

Life Begins at 40



To help mark their 40th anniversary, Sanwa recently gave their flagship M12 steering wheel transmitter a limited edition makeover. Racer joins in with the birthday celebrations and takes the wrapping off the made-over combo to reflect on what's changed and what's stayed from the original M12

They say that life begins at 40 and if that's true, then the future looks to be very special for the Sanwa Denshi corporation. Forty years in RC is pretty much all of its entire existence so there's very little that Sanwa haven't seen or been involved in. They're one of the true grandfathers of RC – part of the establishment and one of its most respected peers. They've evolved as RC has evolved – from early 27MHz AM transmitters to modern 2.4GHz systems. They've gained their respect through providing high quality affordable system solutions that meet and exceed customer expectations. To commemorate their landmark anniversary, they've treated some of their transmitters to a birthday makeover and recently, their distributor sent one of the limited edition M12 steering wheel combos through to the Racer offices for us to cast our experienced eyes over. The M12 itself isn't new, but the birthday makeover has further increased its appeal and enhanced its desirability and as with any

good birthday party, there's always a couple of nice surprises in the party bag for you to go home with afterwards. No jelly or ice cream, but still enough to make any birthday guest smile and be grateful.

CHAMPIONSHIP CREDENTIALS

Two-thousand-and-fourteen turned out to be a pretty special year for Sanwa and especially the M12 transmitter. World Championship wins in four different disciplines, spanning all three main scales (1:12, 1:10 and 1:8) from off-road to on-road, the M12 guided four different champions to the greatest prizes in their respective disciplines and locked out podiums and front rows along the way. Statistically, in one World Championship final, nine out of the ten finalists were all wielding a Sanwa transmitter of their choice – be it the all-conquering M12 steering wheel or the Exzes-Z stick radio and across all disciplines in total, by far the most popular radio systems amongst world championship A finalists bore the

Sanwa nameplate.

Before the cynics amongst you cry out 'sponsorship', more often than not drivers of world championship calibre can have their choice of sponsors and suitors and many choose not compromise upon the tactility and intimacy that only a transmitter can uniquely offer the racer and therefore opt for their radio system of preference. That the majority of those racers selected Sanwa in 2014 speaks volumes of the company's product, its quality and the affinity it has with its customers.

BIRTHDAY SUIT

The M12 we have here is little different to the non-anniversary one we have previously reviewed, save for the gloss 'piano' black finish and the limited edition 40th anniversary edition graphics. Each transmitter also features a unique serial number suggesting a limited production run of only 500 pieces – ours, as can be seen from the photos, sports the serial ID 4861500. Even the LCD boot-up screen has been treated to the anniversary

makeover with a brief splash graphic to commemorate the occasion. The addition of an aluminium steering wheel along with a machine and anodised aluminium steering wheel drop down plate are nice touches over the original's plastic versions, and the subtle red pin striping graphics add elegance in an understated yet confident manner, in much the same way that the fine detailing on a GTI or R-Spec VW Golf separate these models from their more common siblings. Functionally though, it's the same underneath as the previous, non-anniversary model – not that that's a bad thing in any way!

If the special birthday paint finish and the unique serial number isn't quite enough to swing it for you, Sanwa has also upped the ante and included three different receivers with the Anniversary Edition combo. Although the price of the Anniversary Edition combo has also increased slightly RRP – £549 versus the original M12 combo price of £499 at the time of our initial review – adding a further two receivers into

the deal is something that most RC enthusiasts and racers will attest to as being beneficial. They might not quite be 'free' given the price uplift, but the price difference alone isn't as much as the combined added value of the goodies that the anniversary model comes bundled with. Unlike some RC combo special offers we've seen, these receivers are all high-end race variants that offer the very best signal protocol functionality, along with ultra low system latency (more of that later) along with one or two other unique functions.

It seems odd to describe the RX-471 Super Response four-channel receiver as being the 'standard' one of the trio as it's one of Sanwa's

to two different Sanwa transmitters at the same time. It does this by essentially having two available memory slots to store the unique TX/RX pairing code so you can store two separate codes into the one receiver. Curiously though, Sanwa advise that if you only intend to use it with one transmitter, you should go through the pairing process twice with the same transmitter, so that both memory slots are still occupied.

Why on earth would you want to bind the same receiver to two transmitters I hear you ask? Well, firstly it could enable a single car to be bound to both a steering wheel transmitter like the M12 and a stick transmitter like the Exzes-Z, perhaps

higher specification RX-472 version. Retailing at just under £90 alone, this again is a very high specification receiver, aimed most specifically at racers whilst still retaining the option of four-channel functionality. This little gem not only features Sanwa's FH4 signal protocol it also features 'SSL' or Sanwa Synchronised Link which, if used with Sanwa's Super Vortex Zero BL speed control (or any other SSL compatible speed control) effectively enables you to program your speed control via the transmitter using the Code/Aux channel functionality. Not only that, but it also enables RPM, battery state and motor and speed control temperature data to be

range topper and you'd expect it to be pretty well loaded and partly it's also because the broad usage profile of surface RC users is so vast these days that you wouldn't be able to please everyone without adding features that may only have limited appeal to certain sectors. Fortunately, functionality comes these days courtesy of some pretty slick software programming and so, as with every electronic device from full-size family cars to washing machines, user functionality can be programmed to fulfil a whole myriad of functions that would have once required bespoke hardware to achieve. The flip side of this code-driven flexibility is always that the ease of use and feature



The 40th Anniversary Edition uses the same proven, world championship-winning M12 chassis



The piano finish is highlighted against the black and red strip around the large LCD screen



The buttons are all conveniently placed for easy access

most accomplished surface receivers. Natively supporting the company's fastest FH4 frequency hopping signal protocol, the RX-471 sports a full four-channel operation and has long since been a firm favourite with many racer thanks to its tiny footprint and incredible lightweight.

When the M12 was originally reviewed, this was the sole receiver it came with but since then, we've seen combos being offered with telemetry capable RX-461 receivers or even second, cheaper specification receivers. Never before have we seen such a combination of three ultra-high spec receivers being bundled together like this.

IDENTICAL TWINS

The second receiver is visually identical to the RX-471 and at first glance, it's easy to get the pair mixed up. That's because it too is called an RX-471, but if you look very closely, there's an additional silver decal by the output ports that simple states 'Dual ID'.

This split personality race receiver has a unique advantage of being able to be bound simultaneously

for joint testing and driver feedback using team drivers that have different transmitter preferences. The Editor himself is one that appreciates the finer aspects of twin stick control whilst your erstwhile scribe here is a self-confessed wheel addict. The benefit of the Dual ID receiver would enable us both to evaluate a single test vehicle together without fear of our experiences being compromised by one of us having to use an unfamiliar transmitter. Team mates on a shared test day for a new prototype car or in testing some new set-up changes maybe? Or another example would be potentially for the ultimate ease in endurance racing team driver changeovers where once again, a different driver could take up the reigns of a team car without having to faff around with re-binding or using an unfamiliar transmitter. It might sound initially superfluous, but we feel that there are real world situations where its not possible to share a transmitter, yet where car-sharing can provide a benefit so having a technology to enable this is an added bonus. The third receiver is an even

displayed on the telemetry capable transmitter, which of course the M12 is. Telemetry is no longer a new feature but the addition of speed control programming via the transmitter does maybe hint at a more integrated future if compatible speed controls are used and if of course, Sanwa perhaps enable this feature to be deployable via third party speed controls. It might be in its infancy right now, but we think it's pretty cool tech, which once again, has a real world usage benefit for racers needing to fine-tune their equipment in test sessions so that they have the ultimate feel and response control come race day.

IF IT AIN'T BROKE, DON'T FIX IT

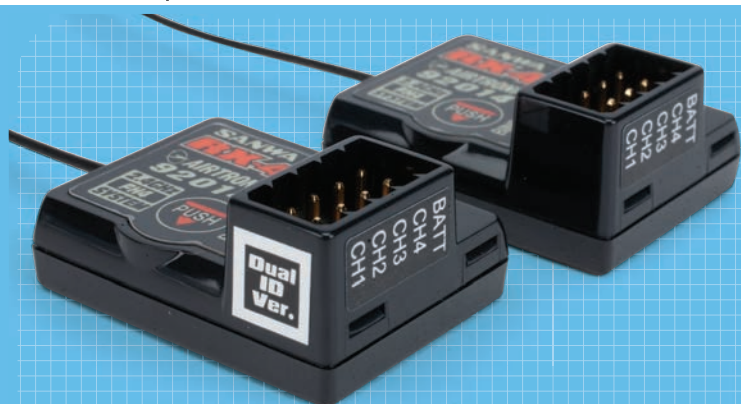
Functionally, with the exception of the new receivers, the M12 Anniversary Edition is the same as the M12 we reviewed a while back. As transmitters go, there's not a lot that it can't or won't do. In truth, we said it before and we'll say it once more, the M12 packs more features than any one single user is likely to ever want. Partly that's because it is a

access is determined or constrained by the user interface with its menu system and programming logic. The M12 is no more difficult to program than any other high specification, multi-functional transmitter, but because there are so many menus and sub menus, it's impossible to get to know the transmitter without having to constantly refer to the instruction booklet. Fortunately, the booklet is well laid out, but with consumer electronics constantly raising the level of expectation, we can't help be influenced by other electronic consumer goods such as Apple's iOS or Android devices and, when compared to those types of interface, the rigid menu driven user interface of the M12 is not as user-friendly or intuitive. We might be being overly harsh in what many will cite as an unfair criticism and we'd agree – to an extent. But just think how cool it would be if, in the near future, we're treated to an iOS-esque user interface with cutting edge intuitiveness – with the feature set of the M12 simply a swipe or double tap away from a customisable home screen.



TEST SESSION

WHAT: SANWA M12 40TH ANNIVERSARY EDITION



One of the standout features of the limited edition set is the Dual ID receiver. Three receivers are included in the box

< To be fair to the M12, it does have the ability to customise the home screen and we applauded this in our original review. It's not that the Anniversary Edition is any worse or poorer than other RC transmitters, it's just we'd like to see the bar be raised as we've seen happen across other consumer electronic devices.

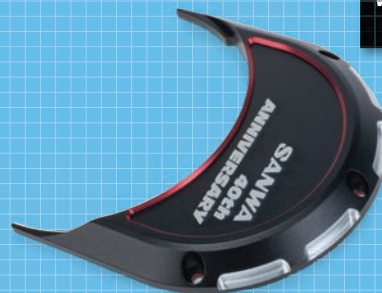
ONE SIZE FITS ALL

The M12 has always been one of the most ergonomically adjustable steerwheel transmitters available and the anniversary edition is no different. We've already mentioned the smart anodised aluminium steerwheel drop down plate, which

enables the wheel to be lowered so that its axis is in line effectively with the throttle trigger's pivot point. As before, there's also a couple of angled plates that can be fitted to alter the angle of the wheel to reduce wrist extension or compression and the trigger itself can be similarly skewed off-axis to suit individual tastes. Most steerwheel transmitters are effectively designed for the right-handed user – i.e. the driver holds the transmitter in their left hand and steers with their right. However, there are those who may favour gripping the transmitter with their right hand – like former World Champion and Sanwa driver Ryan Cavalieri – and would want the

steering wheel to be on the other side. Once more, the M12 Anniversary Edition, just like its predecessor, can accommodate this as the top section of the transmitter including the display and the steering wheel is modular and can be fitted the 'other' way round so that the wheel would protrude towards the left.

None of these adjustments are things you'd want to be doing trackside as they involve a fair bit of care and attention, but the instructions are clear and if followed carefully, there's no reason why anyone can't configure their M12 Anniversary transmitter to suit their own ergonomic preferences. Again, if we wanted to be very critical, we'd like to see some adjustability on the trigger 'finger-fit' as those with small hands may need to pad the trigger a bit in order to get a comfortable snug fit for the optimum feel for both throttle and brake modulation. Again, it's a criticism that can be levied almost universally across all current steerwheel transmitters so it's not as if the M12 is not offering something that others do – but as an experienced steerwheel user who has small hands, it's something that is a personal bug-bear for him. ■



The included drop down cover plate is machined from aluminium and is beautifully finished

LOOKS LIKE WE HAVE A WINNER!

Here's a brief resume of Sanwa's championship-winning season:

2014 IFMAR ITSC World Championships:
Podium lockout for M12 radio as Naoto Matsukura won from Bruno Coelho and Ronald Völker
Nine out of ten A finalists used Sanwa

2014 IFMAR 1:10 Nitro On-Road World Championships
Alex Hagberg won using the M12
Seven out of ten A finalists used Sanwa

2014 IFMAR 1:8 Rallycross World Championships:
First and second in the A final with Ty Tessmann and Ryan Cavalieri both using the M12

IFMAR 1:12 World Championships
M12 users Marc Rheinard and Naoto Matsukura took first and second places

SELECTED FEATURES

- Adjustable left- or right-handed operation
- Steering wheel drop down and offset plates included
- Programmable low voltage alerts and limit alarms
- Programmable push-button switches, trim switches, lever and dial
- Customisable user display menu
- User selectable pre-set racing modes (on-the-fly setting adjustment)
- Servo reversing
- Steering, throttle and brake dual rates
- End point adjustment
- Exponential, ARC and curve adjustments
- Servo speed adjustment
- Anti-lock braking
- Throttle offset and hold
- Lap timer and interval timers
- Programmable aux channel mixing
- Ten selectable model type templates with pre-set mixing (4WS/crawler)

SPECIFICATION

Model: Sanwa M12 40th Anniversary Limited Edition
Included Receivers: RX-471/RX-471 Dual ID/RX-472 SSL
Frequency: 2.4GHz FH3/FH4
selectable via transmitter
Number of Channels: Four
Telemetry Capable: Yes (with selected receivers)
Failsafe Support: Yes (all four channels)
Model Memory: 50
Input Voltage: 4.8-7.4V
Weight: 590g
RRP: £549.99

VERDICT

- ➕ Limited edition appeal
Included extra receivers
Build quality and ergonomic feel
- ➖ Complex manual and sub menu system
Non-intuitive graphical user interface

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SUMMARY

It's hard to imagine a much more accomplished surface transmitter than the Sanwa M12 and the proof is in the pudding with it being so universally well received by world class racers in all disciplines. The anniversary makeover make not be much more than skin deep, but it's definitely worthwhile and the additional receivers make it a viable system solution for multiple class users out of the box. We liked the M12 before and we like this Anniversary Edition even more. Not adding a bespoke carrying case is a missed opportunity perhaps but it wouldn't be enough to stop us wanting the limited edition version of the M12. Over five hundred pounds is a lot to lay down on anything these days and there's a lot of cheaper radio systems on the market, but given that the guidance of all RC cars comes down to the quality of the radio signal connection between car and driver, the initial purchase price of the Sanwa is easily justifiable for the discerning enthusiast. There's an adage that states that by buying cheap, you'll end up paying more in the long run anyway. If that's something you can attest to then the M12 would be a worthy investment – in much the same way as a range of Snap-On tools will last a mechanic's lifetime.