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PAGES OF QUALITY  
RRC CONTENT

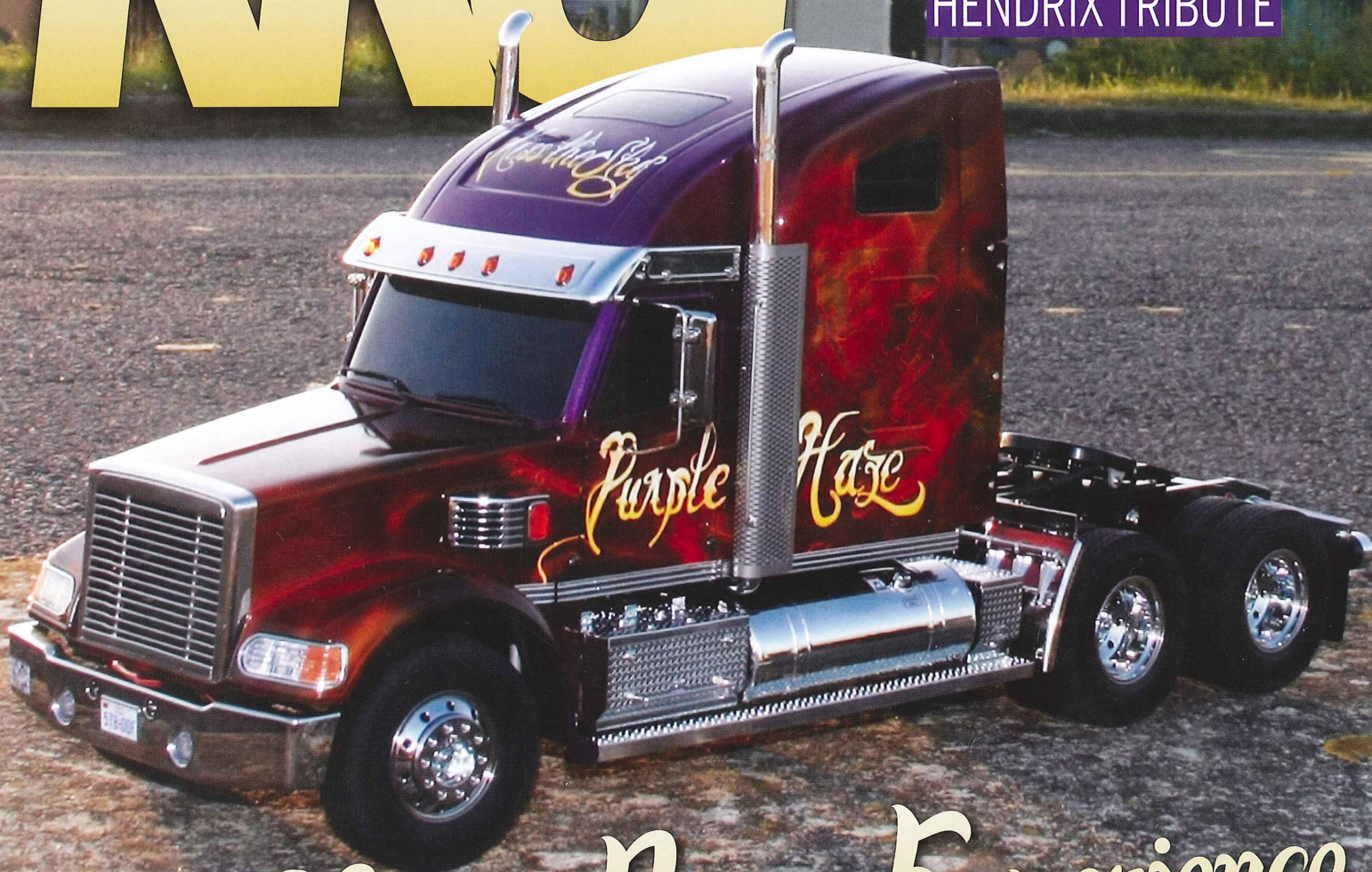
10 PAGE UK SCALE NATIONALS TRAILSIDE REPORT

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AUGUST 2015

# RRC

**TAMIYA'S  
KNIGHT HAULER  
BECOMES A FITTING  
HENDRIX TRIBUTE**



## *A Whole New Experience*

**WHEELIE GOOD FUN!**



TAMIYA RE-RELEASE ANOTHER COOL CLASSIC

**ALWAYS LANDS ON ITS FEET!**



SCHUMACHER'S NEW 2WD SHARPENS ITS CLAWS



**R/C RALLY CHAMPIONSHIP STAGE 4 FULL REPORT**



# "PLEASE PUT DOWN YOUR OLD TX... YOU HAVE TWENTY SECONDS TO COMPLY"

Words & Images: Peter Gray

Manufacturer: Hitec RCD

UK Distributor: [www.jperkins.com](http://www.jperkins.com)

UK RRP: £239.99 (including Axion 4 Receiver)

Proton 4 with GPS £54.99

Axion 2 Fast Response receiver £39.99

Now a couple of issues ago we had a pro spec 4-channel Tx test bench shootout. And we, OK, I have a confession to make...the Hitec Lynx that's the subject of this test bench was supposed to be included. We've since made our apologies to J.Perkins, the UK distributor of all things Hitec, and they know the reason for it getting a late slip for tardiness.

Suffice to say it was caused by an incident beyond our control (and one I never want repeating!) involving a laptop, the boot of my car and me then having to re-write the whole article (and half of the magazine again) from memory. This traumatic experience aside, there is actually a bright side to all this. I got to spend a lot longer actually using and living with the Lynx 4S. And as a consequence have discovered a few features that I didn't cover in the first draft! So it's not all bad...

## ED-209 AESTHETICS

OK, let's get this one out of the way first. The header of this article refers to a quote from the original Robocop film from many moons ago (1987 to be exact!). Now, I was 17 then, and apart from being a year too young to 'officially' get into this R rated film (not that it stopped me!) the thing that stuck in my head most was the ED-209 Enforcement Droid. And this radio immediately reminded me of it!

It's not ugly by any stretch of the imagination, but then again it's not sleek and streamlined either. The best way to describe its looks is that it's a radio for someone who likes functional design and clever ergonomics. It's more mature looking than many out there on the market today, without actually looking dated. It also feels like you are holding something of quality and value, and that will last, cheap it definitely is not.

There's also so very innovative features, even down to the way you can lean it on the front of its case (or its face in ED-209 terms), the rubberised bar fitted to the front acting as a protective stop and avoiding that classic R/C trick...your Tx falling over on a pit table, or while out on a trail run, or hitting the concrete in a car park when bashing. In this respect it trumps all my other radios in one go. Then there's the ergonomics.



Note the 3-position power switch meaning you can turn the Tx and RF on or just the Tx Menu system

The layout has very logical locations for the included selection button, rotary knob, a single 3-position switch, one large (for scrolling and selecting menu options) and two smaller scroll wheels, the three digital rocker trims and the two clickable switches built into the grip.

This may sound like a lot of input options, but nearly all can be programmed for their use, and that really helps an end user like me who is constantly looking for specific

functionality for things like activating winches, turning LED light controllers or sound units on and to help control my latest obsession; adding FPV transmitters and cameras into the mix on some of my scale builds (micro servos used to adjust pan and tilt options, and separate channel to start and stop transmitting and recording).

Versatility is the name of the game here, and as far as that goes the Lynx 4S is covering all the bases. Function switches, buttons and trims aside, even the 'On' and Off switch isn't 'normal'. It offers not just two, but three positions... As well as the obvious 'Off' and 'Power On' there's also a 'Display On' option. Now this is really clever, as moving the power switch to the left position activates the display menu only, without the RF module becoming active.

## MUSIC SOUNDS BETTER 'WITH YOU...'

The last feature is perfect for adjusting parameters of the radio at a race meeting without the feat of being told off for having an active transmitter on in the pits, or as I did, listening to some tunes between runs at an event like a scale meet.

Yes, you've guessed it, as well as being a very cool 2.4 GHz Tx it will also play WAV music files in pretty crisp CD quality sound via its micro SD card slot, built-in speaker or the headphone socket! Hitec even offer you a free app for creating music playlists on their website and it's actually very cool to have this function active while out bashing. Music adds an extra dimension to things, and listening to the latest Prodigy album while ragging a monster truck really adds to the enjoyment!

Sometimes it's the little things like this that make all the difference between a product being 'ordinary' and 'functional', and it standing out from the crowd, yes for privacy of your listening choices you will need some headphones, but who hasn't got a set of in-ears knocking about from a recent



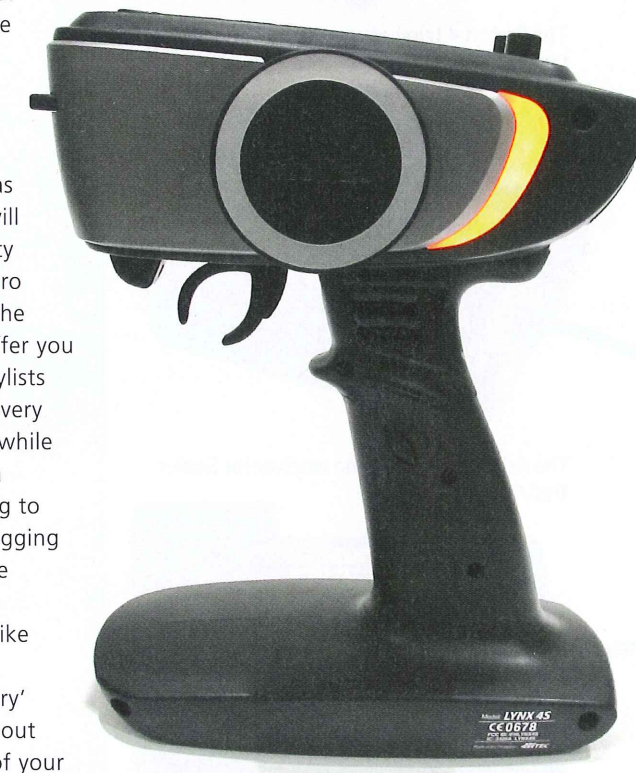
It's a design that's split everyone in the RRCI team that's seen it...but being a Tron, Daft Punk, Robocop fan...I love it!



See that lit up tick behind the steer wheel... now that's a bit of design flare I appreciate from Hitec



The grip is slim and ergonomic, the Tx well balanced top to bottom



It can be set-up for right or left-paw use, that cover simply slides up and the wheel moved to the other side





The drop down adaptor, did nothing for me, but some will love it



The Proton 4 telemetry receiver (watch out for a part 2 where all will be explained!)



The Axion 4, my favourite receiver for Scale/Trail/Crawl/Life...



The Axion 2 AFHSS receiver, the racers choice, fast responsive and light

phone upgrade, at times I think their breeding at my house!

It also has another party trick too... when you switch it on the two opaque looking ticks either side of the rear of its body light up in a luminous red colour. So when you combine that with the silver, red and black of the rest of its livery you end up with something that's even more futuristic looking than you first thought. Think the Battlestar Galactica, or Tron, or Daft Punk, it's epic!

### FULLY FEATURED TOO

It's not just about looks, buttons or the ability to play music, the Lynx 4S also needs to be a rock solid performer where controlling your chosen vehicle comes in. For a start you can have the steer wheel in the stock or dropdown positions. The latter means a few minutes with a cross head screwdriver and puts the wheel in a position that some find more comfortable (I, however, have never found it so, and

left it right where it was!).

Next we will look at the basic and then the more sophisticated functions the Lynx 4S possesses.

When you first fire up the backlit screen it shows the following information: The Model Name (fully programmable for up to 30 standard model memories or a staggering 60



The wall charger supplied with the radio for charging the included NiMH, a simple Euro adaptor later and it was working just fine!

with the addition of a micro SD card).

There's also a Timer indicator that will show a total elapsed time since unit was turned on. A Battery Indicator showing the voltage of the Tx's included NiMH battery (although you can use a variety of cells between 4.8 and 8.4 V in the Tx, including 2-cell LiPo/2-cell LiFe/4-cell NiMH and even 4-cell NiCad). The screen also shows, if applicable, your AMB Number (or 'Personal Transponder Number') identifying your model when racing against others and allows you to read your car's timing data real time.

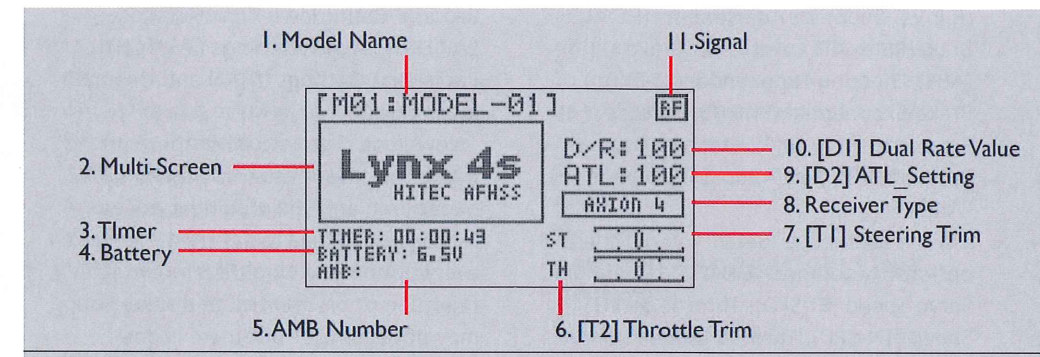
There's also a Throttle Trim indicator that shows current throttle trim value and is linked with the T2 switch. The Steering Trim linked with the T1 switch, a Receiver Type indicator (showing receiver specific detail as well as the status of the very cool BOOST function (more on that later!), ATL Setting (Adjustable Travel Limiter) showing as a % the braking response of your vehicle. A higher ATL value corresponds to a firmer braking response (a 100% value is the equivalent of slamming on your brakes), while a lower setting results in a more gradual stop.

Next we can see the Dual Rate Value: Shows the current dual rate value. Default position of 100% is linked with the D1 dial. Users have the option of increasing or decreasing the servo operation angle with the dual rate adjusting dial. The Signal Indicator shows just that, the radio's signal or frequency and is a feature I've not seen on any of my transmitters before.

It works too as you can see the strength drop further away from a vehicle you go... This isn't an issue on race tracks where the two are never that far apart, but out bashing or when running FPV on my scaler I could glance across from my FPV screen and see when I was pushing the limit of the radio, or when objects or the elevation of the terrain had impact on the way the signal penetrated. Compared to many radios I own the range was exceptional, even more so if you take into account the built-in antenna...

### PROGRAMMING AND SUB-MENUS

Now the Lynx 4S doesn't go for a high-res, full-colour screen and swanky on screen CGI to show its programming screens. And this kinda threw me



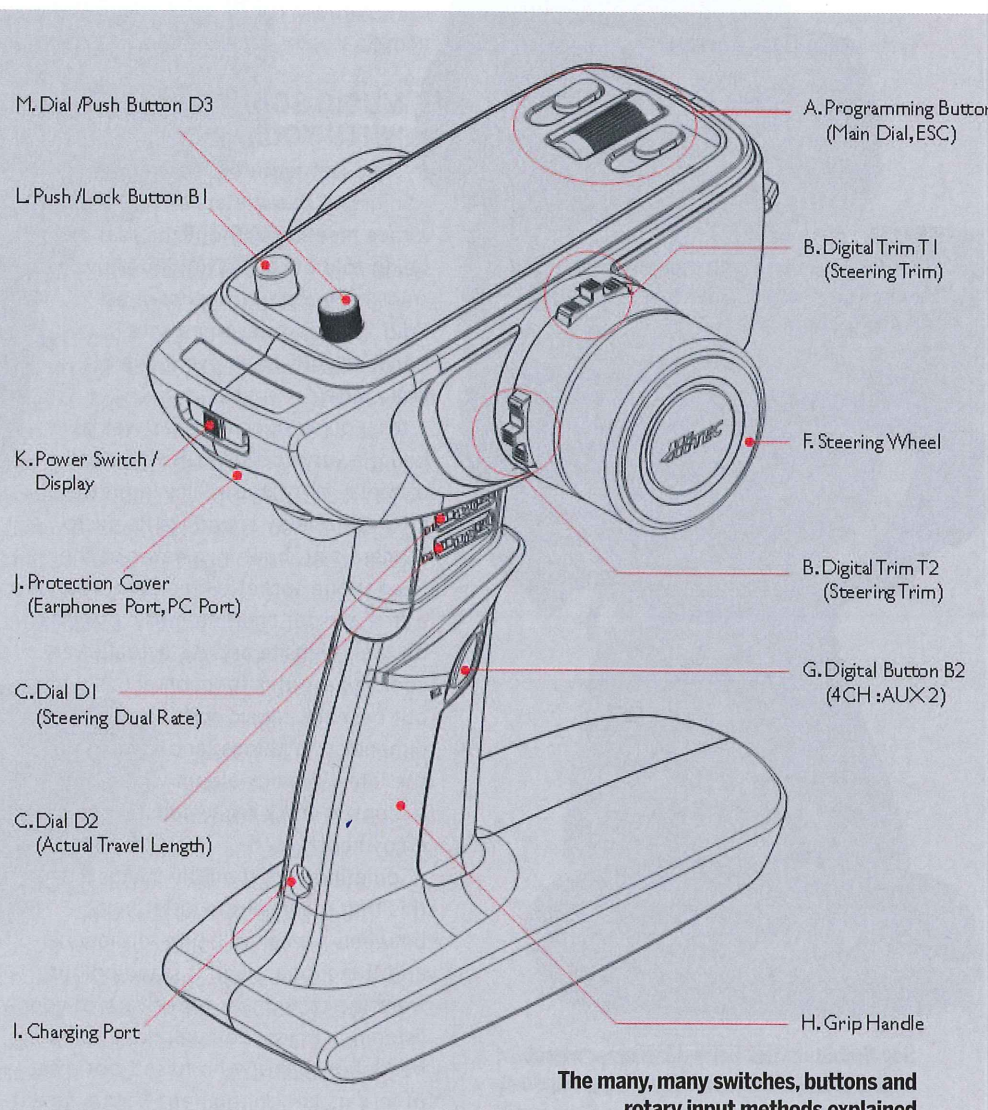
The initial screen, everything you need to know on one LCD

initially, when the rest of the industry seems to be going all Hollywood with their approach to GUI's (Graphical User Interfaces). But then it dawned on me a backlit LCD screen uses less energy and costs far less to produce than a full colour equivalent. Not to mention the extra processing power and graphics chip required to drive it.

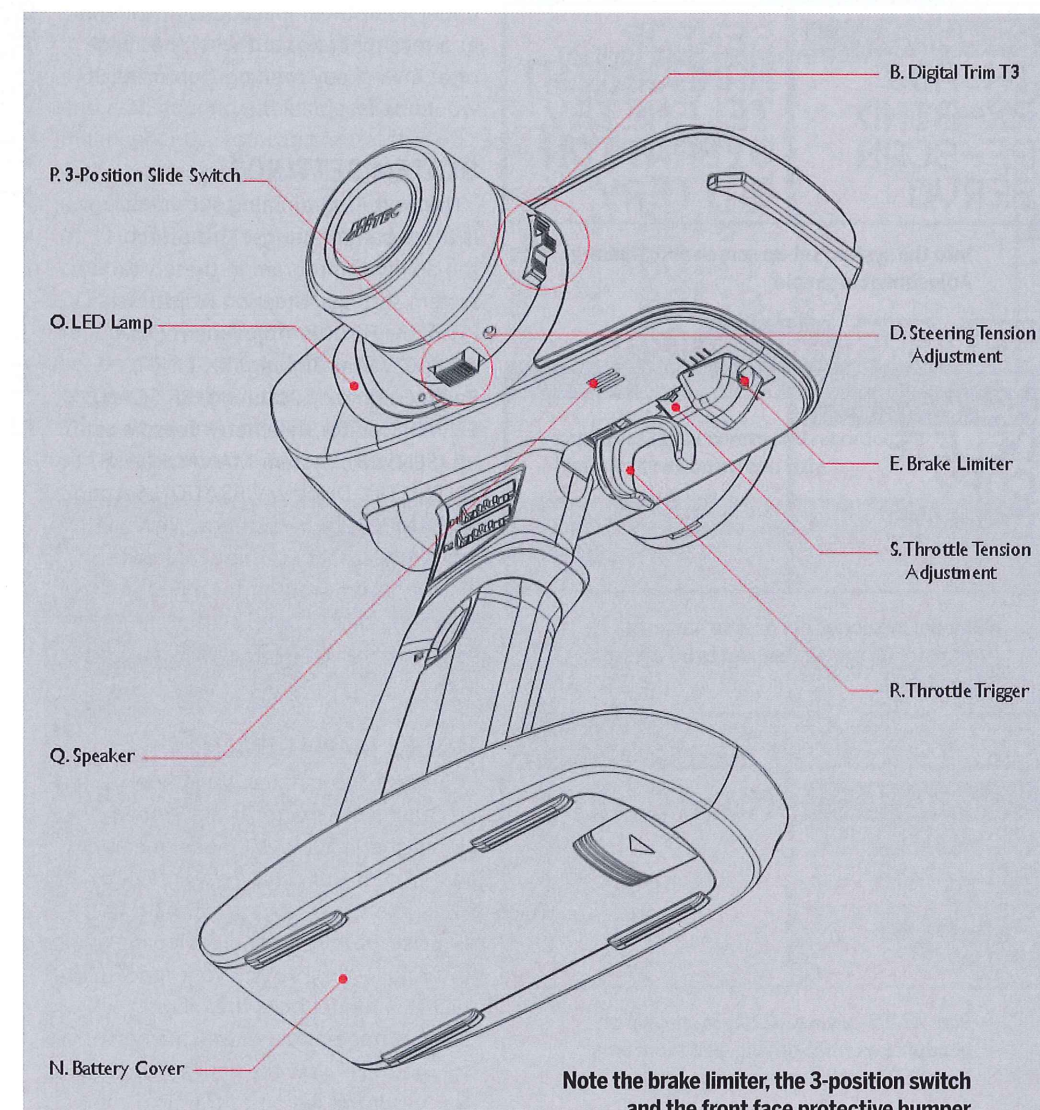
So in essence Hitec have ensured the transmitter's low RRP by removing unnecessary tech and glitz, and instead

concentrated on quality, functionality and a very, very long run time between charges. Now I cannot determine how long because the battery still hasn't depleted since its initial charge, and I've used this radio loads! Put it this way, it's definitely gonna win if I did the Pepsi Challenge with my other systems...I digress, back to programming.

In the sub menus 'Set 1' you get the options to programming in the following parameters: Servo Reverse



The many, many switches, buttons and rotary input methods explained



Note the brake limiter, the 3-position switch and the front face protective bumper



(R.E.V.), Endpoint Adjustments (E.P.A.), Brake Rate (ATL), Anti-Lock Brake (ABS), Steering Exponential (ST-EXP), Brake Exponential (BKEXP), Throttle Exponential (TH-EXP), Steering Dual Rate (ST-D/R), Sub Trims (S-TRIM) and FAILSAFE.

In the submenu 'Set 2' you get these options: Auto Boost (BOOST), Steering Servo Speed (ST-SPD), Throttle Servo Speed (TH-SPD), Throttle Mode (TH-MOD), Idle Up/Down (IDL-UP), Race,

Lap and Countdown Timer (TIMER), LAP LISTS, Switch Settings (SWITCH) Radio Dial, Settings (DIAL) and Channel Mixing (MIX).

Now I could go into all of these in-depth, but this review would end up 12 pages long and you would be asleep by page 6! Suffice to say the Lynx has every option you would ever want to fine tune or program in, and some you may not ever use! But there is one I must mention: 'Boost'!

## BUILT-IN BOOST

In conditions prone to tyre spin, like very low grip surfaces, in the wet, or on snow, mud etc., the Boost function acts like a temporary traction control and creates a brief period of smoother acceleration. Various parameters can be set and you can check the status of the BOOST setting on the graph located on the home screen. And it works a treat...I tested it on the same Astro Turf start line in the wet and it made a huge difference to my start. I don't fully understand the implications of using it at a race meeting, but when bashing or at a weekday evening club meet, it would be invaluable.

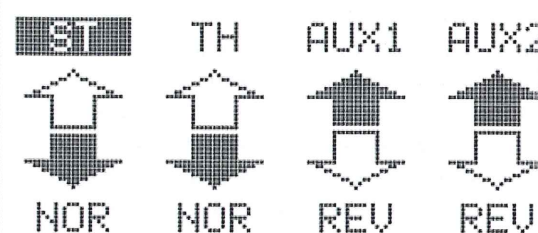
## SYSTEM SETTINGS

The next Programming sub-menu is the System Settings. This offers the ability to program in these vital system settings: Steering Adjustment (ST-ADJ), Throttle Adjustment (TH-ADJ), Receiver Binding (RX-BIND), SERVO Monitor, Telemetry Sensors set-up (SENSOR), System MANAGEMENT, TELEMETRY Display, VIBRATION Setting and BATTERY Type Settings. Now the telemetry aspect I cannot comment on just yet as I'm waiting for a Proton 4 Telemetry receiver and sensors to arrive to undertake a part 2 review at a future date.

## MODEL MANAGEMENT

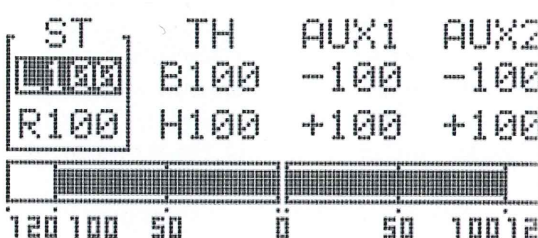
The next sub menu is the model management screen. As mentioned before the Tx has a 30-model memory built-in, but this can be expanded to 60 via the use of a Micro SD card. All the basic options are here allowing you to the following: NAME your model, DELETE a model from the memory, COPY a model to an empty memory slot, and CHANGE the active model. And this leads me on to the final sub

## [SERVO REVERSE]



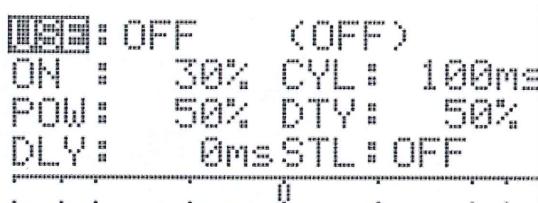
Servo reversing is a simple and visual experience

## [END POINT ADJUST]



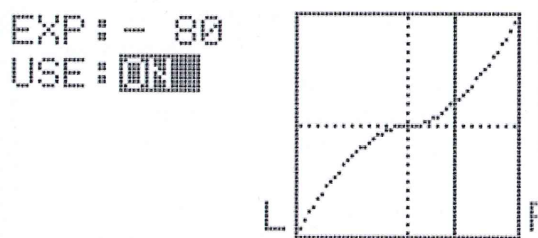
As is end point adjustment

## [A.B.S.]



A.B.S can be finely tuned to suit the track or conditions you run on

## [ST EXPONENTIAL]



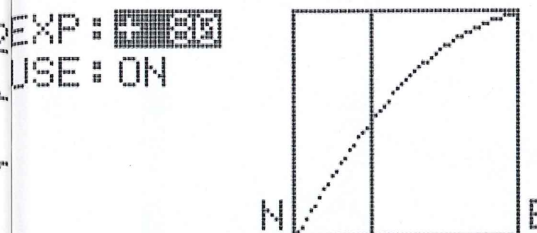
Steering Expo can be adjusted to offer a linear or progressive curve

menu...

## SD CARD MANAGEMENT

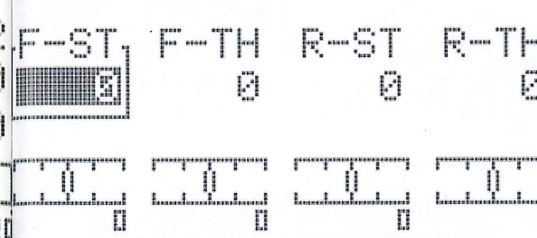
The micro SD card slot is well hidden and sits underneath the Tx right next to the receiver battery connection. In its dedicated sub menu on the main screen you can perform the following tasks: NAME the SD card, DELETE model data from the SD card, IMPORT and EXPORT models from the SD card, setup and adjust the VOICE functions and play MUSIC from the SD card.

## [BRAKE EXPONENTIAL]



Brake Expo can again be fine-tuned to the track or surface you run on

## [SUB TRIM]

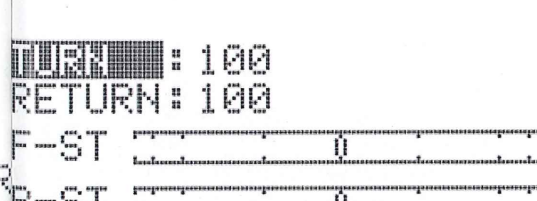


As well as the main trims for throttle and steering there's also ones for 4WS and MOA use



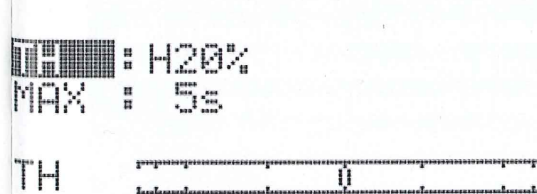
Note that 'BOOST!!!' means it's ready to use and generate some grip!

## [ST SERVO SPEED]



You can adjust the speed of digital servos to fine-tune their 'feel' on track

## [IDLE UP/DOWN]



A must for IC fans, allowing the idle to be adjusted when pitting or warming up to keep the engine running

Again this leads me onto another cool function of the radio. It can be set to play a chosen WAV file to warn you of various things or give you blow-by-blow feedback of telemetry data using a WAV file pack from [www.hitecrd.com](http://www.hitecrd.com). Again this is something I will cover in more depth during my part 2 review, when I delve a little deeper into the Lynx's telemetry options.

## IT VIBRATES TOO...

The Lynx 4S also has a sensory aspect of its feedback, in that the grip itself also has a built-in haptic vibration motor, which can be activated to issue driving and noise warnings. This can be switched on or off as desired but when used in conjunction with say its lap timing function or low battery alert via the bi-directional telemetry; it becomes a very useful tool.

## MOA AND 4WS OPTIONS TOO

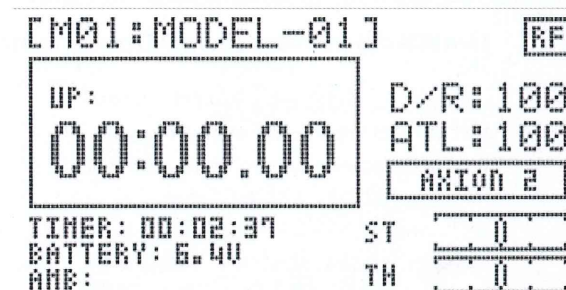
For those like me that like to build crawlers and scale vehicles the Lynx 4S allows you to control both front and rear steering either together or independently. You can control the 4WS system using a variety of different switches/buttons, along with a total of 11 different pre-programmed mix commands.

Crawler MOA mode offers functionality that controls a Dual ESC set-up say in a MOA (Motor On Axle) comp rig or Ultra Class Scaler/Crawler. You can control the Dual ESC system via self-programmed buttons or switches

and again the Lynx offers a variety of different mix commands allowing you to under-drive or overdrive teach axles as you desire. In this respect the Lynx has become my radio of choice for all my scale/trail/crawler builds going forward.

## AND THE BIGGEST SELLING POINT?

I left the best until last. How much would you pay for this radio? There are three options available, one with, and I quote: 'Race-Ready Axion 2 High Response 2.4 GHz Micro 2-Channel Receiver'. Perfect for any racing class that requires fast 4ms frame rate

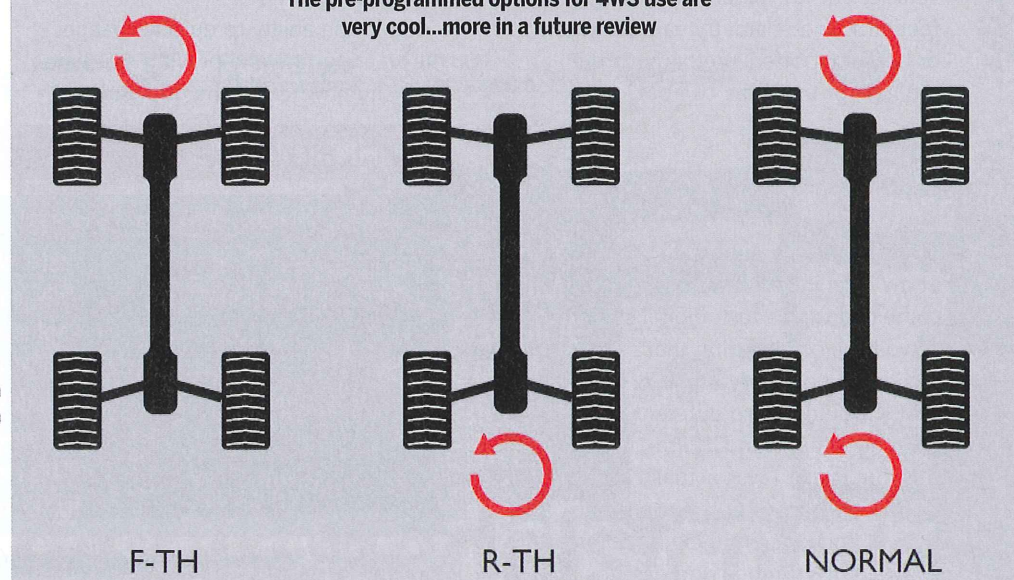


The timer has many uses, elapsed 'Up Time' being just one



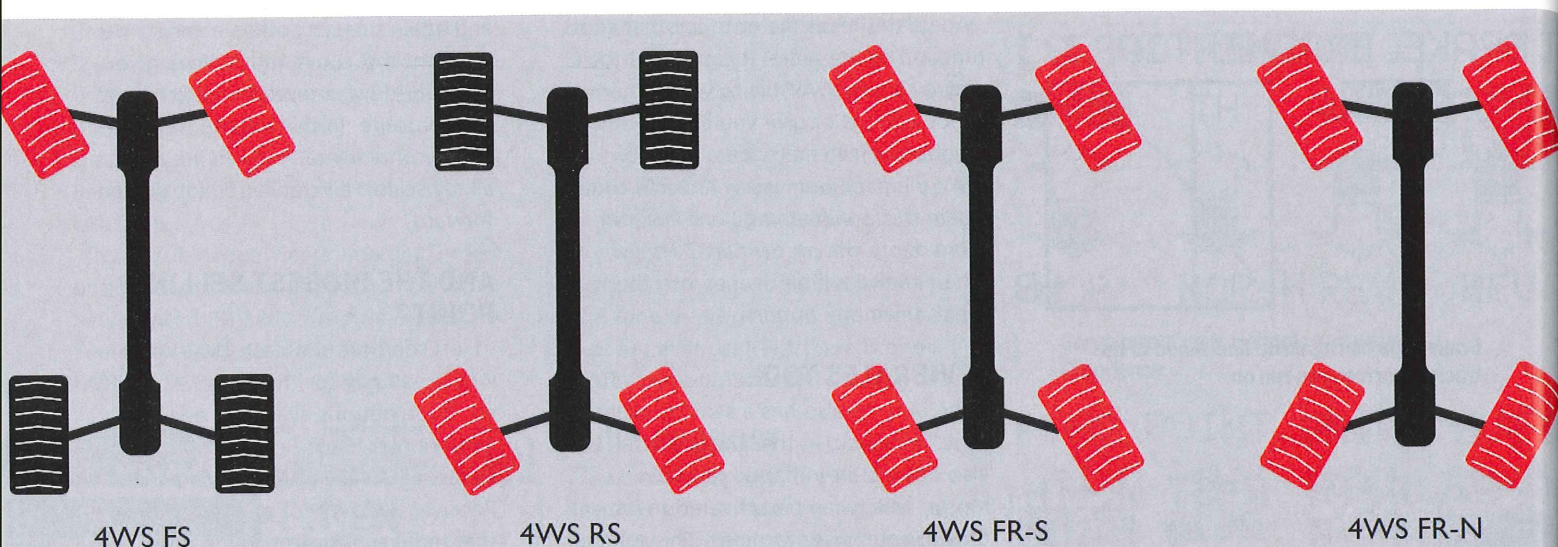
Lap times are accurate and recorded historically as on screen data

The pre-programmed options for 4WS use are very cool...more in a future review



Play WAV files via the built-in speaker or headphones while driving, just store on a Micro SD card you place in the base





Even MOA rigs are catered for...with 11 pre-set options, as well as your own programming options

response, compatibility with the latest fast, digital servos and every fine-tuning option known to man.

Another comes with an Axion 4-channel AFHSS 2.4 GHz Micro Receiver, a user selectable (14ms) or High Response (7ms) Frame Rate and is perfect for Scale and Crawler builds or anything that requires multiple channels and infinite control over them. It's not as fast in its response time compared to their Axion 2, but unless you're Robocop or a seasoned Pro Racer running the fastest buggy or Touring car out there, you would never know!

Lastly there's the Proton 4 telemetry receiver option, offering Bi-Directional Telemetry Functions with RPM, Speed, Temperature and Voice feedback Volume control. Yes the sensors required will need fitting to your chosen vehicle, but for the ultimate in real-time feedback and telemetry data for racers or bashers it offers pretty much the ultimate of the three combos.

## IN USE

I was supplied with both the Axion 2 and 4 receivers. The former fitted to a pro spec drift car and tested for a day at my local indoor drift track. When combined with a fast, digital steering servo it's a combination that's frankly jaw dropping to drive! I never thought that it would feel so different going from my usual brand of Pro-Spec Tx to this, but it did. I was actually initiating drifts far earlier than I've ever done before, and keeping them, in complete control right through and past the

apex. I could 'feel' the car far better, catch things when they went out of shape easier and it added confidence to my drifting abilities.

I also used the very cool brake limiter built into the bottom of the body that physically stops the brakes being applied too hard, and set it so that it wouldn't lock the wheels up if I tapped the brake to initiate a drift. It's such a simple function but one that would be useful in so many ways.

I also fitted the same receiver to a 2WD SCT and spent an afternoon ragging that around a dirt track. By using the BOOST function I could make rally clean starts and you could physically see it fighting to control the traction. The results with this function off were pretty much as expected... zigzagging up the straight or even spinning a complete 180 if I got scared and dared to lift off!

Add in the ability to quickly change the steering rate and braking real-time via a thumbwheel in the grip and you

*"it's a combination that's frankly jaw dropping to drive!"*

have a pretty much unbeatable package for any racer.

As for the Axion 4-channel and Proton Telemetry receivers, well both will be covered at length in part 2, and will feature in a couple of builds I've got in progress. One an Ultra 4 class comp rig for the next Scale Nationals with 4WS, the other a 6x6 build with FPV and full telemetry, hopefully to feature in the September issue (if I get it built in time!).

Until then I will leave you with one final piece of information about the Lynx 4S...it's just £239.99 (including Axion 2 receiver), the Axion 2 Fast Response Receiver is £39.99, and the Proton 4 with GPS is £54.99...now I bet you were not expecting that! **RRCI**

## TECHNICAL SPEC

### USED TO COMPLETE

Your choice of R/C car or surface vehicle to control

### DISLIKES

Marmite aesthetics

### LIKES

Fast 2-channel racing or versatile 4-channel options  
Fully featured & versatile 4-channel 2.4 GHz system  
Sophisticated Bi-Directional Telemetry options  
It looks futuristic and lights up...so 'me like'!  
Includes re-chargeable NiMH Rx pack  
Amazing value for money price-point  
Plays music & has a 'Voice' option  
Haptic technology in grip

**CONTACT** [www.jperkins.com](http://www.jperkins.com)