



Driven to XS

After the successful 750-3, Yamaha's first big bike to really get things right, the prospect of an 1100-4 cast in the same mould was interesting to say the least. But then, if a 750 does all that you want of it, is a heavier, more powerful version so necessary?

The 1100 is big, and at 565 lb dry it is heavy and my reaction to the first few miles of riding it was one of disappointment. Although the 11 floated over bumps and its riding position was good, it merely felt like a bigger version of the 750 and, as the 750 is more than adequate in all respects, there was not a lot to commend the larger bike.

This feeling of anti-climax didn't last long. A hundred miles later I was looking at the T100 in an entirely new light. Our gaggle of journalists had a police escort on a BMW who, apart from taking care of navigation, was making a totally unobstructed route for us by the simple expedient of forcing all other traffic off the road. The armed policeman's wailing siren and unambiguous hand signals seemed to strike terror into the local road users.

The BMW was keeping our cruise speed down to 80 mph on the open roads, slowing drastically for the few corners we found. But one by one we dropped back, letting the convoy get a mile or so ahead and catching up again with bursts of speed which, on reflection, were unnecessarily violent.

After a while it became apparent that we

Yamaha launch the XS1100 and SR500 street single in West Africa.

John Robinson joins them and discovers that XS isn't moderation and SR isn't toothpaste.

were getting a ride which was as comfortable as that of the BMW. This is quite a compliment to the Yamahas, not only because the BM is famed for its ride comfort but also because the roads had bumps which would do credit to a moto-cross circuit. Later on, riding the 500, with a top speed of 90mph, I discovered its rear dampers were getting very warm to the touch, which isn't a common occurrence on roadsters. And the 1100s were coping with this at anything up to 30mph more.

With 7 inches of front fork movement and the standard 3 inches at the rear, the Yamaha's suspension was bottoming less often than one would expect. The forks were topping out more frequently but although the bike was going very light the wheels never seemed to lose contact with the ground for more than a few micro-

seconds at a time. Yet the sudden surges of rpm and the rocket-like thrust each time the bike crested a bump hinted that the rear tyre was going to get torn to shreds if this lasted much longer.

The impressive thing about the Yamaha was that it stayed completely stable. It tracked regularly and smoothly despite the bumps and curves and the sudden changes of mind and line to avoid the odd pothole. Despite the conditions of very high speeds, considerable pitching and long bumpy curves, the 1100 didn't weave. Even when encouraged by rhythmic nudges on the handlebars it just pushed firmly back and refused to go unstable.

The suspension and V-rated Bridgestone tyres deserve most of the credit, but they are complimented by the riding position, something Yamaha NV in Amsterdam have worked very hard at. After four or five attempts with prototype models they came up with the end product shown here. The bars are high but narrow, and angled to give a natural arm position. The footrests are set well back (the kickstart is removed and stowed away for use in emergencies; the gearshift has a remote, rose-jointed linkage) and the seat is good, giving firm support without transmitting shocks through the chassis.

It achieves a lot for the Yamaha: first a riding position which makes even high-

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speed riding easy and relaxed; second, if you push yourself forward, the very upright stance is good for controlling the heavy machine at low speed; third, and possibly most important under our conditions, the footrests give a leg angle which naturally supports the body against wind pressure and road bumps. It was easy to transfer weight through the footrests — and to do it quickly — gripping the tank with the knees, which maximised comfort and control even over the worst road conditions.

Other detail design points blend in with this. Yamaha's controls are among the best around — the mirrors, on the narrow bars are probably the best yet, it is easy to get to the indicators and horn quickly and without thought, the self-cancelling indicators run for just the right time/distance, the twistgrip is light and fast in operation.

They are all small points, but they add up and the proof is that after our first 120-mile run I felt completely fresh and relaxed, in fact it was hard to believe that we'd covered much more than 50 or 60 miles.

The 1100 has to be seen in the role of a majestic tourer, which needs a long-distance road test to evaluate properly but the Yamaha certainly starts off with the right equipment. It carries fairing and saddle-bag mounts, a large H4 headlamp, a fused power take-off socket, burglar alarm, 5.28 gallon tank, 3 pre-load position front forks, 5 on the rear shocks, a fuel gauge and ammeter — but no clock! That's not a facetious comment as those who have ridden BMWs will know — a clock is far more useful than it might appear. As a thoughtful addition, the toolkit carries a suspension compressor, allowing the wheel spindle to be withdrawn past the silencers.

Fuel consumption might be a problem on the bike, over the week, covering some



Unusual handlebars give the 1100 a good riding position while its controls are among the best around.

5,000 miles, the demo bikes averaged 32 mpg which means that as some were ridden gently, others were down into the 20s.

The DOHC 1100 motor is obviously powerful, with a claimed 95 hp and 200 to 220 km/h top speed. The most I saw was an indicated 200 (125 mph) on an unfaired bike, but this all starts to get academic. The point is that it will climb quickly up to 110 mph or so and the motor will still be pulling. Its optimum cruise speed depends more on traffic and weather than on the engine; at 90 mph everything is quite comfortable, below that it's not even trying.

The rubber mounted engine develops smooth, silent, Gold Wing-like power with, on one model out of the three that I rode, a slight tingling vibration through the foot-

rests. It gets into its stride at 5500, when the power really floods in, flattening off above 9000. Gears are largely unnecessary and there is little difference between top gear acceleration and using the gears above 60 mph. Certainly there is no point in taking the motor into the red band, in fact you can feel it holding back whereas changing up produces a very real surge of speed.

Like the 750, the transmission is a tortuous route of chains, countershafts and bevel gears twisting the drive round until it lines up with the final shaft. There is a shock absorber in the countershaft but the final drive relies purely on the torsional element of the shaft itself, whereas the 750 had a ramp-type shock absorber.

The gearshift was quite notchy, on one model it was easy to miss upward changes and the gears would clunk merrily when changing at low engine speed.

On the whole the motor is conventional, virtually formed by adding one cylinder to the triple and taking the drive off the centre of the crank. Some thought has obviously gone into maintenance and from the gearbox upwards it looks fairly straightforward.

They have really gone to town on the ignition: two coils, with a wasted spark, fired by magnetic transducers whose pulses feed transistor circuits, each pulse collapsing the current in one coil and simultaneously switching in the second coil.

Ignition advance is related to the engine condition by a vacuum bleed from one carburettor and a centrifugal advancer on the magnetic pick-up. The coils are fed via a ballast resistor to cut down their input voltage and the resistor is shorted out when the starter is operated, putting full battery voltage across the coils for starting.

On top of this there are two protective shut-off devices, as well as the standard kill-

XS1100

switch. If the ignition is switched on but the motor is not turned over, the circuit automatically shuts down after a few seconds and won't activate itself until the crank is turned through 180 degrees. This protects the coils from overheating, or the battery from running down if the ignition is left on.

A second device, mounted under the fuel tank, switches off the ignition if the bike is leaned through more than 60 degrees, ie cutting the motor if the bike falls over. Cornering shouldn't affect this device as the pendulum-type switch will be loaded by lateral cornering force as well as vertical gravity, so the switch won't know that it is leaning over. Presumably it is damped so that road shocks won't cause it to flutter around and cause mistiming.

Although it's nice to know that such innovations are being explored, I have doubts about any complications which could in themselves cause a malfunction.

The types of road didn't give much chance to evaluate the handling, there was a slight low-speed roll and a tendency for the back end to wallow coming out of corners neither of which is surprising for such a heavy machine. The Bridgestone tyres certainly seemed capable of handling the power and performance, although I imagine that rear tyre life will be something of an embarrassment.

The brakes are more than up to the standard of the rest of the machine, in particular the front discs, which would pin the bike down from top speed quite dramatically. Even with the tyres howling the 1100 stayed in a straight line.

FAIRING

Yamaha also had a couple of models fitted with Yamaha Amsterdam's fairing. Designed by John Mockett, better known for his cartoons, it is claimed to reduce drag, induce negative lift and give weather protection.

The top half turns with the bars, while the chassis-mounted lower portion carries twin spotlamps (which the 300W alternator should be able to handle), small locking compartments and additional instruments.

Drag is almost certainly cut down, the bike holding a steady 90mph on a mere fraction of throttle. Lift is debatable, the bike I rode got very light on its steering and started to weave at just over 100 mph, in direct contrast to the unfaired bikes.

Weather protection, in an ambient 70 deg F, was totally academic, but the hands are protected, the cowlings ducts warm air over the legs and the screen is OK for full-face helmets. Riders with open-face helmets complained of an uncomfortable draught at face level. Although this is one component which needs a UK climate for real evaluation, Yamaha at least deserve congratulations for making the effort.

The basic XS1100 is quite a remarkable package, it doesn't better the 750 in all respects and that wouldn't be easy to achieve anyway. But at a promised £1,990 for March-April deliveries it is going to cause some headaches.



SR500

Yamaha's street single, as they call it, was one bike I expected to be an instant flop. From the pictures, it just didn't look right, especially to those who assumed Yamaha were catering to the nostalgia of those who remember Norton, BSA and Velo.

But instead of the anticipated cafe racer, the SR looked plain ordinary. In fact a closer look, at the tyres, handlebars and riding position shows they have tried to build a sort of street flat-tracker.

The amazing thing is that it works, the 500 really is fun to ride.

Its riding position is an up-on-top, always-in-control arrangement which lets you take the bumps and jumps through your legs and, going into corners it encourages you to take weight on the outside footrest, the inside foot hovering, ready to move out to hold a slide.

Starting, on the two models I rode, wasn't a problem, although one or two other riders had difficulties, despite the numerous aids like the cam position indicator, hot idle compensator on the carburettor, automatic ignition retard and so on.

Comfort and handling through traffic, on bumpy lanes, and even on dirt roads, was remarkably good, considering it coped with such diverse conditions. On dirt it felt like it was coming unhinged more than an off-road bike does. But if it felt a bit loose when the tyres bit and missed, it tightened up very controllably when the back tyre finally let go. On the dirt roads this happened at relatively low speeds, on tarmac it happened faster and I discovered the 500's endearing habits — it didn't spit me off and I

Choke, hot idle compensator, accelerator pump . . . the 500's carb seems to have more bits than the engine.



call that very endearing. But the thought the circumstances still bring a twitch to the side of my face.

Our policeman guide/escort had gotten into the swing of things by the time we rode the 500s and he set off through the outskirts of Dakar at a lunatic pace. As before, his sirens and appearance left a wake of clear unobstructed road immediately behind the BMW, but this time he seemed determined to lose his Yamaha-mounted charges.

The convoy slowly strung out, and he made a left across two lanes of main road traffic, against a red light. At least four of us made a dive for the gap carved out by the wailing BM. Four rear tyres played at flat-trackers on the smoothly polished surface and four feet shot out under the bikes as we convinced the locals that what they had suspected all along was true.

The only problem with the 500 is its lack of top end power. Its claimed 33 hp doesn't give it much more performance than most 250s. Low to mid-range torque is punchy enough but above 5500rpm the torque real disappears. In addition the bike is overgeared and even Yamaha's road loads show it to be quicker in fourth than in top. The most I saw with any regularity was 140 km/h (87 mph) with the needle creeping high on the odd downhill stretch.

Maybe it is nicely set up for fuel consumption but the way it encourages you to ride it's not surprising that the demo bikes averaged 50 mpg over the week — but the appeal is obvious in that they covered just a few more miles than the 1100s . . .

Feeling light for a 500, the SR has suspension as effective as the XS, soaking up the bumps and keeping the bike rigidly on line. Presumably the steering geometry is pretty much the same as the XT because, like the trail bike it reacted quickly at low speed and generated large handlebar wobble above 75mph.

The nature of the SR encourages a style of leaning the bike into turns and keeping the body upright, taking weight off the inside foot. And the bike itself responded, it could be thrown around cheerfully on all manner of surfaces.

The only real differences from the XT are styling and the addition of a front disc brake, which seemed about average in its performance. At £900 it is more expensive than the XT but nostalgia aside, I'd say the SR500 is going to appeal to a wide section of riders who put fun ahead of performance.

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