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SUPER SONIC!

MEV's new Sonic 7 is a brilliant kit car presenting enthusiasts with the classic combination of knockout visual attraction, total design, engineering and styling simplicity allied to standard 230 bhp per ton performance and a credit-crunch beating price. Ian Hynes gives it a brief workout on MEV's test track.

Stuart Mills is definitely getting the hang of this kit car design business. Following a few false starts with the totally practical 4x4, the central driving R3 and the electrically powered R2, all of which have been sold off to new companies which intend production at some point, success came in the form of the Rocket for which production numbers are now well past 60. Meanwhile the decks have been cleared leaving Stuart and 20-year time-served right-hand woman in every aspect of design, manufacture and sales, Julie Wilson, to get on with making and selling them. But that's too easy as well as not being an option for a restless imagination such as Stuart's. Whilst engaged in Rocket production, Stuart used a little down time to come up with his three-wheeled, single-seater electric trike that he took to the annual electric vehicle bash at Haynes' Sparkford track where it proved to be the quickest and best handling thing there despite being about the cheapest to manufacture. This led to more than a few demands for further vehicles but Stuart sold the car for a rewarding sum to a Belgian chap who just wouldn't take No for an answer and then produced a set of plans and details of sources for every single component used, in order for people to build their own copies.

My first visit to MEV to see the 4x4 found a tilting trike with a patented tilting system, another one-off bike creation for a customer, Stuart's silver Aston Martin DB5 which he hires out for film work as 007's car and the remnants of a variety of projects that have included microlight aircraft, all of which have flown, one of them as far as Spain. Thus it was clear that MEV comprised a wealth of engineering and design know-how, originally nurtured in the maintenance of industrial sewing machines but ultimately finding its outlet in a wide variety of more exciting avenues.

The Rocket came about when Stuart was looking at his V-Rod Harley bike which wears its chassis tubes on full view and which provided the inspiration for a car performing the same trick. But though the Rocket has been a great success, for every enthusiast who has bought one, there has been another stepping back from commitment for want of a bit more bodywork and protection. Stuart's initial response was to consider transparent polycarbonate side panels while also coming up with a full bolt-on screen but the more he thought about it, the more he thought additional bodywork would undermine the car's minimalist attractions so, in keeping with regular practice, he reached for a clean sheet of paper. Of course the Rocket is not only a visual success, its attraction extends to the donor vehicle, the car's dynamics and its excellent price thus in creating a complementary product, the brief was to come up with something retaining the Rocket's engineering whilst offering a body design that was the perfect alternative without being competition for the existing model. Step one was the chassis and while the Rocket uses large diameter round-section tube as much for aesthetic reasons as for those of structural considerations, the Sonic 7 uses a 16-gauge, square-section frame that duplicates the Rocket's track and wheelbase. It's a pretty simple looking affair but it's a case of appearances being deceptive. The sides are triangulated in round-section tube and there are twin side rails at the top of the frame. It's further enhanced by aluminium internal skinning for the floors and bulkheads. It may look simple but MEV is not a company to design something, make it and sell it the next day. Instead, once designed and made, it's subjected to as much physical testing as the company's own test track adjacent to the factory can provide after which it goes for a full engineering assessment and report. The dossier on the Sonic chassis pronounced it fully fit for purpose and recorded a torsional deflection figure of 2000 lbs ft / degree which is a figure worthy of a Formula Ford single seater whilst weight is a creditable 67 kgs.

The front suspension is by double unequal length round tube wishbones using Urethane bushes. The uprights are Cortina if you can find them, Hyundai Stellar as an even rarer option or MEV's own cast aluminium replacements but the company saves you the bother of searching them out by providing a pair with the kit. Coilspring damper units are from Gaz and there's no anti-roll bar nor any need for one.

The steering rack is supplied in the kit while the column is from the donor Ford Focus. Pedals too come from the Focus while one of the few items on the extras list is a set of Wilwood pedals with three master-cylinders and a balance bar for the brake bias.

Rear suspension is again by urethane-bushed double unequal length wishbones, the lower being a braced Z-arm, but this time clamping a fabricated steel upright accepting the Focus hub, flange, bearing and driveshaft.

While the Sonic offers the option of brake control via the pedal arrangement, you also have a choice with the stoppers between the standard Focus fare and the enhanced visual treat of drilled and grooved vented discs clamped by alloy four-pot callipers. People always tend to go for the pretty, hi-tech looking stuff but with a standard engine it's hardly necessary as well as putting a dent of a few hundred quid in the budget. However, the choice of engine and its properties of acceleration and arrest are a matter for individual builders.

Like the Rocket, the engine too comes from the Ford Focus which, in this case is the 1,800 cc unit. It's used in completely standard form and retains the standard EFI equipment and engine wiring loom. Many people will naturally gravitate towards the bigger 2-litre unit but though it gives more power it's also a bigger and heavier unit, especially in respect of its beefier MTX 75 gearbox. The 1,800 on the other hand, comes with the comparatively featherweight IB5 box which makes a not insignificant contribution to the Sonic's confirmed weight of just 495 kgs. With the standard 1,800 developing 115 bhp @ 5,200 rpm, the power to weight ratio is 236 bhp per ton which is rudely healthy.

Now while everybody is currently party to the general gloom of the credit crunch, one positive effect has been in respect of donor cars. While the crash repair business used to buy up all the lightly damaged cars for profitable repair, because the used car business is suffering the same pangs as the new car business, nobody is buying lightly damaged cars – except kit car builders. On the day on my visit, Stuart had a 1999 model Focus Ghia with front offside damage that he had bought

in for £310. Having removed the engine, gearbox, pedals, brakes and everything else he requires, he has all body panels save for the damaged front offside wing and front panels, the glass, one headlight and the airbag system for which the price from Ford is 770 + VAT but which regularly appear on Ebay at £200. This one has steel wheels but often they come with saleable alloys such that you can pretty well make your money back plus a few bob on top for your trouble.

But while the bones of the kit are familiar fare, it's the body that elevates the Sonic from the technically competent to the stylistically superb on top of which, for a car designed to have a bolt-on full screen, it looks equally impressive with either, the full screen carrying the appearance of an integral part of the design rather than a later afterthought.

Nor is it merely the styling that makes it so good but also the manner in which the body panels are fitted and mate with each other. In total, there are twelve panels including the four cycle wings. First are the two side panels running the full length of the car. These have a hooked section which drops over the upper chassis tubes after which the panel is stretched slightly to hook under the lower chassis tube, the panel then being riveted to the chassis underneath the car and along the inside where the rivet heads are covered by an aluminium finishing strip. The small slatted grille panel then bolts between the side panels at the front while the rear valence panel does the same at the back. The scuttle panel also incorporates the dashboard and a section under the bonnet and once the leading edge is dropped onto the underbonnet chassis tube, the rest of the panel drops perfectly into place. Thereafter, the bonnet and boot panels are lift-off units while when dropped into place, the bolt on nature of the grille and rear valence panels allow the panel fit to be adjusted.

Though it looks simple, the Sonic actually has quite a complex set of curves which are enhanced by the two-tone livery. Orange seems to be an in colour at the moment and this car looks terrific while another car has been ordered in Kawasaki green to contrast with the black. The side panels look all the better for simply having holes cut for the location of suspension components rather than having a single big hole for the lot but typical of the attention to detail of better quality kits, the panels are inscribed with the hole-cutting locations so you can't get it wrong. Not only that but the body panels arrive fully polished and with all flash-lines removed which means they look as per the panels on the car pictured. Another small aspect of attention to detail is to be found in the cycle wings which complement the car by having a bevelled edge to match the car's styling as well as full return edges so you don't need to detract from the professionalism of the finish by applying Titanfast edging strip.

The smooth clean and uncluttered look of the exterior is duplicated in the cockpit where the dashboard couldn't be less complicated if you tried. Dead ahead of the driver is an LCD panel from Vapor and costing under £100. This gives details of all important read-out and engine monitoring systems while the central switch panel is from MEV's own utterly simple wiring loom. It's supplied as the switch panel already wired to the fuse box with terminals supplied for the various circuits for lights, indicators, hazards etc, plus the warning lights. Using the donor Focus engine wiring loom and ECU, leaves you with just 15 wires coming out of the ECU. Four of them go to the ignition module after which it really is a doddle to wire up everything else. Stuart says he's never enjoyed wiring a car more or done it more quickly. However, if you want a set of alternative instruments, there's nothing to stop you fitting them.

At over 6 ft tall, even I had to swing my leg pretty high to clear the side of the car but, exercise aside, getting in is no problem. The seats are MEV's own GRP buckets but these have recently been improved to give more shape with enhanced support and thus a good deal more comfort. The seat slides for distance while the column is also adjustable and though, for me, it didn't move up quite high enough, it's a simple matter to shave a little more off the dash panel to allow it to do so. That aside there's the Vapor LCD panel ahead, the touch switch panel centrally mounted and just one of the Focus column controls as this car has a wind deflector screen and thus no need of the stalk operating the wipers. Behind you is the Focus 1,800 cc Zetec engine developing 115 bhp @ 5,200 rpm with around 100 ft lbs and driving larger diameter 17" rims, appropriately named Rocket, and fitted with 205/40 Yokohamas inflated to 18 psi all round.

The car is awaiting its SVA test but while driving it on the road was off the menu, MEV is unique among kit manufacturers in having its own test track adjacent to the factory. It's about ¾ mile long comprising a figure of eight with the two circular sections connected by a straight which is covered in both directions on each lap. It's hardly a race track being insufficiently wide for two cars side by side but it does have a good mix of sweeping and tighter corners as well as the space to work up some speed and subsequently to give the brakes a work out.

Start her up and the new exhaust with its central tail pipe pulses with promise as the chassis buzzes to the vibrations as it warms. And it needed to on this day as though the sun was out, the shaded sections of the track were still slick with something between heavy frost and ice and as such, very slippery just to stand on, let alone drive so there was plenty to be careful of.

The Sonic has a very spacious cockpit and a comfortable driving position that will be even more so with the new seats which will be supplied for all future kits. There's bags of adjustment in the seat for very tall drivers, bags of room round the pedals, good internal width so you're not constantly banging elbows with your passenger and there's enough space for your right elbow, but, if you need a bit more, there's plenty of room behind the cockpit side panel to allow you to fit an elbow recess. The sides of the cockpit are open with the chassis tubes on show but it's wasted space that could be half panelled to allow for several storage pockets. Alternatively, cars fitted with larger engines may have it panelled in to act as an air duct with the intake behind the front wheels and possibly twin radiators to either side of the rear engine bay.

However, that's up to you but, before you consider alternative or larger engines, you'll need a good deal of skill to master all the 1,800 can dish out.

Taking a few slow laps to get the feel of the car and the grip available revealed a very solid feeling machine with a very smooth ride and plenty of response in the controls. The clutch and throttle are well weighted, the brake pedal instantly responsive but equally progressive in reaction to sustained pressure. The gear change too is pretty slick while the only complaint was the steering. Supplied with the kit is a new rack and pinion with extension arms but it has almost 4 turns lock to lock. Actually it's 3.8 but it's still too much, especially when trying to keep it on narrow a track that would serve pretty well as a sprint venue. However, there is the option of a quicker 2.6 unit and I reckon that will be the one everybody goes for.

With the driver on board the weight split is nigh on 40 / 60 and as such, you get good traction off the line and a little practice on the clutch will enable you to minimise wheelspin and maximise grip. Once rolling, the 1,800 Zetec is a strong performer once free of the Focus donor. It's got a strong bottom end, solid mid range clout and develops its peak power at

lower rpm than many a 16-valve motor so you can make more use of it. It's also a supremely flexible and smooth unit equally suited to relaxed cruising or full attack.

On MEV's short track, driving the Sonic 7 is all action with hard acceleration, firm braking, quick gearchanges and lots of wheel twirling. On acceleration, the car is very eager and responsive, the nose lifting slightly in reaction to the throttle, the back end gripping and hurling you forward. The charge is aided by well spaced ratios and quick, smooth swapping from the twin cable change. Braking too is impressive. At just 495 kgs, the Sonic doesn't really need the cross-drilled and grooved discs or the Wilwood four-piston, aluminium callipers but they look nice and I can't deny that they offer firm and instantly effective braking but on the other hand, I don't think the standard Focus system would be in any way under par. Although the steering ideally needs something quicker which MEV can supply, it's by no means unmanageable as it is; you just have to put in a little more effort, especially when negotiating tight twists on a slippery surface. Brake, change down and turn in is followed by a bit of understeer which, as you get on top of it, rapidly translates to oversteer but working on the wheel to keep it on the track reveals a very responsive car blessed with really sweet balance. As the sun burns off the ice and the grip comes back to the tarmac, increasingly quick laps eventually dispense with the understeer as the Yokos work up some tenacity after which turning in is greeted with solid grip that ups the corner speed leaving you just the back end to worry about. This too is very grippy and can be driven hard for pure point to point pace with the tyres in total contact with the tarmac. But if you want some fun, a little more throttle on the exit reveals a very controllable rear end that would be a little more controllable with a quicker rack.

Overall, the Sonic 7 holds no surprises aside from its total competence and though speeds on MEV's test track were not high, there's nothing to suggest that greater pace will awake any sleeping gremlins. I love the look, I like its internal space and simplicity and I thoroughly enjoyed driving it although I do relish a go on the road.

Where cost is concerned, there's more good news as MEV confidently predict that a Sonic 7 can be on the road for around £6,000, especially if you go for a really good quality donor and recoup the cost through the sale of the unwanted parts. The kit details are listed on MEV's excellent website but include the fuel tank, locking cap, a set of four coil spring damper units and a good deal more normally found on the extras list for a kit price of £3,850 + VAT. Needless to say, there is an extras list which offers chassis and suspension powder-coating, the roll-bar, MEV's GRP bucket seats, MEV's wiring loom complete with all lights, switches and relays, a stainless steel exhaust and the Wilwood pedal set. I like the car. I like the price and it's great to drive. MEV's Sonic really is super.

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CAPTIONS

1

The Sonic 7 is just as good looking with the wind deflector or full screen which looks integral to the car rather than an afterthought. Hard and soft tops are under development.

2

Completely standard 1,800 Zetec and its ECU drop beautifully into the engine bay to provide 236 bhp per ton. The 2-litre with its MTX 75 box is significantly heavier.

3

The spacious interior offers total simplicity in every respect which suits the car to perfection but doubtless creative builders will find ways to enhance its attraction.

4

The dash / scuttle panel is now in one piece with the central duct. Note the Wilwood pedal system and the radiator location which could be moved ahead of the rack to create luggage space.

5

The cross-drilled, grooved discs with alloy four-piston callipers look good and work well but the standard Focus system will be more than man enough for the job.

6

The area within the side panels could easily be half-panelled to create sufficient cockpit luggage space for tents and sleeping bags for the annual pilgrimage to Le Mans.