

Electronic Excellence

Radio systems have become electronic works of art design to aid the RC racer in every aspect, RCMC look at Futaba's new steer wheel system

Having been a 'user' of the Futaba Megatech 2PD for some time, I read with interest the announcement in the Ripmax catalogue that they were to launch an all singing, all dancing, new version of the Megatech PCM. It was to have new features such as ABS and Traction Control that could be used legally under the BRCA rules (they don't use the third channel or sensors on the car at all), and would bring with them all of the features of their existing stick radio, the field Force 3. I wanted to know more! I had recently gone back to a steer-wheel radio after an unsuccessful attempt at converting to sticks (using a Field Force 3), and I was missing the advanced features on my stick set. I had considered purchasing three radios, the Futaba Megatech PCM 3PD, the KO EX-1 Precious, and the JR R-756 (essentially the same as the KO EX-10). Then I saw the Futaba 3PJ. After trying the others for ergonomics, features, I had narrowed my choice to two radios, the KO RRP at £300 and the Futaba 3PJ RRP at £400. In the end the deciding factor was that I already had a spare Futaba PCM receiver that I could use in my second car. So the Futaba was ordered.

Two months later a phone call from my model shop announced that the radio was ready for collection, and that it was the first one in the country! Phew! - the prestige...

I collected the radio straight from work and couldn't wait to get home. The box was opened and there she

was. Initial impressions were that it looked smaller than in the Ripmax catalogue, and I was pleasantly surprised that it was also a lot lighter than I had anticipated. Whilst on the subject of ergonomics, this is the only steer-wheel set on the market (except the American Airtronics/Sanwa set which is not available in the UK) that can have the handle reversed for left handers. The batteries had already been fully charged (for testing by Ripmax) so it was a simple task of installing crystals in my car and dialling in the settings on my ESC. This was an absolute breeze, even for me. When I was sure the settings were correct I moved on to the main settings. The set-up menu is accessed by pressing two buttons at the same time (a feature that is widely utilised on this radio as I was soon to find out). Then you can cycle through the main features that you will only need to set occasionally, such as display contrast, button assignments and servo reverse, amongst others. For anyone who has used a FF3 the screens will look very familiar with just a couple of new screens to throw you off. Once the main settings had been selected, I had opted for ABS on and off, on the left hand dial, traction control delay on the right hand dial, and lap time on the push button under the "wheel". It was time to play with some of the new features. A set of flash-point nicads was loaded into my touring car and a short walk was made round to the car park behind my house.

ABS and traction control was turned off and the steering wheel

was limited to 80%. The limits on this can actually be set from 0-120%, so for some servos where you wish to use a shorter horn to give more torque, you can actually gain a small amount of movement, up from 60 to 72 degrees throw. A quick test revealed everything to be fine, so it was time to test some of the new features. I should say at this point that for the purposes of this test I had put a set of Tamiya slick tyres on the touring car to give me minimal grip on the dusty surface, this would give me the best possible chance to test the ABS and traction control. So after a few "donuts" and power slides I switched on the traction control. This was set to apply a delay on the last 60% of throttle increase, which meant that the throttle was smoothly and progressively applied should I decide to go into throttle jammer mode! This I duly did...jamming the throttle open with a small amount of steering applied resulted in a huge donut...humph...not impressed. Okay let's increase the delay to slower movement still over the last 60% of travel, same test. Wow! Mega smooth acceleration. A few quick circuits of the car park proved to me all I needed to know. My lap times around the perimeter were around four seconds a lap less, and the incidence of spinning was now only down to being too heavy with the brakes, which leads me to the next option, ABS!

After having been a bit wimpy with the application of the traction control, I decided to set the ABS to its maximum effect, i.e. maximum brake return and fastest cycle, any ESC worth its salt can handle this (but forget using an ESC with reverse). A few more laps round the car park and again the difference was amazing. There was no discernible difference to my best lap



times. Now I could brake and steer at the same time without inducing under-steer (due to locked brakes), or over-steer (polite terminology for totally losing it into a corner due to braking too late and trying to still make the corner). Well I was well impressed I can tell you, anyway by this time my nicads were dumping and any further tests would have to wait, so it was back indoors to play with my RZ-B equipped MP5 to really put the new features to the test!

After the basics were done and the model names stored in the memory (another new feature of this radio), the ABS and traction control were set up the same as for my touring car. A "slick" set of medial pro turbo rats were bolted on, and it was out to the garden to upset the neighbours. A quick bit of hot-dogging ensued just to remind me of the difference between the Gas and Electric cars and then I switched on the traction control...er! what's gone wrong here? Someone's nicked my RZ and swapped it for a 13 Sextuple! I had never experienced how smoothly the power could be applied on my RZ until now. It was incredible, the car still accelerated as quickly as ever, but instead of being accompanied by a major handful of opposite lock to correct a back end that wanted to be a front end, I could actually let go of the steering wheel (well almost). The difference with worn out tyres on damp grass was amazing, so it was time to try the ABS.

Now anyone who drives with a steer-wheel set will tell you that braking is one of the hardest things to get right! Pushing a trigger with the top of your finger does not allow you to get very accurate pressure on the brakes, so invariably the brakes are set for a compromise to avoid locking up all the time. Therefore, ABS must be seen as a major plus for those of us who drive with this type of radio. However, with an IC powered car, to make the most of this feature (which is in fact a cadence braking mechanism rather than a true ABS system), you need to have a fast servo, and I seriously mean, fast!

Now my brake/throttle is currently using a Futaba 0303, with a 9402 for the steering. The 9303 does not really do the ABS justice, so a 9402 may have to be fitted for the throttle/brake as well. Living with what I have for the moment, the ABS

was switched on and the throttle opened to get up a high speed down my garden. Five yards from the end of my garden the brakes were slammed on, (I had already tested this as a safe point without ABS, just an occasional flip put me off), and...the car stopped, flat, and level with four wheels on the ground. A turn was made and the power applied and the car smoothly

features? Well there is a throttle acceleration feature for IC vehicles. This allows the throttle to react sharply near the neutral position up to the first 20% of its throw. The purpose of this is to hook up the clutch much more quickly and provide the sort of response you would expect from an electric vehicle. What it actually does is rev the engine up and down if you so



accelerated and changed direction. Well suddenly it was time to relax. I spent the next 20 minutes putting several tanks full of fuel through my MP5 and testing the ABS and traction control systems, and try as I could, unless I drove like a total bozo (something I have been known to do from time to time), it was proving very hard to "lose it" at all. I was very impressed.

So what of the other new

much as breathe on the trigger, let alone put your finger on it! Nice idea Futaba, but a few bugs I think!

Another new feature is start-line throttle limiter. This enables you to set a maximum throttle setting for use on the start-line, to avoid those first corner pile ups! I cannot really try this until my first meeting, but I can see how it would tame an over exuberant start. It is automatically cancelled when you release the

throttle to give you full control again. All of the mixing features from the FF3 have been retained, so it is still possible to mix in some anti-torque steer on the throttle. The set also has no less than five assign able trims, on assign able toggle switch and one assign able button all within easy reach whilst in use, plus an assign able direct function button so you can decide what feature you would like quick access to. The steering can have the resistance set to taste, and there is a mechanical ATL on the trigger (brake side only). The timer has had some additional features added, such as countdown timer, and ideal lap pacing (beeps when your pre-programmed lap time has elapsed). Only time will tell as to how useful these really can be.

Conclusion

Well the 3PJ has the nicest feel of any steer-wheel set I have tried to date. The massive flexibility in the button set-ups gives the driver the chance to totally customise the radio to his particular taste. The ABS and traction control definitely works well, although I cannot help but think that they would not be as useful to experienced racers as they are for someone like me! The real disappointment is the decision by Ripmax to package it with only one choice of servo (unlike the US where they have a choice of three different servos...including the 9402). The standard servo is useless for anything other than a brake/throttle servo on a 10th scale IC vehicle...not a great deal of choice.

To my mind they should sell the set as a combo only and cut the price to £350. This would bring it more in line with other similar sets whilst still commanding a small premium for the new features, and give the buyer free choice with regard to servos. The other choice being replacing the standard servo with a 9402 and leaving the price the same (doubtful I'm afraid, but we can live in hope). Overall then, the best choice if you are looking for a steer-wheel set, and the only choice if you need to use mixing or are left handed.

**Available from all good model shops.
Imported by Ripmax Models.**

