

**24**  
PAGES OF REVIEWS

**THE BIGGEST AND BEST UK RC MAGAZINE**

**RADIO CONTROL CAR**

[www.rcracer.com](http://www.rcracer.com)

August 2021 / £5.00

# RACER



**THE POWER OF 4**  
ETRONIX  
POWERPAL  
COMPACT X4  
ON TEST

**THIS ESCORT IS A BIT OF ALL WHITE**  
THE TAMIYA TT-02 RALLY CAR RETURNS IN THE FORM OF THE FORD ESCORT CUSTOM

- THE KINGS AND PRINCES OF ALDERSHOT
- GETTING STARTED IN AIRBRUSHING

# MICRO BUGGY

WITH VERY FAMILIAR LOOKS, IT'S HARD NOT TO LOVE THE NRC-24 FROM NRC PROJECTS

**READY FOR THE OVAL**

MARDAVE'S NEW GRP CHASSIS-EQUIPPED VRX HR3 HOTROD REVIEWED



**GEN3 INSPIRED**

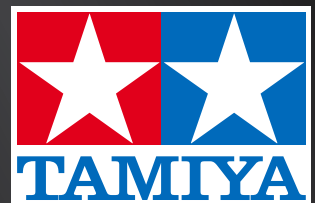
WHY SERPENT USED THEIR 2WD BUGGY AS A MAJOR FACTOR IN THE DESIGN OF THE NEW GEN3 4WD

DOOLITTLE MEDIA





**58690: 1/10 RC Landfreeder  
Quadtrack (TT-02FT)**



# GET ON THE RIGHT TRACK

Tamiya are committed to offering a fresh new twist on the fun world of Tamiya R/C, and that's exactly what is on offer with the Landfreeder Quadtrack, which uses a new variant of the TT-02 chassis with three-sided track units in place of the wheels: the result is awesome traction that can be used to take on rough terrain.



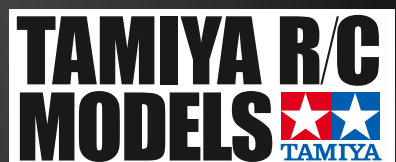
**TT-02FT**  
SHAFT DRIVEN

## SPECS:

- This is a 1/10 scale R/C model assembly kit. Length: 425, width: 247mm.
- The Landfreeder body comes moulded in polycarbonate, pre-painted Black (PS-5) with Smoke (PS-31) windows. Separate plated parts recreate a grille cover, fog lamps and roll bar.
- The TT-02FT is a variant of the TT-02 chassis, with four tracks on its suspension.
- Each of the three-sided track units is 39.3mm in width and has a contact area of 60mm length. Tracks require assembly from link parts, and offer efficient traction.
- Two types of elastomer track link (standard and grouser) are included for setup options.
- Track units are attached to suspension arms via plates, and each features a sprocket and four rollers. The third roller is sprung to further enhance performance.
- Polycarbonate chassis cover and wheel well liners give protection from dust and dirt when off-road driving.
- TT-02 four-bevel differentials and identical suspension arms are used.
- CR-Tuned motor is included as the kit-standard motor and electronic Speed Control TBLE-02S.
- Requires: Carson Reflex 2-channel radio, steering servo, 7.2 volt battery and Ansmann compatible charger to complete.

For more information from Tamiya visit [www.hobbyco.net](http://www.hobbyco.net) or [twitter.com/TamiyaUK](https://twitter.com/TamiyaUK)

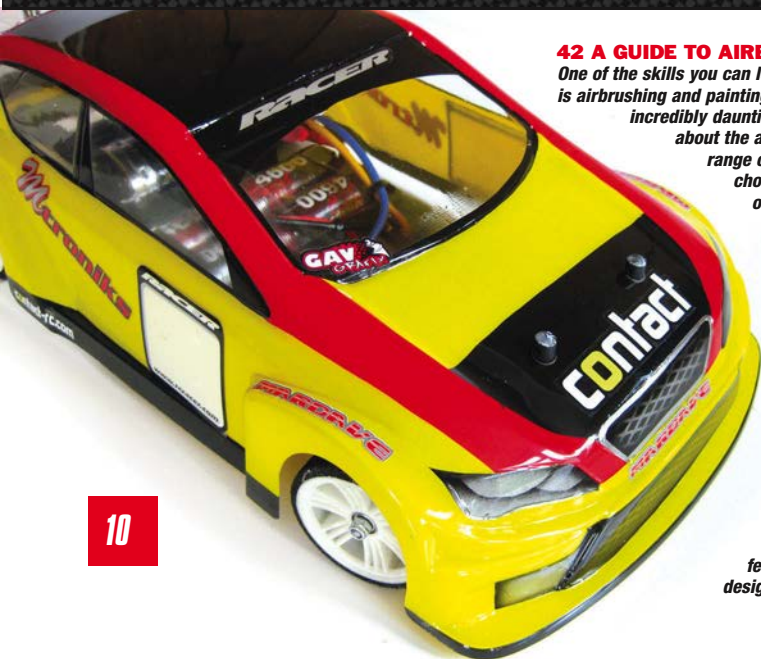
Tamiya, Inc. 3-7, Ondawara, Shizuoka-City, Japan  
Distributed in the UK by The Hobby Company Ltd. Garforth Place, Knowhill, Milton Keynes, MK5 8PG





# CONTENTS

AUGUST 2021 - VOL 24 NO10



10

## FEATURES

**YOUR INSIGHT INTO THE BEST OF RC CARS, PEOPLE AND TECHNIQUES.**

### 22 TC ACTION FROM ALDERSHOT

Round one of the King of Clubs series, incorporating the new Tamiya Junior-E class was hosted by the Aldershot club. Tricky conditions meant the drivers really had to work hard with even the very best making errors when the track was slippery.

### 26 MULTI-CHARGER

The new Etronix PowerPal Compact X4 has the ability to charge four batteries at the same time even with different chemistries and demands yet at under £75 won't break the bank... You can get all the details on the mid-range unit starting on page 26.

### 42 A GUIDE TO AIRBRUSHING

One of the skills you can learn as part of the RC hobby is airbrushing and painting your own body. This can be incredibly daunting though, with a lot to learn about the art of airbrushing, and a massive range of specialist equipment to choose from. In the first of a series of articles that we are putting together with support from The Airbrush Company, we look at the basics including a suitable airbrush and compressor, as well as some ideas to think about going forward.

### 60 GEN3 GOES 4WD

We take a look at Tony Evdoka's personal new Serpent SRX-4 Gen3 that draws heavily on their latest 2WD model, but with some interesting and innovative features included courtesy of lead designer, Billy Easton.

## REVIEWS

**THE LATEST THRASH TESTS.**

### 10 BRITISH BULLDOG

Mardave kits are synonymous with indoor racing that is fast and furious, but also great fun. Many top racers get into the hobby by racing these British-made machines, and the latest Mardave model for review is their VRX HR3 with the GRP chassis, as Peter Winton gets his hands on the budget-friendly 1:12-scale hotrod.

### 30 PROJECT 24

The NRC-24 has a very familiar look to it, with inspiration coming from a World Championship-winning buggy made in the USA. This 1:24-scale model though is made by NRC Projects in the UK, and will be more at home zipping around your lounge

or dining room than an outdoor track. John Weston was the fortunate recipient of the NRC-24 and not only built the kit up, but sourced the specific electrical components for it to be driven.

### 48 CUSTOM COSWORTH

The Ford Escort Cosworth went through a number of different looks as the US company took on the World Rally Championship in the 90s, and this is Tamiya's take on the 1998 evolution of the model based on the TT-02. With a more understated look and single-colour box art, it still looks great!

## REGULARS

**NEWS, LETTERS, DATES, NEW PRODUCTS AND OUR VIEWS.**

### 6 NEWS

Mugen's Joni Skidmore takes the nitro and E-buggy classes at the Dirt GP, the International Model Boat Show 2021 is announced, Traxxas releases a Corvette Stingray option for the 4-Tec 3.0 and we have details of the new Shanghai International Model Auto Racing Arena in China.

### 18 INSIDE LINES

All the latest stuff including kits, accessories, option parts and much more.

### 20 EDITORIAL

Upgrading on the cheap.

### 20 WHO, WHAT, WHEN AND WHERE?

Three pictures from the past but who are they?

### 21 TIME WARP

What was happening one, five and ten years ago.

### 55 DATES

Plan your schedule for the next few months with our racing calendar.

### 57 COMING UP

What you can expect to see in the next month's issue of Racer.

### 64 BUYERS GUIDE

Where to shop in your area with Racer's comprehensive store guide.

### 66 ALL OVER

A quick guide to good marshalling.

**SUBSCRIBE TODAY SEE PAGE P4 FOR A GREAT SUBSCRIPTION OFFER!**

Doolittle Media Ltd., Doolittle Mill, Doolittle Lane, Totternhoe, Bedfordshire, LU6 1QX, Great Britain

E. enquiries@doolittlemedia.com

T. +44 (0) 1525 222573

*ON YOUR MARKS,*  
**GET**  
**SUBS**  
**GET RACER DELIVERED THROUGH**



GET 12 ISSUES (1 YEAR) FOR  
**£42 UK, £56 EUROPE, £69 REST OF WORLD**  
 & GET THE BEGINNERS GUIDE TO RC CARS **FREE**  
**WWW.DOOLITTLEMEDIA.COM • 01525 222573**



www.doolittlemedia.com



01525 222573



enquiries@doolittlemedia.com



**JOIN THE ELECTRONIC REVOLUTION**

Enjoy RC Racer on your iPhone, iPad, Android phone or tablet PC.

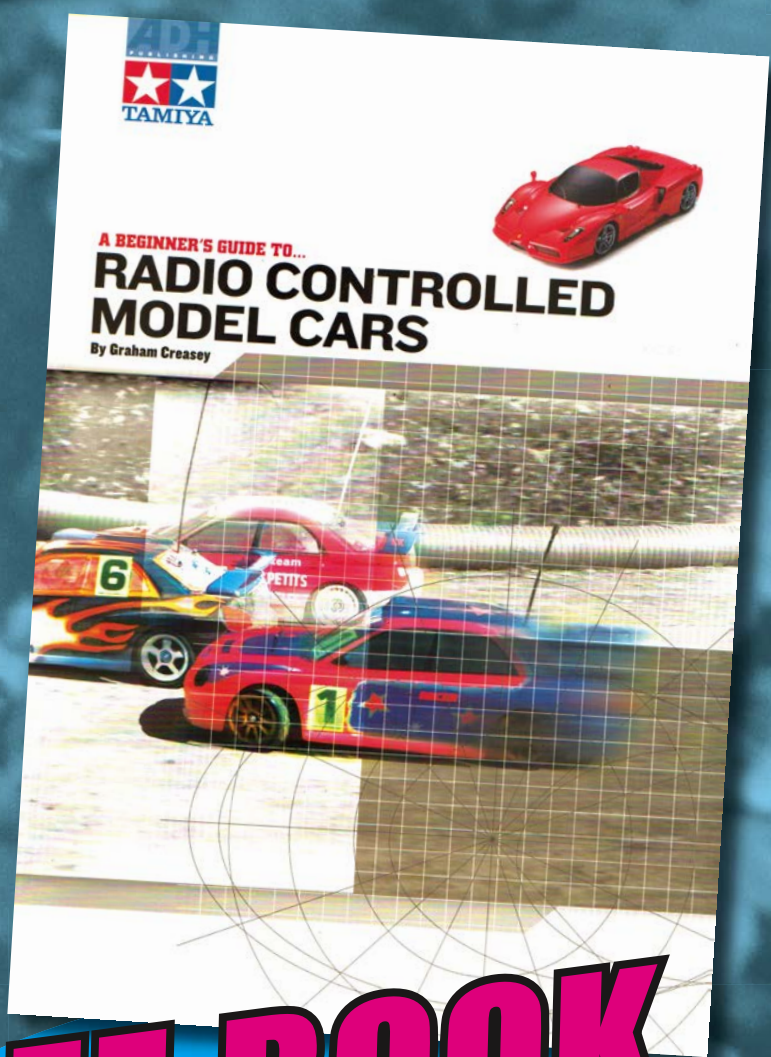
●●●●●●●●●●●●●●●●●●●●

Visit the App Store or Google Play and search for "rcracer" or visit PocketMags.com to purchase single issues and subscriptions to read on your device or PC. The above offer is not available on the digital version of the magazine



# ET FRIBCE!

AT YOUR DOOR AND SAVE **£18** (on UK cover price)




- NEWS
- NEW PRODUCTS
- THRASH TESTS
- RACE REPORTS
- TEST SESSIONS
- RACER INSIGHTS
- RACER GUIDES
- COMPETITIONS
- AND MUCH MORE!

**FREE BOOK**  
**Worth £11.95**  
**with subscriptions**  
(while stocks last)



## ***CORVETTE STINGRAY NOW ON THE TRAXXAS 4-TEC 3.0***

 The Corvette name is synonymous with American sports car excellence and now Traxxas is offering a scale version based on their 4-Tec 3.0 chassis that has the same spirit and excitement of the all-new mid-engine Corvette. The larger 4-Tec 3.0 chassis has a

new long-wheelbase and a wide-track design, that was developed specifically for the Corvette Stingray. In addition to ensuring accurate proportions, the longer, wider footprint improves stability. Traxxas has gone with an integrated quick-release system to secure the body invisibly

with a hidden mechanism delivers a secure hold, and releases in seconds to provide chassis access. Below the body there is a realistic recreation of the 16-valve V8. Replica wheels in stealthy black chrome with wide tyres fill out the rear arches to match the full-size machine's muscular stance.



# SKIDMORE DOUBLES UP AT THE DIRT GP

The three-day meeting saw glorious weather and hot action on the track as Mugen racer Joni Skidmore took honours in the two buggy classes at Nemo Raceway

Nemo Raceway would host the Dirt GP taking place over the three-day bank holiday weekend at the end of May. It was great to see a huge turnout of 134 drivers across 163 entries with fantastic conditions throughout. In the series of race meetings of the run-up to the Dirt GP, the venue had dealt with mixed conditions earlier in the year, so it was good to see the efforts of the organising team enjoying some sun and very hot conditions as some rewards for their hard work.

The main class was nitro buggy with E-buggy and nitro truck providing support and offering the opportunity for the racers to get more track time if they wanted. The first round of qualifying in nitro buggy went the way of Joni Skidmore and his Mugen before Team Associated's Jamie Clancy got into his stride winning the next three rounds to secure TQ ahead of Joni and Lee Martin. There would be 11 drivers qualifying straight into the A final and would look forward to a 30-minute on-track battle, with four more bumping-up. The remainder of the top

were Tommy Hall, Neil Cragg, Will Skidmore, Kevin Brunnsden, Graham Alsop, Mike Lewis, Jamie Hall and Jimmy Whitehall. There were some top drivers looking to make it into the exclusive top 15 and an A final spot from the B final including Lewis Jones, Callum Niblett and Dom Nunn to name just a few...

The nitro truck A final would take place over 20 minutes with the top three in qualifying being Jon Hazlewood, Freddie Thompson and Chris Sharpe-Simkiss.

In E-buggy Joni Skidmore would take the top honours in qualifying for Mugen from the Agama of Kevin Brunnsden with Joni's brother Will in third. The victory in E-buggy would be decided over two 10-minute legs.

Bumping up into the nitro buggy A final were Elliot Taylor, Callum Niblett, Dom Nunn and Liam Brocklehurst who would line-up in 12th through to 15th places respectively. The A final win though would go to Joni Skidmore for Mugen who enjoyed a comfortable victory of over nine seconds with Team

Associated's Tommy Hall, with Agama's Lee Martin and Kevin Brunnsden separated by just over a second at the line completing the top four.

Joni would also take the E-buggy win with brother Will coming in second to complete a successful weekend for the family.

In nitro truck, Freddie Thompson would move up a spot to take the win in the A final with Simon Hamblett second and Matt Bridge third, as the pole sitter Jon Hazlewood, would only complete two laps...



### RESULT - NITRO BUGGY A FINAL

POS	QUAL	DRIVER	RESULT
1	2	Joni Skidmore	44 laps 30:04.474
2	4	Tommy Hall	44 laps 30:13.745
3	3	Lee Martin	44 laps 30:14.239
4	7	Kevin Brunnsden	44 laps 30:14.956
5	8	Graham Alsop	44 laps 30:31.625
6	1	Jamie Clancy	44 laps 30:32.373
7	13	Callum Niblett	44 laps 30:41.204
8	9	Mike Lewis	43 laps 30:23.279
9	11	Jimmy Whitehall	41 laps 30:06.306
10	14	Dom Nunn	37 laps 30:30.171
11	12	Elliot Taylor	36 laps 26:07.974
12	15	Liam Brocklehurst	26 laps 19:37.729
13	6	Will Skidmore	20 laps 13:51.671
14	10	Jamie Hall	11 laps 7:44.116
15	5	Neil Cragg	0 laps 0:00



In E-buggy Joni Skidmore took the win from brother Will and Lewis Jones



The nitro buggy win saw Joni Skidmore again on the top step from Tommy Hall and Lee Martin



Freddie Thompson won nitro trucky with Simon Hamblett second and Matt Bridge third



# THE INTERNATIONAL MODEL BOAT SHOW 2021

Meridienne Exhibitions has announced that this year's International Model Boat Show is planned for the weekend of 6-7 November at Warwickshire Event Centre. Organisers expect many specialist suppliers to be present offering visitors everything they could need for their boat builds and other modelling needs. In addition to all the boating action, the Tamiya Truckin team will be demonstrating and driving their 1:14-scale radio-controlled models on a roadway system over 80 metres square, featuring trucks, plant and machinery. As usual the show will be packed with over 600 fantastic models from over 25 club and society displays. The excellent and varied display of models from early warships to modern power boats and ships will be complemented by action on the large indoor boating pool.

The organisers will continue to monitor and act on advice from the Government and respond accordingly to guidance throughout the coming months, to ensure the event can safely be delivered with compliance to any Covid-19 requirements that may be in place at that time.

Tickets are scheduled to go on sale later this month, but for all the latest information, head to [www.modelboatshow.co.uk](http://www.modelboatshow.co.uk).

## SHANGHAI INTERNATIONAL MODEL AUTO RACING ARENA

Salton Dong is well-known in RC racing circles with his roles at both Hobbywing and Sunpadow, and has led the development of the Shanghai International Model Auto Racing Arena in China that is now official open. SIMARA is located in the Youth Activity Centre of Baoshan District in Shanghai, and will focus on primary and middle school students, then at weekends it will be open to the public. It took nearly a year to build, and has been "Designed to be one of the best RC car arenas in the world". The site features three different types of track to suit the most popular classes, whilst also catering for crawling and drift cars. Spectators can observe from a central location located between the off- and on-road tracks. Thanks to RedRC, Salton Dong and Chasel Young for the images.



## SECOND GEN LAYDOWN

The latest Schumacher Cougar has been released called the LD2 and it comes equipped with a number of improvements as well as a Stock Spec option available alongside the standard model

The Cougar 2WD buggy from Schumacher has proven to be a popular race chassis and is growing in stature around the world. In the UK the chassis has always been well-established, but now with the likes of Broc Champlin and Travis Amezcua strengthening the team in the USA, and Michal Orlowski from Poland continuing to be successful in Europe and on the World stage, the British brand has enjoyed a greater following.

The new LD2 model builds on the original Laydown machine and now features an even lower centre of gravity for improved cornering speed. Schumacher claim that, "It is a very versatile platform, with outstanding performance on a wide range of grip levels, from carpet to Astro to dirt. The LD2 has been designed to be easy to drive and user friendly for the most enjoyable racing experience." The Schumacher international racing team will be aiming to put the LD2 at the top of

the podium all over the world.

Here is a rundown of the features:

- New class-leading front suspension geometry with durable components and a range of optional alloy parts, offering more adjustments to set up the LD2 for all track conditions
- New front-end enables 0 and -5 wheelbase lengths without the need of an additional chassis
- New 2.5mm aluminium chassis with sensor lead wiring channels
- New 90-phased lightweight steel CVD driveshafts
- New easy-access battery fitting system with multiple fitting options
- New low drop wing mount

Of course many of the existing details of the Laydown have been carried over to the LD2 such as

the adjustable Ackermann, triple position equipment mounting plate, gull-wing wishbones, big bore shocks, screw piston fixing with titanium nitride shafts, front shock tower cover, composite "S2" material 4mm shock tower mounts, twin pad slipper and spur gear shield. An optional ball diff is available.

As well as the standard Cougar LD2, the Stock Spec option has the following differences to the standard "modified spec" car.

- Carbon filled transmission housings
- Slipper lockout assembly
- Carbon fibre chassis
- Alloy layshaft
- Carbon fibre motor plate
- Ultra-light body shell

Look out for more details on the Schumacher website at [www.racing-cars.com](http://www.racing-cars.com)



## KINGS OF THE SLIDE

The King of Clubs and Tamiya Junior-E series kicked off at Aldershot with tricky conditions faced by the racers as the weather failed to live up to its late spring date in the calendar

The popular on-road venue at Aldershot would host round one of the 2021 King of Clubs, that also would incorporate the inaugural Tamiya Junior-E series that aims at bringing in new racers to the hobby. A full entry signed up for the event including many top on-road racers getting in some quality competition early on in the outdoor race season.

In modified factory Xray driver Olly Jefferies would take the win with Billy Fletcher taking honours in 13.5T from second on the grid. In the Tamiya Junior-E class, Archie Matthews representing Eastbourne took pole position and the A final win, with local driver Steve Adams taking Tamiya GT-E honours on a tie-break.

An added feature of the series is the team competition and it was Eastbourne who took the round win, aided by the likes of Harley Eldridge and Finley Lanaway who both scored well in their A finals.

Don't miss our full report from the round on page 22.



## MORE EURO CHAMP EVENTS CANCELLED

Sadly the final two remaining EFRA European Championships will be cancelled due to on-going coronavirus restrictions affecting international travel for much of the RC community in Europe. The events in Spain (1:8 on-road) and Italy (1:10 on-road) were both set for August, and will now be run by the same organisers in 2022.

As a result this is the second year with no European Championships taking place apart from the 1:12 which was in early 2020 before the pandemic hit. In a statement published on social media, EFRA said, "With the situation improving as vaccines roll out, we are looking forward with hope to the remaining GPs, 40+ and the all-important National Championships taking place across Europe."

## EDELBROCK PARTNERS UP WITH RC4WD

RC4WD has announced that Edelbrock as a new officially licensed partner. The products are exclusively designed, manufactured, and made in the USA by Rogue Element Components for RC4WD. The first item to come out of the partnership is the RC4WD Edelbrock 1:10-Scale V8 Motor Dress Up Kit, which is the perfect upgrade to your scale V8 engine, made out of billet aluminium with a sleek polished finish.

More details can be found at [rc4wd.com](http://rc4wd.com)



# THRASH TEST - MARDAVE VRX HR3 HOT ROD

■ spec: 2wd grp chassis ■ class: 1:12 on-road competition ■ cost: £69.95

# BACK TO THE FUTURE

Peter Winton gets his hands on the third generation hot rod from Mardave, who are the UK specialist when it comes to 1:12-scale indoor racing. He chose the budget-friendly GRP-chassis version of the VRX HR3 to build ahead of track test in the future

Back in 1971, a young man called Wes Rayner developed a 1:8-scale nitro car that won the first organised race meeting in the UK in 1972. As outdoor racing wasn't the thing to do in a British winter, Wes then made a car for indoor racing and almost single-handedly invented 1:12-scale racing. He called his cars Mardave.

Two owners and almost 50 years later, Mardave is still going strong, and still working to Wes's original philosophy of making affordable cars and letting the drivers' skill speak for itself. It was Wes who told Cecil Schumacher that a differential was a great idea, but only if it could be sold for £5. That challenge sent Cecil away until the ball differential was born – and sold in its first incarnation for £5.50.

Current owner Chris Wilkinson, a long-time Mardave racer and ex-World Champion on the electric oval scene, has broadened the appeal of the cars by introducing a wide range of cars for oval racing – stockcars, hot rods, Legends – and circuit racing – GT12, GT10 and F1. There's a range of cars for one-make classes, the most popular being the Assassin Mini Racer to a set of strict rules. This class is popular in the Yorkshire and Crewe clubs, and now the Stafford Club too. As

Stafford have Hednesford Raceway close by, they have also allowed the HR3 Hot Rod into the class, so this is what we decided to build.

## BUILD PACKAGE

All the bits for this build-it-yourself kit arrive in a nice strong box. We ordered everything to make this car ready to race, adding only the receiver from our own stock of parts. Instructions are in video form on Mardave's YouTube channel which means easy access! A quiet evening with the bags of bits, the videos and the pictures on the website – relax and take your time.

A single-piece glass-reinforced plastic (GRP) chassis supports both the front and rear suspension. Nicely finished with a natty protector underneath, it benefits from sanding the sharp edges. Both front and rear suspension mount directly to the chassis.

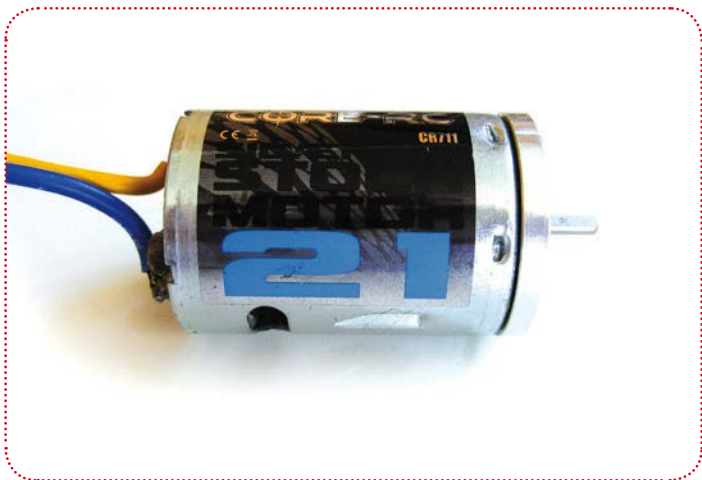
Sliding-pillar front suspension is supported on lower wishbones. Polishing the kingpins until they a smooth and shiny brings an excellent, friction-free suspension. The wishbones are mounted upside down to increase options to run small front tyres to improve handling. Spacers are provided to give the required caster angle and





# THRASH TEST - MARDAVE VRX HR3 HOT ROD

■ spec: 2wd grp chassis ■ class: 1:12 on-road competition ■ cost: £69.95



The Core RC 21-turn brushed motor keeps things nice and simple, and the cost low



Although Mardave 1:12 cars have always been powered by a 4-cell battery, the chemistry and capacity has changed over the years. This is a 4600mAh NiMH pack

◀ the correct ride height. We chose the optional front springs for track use on carpet.

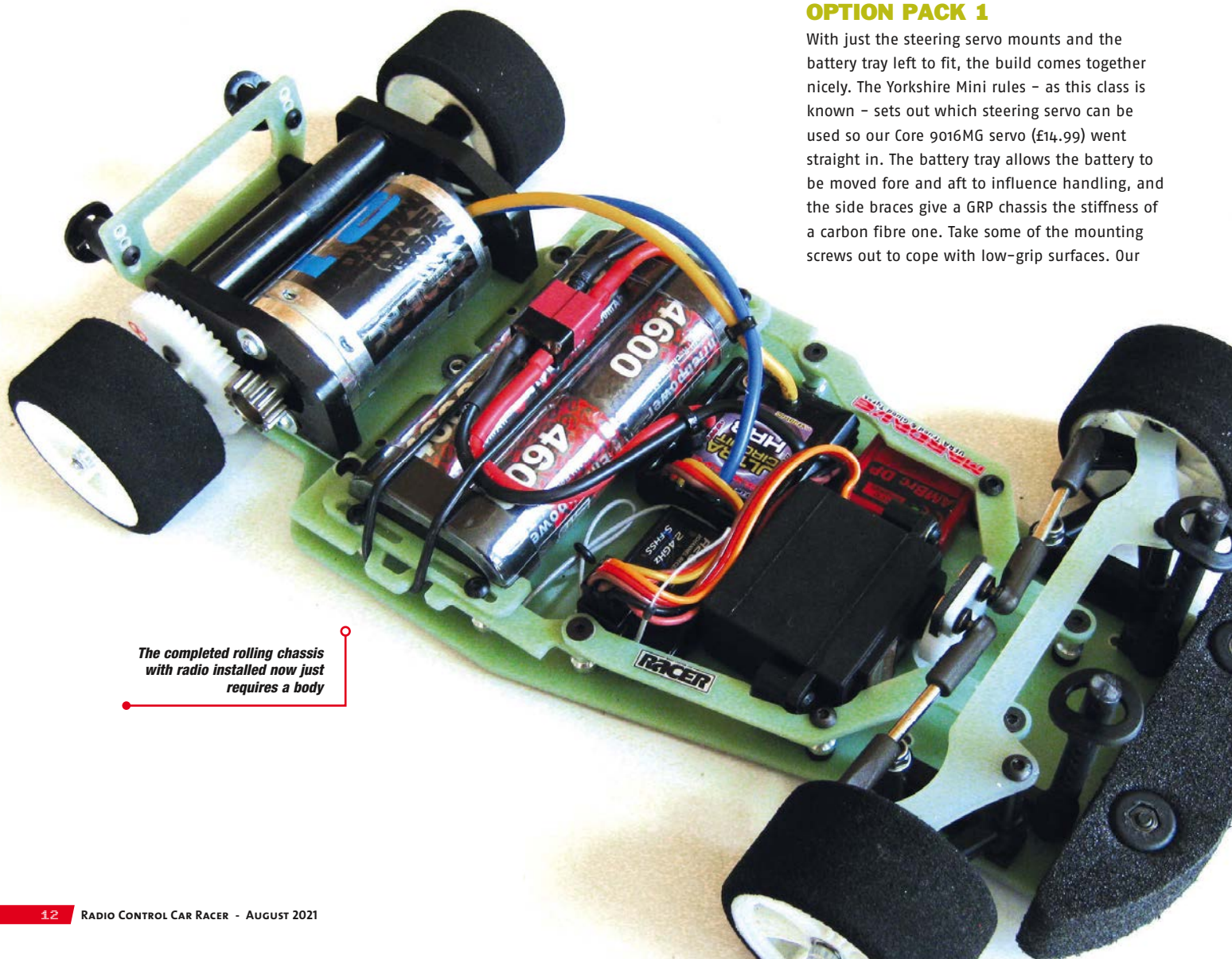
The rear suspension is based around a pod construction sat on a GRP plate. This design harks

back to the first car Wes designed. A pivot on the front of the plate allows the bump and roll motion required, and is controlled by a pair of springs at the rear of the pod. We chose the optional

longer lower plate which includes rear bump stops to control droop. It all fits well and a good suspension action is easy to obtain. We chose softer rear springs too.

## OPTION PACK 1

With just the steering servo mounts and the battery tray left to fit, the build comes together nicely. The Yorkshire Mini rules – as this class is known – sets out which steering servo can be used so our Core 9016MG servo (£14.99) went straight in. The battery tray allows the battery to be moved fore and aft to influence handling, and the side braces give a GRP chassis the stiffness of a carbon fibre one. Take some of the mounting screws out to cope with low-grip surfaces. Our



The completed rolling chassis with radio installed now just requires a body



*The solid axle means the spur gear is bolted straight onto the boss*



*The hot rod uses a 48-tooth, 32DP spur gear - the same as all the original 1:12-scale cars*

side brace was too tight a fit around the right side of the servo, so a file was brought into service to fix that issue.

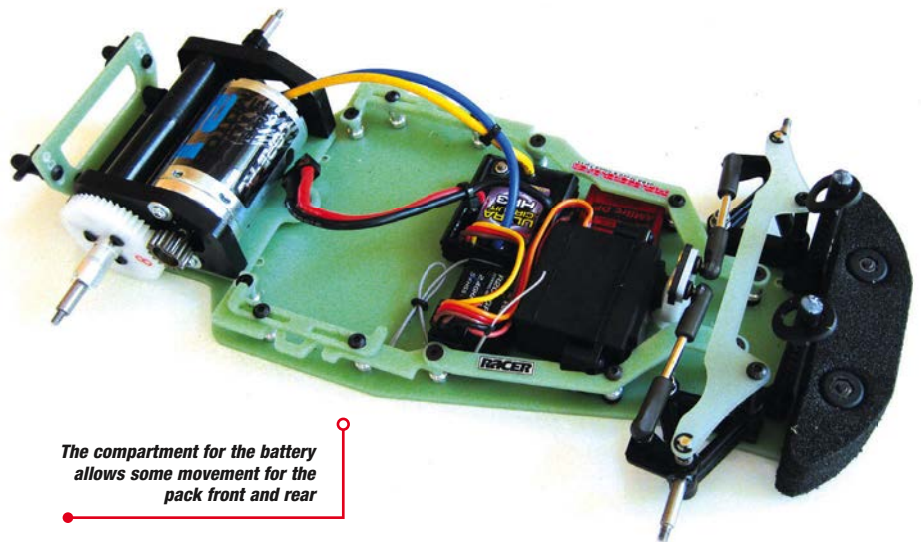
As well as the option springs we also fitted all the other items allowed in the rules. A front camber strap sets the camber to 2-degrees and strengthens the front suspension. The motor lowering plate helps with handling, and the Z-drive rear wheel fixings are metal; more accurate than the plastic items.

Option Pack 1 covers all these parts – except the camber strap and springs – and includes a motor, servo, battery and speed controller, all for around £100. This is a brushed motor setup powered by NiMH cells and a simple two-wire speed controller. It's easy to set up and very easy to use compared to brushless systems.

Contact Mardave directly through the website and they'll help you choose a kit to your specification. Complete with an extra set of tyres and two batteries, our car came in just over £200 – a bargain by any standard as all we



*Some protective film was placed onto the underside of the GRP chassis*

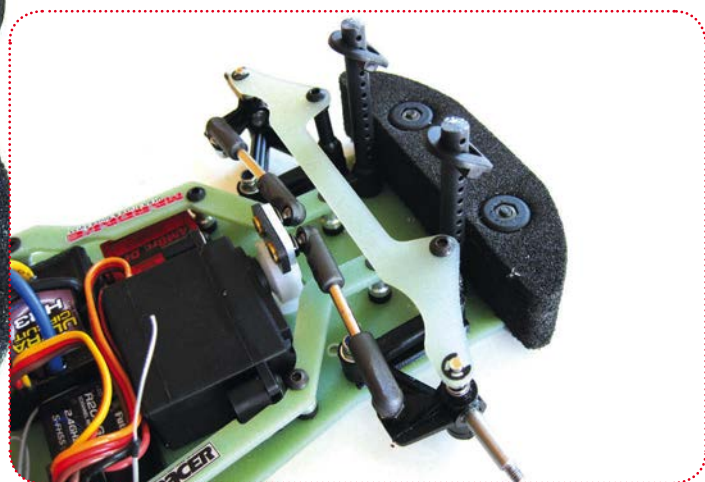


*The compartment for the battery allows some movement for the pack front and rear*

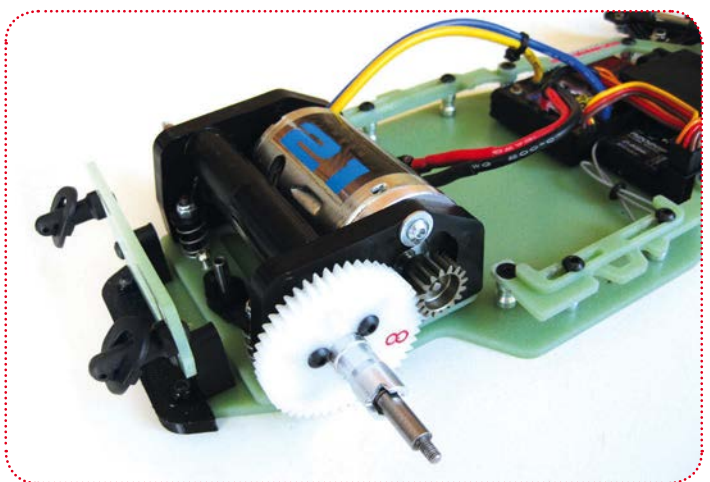
added was our receiver.

Fit the rear axle, wheels and tyres and there's your roller complete. Ball bearings, and good ones at that, come as standard to make for a fine racing

chassis. This review car was fitted with the Mardave Hot Rod Lexan shell looking suspiciously like a VW Polo. The paint by Gavin Clinch of Gav Graphics is excellent – my attempt was shocking!



*The front-end showing the strap that sets the camber angle at the wheel*



*The motor sits between the two moulded bulkheads*

# THRASH TEST - MARDAVE VRX HR3 HOT ROD

■ spec: 2wd grp chassis ■ class: 1:12 on-road competition ■ cost: £69.95

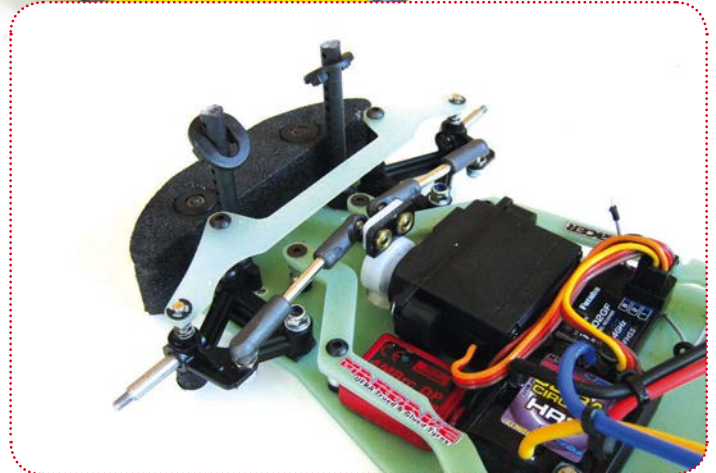


## Racer Tips

- Watch the videos and look at the pictures
- Paint the shell like a real racing pocket-rocket



Despite its low cost the VRX HR3 features bearings throughout



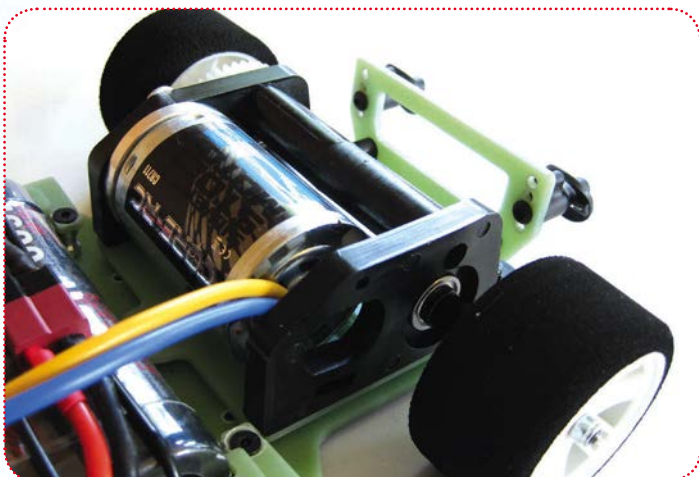
Take your time to ensure the front suspension is as smooth as possible for the best results on the track



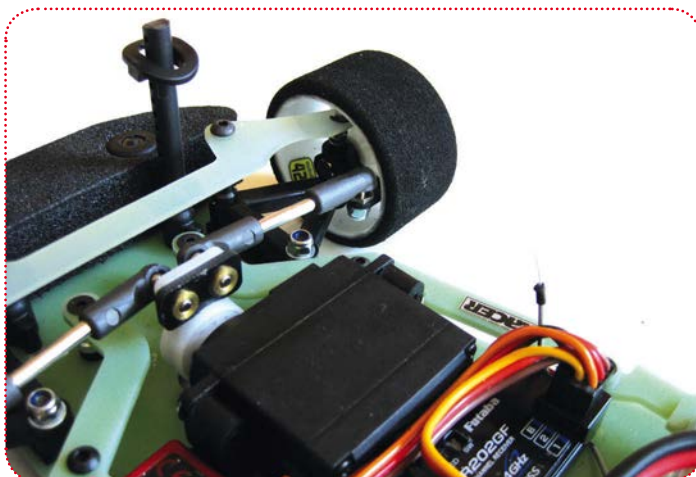
*The optional camber strap strengthens the front suspension. The body posts have adjustable height which is very useful*



*Horizontal body posts makes the hatchback body shell easier to mount*



*The motor can be mounted for circuit racing (as shown) or to the left for oval racing*



*The brace for the servo saver is a very nice design; well worth buying the Mardave one*

## LOW-COST PHILOSOPHY

The parts in Option Pack 1 fit Wes's original philosophy perfectly. When a motor, speed controller, servo, battery, rear axle conversion and other parts come in at £105 complete, that is

the best value for money to be found. Mardave also sells all the kit to make this a complete deal including radio gear. Their radio sets start at £30 – this is low-cost racing!

Weight limit is not part of the Mini class rules.

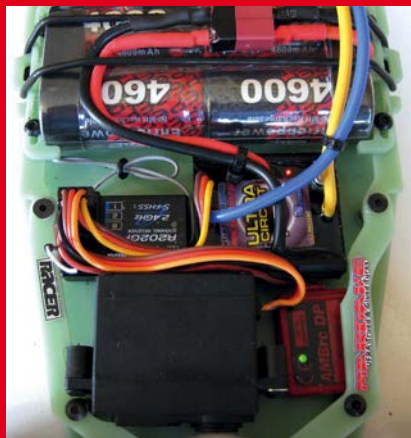
Who needs that when all the components are controlled and you can't deviate from them? All up the car weighs 1030g, not far north of a GT12.

This Mardave may be almost 50 years in the making, but it has been well worth the wait for the latest version. Assembly does need some understanding of how to make the car work, and that means it is not in the same class as a Tamiya car. Find a local club and someone will always be willing to help you.

## THE NEXT STEP

When you get it on the track, I just know it will be a joy to drive. The standard kit setup works first time, so tuning is a small investment in a spring set and then some adjustments that the driver can make easily. Racing is going to be close due to the identical and controlled motor and speed controller. The cars are not fast by 1:12-scale standards, but hardly slow either. Winning is about honing your driver skills and not digging ever-deeper into your pocket or constantly upgrading the car with new parts.

For those that like their racing close and



*The radio equipment including a full-size servo neatly installed*

## Building Tips

Polish up the kingpins until they are smooth and bright, then finish them with Brasso or similar. Smear the kingpins with silicone grease before fitting the axle blocks.

Carefully file the right sidebar brace until it fits around the servo and servo post and all the screw holes line up with the standoffs. Don't force the sidebar into position.

Set the car with 0.5mm droop at the front and 1mm at the rear to start with.

# THRASH TEST - MARDAVE VRX HR3 HOT ROD

■ spec: 2wd grp chassis ■ class: 1:12 on-road competition ■ cost: £69.95

◀ fast, who want something of good quality and good value then look no further than the Mardave VRX HR3 Hot Rod, or it's Mini Assassin stablemate. A complete, competitive race car on the track for just under £200 all in is something

you will struggle to beat in any other class. Form an orderly queue at your local model shop and ask for a Mardave, or contact Mardave direct for all the information you need – go on, you know you want one... ■







### SPECIFICATION

Model:	Mardave VRX HR3 Hot Rod
GRP kit	
Scale:	1:12
Class:	On-Road
Application:	Competition
Format:	Kit
Power:	Electric
Chassis:	GRP
Drivetrain:	2WD
Transmission:	Direct-drive
Differential:	None
Shocks:	None
Bearings/Bushes:	Bearings

### TECHNICAL DATA

length	300mm
width	160mm
height	120mm
wheelbase	202mm
front track	135mm
rear track	130mm
weight	1030g

### WHAT WE USED

Electric Kit	
Transmitter:	Futaba 7XC 2.4GHz stick
Receiver:	Futaba R334SBS 2.4GHz
Servo:	Core 9016MG
Speedo:	Mardave Ultra Circuit HR3 by Mtroniks
Motor:	Core 21T Fan Race
Battery:	EP4600B 4.8V NiMH
Body Shell:	Mardave Hot Rod Lexan Light

### OPTIONAL PARTS

Option Pack 1 (motor, servo, battery and speed controller)  
 Soft rear springs  
 Hard front springs  
 Kingpin brace

### VERDICT



Good quality  
 Easy to drive and tune  
 Inexpensive to run competitively



Front suspension requires some work

**RACER RATING: ★★★★★**

### CONTACT

Mardave  
 Tel: 07796 412674  
 Website: [www.mardave.co.uk](http://www.mardave.co.uk)

## Road Test

*In the current circumstances we haven't managed to get indoors at Stafford to start racing this new class with others. Once we do, there'll be an update here in your favourite RC car magazine.*

## Summary

The latest development of an original design that still delivers the promise of affordable close racing. The Mardave VRX HR3 Hot Rod requires no upgrades, no 'development of the week', just fun around the track. Yes it does need some attention to detail to achieve a good build, but that work is amply rewarded on the track. Simple, solid construction that responds well to tuning and a good driving style. A great car for a great class of indoor electric racing.



### Spektrum Smart Sensor Crawler System

The Spektrum Firma Sensored Smart speed controller system has been specifically engineered to be used with 1:10-scale crawlers and scalars. Featuring advanced Smart connectivity, professional Drag Brake Performance and torque control, all while being fully waterproof.

#### Features:

- Smart all-in-one telemetry
- Pro-level performance sensored motor and speed controller
- Fast, powerful 32-bit ARM M4 processor
- Waterproof speed controller
- Waterproof sensor wire with locking plug and gasket
- Multiple options for easy programming – Smart ESC Programming Box, SmartLink USB Updating and Programmer application, programming from Transmitter via Text Gen Telemetry
- Multi-point protection – over-current protection, automatic LiPo low-voltage cut-off, thermal protection, failsafe protection
- Developed and designed by Spektrum engineers, in partnership with the industry's leading speed controller manufacturer compact for easy installation in most applications
- Ready to install – no soldering required
- Aluminium heat sink for high efficiency
- Includes optional cooling fan
- Adjustable high-power BEC (6V or 7.4V)
- Firmware updatable through the Smart ESC Programming Box
- High heat-resistant IC connectors, backwards compatible with EC connectors

**AVAILABLE FROM:** Logic RC  
**WEBSITE:** [www.LogicRC.com](http://www.LogicRC.com)  
**CONTACT:** 01992 558226

### Pro-Line 1993 Ford Ranger Clear Body

Pro-Line's new 1993 Ford Ranger body is for 12.3" wheelbase crawlers and is officially licensed, developed from the ground up and designed in the latest 3D computer-aided design environment to be as accurate as possible to the real thing. Included with the body is a moulded black plastic front grille and rear taillight buckets with clear headlight and taillight lenses that allow for the addition of optional working 5mm LED lights (6317-00) and 3mm LED turn signals. Also included are moulded plastic side-view mirrors and door handles that are scale replicas of the full-size parts off the 1993 model. The cab and bed are separate pieces for added scale realism and are made from crystal-clear polycarbonate that can be painted to match your favourite factory Ranger colour or custom painted to whatever your heart desires.

Detailed decals are also provided including stickers that match the body graphics found with the STX version of this iconic pick-up truck. Pro-Line also offers a Pre-Runner Fender Flare Kit (6369-00) for this body that transforms your crawler into a desert running Pre-Runner.

- 3537-00 – Pro-Line 1993 Ford Ranger Clear Body Set with Scale Moulded Accessories for 12.3" (313mm) Wheelbase Scale Crawlers

**AVAILABLE FROM:** CML Distribution  
**WEBSITE:** [www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
**CONTACT:** 01527 575349



### Hudy Hard Case Large Accessories Bag

This is Hudy's latest addition to their bag line-up designed to carry and protect your equipment. The highest-quality materials combined with expert workmanship ensure the durability and long life of this hard case. The upper lid features inner net pocket with a zipper. This one measures 280x150x85mm although it is available in different sizes.

#199295-H Hudy Hard Case Accessories Bag Large – 280x150x85mm

**AVAILABLE FROM:** RC Disco  
**WEBSITE:** [www.rcdisco.com](http://www.rcdisco.com)  
**CONTACT:** [sales@rcdisco.com](mailto:sales@rcdisco.com)

### Ruddog Crawler 550 5-Slot Brushed Motors

Made for all crawler enthusiast are the Ruddog Crawler brushed motors, which are now also available in 550-size. Available in 5-slot specification and two different winding variants, the dual ball-raced motors feature adjustable timing, plated end bells, replaceable motor brushes and springs, brush heatsink towers and they are fully rebuildable if needed. The adjustable timing allows to adapt and optimise the motors for drivetrains that require reverse motor rotation operation.

RP-0278 Ruddog Crawler 550 10T 5-Slot Brushed Motor  
 RP-0279 Ruddog Crawler 550 12T 5-Slot Brushed Motor

**AVAILABLE FROM:** X-Factory UK  
**WEBSITE:** [www.xfactoryrc.co.uk](http://www.xfactoryrc.co.uk)  
**CONTACT:** 01923 816636



# ENDURO 24

1:24 SCALE READY-TO-RUN OFF ROAD  
SENDERO TRAIL TRUCK



40180



40181

**RTR**  
READY-TO-RUN

[www.ElementRC.com](http://www.ElementRC.com)  
for more information

## ENDURO24... A BLAST TO DRIVE!

COMES WITH EVERYTHING IN THE BOX.

### THE ENDURO24... A BLAST TO DRIVE!

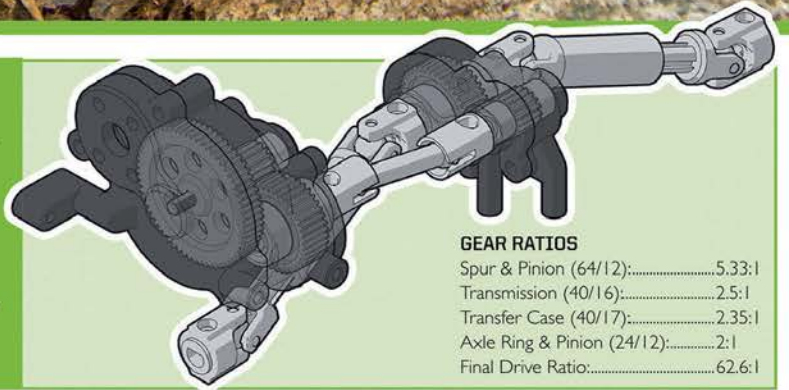
Whether it's outside on the trail or in the comfort of your own living room, there's no doubt this little rig will overcome the challenge. This small scale 4-wheel drive crawler comes equipped with many features found on larger size rigs. Full-time 4-wheel-drive transmission with divorced transfer case, metal vertical chassis rails, and 4-link suspension ensure climbing over obstacles will be a breeze. Providing power and control is a 2-in-1 receiver/ESC, 2-channel radio, powerful servo, and single-cell LiPo. You get all this and more packed into a convenient package.

Don't let the small size and low speed deceive you—the Enduro24 can provide hours of challenging driving and scale fun! No matter your skill level, there's plenty of fun for everyone.

Just install the batteries, charge, and go! Right out of the box, the Enduro24 RTR is ready for adventure... **Are you?**

### FORWARD-MOUNTED MOTOR & DIVORCED TRANSFER CASE:

The forward-mounted motor puts the heaviest part of the rig over the front tires. This forward bias weight keeps the front tires on the ground and provides better front grip during ascents. The divorced transfer case provides a lower center of gravity in a compact space. Not only does this combination perform well, it also adds scale realism, allowing for plenty of room should you want to add a custom body or interior.



### GEAR RATIOS

Spur & Pinion (64/12):	.....5.33:1
Transmission (40/16):	.....2.5:1
Transfer Case (40/17):	.....2.35:1
Axle Ring & Pinion (24/12):	.....2:1
Final Drive Ratio:	.....62.6:1



### 4-LINK FRONT & REAR SUSPENSION:

Front and rear injection-molded 4-link suspension allows for smooth articulation to crawl over rough terrain.



### CHASSIS MOUNTED SERVO (CMS):

The chassis-mounted servo provides maximum steering while maintaining scale looks.



**WHEELS & TIRES:** Crawl, grip and climb over obstacles with black injection-molded single-piece rims wrapped in soft compound rubber tires.

**YOUR JOURNEY BEGINS HERE!**

**ELEMENT**<sup>TM</sup>  
BY ASSOCIATED ELECTRICS

E&OE

**CML**

CML PRODUCTS ARE AVAILABLE IN ALL GOOD MODEL & HOBBY SHOPS. CHECK OUR WEBSITE FOR FULL DETAILS  
[WWW.CMLDISTRIBUTION.CO.UK](http://WWW.CMLDISTRIBUTION.CO.UK)





## EDITORIAL

www.rcracer.com / E-mail: web@rcracer.com

# UPGRADING ON THE CHEAP



We are very lucky here at Racer Magazine to get our hands on the latest RC releases, and reviewing those high-end chassis every issue, month after month. But we are only too aware that for the majority of our readers this is an unachievable situation and that replacing your race chassis every year or when a new model comes out for your chosen class, simply doesn't make sense, or can't be justified for a number of reasons.

Over the numerous lockdowns in the past couple of years, we know that lots of readers have raided spare rooms, parent's houses, sheds, garages and lofts and come away with their RC models from the "old days". As a result touring cars, 1:12, Pro 10 and buggies were rediscovered and the enjoyable process of rebuilding them took place so the majority of the time they could take pride of place as "shelf queens". That kept them busy during the downtime and a chance to reminisce, but what

about current RC models? Well there are a number of ways of upgrading on the cheap, that not only will improve the looks of an existing model without breaking the bank, but will also make you feel good too!

First of all, how about a rewire of your electrics. You can choose a new colour of wire or if you have lots of time, try and come up with a neater and improved wiring layout. There are some well-known RC builders out there who come up with some fantastic, clean wiring designs that not only look good but also make it easy to work on and maintain. Another cheap idea is to re-sticker an existing body as it doesn't have to be a new one, but a quick clean-up starting by removing the old decals, then a wash, getting rid of those battle scars and then raid the sticker box for some new ones. If you have a spare body, why not send it off for painting to your favourite artist, or if you are brave, then why not paint your own? In this issue

Andy Carter begins a series of articles under the title of 'a guide to airbrushing' on page 40. Change the colours or come up with a new scheme, and either way this will give your vehicle a lovely fresh look. New wheels and tyres will also make any RC model look much nicer even if they are of a specification you are unlikely to use! Finally, an ideal upgrade is to try and find something that can be used on all your RC models like a wrap for your transmitter. This can match your race colours or be less specific like a camo scheme or similar but either way, that stock-looking transmitter will now stand out from the crowd for a relatively small outlay.

So there you go - no excuses anymore! No matter what your budget, for just a few pounds there are plenty of ways to give your RC equipment an update. What's stopping you...

*Matt Benfield*  
Editor

## TOOL OF THE MONTH

This Centro Mini Electric Intelligent Soldering Iron is a great addition for any RC enthusiast, capable of getting up to temperature in just over ten seconds with an OLED display for the adjustable temperature range. It works off an input range of 12V to 24V DC power to reach a max of 400-degrees Celsius with a selection of optional power leads with a selection of optional tips are available. The iron retails for £59.99 and is available from all good model shops through CML Distribution.



## WHO, WHAT, WHERE & WHEN?

Three pictures from the past:  
Do you know who, what, when and where they are now?  
Answers on page 66.



3

# TIME WARP

## THE BEST OF - SOCIAL MEDIA



Facebook – Gens Ace

"This takes some really mad skill! This crawl explorer conquered a complete right-angle!"

You can check out the full video on the Gens Ace social media at <https://tinyurl.com/nz5wnfy8>



Facebook – Nitro Circus

"Traxxas Truck Skim – when all the boat racing is done, we had to see how the Traxxas trucks handled on the water!"

Travis Pastrana puts a paddle tyre-equipped Traxxas X-Maxx on to the water. Fortunately the truck maintained enough momentum to go from land to water to land again. The full video is available to watch at <https://tinyurl.com/jm4bpxj4>



Facebook – Velocity RC Magazine

"Check

out this beautiful 3D-printed Comical-style Williams FW13B by Billy Yip, spotted in the 3D Printed RC Facebook group."



## 1 YEAR AGO – AUGUST 2020



First up in National news the 1:8 circuit British Open Championship 2020 started with a full entry at the famous Halifax circuit with Alex Thurston and Mikey Mansell winning nitro and electric respectively for Capricorn whilst in 1:8 off-road, North West Nitro hosted round two of the BRCA Truggy and E-Buggy Mini Series Nationals. Elliott Boots topped the truggy class for Sworkz whilst Mugen driver, Joni Skidmore, took the with E-buggy class. At round one of the MTC Nationals at EARCC in Norwich there was Rand family dominance - Dave Rand took a well-deserved first A final win with his RRP 3 Racing M4 Pro in foam as brother Stu took rubber honours. Horizon Hobby announced the acquisition of Pro-Line then confirmed it would include Protoform in a press release a week later! New releases this month came from OS Engines and their 21XR-B Ver.3 3.5cc model containing the DNA of the ultra-successful OS

Speed line but for a more budget-friendly package. Chassis-wise WRC Racing introduced their all-new ST2.1 1/10th scale front-wheel drive electric touring car kit based on the successful STX.7 platform - which we reviewed this in the April 2021 issue, Horizon Hobby were busy with announcements of the Losi Lasernut U4 rock racer, TLR 8ight-XT/XTE nitro and electric truggy kit, as well as the 8ight-XE Elite electric buggy race kit. Following a first teaser image earlier in the month, Schumacher fully unveiled their all-new Storm ST 2WD stadium truck kit developed from the Cougar Laydown buggy, and we got all the details of the mega Hoss 4x4 VLX ready-to-run monster truck from Traxxas.

## 5 YEARS AGO – AUGUST 2016

It's all the rage these days and people are pouring their hard-earned into it – re-releases of iconic RC cars. After the Tamiya Sand Scorcher and Holiday Buggy, Schumacher CAT XLS et al comes the Kyosho Optima. Not quite an original as the Optima looked like with the 1986 version, but this had a lot of 2016 tech on it. At the EFRA 1:12 European Championships at the Hudy Racing Arena, Hupo Hönigl (stock) and Alex Hagberg (modified) retained their titles. The BRCA Touring Car National Championship got under way at the Cotswold track with Chris Grainger getting the win for Team Associated. There's something about the Kent club's track that Neil Cragg seems to like – he won the BRCA 1:8 Off-Road National Championship round there for the second year running. And Schumacher's new touring car the Mi6 was released and we tested it... nice!



## 10 YEARS AGO – AUGUST 2011

One thing we always wait for is a new Team Associated touring car. They trail them for ages and then they arrive to satisfy the model shop queues that inevitably form. The fourth incarnation of the car – remembering that they started at TC3 – is the TC6, resplendent in black (carbon fibre) and blue (aluminium) featuring truly neat design touches as only Team Associated's Area 51 can provide. We also mourned the passing of the man who powered 28 IFMAR World Championship cars for Team Associated, Mike Reedy. Mike passed away amongst his friends in the RC family after a long illness. His name, and that famous brand have outlived him, and serve as a constant memorial to arguably the greatest name in RC history. We said goodbye Mike and thanks for all the memories. Check out All Over on page 66 for more on Mike Reedy...



# YOUNG AND OLD MASTER THE CONDITIONS

*The first round of the 2021 King of Clubs series kicked off at Aldershot in tricky conditions, but with a full entry containing many of the country's top on-road racers, it was great to be back and just what the racers needed after months away from competition*

We have seen numerous on-road championships and classes come and go over the years. The successful ones are still active and pulling in good numbers, but while most of these aim to fulfil the driver's needs, the idea behind the King of Clubs series seems to focus heavily on growing the sport itself. Now in its second year, it's seriously gaining momentum.

After lockdown, everyone was keen to get back trackside, and round one of KOC at Aldershot attracted a full entry with some big

national names joining in the fun. As well as fighting for their own personal results, nominated drivers also contribute points towards an inter-club championship. This aspect adds a little spice to the meetings and encourages clubs to interact with each other – something much needed in these post lock down times.

## STACKED ENTRY

Given that there isn't a national at Aldershot in 2021, there was a strong entry in modified, including

national champion Ollie Jefferies, Chris Grainger, Zak Smith and Harley Eldridge. In the 13.5T stock class, local driver Ashley Wiffen would be tested by Marcus Askill, who at the previous weekend's club meeting set a new class track record. The Mini Touring Cars are mixed in with a Tamiya class that saw the name of one Ollie Payne on the entry list, the Eastbourne club looking strong here with Stuart Rand also listed as a potential Eastbourne points scorer. The biggest class was 17.5T stock touring, and on paper, this looked to be a three-way battle

between Aldershot members Jay and Glenn Westwood and Adur club driver Matt Quinlisk. There was one heat of Formula One was on the entry list with F1 specialist Michael Lee heading the entry.

One of the innovations within the KOC series is Tamiya Junior-E, aimed at attracting new young drivers into racing. This class is split into two, Rookies and Juniors, depending on the level of driving experience, and the stock Tamiya cars are very restricted with only a handful of modifications allowed. A chance for

Eastbourne's John Nye negotiating the Demon Raceway





*The wet weather provided challenging conditions for the racers*



*The sun did shine during practice*



*The King of Clubs has attracted great support*



*Schumacher's Zak Smith took second in modified*

our youngest drivers to show what they can do at what was looking like a big meeting given the quality of entry.

A lot of work had been going behind the scenes in the lead up to round one. This series has some serious support, particularly in the area of media exposure. If you had not heard about King of Clubs before reading this report, where have you been? This series will grow and develop in 2021, very much a case of watch this space.

## RACE DAY

Sunday morning, and we were off, then halfway through practice and the rain came, and that was the order of the day. There were a few times when slicks were considered, but it felt like every time you reached for your dry car, the clouds would open up again.

In modified qualifying Ollly Jefferies has a reputation for being fast in the wet. The reigning UK champion underlined that notoriety

taking the fastest time in all four rounds of qualifying. Zak Smith showed good speed and kept Ollly honest. He needed to find a few tenths to test Ollly in the finals, and with the full force of the Schumacher team behind him, Zak looked determined to close the gap. Teammate Andy Murray did not seem phased by the weather, and the 1:12-scale expert lined up third for the A final. Chris Grainger had an inconsistent qualifying not helped by tyre issues, making it three Schumacher drivers in the top five was Chris Ashton.

After a slow start, Ollie Payne took the last two rounds of qualifying in MTC, giving him TQ ahead of Rich Ludlam and David Rand. "Mr Moody Fools" Remo Casadei was next up, his score boosted by a round one win. Stuart Rand was let down by a poor first round but still managed fifth.

The 13.5T stock class is always keenly contested, and it was Markus Askeil that took TQ with his Xray. Billy Fletcher put the disappointment of

a poor warm-up race the previous week behind him to take second on the grid with Ashley Wiffen third, James Hart was next up for Schumacher, with Mark "Waldo" Wallace completing the top five.

Three wins for Jay Westwood saw him out-qualify his brother Glenn and the two Aldershot drivers headed 17.5T ahead of another local driver Joe Jenyavanja. Matt Quinlisk had a solid last round which helped his cause and netted him fourth overall, while Andy White rounded out the top five.

In Tamiya Junior-E the more experienced Juniors led the way. Archie Mathews from Eastbourne club was the class of the field, while Finlay Lanaway and Harry Jefferies swapped lap times during the day, Finlay eventually taking second on the grid ahead Harry. In the Rookies it was another Westwood in the form of Carson who led from Reece Watts and Maverick Adams. Some well-known surnames punctuating the entry list in the class as offspring

of established drivers showed their potential. It will be interesting to where some of these drivers will be as they reach their teens. Remember, you heard it here first folks!

Three out of four in qualifying was more than enough to give Michael Lee TQ in Formula One, with Daniel Robins making it an Aldershot one-two. Paul Ellis was consistent in qualifying but lacked that little extra to challenge the top two, and he would end up third.

Tim Harrap was poised to jump on any mistake by Steve Adams lining up second for the Tamiya GT-E class. Straight wins in all four rounds of qualifying put Steve on pole. Ian Hill was a few seconds off the two drivers ahead in qualifying, but the wet conditions offered lots of opportunities should the front runners hit problems.

There was no doubting it had been a tough qualifying. The weather had tested everyone to the limit, so topping the times in any class proved to be an achievement in itself. ➤

# RACE REPORT

what: king of clubs ■ where: aldershot ■ class: 1:10 on-road

€ Still, as the pole sitters reflected on their qualifying result, they needed to consider they were now in a race, not only for the overall win but for some club points as well.

## MODIFIED A FINALS

You could argue that there was less margin for error in the finals as you are not looking for speed and consistency but instead racing those around you and trying to stay on the track in the persistent rain that was still falling as the drivers lined up for the two-leg finals.

Controlling an RC in the wet takes a degree of skill, and doing it with a modified motor installed looks to someone like me who doesn't race, a black art. Ollly Jefferies continued his qualifying form taking leg one of the modified A final. Like in qualifying, Zak Smith had to settle for second with an excellent third for Harley Eldridge showing that she had more pace than her seventh spot on the grid would indicate. Leg two and in his effort to get grip from a new set of wet tyres, Ollly spun and as often in these conditions, the

other drivers could not avoid the spinning Xray and mayhem ensued. Coming out the first corner, it was the Schumacher of Chris Ashton leading the pack. At halfway, it was Harley leading, but Ollly was coming back through the field, and in the closing stages, the Yokomo driver was fighting off the Xray machine that was on a charge. Harley did exceptionally well, but she was up against the defending National Champion on his best form, and a move around the side saw Ollly take the lead in the dying stages and the win. This meant the overall victory for Ollly with two straight victories with Zak and Harley tied on points, Zak taking second on the tie-break. If everyone was here for some insight ahead of the Nationals in June, they got a good indication of the current form book. Chris and Andy Murray made it three Schumacher Mi7's in the top five giving the Northampton-based manufacturer a positive early-season boost. Sadly Chris Grainger sat out the second final after enduring tyre issues.

## 13.5T A FINALS

Sitting number two on the grid for the 13.5T A final, Billy Fletcher had his eyes on the rear of Markus Askeff's Xray. These two would enjoy a good battle over the two A finals but unlike the modified A final, it was the second-place driver on the grid that would go on to take the win driving his Capricorn on the limit, Billy put in a mature performance. There was disappointment for Marcus who finished in third as Ash Wiffen scored consistently over the two legs to take the deserved runner-up spot. James Conolly edged out the BRCA Stock Champion to take fourth place as James Hart endured a frustrating day but gaining good experience in the wet with the Mi7.

## 17.5T A FINALS

There weren't many people around the track that would bet against a Westwood taking victory in the 17.5T A final - it was just a question of which one. Two A finals later and we knew the answer as two straight wins for Jay gave him the victory

over brother Glenn. Just as important though was a good haul of points for Aldershot in the club championship. Matt Quinlisk kept team Westwood honest all day but needed a little more pace to challenge. Coming up from tenth on the grid, Steph Abbot finished fourth overall with a fifth and sixth as Andy White completed the top five.

## TAMIYA JUNIOR-E A FINALS

Racing a standard Tamiya chassis without any tweaks or hop-ups fitted in these conditions would be tough for even a seasoned racer. For the Tamiya Juniors just staying on the track was an achievement, but through all the spins and trips to the grass came Archie Mathews to the win ahead of Finley Lanaway. Reece Watts was an impressive third overall and first of the rookies. Harry Jefferies was next up, with local driver Maverick Adams completing the top five.

The difference in abilities through the field was noticeable. Hopefully, that issue will be resolved as this



Andy Murray from Schumacher raced in the modified category finishing in fifth place



Darren Gale in the Monitec F1



Ollly Jefferies's winning Xray on the A final grid



Tamiya Junior-E pole sitter, Archie Mathews



Marcus Askeff TQ'd in 13.5T blinky, but was beaten into third place in the finals



Zak Smith's Schumacher Mi7 sits on P2





Harley Eldridge ended up tied for second with Zak Smith



Olly Jefferies took the modified win albeit with some mistakes on the way

new class grows and conditions improve through the season to give the drivers a better chance to shine. Eleven drivers of vastly different skill levels on a wet track was a bit of a recipe for a crash fest, and so it proved to be, but you didn't hear the kids complaining!

## TAMIYA GT-E A FINALS

In the GT-E class we saw a tie for the overall win, but a faster time in the second final gave the victory to Steve Adams ahead of Tim Harrop. Coming up from seventh on the grid, Karl Mathews completed the podium.

## MTC A FINAL

This was a simple affair for Ollie Payne converting pole position in MTC to two A final wins ahead of Dave Rand. Still, third place man Mark Knight had to come from seventh on the grid to score a third and fourth over the two legs, which was an excellent result for Mark but even better for Dani Young. Having a troubled qualifying, Dani showed

her genuine pace to take fourth and possibly would have been higher if not for her low qualifying slot. While Dani must have been pleased with her final after qualifying, Rich Ludlam must have been disappointed with fifth overall.

## REFLECTION FROM ALDERSHOT

If ever there was a test for a developing race series, round one of this year's King of Clubs was certainly that. The rain was constant all day, and when you have a class for kids this can be an issue. Still, to the credit of the organisers, everyone stuck with it even the youngsters. They looked a bit like drowned rats as they made their way up to the rostrum holding their transmitters, but were all smiling and keen to carry on racing.

In the club championship it was Eastbourne that came out on top at round one and they will be hoping to carry that winning streak on to the next round as they are the hosts.

In summary, Aldershot and

RESULT - MODIFIED TOURING A FINAL							
POS	QUAL	DRIVER	TEAM	PTS	L1	L2	
1	1	Olly Jefferies	Adur	2	1	1	
-2	2	Zak Smith	—	5	2	3	
-2	7	Harley Eldridge	Eastbourne	5	3	2	
4	5	Chris Ashton	—	9	4	5	
5	3	Andy Murray	—	11	7	4	

RESULT - 13.5T BLINKY TOURING A FINAL							
POS	QUAL	DRIVER	TEAM	PTS	L1	L2	
1	2	Billy Fletcher	Eastbourne	2	1	1	
2	3	Ash Wiffen	West London	5	3	2	
3	1	Marcus Askell	—	6	2	4	
4	7	James Conolly	—	8	6	3	
5	4	James Hart	—	10	5	5	

RESULT - 17.5T BLINKY TOURING A FINAL							
POS	QUAL	DRIVER	TEAM	PTS	L1	L2	
1	1	Jay Westwood	Aldershot	2	1	1	
2	2	Glenn Westwood	Aldershot	4	2	2	
3	4	Matt Quinlisk	Adur	6	3	3	
4	10	Steph Abbott	—	11	5	6	
5	5	Andy White	Aldershot	12	4	8	

RESULT - TAMIYA JUNIOR-E A FINAL							
POS	QUAL	DRIVER	CLASS	TEAM	PTS	L1	L2
1	1	Archie Matthews	Junior	Eastbourne	2	1	1
2	2	Finley Lanaway	Junior	Eastbourne	4	2	2
3	5	Reece Watts	Rookie	West London	7	4	3
4	3	Harry Jefferies	Junior	—	8	3	5
5	6	Maverick Adams	Rookie	Aldershot	12	8	4

RESULT - TAMIYA GT-E A FINAL							
POS	QUAL	DRIVER	TEAM	PTS	L1	L2	
-1	1	Steve Adams	Aldershot	3	2	1	
-1	2	Tim Harrop	—	3	1	2	
3	7	Karl Mathews	Eastbourne	7	3	4	
4	3	Ian Hill	West London	9	4	5	
5	4	Carl Osborne	Adur	10	7	3	

RESULT - MTC A FINAL							
POS	QUAL	DRIVER	TEAM	PTS	L1	L2	
1	1	Ollie Payne	Eastbourne	2	1	1	
2	3	Dave Rand	Eastbourne	5	2	3	
3	10	Mark Knight	Aldershot	7	3	4	
4	6	Dani Young	Eastbourne	10	8	2	
-5	2	Rich Ludlam	Aldershot	11	4	7	

round one was a massive success and a credit to the organisers who put heart and soul into making this event happen. After the wettest May

on record, some better weather at the following rounds will make it a lot easier, and we will see the true pace of the racers, young and old. ■



The F1 cars make their way through the Aldershot chicane

# FOUR TO THE FORE

Stephen Coyle tests the new Etronix PowerPal Compact X4 to see what the mid-range charger has to offer including the four outputs

As part of my recent build review of the Schumacher Mission FT, the Editor sent me an Etronix charger to check out. To give it's full name this is the Etronix PowerPal Compact X4 and on paper this looks like good value for money as it retails at around £75. For that you get a charger with pretty decent specs especially when you see that the X4 stands for the ability to charge four batteries at once and it can be powered from the mains or a 12V power source.

The unit arrives in a small square box and upon opening the box you see the charger which is relatively small for something that promises to charge four batteries measuring in at 135x140x45mm. Below the charger in the box, there is not a lot else, just a manual and quite a short power lead at about a metre long so it will reach from your table to the power source on the ground but not much further. The manual is quite short but explains all the features really well.

Taking the charger out of the box it is made of plastic but feels sturdy and strong. On the top of it there is a display that glows blue when the charger is on. Above this is a 40mm hole with a fan below it and there is a grille at the front which I understand allows the air to flow through the charger body. There are four red dots around the screen and this is how you see which of the four output channels



The PowerPal Compact X4 comes with a power cord all for £74.95



A fan, located in the top of the casing ensures the unit remains cool in use

Each side features two XT60 connections and a balance port

The charger can be used off the mains (AC) or from a suitable DC power supply



you are working on. Below the screen are five buttons:

**Select** - this moves between each of the four channels and the red dot moves as you press this

**Stop** - stop charging or the mode you are programming and go back to the start menu

**Inc/Dec** - these are used to select your battery type in the battery menu where there is a good selection catered for; LiPo, LiFe, Li-Ion, LiHV, NiMH. It also allows you to change between

balance charging and fast charging mode (more on this later)

**Start** - pressing the start button allows you to select your amps (up to 10A per channel) and then the number of cells for LiPo et cetera (up to 4S). Pressing and holding start will set the charging going with the settings selected

On the left side of the charger there is a DC input that allows you to connect to a 12V battery source. Like all the battery connectors on this charger it is an XT60 connector. These are becoming more and more common as it makes

it impossible to connect the wrong way round. Beside that there is a micro USB port to allow you to connect to a PC for firmware updates. At the time of writing there was nothing on the Etronix website for any updates. The other ports are two female XT60 ports and two balance ports. The right hand side is similar with two more female XT60 and balance ports and then the connector for the included power supply cable.

## POWER UP

When you switch the charger on by plugging it in or connecting it to a battery, the two-line display glows blue and is very clear to read. There is no

# TEST SESSION

■ What: Etronix PowerPal Compact X4



There is a large fan on the top of the casing



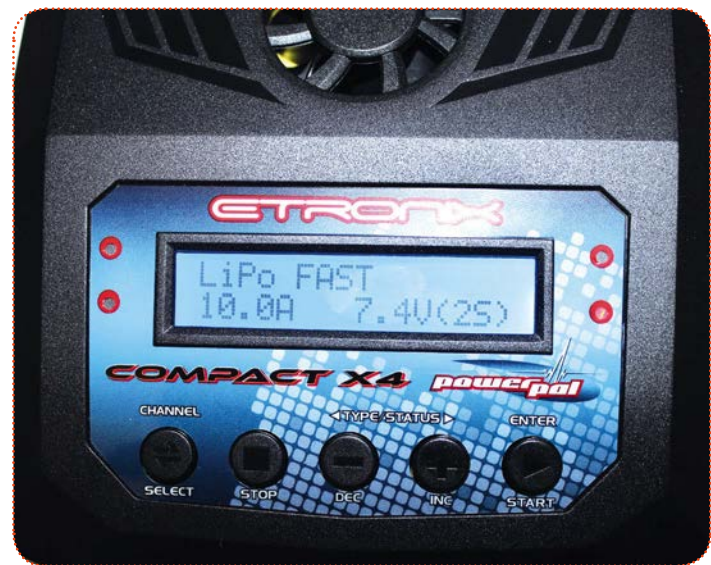
The functional control buttons and two-line LCD screen



You get a 240 AC mains power cord with the charger but it can also accept an input via a power supply



With so many different battery connectors and types on the market, it is understandable that Etronix don't include leads in the box



As you can see from the display it's possible to charge up to 10A or as low as 0.1A. The rate is fully adjustable in 0.1A increments

power switch and it is just the act of plugging it in that starts it. As I said there are no balance leads, balance boards or even normal charge leads including in the box so you will need to be organised and order leads when you order the charger. If you are looking at balance charging four batteries at once you need to think about adding about £40 for four leads to the price.

The display shows the charge type on the top line so in my case LiPo Balance and then the second line shows the charge amps and the battery type. I adjusted this to 10A charge and 7.4V (2S) by pressing the enter key and then using the Inc/Dec keys. Then holding down the Start button will start the charge. Once charging you will get information showing the number of cells, charge current, battery voltage on the top line and then charging time and charge capacity on the bottom line. If you press the Inc key during charging you

will get a display of the cells in your battery (in my case 2S) and the voltage of each cell.

## SAVE AND SAFETY

This charger is a decent charger for the money especially if you are looking for a four battery charger. It allows you to charge batteries of different types and you can save your settings as well with it being able to hold up to ten different settings. There are some other features including the ability to simply check a pack and it's cells without charging. Additionally there are some safety features including a time where you can adjust the charger to stop after the set amount of minutes even if it has not completed charging. There is also a capacity cut-off that allows you to set the capacity to stop at. This could, in theory, be used to storage charge your packs but remember to switch it off to charge for racing. ■

## Summary

*This is not a top of the range iCharger but then you would pay three times the money for one of those, but it does allow you to charge up to four packs at a time if that is something you need to do, maybe for E-buggy or if you are an RC enthusiast who has a wide range of models and different battery packs, and would like to charge them all at the same time...*

## CONTACT:

CML Distribution  
Saxon House  
Saxon Business Park  
Hanbury Road  
Bromsgrove  
Worcestershire  
B60 4AD

Tel: 01527 575349  
E-mail: [info@cmldistribution.co.uk](mailto:info@cmldistribution.co.uk)  
Website: [www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
[www.etrnix-rc.com](http://www.etrnix-rc.com)

## FEATURES:

Input Voltage: AC100-240V/DC 19-26V  
Charge Current: 0.1-10A x4  
Charge Power: 100W across four outputs  
Balance Current: 500mA  
Balance Precision: ±0.01V  
LiPo/LiFe/Li-Ion/LiHv: 1-4S  
NiMH/NiCd: 1-8S  
PB: 2-14V  
XT60 Battery ports  
Backlit LCD display  
RRP: £74.99

FROM THE DRIVEWAY TO THE DESERT



# RANGER



SCALE REALISM IN ONE PACKAGE!

**1993 FORD® RANGER CLEAR BODY SET WITH SCALE MOLDED ACCESSORIES**  
for 12.3" (313mm) Wheelbase Scale Crawlers  
#3537-00



DOMINATE THE DESERT BY BUILDING THE ULTIMATE TRUE-SCALE PRE-RUNNER!

**PRE-RUNNER FENDER FLARE KIT**  
for Pro-Line 3537-00 Ford® Ranger Body  
#6369-00



**1.9" DUAL STAGE INSERT**  
Closed Cell Inner/Soft Outer  
for Pro-Line 1.9" XL Size Tires  
#6174-00



**HYRAX**  
1.9" Rock Terrain Truck Tires  
for Front or Rear  
#10128-03 Predator (Super Soft) ●  
#10128-14 G8 ●



**MUD-TERRAIN T/A® KM3**  
1.9" Rock Terrain Truck Tires  
for Front or Rear  
#10150-03 Predator (Super Soft) ●  
#10150-14 G8 ●



**TrXuS® M/T**  
1.9" Rock Terrain Truck Tires  
for Front or Rear  
#10173-14 G8 ●



**KRAWLER T/A® KX**  
1.9" Rock Terrain Truck Tires  
for Front or Rear  
#10171-03 Predator (Super Soft) ●  
#10171-14 G8 ●



**ROCK SHOOTER**  
1.9" Aluminum  
Composite Internal  
Bead-Loc Wheels  
for Front or Rear  
#2781-00

**BIG BORE  
SCALER SHOCKS**  
(90mm-95mm)  
for 1:10 Rock Crawlers  
Front or Rear  
#6343-00  
#6343-01 Rebuilt Kit  
#6343-02 Spring Assortment



ALL TIRES, WHEELS & BODIES ARE  
**MADE IN THE USA**

FOLLOW US



PROLINERACING.com

# PRO-LINE

RACING TO BRING YOU THE BEST!

CML PRODUCTS ARE AVAILABLE IN ALL GOOD MODEL & HOBBY SHOPS. CHECK OUR WEBSITE FOR FULL DETAILS  
[WWW.CMLDISTRIBUTION.CO.UK](http://WWW.CMLDISTRIBUTION.CO.UK)



E&OE

## THRASH TEST - NRC PROJECTS NRC-24

■ spec: 2wd carbon fibre chassis ■ class: 1:24-scale off-road ■ cost: £190

# A MICRO CLASSIC

Fancy something cool? No really cool? Then the NRC-24 is it! Taking inspiration from a famous World Championship-winning buggy, this new kit from NRC Projects is a must-have whether it's for the shelf, or something to rag around your home



UK manufacturer NRC Projects specialise in scaling down classic buggies into 1:24-scale and they do this to mind-blowing effect. Following on from their successful NRC-Y24 conversion kit which made use of a Carisma donor vehicle, NRC has now developed a car from the ground up which pays small-scale homage to

the most successful 2WD buggy line of the 1980s and 1990s. The NRC-24 is in kit format, which is quite unheard of in this scale, so the entire buggy needs to be assembled from parts. We were intrigued since the moment we heard about this new release and were delighted to lay our hands on a kit to see just how easily something

of such tiny proportions can be assembled. This is by no means just a model kit and NRC Projects very much intends for owners to kit it out with electrics and give it a run. That's why this engineering marvel is equipped with bearings, bell crank steering, adjustable ball differential, CVDs, adjustable camber and toe, and much more. The NRC-24 really is a full-featured scaled down 2WD off-road buggy and in this thrash test we'll take you through the build, guide you on what we've learned and then see how it holds up when fired up.

### WC-WINNING LOOKS

First impressions last and we were immediately struck by the cool packaging from NRC Projects. Environmentally aware, the manual can be downloaded from their website and a postcard in the top of the box gives you this information along with their email address for support and social media links. The parts bags are numbered from one to five and you access them chronologically through the build. Five bags sounds quite a doddle, but there are bags within the bags and you need to prepare for a number of hours (and quite rightly so) to get you through the assembly. Preparation is key and first of all you will need to gather the tools, some of which may not be laying around in your regular RC tool box, that are mentioned on the opening page of the user manual. You cannot cut corners and really do need the tools that NRC describes - we've commented further on this in the Racer Tips section of this review. Following on from the tools page, there is a section covering do's and don'ts during the build and this should be taken in and adhered to bearing in mind the tiny size of all of the components you'll be dealing with. The message from NRC is a simple one; take it steady and don't overtighten anything.

### BAGGED

Parts bag one contains all of the individual parts for assembly of the gearbox and you begin by constructing the ball differential. Immediately, care must be taken not to lose anything! A magnetic tool tray is a must along with a clear area around you for when something does inevitably get dropped. The balls aren't that much smaller than a 1:10-scale ball differential, to be fair and we had no issues mounting them into the diff gear (which is actually the same part as the spur gear). We found there were two extra



# WHAT IS AVAXHOME?



# AVAXHOME-

the biggest Internet portal,  
providing you various content:  
brand new books, trending movies,  
fresh magazines, hot games,  
recent software, latest music releases.

Unlimited satisfaction one low price  
Cheap constant access to piping hot media  
Protect your downloadings from Big brother  
Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages  
Brand new content  
One site



**AVXLIVE** **ICU**

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>

# THRASH TEST - NRC PROJECTS NRC-24

■ spec: 2wd carbon fibre chassis ■ class: 1:24-scale off-road ■ cost: £190



The NRC-24 naturally is supplied in a small, unassuming box



All the parts are included to build the kit up including a body, wheels and tyres



Maybe not the best for the environment but the individual packaging ensures the build process is very clear

**“The NRC-24 gets you back into traditional modelling when building this fantastic piece of engineering”**



It's hard to see just how small and cute the NRC-24 is once built

balls supplied just in case you do have a 'mare on the opening step. The differential went together really well with clearly photographed steps in the manual and it wasn't as fiddly as we'd expected. A satisfying start to the build. You have to trim the 3D printed plastic parts in places sometimes during the build and the bearing holes in the gearbox are an example of this. You just need to take off the very edge at a 45-degree angle to help the bearings slot snugly in. It wasn't long before we were clutching a fully assembled gearbox between thumb and forefinger.

Bag two contains a number of plastic parts including the battery holder, rear bulkhead, steering bell crank and rod ends. NRC has upgraded the rod ends from the earlier kits as they were prone to splitting. If you encounter this issue, contact them and they will send the strengthened replacements. The rear bulkhead assembly is tackled in the next few steps and you will need to chamfer some holes and also use a pin drill to make holes to a specific diameter. We enjoyed this crafting of the plastic parts. It's not an annoyance at all and brings you closer to the build. At this point we got our hands on the lovely carbon fibre chassis plate with the '24' logo etched onto it as we bolted on the rear bulkhead with countersunk screws ensuring a smooth chassis underside, which can also be protected at the end of the build with an optional skin. So far so good

with the build.

The third bag is all about the wishbones which are constructed just as you would on the 1:10 classic original buggies that this model reflects. There are no dramas at this point and the wishbones and hub assemblies come nicely together. The rear wishbones are attached to the chassis and then the gearbox is pushed between them snugly into place. Good quality alloy driveshafts slot into hardened alloy outdrives to ensure quality and durability at the business end of this buggy. Adjustable camber rods are attached from the bulkhead to the upper part of the hubs. For the front wishbones it is worth ensuring you have the correct screw lengths because there is a combination of 14mm and 12mm which could easily get mixed up. Parts bag four will already have been opened to extract the chassis and some other larger parts and the rest of it needs to be emptied at this point as the front end, including adjustable top rods for camber, is constructed and then attached to the chassis. It is time then to focus on the steering assembly. A printed bell crank is supplied along with some tiny rod ends. The pin drill is again required at this point and a reminder to take this steady as you work with the extra small parts. The bell crank has metal bearings top and bottom. At this point you'll need some decent cutters as the head needs to be removed from two screws to produce tie rods

*This buggy was designed to be run but it's unlikely to be used and abused like a typical 1:10-scale club racer's buggy so it is worth taking time to savour the build and to do that you must be prepared with the right equipment. Some of the tools required may not come to hand if you're used to building and racing larger scale RC cars.*

*Firstly, you need to ensure that you have a 0.9mm hex driver. This size is smaller than your typical pinion grub-screw driver and is needed a number of times throughout the build.*

*A pin drill is essential and is something more commonly associated with jewellery making. You will be required to make 1.5mm and 2mm holes several times during the build. The good news is that a pin drill (also known as a pin vice) is a very inexpensive piece of kit and typically comes with several tiny drill bits including the 1.5mm and the 2mm that you'll need. A reamer will also be required on some of the plastic parts. These are the tool of choice for making holes in bodies but if you don't possess one then now is the time.*

*Finally, it is worth ensuring you have access to a small vice. This is especially for when you need to drill the shock bodies. This is a difficult and time consuming manual process with a pin drill and you'll need to brace the shock body whether you use a pin drill or a power tool to do this. Also worth noting is that it's unlikely that a typical DIY power drill can grip a 1.5mm bit.*



Getting all the components and accessories ready to install the electrics



RC enthusiasts will be able to relate to the white printed mouldings inspired by a WC-winning platform



The rear suspension components start to be put together



The PN Racing 64dp 12T pinion is recommended by NRC Projects



The rear bulkhead is secured to a natural-coloured shock tower



Bearings inserted into the rear hubs

# THRASH TEST - NRC PROJECTS NRC-24

■ spec: 2wd carbon fibre chassis ■ class: 1:24-scale off-road ■ cost: £190



The ball raced steering bell crank



Included in the kit is a full set of wheels and tyres



The front and rear wheels need to be bolted together. Here you can see two assembled and two unassembled



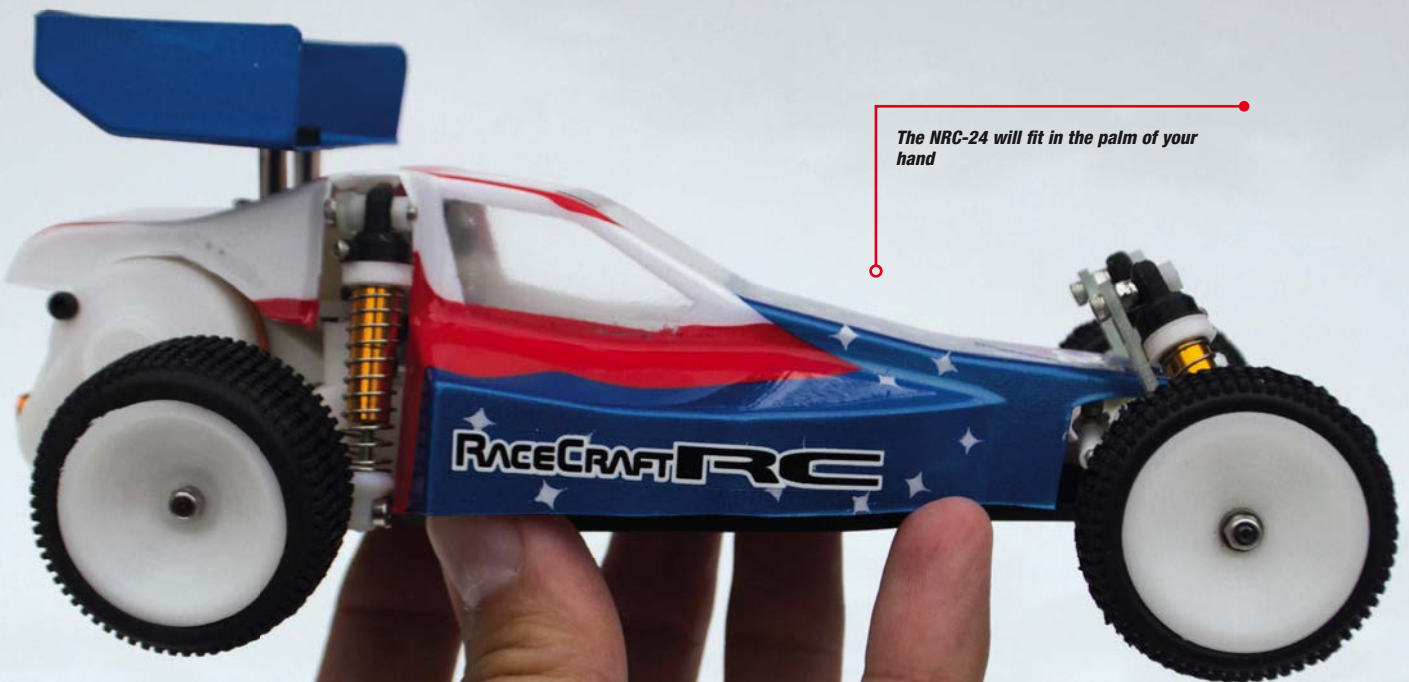
A pin drill is an essential tool to have. It is the sort of thing used to drill out 1:10-scale pistons



The moulded ball joints are drilled out...



...which is necessary to access the head of the metal ball stud



The NRC-24 will fit in the palm of your hand



◀ for the steering links. We loved this. For one it's clever thinking from NRC to solve a problem and secondly it again brings you a bit closer to the build. It's sometimes rewarding to have to

put a bit more in rather than being handed it on a plate.

The final parts bag contains shocks and wheels. With the shock construction we faced our

first real bit of serious effort. A 1.5mm diameter hole, which will hold the shock cap in place, needs to be drilled into the shock bodies. There is a placement tool to ensure you hit the right ▶



*As it's period correct, the kit comes with a ball differential*



*The gearbox has just two gears with the layshaft and diff gear*



*The layshaft and diff are supported by bearings inside the casing*



*With the layshaft inside and diff installed, the gearbox can be bolted together*



*The ball diff gear can be seen through a gap in the casings*



*Motor plate and spur gear in position*

# THRASH TEST - NRC PROJECTS NRC-24

■ spec: 2wd carbon fibre chassis ■ class: 1:24-scale off-road ■ cost: £190



The body, wing, decals and window masks



The front suspension units ready to bolt to the nose plate



The nose plate supports the front suspension with the body post and shock tower in place



The rear bulkhead assembly is screwed onto the NRC-24 carbon fibre chassis



The metal rear driveshafts can now be inserted into the rear hubs



With the gearbox bolted into the chassis

◀ spot and then it is down to the pin drill and some patience to drill the hole. This took a fair amount of manual effort for the front shocks and then we discovered that the rear shocks were much thicker and they took a long time to drill. This step will need some consideration and we wish we'd had a power tool at this point that could hold the 1.5mm bit. The shocks are of a simple friction design and once the drilling was complete, they fitted swiftly together and really look the part in anodised gold. Each of the four wheels are of a two-piece design and need to be screwed together using tiny 3mm screws. We really do mean tiny and it is absolutely worth putting a small blob of grease onto the tip of the driver to hold the screw while you navigate to the hole inside the wheel rim. Gluing the tyres is optional and we decided not to at this point.

## MICRO ELECTRICS

With the shocks and wheels now attached it was time to fit the electrics. The motor meshing is described in the manual and it is worth going through the recommended steps which include refitting the spur gear. The motor position is adjustable via the placement of the bottom of the two holding screws. We highly recommend using the PN Racing 64dp 12T pinion. Suitable pinions are scarce but the PN pinion is in good supply and is tried and tested by NRC Racing. We address this

in more detail later on. Once the motor is meshed correctly, a cover is put into place to protect the spur and pinion and of course, your fingers. The steering servo is held at the front of the battery cup and should be fixed along with the speed controller and receiver directly onto the chassis plate with some strong tape.

## PAINT BY PARKES

The body and wing are made from 0.5mm PETG plastic and they need to be cut out and painted on the inside. The material is more flexible than polycarbonate and easy to cut so it is the perfect choice for a car of this size. Window masks are provided. We sent the body and wing to Adie Parkes at Racecraft RC to be pro-painted. We gave Adie free rein and he chose a stars and stripes airbrushed scheme. Painting a body this size is a challenge and he did a great job which includes the NRC Projects logo emblazoned on the wing. You don't really need to be a pro to paint the body though and great designs can easily be achieved using regular polycarbonate spray cans and some masking tape. If things go wrong, replacement bodies and wings are available from the NRC Projects website for just under £11. Once painted and cut, you will need to make two 6mm holes front and rear for the body mounts. There are dimples to ensure you hit the exact spots. Two further holes of a 2mm diameter are needed for

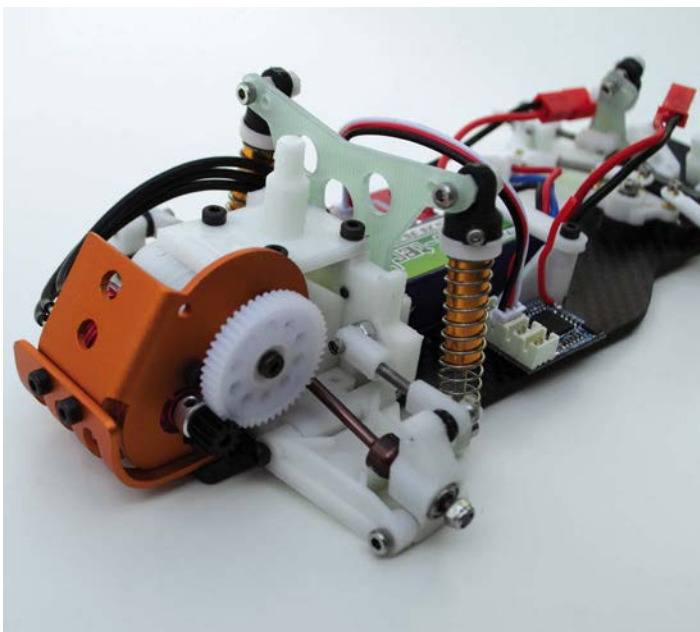
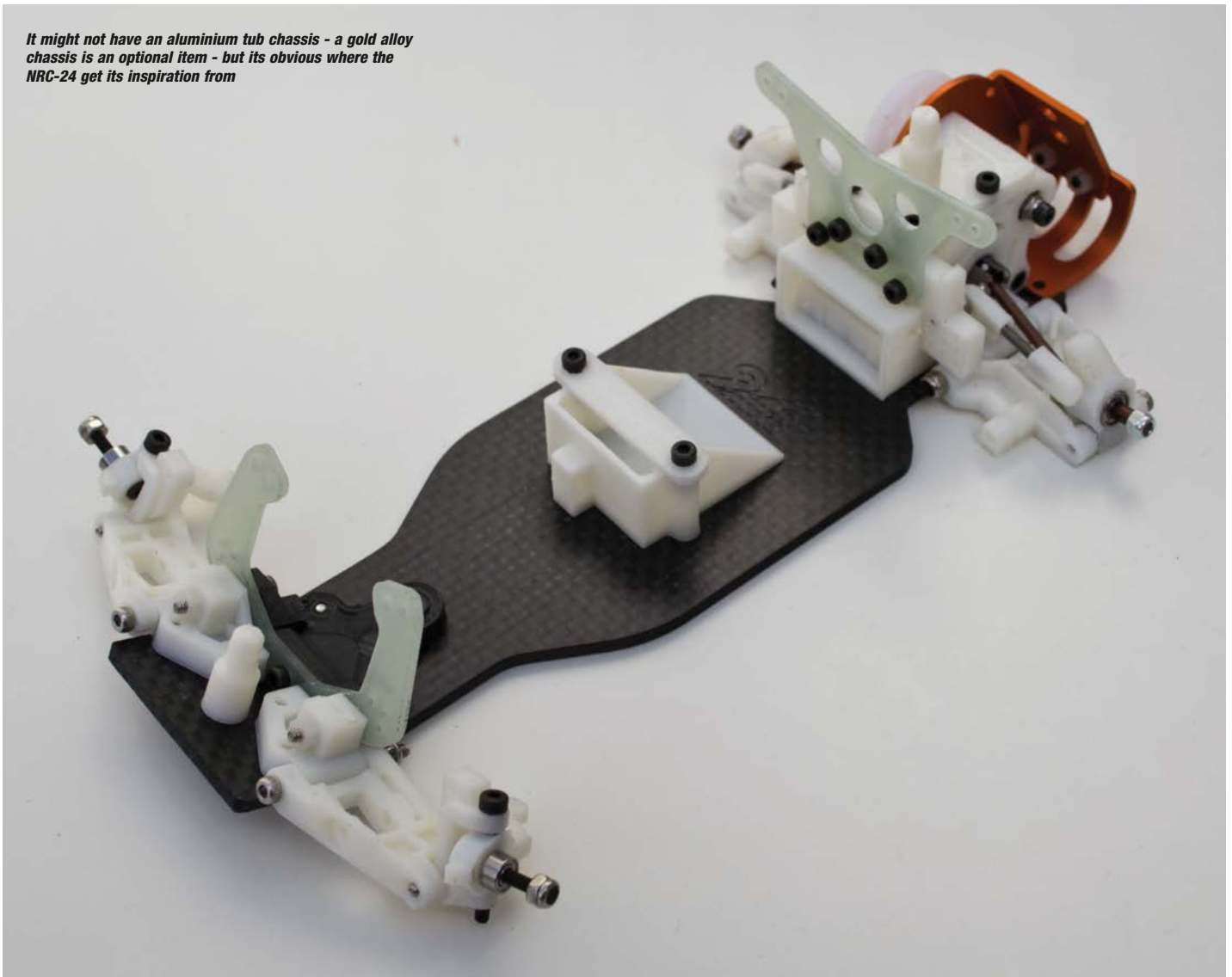
the wing mount. The mount can be placed onto the body to mark these out and then the wing is screwed onto the mount which sits underneath the body and slots over the rear body post. There are spacers to give the wing some height.

We gave the NRC-24 a run on a handy garden patio. One point to note is to ensure the rear wheels feel as free as possible and you will need to trim the inside edge of them, plus the wishbones to achieve this. The tiny motor won't cope with having to force the drive to function. It's a cool little buggy and fun to drive with the back garden patio being the best option alongside a laminated floor space indoors for some drifting fun.

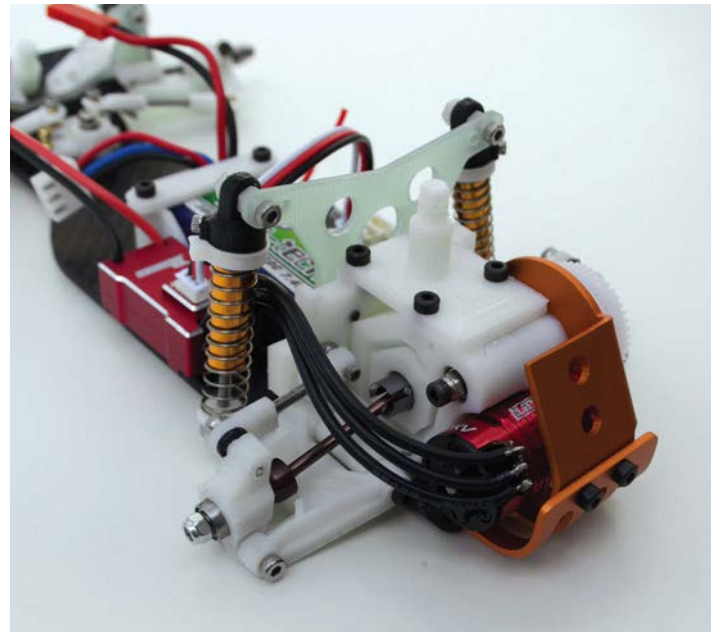
## UP AND RUNNING

To get the very most from this buggy it needs to be run and you need to be very careful when selecting the electrics. They're not something you'll be able to pick up in one hit at your favoured RC retailer. The user manual does not spend much time on the electrics, but there is a must-view electronics compatibility list on the nrcprojects.com website. It is vitally important that you select the correct set of motor, pinion, speed controller, battery, receiver and steering servo. Most of these micro scale items are only available from the United States or Asia so considering the distance, it is well worth

*It might not have an aluminium tub chassis - a gold alloy chassis is an optional item - but its obvious where the NRC-24 get its inspiration from*



*All it needs are some wheels and tyres, as well as a painted body*



*The micro-sized Surpass brushless electronics installed*

# THRASH TEST - NRC PROJECTS NRC-24

■ spec: 2wd carbon fibre chassis ■ class: 1:24-scale off-road ■ cost: £190



◀ sticking to the included guide rather than going too far off-piste on this and finding you end up with compatibility issues. The pinion, for example, needs to be a 64dp (pitch) and 12-tooth in size, and there aren't many of those around the globe so stick to what NRC tell you in the guide and order a PN Racing pinion from either the US or Asia. Having said that, we admittedly did venture off of the path to pick up a UK available servo. We're still undecided on its durability but it was a very low-cost item that we decided to try. We also needed to find a micro receiver compatible with our Sanwa Gemini X stick transmitter. We found the DasMikro GRX-471 FHSS online and went

for that. It was approximately £30 delivered from Hong Kong. For the power unit we selected the Surpass Rocket 3500Kv brushless motor with 18A speed controller combination which was just over £40 delivered from Hong Kong. The battery is nice and straight-forward. The Nano-Tech 300mAh 2S is the perfect fit and is available in the UK for less than £10.

With all of the electrics gathered together, it will be very likely that some of the connectors will need changing. For our combination we learned a lesson on JST connectors. The Nano-Tech battery is supplied with a JST BEC 2-pin male connector so we bought a batch of female connectors and

replaced the connector on the speed controller with one. They need to be crimped and we practiced on a blank first of all to hone the technique. The ports on the DasMikro speed controller are JST 1.5mm 3-pin. This took a bit of working out because the sparse speed controller information doesn't give that important fact away. We bought a supply of connectors and replaced the servo connector with one. Again, after some practise, it was crimped onto the servo to replace the original connector. The Surpass speed controller already came with one fitted. At this point, we connected up the components and the LED on the speed controller lit up, which was a





good sign! Next up was the soldering of the three speed controller wires onto the motor just as you would on a 540-sized can but this time in much smaller scale! The only advice we can give here is the obvious one and that is to ensure you have a small tip on the iron.

With everything hooked up it was time to bind the receiver. After a couple of attempts it bound and we had life. Motor and servo functioning. All good. In summary, the electrics is a fun adventure in itself, gathering it all together, sorting out connectors and then hoping it all cooperates.

Especially if you've never dealt with this kind of scale before.

### THE GOLDEN OPTION

NRC Projects has recently released a gold aluminium chassis conversion for the NRC-24 that replaces the carbon fibre chassis plate with a classic gold pan and retails at just over £50. This kit will transform the NRC-24 and comprises of the chassis base, sides, bulkheads, bracing rods and an updated steering bell crank. ■

## Summary

It was a wonderful experience working with the NRC Projects NRC-24 from the moment we opened the box to the moment we powered it off after its first run. Most small scale RC cars are supplied ready built so the kit format is most welcome and something to savour. Elements of the construction process take you that bit closer to the modelling side of the hobby and that was a highlight for us when building this fantastic piece of engineering. With practicality in mind, this buggy is so handy and can be taken anywhere. It's definitely something your fellow RC enthusiasts would want to take a look at as well. It is so close in so many ways to the classic vintage buggies that it pays tribute to that it is a big 'hats off' to NRC Projects for their attention to detail. All in all the NRC-24 is a marvellous creation backed up by full support from NRC and we're looking forward to seeing what they come up with next.

### SPECIFICATION

Model:	NRC Projects NRC-24
Scale:	1:24
Class:	Off-Road
Application:	Racing
Format:	Kit
Power:	Electric
Chassis:	Carbon Fibre
Drivetrain:	2WD
Transmission:	Gear
Differentials:	Ball-type
Shocks:	Coil
Bearings/Bushes:	Bearings

### TECHNICAL DATA

Length	175mm
Width	106mm
Wheelbase	126mm
Front track	106mm
Rear track	100mm
Weight	200g

### WHAT WE USED

Electric Kit	
Transmitter:	Sanwa Gemini X
Receiver:	DasMikro GRX-471 FHSS
Servo:	HK-5320 Ultra-Micro Digital
Speed Controller:	Surpass Rocket 18A Mini
Motor:	Surpass Rocket 3500kv brushless
Battery:	Nano-Tech 300mAh 2S 35-70C 7.4V LiPo

### OPTIONAL PARTS

NRC-24 Gold Chassis Conversion  
 NRC-24 Team Car Shock Bodies  
 NRC-24 Carbon Fibre Gearbox Brace  
 NRC-24 Pink Wheel Dots  
 NRC-24 Chassis Skin  
 NRC-24 Fluorescent Yellow Wheel Set

### VERDICT



Stunning iconic looks  
 Ultra-cool



Drilling the shock bodies is difficult

**RACER RATING: ★★★★★**

### CONTACT

NRC Projects  
 Email: [hello.nrcprojects@gmail.com](mailto:hello.nrcprojects@gmail.com)  
 Website: [www.nrcprojects.com](http://www.nrcprojects.com)

## Element RC Enduro Sendero HD RTR

The Enduro Sendero HD Trail Truck is an all-new machine from Element RC. At the heart of the Enduro is their Stealth X gearbox and whilst the exterior appears to have a conventional 3-gear transmission look, the inside is far from conventional. The Stealth X features the ability to adjust the rear drive ratio independently of the front drive across three levels: stock overdrives the front-end 5.7 per cent (installed in RTR), option 1 provides a one-to-one drive ratio front-to-rear (available separately), and option 2 overdrives the front end 11.83 per cent (included with RTR). Feeding the power to the tyres are 3-piece telescopic driveshafts with an extruded aluminium centre section, universal front drive

axles, and hardened steel ring and pinion gears. The steering link assembly has been relocated from the conventional location to behind the axle (BTA) and this greatly improves approach angle and front-end clearance. The Enduro Trail Truck with Sendero body comes ready with Reedy Power electronics including a powerful 16-turn, 5-slot brushed crawler motor and Reedy Power SC480X electronic speed controller with T-plug connector. Controlling the truck is a new 3-channel XP130 2.4GHz radio and Reedy Power high-torque 1523MG metal-gear servo. The #40105 Combo includes a Reedy Compact Balance Charger and Reedy 7.4V LiPo Battery with T-plug.

### Features:

- Reedy Power SC480X electronic speed controller
- Reedy Power high-torque 1523MG metal gear servo
- Steel servo horn
- Adjustable width rock sliders
- New box diorama
- Sendero HD high-strength polycarbonate body, cab only design with moulded utility bed
- Ocho beadlock wheels
- Adjustable front injection-moulded bumper
- Updated plastics

**AVAILABLE FROM:** CML Distribution  
**WEBSITE:** [www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
**CONTACT:** 01527 575349

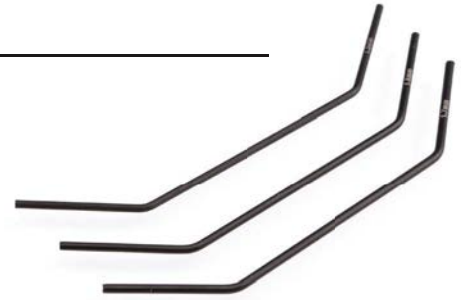


## Revolution Design T6.2/SC6.2 Hard Front Anti-Roll Bar Set

RDRP has come up with a set of three anti-roll bars with high-grip racetracks in mind, which will be a welcome option for everyone racing a Team Associated 6-series truck on carpet or Astroturf. This set extends the range of available anti-roll bars for current Team Associated stadium and short course trucks, with 1.5, 1.6 and 1.7mm options for fine adjustments of your truck's roll characteristics. These are made of high-grade spring steel, laser-engraved for easy identification and are a direct fit for all Team Associated 6.1- and 6.2-series trucks

#RDRP0555 Revolution Design T6.2/SC6.2 Front Anti-Roll Bar Set - Hard (1.5/1.6/1.7mm)

**AVAILABLE FROM:** X-Factory UK  
**WEBSITE:** [www.xfactoryrc.co.uk](http://www.xfactoryrc.co.uk)  
**CONTACT:** 01923 816636



## Schumacher Mi7 Shorty LiPo Weight Set

This new brass shorty LiPo set offers perfect central weight balance placement when using shorty batteries in the Schumacher Mi7. It provides a significantly lower centre of gravity which in turn makes the car easier to drive and have more corner speed, and is especially valid on carpet or small outdoor asphalt tracks with modified motors. This is only compatible with the V2 alloy chassis which can be identified with the additional LiPo mount holes and was shipped after 30 October 2020. It adds 93g, which is the perfect amount when switching from stick to shorty LiPos.

U8177 Schumacher Brass Shorty LiPo Set (V2 Alloy Chassis Only) - Mi7

**AVAILABLE FROM:** Schumacher Racing  
**WEBSITE:** [www.racing-cars.com](http://www.racing-cars.com)  
**CONTACT:** 01604 790770



## Xray Gamma 2D Body - Light

This is the ultra-lightweight version of the XB2 Gamma 2D body from Xray that has been designed especially for low traction conditions. Lower weight reduces the roll of the car and improves corner speed. The profile of the body improves the stability and increases downforce towards the rear of the car to help generate more traction for the car. With the focus on maximising rear downforce to increase traction, the front was designed to give optimal steering. The sides of the body and cockpit are as flat as possible to allow air to flow around the body for improved side stability. On the top of roof are two integrated flow channels for proper airflow.

#329711 Xray Gamma 2D - Light

**AVAILABLE FROM:** RC Disco  
**WEBSITE:** [www.rcdisco.com](http://www.rcdisco.com)  
**CONTACT:** [sales@rcdisco.com](mailto:sales@rcdisco.com)



## Hudy Premium Silicone Oils

Hudy's Premium Silicone Oils are now available in an all-new square bottles. The easy-to-store bottles feature flip button cap and easy to read viscosity collar which is colour-coded to instantly recognise the type of viscosity. The bottles are factory sealed for leak prevention during transport and are available in 50ml and 100ml volume. These silicone oils are made in Europe and laboratory tested and calibrated to ensure each batch has the proper viscosity. The oils are available in an extensive line-up of all popular viscosities.

**AVAILABLE FROM:** RC Disco  
**WEBSITE:** [www.rcdisco.com](http://www.rcdisco.com)  
**CONTACT:** [sales@rcdisco.com](mailto:sales@rcdisco.com)

## Reedy Crawler 550 14T 5-Slot Brushed Motor

Reedy's Crawler 550 14T 5-slot motor is the same motor that comes standard in the Element Enduro Gatekeeper RTR and is now available separately. Due to its longer 550 design, the Crawler 550 offers both torque and power output while its 5-slot armature delivers precision throttle control for a variety of surfaces and course conditions.

Long-wearing brushes, fixed 0-degree timing, low-friction bushings, and silicone lead wires make this a highly valuable yet cost-effective performance upgrade for your truck.

**Features:**  
High-torque 550 configuration  
5-slot armature for precision control  
Long-wearing brushes  
Fixed 0-degree timing  
Low-friction bushings  
Silicone wires

**AVAILABLE FROM:** CML Distribution  
**WEBSITE:** [www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
**CONTACT:** 01527 575349



# art of airbrushing - the basics

One of the skills you can learn as part of the RC hobby is airbrushing and painting your own body. This can be incredibly daunting though, with a lot to learn about the art of airbrushing and a massive range of specialist equipment to choose from. In the first of a series of articles that we are putting together with support from The Airbrush Company, we look at the basics including a suitable airbrush and compressor, as well as some ideas to think about going forward...

If there's one silver lining to come out of the coronavirus cloud, it's that for many, it enabled us to reconnect with and rekindle the love for lost hobbies and interests. Many re-found their creative sides and immersed themselves in projects that they'd not had time to do before the pandemic.

The RC hobby saw many existing enthusiasts

rebuild old cars, buy new kits and generally fall back in love with a past-time that for many of us, has been a part of our lives since childhood. It's a hobby that encompasses many different facets; from building and construction through tuning and modifying to socialising by racing and competing against others. It truly is a hobby that has multiple appeal and part of that is how it can

support further interest in learning and acquiring additional skills and techniques that are separate creative interests in themselves.

## AIRBRUSHING

One such aspect is the art of airbrushing. It's almost inevitable that before long, most RC enthusiasts will encounter the need to paint an



RC car body shell and will be faced with a choice; either paint it using spray cans or pay a custom RC car body painter to spray (using an airbrush) a custom bespoke creation. It's almost a passage of rites for many racers to go from box art and one-colour wonders through to the evolution of having their own colour scheme and design, which in turn becomes their RC racing identity – the mask that they don when they step up onto the rostrum in order to compete.

But there is a third option too. If you've gone to the trouble of telling someone else what colours or design you want them to paint onto your body, what if I told you that you could lay down the paint, in your own time, without the need for sending it off or waiting because the painter is too busy? What if the cat was to be let out of the bag and I was to tell you that it's not nearly as difficult as you are probably already imagining it. Sure, you wouldn't know the techniques that your favourite RC body painter does to begin with – but you can learn them just as they have done and actually, there's an added sense of achievement and pride when you do learn a new skill or technique.

Yes, there's an investment in equipment and so no, it's not a casual purchase decision, but if you've already painted even just a handful of body shells using spray cans or, have sent more than a few 'PayPal' payments to your favourite RC 'shell painter, then you'd possibly be surprised to realise that the investment costs aren't nearly as much as you've been telling yourself. And with just a little bit of practice and a touch of dedication, you too could be creating your own RC race colours or pit

boards or even T-shirts. Having an airbrush is, for those that have already taken the plunge, almost as ubiquitous as having a Dremel in your pit box armoury.

### WHAT EQUIPMENT IS NEEDED?

We'll cover the individual equipment elements in more detail separately but in essence, you'll need an airbrush, some form of air supply and some paint materials. There's a lot more to it in detail but most importantly, each piece of equipment has to work in conjunction with the others in order for the whole system to work well. If your airbrush and compressor aren't well suited to each other, then you'll struggle. If your paint is too thick for the size of the needle in your airbrush, then you'll end up having thin your paint to such an extent that it won't cover the surface and the results will be more frustrating than rewarding. Getting it all to work together in harmony is a prerequisite for success. Experience will help you refine techniques and enable you to become more confident and understand how paints work and how colours can be altered with backing coats but if the equipment isn't working together, either due to poor selection, poor quality or component damage (like a bent needle for example), then the rest almost becomes an exercise in futility and frustration.

### WHEN AN IWATA IS NOT AN IWATA

This is where you can't underestimate the importance of having some expert advice on hand. Seek advice. Ask the questions and

### THE COST BENEFIT EQUATION

Inevitably, the question of cost will raise its head. For the purposes of comparison, I've taken a hypothetical example of an 'average' racer wanting four body shells per year (two per race class) and painting a RC race colour scheme consisting of six colours. Spray cans will cost approximately £6 per can (colour) and will probably cover between two to three bodies depending on scheme and body size. That works out to be just over £14 per body, or £57 per year. Compare that with the cost of a professionally painted body at approximately £30 per body shell and it's clear that painting it yourself starts to make economic sense quite quickly.

Typical acrylic airbrush paint such as Createx Wicked, or Pro-Line will cost between £6 and £7 per bottle and so it might initially seem no cheaper to start airbrushing in comparison to using spray cans, when you factor in that a spray can will probably only cover two to three bodies, the equivalent number of bodies that you'd expect to get out of a 60ml airbrush colour could be anything up to ten to 15. So the same paint investment would drop from £14 per body (for spray cans) to being just over £3 per body when using an airbrush.



A selection of different airbrushes



The Iwata Power Jet Plus compressor is a high-end model



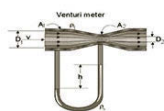
The Iwata Revolution HP-CR and Power Jet Pro HT is a terrific mid to high-end combo for any serious hobbyist



Whilst this Neo and Sparmax Arism-Viz compressor is an excellent budget-friendly option

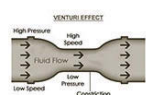
## FINE SCALE MODELS

In researching for this series of articles, I came across a website written by an American Dentist by the name of Paul Budzik ([www.paulbudzik.com](http://www.paulbudzik.com)). Whether it's due to his passion for scale modelling, or due to his vocation as an extremely skilled dentist (or a mixture of both), Paul has an incredible ability to describe the technical workings of the airbrush, enlightening his readers on the theory and the physical laws that help make the phenomenon of painting with air possible whilst also outlining how the various elements within the airbrush combine to make it all possible and how their size and shape can affect the spray pattern that is ultimately achieved. Not wanting to plagiarise his work in any way, I reached out to him and explained what I was doing and he graciously agreed that I could use the information I found on his site within this series. So I'd like to give credit and thanks to Paul and the hours he's already devoted to his website and the compilation of his scale modelling journey for some of the knowledge I've gained and which I hope to impart through this series.



BERNOULLI'S EQUATION

$$p_2 + \rho \frac{V_2^2}{2} = p_1 + \rho \frac{V_1^2}{2}$$



Flow velocity

$$V_2 = \sqrt{\frac{2(P_1 - P_2)}{\rho(A_1/A_2)^2 - 1}}$$

remember that an airbrush is a precision instrument whose operation is reliant on the exacting tolerances and high-quality materials that it is manufactured from. There are very good and obvious reasons why some airbrushes are £15 whilst others are £500! Both will look like an airbrush but the consistency and quality of their function will be vastly different. There's a reason why Iwata are perhaps the single most revered brand name in airbrushes and it's for that reason why they're also the most imitated and subject to a huge number of poor quality, cheap 'fake' copies. Sure, that £15 no-name airbrush that you got for a bargain on a well-known internet marketplace from a nondescript vendor from some far-flung corner of the world might 'look' like an Iwata, but it won't perform like one. Nor will it last as long as an Iwata and before long, you'll be spending more money by having to purchase more equipment or deciding to give up entirely and revert back to using spray cans or sending PayPal payments to your favoured professional painter. Buy cheap and repent at cost.

At the same time though, don't be alarmed and think that you've got to buy the most expensive airbrush in the catalogue or the biggest compressor - that's not the point. The point is that you need the equipment to be suited to each other and for the materials (paint) that you are intending to use and that it is all of sufficient quality to ensure consistent results to allow your confidence and experience to grow over time. This is where having the right support is important. Contact someone who can give you correct information and help you with your application. In our case here, this series came about through an unsolicited email to The Airbrush Company ([www.airbrushes.com](http://www.airbrushes.com)) because I was struggling with achieving a consistent paint flow every time I went to use my airbrush, either for my own race bodies or, more often than not, for some of the magazine cars that I've been fortunate to build and review. There's nothing quite like the pressure of having to perform a one-off paint job that's worthy of being on the cover of a magazine

when you're up against a deadline and it's near freezing outside because it's in the depths of winter. Paint that once flowed nicely during the heights of summer was now behaving like treacle and my compressor was beginning to sound as if it was struggling to achieve the crazy-high pressures that I seemed to need to get the paint I was using to flow through my old Parma/Faskolor-branded gravity-fed airbrush.

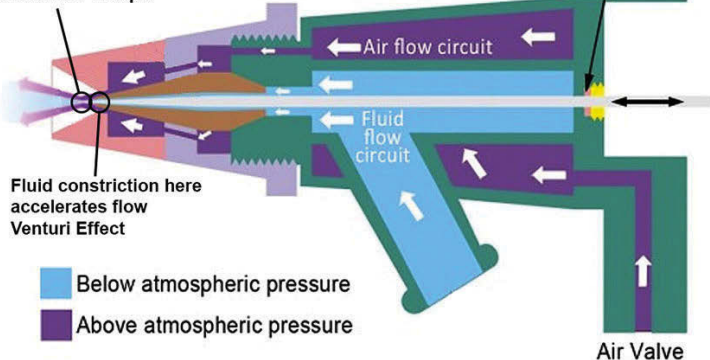
Having explained the issues I was having, Lisa Munro at The Airbrush Company who was on the other end of my email was able to guide me towards the likely causes of my issues and recommend some ideas and replacement equipment suggestions that would be better suited my needs.

It was not the most expensive equipment - but the right equipment. Sometimes, in this world of quick information and the Internet, we can overlook the importance of reaching out for more information, from people that have experience and who understand and know how to use the products they sell. Reaching out like I did, in a moment of frustration, has set me on a journey of discovery that has culminated in me now trying to share some of that learning with you all and which has increased my knowledge and understanding of some of the fundamentals that I had taken for granted and which I hadn't even contemplated as being one of the main causes of my frustration. Hint: I never realised quite how complex the world of 'paint' and paint additives can be - but more of that later!

## AIRBRUSH BASICS

To apply the paint, in addition to the air supply you'll obviously need an airbrush. Not to be confused with the 'spray gun' that a full-size car painter would use, an airbrush is a much finer piece of equipment that has a much smaller spray pattern and which greater control for finer lines can be achieved. The typical type of airbrush that we'll discuss in more detail herein is what's termed an Internal Mix, Dual (or Double) Action airbrush that allows for separate air and paint control through a two-way trigger or lever mechanism. Most airbrushes are held much like a pencil with the forefinger resting on top of the lever. Pressing down on the lever activates the air flow and pulling the lever backwards retracts the needle allowing the paint to be drawn into the air stream courtesy of the physical laws regarding pressure differential as described by Bernoulli's principle and the Venturi effect. The liquid paint travels along the surface of the needle where it accumulates at the tip and becomes atomised into the air stream and blown out towards the surface to be painted. Thus it soon becomes understood just how important the quality of the airbrush construction is in helping to achieve a consistent paint flow and spray pattern. A poor quality surface finish or a lower grade material will create

Low pressure here causes fluid draw  
Bernoulli's Principle





**The hologram on the box ensures you are buying a genuine Iwata airbrush**



**Createx Wicked paints and cleaner**



**You hold an airbrush like a pencil, pushing down and pulling back to control the air and paint respectively**



**The Sparmax GP-850 is a single-action airbrush that uses a simple trigger to operate**

more friction within the airbrush and effectively 'slow' the paint flow along the needle. More pressure will be needed to overcome this and as a result, the paint will need to be wither thinned further or applied with greater air pressure from your air source, both of which will affect the level of control and the quality of the finish you can realistically achieve. This is why some airbrushes will be more expensive than others; essentially they are precision instruments whose performance and durability is defined by the quality of their construction and the materials used.

A typical airbrush that is suitable for RC car painting with the acrylic (water-based) paints that are commonplace today will generally have a 0.35mm to 0.50mm diameter needle and will need to be driven by an air source that's capable of delivering a consistent pressure of approximately 25-35PSI.

## THE AIR SUPPLY

To 'power' the airbrush, you'll also need some form of air supply. Preferably one that is capable of delivering a constant pressure whilst you are using it to spray with. Any airbrush will require a certain volume of air to be moved at any one moment in time as otherwise the pressure will drop off as you try to apply the paint in a continuous spray and so selecting, or matching the airbrush and the compressor is vital. If your airbrush demands too much air or your compressor is effectively too small to power it, the pressure will drop off too rapidly and the paint won't atomise cleanly and the resultant paint flow will be erratic and poor. Don't be misled solely by the pressure (PSI) rating on either the airbrush or the compressor. Pressure is one thing - but moving a volume of air constantly over time is the most important bit and although many compressors will quote an effective 'working' pressure range, it's the air flow volume (often quoted in terms of Cubic Feet per Minute or CFM)

that will be the determining factor as to whether the compressor will be powerful enough or not.

There are many other factors that might weigh in on your decision regarding a suitable compressor. Workshop compressors tend to be cheaper options and are generally much more powerful than you need for typical RC body painting, but they are uncomfortably noisy and can be too intrusive to use during the evenings or late at night whereas a 'studio' compressor will often be no noisier than the typical volume of watching a TV programme. Some compressors are silent (think refrigerator noise levels) but require oil to be added which can become atomised in the air supply itself and affect the paint or be completely unsuitable if you're painting something edible such as a birthday cake (yes, an airbrush can do this too!)

Moisture is also a byproduct of compressing air and so an inline moisture trap is also a good idea as is a tank or air reservoir to help prevent any pulsing of the air flow that can otherwise occur if the output is direct from either the diaphragm or the piston that is providing the compression stroke.

Consideration should be given also to the likely time that you'll spend airbrushing in one session. Many compressors will be quoted as having a 'duty-cycle' of constant usage and should be switched off and allowed to cool down to avoid premature wear and failure. Some compressors have auto-pressure sensing cut-off switches which are effective in reducing motor wear whilst others might have a clever micro-switch integrated into the airbrush holder that cuts the motor when the airbrush is not in use. Typically, most RC painting sessions will be a combination of spraying cycles interspersed with paint mixing and refilling plus inevitable drying times between coats. Thus, it is unlikely that most 'recreational' painters will encounter real-world usage durations that

exceed the quoted duty-cycles - although care will be needed to ensure that the compressors are manually switched off during drying cycles and paint re-mixing/reloading on those compressors that don't offer any form of auto cut-off.

Other alternatives can include canisters of compressed air or even car tyre inner tubes, but these tend not to be particularly effective as neither will sustain a consistent pressure for very long which will inevitably lead to frustration and poor spraying results. In short - a decent compressor is as important as a reputable airbrush and both should be selected to match each other's output requirements if the system is to work as intended and as reliably as possible.

## PAINT

With the airbrush and air source all sorted, attention will inevitably turn to paint. In truth, this is a subject all in itself and one that despite many years of airbrushing, I've only recently begun to appreciate just how little I have understood the complexities of reducers (thinners) and additives. Nowadays, nearly all of the RC paints on the market are water-based acrylics in one form or another but they are not all created equal. Some will require crazy high pressures to paint with in an un-thinned state whilst others will spray from the bottle. Colour mixing and how they react and change when backed with different colours is all a part of the learning journey. There are numerous brands available but many acrylics are designed primarily for textiles (T-shirts) and will be thicker than we require for our polycarbonate type of body shells. Createx is perhaps the most well-known and respected acrylic paint brands and their range of "Wicked Colours" are ideal for RC body painting. They have recently re-aligned many of their in-house sub-brands to make things less confusing and this, along with the copious amount of help that they offer with via their website or via numerous YouTube tutorials really makes it very easy to learn how to get the best out of their products. Pro-Line are obviously another RC contender - from a brand that has long been associated with RC whilst Parma Faskolor and Hobbynox are probably the other two most well-known brands that are commonly available.

## NEXT TIME

In the next instalment we'll explain in more detail the types of things to look for in a typical hobby type of compressor and airbrush combination and explore the typical costs of a budget and Intermediate/advanced setup, explaining the pros and cons of each and why one set up might be better than the other. We'll also look a little into basic cleaning and end of session type maintenance routines that will help you to reduce the risk of your needle becoming stuck due to paint build up and paint drying between usages. ■

## Element RC Enduro24 Crawler RTR Trailrunner Trail Truck

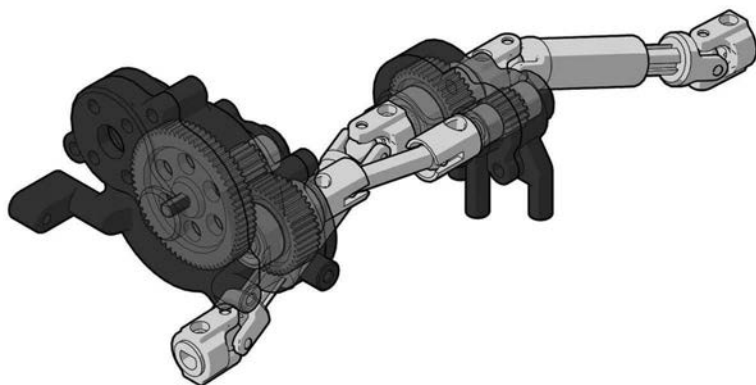
Whether it's outside on the trail or in the comfort of your own living room, this small scale, 4-wheel drive crawler is ideal. The full-time 4-wheel-drive transmission with divorced transfer case, metal vertical chassis rails, and 4-link suspension and forward-mounted motor ensure climbing over obstacles will be a breeze. Providing power and control is a 2-in-1 receiver/speed controller, 2-channel radio, powerful servo and single-cell LiPo. Just install the batteries, charge and go.

### Features:

- Single-piece polycarbonate Trailrunner body
- 2.4GHz 2-channel radio
- 2-in-1 receiver and speed controller combo
- Single-cell LiPo included
- Chassis-mounted servo
- Charger included
- 7mm wheel hexes
- Vertical metal chassis rails
- Soft compound rubber tyres

- Soft, coil-over shock absorbers
- Telescoping centre driveshafts
- Removable front bumper
- Adjustable body posts
- Steel pivot balls

**AVAILABLE FROM:** CML Distribution  
**WEBSITE:** [www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
**CONTACT:** 01527 575349





### Associated Electrics Logo T-Shirt

These blue T-shirts are 100 per cent pre-shrunk cotton and available in eight sizes. The heritage AE "racetrack" logo emblazons the front while the Associated Electrics brands line up on the back. These are available in sizes from small through to 5XL.

**AVAILABLE FROM:** CML Distribution  
**WEBSITE:** [www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
**CONTACT:** 01527 575349



### Xray XB4'21 Graphite Chassis Front T-Brace Set

This optional front graphite chassis T-Brace from Xray was designed to increase front stability on high traction tracks, which makes the car more predictable and easier to drive. The T-Brace is mounted via included aluminium posts to the chassis and to the front lower brace, and is a vital part of the Multi-Flex setting.

#361299 Xray Graphite Chassis Front T-Brace - Set

**AVAILABLE FROM:** RC Disco  
**WEBSITE:** [www.rcdisco.com](http://www.rcdisco.com)  
**CONTACT:** [sales@rcdisco.com](mailto:sales@rcdisco.com)

### Xray XB4'21 Aluminium Steering Plate 2-Holes

This is the optimised aluminium steering plate with 6mm profiled shape that has been CNC-machined from premium Swiss 7075 T6 aluminium. Designed and recommended for use in high-traction conditions, it increases steering precision and predictability when fitted to the XB4 and XT4 models

#362575 Xray XB4'21 Aluminium Plate 2-Holes - 6mm Profiled Shape - Swiss 7075 T6

**AVAILABLE FROM:** RC Disco  
**WEBSITE:** [www.rcdisco.com](http://www.rcdisco.com)  
**CONTACT:** [sales@rcdisco.com](mailto:sales@rcdisco.com)



### Tekno RC Aluminium Anti-Roll Bar Collars

To help keep your anti-roll bars in place for a long final Tekno RC has released these new aluminium collars. CNC-machined from aluminium and hard anodised, these collars are less likely to move due to the threads being damaged from over-tightening or a direct hit to the anti-roll bar. These require four M3x4mm set screws. This can be used with the EB48 2.0 and NB48 2.0 vehicles and should be a direct replacement for the stock part or used as a new feature.

TKR9090A Tekno RC Aluminium Sway Bar Collars (4)

**AVAILABLE FROM:** RPRC Distribution  
**WEBSITE:** [www.rprcdistribution.com](http://www.rprcdistribution.com)  
**CONTACT:** 07948 080253



### Protoform 1967 Dodge Dart Body

The Dodge Dart harks back to the glory days of American road racing and Protoform is now offering a version for the Vintage Trans-Am race class. The Dart was one of most unique cars in the famous Trans-Am series, with its flat-sided, compact-muscle look, and Protoform has captured all the details of the 3-time race-winning car in 1:10 scale to fit 190mm touring cars fitted with Protoform's own VTA tyres and wheels. For more aero tuning, an add-on decklid spoiler is also included. This officially licensed body is formed from a single piece of high-quality, light weight polycarbonate and requires no assembly. The Dart meets all VTA Class rules and includes a detailed decal sheet with rear stripes, protective overspray film, and window masks.

1579-30 Protoform 1967 Dodge Dart Clear Body for VTA Class

**AVAILABLE FROM:** CML Distribution  
**WEBSITE:** [www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
**CONTACT:** 01527 575349



# THRASH TEST - TAMIYA TT-02 FORD ESCORT CUSTOM 1998

■ spec: 4wd moulded chassis ■ class: 1:10 off-road fun ■ cost: £145

OLD SCHOOL COOL



A hotly anticipated Ford release from Tamiya has landed on our desk. Let's go back to the old school with this iconic rally racer...

We cannot remember hype for a Tamiya release quite like the recent Ford Escort Mk II rally. The chat on enthusiast's groups of both RC and full-size Ford fans was notable, and when UK importer The Hobby Company brought in their first batch of the RC kits, it sold out in hours. Not one to miss out on a good thing, the Japanese giant

have followed up one iconic Ford rally car with what is surely one of the others? All we need next is Colin McRae's Ford Focus if you're listening!

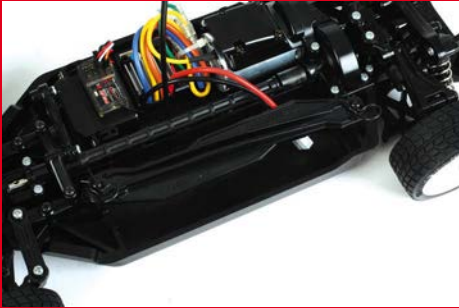
The first 'narrow' touring car your reviewer ever had (as a young lad) was Tamiya's 58176 Ford Escort RS Cosworth which remains one of their most collectable retro classics out there.

This new car on the TT-02 chassis is similar, but actually is closer to 58216, which was a TL-01 car liveried as the car driven by Juha Kankkunen in the 1998 World Rally Championship (WRC) series. The interesting thing with this one is it loses the Cosworth name, the rally colour scheme, and represents a custom road car, albeit I'm



# THRASH TEST - TAMIYA TT-02 FORD ESCORT CUSTOM 1998

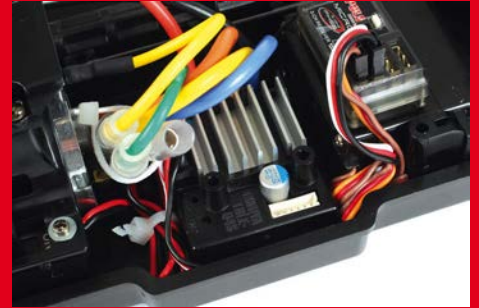
■ spec: 4wd moulded chassis ■ class: 1:10 off-road fun ■ cost: £145



The battery compartment will accept a variety of pack types and designs



The TT-02 is a quick and easy build aided by moulded linkages front and rear



The included Tamiya TBLE-04S speed controller can also be used with a brushless motor

◀ not entirely sure how accurate it would be as the last Escort Cosworth road cars were 1996 model years. However, historical accuracies aside, this is an awesome looking and very special car from Tamiya and one that will surely join the collections of those who have the Mk II Escort already.

## TT-02 FOR YOU

Rather than doing what Tamiya has done quite a lot of recently, which is to bring back these classic bodies on classic chassis, the Escort comes on their latest entry-level TT-02 shaft-drive one. Don't let the term 'entry-level' put you off, as the TT-02 is actually a nice handling and tough platform. I would suggest as a bare minimum (if you're going to run this car) adding a set of ball races; these are really quite cheap now compared to what they were in the 1990s and will make the car faster and

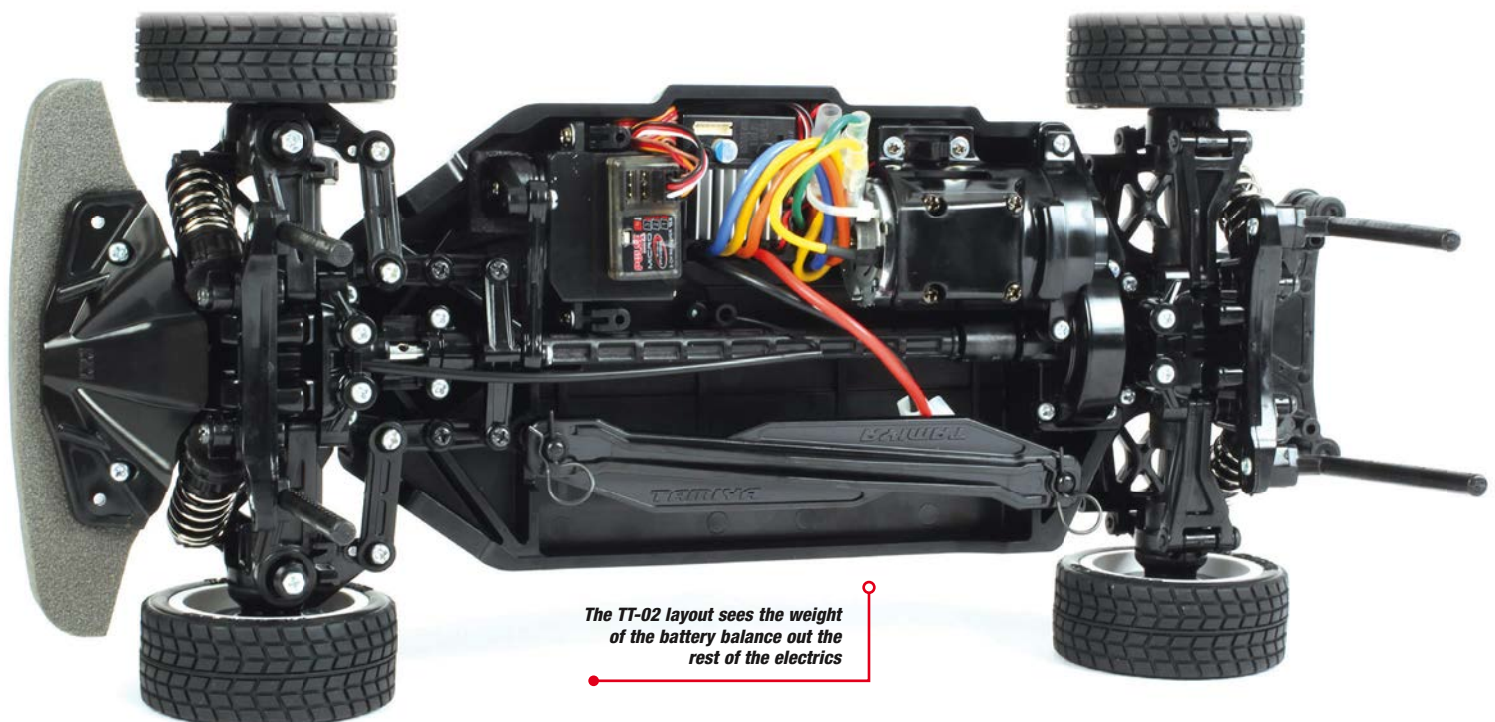
last longer. Beyond that, the friction-style shock absorbers would be better off being replaced by oil-filled versions such as Tamiya's own CVA units, but of course the sky is the limit in terms of Hop-Ups, and a huge amount of them are available to purchase should you wish to make your car more bling.

## BUILD UP

The Escort comes as a kit which you build yourself, and in the UK at least, Tamiya include a motor, and also a speed controller which handles brushed (included) motors and mild brushless ones. It's a nice touch, but if you were tempted to add any serious horsepower through the car, you'll need to upgrade it (and most of the car's physical drivetrain too!)

If you've never built a Tamiya RC kit before, in terms of instructions quality and fit and finish,

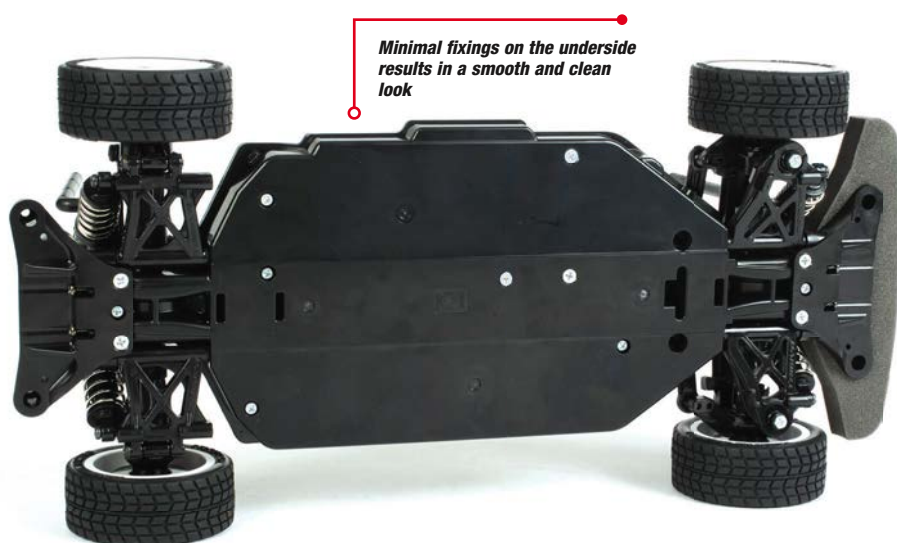
they are the best there is. You'll need a few tools to build it too which are detailed in the instructions; best advice here is to get a really good quality, brand new, Pozidrive screwdriver as Tamiya screws can be a little easy to chew the ends on. Generally, it comes together very nicely and very quickly as the front virtually mirrors the rear so you practice each section before you move on and do it again. One point of note is to make sure you use the correct screws for the front steering knuckles, which have a hex head as well as a cross head – it's not immediately obvious at first, so make sure you don't have to redo this step. Another odd building step is that there are three motor wires and connectors on the speed controller, but only two on the motor, and the colours do not match! Be sure not to connect the orange wire and tuck it neatly away with the included cable ties. As said above, it's really



The TT-02 layout sees the weight of the battery balance out the rest of the electrics

## Why Custom?

Anyone who is a fan of motor vehicles from this era will know that a Ford Escort Custom never existed in the real world. So why has Tamiya chosen to use this name for their latest TT-02 model? All we can assume is that although Tamiya is currently enjoying a good relationship with Ford - hence the Escort Mk II Rally, 2020 GT Mk II, Mustang GT4 - and have the licensing to do so, that they don't have the same approval to use the Cosworth title. So instead they have simply replaced the Cosworth wording with Custom. Does it make a difference? Well obviously not as the Tamiya TT-02 Ford Escort Custom 1998 looks great and we all know what the model was based on....



**“Fitting it out with electronics really is plug and play, and unlike many manufacturers, Tamiya details a lot of this in the manual rather than leaving you to guess”**

just a nice, and simple, thing to build and if it's your first RC build you'll not struggle. If you're a seasoned vet however, it'll be a nice relaxing one which culminates in that gorgeous and detailed body.

### THE CHERRY ON TOP

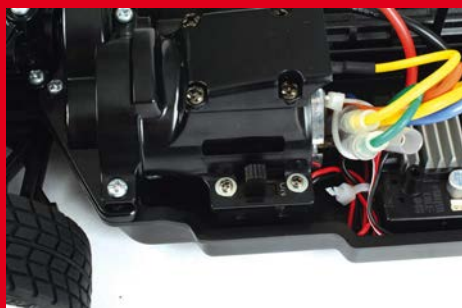
On top of the simple and venerable TT-02 chassis sits the polycarbonate bodyshell. It is very well detailed and perfectly to scale. However, before you proudly plonk it on top you need to paint it. This is a simple job, and Tamiya suggests you paint it white with their PS-1 paint. Of course, if you want to paint it any other colour you can, but be aware that the rear wing and mirrors are white, so you'll need to some suitable paint for this to match your body colour, and possibly some clear

coat to match the gloss of the clear body which is painted on the inside (and thus very shiny). Tamiya suggests using a smoke spray on the windows to tint them - if you do, be sure to paint the white paint quite thickly, and back it with silver if you can, otherwise the smoke colour may bleed through the body itself.

### ELECTRONICS CHOICE

Tamiya is pretty generous in providing a lot of what you need to make the car work in the box. However, you will need some other components to fully make it drivable. Firstly, a steering servo is needed, this doesn't have to be too fancy - a spare unit from the bottom of the pit box was used here and works really well. That said, even metal-g geared high-torque servos are a fraction

of the price they used to be and £20 buys something you could only dream of a few years back. A suitable transmitter and receiver will also be required, again, here we used nothing too fancy, but it's worth having something with steering dual rate control, and if you like a steerwheel-type transmitter (most do) then a foam wheel is so much better in cold weather! Finally, a main battery is needed, whether you choose a 7.2V NiMH battery which is more robust, or a 7.4V LiPo one (which will give a touch more speed) is up to you. Again, £25 will buy you something more than suitable for this car and its motor. Fitting it out with electronics really is plug and play, and unlike many manufacturers, Tamiya details a lot of this in the manual rather than leaving you to guess. >



The switch is screwed into place and is handily placed for access with the body fitted



A cable tie keeps the excess length of wires neat and tidy



Down the centre runs the moulded plastic propshaft linking the drive front to rear

# THRASH TEST - TAMIYA TT-02 FORD ESCORT CUSTOM 1998

■ spec: 4wd moulded chassis ■ class: 1:10 off-road fun ■ cost: £145



There is still life left in the venerable Tamiya battery connector



White plastic bushes come as standard and feature throughout the transmission



The hex moulding incorporates a dummy brake disc



The front and rear driveshafts, like the prop are also moulded plastic



A moulding above the motor directs airflow onto the Mabuchi 540-size motor



This tiny 2.4GHz receiver sits on top of the steering servo



The Tamiya wheel design is authentic for a rally car

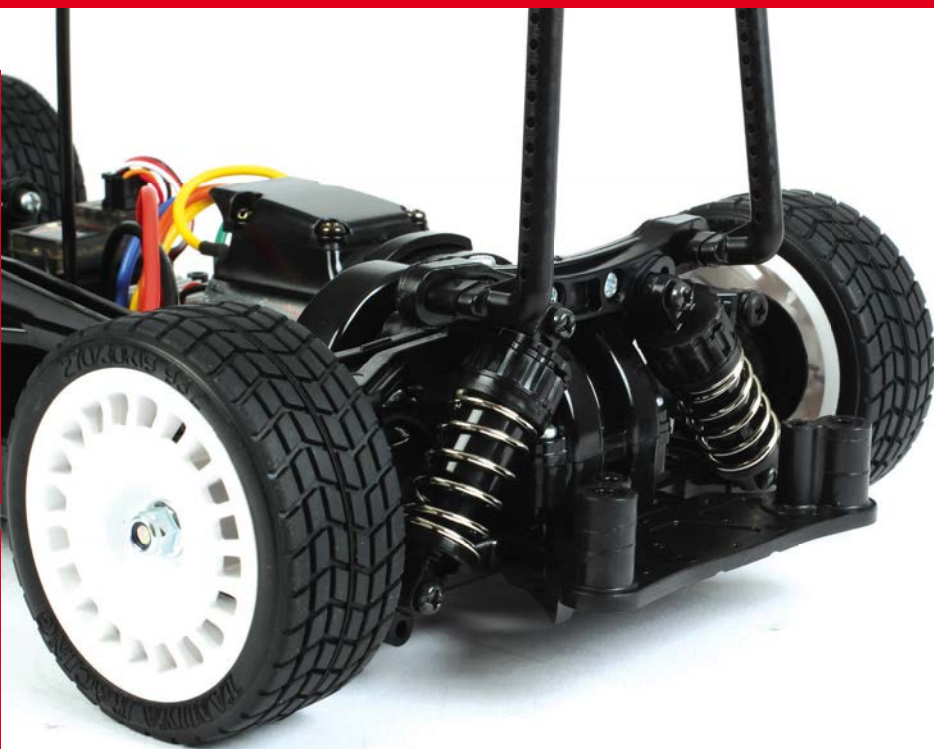


This is the Gens Ace 4000mAh battery we will use after changing the connector



A friction damper is bolted on at each corner





## FINAL THOUGHTS

To be honest, a lot of TT-02 cars come through the doors here, some are pretty special, some are a bit less so. This Escort is in many ways a re-release of what went before, but like the Porsche 911 GT1 Street Version, Tamiya has chosen to appeal to the retro collectors, but also do something a bit different and actually, a bit unique. It's not really a real car, but more of a fantasy for the collectors of both real fast Fords

and also RC fans. I really like it, and next to the Mk II Escort it sits really well in my little rally collection. The TT-02 is easy to build, yet good to drive (better than the older TT-01 for sure) and going fast isn't the objective with this anyway. The good news is that the body set is available too as a separate purchase should you already have a chassis. I think it'd go very well on the old rally XV-01 if you have one – that'll be my plan! ■



The box art is easy to replicate using just a few select decals, and why wouldn't you!

## Summary

The Tamiya TT-02 Ford Escort Custom 1998 offers distinctive looks and great scale features on a simple to build and robust chassis. Tamiya is doing here what they do best. If you're a fast Ford fan, this is a must have!

## SPECIFICATION

Model:	Tamiya TT-02 Ford Escort Custom 1998
Scale:	1:10
Class:	On-Road
Application:	Fun
Format:	Kit
Power:	Electric
Chassis:	Plastic
Drivetrain:	4WD
Transmission:	Shaft
Differentials:	Geared
Shocks:	Friction
Bearings/Bushes:	Bushes

## TECHNICAL DATA

Length	425mm
Width	189mm
Height	145mm
Wheelbase	257mm
Front track	185mm
Rear track	185mm
Weight	200g

## WHAT WE USED

Transmitter:	Etronix Pulse EX3G 2.4GHz steering wheel
Receiver:	Etronix Pulse 2.4GHz
Servo:	Etronix ES030
Speed Controller:	Tamiya TBLE-04S (kit)
Motor:	Mabuchi 540 Silver Can Torque Tuned (kit)
Battery:	Gens Ace Hard Round Case 7.4V 2S LiPo 4000mAh 50C

## OPTIONAL PARTS

#54977	TT-02 Aluminium Servo Mount
#54965	TT-02 Type-S Aluminium Steering Set (Long Tie-Rod)
#54947	TT-02 Carbon Damper Stay II (3.5mm, Front & Rear)
#54893	Aluminium Adjustable Servo Horn
#54874	TT-02 Adjustable Upper Arm Set
#54875	TT-02 Oil Gear Differential Unit
#54814	TT-02 Carbon Bumper Support
#54476	TT-02 Ball Bearing Set 0P.1476

## VERDICT



Easy to build  
Great scale looks



If you want to run it, add ball races and CVA shocks

**RACER RATING: ★★★★★**

## CONTACT

The Hobby Company Ltd  
Garforth Place  
Knowlhill  
Milton Keynes  
Bucks  
MK5 8PG

Tel: 01908 605686  
Website: [www.hobbyco.net](http://www.hobbyco.net)  
[www.tamiya.com](http://www.tamiya.com)

## **Reds Racing 721 Superveloce (Superfast)**

Due to the success of 721 Superveloce Limited edition 3.5cc off-road engine, Reds Racing has decided to release a new continuative version that will be available for the whole 2021 year together with 721 Scuderia Gen2 and 721 Corsa engines.

Their main objective was to develop a superfast engine able to guarantee a good fuel economy. This engine is suitable for tracks where a more powerful engine will give you an advantage. The Superveloce is a classic 3.5cc 7-port engine - a feature that has now become Reds Racing trademark - that can be used for both 1:8 buggy and truggy. Thanks to the AirBoost backplate and Extra Tuning by Mario Rossi the new engine has an extremely linear power delivery, which makes it super powerful but at the same time drivable.

### Features:

Extra Tuned Sleeve by Mario Rossi - this special modification to the sleeve by Mario Rossi increases engine power noticeably and guarantees good fuel mileage at the same time  
New Airboost Backplate - the new AirBoost backplate has been designed for increased mid-to-high RPM power, increased fuel efficiency and faster return to idle  
All carburetors come with a special sealing ring to increase sealing and tuning stability.

Reds Racing advise using both engines with their X-One pipe system or 2143 standard pipe and M manifold, Tetra clutch system and Durabell clutch bells.

### AVAILABLE FROM:

Kyosho UK

### WEBSITE:

[www.kyoshoeurope.com](http://www.kyoshoeurope.com)

**CONTACT:** 01992 893339





# DATE-A-BASE

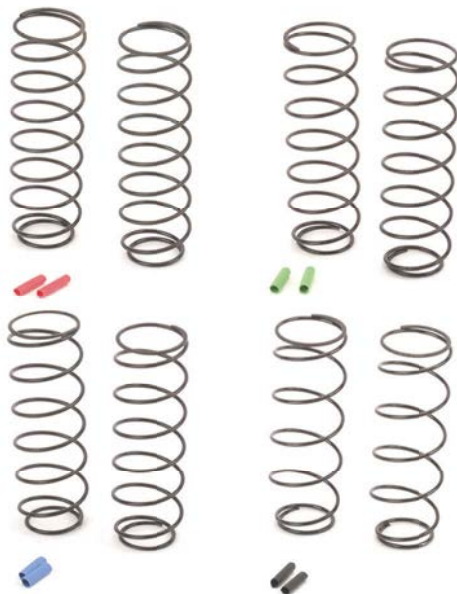
E-MAIL: [WEB@RCRACER.COM](mailto:WEB@RCRACER.COM) WEBSITE: [WWW.RCRACER.COM](http://WWW.RCRACER.COM)

## Core RC Hi Response Long Springs

These Core RC Hi Response Long Springs are for off-road buggies, and have been made to improve the responsiveness of the cars, compared to the alternative Core RC and Schumacher big bore springs. They feature less coils and have a thinner wire diameter. They also offer a handy weight saving, by an average 4 grams per pair over previous Core RC springs, which can be used on the rear of the Cougar Laydown, CAT L1 Evo and other cars using big bore shocks.

CR808	Core RC High Response Spring; Long Red - 2.0 lb/in (pr)
CR809	Core RC High Response Spring; Long Green - 2.2 lb/in (pr)
CR810	Core RC High Response Spring; Long Blue - 2.4 lb/in (pr)
CR811	Core RC High Response Spring; Long Black - 2.6 lb/in (pr)
CR812	Core RC High Response Spring Tuning Set Long (4 pairs)

**AVAILABLE FROM:** Schumacher Racing  
**WEBSITE:** [www.racing-cars.com](http://www.racing-cars.com)  
**CONTACT:** 01604 790770



## Hudy Hard Case For Transmitter

This Hudy hard case bag has been developed specially for the Sanwa MT4, MT44 and M17 transmitters whilst the upper lid features an inner net pocket with a zipper. It measures 185x220x145mm although Hudy offers a wide range of other hard cases in different sizes.

#199171-H Hudy Hard Case for Transmitter

**AVAILABLE FROM:** RC Disco  
**WEBSITE:** [www.rcdisco.com](http://www.rcdisco.com)  
**CONTACT:** [sales@rcdisco.com](mailto:sales@rcdisco.com)



## JULY

3-4	Schumacher Outdoor Off Road Masters	Telford
4	MTC National	West Bridgford
4	Large-Scale Summer Championship	SERCCC
4	BRCA I:10 TC Clubmans Championship	Bedworth
4	I:10 off-road summer series	IOGG
4	BRCA I:8 Truggy National Championship	Kent
10-11	Iconic Cup	Stafford
10	Nitro X	Nemo Raceway
11	Nitro X	Nemo Raceway
11	BRCA TC National Championship	Colchester
11	I:10 off-road summer series	South Lakes
11	I:8 off-road	Slough
18	I:10 off-road	Stofford
18	On-road club championship	Carlisle
18	I:10 summer series	Herts
18	Large-Scale Summer Championship	SERCCC
18	I:10 off-road summer series	IOGG
18	King of Clubs summer series	West London
18	BRCA I:8 Truggy National Championship	Brookthorpe
24-25	BRCA I:8 Off-Road National Championship	East Shrewsbury
24-25	Schumacher Outdoor Off Road Masters	Mendip
25	BRCA I:10 TC Clubmans Championship	West London
25	I:8 off-road club series	Ledbury
25	King of the North	Force Raceway
25	TC Heroes	Carlisle
27	I:10 off-road summer series	South Lakes
30-1 August	Revival 2021	Bingham Model Raceway
30-1 August	BRCA I:8 Off-Road National Championship	Herts

## AUGUST

1	MTC National EARCC	SERCCC
1	Large-Scale Summer Championship	IOGG
1	I:10 off-road summer series	Booklands
7-8	BRCA Club Sport Large-Scale Series	Herts
7-8	Schumacher Outdoor Off Road Masters	Halifax
8	BRCA TC National Championship	South Lakes
8	I:10 off-road summer series	Slough
8	I:8 off-road	Carlisle
8	On-road club championship	Brookthorpe
14-15	BRCA I:8 Off-Road National Championship	Stofford
15	I:10 off-road	West London
15-16	Iconic Cup	IOGG
15	I:10 off-road summer series	Coastal
15	BRCA I:10 TC Clubmans Championship	Adur
15	King of Clubs summer series	Gubbio, Italy
18-21	IFMAR I:10 Touring Car World Championship	Cremona, Italy
21-22	EFRA Large-Scale TC GP	Southport
21-22	Schumacher Outdoor Off Road Masters	Nemo Raceway
22	BRCA I:8 Truggy National Championship	Italy
22	IFMAR TC World Championship	Ledbury
22	I:8 off-road club series	South Lakes
22	Lakeland Classic	Herts
22	I:10 summer series	Mendip
28-29	Iconic Cup	TORCH
28-29	RudeBits Dash4Cash	RHR
28-29	RHR Classic	Stafford
29	BRCA I:10 TC Clubmans Championship	Brookthorpe
29	Nitro X	IOGG
29	I:10 off-road summer series	Force Raceway
29	King of the North	Carlisle
29	M-Chassis 5-Hour Endurance	Brookthorpe
30	Nitro X	

## SEPTEMBER

4	I:8 off-road club series	Brookthorpe
5	I:8 off-road club series	Brookthorpe
5	BRCA TC National Championship	Cotswold
5	I:10 off-road summer series	South Lakes
5	I:8 off-road	Slough
5	MTC National	Eastbourne
5	On-road club championship	Carlisle
10-12	EFRA I:8 Off-Road European 40+ Championship	Reding, France
11-12	BRCA Club Sport Large-Scale Series	Craigavon TT*
12	King of Clubs RC Empire GP & RC Jumble	Aldershot
13-18	EFRA I:10 and I:8 IC On-Road European 40+ Championship	Utrecht, Netherlands
17-19	EFRA Large-Scale TC GP	Lostallo, Switzerland
19	I:10 off-road	Stofford
19	I:10 summer series	Herts
19	BRCA I:10 TC Clubmans Championship	Aldershot
19	I:10 off-road summer series	South Lakes
25-26	MTC GP	MB Raceway
25-26	Schumacher Outdoor Off Road Masters	RHR
26	On-road club championship	Carlisle
26	Large-Scale Summer Championship	SERCCC
26	I:8 off-road club series	Ledbury
26	BRCA TC National Championship	Bedworth
26-27	BRCA I:8 Off-Road National Championship	Nemo Raceway
30-1 October	IFMAR I:10 TC On-Road World Championships	Gubbio, Italy

\*TBC

Due to publication deadlines, the on-going impact of the coronavirus and the potential restrictions, we would suggest making sure these events are still taking place before committing to travelling.

## AFFORDABLE RC TRANSPONDERS

available to order online @ [www.mrtwebshop.com](http://www.mrtwebshop.com)

# Ready for the RTX ?

\*\* RTX Battery Transponder - RTX 'ACS' Charger \*\*

\* compact size - long life battery \* 'club friendly' run ALL day \*

mPTX & mPTX PRO + NEW RTX rechargeable (soon!)

MRT - WORLD BEATING ADVANCED ELECTRONIC PRODUCTS

Tel: UK 0870 1624955 Email [support@team-mrt.com](mailto:support@team-mrt.com) [bit.ly/mrt-help](http://bit.ly/mrt-help)

MODEL RACING TECHNOLOGY @ [www.rclaps.com](http://www.rclaps.com)

# SERPENT

## INNOVATIONS



SPARES BACKUP

SET UP ADVISE

TRACKSIDE HELP

READY TO RUN KITS  
ALSO AVAILABLE

www.serpentuk.com  
email: sales@serpentuk.com  
tel: 07876 664422 (daytime)

**EDITORIAL:**

Publisher: **Alan Harman**  
Editor: **Matt Benfield**  
Editor-At-Large: **Tom Stacey**  
Deputy Editor: **Marcus Nicholls**  
Office Manager: **Paula Gray**  
Administration Manager: **Hannah McLaurie**  
Contributing Editor: **Joe Brown**  
On-Road Technical Editor: **Stephen Coyle**  
Features Editor: **Peter Winton**  
Advertising Manager: **Richard Andrews**  
On-Line Editor: **Matt Benfield**  
Photography: **Ian Peckett**

**ART:**

Design: **Peter Hutchinson**  
Website Design: **Justin Noble**

**ADDITIONAL CONSTRUCTION AND CONTRIBUTIONS:**

Matt Ellis, Alex Hagberg, Chris Delves, Juliet Exall, Stef and Mandy Godfree, Ade Pitman, Luke Burley, Simon Reeves, Adrian Jefferies, Ellis Stafford, Keith Robertson, Scott Smart, Phil Morstedt, Andy Carter, Shaun and Hayden Taylor, Alex Brayshaw, Old Time Racer, Marcus Askell, Ken Block, Mark Stiles, Steven Brooke, Andy North, Ian Peckett, John Weston, Kane Wood, Terry Atkinson, Ollie Jefferies, Justin Noble, Jerry Ibbotson, Donut and She Who Must Be Obeyed...

**EDITORIAL, ADVERTISEMENT AND CIRCULATION:**

Racer Magazine, Doolittle Mill, Doolittle Lane,  
Totterhoe, Bedfordshire, LUG 1QX  
Tel: 01525 222573  
E-mail: web@rcracer.com

**CIRCULATION TRADE ENQUIRIES:**

DISTRIBUTOR:  
Seymour Distribution  
2 East Poultry Avenue, London, EC1A 9PT  
Tel: 020 7429 4000

**NEWSTRADE:**

Select Publisher Services  
3 East Avenue, Bournemouth BH3 7BW  
Tel: 01202 586848  
E-mail: tim@selectps.com

**SUBSCRIPTIONS:**

Racer Magazine, Doolittle Mill, Doolittle Lane,  
Totterhoe, Bedfordshire, LUG 1QX  
Tel: 01525 222573  
Rates: UK £42, Eire and Europe £56, Worldwide £69

**BACK ISSUES:**

Racer Magazine, Doolittle Mill, Doolittle Lane,  
Totterhoe, Bedfordshire, LUG 1QX  
Tel: 01525 222573  
Website: www.rcracer.com

**HOW TO CONTACT US:**

Tel: 01525 222573  
E-mail:  
enquiries@doolittlemedia.com

Racer Magazine, Doolittle Mill,  
Doolittle Lane, Totterhoe,  
Bedfordshire, LUG 1QX, England

THE NEXT ISSUE OF  
RC CAR RACER IS ON SALE  
5 AUGUST 2021  
ISSN 1366-6916

**DOOLITTLE  
MEDIA**

Radio Control Car Racer is published monthly by Doolittle Media, Doolittle Mill, Doolittle Lane, Totterhoe, Bedfordshire, LUG 1QX. Entire contents © 2021 Doolittle Media. Reproduction in part or whole of any text, photograph or illustration without written permission from the publisher is strictly prohibited. While due care is taken to ensure the contents of RC Car Racer is accurate, the publishers and printers cannot accept liability for errors and omissions. Advertisements are accepted for publication in Racer only upon Doolittle Media's standard terms of acceptance of advertising, copies of which are available from the advertising sales department.

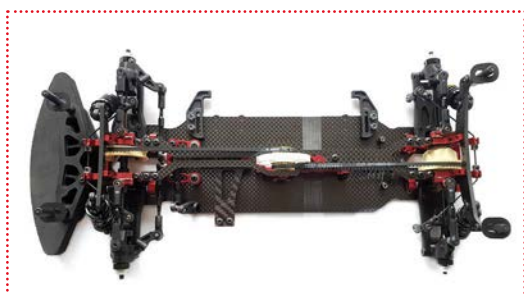
# COMING UP

## ON SALE: 5 AUGUST 2021

**CORALLY MURACO XP 6S** – a 1:8-scale truggy is a hugely potential platform with the ability to run high voltage battery packs in a relatively light chassis, yet retaining great off-road potential with highly its capable suspension and grippy tyres. The new Muraco from Corally is based on their Shogun model, and with the included 2050Kv motor powered by 6S, means a possible top speed of 60mph plus. We put the electric-powered model to the test in the next issue where you can read all about it.



**CAPRICORN TE05** – the Italian brand's new TE05 electric touring car platform has been updated with longer wishbones all round to increase traction and corner speed, and work in combination with new rear uprights, front C-hubs and steering knuckles. To lower the centre of gravity there are also new shock towers and shocks, which will also make the chassis more stable at higher speeds, especially in higher traction conditions. We will have a full review in the September issue courtesy of Stephen Coyle who will also be hitting the track with the TE05 in 2021.



**CHASSIS-INTEGRATED SPEED CONTROLLER** – what do you do if you are an electrical designer and are an RC racer? Well if you Ian Mullaney you incorporate a speed controller into the chassis of your vintage Schumacher 4WD buggy. Called the ESCAT, John Weston chats to Ian and finds out how he came up with the idea as well as some background details after making a comeback into the racing scene.



Also in the September 2021 issue, we bring you the latest RC news from around the world, the most up to date kits, hop-ups and spares available, as well as reports from around the country of club and regional action from race series and local competitions.

Although we try hard to ensure that these articles will appear in the next issue, there are instances where this is beyond our control.

**NEWSAGENT  
COUPON**

Please order Radio Control Car Racer Magazine for me and reserve/deliver a regular copy starting with issue:

NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
TELEPHONE: \_\_\_\_\_

**NEWSAGENT PLEASE NOTE:**

Racer Magazine is available to your wholesaler through Odyssey Publisher Services - 0870 240 2058. Hobby shops please call Doolittle Media on 01525 222573.

## Pro-Line Axis for TLR 8ight-XE

The Axis is all-new series of race bodies for 1:8 buggies from Pro-Line that feature a super low-slung design with sharp lines. The Axis is a cab-forward design that provides enhanced steering response while the small side fins balance out the rear of the car with ideal side-bite. The rear of the Axis body has the right amount of clearance for the motor and electronics and fits the chassis and bulkhead shape of your race buggy perfectly. To run the Axis body on the 8ight-XE electric buggy, the battery must be no taller than 39mm due to the low-slung nature of the Axis side

pods.

Pro-Line bodies are made from durable polycarbonate material, with a paint-then-peel overspray film, window masks, and Pro-Line decals are included.

3567-00 Pro-Line Axis Clear Body for TLR 8ight-XE (with LCG battery)

**AVAILABLE FROM:** CML Distribution  
**WEBSITE:** [www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
**CONTACT:** 01527 575349



## Pro-Line 1972 Chevy C-10 Drag Truck Body

Pro-Line's newest drag body is the iconic 1972 Chevy C-10 truck specifically designed for the growing no-prep SC drag racing scene. The ultra-scale body captures all the signature details of this classic truck when fitted to a Traxxas Slash 2WD or the Associated Electrics DR10. Pro-Line recommend using their Hoosier 2.2" Drag Racing Tyres on the front, Hoosier Drag Slick SC 2.2"/3.0" Drag Racing Tyres or Reaction HP SC 2.2"/3.0" Belted Tyres or Big Daddy Wide Slick SC 2.2"/3.0" Tyres in the rear, Pomona Drag Spec Wheels, and the Stinger Wheelie Bar to complete the ultimate drag truck look. To create the most scale look possible, the body is designed with a narrower track width than a traditional SC body. It does fit on the AE DR10 with trimming, but the Slash will require some different parts to fit correctly.

3557-00 Pro-Line 1972 Chevy C-10 Clear Body for Slash 2WD Drag Car/AE DR10

**AVAILABLE FROM:** CML Distribution  
**WEBSITE:** [www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
**CONTACT:** 01527 575349



## Klinik RC Ride Height Gauges

Klinik RC has a new line of ride height gauges machined these from billet aluminium, hard anodised with laser etch measurements for quick identification. The centre shaft is a perfect replica of Klinik RC's turnbuckles albeit bigger. The gauges will also include their own titanium hardware for the most trick look, and are available in a silver/black and gold/black colour combo. The gold option will also come with gold anodised titanium screws.

**Available sizes:**  
 1:10 buggy gauge will come with 16-21mm triangles  
 1:10 truck and 1:8 buggy gauge will come with 22-27mm triangles  
 13-15mm gauge is available separately for carpet racers

**AVAILABLE FROM:** Schumacher Racing  
**WEBSITE:** [www.racing-cars.com](http://www.racing-cars.com)  
**CONTACT:** 01604 790770



## Xray XB2'21 Solid Axle

This Xray solid axle set fits the XB2'20, XB2'21 and XT2'21, and includes lightweight axle shaft with 20T pulley, disc carrier, spur gear and hardware. The axle body is manufactured from aluminium and is hard coated, as well as being strategically machined lighter than a standard solid axle shaft. Especially hand-ground for maximum precision and smooth operation, additionally heat treated and black coated to ensure long life and maximum performance. This has been designed for stock class to reduce maximum rotation mass and eliminate slipper effect, with a super lightweight adapter to eliminate extra weight.

#324102 Xray Solid Axle - LCG - Lightweight - Set

**AVAILABLE FROM:** RC Disco  
**WEBSITE:** [www.rcdisco.com](http://www.rcdisco.com)  
**CONTACT:** [sales@rcdisco.com](mailto:sales@rcdisco.com)



## Contact RC LMP12 Hex Wheels

New from Contact RC are these LMP12 Hex Wheels for the Schumacher Eclipse 4 and other brands using the U8176 LMP12 Hex Lightweight Spool Set. The solid rear axle on the Eclipse 4, these new wheels use a single M4 nut fixing. Along with quicker wheel changes and easier use, the rotating and unsprung mass has been significantly reduced offering better performance. Flexibility has also been improved for more equal stiffness around the wheel. These tyres can also benefit other manufacturers cars not just the Eclipse 4 with the use of U8176 LMP12 Hex Lightweight Spool Set.

Truing these tyres is also easy with the specific Contact RC truing arbour for hex rear and front wheels. This fits popular tyre truers with an 8mm shaft.

- JT3-28RA Contact RC 1:12 Hex Rear Soft Pink 28Sh A Foam - 46mm
- JT3-30RA Contact RC 1:12 Hex Rear Magenta 30Sh A Foam - 46mm
- JT3-32RA Contact RC 1:12 Hex Rear Double Pink 32Sh A Foam - 46mm
- JT3-35RT Contact RC 1:12 Hex Rear 35Sh T Foam - 46mm
- JT3-38USR Contact RC 1:12 Hex Rear 38Sh USA Spec Purple
- JT3CR Contact RC 1:12 Hex Rear 30Sh Control Tyre - 46mm
- U8176 Contact RC LMP12 Hex Lightweight Spool Set
- J016 Contact RC Truer Arbour and Clamp - 1:12 Hex

**AVAILABLE FROM:** Schumacher Racing  
**WEBSITE:** [www.racing-cars.com](http://www.racing-cars.com)  
**CONTACT:** 01604 790770



## CONTACT:

Serpent UK Off-Road  
Tel: 07876 664422  
E-mail: [tony@rudebits.net](mailto:tony@rudebits.net)  
Website: [www.serpentuk.com](http://www.serpentuk.com)

# TONY'S NEW RIDE

Racer got the opportunity to take some photos of Tony Evdoka's new Serpent Spyder SRX-4 Gen3 4WD competition buggy. Tony is the man behind Serpent UK Off-Road and was running one of the first production examples of the chassis at a local event that we attended

It has been some six years since Serpent entered the 4WD market with a belt-driven chassis and now in 2021, the brand has come up with a very different looking platform in the form of the latest Spyder SRX-4 that draws heavily on the Gen3 2WD. Designer Billy Easton stated that, "It had to be easier than any car of its kind to work on, handle with precision and ease, be maintenance friendly, and share more parts across the 1:10 categories we compete in." The SRX-4 Gen3 shares over 50 per cent of its SRX-2 Gen3 relative, as

Serpent didn't want customers to have to purchase a significant amount of new parts just to operate two cars.

## CHASSIS

The chassis on the all new SRX-4 Gen3 is made from 7075-T6 aluminium and is narrow in design for its flex characteristics. This also incorporates a new idea for the front pivots and diff position that offers greater ground clearance. With the improved ground clearance you get much greater consistency

when it comes to jumping with regard to take-off and landing. Another feature of the chassis design is that there are dedicated locations to add weight, in both low and high grip situations.

The side pods are moulded from a composite material and are mounted using a "tongue and groove" system that locks the chassis, aims to improve flex characteristics. The pods also have four mounting pegs for your body to locate on and can be used with or without Velcro should you wish.

Space in the chassis is plentiful even with





*A side belt transfers drive from the rear gearbox forwards*



*Tony's personal buggy is equipped with some extra bling*



*Vertical ball studs at the rear add to the huge tuning potential of the SRX-4 Gen3*



*Note the additional weights that bolt to the chassis into designated positions*



*The gold-coloured Dash equipment is complimented by the optional hardware*



*The alloy hexes are an optional width*

full-size servo and receiver. There is also enough room behind the electronics and in front of the motor for a fan if you choose to use one.

## STEERING

When it comes to the steering setup, the designer wanted to eliminate bump steer and create a smoother linear Ackerman curve as well as reducing maintenance time. As a result of this the multipurpose front/rear pivot blocks also double as steering post mounts and pivot insert holders, which also simplifies the design and reduces the overall part count. Just like many 2WD off-road buggies, the steering system is at the same angle as the chassis kick-up angle. The servo mount is floating and the servo is located as close to the centre line of the chassis as possible for the best flex characteristics.

## DRIVETRAIN

Serpent makes big claims when it comes to the transmission saying that "It is the absolute easiest belt drive car to ever be worked on" and that "The new layout can be made to have perfect left to right weight distribution with a variety of batteries." Starting with the differentials you get the option to run either two or four gears inside which is a popular tuning theme. The rear differential is accessible by four vertical and two horizontal screws, as well as removing at least one shock nut, with Serpent claiming that the removal of any unnecessary parts has been completely avoided. The differential height can be set in one

of five different heights in of 0.5mm increments. The diff height inserts are locked into position to make sure that the oval inserts can't rotate slightly during operation causing damage to the internal gears. With the differential removed, you can now take the idler gear out by undoing a single button-head screw. To access the top shaft you will simply have to remove the slipper bolt, remove the slipper, then remove the three screws that holds the motor plate, and you can slide the top shaft out.

The slipper clutch on the SRX-4 Gen3 has a number of options including a solid full-time slipper and Limited Slip Differential (LSD). The latter is a more precise way to distribute power to the front wheels than oil driven differentials. Both slipper assemblies share the same top shaft, so you can change this in a very short amount of

time without the removal of extra parts.

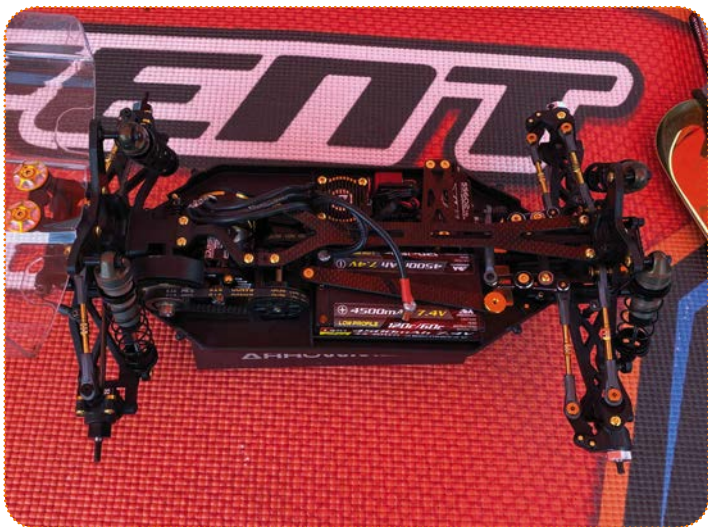
You can simply remove the rear belt by taking off a single circlip without the need to remove the slipper or change the setting. The front belt is also easily accessed for maintenance and can be done at the same time as a front differential adjustment or by itself, with Billy stating that it is actually even easier than changing the rear diff. To adjust the front belt tension you insert a 3mm shim under the mounts, allowing for easy adjustment depending upon the class or track condition.

## NARROW REAR PIVOTS/INSERT SYSTEM

The narrow pivot system has been carried over from the SRX-2 although owners can purchase, medium and wide pivot sets for even more adjustability as optional parts. The new

*With the suspension removed you can see the transmission layout that uses a gearbox and two belts*





*It is nice to see a manufacturer come up with an alternative chassis layout to the established designs*



*The amount of roll centre options at the rear hub is incredible*

system will allow for 2-degrees total in or out from 3-degrees which is standard. This system is adjustable and in the box is a complete set of inserts that are anodised black with silver chamfered edges.

## REAR UPRIGHTS

The SRX-4 Gen3 comes with a revised rear upright that features a new track width, axle position, and roll centre adjustments. You can adjust the roll centre by way of seven different positions in reference to the distance away from the axle in 0.5mm increments. The same inserts adjust the offset of the upright. The upper camber link has an adjustable length, which is set using shims between the camber link mount and upright. The vertically mounted ball stud allows fine adjustment setup. The wheel axle can be adjusted in 1 and 2mm increments in or out that alters the driveshaft length, and also the location of the outer driveshaft pivoting point, which has an influence on rear end grip and roll. Serpent

has the original 65mm and 66mm driveshafts as well as two new ones in 67mm and also 68mm. Finally, there is a new set of hex adapters that make all these axle adjustments possible with 4mm through to 9mm in 1mm steps.

## NEW REAR SHOCK GEOMETRY

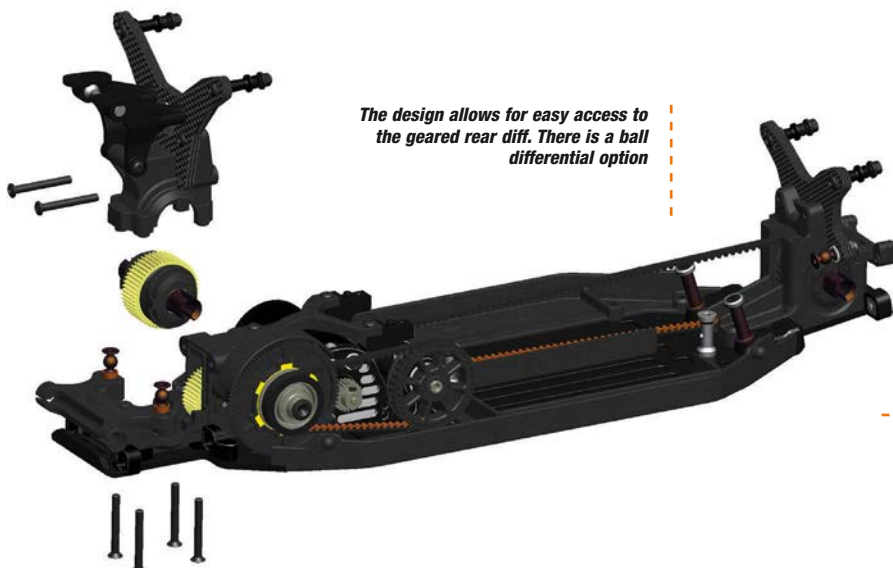
When Serpent developed the first SRX-4 model the shocks were mounted to the back side of the rear wishbone. This is still possible on the Gen3 but since that time rear suspension geometry has improved and so the Gen3 has the shocks on the front side of the rear wishbone that sees a benefit when it comes to cornering and jumping. The height of the tower has been updated accordingly to maximise droop and up travel. There is also an option tower for much higher grip conditions like carpet indoor racing.

Finally there is a fully integrated anti-roll bar system that is secured using just two button head screws and there are options available from 1mm through to 1.7mm thicknesses in 0.1mm steps.

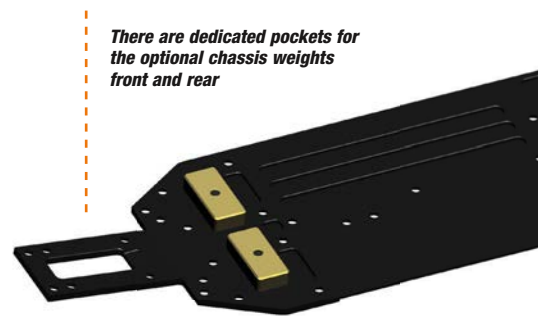
## NEW FRONT SUSPENSION GEOMETRY

Serpent was keen to improve on their past designs and incorporated ideas that would allow them more freedom into the future. They started with the IFMAR legal offset wheel and then worked from there starting with an all-new front pivot/insert system. Once again there is plenty of adjustability as you can change the kick-up angle from 6- to 10-degrees, change the wishbone sweep angle from -2 to +2, and adjust the track width narrower or wider by 2mm.

The caster block, was completely redesigned to have a specific offset, caster range, and the position of the roll centre has been adjusted. There are two upper link choices, where you can mount a vertical ball stud. The standard caster block using the 0-degree insert gives a total of 10-degrees of caster and from this point you can adjust it either way in increments of 2.5- and 5-degrees. This gives you a total range from 5-degrees all the way up to 15-degrees of total caster at the wheel (hub).



*The design allows for easy access to the geared rear diff. There is a ball differential option*



*There are dedicated pockets for the optional chassis weights front and rear*

*Like 2WD designs, the steering assembly is angled to match the kick-up in order to eliminate bump steer*





*Alloy steering components over flex-free operation with the best driver feedback*

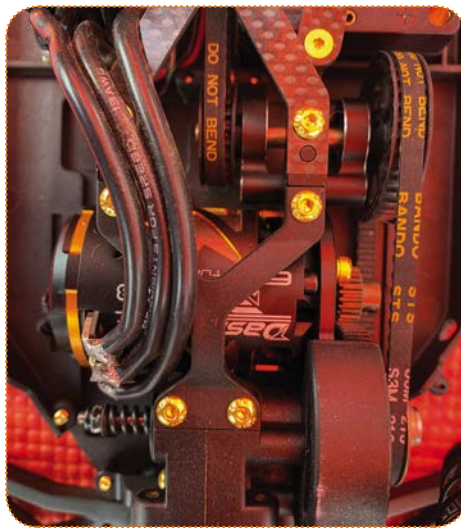
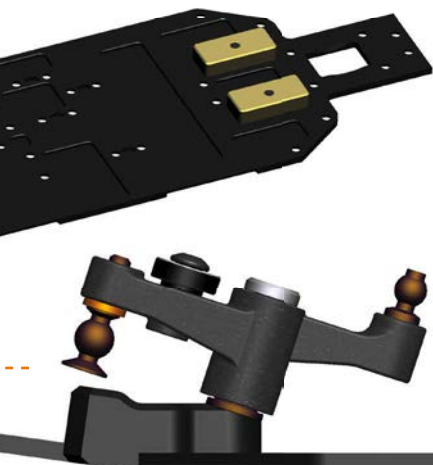
The steering spindle has also been redesigned to improve scrub offset as well as mate the caster block in a way that allows the roll centre to be adjusted by three 1mm shims. The Ackerman arms are mounted to the underside of the spindle and the bump steer can be adjusted again by using shims on the top side under the ball stud. The outer bearing was increased to a 5x13x4 bearing, to improve life and durability.

The new Ackerman arms that are mounted to the steering spindles are made from 7075-T6 aluminium and are black anodised. There are three choices with optional parts to allow adjustment of the Ackerman angle.

Like the rear-end, there is an anti-roll bar up front that can be easily accessed or removed. Here you can adjust the bar from 1.2mm, 1.3mm, 1.4mm, 1.6mm and 1.8mm options.

## BODY

Serpent wanted to make the body look sleek, stylish and aerodynamic, and aimed to match the



*The rear top brace ensures a very rigid chassis with little flex*

style of their 2WD. They commented that, "We wanted them to look as similar as possible so regardless of which one you were driving they felt similar to you. The styling is fresh, sharp and tough to beat." Tony's own personal colour scheme is applied by Kifo Paint (aka Keith Newton) despite him being one of the top body painters for many racers back in the day.



*Both the front and rear shock towers are machined out of 4mm thick carbon fibre*



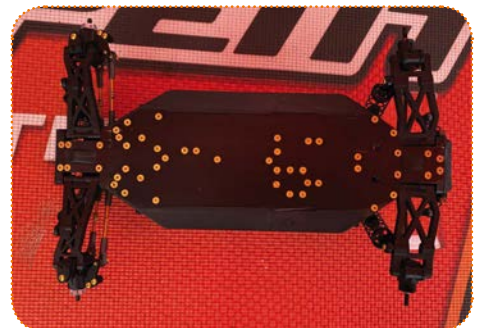
*The shocks on the latest Gen3 4WD are carried over from the 2WD buggy*



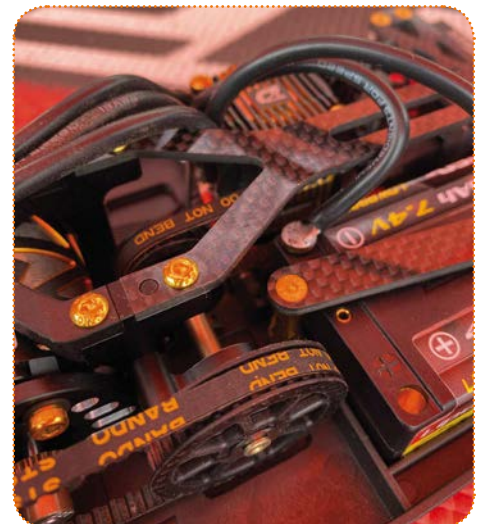
*Tony has fitted orange-coloured hardware throughout*

## THANKS

Racer would like to thank Tony Evdoka at Serpent UK Off-Road for his help in putting this article together and providing us with unlimited access to the car, his knowledge and experience. As one of the more mature racers in the country, his enthusiasm for RC knows no bounds and is a great ambassador for the hobby. ■



*The contrasting-coloured hardware is clear to see against the black alloy chassis*



*Here you can see how the top deck is keyed to the bulkhead*

# RACER BUYERS GUIDE

Here's a list of the best shops in the UK for advice, good stocks of the latest products and convenience for you.

Bedfordshire

## SUNDON MODEL SHOP

**Tel. 01582 539969**

30 Sundon Park Parade, Luton, Beds, LU3 3BJ

Open Mon - Fri 9.00am - 6.00pm. Sat 9am - 6pm

**R/C CARS, PLANES AND HELICOPTERS, BOTH NITRO AND ELECTRIC**

We accept all major credit cards and also accept Paypal  
[www.sundonmodelshop.com](http://www.sundonmodelshop.com)

Derbyshire

## HOBBIES & MOOR

Mastin Moor Aquatics, 38 Worksoop Road  
 Mastin Moor, Chesterfield

**WWW.MOORHOBBIES.CO.UK**

Call **01246 470 555**

The Hobbies & Moor team are ready to take your call and find you your perfect remote controlled vehicle.

Hertfordshire

**PLEASE MENTION RACER MAGAZINE  
 WHEN REPLYING TO THESE ADVERTS**

YOUR MODEL SHOP COULD BE HERE, CONTACT  
**richard@doolittlemedia.com**

**FOR FULL DETAILS**

## HERTS RC MODELS

Westmill Farm, Ware, Hertfordshire SG12 0ES

**TWO OFF ROAD TRACKS ON SITE  
 AVAILABLE FOR PRACTICE**

Radio Controlled Model Specialists

Web: [www.hertsrmodels.co.uk](http://www.hertsrmodels.co.uk)

Email: [Sales@hertsrmodels.co.uk](mailto:Sales@hertsrmodels.co.uk)

Tel: 01920 466 995

**Fully Trained Staff**

Open Mon - Sat 10am to 6pm

West Midlands

## EURO AND ASIA MODELS

**Tel. 01628 770433 Fax. 01628 770433**

23 Treesmill Drive, Cox Green, Maidenhead, Berkshire, SL6 3HR.

Open Mon - Sat 11.00am - 6.00pm

**1/8 BUGGY SPECIALIST**

Remote World 1:8  
 I.C. Car Club

**ALL CARDS ACCEPTED**

OS Engines, Sirio and RB engines.  
 Kyosho major stockist.

## MIKE'S MODELS

**Tel/Fax. 0121 360 4521/0121 360 7350**

3/5 Brockwell Road, Kingstanding, Birmingham, B44 9PE

Open Mon/Tues/Thurs/Sat 9.30am - 5.30pm

Note: Closed Wednesday & Sunday

**ON AND OFF ROAD, AIRCRAFT, HELICOPTERS, JETS**

Support BRCA and all  
 local race meetings

**ALL CREDIT CARDS**

Proprietors race model cars  
 & fly aircraft & helicopters

W. Yorkshire

## MODELSPORT UK

**Tel: 01943 466535 Fax: 01943 850810**

Cross Green, Otley, W.Yorks, LS21 1HD

Mon - Sat 9.00 - 5.00 Closed Sun

**1:10 OFF ROAD & 1:10 IC RC CAR SPECIALS,  
 LOSI, TAMIYA, SCHUMACHER**

Mail Order Specialists

**MASTERCARD/VISA/SWITCH**

Call for our latest prices

**PLEASE MENTION RACER MAGAZINE  
 WHEN REPLYING TO THESE ADVERTS**

YOUR MODEL SHOP COULD BE HERE, CONTACT  
**richard@doolittlemedia.com**

**FOR FULL DETAILS**

Devon

## ACTION MODEL CENTRE

**Tel.01803 211007 Fax.01803 292029**

34 Lucius Street, Torquay, Devon, TQ2 5UN

Open: Monday-Saturday 9.30-5.30 late night Thursday 7.00 p.m

**THUNDER TIGER - TAMIYA - CALANDRA - ASSOCIATED - YOKOMO  
 TRAXXAS - SCHUMACHER - HPI - MARDAVE - CORALLY - LRP  
 TRINITY - HOT BODIES - CEN - KO - PROPO - MUGEN**

Torrs Tuesday nights

Paignton 7.45 - 10.00pm

**MAIL ORDER / ALL MAJOR CREDIT CARDS**

email: [sales@actionmodelcentre.co.uk](mailto:sales@actionmodelcentre.co.uk)

**PLEASE MENTION RACER MAGAZINE  
 WHEN REPLYING TO THESE ADVERTS**

YOUR MODEL SHOP COULD BE HERE, CONTACT  
**richard@doolittlemedia.com**

**FOR FULL DETAILS**



RADIO CONTROL CAR

# RACER

ENJOY YOUR FAVOURITE MAGAZINE ON YOUR IPHONE, IPAD, ANDROID PHONE OR TABLET PC.

VISIT THE APP STORE OR GOOGLE PLAY AND SEARCH FOR "RC RACER" OR VISIT POCKETMAGS.COM TO PURCHASE SINGLE ISSUES AND SUBSCRIPTIONS TO READ ON YOUR DEVICE OR PC.



Call 01525 222573 or fax your web details to 01525 222574 for your business to appear here

[www.cmldistribution.co.uk](http://www.cmldistribution.co.uk)  
 HoBao FL FTX CML  
 fastrax GP NOVAH YOKOMO

See the full range of all Tamiya Products  
[www.tamiya.com](http://www.tamiya.com)

[RadshapeRC.com](http://RadshapeRC.com)

[www.hpieurope.com](http://www.hpieurope.com)

**PRO-LINE**  
[www.prolineracing.com](http://www.prolineracing.com)

If you can see this so can 1000's of customers  
 Contact [richard@doolittlemedia.com](mailto:richard@doolittlemedia.com)

[www.horizonhobby.eu](http://www.horizonhobby.eu)

[www.traxxas.com](http://www.traxxas.com)

Distributors for  
 SMD  
 ASHIMA LRP  
 JAMMIN SANWA Hasegawa  
 DUALSKY TARGUS  
[www.smdirect.co.uk](http://www.smdirect.co.uk)

Team Magic F4RS II  
 and more... FLETA 4  
**BEST PRICE**  
[www.rcracingpro.com](http://www.rcracingpro.com)

[www.logicrc.com](http://www.logicrc.com)

[www.racing-cars.com](http://www.racing-cars.com)

**Modelsport UK**  
[www.modelsport.co.uk](http://www.modelsport.co.uk)

If you can see this so can 1000's of customers  
 Contact [richard@doolittlemedia.com](mailto:richard@doolittlemedia.com)

**AXIAL**  
[www.axialracing.com](http://www.axialracing.com)

[www.rc10.com](http://www.rc10.com)

[www.kyoshoeurope.com](http://www.kyoshoeurope.com)

Follow us on Twitter - [@racermagazine](https://twitter.com/racermagazine)  
 Find us on Facebook, search [racermagazine](https://www.facebook.com/racermagazine)

# They Think It's all Over...

THE LAST WORD IN EVERYTHING RC!

## KEEPING ON YOUR TOES

AFTER YOU HAVE RACED IT'S THEN TIME TO MARSHAL. BUT THIS MARSHALLING LARK – HOW DOES IT GO...?

It's been a while, back to the middle of 2020 for most of us. It's opening up, slowly but surely, we can go racing again. We wonder how well we will be able to drive after such a long rest, but if you can't find your marshalling mojo it's not going to end well!

Marshalling – it's that thing you do after your race is over and (in theory) before you check the results and hold the post-race analysis. It's compulsory, and failure to do so has penalties. Ah... yes, that bit of the race day. Not sure? Here's Racer's guide to what is expected, so sit down with your beverage of choice and remind yourself how it's done...

It is compulsory. You expect your accidents to be cleared up by the corner marshal, so when it is your turn don't shirk it. Do it as you would want it done for you.

The procedure is simple – you get on the rostrum, you race, you get off the rostrum, you go to your place and marshal. No, the results will still be there after you've marshalled and no, the post-race analysis can wait until the marshalling is done and no,

it's not a time to chat!

Watch the track in front of you. As a driver, how cross can you get when someone is idly watching another part of the track and fails to notice your pride and joy stuck in the barrier or on its roof?

Be a good marshal. Watch the cars coming into the section of track you're standing next to. What's going on? Cars close together and making the racing line up as they go along? Someone attempting the overtake from a position back in another postcode? All those good signs of your services being needed are there to be seen, and make your arrival to sort out the mess just that little bit earlier. Be alert (Britain needs Lerts!)

You've seen it coming, it's written in the stars and you're on your way to the scene of the accident – but then you start the Dad-dancing routine trying to dodge the other oncoming cars! Always be aware of the cars around you, their speed and yours. If you have to wait, wait. Cars can be made brand new again, you can't. Wherever you end up, make

sure it's safe to go back to your position.

You only have one job – to marshal. Not to text, to take the call that can wait, to eat, drink or check social media. You have just one job – do it!

Try to remember what annoys you about other marshals and don't repeat that. Be on time, pay attention, do the very best job you can to keep your fellow racer on track.

The last word is for the drivers. It is not your job to discipline the marshals, leave that to race control. Remember that you see that crash before the marshal, that your car is (always!) about as far from them as it could be, and they can't be in two places at once. They don't deserve to be yelled at, and the wrong choice of words could get you sent home. We are all only human, treat each other kindly.

Now you remember, don't you!

*It is Now!*



### 1 2 3 ANSWERS TO WHO, WHAT, WHEN AND WHERE. P20

1. On 13–14 July 1985, Ian Oddie made the A final at the Newby Hall to-day off-road competition at Ripon in Yorkshire. Ian has competed in many RC classes and is arguably best known for his large-scale success, but he is pictured here with his 540 Open class-winning car. At the event, Howard Cliff of Modelsport UK was the main sponsor through his shop, which at the time was known as H&S Cliff Model.

2. Mugen is currently pushing hard in the 1:10-scale touring car scene but they used to make a 1:10-scale electric off-road buggy in the mid-1980s. The Mugen Bulldog AWDS kit shown here features four-wheel drive and four-wheel steering that gave the acronym AWDS. The Bulldog also featured adjustable air shocks, front and rear geared differentials and a centre limited slip differential that all came for around £100 back in the day.

3. The second round of the Brazilian 1:8 IC Off-Road National Championship took place on this enormous track, laid out on a football pitch! We may have seen large off-road tracks before in Racer but this is the biggest ever. Interestingly, when the race was run, Kyosho 2WD cars took the first four spots as the 4WD machines struggled.

**INTEGY**  
www.integy.com

FOR TRAXXAS  
**X-MAXX**



SPEED TUNED  
SPRING SET

#C28042



RUBBER SEALED  
BEARING SET

FOR REDCAT  
**EVEREST**

BILLET MACHINED  
STEEL SPUR GEARS



#C28329-C28330

FOR TRAXXAS  
**TRX-4**



AD-RC02 SMD LED  
LIGHT SET

#C28256



BILLET MACHINED 1.9  
BEADLOCK WHEEL SET

#C28093



ALLOY MACHINED  
SUSPENSION LINK SET

#C28336

FOR AXIAL RACING  
**SCX10 II**

FOR TRAXXAS  
**TRUCKS**



BILLET ALLOY  
REAR GEARBOX  
HOUSING

#C28196



ALLOY MACHINED  
DRIVE SHAFTS

#OBM-1345



#C27799

MACHINED ALLOY  
SIDE RAIL SKID PLATES



ALLOY REAR  
DIFFERENTIAL CASE

#C28187



T7 HIGH TORQUE  
REMOTE WINCH SET

#C25589



ADJUSTABLE  
REBOUND SHOCKS

#C28071

FOR CUSTOM 1/10

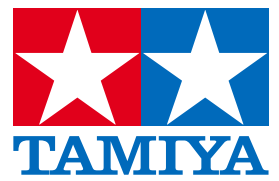
**CRAWLERS**

www.integy.com

alloy upgrades • tool sets • led lighting • scale accessories



**58685:  
COMICAL HOTSHOT (GF-01CB) 4X4**



NO LAUGHING MATTER, IT'S A

# SIZZLER

HERE IS ANOTHER RELEASE IN THE POPULAR SERIES OF COMICAL BUGGY MODELS OF THE CLASSICS - THE COMICAL HOTSHOT! THE ORIGINAL HOTSHOT WAS OUR FIRST SHAFT-DRIVEN 4WD BUGGY BACK IN 1985. NOW IT IS HERE ON THE 4WD GF-01CB CHASSIS. THE REIMAGINED COMICAL BODY COMES PRE-PAINTED IN RED AND ALL THAT IS NEEDED IS THE APPLICATION OF THE DECALS THAT ARE INCLUDED. THE GF-01CB CHASSIS IN WHICH THE BODY SITS ON TOP OF IS A GEAR-DRIVEN UNIT THAT PROVIDES A THRILLING DRIVE AND SUPER WHEELIES WHEN YOU GIVE IT SOME WELLY.

## GF01CB CHASSIS

**GF-01: SERIOUSLY STABLE 4WD:** THIS GEAR-DRIVEN 4WD CHASSIS IS BASED AROUND A LIGHTWEIGHT AND TOUGH MONOCOQUE FRAME, WITH POWER PROVIDED BY THE CENTRALLY-POSITIONED MOTOR. SEALED GEARBOXES PROTECT FROM DUST AND DEBRIS AND ARE INTEGRATED INTO THE FRAME, WHILE THE BUILT-IN DIFFERENTIAL GEARS PROVIDE SMOOTH CORNERING. THIS IS COMPLIMENTED BY 4-WHEEL DOUBLE WISHBONE SUSPENSION WITH CVA OIL DAMPERS AND A TWO-PIECE TIE ROD STEERING SETUP WITH THE SERVO ON THE LEFT - ALL PROVIDING A FANTASTIC RESPONSE AND DELIGHTFUL HANDLING.



## SPECS:

- This is a 1/10 scale R/C model assembly kit. • Includes a lightweight and durable stylised polycarbonate version of the Hotshot body and wing, developed specially for this model. The body is pre-painted in PS-2 Red to save the hassle of a paint job. Stickers based upon the 2007 re-issue Hotshot (Item 58391) are included for decoration. • Stylish bumper and muffler parts are included, as well as dedicated side guard components. • Separately sold 5mm LEDs can be used to light up the model. Light pods are included. • ST block bubble tyres have stepped block patterns (width/diameter: front 45/99mm, rear 55/99mm). • The GF-01CB chassis offers efficient gear-driven 4-wheel drive. • ABS two-part wheels have red and white spoke parts. • CVA Super Mini oil dampers moulded in red ensure your ride has superior cushioning. • A rear wheelie bar lets you perform thrilling wheelies by slamming on the throttle. • Includes the NEW TBLE-04S ESC. Compatible with brushless motors (sensored) of 21.5 turns and higher, and Tamiya brushed motors 25 turns and over. • Requires: Carson Reflex 2-channel radio, steering servo, 7.2 volt battery and Ansmann compatible charger to complete. • WR-02 or GF-01 Hop-Up Option parts are available to make it unique and truly yours.

For more information from Tamiya visit [www.hobbyco.net](http://www.hobbyco.net) or [twitter.com/TamiyaUK](https://twitter.com/TamiyaUK)



Sign Up to our Newsletter on [www.hobbyco.net](http://www.hobbyco.net)



Find us on facebook search Tamiya UK

Tamiya is distributed in the UK by:  
**The Hobby Company Limited, Knowlhill, Milton Keynes, MK5 8PG**  
SEE YOUR UK TAMIYA DEALER FOR FURTHER INFORMATION



[www.hobbyco.net](http://www.hobbyco.net)