

What is the MyLaps RC4 system all about?

In the beginning

Back in 1983 two Dutch guys got together to solve the problem of reliably scoring RC car races. The product they developed, the AMB8300 system transformed RC racing and was the first product of an enterprise that is now a supplier of timing systems for a wide range of racing, from Formula 1 to Speed Skating and everything in between. In 2008 they joined forces with Champion Chip, another Dutch company that specialised in mass race timing, typically Marathons, to form MyLaps Sports Timing.



AMB8300 Transponder

AMB8800 Decoder

AMB8300 Decoder

AMB20 Transponder

AMB20 Decoder

In 1988 the decoder was simplified and since then there have been only two technology updates. In 1990 the development of RC electronics was conflicting with the AMB8300 Transponders, so a new system was created, the AMB20 system. Rather than consigning the earlier decoders to the scrap bin, conversion kits were sold and are still in use today.

Year 2000, the Digital age



AMBr(2) Decoder



AMBr Rechargeable Transponder



AMBr Direct Powered Transponder



AMBr3 Decoder

In 2000 with the digital electronics industry emerging a new system, AMBr was released with every transponder having a unique 7 digit number. In 2001 a direct powered "Personal" Transponder became available. As no conversion kit was possible a generous trade in scheme was available up to 2004. In 2006 the AMBr Decoder was replaced by the AMBr3 Decoder. The new decoder added some interesting user options and can be connected to the Internet to provide unattended practice timing data to the MyLaps.com website.

You may have noticed a pattern here of a new technology advance every 10 years. It is now 2010 and MyLaps have the next standard for RC Identification and Timing ready.

Enter the RC4 Hybrid Direct Powered Transponder aka Harry

With over 200,000 Personal Transponders (PT or Petes) in use worldwide any development has to have backwards compatibility. AMBit, now MyLaps, have a tradition of long life products. Drivers who bought Petes back in 2001 can expect to be able to use them for many years to come. The world of electronics has moved on in the past 10 years, so there is scope for considerable advances in timing technology. The market also expects added functionality. Take the mobile phone for example. Compared with the product of the 1980's and 1990's mobile phones are very different. Cameras, music and video playback, Internet access and accelerometers for games are commonplace. In some ways it's a wonder we still use them for phone calls.

The headlines features of the Harry are straightforward.



Pete, Harry and Clip

- Smaller and lighter
- Wider Voltage range, 2.8-16v. 1-4 cell Lipo.
- PTFE wire
- Status LED to confirm the transponder is within safe voltage
- Lower Price than the Pete Transponder
- Double the timing message rate of the Pete Transponder
- Clip for ease of mounting and transfer to other cars

These are improvements that should come as no surprise. What is more interesting is the information that is being transferred to the Decoder. The Pete transponder sends 300 timing messages a second using a very simple message format. The Harry sends an additional 300 timing messages a second using a more reliable message format and includes additional information. The full extent of that information is not being disclosed, but what has been announced so far is voltage and temperature. The Pete style timing messages mean that the Harry is compatible with the original AMBrc Decoder and the current AMBrc3 Decoder. The 300 new style messages can only be detected by decoders with the RC4 firmware. In due course all AMBrc3 decoders will be able to have a free firmware upgrade to RC4.

The RC4 development is all about adding extra information.

For example imagine a Harry type transponder that could be buried in a track and powered from the loop and send a passing signal every 5 seconds. It would assure the timekeeper that the system was working correctly and would provide a record of the track temperature. Combine this with the facility of the RC3/4 Decoder to be connected to the internet, plus the many ways for tracks and drivers to connect to the internet and you have the possibility of going to your local track to practice and even if no one else is there, see your lap times on the MyLaps website. You would even have a record of the track temperature and air temperature (from your own transponder) and transponder supply voltage when looking back at previous race data. Because the Harry transponder can be powered by up to 16v, you can power it directly from your 2, 3 or 4 cell Lipo. You might be surprised when you compare lap times and voltage and track temperature and tyre type!

What about future products

There are lots of possibilities but already announced is a “Car ID” transponder. This allows the driver the convenience of a number of transponders with the same master number, but gives Race Control the assurance that a second transponder with the same number is not affecting the accuracy of the race times. If there are two identical transponders there is the possibility of both being detected during a race leading to inaccuracies of results. The Car ID transponder will allow driver convenience without compromising the confidence in results.

How do clubs and drivers stay up to date?

To help clubs keep up to date with their decoder hardware, there is a trade in offer enabling clubs to trade in their AMBrc Decoder with a 50% discount on the RC3 Decoder. You can also trade in an AMB20 Decoder for a 25% discount.



Drivers can trade in their Pete transponder, and clones for a Harry. Trade in a clone and you get a 50% discount on a Harry, trade in a Pete and the discount is a massive 60%. Why wouldn't you? No matter how old or “tired” your transponder, as long as it works we will trade it in.

