

THRASH TEST

LRP S8 REBEL BX 2.4GHZ RTR LIMITED

SPEC: 4WD ALLOY CHASSIS **CLASS:** 1:8 OFF-ROAD **COST:** £290



LRP's Nitro Rebel



Back in the September issue of *Racer* we looked at the Rebel BXe 1:8 electric buggy and were thoroughly impressed. The latest S8 Rebel chassis now comes in a very attractive RTR nitro option complete with high spec parts and competition pedigree...

LRP has quickly established itself as a serious manufacturer of high spec RTR kits on top of its usual abundance of quality electrics and accessories. This quality shows once you pull the Rebel BX out of the box as some of the parts and design elements from the successful BXR Evo model have been passed down.

Straight away you notice the modern cab forward body, race ready tyres along with alloy threaded shock bodies – a good start! Underneath the screen-printed white/blue flame-style body (a blue/red design is also available) there is the proven 1:8 off-road format and layout awaiting you which looks tidy and well put together. We expected nothing else when it comes to LRP!

THE POWER SOURCE!

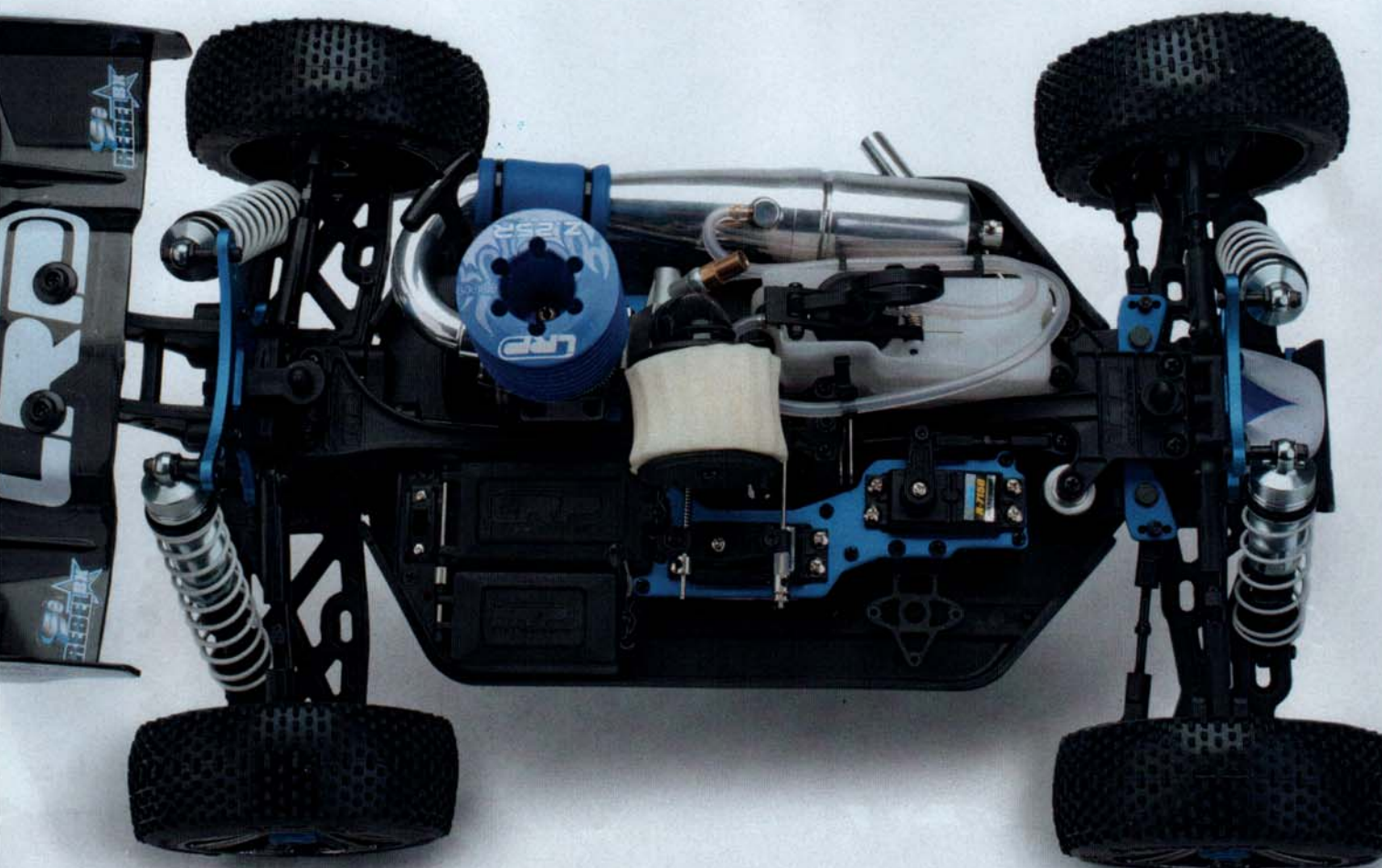
The Rebel BX is powered by their own Z.25R sport pull-start engine that sports a large blue LRP heatsink. This engine offers a claimed 2.73hp so is very quick for a RTR package, especially when reaching its quoted 34,000rpm! The adjoining slide carburettor has three needle settings for idle, low-end and top-end adjustment. Like any competition-spec buggy, the exhaust gases exit the buggy via a polished alloy racing manifold and pipe whilst underneath the engine is a cut-out that allows the use of a starter box. In keeping with the competition spec, there is a three-shoe clutch system hidden behind the clutch bell that easily transmits all the power from the engine to the transmission

The Rebel BX comes with a competition fuel tank complete with a handle incorporated into the sprung loaded cap. A splashguard is also moulded into the tank along with fuel level indicator and from full to empty, we were seeing run times of around ten minutes during our thrash test. All of these components are mounted onto a countersunk 3mm thick alloy chassis.

TRANSMISSION TIME

Power from the engine is distributed efficiently through a geared front, centre and rear differential. These three oils filled units are designed to be as low maintenance as possible and sport extra hardened outdrives for greater durability. Dogbone-style CVD driveshafts are used on all four corners of the buggy

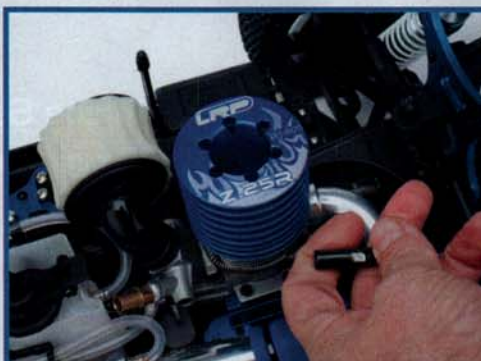
SPEC: 4WD ALLOY CHASSIS **CLASS:** 1:8 OFF-ROAD **COST:** £290



A moulded fuel tank pull is a nice touch and makes for easy refuelling



A plastic clip keeps the fuel pipe tidy and less likely to get damaged

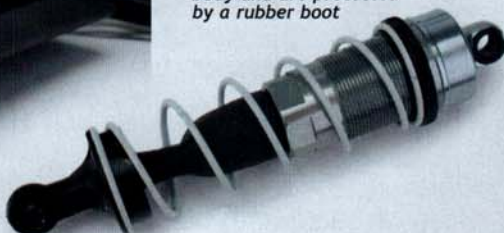


Like most RTRs on the market, the engine comes equipped with a pull-start on the rear



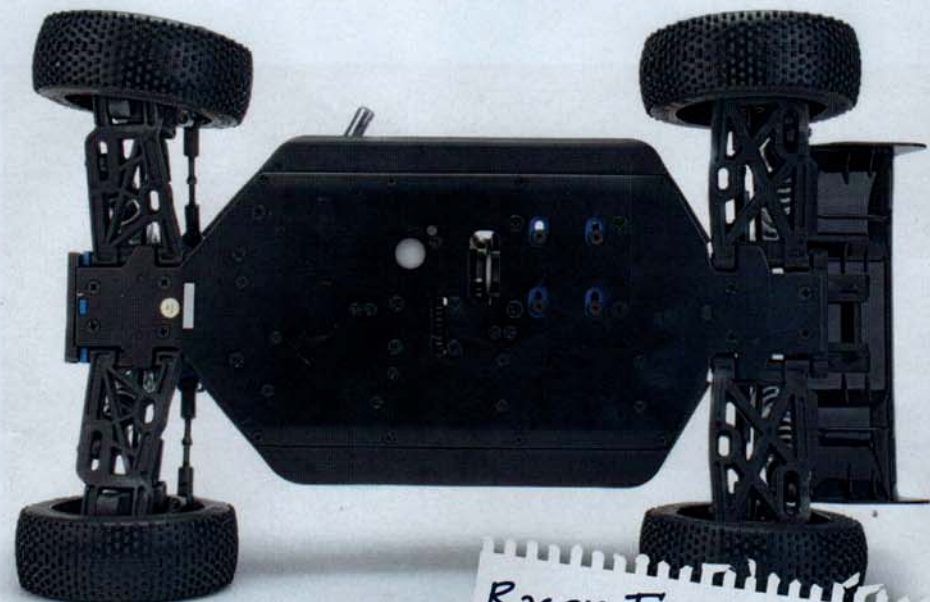
Front-end of the S8 uses a traditional caster block design with an alloy steering arm

LRP's big bore shocks feature a threaded body and are protected by a rubber boot



We think that the wheels on the Limited Edition model are more street than race





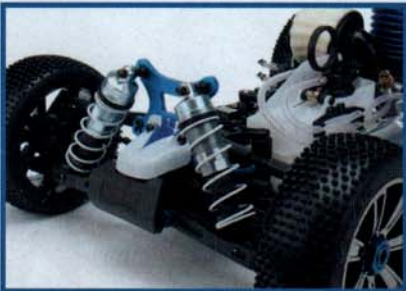
The LRP R-7150 for the steering is a high-torque unit and rated at 9kg



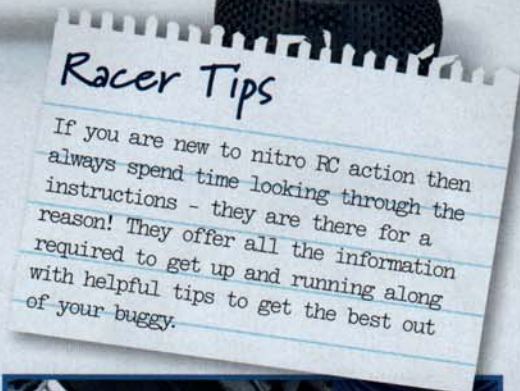
The radio box is split into two - one lid to access the receiver and the other for the battery pack



Coloured springs fitted to the big bores. The ride height is adjusted on the collars



The blue corporate theme of LRP is used on the alloy components



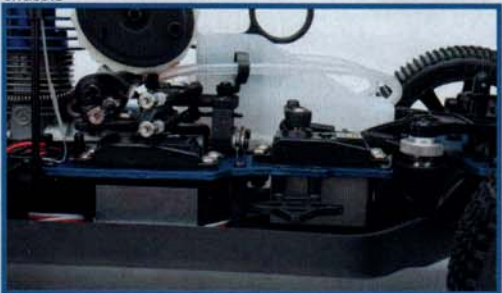
Inside the radio box is the receiver and on-board battery



The adjustable servo saver can be accessed easily as the nut is located at the top of the steering post



The rear gearbox module is braced against the main chassis



The two servos are bolted onto the alloy plate



LRP include their own A2 STX Sport III 2.4GHz steering wheel radio with all the usual trims and adjustments required

SPEC: 4WD ALLOY CHASSIS CLASS: 1:8 OFF-ROAD COST: £290

ON TEST

Although the Rebel BX is sold as a RTR package you still need to purchase a glow start and charger, as well as fuel and batteries for the transmitter and receiver pack. These items are readily available from your local model shop for a very reasonable outlay.

With these items on hand at Racer HQ, we carried out the engine running in procedure as recommended in the instruction manual. Not wanting to repeat ourselves here with our nitro reviews, but as tempting as it is to get out and go flat out straight away (we still struggle with these urges) running in the engine will make it perform better and for longer.

With the engine properly run in after three tanks or so, starting could be made with just a couple of pulls on the handle. We were hoping to take the Rebel to a local club meeting but with time constraints we only managed to run the buggy at a local multi-surface venue. Despite this we still put the buggy through a good hard thrash test!

After a couple of trim checks for the steering, brakes and throttle positions, we were underway. The Z.25R engine was left a little rich at the beginning of the test, but it still pulled nicely through the rev range providing a very good show of speed and acceleration. With a small track marked out we were able to see how the Rebel BX handled the turns on the loose stuff. With the soft suspension set-up from the factory the buggy turns sharply and is very responsive. On the tighter corners we did manage to roll over a couple of times so with a quick adjustment of the threaded shock bodies we lowered the chassis a little and this helped to make the car corner faster and harder.

The VTEC Kamikaze high grip tyres did exactly what was expected and provided very good grip on the grass, dirt and loose gravel. Over some of the small jumps and bumps the buggy was predictable and showing no signs of doing anything untoward. After some more tanks had passed through, we were further able to lean the engine to stretch its legs some more. This provided greater top speed and more throttle response, highlighted by the

race exhaust system that produced a nice crisp engine note as the revs build up. We were also very impressed with the performance of the brakes that were able to stop the buggy at speed with ease and very little fuss.

After a few more tanks, we let the engine and components cool down and checked everything out. There were no signs of any failures although we did have an intermittent fault with the battery pack for the receiver. We always carry spares with us during our tests to prevent an early trip back to the office. On this occasion the AA battery box had a loose wire – a non-LRP part may we add – and shows why one of the first parts to upgrade is to fit a rechargeable receiver pack to prevent such failures. Overall the S8 Rebel BX is a fantastic 1:8 nitro buggy. Pretty much hassle free in terms of running a nitro buggy so this is ideal for the inexperienced racer. It was great fun to drive and easy to get up and running thanks to the factory settings. Performance wise, it is fantastic for a RTR buggy. With this in mind we look forward to hitting our local club in the not too distant future.





“The Limited Edition version of the S8 Rebel BX RTR provided hassle free running making it ideal for the inexperienced racer!”

and also for transferring the power from the centre diff to the front and rear. The central differential features a steel spur gear with separate front and rear vented brake discs for mega stopping power.

BIG BORE ADJUSTMENT

As mentioned the Rebel BX sports some serious suspension for a RTR package starting out with big bore shocks featuring 3.5mm shock shafts for maximum durability and threaded bodies for easy adjustment. You will also notice that the shocks come with rubber dust covers to keep out the dirt and maintain performance and the completed units have a range of mounting points on the 4mm shock towers.

As you would expect the possibilities of further chassis set-up is available on both front and rear wishbones. Chunky turnbuckles take care of the camber adjustment whilst there are two options for the linkages on both the front and rear hubs. Turnbuckles are also seen on the steering arms for toe-in/out of the front wheels and these are attached to a 4mm alloy steering linkage. If you attend to start racing then this buggy will offer you lots of set-up options to help fine tune your buggy to better suit the track and/or conditions.

RADIO EQUIPMENT

Modern day top-end race cars feature 2.4GHz control systems and this great development has filtered down to RTR buggies like the Rebel BX as they include their own A2-STX Pro radio package. Not only does this steerwheel transmitter feature the usual trim and servo reverse functions, it also has separate controls for the end-point adjustment for both

steering and throttle positions. Inside the protective radio box in the car sits a matching LRP 2.4GHz receiver and all the wires are neatly tucked away, with the pivoting lid held in place by a body clip for easy access. An LRP 9kg high torque servo complete with metal gears takes care of the steering duties at the front whilst throttle and braking is controlled by an equally high spec LRP servo. Both these servos have heat sink protection on the cases and are housed in the same blue (no other colour imaginable) 4mm alloy chassis top plate seen on the shock towers and steering slider.

KAMIKAZE GRIP

The Rebel BX has some top rubber included tempting you to head straight for the track rather than the park for a bash with your mates. VTEC Kamikaze high grip tyres sit proudly on all four corners of the buggy and sport the block-style tread pattern and a soft insert. The tyres are mounted onto shiny seven spoke wheels, which are fixed onto the hubs via industry standard 17mm hexes allowing every aftermarket wheel to fit. As stated at the beginning the finished body is of a modern cab forward design and is made from tough and durable polycarbonate. The body fits nicely over the chassis with help from a nice big cut out for the engine, although we found that the body needs to be removed to make starting the easiest. You will also see that there is a handy hole for access to-the top end needle when fitted. Complimenting the body is a moulded plastic rear wing that is shaped for maximum performance whilst also being flexible to absorb the impact in a crash.

SPECIFICATION

Model:	LRP S8 Rebel BX RTR
Scale:	1:8
Class:	Off-Road
Application:	Fun/Entry-Level Competition
Format:	RTR
Power:	Nitro
Chassis:	Alloy
Drivetrain:	4WD
Transmission:	Shaft
Differentials:	Gear
Shocks:	Oil-filled/Threaded bodies
Bearings/Bushes:	Bearings

TECHNICAL DATA

LENGTH:	503MM
WIDTH:	300MM
HEIGHT:	179MM
WHEELBASE:	330MM
FRONT TRACK:	260MM
REAR TRACK:	255MM
WEIGHT:	3385G

WHAT WE USED - Nitro Kit

TRANSMITTER:	LRP A2 STX SPORT III 2.4GHZ STEERWHEEL (KIT)
RECEIVER:	LRP A2-RX SPORT III 2.4GHZ (KIT)
STEERING SERVO:	LRP R-7150 9KG HIGH-TORQUE (KIT)
THROTTLE/BRAKE SERVO:	LRP R-7030 HIGH-TORQUE (KIT)
ENGINE:	LRP Z.25R SPORT PULL-START (KIT)

VERDICT

- + Fantastic build quality and spec Out the box performance
- Running out of fuel

RACER RATING

★★★★★

CONTACT

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All in all we could not fault LRP's Rebel BX whilst reviewing the RTR buggy in the office. The build quality is second to none and the components used are of a very high standard, but the real test is how it performs outdoors! ■

SUMMARY

You can get cheaper RTR 1:8 nitro buggies but this entry-level option from LRP is going to be hard to top. For the money the spec is fantastic and with LRP's build quality and the performance we saw in our test you will not be disappointed. The S8 Rebel BX is an ideal buggy for bashing with your mates and will be just at home if you decide to start racing at your local club. Racer recommended!



TEST SESSION

WHAT: SANWA EXZES Z

Z Car Radio

With many small updates and improvements, the new Exzes Z stick radio uses the same technology as the recently launched M12 steerwheel. As the choice of many top racers, we had to see what the latest model has to offer...



Sanwa have become the go-to radio company when looking for a race-spec stick transmitter. They have a fantastic range of both wheel and stick models and whilst their competition for the top-end models appears to focus on steerwheels and hybrid designs, Sanwa's market share has grown tremendously and now dominates the sector – something that is evident at any race meeting in the UK.

With the likes of Andy Moore, Robert Pietsch, Olly Jefferies, Jilles Groskamp and Elliott Boots all running the flagship Sanwa Exzes X 2.4GHz stick transmitter, it's clear that the radio has the specification that World Champions and superstars demand. After we reviewed the latest M12 steerwheel model in the April 2013 issue, we all wondered if this would prompt an update to the stick model. Then in late June, Andy Moore

posted up a picture of what looked like a production-spec Exzes Z model that he was testing. Immediately this created a buzz for existing Sanwa fans – although the Exzes X wasn't out-dated, racers can't help themselves and naturally targeted the Z as their next significant purchase. Here at Racer, we had to sit patiently and wait for its public release like the others. Thanks to the team at LRP in Germany and SMD in the UK, we were supplied with our own Exzes Z for review as soon as they could...

SANWA SHAPE

For those of you coming from an X will be pleased to know that the Z uses the same moulded case so the ergonomics are carried over and with some small tweaks to the sticks' tension and angle, it is possible to perfectly replicate your old handset with the new one. At the top there

are the usual programmable controls with dials and toggle switches that makes the Z suitable for all aspects of RC from two-stroke petrol large-scale through to electric micro racing.

WHAT'S NEW?

Where the most significant changes have been made with the Z are internally and this manifests itself on the outside with a new squarer-screen and revised button layout. Gone are the six silver buttons to the right and the two on the left and these are replaced primarily by a scrolling wheel that also can be pushed to select. A select toggle as well as a back button complete the right side whilst on the left there is the display button – an excellent feature – and this makes the whole area around the LCD a much cleaner and simpler main panel.

The display highlights the brand

new menu system so we took some time to work through this and find out the key features of this top of the range transmitter.

POWER UP

So now we have covered the ergonomics of the Exzes Z, as well as the looks and controls, its time to power it up and check out the new menu that is carried over from the M12 steerwheel. At the rear is the battery compartment and Sanwa kindly include a 1500mAh 4.8V NiMH battery to use. The manual states that the unit is designed to use four AAs as this offers the best balance, but weird that a rechargeable pack is supplied. That said, you will benefit from higher capacity and this will be cheaper in the long run. Now with Lithium chemistry all the rage, don't worry that the Z only embraces old technology as you can use batteries



WHAT IS FH4T?

The latest top of the range Sanwa transmitters in the form of the Exzes Z that you see here and the M12 feature their very latest FH4T technology. This 2.4GHz technology means a direct and super fast transmission between the transmitter and receiver, resulting in greater feel on the race track. Quick throttle and steering response will allow for even more precise manoeuvres.

DID YOU KNOW, THE BEST JUST GOT LIGHTER?

The Sanwa Exzes Z offers even more features than their rage topping X model that preceded it. Even with the telemetry features, due to upgrades within the internal structure, the weight of the transmitter has been significantly reduced.

SIGNAL PROTOCOL

Contrary to belief, 2.4GHz systems are not interference free but deal with the issue in a different way. Whereas the older 27MHz and 40MHz systems used to suffer interference where you would lose full control of the vehicle, with a high quality 2.4GHz set-up it is unlikely that you would even notice a rogue signal as it would ignore it. Some of our readers may have experienced the moment when their transmitter input is delayed or the model fails to respond to a signal and this is the radio system dealing with interference - 2.4GHz systems tend to 'ignore' signals they don't understand and simply hold onto the last clean signal they received. It's no surprise that the higher quality radios with their superior latency speeds make this less obvious than a lower priced unit but at the end of the day, it's still a form of interference.

All systems suffer from latency which is the measure of time delay experienced and all manufacturers are trying to make this as low as possible for the best feel for the driver. Sanwa claim that the Exzes Z has the lowest system latency of any 2.4GHz transmitter on the market at an incredible 1 millisecond compared to the competition who state theirs is around 3 to 6 milliseconds.

The Exzes Z comes bundled as a combo with Sanwa's four-channel RX-471 Super Response receiver that uses the company's latest, fourth generation Frequency Hopping protocol (FH4) and is one of their smallest 2.4GHz receivers to date. For those upgrading from earlier FH2 or FH3 Sanwa systems, the transmitter can be set to transmit on their earlier protocols and in addition, the transmitter is also telemetry capable and so can use telematic receivers such as the RX-461.



Angle and stick tension is easily adjusted



An additional rotary dial appears on the top of the unit



The radio is comfortable to hold aided by the rubber pads on the side

"You pay a premium price for Sanwa's latest stick radio but then it has the ability to do it all..."



Fans of the old radio's ergonomics will be pleased with the casing on the Exzes Z



There is no need to turn on the radio to make adjustments with the display button



Old and new. The protective covering on the screen of the Z is still in place with the sticks in the position set by the factory



A neater and more up to date USB connector is located in the battery compartment replacing the set-up as found on the X (right)



Here you can see how Sanwa have added an extra control on top of the new Exzes Z model

rated from 4V through to 9.6V with this radio. If you do decide to use a two-cell LiPo or LiFe battery, don't use the included mains charger or the socket in the side of the casing. For the record, we opted to use the included NiMH battery although we welcomed the flexibility and may decide to install a higher capacity two-cell (2S) 6V LiFe pack in the future.

M12 INSIDE

As we mentioned before, the Exzes Z uses the same chipset as found

in the M12 wheel so has all the same functions including the ability to handle telemetry data. With a suitable receiver like the included Sanwa RX-472 as well as a their Super Vortex Zero speed control, telemetry data like motor rpm and temperature can be displayed on the transmitter, or viewed on a PC by selecting the PC-Link function and transmitting the data via the optional data wire. We don't think that the telemetry option will appeal to many racers out there as its not allowed at many events, but then again it's a great feature to have

available if you are testing.

The telemetry is just one aspect of the huge range of features contained in the software menus that at first appear simple. Delve a little deeper and then you are made aware of the complexity of the transmitter and what it has to offer. Behind each function or sub-menu you find more settings and this can be taxing to grasp. But fear not as it is possible to customise the options and create a personalised set of features that you need to use and access.

The large default screen called

Status contains lots of information such as the selected transmission protocol, elapsed on-time and battery voltage for the selected model. All four channel trim positions are shown on the main screen along with the steering, throttle and brake dual rate settings. But it is the four sub-menus along the bottom of the display (System, Setup, Racing and Custom) that open up a whole other world of functions.

Rotating the scroll wheel changes the main display from Status screen, through to the Assign screen then



TEST SESSION

WHAT: SANWA EXZES Z



Just three controls and the jog wheel makes for swift navigation



A RX-471 receiver is included with the Exzes Z combo



The LCD on the stick radio now mirrors the steerwheel transmitter



A 1500mAh NiMH battery is included

LIGHT INFO

To the right of the LCD are three LEDs marked LED 1, R-MODE and LED 2 and these are to make the user aware of active settings. Although there are over 20 combinations of the three as well as a range of colours, the most important for the driver will be the ones that work in combination with the alarms. As well as the visual indication, beeps will warn of inactivity as well as over and low voltage warnings as well as a low voltage limit for the transmitter battery.



Invest in a decent bag to protect your investment like this Sanwa one

on to the telemetry data screen that shows real time info. Navigating through the sub-menus is easy enough via the scroll wheel along with the select and back buttons on the transmitter. We have to say that all the control switches are very positive in feel, but the wheel action is very light.

Scrolling through the System and Setup menus yields access to all of the commonly used functions such as EPA (End-Point Adjustment), Dual Rates, Servo Reversing and Steering and Throttle Curves.

The Exzes Z is a very capable four-channel unit and with the programmable switches it seems

the capability is almost endless. We think that the switches would suit operation of a crawler's mechanical dig gearbox or set to operate a servo driven winch. The Auxiliary channels can also be assigned for advanced mixing functions on specialist applications such as large-scale cars where it would be possible to mix different servos to apply front and rear disc brakes and control the braking bias. To assist in the popular type of mixing, each model memory can be assigned as being one of ten different model types with the idea being that the model type chosen will pre-assign the most popular mixing for that type of

I BOUGHT ONE

Steve Brown of TORCH fame recently invested in the latest Sanwa transmitter so we asked him to give us an overview as to why he decided to go with the Exzes Z model...

"For many years I have never compromised with the technology between my hands. The new Sanwa is another big step forwards in what they have to offer and it has evolved for the competitive racer. I've always liked Sanwa equipment and the opportunity to upgrade was mainly driven by some key functionality. The Exzes X is a great stick radio but the Exzes Z is even better... The amazing response with the new equipment is so noticeable to the point where I believe you can't get any better! I've used the RX-471 receivers with the Exzes X transmitter and noticed no change, and I kept these when I changed to the Exzes Z and the smooth response and feeling is the best I ever used making the car feel more predictable and rewarding to drive.

Getting a general understanding of the various functions took a little getting used to. To be honest, it's a totally different way of operating the settings from Exzes X to Z. At first this was a little challenging, but after some meetings and playing around, the actual speed and ability to change settings is so much easier and simpler. I didn't get too caught up on the manual, but played a little first and with some guidance from the manual I was away.

The general transmitter feel is the same along with the adjustability that you had with the older model with a nice benefit in that it is lighter too. One other area I have found to be really useful is the "race mode" function. This is something that enables a one-touch setting change - a really cool improvement.

Lastly for many racers the space in cars for radio equipment is becoming more of a premium, but the included receiver is super small, robust and another step forward from the older generation.

I've used other manufacturer's equipment before and I've always gone back to Sanwa. I guarantee you won't be disappointed with this combination of the transmitter and receiver."



INFORMATION OVERLOAD

Alongside the existing steerwheels of the M12 and lower priced MT-4, Sanwa's Exzes Z is capable of displaying real time telemetry data from models when used with a suitable receiver and the required sensors. In theory, knowing your model's speed is interesting whilst the ability to know your engine temperature can theoretically help you to maximise your engine settings and prevent overheating. In reality though, whilst having telemetry might help sell the concept, it's actually very difficult to use it and thus it's often seen as a gimmick. This is backed up by the fact that telemetry is banned at national and international races.

What Sanwa have done though with the system is to make the data downloadable through the PL-Link allowing all of the information it receives to be recorded and then can be reviewed after the event. Not only will it log the received data from any telematic sensors but it will also log the inputs that the driver makes via the two primary channels of the throttle and steering. The idea of being able to see the exact steering and throttle inputs that a driver makes around a lap could be helpful when testing to help analyse where time is being lost or where faster drivers are getting on the throttle harder or earlier out of corners. These input traces, along with the other received telematic data, can be reviewed after the run on the large LCD or a PC.

model. Unfortunately, these model types are not called out by name such as crawler, MOA or large-scale, but simply given a roman numeral denomination from one to ten. This means that you have to refer to the instructions to find out what mix functions each model type enables and as such, it's possible to determine which type best suits your needs.

Apart from the trim settings that are naturally dedicated to the throttle/brake and steering, the other control switches and dials can be programmed to perform different functions via the Assign sub-menu of the system menu. ■

SPECIFICATION

101A31272A SANWA EXZES Z RADIO COMBO
£574.99

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