

R80 ReTurned from the dead

BMW's 800 resurrected in a Tourin' Shroud.

Test by Tim Rumball.

I was expecting something different. Years ago when currently-Cortina-canned fuddy duddies were blazing oily trails along unrestricted A roads on thunderous fourstrokes and the ton was still magic, the BMW was very special. As testament to its immortality the 650cc engine grew, in time, to the R80/7. The ascension of this model to the realms of the remembered was decried by the faithful. Now it's back, and sitteth on the RT hand of the line as the R80RT.

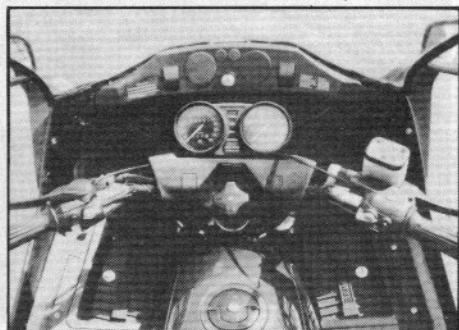
In its new guise the most obvious change is a smart and well finished touring fairing which gives the 800 all the panache of its 1000cc brothers, but that's not all.

Gone is the ponderous growl of the R80/7 as opposed pistons flogged the lumbering flywheel into life. The new RT positively zings with enthusiasm. A handful of twistgrip, with only quarter of a turn from stop to stop, sends the rev counter needle soaring into the 7000rpm red zone. Some change.

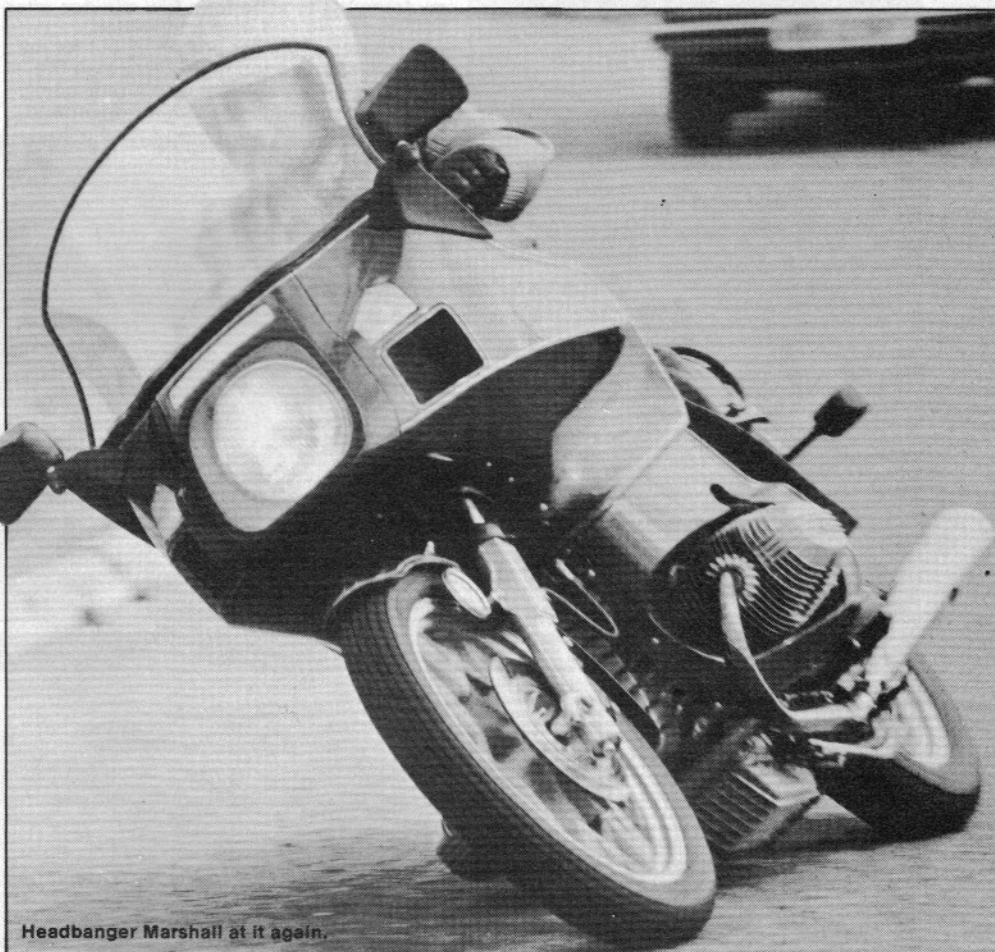
The R80RT engine is identical to that in the off road R80GS, which in turn is not dissimilar to the old R80/7. Introduced as a replacement for the road bike, the 798cc GS power plant was given a lighter crankshaft, nickel plated bores to reduce friction and an alteration of power characteristics.

When we tested the R80/7 in June '78 the technical specification claimed a maximum power of 55bhp @ 7000rpm. The GS and RT produce only 50bhp. Torque from the old engine was 46.3ft.lbs @ 5500rpm but the reworked motor gives 43.5ft.lbs down at 3500rpm. What's so odd is that this radical change in power delivery, originally designed to give the off road GS more bottom end, allows the RT version, despite its substantial fairing, to perform on equal terms with its predecessor.

Starting from cold requires full choke, and like many of today's emission controlled engines the flat twin is very fussy until warm. There's no power band, the bike can be chuffed along in top gear at tickover and with only mild complaint will pull through to its maximum speed. As can be seen from the flexibility figures on the performance chart all the power is at the bottom end. By the time a true 70mph is achieved power is tailing off rapidly, yet watching the speedo you wouldn't believe the MIRA test figures. Without fuss the RT will waffle up to an indicated 90mph and stay there for as long as the rider chooses. With just a mite more effort the needle will cross 100mph, but the



Cockpit has lots of room for extra instruments. Speedometer is seriously inaccurate and three position steering damper pointless.



Headbanger Marshall at it again.

speedometer is a deceitful (and illegal) 10 percent enthusiastic.

For all that the bike will eat miles like it eats petrol. An average of just 37.5mpg makes the RT a thirsty brute. It's as well the fuel tank holds a gargantuan 5.3gallons including just under half a gallon reserve giving a range of about 180 miles on the main tank.

All we could squeeze from our test R80RT at MIRA was a two way average top speed of 97mph and a best one way - with a strong tail wind - 107.6mph. Standing start 1/4 mile times were in the mid 14 second area. Although that's none too good for a modern 800cc motorcycle it equals the old R80/7 which had more power and no fairing.

While testing acceleration the clutch, which has a lovely light lever action for road work, got fried. Although it never slipped seriously after that there was always a nasty smell of burnt lining material. BMW say the RT has inherited from the R65 a single plate dry clutch which is lighter than the original version. For performance testing it wasn't up to the job but it was fine for normal road use.

Gearchanging hasn't changed a great deal. The gears of the RT don't engage with such a clunk as on earlier BMWs. Improvements were made to the whole range after the introduction of the R45 and R65 in the shape of extra cushioning in the shaft drive. This somewhat detuned its severity and softened gearchanges. The bottom three

ratios in the five speed box of the RT do grate a little and are harsh on selection with one or two false neutrals. Fourth and fifth are better than the rest and with a careful match of engine speed will change without use of the clutch.

At low speed the bike can be chuffed smoothly round in circles, and steering is neutral and accurate, but on slow, full lock turns the rider's fingers are trapped between the high handlebar levers and the edges of the fairing screen. Travelling more quickly lines can be chosen and held but because of the frame mounted fairing changes of line are ponderous, and wriggly country lanes an effort to negotiate quickly. A steering damper is fitted, with a prominent three position knob on top of the steering head. For most of the test period it was left in position one and seemed as pointless as the air ducts in the fairing.

Conventional telescopic forks suspend the front with twin oil damped springs controlling the rear swinging arm. These rear units have three pre-load adjustments via a fixed lever, similar to the MZ set up. While giving a firm ride they soak up bumps effectively and keep the wheels in touch with the road. There's no wallowing or pitching when motoring hard through poorly surfaced bends but when really scratching on our test bike a gentle steering wobble set in. It never felt dangerous although road surface changes would accentuate the problem. Almost certainly it was due to the tyres, tubed Metzlers, 3.25 H19 front and 4.00 H18

SPECIFICATIONS

ENGINE

Type: Horizontally opposed, air-cooled, pushrod four-stroke twin. Bore x stroke: 84.8 x 70.6mm. Displacement: 798cc. Compression ratio: 8.2:1. Carburettors: Two Bing 32mm cv types. Lubrication: Wet sump. Max bhp: 50 @ 6500rpm. Max torque: 43.4lb.ft @ 3500rpm.

TRANSMISSION

Overall gear ratios: 1st 14.78, 2nd 9.61, 3rd 7.06, 4th 5.61, 5th (top) 5.04:1. Clutch: Dry, single plate. Final drive: Shaft.

FRAME and FORKS

Frame: Twin loop oval section tubular steel with bolt-on rear sub-frame. Front suspension: Telescopic fork with coil springs and oil damping. Rear suspension: Swinging fork controlled by two coil sprung, oil damped units with three spring preload adjustments. Front travel: 7.9in. Rear travel: 4.9in. Trail length: 3.7in. Equipment: Full fairing, small rear carrier.

WHEELS and BRAKES

Front tyre: Metzeler 3.25 H19 tubed. Rear tyre: Metzeler 4.00 H18 tubed. Front brake: Twin hydraulic disc, 10.2in dia. Rear brake: Single leading shoe drum, 8in dia.

ELECTRICS

Ignition: Transistorised, breakerless. Battery: 12V 28Ah. Alternator: 280W output. Headlight: 7.1in dia, with 12V 60/55W Halogen bulb. Tail/stop lamp: 12V 5/21W. Indicators: 12V 21W. Warning lights: High beam, neutral, oil pressure 1.2W, indicators/generator 3W.

DIMENSIONS

Seat height: 31.8in. Length: 89.7in. Width: 37.4in. Height: 57.8in. Wheelbase: 59in. Ground clearance: 6.7in. Dry weight: 471lb. Fuel tank: 5.3 gallons inc 1/2 gal reserve.

rear. Under all other conditions these boots suit the RT perfectly offering excellent grip on wet or dry roads, and reacting only slightly to white lines and road irregularities. Setting the steering damper to position three did nothing to quell the tyre-induced wobble.

Although the high handlebars - identical to those fitted to the R100RT - offered a comfortable ride position (notwithstanding trapped fingers) they occasionally caused my forearms to ache for a few minutes after setting off. No one else on the staff complained of similar problems, but for me the bars seemed too high. Otherwise the ride position is excellent with a firm, comfy seat offering plenty of room for driver and

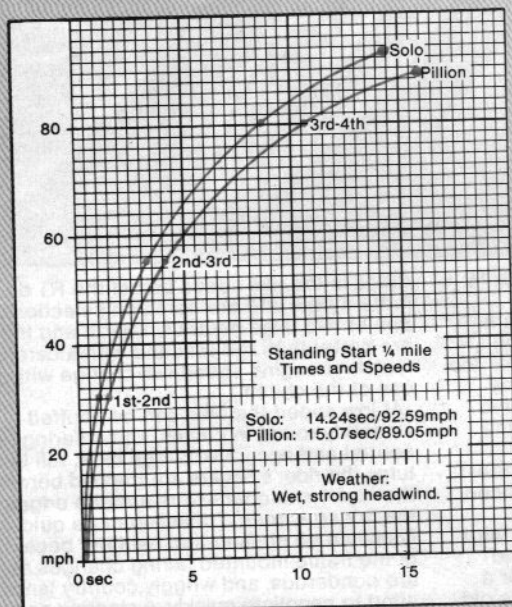
passenger. Driver's footpegs are well rear set, but bring his heels into contact with the passenger's toes at times. Some annoyance was also caused by the flanks of the fairing which persistently fouled my left ankle when reaching for the ground. It never occurred on the right hand side, and I don't walk funny,

Strong, well finished glass fibre fairing with adjustable perspex screen blends beautifully into bikes styling.



Twin 10.2in front discs are bitten by Brembo calipers.

PERFORMANCE CHART



FLEXIBILITY IN TOP GEAR(sec)

mph	30-50	40-60	50-70	60-80	70-90	80-100
solo	4.90	6.22	7.04	8.43	12.56	-

Oil used

None

MAXIMUM SPEEDS and SPEED RANGES

Gear	mph max	mph min	1000rpm
1 solo	32.93	5.41	5
2 solo	57.48	7.97	8
3 solo	79.81	11.13	11
4 solo	95.02	13.88	15
4 pillion	93.07	"	"
4 prone	96.82	"	"
5 solo	97.12	16.71	16
5 pillion	95.87	"	"
5 prone	98.95	"	"

Best one way speed: 107.56mph

SPEEDO

ind	true
30	27
40	36
50	45
60	54
70	64
80	73
90	82

BRAKES(both)

mph	solo	pillion
30	30	34
40	64	73
50	97	112
60	129	154
70	161	199

MPG

Best	45.9
Worst	32.8
Overall	37.5

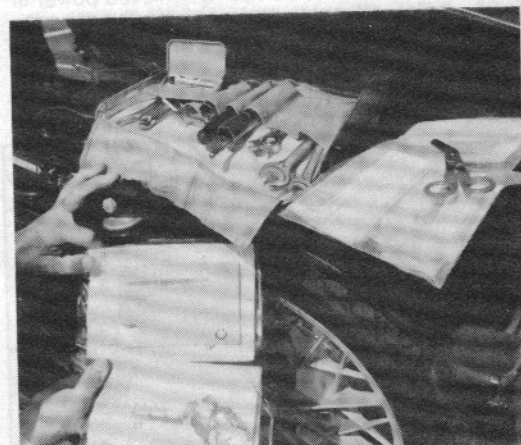
Milometer

Accurate

Performance figures obtained at: M.I.R.A. Test Track, Nr. Atherstone, Warks.
Test Riders: Tim Rumball, Tony Dennis.

COMPARISONS

Make	Speed prone	SS 1/4 mile prone	Dry weight	Claimed bhp	mpg	Price on road
BMW R80RT	97mph	14.24sec/93mph	471lb	50 @ 6500rpm	38	£2937
BMW R80GS	101mph	14.33sec/93mph	368lb	50 @ 6500rpm	43	£2608
Moto Guzzi Le Mans III	127mph	12.99sec/104mph	454lb	78 @ 7800rpm	46	£2939
Yamaha XV750SE	104mph	13.83sec/94mph	467lb	61 @ 7000rpm	46	£1399
Triumph T140E(S)	109mph	13.92sec/91mph	430lb	51 @ 6500rpm	44	£2109
Harley FLT1340C	100mph	15.95sec/81mph	725lb	60 @ 5200rpm	48	£6089



Comprehensive toolkit is very high quality, but access to it and first aid kit stored beneath seat is difficult.

leaked and the lids lock or lift easily. They're supplemented by a black finished rack on the bike tail which is so small as to be impractical. In usual BMW style provision is made for a host of optional extras in the fairing but in standard trim only air ducts, glove boxes and a front parking light are fitted.

On our test bike the screw-on fuel filler cap, which is also locked by the ignition key, often took several minutes to open because the lock dogs would not disengage. Just as difficult is the seat lock which uses the key and a push button. The button was extremely stiff and made access to the excellent tools, manual and first aid kit almost impossible. The same key operates a conventionally mounted steering lock which is awkward to get at between the fairing side and the steering head. An ignition switch lock is impossible due to the damper and dashboard mounted switch.

A neat speedometer and rev counter are provided, with indicators, oil pressure, generator, neutral and high beam warning lights between. They're clear and bright but the indicator and neutral lights are both green which I found confusing at first.

Handlebar switchgear is very good and most of it well positioned, but the indicator switch is so low on the left cluster that it's almost out of sight and takes some groping to locate.

Pulling the 471lb weight to a halt are twin hydraulic 10.2 inch Brembo disc brakes on the front wheel. They have a powerful action but need lots of pressure to stop quickly. They're supplemented by a seven inch drum in the rear hub and for road use the combination is well balanced.

Not so good is the 60/55W Halogen headlight which has fair penetration on main beam, but the light is yellowish and somewhat diffuse. Also because the lamp is fairing mounted its centre of illumination lags behind the bike's line through a bend which makes scratching after dark hazardous. Dipped beam is OK but again the pattern lacks definition and cut off falls short.

BMW offer as an optional extra a pair of retractable spotlights which fit into the fairing and cost £131 plus a fitting charge. They could improve the lighting situation.

Bodywork finish is excellent and the machine has a real feeling of class. I loved riding the R80RT, particularly long distances, but couldn't reconcile its unexceptional performance and behaviour - including several irritating faults, notably the awkward petrol cap and high fuel consumption - with a price which would buy a Japanese equivalent and leave up to £1000 change. Despite minor improvements the BMW format hasn't changed for many years. That super fairing does little to hide the old fashioned nature of the machine beneath, and, but for a band of faithful disciples, the third day of the R80 may never have come. ■



(Above) Andrew (Wot, no duct tape?) Marshall samples RT handling.



Photography by Andy Mills



Seat is roomy, firm and well shaped. Tail rack is a standard fitting but too small for bulky touring luggage.