YAMMA

Place: MIRA timing straig
11.69s @ 120.6mph. Daf
Stan gets up to his old tr

Crossbreeding is a fascinating thing. Isadora Duncan once asked George Bernard Shaw to marry her, the idea being that a Hollywood beauty matched to a man of his wit and intellect would produce world-beating offspring. "But Isadora," George is reputed to have said, "What if they had my looks and your brains?" We can therefore safely say that George understood the first rule of genetic engineering, namely that it is very easy to make a horrible mess of things.

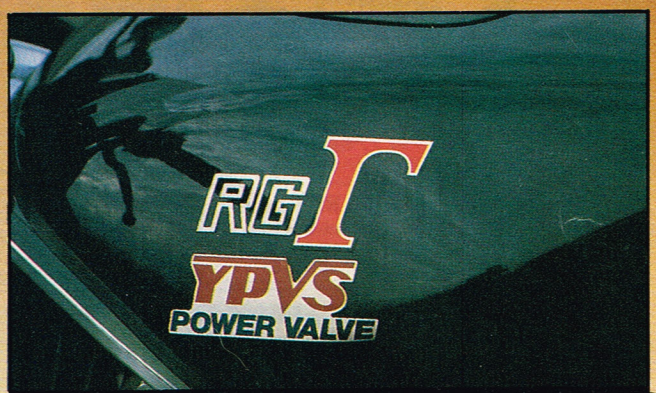
Nick Croom's YammaGamma is definitely not a horrible mess, a fact that was pressed home to me as it wheelspun through the first 70 or 80 yards of MIRA's sodden quarter mile strip with the engine screaming to 12,000rpm. The rain was sheeting out of the sky, the far end of the track was invisible and I was savouring the rare pleasure of going completely bananas on a 140mph motorcycle without being able to see more than a couple of hundred yards ahead. It's a hell of a feeling.

The bike, a YPVS350/Mk2 Gamma hybrid produced jointly by Stan Stephens and Nick, his shop manager, had just won the Ultimate Streetbike two stroke twin class with an incredible 11.70s/119mph run at Long Marston. It had been a couple of years since I'd last tested (and spectacularly destroyed) one of Stan's LCs, and he'd brought Nick's bike along to MIRA to achieve one of two things: get an even better standing quarter time or watch me die in the attempt. Either way, Mr Stephens was looking forward to a good day's sport.

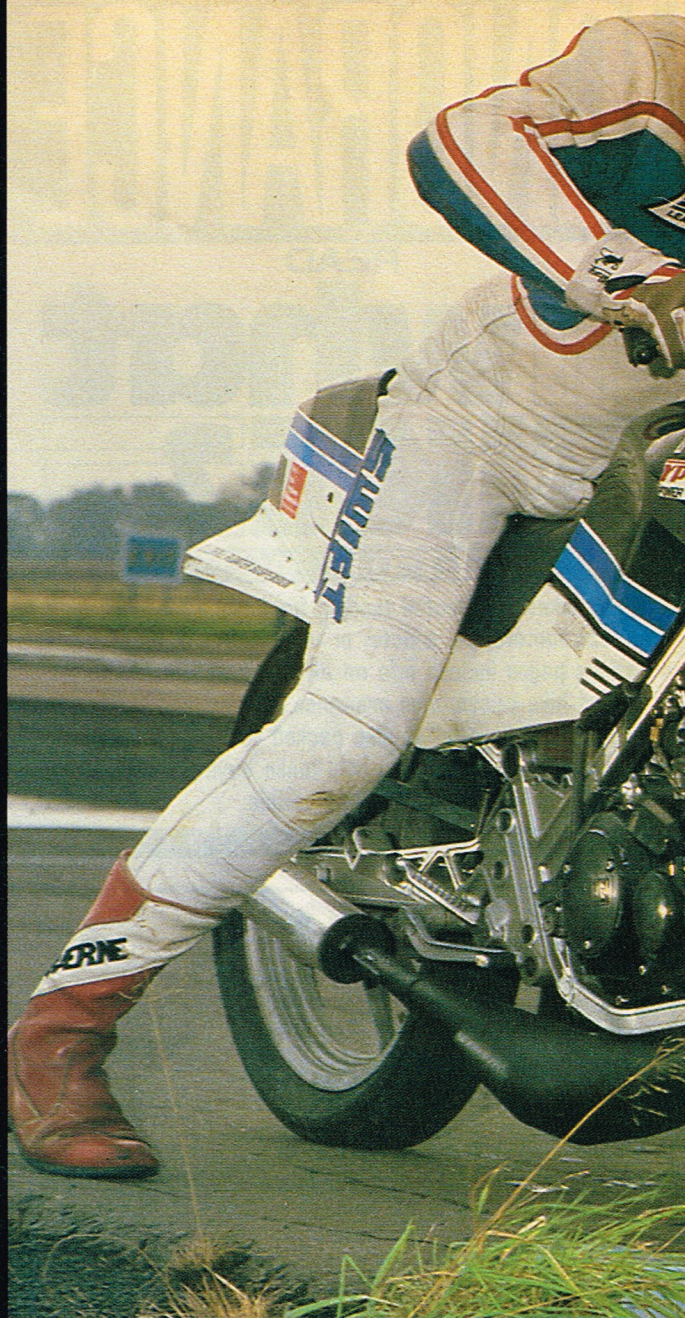
Between them, Stan and Nick can be credited with the invention of the YammaGamma back in '84. Stan had read a euphoric roadtest on the Mk2 Gamma (written, incidentally, by one M. Oxley) and on the evidence of this, rushed out and got one. It was the first new bike he'd ever bought.

Unfortunately it didn't perform as well as the roadtest model had, producing a peaky 32bhp on Motodd's dyno. Stan went on to develop a tune for the Gamma but for racing the 250LC remained more powerful, more reliable and cheaper. At the same time the Gamma's aluminium chassis was way ahead of the LC's. The answer was obvious — put a 250LC motor in. Better still, make that a 350YPVS.

Stan reckons to have made around 20 YammaGammas since then, but Nick's one is the original. It's done 20,000 miles



A sticker says a thousand words.



te: 7 Oct. Standing quarter: Oct. Top speed: 141.6mph. Reckless Rupert kicks ass.

Pics: Phil Masters

clock in day to day use. OK, so a standard LC can almost do that, but you have to remember that Nick's bike has 500LC clocks . . .

Which brings us quite nicely back to MIRA, the rain and a gleeful Stan sitting in the timing hut observing proceedings. To give the bike a bit more zap for the Long Marston meeting, he had increased the compression slightly, advanced the ignition timing and jetted down. This made the LC far crisper than any roadgoing two stroke, and the nearest comparison I could think of was a CR500 motocrosser which had the same instant arms-out-of-sockets tug whenever the throttle was opened. There was another similarity in the way the LC was going through the gears — regardless of whether it was in first or fifth, the motor pulled round to its 11,800rpm change-up point with equal and amazing speed. Each run was a blur of evenly-spread gearchanges, then I'd be braking again. In the wet, the best I got was 12.50s @ 114.3mph — far faster, incidentally, than any other tuned LC we've tried and on a par with the aforementioned CR500 in the dry.

What we really needed was some better weather, and after an extended lunch we got some. As the track dried out the times came down to around 12 seconds (about the same as a stock 500LC), but the rear Michelin Hi-Sport would only grip well immediately after a burnout. Unfortunately MIRA's triggering system requires the bike's front wheel to sit on a rubber strip for ten seconds before you can go, and in its overheated, worn-out state the clutch was dragging enough to stall the motor during this time. The only way to do it was to forget the burnout and leave the bike in neutral until the last second.

Then Stan remembered that Nick had let the rear tyre down to 6psi at Long Marston for more grip. We didn't have a gauge that read that low so we just guessed and the YammaGamma responded by doing 11.69s @ 120.6mph. It was still wheelspinning like crazy but any less air in the back tyre would have made things very wobbly at the far end of the quarter. Stan was delighted, and despite claiming not to be interested in drag racing, started talking about nitrous oxide and a GSX-R1100 rear wheel as the next step. The fact that we'd beaten the previous best by a mere 1/100th of a second was lost on both of us.

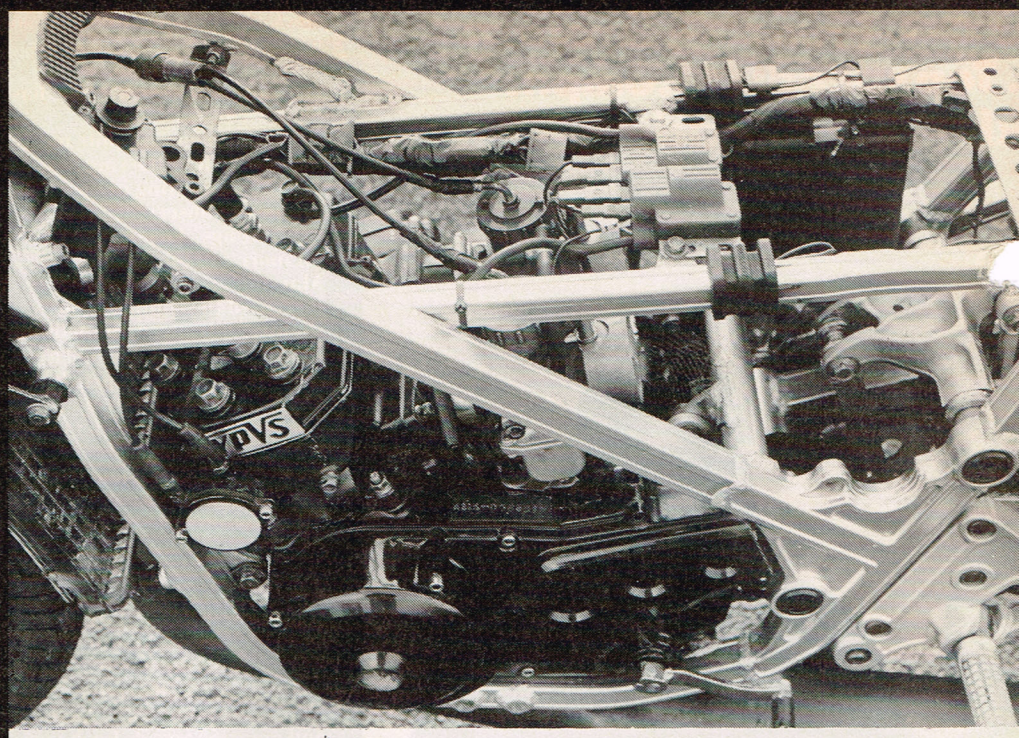
YAMAHA?

pumped up the tyre. My first run was a bit cautious as it had started raining again, so having made sure I could stop in time I went back up the strip for a balls-out attempt. First, second, third, whuuurgh. We'd forgotten the small detail of jetting up, and the engine had responded with a mild seizure. "The last thing Nick said to me was, 'Don't forget to jet it up for the top speed run'," said Stan after he'd unscrewed a whitened plug from the right hand cylinder. End of day's test.

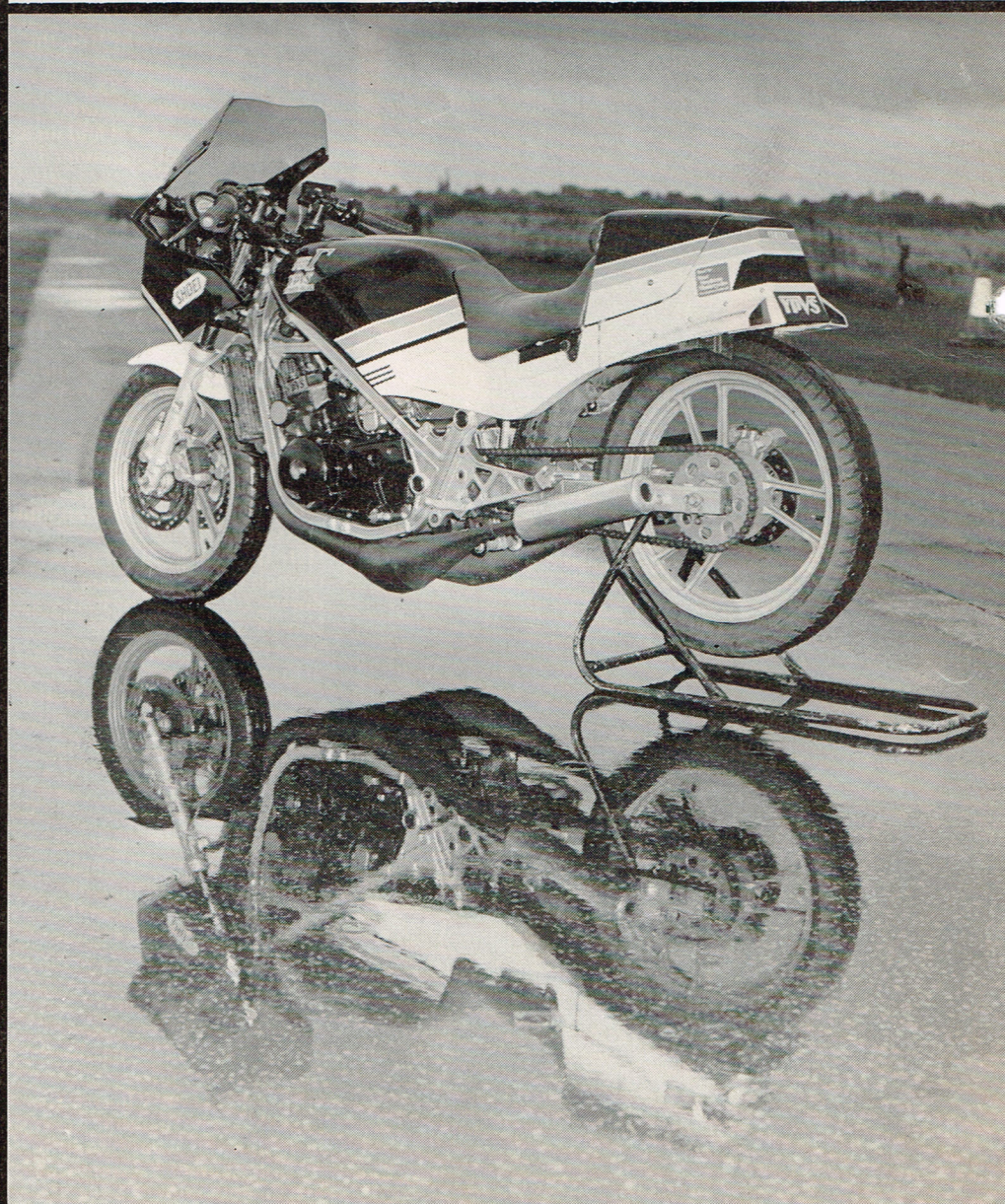
Getting 11.7 second quarters out of a YPVS is great fun, but with extended swingarms, low tyre pressures and very close-to-the-knuckle jetting it's not representative of the YammaGamma's everyday performance. Back at MIRA the following week, we got an easy 141.6mph at 11,600rpm with the bike still accelerating like a mad thing as it went through the speed trap. This was in road trim — short swing arm, standard shock, full fairing, 18 tooth engine sprocket and one size up on the main jets. Nick says he's seen 12,000rpm in top several times and if I'd kept the throttle wide open for the rest of the strip I'm sure I would have done too, but I probably wouldn't have felt like talking about it afterwards. Steel fences have that effect on people. Sadly, the faster mile loop track, where we might have seen 145mph or more, was being hogged by a couple of HGVs that day.

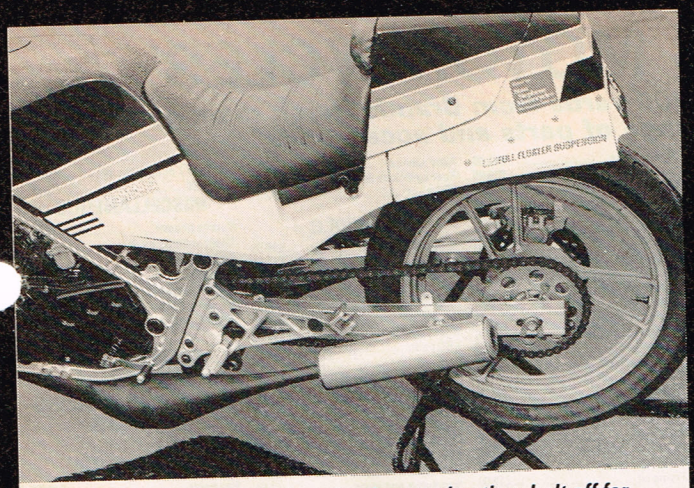
Nick also has an FZ750 and says that his YammaGamma can outperform the bigger bike most of the time. The figures we got at the track bear this out. Depending on what gearing you choose you get virtually the acceleration or the top speed of a 80bhp roadster. As the bike still looks, to casual observers, like a 250 Gamma, this is rather like owning a pet ferret which can bring down a water buffalo. A neat trick.

Nick certainly thinks so, because after 20,000 miles of terrorising Kent he's taking the bike off the road to concentrate on drag racing next year. In a way confining it to straight lines is a shame; one of the best aspects of the conversion is the way the Gamma's fabulous chassis exploits the LC's berseko power at any angle of lean you care to sample. That and the fairly substantial weight reduction makes the YammaGamma one of the best engine swaps we've come across. If you want to build one, Stan has explained exactly how to do it on the opposite page. If you want it to do

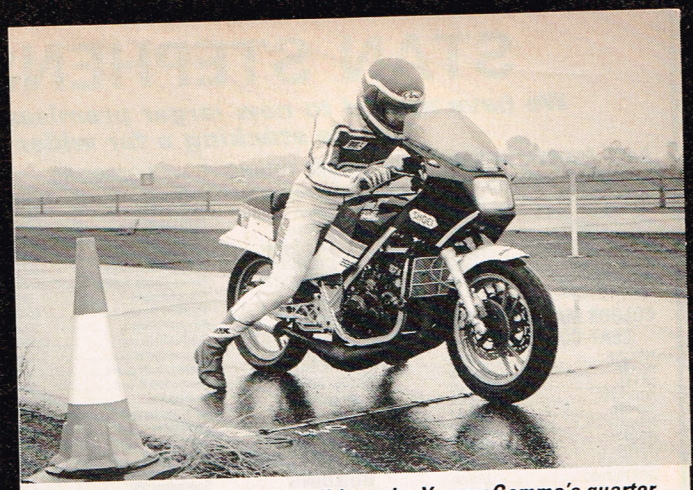


It all fits because that's the way God meant it. Note super-stiff rear shock.



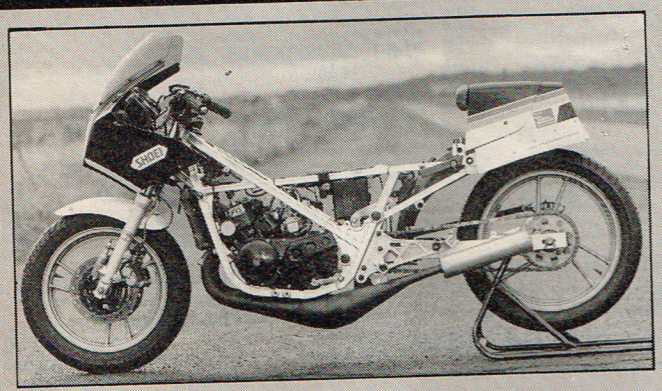


Swingarm extensions bolt on for drag racing then bolt off for street lunacy. SS pipes were a touch noisy for the road.



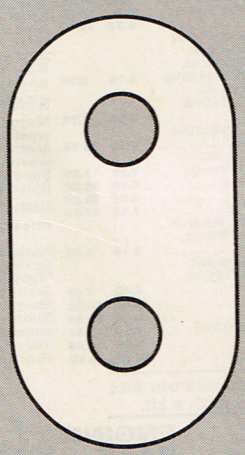
Yee haw! Even in damp conditions the YammaGamma's quarter mile times were as good as a 500LC's.

Build your own YammaGamma



Ingredients: Complete YPVS engine unit with ignition, carbs and cables. YPVS exhausts or SS Performance race pipes. YPVS complete wiring loom and electrics: CDI, rectifier plus plastic mounting, computer, fuse box, servo motor and cables, switchgear, ignition switch and coils. Complete Gamma rolling chassis, indicators, lights, clocks (apart from tacho which must be YPVS/500LC/TZ because the Gamma tacho's gearing is fatally different), radiator, K&N, S&B or Powerflow filters. One workshop, nuts and bolts as required and a mechanic with brain engaged.

Engine Mounting: Use the Gamma engine bolts. Make two spacers up for the front engine bolts; 50mm on the left and 18mm on the right. This centralises the engine in the frame and lines up the sprockets. For the rear top mounting make up two small plates 30mm wide (see diagram) with two 10mm holes drilled 27mm apart. The shortened engine bolt goes through the lower holes in these two plates; the top holes line up with brackets on the frame so you need two short bolts here. When the engine is mounted like this there is no need for stabiliser bars.



This is a rear engine mounting plate.

Covers: File off the lip on the lower rear edge of the right hand crankcase/clutch cover joint face to clear the frame. Shorten, then file, the left hand plastic crankcase cover below and behind the gearchange shaft. File off the front of the left hand Power Valve cover and Power Valve cable adjuster housing — again, this is to miss the frame.

Cooling system: Go to a car accessory shop and buy Quinton Hazell hose part numbers RH935 (top hose) and 2 x RH1465 (bottom hose). You only need the right angle bends don't. Instead we remove the thermostat, blank off the by-pass hole with a bolt and use it as an air bleed when filling the system with coolant.

Exhausts: Use YPVS exhausts or for racing our SS Performance pipes. Cut off the rear mounting brackets and reweld 60mm further back. Put a neat flat or dent in the right exhaust to get the brake lever to clear.

Electrics: Mount the CDI and rectifier assembly on the three mounts on top of the frame where the airbox used to be. The rectifier goes above. Mount the computer box on the rear mudguard behind the brake reservoir. Chamfer the side of the computer to miss the rear shock. The fuse box goes on the rear mudguard. The battery goes in the normal place with Gamma battery connections. Mount the servo under the tank and the YPVS coils on the Gamma coil mounts.

Wiring connections: These are approximate, Stan's excuse being that his 'well-thumbed page of notes is worn away.' If you've got this far, however, you're unlikely to be a complete dunderhead and can therefore work the finer points out yourself.

Plug in all normal plugs which match e.g. switchgear etc. Use the YPVS headlight plug. Cut the six way white plug off the loom whose wires are the following colours: light brown, dark green, blue, black, green/red, black/red. Join as follows:

YPVS loom	Gamma bits
Earth black	Black/white
Clock lights blue	Grey (part of four way plug inc. side lights)
High beam yellow	Yellow
Indicators single dark green	Light green
Indicators double dark brown	Black (part of four way plug for indicators)
Neutral/oil/temp light brown	Orange
Neutral light blue	Dark blue
Oil black/red	Blue/white
Temp green/red	Black/green
Rear light blue/red	Brown/grey
Rear light green/yellow	White
Rear light black	Black/white

Stan Stephens

SPEC

Engine: Stage three road tune, SS Performance race pipes (£140), TZ750 carb rubbers, Harpowa reeds, welded crank, straight cut primary gears, close ratio gearbox (Stan can get these made in batches of six), 38mm powerjet Mikunis, B10EV plugs, Silkolene octane booster, 50:1 Silkolene Pro 2.

Chassis: Bolt-on swingarm extensions, rear shock replaced by the torque arm, dropped yokes (all for drag racing only). Owner: Nick Croom, Stan's right hand man. Tuned by: Stan Stephens, Unit 26, Blue Chalet Industrial Estate, London