K.O. PRECIOUS
RADIO REVIEW

PART 2
BY DEZ CHAND

Smeagol Reveals All

I suppose if I was any sort of reviewer at this point I would run down the previous months article, well I'm not, so if you haven't read the first part you'll have to contact RRC's back editions department and order the November issue.

2) *Function Mode*

Under this menu, entered by pressing the "up" and "down" keys simultaneously from the initial start up screen, you will find all the pre-meeting adjustments and to this end a small red label that says "Func Mode" connects the two graphics. The stop watch is very comprehensive including an up timer, lap timer, race alarm, pre-alarm, lap review, lap navigation and auto start functions. The "Up" and "Lap" timer are as per any stopwatch but being able to operate them yourself means that your wife/kids/best mate are not be grudgingly sat next to the start line during your test sessions with your wrist watch counting every lap that they remember to click on, as and when they feel like it. A nice point here is that you cannot double click the split timer as it will not accept another hit inside of three seconds. You can tap away confident that you are not spoiling your data with ghost laps so the time and lap count recorded at the end will be a true figure.

Race Alarm

The "Race Alarm" is a count down timer that you can set to how ever long you race for and it will beep for ten seconds to signal that your time is up and you are on your split time. The "Pre-Alarm" can be set to however many seconds you like to indicate when the end is nigh and use the pre-set period to make the line at all costs if you want to go around again instead of being cut off by the computer in race control.

"Lap Review" lets you browse through your split times, it can store up to 40 individual laps before it starts to overwrite the first ones, and you can then delete them singularly or all at once when you are done admiring your best ones and ignoring the slip ups.

"Lap Navigation" does not tell you"...Turn in NOW....HARDER through there....stay off the KERBS..." but is simply a countdown alarm with a repeat function that you set to the best time you think you can achieve each lap and when the beeper goes off you can tell by your position on the track whether you were inside this time or not. This sure beats having someone shouting out your lap times for all to hear doesn't it? With this function you can try different lines and styles and be able to tell whether it was a faster lap or, as is usually the case, it just felt like one. I have timed lots of people secretly while they are saying to their pit crew "... Oh yes that's better I like the line through there, that was a better lap..." etc. when in reality the flash manoeuvres had in fact cost them some time.

Auto Start

The "Auto Start" function assigns the stop watch start button to the throttle trigger. Once you have sidled up to the start line and are happy with your position you can select "Auto Start" by holding down the "+" and "-" keys in stop watch mode, then as soon as you touch the throttle at the green light, the clock will begin counting automatically leaving both hands free to concentrate on the all important entry into turn one.

Throttle Punch

Also under "Function Mode" you will find throttle and brake E.P.A. (End Point Adjustments), a Trim Warning that literally tells you that something has been changed that is not saved to memory's so that you have the option of ignoring it and returning to your original mark or updating the nominal settings. "Throttle Punch" is a way of defining how far the throttle actually moves at the slightest touch of the lever. On an I.C. car it is very useful to skip the portion of servo movement between the point where idle brakes are dragging with the carb fully shut onto its tickover screw, to the point where the brakes are fully off and the clutch is biting. This increases corner exit punch and maintains full trigger movement for the purpose of throttle control. In the same way "Brake Punch" can help an electric car skip the portion of brakes that are limited and get straight to the All Ahead Stop region for some really wicked deceleration.

Don't forget that on full sized racing cars the attention given to the braking system is only equalled by that applied to the power unit, because being able to get on the brakes later means you can stay on the power longer and go into corners deeper than the opposition.

More speed and less haste.

Steering E.P.A. is adjustable from 0-150% of the normal servo range while turn and return speed are available anywhere within 0-100% servo speed which is very useful if your servo is so fast that it can keep up with the little over corrections that you didn't mean to make mid corner. This can help to maintain cornering traction because if you break the hold on the track with a sudden movement it will start the car into a slide that can either lead to under-the-rostrum type understeer or backwards-into-the-fencing oversteer, depending on the cars selected suicide mode.

Traction Control

The brochure boasts of traction control but maybe these are too strong a word for what it actually can do, all be it that the end result is almost the same as a full blown feed back control loop that a real traction control device would take to operate. What you are actually looking at is a programmable throttle curve that is plotted as a measure of movement against time rather than servo movement against input, as per the throttle curve facility. Now I have tried to explain the difference I can fully appreciate why they decided to just call it traction control!! What you do is tell the computer at what point you want it to reconsider your demands, power wise, and then tell it whether you want it too take action above or below this given point. Now tell it how much acceleration that it can pass on as a percentage figure. Look, say you are happy with only 40% throttle coming out of corners and above this figure you would really like a smooth transition up to full throttle because you intend to over gear the car and drive "soft". Well by telling it 40, "H" for higher than and then dialling in anything up to 100% as the "Save" figure it will do exactly that for you. The lower the "Save" figure, the faster the transition from the set point to full throttle will be, regardless of what your finger is doing.

For you electric boys to appreciate it fully you would have to plug in a servo instead of you E.S.C. and watch the difference while with an I.C. car you are already able to see the difference. As soon as you back off the throttle it will come down with you but as soon as you pass the set point on the way back up, the computer takes over once again. The up shot of this is that you cannot blip the throttle coming out of corners which will not only save you power but help to keep that all important amount of traction from being broken by a spinning wheel. It is possible to over do the amount of save to the point where the car is actually slower than it could be, but when it can make a Formula 1 car driveable on foams in the pouring rain I guess there isn't a lot it cannot do.

3) Direct Mode.

This third and final menu allows start line access to steering balance L/R, steering curve, throttle curve, model selection and the function that you have designated to your custom button.

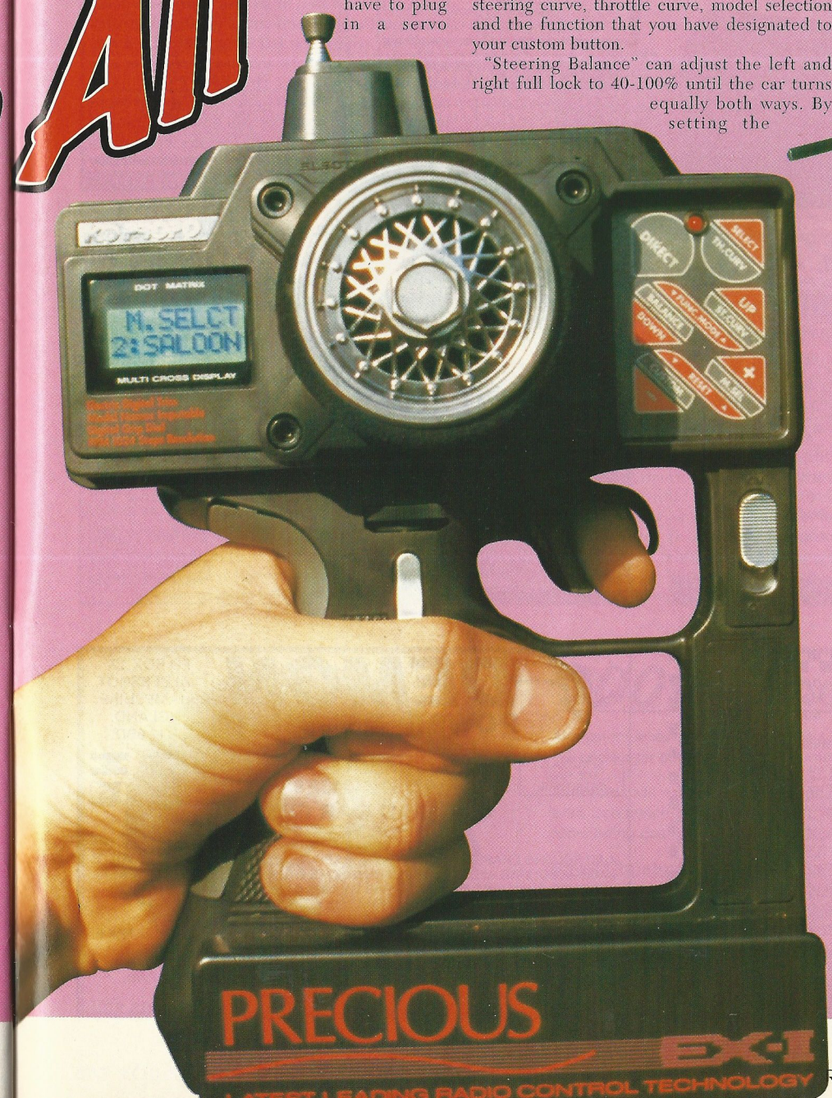
"Steering Balance" can adjust the left and right full lock to 40-100% until the car turns equally both ways. By setting the car up then viewing the figures on screen you have got a digitised analysis of how tweaked your chassis is. If left and right are within 10% of each other then I would say this is a reasonable tolerance but anything over 20% would suggest a definite problem that should be addressed as soon as possible. The problem can usually be traced to spring lengths, preloads, shock length or corner weight, but if you are entirely happy with your geometry then it must point the finger at your steering servo or something equally difficult to spot like a tight wheel bearing or a twisted chassis plate.

Steering Curve

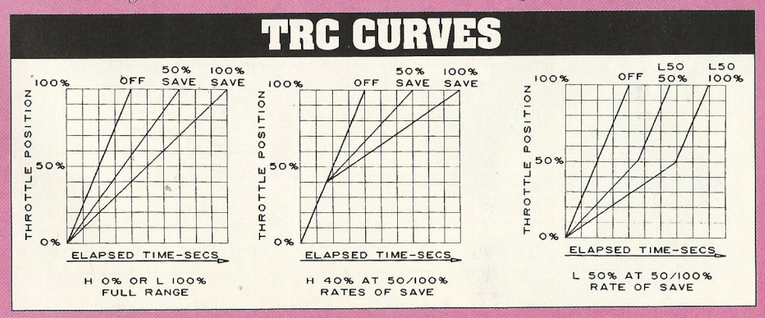
"Steering Curve" can give you the chance to soften the central, straight running portion of

The handle say's it all.

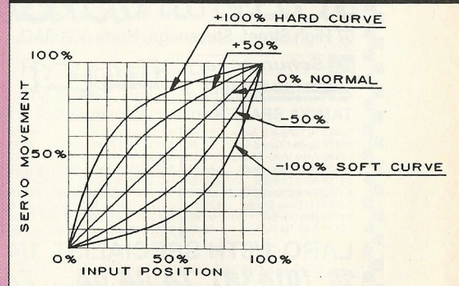
I still can't find a use for these.



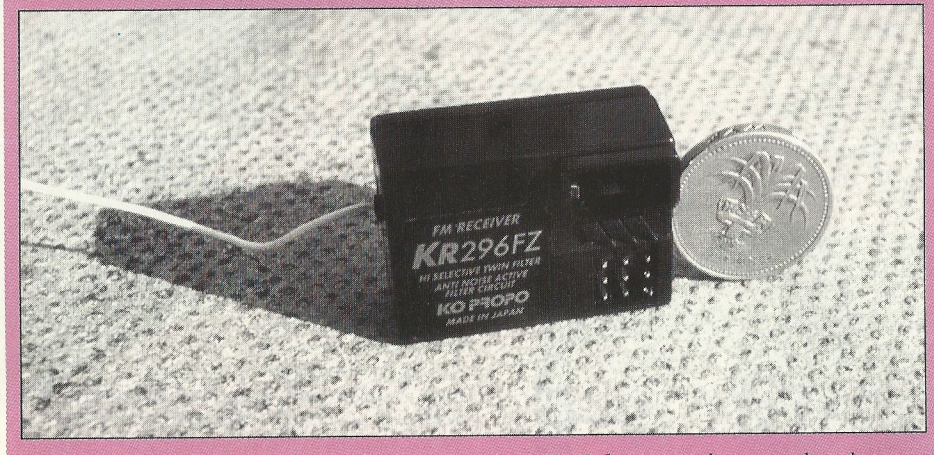
TRC CURVES



THROTTLE/ STEERING CURVES



The Tx crystal locates in the rear of the main module.



The mini receiver really is small.

the servos throw to help tame a twitchy car to the point where you regain control at speed. Like the steering the "Throttle Curve" can also be set to -100% or +100% to soften or harden the curve but this time forwards and backwards have their own separate curves, whereas the steering curve applies equally to left and right. In all cases 0% will give a straight line that is the traditional manner leaving all the tuning to your finger but why not let the computer take the strain ? A "soft" curve will give fine low down control for more twitchy thoroughbreds while a "hard" curve is really the reserve of four wheel drive cars that can take advantage of the corner exit control they sustain. This method of curve adjustment means that you can set up totally different cars to be driven by the same style and still get the best out of them.

"Model Select" flicks quickly between the six different memories installed and retrieves all your dialled in information at the blink of an eye identified by both memory number and model name but like every other selection it only stays selected if you jump back into the steady or operational mode by pressing the "Direct" button again.

Other features are included but not covered by any menu, like holding down "+" and "-" to reset any function to the nominal position and using "Up" and then "+" or "-" to raise or lower the beeper pitch. The audio range covers very low barely noticeable notes all the way into the Here Boy octaves beyond human perception. The volume level is not adjustable so it's a case of find the frequency that your ears are most receptive to whilst remaining suitably different to any other beepers on the rostrum.

There is a compartment with a push-to-flip lid just below the power on/off switch that contains a small "tweeker" screwdriver. As there are no tweekable pots on the entire handset, I guess this is intended for dialling in your E.S.C. but mine has a one touch set up facility so I wish the compartment had been a little larger then I could have stored a couple of tx crystals in there instead, but such is life. Not all of my cars are so well equipped (yet) so it will come in handy on occasion.

Adjustable for width

Even the throttle trigger is adjustable to suit the width of your index finger but once set up to a comfy, slop free fit so that there is no delay between throttle and braking. it will pretty much stay where you left it for ever. The screw has a Philips head so the pot tweeker is still redundant as far as the EX1 Precious is concerned and besides, unless you are on some incredibly vicious diet or you are a six year old that intends to try and out live the Precious, I can't see that you are going to need a handy little screw driver for this purpose.

Perfect Sense

Everything about the EX1 Precious makes perfect sense, offering enough adjust ability to lift anybodys game because it has been designed with a racers experience and a programmers imagination. It offers enough toys on top of the practical stuff to get us techno junkies by for years and with some combat hours under your belt you'll wonder how you ever lived without it. It will help if you know how to drive and set up a race winning car before purchasing the EX1 Precious, however because it cannot win the war for you but it is a serious piece of artillery that will upgrade anybodys arsenal.

If you are already using a steerwheel combo then I promise you will appreciate the difference but if you're still using "chopsticks" you will never know what you are missing.