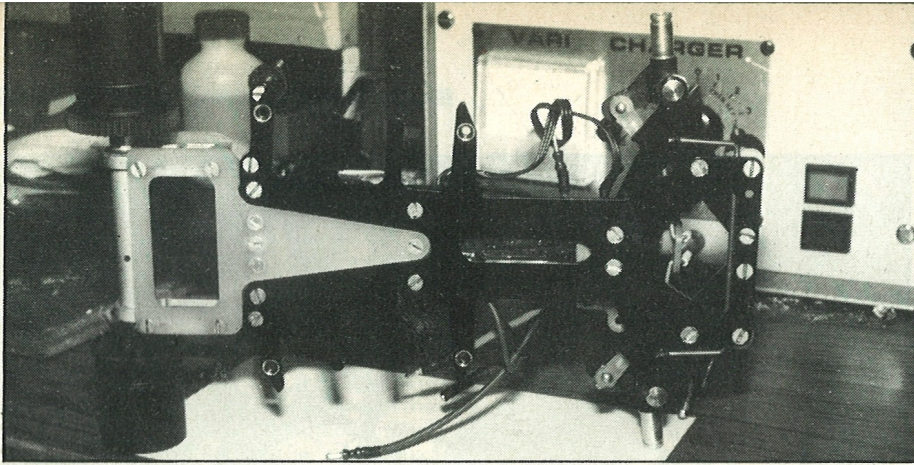
Next to the 54 tooth pulley there is a 48 tooth pulley which is linked by another belt to, you've guessed it, another toothed pulley, this one having 42 teeth and enclosing another geared differential at the front of the car. Drive to the front wheels which don't forget are for steering also is via two small 'ball pin' drive shafts, again similar to drive shafts on the RC10. The front suspension is of the sliding pillar type and 4 mm of travel is available.

Battery arrangement is for stick type cells which are slung beneath the mechanical deck and held in place by cable ties. Although a wiper type speed controller is supplied with the kit, this was discarded in preference to an electronic unit which was servo taped to the mechanical deck. The steering servo is again servo taped underneath the mechanical deck leaving just enough room behind it for the receiver, the aerial of which is soldered to a metal 'roll over' mast which is bolted to the mechanical deck.

The servo saver provided was of the same design type as the popular Kimbro *Hirobo Ashura Review. Rear of the car; the drive from the motor pulley is transferred to the 54T pulley while the 48T pulley transfers the drive forward.*

The double ball link arrangement linking the motor pad to the mechanical deck can be used as a crude tweak adjuster.





would have been pulling 37.85 mm per rev at the rear and 29.10 mm per rev at the front. With the new figures for the front the figure is 38.08 mm per rev and keeping this difference of about 6 mm between front and rear tyre diameter keeps the mm per rev figures front and rear, virtually the same, ie. full 4 wheel drive.

The corally conversion kit for the Schumacher C-car range. A chassis for the CV and SPC car are available. Both come with new wishbones or rear T piece strap.

type but came with different centres for different servos like the Schumacher unit and therefore required assembly. I found the assembly an extremely arduous job which took many attempts over a 15 minute period, but the end result was a servo saver with no 'slop' in it. The steering linkages are of the ball type on one end with an 'S' bend on the other and the wheels were set parallel with no toe-in or toe-out.

The motor mesh was set so that both pulley's were in line with about 1.5 mm of movement in the belt. The tyres supplied were extremely small and had an uncomfortably plastic feel to them so these were replaced by some Grand Prix 'C' tyres. The rear damper adjuster was then tightened to such a degree so that the chassis and motor mount can be positioned on the same horizontal line when the suspension is restored after pressing the rear part of the body with the car set to the running condition. Figure 3.

All that remained to do was to paint the body shell and cut it out, the body post holes and wheel arches had already been. Finish using the self adhesive decals. The final adjustment was a slight change in the chassis tweak, effected by altering the length of the ball links which attach the motor pod to the mechanical deck.

It was only now that after the kit was ready to run came the problem of gear ratio's. This time the gear ratio is plural, ie. front and rear. The instructions recommend a 44 mm diameter front tyre and a 50 mm diameter rear, to fully exhibit the features inherent to my Ashura, 'but what about the mm per rev and all that jazz'.

Moving to the table on Page 7 of the manual we have a list of gear ratio's.

Front:Rear = 1.142:1

Number of teeth of motor pulley	Reduction ratio of rear section	Reduction ratio of front section
13T	4.15:1	4.75:1
14T	3.86:1	4.41:1
15T	3.60:1	4.11:1
16T	3.38:1	3.86:1

The second column refers to the reduction of the rear section, ie. the drive from the motor pulley to the 54T pulley. The third column is the reduction ratio to the front section but I cannot see how they get these ratio's (see figure 1). Remember the 48T drive pulley next to the 54T pulley transfers the drive to a 42T pulley at the front end, ie. a Front:Rear ratio of 1.142:1, ie. for every one revolution of the rear wheel, the front wheel will revolve 1.142 times to make up for its smaller diameter tyres, yet according to column 3, compared to its corresponding rear ratio for any given motor pulley the front wheels will be travelling slower. Figure 2 is a corrected table.

Using Hirobo's figures, to work out your mm per rev figures, on 44 mm fronts and 50 mm rears with the 13T pulley, you

According to the table, reduction ratio is 1:3.38 to the rear and 1:3.86 at the front but this second figure is incorrect. The actual ratio at the front is 1:2.96.

FIG. 1

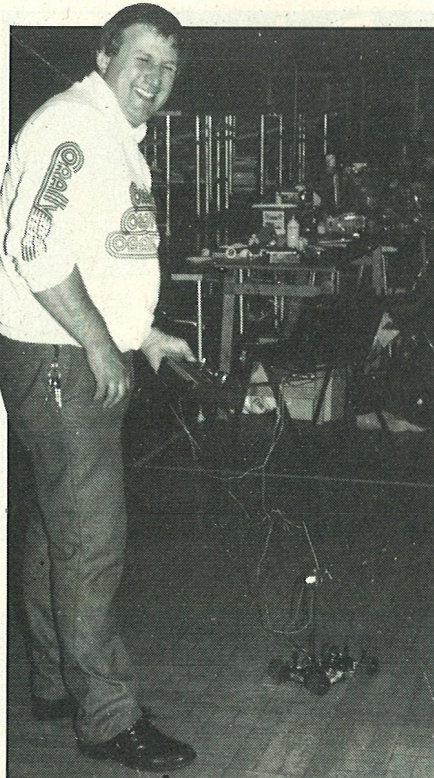
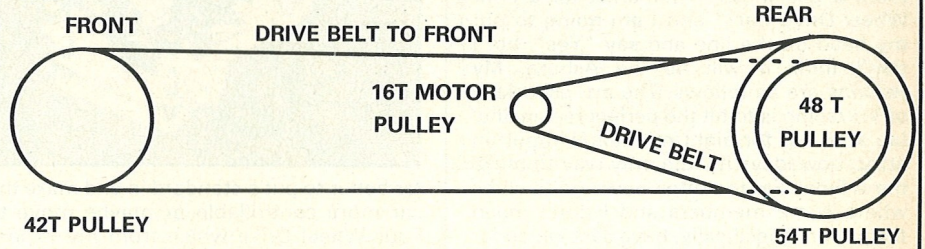


FIG. 2

Motor pulley	Reduction of rear	Reduction of front (incorrect)	Reduction of front (correct)
13T	4.15:1	4.75:1	3.63:1
14T	3.86:1	4.41:1	3.38:1
15T	3.60:1	4.11:1	3.15:1
16T	3.38:1	3.86:1	2.96:1

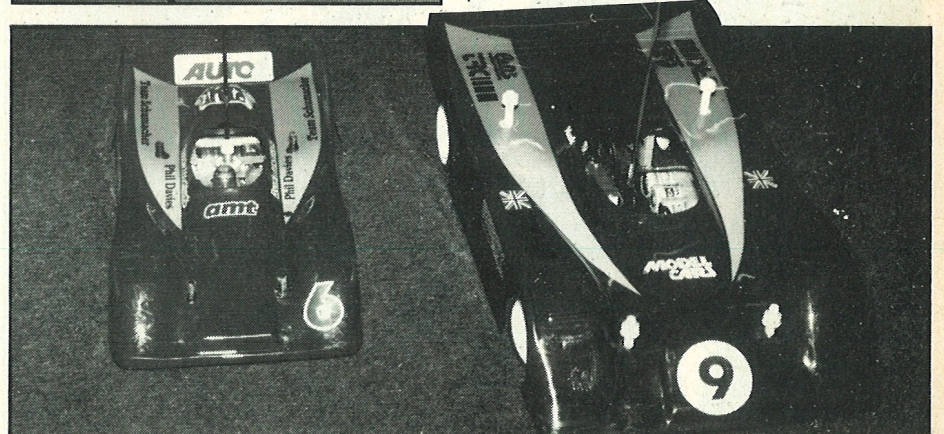
Running The Car

To start with, the car was set up with plenty of steering lock with the inner 1/2 of the front tyres treated with additive. Although this set up worked well, under acceleration on heavy cornering, the front drive shafts had the occasional tendency to jump out. The problem was easily rectified by reducing the lock but increasing the treatment of the front tyres to 3/4 of their width.

Considering its lack of adjustment of the rear, ie. roll stiffness and damping, the performance was surprisingly crisp. The drive system is extremely efficient as no problems were experienced in doing the eight minute runs with my normal 1/2 modifieds.

'Walkies', Ian Spashett takes his car for a walk using the diagnostic cable for his radio.

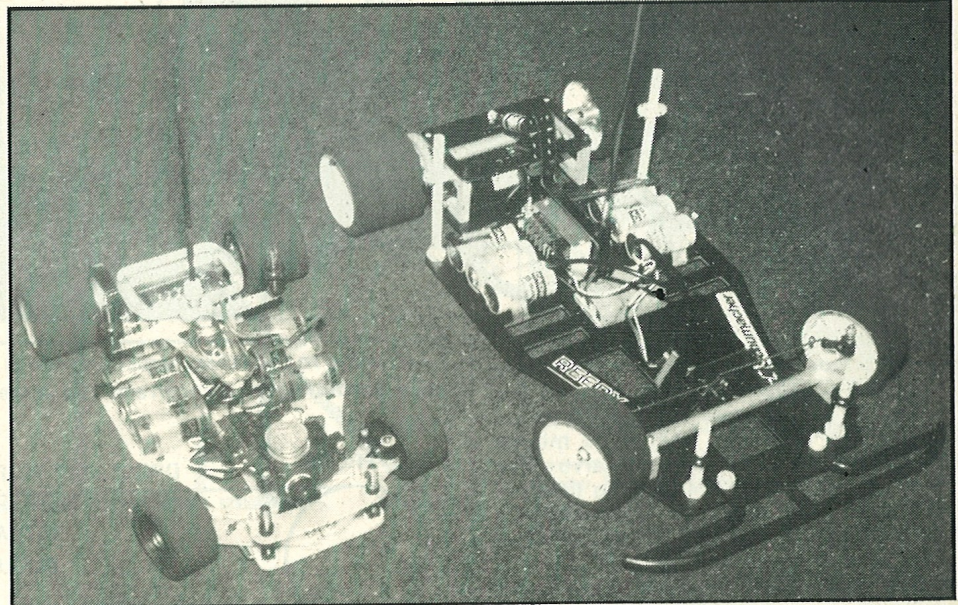
Ready to go, a Team Schumacher SPC and a TRC Pro 10, 1/10 circuit car.



The cars obvious advantage is its stability on acceleration, especially out of corners with very little tendency to understeer under power, especially as I have said before when the grip is low, however when the grip has come up and the normal rear wheel driven cars are set up, then the Hirobo Ashura is going to be just down on performance. However having tried the Ashura back to back on the local car park against my RC12L, the Ashura's capabilities shine through, but again this is due to the grip being low.

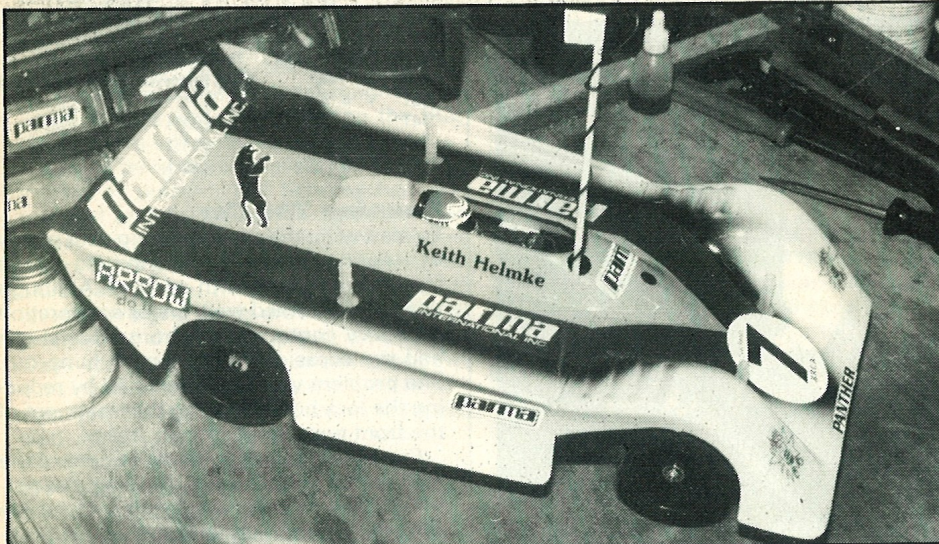
Conclusions

The question I have to ask myself is, "Is there a gap in our 1/12 market for a Four Wheel Drive Car?" and I am going to put my head on the line and say "Yes", but I don't think it will be the Ashura. My reasons are as follows. The art, especially of 1/12 racing is to hit the perfect racing line, lap after lap for eight minutes without an error, nowadays it's the only way to make the A Final. Far too often now I go to clubs where some members and I don't mean the juniors specifically, have cars which for eight minutes resemble uncontrollable missiles, especially when they go to a modified event and think they need to put in a modified to do well. They would be doing

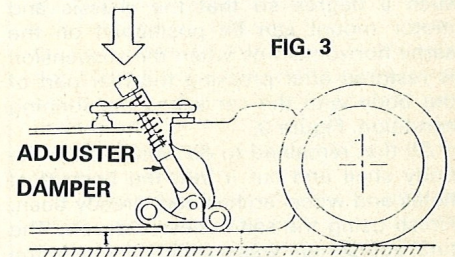
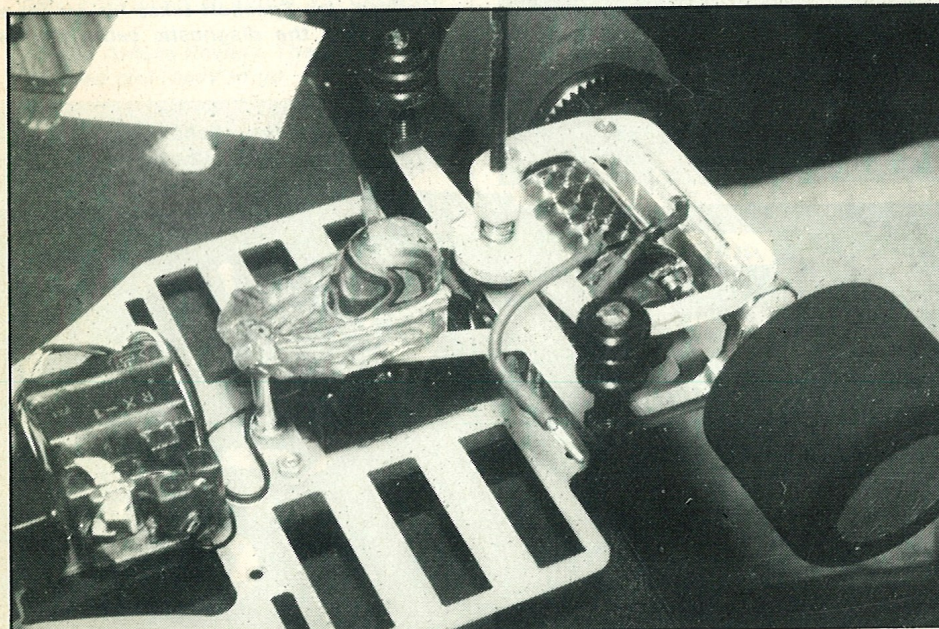


far better to put a standard in and make the car more controllable or maybe move to Four Wheel Drive which from my experiences with the Ashura are far more forgiving. I said only a few lines ago that although there is a space for a Four Wheel Drive car I didn't think it would be the

Inside one of the new 1/10 circuit cars, the TRC Pro 10 next to an SPC 1/12 car.



The latest body from Parma called the 'Tiga'.



Ashura. To me the Ashura is a cross between say a Tamiya Boomerang and an Associated RC12L, ie. the concept is there but the idea needs more development, ie. the difference between a Tamiya Boomerang and a Schumacher CAT, when it comes to the best performance. For example the Ashura has limited gear ratio's, no ride height adjustment, no rear roll stiffness adjustment, as such and a lack of damping. The Ashura would be ideal for a newcomer as it's very simple but the next stage would be to give the car to someone like our own Cecil Schumacher and say improve on that and I'm quite sure you would see one hell of a high performance Four Wheel Drive car but of course, before that happens, a manufacturer has got to be sure that a good market is waiting for him and as 1/12 sales are relatively small in this country, that is the stumbling block.

In all it was nice to try something different which has got potential without doubt.

Pit Bits

At the Chesterfield National on May 28th and 29th saw everyone able to see one of the latest 1/12/1/10 cross breeds. This new branch of racing 1/10 circuits is sure to take off over here, just as it has in the States and Team Schumacher were showing off the latest TRC Pro 10 car. Notice five slots in the chassis both sides so can alter the weight distribution to suit the track.

Prototype mini-shaker plate on Phil Davies's Schumacher SPC car which adds a bit more rigity to the chassis as well as giving a mounting area for your driver figure.

Team Parma were running the latest Parma 1/12 shells called the Tiga which seemed to work well.

Phil Davies was running a tiny shaker plate on his car, "a bit over the top though Phil to mount your driver figure", but the plate does add to the chassis rigidity.

Dave Towell was exhibiting a re-odourising additive for his Tractite Additive. Dave makes his tyre additive and then adds the odourising compound but apparently the effect of the odouriser is lost after 24 hours but when treated again, the odourising power is maintained. The re-odourising fluid is sold in a plastic 20 ml bottle and you are advised to add just a couple of ml to each bottle. The retail price will be about £1.65.

Word Of Warning

The person who told me this little snippet will remain anonymous, as he was grateful that Rob Roy did not attend the standard class event at the Chesterfield National. Apparently on the club night before the National, the aforementioned person had got his car well sorted, but at the National could not explain why his car was 'tramping' badly on right handers and the cause could not be found. The solution was only found at the end of the weekend. The hole for his transponder had been drilled in the shell too near to the front wheel and under full lock the wheel was jamming on the transponder. A simple error but it quite easily ruined a weekends racing so beware.

