



THE MARICARDO

IN THE FIRST OF AN OCCASIONAL SERIES LOOKING AT TIMELESS FAVOURITES, ALEX WHITTAKER GETS SENTIMENTAL ABOUT A RADIO MODELLER GEM

It's the era of metrication, new money, Formica furniture, and glam rock. The year is 1971; the magazine, *Radio Modeller*. Featured inside the November issue, we have a smart 56" span shoulder-winger for

same time. What can explain this simple model's continuing appeal? To answer that question, we have to go back to the days of flares and miniskirts, and the original introductory article.

good for sports type aerobatics - a forgiving but agile aerobat. Oh yes, and he didn't want to spend too much time building it either.

What he came up with delivered these expectations by the shed load. Through fixing the wing area at around 600 sq. in., employing a shoulder wing with a thick symmetrical section, fitting a Super Tigre .40, and keeping the weight to under 6 lb., he produced a very forgiving and sweetly harmonised model. In short, a classic that would still be around generations of modellers later.

The original had what de Felice described as being 'modest dihedral' but in reality, he was building in stability and a relaxed flying style.

Over time, like the Spitfire, the Maricardo has proved an accommodating and flexible design, capable of evolving as our modelling technology has progressed. Nowadays, most of the Maricardos in our Club sport ball-raced .46 and .53 engines, and fly with reduced dihedral. One or two even have tuned pipes, and a blistering vertical performance... but I'm getting ahead of myself.

CLASSIC DESIGN

As de Felice claimed in 1971, Maricardo is indeed 'cheap,



A classic layout - stable shoulder wing design, good proportions, lots of wing area.

.35 - 40 power - and it's destined to become a classic. The aircraft is C.A. de Felice's Maricardo.

This plan is an immediate hit. In sheds up and down the land, many Maricardos are built, and soon Marionville Models are offering a kit. Thirty odd years later, in our Delyn Club, on some Sundays you can still see four or five Maricardos in the air at the

RACY LOOKING SPORTSTER

Designer Mr. de Felice said that he was sick of uninspiring boxes with the shoulder wing stuck on top. He desired what most of us want from a club sports model: one that flew like a demon, but looked like a real aeroplane. A model that handled well enough to be suitable as a first aileron trainer, yet looked like a pylon racer. In addition to all that, de Felice wanted an aircraft that would be



In the air she really does look like a Pylon Racer despite her predictable handling.

simple and strong'. The basic design relies on a straightforward, but shapely, balsa sheet fuselage, with a classic built-up wing - a formula that produces a light and tough sports airframe. On the prototype, the tailplane was mounted low, which de Felice claimed would keep it 'clear of any wing turbulence'. Well, I don't know about that, but I do know the simple tailplane is easy to make, and almost self-jigging in terms of incidence, providing the fuselage is built with ordinary care. The latter is quite deep, because thirty-odd years ago radio gear was bulky; the original had to carry large and heavy Flight Link 5 Series 2 gear. I wonder: did Mr. de Felice realise that this necessary depth, and increased side area, years later would greatly assist the animals in our club who shoe-horn .53's into their steeds, in order to perform horizon - horizon knife-edging? Er... probably not!

STRAWSONISED MARICARDO

In our local area, one modeller, Paul Strawson, has almost single-handedly ensured that the Maricardo continues to prosper well into the 21st century. He reckons that you can't get a better all-round sportster - in fact, Mr. Strawson maintains a tremendous admiration for Mr. De Felice as a designer. Now, Paul has flown his own Maricardos for years and such is his reputation as a builder, many local modellers have asked him to make them a Maricardo too. In the days before mass ARTFs, many of us commissioned and flew Strawson Maricardos - so, he has built scores. I still have mine, and am in the process of commissioning Number 23.

SYMBIOSIS

As with the classic car movement, expertise develops, and Paul has incorporated a number of practical modifications over the years. There's been some keen symbiosis between the developer and flier; indeed, egged on by keen aerobatic pilot Gareth Williams, Paul has developed the Maricardo's handling and construction in tune with modern engines and radios. This allows a modern Maricardo to take advantage of the latest flying techniques.

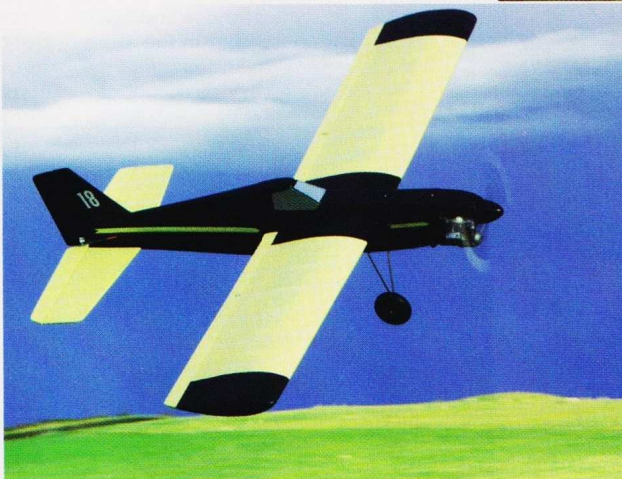
Throughout this process, Paul has remained a devout Maricardo enthusiast. At all times, he's striven to make sympathetic changes which do

not violate the integrity of the original design. The result is an updated, but faithful representation.

STRAWSON MODS

Tested over many seasons - and many pilots - the current version of the Strawson Sports Maricardo now has the following modifications:

- De Felice's original banded-on wing fitting is now replaced by a bolt-on solution, with the bolts being fitted from below the wing.
- Dihedral is reduced to zero.



- Tank size is increased to 6oz. (Red SLEC fits a treat).
- Ailerons are controlled by twin wing mounted (standard) servos, i.e. one per wing, on plates, allowing many more mixing opportunities than the original single servo allowed.
- Originally, the Maricardo had a fake airscoop to cover its large, protruding, early seventies wing servo. This is not necessary now, thanks to modern, smaller servos.
- The originally suggested fibreglass wing bandage is dispensed with - its not necessary.
- Rudder size is increased by an inch from the hinge line, for positive spin entry / exit.
- All surfaces are hinged and sealed with the chosen covering, which greatly improves control response.
- The engine is canted over to 45° from inverted, allowing a smoother nose-line, while retaining much of the every-day practicality of an upright installation. This aligns the silencer with the centreline of the fuselage underside, and also directs the exhaust residue under the fuselage, improving cleanliness.



- As mentioned above, a high performance .46 or the .53 is now the engine of choice for most Maricardo jockeys. Some fit tuned pipes, though at the other end of the spectrum, I've seen them fly very well on a cooking .40, such as an O.S. 40LA. For the record, my own Maricardo has an Irvine .53, fitted with the excellent, (standard) quiet silencer. A good combination.

The Strawsonised restyling makes the whole nose treatment a lot sleeker on the Mk II Maricardo. Note also the canted engine.

Mike Parry chucks his Maricardo into a steep pylon turn for the camera.

- Original Maricardos had built-in engine down-thrust - this is actually not required, so engines are now shimmed up to zero - zero incidence with the wing.
- Paul uses a piano-wire version of the dural strip undercart shown on the original plan, but built to identical dimensions.
- Wheels are increased to 3 1/2" DuBros, to better cope with wet and muddy grass strips.
- These days, Maricardos tend to balance out okay, with no lead required to achieve the C of G.
- Modern Maricardos weigh less than the original due to lighter, modern gear.
- Paul's original Maricardo flew well on an Enya .29 - it would loop and roll, but not knife-edge!
- At club colleague Gareth Williams' suggestion, Paul aims to build his next batch of Maricardos with lifting-section tailplanes.

FLYING THE MARICARDO

For a forty-class model, this aircraft is not small; it has a good wing area, and

Number 18 with Mike's distinct silvered cockpit and black / antique Solartex livery.





Ken Pilkington's Maricardo, flying well despite the absence of a pilot.

A fine winter's day, a reliable engine, and a Maricardo – Heaven!

a delightfully chunky look. A key point made by the original designer is that his Maricardo embodies most of the advantages you expect with a low-winger, but retains the security and good manners of a shoulder wing design. I'd also say the Maricardo is a very easy model with which to learn tail-dragger take-off techniques, especially, if she's a follow-on from your first high-wing, tricycle undercart trainer.

Starting and adjusting the engine in a Maricardo is very easy since everything is to hand - something that is not to be underestimated if you intend getting in lots of aerobatic practice. Maricardos are good all-weather fliers, and have a decent amount of ground clearance. Moreover, handling on the deck is first rate, and the overall aerodynamic layout confers great stability in the air. They suit our blustery British winter conditions, and handle gusty winds very well.

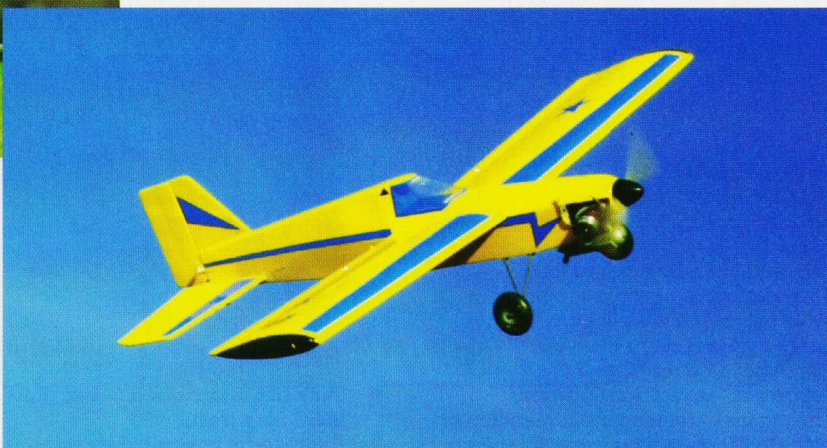
However, Maricardos aren't just good aerobatic trainers, they also provide great sport for competent pilots too. Fit a bigger engine, dial in way more throws than were ever envisaged in the seventies, and you have a very potent aerobat. They're also good for learning the fundamentals of control mixing in a forgiving airframe. If you've just bought

a posh computer radio and have no idea how to exploit it fully, then a Maricardo is for you.

VICELESS AND PREDICTABLE

Overall, the great thing about a Maricardo is her smoothness and predictability in the air - these qualities mean she's a very easy model

rate, as you would expect with that wing area and such a modest weight. Long, slow approaches are the norm, while dead-stick approaches are entirely relaxed affairs. Maricardos do not drop wings, have vicious stalls, or try to catch you out - probably the main reason why such a range of pilots, from beginners to experts, swear by them. The fact is, you look good flying a Maricardo, even if, like me, you're definitely just a bog-standard club pilot.



to fly cleanly and neatly through club aerobatics. In my experience, the Maricardo always has a solid 'sit' in the air; this makes her easier to judge in, say, a stall turn, bunt or loop. I've flown three or four with different engines and set-ups, and amazingly (perhaps I shouldn't be so surprised), they've all had the same, comforting laid-back handling characteristics. It's in the genes.

Maricardos have got speed and excitement when you want it, and an easy grace and stability when you don't. Inverted flight requires little or no forward stick, and spin entry and exit (with the modifications set out earlier) are both very positive. With a good bit of aileron deflection dialled in at the transmitter, she overcomes her natural stability, and rolls like a good 'un - highly axial, even without a dab of elevator as she passes '12 o'clock' inverted.

She's a genuinely viceless flier, and a newcomer to aerobatics can simply throttle back and buy some breathing space before re-entering the fray. I've watched our Gareth doing lazy, low, slow rolling circles with his Maricardo, and find I become hypnotised just absorbing all the synchronised stick inputs, and the model's correspondingly smooth progress. You do not have to hurry manoeuvres with a Maricardo - just select an appropriate throttle setting, and take your time.

When it comes to flying through huge loops at three-quarter throttle, or performing leisurely reversals far down the strip, the Maricardo looks particularly good. The glide is first

WHAT MAKES A CLASSIC?

A classic embodies its period. It crystallises a time and a mood, and often introduces new ideas, styling cues, and layouts which later become the norm. Sometimes, that which we now look upon as a classic was actually not the first, or necessarily even the best, of what later would become a famous look, but it is the most memorable. The true classic always has a certain purity of conception, and economy of line. Form truly follows function.

There is also the sense with some outstanding classic designs, like the Spitfire or the Mini car, that they are capable of much upward evolution. The Maricardo matches these notions of a classic on most counts, for it is a timeless design, and effortlessly matches its design brief. Thirty years on, it is still built and flown in both its original and updated versions, having proved itself capable of keeping up with modern hardware and flying techniques.

When I mentioned the Maricardo in passing in a recent Weekenders column, I received a flurry of letters, e-mails, button-hole-ings and telephone calls from enthusiastic owners and prospective builders telling me to hurry up with this celebration. If you are looking for a practical classic that you can build yourself, on your own bench, in this increasingly ARTF dominated world, I earnestly entreat you to consider Mr. de Felice's masterpiece, the Maricardo. Plans are still available from the Nexus 'X' List Plans Service, as detailed in the Datafile.

DATAFILE

Name:	Maricardo
Model type:	Shoulder-wing sport
Designed by:	C.A. de Felice
Available from:	X-List Plans Service, 22 Old Brewery Close, Aylesbury, Buckinghamshire HP21 7SH Tel. 01296 424997 (no telephone ordering). Please quote plan No. RM85
Price:	£7.50 plus p&p
Wingspan:	56"
Wing area:	600 sq. in.
All-up weight:	Originally 5.5 - 6 lb, but less with modern equipment
Rec'd engine range:	.35 - .40 two-stroke