MANTA B

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German-built coupé cool on the cheap: modify the Manta for some rear-wheel drive B-stinging style.

Pros
Versatile
Head-turning sports coupé
Some Vauxhall parts easily interchangeable

Cons
Feeble original engines
Sloppy ride on basic models
Some parts scarce

Here's a funny thing; over here, drop an XE into your Manta B and you won't feel the conversion is complete until you have a red top Opel badge adorning the cam cover. Pop over to the father land and it's exactly the opposite, a Vauxhall badge is pedigree. That says more about attitudes than it does the cars, but it underlines the fact that over here the Opel is regarded as more exclusive than anything that rolled off the line in Luton.

Fortunately for Griffin fans, there was an alternative to blocking all the daylight from your living room by parking a mammoth Monza on the driveway in the shape of the smaller, more economical, but still sporty and rear-wheel drive Manta.

The Manta A was produced from 1970-75 and was the main competitor to the MkI Capri. The Manta B came on to the scene just in time to take up the challenge off the MkII Capri in 1975 and continued production right up to 1988, after a second facelift in 1981, that's three World Cups, two general elections and a single Maggie.

Opel didn't hold back when it came to making the necessary changes for the Series B models. The chassis was stiffened and a roll bar added to stiffen the ride further. The carb-fed 1.8-litre LET (low end torque) engine was a new addition, while the 2-litre had an ultra-reliable Bosch LE Jetronic fuel injection system added, beefing the output to 110 bhp, 20 bhp more than the 1.8-litre.

Other changes for the B series Manta included a full complement of six gauges, a five-speed Getrag box and electronic ignition.

To confuse matters a little, there were also two other models based on the Manta B: the Manta C (coupé) and CC (combination coupé). The range of Bs was pretty extensive, with the line-up being updated over the years. The 1.8-litre cars included the GTJ, GT, Berlinetta and Exclusive, and the 2-litre models included the 2.0E, GTE and GTE Exclusive.

We couldn't, of course, forget the special edition Mantas, some of which were homologation cars for rallying and others Irmscher development cars, and included fabled names such as the i200, i240, i300 and Manta 400.

The upshot is that, with so many variants available, more than half a million cars produced over 13 years and good interchangeability between the German wagon and its British cousins, building yourself a cracking fast road car is far from out of the question.

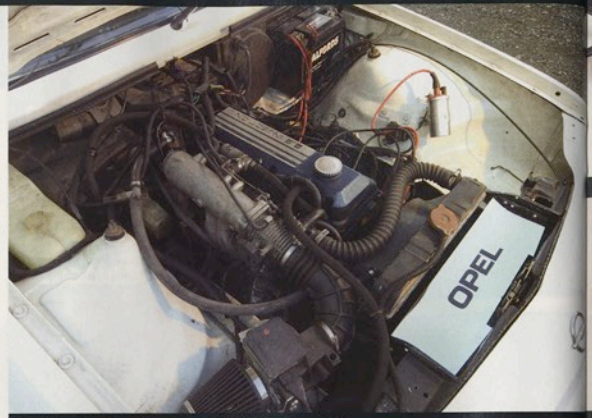
Engine

The original engines are pretty feeble according to Paul Newport, who knows a thing or two about heavily modifying Mantas. "The 1800 and the 2-litre aren't the most playable," he says. "They're fairly versatile, but I've always gone down the route of stuffing a bigger one in." The 2-litre uses Bosch LE Jetronic injection so it's possible to have the ECU re-mapped, but Paul reckons it's not worth it, resulting in little power increase and upping the fuel consumption.

It's a bit of an industrial engine, so the 2-litre is only good for about 130-135 bhp. With good aftermarket pistons and rods you could probably get a little bit more, but Paul reckons with a 16-valve going straight in it's hardly worth it.

"It's mostly XEs that get dropped in," he says. "The 1800 gearbox fits an XE directly, and it's also possible to fit the 2-litre eight-valve SHE." The 1800 Berlinetta has the same propshaft, engine mounts, oil pick-up and sump as the 16-valve so it's an easy conversion.

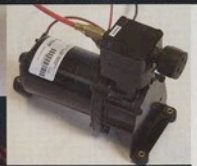
Paul's car has a 2.2-litre from a Carlton — the same dimensions as a 2-litre but with different pistons. The 2.2 has more power as standard, as does the 2.4 CIH, and the potential for about 155 bhp for little cash. It's just a case of taking a Dremel or die grinder to the head.



2.2-litre Carlton motor is an easy swap using the 2-litre gearbox.

Injection engines benefit from the 2.4-litre fuel rail.

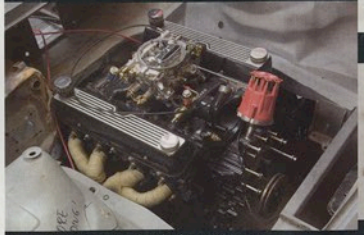

Magnaflow exhaust cans are readily available.


Brand new compressor for Paul's V8 air ride set-up.


Common modified 16-valve distributor set-up.


Relocated ignition coil is another popular mod.


Polo Coupé servo with Monza master cylinder saves space.


Huge V8 needs plenty of engine bay metalwork.


The 1.8-litre sump mount and oil pick-up are very useful.

The 3.9 V8 is the biggest conversion Paul's attempted; in fact his own V8 Manta B is currently a work in progress. Apparently the hardest thing is getting it into the engine bay, which requires a lot of metalworking.

A 16-valve and 2-litre engine will use a standard Manta rad, but it's best to have it re-cored with three cores. Paul reckons most of the hoses are interchangeable between the cars, but cooling isn't a major issue. Tech diagrams are available on the Manta Club forums.

Exhaust wise, Paul thinks stainless systems are the way to go. Aftermarket kits aren't as readily available as they used to be, but the standard manifold is great for the 2-litre, 2.2 and 2.4 engines — it's a 4-2-1 system. "Magnaflow do excellent stainless bits for the V8s," Paul tells us. "They're very cheap direct from America. I designed two back cans which they then built for me."

Paul built his friend Alan's car for him, dropping in a 16-valve XE with twin 45s on a SBD manifold. The distributor has been moved to make way for the carbs: it's an 1800 distributor with a fabricated bracket, but is quite a common set-up.

The fuel injected engines can also benefit from 2.4 (think Frontera) injectors, which flow a bit better and have larger capacity. A 2.2 inlet manifold with 3-litre Monza throttle flap helps them breathe better, too.

Although Paul thinks modifying the standard engines is a bit of a loss, he does rate them highly for strength. "They're weak because they're strangled," he says, "but the internals are strong. You'll struggle to kill a stock engine by modifying it."

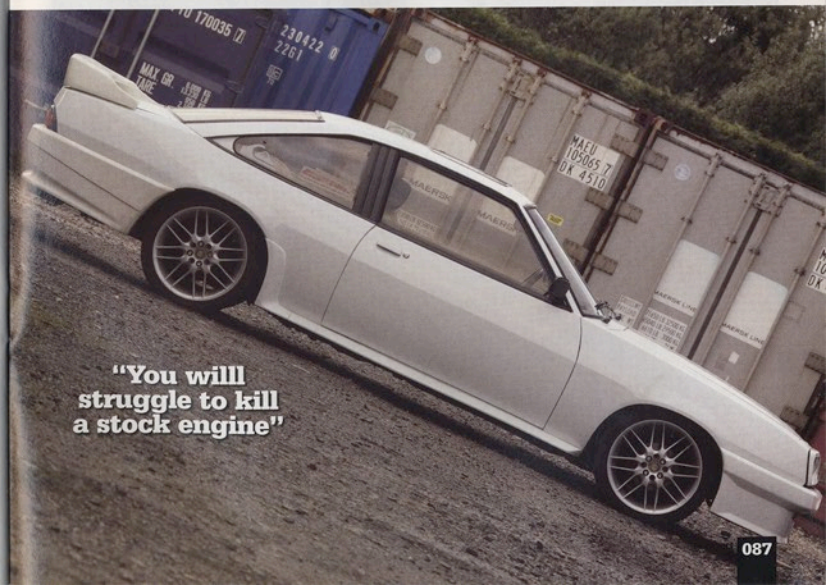
Electronic ignition for the V8.


Performance air filter aids breathing.


Fresh 2.2 is ready for Paul's Manta.

You'll have to get these made, or imported from Germany.


The mighty 16-valve XE drops into the bay a treat.



Brakes

"Brakes are a tricky one," says Paul. "If you keep the standard 13 or 14 inch wheels you can't do much with the brakes as the wheels are too small."

The answer, then, is to fit bigger wheels, in which case anything goes. That includes Volvo 240 four-pots, which will bolt straight on to Manta hubs, although you'll have to use Carlton 2.2 discs, and are obviously a vast improvement over the original single-pots. You'll need to space out a gap of about 2 mm between the hubs and callipers, but it works great and if it's good enough to halt the Tory housewives' finest, it's good enough for the Teutonic coupé.

"It's all pretty interchangeable on the front," Paul says. Four-stud hubs mean a lot of discs will fit: the list of possible suitors includes the previously mentioned Carlton and the Astra GTE .

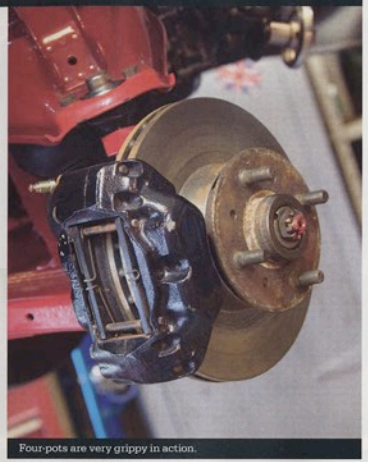
Calibra sliding callipers are better than the original floating Manta units. They're a bolt on conversion, but you'll need to get the discs drilled to make the set-up work efficiently.

With the rear brakes you can either maintain what you've got — they're actually not bad for drums — or there's a rear disc conversion available, although it may take some tracking down. Start looking at www.mantaclub.org.

"You should at least play with the front brakes if you're going for a 2.2 engine, or bigger or a 16-valve," says Paul. "The originals are more than man enough for the 1.8 or 2-litre though."

It's also possible to fit a Monza master cylinder, which is bigger and gives a better pedal. Add a smaller Polo Coupé servo, which is smaller but just as effective, and you'll save yourself room for carbs or engine transplants.

Volvo 240 four-pots are a bolt-on upgrade.



Four-pots are very grippy in action.

"A grotty car will cost as little as £300"

Suspension

The ride was not the Manta's pièce de résistance — they sat quite high as standard and had pretty sloppy shocks and springs. This is a fairly easy fix: you can lop a coil off the standard springs or purchase aftermarket ones without much hassle. "The standard shocks are far too sloppy," Paul tells us. "I'd recommend Bilstein units or Spax adjustables."

The cars have an independent, double-wishbone front set-up with turreted shocks and a beam axle rear. It's a simple set-up but a proven performer and, with some simple upgrades, can make the cars handle very neatly indeed.

Changing the rear shocks and springs is easy enough, a 30 minute job if you can wield a spanner, but Paul recommends steering clear of the fronts unless you have a ramp and air tools, as the bottom wishbone needs to come undone at the lower ball joint access the set-up. A spring compressor is essential.

Paul's car has been dropped about 1.5 inches, which has stiffened up the ride and got rid of some of the tell-tale gap in the arches.

Poly bushes are available from companies such as Superflex (they're identical to an Australian GM model, so can be ordered pretty quickly). Powerflex also do a full range for the Manta B.

Paul's V8 is has an air bag set-up — useful for avoiding speed bump damage, but not cheap — he uses a Firestone Air-Ride set-up with a compressor and air tank on board.

Trick air bag suspension is not for the faint hearted.

Body

The panels from Bs and Cs are largely interchangeable: "The Cs and GTEs came with sidekirts and were given the most treatment," says Paul, but pillaging a good GTE for the panels won't earn you any friends in Manta circles, especially with panels and even aftermarket kits being hard to come by.

Paul's replaced his metal sunroof with a glass example. The metal ones rusted badly so cutting them out is something that's required from most Manta fans at some point. "They're an absolute nightmare to sort," he says.

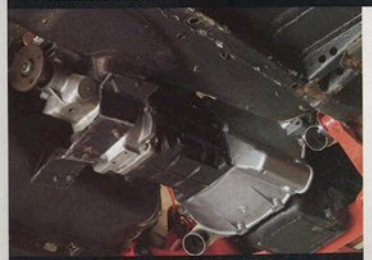
Apparently a lot of people are going for smoothed panels at the moment: Paul has got rid of his fuel cap and put the filler neck in the boot.

Replacing the rear lights is also popular — Manta A units can be made to fit if you're handy with the metalwork, and quad-headlamp kits are an easy fit. The front grilles are often changed too — originally metal, Paul's made his own fibreglass example. Alan's car has Manta 400 mirrors and Astra GTE bonnet vents.

"The later cars on E and F-plates rusted really badly because of poor metal — must have been something to do with the end run and poor materials being used," Paul says.

Some of the special edition cars were developed by Irmscher, so that's a good place to start looking for kits and styling options. Moving in the right Manta circles will turn up parts, but don't expect anyone to give them away.

Transmission



Rover SD1 box copes with V8 power in its stride.

Manta halfshafts, and Rover diff and housing.

The unit from the 1.8-litre is a sturdy box, too.

This bit's pretty simple — the 16-valve will use the 1800 Manta box while the 2-litre, 2.2 and 2.4-litre engines will take the 2-litre box. A Vauxhall V6 will take the 1800 box too, while the V8 will use a Rover SD1 gearbox.

"They're very strong units," Paul says of the standard boxes. "I've never found the limit of the 1800 and I know of one guy who turbo'd a 2-litre and ran it through a 2-litre box with no problems."

Interestingly, Paul used the 2-litre box on an Ascona 2.4 conversion he did with no adverse effect on the box's reliability. BMW also used the same Getrag unit on engines up to 2.5 litres, so it's clearly not going to go into meltdown at the first sniff of power. Because it's such a common and indestructible unit, spares are really easy to come by, too.

LSDs were a factory option, but for some reason were infrequently taken up — you can still find them if you're lucky though.

"If you run a Rover V8 with a Rover back axle you can cut the half-shaft tubes, weld Manta ones into them and end up with Manta mounts and Rover strength," says Paul. Of course, this also leaves plenty of potential for LSD-based shenanigans.

The V8 will also take a TVR six-speed box. You can use a Ford T5 box with a Rover adaptor for the bellhousing, too.

Wheels

Common stud pattern gives a good choice of rims.

They're all four-stud, so anything from a Vauxhall with a 32 offset or similar will fit. "It's really a case of suck it and see," Paul tells us. "If you like the look then most places will be able to tell you if they'll fit. That's the great thing about these, the four-stud set-up is really interchangeable."

Some of the standard rims are pretty cool, the Manta Exclusives for example, but there's no end of aftermarket options thanks to the common stud pattern. Of course, to improve your braking you'll need to consider something with plenty of space behind them.

Interior

Six-dial dash comes as standard. GTE seats are extra comfy, too.

Interiors are not particularly interchangeable, and most people don't bother messing around with them too much as all the cars had six dials as standard. The Cs and GTEs had nicer seats though, so it's worth keeping an eye out for a good example. Electric windows and central locking were a speck on Opel's horizon, so you could up the luxury levels if you're willing to play with the electronics.

A different wheel choice is a popular start for any potential modder.

How Much?

"A grotty car will cost as little as £300-500, but a good one will be £2000," says Paul. "You can spend a fair amount of money modifying: my V8 will cost thousands to finish. A good red top engine will set you back £200-250 plus freshening up, but parts are readily available." Costs all depend whether you're building something unique, in which case you'll spend thousands on bespoke parts such as Paul's air bag suspension set-up, or upgrading using breakers' yard bolt-on parts. Panels and body parts are some of the hardest to come by, but prices are often negotiable — you could pay as little as £15 for a rear valance or £200 for Irmscher bits.

Expect to pay £400-500 for adjustable shocks and springs, but you'll bag yourself some Carlton discs or Volvo four-pots for £30-40 from a breaker's. Tuning bits for XEs are two for a penny: a gasflowed head will set you back around £400 and a fast road cam £150, although the forum classifieds turned one up for £45.

"Forums are the best places to track down parts," Paul tells us. "My Opel rocker cover came from Paul Beats in the Manta club, and Thorsten Kriegsamn at Opel Classic Parts in Germany is excellent."

This One's Mine

For a guy who only plays with Mantas in his spare time, Paul Newport knows a thing or two about the Opels. He's built a few of his own and a couple for mates out of his workshop a few miles from Penzance. It's not just retro cars that Paul's into either: his haulage company runs some very cool old school trucks, too. Frankly, we have a lot of time for anyone who can keep a fleet of early '80s Seddon Atkinson trucks running.

"I've had this white car for 15 years," says Paul. "It has a 2.2-litre from a Carlton at the moment, but I've another engine on the bench ready to go in."

Paul's a regular contributor and tech guru on the forums at www.mantaclub.org and also frequents www.migweb.co.uk on a regular basis. "This is a hobby really; I like buying and selling and doing the usual Saturday stuff," he says. "I post a lot of technical information on the Manta forums and I get a lot of phone calls asking for Paul Manta," he laughs.

His Manta love affair started at an early age: "When I was 10 or 11 years old a friend's dad pulled up in a brand new GTE with all the side skirts — the full works — and I thought, 'I've got to have one of those'. As soon as I passed my test I bought myself a gold hatchback then replaced it with this one. Of course, I've had a few since, about 15, and I have about eight at the moment."

Clubs and Sources

www.mantaclub.org
www.migweb.co.uk
www.mantaworld.com

Opel Classic Parts (Germany)
www.opel-classic-parts.com

MANTA SERIES B TECH SPEC

BODY
Steel construction, three-door available in hatchback, coupé and combination coupé styles. Length: 175 inches; width: 66.4 inches; height: 52.8 inches; wheelbase: 99.1 inches; unladen weight: 1025-1065 kg.

ENGINE
From 1981 onwards choice of: cast iron block with alloy head, 1796cc in-line four-cylinder, 84.8x79.5 mm, GM Varijet II twin-choke carb. Compression ratio: 9.2:1; maximum power: 90 bhp @ 5400 rpm; maximum torque: 106 lbf.ft @ 3000 rpm.
Or:
Cast iron block with alloy head, 1979cc in-line four-cylinder, 95x69.8 mm, Bosch LE Jetronic fuel injection. Compression ratio: 9.4:1; maximum power: 110 bhp @ 5400 rpm; maximum torque: 120 lbf.ft @ 2800 rpm.

TRANSMISSION
1.8-litre: five-speed all synchromesh manual gearbox: 3.720, 2.020, 1.320, 1, 0.800, reverse 3.450, axle ratio 3.670.
2-litre: five-speed all synchromesh manual gearbox: 3.720, 2.020, 1.320, 1, 0.800, reverse 3.450, axle ratio 3.440.
Opel three-speed auto: 2.400, 1.480, 1, reverse 1.920.

SUSPENSION
Front: independent unequal length wishbones, telescopic dampers, coil springs, anti-roll bar.
Rear: live axle, trailing radius arms, transverse linkage bar, coil springs, telescopic dampers.

BRAKES
Front: 9.7 inch discs with single-pot floating callipers.
Rear: 9.1 inch drums, servo assisted.

WHEELS AND TYRES
Steel 5.5Jx13 inch sports wheels with 185/70 radials, light alloy 6Jx13 inch with 185/70 radials or light alloy 6Jx14 inch with 195/60 radials.

INTERIOR
Differing trim levels depending on model, six dials as standard.