



# TAIL END CHARLIE!

To say that the Honda was not really a front-runner in the 2007 Grand Prix season would be a bit of an understatement. **Jon Winter** sees if Studio 27's kit of the RA107 puts the model at the front of the pack...

In this age, Grand Prix racing is now firmly a manufacturer led business, the car companies using it purely as a marketing tool. Two approaches have mainly been taken to these manufacturers joining Formula One, the first being the complete new start-up operation such as that taken by Toyota, the second being to buy into or take over an existing team, the path taken by Toyota's fellow Japanese company Honda. The first year after taking over BAR, 2006, looked pretty promising for Honda.

Apart from a couple of major hiccoughs, the car was developed over the course of the season to the point where the RA106 chassis took its first win in Hungary which also marked Jenson Button's first win too. Admittedly the win was fortuitous in changeable conditions but nothing can take the result away from them.

Fast forward to 2007 and as with every team, press releases promised the usual, i.e. Another learning year and development, blah, blah, blah. The only slight downside from the off was that one magazine

pundit who used to be very prominent in F1 design circles took one look at the car, predominantly it's aerodynamics and remarked that it would never work... maybe in hindsight and bearing in mind Honda's results for the season he should forward his CV to the team...

Aerodynamics probably governs a modern F1 cars performance more than any other parameter. That's why we end up with clones of cars that if they were all painted the same colour you would be hard pressed to tell the difference. I have to

admit that I am not a great fan of F1. A sport that treats is (hugely extortionately) paying fans that pass through the gates as badly as it does while providing minimal on track action really doesn't float my boat. The cars are frankly ugly, looking like the illegitimate lovechild of a Formula Three car and a Tie Fighter, give me a Lotus 79 any day! I do however find it a great cure for insomnia as it is virtually guaranteed that after four laps from the start lights going out and James Allen croaking GO!, the cars will be spaced at three second

intervals and I will be laying on the sofa snoring...

So to say that the Honda RA107 didn't perform very well over the course of the year would be a minor understatement. I would imagine that the words 'unmitigated' and 'disaster' were used in close proximity in Honda's boardroom when discussing the team's performance after each race. So what makes the RA107 a good subject for a kit? The answer is its livery. The team certainly got more column inches in the press through this over their performance on track. Supposedly devised to promote Honda's green, environmental image it also backfired a bit, many commenting that it is trying to push a green image in one

of the most 'un-green' sports in the world, something that is a bit difficult to argue with really. Nevertheless, it is interesting, purely for the fact that it is different, the world map image covering the main monocoque and bodywork would certainly prove a challenge, mainly for the company who took on the manufacture of the kit, in this case Japan's Studio 27.

## STUDIO TIME

Studio 27 really don't need too much of an introduction to most regular TMMI readers. Their multimedia kits have featured in many reviews in this magazine and they are one of the leaders in this field of kit production. Modern F1 cars are not produced that much as kits any more probably

due to the licensing costs so the smaller, short run multi-media kit producers fill this void nicely, the only issues being the relatively high price of the kits over their mass produced plastic counterparts and the fact that many people are nervous of multi-media kits regarding the skills to build them. I can allay one of those fears though as, due to other contributors being loaded up to the hilt with projects for TMMI and a short build deadline, it was me who would build it, and I have never built one before, only previously doing plastic kits in larger scales and a couple of 1:43 scale models. Another voyage of discovery awaited...

When I finally got the kit home and opened the box to start the model, the scale of

what I had taken on dawned on me a bit. Fitment of parts would be the key and using the correct glues in the relevant placing as well as the preparation of parts before painting. The kit has a main body and undertray cast in resin with the suspension, wings and aero appendages being cast from white metal. The wheels are turned metal alloy with cast metal centres, a small photo-etch detail ring for the rim and nicely moulded soft vinyl tyres. Unsurprisingly, the decal sheet is large, carrying the full earth print with each decal carefully and accurately shaped to the panels on the car. It is beautifully printed and the overall body of the car just needs painting gloss black, the rest is all decal! ▶



Parts such as these dummy cameras from the nose of the Honda were covered with carbon decal and clear coated.

White metal parts were prepared by coating with a mix of filler and Liquid Poly before sanding back to fill small imperfections.

**A Merry Jig**

I made quite a few jigs when building this kit to ensure that various parts and assemblies were attached at the right angles or heights and the good thing is that its hardly rocket surgery to make them. As mentioned in the main text, the ride height jig was simple to make, two plastic rectangle sections glued to the edge of a rectangular piece of plastic sheet achieved this task admirably. The jig for ensuring the camber on the wheels was just as easy. A small set square from a Christmas cracker was glued on one edge to a plastic sheet platform. This was then sanded along its vertical edge using a camber gauge from RC car racing as a guide to give one degree negative. The same could easily be accomplished by checking with a protractor while filing the angle. Once made, these jigs can be used on other kits so they are simply the gift that keeps on giving. Lovely.

**TRIAL FITTING**

I had been warned by the Editor that building one of these was an exercise in fitment and alignment and it wouldn't be easy. What a way to inspire confidence! So I started the build by getting the body and undertray to close correctly. This all looked positive as the two parts on their own closed beautifully, however the introduction of the resin gearbox dulled this somewhat. Gentle fettling of the gearbox though soon had it all fitting nicely and it was onto the suspension to make sure everything fitted and to get the model to sit at the correct ride height. All the white metal parts were cleaned up and prepared in the same way. After initially sanding off any separation lines, the parts were then treated to a run over with a wire brush in a Dremel to remove any surface oxidation. Then they were painted with a mix of model filler thinned with liquid poly and then sanded back again using fine sanding sticks, this process filling any small imperfections. The suspension was assembled

as per the instructions using small screws at the upright ends while the holes were drilled in the body 0.2mm larger than the locating pins on the suspension parts to account for paint build-up.

The suspension all went onto the main body without issue and the correct and even ride height was attained by using a jig made from plastic sheet and square section strip that located the chassis at the height I wanted. The white metal suspension components were then gently manipulated so that all four wheels sat on the deck. Whilst at this stage it was also necessary to build up the front wing and gain the correct and level mounting for this. The wing's support is white metal and must be attached to and blended in with the main body. This support is longer than needed and needs the wing location marked then cutting back and finishing, something that looked daunting but was in fact not that hard at all. After this was done, the front wing was removed along with all the suspension parts,

All the aero parts were also carbon decaled and clear coated to give the same high lustre apparent on the parts from reference images.

the suspension was also disassembled back to its individual parts so that it could be painted. Another thing was annoying me though. The airbox on the main body was solid, after a 2mm inset, there was a big mass of resin making this area not look as it should, however well you finished it. Therefore I decided to attack it and open it up, something that had the potential to go massively wrong in a comedy fashion, in my hands anyways! However bravado took over and I convinced myself it was possible and after a half hour interfacing session between the Dremel, the airbox and a dental burr I had the desired result. If in doubt, have a go, it's the only way you'll learn. After all what's the worst that could happen...thankfully I didn't find out on this occasion...

**CARBON COPIES**

At this point I made an executive decision, one which would lengthen the build time but in my opinion make a better finished model. Formula One cars are predominantly



More carbon decal! Studio 27's own carbon decal was used on this build and conforms well with setting solutions.



The underside of the completed model showing the undertray secured to the main body by small screws.

carbon fibre so therefore adding carbon decal was the order of the day and for this I would try Studio 27's own carbon decal. Two sizes of weave were used; small on all the suspension components and medium on the front and rear wings along with the undertray. This meant though that nearly all the model would be covered with decal!

The usual procedure of making templates for the various parts out of Tamiya Masking Tape was employed. All the parts including the main body after the attaching of the chimneys were painted first in Halfords Grey Primer in the case of the resin components and Halfords Filler Primer for the white metal parts. Then they were painted with Halfords Gloss Black, applied by my Iwata TR2 airbrush after decanting the paint from the aerosol can using a straw. Then the decaling could begin in earnest. All the suspension parts were covered in carbon decal with the further addition of some gold bare metal foil on the rear upper wishbones to replicate the heat shielding used on these parts. The uprights in particular were

quite hard to decal and each part was covered with between five and seven parts of decal to get the right look. The undertray was also done, leaving the plank free from decal, this part to be painted in later. The airbox mounted camera and the smaller aero parts were also carbon decaled at this time. Looking at the images I found of the car on Google showed that all the carbon parts had a high lustre so all the parts were then varnished using several coats of Halfords Clear Lacquer, again decanted from the can and applied by airbrush. After this had been done, the underbody plank was masked off, airbrushed light brown and matt varnished.

**EARTHLY IMAGES**

Moving onto the body and the front wing, following the gloss black basecoat, the mammoth task of decaling up virtually all the surfaces could begin. More templates were made to carbon decal the front wing endplates and leading edge, underside of the main body monocoque, the inside of the air intakes and the exhaust heat shields along with the inside surfaces of the

cockpit. These were then put to one side so that the main livery could be applied and any positioning issues could then be taken into account and the templates adjusted accordingly. The Studio 27 decals in the kit are printed by Cartograf and are superb. They fit and conform beautifully to the body using Micro Sol and Set, to be quite honest something that may have seen really daunting on paper was really actually not that hard at all in practice. All the decals were applied with the exception of the chrome Honda logo on the nose. This was left off as I had fears of the clear varnish attacking the chrome and placed afterwards. The previously made templates were used to make the carbon decal and it was time to repeat as before and crack out the Iwata and clear lacquer the body and front wing. After leaving this to gas out for a week then polishing up, I have to admit that I was pretty pleased with the results.

Some detailing was still needed on the body though. The exhaust outlet shields had been carbon decaled before clear coating. These shields, as with the exhausts which had previously been

painted silver, were treated to some heat staining using Tamiya clear colours. These areas were then masked off along with further areas of the rear bodywork and matt varnished as per the finish on the real car.

**STAY SEATED**

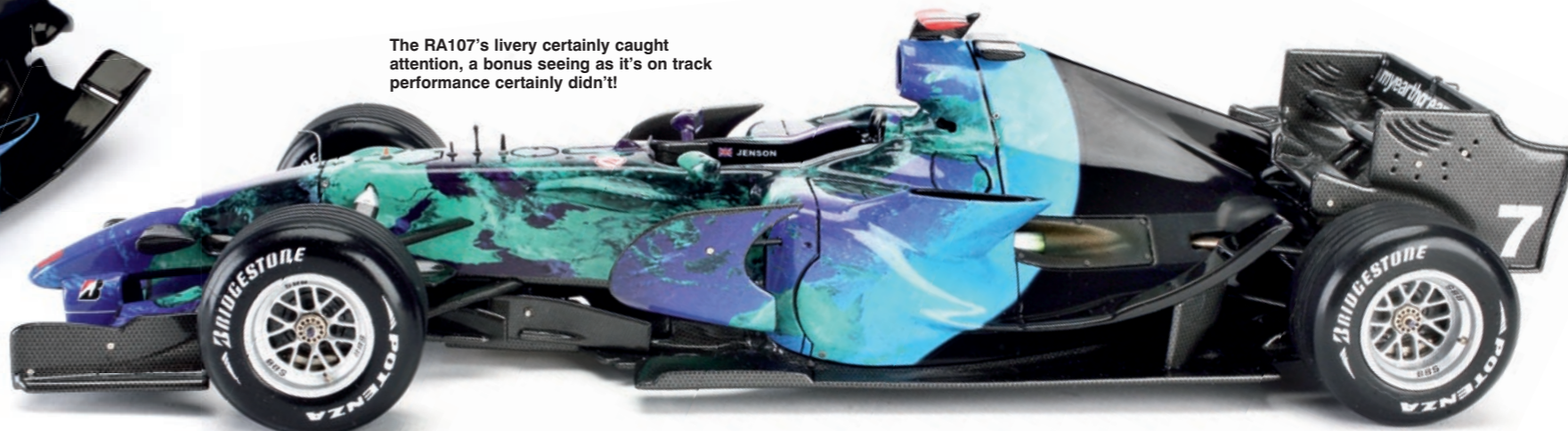
The cockpit on the Studio 27 Honda consists of a cast resin seat which goes into the body underneath. The dashboard is taken care of by a cast white metal main panel and steering wheel. The seat simply needed painting black and the seat belts finishing and attaching (see separate panel) while dash panel needed painting and carbon decaling along with the steering wheel and detail picked out. Now this is where my only small criticism of this kit comes out. The steering wheel in inaccurate in shape for a start but I had big fears that the cast white metal part would just not look detailed enough and be difficult to finish. After pondering various courses of action including trying to remake the steering wheel, I elected to use the kit part and try and add my own touches. Therefore the steering wheel was painted, carbon decaled



The underside of the body showing where the completed seat assembly is located after painting is completed.



The colour scheme is created by painting the body black and applying the kit's excellent decals.



The RA107's livery certainly caught attention, a bonus seeing as it's on track performance certainly didn't!



Top and bottom views of the front wing. These white metal parts were fixed together using five-minute epoxy glue.

and detail picked out. When this was done I have to admit that I was pleasantly surprised by the result! Add to this the photo-etch gear-change paddles that were also carbon decaled and my own wheel release mechanism made from various spare parts I had kicking around and I think this area looks absolutely fine. This was then attached to the dash panel after it had been painted, carbon decaled and lacquered, followed by gluing the assembly into the underside of the cockpit aperture.

**CLOSING TIME**

After affixing the completed seat into the body came the time to close it up to the undertray. The rear suspension was epoxied to the gearbox and in turn this was then glued to the main body. Then the undertray could be married up. This is held together using five small screws and care must be taken not to overtighten these small self tappers and strip out the threads that they cut. It was all looking pretty good at this point, so the front suspension was next to be added. Now due to the amount of paint, decal and cleat coat, several mountings had to be

adjusted to get the parts to fit, but fit they duly did and with the contrast between the carbon parts and shiny bodywork it was looking pretty stunning, even though I do say so myself!

I was however brought down to earth a bit when it came to attach the front uprights. Whilst the nearside part (right hand side looking at the front of the car) looked in the correct position and at the right angle, the offside one certainly didn't. Basically, using the top attaching screw on the upright pulled about eight degrees of negative camber onto the wheel. After some measurement, this seemed to be down to the fact that the top wishbone on this side is in the region of 1.5mm shorter than on the nearside, pulling the upright out of position. Correction is relatively easy though. The top wishbone to upright screw is hidden under the wheel rim. The right position for the upright was attained and the ride height checked again, then the wishbone was simply glued to the upright with five-minute epoxy. On the finished model you wouldn't notice the fault, the glued part is hidden and all looks correctly aligned. Minty.

The completed gearbox locates into the body after assembly.



The top view of the gearbox shows the carbon decal and heat shielding on the wishbones added by the author.



All the suspension parts were decalced using a smaller carbon weave than used on the undertray and wings.



**Belt Up!**

Studio 27 provide photo-etched belts with this Honda RA107 kit. I must admit that I am not necessarily a fan of these, to me even the best finished photo-etched belts that I have seen don't look a patch on proper fabric belts. That said though, this is a kit review so I elected to use these belts if possible. However I ran out of talent and just couldn't get them right to the extent that I couldn't get them to sit correctly on the seat, then damaged some of the hardware trying with my sausage fingers. Boooo. So plan B, which I hadn't yet devised, the reason being that the Honda uses green Takata belts. Now for belt material I have blue, black, red but no green. Belt hardware was no problem; I had some Scale Motorsport parts floating about but green belts? A visit to chance Hobbycraft netted various green satin materials, normally used for cake decorating. The problem with this was though being satin, although looking highly authentic, the material would fray when cut leaving untidy edges. So I endeavoured to find a solution and this proved to be soaking lengths of the material in Johnsons Klear, leaving to dry, cutting to width of the belts then soaking again and allowing to dry thoroughly before assembling the photo-etched hardware onto it. It doesn't completely eliminate the problem of the material fraying but it does allow the completed belts to be tidied and opens up a whole new range of colours that can be used for seat belts.

**WING IT**

I left the rear wing as the last major assembly to be built. I did this for a couple of reasons. Firstly I wanted to make any adjustments to position needed on a completed chassis so it all looked right but predominantly it scared me! Made from white metal pieces, even trial fitting parts proved hard to get aligned so a series of ad-hoc jigs were made from variously positioned heavy objects and Blu-Tac. Professional huh?! Epoxy glue was used to glue each part, only doing one at a time and allowing drying

time so the positioning stayed. One note worth mentioning though, while gluing the parts I actually used epoxy glue as a filler too between the parts. Any excess of epoxy can be simply wiped off using a cotton bud soaked in methylated spirits. Works a treat and leaves no residue. When all the elements of the rear wing had been glued and cleaned up, it was trial filled to the chassis and a small amount of material removed from the wing mountings so that it would fit when paint, carbon decal and clear lacquer had been applied to the assembly.



The chrome Honda 'H' logo was applied after the body had been clear coated just in case the lacquer attacked the chrome on the decal.



Tyres had their moulding seam removed and decals applied. The wheels and sidewalls were then satin varnished.



The airbox was deepened by using a dental burr in a Dremel. Care must be taken when doing this but it definitely enhances the finished model.

Basing the rear wing up with Halfords Filler primer, it was then sanded smooth in preparation for the gloss black paint. I thought it had all gone a bit too smoothly so far and disaster duly struck. The black paint developed a mass quantity of fish-eyes in the finish and no matter how much I sanded it back and reapplied the paint, they still appeared. The only solution was to start again as I figured it must be something in the primer coat, therefore the wing was treated to a brake fluid bath for a couple of days, thoroughly cleaned and the primer and

black duly reapplied, this time to an altogether more satisfactory finish.

Out with the Tamiya Tape and carbon decal again then. The rear wing was templated and completely covered in carbon decal, some 35 decals in total. Medium weave was used for the most part while the supporting struts were covered with the small weave to add some variation. The wing was then given three coats of Halfords Clear Lacquer after applying the kit numbers and decals. After leaving the wing a couple of days for the



Templates were made using Tamiya Masking Tape for all the parts to be carbon decaled. This rear wing alone used over 30 decals!



The underside of the body showing where the gearbox assembly is attached with epoxy glue prior to screwing the undertray in place.



Exhaust outlet area was treated to carbon decal and heat staining using Tamiya clear colours before being finished off with a coat of matt varnish.

lacquer to fully harden, it was then fitted to the car, only needing a small amount of adjustment to the mountings before being committed using epoxy glue.

**WHEELIN' N DEALIN'**

As mentioned earlier, the wheels are made up from metal parts made by three different processes. The spoked wheel centres are cast white metal, the main outer rims are turned aluminium and there is a photo-etched part that forms the outer face of the rim giving the etched BBS detail. The spoked cast

white metal part needs a small amount of clean-up where the separation line of the mould occurs and all three parts are then glued using epoxy. Care must be taken though to ensure you glue these parts together concentrically, off centre wheel rims definitely don't look cool and would put your model into standing on three wheels and rocking territory. I did this by eye, all highly scientific. Thankfully my eye seems reasonably accurate. The wheels were then painted using Halfords BMW Titanium Silver and the BBS decals applied. ▶

## CAR KIT REVIEW

STUDIO 27 HONDA RA107 ● ITEM NO. ST27-HD2003C

④ Moving to the tyres, these soft vinyl items come well moulded and look in good proportion and shape. There is a small separation line around their centre and this was duly removed with a sanding stick. The tyres were then fitted to the wheels and their front and rear faces satin varnished after applying the kit tyre decals. The tread area was not varnished, leaving it a more matt surface giving a look very similar to the tyres on the launch presentation RA107.

Before the wheels could be attached, the brakes needed taking care of. These look to be a white metal casting of a modified Tamiya part, although I may be wrong and look good with a buzz over with the wire brush in the Dremel and painting as instructed. These were then attached to the uprights on the car using epoxy glue.

The wheels attach using a separate centre wheel nut which incorporates a pin location. These then have a small photo-etch part attached on their front face to replicate the key for the wheel wrench gun as well as a small central pin which I remade using fine gauge wire. When painted and detailed, these parts look very good and add a good deal of interest to the wheel. Finishing off the wheels before attachment was a small addition – some tyre valves from Aber. Although machined from brass they are probably the wrong colour but I liked the contrast so on they went.

### CAMBER STANDS

Fixing the wheels would be a critical point. Mounting them so they were skewed would make the whole model look wrong so correct alignment was essential. To this end I made another patented quality jig that gave each wheel one degree of negative camber then glued each one in turn using five minute epoxy. When this was done, the front wing was positioned. A twist of fate made this easier as the build up of paint had turned this into an interference fit on the mounting. When the right location was attained, the wing simply had two small drops of thin superglue applied underneath to the mount, capillary action ensuring that it flowed around and formed a strong fixing. From then on all that needed doing was attaching the aero parts, mirrors, rear light and various body fixings and the model was complete.

### FINAL THOUGHTS

As I said earlier in this review, this Studio 27 Honda RA107 is the first larger scale multi-media kit that I have built and as such I almost talked myself into believing that the kit would be beyond my abilities. Having, as we do here at TMMI, to build it to a deadline for the magazine really didn't help this thought process. There must be many out there who think the same as me regarding their own abilities and kits such as this but take it from me, it is nowhere near as



The yellow in the centre of the wheels is Halfords Filler Primer, useful for covering and levelling minor defects.

The wheel nuts are very effective and add interest to the wheels, shown here before the satin varnish had been applied.



daunting as it may seem. The painting processes are all the same as for plastic kits, the differences lie in the preparation and building. Whereas with a mass market plastic kit you can be reasonably sure that there are going to be little or no fitment issues, multi-media kits are a whole different ball game. Dry builds are the key before any painting. This Studio 27 Honda though went together well. Sure adjustment was needed on

some parts but the quality of manufacture is very good and it builds into a fine model. I actually enjoyed building this far more than a straight injection moulded plastic kit, it is a whole new way of building and opens up a range of great subjects that can be built. In short then, this is a great model, looks good on the shelf and proves to be an enjoyable build, whether a multi-media kit building expert or somebody green to this field of modelling, just like me! ●

### MODELSPEC - STUDIO 27 HONDA RA107

<b>Materials:</b>	Cast resin, cast white metal, photo-etch metal, soft vinyl tyres, waterslide decals.
<b>Paints Used:</b>	Halfords Automotive Grey Primer, Filler Primer, Gloss Black, Satin Black, BMW Titanium Silver, Rover Steel Grey, Vauxhall Champagne Gold, Daewoo Stone Silver, Clear Lacquer Humbrol Enamels Red, Orange, Silver, Light Blue
<b>Accessories</b>	Studio 27 Carbon Fibre Decal ST27-FP0002 Small, ST27-FP003 Medium Bare Metal Foil Gold
<b>References</b>	Google image search is your best friend.

⚠ Always ensure that you work in a well-ventilated room when using aerosols and solvents

Item No. ST27-HD2003C



The only time most of the opposition saw this view of the Honda RA107 was when it was being lapped!

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