

FLASH

HITEC PRO CAR FLASH 4. STICK RADIO COMBO REVIEW.

by Dez Chand

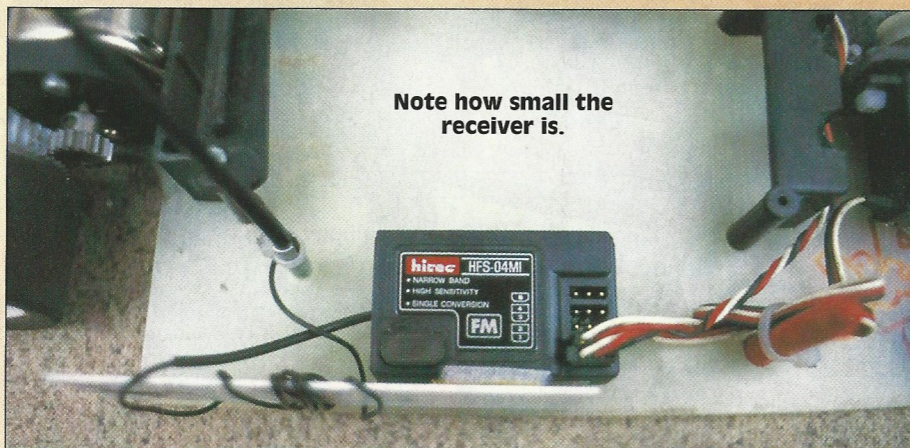
Running a model car is possible with just a simple two channel basic radio set with only trims and steering rate, but without precise control to put the vehicle

exactly where it should be on the track there is next to no chance of winning the race.

To put this level of equipment within most peoples reach, Hitec have introduced the Pro Car version of the Flash 4. A micro computer combo with many features, normally found only on transmitters at twice the price. £149.95 buys you the transmitter, receiver, tx and rx nicad packs and a mains nicad charger that can cope with both packs at the same time.

It's all in the memory

Being computerised, the tx is capable of retaining two model memories and offers throttle curve, steering curve, stopwatch and dual rates



Note how small the receiver is.



Just as it comes out of the box.

which allows you to mix the two as only a computer can. With digital trims you can rest assured that the settings will not be adjusted accidentally or alter in transit so the model will be set up exactly as you last left it, as long as you remembered to save any alterations into the memory. The menu will inform you how far from the servo neutral you have selected and if this approaches 25% it is suggested that you alter your links or rotate the servo horn by a couple of splines to bring this back to nearer zero.

Throttle and steering curve calculations are worked out by telling the computer how far into each sticks throw what percentage servo travel

you desire and drawing two lines from this point, one to zero and one to 100%. The servo will then follow the prescribed "curve". Useful features like these are a must to give easy bottom end control saving maximum throttle for just the last quarter of the stick path. This setting does not effect the reverse throw which stays constantly linear so your brakes will always be there no matter how radical your throttle curve becomes (this works for electric and IC cars).

Lock to Lock

The steering curve works in the same way but does apply equally to both sides of neutral to give a balanced result. If you don't want a balance then the left and right end point adjustments will cater for any bias from 0-125% of servo movement that your particular circumstances require. On most circuit and off road cars a balance can be achieved more accurately than by a good chassis set up alone could ever do and give your thumbs a much easier time come race day.

Dual rate mixing is normally only found on the elitist radio in any range and here it is for your amusement. Making good use of this function needs a portion of trial and error as a fair guess can be bench tested but only when you try it on your particular formula will you know if has improved the drivability or you have gone to far.

All you need to tell the computer is the transition point on the throttle curve and the desired steering rate above and below this point. Typically an 80% change point, with 100% steering below and 75-85% above to make full throttle steering responses less than at slow corners. This should smooth out any over corrections when the red mist rises, all your good intentions disappear and a bad dose of premature power on leads to fishtailing down the straight. This feature can become a steering rate adjuster whilst racing simply by leaving the screen in programming mode and using the steering trim switch to alter the numbers on the screen that relate to the high or low level steering rate until you have a set up worth saving to memory.

There are three programming modes that separate all the functions into family groups so that none are adjusted unintentionally.

Mode A: switch on with timer and save held down. Model 1 or 2 selectable.

Mode B: switch on with timer and up held down. Count down timer set and all reset option.

Mode C: whilst switched on hold down timer and up. EPA, sub trims, servo reverse, steering curve, throttle curve, dual rate curve mixing as described earlier.

On screen

The normal screen view is battery voltage but this changes to the countdown timer with the press of the timer button. this will continue to show the countdown, between 1 and 30 minutes as set in the menu for this particular model memory, until the alarm sounds for the last 10 seconds. There is a built in battery alarm which sounds very similar and will sound if you get into trouble (below 9.2 volts) whether the timer is running or not but with a 600 mAh nicad pack you should get a maximum of three hours running time from a full charge, enough to run two different classes at one meeting competing in



Rear view of the transmitter with the battery cover removed.

all four rounds and even an half hour I.C. main "A" finals!

In the battery compartment is the plug-in nicad pack but also the option to slot in a cassette of 8 normal batteries if you prefer. Next door, under the same cover, is a storage space for two crystals so you no longer have an excuse for holding up a race by rushing back to the pits to change frequency. Handy on any multi model memory set, I'd say damn near imperative but then I never did like wasting time just standing around at a large multi formula meeting. I'd rather be out there getting some track time no matter how diverse the classes, so this handy crystal cubby hole may just mean I'll gain some weight over the summer for a change. Other physical options are stick length and, by opening the back to allow screw driver access, stick spring tension so that Giant Haystack and Rudolf Nureyev can obtain the same feel (well, on the rostrum at least).

The receiver (available separately for £29.95) is compact for a four channel 40 mhz rx and although it states it is nowhere, not even in the instructions, it is B.E.C. equipped so the supplied receiver nicad pack is only really of use if you intend to run an I.C. of some description, or something like a scale saloon where the weight limits are so high that you may as well run a receiver pack; it beats cable tying a pair of pliers to your top deck!

In conclusion, if this basic priced yet multi function combo can tame an ungainly creature like a sidecar outfit with ease it should go some way to improving just about anything you care to point it at. It is even aircraft compatible, by using all four channels at once, in case your particular horizons ever look up but as I don't have the instructions for that kind of layout and am a confirmed sunny Sunday shim smasher anyway, I'll leave that side of things to some other fly boy.



The gear installed in RRC's side car.

Specification

Transmitter

- 2 Channel Car/ 4 Channel Airplane PPM/FM
- 2 Model Memory
- Timer With Alarm
- Transmitter Battery Voltage Indicator/Low Battery Alarm
- All Channel End Point Adjustment (EPA)
- Servo Reverse
- Auto Dual Rates (Car Only)
- Curve Point Setting (Steering/Throttle)
- Curve Mixing (Steering/Throttle)
- Trim Memory
- All Data Reset

Receiver

- Ultra Narrow Band
- 455 KHz / 10.7 MHz Middle Frequency Method
- Low Power Consumption